

September 9, 2019

Via Electronic Form
North Carolina Clean Energy Plan

Written Comments in Response to the Draft North Carolina Clean Energy Plan

Submitted by the Coalition for Green Capital

The Coalition for Green Capital (CGC) submits these written comments in strong support of the recommendation to form a Green Bank (also known as a “green energy bank” or “statewide clean energy fund”) presented in the draft Clean Energy Plan.

North Carolina’s Green Bank could play a key role in achieving the goals of Executive Order 80. Issued by Gov. Roy Cooper in 2018, the Executive Order pledges to reduce North Carolina’s greenhouse gas emissions 40% below 2005 levels. Several cities in the state—including Asheville, Charlotte, and Wilmington—have adopted even more aggressive clean energy goals.

Establishing a Green Bank in North Carolina could also position the state to benefit from potential new federal investment. The National Climate Bank Act,¹ introduced in the Senate in July, would establish a Climate Bank at the federal level and make \$35 billion available to capitalize state and local Green Banks, as well as to directly invest in large-scale clean energy projects.

Currently, North Carolina generates 35% of its power from nuclear plants and 20% from coal.² Renewables represent a small but increasing portion of the state’s generation mix. This is driven largely by a rapidly developing solar market, which generates about 4.4% of the state’s electricity. According to the Solar Energy Industries Association, North Carolina ranks second in the nation in cumulative installed solar capacity.

However, North Carolina has challenges ahead, as the state’s fleet of 11 nuclear reactors grows older. Most were built in the 1940s, raising the need to plan for their possible retirement. Coal generation also continues to decline, and together these trends could leave more than 55% of the state’s energy need unanswered. Addressing the gap with renewable energy will be important to meeting North Carolina’s climate goals, while also providing benefits to the state’s economy and the health of its residents.

A Green Bank can accelerate this trend towards renewable energy in North Carolina. It can help ensure that renewable energy is delivered affordably, without raising power prices for consumers. And, it can invest in energy storage and other technologies that will allow renewables to integrate onto the grid without affecting reliability. Given these advantages, it is no surprise that through the Clean Energy Plan

¹ Office of Senator Ed Markey. Senators Markey and Van Hollen Introduce Legislation to Create a National Climate Bank. <https://www.markey.senate.gov/news/press-releases/senators-markey-and-van-hollen-introduce-legislation-to-create-a-national-climate-bank>. July 8, 2019.

² Energy Information Agency. *State Profile: North Carolina*. <https://www.eia.gov/state/?sid=NC>. Accessed August 2018

stakeholder process, “a diverse group of individuals and other energy collaborators identified a need for an NC clean energy fund.”

Part of the appeal of Green Banks comes from the track record of success these institutions have built up in other states. Fourteen Green Bank institutions already exist across the U.S., and they have mobilized a collective \$3.67 billion in investment into clean energy projects through 2018.³ The nature of these individual projects can vary considerably, but the common threads include helping state residents overcome financial barriers and improve their homes and businesses while reducing their energy bills.

Participants in the stakeholder process for North Carolina’s Draft Energy Plan identified a wide range of markets where consistent access to affordable capital represents a barrier, including: “project funding in renewable energy, energy efficiency, electric vehicle infrastructure, and other measures that reduce emissions, particularly in rural and poorer communities of the state that otherwise lack access to necessary capital.” Green Banks in other geographies have invested in these markets, including solar, energy efficiency, and projects focused on low- and moderate-income communities (LMI). Innovative efforts have included the Connecticut Green Bank’s successful Solar for All Program,⁴ and Hawaii GEMS’ new program to allow renters to lower their energy bills by going renewable.⁵ Income or homeownership shouldn’t be a barrier to accessing the benefits of clean energy.

Structure and governance of a North Carolina Green Bank

The draft Clean Energy Plan rightly calls on actors outside of state government—NGOs, academia, and local government—to determine how to establish a Green Bank in North Carolina. The role of the state government, as identified in the draft, is to provide public support and guidance. This places state government in critical governance and advisory roles, rather than being tasked with development and execution of a new financing entity.

This division of responsibilities fits well with CGC’s experience in other states. CGC has conducted preliminary research in North Carolina, and next intends to produce a more in-depth report in partnership with the Nicholas Institute for Policy Solutions at Duke University. Based on CGC’s findings thus far, as well as CGC’s experiences consulting on the establishment of Green Banks in other states, CGC recommends that a North Carolina Green Bank (NCGB) be formed by NGOs and academia as a government-adjacent, independent 501c3 non-profit corporation. Creating a nonprofit (as opposed to a quasi-public entity) avoids the need for the passage of legislation. Non-profits are also better positioned to receive and blend public, philanthropic, and private capital on their balance sheets.

This non-profit Green Bank would also be well-positioned to work in close coordination with other Green Banks around the country that are now organizing to achieving collective scale. A non-profit Green Bank would be ideally structured to join the American Green Bank Consortium and engage in capital and product partnerships with its fellow Green Banks. It could also collaborate and work closely with all Green Banks to learn best practices in order to scale its operations more quickly.

³ Annual Industry Report of the American Green Bank Consortium. <https://greenbankconsortium.org/annual-industry-report>

⁴ <https://ctgreenbank.com/2018-slice-award-solar-for-all/>

⁵ <https://www.greentechmedia.com/articles/read/justin-hawaii#gs.1jj3b8>

CGC expects to provide more detailed findings and recommendations in our next report. At each stage of the process, we are ready to assist in identifying the path forward for a North Carolina-based Green Bank, and thank state leaders in North Carolina for the opportunity to comment.

Appendix: The Green Bank Model

Green Banks are specialized financial institutions that drive investment in clean energy and accelerate the decarbonization of the power sector. Green Banks can take multiple legal forms, including non-profit or quasi-public. They are typically capitalized with public funds, which can then be leveraged to maximize total investment capacity of the organization.

Core attributes

The Green Bank model is already in use in states across the US and in countries around the world. The flexibility afforded within the Green Bank framework is one of its strengths, and these institutions vary in their structure and focus. At the same time, they share a set of core attributes that contribute to their unique effectiveness.

- Reduce consumer energy costs and increase consumer access to clean energy.
- Use financial tools and expertise to draw private investment into carbon-reducing projects.
- Accelerate the reduction of greenhouse gas emissions.

Amplification of impact

One of the advantages of Green Banks is their ability to multiply their investment impact beyond the amount of capital initially provided. Methods to accomplish this include:

- Recycling capital: Lending money to be repaid, with interest, to the Green Bank, allowing each dollar deployed to be recycled and re-lent again.
- Project-level leverage: Mobilizing private capital at the project level through co-investment and credit enhancements, ensuring that each Green bank dollar draws in multiple private dollars of investment.
- Balance sheet leverage: Borrowing against existing assets, increasing lending capacity beyond the public capitalization. This method has not been used by existing Green Banks at the state level, but is used by other entities like commercial banks and development banks, and could be an effective approach for a large enough Green Bank.

Financial methods

Green Banks use financial tools to achieve project-level leverage, addressing barriers that prevent private capital providers from fully investing in the target market opportunities. They seek to expand markets and create new opportunities for private investment.

- Addressing perceived project risks with credit enhancements: If private investors see an investment as risky (perhaps because it is based on an unfamiliar technology, or because it

serves a customer base seen as a credit risk) they may be unwilling to offer capital at rates that are feasible for a project to move forward. Green Banks can offer credit enhancements, such as loan loss reserves or loan guarantees, that help de-risk investments for private investors.

- Addressing inefficiencies of scale with aggregation: Small and geographically dispersed projects like residential or small business energy efficiency are often not cost-effective for private investors to underwrite. Green Banks can bundle together and projects that are not cost-effective to underwrite on their own. Pooling these loans diversifies risk and achieves scale, making them far more attractive to lenders.
- Addressing resistance to first-of-kind transactions: Transactions that have never been done before are more labor-intensive than typical standardized transactions. Green Banks can put in the technical legwork to develop frameworks for new types of transactions. As the new transaction types become more common, processes become more standardized and friction is reduced.

Proven track record

Green Banks are a cutting-edge idea, but they have a proven track record. There are now 14 existing Green Banks in the US that have driven \$3.67 billion of investment to date.⁶ National Green Banks in other countries like the UK and Australia have also already financed billions of dollars of clean energy.⁷ These investments have reduced greenhouse gas emissions while also reducing consumer costs and generating returns for private co-investors. Specific examples can help showcase Green Banks' achievements.

- Catalyzing new markets: Supporting new technology markets helps demonstrate their potential and overcome initial barriers. For example, fuel cell technology has the potential to facilitate clean energy storage and zero emission propulsion. However, private capital providers are often hesitant to lend to the industry because at commercial scale its use is relatively new. In August 2017, the New York Green Bank committed \$45 million to a fuel cell technology company that provides hydrogen-based propulsion systems for industrial and commercial vehicles. This investment lessened the burden of cash collateral accounts and brought the technology into wider use, smoothing the path for future deployment and expansion.
- Mobilizing private capital: Another strategy for accelerating investments in clean energy is through business models that address private capital markets constraints and risk perceptions. Since 2010, Michigan Saves has mobilized \$200 million in private investments from just \$7 million in public capital. Michigan Saves uses a credit enhancement in the form of a loan loss reserve to attract private capital. The program's method of driving private investment ultimately means that many more consumers can be served, lowering both their carbon footprint and energy bills.
- Assisting low-and-moderate-income communities: Green Banks can help low and moderate income consumers overcome the upfront capital costs of relatively expensive upgrades. For

⁶ <https://greenbankconsortium.org/annual-industry-report>

⁷ <https://unfccc.int/news/green-bank-network-mobilizes-us41-billion-for-clean-energy-projects-around-the-globe>

example, the Connecticut Green Bank launched a “Solar for All” program targeting low-to-moderate income (LMI) households. The program offers combined residential solar PV and energy efficiency measures, and has reached nearly 2,500 homes, deployed over 16 MW of solar PV, expanded energy efficiency measures, led to the investment of nearly \$70 million, and reducing the energy burden on families by about 30 percent. Connecticut is now a “solar parity” state where LMI households are demanding solar PV the same as non-LMI households.