



Affordable clean energy through Connecticut's Green Bank

Government: Connecticut, US

Region: North America

Sector: Climate finance

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Summary

Accessing sufficient financing for the clean energy transition can be a challenging task. However, in 2011 Connecticut established the world's first state level 'green bank', with broad bipartisan support. This pioneering clean energy financing model represents an exemplary marketplace for the accessible and affordable adoption of clean green energy and energy efficiency upgrades by homeowners, businesses and institutions alike.

The Connecticut Green Bank also succeeds in creating jobs and promoting energy security. Through innovation, education, activation and acceleration, it leverages limited public resources to attract private investment, using several mechanisms including co-lending, credit enhancements, and aggregation and securitization to de-risk clean energy projects for private investors. The bank is also experimenting with innovative loan repayment mechanisms, such as on-bill and PACE financing, which reduce risk by linking loan payments to established payments like electricity bills and property taxes. After sparking the revolutionary [Green Bank movement](#), through a demonstration of creative policy, partnership and large-scale innovation, it was awarded the Harvard Kennedy School's Ash Center's "Innovations in American Government Awards" in 2017.

Funds for the Bank come from a number of sources, including a [Systems Benefit Charge](#), [the Regional Greenhouse Gas Initiative \(RGGI\)](#), Renewable Energy Certificate (REC) sales and the federal government. The success of the Connecticut Green Bank has led to several new partnerships and innovative projects between the energy and financial sectors.

Results

The Connecticut Green Bank has attracted over \$1 billion in capital for clean energy projects across the state to date. By using \$174.6 million of ratepayer funds, the bank leveraged \$914.8 million of private investment. This has supported the overall deployment of 234 megawatts (MW) of renewable energy and generated enough savings per annum to reduce the energy burden on over 20,000 households and businesses. Projects have collectively created over 13,000 direct, indirect and induced jobs and reduced



~3.7 million tons of CO₂ emissions. Ultimately, the Connecticut Green Bank helps de-risk clean energy projects for private investors through three main mechanisms, including i) direct lending and co-lending to under-financed projects, ii) credit enhancements (loan loss reserve funds and loan guarantees), covering losses that would occur if a clean energy loan defaults, and iii) aggregation and securitization of small clean energy loans to attract interest from private investors.

Some of the projects implemented by the Green Bank include:

- [CT Solar Loan](#) – a residential solar PV loan product for local contractors to offer in-state customers. Initially supported by crowd funding and a community development finance institution, the loan successfully graduated to a privately funded model and is now offered in several other states, including California, Massachusetts and New York State.
- [Commercial Property Assessed Clean Energy \(C-PACE\)](#) - a long-term financing tool to pay for green improvements over time through a voluntary benefit assessment. There are 125 municipalities that have signed onto C-PACE. Of those municipalities, 70 municipalities have completed at least one C-PACE project.
- [Solarize Connecticut](#) – a proven model for advancing residential solar. The bank offers incentives and low-cost financing to support homeowners, municipalities and institutions.
- [Smart E-loan](#) – a low interest, 5 -12 year, unsecured loan product, offered through local community banks and credit unions to support clean energy improvements (as well as health and safety measures) consistent with [Connecticut's Comprehensive Energy Strategy](#).

The next steps are for the Green Bank to rely solely upon private investments, something bank officials think could be achieved within the next decade, as cost of clean energy continues to fall.

Enabling conditions

The Connecticut Green Bank evolved from an initial investment and ongoing commitment from existing policymakers. The Connecticut Clean Energy Fund (CCEF) and the Clean Energy Finance and Investment Authority (CEFIA) then gave a broader mandate in 2011 to become the first state-led green bank in the United States. It was spearheaded by engaged citizens and the Connecticut Green Bank team's motivation to accelerate climate action.

Challenges

- **Customer acquisition.** The success of the green banks model is largely dependent upon its ability to bring new markets to scale quickly, so that costs fall and customer demand rises. To this end, generating a sufficient amount of lead volume is critical to sustain the interest of channel marketing partners (e.g. solar installers, energy efficiency contractors and lenders). As both a B2B and B2C marketer, the Green Bank not only drives the process of increasing general market awareness of green energy opportunities but also helps channel partners achieve greater penetration within their target markets by developing tailored go-to-market campaigns.
- **Market innovation vs. the legacy of zero-based budgeting.** While appropriate for most government programs and agencies that disburse grants and subsidies, zero-based budgeting does not adequately support a mission designed to transition markets away from public funding in favor of private investment. As a result, policy makers may underestimate the fundamental role that balance sheet leverage plays to secure the viability and sustainability of the green bank model.
- **Maintaining strong relationships** with capital partners and stakeholders after the Connecticut General Assembly (state legislature) rescinded a majority of the banks funding for two years beginning in fiscal year 2017.



Key lessons learned

- Public-private partnerships that offer greater access to affordable financing not only catalyze renewable energy markets - both residential and commercial - but also rapidly accelerate the rate at which they are able to achieve scale and drive down consumer costs.
- The Connecticut Green Bank model is highly replicable. It is currently being implemented in several other areas of the United States, including: Montgomery County Maryland, New York and Rhode Island.
- The low-to-moderate income market segment represents enormous potential for solar PV.

More information

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2017 Financial Report: [here](#)