May 10, 2023

Michael S. Regan
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20004
ggrf@epa.gov

**SUBJECT: Public Comments from the Connecticut Consortium – Written Comment: Greenhouse Gas Reduction Fund Implementation Framework, Solar for All Docket ID No. EPA-HQ-OA-2022-0859**

Dear Administrator Regan:

The Connecticut Consortium values the U.S. Environmental Protection Agency's ("EPA") invitation to provide comments regarding the Implementation Framework ("Framework") for the Greenhouse Gas Reduction Fund ("GGRF"), specifically with respect to its "Solar for All" competition. The Framework invites written technical feedback and comments on the design and implementation of the GGRF.

The Connecticut Consortium consists of:

- **Connecticut Green Bank ("Green Bank")** [Co-Applicant] – As the nation's first state-level green bank, the Green Bank is a quasi-public agency. The vision of the Green Bank is "a planet protected by the love of humanity," and its mission is "to confront climate change by increasing and accelerating investment into Connecticut's green economy to create more resilient, healthier, and equitable communities". It achieves its mission by (1) leveraging limited public resources to scale-up and mobilize private capital investment in the green economy of Connecticut, (2) strengthening Connecticut's communities, especially vulnerable communities,[1] by making the benefits of the green economy inclusive and accessible to all individuals, families, and businesses, and (3) pursuing investment strategies that advance market transformation in green investing while supporting the organization's pursuit of financial sustainability. By 2025, no less than 40 percent of investment and benefits from its incentive and financing programs are directed to vulnerable communities.

  For more on the green bank model – see Attachment A.

  With its experience leading residential solar and storage incentive and financing programs, the Green Bank will be a Co-Applicant.

- **Department of Energy and Environmental Protection ("DEEP")** [Co-Applicant] –DEEP is charged with making cheaper, cleaner and more reliable energy available for the people and businesses of the state,

[1] Per Public Act 20-05, "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 the Department of Energy and Environmental Protection in consultation with community representatives.

in addition to conserving, improving, and protecting the state's natural resources and environment. The agency is committed to playing a positive role in building Connecticut's economy and creating jobs, all with the incentive of fostering a sustainable and prosperous economic future for the state. Since the agency's inception, DEEP has made great environmental strides including, but not limited to, cleaning up the land and waters of Long Island Sound, improving air quality, beautifying Connecticut's landscape, protecting natural resources, expanding the network of state parks and forests, and restoring terrestrial wildlife and aquatic life in the state's waterways. Work at DEEP has also helped support Connecticut's achievement of over 75% of our state-wide electric load being firmly contracted with zero-emission technologies.

With its leadership in overseeing climate change and clean energy policy, DEEP will be a Co-Applicant.

- **Public Utilities Regulatory Authority ("PURA")** [Co-Applicant] – PURA is Connecticut's regulatory agency that oversees the rates and services of electricity, natural gas, water and telecommunications companies, and manages franchises for the state's cable television companies. PURA is statutorily-charged with ensuring that Connecticut's investor-owned utilities, including the state's electric, natural gas, water, and telecommunications companies, provide safe, clean, reliable, and affordable utility service and infrastructure. A quasi-judicial agency that interprets and applies the statutes and regulations governing all aspects of Connecticut's utility sector, PURA's role encompasses many responsibilities. This includes setting the rates charged by investor-owned utilities, advancing modernization of the electric distribution system, regulating the retail electric supplier market, implementing federal requirements for natural gas pipeline safety, fostering adequate water system infrastructure investments, providing education and outreach for consumers, and regulating the expansion of telecommunications infrastructure.

  With its leadership overseeing the implementation of residential solar, community solar, and battery storage incentive programs and policy, PURA will be a Co-Applicant.

- **Connecticut Housing and Finance Authority ("CHFA")** – Another essential quasi-public agency, CHFA's mission is to alleviate the shortage of housing for low- to moderate-income families and persons in this state and, when appropriate, to promote or maintain the economic development of this state through employer-assisted housing efforts. All 169 Connecticut towns have benefited from financing by the self-funded agency which lends more than $500 million dollars each year for affordable housing. CHFA leverages its financial strength in partnership with public and private investors resulting in nearly 147,000 Connecticut residents having purchased their first homes with a CHFA below-market interest rate mortgage thus far. Not only has it afforded Connecticut residents the ability to begin building their financial futures, CHFA's investments have built or renovated the more than 58,000 affordable multifamily apartments that hundreds of thousands of state residents call home.

  As a quasi-public organization focused on housing and finance, CHFA is an instrumental part of the interagency team working on residential solar and storage investment and deployment on affordable housing.

- **Department of Banking ("DOB")** – DOB regulates the financial services industry in Connecticut. The agency is the primary state regulator for securities, consumer credit and state-chartered banks and credit unions. The DOB's mission is rooted in advocacy for consumer and investors and they are responsible for financial implementations including, but not limited to, licensing and regulation of individuals and businesses that fall under their jurisdiction. The agency's necessary enforcement actions can result in administrative orders and settlement agreements pertinent to the ongoing development and security of Connecticut's finances.

With its leadership regulating the banking industry, DOB will use its authority that federal law provides (e.g., Community Reinvestment Act) to encourage regulated financial institutions to support and expand lending efforts to low-income and disadvantaged communities so that they may have the necessary capital to benefit from solar and storage.

- **Department of Housing ("DOH")** – DOH works together with municipal leaders, public agencies, community groups, local housing authorities, and other housing developers in the planning and development of affordable homeownership and rental housing units, the preservation of existing multi-family housing developments, community revitalization, and financial and other support for Connecticut's most vulnerable residents through their specialized funding and technical support programs. DOH annually invests $200M in bonds to produce and preserve affordable housing. As the State's lead agency for all matters relating to housing, DOH provides leadership for all aspects of policy and planning relating to the development, redevelopment, preservation, maintenance and improvement of housing serving low- and moderate-income individuals and families. DOH is also responsible for overseeing compliance with applicable statutes, regulations, and financial assistance agreements for funded activities through long-term program compliance monitoring. Their mission is to eliminate homelessness and to catalyze the creation and preservation of quality, affordable housing to meet the needs of all individuals and families statewide to ensure that Connecticut continues to be a great place to live and work.

  With its leadership overseeing housing policy, DOH is an instrumental part of the interagency team working on residential solar and storage investment and deployment on affordable housing.

The State of Connecticut has taken several leading public policy positions in the green economy transition, including:

- **Reducing Greenhouse Gas Emissions** – targeting no less than a 45 percent reduction from 2001 levels by 2030,[2] 100% decarbonization of the electric sector by 2040, and no less than an 80% reduction from 2001 levels by 2050[3];

- **Justice 40** – within various incentive programs,[4] establishing residential solar and battery storage targets of no less than 40 percent of investment and benefits directed towards low-income families, distressed communities, and vulnerable communities; and

- **Just Transition** – enabling workforce development programs, including pre-apprenticeship and apprenticeship training, paying prevailing wages, and requiring community benefits agreements for certain type of renewable energy project.[5]

These important foundational public policies reduce greenhouse gas emissions while delivering benefits from mobilizing financing and private capital investment in and deployment of such projects in communities, particularly low-income and disadvantaged communities ("LIDACs").

[2] Consistent with the Nationally Determined Contribution of 50-52 percent reduction of 2005 levels by 2030

[3] In the ongoing 2023 Connecticut General Assembly session, DEEP has submitted legislation that would, among other objectives, increase the state's 2050 target to net-zero and require the agency to establish sub-sector emissions reduction targets.

[4] Residential Renewable Energy Solutions and Energy Storage Solutions

[5] Public Act 21-43 – "An Act Concerning a Just Transition to Climate-Protective Energy Production and Community Investment"

The Connecticut Consortium intends to submit a response to the forthcoming Solar for All Notice of Intent ("NOI"), with the Green Bank, DEEP, and PURA as Co-Applicants. Beyond Solar for All, the Co-Applicants will closely monitor opportunities to engages with the National Clean Investment Fund ("NCIF") and Clean Communities Investment Accelerator ("CCIA") competitions. We encourage the EPA to clearly identify how states can productively engage in the governance of the NCIF and the CCIA in future guidance. The funding for these two competitions will significantly impact states' abilities to cost-effectively decarbonize. Therefore, decisions about which projects and programs are financed/funded over the long-term from these two competitions need to align, and remain aligned, with state policy goals.

For the Solar for All competition, the Connecticut Consortium intends to focus on expanding access to existing low-income solar and storage programs. The experience and expertise of the Connecticut Consortium in administering residential solar, community solar, and battery storage incentive and financing programs, especially for vulnerable communities,[6] will be brought to bear.

1. **Residential Solar**

   Connecticut transitioned its residential solar policies from net metering (i.e., CGS 16-243h) and incentives (i.e., CGS 16-245ff), to a tariff-based compensation structure (i.e., CGS 16-244zz). Administered by the electric distribution companies ("EDCs"), the Residential Renewable Energy Solutions ("RRES") program is the successor program to the Residential Solar Investment Program ("RSIP"), which was administered by the Green Bank from 2012 through 2022. The implementation of the RSIP was among the Northeast region's most effective (e.g., W/capita), efficient (e.g., $/kWh), and equitable (i.e., reaching <80% AMI households and communities of color) residential solar programs.[7]

   For more on the RSIP – see Attachment B.

   RRES serves to provide two (2) different types of incentives for residential end-use customers, including (a) Buy-All Sell-All Tariff (i.e., $0.3243/kWh), or (b) monthly netting. PURA has established a policy target of no less than 40 percent of the benefits of RRES are directed to low-income families, families residing in distressed communities, or affordable housing.

2. **Community Solar**

   Connecticut has two (2) community solar policies that encourage the investment in and deployment of solar PV, providing opportunities for low-income families as well as tenants within affordable housing to realize benefits from solar energy, including:

   - **Residential Renewable Energy Solutions** – an onsite deployment program summarized above, that also serves multifamily affordable housing by requiring participating property owners to share no less than 20% of the economic benefit of a residential solar system from the "Buy-All Sell-All" tariff (i.e., $0.06486/kWh) for 20 years with individually metered tenants of affordable housing;[8] or

[6] Per Public Act 20-05, "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 the Department of Energy and Environmental Protection in consultation with community representatives.

[7] "Residential Solar Investment Program: 2012-2022 Program Impact Evaluation and Future Recommendations" by Slipstream (May 3, 2023) – click here

[8] It should be noted that the treatment of master metered multifamily affordable housing properties in terms of RRES is still in process through a regulatory proceeding and expected to be completed by the end of 2023.

- **Shared Clean Energy Facilities** – an offsite deployment program, Shared Clean Energy Facilities ("SCEF") prioritizes low-income families and tenants of affordable housing with a subscriber credit (i.e., $0.0250/kWh) for 20 years should they receive such credit through a random lottery process.

**3. Associated Storage**

Connecticut recently launched a residential storage incentive program called Energy Storage Solutions ("ESS"), which is being jointly administered by the Green Bank and the EDCs. ESS provides upfront and ongoing performance-based incentives to deploy 290 MW of behind the meter battery storage to (a) reduce peak demand (i.e., passive and active demand response or virtual power plant "VPP") to benefit all ratepayers, and (b) provide resiliency to the participant. PURA has established a policy target of no less than 40 percent of the benefits of ESS are directed to low-income families, families residing in distressed communities, or affordable housing. By combining solar with storage, low-income and disadvantaged communities can reduce energy burden and increase energy security.

4. **Enabling Upgrades**

It is great to see that the EPA has included enabling upgrades that support solar deployment, specifically investments in building infrastructure to support its deployment (e.g., electrical panel upgrades, roof repairs, access to the internet for system monitoring).

**5. Other Comments**

The Connecticut Consortium has the following comments for the EPA with respect to Solar for All:

- **Expansion of Enabling Upgrades** – beyond enabling upgrades for the "building infrastructure" to support residential solar deployment, there may also be need for "system infrastructure" (e.g., transformer upgrades) or "administrative support" (e.g., interconnection review by EDCs) to increase and accelerate solar + storage deployment, especially in LIDACs. The EPA should also consider allowing "enabling upgrades" to include weatherization, electrification, and energy efficiency, as well as removal of asbestos, lead, and mold,[9] as a component of "building infrastructure" to ensure that all barriers to solar + storage deployment on "system infrastructure" (e.g., overloading distribution system with solar) can be addressed in locations across the country. For example, within the Green Bank's existing "Solar for All" program with PosiGen, energy audits and weatherization are included with solar. By extending the definition of enabling upgrades to include these measures the GHGRF will significantly benefit low-income and disadvantaged communities – enhancing a buildings resilience by enabling efficient heating and cooling system electrification that could continue to operate with solar generation during a grid outage.

- **Equitable Allocation** – as the necessary level of investment in and deployment of residential and community solar in LIDACs is significant (e.g., estimate of $800 million in Connecticut by 2030),[10] in order for states to be able to submit an amount of funding they expect to apply for under the "Solar for All" competition, it will be important for the EPA to clarify what level of allocation states and territories can assume in order for the NOI to appropriately take into consideration the design of a state or territorial program. For planning purpose, the Connecticut Consortium would recommend that an equitable allocation of funds from the EPA to states, territories, and tribes per the recent Bipartisan Infrastructure Law ("BIL") for the Clean Water State Revolving Fund ("CWSRF") be considered as clarification for NOI applicants. For example, the BIL allocated

[9] "Affordable and Accessible Solar for All: Barries, Solutions, and On-Site Adoption Potential" Technical Report NREL/TP-6A20-80532 (September 2021)

[10] Assumes 75 MW of residential solar per year for 8 years (i.e., 600 MW total), with 40 percent of deployment in LIDACs (i.e., 240 MW), and assuming installed cost of residential solar (including for affordable housing) of $3.50/W

Connecticut 1.199% of the CWSRF allocation. If $7 billion were available through Solar for All, then Connecticut would submit a plan through the NOI for a maximum of $83.9 million. If there were no state or territorial equitable allocation, then Connecticut would seek greater funding to achieve the level of investment in and deployment of residential solar in the LIDACs of the state. Regardless of the allocation approach chosen, the EPA should leave flexibility to allow for funding to support existing state solar programs in ways that will reduce cost burdens on ratepayers.

- **Equity and Justice 40** – improving the lives of Americans, particularly those in LIDACs, is the impact the GGRF seeks to achieve. Alongside the EPA, many states, territories, municipalities, and nonprofit organizations share this perspective. The Framework indicates that the pending Notice of Funding Opportunity ("NOFO") will provide additional guidance on the definition of LIDACs located outside of geographies identified by the Climate and Economic Justice Screening Tool ("CEJST"). As recommended by eleven (11) states[11] and a territory[12] in public comments submitted to the EPA on December 5, 2022, to further support equitable funding deployment and to enable leveraging of existing programs and funding streams, the EPA should permit the use of state-specific definitions for "low income," "disadvantaged communities," and other related terms such as "environmental justice zones". The EPA could request NOI applicants to justify their respective state and/or territory definitions.

- **Technical Assistance from the EPA** – as technical assistance resources will be imperative to the success of Solar for All, within the NOFO, the EPA needs to be more specific about what sorts of technical assistance it will provide so that applicants can specify their own technical assistance needs within their NOI. For example, the Environmental Justice Thriving Communities Technical Assistance Centers ("EJ TCTAC") program is an excellent example of community-based technical assistance that the EPA can provide states, Tribal governments, municipalities, and others. Also, if the EPA were to continue its collaboration with the DOE, then tools available from the National Renewable Energy Laboratory ("NREL") like its Distributed Generation Market Demand Model,[13] would be useful technical assistance to provide states, Tribal governments, municipalities, and tribes, especially to assess market potential for solar for single-family owner-occupied and rental low-income, and multifamily rental low-income market segments.

- **Financial Assistance from the EPA and FEMA** – as financial assistance resources will be imperative to the success of Solar for All, especially as it pertains to not only reducing energy burden, but also increasing energy security, in an effort to continue to work across government, the EPA should work with the Federal Emergency Management Agency ("FEMA") to enter into agreements between the GGRF Solar for All program and the Safeguarding Tomorrow through Ongoing Risk Mitigation Act ("STORM Act")[14] with states and Tribal governments to make capitalization grants to establish hazard mitigation revolving loan funds. In an effort to address the short- and long-term solutions to LMI solar adoption barriers, as it applies to resiliency and recovery, increased efforts by stakeholders to ensure federal pre- and post-disaster funding is more readily available and used by low-income and disadvantaged communities is important to realizing all of the benefits from Solar for All and GGRF.[15]

[11] Connecticut, Colorado, Illinois, Louisiana, Maine, Michigan, Nevada, New Jersey, New Mexico, Pennsylvania, and Vermont
[12] Puerto Rico
[13] https://www.nrel.gov/analysis/dgen/
[14] https://www.congress.gov/bill/116th-congress/senate-bill/3418/all-info
[15] "Affordable and Accessible Solar for All: Barries, Solutions, and On-Site Adoption Potential" Technical Report NREL/TP-6A20-80532 (September 2021)

- **Strategic Coordination** – to the extent that it is possible, there should be strategic coordination from Solar for All with the National Clean Investment Fund ("NCIF") and Clean Communities Investment Accelerator ("CCIA"). For example, recipients of funding for financial assistance and technical assistance through the NCIF and/or CCI should seek to work with standardized loan documents and securitization of assets as appropriate.

- **Webinar Series** – in an effort to share the "lessons learned" and "best practices" developing residential solar in Connecticut, the Green Bank is holding a multipart webinar series. The first webinar was held on May 4, 2023 and focused on "Residential Solar Investment and Deployment in Connecticut: An In-Depth Review of a 10-Year Incentive Program (2012-2022)". For access to the webinar, and a detailed story board – click here.

  There will be several webinars to follow, including:

  - **Webinar Two: Financing Residential Solar in Connecticut #1: Insights into Loan Programs** – will focus on the role of financing, delving deeper into the structure and benefits of two loan products: the CT Solar Loan and the Smart-E Loan. Using $8 million of repurposed American Recovery and Reinvestment Act ("ARRA") funds as credit enhancements, the Green Bank was able to use $25 million in state and federal funds to mobilize $180 million of private capital investment in residential clean energy deployment. In a venture with Sungage Financial, the Green Bank supported a clean energy finance entrepreneur in demonstrating the viability of a specific solar loan product. In collaboration with nine local community banks and credit unions, the Green Bank's Smart-E loan provides a second loan loss reserve for unsecured financing of clean energy projects, including residential solar.

    Monday, June 5, 2023 at 12:00 p.m. EDT

    Register at https://attendee.gotowebinar.com/register/6567252541191848026

  - **Webinar Three: Financing Residential Solar in Connecticut #2: Insights into Lease and Third-Party Ownership Programs** – will focus on two lease products: the CT Solar Lease and Solar for All. Through the leveraging of ARRA funds as credit enhancements, the Connecticut Green Bank provided access to lease financing for local contractors, in partnership with a syndicate of local lenders and tax equity providers. In recognition of the need to provide access to capital to low-income and vulnerable communities, in partnership with PosiGen, the Green Bank launched the Solar for All solar and energy efficiency lease product. This session will look at the structure of these lease financing products, including the various benefits that result from increasing easy and affordable access to residential solar, especially for vulnerable communities.

    Thursday, August 3, 2023 at 12:00 p.m. EDT

    Register at https://attendee.gotowebinar.com/register/2011784552298597467

  It is likely that there will be a fourth webinar series on the new residential solar and storage incentive programs in Connecticut, including a focus on single family homes and affordable housing in LIDACs. The Green Bank looks forward to engaging local and national stakeholders through this webinar series.

The Connecticut Consortium appreciates EPA's efforts to solicit public comment on its Framework for the GGRF.

Sincerely,

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Department of Energy and Environmental Protection

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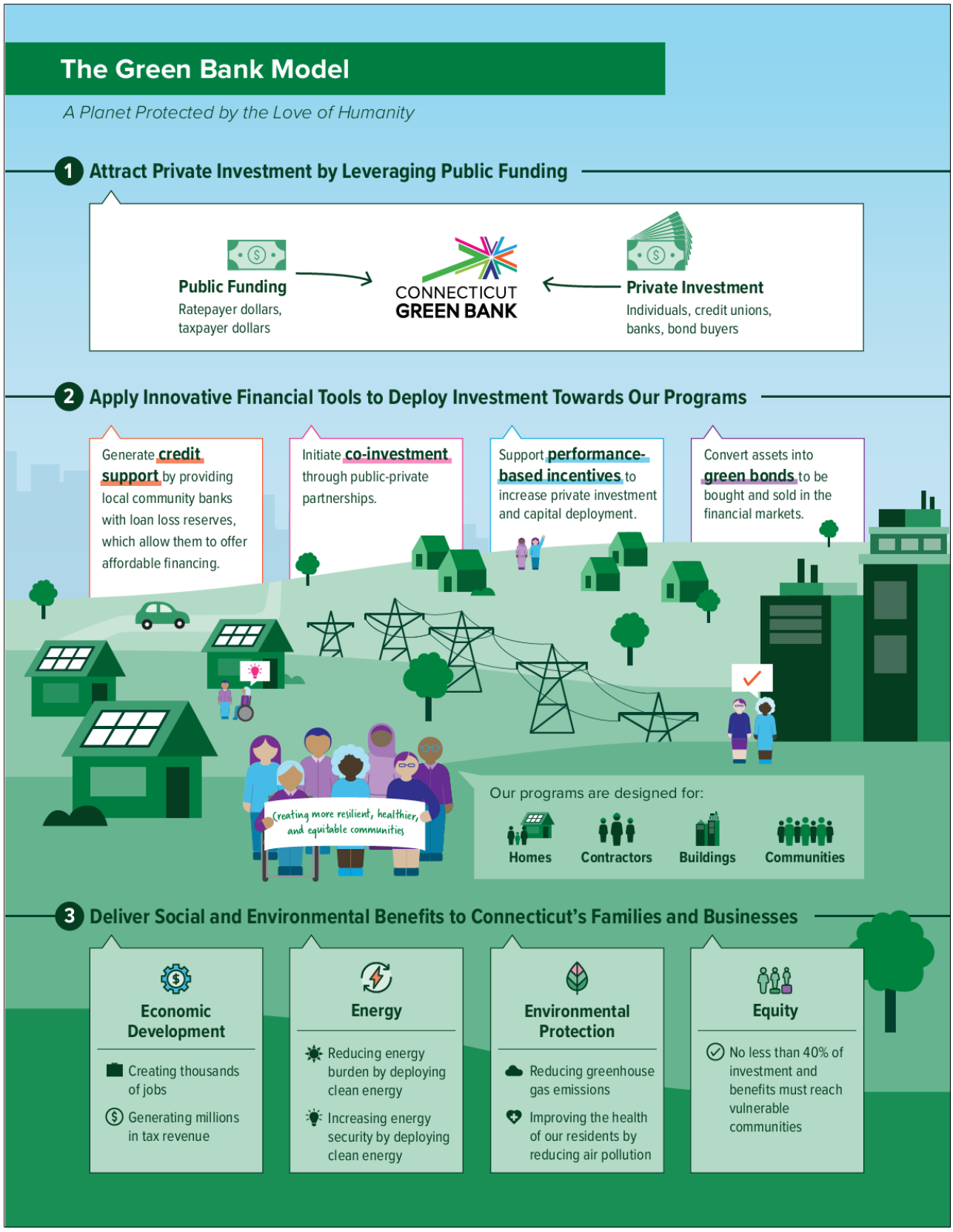
cc: Dan DeSimone, Office of Governor Lamont

**Attachments**
Attachment A – Green Bank Model
Attachment B – Residential Solar Investment Program

**ATTACHMENT A**
Green Bank Model



**ATTACHMENT B**
Residential Solar Investment Program