Establishing a Local Green Bank

MONTGOMERY COUNTY AND THE ROLE OF GOVERNMENT IN EXPANDING THE ENERGY FINANCE MARKET

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MONTGOMERY COUNTY, MD

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ACEEE ENERGY FINANCE FORUM
NEWPORT, RHODE ISLAND
Let’s start with...

Montgomery County Green Bank
- Why a Green Bank
- Work Group and Market Research
- Progress Report

Bringing Energy Finance to Local Government
- Capacity Building and Crucial Partners
What a local government can do to push a market

Montgomery County Energy Goals and Programs

2009: County Greenhouse Gas Reduction Goal & Climate Protection Plan

2009: EmPOWER Maryland Utility Energy Efficiency Programs Launch

2014: County Benchmarking and Transparency Law

2015: County Commercial Property Assessed Clean Energy

2015: County Green Bank Law
A green bank is a **public financing authority** that **leverages private capital** with **limited public-purpose dollars** to **accelerate the growth** of clean energy markets.
Green Banks go where other banks don’t go...yet

Green Banks:
- **Leverage** private dollars
- Address market **gaps**
- Data **standardization**
- Support and enhance **demand**
- Build and bundle **volume**
- **De-risk** through innovative financing

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**Connecticut Green Bank**

<table>
<thead>
<tr>
<th></th>
<th>FY12-FY15 (CGB)¹</th>
<th>FY16 Targets (CGB)²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>Financing</td>
<td>Financing</td>
</tr>
<tr>
<td><strong>Clean Energy</strong> (MW/yr)</td>
<td>33.63</td>
<td>110.0</td>
</tr>
<tr>
<td><strong>Investment</strong> ($MM/yr)</td>
<td>$165.8</td>
<td>$670.0</td>
</tr>
<tr>
<td><strong>Leverage Ratio</strong></td>
<td>3:1</td>
<td>10:1</td>
</tr>
<tr>
<td>% of Funds as Loans</td>
<td>56</td>
<td>80</td>
</tr>
</tbody>
</table>

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Example of CT Green Bank, provided by Coalition for Green Capital
Building a Green Bank

**Nation’s First Local Green Bank**

- Green Bank Legislation enacted June 2015
  - Public-Purpose Nonprofit Entity
  - Increase investment in clean energy deployment
  - Board of Directors Composition
  - Designation

- Work Group to provide recommendations

- Not Taxpayer-Funded
  - Anticipated to be capitalized with funding through the County’s Settlement Agreement with the Exelon-Pepco merger
A “Working” Work Group

Learning about Community Needs/Opportunities

- Work Group
  - 400+ email subscribers, 50+ committee members, 30+ super members
  - Over 120 attendees at Green Bank Kick-off
  - 3 Committees: Fundraising/Capitalization, Governance, Marketplace Development
  - Each committee met for 2 hours each month for seven months

- Coalition for Green Capital: Market Assessment
  - Landscaping
  - Market Sizing
  - Recommendations

- Harcourt Brown & Carey: Background Research
$2.7 billion of clean energy potential in the County

<table>
<thead>
<tr>
<th>Selected Technologies</th>
<th>Total Current Installed Capacity</th>
<th>Total Potential Market</th>
<th>Total Unfilled Potential Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind</td>
<td>0 MW</td>
<td>N/A</td>
<td>$0</td>
</tr>
<tr>
<td>Solar PV</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>14.3 MW</td>
<td>182 MW</td>
<td>$549 M</td>
</tr>
<tr>
<td>C&amp;I</td>
<td>13.7 MW</td>
<td>175 MW</td>
<td>$308 M</td>
</tr>
<tr>
<td>Energy Efficiency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electric</td>
<td>896 GWh</td>
<td>3,842 GWh</td>
<td>$879 M</td>
</tr>
<tr>
<td>Thermal</td>
<td>N/A</td>
<td>9,032 BBtu</td>
<td>$701 M</td>
</tr>
<tr>
<td>Bioenergy Electric Generation(^1)</td>
<td>54 MW</td>
<td>31 MW</td>
<td>$122 M</td>
</tr>
<tr>
<td>Combined Heat &amp; Power</td>
<td>67 MW</td>
<td>75 MW</td>
<td>$90 M</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>N/A</td>
<td>N/A</td>
<td><strong>$2,652 M</strong></td>
</tr>
</tbody>
</table>

Notes & Sources: (1) Only includes power generation, does not include bioenergy used for end-use efficiency. Only estimates technical potential. SEIA, EIA, NREL, GTM, EmPOWER, ACEEE, DOE, GDS, EEFA, CHP Market Analysis
$2.7 billion of clean energy potential in the County

$900 Million Solar Opportunity

$1.5 Billion Efficiency Opportunity

Graphic compiled by Coalition for Green Capital on behalf of Montgomery County
Ground-truthing through Interviews

<table>
<thead>
<tr>
<th>Status</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed</td>
<td>43</td>
</tr>
<tr>
<td>Upcoming</td>
<td>0</td>
</tr>
<tr>
<td>Scheduling</td>
<td>0</td>
</tr>
<tr>
<td>No response</td>
<td>7</td>
</tr>
<tr>
<td>Declined</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>55</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance</td>
<td>10</td>
</tr>
<tr>
<td>Government</td>
<td>4</td>
</tr>
<tr>
<td>Nonprofit</td>
<td>4</td>
</tr>
<tr>
<td>Consulting</td>
<td>4</td>
</tr>
<tr>
<td>Utility</td>
<td>3</td>
</tr>
<tr>
<td>End-User</td>
<td>2</td>
</tr>
<tr>
<td>Property Owner/Manager</td>
<td>4</td>
</tr>
<tr>
<td>Contractor</td>
<td>6</td>
</tr>
<tr>
<td>Community Solar</td>
<td>4</td>
</tr>
<tr>
<td>Academic</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>43</strong></td>
</tr>
</tbody>
</table>
No surprises, but plenty work for the Green Bank to do

**Supply – Side**

- Limited financing options tailored for energy improvements
- Need for energy financing technical assistance
- Lenders seek risk-reducing measures for new types of investment

**Demand – Side**

- Customers need zero upfront cost, have immediately positive cash flows, and have simple process
- Customers need more and clearer information, and trusted, central source of information
- Customers need a turnkey solution that requires minimal effort
Recommendations and Activities

- REC Financing & Aggregation
- Deep Retrofits
- Residential Solar Loan/Lease
- Energy Efficiency
- Multifamily Project Development
- Solar Co-op
- Solarize
- Low-to-Moderate Microgrid
- Demand Aggregation
- Pre-Dev Loans for Multifamily
- Market Transparency
- Energy Storage
- EE Loan Warehousing
- Community Solar
- Data Standardization
- Commercial EE Loan
- Online Resource
- PACE Construction Loans
- Electric Vehicle Lender Education
- Commercial Solar Pilot Projects
- Solar & Storage
- Loan Loss for Residential Financing
- Energy Management
- One-Stop Shop
- Weatherization
- Consumer Outreach
- Water Efficiency
“What will the Green Bank do first?”

The Board of Directors will take all the research, templates, and input collected through this process, and use that to set priorities.

**Green Bank Work Group + DEP**

- Policy Goals and Needs
- EE and RE Potentiality from Market Assessment
- Stakeholder Insights
- Market Assessment & Recommendations
- Consolidate Data and Information

**Board of Directors**

Priorities of the future Board of Directors will determine Green Bank activities
We’re on our way...

✓ Incorporation in the State of Maryland
✓ BoD Recruitment

☐ Amendments & Report to Executive and Council – in progress
☐ Recruitment of Board of Directors – in progress
☐ Establishment of the Board of Directors
☐ First Meeting: Passage of Bylaws (“baby”/abridged)
☐ Appointment of Directors of DEP/FIN
☐ Designation by Resolution (Anticipated Summer/Fall 2016)
Increasing Activity around Energy Investment Globally

New commitments mean greater investment

- COP21 and the Global Green Bank Network
- New York Green Bank
- Connecticut & Hannon Armstrong
- California Residential PACE
- Montgomery County C-PACE Designated Lender
Wrapping up with...

Montgomery County Green Bank
- Why a Green Bank
- Work Group and Market Research
- Progress Report

Bringing Energy Finance to Local Government
- Capacity Building and Crucial Partners
So you want to build a Green Bank?

Challenges

- No energy finance expertise in the government
- Language barriers between departments
- “Green Bank” concept can be hard to grasp
- No clear model – Lots of options
- Lack of policy-level education on energy financing
Vote of Confidence

“You’re not exactly qualified to build a bank, Michelle.”

– Mom, in her skeptical-but-encouraging voice

“I know! But it’s not really my decision...”
Turning a Policy-head into a Finance-Fiend

My tips?

- Get curious.
- Finance is a “language” – learn it like one.
  - SPEAK it and READ it...
- Know there isn’t a “right” way...but find out if there’s a “better” way.
- Make Friends:
  - In-House: Department of “Government” Finance, Housing Finance Authorities, CDFIs, Economic Development
  - Not-for-Profit: DOE, ACEEE, IMT, Cadmus, Coalition for Green Capital
  - For-Profit: Harcourt Brown & Carey, Urban Ingenuity, Eutectics, Local Banks
  - Community Stakeholders: I highly recommend a Work Group Process.

Contact: Michelle Vigen | michelle.vigen@montgomerycountymd.gov
Thank you

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