

BUILDINGENERGY NYC

Do the Math: Financing Decarbonization in Existing Multifamily Housing

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Northeast Sustainable Energy Association (NESEA)

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Do The Math: Financing Decarbonization in Existing Multifamily Housing

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1. Introduction: why **decarbonizing** affordable housing is important

2. Our collaboration

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5. Digging into the **numbers**: a case study

6. The path forward: **solutions and resources**

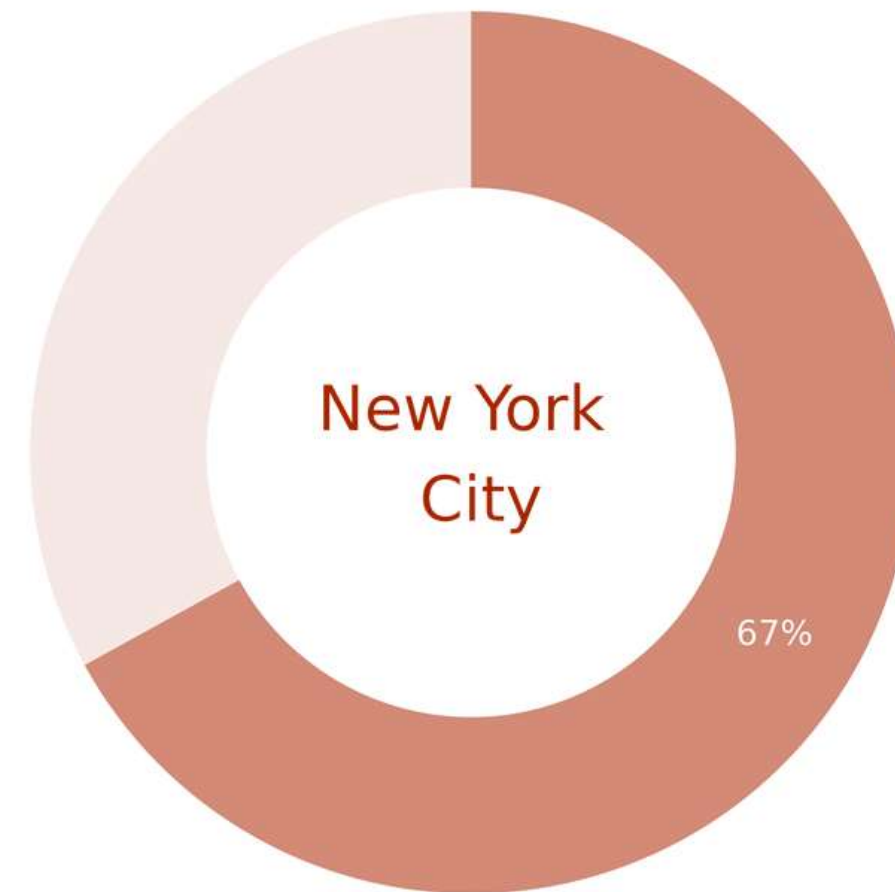
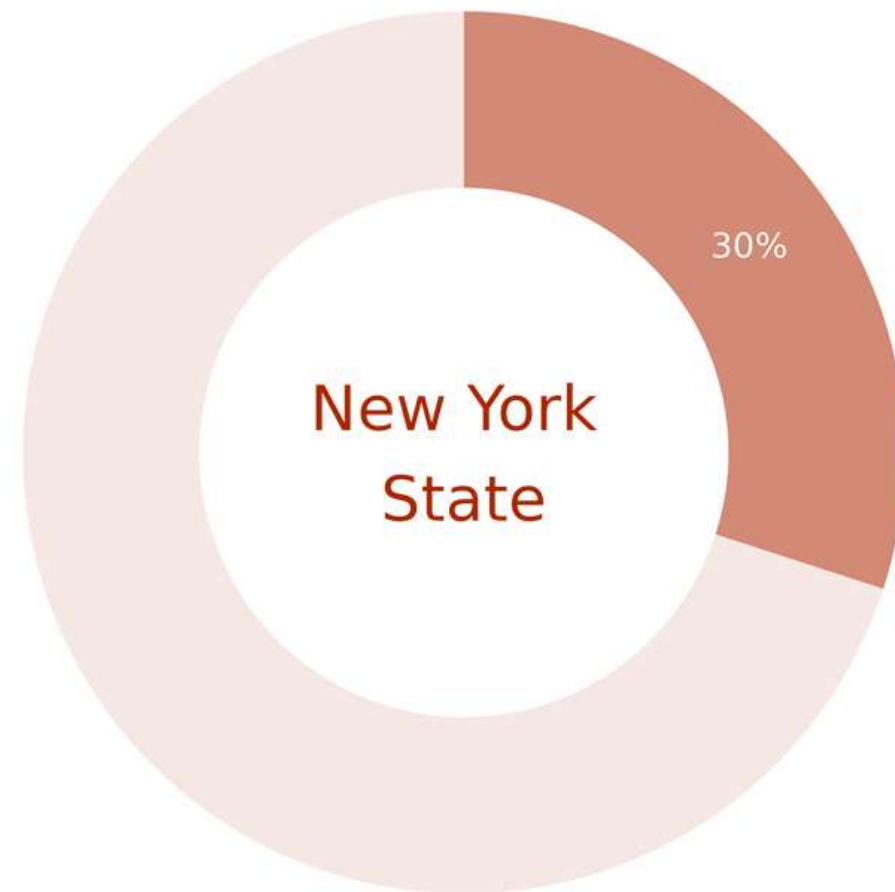




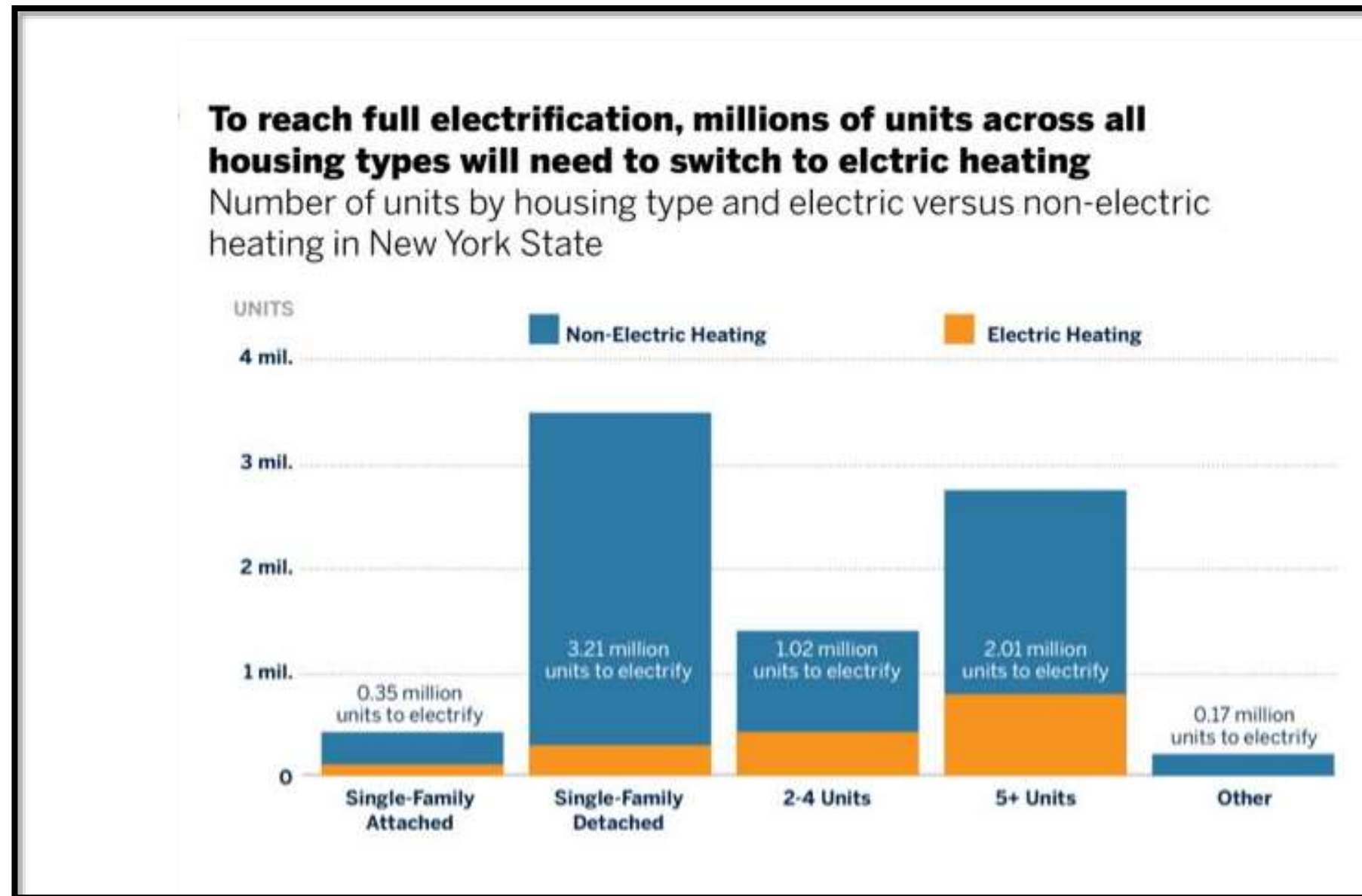
**WHY
DECARBONIZING
AFFORDABLE HOUSING
IS IMPORTANT**

BUILDINGS ARE A KEY SOURCE OF EMISSIONS

Buildings account for **30%** of emissions statewide and **67%** of emissions in New York City



MILLIONS OF HOUSING UNITS WILL NEED TO TRANSITION



INVESTMENTS IN AFFORDABLE HOUSING ARE NECESSARY TO ACHIEVE GOALS

New York State Housing Stock and Energy Usage

	Overall	NYC	Non-NYC	LMI	Non-LMI
Total occupied units/ households (millions)	7.4 (100%)	3.2 (43%)	4.2 (57%)	3.6 (49%)	3.8 (51%)
Ownership status (%)					
Renter-occupied/ renting household	46% (3.40 ^B)	67% (2.14)	30% (1.26)	63% ^C (2.27)	31% ^C (1.18)
Building type^D					
Single family	47% (3.94)	16% (0.57)	70% (3.47)	34% ^E (1.22)	59% (2.24)
2 to 4 units	17% (1.42)	22% (0.78)	13% (0.64)	22% (0.79)	14% (0.53)
Multifamily (5+ units)	34% (2.81)	61% (2.16)	13% (0.65)	41% (1.48)	26% (0.99)
Other	2% (0.19)	0.2% (0.00)	4% (0.19)	3% (0.11)	1% (0.03)
Heating fuel					
Utility gas	59% (4.40)	65% (2.08)	55% (2.32)	56% ^F	58% ^F
Fuel oil and propane	24% (1.77)	18% (0.57)	28% (1.20)	21%	21%
Electricity^G	13% (0.93)	13% (0.41)	12% (0.51)	22%	18%
Other	4% (0.32)	4% (0.13)	5% (0.19)	2%	3%





OUR COLLABORATION

THE TRANSITION REQUIRES A MULTI- STAKEHOLDER APPROACH



**SUSTAINABLE
AFFORDABLE HOUSING**

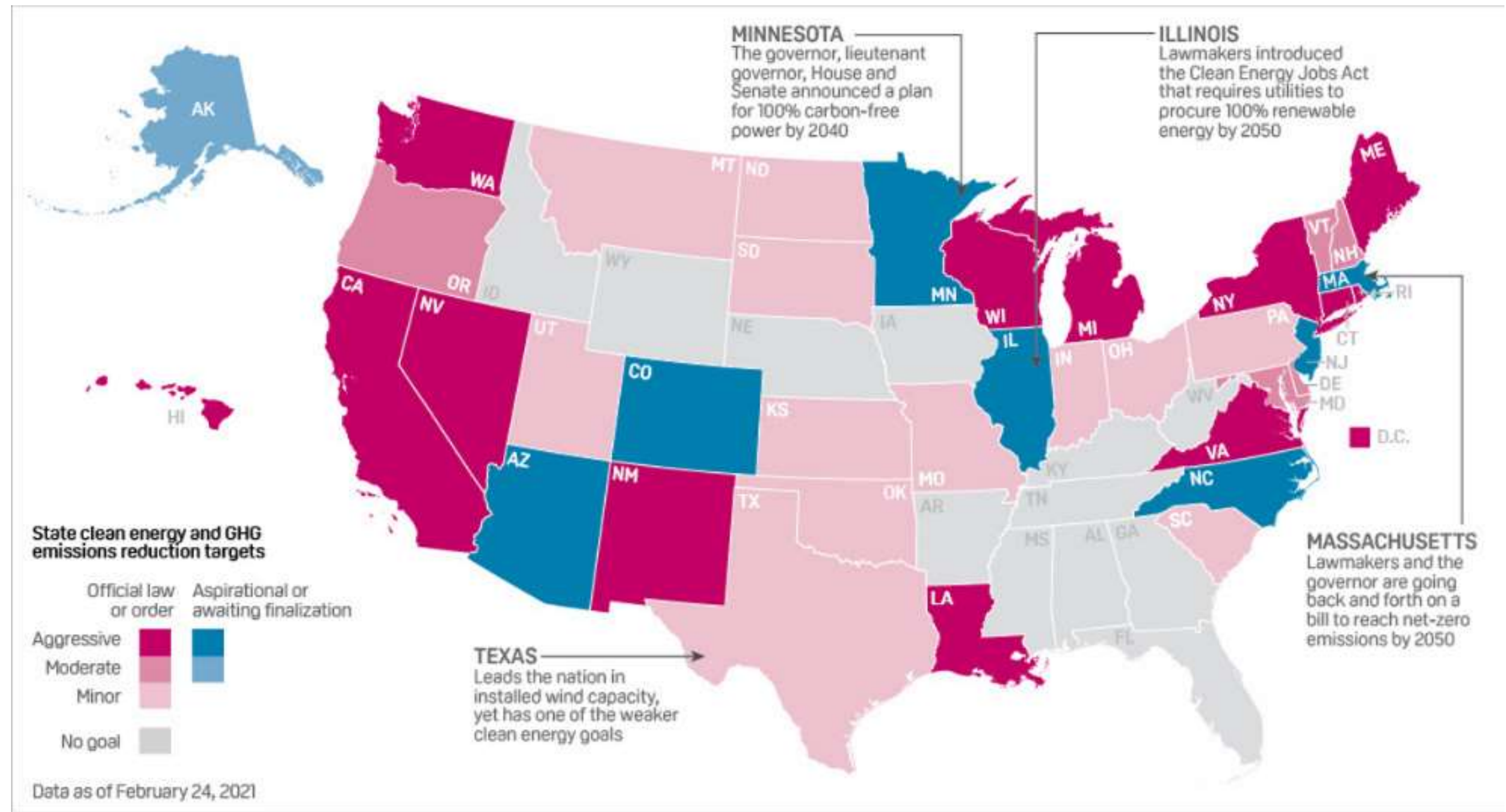


**Strategies for Financing an
Inclusive Energy Transition**



NATIONAL OVERVIEW

A GROWING NUMBER OF STATES HAVE SET CLEAN ENERGY GOALS



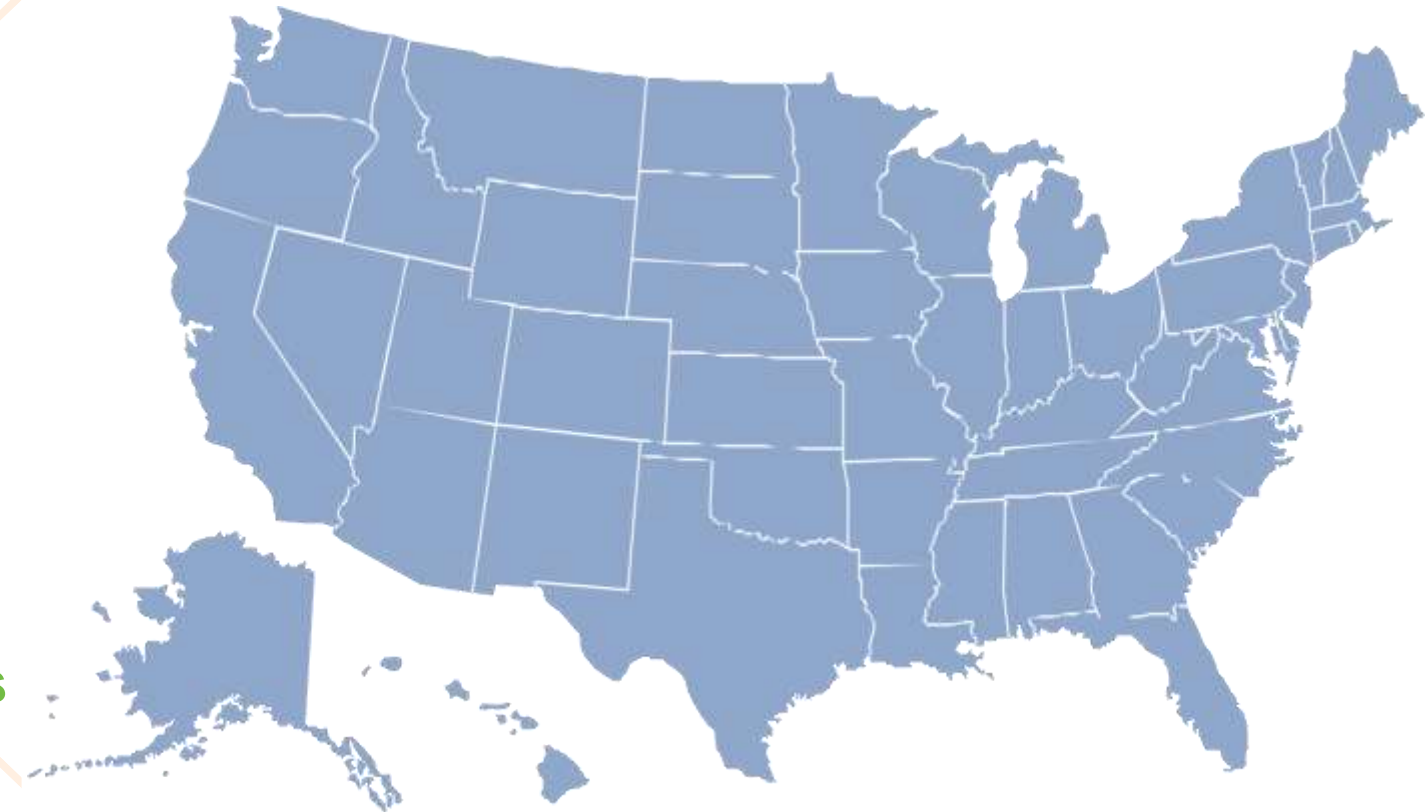
Source: S&P Global Platts, National Conference of State Legislatures, ERCOT, Cal-ISO, other associated sources for individual states and territories



CLIMATE LEGISLATION – U.S. PERSPECTIVE

U.S. has \$369 billion for climate and clean energy provisions to curb the country's carbon emissions by roughly 40% by 2030.

- **\$1 billion:**
Green Energy Retrofit Program (HUD)
- **\$26 billion:**
Greenhouse Gas Emissions (EPA)
- **ITC expansions (IRS)**
- **\$60 billion:**
Energy Justice Initiatives
- **\$27 billion:**
Clean Energy Accelerator (DOE)
- **\$30 billion:**
Grant Programs for advanced Clean Energy Transition



Climate technology in the U.S. saw over \$56 billion in investment between 2020 and 2021.



CLIMATE LAWS AND NEW YORK MARKET

LEGISLATION

April 2019 New York City

Climate Mobilization Act ("CMA")

- Includes Local Law 97 ("LL97"): requires buildings larger than 25,000 sf to meet greenhouse gas emissions limits starting in 2024
- Part of NYC's effort to reduce greenhouse gases by 80% by 2050
- Expected to create a \$20 billion retrofit market in New York City and support 26,700 green jobs by 2030

July 2019 New York State

Climate Leadership and Community Protection Act ("CLCPA")

- Requires select NYS buildings to reduce greenhouse gas emissions by 40% by 2030 and no less than 85% by 2050
- 40% of spending on retrofitting and climate compliance measures to be directed toward disadvantaged communities

August 2022 U.S.

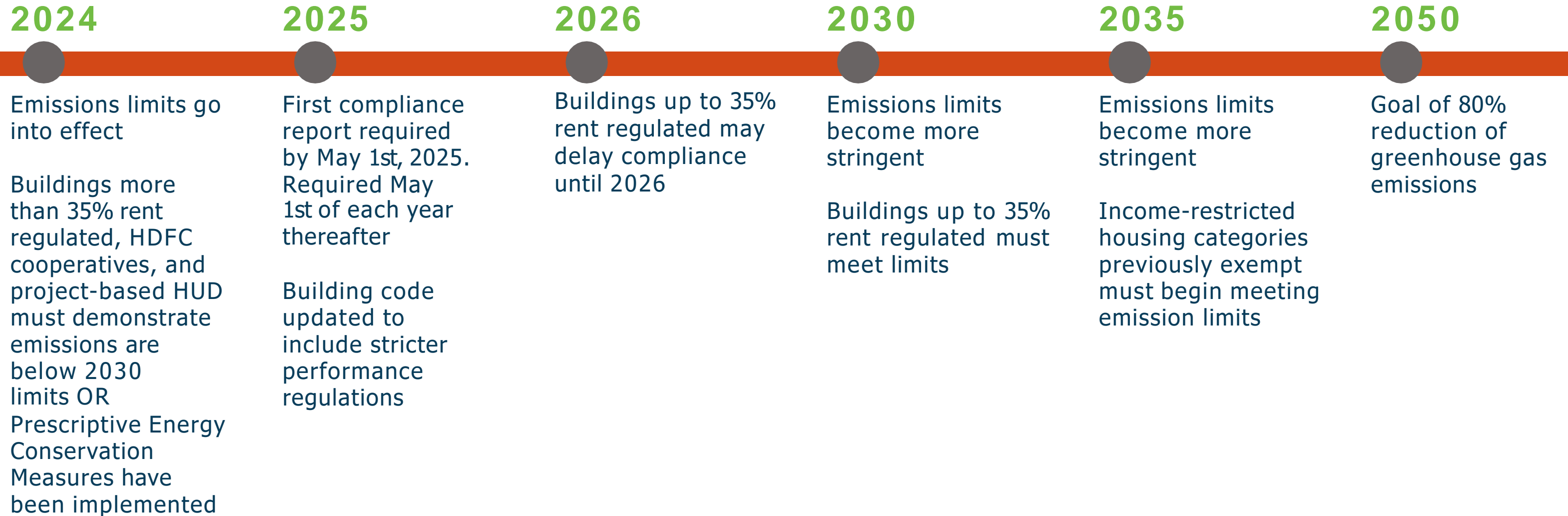
Inflation Reduction Act ("The IRA")

- Goal of 40% emissions reductions by 2030
- Provides over \$360 billion towards energy security and climate change initiatives
- Funding through direct grants and tax credits to preserve affordable housing, reduce energy costs, increase community resilience



NEW YORK CITY LL97

TIMELINE



NEW YORK REGULATORY DRIVERS

NYS – CLCPA

(under development)

- Emissions-free new construction (2025/2028)
- Phase out of fossil heating appliances (2030/2035)
- Building performance standards (2030)
- Benchmarking / Building Labeling (ASAP)
- Cap and Invest
- Governor Hochul's Two Million Climate Friendly Homes initiative

NYC

(enacted)

- Local Law 97 building emissions caps (2024 – stepping down 2030, 2035, 2040...)
- Emissions-free new construction (2024/2027)

Financial Institution Regulations

- DFS Proposed Guidance re: Climate Risks
- SEC proposed climate disclosure regulations



BARRIERS & OPPORTUNITIES

Barriers

- **Customer Demand:**
 - Absences of regulation in most markets
 - Familiar lending products (mortgages) do not require decarbonization
 - Low consumer awareness and technologies seen as optional/unnecessary expense
- **Cost:**
 - Many decarbonization technologies are not cost effective, need incentives today
 - Inflationary pressures (construction costs, mortgage rate, etc.)
 - No Savings to pay-back loan with decarbonization measures
 - Expensive up-front assessments and design expertise up-front
- **Awareness/Expertise/Capacity:**
 - Lack of regulation/policy caused low capacity/expertise
 - No model to serve smaller scale LMI projects that the larger Solar/ESCO market serves
 - Retail lenders lack expertise in underwriting new technologies
- Consumers do not understand benefits

Opportunities

- Climate regulation initiating increasing demand
- Influx of climate capital combined with project level TA funding
- New market emerging around climate focused on investing in LI-DAC communities
- New workforce opportunities – (i.e. heat pump elite contractor trainings)





DIGGING INTO THE NUMBERS: A CASE STUDY

CASE STUDY INSIGHTS



Owners are ultimate decision-makers



Decisions made at building level



LL97 fines balanced against

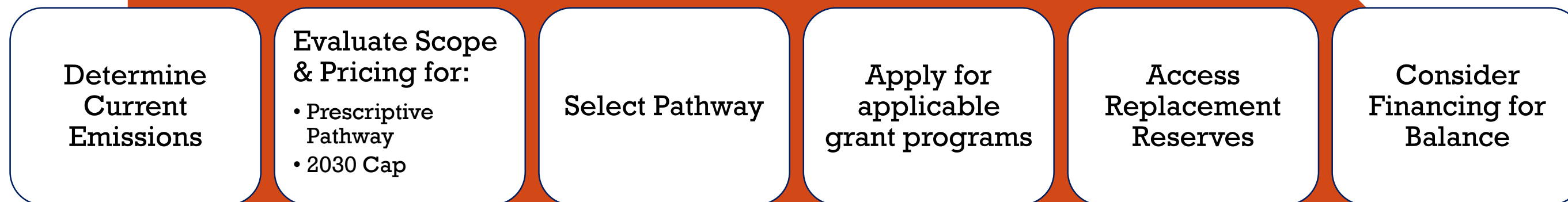
Cost of implementation
Impact on operating costs
Availability and terms of debt financing
Availability of incentives



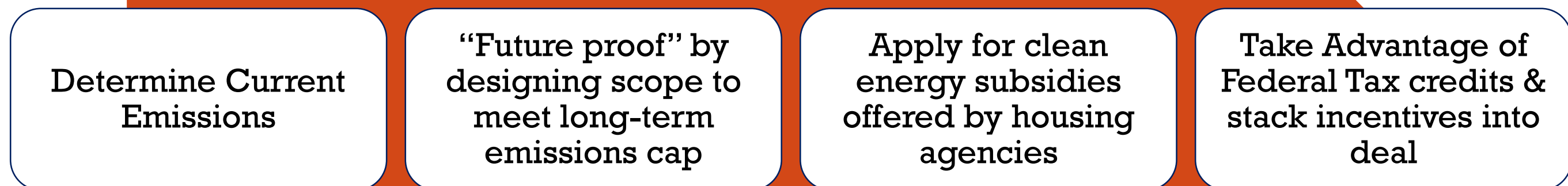
RESOURCES AND OPPORTUNITIES

STRATEGIES TO COMPLY WITH LOCAL CLIMATE LAWS

Buildings mid-cycle financing



Building planning a major renovation



SAMPLE OF MID-CYCLE RESOURCES

Program	Administrator	Scope	Eligibility
Clean Heat	Con Ed	Air Source/Ground Source Heat Pumps	Open to multifamily, single family, commercial
AMEEP	Con Ed/National Grid	Energy Efficiency Measures	Affordable Multifamily only
Prescriptive Measure Pilot	HPD/Con Ed	Prescriptive Pathway Option #1 Scope	HPD Properties subject to prescriptive pathway and is 25-75k sq ft
Low Carbon Capital Planning	NYSERDA FlexTech	Energy Audits & Electrification Studies	All multifamily eligible
Climate Friendly Homes Fund	CPC/HCR *delivered as forgivable loan*	High performance, all-electric equipment	Existing affordable multifamily 5-50 units



SAMPLE OF DEVELOPMENT RESOURCES

Program	Administrator	Scope	Eligibility
Clean Energy Initiatives (CEI)	HCR 4% and 9% programs	Electrification of heating, dhw, advanced envelope	HCR rehabs and group up new construction
HPD Future Housing Initiative (FHI)	HPD Development Pipeline	High-performance all-electric new projects that meet HPD "Reach" goals	HPD New Construction
HPD Electrification Pilot	HPD Preservation Pipeline	Electrification and efficiency scopes	HPD Rehabs
Specialty Lenders	IPC, NYCEEC, NYGB CDF	Flexible – green lending capital (solar, efficiency, decarb, etc.)	Rehabs or mid-cycle and new construction



IRA RESOURCE OPPORTUNITIES FOR AFFORDABLE HOUSING

Solar

- Tax credit doubled from 26% to 50%
 - Additional 10% credit in low-income communities, or
 - 20% increase for a qualified low-income project
- Tax credit for battery storage
- Nonprofits can take a cash payment in lieu of the tax credit

Energy

- Treasury: Energy Efficient Home Credit is a tax credit stackable with LIHTC; (45L) incentive per unit for 3rd party certification 179D) Incentive for site EUI reduction
- DOE: HOMES Rebate Program: \$4.3 billion through State energy offices
- DOE: High Efficiency Home rebate Program: \$4.5 billion as grants through State Energy Offices
- HUD: Green & Resilient Retrofit Program (GRRP) \$1B to owners of HUD-subsidized properties

Greenhouse Gas Reduction Fund (GGRF)

- EPA: \$27 billion and \$15 billion targeted to low-income and disadvantaged communities
- Administered by EPA through State Energy Offices



THANK YOU

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