



GREEN BONDS SECOND PARTY OPINION

ISSUER:

Connecticut Green Bank

OPINION ON:

Green Bond Framework

SECTORS:

Renewable Energy
Green Buildings
Energy Efficiency
Clean Transportation
Pollution Prevention and Control



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Executive Summary

Kestrel Verifiers is of the opinion that the Green Bond Framework for Connecticut Green Bank's Master Bond Indenture (2020) conforms with the four core components of the Green Bond Principles 2018. This assessment is based on the following:

Use of Proceeds

The eligible categories for the use of proceeds – Renewable Energy, Green Buildings, Energy Efficiency, Clean Transportation, and Pollution Prevention and Control – are aligned with those recognized by the Green Bond Principles 2018. Kestrel Verifiers considers that the Connecticut Green Bank's investments in these areas will lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically Goals 1, 3, 7, 8, 9, 10, 11, 13 and 17.

Process for Project Evaluation and Selection

Connecticut Green Bank programs and related activities are reviewed by the organization's Deployment Committee and approved by its Board of Directors. The Green Bank Board of Directors ultimately approves all programs and related activities.

Management of Proceeds

Proceeds from Green Bonds issued by the Green Bank will be earmarked for use in only the eligible project types listed in the Green Bond Framework.

Reporting

The Green Bank commits to producing a voluntary annual green bond report detailing how Green Bond proceeds were used. Furthermore, the Green Bank commits to reporting on specific key performance indicators (KPIs).

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SECOND PARTY OPINION

Green Bond Framework Connecticut Green Bank’s Master Bond Indenture (2020)

Issuer: Connecticut Green Bank
Framework: Connecticut Green Bank’s Master Bond Indenture (2020)
Sector Criteria: Renewable Energy, Green Buildings, Clean Transportation, Pollution Prevention and Control
Issuer Location: Connecticut USA
Evaluation Date: April 2020

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OVERVIEW

In 2020, the Connecticut Green Bank Board of Directors approved a new Master Bond Indenture to support the financing capabilities and strategies of the agency. In a related action, the Board of Directors also approved a comprehensive Green Bond Framework (“Framework”) which outlines the entirety of the Green Bank’s activities in promoting investment to combat the threat of global climate change. The Framework provides a roadmap to programs and initiatives the Green Bank is implementing to meet its ambitious goals for emissions reduction, climate change mitigation, and resilience. More specifically, the Framework provides eligibility criteria to ensure programs and activities selected for bond financing promote the transition to a low-carbon and climate-resilient society. The Green Bank plans to issue Green Bonds, including Certified Climate Bonds, using a programmatic approach and relying on its published Green Bond Framework.

This Second Party Opinion reflects Kestrel Verifiers’ view of how Connecticut Green Banks’ Framework and related green bonds conform with the four pillars of the Green Bond Principles 2018 and the Climate Bonds Standard.

In our opinion, the Framework adopted by the Connecticut Green Bank conforms with the Green Bond Principles 2018 in the eligible categories of Renewable Energy, Green Buildings, Clean Transportation and Pollution Prevention and Control.

ABOUT THE GREEN BANK

Connecticut Green Bank was established by the Governor and the State of Connecticut General Assembly on July 1, 2011 as a quasi-public agency. The Green Bank, the first of its kind in the United States, is a recognized leader in Green Finance, utilizing both public and private capital to accelerate deployment of clean energy in Connecticut. Its financing activities address renewable energy, energy efficiency, clean fuels and related infrastructure for transportation.

The Green Bank is committed to an energy strategy to achieve cleaner, less expensive, and more reliable sources of energy, which lead to inclusive prosperity for its stakeholders. Since its inception in 2011, the Green Bank has mobilized over \$1.5 billion of public and private capital to fund clean energy deployment in Connecticut.

SUMMARY OF GREEN BOND FRAMEWORK

Use of Proceeds

By statute, the Connecticut Green Bank may only invest in programs and activities that further the deployment of energy generated from solar, wind, fuel cells, landfill methane gas capture, ocean thermal power, wave or tidal power, hydropower, sustainable biomass facilities, energy efficiency or alternative fueled vehicles. The Green Bank recognizes that there are different standards for Green Bond verification. Programs and activities will be evaluated against either the Climate Bonds Standard and Criteria or the Green Bond Principles, as shown below. All project types listed under the Climate Bonds Standard in Table 1 are also eligible under the Green Bond Principles.



	
Solar	Hydropower
Wind	Landfill Gas Capture
Geothermal (emissions < 100 gCO2/kWh)	Wave or Tidal Power
Electric and Hydrogen Vehicles	Ocean Thermal Power
Dedicated charging and alternative fuel infrastructure	Alternative Fueled Vehicles
Commercial Buildings that meet the CBI Calculator for new buildings or energy efficiency upgrades	Biomass Facilities

Table 1. Green Bond Framework Climate Bonds and Green Bonds Eligibility Criteria

Programs and activities to be evaluated for conformance with the Green Bond Principles are eligible in various categories, as explained in Table 2. All of Connecticut Green Bank's programs and activities align with one or more of these eligible green bond categories.











	ELIGIBILITY CRITERIA
ELIGIBLE CATEGORY: <ul style="list-style-type: none"> • Renewable Energy • Green Buildings • Clean Transportation • Pollution Prevention and Control 	<p>Includes production and transmission of renewable energy</p> <p>Buildings which meet regional, national, or international standards</p> <p>Transport with electric, hybrid, public, rail, non-motorized, and infrastructure for clean energy vehicles</p> <p>Includes reduction of air emissions and greenhouse gas control</p>

Table 2. Green Bond Principles Eligibility Criteria



The 2030 Agenda for Sustainable Development adopted by all United Nations Member States in 2015 provides a shared “blueprint to achieve a better and more sustainable future for all.” The United Nations’ Agenda describes 17 Sustainable Development Goals (SDGs) to achieve by the year 2030. Programs and projects financed with bonds supported by the Green Bond Framework align with nine of the SDGs:

RELATED SDGs
<div data-bbox="354 1024 1365 1140">          </div> <ul style="list-style-type: none"> • SDG 1: No Poverty — The Green Bank’s programs and investments are designed to reach all parts of the economy and are presently achieving more uptake in communities that have been historically underserved such as communities of color or communities that have average incomes that are lower than their surrounding metropolitan statistical area. • SDG 3: Good Health and Well-being — Improvements in air quality from reduced emissions reduces pollution-related illnesses and deaths, ultimately raising the standard of health in the region. • SDG 7: Affordable and Clean Energy — This is at the core of the Green Bank’s mission and the Green Bank has to date reduced the energy burden for over 35,000 residents and businesses in Connecticut. • SDG 8: Decent Work and Economic Growth - The Green Bank’s programs and investments have created over 18,000 jobs that pay above a living wage. • SDG 9: Industry, Innovation, and Infrastructure — The Green Bank invests in projects such as electricity infrastructure upgrades in the state that cultivates a region that supports innovative industries. • SDG 10: Reduced Inequalities — As mentioned with SDG 1, the Green Bank seeks to build inclusive prosperity for all members of society. Recent analyses of Green Bank programs show that they have exceeded parity in terms of serving historically marginalized communities vs. non-historically marginalized communities. • SDG 11: Sustainable Communities — The Green Bank’s programs directly contribute to sustainable communities by improving air quality and job creation.

- **SDG 13: Climate Action** – The renewable generation and energy efficiency supported by the Green Bank reduce carbon dioxide emissions, directly supporting climate action.
- **SDG 17: Partnerships** – At the heart of the Green Bank movement is the recognition that building a sustainable future is something that cannot be done alone. The Green Bank continues to mobilize private investment and action by forging partnerships between communities and the private sector.

Existing Green Bank Programs

Connecticut Green Bank intends to finance existing programs (see Appendix 1) with Green Bonds, including Certified Climate Bonds. Through programs like Smart-E Loan, RSIP, and Solar for All, the Green Bank offers a variety of incentive structures to encourage renewable energy deployment. From low-interest financing and rebates to reduced costs for starting a solar lease, the Green Bank makes producing low-carbon energy a reality for local homeowners. Furthermore, through the Green Bank's Property Assessed Clean Energy (PACE) program, commercial building owners in Connecticut can pay for green energy improvements over time and secure low-interest capital to fund renovations. The PACE program is structured so that energy savings exceed the benefit assessment, giving incentive to dramatically increase deployment of solar energy and energy efficiency upgrades. These existing programs set the precedent for how the Green Bank will use capital to create positive environmental benefits in Connecticut.

Green Liberty Bonds Designation

To honor of the 50th anniversary of Earth Day in the United States, the Green Bank is creating the Green Liberty Bond. The Green Bank views the Green Liberty Bond as a specific class of green bond with the following characteristics:

1. **Confront Climate Change** – proceeds raised from the issuance of green bonds go towards confronting climate change by acknowledging the need to increase capital flows for mitigation and adaptation projects as recognized by the Paris Agreement;
2. **Democratize Public Finance** – denominations for green bonds are to be no more than \$1,000 in order to attract individual retail investors who can invest alongside institutional investors in confronting climate change through the purchase of green bonds; and
3. **Third-Party Certification** – the green bonds are independently certified by a third-party as a form of consumer protection for individual retail investors seeking to confront climate change through their green bond investments.

It is the opinion of Kestrel Verifiers that the Green Liberty Bond characteristics are in alignment with the Green Bank's Green Bond Framework.

Process for Project Evaluation and Selection

The Green Bank's programs eligible for Green Bond designation address renewable energy, green buildings and energy efficiency assistance programs. These programs are referenced in Appendix C of the Green Bond Framework.

The agency utilizes a robust and transparent annual planning process that is in line with best market practices. Programs and related activities are reviewed by the organization's Deployment Committee and approved by its Board of Directors. The Green Bank Board of Directors ultimately approves all programs and related activities.

The Green Bank has also established a robust [Program Evaluation Framework](#) which includes methodologies for assessing a program's alignment with Green Bank goals, beneficial impacts, and procedures for continuous improvement. [Each methodology](#) was developed with guidance from experts in the relevant fields and officials from Connecticut state government. Impact methodologies have been reviewed by the Green Bank Audit Compliance and Governance Committee and approved by the Board of Directors. These procedures are all in line with best market practices and the Green Bond Principles.

Furthermore, besides the broader Program Evaluation Framework, the Green Bank's Green Bond Framework establishes criteria for project evaluation and designation as eligible for a green bond designation. The Framework sets out how the Connecticut Green Bank ("Green Bank") proposes to use its Master Trust Indenture in a manner consistent with its purpose and to provide the transparency and disclosures investors require to make investment decisions through green bonds. This Framework is specifically intended for the Master Trust Indenture approved and adopted April 22, 2020, which establishes the purposes for which the Green Bank may issue green bonds or other public debt.

The Green Bank proposes to use a programmatic structure versus an individual certification process for each green bond or Certified Climate Bond.

Management of Proceeds

Proceeds from Green Bonds issued by the Green Bank will be earmarked for use in only the eligible project types listed in the Green Bond Framework Appendix C. The Green Bank commits that green bonds may only be used for green projects and has committed to oversight from the Operations Department of the Green Bank.

Furthermore, the Green Bond Framework establishes that assets included in green bonds issued by Connecticut Green Bank will not be offered in any other agency or organization's Green Bonds.

Reporting

Connecticut Green Bank recognizes the importance of regularly evaluating the impacts of its programs. While the Green Bank is not obliged to evaluate its energy efficiency programs in the same manner as utility companies, it is committed to evaluating all programs to ensure that investments advance objectives and programs operate effectively and efficiently. The Green Bank sees assessing, monitoring and reporting of program impacts and processes as a normal function of operating an organization that is focused on delivering societal impact. Specific descriptions of methodologies used by the Green Bank are outlined in Appendix 2. In this area, the Green Bank is a leader. The Program Evaluation Framework and Methodologies described previously define procedures for reporting on impacts, which can broadly be viewed within two categories:

1. Energy savings and clean energy production supported by Green Bank programs and the resulting societal impacts or benefits arising from clean energy investments; and

2. Market transformation impacts from Green Bank programs that lead to new opportunities to support clean energy projects, ultimately through the increase in private capital investment in clean energy.

In addition, the Connecticut Green Bank has varying degrees of statutorily required auditing and reporting requirements, including:

1. Independent Audit: Public Act 11-80 requires that the Clean Energy Fund, administered by the Connecticut Green Bank, be audited annually by independent certified public accountants; and
2. Reporting: Public Act 15-194 requires the Green Bank to report to the Energy and Technology Committee of the General Assembly on progress toward the goals of the Residential Solar Investment Program.

The Green Bank commits to producing a voluntary annual green bond report detailing how Green Bond proceeds were used. Furthermore, the Green Bank commits to report on specific key performance indicators (KPIs), which are shown in Appendix A of the Green Bond Framework. Connecticut Green Bank has engaged Kestrel Verifiers, a Climate Bonds Initiative Approved Verifier, to produce an annual program report for Certified Climate Bonds, in accordance with procedures for programmatic certification set forth in the Climate Bonds Standard. All reports will be publicly available and posted on the agency's website.

SECOND PARTY OPINION

Based on the Reasonable Assurance procedures conducted, in our opinion, the Green Bond Framework for Connecticut Green Bank's Master Bond Indenture (2020) conforms, in all material respects, with the Green Bond Principles 2018 and Climate Bonds Standard. Program activities in the Framework are aligned with the Green Bond Principles eligible categories of Renewable Energy, Green Buildings, Clean Transportation, and Pollution Prevention and Control. Additionally, the Green Bank's activities support nine of the 17 United Nations Sustainable Development Goals.

It is the opinion of Kestrel Verifiers that the programs and activities described in Connecticut Green Bank's Framework and supporting documents conform with the Renewable Energy, Green Buildings, Clean Transportation, and Pollution Prevention and Control categories of the Green Bond Principles. Connecticut Green Bank is continuing to demonstrate leadership toward a low-carbon future with the Green Bond Framework, and the programs and activities it supports.

DISCLAIMER

Kestrel Verifiers relied on both public and non-public information sources to produce this opinion, including information provided by the Issuer. We carried out our due diligence from February 10, 2020 through March 12, 2020. We interviewed key staff throughout February and March 2020. We were provided with access to all the appropriate documents and people we solicited. The information we received enables us to establish our opinion with a reasonable assurance on its relevance, precision and reliability. Kestrel Verifiers and the Issuer have no other relationship – financial or otherwise outside of this engagement and related green bonds verification and reporting.

Providing this opinion does not mean that Kestrel Verifiers certifies the materiality of the programs and activities financed with Green Bonds. The opinion delivered by Kestrel Verifiers does not address financial performance of any Green Bonds or the effectiveness of allocation of bond proceeds. Kestrel Verifiers is not liable for consequences when third parties use this opinion either to make investment decisions or to undertake any other business transactions. The opinion is provided by Kestrel Verifiers to Connecticut Green Bank for its exclusive use.

About Kestrel Verifiers

To public and corporate finance teams who are preparing green bonds, Kestrel is a US-based Approved Verifier with experience in many sectors including water, wastewater, renewable energy, green buildings and climate change adaptation. As bespoke US municipal specialists, we strive to provide a personal, focused approach and dedicated support. We bring real-world experience, relationships and tools to efficiently verify and report on green bonds. Kestrel is a Woman-Owned Small Business and a certified Women's Business Enterprise.

For more information, visit www.kestrelverifiers.com



APPENDIX 1: EXISTING PROGRAMS OF THE CONNECTICUT GREEN BANK (NOT ALL INCLUSIVE)

PROGRAM	PROGRAM DESCRIPTION
Smart- E Loan	A low-interest loan financing program offered through participating community banks and credit unions to help homeowners upgrade their home's energy performance with no money down.
C-PACE	An innovative financing program that lets facility owners pay for green energy improvements over time through a voluntary benefit assessment on their property tax bill.
Residential Solar Investment Program (RSIP)	<p>An incentive program to help homeowners solar PV systems. RSIP offers two incentives:</p> <ul style="list-style-type: none"> • Expected Performance-Based Buydown incentive (EPPB): an upfront rebate available to homeowners who purchase a PV system from contractor. • Performance-Based Incentive (PBI): a performance-based incentive paid out quarterly over a 6-year period that allows homeowners to benefit from solar PV systems for little to no upfront cost.
Solar for All	An innovative approach that offers low-to-moderate income homeowners a solar lease that also includes money-saving energy efficiency measures. The program takes away the concern of being turned down based on credit profile, making solar affordable for all.
Multifamily Energy Financing Programs	<p>A number of programs are offered by the Connecticut Green Bank to help developers and owners of multifamily housing.</p> <ul style="list-style-type: none"> • Navigator Pre-Development Energy Loan funds 75% of eligible energy-related pre-development expenses • Low Income Multifamily Energy (LIME) Loan funds energy improvement projects for low- and moderate-income properties. • Solar Power Purchase agreement (PPA) allows residents to deploy solar PV systems with no money down through a third-party owned and maintained system. • EnergizeCT Health & Safety Revolving Loan Fund provides low interest loans that allow owners of multifamily housing serving low income residents to make health and safety improvements

APPENDIX 2: CONNECTICUT GREEN BANK IMPACT METHODOLOGIES

At present, the Green Bank has the following methodologies approved or under development that reasonably estimate the environmental and social impact resulting from investment in and deployment of clean energy supported by the Green Bank:

- **Environmental (Air Quality) Impact** – assessed by the Connecticut Department of Energy and Environmental Protection (“DEEP”), the Green Bank uses the US Environmental Protection Agency (“EPA”)’s Avoided Emissions and Generation Tool (AVERT) The model estimates the changes in air quality associated with clean energy projects in terms of Carbon Dioxide, Sulfur Dioxide, Nitrogen Oxides and Particulate Matter. The Green Bank also has adopted the EPA’s environmental equivalency calculator as a way to make these impacts more relatable.
- **Health Impact** – assessed by the Connecticut Department of Public Health (“DPH”) and DEEP, the Green Bank uses the EPA’s CoBenefit Risk Assessment (CoBRA) model that estimates the economic value of improved health outcomes associated with improved air quality resulting from clean energy deployment.
- **Jobs Created** – assessed by the Connecticut Department of Economic and Community Development (“DECD”), working with Navigant Consulting, the Green Bank uses a model that estimates the number of direct, indirect, and induced job-years created per \$1 million dollars of investment in each clean energy technology supported by the Green Bank.
- **Tax Revenue Generated** – assessed by the Connecticut Department of Revenue Services (“DRS”), working with Navigant Consulting, the Green Bank uses a model that estimates tax revenue generated for the State of Connecticut from sales, personal, and corporate income taxes associated with Green Bank supported projects.
- **Community Reinvestment Act Compliance (under development)** – being assessed by the Connecticut Department of Banking (“DoB”), the Green Bank expects to implement a methodology that qualifies its public-private partnership investments in clean energy projects that are eligible towards Community Reinvestment Act (“CRA”) requirements for investments in underserved communities (e.g., low-to-moderate income families, small businesses, etc.).
- **Equity (under development)** – being assessed by the Connecticut Commission on Human Rights and Opportunities (“CHRO”), the Green Bank expects to implement a methodology that evaluates the reach of the Green Bank’s programs in underserved communities (e.g., low-to-moderate income families, communities of color, etc.).
- **Energy Burden (under development)** – the Green Bank expects to implement a methodology that estimates the economic relief from energy expenses that is provided to families and businesses that reduce the burden of energy costs, including the affordability gap, by investing in and deploying clean energy.