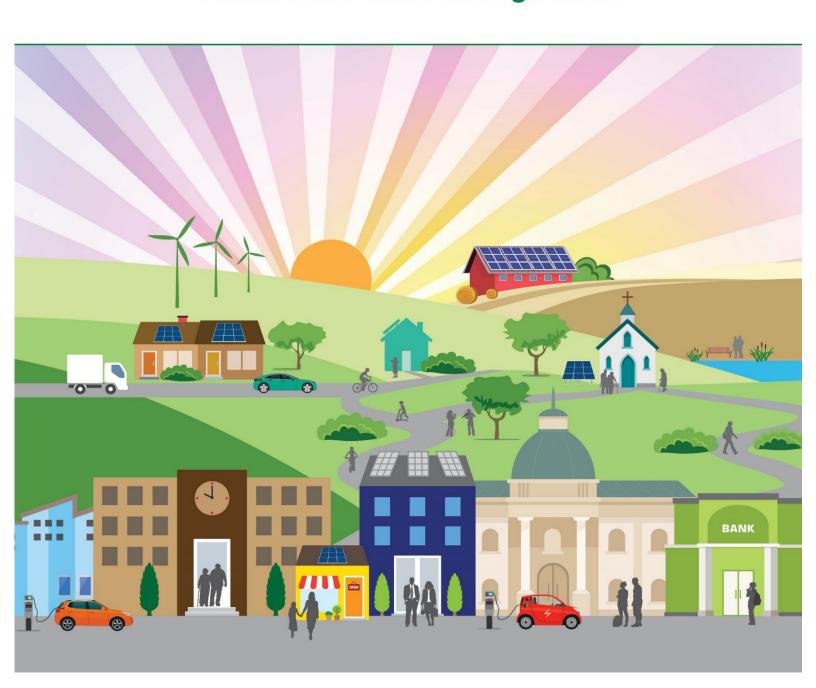


# Comprehensive Plan Fiscal Years 2023 through 2026





# **Comprehensive Plan**

Fiscal Years 2023 through 2026

### **Green Bonds US**

July 2022
January 2023 (Revised)
July 2023 (Revised)
January 2024 (Revised)
July 2024 (Revised)
January 2025 (Revised)
July 2025 (Revised)

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#### 1. Introduction

Over the past four years, the Connecticut Green Bank ("Green Bank") operated in alignment with a federal government that shared our mission to confront climate change through investment into the green economy and to create resilient, healthier, and equitable communities. Major legislation — including the Infrastructure Investment and Jobs Act ("IJA") of 2021 and the Inflation Reduction Act ("IRA") of 2022 — created historic opportunities to expand renewable energy, strengthen grid resilience, lower energy costs, and invest in underserved communities. The IIJA provided \$1.2 trillion for infrastructure improvements, including research, development, and deployment of low-carbon and electrified technologies. The IRA allocated \$369 billion toward building the clean energy economy through long-term tax incentives and the creation of the Greenhouse Gas Reduction Fund ("GGRF"), modeled after the Green Bank itself. Together, these policies demonstrated the catalytic power of federal government investment to mobilize private capital and accelerate climate progress.

Today, however, the federal landscape has shifted. While the current administration continues to invoke the values of energy affordability, independence, and security – qualities clean energy provides – its actions are dampening investment in and slowing momentum for climate solutions. The "One Big Beautiful Bill Act" budget reconciliation legislation, signed into law in July 2025, significantly curtails clean energy tax credits, withdraws financial assistance for a wide range of renewable technologies and increases barriers to investment by the private capital in this sector. At the same time, GGRF capital previously-awarded to national coalitions like ours, has been unjustly withheld, prompting litigation and casting doubt over future availability of funds.

Despite these headwinds, the long-term value of clean energy remains clear. It is essential not only to achieving Connecticut's climate goals, but also to delivering tangible benefits, like creating jobs, reducing energy costs and improving public health across the state. Connecticut must significantly accelerate annual reductions to meet the decarbonization targets set forth in the 2008 Global Warming Solutions Act ("GWSA"). According to the 2021 Connecticut Greenhouse Gas Emissions Inventory, released in April 2024 by the Connecticut Department of Energy and Environmental Protection ("DEEP"), emissions in 2021 represented only a 22 percent decrease from the 1990 baseline vs. a goal of a 45 percent decrease by 2030. Transportation is the highest emitting sector (i.e., 40% of emissions), with residential (i.e., 19% of emissions) and electric power (i.e., 15% of emissions) following.

Across the country, we are also witnessing a reversal of a decades-long trend: electricity demand is rising. After years of flat or declining growth, the U.S. power system is now expected to see significant new load from electrification, reshoring of manufacturing, and data center expansion<sup>4</sup>. The United States Department of Energy ("DOE") projects record-setting consumption in 2025 and 2026. ISO New England – Connecticut's independent system operator – projects that summer peak demand will increase 1% per year between now and 2034, and winter peaks climbing even faster at 2.9% per year.<sup>5</sup> This moment of inflection presents a clear choice. If we are deliberate, this load can be met with zero-carbon, non-polluting solutions that improve grid reliability, reduce emissions, and create lasting economic opportunity.

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<sup>&</sup>lt;sup>1</sup> https://rules.house.gov/sites/evo-subsites/rules.house.gov/files/evo-media-document/file 8654.pdf

<sup>&</sup>lt;sup>2</sup> Reduce GHG emissions by 45% from 2001 levels by 2030; 65% from 2001 levels by 2040; an economy-wide net-zero level, provided direct and indirect emissions are at least 80% below 2001 levels by 2050

https://portal.ct.gov/-/media/DEEP/climatechange/1990-2021-GHG-Inventory/DEEP GHG Report 90-21 Final.pdf

<sup>&</sup>lt;sup>4</sup> U.S. Energy Information Administration (EIA)

<sup>&</sup>lt;sup>5</sup> New England's Electricity Use, ISO-NE

To meet these targets, Connecticut is prioritizing the deployment of residual federal funds and concentrating state-funded programs in vulnerable communities while catalyzing investment in high priority emerging sectors such as climate adaptation (i.e., resilience), clean energy for multifamily affordable housing, and electric school buses. The Green Bank has been doing our part to support Connecticut's decarbonization. In the 13 years of its existence, the Green Bank has helped avoid over 11 million tons of carbon dioxide emissions (the equivalent of 2.3 million passenger vehicles driven for one year). Avoiding 1 million tons of carbon dioxide emissions a year, for a state that emits nearly 35 million tons per year, Is nearly 3 percent of all emissions avoided, or over 25 percent of emissions avoided from electricity generation (and consumption).

In recognition of the Green Bank's successful track record of deploying green infrastructure, Governor Ned Lamont, with the support of the Governor's Council on Climate Change, signed into law Public Act 21-115 on July 6, 2021.9 This act expanded the Green Bank mandate to include environmental infrastructure (including, but not limited to, climate adaptation and resilience) – a recognition that the same financing tools we have successfully pioneered and leveraged to increase private investment in and deployment of clean energy in Connecticut can support other environmental sectors in need of rapid transformation as well. The act includes the creation of an Environmental Infrastructure Fund which could receive federal funds (e.g., GGRF) to mobilize private investment in environmental infrastructure.

In 2025, Connecticut reaffirmed its bipartisan climate leadership through the passage of Public Act 25-33,<sup>10</sup> which amongst other policy initiatives created Resilience Improvement Districts ("RIDs"). RIDs offer municipalities a flexible framework to plan, finance, and implement clean energy, environmental infrastructure, and resilience projects, unlocking new revenue streams to support investment in long-term community-wide climate adaptation and resilience, including a role for the Green Bank. The Green Bank was proud to support the development and passage of this bipartisan legislation, which we view as a model for scalable, place-based climate finance.

Also during this session, Connecticut passed Public Act 25-173,<sup>11</sup> strengthening energy affordability protections for consumers, especially those in vulnerable communities, while modernizing regulatory oversight mechanisms—creating an enabling policy environment for clean energy deployment and utility transformation. It also supports grid modernization through investments in Advanced Metering Infrastructure ("AMI"), creating a more transparent and responsive energy system. Together, Public Act 25-33 and Public Act 25-173 reinforce Connecticut's commitment to inclusive, forward-looking climate leadership and open new avenues for the Green Bank to continue to fulfill its mission.

Beyond Connecticut, there is a global recognition that an innovative approach to financing can shift our climate trajectory. António Guterres, Secretary-General of the United Nations, in his comments on the 2024 Sustainable Development Goals ("SDG") report<sup>12</sup> emphasizes that given only 17% of SDG goals are on target "...we need a surge in implementation. Massive investment

<sup>6</sup> https://www.ctgreenbank.com/wp-content/uploads/2024/09/FY12-FY24-Connecticut-Green-Bank-Impact-Report-8-30-2024.pdf

<sup>&</sup>lt;sup>7</sup> Connecticut Greenhouse Gas Inventory (Update for 1990-2021) by DEEP (April 20, 2023)

<sup>8</sup> Ibid (11)

<sup>&</sup>lt;sup>9</sup> An Act Concerning Climate Change Adaptation – <a href="https://www.cga.ct.gov/2021/ACT/PA/PDF/2021PA-00115-R00HB-06441-PA.PDF">https://www.cga.ct.gov/2021/ACT/PA/PDF/2021PA-00115-R00HB-06441-PA.PDF</a>

<sup>&</sup>lt;sup>10</sup> An Act Concerning the Environment, Climate and Sustainable Municipal and State Planning – https://www.cga.ct.gov/2025/ACT/PA/PDF/2025PA-00033-R00SB-00009-PA.PDF

<sup>&</sup>lt;sup>11</sup> An Act Concerning Energy Affordability, Access and Accountability – <a href="https://www.cga.ct.gov/2025/ACT/PA/PDF/2025PA-00173-R00SB-00004-PA.PDF">https://www.cga.ct.gov/2025/ACT/PA/PDF/2025PA-00173-R00SB-00004-PA.PDF</a>

<sup>&</sup>lt;sup>12</sup> unstats.un.org/sdgs/report/2024/The-Sustainable-Development-Goals-Report-2024.pdf

and more effective partnerships are needed to drive critical transitions across food, energy, digital connectivity and more, unlocking progress right across the Goals." With approximately \$1.9 trillion of public and private investment in 2023 in global climate finance (i.e., mitigation of greenhouse gas emissions and adaptation from the impacts of climate change)<sup>13</sup> (approximately \$230 per person), 3 to 6 times more investment is needed by 2030 – \$6 to \$12 trillion per year (i.e., \$700 to \$1,400 per person) – to confront climate change. It should be noted that about 5 percent of public and private investment is in adaptation, in comparison to the overwhelming amount of investment in mitigation.

Although the Green Bank is geographically limited in our ability to invest in mitigation and adaptation (i.e., resilience) to confront climate change, we can continue to be a leader in the space and demonstrate how new financing models through public-private partnerships can drive innovative investment in our global future. Since the Green Bank's launch in 2011 as the first state level green bank in the nation, dozens of state and local green banks have popped up both nationally and abroad.

While 2025 brought unexpected challenges at the federal level – including the disruption of anticipated GGRF funding – the Connecticut Green Bank is undeterred. In a time of national uncertainty, our resolve is stronger than ever. Connecticut's policies, grounded in bipartisan commitment and community-centered impact, continue to chart a clear and ambitious course for clean energy and environmental infrastructure. By focusing on what truly matters – lowering energy burden, protecting public health, and creating an inclusive green economy – we are making tangible progress every day. These outcomes are not just possible – they are already underway. In Connecticut, confronting climate change is not a promise; it's a practice, and the Green Bank is proud to lead it forward.

#### 2. Organizational Overview

The Green Bank<sup>16</sup> was established on a bipartisan basis by Governor Malloy and the Connecticut General Assembly ("CGA") on July 1, 2011 through Public Act ("PA") 11-80<sup>17</sup> as a quasi-public agency that supersedes the former Connecticut Clean Energy Fund ("CCEF"). On July 1, 2021, the 10<sup>th</sup> anniversary of the Green Bank, again, on a bipartisan basis, Governor Lamont and the CGA enacted PA 21-115 expanding the scope of the Green Bank beyond "clean energy" to include "environmental infrastructure". As the nation's first state green bank, the Green Bank leverages public funds to mobilize multiples of private investment to increase and accelerate investment in clean energy deployment and environmental infrastructure improvement in Connecticut.

The Green Bank's statutory purposes are:

<sup>&</sup>lt;sup>13</sup> Climate Policy Initiative. 2025. Global Landscape of Climate Finance 2025. https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2025/

<sup>&</sup>lt;sup>14</sup> "The Cost of Inaction" by Caroline Alberti of the Climate Policy Initiative (January 4, 2024)

<sup>&</sup>lt;sup>15</sup> "There's finally a national climate bank. Here's how it can make its \$27 billion go even further" in Fast Company by Ashley Stimpson (December 16, 2022)

<sup>&</sup>lt;sup>16</sup> PA 11-80 repurposed the Connecticut Clean Energy Fund ("CCEF") administered by Connecticut Innovations, into a separate quasi-public organization called the Clean Energy Finance and Investment Authority ("CEFIA"). Per Public Act 14-94, CEFIA was renamed to the Connecticut Green Bank.

<sup>&</sup>lt;sup>17</sup> An Act Concerning the Establishment of the Department of Energy and Environmental Protection and Planning for Connecticut's Energy Future – <a href="https://www.cga.ct.gov/2011/act/pa/pdf/2011PA-00080-R00SB-01243-PA.pdf">https://www.cga.ct.gov/2011/act/pa/pdf/2011PA-00080-R00SB-01243-PA.pdf</a>

- To develop programs to finance and otherwise support clean energy and environmental infrastructure investment in residential, municipal, small business and larger commercial projects and such other programs as the Green Bank may determine;
- To support financing or other expenditures that promote investment in clean energy sources and environmental infrastructure to foster the growth, development and commercialization of clean energy sources, environmental infrastructure, and related enterprises; and
- To stimulate demand for clean energy and the deployment of clean energy sources and investment in environmental infrastructure within the state that serves end-use customers in the state.

The Green Bank's purposes are codified in Section 16-245n(d)(1) of the Connecticut General Statutes ("CGS") and restated in the Green Bank's Board approved Resolution of Purposes. The Green Bank is a public policy innovation that exemplifies Connecticut's more than two-decade history of bipartisan executive and legislative branch leadership on the issue of climate change.

Gubernatorial leadership highlights include:

- Governor Rowland co-chaired the New England Governors and Eastern Canadian Premiers Conference, which established a regional commitment to reduce greenhouse gas ("GHG") emissions (i.e., 1990 levels by 2010, 10% below 1990 levels by 2020, and 80% below 2001 levels by 2050);<sup>18</sup>
- Governor Rell supported PA 08-98<sup>19</sup> codifying the regional commitment into state law, appointing Gina McCarthy to be the Commissioner of the Department of Environmental Protection who would help lead the development of the Regional Greenhouse Gas Initiative ("RGGI"), later become the Administrator of the United States Environmental Protection Agency ("USEPA") under President Obama, and become the White House National Climate Advisor for President Biden;
- **Governor Malloy** led the passage of PA 11-80 establishing DEEP, creating the Green Bank, and other policies catalyzing the market for clean energy, as well as PA 18-50<sup>20</sup> and PA 18-82<sup>21</sup> increasing the state's renewable portfolio standard ("RPS") to 40% by 2030 and establishing a midterm GHG emissions reduction target of 45% below 2001 levels by 2030, respectively; and
- Governor Lamont issued his first<sup>22</sup> and third<sup>23</sup> executive orders on state "Greener Gov" for sustainability, clean energy, and climate change leadership, passing PA 21-115 expanding the scope of the Green Bank to include "environmental infrastructure," PA 22-

<sup>&</sup>lt;sup>18</sup> NEG-ECP Resolution 26-4 adopting the "Climate Change Action Plan 2001" (August 2001 in Westbrook, CT) – Westbrook Resolution

<sup>&</sup>lt;sup>19</sup> An Act Concerning Connecticut Global Warming Solutions – <a href="https://www.cga.ct.gov/2008/ACT/Pa/pdf/2008PA-00098-R00HB-05600-PA.pdf">https://www.cga.ct.gov/2008/ACT/Pa/pdf/2008PA-00098-R00HB-05600-PA.pdf</a>

<sup>&</sup>lt;sup>20</sup> An Act Concerning Connecticut's Energy Future – <a href="https://www.cga.ct.gov/2018/act/pa/pdf/2018PA-00050-R00SB-00009-PA.pdf">https://www.cga.ct.gov/2018/act/pa/pdf/2018PA-00050-R00SB-00009-PA.pdf</a>

<sup>&</sup>lt;sup>21</sup> An Act Concerning Climate Change Planning and Resiliency – <a href="https://www.cga.ct.gov/2018/act/pa/pdf/2018PA-00082-R00SB-00007-PA.pdf">https://www.cga.ct.gov/2018/act/pa/pdf/2018PA-00082-R00SB-00007-PA.pdf</a>

<sup>&</sup>lt;sup>22</sup> https://portal.ct.gov/-/media/Office-of-the-Governor/Executive-Orders/Lamont-Executive-Orders/Executive-Order-No-1.pdf

<sup>&</sup>lt;sup>23</sup> https://portal.ct.gov/-/media/Office-of-the-Governor/Executive-Orders/Lamont-Executive-Orders/Executive-Orders/Def

5<sup>24</sup> including a 100% zero emission electricity target by 2040, PA 22-25<sup>25</sup> confronting greenhouse gas emissions from the transportation sector, including 100% targets for school buses in environmental justice communities by 2030 and all communities by 2040, and PA 25-125<sup>26</sup> establishing a midterm GHG emissions reduction target of 65% below 2001 levels by 2040, revising the long-term GHG emissions reduction target to an economy-wide net-zero level provided direct and indirect emissions are reduced by at least 80% below 2001 levels by 2050, including carbon sequestration within the GHG emissions inventory and initiating nature-based solutions.

The CGA has worked hand-in-hand with these Governors and the citizens of the state over the years to devise and support public policies that promote clean energy, environmental infrastructure, and lead the movement to confront climate change.<sup>27</sup>

#### 2.1 Vision Statement

...a planet protected by the love of humanity.<sup>28</sup>

#### 2.2 Mission Statement

Confront climate change by increasing and accelerating investment into Connecticut's green economy to create more resilient, healthier, and equitable communities.

#### 2.3 Goals

To achieve its vision and mission, the Green Bank has established the following three goals:

- 1. To leverage limited public resources to scale-up and mobilize private capital investment in the green economy of Connecticut.
- 2. To strengthen Connecticut's communities, especially vulnerable communities, <sup>29</sup> by making the benefits of the green economy inclusive and accessible to all individuals, families, and businesses.
- 3. To pursue investment strategies that advance market transformation in green investing while supporting the organization's pursuit of financial sustainability.

<sup>&</sup>lt;sup>24</sup> An Act Concerning Climate Change Mitigation – <a href="https://www.cga.ct.gov/2022/act/Pa/pdf/2022PA-00005-R00SB-00010-PA-PDF">https://www.cga.ct.gov/2022/act/Pa/pdf/2022PA-00005-R00SB-00010-PA-PDF</a>

<sup>&</sup>lt;sup>25</sup> An Act Concerning the Connecticut Clean Air Act – <a href="https://www.cga.ct.gov/2022/ACT/PA/PDF/2022PA-00025-R00SB-00004-PA PDF">https://www.cga.ct.gov/2022/ACT/PA/PDF/2022PA-00025-R00SB-00004-PA PDF</a>

<sup>&</sup>lt;sup>26</sup> An Act Concerning the Protection of the Environment and the Development of Renewable Energy Sources and Associated Job Sectors - <a href="https://www.cga.ct.gov/2025/ACT/PA/PDF/2025PA-00125-R00HB-05004-PA.PDF">https://www.cga.ct.gov/2025/ACT/PA/PDF/2025PA-00125-R00HB-05004-PA.PDF</a>

<sup>&</sup>lt;sup>27</sup> Reducing greenhouse gas emissions and confronting climate change is supported by a number of public policies, including, but not limited to PA 17-3, PA 18-82, PA 19-71, PA 25-33, Governor Lamont's Executive Orders 1 and 3, Comprehensive Energy Strategy, Governor's Council on Climate Change, and many other past acts, plans, or policies.

<sup>&</sup>lt;sup>28</sup> Vision Statement inspired by the Innovations in American Government Awards at the Ash Center of Harvard University's Kennedy School of Government, Maya Angelou's "On the Pulse of Morning," the powerful words of Mary Evelyn Tucker on "inclusive capitalism," and the late Mother Jennifer of the Daughters of Mary of the Immaculate Conception

<sup>&</sup>lt;sup>29</sup> Per PA 20-05, "An Act Concerning Emergency Response by Electric Distribution Companies, the Regulation of Other Public Utilities and Nexus Provisions for Certain Disaster-Related or Emergency-Related Work Performed in the State," "vulnerable communities" means populations that may be disproportionately impacted by the effects of climate change, including, but not limited to, low and moderate income communities, environmental justice communities pursuant to section 22a-20a, communities eligible for community reinvestment pursuant to section 36a-30 and the Community Reinvestment Act of 1977, 12 USC 2901 et seq., as amended from time to time, populations with increased risk and limited means to adapt to the effects of climate change, or as further defined by DEEP in consultation with community representatives.

The vision statement, mission statement, and goals support the implementation of Connecticut's climate change, clean energy, and environmental infrastructure policies be they statutorily required (e.g., PA 21-53),<sup>30</sup> planning (e.g., Comprehensive Energy Strategy), or regulatory (e.g., Docket No. 17-12-03RE03)<sup>31</sup> in nature.

#### Framework for an Equitable Modern Grid<sup>32</sup>

The Public Utilities Regulatory Authority's ("PURA") Framework for an Equitable Modern Grid, seeks to (1) support, or remove barriers to, the growth of Connecticut's green economy; (2) enable a cost-effective, economy-wide transition to a decarbonized future; (3) enhance customer access to a more resilient, reliable and secure electricity commodity; and (4) advance the ongoing energy affordability dialogue in the state, particularly in underserved communities.

The Green Bank supports PURA in their efforts through participation in many of the re-openers in the equitable modern grid as a commentor, a participant and a program administrator.<sup>33</sup>

#### 2.4 Definitions – Clean Energy and Environmental Infrastructure

The Green Bank's investment focus is on "clean energy" and "environmental infrastructure" as defined by CGS Section 16-245n:

- <u>Clean Energy</u> "clean energy" means solar photovoltaic energy, solar thermal, geothermal energy, wind, ocean thermal energy, wave or tidal energy, fuel cells, landfill gas, hydropower that meets the low-impact standards of the Low-Impact Hydropower Institute, hydrogen production and hydrogen conversion technologies, low emission advanced biomass conversion technologies, alternative fuels, used for electricity generation including ethanol, biodiesel or other fuel produced in Connecticut and derived from agricultural produce, food waste or waste vegetable oil, provided the Commissioner of Energy and Environmental Protection determines that such fuels provide net reductions in GHG emissions and fossil fuel consumption, usable electricity from combined heat and power systems with waste heat recovery systems, thermal storage systems, other energy resources and emerging technologies which have significant potential for commercialization and which do not involve the combustion of coal, petroleum or petroleum products, or nuclear fission, financing of energy efficiency projects, projects that seek to deploy electric, electric hybrid, natural gas or alternative fuel vehicles and associated infrastructure, any related storage, distribution, manufacturing technologies or facilities and any Class I renewable energy source, as defined in CGS 16-1(a)(2).
- <u>Environmental Infrastructure</u> "environmental infrastructure" means structures, facilities, systems, services and improvement projects related to (A) water, (B) waste and recycling, (C) climate adaptation and resiliency, (D) agriculture, (E) land conservation, (F) parks and

<sup>&</sup>lt;sup>30</sup> An Act Concerning Energy Storage – https://www.cga.ct.gov/2021/act/Pa/pdf/2021PA-00053-R00SB-00952-PA.PDF

<sup>31</sup> Equitable Modern Grid Initiative – Electric Storage

 $<sup>^{32}\,\</sup>underline{\text{https://portal.ct.gov/PURA/Electric/Grid-Modernization/Grid-Modernization}}$ 

<sup>&</sup>lt;sup>33</sup> Per PA 24-38 and PA 25-173, PURA may select the Green Bank, and/or other partners to implement various programs.

recreation, and (G) environmental markets, including, but not limited to carbon offsets<sup>34</sup> and ecosystem services.<sup>35</sup>

#### 2.5 Governance

Pursuant to Section 16-245n of the CGS, the powers of the Green Bank are vested in and exercised by a Board of Directors ("BOD")<sup>36</sup> that is comprised of twelve voting and one non-voting members each with knowledge and expertise in matters related to the purpose of the organization – see Table 1.<sup>37</sup>

Table 1. Board of Directors of the Connecticut Green Bank

Position	Status	Appointer	Voting
State Treasurer (or designee)	Ex Officio	Ex Officio	Yes
Commissioner of DEEP (or designee)	Ex Officio	Ex Officio	Yes
Commissioner of DECD (or designee)	Ex Officio	Ex Officio	Yes
Secretary of OPM (or designee)	Ex Officio	Ex Officio	Yes
Residential or Low-Income Group	Appointed	Speaker of the House	Yes
Investment Fund Management	Appointed	Minority Leader of the House	Yes
Environmental Organization	Appointed	President Pro Tempore of the Senate	Yes
Finance or Deployment of Renewable Energy	Appointed	Minority Leader of the Senate	Yes
Finance of Renewable Energy	Appointed	Governor	Yes
Finance of Renewable Energy	Appointed	Governor	Yes
Labor	Appointed	Governor	Yes
R&D or Manufacturing	Appointed	Governor	Yes
President of the Green Bank	Ex Officio	Ex Officio	No

There are four (4) committees of the BOD of the Green Bank, including Audit, Compliance, and Governance Committee ("ACG Committee"), Budget, Operations, and Compensation Committee ("BOC Committee"), Deployment Committee, and the Joint Committee of the Energy Efficiency Board ("EEB") and the Green Bank.<sup>38</sup>

#### Principal Statement of the Joint Committee

To support the Joint Committee of the EEB and the Green Bank, the following is a principal statement to guide its activities:

The EEB and the Green Bank have a shared goal to implement state energy policy throughout all sectors and populations of Connecticut with

<sup>&</sup>lt;sup>34</sup> Carbon offsets means an activity that compensates for the emission of carbon dioxide or other greenhouse gases by providing for an emission reduction elsewhere.

<sup>&</sup>lt;sup>35</sup> Ecosystem services means benefits obtained from ecosystems, including, but not limited to, (A) provisioning services such as food and water, (B) regulating services such as floods, drought, land degradation and disease, and (C) supporting services such as soil formation and nutrient cycling.

<sup>36</sup> https://www.ctgreenbank.com/about-us/governance/board-of-directors/

<sup>&</sup>lt;sup>37</sup> https://www.ctgreenbank.com/about-us/governance/

<sup>&</sup>lt;sup>38</sup> Pursuant to CGS 16-245m(d)(2) — There shall be a joint committee of the Energy Conservation Management Board and the board of directors of the Connecticut Green Bank. The boards shall each appoint members to such joint committee. The joint committee shall examine opportunities to coordinate the programs and activities funded by the Clean Energy Fund pursuant to section 16-245n with the programs and activities contained in the plan developed under this subsection and to provide financing to increase the benefits of programs funded by the plan so as to reduce the long-term cost, environmental impacts and security risks of energy in the state. Such joint committee shall hold its first meeting on or before August 1, 2005.

continuous innovation towards greater leveraging of ratepayer funds and a uniformly positive customer experience.

In addition to the above principal statement, on July 22, 2024, the Joint Committee recommended that the EEB and BOD of the Green Bank adopt the following goal within their respective plans:

#### Joint Committee Goal on Affordable Rental Housing

To enable greater investment in and deployment of technologies (i.e., solar PV, battery storage, EV recharging, heat pumps, weatherization, appliances, and controls) in affordable rental single and multifamily properties to realize important benefits for tenants (e.g., reduce energy burden (i.e., no more than 6% of annual household income), increase climate resilience, reduce GHG emissions) through the Conservation and Load Management Plan of the Energy Efficiency Board and Comprehensive Plan of the Connecticut Green Bank Board of Directors, and through greater coordination of incentive and financing programs from state and federal sources of capital.

The BOD of the Green Bank approved of the Joint Committee goal on July 26, 2024.

The BOD of the Green Bank is governed through enabling legislation, as well as by an <a href="Ethics">Ethics</a> Statement and <a href="Ethical Conduct Policy">Ethical Conduct Policy</a>, Resolutions of Purposes, <a href="Bylaws">Bylaws</a>, <a href="Joint Committee Bylaws">Joint Committee Bylaws</a>, and a Comprehensive Plan. All meetings, agendas, and materials of the Green Bank's BOD and its Committees are publicly available on the organization's website. <a href="39,40">39,40</a>

#### 2.6 Organizational Structure

The Green Bank is administered by a professional staff overseeing three (3) business units, including:

- Incentive Programs the Governor, CGA, and/or PURA<sup>41</sup> from time-to-time may decide that there are certain incentive programs that they seek to have the Green Bank administer (e.g., PA 21-53). The Green Bank administers such programs with the goal of delivering on the public policy objectives, while at the same time ensuring that funds invested by the Green Bank are cost recoverable.<sup>42</sup> For example, the Green Bank coadministers the Energy Storage Solutions ("ESS") program with the Electric Distribution Companies ("EDC") (i.e., Avangrid and Eversource Energy) to deploy 580 MW of behind the meter residential and non-residential battery storage systems through an upfront declining incentive block structure and ongoing performance-based incentive.
- Financing Programs the Green Bank's core business is financing clean energy projects. The use of public revenues by the Green Bank (i.e., Clean Energy Fund ("CEF") and RGGI allowance proceeds) are to be invested with the expectation of principal and interest being paid back over time (i.e., earned revenues). For example, per CGS 16a-40q, the

<sup>&</sup>lt;sup>39</sup> https://www.ctgreenbank.com/about-us/governance/board-meetings/

<sup>40</sup> https://www.ctgreenbank.com/about-us/governance/committee-meetings/

<sup>&</sup>lt;sup>41</sup> Section 8 of Public Act 24-38 "An Act Concerning Energy Procurements, Certain Energy Sources and Programs of the Public Utilities Regulatory Authority"

<sup>&</sup>lt;sup>42</sup> In the past, per CGS 16-245ff, the Green Bank administered the Residential Solar Investment Program ("RSIP") which resulted in nearly 380 MW of residential solar photovoltaic system deployment between 2012 through 2021. RSIP is cost recoverable per CGS 16-245gg.

Green Bank administers the Commercial Property Assessed Clean Energy ("C-PACE") program. Through C-PACE, the Green Bank provides capital to building owners to make clean energy and resilience improvements on their properties that is paid back over time from a benefit assessment on the building owner's property tax bill. The interest earned from these types of investments, over time, is expected to cover the operational expenses and a return for the Green Bank.

Environmental Infrastructure Programs – as a result of the passage of PA 21-115 expanding the scope of the Green Bank beyond "clean energy" to include "environmental infrastructure," the financing tools of the green bank model will be used to mobilize private investment in Connecticut's green economy. Raising capital for the Environmental Infrastructure Fund ("EIF") through the issuance of Green Liberty Bonds, accessing federal resources (e.g., IIJA, GGRF), and/or other means, will provide resources to invest in the modernization, decarbonization, and resilience of the state's environmental infrastructure.

These three business units – Incentive Programs, Financing Programs, and Environmental Infrastructure Programs – serve the purposes of the Green Bank. To support the business units and their investments, the Green Bank has administrative support from investments, finance and administration, legal, marketing and operations, as well as innovation.

In FY19, the Green Bank, in partnership with DEEP and the Kresge Foundation, formed a nonprofit organization called Inclusive Prosperity Capital ("IPC"). The mission of IPC is to attract mission-oriented investors in underserved clean energy market segments (e.g., low-to moderate-income ("LMI") single and multifamily properties) of the green economy. Although not an affiliate, nor a component unit of the Green Bank, IPC serves an important role supporting Green Bank programs (e.g., Smart-E and Solar PPA) through FY26. Through Professional Service Agreements ("PSA"), the Green Bank has engaged IPC since FY19, and expects the final PSA, with a focus on the Smart-E Loan, to be in FY26 as IPC becomes self-sustainable.<sup>43</sup>

For an overview of the organizational structure of the Green Bank, and its partnership with IPC – see Figure 1.44

<sup>&</sup>lt;sup>43</sup> It should be noted that IPC was a winner of a \$249.3MM contract with the US EPA through the Greenhouse Gas Reduction Fund's Solar for All initiative in 2024.

<sup>&</sup>lt;sup>44</sup> Please note that this figure has changed over time as IPC has provided support to the Green Bank for its multifamily Solar PPA, and Smart-E programs since FY19.

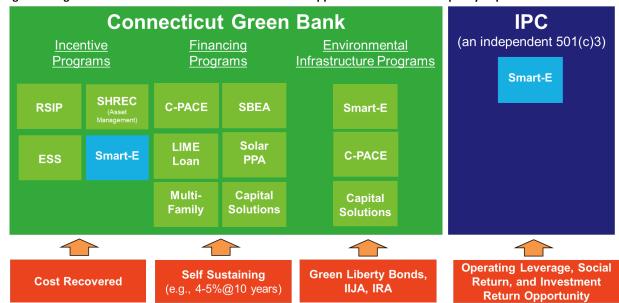


Figure 1. Organizational Structure of the Green Bank with Support from Inclusive Prosperity Capital

An Employee Handbook and <u>Operating Procedures</u> have been approved by the BOD and serve to guide the staff to ensure that it is following proper contracting, financial assistance, and other requirements.

#### 3. Incentive Programs

The Green Bank administers incentive programs, including credit enhancements (e.g., interest rate buydowns, loan loss reserves), used to deploy clean energy and environmental infrastructure, while at the same time cost recovering the expenses associated with several of these programs (i.e., CGS 16-245ff, PA 21-53) within the business unit – including, but not limited to, incentives, administrative expenses, and financing costs.

## 3.1 Residential Solar Investment Program and Residential Renewable Energy Solutions

#### Residential Solar Investment Program

Per CGS 16-245ff, the Green Bank administered the Residential Solar Investment Program ("RSIP") to deploy 350 megawatts ("MW") of new residential solar PV systems on or before December 31, 2022, while promoting the sustained, orderly development of a local state-based solar PV industry and ensuring that solar PV systems are accessible and affordable to vulnerable communities. As of December 31, 2022, the RSIP achieved 378 MW of deployment from \$1.4 billion of total investment, providing more than 46,300 households with access to solar PV systems, including 50% within vulnerable communities. With the end of the RSIP policy, the focus of the Green Bank will be to manage the Solar Home Renewable Energy Credits ("SHREC") generated from the systems supported through the RSIP to recover incentives, administrative expenses, and financing costs, by selling SHRECs to the EDCs through a 15-year Master

<sup>&</sup>lt;sup>45</sup> Each year, from 2019 through 2022, and cumulatively from 2014 through 2021, Connecticut had the largest per capita deployment of residential solar PV in the entire northeast (i.e., New England, New Jersey, and New York) as a result of administering the RSIP (SEIA – Solar Market Insights 2022).

<sup>&</sup>lt;sup>46</sup> "Residential Solar Investment Program – 2012-2022 Program Impact Evaluation and Future Recommendations" by Slipstream (May 3, 2023) – <u>click here</u>.

Purchase Agreement ("MPA") to pay for bonds sold to support the program. In addition to cost recovery of the RSIP through the SHREC, the Green Bank is looking into how to manage the end-of-life of the solar PV systems as the waste is potentially heavy in weight and sizable in volume.<sup>47</sup>

#### Residential Renewable Energy Solutions

Starting January 1, 2022, the residential solar PV market transitioned from the RSIP and net metering to a tariff-based compensation structure. In order to ensure the continued sustained, orderly development of the local solar industry beyond the conclusion of the RSIP, and access to such clean energy technologies by vulnerable communities, the Green Bank actively engaged in the regulatory process (i.e., Docket No. 20-07-01) overseen by PURA to establish Residential Renewable Energy Solutions ("RRES") – an EDC-administered residential renewable energy tariff program.

As a result of the Green Bank's engagement in the PURA process for the RRES, the following key program design principles were included:

- Rate of Return a just, reasonable, and adequate rate of return of between 9 to 11 percent was determined (i.e., equivalent to \$0.2940/kWh in 2021 and \$0.3195/kWh in 2025) for the 20-year tariff through the Green Bank's inclusion of an objective rate of return analysis of the RSIP;
- HES or HES-IE Requirement to continue the linkage between energy efficiency and solar PV as demonstrated by the RSIP, an important objective of the Joint Committee, the Green Bank advocated for a Home Energy Solutions ("HES") or Home Energy Solutions Income Eligible ("HES-IE") requirement as part of the RRES;
- Additional Incentives for Vulnerable Communities given the success of the RSIP in reaching vulnerable communities, the Green Bank wanted to ensure that solar PV was affordable and accessible to LMI households, and thus adders for low income (i.e., \$0.0250/kWh in 2021 and \$0.0550 for the buy-all tariff and \$0.0350/kWh for the netting tariff in 2025) or households located in distressed municipalities<sup>49</sup> (i.e., \$0.0125/kWh in 2021 and \$0.0275/kWh for the buy-all tariff and \$0.0175/kWh for the netting tariff in 2025) over the 20-year tariff were determined;
- Direct Payment due to the perceived risks of underwriting financing (i.e., loans, leases, or power purchase agreements ("PPAs")) for vulnerable communities, the Green Bank advocated for direct payments of the tariff rates from the EDCs to a third-party in-part or in-whole as a way to reduce borrower risk (including perceived risk) and therefore make renewable energy more affordable and accessible to vulnerable communities. This provides a financing mechanism that would allow the Green Bank to provide investment in developers serving vulnerable communities; and
- Affordable Housing as part of the Green Bank-led amendments to Section 2 of PA 21-48,<sup>50</sup> which includes "affordable housing" as part of RRES (i.e., versus Non-Residential

<sup>&</sup>lt;sup>47</sup> 1.2 million panels is equivalent to over 55 million pounds of weight and nearly 5 billion cubic inches of volume – equivalent to 4,600 African elephants (i.e., 1,200 pounds each) and 30 Olympic sized swimming pools (i.e., 2.5 million liters of water).

<sup>&</sup>lt;sup>48</sup> See CGS 16-244z and Docket No. 20-07-01

<sup>&</sup>lt;sup>49</sup> https://portal.ct.gov/DECD/Content/About\_DECD/Research-and-Publications/02\_Review\_Publications/Distressed-Municipalities

<sup>&</sup>lt;sup>50</sup> An Act Establishing and Energy Efficiency Retrofit Grant Program for Affordable Housing – https://www.cga.ct.gov/2021/act/Pa/pdf/2021PA-00048-R00SB-00356-PA.PDF

Renewable Energy Solutions or "NRES"), and a subsequent decision by PURA in Docket No. 22-08-02, it will be easier for property owners to participate in RRES, enabling energy savings to both the property owner and its low-income tenants (i.e., renters).

These key program design principles within the EDC-administered tariff program will improve the program's likelihood of success in deploying no less than fifty (50) MW of new residential solar PV a year, while ensuring that vulnerable communities have continued opportunities to reduce the burden of energy costs that they experienced through the RSIP. It should be noted that in 2024, over one-hundred and twenty-three (123) MW of new residential solar PV was deployed in Connecticut – versus Massachusetts (i.e., 196 MW), New Jersey (i.e., 147 MW) and New York (i.e., 184 MW)<sup>51</sup> – with Connecticut exceeding all of them on a watts per capita basis. RRES progress, following on the RSIP, demonstrates the importance of market transformation. Future efforts to support the market's continued growth and sustainability will rely on appropriate public policies to ensure consumer protections.<sup>52</sup>

#### 3.2 Energy Storage Solutions

With the passage of PA 21-53 establishing a 1000 MW energy storage deployment target by 2030, and the final decision in Docket No. 17-12-03RE03 on electric storage, the Green Bank was selected by PURA to co-administer a 580 MW behind the meter residential and non-residential battery storage incentive program with the EDCs called Energy Storage Solutions ("ESS"). The Green Bank is responsible for administering the upfront incentive, marketing the program, overseeing evaluation, measurement, and verification ("EM&V"), and fostering the sustained, orderly development of a state-based electric energy storage industry. ESS seeks to deploy battery storage systems to help families and businesses become more resilient against power outages, while reducing peak demand during summer and winter periods generating savings and reducing electric rates for all ratepayers.

As of January 1, 2025, there are 747 residential battery storage systems totaling 6.4 MW and \$19.0 million of total investment and 68 non-residential battery storage systems totaling 140.1 MW of installed capacity and \$250.0 million of total investment that have been approved by the Green Bank.

#### 3.3 EnergizeCT Smart-E Loan

The EnergizeCT Smart-E Loan ("Smart-E Loan") is a partnership between the Green Bank and local community banks and credit unions that provide easy and affordable access to capital for homeowners to finance clean energy and environmental infrastructure improvements on their properties through local contractors. The Green Bank provides credit enhancements to the participating financing institutions in the form of interest rate buydowns (i.e., from the use of federal resources and from the Green Bank balance sheet through linked deposits) and loan loss reserves (i.e., from the Green Bank balance sheet). This allows financial institutions to provide low-interest and longer-term loans to families.

In FY 2023, the Green Bank, worked with Connecticut Institute for Resilience and Climate Adaptation ("CIRCA"), DEEP, Connecticut Department of Public Health ("DPH"), Connecticut Insurance Department, and other stakeholders, to identify additional measures (i.e., climate adaptation and resilience, water) for inclusion within the Smart-E Loan for environmental infrastructure. On June 18, 2024 the Green Bank announced that climate adaptation and resilience and water measures are eligible for the Smart-E Loan.

<sup>&</sup>lt;sup>51</sup> Solar Market Insight by Solar Energy Industry Association and Wood Mackenzie

<sup>&</sup>lt;sup>52</sup> Section 7 of Public Act 24-38 "An Act Concerning Energy Procurements, Certain Energy Resources and Programs of the Public Utilities Regulatory Authority"

As of January 1, 2025, 9,319 families that have received Smart-E Loan from community lenders to finance various clean energy and environmental infrastructure projects totaling \$194.9 million of total investment.

#### 3.4 Incentive Program Targets

The Green Bank has set targets for its Incentive Programs business unit for FY 2023,<sup>53</sup> FY 2024,<sup>54</sup> FY 2025,<sup>55</sup> and FY 2026 in terms of the number of projects, total investment (i.e., public and private), and installed capacity – see Tables 2 through 5.

Table 2. Revised FY 2023 Targets for the Incentive Programs Business Unit

Program / Product	Projects	Total Capital Deployed (\$MM's)	Installed Capacity (kW)
Energy Storage Solutions – Residential	350	\$14.9	4,700
Energy Storage Solutions – Non-Residential	30	\$67.5	45,000
EnergizeCT Smart-E Loan	960	\$15.0	200
Total	1,340	\$97.4	49,900

Table 3. Revised FY 2024 Targets for the Incentive Programs Business Unit

Program / Product	Projects	Total Capital Deployed (\$MM's)	Installed Capacity (kW)
Energy Storage Solutions – Residential	150	\$4.8	1,000
Energy Storage Solutions – Non-Residential	15	\$30.4	20,700
EnergizeCT Smart-E Loan	1,204	\$22.4	900
Total	1,359	\$57.3	22,800

Table 4. Revised FY 2025 Targets for the Incentive Programs Business Unit

Program / Product	Projects	Total Capital Deployed (\$MM's)	Installed Capacity (kW)
Energy Storage Solutions – Residential	500	\$16.0	4,300
Energy Storage Solutions – Non-Residential	5	\$12.5	10,000
EnergizeCT Smart-E Loan	1,325	\$26.8	2,120
Total	1,830	\$55.3	16,420

<sup>&</sup>lt;sup>53</sup> Revised by the BOD on January 20, 2023

<sup>&</sup>lt;sup>54</sup> Revised by the BOD on January 26, 2024

<sup>&</sup>lt;sup>55</sup> Revised by the BOD on January 24, 2025

Table 5. FY 2026 Targets for the Incentive Programs Business Unit

Program / Product	Projects	Total Capital Deployed (\$MM's)	Installed Capacity (kW)
Energy Storage Solutions – Residential	500	\$15.0	5,000
Energy Storage Solutions – Non-Residential	5	\$15.0	10,000
EnergizeCT Smart-E Loan	915	\$23.1	2,000
Total	1,420	\$53.1	17,000

In terms of the Green Bank's vulnerable community's prioritization, the following is a goal for Incentive Programs:

 No less than 40 percent of investment and benefits (e.g., reduction in energy burden, increase in resilience, jobs) from Incentive Programs is directed to vulnerable communities.

As a result of successfully achieving these targets, the Green Bank will reduce energy burden and increase resilience for Connecticut families and businesses, especially those in vulnerable communities, create jobs in our communities, raise tax revenues for the State of Connecticut, and reduce air pollution causing local public health problems and contributing to global climate change.

For details on Incentive Program performance, please see the Annual Comprehensive Financial Report for FY24.<sup>56</sup>

#### 4. Financing Programs

The Green Bank manages financing programs. That is to say that it oversees financing programs that invest capital upfront (i.e., public revenues including CEF and RGGI) to deploy clean energy, while at the same time returning principal and interest (i.e., earned revenues) over time from the financing of projects, products, or programs to ensure the financial sustainability of the Green Bank.

#### 4.1 Commercial Property Assessed Clean Energy

Per CGS 16a-40g, C-PACE enables building owners to pay for clean energy improvements over time through a voluntary benefit assessment placed by participating municipalities on their property tax bills. As of January 1, 2025, there have been 140 cities and towns that have opted into C-PACE. This process makes it easier for building owners to secure low-interest capital for up to 25 years to fund clean energy improvements and is structured so that energy savings more than offset the benefit assessment. With the passage of PA 22-6,<sup>57</sup> resilience and electric vehicle recharging stations were added to the list of eligible measures for C-PACE.

<sup>56</sup> https://www.ctgreenbank.com/wp-content/uploads/2024/10/CT-Green-Bank-Final-ACFR-2024R-2024.10.25.pdf

<sup>&</sup>lt;sup>57</sup> An Act Concerning the Commercial Property Assessed Clean Energy Program – https://www.cga.ct.gov/2022/act/Pa/pdf/2022PA-00006-R00SB-00093-PA.PDF

Continuing its efforts, in FY 2024, the Green Bank, worked with DEEP, CIRCA, and other stakeholders, to expand C-PACE beyond clean energy to include resilience measures. On June 18, 2024 the Green Bank announced that resilience measures are eligible for C-PACE.

As of January 1, 2025, 412 property owners have received \$379.3 million in C-PACE financing for various clean energy and environmental infrastructure projects.

#### 4.2 Green Bank Solar Power Purchase Agreement & Solar Lease

The Green Bank Solar PPA and the Green Bank Solar Lease are third-party ownership structures to deploy solar PV systems for commercial scale end-use customers (e.g., businesses, nonprofits, municipal and state governments, schools, affordable multifamily properties, etc.) that uses a multi-year PPA or site lease to finance projects while either reducing energy costs for the host customer or providing an annual lease payment, in the form of a fixed payment or a portion of the project's tariff revenue.

As of January 1, 2025, 220 property owners have received \$145.7 million in Green Bank Solar PPA financing for 65.4 MW of solar PV projects. In FY 2025, the Green Bank Solar PPA will focus on including battery storage to increase resilience of property owners while reducing electricity rates for all ratepayers.

#### 4.3 Solar Marketplace Assistance Program ("Solar MAP+")

Supported by public policy,<sup>59</sup> the Green Bank continues to support Connecticut state agencies, municipalities, and affordable multifamily property owners in their sustainability initiatives through Solar MAP+ for Towns and Cities. 60 Many Connecticut towns, primarily smaller towns, state agencies and affordable multifamily property owners are challenged to get through the many project steps preventing them from taking advantage of clean energy. Solar MAP+ provides turnkey support from start to finish to make it easier for these stakeholders to identify projects that will provide savings (i.e., through solar) and resiliency (i.e., through battery storage), to access necessary incentives and Green Bank financing, and to add much-needed capacity to manage project implementation and construction. The program administers a competitive solicitation to select a construction partner and bring more projects to the market to grow our state's clean energy economy. Projects are bundled into portfolios to achieve economies of scale driving down project costs and delivering better savings a property owner wouldn't experience if they acted alone. With feedback from contractors and municipalities, the Green Bank integrated additional transparency into the Programs' status and activities and developed a clearer mission and target audience. Solar MAP+ aims to support municipalities and other stakeholders that are underserved by the market. 61 From a municipal standpoint, this typically means towns that are smaller in population and/or town staff without recent history of doing solar or battery storage projects. The comprehensive program support and refined mission help better serve our stakeholders and the clean energy market.

<sup>&</sup>lt;sup>58</sup> Per CGS 16-244aa, "resilience" means the ability to prepare for and adapt to changing conditions and withstand and recover rapidly from deliberate attacks, accidents or naturally occurring threats or incidents, including, but not limited to, threats or incidents associated with the impacts of climate change.

<sup>&</sup>lt;sup>59</sup> CGS 16-245n "...stimulate demand for clean energy and deployment of clean energy sources that serve end use customers in the state..." (i.e., 16-245n(c)); and "...shall (i) develop separate programs to finance and otherwise support clean energy investment in residential, municipal, small business and larger commercial projects..." CGS 16-245n(d)(1)(B).

<sup>60</sup> https://www.ctgreenbank.com/community-solutions/solar-solutions-for-communities/solar-map/

<sup>&</sup>lt;sup>61</sup> Ibid

#### 4.4 Small Business Energy Advantage & Business Energy Advantage

Small Business Energy Advantage ("SBEA") and Business Energy Advantage ("BEA") are Eversource Energy administered on-bill commercial energy efficiency financing programs for small and medium-sized businesses, municipalities and Connecticut state agencies. Low-cost capital is provided by Amalgamated Bank with a credit enhancement from the Green Bank (i.e., subordinated debt) and the Connecticut Energy Efficiency Fund (i.e., loan loss guaranty and interest rate buydown). SBEA and BEA enables qualifying customers to access 0% on bill financing for up to \$100,000 per site for businesses (up to a maximum of \$1,000,000), up to \$5,000,000 for municipalities, and up to \$5,000,000 per project for state facilities with no overall outstanding loan cap.

As of January 1, 2025, 7,733 property owners have received \$115.5 million in SBEA financing for energy efficiency projects.

#### **4.5 Multifamily Products**

In FY 2024, as a result of public policy<sup>62</sup>, the Green Bank focused its multifamily<sup>63</sup> efforts on deploying solar and storage in affordable multifamily properties. The Green Bank expanded its Solar MAP+ to include the affordable multifamily sector. Through this program, properties receive assistance through all steps of the solar and storage project development process, from site identification and feasibility assessments to contractor procurement and financing. Eligible property owners can finance these projects through the Green Bank Solar PPA & Lease as well as C-PACE and the Solar Loan. Solar and storage developers active in the sector can also finance their projects through these products, outside of the Solar MAP+ program.

The Green Bank will continue to support energy efficiency through its support of the LIME product offered by Capital for Change, as well as C-PACE. Additionally, to enable greater investment in and deployment of technologies (i.e. solar PV, battery storage, heat pumps, weatherization, appliances, EV charging, and controls) in affordable multifamily properties, the Green Bank will continue efforts began in FY 2024 to work with the EDCs, DEEP, and the Energy Efficiency Board to better coordinate incentive and financing programs from state and federal sources of capital.

#### 4.6 Green Bank Capital Solutions

As opportunities present themselves, the Green Bank from time-to-time invests as part of a capital structure in various clean energy projects (e.g., fuel cell, hydropower, food and farm waste to energy, electric school buses). These projects are selected based on the opportunity to expand the organization's experience with specific technologies, advance economic development in a specific locale, or to drive adoption of clean energy that would otherwise not occur, while also earning a rate of return.

#### 4.6.1 Electric School Buses

The Green Bank's enabling statute directs it to "Promote investment in... projects that seek to deploy electric... or alternative fuel vehicles and associated infrastructure" and to "Promote investment in clean energy in accordance with a comprehensive plan." The passage of the Connecticut Clean Air Act (P.A. 22-25)<sup>64</sup> created a suite of clean transportation policy directives for the State, including the following zero-emission school bus deployment requirements:

<sup>62</sup> Public Act 21-48 and Docket No. 22-08-02

 $<sup>^{\</sup>rm 63}$  Buildings with 5 or more units

<sup>&</sup>lt;sup>64</sup> P.A. 22-25

- 2030 all school buses that serve environmental justice ("EJ") communities; and
- 2040 all school buses in the state

To support this public policy, the Green Bank has launched an initiative to support Connecticut school districts transition to electric school buses. This support has taken two forms: 1.) launching a Fleet Electrification Accelerator<sup>65</sup> program and 2.) providing financing for buses, charging infrastructure, and grid upgrades. Under the Fleet Electrification Accelerator, school districts will support districts to develop a fleet electrification plan with follow-on deployment support to implement the plan. The Fleet Electrification Accelerator launch in June 2025 and will operate as a cohort model. The initial cohorts will be restricted to Connecticut's Distressed Municipalities.

Through GGRF-NCIF efforts, the Green Bank has also initiated the financing of electric school bus fleets as well as associated charging and grid infrastructure under the Capital Solutions Program.

#### **4.7 Financing Program Targets**

The Green Bank has set targets for its Financing Programs business unit for FY 2023 through FY 2026 in terms of the number of projects, total investment (i.e., public and private), and installed capacity – see Tables 6 through 9.

Table 6. Revised FY 2023 Targets for the Financing Programs Business Unit

Program / Product	Projects	Total Capital Deployed (\$MM's)	Green Bank Capital Deployed (\$MM's)	Installed Capacity (kW)
Commercial PACE	23	\$31.0	\$7.0	-
Green Bank Solar PPA	19	\$13.7	\$2.7	7,600
Small Business Energy Advantage	839	\$18.6	\$3.7	-
Multifamily Term Loan	6	\$1.4	-	600
Multifamily Health and Safety	1	\$0.9	-	-
Total	882	\$64.2	\$13.4	7,600

Table 7. Revised FY 2024 Targets for the Financing Programs Business Unit

Program / Product	Projects	Total Capital Deployed (\$MM's)	Green Bank Capital Deployed (\$MM's)	Installed Capacity (kW)
Commercial PACE	19	\$21.2	\$7.7	-
Green Bank Solar PPA	10	\$10.7	\$6.5	4,700
Small Business Energy Advantage	480	\$11.7	\$2.3	-
Multifamily Term Loan	3	\$0.3	\$0.3	300
Total	515	\$49.0	\$21.1	8,200

<sup>65</sup> Fleet Electrification Accelerator - CT Green Bank | Accelerating Green Energy Adoption in CT

Table 8. Revised FY 2025 Targets for the Financing Programs Business Unit

Program / Product	Projects	Total Capital Deployed (\$MM's)	Green Bank Capital Committed <sup>66</sup> (\$MM's)	Installed Capacity (kW)
Commercial PACE	23	\$32.2	\$14.7	-
Marketplace Assistance Program	8	\$8.8	\$6.1	3,470
Green Bank Solar PPA <sup>67</sup>	4	\$3.0	\$1.6	-
Small Business Energy Advantage	518	\$12.6	\$2.5	-
Total	553	\$56.6	\$24.8	3,470

Table 9. FY 2026 Targets for the Financing Programs Business Unit

Program / Product	Projects	Total Capital Deployed (\$MM's)	Green Bank Capital Committed <sup>68</sup> (\$MM's)	Installed Capacity (kW)
Commercial PACE	24	\$42.2	\$10.2	-
Marketplace Assistance Program	20	\$28.7	\$2.2	14,744
Green Bank Solar PPA <sup>69</sup>	11	\$12.6	\$5.2	10,101
Small Business Energy Advantage	436	\$14.5	\$2.9	-
Total	491	\$98.1	\$20.5	24,845

In terms of the Green Bank's vulnerable communities prioritization, the following is a goal for Financing Programs:

 No less than 40 percent of investment and benefits (e.g., reduction in energy burden, increase in resilience, jobs) from Financing Programs is directed to vulnerable communities.

The capital provided by the Green Bank, which is a portion of the total investment, is expected to yield a return commensurate with the financial sustainability objectives of the organization and business unit.

As a result of successfully achieving these targets, the Green Bank will contribute to its financial sustainability, and also reduce the energy burden and increase resilience for Connecticut families and businesses, especially those in vulnerable communities, create jobs in our communities, raise tax revenues for the State of Connecticut, and reduce air pollution that cause local public health problems and global climate change.

For details on Financing Program performance, please see the Annual Comprehensive Financial Report for FY24.<sup>70</sup>

<sup>&</sup>lt;sup>66</sup> The Green Bank has clarified our targets and in FY 2025 is using the term Green Bank Capital Committed, where we are looking to commit to using funds from our balance sheet towards specific programs and projects. This is an important metric to track as it is indicative of our growth and progress toward achieving financial sustainability.

<sup>&</sup>lt;sup>67</sup> This includes Green Bank and 3<sup>rd</sup> Party developed solar installations where the Green Bank's support is through debt.

<sup>&</sup>lt;sup>68</sup> The Green Bank has clarified our targets and in FY 2025 is using the term Green Bank Capital Committed, where we are looking to commit to using funds from our balance sheet towards specific programs and projects. This is an important metric to track as it is indicative of our growth and progress toward achieving financial sustainability.

<sup>&</sup>lt;sup>69</sup> This includes Green Bank and 3<sup>rd</sup> Party developed solar installations where the Green Bank's support is through debt.

<sup>&</sup>lt;sup>70</sup> https://www.ctgreenbank.com/wp-content/uploads/2024/10/CT-Green-Bank-Final-ACFR-2024R-2024.10.25.pdf

#### **5.** Environmental Infrastructure Programs

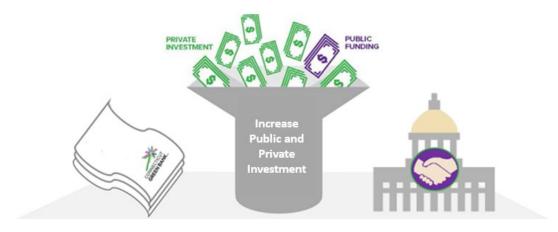
Following the passage of PA 21-115 in June of 2021, the Green Bank began the process of policy assessment and development for environmental infrastructure in FY 2022, including:

- Governance Amendments revising various governance documents including the Resolution of Purpose, Bylaws, and Operating Procedures;
- Assessing Bond Potential investigating the potential for Green Liberty Bonds to be issued to raise proceeds for environmental infrastructure investment, including fifty (50) year maturity terms;
- <u>Developing Products</u> expanding the ability for the Smart-E Loan to support environmental infrastructure projects for single family property owners and C-PACE to support resilience projects for multifamily and commercial property owners;
- Stakeholder Engagement initiating outreach to public, private, nonprofit, and academic stakeholder organizations to introduce the Green Bank, understand public policies and targets, identify funding opportunities, market potential, investment requirements, and financing models, and metrics for environmental infrastructure; and
- <u>Strategic Retreat</u> engaging members of the BOD, staff, and key stakeholders in an offsite strategic retreat to expand the scope of the Green Bank to mobilize private investment in environmental infrastructure.<sup>7172</sup>

As a result of these efforts in FY 2022, the Green Bank made the following observations with respect to environmental infrastructure:

 Market Intermediary Role – as is the case with respect to "clean energy," the Green Bank has a role to play as a market intermediary for "environmental infrastructure" – see Figure 2. Given the ambitious nature of public policies with respect to environmental infrastructure, and the need to mobilize and attract private investment to achieve the policy objectives, there is a need for an intermediary role for the Green Bank between capital markets and public policy.

Figure 2. Market Intermediary Role - Capital Markets and Public Policy



 $<sup>^{71}\,\</sup>underline{\text{https://www.ctgreenbank.com/wp-content/uploads/2022/07/2022-Strategic-Retreat-Report.pdf}$ 

<sup>72</sup> https://www.youtube.com/watch?v=6V3wwMcaUvU

- 2. Better Market Signals again, as is the case with respect to "clean energy" (e.g., zero emission renewable energy credits), there is a need for public policy to send better market signals to unlock and mobilize private capital investment in "environmental infrastructure". For example, beyond "sticks" (e.g., regulation and enforcement requiring producers of food waste to transport their waste to an anaerobic digester per CGS §22a-226e), there need to also be associated "carrots" (e.g., virtual net metering, low emission renewable energy credits, renewable natural gas) in order to enable private investment in "environmental infrastructure". A strong market signal public policy for green and blue infrastructure is Maryland's Conservation Finance Act of 2022 and the pay-for-success contracts for certain environmental outcomes.<sup>73</sup>
- 3. Appropriately Priced Capital if public policy in Connecticut is designed to reduce risks (including perceived risks), then attracting and mobilizing appropriately priced private capital (e.g., lower interest rates, longer terms) must ensue. The Green Bank can access affordable private capital through the issuance of Green Liberty Bonds, which can be paid back over 50 years (or the useful life of the asset) and whose proceeds can be invested in environmental infrastructure.
- 4. <u>Community Engagement</u> there is a continuous need to not only engage public, private, nonprofit and academic stakeholders, but also municipal, councils of government, and other community-level officials. Empowering impacted communities, especially vulnerable communities, through near-term engagement (i.e., informing, consulting, and involving) to long-term engagement (i.e., collaborating and empowering) is vital to identifying needs to support the development of programs and the success of investments in projects to achieve their intended impacts.
- 5. <u>Vulnerable Communities</u> with a key goal to "strengthen Connecticut's communities, especially vulnerable communities, by making the benefits of the green economy inclusive and accessible to all individuals, families, and businesses," as is the goal for "clean energy," the Green Bank will ensure that by the end of 2025 no less than 40 percent of investment and benefits (e.g., jobs) in "environmental infrastructure" are directed to vulnerable communities.

In FY 2023, the Green Bank continued to make progress developing its environmental infrastructure business unit and programs by:

- <u>Building the Team</u> hiring several critical positions including the Manager of Community Engagement and Director of Environmental Infrastructure, as well as qualifying a suite of contractors to support the work of the business unit;
- Continuing Engagement wrapping up stakeholder outreach for water, and continuing engagement of municipal and regional governments, especially those in vulnerable communities (e.g., Bridgeport, Hartford);
- Raising Resources identifying and realizing opportunities for federal (i.e., GGRF) and foundation (i.e., Robert Wood Johnson Foundation) funding, and developing the Green Liberty Bonds to raise proceeds from the issuance of bonds to provide capital for investment;

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<sup>&</sup>lt;sup>73</sup> https://mgaleg.maryland.gov/mgawebsite/Legislation/Details/sb0348?ys=2022RS

- Launching New Products developing existing financing products for clean energy (i.e., Smart-E Loan, C-PACE) to support environmental infrastructure measures; and
- Conducting Research and Development continuing to identify research opportunities
  to develop markets for carbon offsets and ecosystem services for the purposes of
  generating revenues from projects as a result of Green Bank investments.

In FY 2024, the Green Bank continued to make steady progress developing its environmental infrastructure business unit and programs including, but not limited to:

- Strategic Assessment of Market Readiness identified and synthesized market conditions, readiness, and opportunities across sectors, including resources needed to develop, expand, or launch new programs and markets;
- Continuing to Build the Team identified critical positions and/or contractual support services to implement programs and opportunities based on the strategic assessment;
- <u>Continuing Engagement</u> initiated stakeholder outreach for waste and recycling, continued engagement of municipal and regional governments, especially those in vulnerable communities;
- Explore Stakeholder Advisory Committee explored the formation of an Environmental Infrastructure Stakeholder Advisory Committee to engage various state agencies to act as liaisons to the Green Bank.<sup>74</sup> Considered other important engagement or advisory opportunities with strategic organizations, stakeholders, and/or municipalities;
- Raising Resources identified, sought, and received funding from federal (e.g., IIJA, IRA, GGRF) and foundation (e.g., grants, program related investments ("PRIs")) channels. In 2024, develop and issue Green Liberty Bonds to raise proceeds to provide capital for investment (e.g., revolving loan fund);
- Launching or Expanding Existing Products Inclusive of Key Outcomes developed and launched existing financing products for clean energy (i.e., Smart-E Loan, C-PACE) to support environmental infrastructure measures. Assessed and created additional clean energy incentive and financing product expansion opportunities in alignment with strategic assessment (i.e., Green Bank Capital Solutions); and
- Continue Conducting Research and Development continued to identify research and development opportunities for the purposes of generating revenues, including environmental market revenues (e.g., carbon offsets, ecosystem services) from projects as a result of Green Bank investments.

In FY 2025, the Green Bank continued to make steady progress developing its environmental infrastructure business unit and programs including, but not limited to:

■ Expand and Implement Existing Products - following the launches of existing products (i.e., Smart-E Loan, C-PACE) inclusive of environmental infrastructure measures (e.g., resilience, water) in FY 2024, continued measure expansion for septic, dams, and wells.

<sup>&</sup>lt;sup>74</sup> Per Section 5.3 Advisory Committees within its bylaws, the Green Bank may form advisory committees to advise and assist the Board or management in the performance of its statutory responsibilities.

Supported market development of such Smart-E Loan measures and the C-PACE underwriting criteria for resilience measures. Collaborated to identify and collect information to support the development of impact metrics.

- Identify Unique Project Opportunities launched Green Bank Capital Solutions, inclusive of environmental infrastructure measures, in FY 2025, by promoting the open RFP program, building a pipeline of priority project opportunities, creating proposal evaluation criteria, and investing in one project opportunity as appropriate.
- Continuing Engagement finalized the "Waste and Recycling" primer, and supported community engagement relative to environmental infrastructure. Continued engagement of municipal and regional governments, especially those supporting vulnerable communities, to understand their needs in terms of environmental infrastructure.
- Support Public Policy that Unlocks Private Capital Investment supported existing and advanced new public policies (PA 25-33 and PA 25-125) that mobilize private capital investment in and deployment of environmental infrastructure.
- Raising Resources identified, pursued, and received opportunities and partnerships for federal and foundation funds (e.g., grants, PRIs) and private capital resources. In FY 2025, continued the Green Bank's determination of the capability for Green Liberty Bonds (i.e., up to 50-year bonds) to raise proceeds to provide capital for investment in environmental infrastructure.
- Market Research and Development continued to identify research and development opportunities for the purposes of product and market development, including public policies that enable private capital investment, the identification of project and programmatic opportunities, and generating revenues, especially from environmental markets (i.e., carbon offsets, ecosystem services).
- Data, Targeting, and Impact assembled data (e.g., resilience opportunity areas, vulnerable communities, etc.) to target the promotion of products and programs for environmental infrastructure investments. Helped to optimize impact across Environmental Infrastructure sectors and key performance indicators ("KPIs").

In addition to the above, the Green Bank for the first time, set targets for its Environmental Infrastructure Programs business unit for FY 2025 in terms of the number of projects and total investment (i.e., public and private) – see Table 10.

Table 10. Revised FY 2025 Targets for the Environmental Infrastructure Programs Business Unit

Program / Product	Projects	Total Capital Deployed (\$MM's)	Green Bank Capital Committed <sup>75</sup> (\$MM's)
Smart-E Loan	20	\$0.1	\$0.0
Green Bank Capital Solutions	1	\$2.0	\$1.0
Total	21	\$2.1	\$1.0

<sup>&</sup>lt;sup>75</sup> The Green Bank has clarified our targets and in FY 2025 is using the term Green Bank Capital Committed, where we are looking to commit to using funds from our balance sheet towards specific programs and projects. This is an important metric to track as it is indicative of our growth and progress toward achieving financial sustainability.

In FY 2026, the Green Bank will implement the following within its environmental infrastructure business unit, including, but not limited to:

- Support Product Expansion and Implementation following the expansion of existing products inclusive of environmental infrastructure measures (e.g., Smart-E climate adaptation and resilience measures, water measures, and C-PACE Resilience) in FY 2024 and FY 2025, continue support for measure expansion and market adoption of such measures while also identifying and collecting information to support the development of impact metrics.
- Pursue Priority Project Opportunities

   continue promoting Green Bank Capital
   Solutions, building a project pipeline, and investing capital into project opportunities
   where appropriate, and in alignment with investment strategy and market development priorities, while also identifying and collecting information to support the development of impact metrics.
- Market Research & Strategic Program Development continue to identify market research and development opportunities (e.g. financing nature-based solutions per PA 25-125) to guide the design of potential policy or financing programs (e.g. Resiliency Improvement Districts per PA 25-33) which generate revenue in support of public policy objectives.

In addition to the above, the Green Bank set targets for its Environmental Infrastructure Programs business unit for FY 2026 in terms of the number of projects and total investment (i.e., public and private) – see Table 11.

Table 11. FY 2026 Targets for the Environmental Infrastructure Programs Business Unit

Program / Product	Projects	Total Capital Deployed (\$MM's)	Green Bank Capital Committed <sup>76</sup> (\$MM's)
Smart-E Loan	15	\$0.1	\$0.0
Green Bank Capital Solutions	2	\$5.0	\$2.5
Total	17	\$5.1	\$2.5

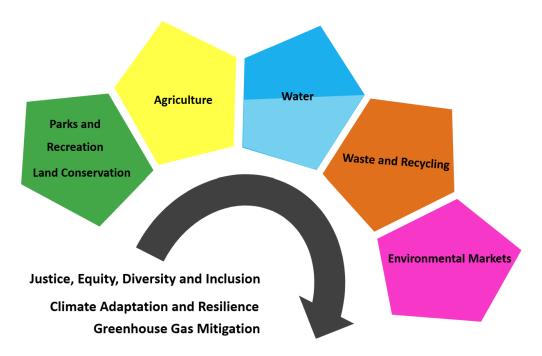
#### **5.1 Confronting Climate Change and Vulnerable Communities**

Given the mission of the Green Bank, investments in environmental infrastructure must seek to confront climate change (i.e., mitigate GHG emissions and increase resilience against its impacts) and increase investment in vulnerable communities – see Figure 3. The umbrella of Environmental Infrastructure sectors guides the Green Bank's efforts to mobilize investment in concert with public, private, nonprofit, municipal and other stakeholders.

76

<sup>&</sup>lt;sup>76</sup> Ibid

Figure 3. Confronting Climate Change and Enabling Investment in Vulnerable Communities through Environmental Infrastructure



Through stakeholder engagement, the Green Bank recognizes the opportunity for investment in nature-based solutions that protect land and water from loss, improve management of natural resources for productive use in the economy, and restore native cover – all of which help Connecticut confront climate change – see Figure 4.

Figure 4. Nature-Based Solutions and Green Infrastructure



With the passage of PA 25-33, the Green Bank is able to finance environmental infrastructure projects through RIDs, including supporting the public policy priority of investing in nature-based solutions projects (including in vulnerable communities).

In terms of the Green Bank's vulnerable communities prioritization, the following is a goal for Environmental Infrastructure Programs:

No less than 40 percent of investment and benefits (e.g., reduction in air and water pollution, increase in resilience, public health improvement, jobs) from Environmental Infrastructure Programs is directed to vulnerable communities.

#### **5.1.1 Strategy Overview**

As the Green Bank continues to implement its Environmental Infrastructure efforts, there is a need to accelerate the pace at which the team can begin to provide financial solutions to the market while allowing for flexibility to learn more about each sector. The Environmental Infrastructure team created a three-part strategy to balance near-term product and investment opportunities alongside longer-term program and market development. The strategy was also envisioned to leverage existing staff resources and to build on respected program brand names and market awareness. This strategy is to:

- Expand Program Offerings: include Environmental Infrastructure measures in existing programs such as Smart-E (i.e., climate resilient and adaptation and water measures) and C-PACE (i.e., resilience)
- 2) **Pursue Bespoke Opportunities:** expand and leverage Green Bank Capital Solutions Open Rolling Request for Proposals for Environmental Infrastructure projects
- 3) **Develop Strategic Programs**: determine longer-term strategic program design opportunities (e.g., advancing environmental infrastructure projects through RIDs)

Expand Program
Offerings

• Smart-E Resilience
• C-PACE Resilience

Pursue Bespoke
Opportunities

• Green Bank Capital
Solutions

• e.g. Resiliencey
Improvement Districts
• e.g. Bridge lending for land and agricultural acquisition

Figure 5. Environmental Infrastructure Strategy

As the Green Bank has worked to define a strategic approach to the expansive scope of Environmental Infrastructure, it has been important to maintain a broad aperture of financing tools and investment strategies for Environmental Markets, Land Conservation, Parks and Recreation, Agriculture, Water, and Waste and Recycling. Each of these sectors have many potentially viable investment strategies. The team has engaged in conversation, participated in working groups, developed new partnerships, and performed other stakeholder engagement activities to better understand near-term program design opportunities and longer-term market and program development needs.

The following is a succinct breakdown of each area of environmental infrastructure, including links to more detailed guides or primers based on stakeholder outreach.

#### **5.2 Environmental Markets – Carbon Offsets and Ecosystem Services**

Carbon offsets are measurable outcomes from carbon sequestration activities, traded in voluntary (e.g., requiring verification and certification) and compliance (e.g., RGGI) markets, whereby regulations, sustainability priorities, and public relations are motivators for buyers and sellers. Ecosystem services are the benefits people obtain from ecosystems,<sup>77</sup> and when measured, not only demonstrate social and environmental benefits, but also, in some cases, produce environmental market revenues from the investment in and deployment of environmental infrastructure. Fundamentally, ecosystem services markets are designed to embed the positive benefits (e.g., public health, resilience) and negative impacts (e.g., GHG emissions) of individuals on natural resources into market-based systems which financially incentivize environmental stewardship, conservation, and rehabilitation of natural ecosystems.

Environmental infrastructure projects that involve carbon offsets and ecosystem services can be quantified and sold in markets to generate additional earned revenues from the projects. For example, the Green Bank has developed a carbon offset methodology VM0038<sup>78</sup> and VMD0049<sup>79</sup> published under the Verified Carbon Standard ("VCS") Program, administered by the nonprofit Verra. This methodology allows those with the rights to electric vehicle charging infrastructure to earn carbon credits based on vehicle charging activity. The Green Bank led the development of this methodology with several partners going back to 2016 and worked with a consortium of partners<sup>80</sup> to submit for credits in 2021 for activity from 2016-2021. Credits were certified, verified, and minted in the fall of 2022 and monetized in the spring of 2023. The Green Bank is currently preparing to file for activity for calendar years 2021 and 2022 and expects to file for credits on behalf of its partners going forward for the life of the project, through 2041.

Though ecosystem services have been part of multiple discussions on opportunities for Green Bank engagement, the Environmental Infrastructure team has not developed a specific strategy or priority opportunity to engage across Environmental Markets. Starting in FY 2025, the Environmental Infrastructure team will continue to incorporate ecosystem service markets into broader project and program design opportunities as appropriate while also exploring project financing and program design opportunities with ecosystem service registries and project development partners.

For the basics on environmental markets, see Guide – Environmental Markets.82

<sup>&</sup>lt;sup>77</sup> Provisioning services (e.g., food, water, fuel, wood), supporting services (e.g., nutrient cycling, soil formation, habitat provision, primary production), regulating services (e.g., climate regulation, flood regulation, water purification), and cultural (e.g., spiritual, aesthetic, educational, and recreational).

<sup>78</sup> https://verra.org/methodologies/vm0038-methodology-for-electric-vehicle-charging-systems-v1-0/

<sup>&</sup>lt;sup>79</sup> https://verra.org/methodologies/vmd0049-activity-method-for-determining-additionality-of-electric-vehicle-charging-systems-v1-0/

<sup>&</sup>lt;sup>80</sup> Partners include: AmpUp, Blink Dominion Energy, EV Match, EV Structure, Exelon, Opconnect, OptiWatt, and UGO. We have been facilitated by the expertise brought by the Climate Neutral Business Network.

<sup>81</sup> https://verra.org/new-methodology-for-ev-charging-systems-approved/

<sup>&</sup>lt;sup>82</sup> https://www.ctgreenbank.com/wp-content/uploads/2023/04/Environmental-Infrastructure Environmental-Markets-Guide 062323.pdf

#### **5.3 Land Conservation**

Nature-based solutions such as protecting intact lands from loss (e.g., forestlands, wetlands), improving the management of working lands (e.g., sustainably certified timberlands), and restoring native land cover, including coastlines, can both mitigate GHG emissions that cause climate change (e.g., forest carbon sequestration) and increase resilience against the impacts of climate change (e.g., flood protection).

The following is the market potential for land conservation from the perspective of forestland – see Table 12.

Table 12. Market Potential for Land Conservation in Connecticut based on Forest Land

3,205,762 Acres  Land in Connecticut							
	<b>1,869,761 Acres</b> Forest Land			<b>01 Acres</b> est Land			
298,994 Acres Protected Core	568,857 Acres Unprotected	<b>1,001,910 Acres</b> Non-Core Forest	<b>1,130,000 Acres</b> Urban Area	206,001 Acres Other Non-Urban			
Forests	Core Forest			and Non-Forest			

To retain the multiple benefits that forests provide, there is a "no net loss of forest" policy goal.

The following is a breakdown of the land conservation target outlined in the CGS  $23-8^{83}$  – see Table 13.

Table 13. Progress Towards the Open Space Land Target in Connecticut (as of December 31, 2019)

3,205,762 Acres  Land in Connecticut								
	320,576	Acres			352,634 Acres			2,532,552 Acres
	State Goal (@10%)			Partner Goal (@≥11%)			No	
175,000	36,000	46,000	63,500	84,000	99,000	66,000	104,000	Land Conservation
Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	(@79%)
State	State	Wildlife	left to	Cities	Water	Non-	left to	
Forests <sup>84</sup>	Parks <sup>85</sup>	Area	achieve	and	Companies	Profit	achieve	
		and	target	Towns		Land	target	
		Other <sup>86</sup>				Trusts		

Of the open space goal of 21% by 2023 (i.e., 673,210 acres), approximately 510,249 acres are conserved (as of December 31, 2019), or 76% of the open space goal comprising 261,806 acres of state (i.e., 82% of the 10% state target) and 248,953 acres of partner (i.e., 71% of the partner target) – leaving an estimated 162,451 acres of open space left to achieve. If the average land acquisition cost is \$9,000 per acre, then approximately \$1.5 billion of public and private investment in land conservation would be needed to acquire and protect over 160,000 acres of open space in order to achieve the 21% target.

<sup>83</sup> State goal for open space acquisition – <a href="https://law.justia.com/codes/connecticut/2012/title-23/chapter-447/section-23-8/">https://law.justia.com/codes/connecticut/2012/title-23/chapter-447/section-23-8/</a>

<sup>84 33</sup> locations

<sup>85 107</sup> locations

<sup>&</sup>lt;sup>86</sup> Including wildlife management areas, fish hatcheries, flood control, natural area preserve, water access, wildlife sanctuaries, and other

As the Green Bank looks to increase and accelerate private investment in land conservation, it will be exploring the following financing tools, including, but not limited to:

- Carbon offset markets
- Ecosystem services markets
- Pay-for-Performance
- Eco-Labeling (e.g., FSC Certified)
- Green Liberty Bonds

- Buy-Protect-Sell Revolving Loan Fund
  - Predevelopment Financing
  - o Bridge Financing
  - o Traditional Debt Financing

Based on learnings to date and also aligned with the agriculture sector priority opportunities, a bridge loans for land conservation, restoration, and stewardship is a priority opportunity for the Green Bank to engage across the land conservation sector, especially for projects and acres facing high development pressure and risk of conversion to incompatible use.

For further details on the market opportunity, see Primer – Land Conservation.<sup>87</sup>

#### **5.4 Parks and Recreation**

Infrastructure investments in parks and recreation can both mitigate the GHG emissions that cause climate change (e.g., carbon sinks from urban tree canopy cover) and increase resilience against the impacts of climate change (e.g., stormwater management through urban parks, improve public health).

The following is a breakdown of the market potential for parks and recreation from the perspective of active<sup>88</sup> and passive<sup>89</sup> outdoor recreation facilities, and on "land" or "water" based activities from the Statewide Comprehensive Outdoor Recreation Plan ("SCORP") – see Table 14.

Table 14. Outdoor Recreation Facilities in Connecticut (2005)

Outdoor Recreation Type	# of Facilities	DIRPS <sup>90</sup> per 10,000 Residents	Statewide Average	Ownership Municipal Average	Other Average
Active – Land	4,788	1.4	4%	77%	20%
Active – Water	137	0.4	2%	69%	30%
Passive – Land	1,957	1.0	27%	46%	27%
Passive – Water	1,130	1.1	22%	45%	33%
Total	8,012	1.2	14%	62%	24%

The Trust for Public Land's ("TPL") ParkScore Index is a comprehensive rating system to measure how cities are meeting the needs for parks. 91 In an effort to assess ParkScore, the following data

<sup>87</sup> https://www.ctgreenbank.com/wp-content/uploads/2023/01/Environmental-Infrastructure Land-Conservation Oct-16-2022.pdf

<sup>&</sup>lt;sup>88</sup> Active outdoor recreation facilities based on 2005 data (X – #) and 2017 use frequency index data, if available (# – Y), include fields, courts, and courses for baseball and softball (984 – 16.0), basketball (645 – 23.0), football (154 – 10.0), golf (125 – 13.6), multi-use (624), soccer (495 – 14.6), tennis (384 – 11.2), and volleyball (74 – 23.0), as well as playgrounds (1,065), swimming pools (137 – 60.9), and winter sports (238 – 9.3)

<sup>&</sup>lt;sup>89</sup> Passive outdoor recreation facilities based on 2005 data (X - #) and 2017 use frequency index data, if available (# - Y) include access to sites for beaches (176 - 60.1), boating (285 - 10.9), camping (88 - 13.5), fishing (669 - 19.0), gardens (109), historic landmarks (99 - 35.9), hunting (88 - 3.5), picnics (677), and trails (896 - 102.8)

<sup>&</sup>lt;sup>90</sup> Discrete Identifiable Recreation Places

<sup>&</sup>lt;sup>91</sup> The "% of Land as Parks," "# of Parks," and "10-Minute Walk" data were used from TPL's ParkScore data set.

are for Connecticut's "Top 10" most populated municipalities with respect to park access – see Table 15.

Table 15. "Top 10" Most Populated Municipalities in Connecticut and ParkScore

City	Population	Acres	% Land as Parks	Acres of Land as Parks	Acres of Parks per 10,000 Residents	# of Parks	Parks per 10,000 Residents	10- Minute Walk
Hartford	121,203	11,136	9%	1,002	83	218	18.0	99%
New Haven	130,764	11,968	12%	1,436	110	128	9.8	96%
West Hartford	63,063	13,952	20%	2,790	442	48	7.6	82%
Stamford	129,302	24,064	5%	1,203	93	54	4.2	74%
New Britain	72,303	8,576	7%	600	83	23	3.2	73%
Bridgeport	143,653	10,304	7%	721	50	35	2.4	73%
Waterbury	106,458	18,240	6%	1,094	103	30	2.8	60%
Norwalk	88,326	14,656	3%	440	50	45	5.1	55%
Bristol	59,639	16,896	4%	676	113	20	3.4	51%
Danbury	84,732	26,880	5%	1,344	159	17	2.0	37%

The quality of parks is difficult to discern. To better understand the quality of parks, TPL partnered with the Urban Resources Institute ("URI") to compare New Haven against the nation's most populous cities on five (5) categories reflective of an excellent city park system: Acreage, <sup>92</sup> Access, <sup>93</sup> Investment, <sup>94</sup> Amenities, <sup>95</sup> and Equity <sup>96</sup> – see Table 16. <sup>97</sup>

Table 16. TPL and URI Analysis of New Haven Compared to Other Cities

City	Overall	Acreage	Access	Investment	Amenities	Equity
New Haven, CT	60	36	95	35	71	65
Hartford, CT	59	44	95	40	44	73
Boston, MA	-	47	100	79	65	79
Baltimore, MD	-	25	81	68	40	83
Buffalo, NY	-	25	85	47	61	64

The TPL-URI research also delves deeper into the twenty (20) neighborhoods of New Haven to collect data with respect to population, acres of parks, and acres per 1,000 population, as well as demographic data including income and people of color. Based on data from TPL from 14,000 cities, parks that serve low-income households are four (4) times as crowded as parks that serve

<sup>&</sup>lt;sup>92</sup> Acreage score indicates the relative abundance of large 'destination' parks, which include large natural areas that provide critical mental health as well as climate and conservation benefits.

<sup>&</sup>lt;sup>93</sup> Access score indicates the percentage of the city's residents that live within a walkable half-mile of a park – the average distance that most people are willing to walk to reach a destination.

<sup>&</sup>lt;sup>94</sup> Investment score indicates the relative financial health of a city's park system, which is essential to ensuring parks are maintained at a high level for all to enjoy.

<sup>&</sup>lt;sup>95</sup> Amenities score indicates the relative abundance of six park activities popular among a multi-generational cross-section of user groups (i.e., playgrounds, basketball courts, dog parks, senior and recreation center, splashpads, and permanent restrooms).

<sup>&</sup>lt;sup>96</sup> Equity score indicates how fairly parks and park space are distributed within a city, including percentage of people of color and low-income households within a 10-minute walk of a park, and comparison of the amount of park space between neighborhoods by race and income.

<sup>&</sup>lt;sup>97</sup> For example, a score of 90 means that the municipality is within the top 90 percent across the country.

high-income households, and parks that serve people of color are five (5) times as crowded as parks that serve majority-white populations. Such analyses in municipalities across Connecticut could elucidate opportunities for areas of improvement, including improving the public health of residents (e.g., reducing urban heat island effects) with access to parks and the economic development impact of property values within proximity to parks. Through its research and development efforts, the Green Bank has supported TPL and other community-based nonprofits to conduct a similar assessment for Hartford, the birth and burial place of Frederick Law Olmstead.

As the Green Bank looks to increase and accelerate private investment in parks and recreation, it will be exploring the following financing tools, including, but not limited to:

- Carbon offset markets
- Ecosystem services markets (e.g., Park Rx)
- Pay-for-Performance
- Green Liberty Bonds
- Tax Increment Financing

- Buy-Protect-Sell Revolving Loan Fund
  - Predevelopment Financing
  - o Bridge Financing
  - Traditional Debt Financing

Based on learnings to date, one of the most promising opportunities for the Green Bank to engage across the Parks & Recreation sector could be through bridge lending or working capital facilities for high impact community projects. The Environmental Infrastructure team will continue exploring how to bring financing methodologies to park projects while pursuing potential opportunities with project sponsors through Capital Solutions.

For further details on the market opportunity, see Primer – Parks and Recreation. 99

#### **5.5 Agriculture**

Nature-based solutions such as protecting farmlands from loss and improving farming practices, can both mitigate GHG emissions that cause climate change (e.g., climate smart agriculture) and increase resilience against the impacts of climate change (e.g., flood protection).

The following is a breakdown of the market potential for "agriculture" (i.e., farmland), including other natural forms of land cover (i.e., forestland and wetlands) – see Table 17.

Table 17. Land Cover in Connecticut (2015)

	3,179,253 Acres  Land and Water in Connecticut							
<b>921,827 Acres</b> Developed Land <sup>100</sup> 29%	233,847 Acres Farmland 7%	<b>1,873,471 Acres</b> Forestland <sup>101</sup> 59%	<b>129,153 Acres</b> Wetlands <sup>102</sup> 4%	20,955 Acres Other Lands <sup>103</sup> 1%				

<sup>98 &</sup>quot;The Heat is On" by The Trust for Public Lands

<sup>&</sup>lt;sup>99</sup> https://www.ctgreenbank.com/wp-content/uploads/2023/01/Environmental-Infrastructure\_Parks-and-Recreation\_Oct-16-2022.pdf

<sup>&</sup>lt;sup>100</sup> Includes "Developed," "Turf & Grass," and "Other Grasses" classifications

<sup>&</sup>lt;sup>101</sup> Includes "Deciduous Forest," "Coniferous Forest," "Forested Wetland," and "Utility-Rights-of-Way (Forest)" classifications

<sup>&</sup>lt;sup>102</sup> Includes "Water," "Non-Forested Wetlands," and "Tidal Wetlands" classifications

<sup>103</sup> Includes "Barren" classification

More than 70% of Connecticut's land is farmland, forestland, or wetland. From 2001 through 2016, approximately 6% of the state's farmland was converted to urban or low-density residential development – placing the state in the top three nationally in percent of farmland lost to development. $^{104}$ 

The long-term goal of the Farmland Preservation Program, which was set back in the 1980's, is to preserve 130,000 acres of farmland – see Table 18.

Table 18. Progress Towards the Farmland Preservation Program Target in Connecticut

		3,205,762 Land in Con			
	381,539	Acres <sup>105</sup>		2,824,223 Acres	
	Farmland				
148,609 Acres	113,355 Acres	31,923 Acres	87,652 Acres		
Farmland	Woodland	Pastureland			
48,744 Acr	Preserved Fares	81,256 Acı			
Preserved	1	Not Preserv			

As of October 2020, the Farmland Preservation Program has protected nearly 49,000 acres on 418 farms with agricultural conservation easements – leaving 81,000 acres of farmland left to preserve. If the average real estate value of an acre of farmland in Connecticut in 2019 was \$12,200, and Purchasing Development Rights ("PDR") is 30-50% of value, then between \$300 to \$500 MM of public investment (e.g., through the Connecticut Department of Agriculture ("DoAg") and/or USDA-Natural Resources Conservation Service ("NRCS")) would be needed to protect 81,000 acres of farmland to achieve the 130,000 acres of farmland preserved target.

As the Green Bank looks to increase and accelerate private investment in agriculture, it will be exploring the following financing tools, including, but not limited to:

- Carbon offset markets
- Ecosystem services markets
- Pav-for-Performance
- Eco-Labeling (e.g., Connecticut Grown)
- Green Liberty Bonds
- Linked Deposits

- Buy-Protect-Sell Revolving Loan Fund
  - Predevelopment Financing
  - Bridge Financing
  - Traditional Debt Financing
- Farmland Investment Fund
- Loan Guarantees (e.g., Smart-E Loan)

Based on learnings to date, and in alignment with the land conservation sector priority opportunity, one of the most promising financing tools for the Green Bank to explore across the agriculture sector is a flexible revolving loan fund structure that could support project activities and business improvements across multiple components of the sustainable and regenerative agricultural value and supply chains. These include climate-smart commodity production, farm and forestland conservation, infrastructure modernization and supply chains sustainability improvements, renewable energy integration, and ecosystem service generation.

<sup>&</sup>lt;sup>104</sup> "Planning for Agriculture – A Guide for Connecticut Municipalities: Emerging Agricultural Trends" by the American Farmland Trust and Connecticut Department of Agriculture (2020 Edition) (Page 19)

<sup>&</sup>lt;sup>105</sup> USDA Economic Research Service – 2017 data

 $<sup>^{\</sup>rm 106}$  Land in house lots, ponds, roads, wasteland, etc.

<sup>&</sup>lt;sup>107</sup> Connecticut Department of Agriculture, Farmland Preservation Programs Report (January 2022)

This exploration is influenced through an evolving partnership with the Connecticut Department of Agriculture ("DoAg") on joint priorities, and in consideration of the proven revenue streams and viable lending models for farmland acquisition and business lending for increased climate resilience across the agricultural sector.

For further details on the market opportunity, see Primer – Agriculture. 108

#### 5.6 Water

Water infrastructure and market opportunities in Connecticut are complex. Water is managed through several state agencies (i.e., DEEP, DPH), including issuing green bonds by the Office of the Treasurer, and federal departments (i.e., EPA).

Per PA 21-115, there are several boundaries with respect to what the Green Bank can do with respect to water, including:

- Environmental Infrastructure Fund may not receive funds from the Clean Water Fund pursuant to sections 22a-475 to 22a-438f, or funds collected from a water company as defined in section 25-32a; and
- Apply for Federal Assistance may not apply directly or through a subsidiary to be eligible for federal grant assistance under the Clean Water Act, 33 USC 1251 et seq., nor the Safe Drinking Water Act, 42 USC 300f et seq., without the approval of the State Treasurer, Commissioner of Energy and Environmental Protection, and Commissioner of Public Health.

As a result of these restrictions, and since Connecticut's State Revolving Fund ("SRF") hasn't invested in green infrastructure, <sup>109</sup> the Green Bank will focus its efforts on nature-based solutions (e.g., land conservation) and stormwater (e.g., green roofs), as well as its financing programs (e.g., Smart-E Loan, C-PACE) to help end-use customers improve water on their property. It should be noted that within PA 21-115, that municipalities can create stormwater authorities.

As a result of climate change, there is increased possibilities of instream (i.e., ecological, recreational) and out-of-stream (i.e., drinking, industry, agriculture, energy needs) water shortages from droughts as a result of heat waves, flooding as a result of rain bombs, and other adverse local impacts. These impacts are likely to impact vulnerable communities first and worst, as evidenced by recent flooding impacts on stormwater systems.<sup>110</sup>

As the Green Bank looks to increase and accelerate private investment in water, in collaboration with its state agency partners, it will be exploring the following financing tools, including, but not limited to:

- Ecosystem services markets
- Pay-for-Performance
- Green Liberty Bonds
- Linked Deposits
- Loan Guarantees (e.g., Smart-E Loan)
- Buy-Protect-Sell Revolving Loan Fund
  - Predevelopment Financing
  - o Bridge Financing
  - o Traditional Debt Financing

<sup>108</sup> https://www.ctgreenbank.com/wp-content/uploads/2023/01/Environmental-Infrastructure Agriculture Oct-16-2022a.pdf

<sup>&</sup>lt;sup>109</sup> Hansen, K., Thomas, T., Vo, S., Berven, K., Moudgalya, P., Vedachalam, S. (2022). Financing Green Stormwater and Natural Infrastructure with Clean Water State Revolving Funds. by the Environmental Policy Innovation Center – EPIC. (pp 11)

<sup>110 &</sup>quot;Hartford to Get \$85M for Sewage System Fix" by Deidre Montague in the Hartford Courant (June 27, 2023)

Based on learnings to date, one of the most promising near-term opportunities for the Green Bank to engage across the Water sector is to explore a Linked Deposit program to facilitate access to lower-cost Smart-E loans for resilience and water measures, especially among residents in vulnerable communities impacted by, or at risk of, flooding and extreme weather. This approach is envisioned as a catalyst for a deployment model for Smart-E and Capital Solutions that aligns with the Environmental Infrastructure team's priority program design and investment criteria.

For further details on the market opportunity, see Primer – Water. <sup>111</sup>

## 5.7 Waste and Recycling

In FY 2024, and continuing into FY 2025, the Green Bank pursued a three-part strategy to develop its primer and begin to engage on waste and recycling, including:

- Solar PV & Battery Storage End-of-Life Assess existing technology deployed in solar PV and battery storage programs – both those administered by the Green Bank and by other entities – to identify strategies to reuse, recycle, and dispose of these products.
- 2. <u>Expand & Scale Organic Waste Management</u> Assess opportunities to scale-up solutions to organic waste management including strategies to prevent, rescue, and recycle these materials.
- 3. <u>Support the State</u> supporting DEEP goals for waste management and recycling per Public Act 23-170.

The Green Bank Waste and Recycling Primer was finalized and released in 2025. It highlighted key public policy objectives, existing funding programs and sources of financing, and a set of opportunities for further exploration aligned with the Green Bank's Waste and Recycling strategy. The following is a breakdown of the context, market potential, and potential investment opportunities related to "Solar PV & Battery Storage End-of-Life" and "Expand & Scale Organic Waste Management."

#### 5.7.1. Solar PV & Battery Storage End-of-Life

As Connecticut rapidly expands clean energy deployment, planning for the end-of-life ("EOL") of solar photovoltaic ("PV") panels and battery storage systems has become a critical issue. While these technologies are essential to meeting the state's renewable energy targets, their eventual retirement presents both environmental and economic challenges.

Connecticut's EOL solar and battery waste stream will grow significantly as over 3.7 million solar panels and 1 GW of energy storage systems reach retirement in the coming decades. Currently, the recycling market for solar PV remains nascent due to unfavorable cost dynamics, while battery recycling holds more promise due to the high value of materials like lithium and cobalt. With a lack of formal EOL infrastructure and policy mandates, Connecticut has an opportunity to shape the regional market and lead nationally. The Green Bank can help unlock private investment and coordinate among stakeholders to develop infrastructure, facilitate logistics, and potentially avoid the landfilling of these systems. Stakeholder consensus is forming around policy tools like Extended Producer Responsibility, Advanced Fee Administration, and Decommissioning Bonds.

<sup>111</sup> https://www.ctgreenbank.com/wp-content/uploads/2023/04/Environmental-Infrastructure Water Primer 062323.pdf

As the Green Bank looks to increase and accelerate private investment in end-of-life solutions for solar PV and battery storage systems, it will be exploring the following financing tools, including, but not limited to:

- Extended Producer Responsibility
- Advanced Fee Administration
- Decommissioning Bonds
- Logistics and collection system financing
- Infrastructure investment for solar/battery recycling
- Supply chain financing for recovered materials markets
- Traditional debt financing

Based on learnings to date and aligned with the clean energy sector's EOL obligations, a recycling infrastructure and logistics investment strategy is a priority opportunity for the Green Bank to engage in, particularly in collaboration with original equipment manufacturers, developers, and regional partners to reduce cost, mitigate risk, and ensure environmental sustainability.

## 5.7.2. Expand & Scale Organic Waste Management

As organics are a leading waste stream for Connecticut, it should be noted that the Green Bank is a leading financier of food waste<sup>112</sup> and farm waste<sup>113</sup> to energy projects that utilize anaerobic digesters and combined heat and power to reduce methane and produce renewable natural gas for onsite clean energy.

Connecticut's 2016 Comprehensive Materials Management Strategy ("CMMS") (CGS 22a-241a)<sup>4</sup> provides the overarching policy framework and targets related to Municipal Solid Waste ("MSW"). The primary goal of CMMS was to divert 60% of MSW from the 2005 baseline by 2024, a target codified in Connecticut statute. The CMMS also codifies goals to reuse, recycle, and compost 1.46 million tons of material and divert 300,000 tons of food waste to more sustainable uses such as anaerobic digestion and related waste recycling strategies (e.g. organic waste upcycling for beneficial uses, such as animal feed).

The state's most recent comprehensive study (2015) estimated that Connecticut generated a total of 2,332,598 tons of MSW, with the top material categories including paper (539,493 tons, 23.1%), food waste (519,832 tons, 22.3%), construction and demolition debris (276,995 tons, 11.9%), and plastic (275,613 tons, 11.8%). Approximately 965,650 tons or 41.4% of the total MSW is considered compostable (though not all reclaimable), including food scraps, yard waste, and compostable paper. In 2015, approximately 57% of Connecticut's food waste was generated by industrial, commercial, and institutional sources (293,822 tons), with the remaining 43% coming from residential sources (273,000 tons). 114

The difference between the state's potential and actual diversion rate is evident in a 2023 Draft CMMS Amendment, with only 326,000 tons (9.3%) diverted from over 3.1 million tons of total

<sup>112</sup> Quantum Biopower – http://www.quantumbiopower.com/

<sup>&</sup>lt;sup>113</sup> Fort Hill Farm – <a href="https://aggridenergy.com/project/fort-hill-farm/">https://aggridenergy.com/project/fort-hill-farm/</a>

<sup>&</sup>lt;sup>114</sup> Connecticut Department of Energy and Environmental Protection (DEEP), Statewide Waste Characterization Study, 2015 (Hartford, CT: Connecticut DEEP, 2015), 3-1

MSW produced in 2022, including recyclables, organics, and other recoverables (not just food or compostable waste). In 2022, Connecticut's capacity for in-state waste management solutions was further impacted by the closure of the Hartford-based Materials Innovation and Recycling Authority ("MIRA") waste-to-energy facility, which resulted in the loss of nearly a third (720,000 tons annually) of MSW processing capacity and prompted urgent calls for diversion and infrastructure solutions. As such, investment in organic waste management solutions represents one of the most significant opportunities for the Green Bank to support policy goals and address this waste management crisis.

Analogous to that outlined in Connecticut General Statutes (CGS) Section 22a-228(b), the EPA food waste management hierarchy provides an effective framework to reduce the environmental impact of the food waste sector. Investments in preferred solutions such as reducing and recycling, composting, and sustainable waste-to-energy conversion will lead to better management of food waste.

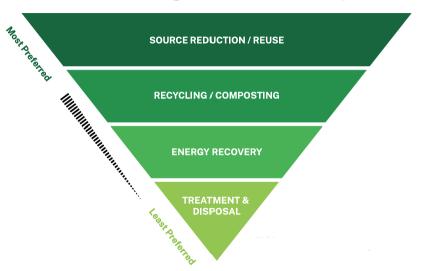


Figure 6. EPA Food Waste Hierarchy. (Source: EPA)

<sup>&</sup>lt;sup>115</sup> As per Connecticut DEEP, Draft Comprehensive Materials Management Strategy (CMMS) Amendment, 2023.

Figure 7. CT DEEP Waste Management Hierarchy established in Sec. 22a-228. (Source: DEEP)

# **Waste Management Hierarchy**



ReFed, a leading national nonprofit focused on solutions to reduce food loss and waste, developed a "Roadmap to 2030" framework to reduce food waste in the US by 50% by 2030 as part of an interagency agreement between the USDA, EPA, and FDA. The framework's key action areas are well-aligned with CT DEEP's waste management hierarchy and 2016 CMMS food waste solutions framework as well as other state targets for materials management and organic waste diversion.

Table 19. Key Action Areas Adapted from ReFED "Roadmap to 2030: Reducing U.S. Food Waste by 50%"

Prevent	Optimize the Harvest: Avoid over-production, then harvest as much as possible. For wild caught products, source only what is needed.			
	<b>Enhance Product Distribution:</b> Leverage technology to create smart systems that help efficiently move products to maximize freshness and selling time.			
	<b>Refine Product Management:</b> Align purchases with sales as closely as possible and find secondary outlets for surplus. Build out systems and processes for optimal on-site handling.			
	<b>Maximize Product Utilization:</b> Design facilities, operations, and menus to use as much of each product as possible. Upcycle surplus and byproducts into food products.			
	<b>Reshape Consumer Environments:</b> Drive consumers towards better food management and less waste by creating shopping, cooking, and eating environments that promote those behaviors. Shift culture to place more value on food and reduce waste.			
Rescue	<b>Strengthen Food Rescue:</b> Further the rescue of high-quality, nutritious food by increasing capacity, addressing bottlenecks, and improving communication flow.			
Recycle	<b>Recycle Anything Remaining:</b> Find the highest and best use for any remaining food or food scraps in order to capture nutrients, energy, or other residual value.			

As the Green Bank looks to increase and accelerate private investment in organic waste management solutions, it will pursue the following strategies and related opportunities, including but not limited to:

- 1. Prevent Organic Waste by investing in solutions that prevent the creation of food and other forms of organic waste (e.g. technology and equipment adoption to reduce harvest losses)
- Strengthen Food & Organic Waste Rescue by investing in solutions that increase food and organic waste rescue and reuse, including strategies meant to capture food that would otherwise go to waste and increase diversion to beneficial use, especially to use by food banks or other organizations working with vulnerable communities (e.g. working capital support for food rescue initiatives)
- 3. Increase Organic Waste Processing Capacity by investing in solutions that help to capture, segregate, collect, transport, pre-process, and process organic waste, including scaling up solutions that increase materials management and food waste processing infrastructure like aerobic or anaerobic digestion of food and farm waste (e.g. traditional debt financing for pre-processing or processing infrastructure).

Based on learnings to date, strategic approaches to organic waste recycling can be both commercially viable and highly aligned with Connecticut public policy objectives, in-state processing capacity needs, and Green Bank strategy. The Green Bank is poised to address municipal and industrial, commercial, and institutional waste management challenges through targeted investments that bolster organic waste management systems, create cost-effective municipal organic waste solutions and commercialize emissions reductions from organic waste prevention, rescue, and recycling.

The Deployment Committee approved the Green Bank's first environmental infrastructure-exclusive transaction for an organic waste management solution at the May 2025 meeting. Green Bank financing will support Bright Feeds, a Connecticut-based company that rescues and upcycles food waste to produce animal feed on a commercial scale. The Capital Solutions loan is anticipated to close in Q1 of FY26 with final details forthcoming.

This project represents the first in a pipeline of strategic opportunities that the Environmental Infrastructure team will continue pursuing with project sponsors through Capital Solutions. For further details on these market opportunities, see Primer – Waste and Recycling.<sup>116</sup>

# 6. Citizen and Community Engagement – Green Bonds US

The Green Bank, and its predecessor the CCEF, have a long-standing history of community engagement in Connecticut. In 2002, the CCEF partnered with six private foundations<sup>117</sup> to cofound SmartPower – which launched the 20 percent by 2010 campaign and led the administration of the CCEF's EPA award-winning Connecticut Clean Energy Communities Program to engage citizens in signing-up to purchase clean energy.<sup>118</sup> Then in 2013, the Green

<sup>116</sup> https://www.ctgreenbank.com/wp-content/uploads/2025/02/Waste-Recycling-Primer Final February 2025.pdf

<sup>&</sup>lt;sup>117</sup> Emily Hall Tremaine Foundation, The John Merck Fund, Pew Charitable Trust, The Oak Foundation, Rockefeller Brothers Fund, and Surdna Foundation

<sup>&</sup>lt;sup>118</sup> "Climate Policy and Voluntary Initiatives: An Evaluation of the Connecticut Clean Energy Communities Program," by Matthew Kotchen for the National Bureau of Economic Research (Working Paper 16117).

Bank launched a series of Solarize campaigns in communities across the state in partnership with SmartPower and the Yale Center for Business and the Environment to help citizens install solar PV on their homes, <sup>119</sup> while also advancing the SunShot Initiative of the U.S. Department of Energy ("USDOE") in partnership with the Clean Energy States Alliance through projects that reduce soft-costs for solar PV (i.e., customer acquisition, permitting, and financing) and provide better access to solar PV for LMI households.

Citizen and community engagement have been in the DNA of the Green Bank since its inception. In 2022, in collaboration with the Greater Bridgeport Community Enterprises and Operation Fuel, the Green Bank continued its efforts to learn more about community engagement by seeking to understand the importance of community benefit agreements through the Communities Local Energy Action Plan ("Communities LEAP") pilot program of the DOE. The Green Bank is reaching citizens and communities through various ways including green bonds, community match funds, community-based campaigns, municipal assistance programs, and eventually community benefit agreements.

In FY 2024, the staff of the Green Bank came together to renew the organization's commitment to community engagement coalescing around the following statement:

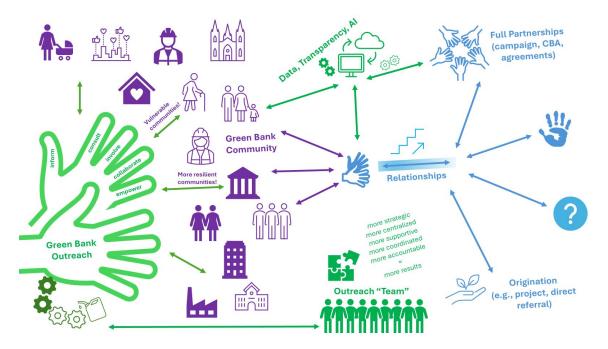
#### **Statement on Community Engagement**

The Green Bank builds trust and awareness within our community — especially amongst its most vulnerable members — through clear and transparent communication, education, and active listening, enabling us to understand and meet their needs. By strategically cultivating strong, collaborative, and reciprocal relationships with stakeholders, we empower them to achieve their energy, environmental and resiliency goals while advancing the mission of the Green Bank and realizing its vision of a planet protected by the love of humanity.

In addition to the statement, the staff designed a visual image depicting a vision for the Green Bank's commitment to community engagement – see Figure 8.

<sup>&</sup>lt;sup>119</sup> "Solarize Your Community: An Evidence-Based Guide for Accelerating the Adoption of Residential Solar" by the Yale Center for Business and the Environment.

Figure 8. Connecticut Green Bank Vision for Community Engagement



Under this premise, we expect to continue the below efforts but to also play a more active and intentional role with those in our community, helping to identify issues and projects while breaking down barriers. Community engagement will follow a framework to inform, consult, involve, collaborate, and empower our community, with the goal of developing relationships that lead to desired outcomes – ultimately originating Green Bank transactions that lead to the financing of projects that help community members, especially those in vulnerable communities, achieve their energy, environmental and resiliency goals.

We also recognize the need to be more thoughtful and strategic in our approach to community engagement – including leveraging technology (e.g., SalesForce, Artificial Intelligence), achieving deeper internal coordination and consistency, mapping and identifying stakeholder groups and gaps in outreach, developing annual outreach plans, and identifying and implementing the necessary resources to serve our community (especially vulnerable communities). Developing an approach to achieving these goals will be an integral part of the Green Bank's outreach work.

#### 6.1 Green Bonds US

Whether through markets or within communities, the Green Bank is bringing people together and strengthening the bonds we share with one another. As the name of the Comprehensive Plan suggests – "Green Bonds US" seeks to promote a simple but critically important message; green, the environment, bonds us, brings us together, the environment unites us. The simple slogan combines the financial tool of green bonds that are being sold to retail investors across the United States with a unifying message that humanity and the environment are inextricably linked.

CGS Section 16-245n(d)(1)(C) is the enabling statute that allows the Green Bank to issue revenue bonds for up to 25 years for clean energy and 50 years for environmental infrastructure projects to support its purposes. Green Bonds are bonds whose proceeds are used for projects or activities with environmental or climate benefits, most usually climate change mitigation and

adaptation. Research shows that citizens across the US, including Connecticut, are interested in seeing their investments go towards green projects – see Table 20.<sup>120</sup>

Table 20. Green Project Types of Interest by Private Investors by Location

	2022		2024	
Green Project Types	Connecticut	National	Connecticut	National
Clean Water	68.6%	71.4%	54.8%	49.9%
Waste Reduction and Recycling	53.8%	51.0%	34.0%	31.1%
Rooftop Solar	46.0%	45.3%	26.8%	23.4%
Home Energy Efficiency	41.8%	40.1%	30.2%	24.4%
Electric Vehicles	32.6%	30.6%	17.0%	17.9%
Land Conservation	40.6%	37.1%	29.0%	25.9%
Agriculture	39.6%	36.0%	27.0%	26.1%
Parks and Recreation	32.6%	31.5%	30.0%	25.7%
Climate Adaptation and Resiliency	32.0%	29.2%	24.0%	22.9%

To enable everyday citizens with an opportunity to invest in the green economy, the Green Bank created two fixed income securities – Green Liberty Bonds and Green Liberty Notes, which have three features:

- <u>Use of Proceeds</u> funds raised from the bonds must go towards projects that support the Paris Agreement (i.e., mitigation of GHG emissions or adaptation to the impacts of climate change);
- 2. Retail Accessible like the Series-E War Bonds of the 1940's, bonds must be small denomination (i.e., less than \$1,000) and available to everyday retail investors; and
- 3. <u>Independently Certified and Verified</u> due to the expectation by retail investors that the use of proceeds will go towards projects that support the Paris Agreement, the bonds must be independently certified and verified as green.

#### **6.2 Green Liberty Bonds**

In April of 2019, the Green Bank issued \$38.6 million in green asset backed securities – its first rated debt issuance and the first ever solar asset-backed security ("ABS") transaction by a green bank. The issuance was certified by Kestrel Verifiers and independently assessed by Climate Action Reserve. In July 2020, the Green Bank issued \$16.8 million in a Special Capital Reserve Fund ("SCRF") backed Green Liberty Bond that was Climate Bond Certified. And in April 2021, the Green Bank sold out \$25 million in Green Liberty Bonds drawing four times as much demand as could be fulfilled from retail investors in Connecticut and across the U.S., as well as institutional investors interested in sustainability investments.

In March and December of 2020, and June of 2022, the Green Bank's Green Liberty Bonds were awarded for innovation and green bond structure by Environmental Finance, The Bond Buyer, and Clean Energy States Alliance respectively.

The Green Bank will look towards its Green Liberty Bonds, and ability to use SCRF (i.e., up to \$500 million of authority), to support its clean energy and environmental infrastructure efforts.

<sup>&</sup>lt;sup>120</sup> 2022 Brand Awareness Digital Survey by Great Blue for the Connecticut Green Bank (October 2022). 2024 Investment Market Assessment by Great Blue for the Connecticut Green Bank (November 2024)

For more information on Green Liberty Bonds, visit <a href="www.greenlibertybonds.com">www.greenlibertybonds.com</a>

## **6.3 Green Liberty Notes**

In January of 2022, the Green Bank, in collaboration with Honeycomb (which acquired Raise Green in 2024), began a two-year campaign to raise \$2 million by providing an opportunity for citizens to invest as little as \$100 to confront climate change. Issuances are anticipated quarterly. Of the ten (10) issuances through FY24, eight were sold out resulting in an extension for a third year and an increase per quarterly issuance from \$250,000 to \$350,000. In partnership with Amalgamated Bank, a financial institution that has a close relationship with labor unions and is dedicated to providing affordable banking services to working people, investment by everyday citizens in Green Liberty Notes supports Eversource's SBEA program, administered through the Conservation and Load Management Plan, which helps small businesses reduce their energy consumption through deploying energy efficient equipment. As a result of the climate benefits associated with this program, the offering was reviewed and verified for its environmental attributes by Kestrel Verifiers.

To attract more investors, the program offers one-year maturity notes, with \$100 minimums, that are easy to purchase through an online platform without a broker. The Green Liberty Notes were created as an investment companion to Green Liberty Bonds, which have been offered in \$1,000 minimums to retail and institutional investors through brokerage firms. In the future, the Green Bank seeks to identify more ways (e.g., project specific investment opportunities) to partner with Honeycomb to increase community engagement while advancing market transformation in green investing.

For more information on Green Liberty Notes, visit <u>www.greenlibertynotes.com</u>

#### 6.4 Sustainable CT and Community Match Fund

The strategic partnership between Sustainable CT<sup>121</sup> and the Green Bank is focused on the following key priorities:

- Driving investment in projects in our communities, with a goal to accelerate over time;
- Community-level engagement, from project origination through financing, that is inclusive, diverse, and "knitted";
- Creating a structure that harnesses all types of capital for impact from donations to investment;
- Developing a business model that covers the cost of the program; and
- Creating a measurable impact, both qualitative and quantitative.

Sustainable CT's voluntary certification program<sup>122</sup> for Connecticut's cities and towns provides thirteen (13) action areas (e.g., inclusive and equitable communities, well stewarded land and natural resources, renewable and efficient energy) to achieve bronze, silver, or gold status, including a climate leader designation. The Green Bank works closely with Sustainable CT to encourage local actions that are consistent with the respective missions of the organizations. In FY24 and beyond, the Green Bank will focus on working with Sustainable CT to expand its support for modernizing environmental infrastructure (e.g., advancing RIDs).

<sup>121</sup> https://sustainablect.org/

https://sustainablect.org/actions-certifications

Also, in collaboration with Patronicity, Sustainable CT has developed a community matching grant platform to raise capital in support of local projects that provide individuals, families, and businesses with funding opportunities to make an impact on sustainability in their communities. This online crowdfunding platform enables citizen leaders to have access to financial resources (i.e., matching grants) that they need to support local sustainability projects.

In FY 2025, the Green Bank sponsored a yearlong fellowship at Sustainable CT so that the fellow can partner with the Green Bank and communities to further the awareness of Green Bank offerings. The fellow worked to develop a no-cost assistance program that helped communities to offer workshops for businesses to learn about Green Bank financing programs (e.g. C-PACE). In FY 2026, the fellow will look to expand this type of assistance to other audiences benefiting other Green Bank programs (e.g. Smart-e or Energy Storage Solutions).

For more information on Sustainable CT's Community Match Fund, visit https://www.patronicity.com/sustainablect

## 6.5 Community-Based Campaigns

The Green Bank has once again partnered with the Yale School of the Environment, <sup>123</sup> to support USDOE-funded Solar Energy Evolution and Diffusion Study 3 ("SEEDS 3"). SEEDS 3 research builds on nearly a decade of work investigating the peer-to-peer effects of solar PV adoption – how do prospective solar PV customers make the decision to adopt and how do people talk to each other about going solar. Professor Gillingham developed a community-based solar adoption strategy that accelerated the adoption of solar in Connecticut through various Solarize campaigns. <sup>124</sup>

SEEDS 3 expands on this work to investigate the co-adoption of solar, storage, and electric vehicles. The Green Bank supported Professor Gillingham as he initiated and ran community-based solar plus storage campaigns. We will leverage the learnings that these campaigns create to refine our storage marketing messages to assist ESS in achieving its goals.

In addition to this work, the Green Bank is actively pursuing other community-based campaigns, such as one in partnership with the Blue Hill Civic Association, that will help educate us and those in our community about clean energy and resiliency. We are also educating ourselves more broadly with regard to Community Benefit Agreements ("CBA")<sup>125</sup> and Community Benefit Plans ("CBP")<sup>126</sup> and will potentially seek to support and leverage such agreements and structures in

- 1. Engaging communities and labor;
- 2. Investing in America's workers through quality jobs;
- 3. Advancing diversity, equity, inclusion, and accessibility through recruitment and training; and
- 4. Implementing Justice40, which directs 40% of the overall benefits of certain Federal investments to flow to disadvantaged communities.

These key principles, when incorporated comprehensively into project proposals and applications and executed upon, will help ensure broadly shared prosperity in the clean energy transition. The Department of Energy (DOE) requires Community Benefits Plans (CBPs) as part of all Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA) funding opportunity announcements (FOAs) and loan applications.

<sup>&</sup>lt;sup>123</sup> Professor Ken Gillingham and the Yale Center for Business and the Environment

<sup>124</sup> https://cbey.yale.edu/our-stories/lessons-learned-from-solarize-campaigns-in-connecticut

<sup>&</sup>lt;sup>125</sup> CBAs are strategic vehicles for community improvement, while benefiting private sector developers and both state and local governments. They are not zero-sum instruments. They are legal agreements between community benefit groups and developers, stipulating the benefits a developer agrees to fund or furnish, in exchange for community support of a project. Benefits can include commitments to hire directly from a community, contributions to economic trust funds, local workforce training guarantees and more.

<sup>&</sup>lt;sup>126</sup> CBPs are based on a set of four core policy priorities:

the future, including through the use of AI to support vulnerable communities. The Green Bank recognizes that community-based campaigns reduce barriers to adoption – including awareness and education, contractor selection, cost and accessibility of financing, etc. - and will seek to identify areas where these campaigns would serve the community and address gaps.

#### 7. Investment

The Green Bank pursues investments that advance market transformation in green investing while supporting the organization's pursuit of financial sustainability. With the mission to confront climate change, the Green Bank leverages limited public resources to scale-up and mobilize private capital investment in the green economy of Connecticut.

## 7.1 State Funds

The Green Bank receives public revenues from a number of sources that are leveraged to mobilize multiples of private capital investment in the green economy of Connecticut.

## **System Benefit Charge**

As its primary source of public revenues, the Green Bank through CGS 16-245n(b) receives a 1 mill per kilowatt-hour surcharge called the Renewable Energy Investment Fund or Clean Energy Fund ("CEF") from ratepayers of Eversource Energy and Avangrid. The CEF has been in existence since Connecticut deregulated its electric industry in the late 1990s. 127128 On average, households contribute between \$7-\$10 a year for the CEF, aggregating to about \$25 million per year, which the Green Bank leverages to attract multiples of private capital investment in clean energy through its Financing Programs.

#### **Regional Greenhouse Gas Emission Allowance Proceeds**

As a secondary source of public revenues, the Green Bank receives a portion (i.e., 23%) of Connecticut's RGGI allowance proceeds through CGS 22a-174(f)(6)(B). The Green Bank invests RGGI proceeds to finance clean energy projects through its Financing Programs. It should be noted that with the passage of PA 22-25, that allowance proceeds received in excess of \$5.2 million from the Green Bank's portion of RGGI, are to be directed to DEEP for the purposes of supporting electric school buses in environmental justice communities.

#### 7.2 Federal Funds

The Green Bank receives public revenues through a number of past, current, and future sources of federal funds as well that it leverages to scale-up and mobilize private capital investment in the green economy of Connecticut.

## **American Recovery and Reinvestment Act**

Through the American Recovery and Reinvestment Act ("ARRA") the CCEF received \$20 million for its programs and initiatives. After nearly \$12 million of those funds were invested as grants, the Green Bank repurposed and invested the remaining \$8.2 million in financing programs. With \$250,000 of ARRA funds left, 129 the Green Bank invested nearly \$8.0 million of ARRA funds to

<sup>&</sup>lt;sup>127</sup> PA 98-28 An Act Concerning Electric Restructuring – <a href="https://www.cga.ct.gov/ps98/act/pa/1998pa-00028-r00hb-05005-pa.htm">https://www.cga.ct.gov/ps98/act/pa/1998pa-00028-r00hb-05005-pa.htm</a>

<sup>&</sup>lt;sup>128</sup> The Clean Energy Fund should not be mistaken with the Conservation Adjustment Mechanism (or the Conservation and Loan Management Fund), which is administered by the EDCs

<sup>&</sup>lt;sup>129</sup> As of June 30, 2023

attract and mobilize \$232 million of public and private investment in residential clean energy financing programs. 130

#### Infrastructure Investment and Jobs Act

As a result of the IIJA, significant federal resources are being made available to local and state governments through formula grants, and through competitive requests for proposals from budget allocations across many federal agencies. The Green Bank has been an active participant in the various federal agency public engagement processes under the IIJA and IRA.<sup>131</sup> As a result of the Presidential transition from President Biden to President Trump, there is uncertainty as to the future of any and all initiatives and programs supported by the IIJA.

The Green Bank will compete for and pursue federal funding opportunities to support its programs, where appropriate, including:

■ Department of Energy's Loan Program Office <sup>132</sup> – on March 25, 2022, the Loan Program Office ("LPO") of the DOE presented to the Board of Directors of the Green Bank, <sup>133</sup> and the Green Bank subsequently followed with public comments to the DOE on July 1, 2022. <sup>134</sup> Specifically, the LPO presented the new State Energy Financing Institutions ("SEFI") provisions within the IIJA that amended Title 17 to (1) include projects receiving financial support or credit enhancements from SEFIs as eligible projects, and (2) clarifies that such projects do not require "new or significantly improved technologies" to qualify. <sup>135</sup> As defined by the DOE-LPO, the Green Bank is a SEFI – and, on September 29, 2023, the Green Bank received official notification from the DOE that it is a SEFI.

Subsequently, through the passage of the IRA, a congressional appropriation for Title 17 ensued, which triggered the expansion of the LPO's authority including enabling SEFI. LPO can now augment state-administered clean energy programs, providing additional financial support to projects that align federal energy priorities with those of U.S. states like Connecticut. Qualifying project participation may include equity, loan loss reserves, co-lending (i.e., by the SEFI providing debt financing which may be pari-passu with or subordinate to LPO funding or financial support), and other financing mechanisms for eligible technologies such as renewable energy, energy efficiency, fuel cells, hydrogen, energy storage, and more.

The Connecticut Green Bank, in collaboration with other states (e.g., New York Green Bank, Massachusetts Community Climate Bank or the Rhode Island Infrastructure Bank), or with our electric and natural gas utilities (i.e., Eversource and Avangrid), <sup>36</sup> can individually or collectively apply to the LPO or support other proposals submitted to the LPO through SEFI to leverage federal funding to mobilize private deployment of eligible technologies.

<sup>130</sup> https://www.ctgreenbank.com/wp-content/uploads/2024/03/CGB-ARRA-Infographic-March-2024.pdf

<sup>131</sup> https://www.ctgreenbank.com/engagement-on-iija-ira/

<sup>&</sup>lt;sup>132</sup> It should be noted that the President and CEO of the Connecticut Green Bank voluntarily served on the Biden-Harris Transition Team following the November 2019 elections and was assigned to the DOE team and responsible for ascertaining the LPO.

<sup>133</sup> https://www.youtube.com/watch?v=TPb7AHRWFhg

<sup>&</sup>lt;sup>134</sup> https://www.ctgreenbank.com/wp-content/uploads/2022/12/3 DOE LPO Title-XVII CT-Green-Bank Public-Comments 070122.pdf

<sup>135</sup> https://www.energy.gov/lpo/state-energy-financing-institutions-sefi-supported-projects

<sup>&</sup>lt;sup>136</sup> "LPO Announces Conditional Commitment to Pacific Gas & Electric Company to Expand Hydropower Generation, Battery Energy Storage, and Transmission" by the US Department of Energy (December 17, 2024)

#### Inflation Reduction Act

As a result of IRA, significant federal resources are being made available through investment tax credits (e.g., 25D Residential Clean Energy Credit, 48 Energy Investment Tax Credit) and other resources including the GGRF. These tax credits, along with their associated adders (i.e., energy communities, low-income, domestic content), are consistent with the Green Bank's efforts to mobilize investment in vulnerable communities through its various incentive and financing programs. As a result of the Presidential transition from President Biden to President Trump, there is uncertainty as to the future of any and all investment tax credits and programs supported by the IRA.

The Green Bank, as a subrecipient of other lead applicant proposals, competed for and won several federal funding opportunities to support its programs, including:

- Greenhouse Gas Reduction Fund \$27 billion GGRF modelled after the Green Bank, comprising:
  - Solar for All \$7 billion competition that provided 60 grants to states, tribes, municipalities and nonprofits to expand the number of low-income and disadvantaged communities for investment in residential and community solar, as well as associated storage and other enabling upgrades (e.g., new roof, electric panels, energy efficiency). Supported DEEP's winning "Project SunBridge" application of \$62.5 million with a focus on increasing investment in and deployment of solar + storage for multifamily affordable housing.

Please note, that as of June 30, 2025, resources provided by the EPA in support of Solar for All are accessible.

Clean Communities Investment Accelerator ("CCIA") – \$6 billion competition that funded 5 hub nonprofits with the plans and capabilities to rapidly build the clean financing capacity of specific networks of public, quasi-public, and nonprofit community lenders to ensure that households, small businesses, schools, and community institutions in low-income and disadvantaged communities have access to financing. Supported Justice Climate Fund's winning application of \$940 million with a focus on minority depository institutions.

Please note, that as of June 30, 2025, resources provided by the EPA under the Biden administration in support of CCIA are not available, as they have been "frozen" in bank accounts by the EPA under the Trump administration and subject to ongoing litigation by the EPA and CCIA awardees.

National Clean Investment Fund ("NCIF") – \$14 billion competition that funded 3 national nonprofits that will partner with private capital providers to deliver financing at scale to businesses, communities, community lenders, and others. Supported Coalition for Green Capital's winning application of \$5 billion, including \$94 million of support through the Green Bank (including Puerto Rico and New Hampshire) with a focus on increasing investment in and deployment of clean energy and environmental infrastructure through green infrastructure, green

school buses, green resilience hubs, green school buildings, green municipal and commercial buildings, and green homes.<sup>137</sup>

Please note, that as of June 30, 2025, resources provided by the EPA under the Biden administration in support of NCIF through an agreement with the Coalition for Green Capital are not available, as they have been "frozen" in bank accounts by the EPA under the Trump administration and subject to ongoing litigation by the EPA and NCIF awardees and subawardees (e.g., the Green Bank).

The Green Bank's federal competitive funding priority was the GGRF. The Green Bank has been actively involved in all public engagement aspects of the GGRF, <sup>138</sup> and as a result, subject to the issues noted above, will be receiving significant funding through several lead applicants (i.e., DEEP and Coalition for Green Capital).

#### **United States Department of Agriculture**

The Green Bank has applied to and received approval from the United States Department of Agriculture ("USDA") to access low-cost and long-term federal loan funds for the deployment of clean energy in rural communities<sup>139</sup> through the Rural Energy Savings Program ("RESP"). The USDA has vast lending authority under the Rural Electrification Act of 1936, which enables direct loans, project financing and loan guarantees to a variety of borrowers.

## 7.3 Additional Funding Sources

Per CGS 16-245n, additional funding sources include, but are not limited to:

- Charitable gifts, grants, contributions as well as loans from individuals, corporations, university endowments and philanthropic foundations;
- Earnings and interest derived from financing support activities for clean energy and environmental infrastructure projects backed by the Connecticut Green Bank;
- If it qualifies as a CDFI under Section 4702 of the United States Code, funding from the CDFI Fund administered by the United States Department of Treasury, as well as loans from and investments by depository institutions seeking to comply with their obligations under the United States Community Reinvestment Act of 1977; and
- Contracts with private sources to raise capital.

## 8. Impact

The Green Bank's evaluation efforts seek to understand how the increase in investment and deployment of clean energy and environmental infrastructure supported through the Green Bank, result in benefits to society. To that end, the Green Bank has devised an Evaluation Framework and Impact Methodologies for various societal benefits.

<sup>&</sup>lt;sup>137</sup> It should be noted that within the Connecticut Green Bank's proposal to the Coalition for Green Capital, that New Hampshire (i.e., \$14.9MM) and Puerto Rico (i.e., \$37.8MM) are also included as participants (i.e., to receive low-cost debt financing) alongside Connecticut (i.e., \$40.8MM)

<sup>138</sup> http://www.ctgreenbank.com/ggrf/

<sup>&</sup>quot;Rural" communities are defined by a population bound and the various limits depend on the program; at the broadest, "rural" may be considered a town that has a population not greater than 50,000 people. Despite its positioning in a mostly-developed corridor, we estimate Connecticut would have 69% of towns eligible at the 20,000-person limit and 89% of towns at the 50,000-person limit.

#### 8.1 Evaluation Framework

The Green Bank has established an Evaluation Framework to guide the assessment, monitoring and reporting of the program impacts and processes, including, but not limited to energy savings and clean energy production and the resulting societal impacts or benefits arising from clean energy investment. This framework focuses primarily on assessing the market transformation the Green Bank is enabling, including:

- <u>Supply of Capital</u> including affordable interest rates, longer term maturity options, improved underwriting standards, etc.
- <u>Consumer Demand</u> increasing the number of projects, increasing the comprehensiveness of projects, etc.
- Financing Performance Data and Risk Profile making data publicly available to reduce perceived technology risks by current or potential private investors.
- <u>Societal Impact</u> the benefits society receives from more investment in and deployment of clean energy.

With the goal of pursuing investment strategies that advance market transformation in green investing, the Green Bank's evaluation framework provides the foundation for determining the impact it is supporting in Connecticut and beyond across the four (4) "E's" (i.e.,  $E^4$ ) – including Economy, Environment, Energy, and Equity.<sup>141</sup>

The Evaluation Framework will have to be revised, over time, to include environmental infrastructure, as well as the important role Green Liberty Bonds play in raising capital for investments.

## 8.2 Impact Methodologies

To support the implementation of the Evaluation Framework, the Green Bank, working with various public sector organizations, has developed methodologies that estimate the impact from the investment, installation and operation of clean energy projects, including:

- Jobs working in consultation with the Connecticut Department of Economic and Community Development ("DECD"), through the work of Guidehouse (formerly Navigant), the Green Bank devised a methodology that takes investment in clean energy to reasonably estimate the direct, indirect, and induced job-years resulting from clean energy deployment.<sup>142</sup>
- Tax Revenues working in consultation with the Connecticut Department of Revenue Services ("DRS"), through the work of Guidehouse, the Green Bank devised a methodology that takes investment in clean energy to reasonably estimate the individual income, corporate, sales, and property tax revenues from clean energy deployment.<sup>143</sup>
- Environmental Protection working in consultation with the USEPA and DEEP, the
   Green Bank devised a methodology that takes the reduction in consumption of energy

<sup>&</sup>lt;sup>140</sup> https://ctgreenbank.com/wp-content/uploads/2017/02/CTGreenBank-Evaluation-Framework-July-2016.pdf

<sup>141</sup> https://www.ctgreenbank.com/wp-content/uploads/2024/09/FY12-FY24-Connecticut-Green-Bank-Impact-Report-8-30-2024.pdf

 $<sup>^{142}\,\</sup>underline{\text{https://www.ctgreenbank.com/wp-content/uploads/2018/03/CGB\ DECD\ Jobs-Study\ Fact-Sheet.pdf}}$ 

https://www.ctgreenbank.com/wp-content/uploads/2018/09/CGB-Eval-Tax-Methodology-7-24-18.pdf

and increase in the production of clean energy to reasonably estimate the air emission reductions (i.e., CO2, NOx, SO2, and PM2.5) resulting from clean energy deployment.<sup>144</sup>

- Public Health Improvement working in consultation with the USEPA, DEEP, and DPH, the Green Bank devised a methodology that takes air emission reductions to reasonably estimate the public health benefits (e.g., reduced hospitalizations, reduced sick days, etc.) and associated savings to society resulting from clean energy deployment. 145
- Equity with the passage of PA 20-05, the Green Bank devised a methodology that takes the definition of "vulnerable communities" to track progress towards the goal of ensuring that no less than 40 percent of investment from its programs are directed to vulnerable communities by 2025. 146
- Energy Burden working in consultation with DEEP and PURA, the Green Bank devised a methodology that takes actual solar PV production data from meters compared against contractual lease and PPA prices and electricity rates, to estimate the energy burden reduction from financing solar PV.<sup>147</sup>

The Green Bank regularly reviews existing and develops additional methodologies that value the impact the Green Bank is helping create in Connecticut and all of society. For more information on the Green Bank's impact methodologies, visit the Evaluation page of the website.<sup>148</sup>

In time, additional impact methodologies will be developed for environmental infrastructure.

#### **8.3 Green Bond Framework**

The Green Bank's Green Bond Framework<sup>149</sup> provides a structure in which the Green Bank can more efficiently and effectively support its efforts to raise capital and deploy more clean energy and environmental infrastructure through the issuance of green bonds.

Connecticut has been at the forefront of state-level efforts to combat the threat of global climate change. In order to increase investment, the Green Bank will use its statutory authority (i.e., CGS 16-245kk) to issue bonds, including green bonds. These are key to sourcing capital for clean energy and environmental infrastructure projects and providing a way for all residents, businesses, and institutions of Connecticut to invest in growing our green economy.

The framework sets out how the Green Bank could use a Master Trust Indenture ("MTI") structure in a manner consistent with its purpose and provide the transparency and disclosures investors require to make investment decisions through green bonds. This framework is specifically intended for the MTI approved and adopted April 22, 2020, which establishes the purposes for which the Green Bank may issue green bonds or other public debt. The Framework is established in accordance with the Climate Bonds Initiative ("CBI") Standard and adheres to the Green Bond Principles issued by the International Capital Market Association.

The Green Bond Framework will have to be revised, over time, to include environmental infrastructure.

<sup>144</sup> https://www.ctgreenbank.com/wp-content/uploads/2018/01/CGB-Eval-IMPACT-091917-Bv2.pdf

<sup>145</sup> https://www.ctgreenbank.com/wp-content/uploads/2018/03/CGB-Eval-PUBLICHEALTH-1-25-18-new.pdf

<sup>146</sup> https://www.ctgreenbank.com/wp-content/uploads/2022/07/Equity Investment in Vulnerable Communities.pdf

<sup>147</sup> https://www.ctgreenbank.com/wp-content/uploads/2022/07/CGB-Eval-Solar-Methodology-combined-6-8-2021-final.pdf

<sup>148</sup> https://www.ctgreenbank.com/strategy-impact/evaluations/

<sup>149</sup> https://ctgreenbank.com/wp-content/uploads/2020/04/CGB Green-Bond-Framework final-4-22-2020.pdf

## 9. Reporting and Transparency

The Green Bank has extensive reporting on its financial management and societal impact through various mechanisms. As a recipient of public revenues (i.e., CEF and RGGI allowance proceeds), the Green Bank believes that complete transparency is important to ensure the public's continued trust in serving its purpose. The Green Bank reports to the Governor's Office (i.e., Office of Policy and Management ("OPM")), various committees of cognizance within the CGA (i.e., energy & technology, commerce, environment, and banking), and other departments (e.g., DEEP, Office of Fiscal Analysis).

## 9.1 Annual Comprehensive Financial Report

An Annual Comprehensive Financial Report ("ACFR") is a set of government financing statements that includes the financial report of a state, municipal or other government entity that complies with the accounting requirements promulgated by the Governmental Accounting Standards Board ("GASB"). GASB provides standards for the content of an ACFR in its annually updated publication *Codification of Governmental Accounting and Financial Reporting Standards*. An ACFR is compiled by a public agency's accounting staff and audited by an external American Institute of Certified Public Accountants ("AICPA") certified accounting firm utilizing GASB requirements. It is composed of three sections – Introductory, Financial, and Statistical. The independent audit of the ACFR is not intended to include an assessment of the financial health of participating governments, but rather to ensure that users of their financial statements have the information they need to make those assessments themselves.<sup>150</sup>

To date, the Green Bank has issued eleven (11) ACFR's, including:

- Fiscal Year Ended June 30, 2014 (Certificate of Achievement)
- Fiscal Year Ended June 30, 2015 (Certificate of Achievement)
- Fiscal Year Ended June 30, 2016 (Certificate of Achievement)
- Fiscal Year Ended June 30, 2017 (Certificate of Achievement)
- Fiscal Year Ended June 30, 2018 (Certificate of Achievement)
- Fiscal Year Ended June 30, 2019 (Certificate of Achievement)
- Fiscal Year Ended June 30, 2020 (Certificate of Achievement)
- Fiscal Year Ended June 30, 2021 (Certificate of Achievement)
- Fiscal Year Ended June 30, 2022 (Certificate of Achievement)
- Fiscal Year Ended June 30, 2023 (Certificate of Achievement)
- Fiscal Year Ended June 30, 2024 (Certificate of Achievement)

As the "gold standard" in government reporting, the ACFR is the mechanism the Green Bank uses to report its fiscal year financial, investment, and impact performance to its stakeholders. For each of its ten (10) years filing the ACFR with the Government Finance Officers Association the Green Bank has received a Certificate of Achievement for Excellence in Financial Reporting.<sup>151</sup>

<sup>&</sup>lt;sup>150</sup> The Government Finance Officers Association (GFOA), founded in 1906, represents public finance officials throughout the United States and Canada. GFOA's mission is to enhance and promote the professional management of governmental financial resources by identifying, developing, and advancing fiscal strategies, policies, and practices for the public benefit. GFOA established the Certificate of Achievement for Excellent in Financial Reporting Program in 1945 to encourage and assist state and local governments to go beyond the minimum requirements of generally accepted accounting principles to prepare CAFRs that evidence the spirit of transparency and full disclosure and then to recognize individual governments that succeed in achieving that goal.

<sup>&</sup>lt;sup>151</sup> GAO has yet to designate the FY 2023 ACFR with a Certificate of Achievement

## 9.2 Annual Report

Beyond the ACFR, the annual reports of the Green Bank are compiled by the marketing staff and include consolidated financial statement information and narratives of various program achievements in a condensed format that can be widely distributed.

To date, the Green Bank has issued thirteen (13) annual reports, including:

- Fiscal Year 2012 Annual Report
- Fiscal Year 2013 Annual Report
- Fiscal Year 2014 Annual Report
- Fiscal Year 2015 Annual Report
- Fiscal Year 2016 Annual Report
- Fiscal Year 2017 Annual Report
- Fiscal Year 2018 Annual Report
- Fiscal Year 2019 Annual Report
- Fiscal Year 2020 Annual Report
- Fiscal Year 2021 Annual Report
- Fiscal Year 2022 Annual Report
- Fiscal Year 2023 Annual Report
- Fiscal Year 2024 Annual Report

#### 9.3 Auditors of Public Accounts

The office of the Auditors of Public Accounts ("APA") is a legislative agency of the State of Connecticut whose primary mission is to conduct audits of all state agencies, including quasipublic agencies. Included in such audits is an annual Statewide Single Audit of the State of Connecticut to meet federal requirements. The office is under the direction of two state auditors appointed by the state legislature. The APA audited certain operations of the Green Bank in fulfillment of its duties under Sections 1-122 and Section 2-90 of the CGS

To date, the APA has conducted six (6) audits, including:

- Fiscal Years 2012 and 2013
- Fiscal Years 2014 and 2015
- Fiscal Years 2016 and 2017
- Fiscal Years 2018 and 2019
- Fiscal Years 202<u>0 and 2021</u>
- Fiscal Years 2022 and 2023

## 9.4 Open Connecticut and Open Quasi

Open Connecticut centralizes state financial information to make it easier to follow state dollars. In Connecticut quasi-public agencies are required to submit annual reports to the legislature, including a summary of their activities and financial information. In addition to that, the Comptroller's Office requested that quasi-public agencies voluntarily provide payroll and checkbook-level vendor payment data for display on Open Connecticut. The Green Bank, which was among the first quasi-public organizations to participate, has voluntarily submitted this information since the inception of Open Connecticut. In June of 2020, the Comptroller launched Open Quasi, which provides payroll and checkbook level data for all quasi-public organizations in Connecticut.

For more information, go to https://openguasi.ct.gov/

## 10. Research and Product Development

As the Green Bank implements its Comprehensive Plan, there will be ongoing efforts to develop market opportunities for future green investments. With the lessons being learned and best practices being discovered in the green economy, the Green Bank's ability to deliver more societal benefits requires understanding potential opportunities and the development of pilot programs and initiatives to increase and measure impact, including, for example:

- <u>Ecosystems Services</u> increasing understanding of ecosystem services values from environmental infrastructure, will help to identify opportunities to mobilize private investment to maximize GHG emissions reductions and resiliency against climate change. Ongoing support of research studies to understand the value of ecosystem services from environmental infrastructure (i.e., including public health and resilience) is important.
- Carbon Offsets continuing to increase understanding of carbon offsets,<sup>152</sup> recognizing their importance within environmental infrastructure (e.g., forest carbon, climate-smart agriculture) and the potential to generate revenues in support of projects, there is need for ongoing support of research studies to understand carbon offset markets and their accessibility for energy efficiency projects.
- Resiliency in its efforts to advance resilience (e.g., RIDs), the Green Bank working with DEEP, Insurance Department, and CIRCA, will seek to better understand labelling (e.g., FORTIFIED by the Insurance Institute for Business and Home Safety), direct install measures, and other programs (e.g., adapting Solarize campaigns to Ruggedize campaigns). To continue to develop ESS, research and pilots for public health and affordable housing, as well as vehicle to grid ("V2G") may also be pursued.
- Electric School Buses per Public Act 22-25, the Green Bank supported contract extensions for electric school buses ("ESB") and financial support through RGGI for vouchers in support of ESB deployment in environmental justice communities through the Connecticut Hydrogen and Electric Automobile Purchase Rebate ("CHEAPR") program. Support for the deployment of ESBs and electric vehicle supply equipment ("EVSE") will enable increased private investment to support the 100% zero emission ESB goals for 2030 (i.e., environmental justice communities) and 2040 (i.e., all communities). Research efforts have led to Green Bank Capital Solutions opportunities for investment.
- Hydrogen per Special Act 22-8,<sup>153</sup> and consistent with the definition of "clean energy" under CGS 16-245n, the Green Bank was chair of the task force that studied hydrogen power,<sup>154</sup> and led to the passage of Public Act 23-156 "An Act Implementing Recommendations of the Hydrogen Task Force". Recognizing the importance of "green hydrogen" to Connecticut's fuel cell industry, there may be the need for research on the sources, infrastructure, and uses related to hydrogen.
- Impact Methodologies continuing to build on the Green Bank's leading impact methodologies for "clean energy," including economic development, environmental

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<sup>&</sup>lt;sup>152</sup> Verified Carbon Standard – VM0038 Methodology for Electric Vehicle Charging Systems (V1.0) – https://verra.org/methodology/vm0038-methodology-for-electric-vehicle-charging-systems-v1-0/

<sup>&</sup>lt;sup>153</sup> An Act Establishing a Task Force to Study Hydrogen Power – <a href="https://www.cga.ct.gov/2022/ACT/SA/PDF/2022SA-00008-R00HB-05200-SA.PDF">https://www.cga.ct.gov/2022/ACT/SA/PDF/2022SA-00008-R00HB-05200-SA.PDF</a>

<sup>154</sup> https://www.ctgreenbank.com/hydrogen-task-force/

protection, energy, and equity, efforts will be undertaken to develop impact methodologies for "environmental infrastructure" (e.g., ecological resilience).

- <u>Solar and Battery Recycling</u> as the former administrator of the RSIP, and coadministrator of the 580 MW Energy Storage Solutions program, understanding the implications, challenges, and opportunities for solar and battery recycling (e.g., lithium-ion batteries) and end-of-life is important.
- Artificial Intelligence undertake research to identify the challenges and opportunities posed by Artificial Intelligence ("Al") in terms of the Green Bank's operations and mission, including community engagement.
- <u>Community Engagement</u> with a focus on vulnerable communities, supporting community-led research and project development efforts, consistent with community engagement outlined in the Comprehensive Plan.

The Green Bank's research product development efforts are intended to open-up new market channels for private investment in Connecticut's green economy through studies, pilot projects, and other initiatives that have the potential for expanding the impact of the Green Bank.

# 11. Budget

## 11.1 FY 2023 Budget

For the details on the FY 2023 budget– click here.

For details on the FY 2023 revised budget – click here.

## 11.2 FY 2024 Budget

For the details on the FY 2024 budget- click here.

For details on the FY 2024 revised budget – click here.

## 11.3 FY 2025 Budget

For the details on the FY 2025 budget- click here.

For details on the FY 2025 revised budget – <u>click here</u>.

#### 11.4 FY 2026 Budget

For the details on the FY 2025 budget– click here.

# **12.** Glossary of Acronyms

ABS	Asset-Backed Security		
ACFR	Annual Comprehensive Financial Report		
ACG Committee	Audit, Compliance, and Governance Committee		
AICPA	American Institute of Certified Public Accountants		
Al	Artificial Intelligence		
AMI	Advanced Metering Infrastructure		
APA	Auditors of Public Accounts		
ARRA	American Recovery and Reinvestment Act		
BEA	Business Energy Advantage		
BIL	Bipartisan Infrastructure Law		
BOC Committee	Budget, Operations, and Compensation Committee		
BOD	Board of Directors		
CCIA	Clean Communities Investment Accelerator		
CEF	Clean Energy Fund (or Renewable Energy Investment Fund)		
CBI	Climate Bonds Initiative		
CCEF	Connecticut Clean Energy Fund		
CDFI	Community Development Financial Institution		
CEF	Clean Energy Fund		
CMMS	Comprehensive Materials Management Strategy		
CGA	Connecticut General Assembly		
CGS	Connecticut General Statutes		
CHEAPR	Connecticut Hydrogen and Electric Automobile Purchase Rebate		
CIRCA	Connecticut Institute for Resilience and Climate Adaptation		
C-PACE	Commercial Property Assessed Clean Energy		
CBA	Community Benefit Agreement		
CBP	Community Benefit Plan		
DECD	Department of Economic and Community Development		
DOE	United States Department of Energy		
DEEP	Department of Energy and Environmental Protection		
DoAg	Department of Agriculture		
DPH	Department of Public Health		
DRS	Department of Revenue Services		
EDC	Electric Distribution Company		
ESB	Electric School Bus		
EOL	End of Life		
EEB	Energy Efficiency Board		
EIF	Environmental Infrastructure Fund		
ESS	Energy Storage Solutions		
EPA	United States Environmental Protection Agency		
EM&V	Evaluation, Measurement, and Verification		
EVSE	Electric Vehicle Supply Equipment		
GASB	Governmental Accounting Standards Board		
GHG	Greenhouse Gas Emissions		
GGRF	Greenhouse Gas Reduction Fund		
GWSA	Global Warming Solutions Act		
HES	Home Energy Solutions		
HES-IE	Home Energy Solutions – Income Eligible		

IPC	Inclusive Prosperity Capital
IIJA	Infrastructure Investments and Jobs Act
IRA	Inflation Reduction Act
LMI	Low-to-Moderate Income
MPA	Master Purchase Agreement
MTI	Master Trust Indenture
MIRA	Material Innovation and Recycling Authority
MW	Megawatts
MSW	Municipal Solid Waste
NCIF	National Clean Investment Fund
NRCS	Natural Resources Conservation Service
NRES	Non-Residential Renewable Energy Solutions
OPM	Office of Policy and Management
PA	Public Act
PDR	Purchasing Development Rights
PPA	Power Purchase Agreement
PRI	Program Related Investment
PSA	Professional Service Agreement
PURA	Public Utilities Regulatory Authority
RGGI	Regional Greenhouse Gas Initiative
RPS	Renewable Portfolio Standard
RRES	Residential Renewable Energy Solutions
RSIP	Residential Solar Investment Program
RID	Resilience Improvement District
RESP	Rural Energy Savings Program
SBEA	Small Business Energy Advantage
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SCRF	Special Capital Reserve Fund
SHREC	Solar Home Renewable Energy Credit
SRF	State Revolving Fund
TPL	Trust for Public Land
URI	Urban Resources Institute
USDA	U.S. Department of Agriculture
USDOE	U.S. Department of Energy
USEPA	United States Environmental Protection Agency
V2G	Vehicle to Grid





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