How a Green Bank Can Drive the North Carolina Clean Energy Economy: A Market Opportunity Overview

November 2020
Agenda

1. Welcome and Introduction
2. What is a Green Bank
3. Summary of Opportunities and Impact for the Green Bank in North Carolina
4. Capitalization Methods & the Clean Energy and Sustainability Accelerator
5. Steps Forward
The Coalition for Green Capital (CGC) is a non-profit organization focused on accelerating the growth of clean energy markets through the creation of Green Banks.

The Nicholas Institute for Environmental Policy Solutions at Duke University helps decision makers create timely, effective and economically practical solutions to the world’s critical environmental challenges.
Welcome

Sushma Masemore
Deputy Assistant Secretary
State Energy Director
NC Department of
Environmental Quality
Green Banks are purpose-built to connect capital with clean energy projects

- Green Banks are clean energy finance businesses whose mission is to use financial tools to increase sustainable investment
- Green Banks bring together commercial, public, and mission-driven capital to drive clean energy investment in local markets
- Green Banks develop local expertise to break down barriers & connect projects with capital
- Green Banks use methods that catalyze greater overall investment beyond the dollars they deploy
Existing network of state and local GBs have driven $5B of investment...

$3 of Private Capital Deployed for Each Green Bank Dollar
Why are Green Banks Necessary? Business and capital barriers to market penetration of proven technologies

Need more technical capacity at local level

Collective action problems

Perceived LMI credit risk due to lack of credit history

Small projects not at sufficient scale for private capital

Low incentive to serve LMI communities by commercial lenders

Sales/install workforce too small

Need standardization for securitization

Low consumer awareness of financial options

Negative cash flow due to debt rate or term mismatch with project lifetime

Stranded asset value of fossil fuel investments

Perceived LMI credit risk due to lack of credit history
Green Banks knock down barriers for faster and cheaper private market growth with equitable deployment

<table>
<thead>
<tr>
<th>Finance Strategies</th>
<th>Market Creation Strategies</th>
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<tbody>
<tr>
<td>• Debt to make project work for investors &amp; consumers (lower rates, longer terms)</td>
<td>• Standardization of products to enable speed, aggregation and securitization</td>
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<tr>
<td>• Alternative underwriting criteria to address households with limited credit history</td>
<td>• Act as first mover to spark deals that require collective action</td>
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<tr>
<td>• Credit enhancements to mitigate risk and induce private investment</td>
<td>• Partner with utilities to use non-debt based financing structures to not overburden households with more debt</td>
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<tr>
<td>• Standardize, aggregate &amp; warehouse small projects to access capital markets</td>
<td>• Partner with businesses to create and train massive new sales and installation workforce</td>
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<tr>
<td>• Predevelopment and development capital to lower cost and increase speed of project construction</td>
<td>• Employ innovative structures like C-PACE and on-bill financing products to expand access</td>
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<tr>
<td>• Directly finance first-of-kind transactions to lead by example</td>
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**Underlined Strategies Directly Address Frontline, LMI Communities and EJ Needs**
PROCESS AND METHODS

Green Bank Recommended in:

- NC Clean Energy Plan
- NC Energy Efficiency Roadmap
- DOT Zero Emission Vehicle Plan

Duke Nicholas Institute & Coalition for Green Capital:

- Stakeholder Engagement Process
- Aggregation of Barriers & GB Solutions
- Duke & CGC Report Published

Steps Forward:
# Example Roles for a Green Bank in North Carolina

<table>
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<tr>
<th>Role</th>
<th>Barrier to Investment</th>
<th>Solution</th>
<th>Examples</th>
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<tbody>
<tr>
<td>Connector</td>
<td>First-of-kind-transaction</td>
<td>Technical assistance</td>
<td>Put in technical legwork that comes with closing more labor-intensive, innovative transactions</td>
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<tr>
<td>Risk Mitigator</td>
<td>Perceived project risk</td>
<td>Credit enhancement</td>
<td>Provide a loan loss reserve that can mitigate risk and allow investment to flow at longer term of lower rate</td>
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<tr>
<td>Direct Lender</td>
<td>Marginal economics</td>
<td>Co-investment</td>
<td>Lend to a project, in senior or junior position, to improve overall economics for investors and customers</td>
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<tr>
<td>Bundler</td>
<td>Inefficiencies of scale</td>
<td>Aggregation &amp; Warehousing</td>
<td>Aggregate small projects to meet scale to attract private capital</td>
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Example Opportunities for a Green Bank in North Carolina

<table>
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<tr>
<th>Role</th>
<th>North Carolina Opportunities</th>
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<tr>
<td>Connector</td>
<td>• Provide technical assistance to support electrification and energy efficiency on-bill tariff programs for electric cooperatives and municipal utilities</td>
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<td>• Support cities in developing energy efficiency and clean energy projects</td>
</tr>
<tr>
<td>Risk Mitigator</td>
<td>• Encourage traditional lenders to grow their energy efficiency offerings</td>
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<td></td>
<td>• Expand the affordable housing programs offered by the NC Housing Finance Agency</td>
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<tr>
<td>Direct Lender</td>
<td>• Offer dedicated energy efficiency lending in agriculture</td>
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<td>• Electrify transit and school bus fleets</td>
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<tr>
<td>Bundler</td>
<td>• Establish a Heat Pump Water Heater Program</td>
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<td>• Offer standardized energy efficient residential equipment loans</td>
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How a Green Bank Could Help:

Ajulo Othow
Founder, CEO of EnerWealth Solutions

Amber Weaver,
Sustainability Officer,
City of Asheville

Terry Albrecht,
Director, Waste Reduction Partners
Target for North Carolina Clean Energy Fund: $100M to stimulate economy, just energy transition, and GHG reduction

- **Economic Recovery & Job Growth**
  - More than 21,000 NC clean energy workers remain unemployed in July 2020, or approximately 19 percent of the state’s clean energy workforce
  - With $100 million in seed capital, a Green Bank in North Carolina could create 15,000 jobs within its first five years with no other state policy changes

- **Environmental Justice & Health Outcomes**
  - Programs specifically focused on low-income, front line communities

- **Emissions Reductions**
  - Given the state’s goals to reduce electric power sector greenhouse gas emissions by 70% below 2005 levels by 2030 and attain carbon neutrality by 2050, significant investments are needed to build the necessary infrastructure and ecosystem support
Where will the money come from? New federal Clean Energy Accelerator is a promising avenue for NC

One Time Appropriation

Initial Board Appointments

Non-Profit Accelerator

Network of State Green Banks Standing by to Invest

Private Leverage

$4 Total Investment

$1 Public Dollar

$4 Total Investment

$4 Total Investment

$4 Total Investment
Accelerator & NC green bank will partner with private capital to fund businesses and build projects across sectors

- Renewable Power
- Buildings
- Grid
- Transportation
- Industry
- Sustainable Ag & Forestry
- Climate Resilience
40% of investment made in disadvantaged communities to create jobs & businesses, lower energy costs

As non-profit, Accelerator has unique abilities to target investment for disadvantaged communities

Targeted Investment in Disadvantaged, Frontline Through State & Local Partners

Create Jobs

New Businesses

Lower Household Energy Burden

Improved Public Health
Accelerator bill co-sponsored by VP-Elect Harris, already passed 2x, can pass in early ‘21 as clean energy stimulus

- **Passed the House Twice** - Language of National Climate Bank Act included in $1.5T Moving Forward Act, providing $20B to a non-profit renamed the Clean Energy and Sustainability Accelerator

- **Model in President-Elect Biden’s Climate Plan** - to “develop innovative financing mechanisms that leverage private sector dollars to maximize investment in the clean energy revolution”

- **Co-Sponsored & Endorsed by Vice President-Elect Harris**

- **In House Clean Economy Jobs and Innovation Act** – Featured piece of broad energy and innovation bill; be voted on this week

- **Nearly 100 organizations signed letter of support**, including:

  - [Sierra Club](#)
  - [NRDC](#)
  - [LCV](#)
  - [Union of Concerned Scientists](#)
  - [SEIA](#)
  - [GRID Alternatives](#)
  - [EDF](#)
  - [Vote Solar](#)
  - [BLOC Power](#)
  - [GENERATE CAPITAL](#)
Stakeholders across the country are supporting the Accelerator and preparing Green Banks to receive funding.
PROCESS AND METHODS

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- DoT Zero Emission Vehicle Plan

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Steps Forward:
- Nonprofit Corporation Established
  - Advocacy and Coalition Building, Letter of Support
  - Develop Pipeline and Institutional Readiness
  - Fundraising and Hiring
Introducing the North Carolina Clean Energy Fund (NCCEF)

Board Members

Ajulo Othow
Founder, CEO of EnerWealth Solutions

Melissa Malkin-Weber
Sustainability Director
Self-Help Credit Union & Ventures

Jennifer Weiss
Senior Policy Associate, Climate and Energy
Nicholas Institute

Tyler Norris
Director of Development, Cypress Creek Renewables
Steps Forward for a North Carolina Green Bank: The North Carolina Clean Energy Fund (NCCEF)

• NCCEF must have support to move forward. We are actively seeking support through:
  – Letter of Interest
  – Pipeline Examples to demonstrate readiness to deploy funds

• Institutional development
  – Continue developing pipeline of financial products for the state of North Carolina to demonstrate readiness for capital deployment
  – Fundraising for staff positions and operations

Please reach out if you are interested in supporting the NC Clean Energy Fund
Thank You
Jennifer Weiss, Jill Bunting, Hannah Beinecke

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jill@coalitionforgreencapital.com
hannah@coalitionforgreencapital.com
# How Green Banks Are Capitalized: Sources and Methods

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<tr>
<th>National Climate Bank</th>
<th>State Funding</th>
<th>Foundations</th>
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<tr>
<td>• Federal Legislation creating a National Climate Bank</td>
<td>• If the state joins the Regional Greenhouse Gas Initiative (RGGI) and uses auction proceeds to capitalize the Green Bank</td>
<td>• Grants</td>
</tr>
<tr>
<td>• Resilience Funds</td>
<td>• If the state mandates a carbon tax and some portion is used for the Green Bank</td>
<td>• Program-related investments</td>
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<tr>
<td>• Decarbonization Funds</td>
<td>• General Funds</td>
<td>• Budget appropriations</td>
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<tr>
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<td>• Budget appropriations</td>
<td>• Issuance of a state Green Bond</td>
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# Green Bank Pathways and Strategies for Creation

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<th>Pathway</th>
<th>Level of Capitalization</th>
<th>Method</th>
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<tr>
<td><strong>Bootstrap Model</strong></td>
<td>• $1–3 million</td>
<td>Seed funding used to design and implement at most one financial product which the Green Bank can use as proof of concept to then start raising additional capitalization funds in future years.</td>
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<td><strong>Lean and Mean Model</strong></td>
<td>• $10–50 million</td>
<td>Capital used to stand up a Green Bank and roll out one or two programs. As the Green Bank grows, additional capital can be added through foundations, government action, or balance sheet borrowing.</td>
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<td><strong>Transformation Model</strong></td>
<td>• $100 million and more</td>
<td>This level of capitalization would allow the Green Bank to launch multiple financial products in order to transition the state’s energy economy to clean energy and recover from COVID-19 through job creation, and safer, more reliable, more resilient, and more equitable energy sources.</td>
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