



Staff Report Item 15

TO: East Bay Community Energy Board of Directors

FROM: Beckie Menten, Program Manager, Building Electrification and Energy Efficiency

SUBJECT: Program to Support and Scale Low to Moderate Income Building Electrification and Efficiency

DATE: September 22, 2021

Recommendation

Receive an update on plans to develop a Low to Moderate Income Electrification Program.

Background and Discussion

Electrification of both the transportation infrastructure and our buildings has been identified as the most cost-effective pathway to achieving our decarbonization goals in California¹. Replacing gas consuming appliances in our buildings with high-efficiency electric alternatives reduces overall energy demand, improves the health and safety of buildings, and supports grid-integrated buildings which can better suit the intermittent nature of a highly renewable grid². Electrification is a key priority of both East Bay Community Energy as well as the State of California.

Frontline communities need to be centered in this transition away from natural gas infrastructure. Frontline communities are more likely to be located in areas of high environmental pollution, resulting in poor air quality and associated health impacts.

¹ "Deep Decarbonization in a High Renewables Future." Mahone, et al. https://www.ethree.com/wp-content/uploads/2018/06/Deep_Decarbonization_in_a_High_Renewables_Future_CEC-500-2018-012-1.pdf

² Electric appliances can be responsive, enabling an increase or decrease in consumption to match the availability of renewable energy content.

These residents have traditionally had fewer opportunities to participate in clean energy programs, in spite of paying equal amounts towards these programs through their utility rates³. As more customers transition away from natural gas infrastructure, the remaining pool of gas ratepayers will be shouldered with the costs of maintaining the distribution infrastructure, potentially resulting in rate increases. Cost considerations aren't the only concern with building electrification - new research is connecting the combustion of fossil fuels in homes with harmful indoor air quality, even linking gas stoves with increased rates of asthma. Further, these impacts have been shown to disproportionately impact lower-income populations⁴. Ensuring that low to moderate income (LMI) communities are prioritized in the transition away from natural gas infrastructure will help protect these customers groups from potential future rate increases while also ensuring they are first in line to receive cleaner, healthier, more efficient buildings.

The need to prioritize LMI communities is especially acute in EBCE's service area. Nine point eight percent (9.8%) of EBCE's customers live in a "disadvantaged community" (DAC) a specification designed by CalEPA to identify communities disproportionately impacted by a combination of lower income and environmental pollution. Twenty two percent (22%) of EBCE's residential customers are on the CARE rate. Thirty two percent (32%) of Alameda County residents are foreign born, with forty-five percent (45%) of our customers speaking a language other than English at home. Finally, forty-six and a half percent (46.5%) of our customers rent their homes, meaning they will have less control over building decisions.

Moderate income communities are also a priority. Income qualified programs offered by California agencies, such as the no-cost Energy Savings Assistance Program, limit participation to customers whose income is 200% of the federal poverty level or less. For a 4-person household, this equates to an annual income of \$53,000. Many customers our service area may be interested in participating in programs, but do not have the cash on hand to cover the cost of a project, even with the presence of incentives. These customers also frequently do not qualify for the income assistance programs. Moderate income customers have been identified as the most likely to perform home improvement projects if given access to capital.⁵ While they may not

³ Greenlining Institute. "Equitable Building Electrification: A Framework for Powering Resilient Communities." https://greenlining.org/wp-content/uploads/2019/10/Greenlining_EquitableElectrification_Report_2019_WEB.pdf

⁴ Seals, Brady. "Indoor Air Pollution: the Link between Climate and Health." <https://rmi.org/indoor-air-pollution-the-link-between-climate-and-health/>

⁵ Zimring, Mark et al. "Scaling Energy Efficiency in the Heart of the Residential Market: Increasing Middle America's Access to Capital for Energy Improvements." <https://eta-publications.lbl.gov/sites/default/files/mi-policybrief-3-6-2012.pdf>

need as much assistance as lower income customers, they should be provided with a pathway to implement building upgrades if these programs are to scale.

Introduction to BlocPower and Description of Opportunity

BlocPower is a black-owned, clean tech company that was founded in 2014. Their focus is greening residential and commercial buildings with an emphasis on LMI communities. BlocPower functions as an ESCO-style program, offering no-upfront cost solutions for customers, allowing them to amortize the project over 10-15 year terms. BlocPower has developed a technology platform which greatly reduces the administrative costs associated with project implementation, including energy assessments and financing, helping to reduce overall project cost to participants. BlocPower is backed by key bay area investors, and partners with Revalue, a local black-owned energy efficiency contractor, to implement their projects. BlocPower approaches projects with a comprehensive lens, blending all available subsidy and incentive dollars on behalf of participants, focusing on health and affordability outcomes in addition to energy savings, and identifying opportunities for workforce development. Since their founding in 2012, BlocPower has completed projects in nearly 1,000 buildings, saving customers 20-40% on their energy bills.

EBCE has an opportunity to provide project capital to BlocPower, offering a scaleable solution for LMI electrification in our service area. EBCE project capital will directly fund LMI electrification for our customers. BlocPower has proposed that EBCE invest \$1 million in the junior capital position at a 5.5% interest rate. In the junior capital position, EBCE will incur losses on any defaults that are larger than what can be covered through BlocPower's operating reserves and will be compensated at a higher interest rate relative to the senior capital position. EBCE's investment will be leveraged by the entirety of BlocPower's financing stack so the cumulative investment for EBCE LMI customers will be up to \$5 million in projects. Additionally, by accepting the junior capital position, EBCE will reduce the risk of investment in BlocPower's portfolio, helping to reduce the interest rate offered to customers by 100-200 basis points (a 1-2% reduction in the customers interest rate.)

Providing project capital to BlocPower not only offers additional capital specifically to EBCE customers, it also has the potential to continually refresh ensuring an ongoing source of funding for local programs. EBCE's initial investment of \$1M will be repaid at 5.5% interest starting at year 1, less any defaults (currently estimated at 0.75% of the portfolio annually.) The interest earned on this investment will provide funding for Local Programs to continue re-investing in the community.

EBCE staff is also proposing that the project capital investment to BlocPower be supplemented with additional incentive dollars to offset the cost of projects. While no upfront cost solutions are an important component of increasing accessibility to building upgrades, the overall costs of these projects can be significant. Many retrofit projects uncover additional non-energy costs, such as electric panel upgrades or health and safety measures, for which there are no subsidy or incentive dollars available. To keep financing costs as close as possible to anticipated bill reductions, thereby reducing the potential risk of default, EBCE recommends additional incentive dollars be available to project participants. EBCE is recommending that incentives be scaled based on income level, such that upfront energy measure costs for low-income participants stay capped at 20% of the total costs, and energy measure costs for moderate income participants stay at 60% of total.

To consider whether this is an appropriate opportunity for EBCE, staff has reviewed a comparison of the potential risks and benefits of participating in this program (Table 1). The key question centers around the opportunity cost for EBCE’s dollars and the associated value proposition of us participating. In other words, is our investment in BlocPower providing benefits that would not otherwise be available to our customers, and how do those benefits compare to what we could accomplish directly or via another pathway? Given the uniqueness of BlocPower’s program, the highly leveraged capital, and the low modeled risk of default, EBCE staff finds this a prudent and valuable opportunity. EBCE is also exploring the potential to secure our investment via a loan loss reserve or loan guarantee through California’s iBank (administered locally via the Bay Area Air Quality Management District.) Staff are currently in discussion with BAAQMD to determine if this is viable and expect to have an update by the October Board Meeting.

Table 1. Potential Risks and Benefits of Investment Proposal

Potential Risks	Potential Benefits
Potential 1-2% loss on EBCE’s investment	Scaled electrification of a hard to reach population
Low program participation / slow ramp up	Highly leveraged investment
Funds could be used elsewhere	Higher return on investment relative to leaving money in savings account
Sole implementor leaves us exposed to poor performance / delivery	Sustainable model (i.e. fund refresh allows for continued program activity without ongoing investment from EBCE ratepayers)
	Electrification represents a new source of revenue for EBCE

Sole Source Justification

BlocPower offers a unique opportunity that aligns with EBCE's goals. They are backed by local investment and partner with local firms for implementation, ensuring investment will support economic development within EBCE's service area. They are unique in the market; there are no other companies that EBCE is aware of that offer a no-upfront cost solution for building electrification that is targeted to low and moderate income residents. Finally, EBCE's investment will be leveraged 4:1 against BlocPower's existing financing stack.

Fiscal Impact

EBCE staff are proposing a \$1 million investment in BlocPower and an additional \$400,000 in incentive dollars for customer projects. \$650,000 of this funding would be sources from this year's Local Programs budget. (\$400,000 were budgeted for LMI electrification incentives specifically, and another \$250,000 were allocated by the Board of Directors specifically for use in low-income programs.) The remaining \$750,000 will be allocated from the upcoming FY 2022/2023 programs budget. Interest payments on this investment will be re-invested in Local Programs. Additionally, EBCE anticipates additional revenue associated with the electrification of homes. Finally, this funding would be leveraged with 4:1 with BlocPower's portfolio.

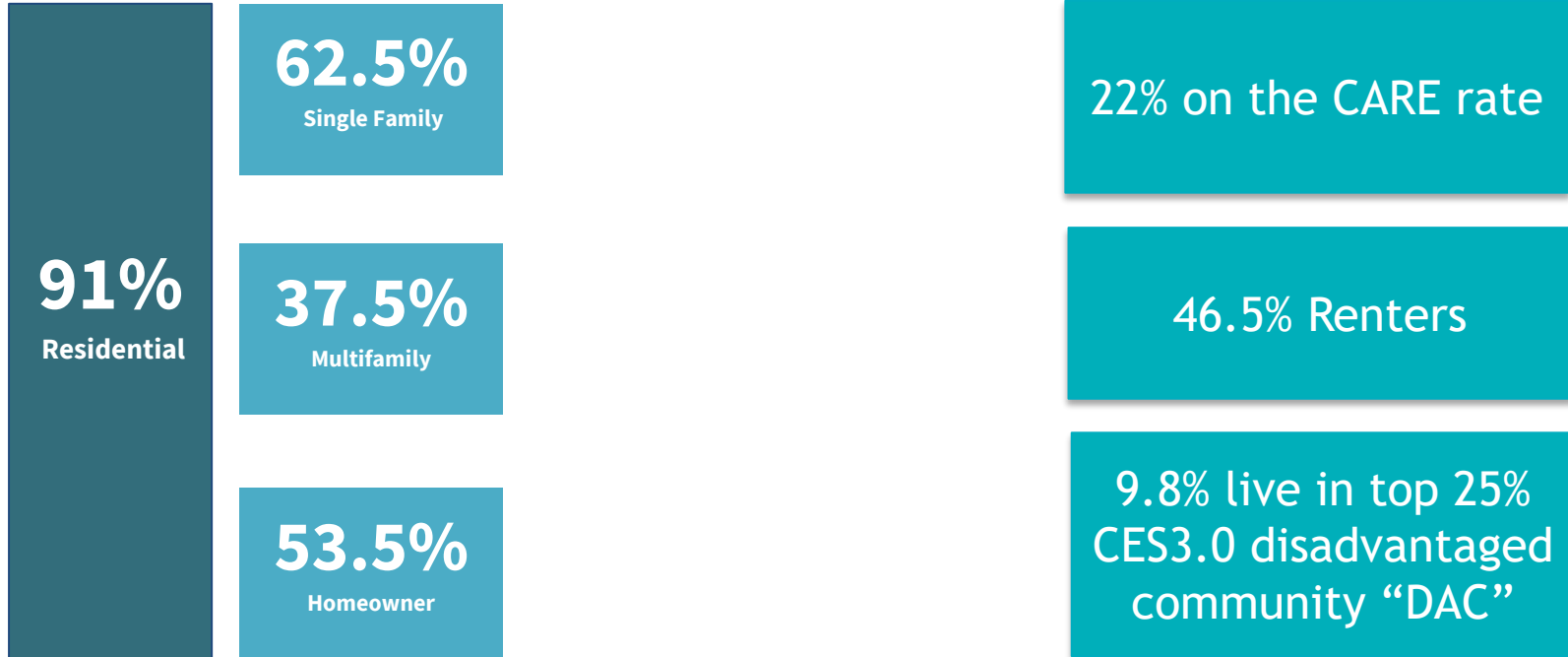
The program will be managed by existing staff.

SEPTEMBER 2021

Low to Moderate Income Electrification and Efficiency



EBCE's Customer Base



Benefits of Electrification

- **Clean and Healthy**
 - Combustion of natural gas in homes has been linked to negative air quality impacts
 - Electric appliances can be powered by renewable energy
- **Affordability**
 - Combination of energy efficiency and electrification can help reduce energy costs
 - Protection against future rate increases



Accessible Program to Center Frontline Communities

Attachment Staff Report Item 15A

- **No upfront cash solution**
 - Rebate programs don't work for many customers
- **Ensure frontline communities are first to participate in electrification**
 - Threat of future rate increases means frontline communities need to be focus of electrification
 - Health benefits of electrification should be delivered to DAC



EBCE Investing in LMI Communities

- \$1.4 Million Investment in EBCE's Frontline Communities
 - \$1 million in junior debt for project capital to reduce customer rate by 1-2%
 - \$400,000 in incentives for homes
 - Target of covering 80% of energy costs for low income (CARE customers)
 - No money down service agreements
- Highly leveraged investment
 - EBCE capital will be leveraged 4:1
 - Incentives stacked with other available incentives (BayREN, TECH)



BlocPower Financing Electrifies Homes



About BlocPower

- Black-owned clean tech company founded in 2014
- Focused on greening residential and commercial buildings in the US, particularly in Low and Moderate Income (LMI) neighborhoods
- Gas-to-electrification technology building conversions (air source heat pumps, hot water, etc.), including energy efficiency and remediations
- Built a tech platform to speed up energy assessments and financing, lowering project development costs by 50%+
- Backed by Bay Area's top investors





Electrification addresses health equity as well as environmental justice



HEPA Filters & UVC Lights

Smart Electric ASHP heating & cooling equipment (HVAC) that uses HEPA filters and UVC lights. Mini-split heating systems are the only systems that treat contaminated and unhealthy air before circulating.



Proper Air Ventilation

Proper ventilation is key to reducing the spread of disease + reducing chronic asthma. Mini-split heating systems use low velocity air circulation, allowing air to be cleansed without blowing infected air at others.



No Money Down

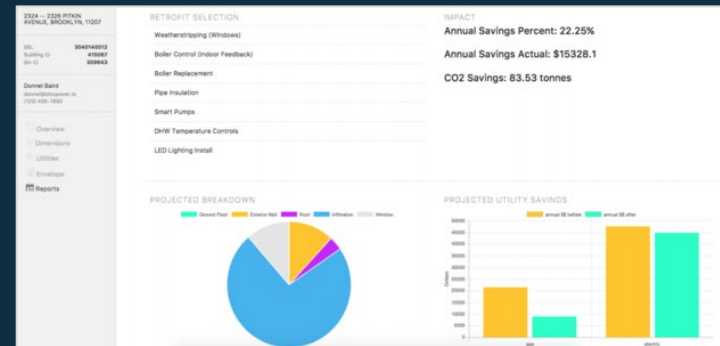
BlocPower offers energy equipment as-a-service. Full installation and maintenance of smart, money-saving, healthy equipment. These projects are generally cash-flow positive from day one.



Financing Model Key to Projects, especially for LMI

- \$0 Down
- 15 year term, maintenance & repairs included
- Guaranteed to function for term
- Creditworthiness based on utility bill payment history, not FICO score
- No lien on the property (UCC-1 fixture filing for security)

BlocPower	
Borough: MANHATTAN Zipcode: 10029 Address List 151 EAST 110 STREET 1775 LEXINGTON AVENUE	
BBL: 1016380023 Building ID: 25313 Biri: 1052178 Targeting: 75.67	
Dimensions Utilities Envelope Reports	
Project Economics	
Estimated Cost	\$67,089.00
Overall Savings	45.0 %
First Year Savings	\$10,912.78
Simple Payback	6.15 Years
Self Finance Amount	\$0.00
Minimum Savings DSCR	1.31x
Minimum Net Operating Income DSCR	3.34x
Minimum Cash DSCR	2.72x



Workforce development key pillar of community investment



Pictured: Reymon Lacheaux, homeowner (above); worker with Eco Options (below)
Source: Elemental

It's always about living-wage Jobs

Workforce development is a key component of sharing the value created by the clean energy economy with those in need of meaningful, living wage jobs. Customers have made it clear how much they value that we are putting local Oakland trainees in community-based contractor pools, where they can learn skills to support their growth and their families' well-being.

Opportunity for individuals

In partnership with Cypress Mandela, Revalue has developed a program to place graduates with a local pool of minority/women-owned contracting businesses such as Eco Options
"Each of [our workers] transitioned to EE work from other trades, after extended challenges with un/under employment, and are very eager to grow with ECO and the industry."

- Dahlia Moodie, Energy Conservation Options

Extensive on-the-ground program learnings

We make mistakes, and need to make allowances for how newly trained workers will need more supervision and training on the job. We need to protect people to minimize risk of COVID exposure and must accept reasonable trade offs in completion rates to support this. Ongoing and professional communications with building owners are key to retaining trust through these challenges

Summary and Next Steps

- **\$1.4 million Total Investment**
 - \$1 M in project capital at 5.5% interest rate
 - \$400,000 in incentives targeted to CARE customers
- **Program Budgeting**
 - \$500k allocated for LMI investment in FY'22 Local Programs budget
 - \$250k allocated by BOD for investment in frontline communities (June 2021)
 - \$650k to be allocated to LMI Electrification in FY'23 budget
- **Sole Source with BlocPower**
 - BlocPower's "electrification-as-a-service" approach and focus on LMI communities is unique in the market
 - BlocPower will leverage local contractors to provide electrification and energy efficiency to 70 EBCE customers
- **EBCE staff will bring as an action item to October Board Meeting**

Thank You!



Questions? Give us a call:
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