Welcome

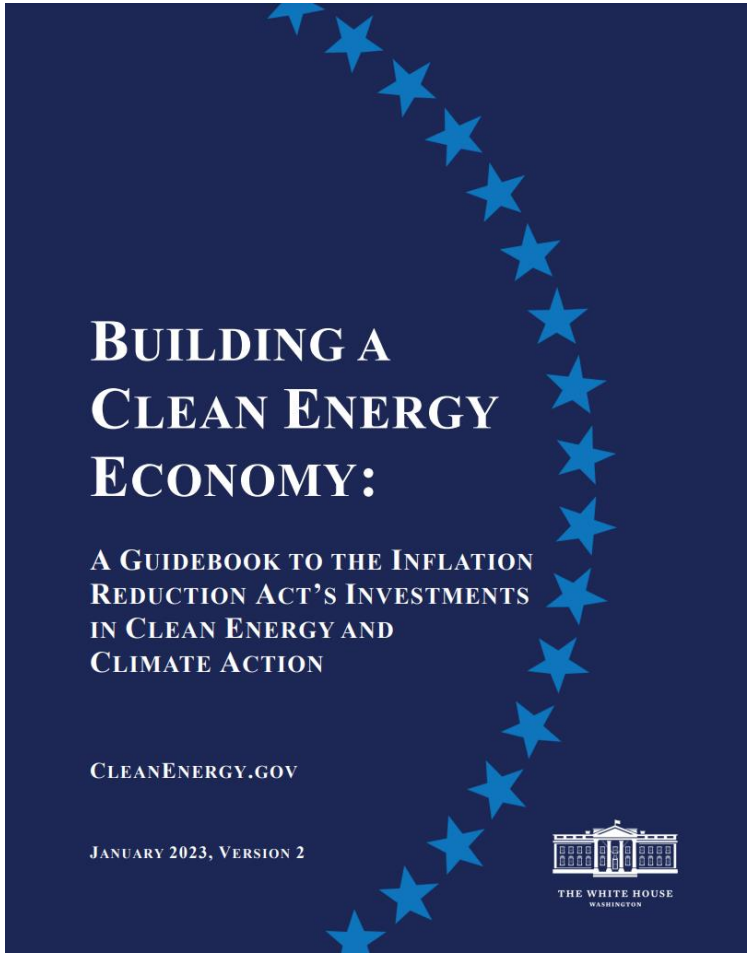
Inflation Reduction Act Celebration Week

August 14, 2024

CONNECTICUT GREEN BANK®

Agenda
Day 1 – August 14, 2024 (Hartford)

- **9:45-10:00** Welcome Remarks
- **10:00-11:00** Inflation Reduction Act's ("IRA") Greenhouse Gas Reduction Fund ("GGRF"): Concept to Competition
- **11:00-11:15** Break
- **11:15-12:15** GGRF: Implementation to Impact
- **12:15-1:30** Lunch
- **1:30-2:30** IRA's Investment Tax Credits
- **2:30-3:00** Wrap-Up



Agenda
Day 2 – August 15, 2024 (Manchester)

- **5:00-5:30** Event Arrival + Family Activities Open
- **5:30-6:45** Dinner Buffet
- **6:30-6:45** Welcome Remarks from Bryan Garcia and then Cyril the Sorcerer, the Merlin of Environmental Magic
- **6:45-7:30** Dessert
- **7:45-8:00** Event Ends

Appreciation
IRA Celebration Week Dream Team

Stephanie Attruia

Emily Ganon

Cheryl Lumpkin

Sara Pyne

Welcome
Inflation Reduction Act Celebration Week

1. **Recognize Family** – bring our families together to recognize them for all of their support of us in doing what we do at work everyday and what they have to listen to every night at the kitchen table

2. **Celebrate Together** – celebrate the moment that has been achieved…the "Constitution State" has left its mark on the Inflation Reduction Act through the Connecticut Green Bank and the Greenhouse Gas Reduction Fund

3. **Realize the Moment** – the Greenhouse Gas Reduction Fund is the single largest non-tax credit component of the Inflation Reduction Act – between the investment tax credits (including the adders) and the GGRF, we need to mobilize more private investment in vulnerable communities in Connecticut – public service is a privilege

Inflation Reduction Act of 2022
Partisan Bill

Partisan politics in DC on climate change is a lot different
than the bipartisan support for climate change policies in Connecticut
(e.g., Public Act 08-98 – Senate (35-0) and House (134-13) with Governor Rell)

Greenhouse Gas Reduction Fund

CONNECTICUT GREEN BANK®

Inflation Reduction Act Celebration Week

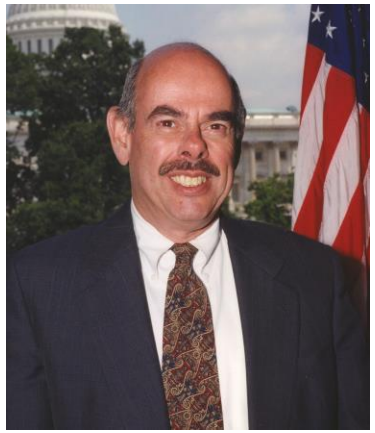
August 14, 2024

Agenda

- **Pre-Inflation Reduction Act** – a brief history of the Greenhouse Gas Reduction Fund ("GGRF") from concept to demonstration
- **Inflation Reduction Act Inclusion of Greenhouse Gas Reduction Fund** – from agreement on public policy, to program design and development, to competition and awardees
- **Break**
- **Priority Funding Areas** – what are we planning on doing with the federal investment through the Coalition for Green Capital (NCIF) and Project SunBridge (Solar for All)
- **Final Comments and Q&A** – additional resources for you

Pre-Inflation Reduction Act
Brief History of the GGRF

Nation's 1st State Green Bank
From Washington, DC to Connecticut


Congressman Ed Markey
and Henry Waxman
ACES Act of 2009
Late Congressman John Dingell
Introduction of CEDA

Connecticut
Public Act 11-80
Governor Dannel Malloy

Green Bank Movement
Innovation in American Government

Connecticut Congressional Leadership
Advancing Green Bank Policy




- **H.R. 4522** – Green Bank Act of 2014
- **H.R. 5802** – Green Bank Act of 2016
- **H.R. 2995** – Green Bank Act of 2017
- **H.R. 3423** – National Green Bank Act of 2019
- **H.R. 2656** – National Green Bank Act of 2021

- **S. 2271** – Green Bank Act of 2014
- **S. 3382** – Green Bank Act of 2016
- **S. 1406** – Green Bank Act of 2017
- **S. XXXX** – National Climate Bank Act of 2019
- **S. 283** – National Climate Bank Act of 2021
- **S. 1208** – National Green Bank Act of 2021

Set the stage for the **Clean Energy and Sustainability Accelerator**, and then the **Greenhouse Gas Reduction Fund within the Inflation Reduction Act**

IRA Inclusion of GGRF
From Agreement to Awardees

Senators Manchin and Schumer Agree
July 27 and August 16, 2022

Greenhouse Gas Reduction Fund
Modelled after the Connecticut Green Bank

Congresswoman Dingell
Clean Energy and Sustainability Accelerator of 2021
(a.k.a. NCB - $20B)

Senator Markey, Senator Van Hollen, and Senator Sanders
NCB – $20B ($100B)
SfA (LIDAC) – $7B

President Biden, Climate Advisor McCarthy, and EPA Administrator Regan
GHG Reduction Fund
NCIF ($14B) – CCIA ($6B) – SfA ($7B)

Residential Solar and Green Banks
Fact Sheet to Senator Sanders

CONNECTICUT GREEN BANK®

RESIDENTIAL SOLAR AND GREEN BANKS
Towards an Inclusive, Just, and Resilient Green Economy in Connecticut

BACKGROUND
Through CGS 16-245ff, the Connecticut Green Bank ("Green Bank") was assigned the public policy responsibility of enabling the deployment of 350 MW of residential solar by the end of 2022, while also fostering the sustained orderly development of a local solar industry. As the nation's first green bank, it has implemented the most successful residential solar program in the northeastern U.S. (see Table 1 in Appendix I). In so doing, it has also ensured that vulnerable communities (i.e., low-income families and communities of color), have had easy and affordable access to solar through innovative financing mechanisms[1] that have made Connecticut among the few recognized "solar with justice" states.[2]

IMPACT – SOCIAL AND ENV
As of June 30, 2021,[3] the Gree

- **Investment** – $1.4 bill
  $0.154 billion of publi
- **Deployment** – 45,530
  420,000 MWh of zero
- **Jobs** – through the inv
  16,060 job-years creat
- **Climate Change and P**
  MTCO2 are estimated
  SOx, NOx, and PM, be
  will be avoided
- **Vulnerable Communit**
  projects, deployment)
  22,873 projects (i.e., 5
  communities (see Tab
  energy affordability g

As a result of the successful in
financing programs (see Table
and financing programs to imp
communities.[7]

TOWARDS AMERICA
In 2020, of the 19.2 GW of sol
was residential – the largest y
GW in 2023 and 7.0 GW by 20
costs for residential solar cont
collaboration with private cap

[1] "Performance of Solar Leasing for L
(May 2021).
[2] "Solar with Justice: Strategies for P
Energy States Alliance (December 2
[3] Comprehensive Annual Financial Re
[4] Per PA 20-05, including Community
[5] "Connecticut Green Bank Low and I
[6] Public Act 21-53 "An Act Concernin
[7] "Connecticut Powers into the Lead
[8] "Connecticut's Solar Lease Program

APPENDIX I
Data

Table 1. Comparison of Residential Solar Deployment in the Northeast (2016-2020)[9]

	CT	MA	ME	NH	NJ	NY	RI	VT
Installed Capacity (MW)	311.2	527.7	29.5	63.2	736.0	716.7	53.8	49.5
Cumulative Watts/Capita	87.3	75.9	21.9	46.5	82.9	36.8	50.8	79.3

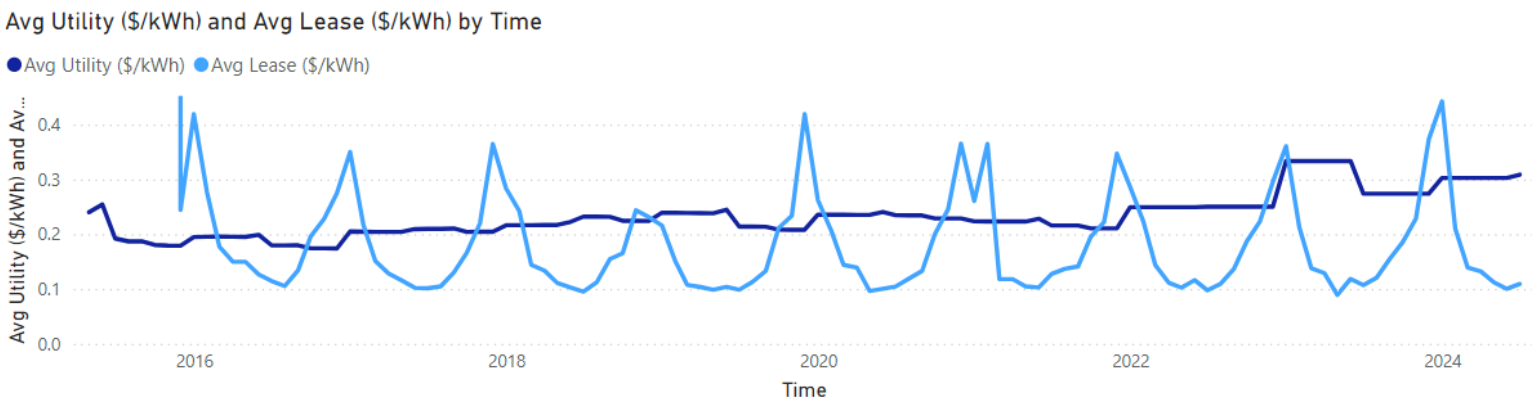
Table 2. Residential Solar Investment in Vulnerable Communities in Connecticut

Fiscal Year	Not Vulnerable	Vulnerable	Total	% Vulnerable
2012	$7,675,503	$2,226,008	$9,901,511	22%
2013	$27,476,228	$7,949,815	$35,426,043	22%
2014	$51,493,616	$22,622,847	$74,116,463	31%
2015	$137,616,423	$76,361,115	$213,977,538	36%
2016	$117,360,251	$100,049,058	$217,409,309	46%
2017	$53,452,499	$66,338,590	$119,791,089	55%
2018	$66,334,127	$80,613,565	$146,947,692	55%
2019	$93,396,871	$102,485,609	$195,882,480	52%
2020	$105,333,570	$101,566,914	$206,900,484	49%
2021	$99,770,722	$80,491,746	$180,262,468	45%
Total	**$759,909,811**	**$640,705,265**	**$1,400,615,076**	**46%**

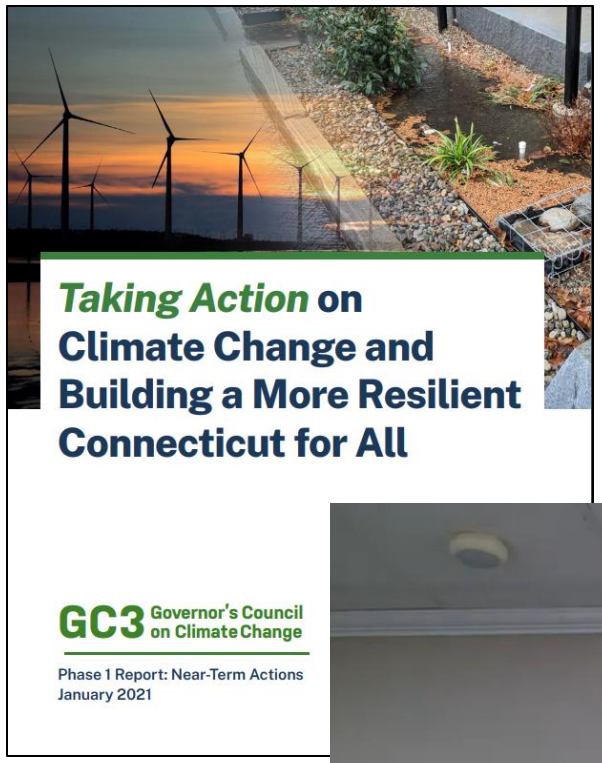
Table 3. Connecticut Green Bank Financing Programs to Support Residential Solar

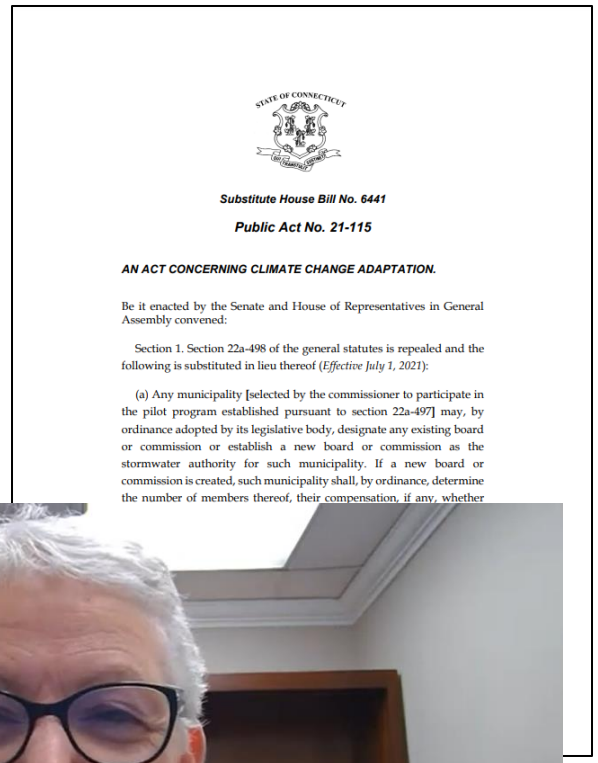
Product	Total Investment ($MM's)	Private Investment ($MM's)	Green Bank Investment ($MM's)	Projects	Installed Capacity (MW)	Energy Costs Avoided[10] ($MM's)
CT Solar Loan[11]	$9.1	$8.6	$0.5	279	2.2	-
CT Solar Lease[12]	$46.3	$36.8	$9.5	1,189	9.6	$3.9
Solar for All[13]	$118.3	$96.9	$21.5	4,292	28.5	$4.0
Total	**$173.7**	**$142.3**	**$31.5**	**5,760**	**40.3**	**$7.9**

[9] Solar data from "U.S. Solar Market Insight" (March 2021)
[10] To date, through June 30, 2021
[11] In collaboration with Sunrage, a solar loan program that graduated in 2015. Resulted in Sunrage receiving a $100 MM pool of capital to originate residential solar loans across the U.S. based on the success in Connecticut.
[12] In collaboration with US Bank, Webster Bank, and KeyBank, a solar lease program that graduated in 2016. The predecessor to the CT Solar Lease was done in 2007-2011 by the Connecticut Clean Energy Fund as the first public-private tax equity-backed residential solar lease program in the U.S. and recognized by CESA with the State Leadership in Clean Energy (SLICE) Award in 2012.
[13] In collaboration with PosiGen, a solar and energy efficiency lease program targeted at LMI families and communities of color



Environmental Infrastructure
Governor Lamont Led Expansion of Mission





Substitute House Bill No. 6441

Public Act No. 21-115

AN ACT CONCERNING CLIMATE CHANGE ADAPTATION.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. Section 22a-498 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective July 1, 2021*):

(a) Any municipality [selected by the commissioner to participate in the pilot program established pursuant to section 22a-497] may, by ordinance adopted by its legislative body, designate any existing board or commission or establish a new board or commission as the stormwater authority for such municipality. If a new board or commission is created, such municipality shall, by ordinance, determine the number of members thereof, their compensation, if any, whether

GGRF Timeline
Concept to Reality

August 2022
Congress passes and President Biden signs the IRA, including the GGRF

November 2022
EPA hosts listening sessions on GGRF

December 2022
EPA collects responses to Request for Information on GGRF
EFAB collects responses to Request for Public Comment

February 2023
EPA publishes two federal assistance listings outlining key parameters of the competitions

March 2023
EPA hosts listening sessions on Solar for All

April 2023
EPA publishes Implementation Framework, requests comments and hosts listening sessions

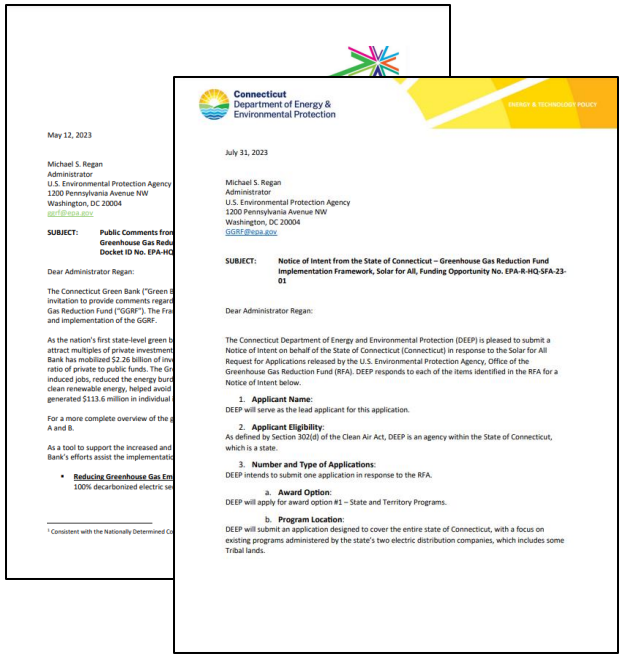
Summer 2023
EPA issues Notice of Funding Opportunity for 3 competitions

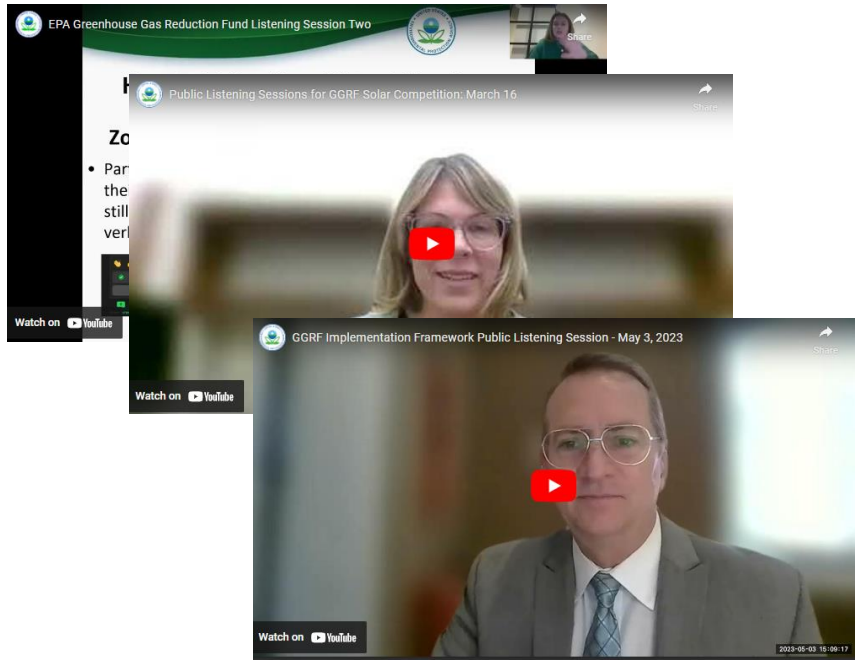
October 12, 2023
Applications submitted to the EPA

January 2024
Finalist applicants interviewed by EPA

April 2024
Winners announced

Connecticut Green Bank
Engagement in GGRF (Nov 2022 – Oct 2023)





Residential Solar Investment and Deployment in Connecticut

An In-Depth Review of an Incentive Program (2012-2022)

Connecticut Green Bank - May 5th, 2023

Financing Residential Solar in Connecticut #1

Insights into Loan Programs

Connecticut Green Bank - June 5th, 2023

Financing Residential Solar in Connecticut #2

Insights into Lease and Third-Party Ownership Programs

Connecticut Green Bank - August 3rd, 2023

Competition

Greenhouse Gas Reduction Fund
Competitions – Summer of GGRF (Oct 12, 2023)

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	National Clean Investment Fund	Clean Communities Investment Accelerator	Solar for All (State Led Funding)
Funding Amount	**$13.97 Billion**, $2 billion must be expended in low-income and disadvantaged communities ("LIDACs")	**$6 Billion** and **100% must be expended in LIDACs**	**$7 Billion** and **100% must be expended in LIDACs**
Project Goals	Focused on funding **2-3 national non-profits** for the purpose of **providing clean technology** to accelerate energy independence and a net-zero future.	Will fund **2-7 non-profits** to build the financial capacity of networks within public, quasi-public and non-profit **community lenders** ensuring **low-income and disadvantaged communities** have access and support for cost-saving and pollution-reduction clean technology projects.	Will provide up to **60 grants to State, Tribal governments, municipalities, and non-profits** to expand the number of low-income and disadvantaged communities that are primed for residential and community solar investment
Types of Projects	Grantees will partner with private capital providers to catalyze tens of thousands of **clean technology projects**, aimed at reducing or avoiding greenhouse gas emissions, or **assisting communities** in the efforts of reducing or avoiding greenhouse gas emissions	Grantees will support **community lenders**, which in turn support deployment of qualified projects within three broad categories: **distributed power generation and storage; decarbonization retrofits of existing buildings; and transportation pollution reduction**.	Grantees will enable low-income and disadvantaged communities to deploy or benefit from **residential rooftop and community solar photovoltaic (PV) projects**, associated storage, and enabling upgrades
Eligible Applicant	Non-profit organizations set forth in 2 CFR § 200.1	Non-profit organizations set forth in 2 CFR § 200.1	States, Municipalities, Tribal Governments and Eligible Recipient (Non-Profits)
# of Awards	2-3 National Non-profits	2-7 Hub Non-profits	60 Grants to States, Municipalities, Tribal Governments and Eligible Recipient (Non-Profits)
# Finalists	5 – seeking $56.6 billion invited to final 30-minute interviews on January 5, 2024	7 – seeking $18.9 billion invited for final 30-minute interview on January 8, 2024	

Connecticut Goals

1. **Resources** – maximize Connecticut (i.e., not just public or quasi-public) access to GGRF resources
2. **Governor's Bill** – realize a source of funding for the "Environmental Infrastructure Fund" within Public Act 21-115
3. **Vulnerable Communities** – mobilize public and private investment in new areas (e.g., environmental infrastructure, green school buses per Public Act 22-25) in low-income and disadvantaged communities ("LIDACs")

Earth Day 2024
Greenhouse Gas Reduction Fund

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EPA United States Environmental Protection Agency

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News Releases: Headquarters | Office of the Administrator (AO)

CONTACT US

Biden-Harris Administration Announces $20 Billion in Grants to Mobilize Private Capital and Deliver Clean Energy and Climate Solutions to Communities Across America

EPA United States Environmental Protection Agency

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News Releases: Region 01

CONTACT US

Biden-Harris Administration announces Connecticut Department of Energy and Environmental Protection to receive nearly $62.5 million to deliver residential solar, lowering energy costs and advancing environmental justice across Connecticut

Project SunBridge
The Connecticut Consortium

CONNECTICUT ENERGY & ENVIRONMENT

CONNECTICUT GREEN BANK

CONNECTICUT HOUSING FINANCE AUTHORITY

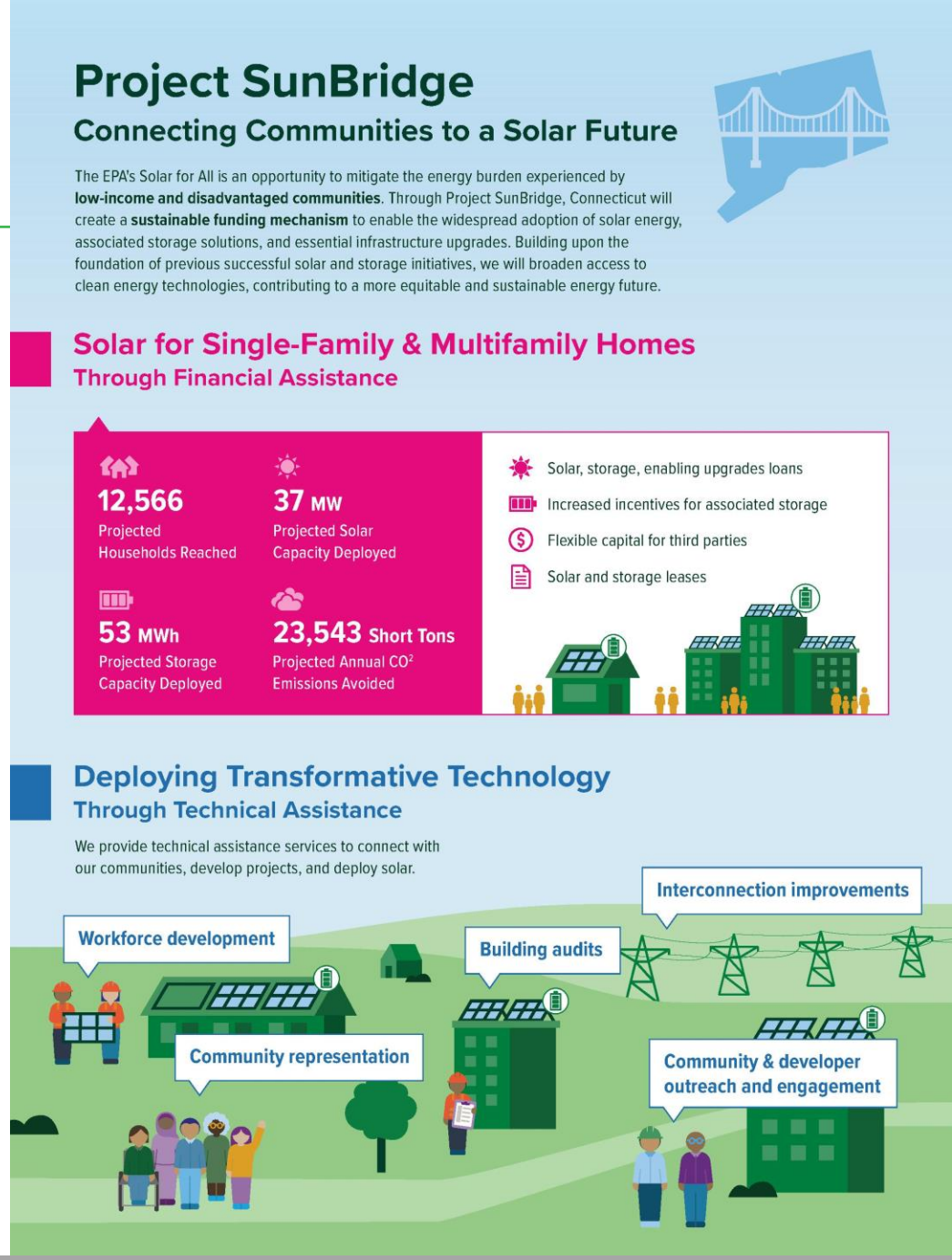
CONNECTICUT Department of Housing

QUI TRANSTULIT SUSTINET

$62,450,000 award

40% greater than proportional allocation (per CEJST populations)

38% reduction of request



Project SunBridge
Highlights

How do we do more to support low-income families to benefit from solar?

Reaching new markets

- Focus on multifamily affordable housing
- How do we serve small multifamily rental units (1-4 family?)
- How do we pair solar + storage?

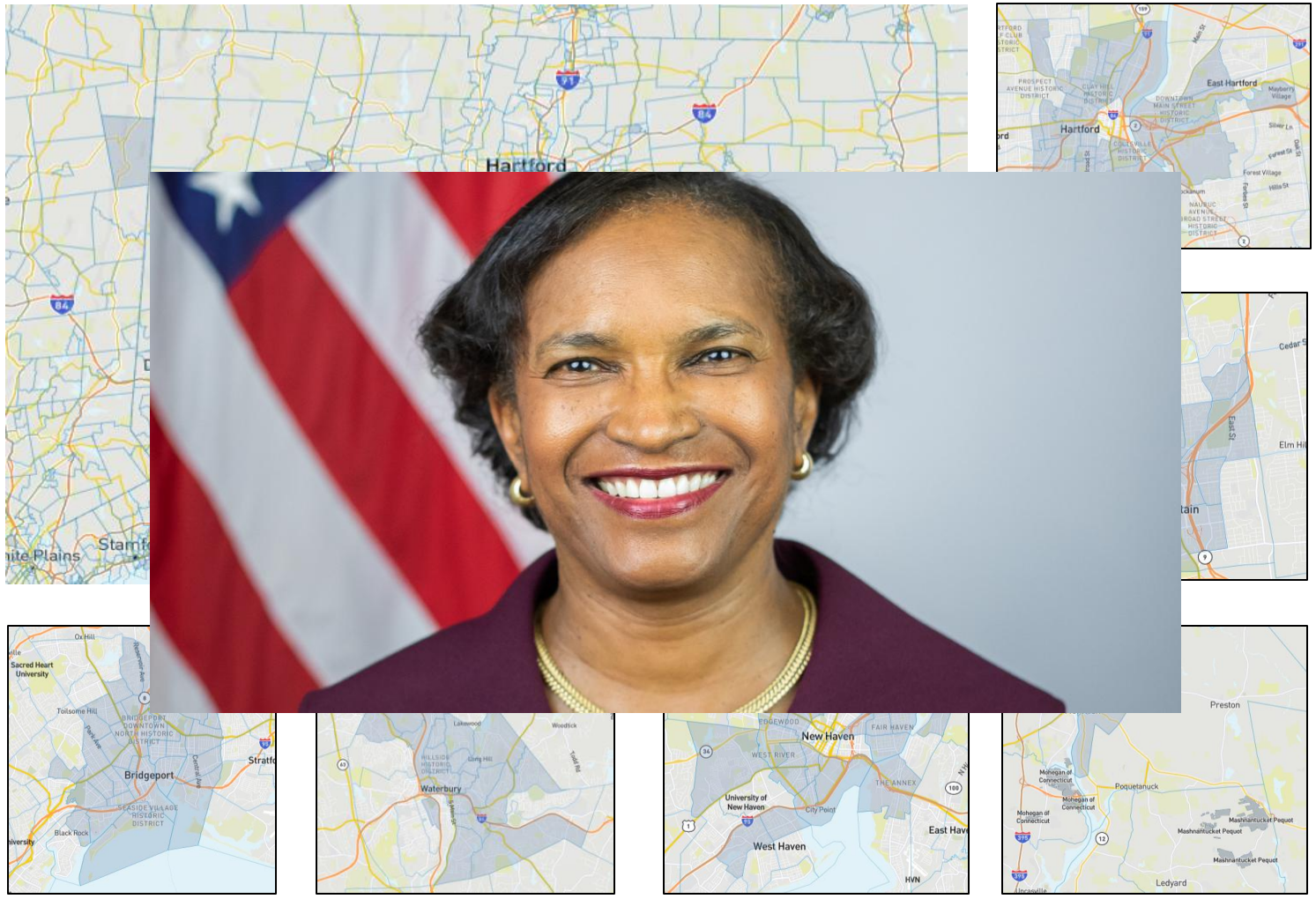
Expanding our definition of "benefit"

- Community Benefit Agreements
- Going beyond bill reduction: Project SunBridge Fund
- Supporting workforce development, training, apprenticeship programs

Selection Process
Overview

Key Selection Criteria

- Timeline – NCIF at 7 years and CCIA at 6 years
- $20B of GGRF Investment into $150B of Public-Private Investment
- 70% of Investment in LIDACs – CEJST and EJ Screen
- 40 MMTCO2 avoided or reduced



Greenhouse Gas Reduction Fund
NCIF and CCIA Awardees

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CLIMATE UNITED — ~$7 billion award

CGC Coalition for Green Capital — $5 billion award

POWER FORWARD — $2 billion award

OPPORTUNITYFINANCE NETWORK — $2.3 billion

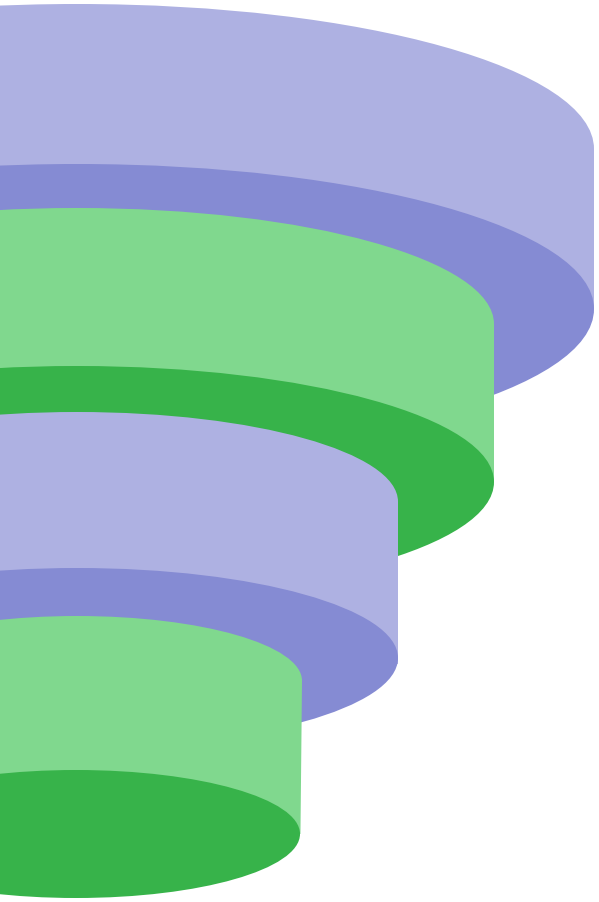
/ inclusiv / — $1.9 billion

Justice Climate Fund — $0.9 billion

APPALACHIAN COMMUNITY CAPITAL — $0.5 billion

NATIVE CDFI NETWORK — $0.4 billion

Coalition Building
Part Politics, Part Relationships



- Hundreds of participants signal to the EPA their interest in participating in the competition
- Dozens of coalitions form, some long-standing, others created to compete for this funding
- The Green Bank enters into discussion with ~12 coalitions to identify most competitive strategy for Connecticut
- The Green Bank supports 6 applications into the GGRF: 2 NCIF, 3 CCIA, and 1 Solar for All

Demonstrating Support
Leveraging Our Network

Federal Government:
Connecticut Congressional Delegation

Credit Unions/CDFIs
Credit Union League of Connecticut
Nutmeg
Capital for Change
Mutual Security

Implementers
Posigen

State/Local Government:
Governor Lamont
Department of Banking
Greater Bridgeport Community Enterprises
Capital Region Council of Governments
SustainableCT

Community Based Organization/Supporters:
Operation Fuel
Trust for Public Land
Yale University
Smart Power

Coalition for Green Capital
Overview

- **History:** Founded in 2009, have supported launching green banks across the U.S.
- **Mission:** Accelerate clean energy deployment and combat climate change by mobilizing private capital

Application Overview

- **Funding:** Requested $11.9B across the GGRF, received $5B (NCIF) and $125M (Solar for All)
- **Structure:** Funds directly to subawardee participants and funds available to invest directly
- **Investment Priority:** Maximize public-private capital mobilization. Focus on high-impact projects in LIDACs.
- **Investment Timeline:** Plan to deploy funding over short timeframe and securitize as bonds to do it again

Coalition for Green Capital
Partners Receiving ~$1.8 Billion

- **California** Infrastructure Bank
- City First Enterprises (CDFI) (+ PA, VA)
- **Colorado** Clean Energy Fund (+ MT, ND, SD, UT, WY)
- Community Development Venture Capital Alliance (CDFI)
- **Connecticut** Green Bank (+ NH, PR)
- **District of Columbia** Green Bank
- Efficiency **Maine** Trust
- Elemental Excelerator
- **Illinois** Climate Bank
- **Michigan** Saves
- **Minnesota** Climate Innovation Finance Authority
- **Missouri** Environmental Improvement and Energy Resources Authority
- Montgomery County Green Bank (+ MD)
- **New Jersey** Green Bank
- New York City Energy Efficiency Corporation
- **New York** Green Bank
- **Ohio** Air Quality Development Authority
- Solar and Energy Loan Fund (CDFI) (+ AL, FL, GA, KY, MS, NC, SC, TN)

Connecticut Partners
Puerto Rico and New Hampshire

CONNECTICUT GREEN BANK

PUERTO RICO
GREEN ENERGY TRUST

COMMUNITY LOAN FUND
Opportunity. Investment. Impact.

GGRF Dispute – NCIF and CCIA
Ecority

Break

Greenhouse Gas Reduction Fund
Implementation to Impact

Developing Priority Funding Areas
Federal Funding to Connecticut Opportunity

- Dream Big Process:
  - People, place, products, promotion, public policy, and… show me the money!
  - What was working well that we could do more with federal funding
  - What areas was the Green Bank not serving that we wanted to expand into
- Translating big dreams into implementation

CGB Priority Funding Areas

	Program	Technology				Targets ($MM)	LIDACs (min%)
		Solar	Storage	Energy Efficiency	Other		
SfA	Green Homes (Multifamily) + Additional ESS incentives	X	X	X		$30.5	100%
NCIF	Green Homes (Single-family)	X	X	X		$17.5	100%
NCIF	Green School Buildings	X	X	X		$3.75	60%
NCIF	Green Municipal & Commercial Buildings	X	X	X		$6.25	40%
NCIF	Green Resilience Hubs	X	X	X	X	$5.0	40%
NCIF	Environmental Infrastructure				X	$5.0	40%
NCIF	Green School Buses				X	$10.0	100%
	Total GGRF to the Green Bank					**$88.0***	

**Includes additional Solar for All funding for Capital Solutions and building assessments and audits*

Green Homes
Single Family

- **Scope** – Single (1-4 units); may include energy audit, weatherization measures, installation of heat pumps, solar PV, battery storage, EV chargers, and/or other improvements (e.g., roof, health and safety measures).
- **Strategy** – Expand Smart-E serving LIDACs; utilize Capital Solutions to deploy funds through additional financing tool(s); coordinate with DEEP on rollout of other federal programs to maximize benefits of multiple funding streams. Historically, low-income families participate in Smart-E when there's an interest rate buy-down – how do we ensure that we have offerings that work? How do we support renters?
- **How are we supporting communities?** – Actively seek feedback and input in Project SunBridge stakeholder engagement sessions. Work with both potential customers and community-based organizations to inform and shape our strategy.

Green Homes
Multifamily

- **Scope** – Multifamily (5+ units); may include energy audit, weatherization measures, installation of heat pumps, solar PV, battery storage, EV chargers, and/or other improvements (e.g., roof, health and safety measures).
- **Strategy** – for multifamily, we have expanded our Solar MAP program to include affordable multifamily. By integrating GGRF dollars into our financing for these projects (leases or loans), we can make the economic benefits to the property owner and tenants
- **How are we supporting communities?** – for multifamily, through our Solar MAP program, we provide full project development assistance, from initial feasibility assessments to incentive and contractor procurement to financing with GGRF dollars. This makes projects easier for property owners to get done, meaning they're saving money and the tenants are seeing larger reductions to their electric bill, while also making the property more resilient for the tenants.

Green School Buildings

- **Scope** – may include an energy audit, weatherization measures, installation of heat pumps, efficient appliances, solar PV, battery storage, EV charging stations, and/or a microgrid.
- **Strategy** – with a new state solar incentive program for schools starting soon, we're looking at restarting our Municipal Solar MAP program to develop solar and storage projects. By integrating GGRF dollars into our financing for these projects (PPAs, leases or loans), we can make the economic benefits to the school even more attractive.
- **How are we supporting communities?** – through our Solar MAP program, we provide full project development assistance, from initial feasibility assessments to incentive and contractor procurement to financing with GGRF dollars. This makes projects easier for schools to get done, meaning they're saving money which can be directed towards their core mission of educating students and providing resiliency to their community.

Green Municipal & Commercial Buildings

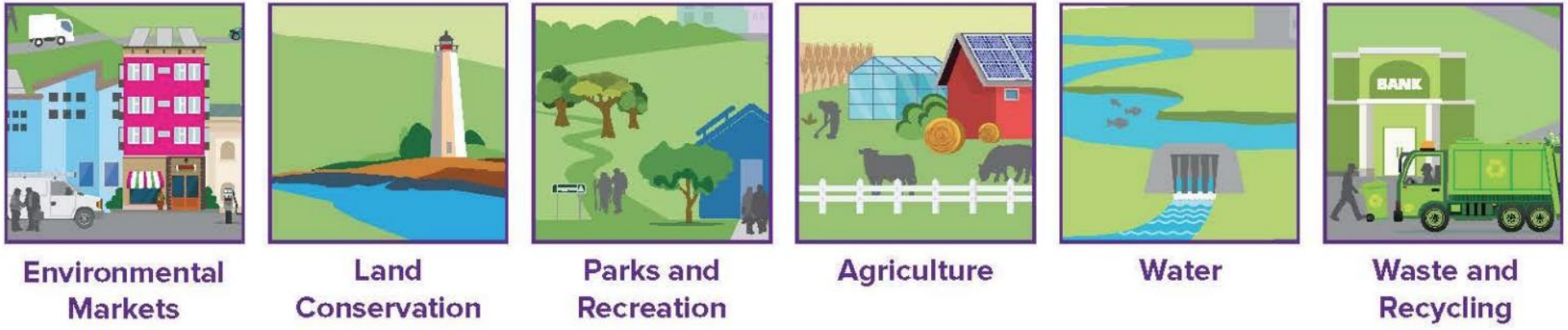
- **Scope** – may include an energy audit, weatherization measures, installation of heat pumps, efficient appliances, solar PV, battery storage, electric vehicle (EV) charging stations, and/or a microgrid.
- **Strategy** – creating a GGRF version of our commercial building products (CPACE, Solar & Storage PPA & Lease, Solar Loan). If contractors and property owners can bring projects that meet GGRF requirements, we can use GGRF dollars to provide a lower cost of capital, increasing the financial benefits of the project
- **How are we supporting communities?** – outreach to contractors and property owners to educate them about these opportunities

Resilience Hubs

- **Scope** – may include solar, storage, energy efficiency, and microgrids at critical facilities.
- **Strategy** – identifying solar + storage projects that can serve a community benefit and crowding in additional investments to support community resilience.
- **How are we supporting communities?** – we're not sure yet! We want to be intentional about how we identify resilience projects that serve communities' needs.

Environmental Infrastructure

- **Scope** – may deploy commercial technologies related to environmental infrastructure, such as land, parks and recreation, agriculture, waste and recycling (e.g., anaerobic digestion and organic waste), water, and/or utilize environmental markets that meet EPA eligible project definition.
- **Strategy** – Capital Solutions Open Rolling RFP
- **How are we supporting communities?** – we're not sure yet! Potential for project or proposal development support.



Environmental Infrastructure

Financing Environmental Infrastructure & Nature Based Solutions through GGRF

- Not listed as priority project categories, but any project can qualify if it meets all six eligibility requirements
- Must deliver additional benefits to American communities within one or more of the following seven categories:

(1) climate change	Urban tree canopy and carbon project
	Rural improved forest management carbon project
	Living shoreline project
(2) clean energy and energy efficiency	Food waste/Farm waste to energy, water quality benefit
(3) clean transportation	Tree planting in transit corridors
	Culvert and stream crossing improvements
(4) affordable and sustainable housing	Climate resilience measures
(5) training and workforce development	Urban/rural wood waste beneficial use with workforce development
(6) brownfield remediation	Park creation on former brownfield
(7) development of critical clean water infrastructure	Green infrastructure
	Stormwater Authority project

Financing Nature-Based Solutions via GGRF by Duke Nicholas Institute & Quantified Ventures

School Buses

- **Scope** – (1) Investment in zero-emission school buses (2) Associated charging and fueling equipment (3) "Make-ready" infrastructure for charging depots & (4) Innovations to support vehicle-to-grid charging (demand response and community resilience)
- **Strategy**
  - Near-term: Increase understanding of business models & plug capital gaps for grant-supported projects
  - Medium-term: accelerate electric school bus deployment
  - Long-term: help build a robust electric school bus market!!
- **How are we supporting communities?**
  - Currently working with PURA to design and administer a "Fleet Advisory Services" Program for ESBs
  - Services will support schools and school bus operators from initial interest to fleet deployment
  - Public Health Focus: on-bus air quality improvements for kids and community-level reductions in ground-level ozone
  - 100% of school bus NCIF resources to federal EJ communities / LIDAC / Vulnerable Communities

CGB Priority Funding Areas
Next Steps

- **<u>Finalize agreements & receive awards</u>**
  - NCIF: Contracts with CGC, PRGET & NHCLF
  - SfA: Contract with DEEP; finalize workplan and budget with EPA
- **<u>Updating Internal Processes</u>** – Compliance with Davis Bacon (prevailing wage), Build America, Buy America (domestic content), Disadvantaged Business Enterprise outreach, etc.; drawdown processes; tracking and reporting requirements; EM&V
- **<u>Deployment!</u>** – CGC incentivizes us to deploy capital quickly – building pipeline and starting to spend funds in the next few months

Additional Resources

Volt Podcasts
Greenhouse Gas Reduction Fund

Volts

[The Immense Promise of a Federal Green Bank]

(August 13, 2021)

[How the EPA Will Spend $27 Billion in Carbon Reduction Funds]

(April 5, 2024)

[Getting Rooftop Solar onto Low- and Middle-Income Housing]

(April 28, 2023)

Additional Resources

1. **GGRF Website** – https://www.epa.gov/greenhouse-gas-reduction-fund
2. **CT Green Bank GGRF Website** – https://www.ctgreenbank.com/ggrf/
3. **GGRF Sharepoint**
4. **Ask Stefanie ☺ (Stefanie.Keohane@ctgreenbank.com)**

Volt Podcasts
Investment Tax Credits

Volts

[What to make of the Democrats' Last-Minute Climate Bill]

August 3, 2022

[Why Transferable Credits are Such a Big Deal]

April 19, 2024

Questions and Answers

IRA's Investment Tax Credits

CONNECTICUT GREEN BANK®

Inflation Reduction Act Celebration Week

August 14, 2024

Welcome and Agenda

- Presentation will focus on impacts/applicability of IRA for Green Bank's commercial projects:

  1. Muni + State MAP projects
  2. Affordable Multifamily Housing
  3. Non-profit C-PACE

- We will not be discussing the impacts tax credit under the IRA for single family residential property owners please reference Appendix for info on these

- **<u>Do not hold questions, please raise your hand!!</u>**

Pre-Inflation Reduction Act
Tax Credits

Pre-IRA Snapshot

- Investment Tax Credit (ITC), under section 48 of the Code, available for businesses allowing them to reduce federal income tax liability. Credit amount is 30% of eligible investment costs.
- Before the IRA, the ITC was set to sunset in 2023:

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Credit Prior to IRA	26%	22%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Credit Under IRA	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	26%	22%	0%

- The applicable percentage is determined by the year in which the project was placed in service or began construction.
- Only for-profit owners of the solar projects could monetize ITC. Sponsors/developers create taxable entities (e.g. CEFIA Solar Services Inc.) to enter into a tax equity partnership with tax equity investors.

Pre-IRA for Solar MAP
State and Municipal Projects

- Green Bank "safe harbored" SAP1 projects given uncertainties around IRA requirements and final rules
- What does "Safe Harboring" mean in this context:
  - ❑ Safe-harboring is designed to allow taxpayers to preserve the ITC rate of that year by starting construction before the year ends.
  - ❑ To demonstrate start of construction: pay 5% of total project's cost, for example purchasing equipment.
  - ❑ There must be a reasonable expectation that the equipment will be delivered within 3 ½ months - this is referred to as the 3.5 rule.
  - ❑ Tax paying entity needs to incur the cost
- In Jan 2023 to be able to safe harbor the SAP 1 Portfolio, Green Bank:
  - ❑ Transferred projects to a tax paying entity – CEFIA Solar Services
  - ❑ Purchased solar modules equivalent to 10% of the EPC cost - ~$1.5 M by signing a Procurement Agreement with Total Energies (EPC Contractor)

Pre-IRA for Solar MAP (cont'd)
State and Municipal Projects

- Green Bank could not monetize ITC, strategy was to sell projects rather than raise tax equity.
  - ❑ Municipal Projects → IPC
  - ❑ State Projects → competitive pricing
- No prevailing wage or apprenticeship requirements associated with ITC
- No ITC adders

Post-Inflation Reduction Act
Tax Credits and Applicability to Projects

Post-IRA for Solar MAP
State and Municipal Projects

Significant Opportunities to improve project economics:

- ITC **adders**:

  10% Domestic Content

  10% Energy Communities

  10% Low-Income Communities Bonus Credit Program (Category 1 - Low-Income Community) – this is a competitive process.

- **Interconnection costs** are ITC eligible

- **Standalone storage** qualifies for ITC

New requirements: **Prevailing Wage + Apprenticeship** requirement for projects >1 MW AC (for upfront EPC and O&M)

ITC Adders
State Projects

Significant impact to our portfolio's economics: 11 projects with ITC adders

Type	Name	Project Size (kW DC)	EPC Cost $	Energy Communities Adder	LI Community Bonus Adder	Adder "Value"
SAP 1	Maloney and Webster	2,420	$4,391,333	10%		$439,133
SAP 1	Manson Youth Institute	2,198	$3,951,608	10%		$395,161
SAP 2	H.H. Ellis	959	$1,741,715		10%	$174,172
SAP 2	W.F. Kaynor	449	$852,630	10%	10%	$170,526
SAP 2	A.I. Prince	757	$1,387,820		10%	$138,782
SAP 2	Eli Whitney	757	$1,414,081	10%		$141,408
SAP 2	Emmett O'Brien	898	$1,636,953	10%		$163,695
SAP 2	Henry Abbott	616	$1,896,602	10%	10%	$379,320
SAP 2	CT Transit Hamden	1,100	$2,019,600	10%	10%	$403,920
SAP 2	Quinebaug Fish Hatchery	317	$786,171		10%	$78,617
SAP 3	Capitol Region Mental Health Center	266	$644,688		10%	$64,469
	Total	**10,737**	**$20,723,201**			**$2,549,203**

Post-IRA for Solar MAP
Challenges – Energy Communities Designation

Energy Communities Designation unlocks a 10% ITC adder

- **Metropolitan or non-metropolitan statistical area (MSA/non-MSA)** which (1) meets certain employment metrics related to the extraction, processing, transport, or storage of coal, oil or natural gas, AND (2) has an unemployment rate above the national average for the previous year **(updated May of each year); Currently New Haven and Fairfield County qualify.**
- Census tract, or a census tract that is adjoining to a census tract, in which a **coal mine has closed after 1999 or a coal-fired electric generating unit was retired after 2009; and**
- **Brownfield as defined by federal definition (CERCLA). Site may qualify if (1) it was** previously assessed through brownfield resources as meeting the definition, (2) Phase II confirms the presence on the site of a hazardous substance, or (3) For projects less than 5MW (AC), a Phase I identifies the presence or potential presence on the site of a hazardous substance, or a pollutant or contaminant.

Positive Impact: New SAP1 & SAP2 projects qualified

Challenge: Without knowing if MSA would change in May, we safe harbored projects (was not necessary)

Post-IRA for Solar MAP
Challenges – Prevailing Wage

Prevailing Wage and Apprenticeship Requirements for the construction, installation, alteration, or repair of a qualified facility. <u>Only applies to projects >1 MW AC</u>

- Prevailing Wage and Fringe Benefit Rates must be applied to manual / physical labor (laborer or mechanic) determined wage rates by the Secretary of Labor
- Apprenticeship Ratio (4 journeymen to 1 apprentice ratio) and registration with a Trade Association.
- **Taxpayer Burden**: Companies must comply + maintain recordkeeping (applicable wage determination, worker 'list' including classification, hours, and pay, etc.).
- **Taxpayer Risk**: Noncompliance can result in IRS penalties and require companies to backpay workers/apprentices.

Impact: 3 SAP projects are >1 MW AC

- Cost associated with prevailing wage included in Contract Sum
- Language associated with Prevailing Wage requirements incorporated in EPC Agreement
- Green Bank is working with CohnReznick to explore compliance + maintaining recordkeeping to avoid IRS penalties
- Cost to comply/oversight – CR quoted $83,000

Post-IRA for Solar MAP
Groton Projects

Town	Groton	Groton
Project	Mystic River Magnet School	Groton Middle School
System Size (kWdc)	140	305
System Production EPC	150,429	328,775
New EPC $/W	$2.050	$1.778
New EPC $ Total	$286,994	$542,289
Offset rate $/kWh	$0.125	$0.142
ITC Original (30%)	$86,098	$162,687
PPA rate $/kWh	$0.088	$0.084
% Discount (against offset rate)	30%	41%
Avg Annual Savings	$9,657	$28,940
Term Savings	$193,146	$578,810
ITC with 10% adder (40%)	$114,798	$216,915
PPA rate $/kWh with ITC adder	$0.079	$0.076
% Discount (against offset rate)	37%	46%
Avg Annual Savings	$11,355	$31,393
Term Savings	$227,092	$627,856

10% adder = More Savings to Town

Post-Inflation Reduction Act
Tax Credits and Applicability to MFAH

Direct Pay (Elective Payment)

- Elective pay allows applicable entities, **including tax-exempt and governmental entities that would otherwise be unable to claim certain credits because they do not owe federal income tax, to benefit from the ITC**. By choosing this election, the amount of the credit is treated as a payment of tax and any overpayment will result in a refund.
- Eligible entities include tax-exempt organizations, states and political subdivisions such as local governments, and agencies and instrumentalities of state, local, tribal and U.S. territorial governments.
- Eligible entities would claim and receive an elective payment by making an elective payment election on their annual tax return along with any form required to claim the relevant tax credit. If the entity does not typically file a annual tax return, it would do so for this purpose.
- Projects above 1MW are subject to domestic content requirements (subject to Increased Cost Exception or the Non-Availability Exception - good faith determination)
- IRS Resources: IRS Landing Page, includes Guidance and FAQs

Property Owner (Utility Customer) Perspective
Advantages and Challenges

Advantages:

- Ownership of project
- *May* realize more returns from project over full effective life of equipment
- No negotiation of 3rd party ownership agreement

Challenges:

- Financing
- Legal and accounting review
- Procurement, construction and contractor risk
- Project feasibility and predevelopment
- Production/return projections
- O&M, warranties and repairs
- Domestic content above 1MW
- Cannot monetize depreciation

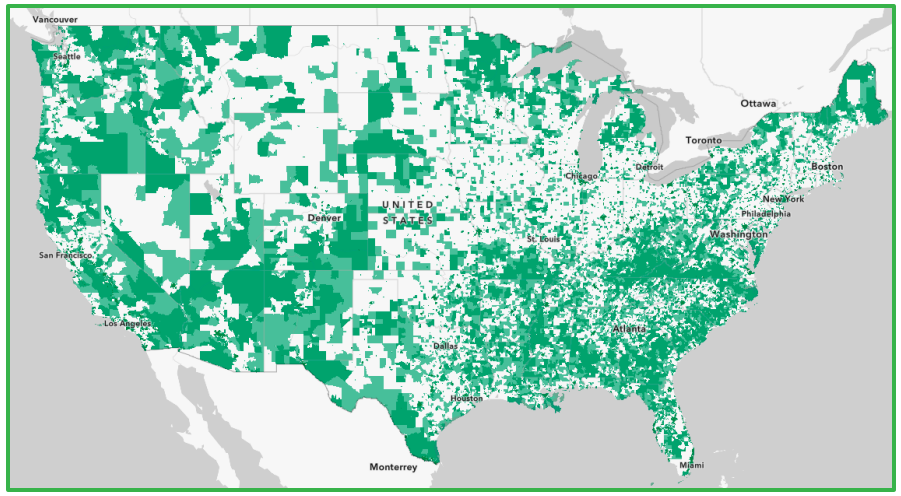
May be a better option smaller projects or customers that have financial/capital and staff with experience in this kind of project procurement/oversight.

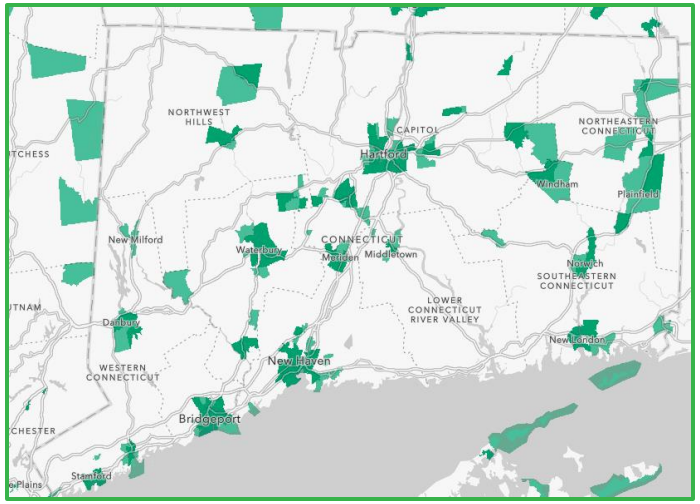
Background (Pre-IRA)
MFAH Solar = RRES

- **Input:** CGB staff and others advocated for a policy environment that would support these projects.
- **Result:** AMF solar is considered residential (RRES) and must be BASA
- **What did this mean?**
  - ❑ Higher tariff value to support these difficult projects!
  - ❑ Rolling Application and not competitive
  - ❑ Front of the meter allows for a third-party Solar Lease which has numerous advantages

Low-Income Communities Bonus Credit
10% or 20% Adder

- Adder for residential (TPO), commercial, native, affordable multifamily housing (AFMH) and community solar projects.
- Location based (10%) and Project based (20%)
- Must apply for an allocation by IRS from a 1.8GW/yr pool (CGB awarded!!)
- Additional Selection Criteria based on *Ownership* and *Location*





Low-Income Communities Bonus Credit

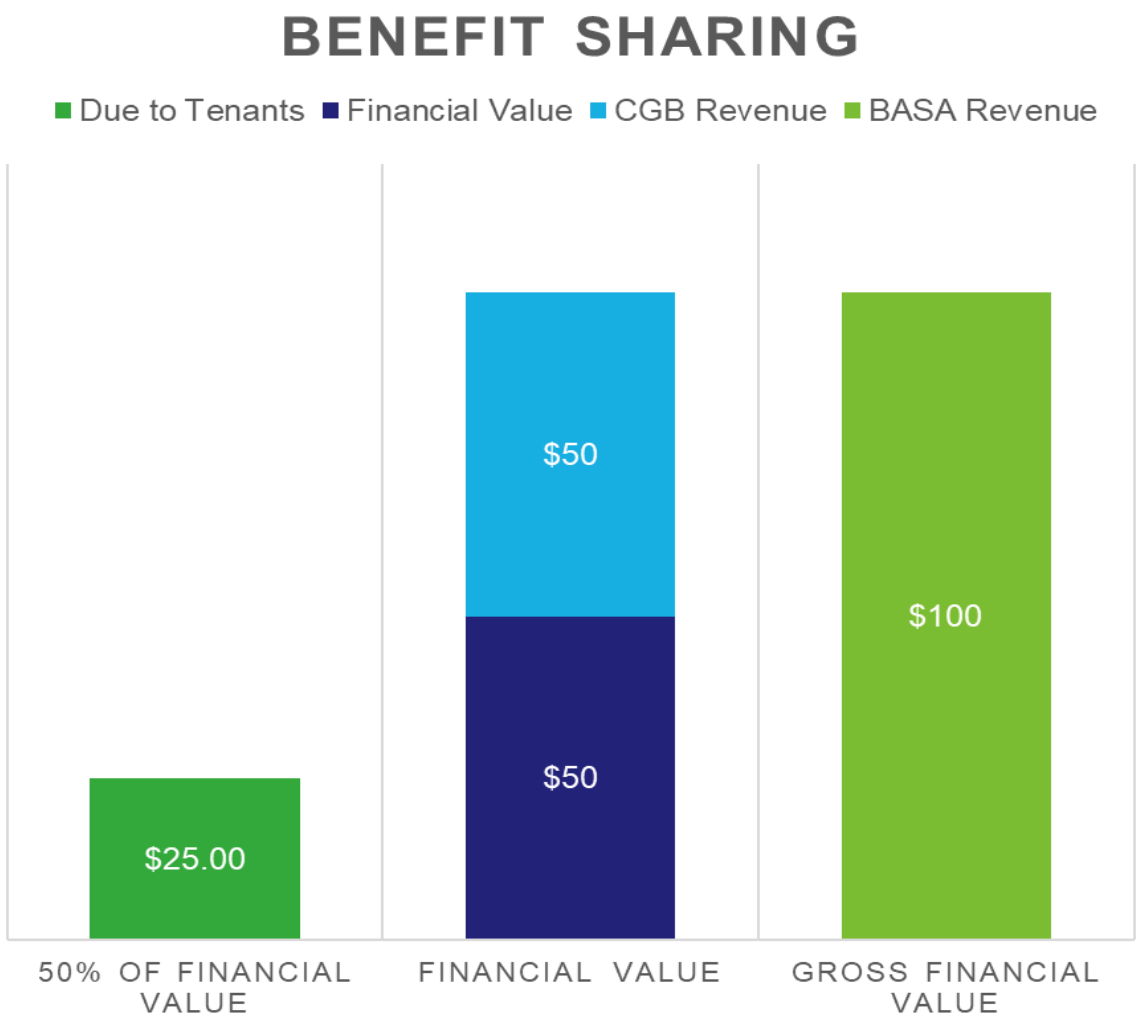
20% Adder – What does "allocated equitably" mean?

CONNECTICUT GREEN BANK

Benefit Sharing Statement

- "At least 50 percent of the financial value…must be equitably allocated to… occupants that are.. low-income"
- "Financial Value" is.. "the gross financial value of the annual energy produced minus any payments made… to the facility owner for energy services… in a given year."

- CGB presented to PURA to help align RRES sharing requirements with federal requirements. A change was made.



Benefits of 20% ITC Bonus

Green Bank needs less tariff revenue to meet our return threshold.

CGB tariff percentage with 30% ITC
47%

CGB tariff percentage with 50% ITC
38%

More money to Low-Income occupants!

1st-year $ to tenants w/30% ITC
$10,973

1st-year $ to tenants w/50% ITC
$17,008

=

More $ and Clean Energy for Vulnerable Populations

Post-Inflation Reduction Act
C-PACE for Non-Profit Solar Projects

Post IRA Example: Easter Seals

Project: roof replacement, LED lighting, and a rooftop solar PV array of 243 kW using a $765,948 CPACE loan

Elective Payment
Tax credit is received as a direct payment and is paid as a part of a regular CPACE payment.

easterseals
Capital Region & Eastern Connecticut

Payment Date	Payment Amt
1/1/2024	$25,468
7/1/2024	$25,468
1/1/2025	$25,468
7/1/2025	$260,842
1/1/2026	$25,468
7/1/2026	$25,468
1/1/2027	$25,468
7/1/2027	$25,468
1/1/2028	$25,468
7/1/2028	$25,468
1/1/2029	$25,468
7/1/2029	$25,468
1/1/2030	$25,468
7/1/2030	$25,468
1/1/2031	$25,468
7/1/2031	$25,468
1/1/2032	$25,468

Post IRA Example: Easter Seals

Benefits of Direct Pay

More projects pass SIR and subsidize the inclusion of roofing costs.

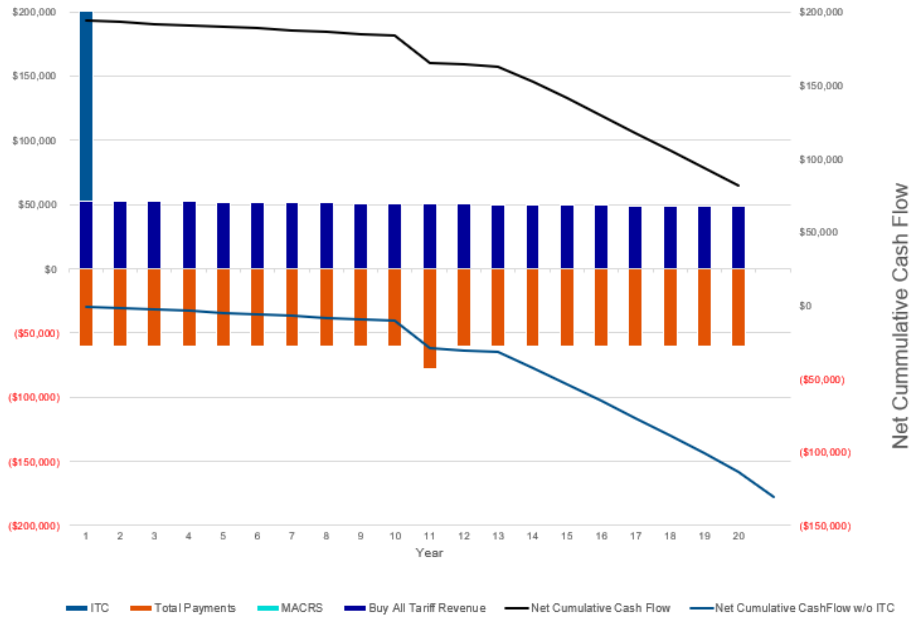
SIR with 30% ITC
- 1.05x

SIR without the ITC
- 0.89x

Improved financial value for non-profits.

NPV with 30% ITC
- $134k

NPV without the ITC
- -$50.6k



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More Solar for Non-Profits

IRA Key Takeaways

Key Takeaways

Positives:

- ITC Adders:
  - Improve economics, leads to greater savings for property owner
  - Harder to finance projects are now "doable"
- Stand-alone storage projects are ITC eligible
- Non-profits able to own solar/storage and able to easily monetize ITC
- Green Bank can monetize ITC through Direct Pay

Challenges:

- Prevailing wage compliance
- Timing and competitive implication for Low Income Bonus Adder
- Uncertainty around MSA designation for Energy Communities adder
- Domestic Content requirement for projects >1 MW AC under Direct Pay
- Benefit Sharing requirements
- No experience (yet!) in satisfying federal requirements to obtain ITC refund under Direct Pay

Appendix

Section 48/48E Investment Tax Credit

- 30% credit for **federal corporate income taxes** for projects placed in service or begin construction in 2023 through 2034
- From the residential customer perspective, the benefits of this tax credit are incorporated into the offtake agreement (e.g., PPA or lease)
- Interconnection costs qualify (projects below 5 MW)
- **Standalone storage qualifies**
- **Projects above 1MW must meet labor requirements**
- Prevailing Wage and Apprenticeship Requirements
- **Transferability**
- **Elective Pay** (Direct Payment)
- **Bonus Adders** – may be combined
  - ❑ Energy Communities (10%)
  - ❑ Domestic Content (10%)
  - ❑ Low-income communities (10% or 20% - limited capacity and must be awarded)

Direct Pay (Elective Pay)

- Elective pay allows applicable entities, **including tax-exempt and governmental entities that would otherwise be unable to claim certain credits because they do not owe federal income tax, to benefit from some tax credits, including ITC**. By choosing this election, the amount of the credit is treated as a payment of tax and any overpayment will result in a refund.
- Eligible entities include tax-exempt organizations, states and political subdivisions such as local governments, and agencies and instrumentalities of state, local, tribal and U.S. territorial governments.
- Eligible entities would claim and receive an elective payment by making an elective payment election on their annual tax return along with any form required to claim the relevant tax credit. If the entity does not typically file a annual tax return, it would do so for this purpose.
- Projects above 1MW are subject to domestic content requirements (subject to Increased Cost Exception or the Non-Availability Exception - good faith determination)
- IRS Resources: IRS Landing Page, includes Guidance and FAQs

Transferability

- **Generally, transferability and direct pay are intended to facilitate financing renewable energy projects by opening up a market to new types of investors outside of traditional institutional tax-equity players.**
- Eligible taxpayers (sellers - generally taxpayers that can't take advantage of direct pay) can make an election to transfer all or a portion of an eligible credit to unrelated taxpayers (buyers) for cash payments (full market value). Tax credits can only be sold once.
- Cannot transfer depreciation benefits.
- The buyer claims the transferred credits on its tax return. The payments is not included in gross income of the seller and are not deductible by the buyer.
- Will require buyers to do careful diligence before buying tax credits
- Buyers can carry back the tax credits they buy up to three years.
- IRS Landing Page, includes Guidance and FAQs

Prevailing Wage & Apprenticeship (PWA)

Prevailing Wage and Apprenticeship Requirements for the construction, installation, alteration, or repair of a qualified facility. Only applies to projects >1 MW AC

- Prevailing Wage and Fringe Benefit Rates must be applied to manual / physical labor (laborer or mechanic) determined wage rates by the Secretary of Labor, see on sam.gov/content/ wage-determinations
- Apprenticeship Ratio (4 journeymen to 1 apprentice ratio) and registration with a Trade Association. A good faith effort exception may apply when requested qualified apprentices from a registered apprenticeship program and no qualified apprentices are available.
- A minimum percentage of the total labor hours of the construction, alteration, or repair work on the facility must be performed by qualified apprentices. This percentage is 10% for 2023, 12.5% for 2023, and 15% for construction beginning in 2024 or after.
- **Taxpayer Burden**: Companies must comply + maintain recordkeeping (applicable wage determination, worker 'list' including classification, hours, and pay, etc.).
- **Taxpayer Risk**: Noncompliance can result in IRS penalties (5,000 fee for each impacted individual) and require companies to backpay workers/apprentices.
- Final Regulations issued June 18, 2024
- FAQs (very helpful)

Bonus Adders – Domestic Content (10%)

- Generally project qualifies if (i) 100% of any steel or iron that is a component of the facility was produced in the U.S., and (ii) 40% (20% for offshore wind) of the total costs of all manufactured products are mined, produced, or manufactured in the United States.
- Safe harbor for categorizing certain applicable project components.
- The person whose costs must be tested is the person performing the Manufacturing Process that produced the US Manufactured Product or the Non-US Manufactured Product, which may not be the project owner's or EPC contractor's direct vendor counterparty. The "cost" taken into account consists of only "direct costs" (direct materials and direct labor costs).
- A lot of overlap with BABA
- Guidance updated on May 16, 2024 – still working toward proposed draft regulations

Bonus Adders – Energy Communities (10%)

- **Metropolitan or non-metropolitan statistical area (MSA/non-MSA)** which **(1)** meets certain employment metrics related to the extraction, processing, transport, or storage of coal, oil or natural gas, **AND (2)** has an unemployment rate above the national average for the previous year **(updated May of each year); Currently New Haven and Fairfield County qualify.**
- Census tract, or a census tract that is adjoining to a census tract, in which a **coal mine has closed after 1999 or a coal-fired electric generating unit was retired after 2009; and**
- **Brownfield as defined by federal definition (CERCLA). Site may qualify if (1)** it was previously assessed through brownfield resources as meeting the definition, **(2)** Phase II confirms the presence on the site of a hazardous substance, **or (3)** For projects less than 5MW (AC), a Phase I identifies the presence or potential presence on the site of a hazardous substance, or a pollutant or contaminant.
- Landing Page with Map and Guidance
- IRS FAQs for Energy Communities (very helpful)

Bonus Adders – Energy Communities (10%)

EPA/CERCLA Brownfields (EPA Clean Up My Community Map)

Note: There is no comprehensive map of brownfields for this purpose. Other brownfields (such as those on larger DEEP/DECD brownfield list) may qualify as well as those that utilize the Phase I or Phase II safe harbor.

MSAs and Coal-Fired Unit Retirements (DOE Energy Community Tax Credit Bonus Map – picture below)

Note: MSA (Counties) subject to update every May, just updated on June 7the, 2024 and in effect until the May 2025 update.