BUILDING ON SUCCESS:

CASE STUDIES FOR GGRF DEPLOYMENT

Case studies highlight local decarbonization solutions and success stories in communities





Case studies showcase the opportunity to deploy local solutions at scale through the Greenhouse Gas Reduction Fund and other federal programs.

This set of case studies ("Building on Success") showcases a diverse range of projects, programs, and partnerships that enable investments in an efficient, healthy, and green building stock.

These 15 examples highlight the ingredients that feed into a successful, community-driven building decarbonization project, including:

- Multi-stakeholder collaboration
- Local leadership to support project development
- Convergence of state, local, and other resources with financing solutions to fill gaps in the market

These case studies showcase opportunities to scale existing solutions for investing in a cleaner and more efficient U.S. building stock. The Greenhouse Gas Reduction Fund and other federal funding programs present a generational opportunity to support community-driven solutions using the successful models that state and local climate leaders have pioneered.

This strong foundation of state and local leadership in supporting green investment will be critical to unlocking the full potential of federal funding.

The following case studies are offered as an example of what is possible as these federal funds begin to flow.



ALI AT LAKEWOOD: Adaptive reuse of vacant building supported by Invest Atlanta and C-PACE financing.



THE PROJECT

Product: C-PACE

Lender: Amalgamated Bank

Project Investment: Approx \$1.2 million (C-PACE only)

Location: Atlanta, Georgia

Project Measures: LED lighting, low U-Factor Windows, high efficiency HVAC (heat pumps), high efficiency DHW, low flow

plumbing fixtures, hydraulic elevators

THE PATH

- The property owner, a **local developer** committed to supporting small business growth and sustainable economic development, identified an opportunity to convert a vacant office building into a vibrant mixed-use office/retail property.
- Invest Atlanta, the city's economic development agency, helped enable construction financing for the project alongside partners. And when C-PACE was identified as an addition to the capital stack, as Program Administrator for Atlanta C-PACE, Invest Atlanta was able to support the financing solution from a different perspective, showcasing the type of multi-stakeholder involvement and creative financing that enables local redevelopment efforts and green building investments.
- Amalgamated Bank funded this C-PACE transaction using Allectrify's FASTPACE platform, which enables all lenders to transact C-PACE using standardized transaction tools.

THE RESULTS

- Adaptive reuse. Vacant office building will be productively utilized.
- Energy savings. Project measures support lower energy costs and opex savings.
- Scale-able Solution. FASTPACE enables efficient, replicable solution.

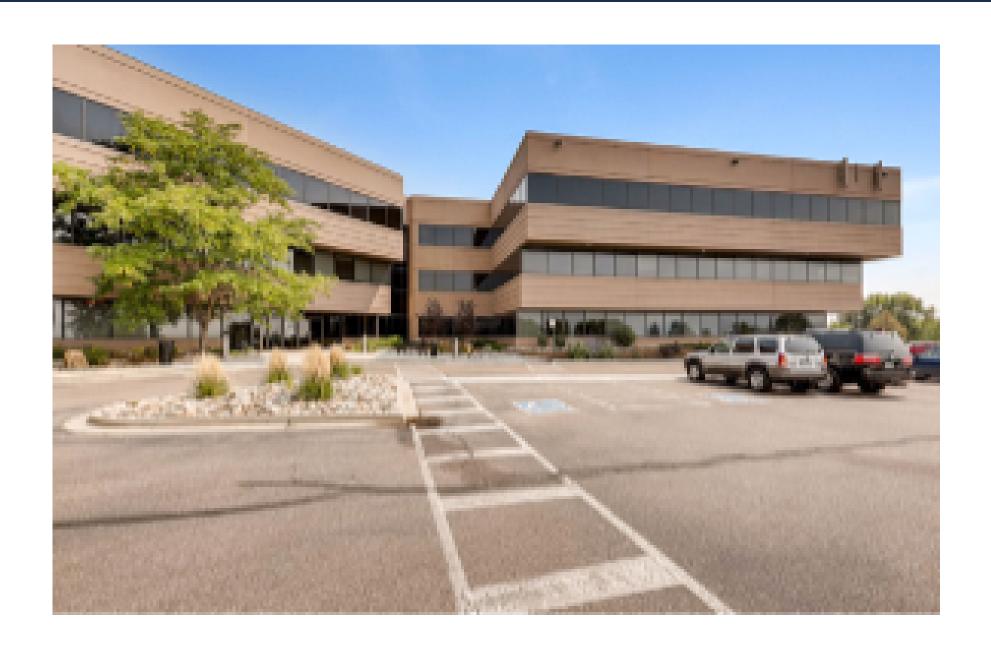


The financed improvements result in 128,000 lbs of annual carbon emissions reductions.





COLORADO SPRINGS: Local credit union deploys green capital to support office building efficiency upgrade.



THE PROJECT

Product: C-PACE

Lender: Bellco Credit Union

Project Investment: \$818,000

Leastion: Colorado Springs, Colorado

Location: Colorado Springs, Colorado

Project Measures: Chiller plant upgrade & controls

THE PATH

- The property owner of a Colorado Springs office building identified an opportunity to upgrade its chiller plant and invest in controls upgrades to improve building performance, reduce operating costs, and invest in compliance with Colorado's Building Performance Standard.
- **Bellco Credit Union** provided C-PACE financing for the building to invest in these upgrades, supporting a long-term customer and aligning with the credit union's focus on positive environmental impacts.
- The project was financed under **Colorado C-PACE**, A program of the New Energy Improvement District (NEID), administered by **Sustainable Real Estate Solutions**, which also delivered technical assistance to evaluate investment opportunities and expected performance metrics.

THE RESULTS

- Improved building performance. The upgrades improve building operations.
- Compliance support. The investments supported a path to compliance under the state's Building Performance Standard.
- Lower energy costs. The upgrades enable energy and cost savings.



The financed improvements result in upwards of 940 metric tons of GHG reductions.





BUILDING DECARBONIZATION IN A BOX: Program bundles technical and financial assistance to support small- to mid-size buildings.



THE PROGRAM

The **Building Decarbonization in a Box** program provides access to project technical assistance and financing solutions.

- **Technical Assistance:** Building owners can access no-cost, third-party resources to help scope, evaluate, and finance their building energy project.
- **C-PACE Lender Training**: Banks, credit unions, and CDFIs can access no-cost training to become a C-PACE lender and access a pipeline of finance-ready energy improvement projects.

THE PATH

- Owners of small/mid-sized commercial buildings face challenges to planning and funding capex upgrades to improve building performance, including for predictable needs like HVAC replacements.
- The **Building Decarbonization in a Box** program provides a turnkey solution: wraparound technical assistance to building owners and training for lenders to deploy green capital to these upgrades.
- Program implementation partner **Sustainable Real Estate Solutions** (SRS) provides third-party analysis using the **EPICTM** software tool to help building owners understand options and quantify benefits.

 Analysis can draw on standardized utility data enabled by **UtilityAPI**.
- In tandem, **Allectrify** enables access to long-term financing solutions for all project sizes through its FASTPACE platform, helping ensure projects are able to be completed.

THE RESULTS

- Market need. Program is designed to fill a gap in the market facing small/mid-sized buildings.
- Scaleable program. Program is designed to be scaled up and sustained using GGRF resources.



Nine cities and counties are among the early adopted of the BDAB program, providing resources to local building owners.







CYCLE HOUSE: DC Green Bank supports LISC financing for mixed-use, net-zero energy affordable housing.



THE PROJECT

Product: Construction financing **Lender:** DC Green Bank & LISC

LIHTC Investor: National Equity Fund

Developers: Urban Green & VNV Development

Location: Washington, DC (Ward 5)

Project Measures: Net-zero new construction

THE PATH

- DC Green Bank participated in Local Initiatives Support Corporation's \$7.5 million construction financing for Cycle House, which will be the among the first mixed-use net-zero energy buildings in DC.
- Developed by **Urban Green** and **VNV Development,** the property will provide 18 units of affordable housing and 1,525 sq ft of commercial space. The building will be constructed using a modular approach, enabling portions to be constructed off-site, shortening the construction period.
- The net-zero building will produce at least as much energy as it consumes thanks to efficient design, solar PV systems, and fuel cells. The project is targeting LEED Platinum and Passive House sustainability certifications and will be bicycle-friendly and conveniently located to transit.



THE RESULTS

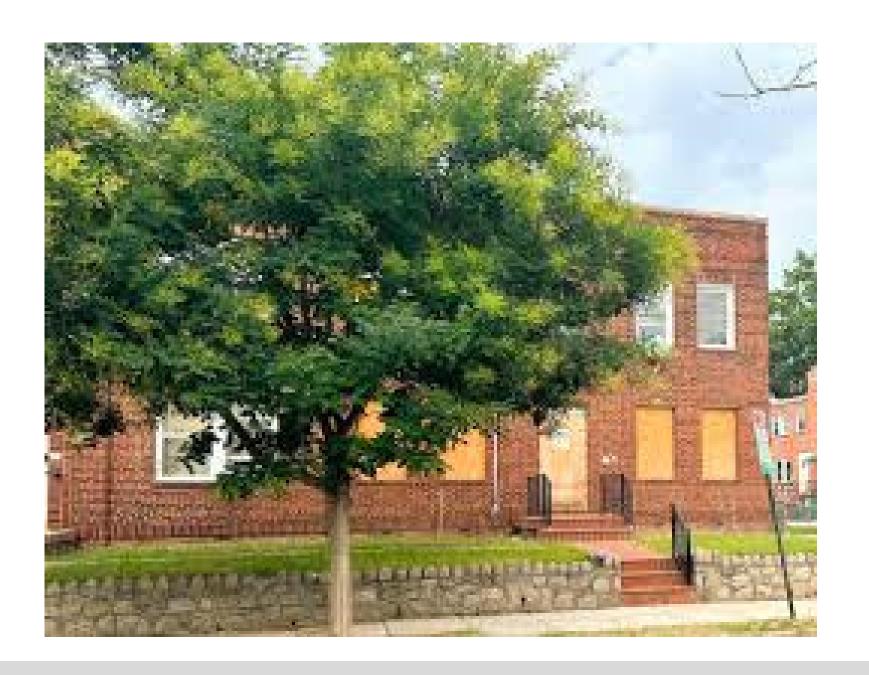
- Affordable Housing. 18 affordable units created plus retail space.
- **Net-zero building.** The first net-zero mixed use property in DC.
- Innovative Design. Modular design and highperformance certifications set a high standard.



The project will create 18 units of affordable housing available for households between 30-60% AMI,



DC Green Bank and partners support all-electric, energy-efficient affordable housing developments.



THE PROJECT

Product: DC Green Bank construction loan, paired with grant funds from Capital Impact Partners' Housing Equity Accelerator Fellowship

Lender: DC Green Bank

Grant Funder: Amazon's Housing Equity Fund

Developer: A-Peace, LLC

Location: Washington, DC (Wards 7 & 8)

Project Measures: All-electric new construction and major renovation

to existing building, including solar PV

THE PATH

- **DC Green Bank** provided a \$3 million construction loan to a local developer, **Ayesha Hudson** (founder & CEO of **A-Peace, LLC**) for electrification, efficiency upgrades, and solar at existing affordable housing in DC's Ward 7 as well as to develop a new, all-electric building creating 9 affordable units in Ward 8.
- Hudson is an alumna of Capital Impact Partners' Equitable Development Initiative and has long focused on affordable housing for underserved communities. In addition to the construction financing, Hudson was awarded a \$300,000 grant through Capital Impact Partners' Housing Equity Accelerator Fellowship, funded by Amazon's Housing Equity Fund.
- The ability to complement DC Green Bank's loan capital with mission-driven grant support reflects the power of partnerships and the role of multiple sources of capital in supporting impactful projects.

THE RESULTS

- Affordable Housing. 4 units preserved & upgraded; 9 units created.
- **Energy savings.** Once complete, the solar systems are expected to generate > 55k kWh annually.
- All-electric buildings. All-electric development supports sustainability over the long-term.



The projects are expected to avoid more than 59k tons of carbon emissions annually.



ENERGY SAVER HOME LOAN PROGRAM: Green Bank provides flexible financing for green home upgrades in LMI communities.



THE PROGRAM

The **Energy Saver Home Loan Program** provides a consumer loan product designed to accelerate the adoption of clean energy technologies by low- and moderate-income homeowners (up to 135% AMI) with flexible terms & low costs.

Loan type: Subordinate mortgage

Term: 240 months. 18-month interest-only period enables customers to avoid going out of pocket prior to receiving rebates, incentives, credits.

Interest rate: 0.5% to 2%

Projects: Eligible projects must achieve 20%+ energy savings

THE PATH

- The Massachusetts Community Climate Bank (MCCB), created in June 2023 as the nation's first green bank dedicated to affordable housing, developed and launched the Energy Saver Home Loan Program.
- The program provides holistic, dedicated support for homeowners to help navigate the home improvement process, addressing barriers to both accessing financing and completing projects.
- The high-touch program model reduces barriers to access and connects consumers with key resources.
 All In Energy, the Cape Light Compact and CET provide consumer-facing concierge services, while
 Abode Energy Management serves as the statewide energy services provider.
- **MassHousing** works with a network of originating lenders to support the program, ensuring the resources are deployed as broadly as possible.

THE RESULTS

- Equitable investment. Program designed to meet needs of LMI home-owners.
- Concierge support. Wraparound customer service improves accessibility.
- Scaleable program. The program is designed to be scaled up with federal Inflation Reduction Act resources.



MCCB has allocated \$20 million dollars to the program, with a goal of serving 1,000 homes





FLATIRON HEIGHTS: Pathway Lending finances a green office conversion with C-PACE using FASTPACE platform.



THE PROJECT

Product: C-PACE

Lender: Pathway Lending

Project Investment: \$997,000 (C-PACE only)

Location: Chattanooga, Tennessee

Project Measures: Office to Mixed-Use Conversion with multiple measures including LED lighting, heat pumps and

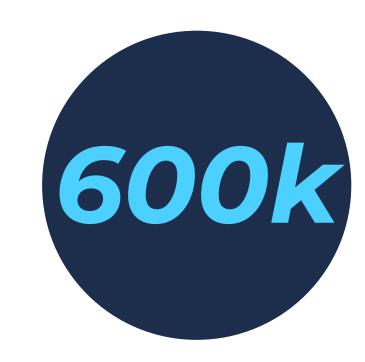
low-flow plumbing fixtures.

THE PATH

- A project developer identified an opportunity to convert **Flatiron Heights,** an historic office building in Chattanooga, into 15 condominiums and 15k square feet of retail/office space. C-PACE was identified as a beneficial addition to the capital stack to support several green building measures in the scope.
- **Pathway Lending,** a Tennessee-based CDFI, funded its first C-PACE loan to support these measures and round out the capital stack for the green redevelopment project.
- This was the first C-PACE financing completed under the **City of Chattanooga's C-PACER program,** an important "first" for the market. Pathway Lending used **Allectrify's** FASTPACE platform to enable efficient and low-cost execution and achieve this milestone.

THE RESULTS

- Energy Savings. Project lowers emissions and energy use while supporting productive redevelopment project.
- Replicable Solution. CDFI-deployed C-PACE is a replicable solution for building energy investments.
- Community Banking. Project suppoted by local, community-driven capital.



The financed improvements result in >600,000 lbs of annual carbon emissions reductions.





FOOTHILLS ART CENTER: Filling a financing gap for a community art center's green building project.



THE PROJECT

Product: CLIMBER Loan (Colorado Loans to Increase

Mainstreet Business Economic Recovery) **Lender:** Collective Clean Energy Fund

Project Investment: \$500,000 (CLIMBER only)

Location: Golden, Colorado

Project Measures: Solar, insulation, windows, LED lighting,

heat pump HVAC units

THE PATH

- Foothills Art Center, a longstanding artistic hub in the western Denver metro region had an opportunity to rehabilitate a vacant building and double the space available for galleries and community events while implementing several energy and accessibility improvements.
- However, bridging gaps in the project budget proved challenging using traditional financing solutions and required collaboration with mission-driven lenders and purpose-built products.
- Impact Development Fund, a regional CDFI, helped the center explore their options and navigate to a solution. Ultimately, the CLIMBER loan product offered by Collective Clean Energy Fund, enabled access to short-term financing at below-market rates.

THE RESULTS

- **Green Building.** Several energy improvements funded & completed.
- Accessibility. Mobility-friendly upgrades.
- Community-driven. Community space and artistic hub growth enabled.

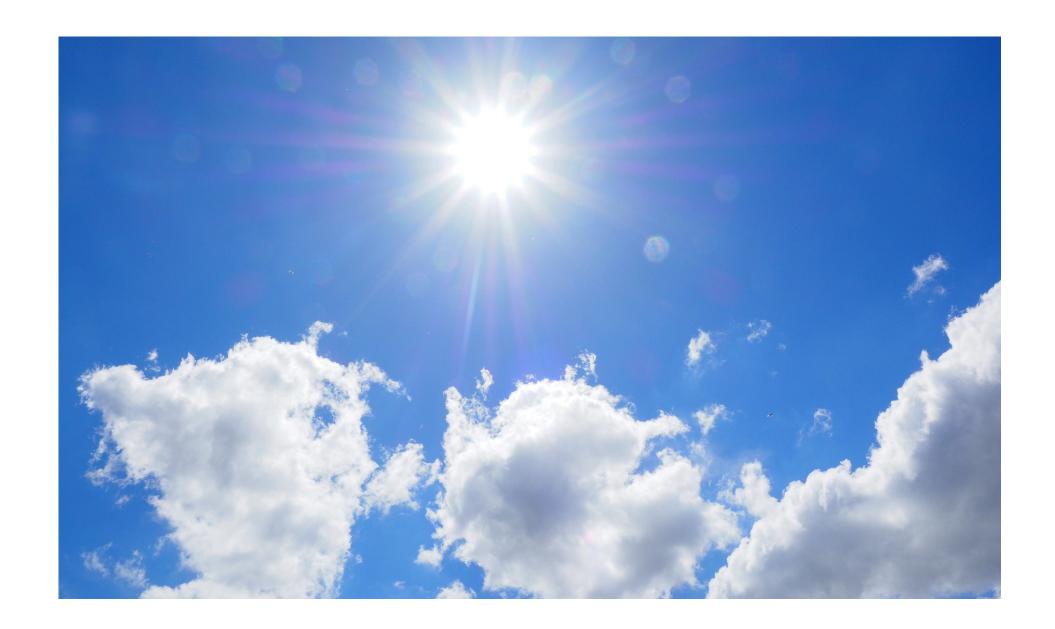
"We appreciate the support and flexibility offered by the CCEF team. Unlike traditional lenders, it's been a situation where we were able to move forward with a lower interest rate [&] favorable terms."

Sherry McEachran
Finance Director, Foothills Art Center





PORTER FARMS: Missouri Green Banc finances solar PV at family farm, lowering operating costs.



THE PROJECT

Product: C-PACE

Lender: Missouri Green Banc

Project Investment: \$400,000 (C-PACE only)

Location: Mercer County, Missouri

Project Measure: Solar PV

THE PATH

- **Porter Farms**, a family farm operating for over 100 years, identified solar PV as an opportunity to lower energy costs and continue to support the family business.
- To finance the installation, they turned to **Missouri Clean Energy District** and **Missouri Green Banc,** which provided C-PACE financing through the **U.S. Department of Agriculture** (USDA) Intermediary Relending Program and using **Allectrify's** FASTPACE platform.
- The project also benefits from the Investment Tax Credit, utility rebates, and a grant from the USDA's **Rural Energy for America Program,** showcasing how diverse sources of of federal and local capital can be leveraged to support clean energy measures.

THE RESULTS

- **Energy savings.** Project lowers electricity bills for long-time family farm.
- Small-balance capital. Allectrify's FASTPACE platform enabled efficient execution for deal size.
- Local Leadership. Missouri Green Banc filled a market gap to support project implementation.

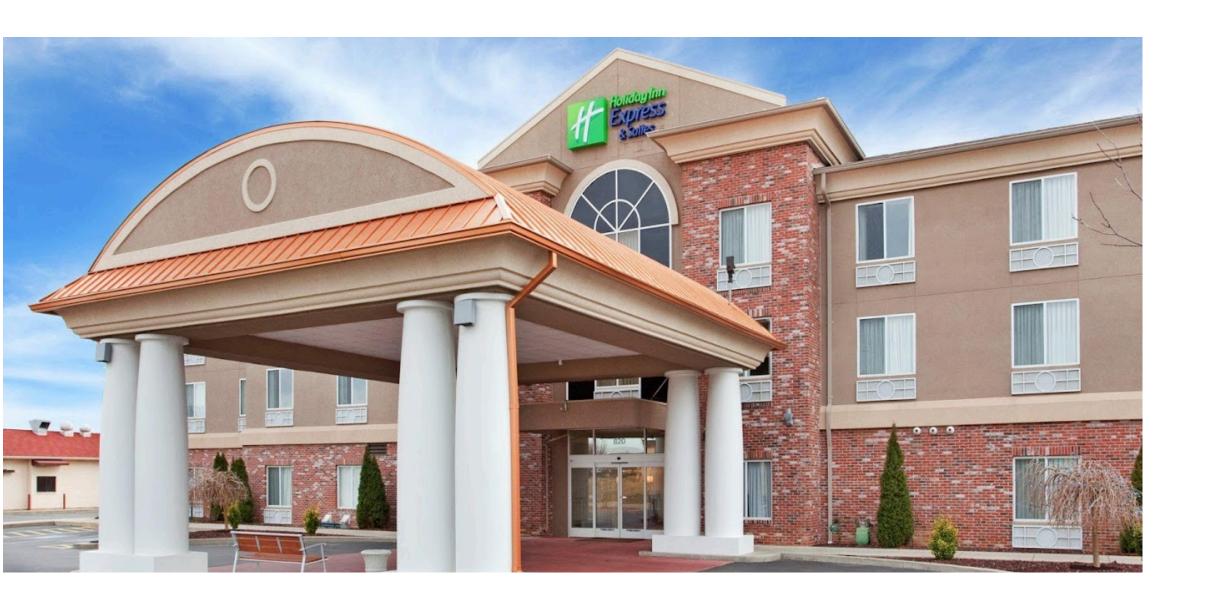
"For over 100 years, the Porter family has grown corn and soybeans in northern Missouri. Our new solar PV system will help us lower our energy costs and stay competitive. The FASTPACE Program was good for my family and our business."

Lori Porter





RURAL SOLAR: Missouri Green Banc finances solar PV in designated disadvantaged community.



THE PROJECT

Product: C-PACE

Lender: Missouri Green Banc

Project Investment: \$200,000 (C-PACE only)

Location: Farmington, Missouri Project Measure: Solar PV

THE PATH

- The **Holiday Inn** in Farmington, MO planned to install solar PV to lower property operating costs and needed a relatively small-balance solution to finance the investment.
- Missouri Clean Energy District funded this C-PACE transaction through the U.S. Department of Agriculture (USDA) Intermediary Relending Program and using Allectrify's FASTPACE platform.
- By enabling a relatively small transaction size and investment in a federally-designated disadvantaged census tract, the financing fills a market gap and demonstrates capital deployment to meet policy goals.
- The project will also benefit from the ITC utility rebates, and a grant from the USDA's **Rural Energy for America Program**, showcasing how resources can be "stacked" to support clean energy.

THE RESULTS

- Energy Savings. Project lowers long-term operating costs for property.
- **Disadvantaged Tract.** Project supports investment in federally-designated disadvantaged census tract.
- Local Leadership. Missouri Green Banc filled a market gap to support project implementation.



The C-PACE financing supports the installation of a 99 kW DC solar PV system.





SAVE ON UTILITIES LONG TERM (SOUL): Groundswell partners with utilities to enable residential energy efficiency upgrades.



THE PROGRAM

The **SOUL** program reduces utility bills through energy efficiency, using a Pay As You Save (PAYS®) approach to pay for efficiency improvements with energy savings.

- Pay As You Save approach
- On-bill repayment
- Eligible efficiency and health & safety investments

THE PATH

- Investing in energy efficiency is an investment in housing equity, as aging, inefficient housing stock drives up energy bills, increasing overall cost burden and impacting the comfort and value of homes.
- The **SOUL** program addresses this challenge. **Groundswell** sees energy efficiency as an investment that can pay for itself, and the program employs individualized but scaleable solutions through its "Pay As You Save (PAYS®)" approach to finance efficiency upgrades for eligible utility customers.
- **Groundswell** works with partners at **EEtility**, a woman-owned B-Corp, to serve municipal and rural utilities and their member-customers through SOUL programs.

THE RESULTS

- Equitable investment. Program is designed to meet community needs and lower energy cost burden.
- Scaleable program. Program is designed to be scaled up and replicated.
- Efficiency-first. SOUL enables energy savings to lower peak demand.



In Year 1, the Soul Home Repairs program enabled >\$500k in critical home repairs, addressing necessary health & safety investments.



SENECA VILLAGE: IPC among mission-driven lender partners supporting affordable housing rooftop solar.



THE PROJECT

Product: Inclusive Prosperity Capital (IPC) provided mezzanine debt, rounding out the project's capital stack

Lenders: Montgomery County Green Bank, IPC, NYCEEC, Locus

Contractors: Solar Energy Solutions & Patuxent

Location: Gaithersburg, Maryland

Project Measure: Solar PV and roof upgrade

THE PATH

- **Seneca Village** is a 58-building, 684-unit apartment complex in Gaithersburg, MD with an opportunity to install clean energy & efficiency upgrades (1.97 MW rooftop solar systems and energy-efficient roofs).
- Multiple mission-driven lenders partnered to provide a suitable financing solution for the project, which is the largest multifamily affordable housing rooftop solar project in its county.
- The **Montgomery County Green Bank** led this transaction, which featured two facilities, one with participations from **NYCEEC** and **Locus**, and one from **IPC** to enable the financing solution.
- Partnerships were critical to providing a comprehensive financing solution, and this project provides a template for similar collaborative investments in multifamily affordable housing projects in the future.

THE RESULTS

- **Equitable solar.** Seneca Village serves a range of households, 90% of which are low-to-moderate income (defined as 60% AMI or below).
- Energy savings. Nearly \$270k in energy cost savings are expected in year one.



The project's projected lifetime energy cost savings total more than \$6.5MM.



SUNWEALTH POWER: Inclusive Prosperity Capital supports mission-driven solar developer in underserved communities.

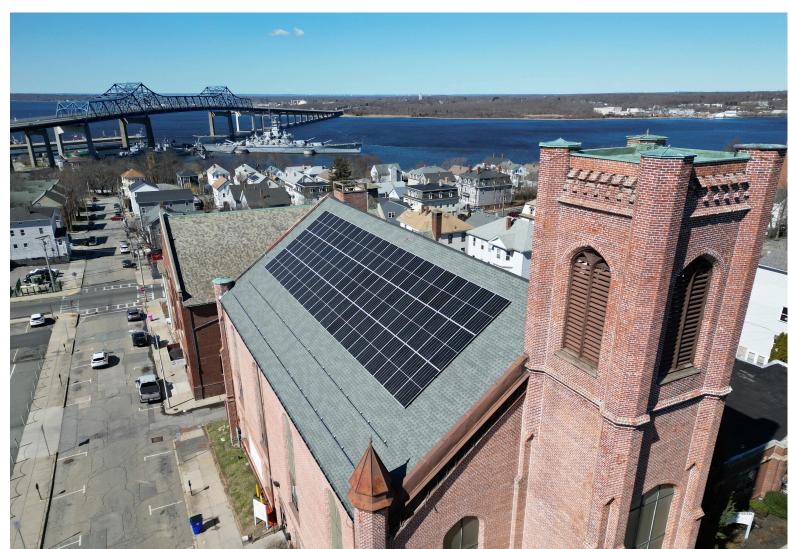


Image Credit: Sunwealth Power Inc.

THE PROJECT

Product: Two solar debt facilities provided to Sunwealth Power Inc., a leading missionoriented clean energy investment firm Lender: Inclusive Prosperity Capital

Project Investment: Two \$2.5 million facilities Location: 18 distributed generation projects

across 6 states

THE PATH

- **Sunwealth,** a leading mission-oriented clean energy investment firm, pursued a financing partnership to support its growing portfolio of traditionally underserved projects, including solar PV systems installed on nonprofit, faith-based, and affordable housing properties.
- They found a valuable partner in **Inclusive Prosperity Capital (IPC)**, a national nonprofit that works to increase financing to clean energy projects that benefit traditionally underserved communities.
- IPC provided financing to support an 18-project portfolio with projects spread across 6 states and totaling 3.5 MW. The facilities closed in summer of 2024, and both organizations hope to build on their relationship in the future through potential **Greenhouse Gas Reduction Fund** opportunities.

THE RESULTS

- Energy savings. \$11.4MM in projected energy savings.
- **Emissions.** >85k MT of projected carbon emissions reductions.
- **Jobs.** >120 solar job years projected to be supported.



The debt facilities support 18 projects across 6 states and totaling 3.5 MW.

Projected results reflect impact over expected operational lifetime.



THE PARK IN PLEASANTVILLE: Financing, rebates, and collaboration enable urgent HVAC improvement.



THE PROJECT

Product: NEIF equipment financing

Lender: National Energy Improvement Fund (NEIF)

Contractor: Thermodynamix
Project Investment: \$380,000
Location: Pleasantville, New York

Project Measure: High-efficiency HVAC

THE PATH

- Building owners of **The Park in Pleasantville**, an office complex in Pleasantville, New York, identified a need to replace HVAC equipment near its end of life and upgrade high-efficiency versions.
- Their contractor, **Thermodynamix** identified an opportunity to install right-sized heat pump rooftop units to serve the building. The plans were tested when an existing unit failed and COVID-related supply chain disruptions impacted equipment availability.
- Upgrades were ultimately completed through the contractor's partnership with the **National Energy Improvement Fund** (NEIF). NEIF provided equipment pre-funding and 100% cost financing that supplemented **Con Edison**'s energy efficiency rebates.



THE RESULTS

- Comprehensive upgrade. The upgrade emphasized high-efficiency equipment and integrated building performance.
- **Dedicated financing solution.** NEIF's financing solution addressed contractor & borrower needs effectively.



NEIF can to offer up to 100% financing for equipment upgrades for partners.





VICARS COMMUNITY CENTER: Groundswell and partners support community-owned resilience hub with solar + storage.



THE PROJECT

Developer: Groundswell **Location:** Atlanta, Georgia

Contractors: InterUrban Solar, SunCatch Energy, and Stryten Energy (note Stryten Energy donated, designed,

and installed the battery storage)
Project Measures: Solar + Storage

THE PATH

- Groundswell, in partnership with the Community Church Atlanta, Stryten Energy, InterUrban Solar, the City of Atlanta, the Wells Fargo Foundation, and GM, supported the development of one of the first community-owned resilience hubs in the Southeast.
- The 34.1 kW DC solar installation at the Community Resilience Hub at the **Vicars Community Center** at the **Community Church Atlanta** utilizes 320 kWh of battery storage to provide community members a safe gathering spot following emergencies or severe weather and otherwise support ongoing services.
- Thanks to the **Inflation Reduction Act**, the Vicars Community Center project leveraged Elective Pay to deliver community ownership and also received a low-income bonus tax credit allocation.
- Prior collaborations laid the groundwork for this project, reflecting the importance of long-term local partnerships and sustained investment in community initiatives.

THE RESULTS

- Clean Energy. The systems support green building operations and energy savings.
- **Resilience.** Solar + storage enables the resilience hub to serve communities in emergencies.
- Community Ownership. IRA tools enable community ownership, while partnerships helped set groundwork.

"We want to be the place people turn to for help in our community, regardless of their faith .. Being a resilience center expands our reach and impact possibilities."

Dr. Kevin Earley
Senior Pastor of Community Church Atlanta

