

# Toward Financing An Emerging Community Energy Program

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City of Charlottesville

County of Albemarle

University of Virginia

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***COG Discussion***

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# Context and Background

- The City of Charlottesville, the County of Albemarle, and the University of Virginia are developing climate action plans in 2009.
- The initial focus will be on energy (and water) conservation and efficiency, for the existing building stock – which accounts for 63% of the community's greenhouse gas contribution.
- In an effort to pool resources and efforts, the City and County are jointly applying for a grant from SEEA, the Southeast Energy Efficiency Alliance. SEEA will be awarding a southeastern city \$500,000 to design a program that reduces energy and water use by consumers and businesses.
- The proposal effort has created a general design for a community energy program to address very aggressive goals in the RFP.



# SEEA RFP Goals and Models

## Goals:

- Deep market penetration (30-50%), all market sectors
- Comprehensive utility savings (20-40% per participating customer)
- 5 -7 year timeframe
- Program design can be widely replicated

## Program models:

- Cambridge Energy Alliance (CEA)
- NYSERDA
- VEIC/Efficiency Vermont



# Proposed Approach: A Local Energy Alliance Program

Tie together, strengthen, and leverage the region's unique assets into a community-based alliance that creates a sustainable energy future for our region.

## Design a sustainable approach to energy:

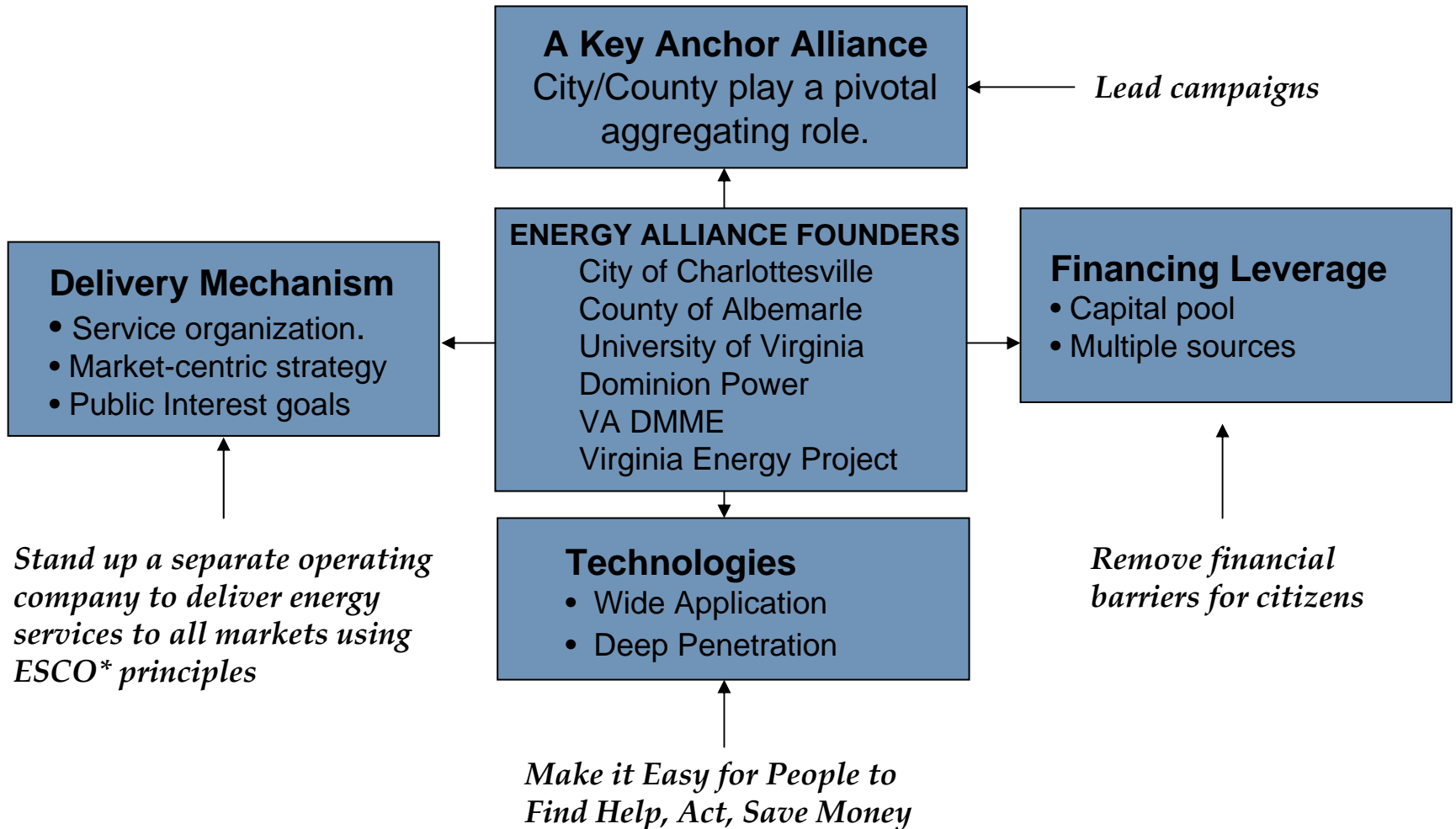
- Public-private partnership and a market-making approach
- Broad systemic approach: building shells, systems, behavior
- Aggressive focus on energy efficiency
- Deliberately phase in alternative/renewable generation
- Put people to work, revitalize construction, create a vibrant retrofit market
- Develop new economic sector, businesses, infrastructure and community

## Implement it in deliberate campaigns over a 5-7 year period with aggressive goals

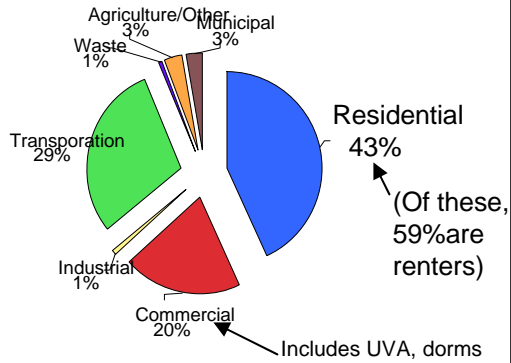
- 30-50 % market penetration in all sectors
- 20-40% gains for each participating customer
- Reduce GHG emissions on an 80% by 2050 pace
- Pace is 10-20 buildings per day
- Make it self-funding, an attractive investment

Bring ESCO-like approaches to the residential and small commercial sectors  
Establish a market-centric, self-sustaining program - not a grant-based program

A Proposed Model : Community-based, public-private alliance, which delivers proven approaches to energy efficiency to all sectors of the community.

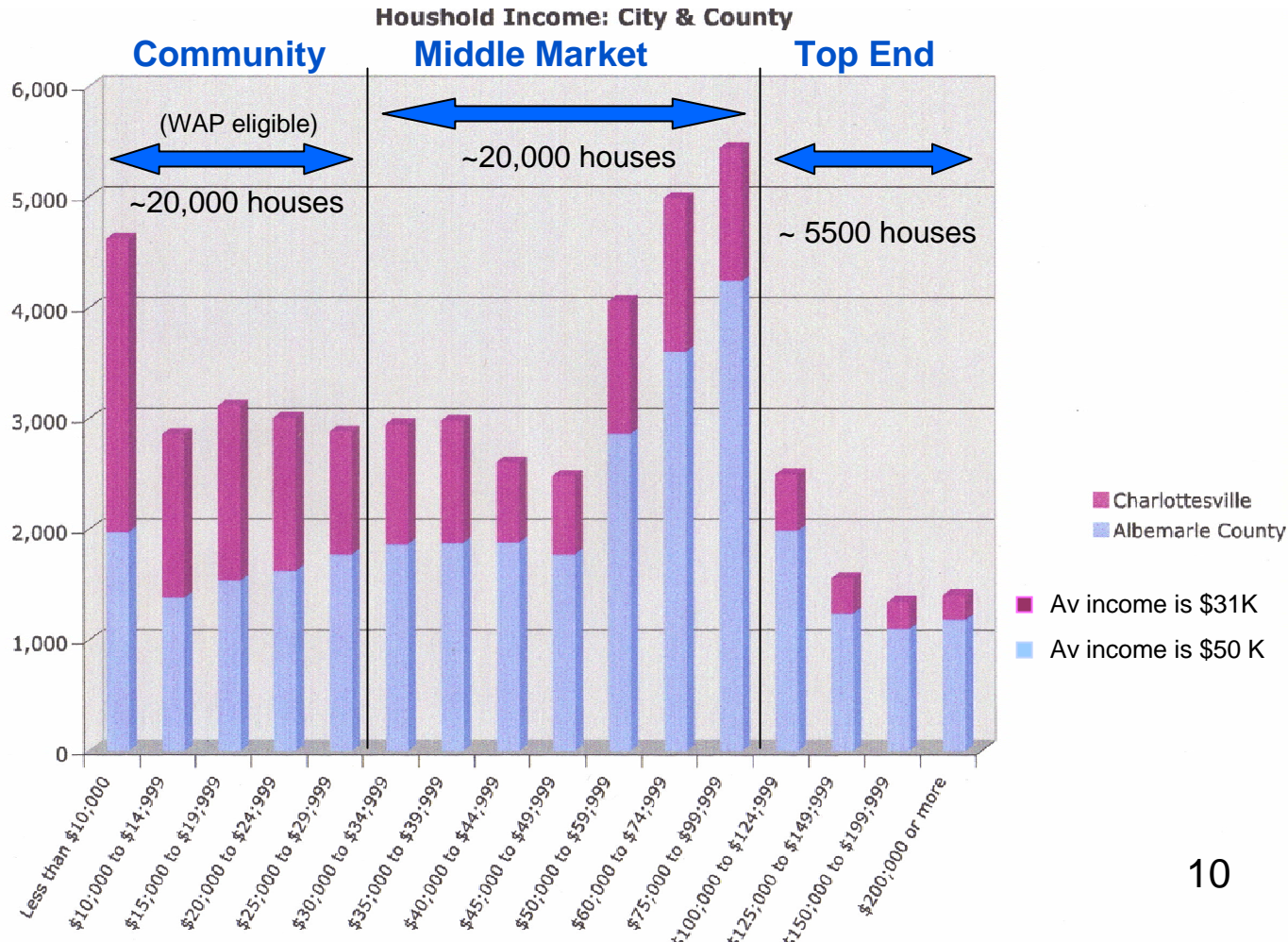


Regional (City/County) Emissions (2000 Baseline of eCO2)

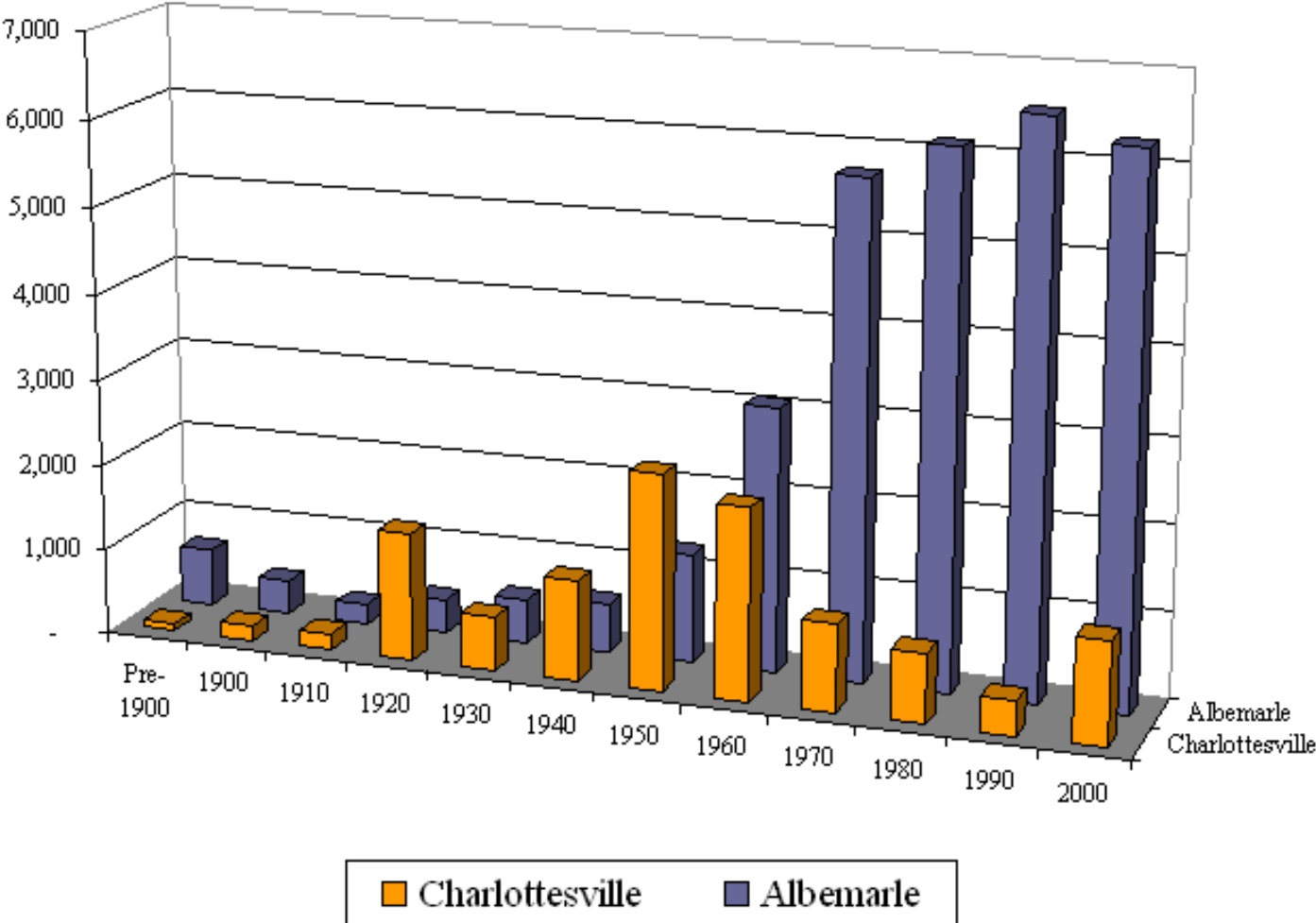


# Focus on Residential

With 45,000 houses and 2768 businesses, the region's building stock is largely residential, with **three clear tiers** as a function of annual household income.

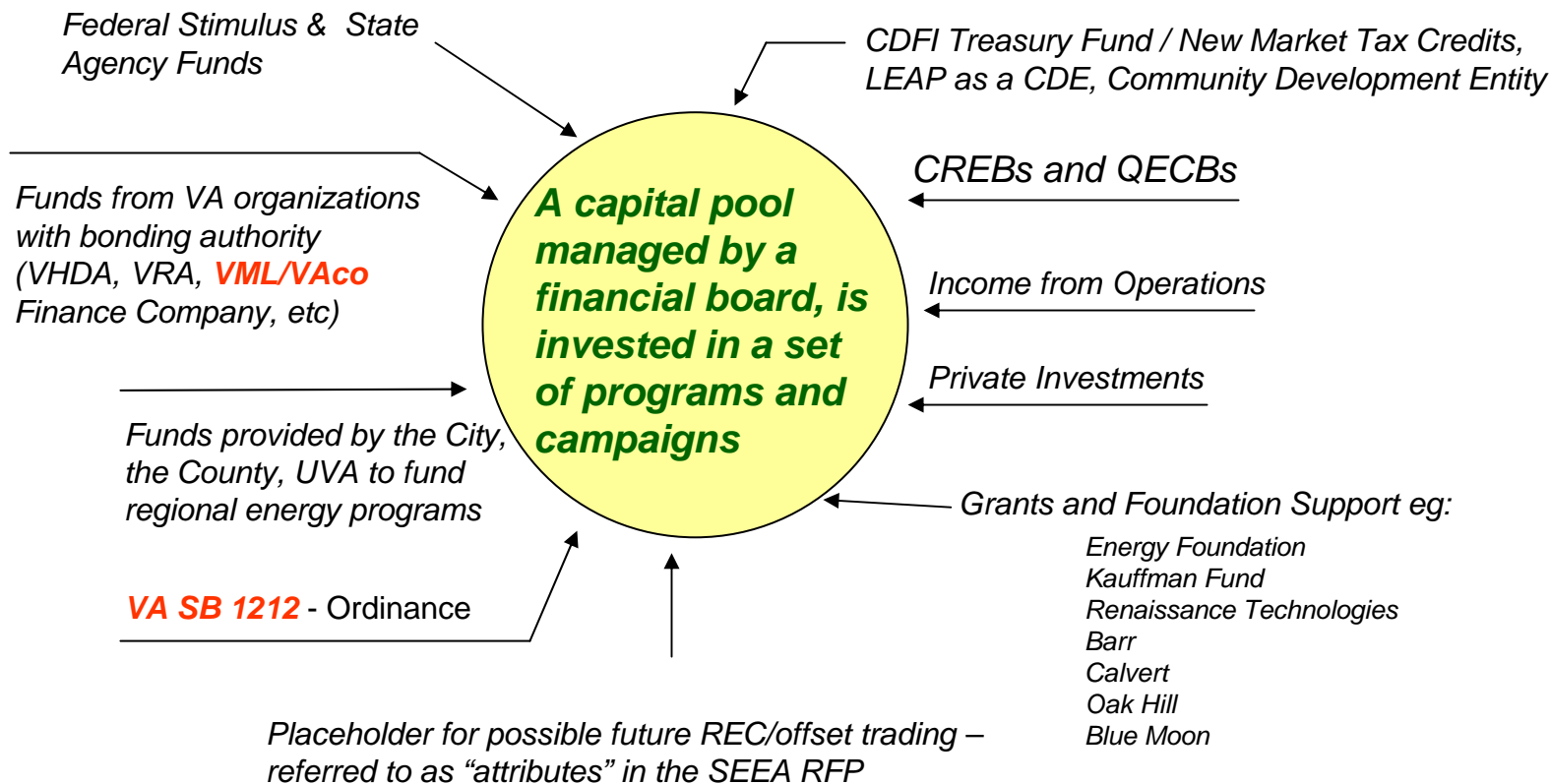


The City and County's buildings were constructed at different times, suggesting a tiered service arrangement.



# The Funding Strategy: Diversify

Develop a capital pool from multiple sources to invest in energy programs which save people energy, money and generate fee income. Manage the pool with oversight from a financial board.





The funds will be invested in capabilities and campaigns; some highly targeted programs, some open market programs, but all ultimately aimed at 30-50% penetration and 20-40% energy gains per participating customer.

## A Portfolio of Coordinated Campaigns from Weatherization to Renewables to Utility Scale Initiatives

### Capability

Marketing & Outreach

Energy Star / BPI Partnerships

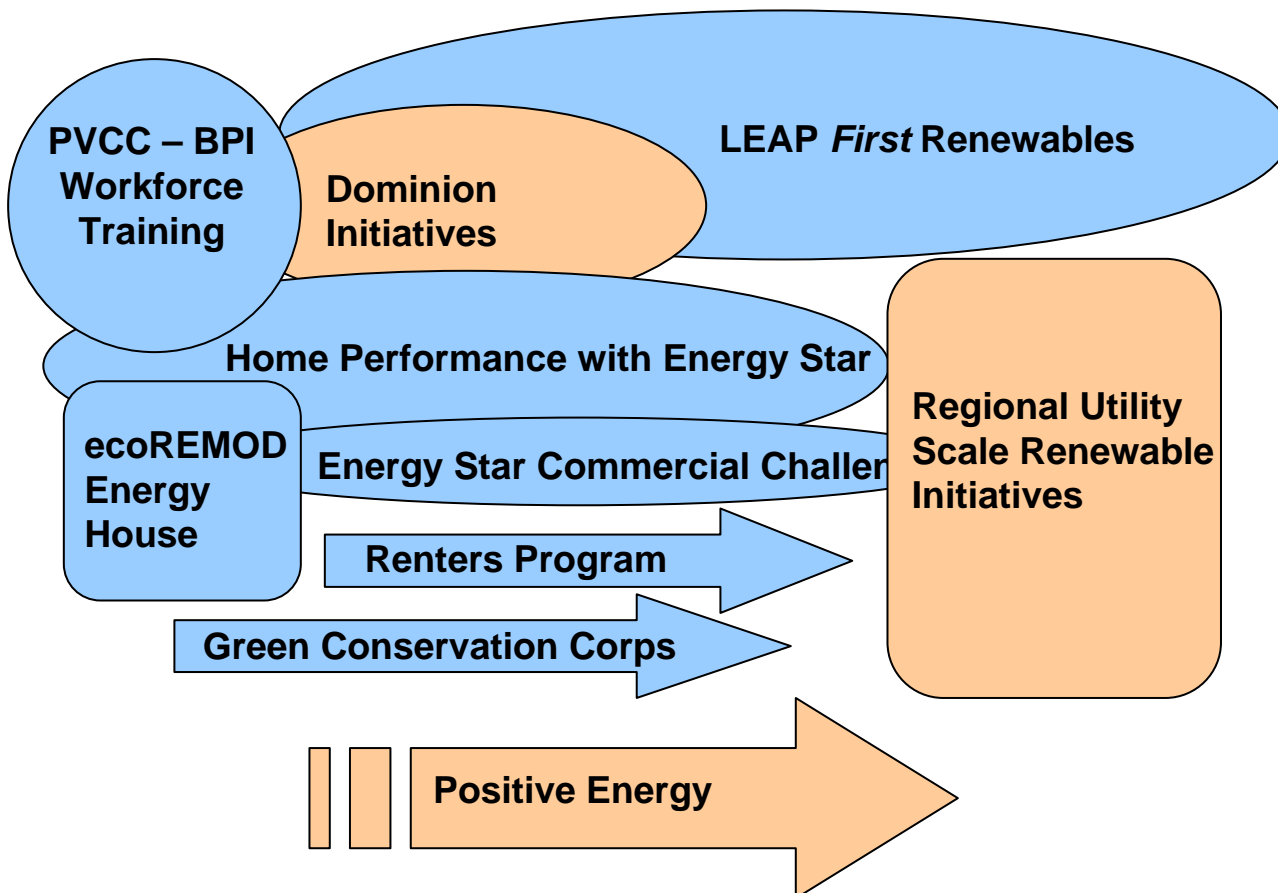
Contractor Training & Certification

Project Financing Arrangements

Energy Specialist Technical Supports

Website, e-commerce

Quality / M&V



# The Core Value Propositions

- To the Customers:

We want you to implement the sensible energy improvements that will save you money. We will provide the delivery system, financing and risk management to make it safe to invest, make sure it works and make sure it pays for itself

- To the Contractors and Trade Partners:

We want you to get certified to do this energy work well, to guarantee your work, and in return, we will bring you motivated customers that have prearranged financing

- To Lenders & Financial Partners:

We want you to make a market in your community by making low interest energy loans, enjoy a solid return, and we will take virtually all the risk off the table.



# LEAP will succeed on a scale-based economic model.

Suppose operating revenue is 2% of project fees and 2% of the financing. The chart below shows Operating Profit in Year 3 as a function of # of houses and average project size.

Average Project Size	30% share (2,340 houses in year 3)	40% share (3,120 houses in year 3)	50% share (3,840 houses in year 3)
\$1,000	(\$433,200)	(\$392,173)	(\$347,855)
\$5,000	(\$212,785)	(\$98,300)	\$14,781
\$7,000	(\$102,577)	\$64,087	\$196,099
\$10,000	\$62,735	\$269,042	\$468,076
\$15,000	\$338,254	\$636,384	\$921,371
\$20,000	\$613,774	\$1,003,726	\$1,374,665

# Financing

- Public benefit charge?
- On bill financing ?
- Bonds ?
- Banks ?
- Revolving fund ?
- Stimulus / other grants ?
- Private investment?
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# FINANCING CUSTOMERS ENERGY NEEDS

We want to offer a portfolio of diverse financing programs for different needs and budgets. The goal is to take first-cost obstacles down and have savings offset costs. This is a work in progress.

Project Cost (in 000s)  Market	<i>Tier 1</i> Weatherization, Insulation, Appliance Upgrade \$0 - 7K	<i>Tier 2</i> Major Insulation, Window Upgrades Solar Hot Water \$7 - 25K	<i>Tier 3</i> Retrofit & Solar or Ground Source \$25 - 50K
Residential Low	WAP/LIHEAP	"Green Match" Stimulus Supported Guaranteed Loan and Match	
Residential Middle Market	Portfolio of Financing Mechanisms <ul style="list-style-type: none"> <li>- Capital Pool, Bank Programs</li> <li>- Ordinance to implement SB 1212</li> <li>- Power Purchase Agreements</li> <li>- Commercial Leasing</li> </ul>		
Commercial			

# Keystone's Program is very compelling – and complicated

[Department of Environmental Protection, PA Treasury Department, Pennsylvania Housing Finance Agency,](#)  
 administered by [AFC First Financial Corporation](#)

LOANS				
	PURPOSE	LOAN AMOUNT	RATE AND TERM	SPECIAL FEATURES
LOAN for ENERGY STAR <i>Unsecured</i>	For installation of qualifying improvements that are ENERGY STAR rated or meet program standards.	\$1,000 to \$15,000	6.99% Fixed Rate 3,5 or 10 Year Term	- <u>Unsecured</u> , No Lien - No Fees or Closing Costs - No Pre-Payment Penalty
LOAN for ADVANCED PERFORMANCE ENERGY STAR <i>Unsecured</i>	For installation of qualifying improvements that exceed ENERGY STAR standards.	\$1,000 to \$15,000	5.99% Fixed Rate 3,5 or 10 Year Term	- <u>Unsecured</u> , No Lien - No Fees or Closing Costs - No Pre-Payment Penalty
RENOVATE AND REPAIR LOAN for ENERGY STAR <i>Secured</i>	For installation of qualifying improvements that are ENERGY STAR rated or meet program standards.	\$5,000 to \$35,000	6.375% to 8.875% Fixed Rate <i>Depending on Home's Equity and Loan Term</i> 10, 15 or 20 Year Term	- <u>Up to 120% of Home's Value</u> - 1 <sup>st</sup> , 2 <sup>nd</sup> or 3 <sup>rd</sup> Lien - Less than \$400 closing costs (may be included in loan) - No Pre-Payment Penalty
WHOLE HOUSE IMPROVEMENT LOAN <i>Unsecured</i>	For improvements that make your "whole house" more energy efficient as recommended by a Certified Energy Audit. <i>Predicted minimum energy savings of 15% to 25% required, depending on your home's energy profile.</i>	\$1,000 to \$15,000	4.99% Fixed Rate 3,5 or 10 Year Term	- <u>Unsecured</u> , No Lien - No Fees or Closing Costs - No Pre-Payment Penalty - \$325 Energy Audit Credit
WHOLE HOUSE IMPROVEMENT LOAN <i>Secured</i>	For improvements that make your "whole house" more energy efficient as recommended by a Certified Energy Audit. <i>Predicted minimum energy savings of 15% to 25% required, depending on your home's energy profile.</i>	\$5,000 to \$35,000	3.875% to 6.375% Fixed Rate <i>Depending on Home's Equity and Loan Term</i> 10, 15 or 20 Year Term	- <u>Up to 120% of Home's Value</u> - 1 <sup>st</sup> , 2 <sup>nd</sup> or 3 <sup>rd</sup> Lien - Less than \$400 closing costs (may be included in loan) - No Pre-Payment Penalty - \$325 Energy Audit Credit

REBATES		
	PURPOSE	REBATE AMOUNT
REBATE for ENERGY STAR	For installation of qualifying improvements that are ENERGY STAR rated or meet program standards.	Up to \$250 10% of the cost of purchase and installation of eligible improvements
REBATE for ADVANCED PERFORMANCE ENERGY STAR	For installation of qualifying improvements that exceed ENERGY STAR standards.	Up to \$500 10% of the cost of purchase and installation of eligible improvements

# Arch 2030's – 14X Program uses financing to target specific results.

- The 14x Stimulus plan proposes using ARRA funds to create a local mortgage buy-down program that offers reduced mortgage interest rates contingent upon renovating or building new to meet specific energy reduction targets. (eg a specific standard, HERS rating, etc.
- To qualify for the program, a homeowner is required to invest a minimum amount in efficiency and energy reduction measures. , creating demand for construction jobs and generating much-needed private spending. The cost of the efficiency upgrades is added into the mortgage, but, because of the lower interest rate, the homeowner's monthly mortgage payments are significantly lower. The homeowner also benefits from lower monthly energy costs.
- For existing homes, mortgage interest rates would be lowered 1% below the current market rate qualified for by the homeowner if, with a minimum homeowner investment in efficiency upgrades and/or renewable energy systems (which is added into the new mortgage), the home is renovated to meet a minimum HERS 70 (or equivalent<sup>1</sup>) rating.

# Developing a Loan Application Contract to Reduce Risk

For customers interested in a little help starting their investments in energy improvements, LEAP are working with local lenders to provide flexible financing options. The financing arrangement will allow you to take advantage of a quick and easy approval process with participating banks, with three different loan tiers, depending on how much you wish to borrow at this time.

TIER ONE - up to \$7000, at 5%, for up to 7 years

TIER TWO – up to \$25,000 at 5%, for up to 15 years

TIER THREE – up to \$50,000 at 5%, for up to 25 years

***Vary the rates to create incentives for specific levels of EE savings***

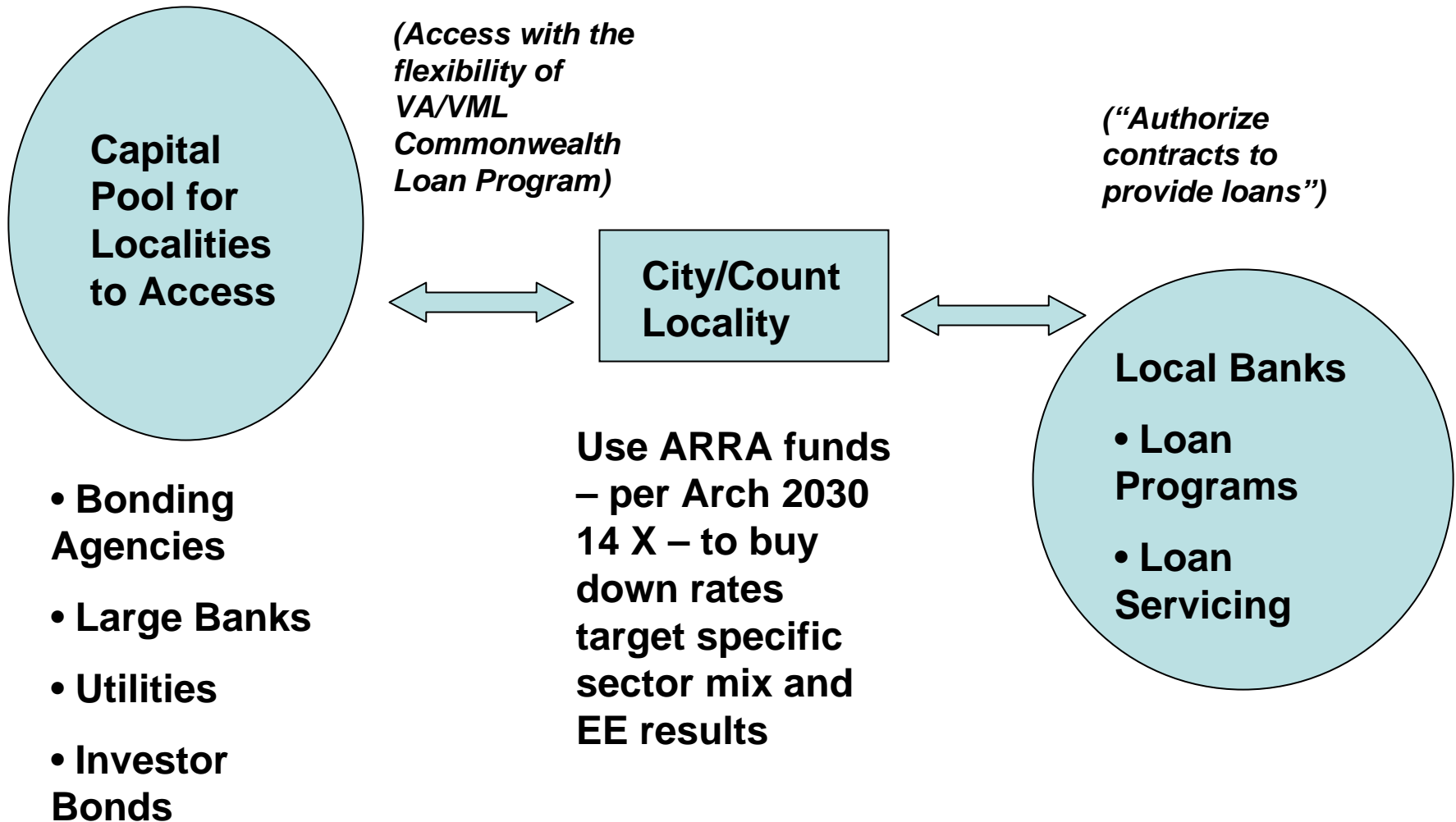
In all cases, we will work with you to set things up so that the savings you can expect from the improvements in your property exceed the cost payments. LEAP loan financing guidelines are:

- 1) No energy improvement loan can be made for more than 20% of the building's assessed value (don't fix things that shouldn't be fixed)
- 2) The useful life of the proposed energy measures should be less than 75% of the useful life of the property (make sure there is opportunity for payback)
- 3) The loan payments should be less than 75% of the anticipated savings expected from the energy improvements (build in cash flow breathing space)
- 4) The proposed energy measures will produce at least a 20% return within 7 years (a requirement of Home Improvement with Energy Star)

LEAP wants to help you finance your energy investments because the availability of money for up-front costs should never stand in the way of longer-term savings.



# Toward a Financing Framework that Thinks Regionally, Acts Locally



# Contact Info

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