



PACE 2.0 – The Next 10 Years

Thank you

for joining the conversation today. Send us your questions and comments!

Welcome

The Broadcast will begin at 2:00 PM (Eastern)



PACE 2.0 – The Next 10 Years

Thank you
for joining the
conversation
today. Send us
your questions
and comments!



Ariel Miller

Manager, Research & Technical Assistance
Council of Development Finance Agencies

See all of CDFA's resources online at www.cdfa.net/resources



PACE 2.0 – The Next 10 Years

Legal Disclaimer

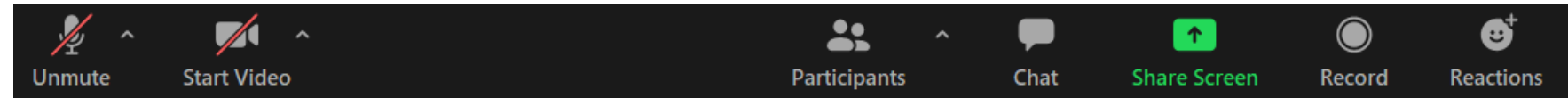
CDFA is not herein engaged in rendering legal, accounting, financial or other advisory services, nor does CDFA intend that the material included herein be relied upon to the exclusion of outside counsel or a municipal advisor. This publication, report or presentation is intended to provide accurate and authoritative general information and does not constitute advising on any municipal security or municipal financial product. CDFA is not a registered municipal advisor and does not provide advice, guidance or recommendations on the issuance of municipal securities or municipal financial products. Those seeking to conduct complex financial transitions using the best practices mentioned in this publication, report or presentation are encouraged to seek the advice of a skilled legal, financial and/or registered municipal advisor. Questions concerning this publication, report or presentation should be directed to info@cdfa.net.

Thank you
for joining the
conversation
today. Send us
your questions
and comments!



PACE 2.0 – The Next 10 Years

Thank you
for joining the
conversation
today. Send us
your questions
and comments!



Submit your questions to CDFA staff



PACE 2.0 – The Next 10 Years

Moderator



Jason Tiemeier

Associate
Bricker & Eckler LLP

Thank you

for joining the conversation today. Send us your questions and comments!

See all of CDFA's resources online at www.cdfa.net/resources



PACE 2.0—The Next Ten Years

CDFA—Bricker Webinar Series

Jason Tiemeier

Attorney

Bricker & Eckler LLP

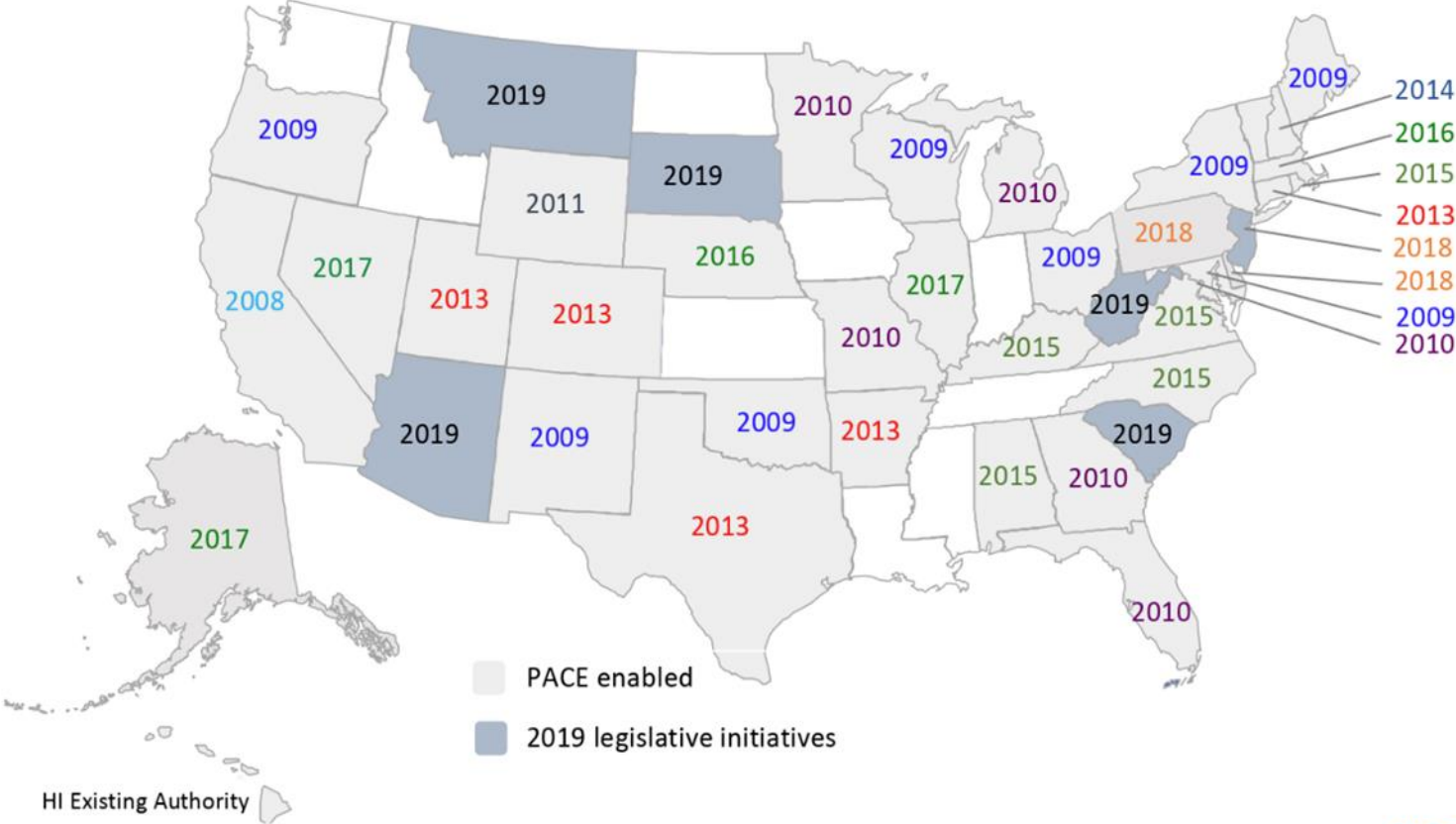


Bricker & Eckler
ATTORNEYS AT LAW

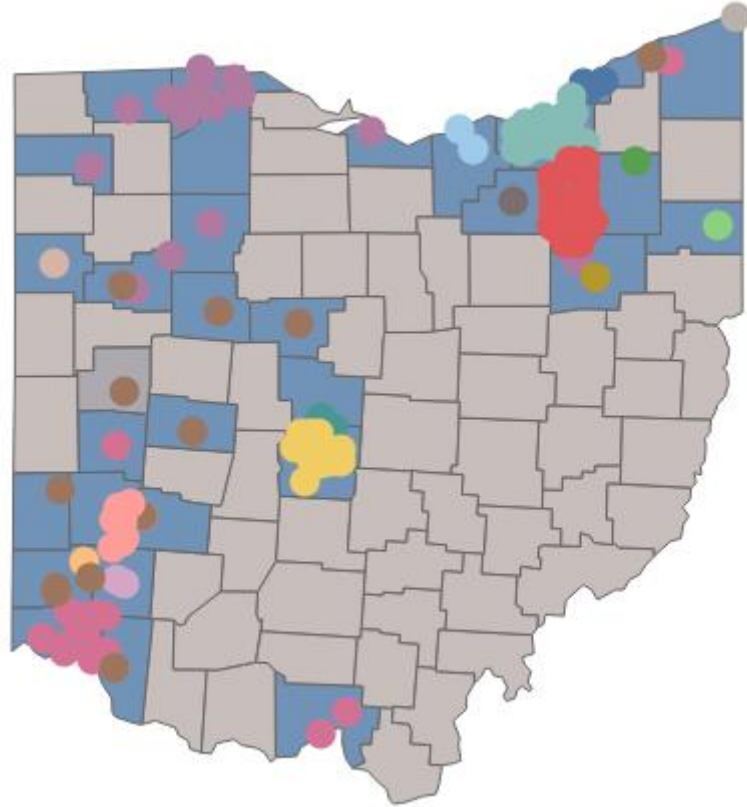
State Authorizing Legislation

- PACE = “Property Assessed Clean Energy”
- 38 states authorize PACE; 26 states with active programs
- States have several PACE laws for various reasons:
 - PACE is covered in more than one law
 - PACE laws have been passed over time to implement various aspects of PACE financing
 - PACE laws have been amended

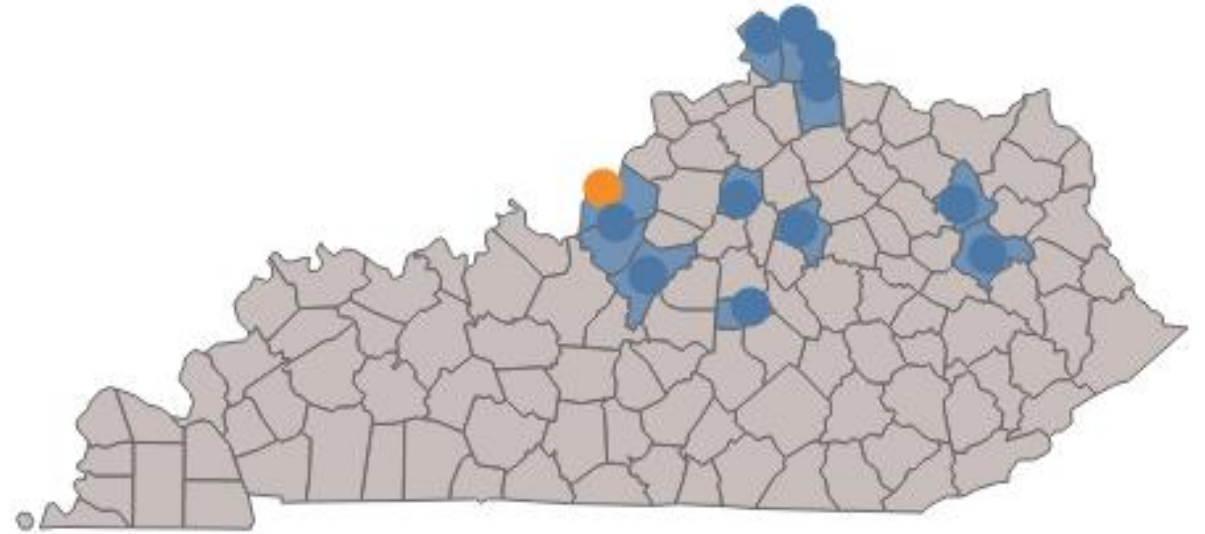
PACE – The First 10 Years



C-PACE in Ohio and Kentucky



Total financed
to date: \$513,016,928.89



Total financed to date:
~\$21,000,000

Special Assessments for Energy Improvements

- Energy efficiency improvements
 - HVAC
 - Lighting
 - Roofs, windows, insulation
- Alternative energy improvements
 - Solar photovoltaic (PV) and thermal
 - Wind
 - Geothermal
 - Biomass
- Water efficiency improvements; other environmental remediation and protection improvements



The First 10 Years



- Projects that are uniquely situated to benefit from PACE
 - Renovation vs. new construction
 - Particular need for specific benefit of PACE vs. acknowledgment of general benefits
 - Education focus
- Use of PACE as a standard portion of the capital stack
 - Repeat users
 - Streamlined processes
 - Leveraging prior experience

The First 10 Years



- Geographic Expansion Once Authorized
 - Project driven
 - Intentional growth
- Aids to Growth and Expansion
 - Education and cross-selling
 - Maturing programs and policies
 - New improvement types
 - New asset classes
 - Addressing unique needs

The Next Ten Years

- Market evolution
- Tackling public policy hurdles
- Process and efficiency improvements
- Expansion of eligible improvements
- Administration of deals and programs

Visit Our Resource Center



www.bricker.com/pace



[ABOUT US](#) | [CAREERS](#) | [EVENTS](#) | [CONTACT US](#)

[SUBSCRIBE](#)

CONNECT:



[PEOPLE](#) [INDUSTRIES & PRACTICES](#) [INSIGHTS & RESOURCES](#) [OFFICES](#)



Insights & Resources

PACE Financing Resource Center



PACE Resources



Jason Tiemeier

jtiemeier@bricker.com

614-227-6067



Bricker & Eckler
ATTORNEYS AT LAW



PACE 2.0 – The Next 10 Years

Panelists



Colin Bishopp

Executive Director
PACENation



Genevieve Sherman

Head of C-PACE Programs and
New Products
Nuveen



Chris Burnham

President
Development Finance Authority of
Summit County

Thank you

for joining the
conversation
today. Send us
your questions
and comments!

See all of CDFFA's resources online at www.cdfa.net/resources



PACE 2.0 – The Next 10 Years

Panelist



Colin Bishopp

Executive Director
PACENation

Thank you

for joining the conversation today. Send us your questions and comments!

See all of CDFA's resources online at www.cdfa.net/resources

We are the national trade association that promotes Property Assessed Clean Energy financing by providing leadership, support, problem solving, data and networking opportunities for a growing universe of PACE market participants.

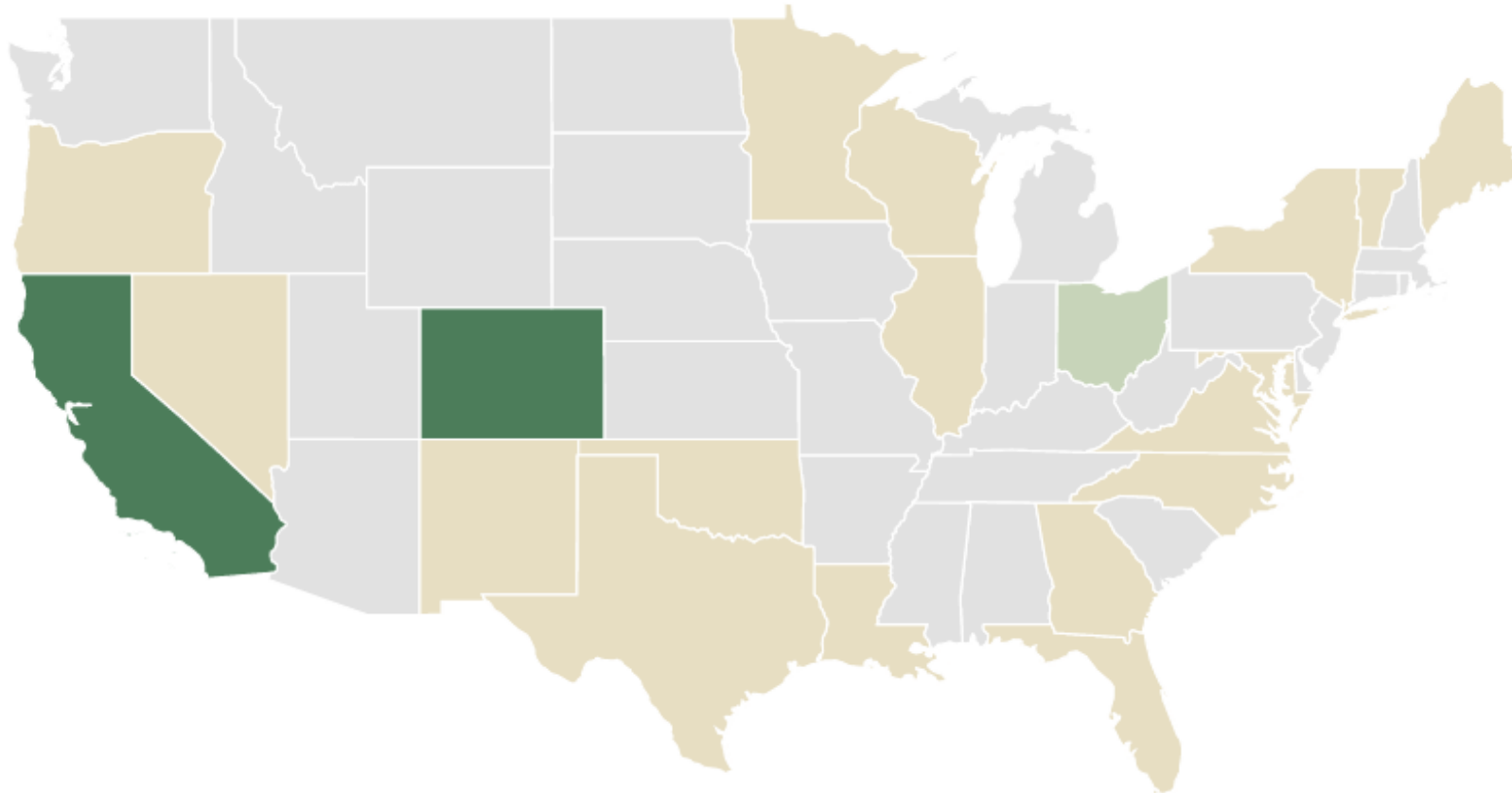
Our work includes:

- Advocacy
- Market research & data
- Policy and market development
- Education and informational resources for members

[PACENation.org](https://www.pacenation.org)

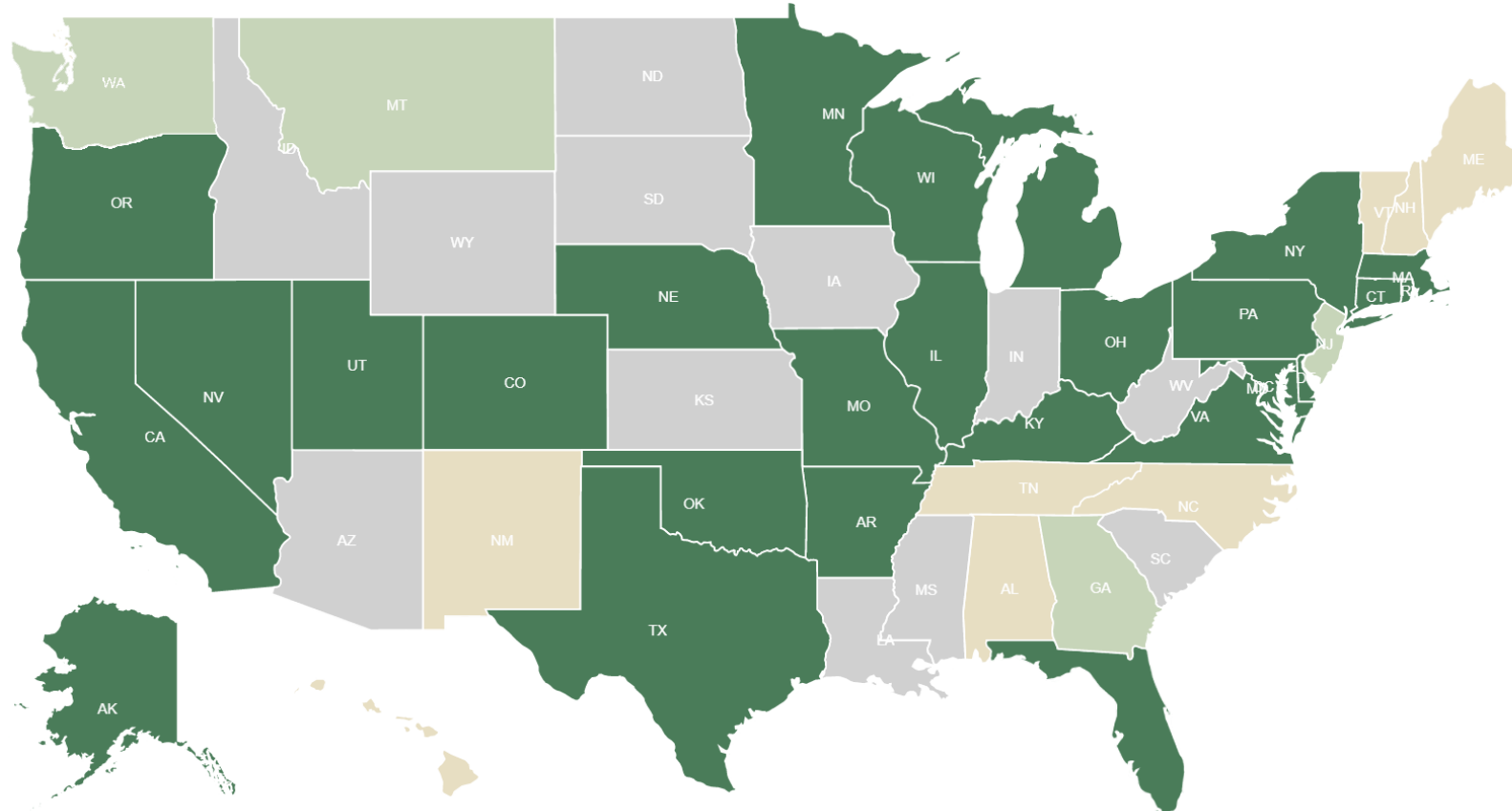
C-PACE in 2010

20 states C-PACE enabled, **2** with active programs
58 projects completed, **\$5** million



C-PACE in 2021

38 states plus D.C. C-PACE enabled, **26** plus D.C. with active programs
2,500+ projects completed, **\$2.1** billion



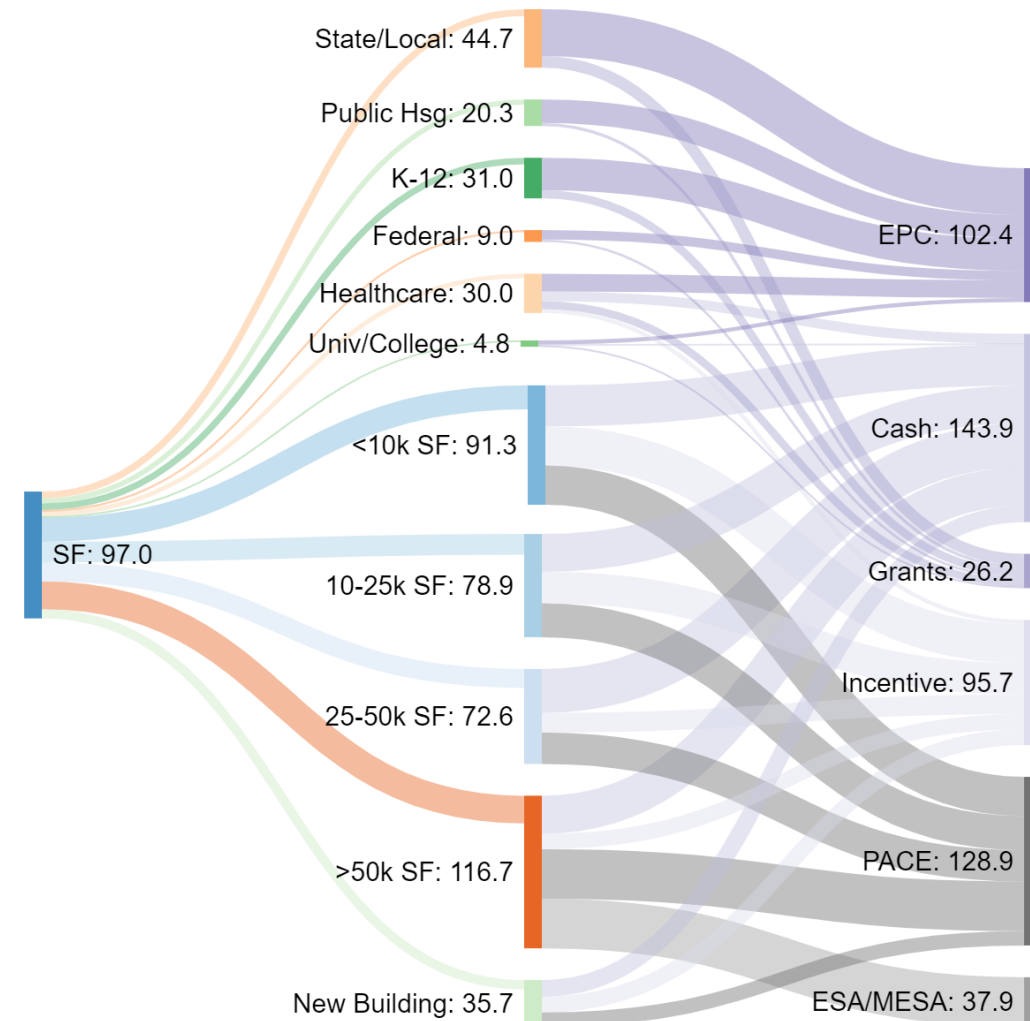
Trend toward mandates and electrification

- **2019: New York City** adopts Local Law 97 (LL97), which requires commercial buildings of more than 25,000sqft to meet aggressive emissions standards by 2024 with stricter limits going into effect in 2030. LL97 includes financial penalties for non-compliance.
- **2019: Washington State** adopts Clean Buildings Standard (HB1257), which mandates reduced emissions for non-residential buildings larger than 50,000sqft.
- **2020: St. Louis** adopts first Building Performance Standard in the Midwest.
- **2020: White House:** Pres. Biden establishes goal to retrofit 4 million buildings.
- **2021: SEC issues an RFI** seeking input on questions related to climate change disclosures. New rules likely to require auditability and transparency in order for businesses to claim they are positively affecting the climate. Issuers of securities (corporate debt, equity, structured transactions) could have significant business liabilities to contend with.
- **2021: California Energy Commission** updates building codes to incentivize all-electric building construction.
- **Ongoing: 50+ municipalities** have now adopted mandates for *full electrification* of new buildings.

Ex: Biden's Goal to Upgrade 4M Buildings

Sources of Capital

- EPC/UESC – Public Buildings - \$103 billion
- Cash, Bank Loans -- \$144 billion
- Grants (Federal) -- \$26 billion
- Utility Incentives -- \$96 billion
- **Commercial PACE – \$129 billion**
- ESA/MESA -- \$38 billion
- **Total Capital Needed: \$536 billion**

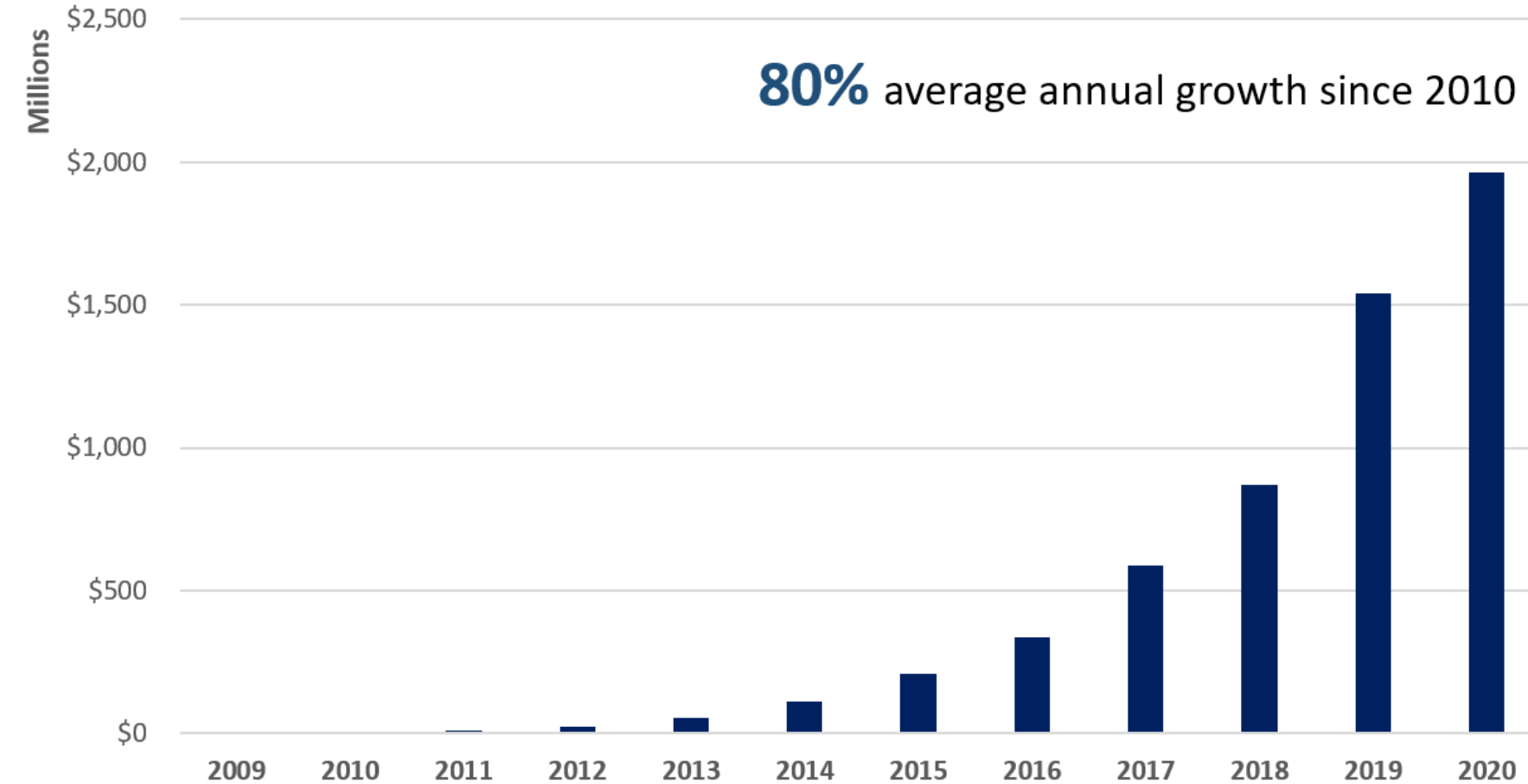


Note: These estimates are for energy efficiency only.
Does not include solar or electrification.

Analysis performed by National Association of Energy Service Companies (NAESCO)

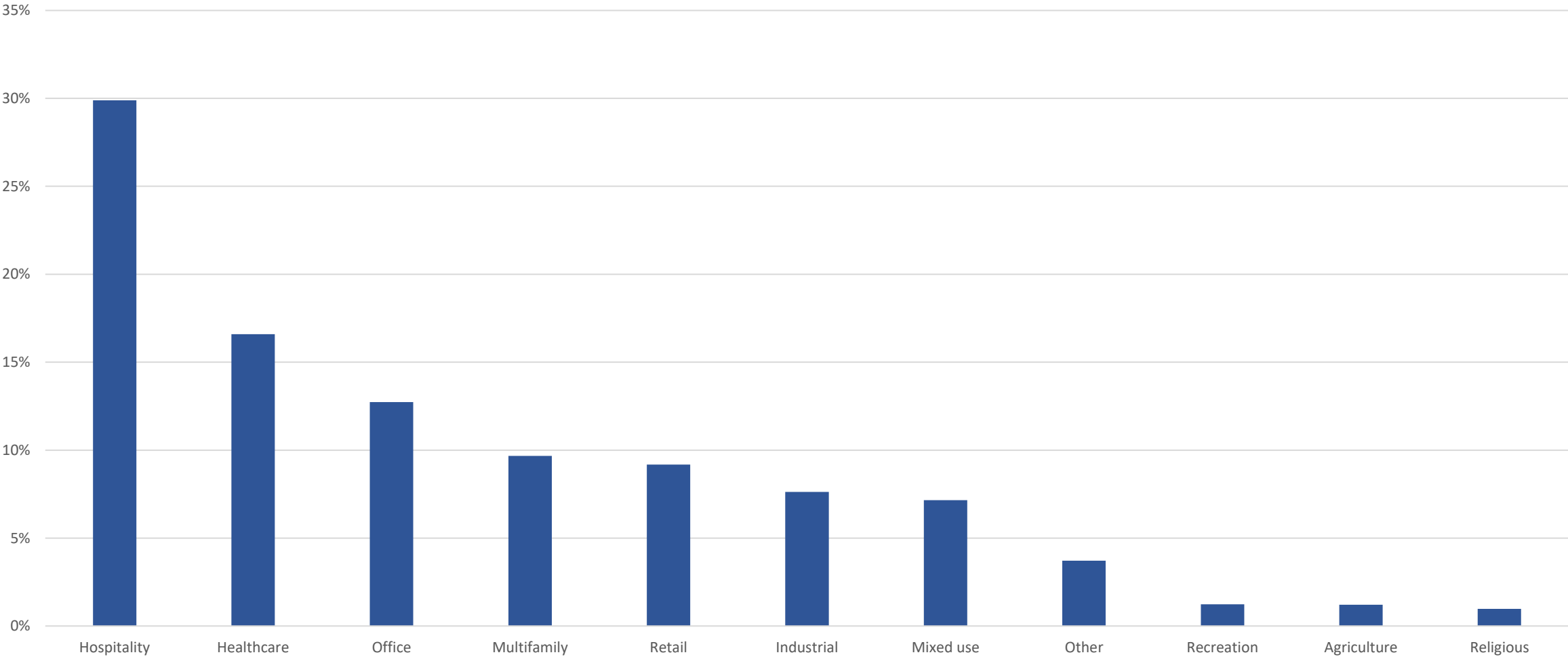
Cumulative C-PACE financing

(2009-2020)



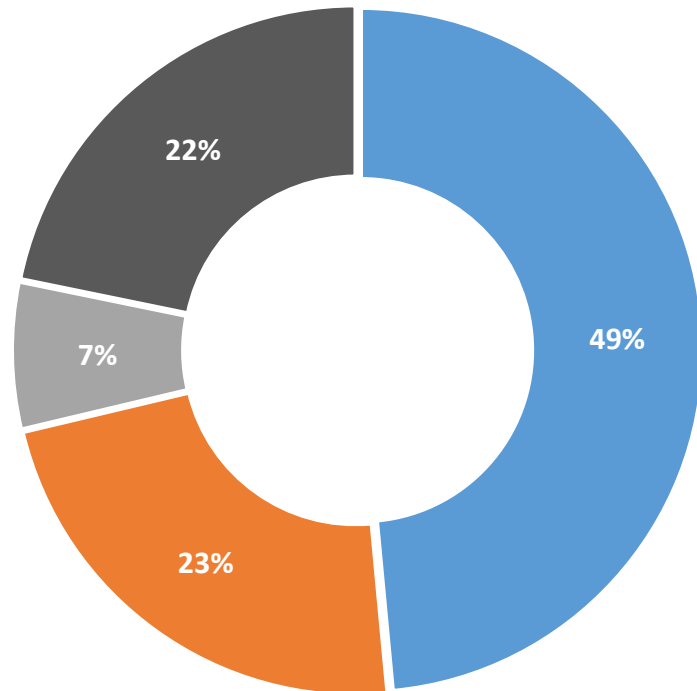
States >\$10MM cumulative financing	
CA	625
OH	376
CT	173
TX	112
MN	95
MO	78
CO	70
RI	64
UT	64
MI	49
WI	45
FL	43
DC	41
NE	31
IL	21
MD	13

C-PACE property types (% of dollars invested)



How is C-PACE used?

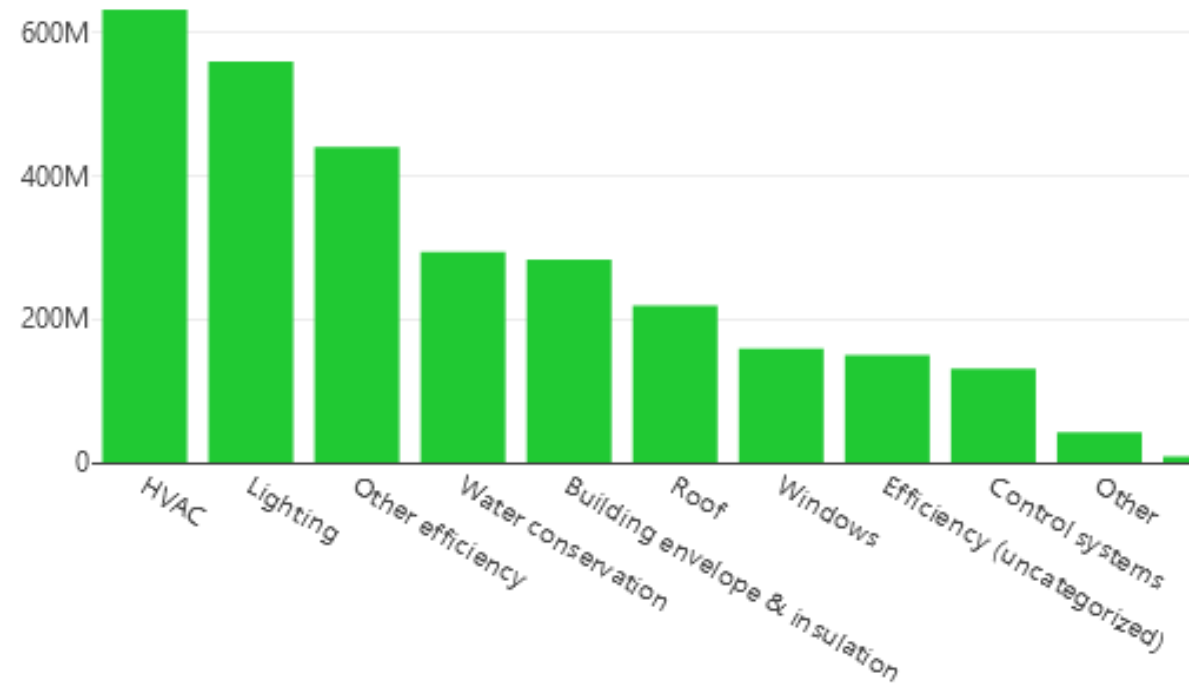
C-PACE funding by category:



■ Energy efficiency ■ Renewable energy ■ Resilience ■ Mixed projects

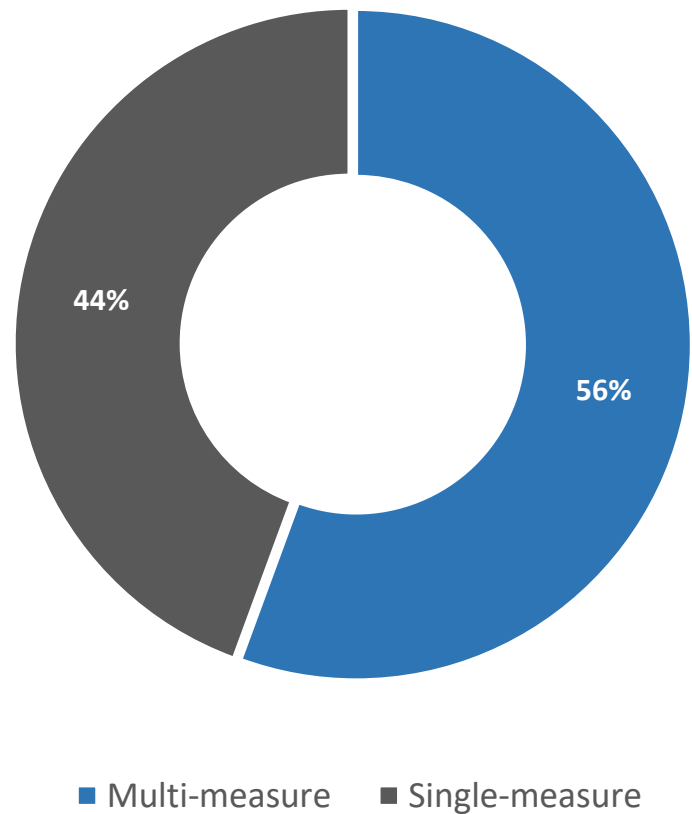
Specific measures:

EE-only and mixed projects

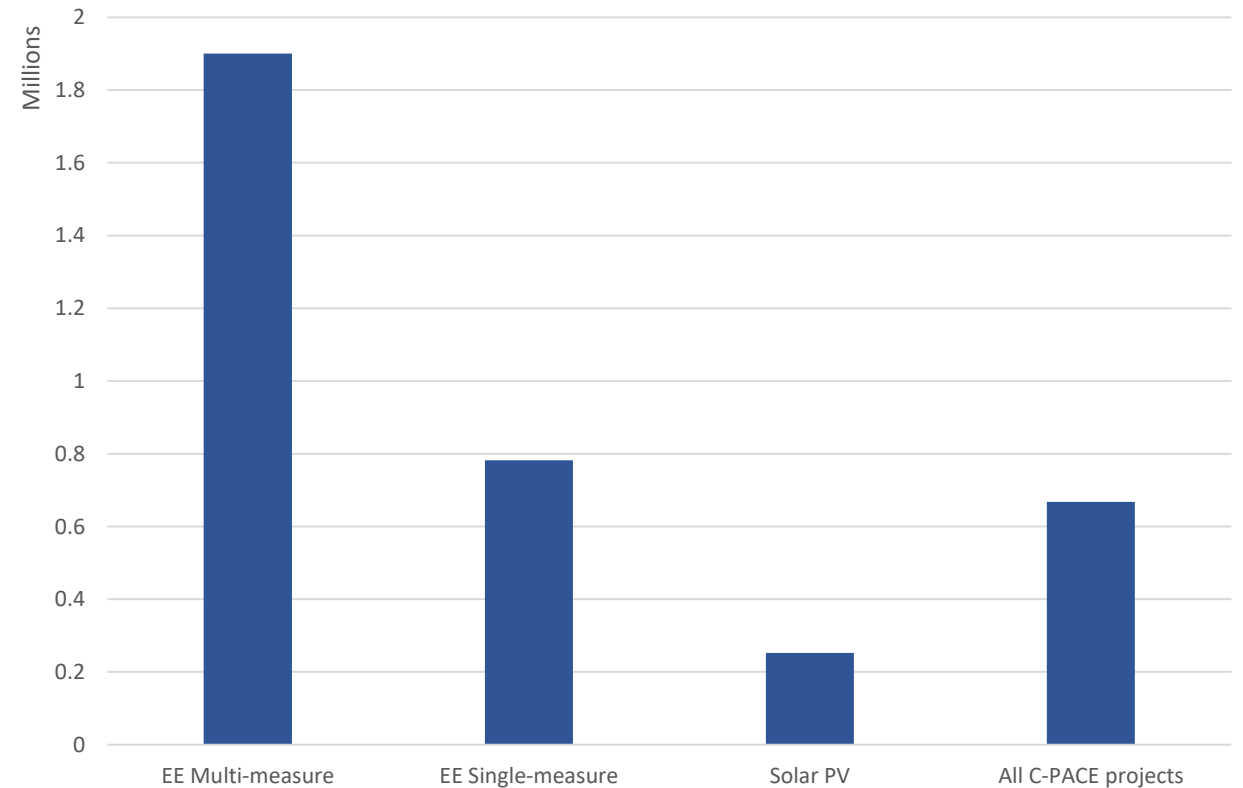


Multi-measure C-PACE projects

Funding: EE Multi-measure vs. EE Single-measure



Average project size: Multi-measure vs. Single-measure



C-PACE impacts

24,000

Job-years created

11B

kWh energy saved

\$3.9B

Economic impact

4M

Metric tons
carbon abated

Estimated over useful lifetime of installed measures

PACE would have a tremendous impact on the environment and the economy if enabled nationwide.

If C-PACE and R-PACE were used by 15% of eligible buildings in the United States, the total potential market would reach \$650 billion, which represents \$282 billion invested to improve commercial buildings and \$368 billion invested in homes.

PROJECTED IMPACT IF PACE WERE UTILIZED IN 15% OF ELIGIBLE BUILDINGS IN EACH STATE

	Job-years Added	Economic Output (\$)	Energy Saved (kWh)	Total Carbon Abated (metric tons)
Commercial PACE	3,270,000	512,146,400,000	990,858,970,000	351,680,000
Residential PACE	6,440,000	772,180,070,000	1,293,751,040,000	467,680,000
Total market	9.71 million	1.28 trillion	2.28 trillion	819 million

Impacts are estimated over useful lifetime of installed measures. Includes data reported to PACENation as of April 1st, 2020.

Thank you!

Colin Bishopp
colin@pacenation.org
202.550.7570



PACE 2.0 – The Next 10 Years

Panelist



Genevieve Sherman

Head of C-PACE Programs and
New Products
Nuveen

Thank you

for joining the
conversation
today. Send us
your questions
and comments!

See all of CDFA's resources online at www.cdfa.net/resources

nuveen

A TIAA Company

C-PACE – The Next 10 Years

November 2021

28 Thorndal Circle #3
Darien, CT 06820
Greenworkslending.com

Greenworks Lending from Nuveen

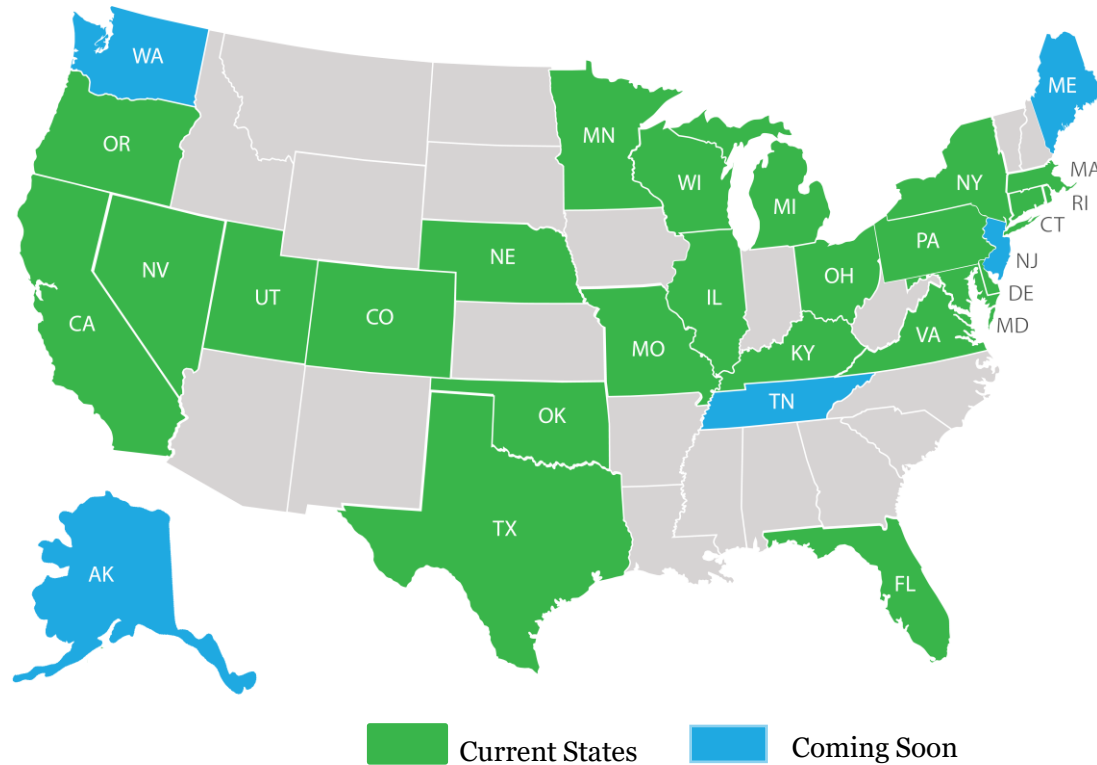


Greenworks Lending from Nuveen is a leading provider of Commercial Property Assessed Clean Energy (C-PACE) financing. Led by several of the industry's founding policy developers and standard-setters, the company was founded in 2015 with the goal of bringing C-PACE financing to building owners across the country. Greenworks has provided financing to hundreds of commercial properties in more than 20 states.

The company completed the industry's first rated securitization in September 2017 and completed several additional securitizations since.

GREENWORKS LENDING LLC IS AN INDIRECT SUBSIDIARY OF NUVEEN LLC AND TEACHERS INSURANCE AND ANNUITY ASSOCIATION OF AMERICA (TIAA) AND A MEMBER OF THE TIAA GROUP OF COMPANIES.

Evolution of C-PACE Policy



2010 – 2017

Started as a tool to finance energy efficiency, water conservation, and solar energy projects

2017 - 2019

C-PACE is used as a source of funds for constructing new buildings. Average project size increases!

2019 - Beyond

C-PACE as a refinancing strategy takes hold during pandemic; increased focus on resiliency.

GREENWORKS LENDING LLC IS AN INDIRECT SUBSIDIARY OF NUVEEN LLC AND TEACHERS INSURANCE AND ANNUITY ASSOCIATION OF AMERICA (TIAA) AND A MEMBER OF THE TIAA GROUP OF COMPANIES.

Policy Horizons & Trends for C-PACE

C-PACE expands to the Southeast & Sunbelt

C-PACE coming to Nevada and New Mexico, the Carolinas, Georgia, Tennessee and Virginia.

Lender consent expands

Many hundreds of lending institutions have consented to C-PACE assessments, increasing due to both the geographic expansion of C-PACE and the increased utilization of C-PACE in new construction / gut rehab of facilities which require additional sources of funds. Orange County, FL mandates consent at the local level.

More work with Federal Agencies

After several successful closings in a few key states, C-PACE industry seeks to expand lender consent guidance with SBA, HUD, Freddie, USDA.

Program design and documents are standardized; billing, collection & enforcement have options.

Irrespective of administrative model, the basic 'CPACE in a Box' document suite that governs the application, approval, and closing of C-PACE transactions is now relatively standard and accessible for new states.

Differences primarily surround the *particular tax/assessment codes in each state*. Some states have legal precedent/option for delegation & assignment billing, collection & enforcement of special assessments to third parties.

Small projects (<\$250,000) remain a challenge.

While several programs (CA, MI, WI) have reduced fees for small deals, financial underwriting and lender consent for small projects remains a high administrative burden. New business models/niche lenders may emerge.

Program Design is Standardized



Design	Implementation	Administration
<ul style="list-style-type: none"> • Determine flow of funds for CPACE/role of tax collector • Identify and confirm CPACE assignment & enforcement options • Design recorded CPACE document • Design other financing docs as need • Design project technical standards • Design standard ordinance • Design standard admin agreement for tax collectors as needed • Design servicing agreement as needed • Legal/FA aid on tax/assessment law – basis for CPACE opinion. 	<ul style="list-style-type: none"> • Outreach to local governments to bring into program • Passage of local CPACE ordinances • Onboard/register lenders • Onboard/register contractors • Create program guidelines • Create program website 	<ul style="list-style-type: none"> • Application review • Assessment creation & document execution/recordation • CPACE collection and servicing (as applicable) • Continual marketing and outreach • Channel partner development • Upkeep of website • Upkeep of marketing collateral • Revision of program documents, as needed • Regular marketing and outreach activities

Program Administration Best Fit



Keep it Low Cost & Simple

Establish clear, concise guidelines and transparent processes without high fees



Keep it Open

Catalyze innovation and promote growth through open-market administration



Keep it Standard

Enable scale by implementing one set of rules for capital providers and contractors

State Agency / Interlocal Governmental body (e.g. Council of Governments)

Current Programs: Connecticut, California, Colorado, Wisconsin

Newly Launching Programs: New Jersey, Virginia, North Carolina

Local Government Program

Current Programs: Nebraska, Oregon, Illinois

Newly Launching Programs: Washington, Tennessee, Alaska

Local Sponsor / Single Admin Program

Current Programs: Maryland, Pennsylvania

Newly Launching Programs: Oklahoma

nuveen

A TIAA Company

Thank You!

October 2021

28 Thorndal Circle #3
Darien, CT 06820
Greenworkslending.com

Contact: Genevieve Sherman, Head of New Markets & Products
Genevieve.Sherman@nuveen.com 917-968-0948



PACE 2.0 – The Next 10 Years

Panelist

Thank you

for joining the conversation today. Send us your questions and comments!



Chris Burnham

President
Development Finance Authority of
Summit County

See all of CDFA's resources online at www.cdfa.net/resources



DFFA

DEVELOPMENT FINANCE AUTHORITY
OF SUMMIT COUNTY

Attracting private capital to Northeast Ohio for public good.

Chris Burnham, President

47 North Main Street

Akron, Ohio 44308

(330) 762-4776



November 2021

The **Development Finance Authority of Summit County (DFA)** specializes in community and economic development finance, primarily focused on Northeast Ohio, by assisting others in obtaining capital that might not otherwise be available. In addition to issuing taxable and tax-exempt revenue bonds, DFA works closely with affiliated non-profits: the **Akron-Summit County Energy Special Improvement District (ESID)** enables DFA to issue Property Assessed Clean Energy (PACE) bonds; the **Development Fund of the Western Reserve (DFWR)** allocates New Markets Tax Credits (NMTC); and the **Western Reserve Community Fund (WRCF)** provides small business and community-based lending.



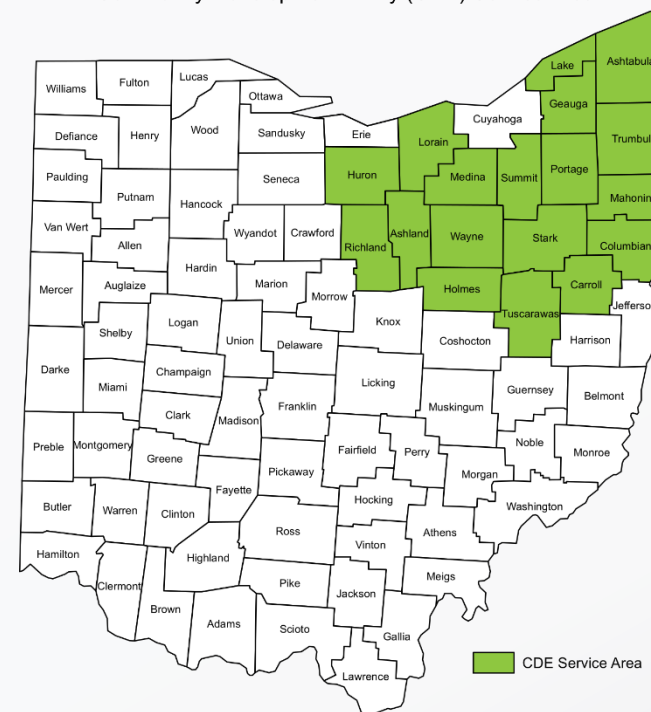
Development Fund of the Western Reserve (DFWR)



DEVELOPMENT FUND of the WESTERN RESERVE

- Private non-profit 501(c)(3) managed by DFA
- Established in 2011
- New Markets Tax Credit (NMTC) financing for eligible businesses
- US Treasury-certified Community Development Entity (CDE)

Development Fund of the Western Reserve, Inc.
Community Development Entity (CDE) Service Area



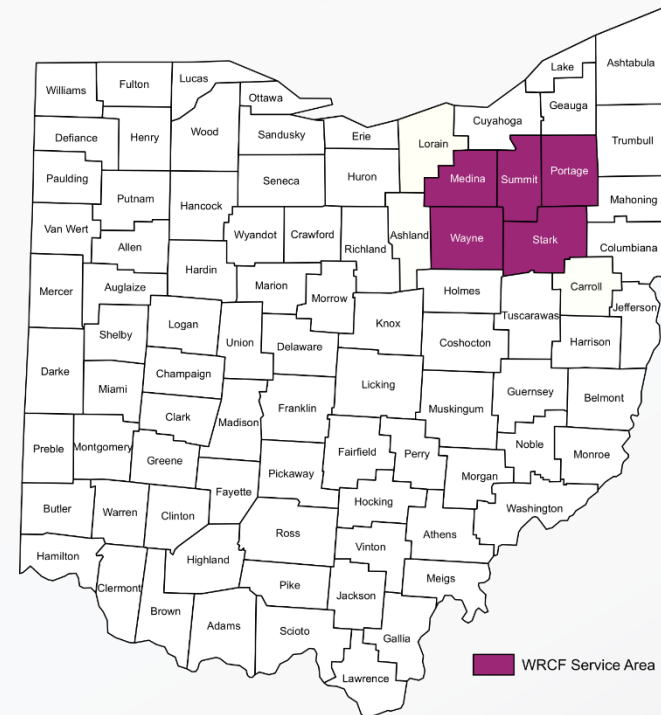
Western Reserve Community Fund (WRCF)



WESTERN RESERVE
COMMUNITY FUND

- Private non-profit 501(c)(3)
- Established in 2019
- Small business & non-profit lending for eligible businesses
- A certified Community Development Financial Institution (CDFI)

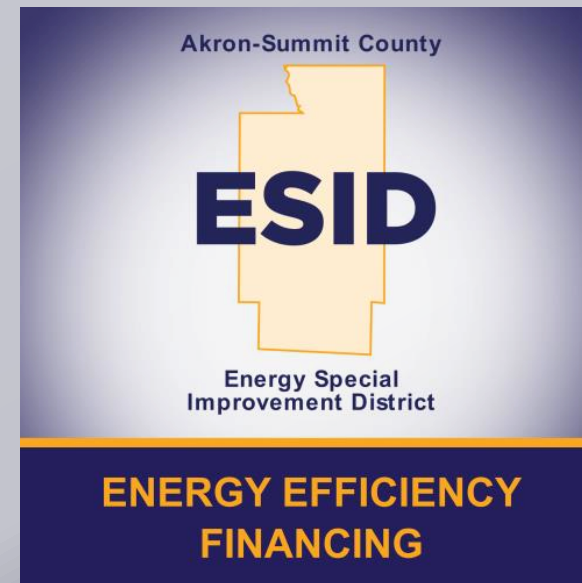
Western Reserve Community Fund
Initial Service Area



Property Assessed Clean Energy(PACE)

Summit County, Ohio Observations

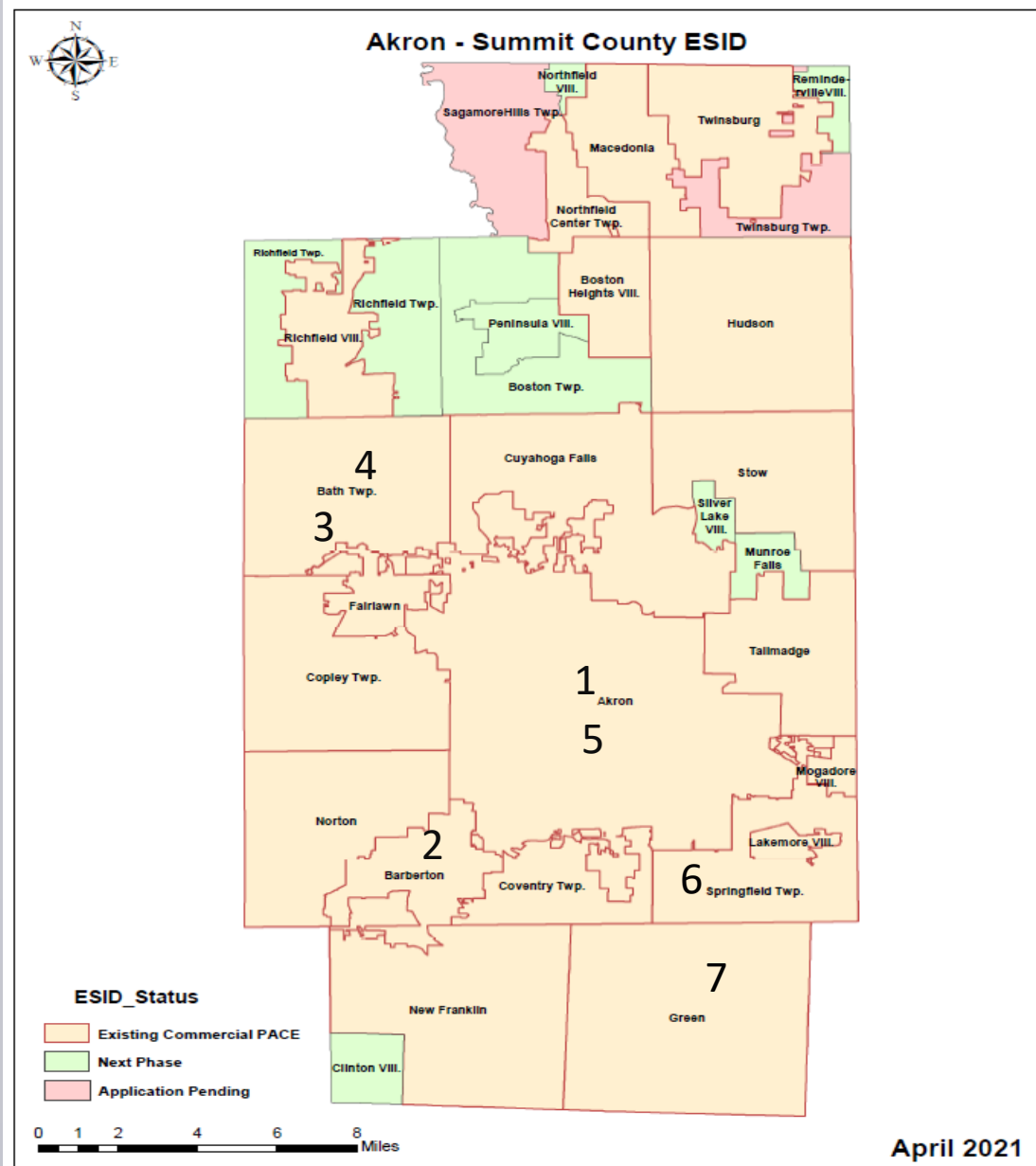
- With the onset of PACE financing becoming available in Ohio in 2016/2017, the County Fiscal Office expressed concerns that needed addressed: multitude of possible lenders perhaps coupled with the ability/awareness of various communities to administer and process PACE assessments.
- Also, communities preferred to not create/administer individual Energy Special Improvement Districts (ESID), conducting meetings, filing financial statements and/or audit with State of Ohio, incurring costs etc.
- To the extent each community within the county created an ESID, there could be as many as 31.
- It was determined to extent possible one organization, the DFA could manage the ESID.



Expanding the ESID throughout the County

- It's one thing to determine to create a multi-community ESID, it's entirely another matter to determine how to do it; the answer:
- DFA made a series of PACE loans to each community. Loans were as small as \$500 and as much as \$13,000, payable through a voluntary assessment within a one or two year period. Project examples include new lighting for pump stations, playgrounds, parking lots, etc.
- To date there are 21 communities in the ESID.
- Because there were so many community projects and with the onset of private commercial PACE projects, the County Fiscal Office required a "Standing Payment Agreement" whereby the borrower sends the tax payment to Summit County, and the county subsequently sends the PACE assessments to DFA.
- DFA then disburses the payments to the various PACE lenders.
- From 2017 to date, the Akron Summit County ESID has experience with six commercial PACE projects in three different communities. In 2022 we anticipate three more PACE projects, two of which are in new communities

PACE projects located in Akron-Summit County Energy Special Improvement District:



**#1 One Cascade Plaza,
Downtown Akron - \$5.6M**

**#2 Akron Rubber Development
Laboratories, City of Barberton
- \$2.5M**

**#3 Crystal Clinic, Bath Township
- \$4.1M**

**#4 260 Springside Drive, Bath
Township - \$1M**

**#5 Canal Place, Downtown
Akron - \$6.1M**

**#6 2022 Prospective Project,
Spring Field Township**

**#7 2022 Prospective Project,
City of Green**



Attracting private capital to Northeast Ohio for public good.

Development Finance Authority
of
Summit County Ohio

Chris Burnham, President

Chris.Burnham@developmentfinanceauthority.org

www.developmentfinanceauthority.org



PACE 2.0 – The Next 10 Years

Thank you

for joining the conversation today. Send us your questions and comments!

Questions?



PACE 2.0 – The Next 10 Years

Upcoming Events



Intro PACE Finance WebCourse

This course qualifies for the CDFA Training Institute's Development Finance Certified Professional Program.

REGISTER
TODAY >>

December 8-9, 2021 DAILY: 12-5 PM Eastern

Thank you

for joining the conversation today. Send us your questions and comments!

CDFA // BNY Mellon Development Finance Webcast Series: Affordable Housing Finance – Market Rate/Affordable/Low-Income

Tuesday, December 21, 2021 @ 2:00 PM - 3:00 PM Eastern

Fundamentals of Economic Development WebCourse

January 26-27, 2022 @ 12:00 PM - 3:00 PM Eastern

Intro Bond Finance WebCourse

February 14-15, 2022 @ 12:00 PM - 5:00 PM Eastern

Register online at www.cdfa.net



PACE 2.0 – The Next 10 Years

Thank you
for joining the
conversation
today. Send us
your questions
and comments!



Ariel Miller

Manager, Research &
Technical Assistance
614-705-1319
amiller@cdfa.net

This webcast is designed to provide accurate and authoritative information in regard to the subject matter covered. It is available with the understanding that CDFA and the panelists are not engaged in rendering legal, accounting, or other professional services. If legal advice or other expert assistance is required, the services of a competent professional should be sought.