

STAR V Solar Accelerator



LLSC MASSACHUSETTS



Introductions



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RESONANT ENERGY

- **Mission:** To expand access to clean energy in underinvested communities
- **Service Area:** Boston-based development company founded in 2016 building projects in MA, NY
- **Focus:** Affordable Housing, Nonprofit, Small Commercial
- **Specialty Services:** Lender & investor consent support, ITC adder and Elective Pay support



Certified



Corporation



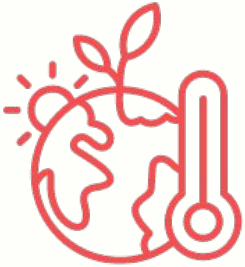
Build Local Power

Why Solar?



Electricity Costs:

- Electricity costs have increased by 2.5x over the last 20 years in Massachusetts (Source: [Federal reserve](#))



Climate Goals:

- Massachusetts has set an aggressive goal of net-zero emissions by 2050 (Source: [Mass.gov](#))

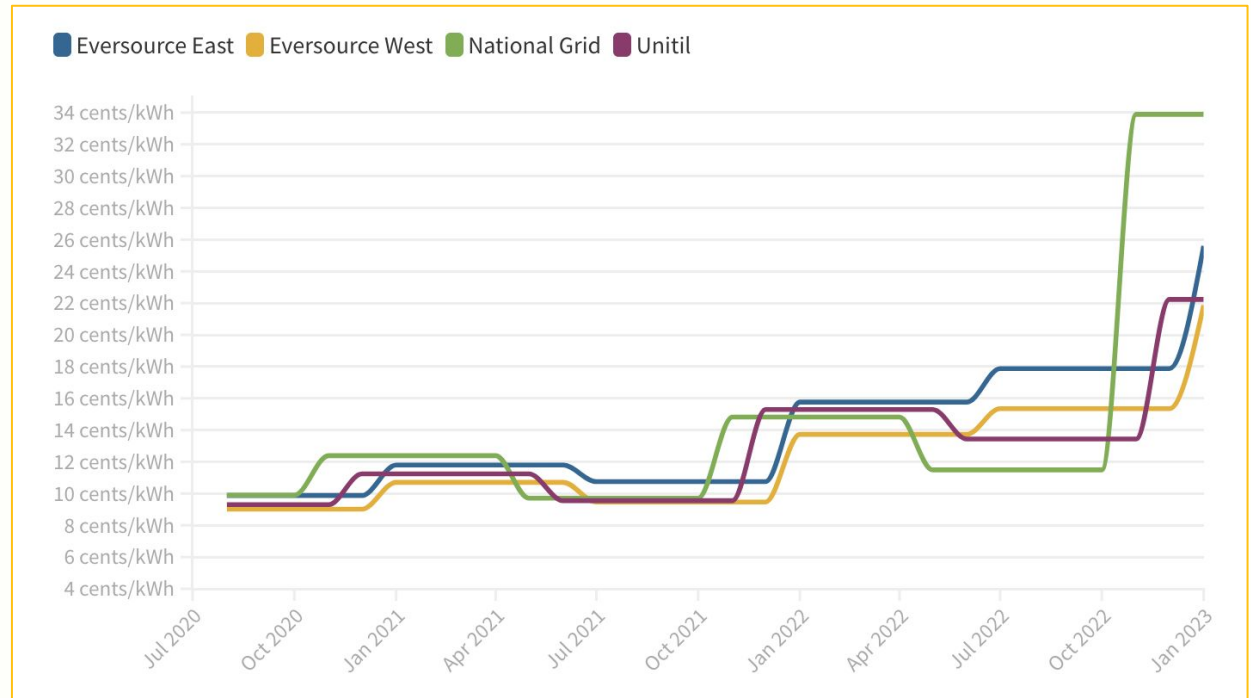


Health Benefits:

- Improvements to indoor & outdoor air quality (i.e. cooking, heating, [EV](#)) rely on affordable, clean electricity.

The Cost of Electricity

- Massachusetts produces most of its electricity with natural gas, which is subject to price spikes.
- Boston is ranked as one of the top 5 cities for energy burden.¹
- Utility rates have been rising much faster than inflation.



*Massachusetts' average residential electricity rate is **\$0.33/kWh**, compared to the nationwide average of **\$0.19/kWh**.*

1. [American Council for an Energy Efficient Economy](#)



Why Now?

Massachusetts Grants:

- Solar for All – **\$156 million** awarded to MA. Launching 2026.
 - Public Housing: Estimated \$5M - \$10M
 - Private Affordable Housing: Estimated \$15-\$25M

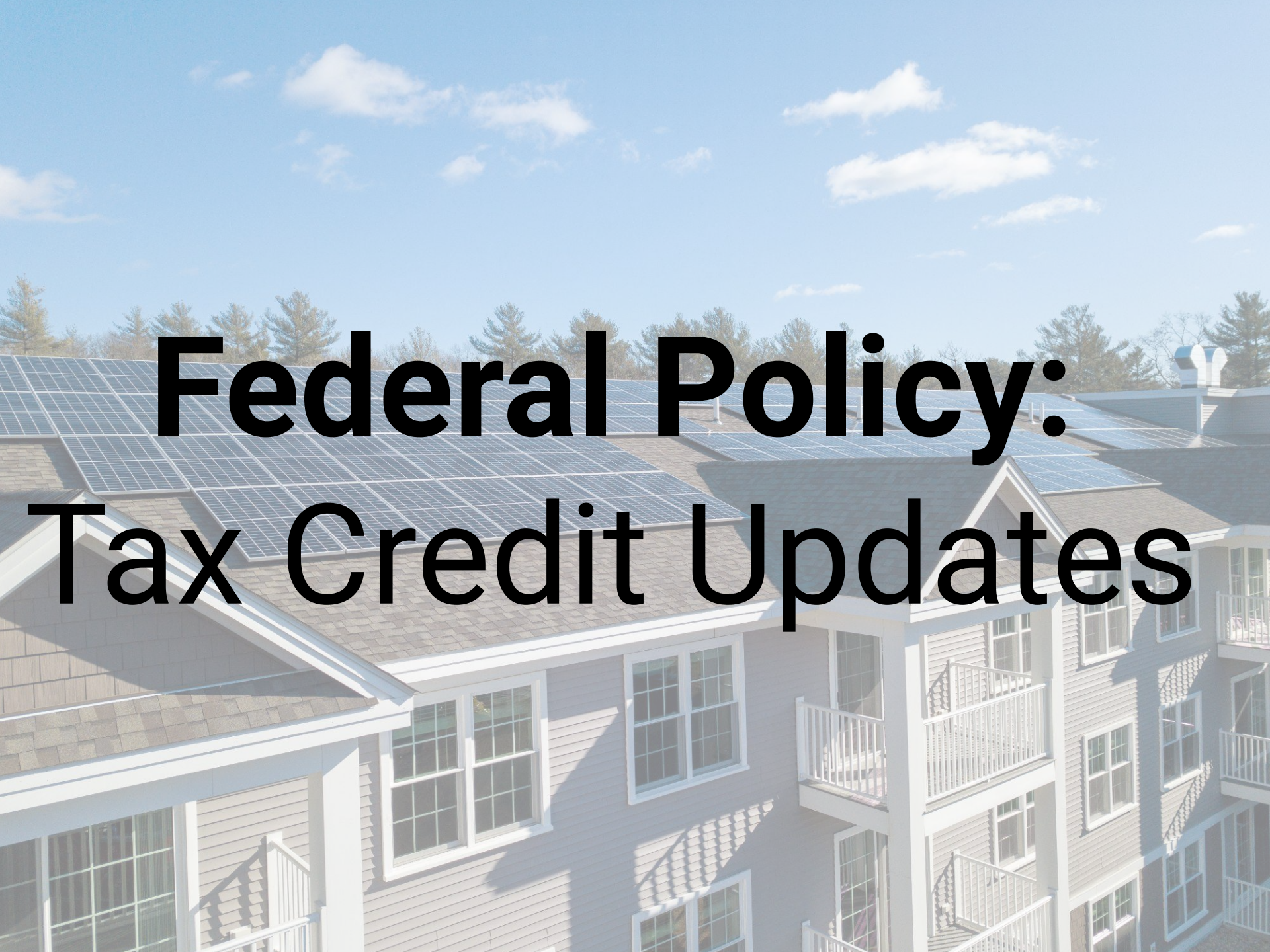
Massachusetts Policy / Incentives:

- State solar policy favors public entities + affordable housing
- SMART 3 (Affordable Housing, Public Adders)

Federal Incentives:

- *See Upcoming Slides*





Federal Policy: Tax Credit Updates

Inflation Reduction Act (IRA)

Game Changer for Housing Providers to Go Solar

- **\$390B** in climate investment
- Largest climate bill ever passed by Congress
- Prior to IRA, nonprofits could not get full value of the tax credit, **now they can**
- New details for tax credit adders and direct pay just rolling out now
- Additional incentives for solar projects that serve **Environmental Justice and Low-Income communities**



Signed into law
in August 2022

Investment Tax Credit Value Increase

22% → 30%





Inflation Reduction Act (IRA)

What it means for your organization



- **Increase of Tax-Eligible Expenses**
 - Solar equipment, labor, permitting, and utility upgrades
- **Elective Pay**
 - **Nonprofits** and public entities can receive tax credit in the form of direct cash rebate
- **Low Income Communities bonus credits can boost tax credit value up to 40-50%**
 - Solar projects that are located in LI Communities and serve LI residents are eligible for additional incentives



Low Income Communities Bonus Credits

	Category 1: Low Income Location 	Category 3: Aff. Multifamily Tenants 
Tax Credit Increase	+10%	+20%
Criteria	Must be sited in a “low-income community” as defined in IRC 45D(e). Map here . <i>i.e. New Market Tax Credit</i>	Must have federal subsidy (LIHTC, PBS8, etc). State PH not eligible. Comes with requirement to distribute some savings to tenants. <i>Many pathways allowed.</i>
Limitations	<ul style="list-style-type: none">• Solar projects with Tax Exempt owners (e.g. public housing) meet additional select criteria (ASC) and are much more likely to get an adder awarded.• Ideal for this reason to focus on <u>ownership</u> over third party owned Power Purchase Agreements.	

LI Communities Bonus Credits

	Category 1: Low Income Location 	Category 3: Aff. Multifamily Tenants 
Tax Credit Increase	+10%	+20%
Criteria	<p>Must be sited in a “low-income community” as defined in IRC 45D(e). Map here. <i>i.e. New Market Tax Credit</i></p>	<p>Must have federal subsidy (LIHTC, PBS8, etc). State PH not eligible. Comes with requirement to distribute some savings to tenants. <i>Many pathways allowed.</i></p>
Limitations	<ul style="list-style-type: none"> Solar projects with Tax Exempt owners (e.g. public housing) meet additional select criteria (ASC) and are much more likely to get an adder awarded. Ideal for this reason to focus on <u>ownership</u> over third party owned Power Purchase Agreements. 	



Trump and Solar: Tax Credits & Tariffs

Tax Credits at Risk

- Federal tax credits and their associated transferability and elective pay (a.k.a. direct pay) rules are the only significant things at risk for solar.
- 18 House Republicans have already come out in favor of protecting clean energy tax credits, **like the baseline 30% tax credit for solar** (August '24). Of those 18, 14 were reelected 3 replaced by Dems.
- House Speaker Mike Johnson has said they will use a "scalpel and not a sledgehammer" when considering rolling back the Inflation Reduction Act (Sept '24).
- The low-income communities bonus credit program may be removed, but requires congressional approval, likely through a 2025 tax overhaul (TCJA expiring end of 2025).

Tariff Related Cost Increases:

- Hold a contingency (5-10%) in your solar budget for some tariff related cost increases in the coming years.



Trump and Solar: Tax Credits & Tariffs

Will Solar Still be Profitable?:

- Yes. Everything else that impacts your solar project's economics – including:
 - Historically high electricity costs,
 - Increasing incentives with MA's new SMART program (2025).
 - Local ordinances requiring onsite clean energy and/or overall greenhouse gas reductions in buildings (BERDO, BUEDO)

What Grant Money Will be Available?:

- Checks have been cut for the [\\$27B in EPA Green House Gas Reduction Fund](#) grant and loan programs.
- MA has received \$150 mil in [Solar For All](#) funding, of which, significant funds will be made available (incl some for priv. aff hou).
- MassCEC will continue to offer nonprofits \$150k implementation grants.





STAR Solar Program

STAR Program

Our collective goal:

Support the installation of solar for affordable housing in Massachusetts.

Focus on **mitigating legal & technical barriers**, as well as streamlining lender/investor consent.

Who's Taking Action?



THE **C**OMMUNITY
BUILDERS

56+
Developers

269+
sites under
development



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STAR Achievements Since 2020



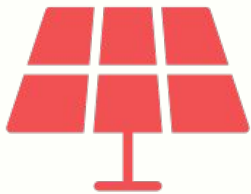
1,500+ Sites Analyzed



13,000+ residents impacted



8,690 kW-DC Under Development



2,601.8 kW-DC installed so far

STAR Participant Benefits

- No-cost solar analysis of your entire building portfolio's solar capacity
- Thorough review of financing options and grant opportunities
- Staff-time support stipend
- Support for lender consent process
- Support applying to Direct Pay and Tax Credit Adders



Trinity Financial - East Boston



Information Gathering

Data needed for participating buildings:

- Electricity Usage/Electric Bills
 - Easiest: add Resonant to Wegowise account
- Most recent roof replacement date
- Roof warranty documentation
- Resident and unit number data



Planning Office for Urban Affairs - Ashland

New Construction: Overview

Why think about solar early?



Pre-Contract

OPEX support with updated production & savings models

Build operating savings into your perm loan DSCR

Financial



Pre-Construction

Coordination with Architect & Engineers

Initiate our solar engineering redline

Engineering & Construction



Mid-Construction

Coordination with GC

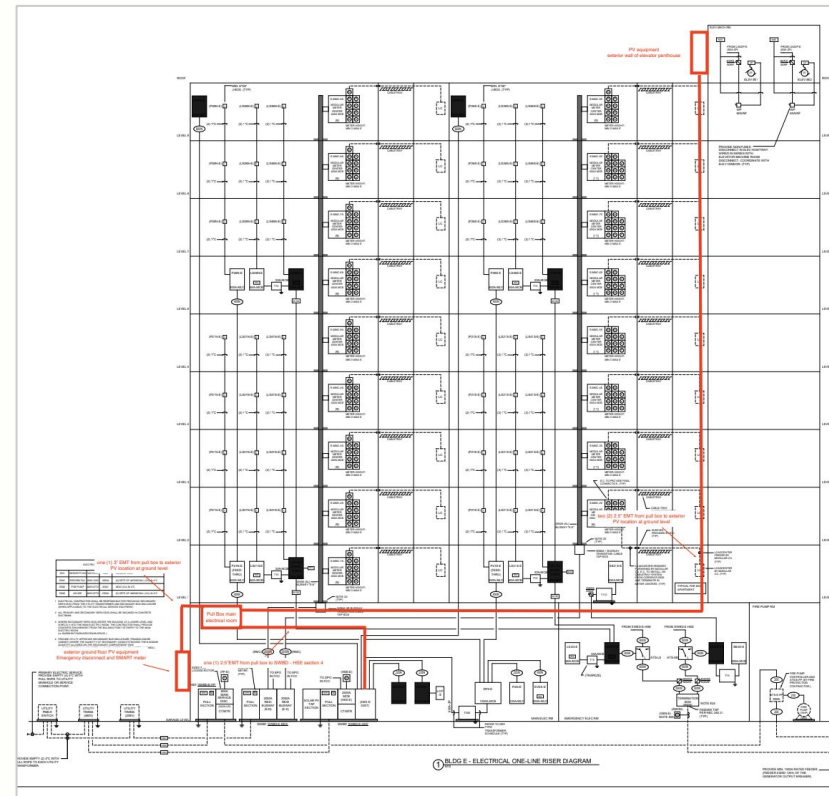
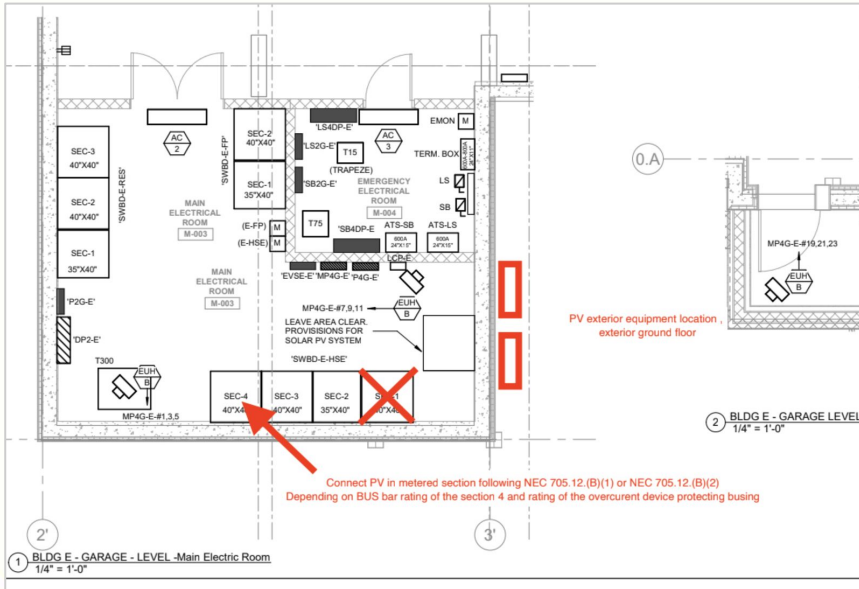
Ensure clear scopes of work; building according to plans



New Construction: PV Redline

Following LOI signing, Resonant will provide a PV Requirement Redline using most recent building drawings, specifying:

- Conduit sizing & routing
- Interconnection strategy
- Equipment dimensions & suggested locations
- Other information for streamlined installation



Case Study

An aerial photograph of a school bus parking lot. The roof of the parking structure is covered in a dense array of solar panels. Several yellow school buses are parked in the lot. One bus in the foreground has "FIRST STUDENT" written on its side. A white utility vehicle is also visible. The background consists of a dense forest of trees with green and yellow foliage, suggesting a wooded area. The text "Case Study" is overlaid in large, bold, black letters across the center of the image.

Case Study: The Neighborhood Developers

New Construction



Financing: **Direct Ownership**
Address: 1005 Broadway, Chelsea, MA

Upfront Cost: **\$277,723 (50% ITC)**
Lifetime Savings Projected: **\$756,171**
System Size: **95 kW-DC**
Annual Output: **105,612 kWh**
Elec. Set Up: **Behind the House Meter**
Percent of Common Usage Offset: **88%**

Retrofit - Asset Management



Financing: **Power Purchase Agreement**
Address: 242 Spencer Ave, Chelsea, MA

Upfront Cost: **\$0 (mid-cycle LIHTC)**
Lifetime Savings Projected: **\$155,632**
System Size: **63 kW-DC**
Annual Output: **71,995 kWh**
Elec. Set Up: **Behind the House Meter**
Percent of Common Usage Offset: **89%**



Apply for STAR V Now



[Apply Here](#)

Questions?



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Appendix

Favorable Design

	High Rises 	Midrises 	Townhouse Construction 
Solar Viability	Bad	Excellent	Good
Pros for Solar	<ul style="list-style-type: none"> • Highest onsite common elec usage • Sometimes have sizeable parking lots • 3ph elec service 	<ul style="list-style-type: none"> • Solid onsite common elec usage • Solid roof space • Height workable for standard crane/lifts • 3ph elec service 	<ul style="list-style-type: none"> • Excellent roof space (pitched) • Height workable for standard crane/lifts
Cons for Solar	<ul style="list-style-type: none"> • limited roof space • Building height makes crane prohibitively expensive • Parking often shaded 	<ul style="list-style-type: none"> • Indiv unit heat pump set up can dramatically limit roof space 	<ul style="list-style-type: none"> • 1ph elec service often, which can limit system sizes • sometimes no common meters • Private market note - low onsite common usage.

Building Subsidy Considerations

	Federal Public Housing	State Public Housing	Redevelopment Project (e.g. Voucher Conversion)
Legal Complexity	More Difficult	Fairly Easy	Easiest
Consent Requirements	<ul style="list-style-type: none"> • HUD involved with RFP • HUD requirements for contracts are onerous 	<ul style="list-style-type: none"> • EOHLC involved with RFP • EOHLC has partners like PowerOptions, who can bypass RFP • EOHLC has legal recommendations 	<ul style="list-style-type: none"> • PPA: consent may be required for PPA, depending on subsidy source. • Purchase: Lender consent if using replacement reserves • Note: HLC can grant procurement relief for redevelopment.
Additional Notes	HUD requires 50% energy savings split with them in some cases. To avoid, best bet is purchase with all energy used on site.	Many State PH sites are signed up for offsite community solar. Need to confirm usage changes re: solar	Fastest and simplest. Sec8 must comply with HAP Contract and Use Agreement requirements.

