coalition for green capital

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GREEN BANK OPPORTUNITY REPORT
Municipality of Anchorage

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Contents

EXECUTIVE SUMMARY

The Municipality of Anchorage, like Alaska overall, faces a unique energy landscape. Residents and businesses pay some of the highest energy costs in the country, with the vast majority of their energy sourced from fossil fuels. Historically, well-funded grant programs have aimed to reduce the energy burden in the state. However, as the state has faced budgetary challenges, the funding for grant-based initiatives has dried up. In the aftermath of the COVID-19 pandemic, budgetary challenges and the overall economic outlook are likely to worsen. In the beginning of 2020, the unemployment rate in Alaska was just over three percent; by mid-April, it had jumped to nearly 17% and is likely to rise further even as some re-openings begin.[1] There is a need now more than ever to develop new tools that efficiently create jobs and build clean energy projects in the state.

Innovative financing programs, designed to fill market gaps and leverage private sector participation, can be a solution for efficiently driving dollars into projects. Alaska has already taken some steps towards building a more innovative financing ecosystem by laying the groundwork for Commercial Property Assessed Clean Energy (C-PACE), which is set to launch later this year, but more can be done to ensure success in C-PACE and other areas. Over the past ten years, new models for clean energy finance have been pioneered at "Green Banks" across the country. Green Banks are market-oriented clean energy finance institutions with a mission to develop underserved markets. Green Banks in the United States have driven over $4 billion in total investment, including co-investment from the private sector.

Anchorage has a community of traditional lenders and other market participants who have expressed interest in doing more clean energy finance. However, banks typically take time to adapt to new markets and most are not yet familiar enough with energy efficiency or renewable energy generation projects for residential and commercial real estate to take the lead on these clean energy lending opportunities. Lack of familiarity increases risk in the eyes of traditional banks, resulting in clean energy finance offers with higher interest rates and shorter payback periods that are non-starters for residential and commercial borrowers. Such short-term and higher interest arrangements swamp energy savings and other benefits (such as lower maintenance costs) that these improvements deliver. The result is significantly less investment, higher energy consumption and fewer jobs (trades, general labor, engineers, and other professionals). Green Banks can help facilitate clean energy lending by traditional banks by designing loan products and programs that reduce risk. This program design, along with the required marketing, is not something that traditional lenders banks are likely to do on their own.

Existing Green Banks, such as the Connecticut Green Bank, have engaged local banks and increased their confidence and interest in clean energy lending by sharing the Green Bank's expertise in clean energy technology, program design, and marketing. This makes it much easier for private banks to step into the role of capital provider often alongside the green bank, frequently with the green bank in a subordinated and/or longer maturity position in the transaction to further mitigate risk for more traditional lenders. And since loans are typically de-risked by lowering interest rates and increasing the length of time a borrower has to pay the loan back, Green Bank programs typically create a higher volume of loans which increases their attractiveness to traditional banks that often perceive those loans as small and disaggregated.

1 U.S. Department of Labor. "Unemployment Insurance Weekly Claims Data, Reflecting the Week Ending 04/18/2020."

In fact, many local banks report that there is little to no demand for clean energy projects. Typically, a business will seek lending for a capital project, which may include something like new lighting or a new boiler, but it is not presented as a clean energy project. In addition to education for lenders on the benefits of clean energy, a successful Green Bank would need to focus on education for businesses and potential borrowers. By making important initial investments in program design and marketing and even loan aggregation, Green Banks can kick-start clean energy finance markets.

Clean energy projects improve property values, comfort, and safety while also creating an immediate revenue stream for borrowers in the form of energy savings which – with a properly structured loan – exceed the monthly loan payments. By designing cash flow-positive loan products, Green Banks can offer clean energy loans that have no more risk of default than other financings similarly secured, and often less. The partnership between Green Banks and existing local lenders helps those lenders enter and grow into the clean energy finance space, expands the market for financing, driving more economic development, more local good-paying jobs, and stronger, sustainable communities.

This report, funded by the Municipality of Anchorage and the Alaska Conservation Foundation and supported by the Renewable Energy Alaska Project (REAP), is the result of a three-month assessment of the opportunity for an Anchorage Green Bank. This process included interviews with over 30 market participants, analysis of existing data sources and policies, and review of past reports. CGC overlaid the findings of this research with the experience of Green Banks in other markets. The outcome of this work is a set of initial opportunity areas for a potential Green Bank in Anchorage, with a focus on the Green Bank's role in C-PACE, small-scale solar, and residential heating and electric efficiency. In all of these markets, CGC finds that there is an opportunity for the Green Bank to complement existing activity, and fill gaps that are not currently being served by lenders due to barriers like project size, a lack of dedicated clean energy lending capital, or lender risk assumptions.

CGC finds the opportunity in small C-PACE lending to be particularly strong due to the estimated number of potential projects and the persistent presence of this gap in other markets. As C-PACE nears launch in Alaska, early support from the Green Bank in this market segment can help set the program up for future growth. CGC estimates that with an initial capitalization of $5 million, the Green Bank could finance 25 new C-PACE projects, ultimately resulting in over $700,000 in energy savings and the creation of 70 new jobs in the Municipality. Over time, if the Anchorage Green Bank can leverage its $5 million facility to generate $50 million of C-PACE loans, then the Green Bank can expect to create more than 700 jobs. These estimates are just for small C-PACE loans – the Green Bank's impact could be significantly larger if it was given sufficient capital to grow into other markets.

In addition to providing financing, the Green Bank could also deliver needed market development activities such as data collection, trainings, and marketing to assist other actors in identifying a pipeline of clean energy projects. Lowering the barriers to entry to clean energy finance would allow businesses to more easily expand their offerings – an option that is particularly relevant in an economic downturn.

While there is a meaningful Green Bank opportunity, this report finds that it will be challenging for an Anchorage-only institution to generate sufficient scale to support a Green Bank's operating costs. This is an important consideration because, unlike grant-funded institutions, Green Banks are designed to earn returns on investments that cover their operating costs and allow for institutional growth over time. CGC recommends pursuing a Green Bank pathway that provides flexibility for expanding the

geographic scope of the Green Bank's operations to achieve the needed scale, such as an institution that could invest across the Railbelt or across the state.

With the opportunity identified, the next step will be finding the capital sources and institutional home for a Green Bank. Other geographies have pursued a diversity of pathways for securing this mission-driven, below-market capital (including local, state, and philanthropic) and institutional homes (including public agencies and independent nonprofits). While many stakeholders should be involved in answering these questions, there is a need for clear leadership from the Municipality of Anchorage in setting and driving the process forward.

About CGC

CGC, a 501(c)(3) non-profit, has been the leading creator, advocate, and expert on Green Banks since 2009. CGC has worked on the development of public institutions such as the Connecticut Green Bank and the New York Green Bank, as well as more recent, nonprofit Green Banks like the Colorado Clean Energy Fund and the Montgomery County Green Bank. CGC manages the American Green Bank Consortium and is currently leveraging its experience and the scale of Green Bank operations across the country to create a national network of Green Banks that can collaborate to more effectively drive capital into clean energy markets.

INTRODUCTION

Energy Market Overview

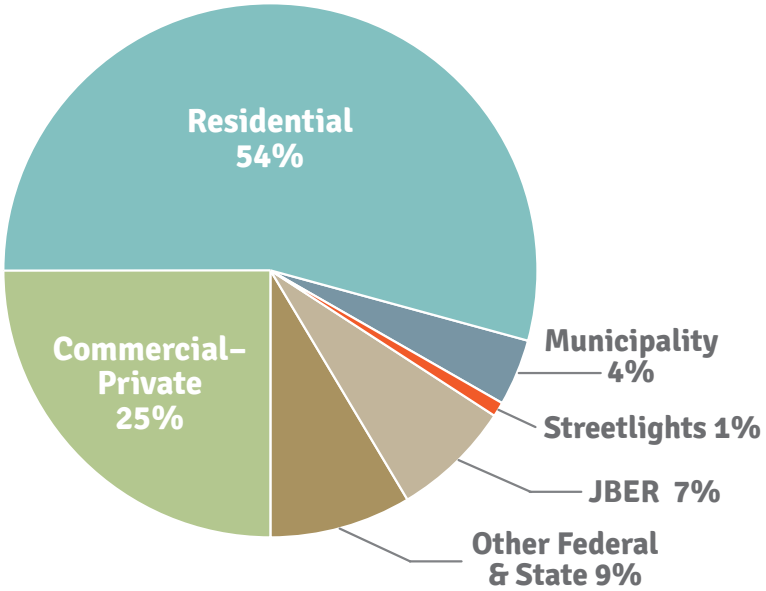
CGC's conversations in Anchorage revealed a strong interest in sustainability, but a lack of development tools available to actors in the market. The Municipality of Anchorage aims to reduce carbon emissions by 80% from 2008 levels by the year 2050.[2] To achieve this goal however, Anchorage must dramatically increase the number of renewable energy and energy efficiency projects under development. Members of the clean energy community interviewed by CGC noted that a lack of innovation, difficult to access or incomplete data, limited support from government, and a lack of coordination among existing actors all presented barriers to development. As they have been in other markets, Green Banks can be a powerful tool to help spur increased development of clean energy in Anchorage. To inform the development of opportunities for a potential Green Bank, the following is an overview of the markets and policies that form the current energy landscape in Anchorage.

ENERGY USE

Alaska is highly reliant on fossil fuel production and consumption. Within Anchorage, 86% of utility net generation comes from natural gas. The rest of utility net generation in Anchorage comes from landfill gas (1%) and renewables (12%) – almost entirely from hydroelectric power.[3]

Buildings are the main contributor to Anchorage's energy consumption, and the natural place to begin thinking about reductions. Over half of energy consumption in Anchorage is attributed to the residential sector, significantly higher than the state average of 9%. Commercial activity in Anchorage represents 25% of energy usage, which is also higher than the state average of 10%.

Figure 1. Energy Consumption in Anchorage[4]



2 019 Anchorage Climate Action Plan. https://www.muni.org/departments/mayor/aware/resilientanchorage/documents/2019%20anchorage%20climate%20action%20plan_4.25.19.pdf

3 Anchorage Energy Landscape and Opportunity Analysis. https://www.muni.org/Departments/Mayor/AWARE/ResilientAnchorage/Documents/Anchorage Energy Landscape and Opportunities Analysis May 2017.pdf

4 Ibid.

ELECTRICITY MARKETS

Within the Municipality of Anchorage, there are three electricity providers: Municipal Light & Power (ML&P), Chugach Electric Association (CEA) and Matanuska Electric Association (MEA). The current utility landscape is in flux, pending CEA's acquisition of ML&P. The implications of this for the creation of a Green Bank in Anchorage are discussed in a later section. Currently, most of the electricity generation in the Municipality comes from natural gas, each provider sources about 5-12% of its electricity through renewables, primarily from the Eklutna Power Plant (47MW) and the Fire Island Wind Project (17.6MW).[5]

At around $0.21/kWh,[6] Anchorage residential rates are slightly lower than the state average of $0.23/kWh but significantly higher than the national average of $0.13/kWh.[7] At around $0.15/kWh and $0.14/kWh respectively, commercial and industrial rates are lower than state averages but again higher than the national average.

The average residential electricity consumption in Anchorage is 550 kWh/month with average monthly costs of $106 (ML&P), $111 (CEA) and $120 (MEA).[8] The median household income in Anchorage is about $83,648 and the average proportion of income spent on electricity is 4%, about equal to the national average[9] and slightly higher than the state average of 3%.[10]

Commercial buildings consume an average of 1,400 kWh/month which costs an average of $234 (ML&P), $232 (CEA) and $285 (MEA), monthly. Residential and commercial monthly costs have risen by about 30-50% over the past 10 fiscal years.[11]

CLEAN ENERGY DEPLOYMENT

The largest source of renewable energy in Alaska comes in the form of hydroelectric power, which provides 24.9% of the state's electricity in an average water year.[12] Out of the 50 hydro projects operating in 2018, the largest plant at Bradley Lake, which is owned by the Alaska Energy Authority (AEA), has the generation capacity of 126 MW. Most hydroelectric plants are located in Southcentral Alaska, the Alaska Peninsula and the Southeast mountainous regions with the highest precipitation in the Southeast. Within Anchorage, the Eklutna Hydroelectric facility has the capacity of 47MW and generates 70MWh per year.[13]

Alaska has the potential for substantial wind generation along its coast. Wind maps show that western coastal areas have wind speeds of up to 9 m/s which rank as class 5 to 7 out of 7 in power. The largest projects in the state are the Eva Creek Wind Project in Nenana (24.6 MW) and the Fire Island Wind Project off the coast of Anchorage (17.6 MW).

Alaska has seen significant growth in its solar market. At the end of 2019, net metered renewable energy

5 ML&P at a Glance. https://www.mlandp.com/Portals/0/pdf/FACT%20SHEET_HowElectricityisGeneratedandDistributed.pdf

6 ML&P. 2018 Independent Financials. https://www.mlandp.com/Portals/0/pdf/2018MLPIndependentFinancialsFINAL.pdf

7 EIA. https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a

8 Anchorage Energy Landscape and Opportunity Analysis. https://www.muni.org/Departments/Mayor/AWARE/ResilientAnchorage/Documents/Anchorage Energy Landscape and Opportunities Analysis May 2017.pdf

9 AHFC. 2014 Housing Assessment. http://cchrc.org/HA/files/Census_Areas/Anchorage_Municipality_CA.pdf

10 Electric Choice. Estimated Household Costs for Home Energy Use, May 2008. https://www.electricchoice.com/blog/percentage-income-electricity/

11 Anchorage Energy Landscape and Opportunity Analysis. https://www.muni.org/Departments/Mayor/AWARE/ResilientAnchorage/Documents/Anchorage Energy Landscape and Opportunities Analysis May 2017.pdf

12 Renewable Energy Atlas of Alaska. https://alaskarenewableenergy.org/wp-content/uploads/2020/03/Renewable-Energy-Atlas-2019.pdf

13 Eklutna Factsheet – ML&P. https://www.mlandp.com/Portals/0/pdf/FACT%20SHEET_Eklutna.Hydro.pdf

systems in the Railbelt grid had an installed capacity of 5.6 MW, a 74% increase as compared to the end of 2018.[14] This represents over a thousand customers, and the vast majority of these are residential solar systems. Over half of net metered capacity is within one of the three utilities serving Anchorage. There are far fewer utility-scale solar projects, the most notable of which is the 1.2 MW installation in Willow.[15] Despite this growth, the overall solar market remains small relative to many northern states in the lower 48 states. Maine, for example, added over 15 MW of non-utility solar in 2019 alone.[16]

A large opportunity for energy efficiency exists in Anchorage as well. Based on high-level AEA estimates, the Municipality reported potential for approximately $51 million in annual energy savings for commercial buildings if they implemented cost-effective energy upgrades.[17] According to Alaska Housing Finance Corporation (AHFC) data, the residential sector has the potential for heating energy reductions of approximately 30% through efficiency. According to this data, the potential is available for approximately 80% of the homes in Anchorage, which sums up to be savings of $33.9 million per year in energy costs through an investment of approximately $217.4 million.[18] While the opportunity in Anchorage is undoubtedly significant, actionable and specific data on the energy efficiency opportunity is limited. This lack of detail may be a hindrance to the development of private lending offerings, and is a market gap that a Green Bank may be able to help fill.

Grants have been a significant driver of past clean energy market activity in the state. Notably, AHFC offered a Home Energy Rebate Program for residential buildings seeking to improve energy efficiency from 2008 to 2016. Approximately 20% of Anchorage homes received upgrades through the Home Energy Rebate program with participating homes saving on average 30% on energy use.[19] The program was largely successful at deploying capital, with the state contributing $252.5 million to projects. Unfortunately, the program ended due to lack of funds in 2016.[20] Without this program, residential energy efficiency development has dropped off sharply. One indication of this is the decline in the number of energy efficiency contractors registered with AHFC. In 2016, there were 160 energy raters registered with AHFC. By 2020, there were 30, an 81% decrease.[21]

While grant funding is currently limited, several interviewees cited the persistence of a "grant mentality" in the state around increasing clean energy deployment. In their assessment, developers, end users, and policymakers are particularly focused on projects that have grant dollars associated with them, and have perhaps neglected the development of other solutions. This has created a market where many lenders feel unable to access clean energy projects and customers feel uncomfortable using finance as a tool to pay for clean energy projects. Grants have an important role to play in developing markets, but they cannot reach every corner of the market. Finance as a tool enables actors to recycle capital into new projects, instead of only funding a single proj-

14 Pike, Chris. "2020 Net Metering Update," Alaska Center for Energy and Power.

15 https://www.adn.com/business-economy/energy/2019/11/19/alaskas-largest-solar-farm-opens-in-willow/

16 "Maine Solar, Data Current Through: Q4 2019." Solar Energy Industries Association. Accessed March 18, 2020.

17 Anchorage Energy Landscape and Opportunity Analysis. https://www.muni.org/Departments/Mayor/AWARE/ResilientAnchorage/Documents/Anchorage Energy Landscape and Opportunities Analysis May 2017.pdf

18 Ibid.

19 2019 Anchorage Climate Action Plan. https://www.muni.org/departments/mayor/aware/resilientanchorage/documents/2019%20anchorage%20climate%20action%20plan_4.25.19.pdf

20 AHFC. "Home Energy Rebate Program to be suspended effective March 25, 2016." Feb 2016. https://www.ahfc.us/newsroom/news/news-archive-2016/more-40000-alaskans-participate-home-energy-rebate-program

21 AHFC. Energy Raters by City. https://akrebate.ahfc.us/raterlist.aspx

ect through a grant. When that financing is offered at sufficiently attractive rates, projects that were otherwise unattractive can be become viable and more forward. Solutions that encourage lenders to use the tools of finance and educate market participants on the value of financing could help overcome the "grant mentality" and spark increased clean energy development in the Anchorage market.

STATE & LOCAL ENERGY POLICIES

Although there is no state-wide Renewable Portfolio Standard, in 2010 the Alaska legislature set the goals of having 50% of the energy generation in the state come from renewables by 2050 and achieving 15% greater energy efficiency on a per-capita basis by 2020.[22]

Starting in 2008, the Alaska legislature has appropriated $270 million a year to the Renewable Energy Fund to develop renewable energy projects across the state. AEA administers the program which provides competitive public grant funding for developers of renewable energy projects. In 2012, the program was extended for another 10 years.[23] Since 2008, it has made 287 grants, with an overall benefits cost ratio of 2.5 based on known project cost.[24] Examples of completed projects are the wind turbines in Quinhagak, hydroelectric project in Gustavus, and Gartina Falls in Hoonah. The application process is competitive, as they are ranked based on technical and economic feasibility, local support, matching funding and the community's cost of energy.

In October 2009, the Regulatory Commission of Alaska approved net metering regulations in the state which became effective in January of 2010. Electric utilities with retails sales greater than 5 million kWh must offer net metering for renewable energy systems with capacities up to 25 kW. However, there is a limit on total net metering of 1.5% of the utility's retail sales from the previous year.[25] Although the state has a net metering policy in place, the cap on net metering is relatively conservative in comparison to states with higher solar generation (e.g. California, New York). For Chugach Electric, 1.5% of average retail demand is 1,810 kW, compared to their current net meter customer capacity of 1,040 kW. There is potential for more net metering in Anchorage given the increase in solar PV installation on residential and commercial buildings. There are no Renewable Energy Certificate markets or feed-in tariffs in Anchorage.

In 2017, the passage of the Municipal Property Assessed Clean Energy Act enabled the creation of a Commercial Property Assessed Clean Energy program, more commonly referred to as C-PACE. Under this program, local governments can implement a C-PACE program through a regimented process, which includes: (1) adopting a resolution of intent with a financial plan and descriptions of potential projects (2) preparing a report with a public hearing date and assignment of a local administrator of the program (3) holding a public hearing and (4) adopting an ordinance that establishes the terms of the program.[26] AEA received a $300,00 grant from the U.S. Department of Energy for C-PACE development and it is working with the Alaska C-PACE Advisory group to initiate programs in larger jurisdictions.[27]

The Municipality of Anchorage released the Anchorage Climate Action Plan in May 2019. The overarch-

22 Alaska Legislature. HB06. http://www.akleg.gov/basis/Bill/Detail/30?Root=HB%20306

23 Renewable Energy Atlas of Alaska. https://alaskarenewableenergy.org/wp-content/uploads/2020/03/Renewable-Energy-Atlas-2019.pdf

24 REAP. Clean Energy Programs. https://alaskarenewableenergy.org/initiatives/

25 DSIRE. Net Metering. https://programs.dsireusa.org/system/program/detail/3734

26 AEA. CPACE statute summary. http://www.akenergyauthority.org/Portals/0/Programs/Energy%20Efficiency%20Conservation/AKcpaceStatuteSummary.docx?ver=2019-06-19-111010-407

27 AEA. CPACE. http://www.akenergyauthority.org/What-We-Do/Energy-Technology-Programs/Energy-Efficiency-Conservation/Commercial-Property-Assessed-Clean-Energy-C-PACE

ing goals are to reduce greenhouse gas emissions by 80% from 2008 levels by 2050, with the interim goal of reducing emissions by 40% by 2030.5 The plan tackles emission reductions on many fronts, including renewable energy, energy efficiency, transportation, consumption, ecology and local outreach. The plan states that Anchorage will establish codes that improve energy efficiency and use innovative finance mechanisms to encourage renewable energy and energy efficiency.

CGC FINDINGS

Alaska is uniquely positioned to benefit from the rapid development of clean energy. With an energy mix that is highly reliant on fossil fuels, Alaska could benefit from more diverse sources of generation that increase its resiliency in the face of turbulent oil and gas markets. Electricity costs are almost double the national average and the population has high energy needs, meaning that customers in Alaska can realize large savings by switching to cheaper, renewable energy generation. Anchorage in particular has set ambitious goals for clean energy deployment, and now needs the tools to realize that ambition.

Seizing on this opportunity will require moving beyond the "grant mentality" that many interviewees mentioned was present in the state. Facing significant revenue constraints, Alaska has been moving to reduce spending in its annual budget. As a result, there are simply not enough grant dollars available at the state or municipal level to realize the opportunity before Anchorage or Alaska. Innovative financing presents a powerful tool to capitalize on the potential in Alaska and efficiently put dollars to work for the next stage of the energy revolution.

A Green Bank can be a driving force to accelerate the growth of clean energy development, acting as a market-facing institution that can provide data and market development resources to a fragmented landscape of actors including utilities, developers, and customers. This development can spur job creation alongside the energy and cost savings associated with clean energy development as the state and the Municipality look for recovery mechanisms in the wake of COVID-19.

The Green Bank Model

Green Banks are mission-driven finance entities designed to drive greater capital into clean energy projects by addressing and alleviating financing barriers in their markets.[28] Given the highly localized nature of energy markets, Green Banks are often created as state or local institutions. They are market-oriented, seeking to achieve returns on their investments, in part to demonstrate to private investors that attractive returns are possible. They use various techniques to offer favorable terms to clean energy projects, including loan guarantees, technical assistance, and lower-cost or longer-term loans.

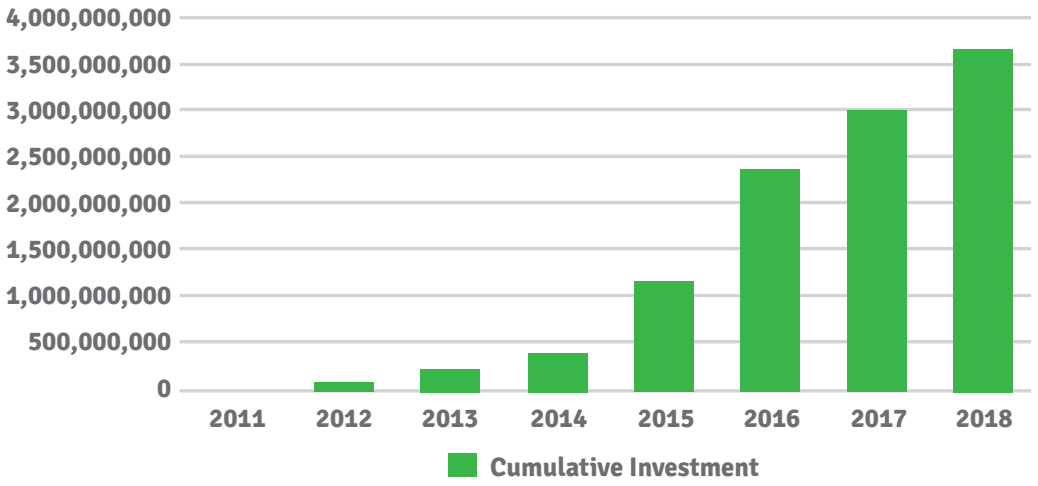
Green Banks apply their specialized expertise in energy to undertake transactions that private sector capital providers are unlikely or unable to do on their own. They focus on scalable solutions, dedicating capital and staff time to demonstrate innovative financing structures that can be replicated across multiple projects. The term "Green Bank" is a description of the kind of role an entity plays in the market. Green Banks are not deposit holding institutions.

Green Banks have served as powerful tools to help states and cities achieve their sustainability goals and drive greater investment into clean energy markets. For example, The Connecticut Green Bank, the state's quasi-public Green Bank, has used $250 million in public funding to drive over $1.6 billion in over-

28 Coalition for Green Capital. The Nonprofit Model for Green Bank Development. January 2019. http://coalitionforgreencapital.com/wp-content/uploads/2019/05/Nonprofit-Model-Memo.pdf

all investment in the state's clean energy market.[29] Michigan Saves, Michigan's independent, nonprofit Green Bank, has used $19 million in public and philanthropic funding to drive over $190 million of investment into the state's clean energy market.[30] Overall, Green Banks across the country have helped drive nearly $4 billion of investment into clean energy projects.

Figure 2. Investment Caused by U.S. Green Banks[31]



The investment above has had a positive impact on both the bottom line of businesses and households where Green Banks operate while providing stable and safe employment in the clean energy industry. For example, in 2018, the Connecticut Green Bank invested $33.6 million of its own money in $265.9 million worth of mostly solar and energy efficiency projects that created over 900 direct jobs in the state. The proposed $35 billion National Climate Bank could be a powerful tool for economic redevelopment in the wake of COVID-19. By channeling funds into local and state Green Banks, including Anchorage, CGC estimates that this fund could help create over 5 million jobs to help put Americans safely back to work.[32]

Given their dedicated expertise in clean energy finance, Green Banks have served as thought leaders for clean energy development in their geographies. For example, the Connecticut Green Bank hosts quarterly webinars highlighting key market insights that may be relevant to developers, financiers, and customers interested in developing clean energy projects in the state.[33]

Depending on the needs of the market they are trying to address, Green Banks have achieved impact in a variety of ways. Green Bank financing solutions can take the form of techniques like credit enhancement, co-investment or warehousing, dedicated debt to support structures like Property Assessed Clean Energy (PACE) finance or on-bill repayment programs, or market development like information sharing, developer training, or program coordination. Earlier-stage Green Banks have traditionally focused on one or two solutions as they seek to establish themselves, while

29 Connecticut Green Bank. Comprehensive Annual Financial Report. 2018. https://www.ctgreenbank.com/wp-content/uploads/2018/10/Green-Bank-CAFR_2018.pdf

30 Michigan Saves. 2018 Annual Report. https://michigansaves.org/michigan-saves-2018-annual-report-your-journey-is-our-story/

31 American Green Bank Consortium. 2018 Industry Report. https://static1.squarespace.com/static/59bc05f0c534a543a9f96b0d/t/5d0d25e4b1ed350001884b0d/1561142759155/Green+Banks+in+the+US+-+2018+Annual+Industry+Report.pdf

32 Coalition for Green Capital. National Climate Bank. https://coalitionforgreencapital.com/projects/clean-energy-jobs-fund/

33 Connecticut Green Bank. Webinars. https://ctgreenbank.com/news-events/webinars/

larger, more mature Green Banks have often expanded their offerings to include a suite of different solutions that can maximize their impact in a variety of markets.

The solutions a Green Bank chooses to offer are largely driven by the conditions present in the target market. Not all solutions work in all markets. For this reason, Green Bank structures and solutions have differed widely across the country. The Anchorage market is no exception and presents a unique environment for clean energy investment. By thoroughly understanding the current gaps and needs present in the Municipality's clean energy market, a Green Bank in Anchorage will be able to offer a financing solution that is specifically tailored to most effectively drive clean energy investment in the Municipality.

Ideally, Green Banks finance projects that deliver savings to the customer which outweigh the cost of financing. This results in a system where the customer realizes savings from day one and uses those savings to pay off the loan financed by the Green Bank. After the loan is repaid, the customer realizes even deeper energy savings. In this way, the Green Bank enables a customer to finance a project with zero-dollars down, earns a modest return on its investment, and unlocks long-term energy savings for the consumer.

Figure 3. Sample Green Bank Financing Solutions

Barrier to Investment	Solution	Examples
Perceived project risk	Credit enhancement	Provide a loan loss reserve can mitigate risk and allow investment to flow at longer term of lower rate
Inefficiencies of scale	Aggregation & warehousing	Aggregate small projects to meet scale to attract private capital
First-in-kind transaction	Technical Assistance	Put in technical legwork that comes with closing more labor-intensive, innovative transactions
Marginal economics	Co-investment	Lend to project, in senoir or junior position, to improve overall economics for investors and customers

Figure 4. Consumer Savings from Green Bank Financing

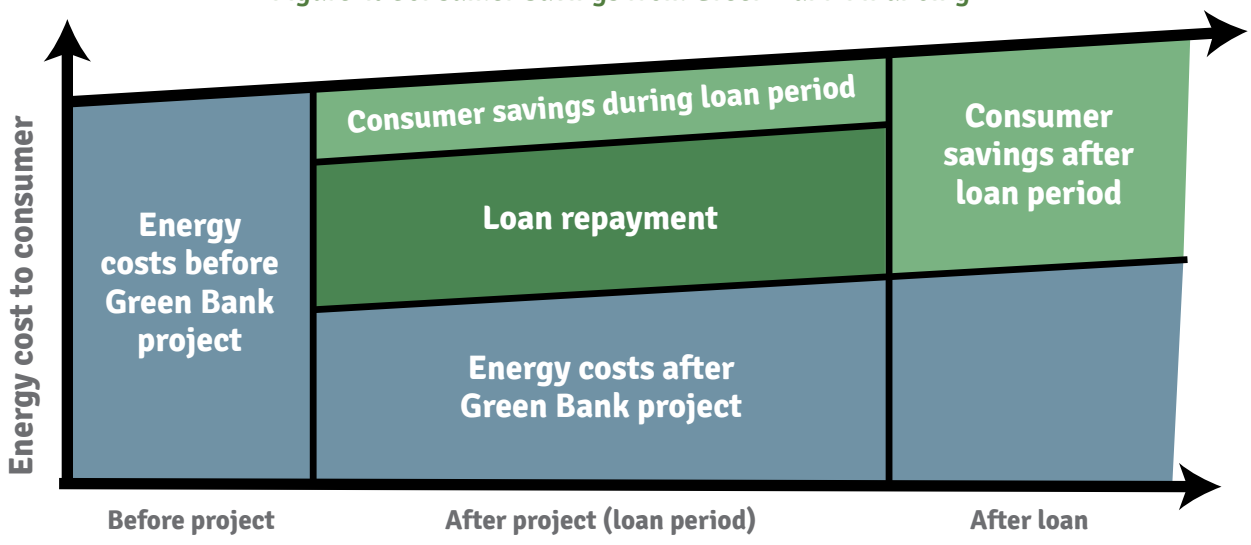
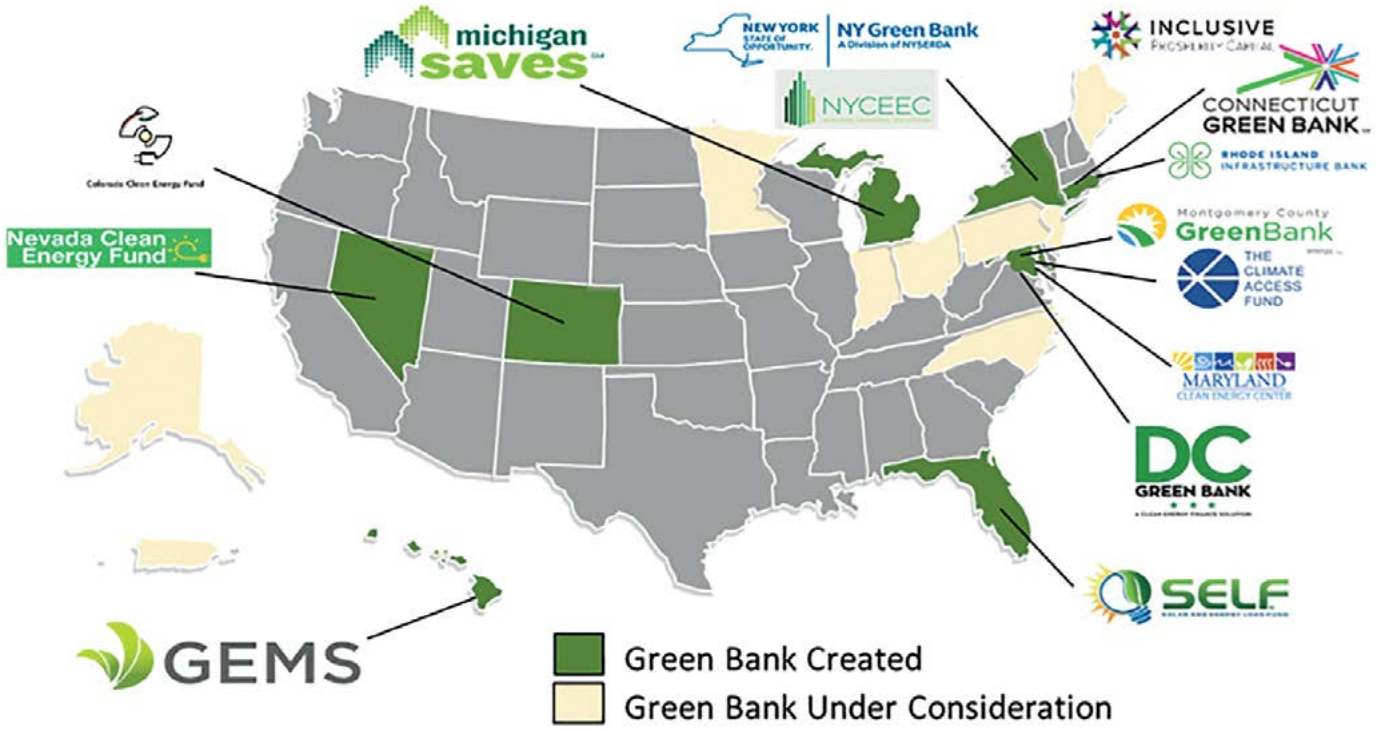


Figure 5. U.S. Green Bank Landscape



As of early 2020, there are 14 Green Banks in the U.S.,[34] with several others under development (Figure 4).

Green Banks have been created using a variety of different structures including public, quasi-public, and nonprofit forms. Earlier Green Banks, like those in Connecticut and New York, were created as public institutions and capitalized using large amounts of public funding. As the Green Bank model has expanded to less politically-unified geographies, the nonprofit model has become increasingly popular.

The nonprofit model allows for Green Banks to draw upon funding from a variety of sources including the public sector, commercial lenders, and philanthropic capital. More recently, the National Climate Bank Act, introduced in Congress in 2019, has opened the door to the potential for federal funding for Green Banks. The Act proposes a $35-billion-dollar non-profit institution that would have the ability to provide capital both to projects and local Green Banks.

GREEN BANKS AT THE CITY-LEVEL

Most Green Banks in the U.S. conduct their operations at the state or regional level. A broader geographic scope can be useful for a Green Bank's mission for several reasons:

- A larger geography typically increases the potential market for Green Bank solutions, enabling the Green Bank to achieve needed volume more rapidly. Scale is critical for the success of Green Bank solutions. Since Green Banks target hard-to-reach markets that often have challenging economics, it is unusual that a handful of transactions will generate profits to cover the expenses of running the entity. The Green Bank must therefore be able to develop a sufficient pipeline of transaction for its products, which can be easier to do if it has a broader geographic scope.

34 American Green Bank Consortium. March 2020.

- Developers, contractors, financiers, and other market participants typically do not limit their business operations to the borders of a particular city or town. The Green Bank will be a more valuable partner if it is able to provide solutions to partners in multiple contexts, rather than just one. This is particularly important since Green Banks often ask partners to invest time, effort, and occasionally resources in doing the "brain damage" of developing new structures. Partners are much more willing to provide this investment if they have reasonable assurances that they can re-use those structures and the Green Bank's financing products in future deals in other geographies.

- Energy policies are largely determined at the state level. A statewide institution is often best suited for developing products that meet the unique operating environment of the state, as well as serving as a market-facing resource for policy makers.

However, there are examples of city or sub-state Green Banks. The experience of these institutions can be useful for guiding the potential development of a Green Bank in Anchorage.

Cuyahoga County, Ohio

The Green Bank in Cuyahoga County, Ohio shows the value in selecting a single financial product to bring to the market. This method has allowed the Green Bank to shorten its creation timeline and secure investment in that particular product. Cuyahoga County is also a good example of how housing a Green Bank within an existing institution can reduce overhead and operating costs.

Cuyahoga County included the creation of a Green Bank in its 2019 climate action plan.[35] In support of this goal, CGC completed a market opportunity analysis in 2019 to explore the most promising markets for increased clean energy lending and develop products to support growth in those markets. At the end of 2019, CGC recommended the first product for the Green Bank: debt for a third-party ownership model for small-scale (i.e., approximately less than 500kW) commercial solar installations. CGC estimated that this product would create more than 450 jobs and double the county's solar power output over five years. Start-up operations will cost approximately $300,000 per year for the first three years until the Green Bank can pay for operations through the revenues earned from its loan portfolio.

In 2020, CGC began securing investment capital and identifying the structure for the Green Bank. A local nonprofit lender that has experience lending to the small business community was identified as the most promising home for the Green Bank. This nonprofit lender will secure investment capital from a range of sources for the Green Bank. It is anticipated that the Green Bank will take advantage of program-related investments from foundations and low-interest loans from the public sector. Long-term (e.g., 15 years) and low-cost debt (e.g., 1%) are critical. Capital without those features would not allow the Green Bank to offer solar at competitive rates in the Ohio market. The Green Bank secured its first investment capital commitment in February 2020 and is actively targeting the creation of a $12-15 million fund.

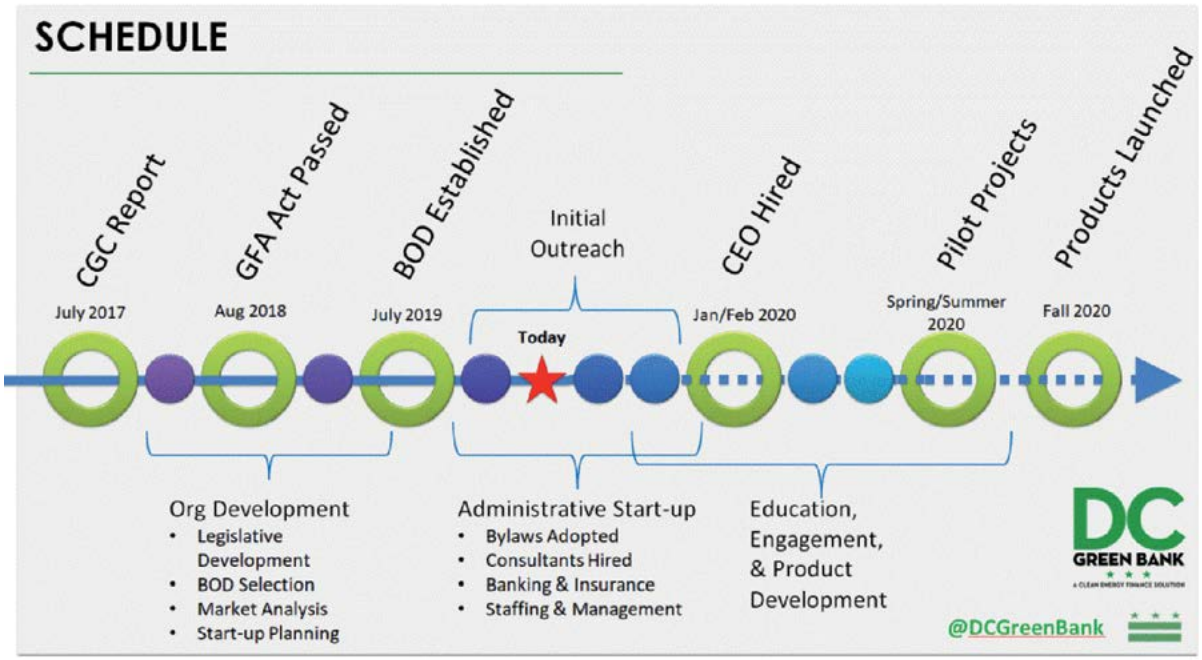
DC Green Bank

Although the development timeline for the DC Green Bank is longer than other markets, it is a useful illustration of the steps a Green Bank might need to take to be developed as a public institution in Anchorage. The DC Department of Energy and Environment issued an RFP for Green Bank development work in 2015. In 2017, the Coalition for Green Capital completed a market opportunity report in Washington, DC to explore the potential for a city-scale Green

35 Cuyahoga County. Climate Action Plan. May 2019. https://www.countyplanning.us/wp-content/uploads/2019/05/Final_CCCCAP-1.pdf

Bank.[36] In 2018, the city called for the creation of the fund, capitalizing the institution with nearly $100 million in the form of a ratepayer surcharge. The fund, which is a public entity, established a board of directors in 2019 and is currently staffing the institution and laying the groundwork for its first lending products. The institution plans to offer direct lending to single and multifamily residential clean energy projects, gap financing for solar projects in the form of pre-development and construction loans, and management of the city's PACE lending program.

Figure 6. DC Green Bank Development Timeline[37]



Montgomery County Green Bank

The Montgomery County Green Bank is a useful example of how the Green Bank can serve as a nexus with local government to support local development needs.

The Montgomery County Green Bank (MCGB) is a nonprofit Green Bank created in Montgomery County, Maryland in response to county legislation passed in 2015. County legislation called for the independent creation and official designation of a nonprofit Green Bank. CGC, along with the Montgomery County Department of Environmental Protection created the nonprofit and the nonprofit earned the county's designation as the official Green Bank in 2016. The Board of Directors of the MCGB is comprised of various professionals across the energy and housing professions and two ex-officio members from county government agencies.

The MCGB was capitalized with $14 million in funds from a utility merger over a period of several years. The MCGB has also successfully sought additional supplementary grants from foundations. The MCGB has developed both a loan loss reserve and dedicated loan product to support energy efficiency and solar PV development in the county.

36 Coalition for Green Capital. District of Columbia Green Bank Report. April 2017. https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/District%20of%20Columbia%20Green%20Bank%20Report%20%28Prepared%20by%20Coaltion%20for%20Green%20C....pdf

37 DC Green Bank. Schedule. https://dcgreenbank.org/about-us/

NYCEEC

The New York City Energy Efficiency Corporation (NYCEEC) is a powerful example of how a city-level Green Bank can change form and grow bigger in its geographic scope over time. This can be informative to the Green Bank in Anchorage as it considers the scale of its operations outside of the Municipality.

NYCEEC is a nonprofit Green Bank that provides financing for projects in commercial and multi-family buildings that save energy or reduce greenhouse gases. NYCEEC generally finances energy efficiency, cogeneration, clean heat conversions, renewables and demand response projects.

NYCEEC was formed by Mayor Bloomberg's office in 2011, and was the recipient of two federal grants awarded to the City under the American Recovery and Reinvestment Act of 2009 for roughly $40 million in initial capital. As of March 2020, NYCEEC has driven over $168 million in overall investment and created over 1,800 new jobs.[38]

Though it began within the Mayor's office as a public authority, NYCEEC was intended to be a nonprofit lender from the beginning. After three years of operations, NYCEEC made the transition to an independent nonprofit with a Board of Directors comprised of public officials and private individuals.

As NYCEEC sought to achieve self-sustainability, it became apparent that it would need to find a significant volume of deals to reach sustainability. In order to reach this scale, NYCEEC expanded its operations outside of New York City to assist projects in states from Connecticut to Maryland.

CGC FINDINGS

Green Banks have been important vehicles for scaling clean energy development and driving economic growth. Both at the state and local level, Green Banks have helped create jobs and save businesses and customers energy and money. Green Banks have used a variety of tools to achieve these goals, each unique to their target market.

A common thread across timely and successful start-up processes is the presence of an organization or group of individuals in a clear leadership role. These leaders are typically closely connected with the ultimate source(s) of capital. The interest of local funders in Cuyahoga County, for example, served as an organizing force for the Green Bank process. In New York, the presence of federal stimulus funds combined with leadership from the mayor's office led to a rapid and successful role out of the Green Bank. When considering potential sources of capital, a Green Bank in Anchorage could potentially follow the example of Montgomery County, Maryland, which used a utility merger to capitalize its fund. As negotiations proceed for the currently proposed acquisition of Municipal Light & Power by Chugach Electric, funding could be allocated to support a Green Bank that would invest in clean energy development within the new service territory. Federal stimulus funding in response to COVID-19, similar to the ARRA funding received by NYCEEC, is another potential source of capital to be explored.

Scale is also an important consideration when determining the success for city-level Green Banks. Both Montgomery County and Cuyahoga County have significantly larger populations than the Municipality of Anchorage has (about three and four times the population, respectively), which suggests both have larger potential markets than Anchorage. To address this, Anchorage could seek to scale its operations in a number of ways. Following the example of NYCEEC, a Green Bank in Anchorage could potentially scale operations to address opportunities within the Railbelt or across the state as scale is needed. Alternatively, the Green Bank could develop and launch

38 NYCEEC. Our Impact. Accessed March 2020. https://www.nyceec.com/infographic/

products for additional markets, increasing loan volume by expanding and diversifying its portfolio of technologies beyond its first product as planned in Washington, DC. For example, the first product might focus on the commercial energy efficiency market (such as C-PACE lending), to be followed by an offering for residential solar.

OPPORTUNITY AREAS FOR AN ANCHORAGE GREEN BANK

At the beginning of 2020, CGC began a three-month scoping exercise to identify potential opportunity areas for an Anchorage Green Bank. This process included interviews with over 30 market participants, analysis of existing data sources and policies, and review of past reports. CGC overlaid the findings of this research with the experience of Green Banks in other markets to develop an initial view of the role(s) a Green Bank could play in filling gaps in the Anchorage market.

The following are potential focus areas in which a Green Bank could support additional development in the current environment through financing. These should be viewed as an initial assessment, and not necessarily comprehensive of all the roles an Anchorage Green Bank could play in the future. A key question for this and future analysis is the potential scale for an Anchorage-focused institution.

Commercial Property Assessed Clean Energy (C-PACE)

As discussed earlier, energy efficiency retrofits for the commercial and industrial sectors present an opportunity to produce tangible and lasting economic benefits for Anchorage's business community. The challenge is identifying an optimal way to pay for these improvement projects. Property owners can self-finance an energy improvement project, but many building owners lack sufficient discretionary capital to pursue this option and/or they have competing budget priorities. Alternatively, a property owner can seek to obtain a traditional bank loan to finance a project, but bank loans are often limited to 5-7-year loan terms which may not be sufficient to produce positive project cash flows depending on the financial payback period associated with the underlying project. Plus, a property owner would still need to self-finance the upfront soft costs associated with the development of the project because traditional bank loans can only be used to finance the hard costs associated with the project (e.g. equipment, construction costs, etc.). This upfront cost often serves as an impediment to commercial and industrial building owners seeking to pursue clean energy projects.

Against this backdrop, C-PACE represents a promising vehicle for addressing the commercial and industrial clean energy market in Alaska and the Green Bank can play a pertinent role in ensuring C-PACE's future success.

C-PACE is a legislatively enabled program that allows commercial property owners to access affordable, long-term capital to finance energy and, in some cases, water improvements to their properties. The financing is secured by a special assessment that is placed on the property and the property owner repays the financing via its local property tax collection process. C-PACE addresses many of the common market barriers to financing clean energy in the commercial and industrial buildings sector. By offering 20-year financing terms, C-PACE dramatically improves the cash flows of these projects as compared to traditional bank financing. And, because C-PACE can be used to finance the soft and hard costs associated with these projects, it doesn't require any money down from the building owner, thus making it even easier and more economically attractive for the building owner to proceed with the project.

In 2017, the Alaskan legislature adopted legislation (AS 29.55.100) enabling local governments to create and deploy C-PACE programs. Extensive planning, due diligence, and coordination among various stakeholders will be required to ensure that the designed program meets the intent of the legislation and the needs of the local market. To that end, in a survey prepared on behalf of AEA, interview participants communicated broad support for C-PACE, but the following program attributes will be the most important to determining program participation:

- Low interest rates ("comparable to or lower than conventional loan rates")
- Ease of use and clear program processes and materials

The Green Bank can and should play a role in the Anchorage C-PACE program to ensure that the program checks these boxes for Anchorage's business community. Fortunately, many examples of C-PACE programs exist to draw upon from across the country, but the design features vary widely across existing programs. As a result, it is important that Alaskan stakeholders understand the various program design options, the benefits and challenges associated with each of those options, and the emerging industry best practices. Ultimately, these features will determine the ease and cost of participating in Anchorage's C-PACE program which, in turn, will determine the eventual scale and success of the program.

Two particular C-PACE design features that will influence the Green Bank's involvement in Anchorage's C-PACE program are the eligible funding mechanisms allowed and the selected program administration model. Some C-PACE programs are characterized as "closed programs" where one capital provider or a select few are eligible to finance projects, whereas others are characterized as "open programs" that rely on a range of private third-party capital providers to finance projects in a competitive manner. This program design feature will influence the role, if any, that the Green Bank plays in directly facilitating and supporting C-PACE finance transactions.

Similarly, as Alaskan stakeholders determine the optimal C-PACE program administration model, it may be determined that a local actor, such as the Green Bank, has a role to play. It is important that the Green Bank monitor the C-PACE program design process, participate in that process as appropriate, and ultimately wait for that process to conclude before determining its exact involvement with the program. Irrespective of that process, though, the Green Bank's involvement in the program should focus on achieving the outcomes set forth in the aforementioned survey – keeping the costs of participating in C-PACE low and ensuring a streamlined and easy to understand process for program participation. In that vein, the following sections outline options to consider as the Green Bank explores possible involvement in the Anchorage C-PACE program.

DIRECT LENDING

Many C-PACE programs rely on a mix of private equity, local and national banks, credit unions, and community development financial institutions (CDFIs) to finance C-PACE projects. The lender participation in Alaska's C-PACE market is currently unknown. The location and size of the market could present logistical and economic impediments to non-local lenders. In initial conversations, CGC has not heard strong interest from national lenders in the Anchorage markets. In contrast, during CGC's interviews, some Alaska-based lenders expressed interest in participating in the C-PACE market. C-PACE presents a new attractive business opportunity for local lenders who are in a great position to leverage their existing relationships to serve the needs of the local business community. However, the true response from lenders and the rates that they will offer remains to be seen.

A local Green Bank should not compete with local lenders interested in financing C-PACE deals. Rather,

to ensure adequate liquidity in the C-PACE market, the Green Bank can play a role as a "lender of last resort." Under this type of model, participating lenders in Anchorage's C-PACE program would have the first right of refusal to finance projects. If a project experiences a difficult time securing attractive financing, then the Green Bank could step in to fill this void.

One segment of buildings that is particularly prone to experiencing gaps in financing is small commercial buildings. Although C-PACE does not have an explicit project minimum, the effective structure of the program makes it difficult for projects below a certain threshold to secure financing from traditional lenders. As the common adage in lending explains, it costs the same or similar amount of money for a lender to underwrite a $50,000 project as it does a $5 million project, resulting in lenders preference to finance larger projects that present more attractive return profiles. The exact minimum lending limits for lenders will depend on many variables and each specific lender, but anecdotal evidence from C-PACE programs across the nation suggest that projects <$250,000 have a more difficult time attracting financing as compared to larger projects.

That is not to say that smaller projects do not represent an attractive segment of the market for the right lender – particularly a mission-driven lender willing to accept a lower return on investment. 72% of all the commercial buildings in the country are less than 10,000 square feet and that figure jumps to 95% when considering buildings <50,000 square feet.[39] In other words, small commercial buildings represent the largest portion of the available market for C-PACE capital. If this segment of Anchorage's commercial buildings is unserved/underserved by the Anchorage C-PACE program, then the Green Bank could step in by offering a direct lending product. In fact, this model has already been demonstrated in other C-PACE markets.

Connecticut launched the first statewide C-PACE program in the country in 2013. At the time, the C-PACE industry lacked C-PACE specialty capital providers to finance projects, small and large. As a result, the Connecticut Green Bank dedicated a $40 million fund to address this challenge and seed its C-PACE program. The result of this approach has differentiated Connecticut's C-PACE programs from many others that have been created since 2013. Approximately 70% of the C-PACE projects closed in Connecticut have been for small buildings, <50,000 square feet, and the average size of all the closed C-PACE transactions in Connecticut is $536,184.

In contrast, Colorado launched the second statewide C-PACE program in the nation in 2016 at a time when a variety of lenders had begun to invest in C-PACE transactions across the country. Colorado C-PACE attracted a very diverse and active lending community, now comprised of 34 total lenders representing private equity, local and national banks, and credit unions. In this regard, the Colorado C-PACE program is, in theory, superiorly positioned to serve a myriad of different types of projects and project sizes as compared to other C-PACE programs in the country with a more limited number of lenders, but only 35% of Colorado's project closings are for small buildings, <50,000 square feet. In fact, the average sized project closed in Colorado is $1,003,701, nearly twice as large as Connecticut's average size project.

This data point demonstrates that without a Connecticut-equivalent dedicated fund for small C-PACE projects, Colorado has experienced a partial void in terms of meeting the needs of small projects. In fact, less than 15% of the projects that have closed in Colorado have been <$250,000, meaning the void becomes larger with smaller projects. And, consid-

39 U.S. Energy Information Administration (EIA). Commercial Buildings Energy Consumption Survey. https://www.eia.gov/consumption/commercial/data/2012/bc/cfm/b1.php

ering large sections of Colorado can be classified as rural, containing small economic sectors comprised of smaller buildings, this represents a serious problem for a program that is intended to produce economic benefits to both rural and urban areas alike.

For this reason, the recently formed Green Bank in Colorado, called the Colorado Clean Energy Fund (CCEF), is working to deploy a small C-PACE lending product designed to fill this gap. CCEF has determined that it can reasonably address the needs of this market segment with a $5-$10 million fund, comprised of grant and program related investment capital that will allow CCEF to offer attractive rates and terms to small commercial property owners. CCEF will finance small C-PACE projects, earn revenue on these transactions via fees (e.g. origination and servicing fees) and a spread on the interest rate offered to projects, and ultimately sell portfolios of these projects downstream to traditional lenders in order recapitalize and grow its fund. Working within a small geography, CCEF will complete a high volume of smaller projects - the opposite of the model followed by traditional C-PACE lenders, which traditionally complete a small number of large projects across a multi-state geography. The Saint Paul Port Authority has established a similar model to CCEF's for the Minnesota C-PACE program with only $5 million in seed funding from the state's ARRA grant. As a result, more than 200 C-PACE projects smaller than $250,000 have been closed through the Minnesota program, making it one of the most successful in the country at serving small businesses overlooked in other markets.

This is a compelling model for the Green Bank to explore and possibly replicate. Many projects applying to the Anchorage C-PACE program will likely come from smaller buildings. Based on tax assessor data, the average size of a commercial building in Anchorage is just under 11,000 square feet.[40] This is even smaller than the average in other markets where small projects have languished. In other words, a gap in small project financing may disproportionately impact the accessibility and success of C-PACE in Anchorage. By working as a dedicated actor in the Anchorage market, the Anchorage Green Bank can play a role to ensure that small building owners are able enjoy the benefits of C-PACE just like their larger neighbors by providing financing that would otherwise be unavailable by traditional lenders. The Anchorage Green Bank could produce an immediate and substantive impact to the local business community via a secure lending platform (i.e. C-PACE) that will allow it to generate a recurring and potentially sustainable revenue source.

PROGRAM ADMINISTRATION

Another option the Green Bank should evaluate is potentially playing a role in the administration and governance of the C-PACE program. Selecting a program administration model is one of the most important decisions when designing and launching a C-PACE program. The program administrator ensures that the requirements and integrity of the enabling legislation and program are followed, thus ensuring the effectiveness and stability of the program. Program administration models vary widely across C-PACE programs. Some programs allow program administrators to participate in the financing of C-PACE projects while others separate the functions of program administration and financing, thus relegating the program administrator role to managing the program processes in a capital agnostic manner.

As PACENation recently opined, "first-rate C-PACE programs depend on skilled program administration. The program administrator's scope of work should focus on three essential functions:

40 Calculated using source data from the Alaska Energy Authorities 2019 "C-PACE Efficiency Market Opportunity Estimates."

- Organize the process of drafting a program manual and guidelines;
- Approve projects that are eligible and compliant;
- Promote the program to stakeholders."

The above tasks can generally be classified as "market-making" activities, or activities necessary to seed, manage, and successfully market a C-PACE program. Dedicated staff are required to carry out these time-consuming tasks and, as a result, an upfront investment is required of the program administrator in order to ensure that it is in a position to satisfy these roles and drive demand for the program on day one. In many programs, the program administrator recoups these expenses via fees charged to successfully closed projects. However, inherent in that statement is the need to produce successes in order to generate a return capable of covering fees and hopefully producing a modest revenue source.

With this in mind, a decision to become a C-PACE program administrator should not be entered into lightly. The Green Bank would first need to become comfortable with its ability to manage a program as complicated as C-PACE, the upfront investment required to either hire or train existing staff to perform the aforementioned functions, and the likelihood of success capable of generating revenue. For additional context, the following provides a high-level outline of the staffing skillsets that are required to successfully administer a C-PACE program. Some of the accompanying costs can be borne by the participating projects, but it is important to limit the fees charged to participating property owners in order to ensure that those fees do not become cost prohibitive and stifle the growth of the program:

Figure 7. C-PACE Skillsets

Program Management Responsibilities	Skillset Required
Intake/Process applications (Projects, Lenders, & Contractors)	Basic Engineering/Clerical
Monitor lien recordings	Clerical
Monitor assessment collections/reittances	Clerical/Financial
Maintain communication with a variety of stakeholders	C-PACE Expertise/Communications
Field Q/A from a variety of stakeholders	C-PACE Expertise/Communications
Dispute resolution (e.g. requets for program changes)	
Marketing Management Responsibilities	**Skillset Required**
Develop and maintain website	Communications/Marketing
Develop and maintain collatoral material	Communications/Marketing
Manage outreach/training campaigns (as necessary)	Communications/Marketing

It is feasible that one or two full-time employees (FTE) could theoretically manage the gamut of program and marketing management responsibilities outlined above. The skillsets required from those two FTE would likely command a salary in the range of $60,000-$125,000 per year, depending on various factors associated with the local labor market. Therefore, in order to staff the Anchorage Green Bank sufficiently to administer the Anchorage C-PACE program, the Green Bank could be faced with an

upfront investment in the range of $120,000-$200,000 per year. This does not include legal fees and other expenses that will likely be incurred to establish various contracts and program documents, provide legal opinions as to the validity of various program structures, record C-PACE assessments, etc. The Green Bank could possibly pass these expenses through to program participants, including lenders participating in the program, but that remains to be seen depending on the design of the program. In other words, considering the Anchorage C-PACE program has not yet been developed, there are several unknowns in terms of the full range of expenses that will be incurred by the eventual program administrator.

Green Banks have historically engaged in both market-making and direct lending activities. In Anchorage, there is a clear need for both C-PACE lending and program administration. While, as discussed above, a Green Bank in Anchorage could add value by making loans to difficult-to-reach portions of the C-PACE market, it is less clear that a Green Bank should administer the C-PACE program if its role as administrator would preclude the Green Bank from doing direct lending. The program administration model that is ultimately chosen for Anchorage C-PACE should inform the Green Bank's interest in playing an administration role for the program.

Precedent for having a Green Bank administer a C-PACE program does exist in Connecticut where the Connecticut Green Bank serves this function. The DC Green Bank is also designated to be the administrator of the city's C-PACE program. There are several benefits to having a local organization play this role for the program. For one, a local actor is likely to gain the trust of local program participants, thereby increasing the chances for program participation and success. And, a local actor is more likely to prioritize the interests of the local business community as compared to an existing program administrator that likely already has an established operating model for managing C-PACE programs. As was stated earlier, Anchorage's business community has voiced its desire for the Anchorage C-PACE program to be easily understood and easy to participate in. A local actor might be in a better position to prioritize this aspect of the program, but, again, that actor must first be confident that it has the skills that it takes to create and administer a streamlined program in a superior manner to an organization that already performs this function in other C-PACE markets.

CGC FINDINGS

If an open model is adopted by Anchorage's C-PACE program, and national and local lenders are either slow to support the program or persistent finance gaps persist across segments of the commercial and industrial building sector, then the Anchorage Green Bank should step in to accelerate lending in the program and fill gaps by offering a direct lending product. There are precedents of Green Banks serving this role successfully and this product would provide the Anchorage Green Bank with an attractive revenue generating opportunity that aligns well with its organizational mission.

In order to produce a material, positive impact for Anchorage's business community, the Anchorage Green Bank would need to capitalize a loan fund of greater than or equal to $5 million. For discussion purposes, we'll assume that the Anchorage Green Bank will focus on financing projects <$250,000 (i.e. the finance gap seen in other C-PACE programs) and that the average size project that it will finance will be $200,000. Under those circumstances, the Anchorage Green Bank could finance approximately 25 projects. If the Anchorage Green Bank is able to aggregate, warehouse, and sell these assets to downstream investors, then it can recycle its investment capital and scale this product to invest in more projects. In other words, the Anchorage Green Bank could serve a substantial number of local businesses, demonstrate and scale this financial model, and produce revenues sufficient to cover operating expenses

with a relatively modest fund size of $5 million. CGC estimates that, within the first three years of operations, this would deliver customers over $700,000 in energy savings and create 70 full-time jobs.

As the experience of Connecticut and Colorado demonstrate, a Green Bank is uniquely positioned to serve this segment of the market. Commercial lenders typically have pre-determined hurdle rates that must be achieved to finance projects. As a result, most C-PACE lenders are built on a business model of sourcing a relatively low volume of large projects. This focus has a knock-on effect on how lenders engage with the market. Most lenders do very limited proactive development of C-PACE opportunities. Those lenders who do more proactive business development have a single originator dedicated to several different states, leaving them unable to do the legwork that's often necessary for to source smaller projects.

The Green Bank can flip this business model on its head and focus on driving a greater volume of small projects. The Green Bank is positioned to do this for several reasons. Perhaps most importantly, the Green Bank brings an intentionality to its activity in the market – it is actively looking to fill an identified gap. The Green Bank also faces different economic incentives than other actors. Its cost of capital enables the Green Bank to have a different approach to hurdle rates than commercial actors. As a local, mission-driven actor, the Green Bank can also spend more time on strategic partnerships with groups such as local contractors, to build a pipeline of potential C-PACE projects.

The Anchorage Green Bank should continue to monitor the Anchorage C-PACE program design process to determine if it should consider filling the role of administering the program. Although this role does not align as well with the traditional functions of a Green Bank and may not produce an attractive risk/return profile, it should not be dismissed until the eventual framework for the C-PACE program is finalized. Once the structure of the program is finalized, the Green Bank should consider serving as the C-PACE program administrator based on the following criteria:

- Program design, particularly with regards to lending limitations
- Presence and desire of other qualified entities to administer the program
- Ability of the Green Bank to create a fee structure that would allow it to recoup the investment required to support program administration processes

Solar

As discussed earlier, Alaska's distributed solar market is small but growing. Residential solar affords customers savings from energy bills that are among some of the highest in the country. Despite these savings, the upfront cost of solar is difficult for many would-be customers to afford. Depending on size and other factors, a residential solar system can cost over $20,000, which is about the size of a typical used car loan. As one developer observed: "A lot of people don't have the cash flow to start a project." Although financing is a tool well-suited to help overcome this barrier, current access to financing among residential solar customers is limited. Better access to financing through a Green Bank could bolster the growth of the residential solar market in Anchorage and the Railbelt.

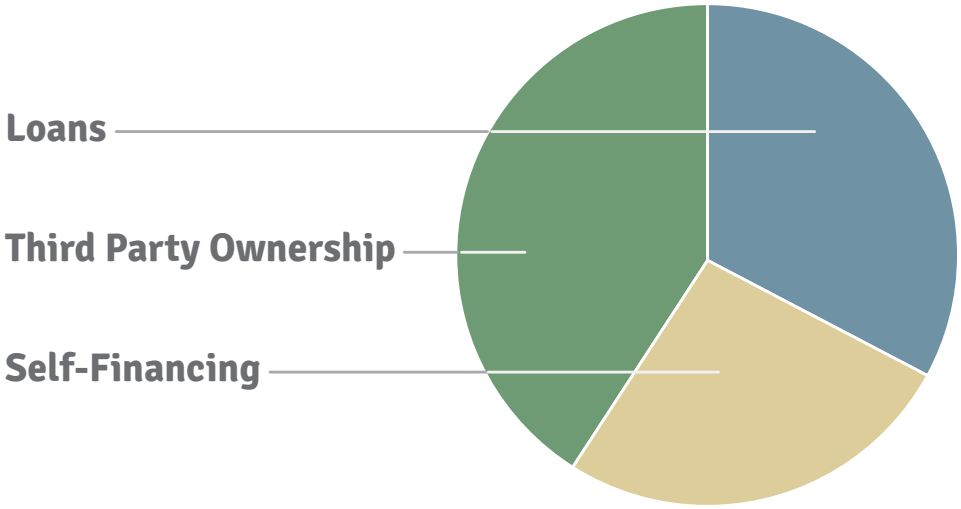
As of 2019, there is still room for solar development in Railbelt utilities. For example, Chugach Electric Association is required to provide net metering for up to 1.5% of its annual load, or 1810 kW.[41] At the end of 2019, the utility had 1040 kW of net metered

41 Alaska Center for Energy and Power. 2020 Net Metering Update.

capacity installed (248 systems), meaning it still has 43% of its capacity available (another ~200 projects).[42] Other utilities closer to their caps have chosen to expand their net metering capacity. For example, the Homer Electric Association filed with the RCA to expand its net metering limits from 1.5% to 3% in 2019 after reaching 161% of its 1.5% limit.[43] A coordinated movement by utilities in the Railbelt to increase net metering caps could create a more favorable policy environment with a Green Bank's financing to more effectively support the expansion of residential solar and the savings it would bring to customers.

Nationally, financing is a popular way to pay for residential solar projects. Across the U.S., loan financing accounts for about 30% of residential solar development, and over 40% of solar projects are financed through a third-party ownership model like a power purchase agreement or a lease.[44] In many parts of the country, the development of third-party ownership models has been an important innovation in driving solar adoption by reducing the upfront cost to customers. A third-party ownership model allows a customer to adopt solar on their site with little- or no-money down. Another entity retains ownership of the solar system, which allows for more efficient monetization of the investment tax credit. Despite its popularity in other geographies, the regulatory environment makes PPAs challenging in Alaska and, as of 2019, have only been used for a few utility-scale projects.

Figure 8. National Residential Financing Strategies[45]



Access to other forms of financing for residential solar projects is currently limited in the Railbelt. The vast majority (90-100%, based on developer conversations) of customers are self-financing, rather than working through a developer. This means customers are either paying out of pocket or arranging personal financing. Customers can currently use personal financing options that are not specific to energy, such as taking out a home equity line of credit (HELOC), taking a personal loan from a bank, or putting a

42 Assuming an average 4 kW system size

43 Alaska Center for Energy and Power. 2020 Net Metering Update.

44 National Renewable Energy Laboratory. Solar Lending Practices by Community and Regional Financial Institutions. June 2018. https://www.nrel.gov/docs/fy18osti/71753.pdf

45 National Renewable Energy Laboratory. Solar Lending Practices by Community and Regional Financial Institutions. June 2018. https://www.nrel.gov/docs/fy18osti/71753.pdf

portion of the expense on a credit card. All of these options have potential downsides. Equity-based lending requires homeowners to have sufficient equity in their home, and go through a lengthy approval process using their homes as collateral. Personal loans are typically less onerous in terms of applications, but tend to have higher rates. Based on customer experiences reported by developers, local banks treat solar loans similarly to any other personal loans. As a result, banks will look to traditional forms of collateral and credit (e.g., FICO scores) when determining who is eligible for a loan instead of the health of the project itself. This can limit the pool of eligible borrowers, and potentially result in a higher cost of capital. Developers noted that rates on these loans could be above 7%. Credit cards typically have even higher rates, well above what makes economic sense for solar.

In other markets with much higher rates of solar penetration, dedicated clean energy lenders regularly offer loans below 6%, and also include short-term financing options that enables customers to take out "bridge loans" while they wait for the solar tax credit.[46] Some specialized debt products for solar will even factor energy savings into the loan consideration, rather than the simply the credit of borrower of their debt-to-income ratio. According to CGC's conversations with developers and experience in other markets, lower term capital would allow for significant increases in the number of residential customers that can "get to yes."

A Green Bank could potentially add a valuable tool to this landscape by providing dedicated loans for solar projects in Anchorage. The Green Bank could provide short- and long-term loans for customers looking to adopt solar. As a lender focused on clean energy, the Green Bank could offer tailored underwriting criteria that is more flexible than a traditional lender and potentially lower interest rates. According to conversations with developers, lower-interest capital from a Green Bank would allow them to serve a class of businesses and residents interested in solar but unable to realize the economic benefits in the current lending environment.

CGC FINDINGS

Providing a dedicated solar loan product to the Anchorage market could enable greater development solar development by expanding the number of financing options available. Given the nascent state of the solar market in Anchorage and the current net metering caps, however, scale is an important factor for the Green Bank when considering this product.

Based on initial modeling, providing loans to one-third of the solar systems installed across the utilities serving Anchorage in 2019 would have required $1.1 million in lending capital. Assuming the Green Bank made $1.1 million in loans at 5% interest rates, it would earn approximately $55,000 in revenue, less than enough to cover operating expenses and the start-up costs of a new lending program. This activity would also create approximately 15 jobs.[47] This initial figure is likely on the lower end for first year lending potential for an Anchorage Green Bank. And lending is likely to rise year over year, as both demand for solar increases (overall net metering capacity in the Railbelt increased 74% between 2018 and 2019), net metering caps are raised, and the launch of a new financing product makes solar more attractive to customers. However, this estimate suggests that a significantly higher volume of projects would be needed to support a dedicated loan program for solar alone.

46 Clean Energy Credit Union. Loan Rates. https://www.cleanenergycu.org/home/fiFiles/static/documents/Clean_Energy_CU_Rate_Sheet.pdf. Accessed March 25, 2020.

47 Assumes $70,000 of investment per job based on similar Green Bank activity (e.g.: Navigant. Clean Energy Jobs in Connecticut. August 2016. https://www.ctgreenbank.com/wp-content/uploads/2017/02/CTGReenBank-Clean-Energy-Jobs-CT-August102016.pdf)

In order to unlock the value of a solar loan product, an Anchorage Green Bank would need to include solar lending as one part of its broader portfolio rather than as a single, dedicated product. Additionally, growing geographically to expand a solar loan to areas outside of the Municipality may allow the Green Bank to see sufficient volume to better support operations. This suggests that there is value in forming an Anchorage Green Bank using a structure that can both offer and manage multiple products as well as scale to cover multiple geographies.

Residential Energy Efficiency

Since over half of Anchorage's electricity consumption goes to the residential sector, there is a clear opportunity for solutions that target this sector. As discussed earlier, previous studies have found significant potential for residential energy efficiency savings. However, tools to realize this potential are lacking. C-PACE's residential counterpart, R-PACE, is not currently under consideration in Anchorage. Popular grant programs have seen their funding dry up. As a result, new financing mechanisms are needed to address the opportunity in the residential sector.

Similar to the solar market, it appears that there are a limited number of dedicated energy efficiency loan products active in Anchorage. Faced with a lack of market activity from current lenders, one option is for the Green Bank itself to become a dedicated energy efficiency lender, as discussed above for solar. However, based on the experience of Green Banks in other markets, offering a credit enhancement may be a more efficient way of leveraging existing lending infrastructure to provide similar offerings to consumers with less use of Green Bank capital. Compared to solar, residential energy efficiency loans tend to be small. Existing lenders, who already have lending infrastructure and relationships with customers, are often better positioned to originate and service these loans.

Credit enhancements have played a role in encouraging traditional lenders to move into or grow their residential energy efficiency portfolio. One example of this is in Connecticut Green Bank's Smart-E residential loan program. Smart-E is a credit enhancement program developed in 2012 to stimulate residential energy efficiency and solar loans. Through this product the Connecticut Green Bank lowers the cost of capital for Connecticut residential customers seeking to install solar PV, high efficiency heating and cooling equipment, insulation or other home energy upgrades and reduces the loan performance to lenders. Using a loan loss reserve, the bank encourages local lenders to offer below market interest rates and longer terms for unsecured loans, mitigating their losses, and encourages customers to undertake measures that would prove uneconomical at higher interest rates.

The Connecticut Green Bank has worked with a network of 10 local banks and credit unions. Before the implementation of this program, these banks were either offering capital at high rates and short terms, or not making loans into the space at any terms. And those that were willing to lend into this market were not actively building deal flow with contractor partnerships or other methods. In exchange for receiving the benefit of the CGB's loan loss reserve, the banks agreed to offer capital at specific terms and rates[48] that don't exceed a certain cap.

Smart-E was designed to make it easy and affordable for homeowners to make energy efficiency and clean energy improvements to their homes with no out-of-pocket cash and at interest rates low enough and repayment terms long enough to make the improvements "cash flow positive." At the same time, the Green Bank was intentional in opening conversations with local lenders to demonstrate the value

48 Terms are set between 5-20 years and rates are capped at 4.49-6.99% depending on term

of loans that would help their existing customers with burdensome energy costs and serve as an effective marketing tool to attract new relationships. In return for a "second loss" reserve which would be available beyond an agreed "normal" level of loan losses, the lenders agreed to lengthen their terms and lower their rates. The end result is a successful loan product that has enabled thousands of homeowners throughout the state to lower energy costs and make their homes more comfortable in the summer heat or the depths of winter. To date, the Smart-E program has encouraged over $74 million of investment into over 3,800 residential energy efficiency and renewable energy projects.[49]

In Michigan, the Green Bank, Michigan Saves, has also used credit enhancement to encourage residential energy efficiency development. Endowed in 2009 with an initial trust fund of $6.5 million from the Michigan Public Service Commission, Michigan Saves developed a program that eliminates the upfront costs of installation and provides a streamlined process for securing financing at preferred rates. To do this, Michigan Saves leverages third-party capital with a loan loss reserve, works closely with energy efficiency and renewable energy system contractors through training and capacity development, coordinates with similar programs in the state and across the country, and monitors the program to track results and ensure success.

Michigan Saves also works with a network of approved lenders and contractors. These lenders agree to lend at or below the terms[50] set by Michigan Saves in order to access the Green Bank's loan loss reserve. As of December, 2019, Michigan Saves has driven over $230 million in overall investment into over 20,000 energy efficiency projects across the state.[51]

Both the Connecticut Green Bank's and Michigan Saves' loan loss reserves have been very popular with residents, contractors, and lenders. In Michigan, the success of the program led to the expansion of the program with an additional $5 million in funding by governor Whitmer in the 2021 budget.[52] In Connecticut, the success of the Smart-E program developing comfort among the local lending community allowed the Green Bank to decrease the amount in its loan loss reserve in 2019, demonstrating a decreased reliance on the program's funds to stimulate lending.[53]

CGC FINDINGS

A similar program in Anchorage could be used to spark lending into residential energy efficiency projects. Several design elements will need to be explored with local lenders, such as whether the program will take a first or second loss, and the extent of losses covered. CGC estimates that a loan loss reserve in Anchorage could use around $500,000 to drive $2.1 million in annual investment and create approximately 30 jobs.[54] In order to make the program successful, the Green Bank should plan to devote resources to program administration, contractor training, customer marketing and support, and verification. These costs would generally be in addition to the costs of operating the Green Bank itself. Based on estimates from other Green Banks, this could be around $100,000 each year. While the amount of investment and job creation from credit enhancement is less than direct investment in C-PACE, this solution requires less capital to implement and encourages activity

49 Connecticut Green Bank. 2019 CAFR. https://ctgreenbank.com/wp-content/uploads/2019/11/2019-Green-Bank-CAFR-FINAL-10-31-19.pdf

50 Terms are set at up to 120 months with rates no more than 7.00%

51 Michigan Saves 2018 Annual Report. By the Numbers. https://annualreport.michigansaves.org/by-the-numbers/

52 Michigan Saves. PRESS RELEASE: Gov. Whitmer's 2021 budget proposes $5 million investment in Michigan's green bank. February 2020. https://annualreport.michigansaves.org/by-the-numbers/

53 Connecticut Green Bank. 2019 CAFR. https://ctgreenbank.com/wp-content/uploads/2019/11/2019-Green-Bank-CAFR-FINAL-10-31-19.pdf

54 This assumption is based on a target market penetration of 1% for an estimated $217 million of potential projects.

from the private sector. Although it may not be an ideal first product for the Green Bank to offer, since it does not earn sufficient returns to cover its administration costs, credit enhancement for residential energy efficiency development could be a powerful addition to a Green Bank's tools once it become self-sufficient and is seeking to broaden its market impact.

RECOMMENDATIONS

CGC finds that there are persistent barriers to clean energy growth in Municipality of Anchorage. New financing tools could help reduce these barriers and unlock and more clean energy projects, promote economic development, and enhance energy diversity in Anchorage. Clean energy markets are currently hindered by the lack of a dedicated clean energy finance partner to assist businesses and banks in clarifying the market opportunity and providing financing options. A Green Bank would be a strong addition to this landscape.

First Green Bank Product

While each product presents an opportunity for a Green Bank to play an additive role in the Anchorage market, CGC's initial assessment is that direct lending into C-PACE is the strongest initial opportunity. Green Banks have already shown the role they can play in jumpstarting C-PACE markets, and this is likely true in Anchorage. It is important to note that any Green Bank role in C-PACE (administration or lending) should be re-visited as the program details are finalized.

With a fund size of $5 million, CGC estimates the Green Bank could make the following impacts in the Anchorage market by directly investing in C-PACE projects.

Figure 9. Estimated impact of $5 million deployed through direct C-PACE lending[55]

Ancorage GB Impact: CPACE	Year 1	Year 2	Year 3
Number of Projects	5	10	10
Averae Project Size	$200,000	$200,000	$200,000
Average Payback Period (years)	7	7	7
Energy Savings (annual)	$143,000	$286,000	$286,000
Energy Savings (cumulative)	$143,000	$429,000	$714,000
Jobs Created (annual)	14	28	28
Jobs Created (cumulative)	14	42	70

55 Assumes capital is deployed with a 6% interest rate and 15-year term

This impact will increase dramatically if the Anchorage Green Bank employs capital recycling practices. For instance, the Colorado Clean Energy Fund (CCEF) plans to launch a similar finance product, with the intention of selling portfolios of C-PACE loans downstream to investors. By doing so, CCEF intends to recycle a $10 million C-PACE facility 10 times, thus ultimately generating $100 million of C-PACE loans over time. The Saint Paul Port Authority pursued a similar strategy and has generated >$150 million of clean energy loans with a fund that was initially capitalized with $15 million. Over time, if the Anchorage Green Bank can leverage its $5 million facility to generate $50 million of C-PACE loans, then the Green Bank can expect to create more than 700 jobs.

This impact will continue to grow as the Green Bank continues to expand its lending efforts to other segments of the market and geographies. If an established Green Bank were to expand its product portfolio to include a $5 million loan loss reserve to support residential energy efficiency projects, it could support an additional $21 million in projects and create an estimated 300+ additional jobs.

Like any start-up, the Green Bank will need a runway of operating capital as it sets up its operations and builds a book of business. The amount of operating support depends on several variables, such as whether the Green Bank is a standalone institution or is sharing resources at an existing one, the amount of investment capital it is given, its cost of capital, and so on. Based on the experience of lean, single-product Green Banks in other markets (e.g., Cuyahoga County), CGC believes $300,000 in annual operating support over a three-year period is a reasonable estimate for the amount of operating capital required. This is in addition to any investment capital secured.

The above is an estimate of just one product the Green Bank could employ in the Anchorage market. As the Green Bank matures, it should seek to bring existing products to new geographies as well as develop and deploy new products into existing markets. These should include those products outlined above for solar lending and energy efficiency development. By starting with the largest opportunity first, the Green Bank will be able to reach a state of self-sustainability most quickly. This stability will then allow the Green Bank to support smaller opportunities that never-the-less play a vital role in developing more nascent clean energy markets.

Next Steps: Capital

Potential capital sources for a Green Bank are diverse. As highlighted in the case studies, Green Banks have drawn on public, private, and philanthropic sources for investment capital and public and philanthropic sources for start-up operating costs. A Green Bank in Anchorage should explore the option of utilizing all of these sources when assembling its initial capital stack. Given the opportunities outlined above, CGC believes that a Green Bank could begin to make an impact in Anchorage with as little as $5 million of initial investment capital and approximately $300,000 of operating capital annually over three years. This level of capitalization and deployment would put the Green Bank on the pathway to financial self-sustainability at the end of year three.

The following are key considerations when determining what kind of capital will be best suited for Green Bank lending:

- Long-term capital, with terms of at least 10 years, is critical for matching the payback periods of the measures supported.
- Rates must be zero or very low, in order to keep cost of financing to the customer attractive while putting the Green Bank on the path to self-sustainability through its loan revenue.
- Capital that is geographically flexible and can be deployed outside of the Municipality is ideal—although it is possible for the Green Bank to have

a mix of capital that may have certain geographic constraints.

- Operating capital for the first three years would ideally come in the form of a grant.

There are a number of sources of investment capital that should be explored for creating a potential Green Bank in Anchorage. At the municipal level, public funding could be invested in the creation of a Green Bank. Philanthropic investment capital, in the form of a grant, 0% interest loan, or program related investment could also be a potential source of seed funding. State dollars in the form of legislative approval or a ratepayer surcharge are another potential source of investment capital if the Green Bank as they have been in a number of other states. Lastly, federal dollars directed to the state could be a source of investment capital for the Green Bank, especially as redevelopment plans allocate funds for development in the wake of COVID-19.

The process for exploring capital sources should begin by educating capital providers about the opportunities outlined in this report and continue by comparing the available capital with the opportunities to determine if there is potential for deployment through the Green Bank. One organization should take the lead on furthering the Green Bank capital raising strategy to maintain momentum and clear direction for the activity.

Next Steps: Structure

Another key next step for the Green Bank creation process is determining where the Green Bank will be housed. The process of raising capital should happen in advance of or (at a minimum) in parallel to the conversation around institutional form and location. Each conversation can help to inform the other, as host organizations are likely to gain a better understanding of the opportunity if there is capital allocated for the fund, and capital providers will feel more secure in their investment if they know where it will be housed and managed.

States and municipalities across the country have used various structures for creating and housing their Green Bank, from the creation of an independent nonprofit to housing the Green Bank within an existing government entity or mission-driven market actor. Given the size of a potential Green Bank in the Anchorage market, CGC believes that the best path forward is to house the Green Bank within an existing actor.

Housing a Green Bank within an existing entity offers a number of potential benefits and risks. When partnering with an existing institution, the Green Bank can leverage the expertise, infrastructure, and relationships that already exist at that entity to reduce the start-up and operating costs of the Green Bank. These can include functions like lending infrastructure, clean energy market expertise, or back-office support. This method of creation can also reduce the incubation period of the Green Bank if existing capacity and authority to create new functions exist within the chosen organization. Risks to housing the Green Bank within an existing entity can include longer creation timelines and "mission drift" away from the identified programs of the Green Bank if the host entity does not focus on clean energy.

When selecting an entity to house a Green Bank in Anchorage, there are several important criteria to consider:

- The alignment with the host organization's mission and vision for strategic growth. The Green Bank is less likely to be a successful force for market transformation if the host plans to integrate it fully into its operations, rather than siloing it as a "green lending line" or similar.
- The presence of existing lending infrastructure, which can allow a Green Bank to draw on existing staff and structures to deliver its products.

- The geography in which an organization is permitted to act is another important consideration for housing a Green Bank. Since scaling a Green Bank to act outside of Anchorage is likely to be a critical piece of achieving self-sustainability for the institution, the ability to act outside of the Municipality should be a key characteristic of a potential host for the Green Bank.

While complementarity between a host and the Green Bank is important to consider, not all functions of the Green Bank are required to sit with the host organization or even the Green Bank itself. Many of the necessary support functions can be outsourced through contracting to other local businesses. Examples of these services include: legal services, loan servicing, and grant administration.

While there is interest in the value a Green Bank could bring to the market from all of these sectors, no single organization has emerged as the leader for Green Bank development. A strong voice is needed to guide the conversation around a Green Bank and determine a clear process for determining its best potential location without moving ahead of key stakeholders.

In order to determine the ideal location for the Green Bank a number or steps need to be taken. First, the various entities who could be potential hosts need to be educated on the opportunity for a Green Bank. Through the work required to draft this report, CGC has had a number of conversations to educate actors on the current state of Green Bank development. As a next step, each organization should be gauged based on their interest in the concept and capabilities of creating an institution that can execute on one or several of the opportunities outlined above. The Municipality has an important role to play in these conversations and in determining the Green Bank's ultimate location, is discussed in greater detail later in this report.

The Municipality's Role

As mentioned above, it is unlikely a Green Bank will come into existence without on-the-ground leadership. CGC believes that the Municipality has an important role to play in supporting and enabling the creation of a Green Bank. The Municipality can take several steps to support the launch of a Green Bank in the wake of this report's release.

- Publically declare support for the creation of a Green Bank
- Convene and head a steering committee of interested parties to discuss the creation and capitalization of a Green Bank
- Hold individual stakeholder meetings to identify an appropriate host organization for the Green Bank and other potential sources of investment capital from government, philanthropic, and private actors
- Secure letters of support and/or capital commitments from other municipalities in the Railbelt
- Advocate at the federal level for a Clean Energy Jobs Fund that could serve to scale investment in the Anchorage Green Bank
- Incorporate the Green Bank into the state's COVID-19 response plan
- Make an anchor investment in the Green Bank

In order to achieve these goals, CGC recommends that the Mayor direct the Energy and Sustainability Manager to lead Green Bank development efforts. In order for these efforts to be successful, CGC recommends that this person be given both the time and resources needed to develop the activities outlined above over the next six months.

The efforts at the Municipality should not happen in isolation, and support from other stakeholders will be critical to achieving success in the Green Bank creation process. State and local actors can review their capacity to host a Green Bank, foundations can commit to support the fund with start-up operating funds or investment capital, and clean energy advocacy groups can work to lobby for a Clean Energy Jobs Fund and/or state-level stimulus for clean energy at the federal level.

Now is the time to move forward. A Green Bank in Anchorage would create jobs and spur economic growth in clean energy markets, while saving businesses and customers money. CGC sees strong local potential as well as an opportunity for the Green Bank to scale and potentially offer its benefits across the Railbelt or the entire state. CGC looks forward to assisting in this process as the initiative evolves and Anchorage joins the growing community of geographies using Green Banks as tools to create jobs, energy savings, and clean energy development.

APPENDIX 1. INTERVIEW LIST

Name	Organization
Michael Spencer	AHFC
Alan Weitzner	AIDA
Mike Craft	AIPPA and Delta Wind Farm
Michael Barber	Alaska Conservation Foundation
Tom Benkert	Alaska Energy Authority
Penny Gage	Alaska Growth Capital
Mary Miner	Alaska Growth Capital
Andrew Halcro	Anchorage Community Development Authority
Bill Popp	Anchorage Economic Development Corporation
Ben May	Anchorage Solar
Stephen Trimble	Arctic Solar Ventures
Brian Murkowski	Brian Murkowski Energy Consulting
Karla Brollier	Climate Justice Initiative
Shawn Holdridge	Cook Inlet Housing Authority
Jim Fowler	Energy Audits of Alaska
Mike Craft	Independent Power Producer Association
Isaac Vanderberg	Launch Alaska
Joe Jacobson	McKinnley Capital
Mayor Ethan Berkowitz	Municipality of Anchorage
Alex Slivka	Municipality of Anchorage
Chris Schutte	Municipality of Anchorage
Mark Spafford	Municipality of Anchorage
Dan Moore	Municipality of Anchorage
Jack Gadamus	Municipality of Anchorage
Ross Risvold	Municipality of Anchorage
Jason Bockenstedt	Municipality of Anchorage
Brendan Babb	Municipality of Anchorage
Lance Wilber	Municipality of Anchorage
Andrew Halcro	Municipality of Anchorage
Jim Nordlund	Neighborworks
Mike Martin	Northrim Bank
Jessa Coleman	Pace Financial Servicing
Genevieve Sherman	Pace Financial Servicing
Chris Rose	Renewable Energy Alaska Project

coalition for green capital