



“Electrifying our homes and businesses is one of the surest climate actions that we can take right now. We can use already **existing, proven technologies** to dramatically reduce **carbon pollution**, create millions of good-paying **jobs**, and secure a more **equitable future** for our communities.”

-Senator Heinrich



Electrify NM: Coalition of Sustainable Communities New Mexico

Grace Park-Bradbury, General Manager West,
BlocPower

September 15, 2021

partnerships@blocpower.io



Agenda

- Overview of Buildings, Electrification and industry challenges
- Scalable, Just programs with BlocPower
- Models for program financing





About BlocPower

- BlocPower is a minority-owned clean tech company founded in 2014, focused on greening residential and small commercial buildings in the U.S.
- BlocPower develops and finances energy efficiency and clean energy projects for building owners in dense urban areas.



nationalgrid

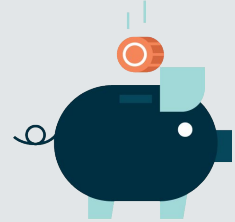


ANDRESSEN
HOROWITZ

Kapor
CAPITAL



Our software platform streamlines the process of designing and installing these projects, **cutting down the time and cost** of completing an energy project.



BlocPower financing enables building owners to get much-needed energy-saving infrastructure improvements with **no money upfront** and projects can be profitable day one.

U.S. buildings are inefficient and unhealthy.



75%

Increased energy usage

5 million U.S. small- and medium-sized buildings are outdated and inefficient, consuming 40% to 75% more energy than needed

30%

Increase in sickness

30% more people experience sick building symptoms than those in green certified buildings



The terms “building electrification,” “beneficial electrification” and “building decarbonization” all describe shifting to use electricity rather than fossil fuels for heating and cooking.

The goal:

All-electric buildings powered by solar, wind and other sources of zero-carbon electricity.

Environmental and social factors drive Building Electrification



- **Health** - indoor air quality, increasingly impacted by wildfires and natural disasters
- **Equity** - mandates to direct benefits toward disadvantaged communities highlight gaps in building infrastructure
- **Climate Change** - Federal, state and city governments have identified building electrification as a critical component of their climate action plans and roadmaps and have enacted policies to reduce fossil fuel use*
- **Financial incentives** - over 1,800 incentive programs now exist across the US to support owners in electrifying their heating, cooling and hot water. **
- **Green Workforce Development** - programs introducing electrification training***

*NYC's Roadmap to 80x50's included "transitioning away from fossil fuels in buildings"; Boston identifies that 80% of existing buildings must be electrified; Denver, CO includes electrification in their goal of net zero energy

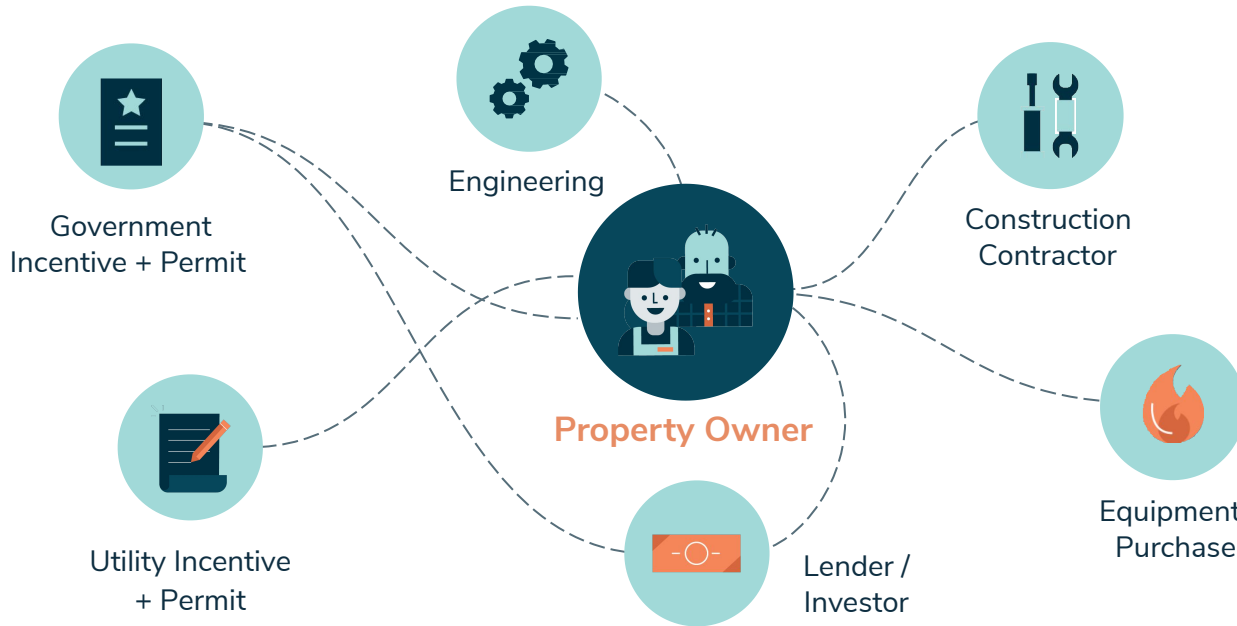
**New Mexico's Sustainable Building Tax Credit provides up to \$2,000 per Energy Star ASHP in Low Income buildings

***ICAST received a DOE-BTO grant to pilot innovative training in HVAC technologies with Santa Fe Community College

To electrify, property owners must hire 6-12 parties across multiple industries



The problem: complexity



Fragmented datasets and communication prevent efficient project assessment and collaboration

This drives up costs, reduces profitability, and prevents **5 million SMEs** from upgrading.

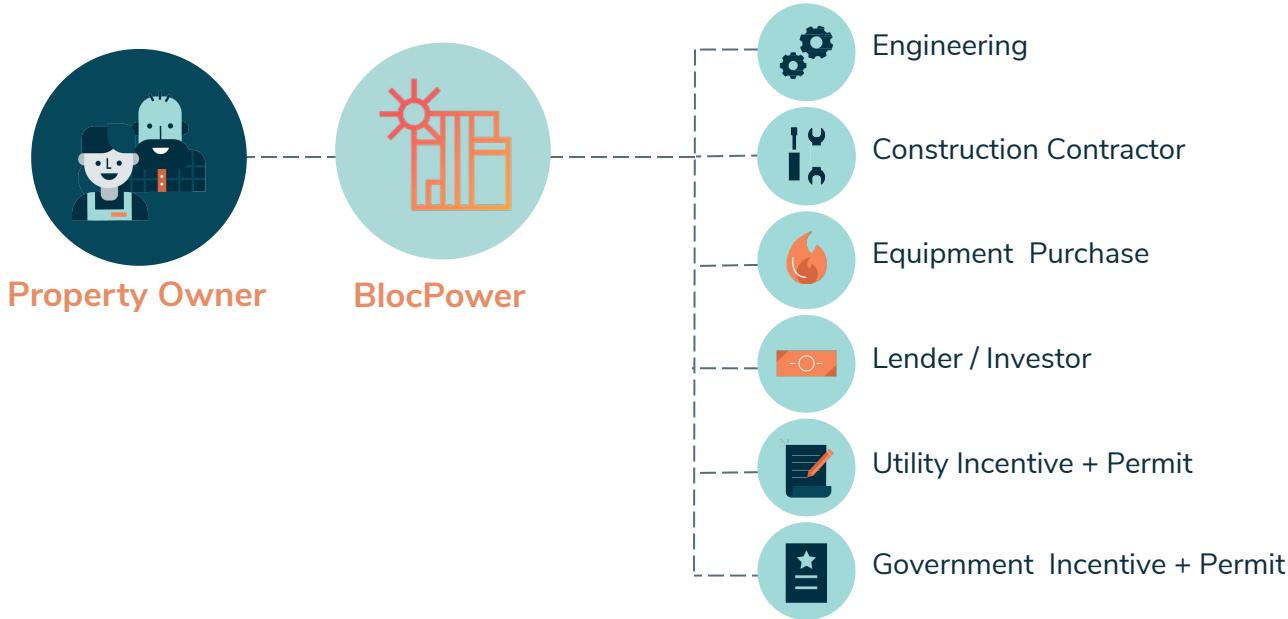
80%

Project Cost Increase Potential

BlocPower delivers a one-stop solution for building owners, working with local partners

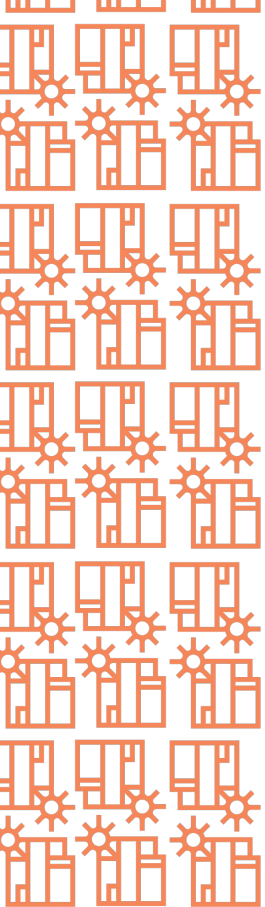


The solution: a steward of the customer experience



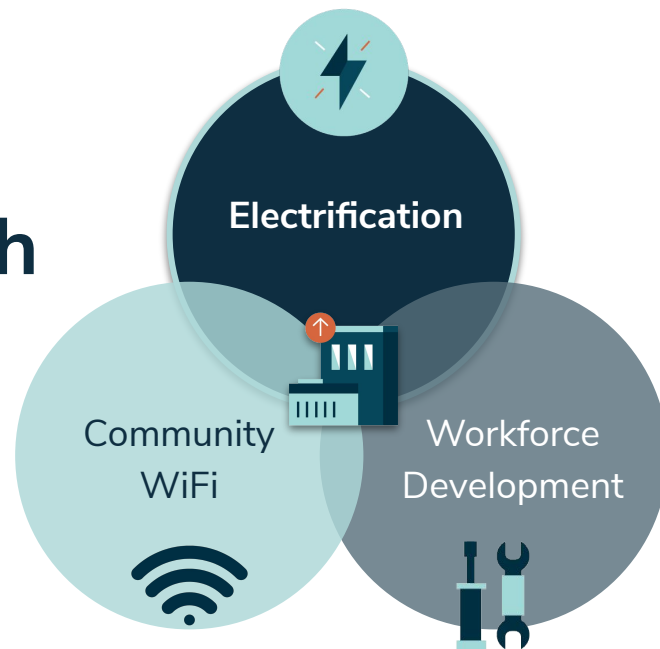
Software streamlines project management and keeps costs low

Financial offering eliminates upfront cost & structures payments to match savings



BlocPower works with YOUR CITY

Three overlapping solutions support an equitable transition to clean energy



BlocPower partners locally to bring impact to communities



Blueprint for a scalable program

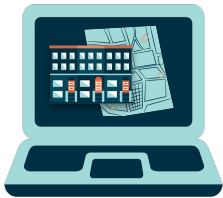
Pilot



- 1-10 building projects (single-family, multi-family, houses of worship)
- Unit economics
- Marketing materials
- Community Advisory Board



Software



- BlocMaps with Analysis layers (e.g. BP Target, EJ score, etc.)
- Inform program prioritization + funding deployment



Scaled Program

- Software-enabled, community-wide implementation of retrofits
- Building project finance
- Program administration
- Flexible & stacked custom incentive pool
- Workforce development
- Marketing and outreach

Getting off the ground with pilot projects delivers key insights to inform scaled program (land and expand)

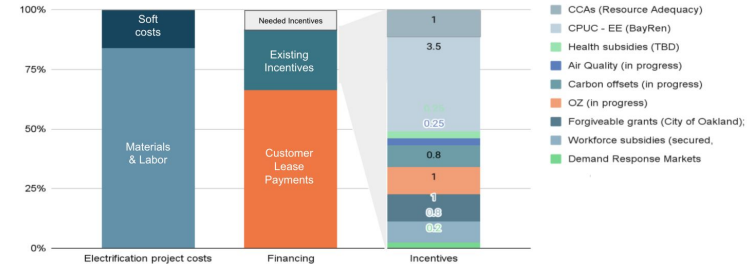


Pilot model

Pilot



- Informs the Capital Stack
 - Identifies and scopes necessary incentives, including securing federal funds
- Uncovers on-the-ground conditions and pain points to collectively resolve
- Develops community proof points (such as Houses of Worship) and trust
 - Develops social proof in locally-completed projects
 - Source of Marketing materials
 - Initiates Community-based approach, including advisory boards, and word of mouth campaigns



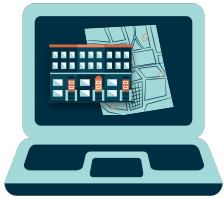
Illustrative

Pairing software with city data and local insights support pilot success and enable scale



BP Target and Preliminary Needs Assessments

Software

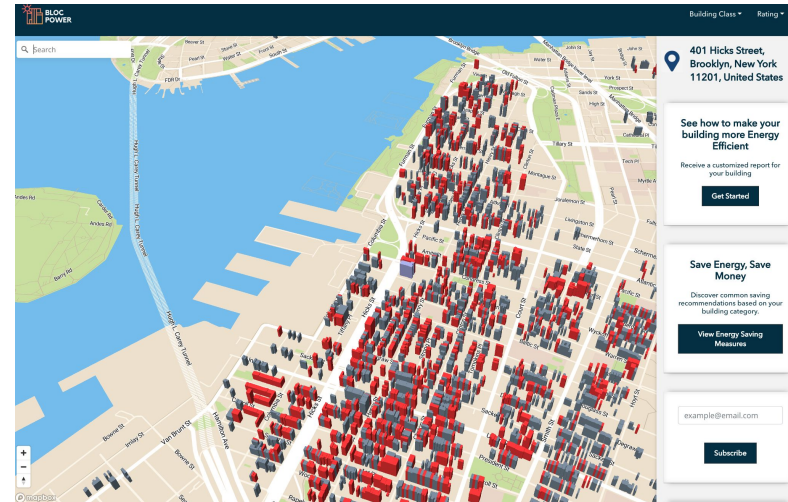


BP Target

- BlocPower software built on public and proprietary data sets
- Building visualization tool for an entire community of buildings, allows cities, utilities, and private building owners to view each building's energy efficiency score within a community

Preliminary Needs Assessment Engine

- Produces an automated list of recommended energy conservation measures, or PNA, to provide guidance and direction for the necessary scope of each retrofit project



An “all of the above” suite of electrification services allow building owners to pursue what’s best for them



Air source and
ground source heat
pumps;
High SEER AC units



Heat pump hot water



Home appliances, +
panel upgrades



LED lighting,
insulation, air sealing,
water measures



Remediation:
Lead, mold, asbestos



Monitoring and
control systems



Local Solar or
Community Solar



Battery Storage

BlocPower brings low-cost capital to stakeholders underserved by other funding sources



Primary Audience	Market-Rate Customers	LMI Customers	Objectives and Characteristics
Green Bank	✓		Provides financing to prove new market-based solutions + Supports rapid growth of clean energy to new markets - Ill-equipped to deal directly with complexity of LMI
PACE	✓	✓	Enables a path to finance clean energy improvements - Does not require a high credit score - Places lien on the building; opportunistic sales
ESCOs	✓		Targets large commercial buildings and portfolios <ul style="list-style-type: none"> • Portfolio & commercial service leaves unserved market • Controls customer use, can lead to lack of comfort
BlocPower Lease	✓	✓	Making the savings, health benefits, and comfort from electrification accessible to LMI customers <ul style="list-style-type: none"> + 0 money down option + Payments matched to savings + Holistic approach to credit ratings + No lien placed on home + Flexible capital to address deferred maintenance

BlocPower brings:

- Diverse & flexible capital streams dedicated to electrification; continually lowering capital costs
- Partnership to leverage federal funds
- Expertise in incentive stacking and navigation

Justice reframes the typical adoption curve and centers the transition in historically underserved communities



Typical Market-based Adoption Curve

Adoption driven by access to resources & risk tolerance



Early-adopters: →
Risk takers who have
resources and desire to try
new things

Majority → **Laggards:**
Make decisions based on
past experience; not
economically able to take
risk on new ideas

LMI-First Adoption Spiral

Adoption driven by potential to benefit



A **just transition** centering on those with highest
energy burden, negative health impacts, and the
compounded burdens of historical racism

Centering equity in a green workforce builds wealth throughout the community



BlocPower's Apprenticeship training model grows the labor force, recruiting trainees from community networks and using grants and impact capital to create paid "on the job" training slots on crews completing BlocPower projects. BlocPower provides an on-ramp for diverse workers into high demand and high pay industry.

1. Multifamily residents (overlapping significantly with LMI) are able to take advantage of health and wealth benefits
2. Contractors expand their business to additional value-add technologies
3. Local workforce grows and deepens their green skillset beyond solar
4. The community at large benefits from money and jobs that stay local and flow through all corners



Building durable wealth in the community

Community WiFi eases the digital divide and strengthens long-term customer value



- Digital divide has a proven negative impact on education and job readiness that widens or reinforces wealth and health gaps
- Community ownership and governance input opportunity for communities to build wealth
- Workforce development opportunity



The New York Times

ON TECH

Think Local About the Digital Divide

DIY internet projects like this one in the Bronx may help us get more Americans online.

f w t i s

Nicole Giselli

By Shira Ovide

Published Dec. 3, 2020 Updated Dec. 4, 2020

This article is part of the On Tech newsletter. You can [sign up here](#) to receive it weekdays.

A rooftop in the Bronx may point a way to a better internet in the United States.

On a recent Monday, workers bolted an internet antenna — a flat, rectangular-shaped box fitted onto a metal pole — to the side of the rooftop of a Catholic school in the South Bronx. It beams free wireless internet to people who live in the immediate area. About [38 percent of Bronx residents don't have home internet](#), even higher than the 29 percent for all of the city.

Case Study: Affordable Housing in West Oakland



Maintaining below-market rents while improving their health and comfort

- Landlord and life-long resident of West Oakland wanted to eliminate on-site fossil fuel use in her building without passing on the costs to her tenants
- BlocPower partnered with local community developer Revalue.io to provide cleaner, electrified heating, cooling, and hot water, while improving the overall performance of her building envelope through weather-proofing insulation
- Additional workforce training incentives secured by Revalue
- BAYREN incentives brought the cost of the project down to \$32K, being repaid at 5.5% interest.

Estimated annual energy savings: \$1,300+

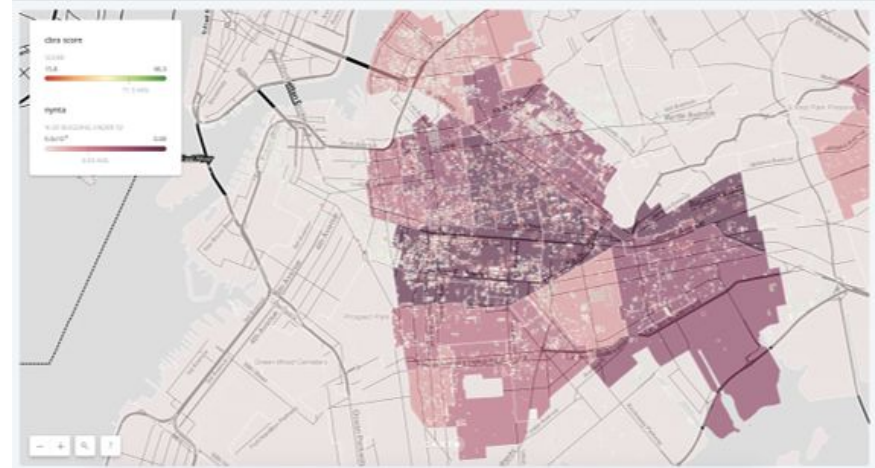


Case Study: Community-Level Engagement



Partnership with NYC Mayor's office and community groups brings impact to scale

- NYC Utility and NYC government hired BlocPower to manage a 500-building project to reduce peak demand in Brooklyn.
- BlocPower completed the project under budget and one year ahead of schedule
- BlocPower used utility data and sensor data to recommend equipment upgrades and replacements.
- BlocPower connected building owners to top contractors and brought “smart” energy efficient equipment to the table.
- Community Advisory Board model emerged - local community leaders joined BlocPower to build trust and drive referrals





BlocPower Impact

1,200+

Energy efficiency and electrification projects completed

- Air source heat pumps
- Solar installations
- Building envelope updates
- Deep retrofits including lead and asbestos removal
- LED lighting

\$1,165

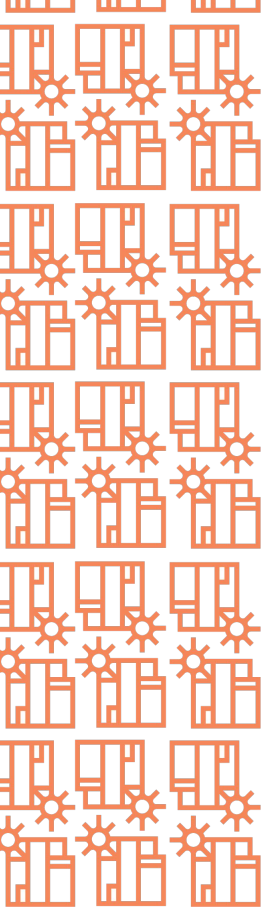
Estimated average annual energy bill savings to customers

- \$0-down lease financing including installation, maintenance, and repair

155

Jobs created

- 1500 Workforce trained
- Workforce development focusing on minorities, women, veterans and previously incarcerated citizens



How do cities pay for things?

Program financing models

Climate, COVID, Justice40 and other national tailwinds support funding for intersectional programming



Models from other cities across the US

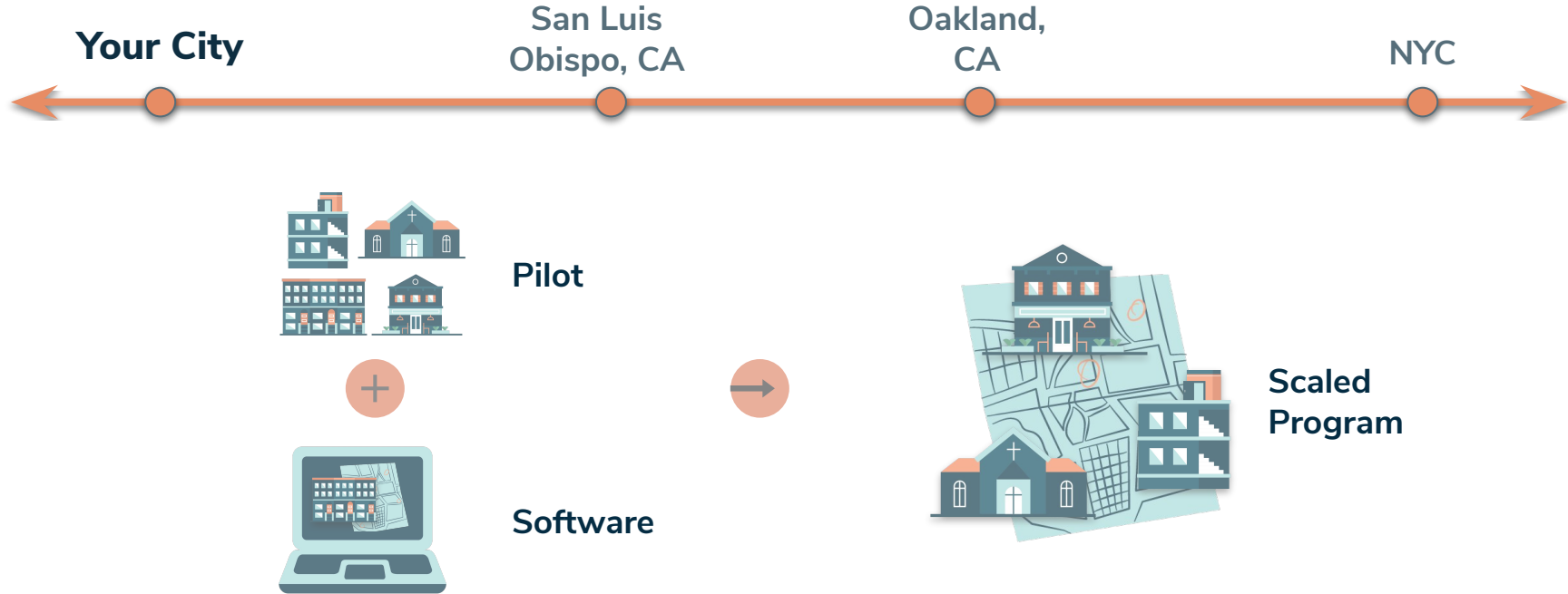


- Federal funding opportunities
 - [RMI's federal funding opportunities for local decarbonization](#) spreadsheet resource for cities to leverage federal \$ for these programs
 - NYC - ARPA funding for workforce development to lower costs of electrification
 - ME - Allocated \$50m of ARPA funds over two years to accelerate weatherization, electrification, and ventilation (\$15m in FY2022 and \$35M in FY 2023), with a particular focus on low-income, older residents, and renters.
- NYC
 - Layers incentives from local utilities (ConEd, National Grid), NYSERDA
- Pittsburgh
 - [Priority Based Budgeting](#) - Pittsburgh applied a novel budgeting approach to identify programs across departments and budget by outcome instead of line item/department to increase impact
- San Luis Obispo, CA
 - Budgeted for initial SW and strategic prioritization spend as part of GHG leadership
 - Leveraging local Renewable Energy Network incentives and CA TECH program via the Public Utilities Commission

Get started with accessible electrification in YOUR CITY



Cities on the path to electrification with BlocPower





How do we get started?

Collaboration in practice

Drive alignment within city leadership to center equity while addressing the climate crisis



Clear positioning through policy, practice and budget

- Center equity in discussions of climate policy
 - Work across departments to align budget priorities
- Provide easy, affordable capital to remove up-front barriers
 - Get creative to stack and direct funding to projects (e.g. air quality; workforce development)
- Support Community-based engagement and buy-in through local channels and proof points
 - Recognize and counter sources of predatory delay (e.g incentivizing hybrid systems that lock in stranded assets, paid for by those that can't afford it)



Leverage today's momentum for New Mexico

Tactical steps to get started



- **Today's discussion:**
 - What are the unique circumstances and opportunities for this group of cities in New Mexico?
 - How can this group work together to be more powerful?
 - What can we work on individually?
- **Continuing discussion:**
 - Email partnerships@bloccpower.io for:
 - Pilot Enablement Materials
 - Sample case studies



Questions?
Thank You!

partnerships@blocpower.io