



Municipal Thermal Energy Network Accelerator



THANK YOU TO OUR FUNDER!

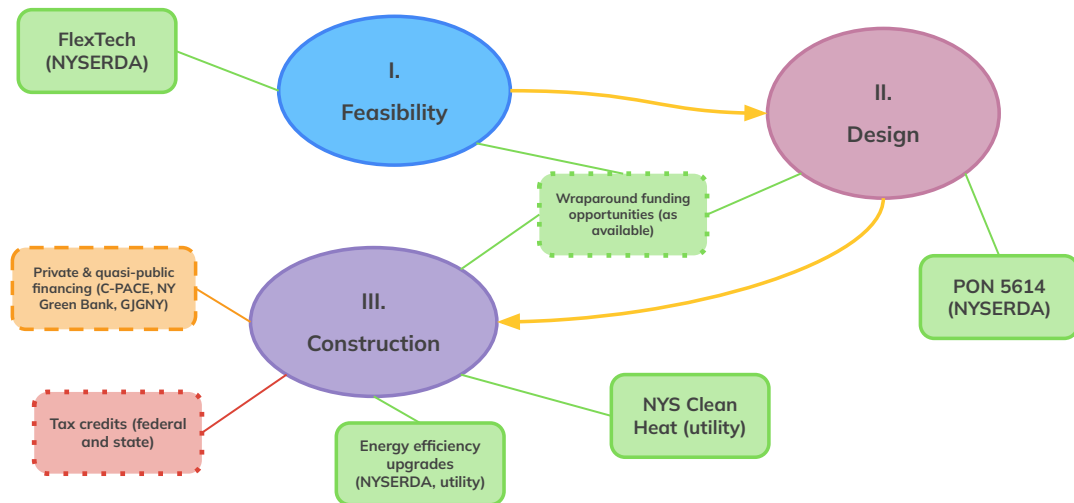
*The New York
Community Trust*
of Westchester

A COLLABORATION BETWEEN:



Financing pt. 1 – Session #4 Recap

- Topics covered:
 - MTEN Costs: soft costs, drilling, pipe installation, building upgrades
- Focus on state & utility funding support:
 - PON 4614
 - PON 5614
 - NYS Clean Heat
 - NYSERDA programs
 - Wraparound funding - CFA
- Barriers to be conscious of:
 - Many state, utility programs require applicants to pay into the SBC (Systems Benefit Charge)
 - Certain programs may be short-term opportunities
 - Higher costs for pilots
 - Demand and greater adoption of technology may help drive down costs



EXPLORE additional funding opportunities for thermal energy network & associated projects

- Federal Tax Credits & Rules
- Private & Quasi-Public Financing
 - C-PACE
 - New York Green Bank
- Local Development Corporations (LDCs)
 - Troy Case Study



Two Quick Reminders:

- This presentation is for informational purposes only — not legal or tax advice
- Work with qualified legal and tax professionals to confirm eligibility and maximize incentives

Federal Tax Credits and Rules

Impact of OBBBA (“H.R. 1”) on IRA Incentives

Quick Reminder – The Laws of TEN Business Models

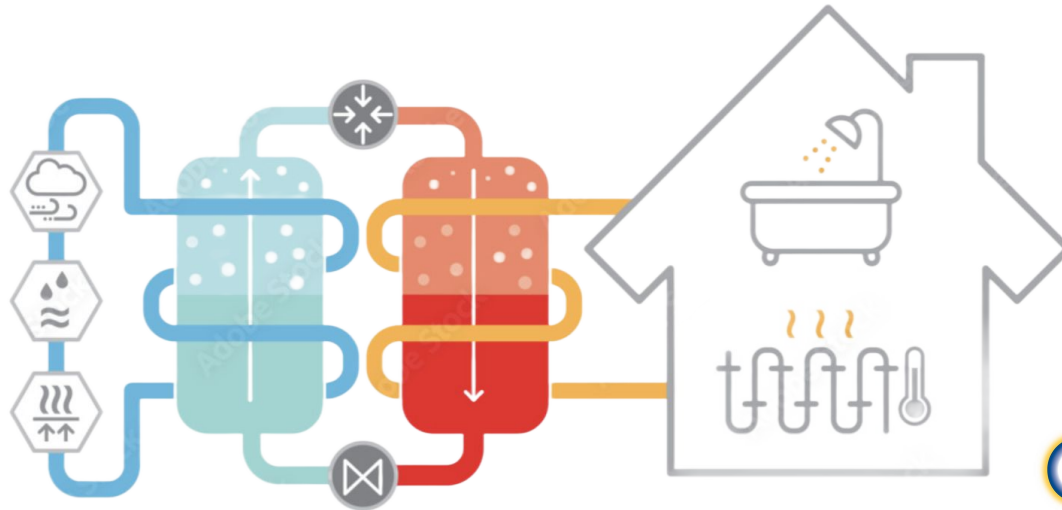
Four Bodies of Law

- **New York State Municipal Laws**
 - NYS Constitution
 - Municipal Home Rule Law
 - NYS Laws Governing Cities, Counties, Towns and Villages
- **Public Service Commission**
 - Public Service Law
 - UTENJA Docket & Regulatory Development
- **Federal Tax Credits** under the IRA and OBBBA (H.R. 1)
- **Local Development Corporations**
 - General Municipal Law Art 18-A
 - Section 1411 of the Not-for-Profit Corporation Law



H.R. 1 did **NOT** change:

- Section 48 ITC for Ground-Source Heat Pump Systems
 - Prevailing Wage and Apprenticeship Rules
 - Domestic Content and Energy Community Bonuses
- Energy Property Split-Ownership Rules
- Elective (Direct) Pay and Credit Transfer



Section 48 Investment Tax Credit

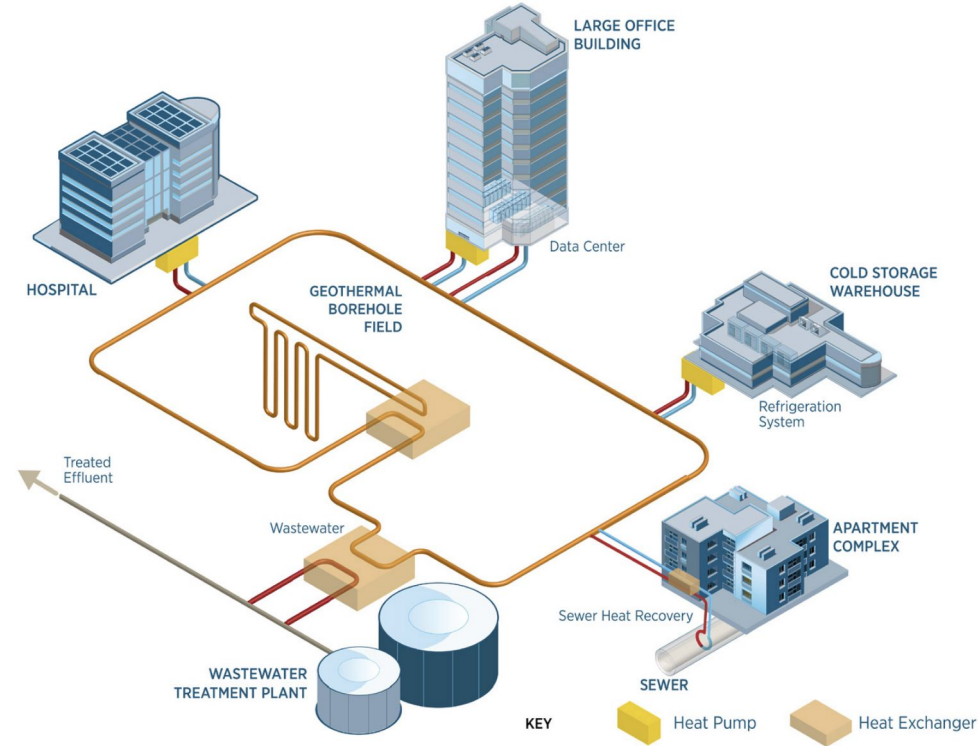
Table 1: Section 48 Investment Tax Credit Overview

Tax Credit Type	Tax Credit Amount by Year Construction Begins		
	≤ 2033	2034	2035
Base ITC	6%	4.5%	3%
Prevailing Wage and Apprenticeship Bonus or < 1 MW	$+ \leq 24\%$	$+ \leq 18\%$	$+ \leq 12\%$
Domestic Content Bonus	$+ \leq 10\%$	$+ \leq 7.5\%$	$+ \leq 5\%$
Energy Communities Bonus	$+ \leq 10\%$	$+ \leq 7.5\%$	$+ \leq 5\%$
Potential Maximum ITC	Up to 50%	Up to 37.5%	Up to 25%

Energy Property – Rules Limiting Split Ownership

To qualify for the Section 48 ITC (as amended by H.R. 1):

- A single taxpayer must own a complete, unified “unit of energy property.”
- For geothermal heat pump (GHP) systems, ownership must cover at least:
 - Boreholes or borefields
 - Ground loops
 - At least one connected heat pump



"Definition of Energy Property and Rules Applicable to the Energy Credit," 88 Fed. Reg. 72,560–72,575 (Nov. 22, 2023), <https://www.federalregister.gov/documents/2023/11/22/2023-25539/definition-of-energy-property-and-rules-applicable-to-the-energy-credit>

Elective Pay and Credit Transfer

- Elective Pay (Direct Pay, §6417):
 - Allows municipalities, nonprofits, and tribal governments to receive cash payments instead of tax credits
 - Payments may be reduced if tax-exempt financing is used or certain requirements are unmet
 - New FEOC and Domestic Content restrictions - *Not currently applicable to § 48 ITC for geothermal*
- Credit Transfer (§6418):
 - Enables eligible entities to transfer ITCs to commercial taxpayers
 - Supports public-private partnerships and other financing solutions
 - Transfers prohibited to Specified Foreign Entities (SFEs)

Pause for Questions



H.R. 1 DID change:

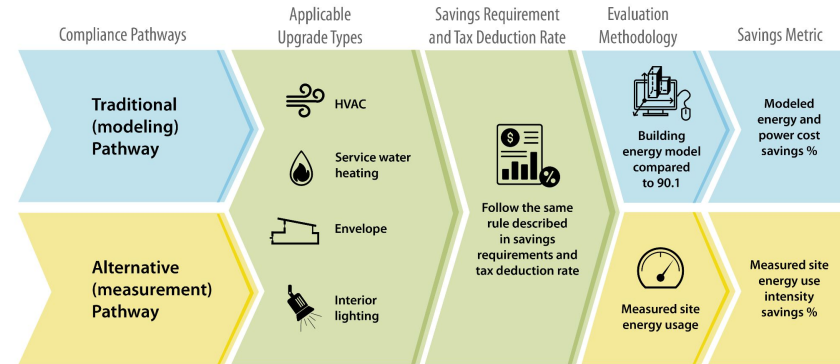
- Early Phase Out of Key Energy Efficiency and Renewable Energy Tax Credits:
 - Commercial Energy Efficiency Tax Credit – 179D
 - Energy Efficient Home Improvement Tax Credit – 25C
 - Residential Clean Energy Tax Credit – 25D
- Third-Party Ownership and Leasing of Energy Property
- Depreciation
- Foreign Entity of Concern (FEOC) Restrictions



Commercial Energy Efficiency Tax Credit – 179D

- Two pathways:

- **Energy Efficient Commercial Building Property** – modelled pathway for deduction, applicable to *new construction and retrofits*
- **Energy Efficient Building Retrofit Property (EEBRP)** – measured pathway for deduction, *building must have been in service for ≥ 5 years*



Source: Department of Energy, [179D](#)

- Must achieve at least 25% savings from baseline
- Bonuses for prevailing wage and apprenticeship

SEC. 70507. TERMINATION OF ENERGY EFFICIENT COMMERCIAL BUILDINGS DEDUCTION.

Section 179D is amended by adding at the end the following new subsection:

“(i) **TERMINATION.**—This section shall not apply with respect to property the construction of which begins after June 30, 2026.”.

OBBBA Phaseout: Construction begins by 6/30/26, not placed-in-service

Energy Efficient Home Improvement Tax Credit – 25C

- **\$1,200 annual cap for:** building envelope improvements (insulation, air sealing,) home energy audits, panel upgrades, central AC, and fossil fuel space & water heating systems
 - Specific caps for each technology
- **\$2,000 annual cap for:** air source heat pumps, heat pumps, water heaters, and biomass stoves/boilers
- **\$3,200 cap total for 25C**



OBBBA Phaseout: **Must be placed-in-service by 12/31/25**

Residential Clean Energy Credit – 25D

- **30% Uncapped Credit** for solar, battery storage, geothermal heat pumps, and small wind turbines

OBBBA Phaseout: Expenditures made by 12/31/25

SEC. 70506. TERMINATION OF RESIDENTIAL CLEAN ENERGY CREDIT.

(a) IN GENERAL.—Section 25D(h) is amended by striking “to property placed in service after December 31, 2034” and inserting “with respect to any expenditures made after December 31, 2025”.

(8) WHEN EXPENDITURE MADE; AMOUNT OF EXPENDITURE

(A) In general

Except as provided in subparagraph (B), an expenditure with respect to an item shall be treated as made when the original installation of the item is completed.

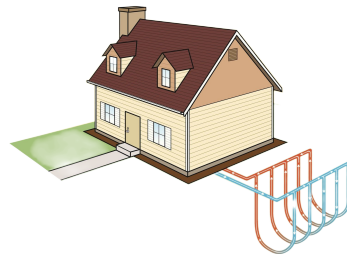
(B) Expenditures part of building construction

In the case of an expenditure in connection with the construction or reconstruction of a structure, such expenditure shall be treated as made when the original use of the constructed or reconstructed structure by the taxpayer begins.

(h) TERMINATION

The credit allowed under this section shall not apply with respect to any expenditures made after December 31, 2025.

Left: [H.R.1 2025-2026](#)



Left: [U.S. Code § 25D](#)

25C & 25D: Tips & Eligibility

- *New in 2025 for 25C:* use a “qualified manufacturer”
 - For windows, doors, skylights, outdoor heat pumps, water heaters, AC & fossil fuel heating
 - May need to request code from your manufacturer?
- For heat pumps, HVAC, windows, doors, confirm equipment is ENERGY STAR certified
 - Not required for insulation
- Nonrefundable - you must owe what you claim
 - **25D: carryforward still applies!** (Source: U.S. Code § 25D)



Third-Party Ownership and Leasing of Energy Property

New Leasing Language Added in H.R. 1

- New language was added to the Revenue Code to allow for geothermal system leasing
- Exempts geo systems from “limited use property” policies at the IRS
- Offers new third-party ownership opportunities in the geothermal market

(2) CONFORMING RULES.—Section 50 is amended by adding at the end the following new subsection:

“(e) RULES FOR GEOTHERMAL HEAT PUMPS.—For purposes of this section and section 168, the ownership of energy property described in section 48(a)(3)(A)(vii) shall be determined without regard to whether such property is readily usable by a person other than the lessee or service recipient.”.

Third-Party Ownership and Leasing of Energy Property

Master Limited Partnership Ownership Structures Now Available

- Geothermal heating and cooling systems now eligible for ownership under publicly traded partnerships
- Allows for Master Limited Partnership structures to own geothermal systems and take advantage of associated tax benefits

SEC. 70524. INCOME FROM HYDROGEN STORAGE, CARBON CAPTURE, ADVANCED NUCLEAR, HYDROPOWER, AND GEOTHERMAL ENERGY ADDED TO QUALIFYING INCOME OF CERTAIN PUBLICLY TRADED PARTNERSHIPS.

“(vi) the operation of energy property described in clause (iii) or (vii) of section 48(a)(3)(A) (determined without regard to any requirement under such section with respect to the date on which construction of property begins).”.

More to come!

Depreciation

Five-Year Depreciation Eliminated for Energy Property

- Five-year accelerated depreciation for geothermal systems is eliminated effective January 1, 2025
- Accelerated depreciation remains but is dependent on ownership structure and system design
- Municipalities and other tax-exempt entities cannot claim depreciation directly
- Consult a tax professional for additional depreciation guidance

SEC. 70509. TERMINATION OF COST RECOVERY FOR ENERGY PROPERTY.

(a) ENERGY PROPERTY.—Section 168(e)(3)(B)(vi), as amended by section 13703 of Public Law 117–169, is amended—

(1) by striking subclause (I), and

(2) by redesignating subclauses (II) and (III) as subclauses (I) and (II), respectively.

(b) EFFECTIVE DATE.—The amendments made by subsection (a) shall apply to property the construction of which begins after December 31, 2024.

Foreign Entity of Concern (FEOC) Restrictions

FEOC Compliance: Entities must not be directly or indirectly owned, controlled, or substantially financed by a Prohibited Foreign Entity (PFE), as defined under FEOC rules (e.g., those linked to China, Russia, Iran, North Korea).

H.R. 1 introduces complex “prohibited foreign entity” rules (aka “PFE” or “FEOC”)

Note: Foreign entity rules apply alike to taxpayers claiming credits through Elective Pay or otherwise

Extensive foreign entity rules apply to 45Y PTC, 48E ITC, and 45X Advanced Manufacturing Credits

1. Entity-level rules (ownership, influence)
2. Payments rules (payments/contracts conferring “effective control”)
3. Material assistance rules (supply chain)

Only Entity-level rules apply to 45Q Carbon Capture, 45U Existing Nuclear, 45Z Clean Fuels

Foreign entity rules do not apply to:

- PTC/ITC for projects that began construction before 2025 (legacy PTC/ITC)
- ITC for ground source heat pumps
- 45V Clean Hydrogen Credit

Source: Lawyers for Good Government (L4GG) – 7.30.2025 webinar

What's Next?

- Implementation of H.R. 1 is now underway at the U.S. Department of the Treasury
- JCT Bluebook expected next year
- Industry continues to engage Treasury Office of Tax Policy and seek additional legislative opportunities at the federal and state levels



Key Takeaways

- Talk to qualified tax and legal advisors about provisions specific to their project – lots of overlapping, nested definitions
- FEOC restrictions apply to clean electricity (wind & solar) production & investment, advanced manufacturing, nuclear power, carbon capture, and clean fuel production...
 - **But NOT geothermal! (For now ...)**
- Final guidance on FEOC restrictions will likely take more time to come together than other rules/guidelines
 - Stay tuned for updates



Key Takeaways

Next Steps

1. Review the Guidance Thoroughly

- **Understand updated definitions** of key terms like “beginning of construction,” “continuous construction,” and “continuous efforts.”
- Identify any **changes to safe harbor deadlines** or methods (e.g., physical work test vs. 5% safe harbor).
- Note any **clarifications on credit eligibility**, especially for clean energy projects (e.g., PTC/ITC).

2. Update Project Timelines and Documentation

 *Timelines are key!*

- Align your **project development timelines** with the new BOC rules to ensure eligibility.
- Adjust construction schedules or procurement strategies if necessary.
- Ensure **documentation practices** (contracts, invoices, permits) meet any new IRS requirements for substantiating BOC.

Source: Lawyers for Good Government (L4GG) – 7.30.2025 webinar

Key Takeaways

Next Steps Cont.

3. Communicate with Stakeholders

- Inform investors, lenders, and developers of any changes in project credit timelines or eligibility.
- Update internal teams (e.g., legal, construction, finance) with compliance checklists.

4. Hire Paid Tax Counsel (if you can) OR Join L4GG's Elective Pay Sprint Hub

Work with legal and tax advisors to:

- Interpret how new rules apply to your specific projects.
- Conduct **eligibility assessments** for current and planned projects.
- Plan and file!

Source: Lawyers for Good Government (L4GG) – 7.30.2025 webinar

Resources

- Lawyers for Good Government (L4GG):
[Elective Pay & IRA Tax Incentives Resources Page](#) (recommend signing up for e-news at bottom)
 - *News, fact sheets, webinars, resources, and more!*
- [Clean Energy Tax Navigator](#)
- Tax Law Center: [Navigating OBBA](#)
- Clean Energy Business Network: [Tax Package Resource Center](#)



Pause for Questions



C-PACE Financing

Susan Morth, CEO

E: smorth@eicpace.org

P: 914-302-7300 ext. 8114



New York Green Bank

ABOUT NY GREEN BANK

Mission-driven, solutions-oriented investment professionals with deep credit, project finance, and technical experience, along with unique expertise in energy and environmental policy

LARGEST
green bank
in the nation

\$1 BILLION
capitalization with New
York ratepayer funds

2013
year established

\$5-50 MILLION
typical investment size

GOAL

Alleviate financing gaps in New York's sustainable infrastructure markets to accelerate clean energy investments that combat climate change and deliver benefits equitably for all

HOW CAN NY GREEN BANK HELP OVERCOME BARRIERS?

NY Green Bank steps in to fill gaps in the market where financing may not be available from conventional lenders due to various barriers

BARRIER

NY GREEN BANK SOLUTION

LIMITED NUMBER OF FINANCING PARTNERS

Be a first-mover to build market scale and standardization attracting more private capital to the sector

UNFAMILIARITY WITH ASSET CLASS

Utilize deep expertise in financing clean energy projects and leverage expertise of NYSERDA colleagues

PERCEIVED UNCERTAINTY OF REVENUE STREAMS

Consider all types of revenue contracts, merchant markets, and incentive payments, with a focus on building replicable structures

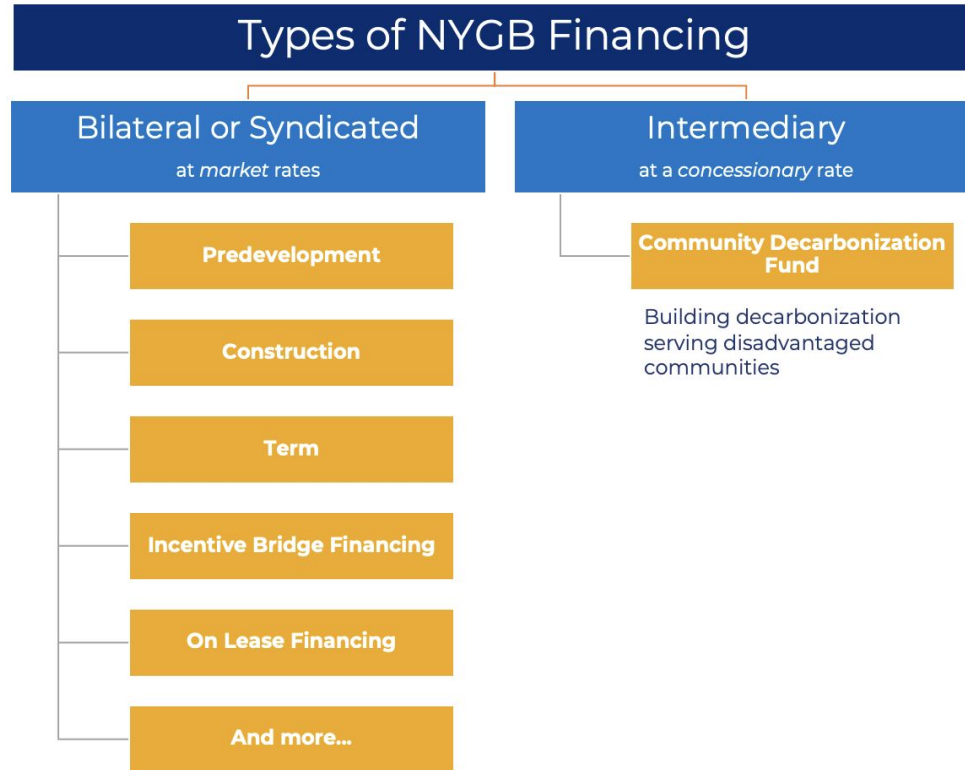
SMALL TRANSACTION SIZE

Provide financing for, and help standardize, portfolios of small- to mid-sized transactions

MINIMAL STANDARDIZATION

Be solutions-oriented in finding creditworthy approaches to financing projects with limited transactional precedent

NYGB OFFERS FLEXIBLE FINANCING IN TWO BROAD CATEGORIES



BILATERAL OR SYNDICATED MARKET RATE FINANCING: RFP 1 – CLEAN ENERGY FINANCING ARRANGEMENTS

INVESTMENT CRITERIA

To be a fit for NYGB financing, a transaction must:

- Demonstrate additionality/gap filling need;
- Finance projects located in New York State;
- Contribute to greenhouse gas emissions reductions in support of New York State clean energy policies; and
- Utilize eligible technologies

INDICATIVE TERMS

- **Amount:** Minimum of \$5MM - \$50MM per sponsor
- **Collateral:** Flexible
- **Repayment:** Flexible
- **Term:** Flexible, typically up to 10 years
- **Interest Rate:** Market interest rate, fixed/floating

SELECT ELIGIBLE TECHNOLOGIES

Clean Energy Generation Sources: Other Clean Energy Technologies:

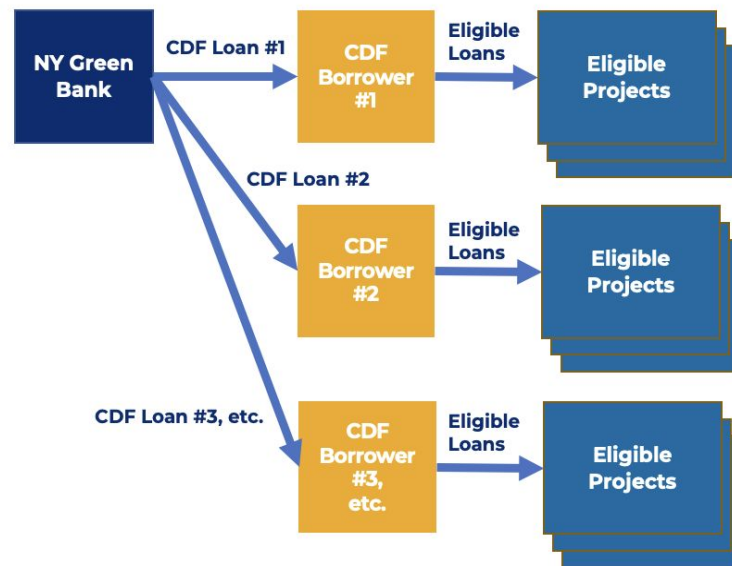
- Solar (Photovoltaics and/or Thermal)
- Wind (Onshore and/or Offshore)
- Hydroelectric (Upgrades and/or repowering New low-impact run-of-facility [30 MW or less with no new storage impoundment])
- Geothermal electric
- Tidal Energy
- Wave Energy
- Ocean thermal
- Fuel cells
- Biomass, so long as contracted under a NYSEDA incentive program or a Tier 1 REC procurement
- Clean Transportation
- Electric vehicle infrastructure (including charging stations)
- Thermal and Electric Energy Storage
- Bioenergy for use cases other than electricity generation (e.g., alternative fuels)
- **Geothermal ground source heat**
- Port Infrastructure in support of Offshore wind projects
- Any other clean energy technology eligible under the NYS Public Service Commission's "Order
- Authorizing the Clean Energy Fund Framework," issued and effective January 21, 2016, and any related orders issued by the Public Service Commission.

The full and definitive list is available on the NY Green Bank website

INTRODUCING THE COMMUNITY DECARBONIZATION FUND (“CDF”)

The CDF provides **\$250MM in concessionary capital** to community lenders experienced in funding clean energy projects and improvements that benefit underserved communities

- Deployed from **2023 through 2027** by loans to Eligible Applicants
- The CDF will seek to fund a diverse and representative group of CDFIs and specialty lenders to **support energy finance programs with emphasis on building electrification and affordable housing**
- CDF Applicants with **emerging clean energy finance programs** will be encouraged to apply, particularly those serving persistent poverty areas, communities of color, and other traditionally marginalized communities
- The CDF is designed to be **additive and complementary with existing lending programs** serving disadvantaged community markets or those we know will be launched



INTERMEDIARY LENDING: RFP 23: COMMUNITY DECARBONIZATION FUND - FINANCING FOR DISADVANTAGED COMMUNITY LENDERS

ELIGIBLE APPLICANTS:

A certified Community Development Financial Institution ("CDFI"), including: Community Development Banks; Community Development Credit Unions; Community Development Loan Funds; and Community Development Venture Capital Funds

A specialty lender, defined as a **501(c)(3) non-profit organization or government-chartered institution or public housing agency** with a mission that includes developing, managing, or investing in: affordable housing solutions; -cooperatives; clean energy projects; and contractors

INDICATIVE TERMS

- **Amount:** Minimum of \$2M and up to \$25M per borrower, sized to the borrower's existing balance sheet
- **Availability Period:** 24 months from closing date
- **Term:** 12 years after the closing date
- **Interest Rate:** 1.50% per annum fixed interest rate

ELIGIBLE TECHNOLOGIES

- Building Electrification and Supporting Measures¹, examples including but not limited to:
 - Heating and Cooling Load Reduction
 - Weatherization
 - Windows
 - Heat recovery ventilation
 - Clean Heating Technologies²
 - Air Source Heat Pumps
 - Water Source Heat Pumps
 - Ground Source Heat Pumps
 - District thermal interconnection
- Electric Vehicle Infrastructure (including charging stations)
- Thermal and Electric Energy Storage
- On-site Solar serving customer load when combined with one or more of the above listed Eligible Technologies

NYGB may consider other technologies that reduce greenhouse emissions, beyond those listed above. The CDF Scoring Committee, which includes a member of the NYSEDA Clean and Resilient Buildings team, will assess whether a given technology is supporting New York State climate policy goals.

CDF BORROWERS

EIGHT TRANSACTIONS TOTALING \$158 MILLION CLOSED TO DATE

These first movers will help expand lending in communities that need it most and serve as models for future transactions as we look to support even more community lenders.

Interested in contacting any of the approved CDF borrowers? Reach out to the contacts below:

TruFund - Desiree Thomas, VP/Director of Community Climate Finance, dthomas@trufund.org

ECLF - Megan Marsick, Director, Investment, mmarsick@enterprisecommunity.org, and Sivan Bruce, Senior Loan Officer, sbruce@enterprisecommunity.org

CPC - Fergus O'Connell, Vice President, Director of Capital Strategies, foconnell@communityp.com

CONTACT INFORMATION

CONTACT NY GREEN BANK

1333 BROADWAY | SUITE 300 | NEW YORK, NY 10018

CALL: (212) 379 – 6260

EMAIL: INVESTMENTRFPS@GREENBANK.NY.GOV

VISIT: WWW.GREENBANK.NY.GOV

FOLLOW ON LINKEDIN: [@NY-GREEN-BANK](#)



Pause for Questions



Local Development Corporations

The Role of LDCs in TEN Project Financing

Dylan Turek

Senior VP of Development, Advance Albany County Alliance
Former City of Troy Economic Development Director



Why LDCs Matter for TEN Projects

- LDCs = Nonprofit, public-purpose corporations under NY NPCL §1411
- Provide municipalities with:
 - Financing flexibility (bonds, loans, Green Bank)
 - Public-private partnership platform
 - Ability to own/lease borefields, contract with utilities, work with private landowners
- **Opportunity:** Mobilize local economic development + decarbonization goals simultaneously



Lessons from Troy

Figure 4. Phase 3 Proposed Site Plan



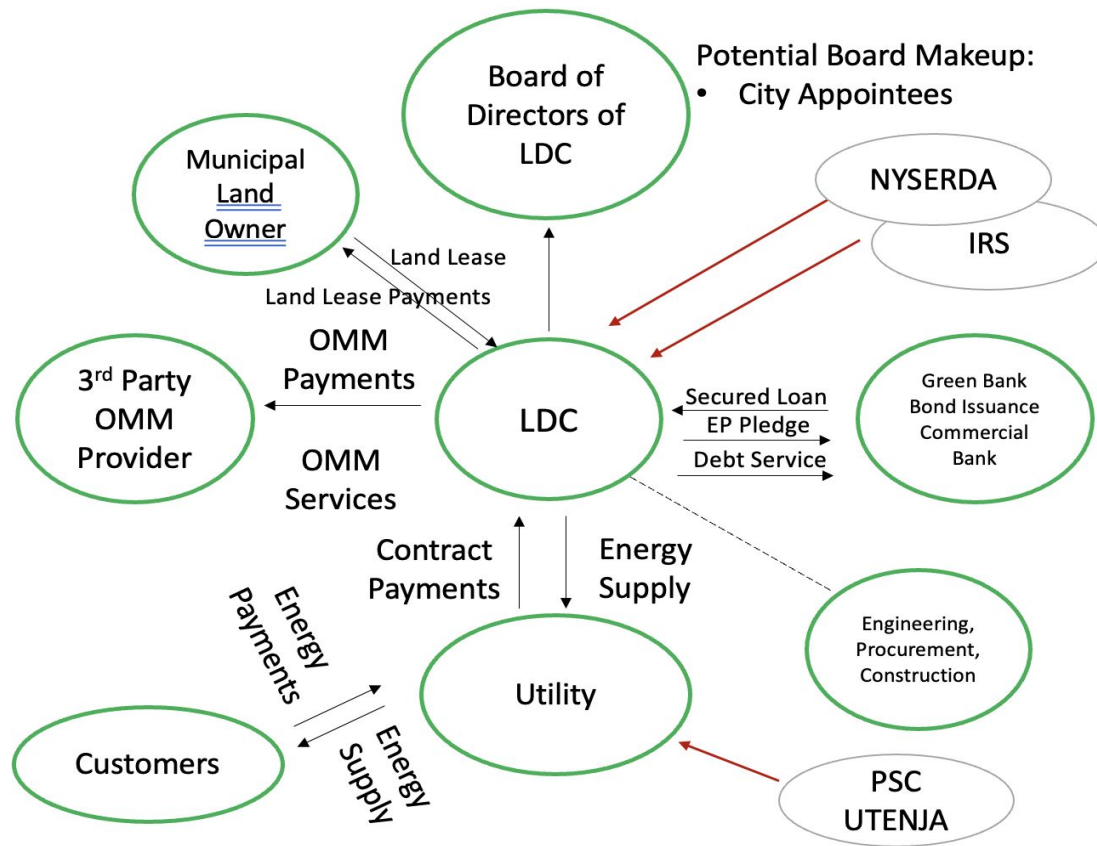
Lessons from Troy

- **Project site:** Former City Hall along Hudson River; complex “rat’s nest” infrastructure → pivoted to using park land as borefield → innovative municipal land use strategy
- **Issue:** Conservative bond counsel; required more than one private offtaker if using public resources, couldn’t municipally bond → City partnered with LDC
- **Outcome:** Passed distribution network ownership to National Grid under UTENJA



Hybrid Municipal TEN

- Hybrid Municipal-UTENJA Model
 - Separate generation from distribution ownership
- Costs
 - Equity cost for utility owning distribution
 - Private O&M contracts
- 100% LDC financed and grant reliant
- TEN Generation operated, maintained, managed by LDC via its Contractor
- TEN Distribution operated by Utility utilizing existing rights of way/easements
- Utility contracts customer billing/service
- LDC-Utility contract scalable fee paid to LDC with commitment to maintain quality of service, covering debt service, LDC administration and overhead costs* plus municipal land lease payments

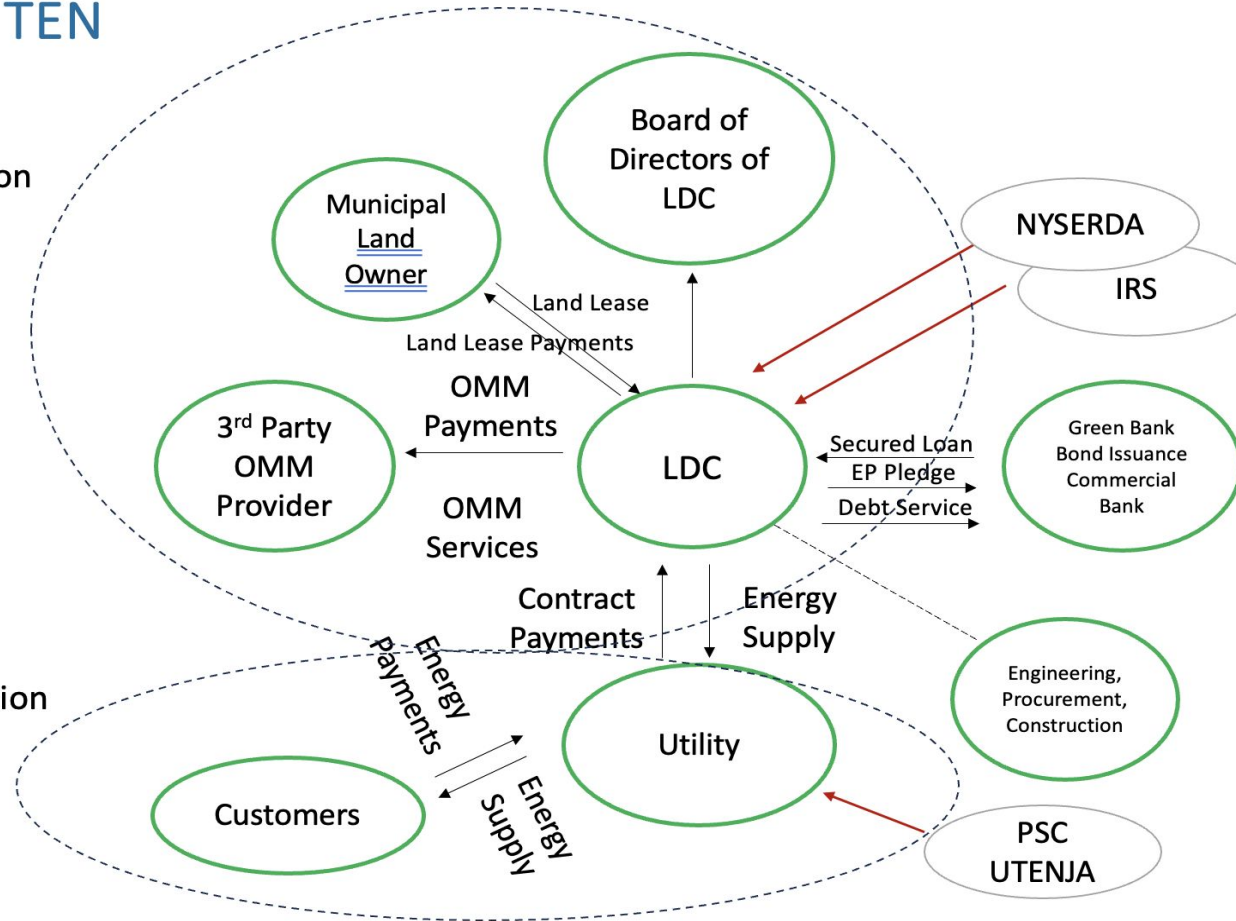


Hybrid Municipal TEN

- Split-ownership model at odds with federal single ownership rules for *Energy Property* under the § 48 ITC
- Distribution system treatment is ordinary utility *cost of service* principles

Generation

Distribution



Benefits of Using an LDC Structure

Financial Flexibility

- Avoids municipal bond law constraints; can act more nimbly
- Structures financing with multiple partners
- Engages private landowners where municipalities cannot

Municipal Opportunities

- Revenue generation from leasing public land for borefields
- Property tax relief as new revenue streams ease budget pressures
- Democratic/local energy control vs. “easy route” of leasing to private developers

Governance Advantages

- Independent nonprofit structure separates risk from municipality
- Board governance includes city appointees + private representatives
- Exempt from some procurement/appraisal rules, enabling faster action
- Supports campus-style or district TENs with multiple stakeholders

Challenges and Risks

With LDC Structure

- Need for multiple offtakers before financing → difficult to back debt service when offtakers are uncertain
- Internal municipal leadership changes → continuity risk

With Split Ownership

- Split ownership (generation vs. distribution) conflicts with federal tax rules, complicating ITC eligibility
- Utility takeover of distribution simplified operations for City/LDC but reduced municipal financing control



A Path Forward

- Start with **comprehensive planning** → citywide decarbonization studies
- **Explore** LDC formation with local development agencies

Opportunity: Explore how LDCs + municipal agencies can “bundle” projects or create comprehensive decarbonization plans to access funding

- **Leverage** municipal land assets + state/federal programs.
- **Consider** phased “campus” TEN pilots
- **Coordinate** with utilities (per PSC UTENJA) while preserving local control



Pause for Questions



Next Up & October Preview:

Planning, Zoning, and Permitting



October 20th or 27th
11am - 12pm

Reach out for 1-on-1s!

- Go over topics discussed so far
- Share updates
- Think about resource and material needs for implementation packages

Session 6 Topic:

Part 1: Planning, Zoning, and Permitting for TENs

- NYPA Resources Overview

Thank you!

