The Clean Energy Initiative Program

New York State Homes and Community Renewal

Rental Housing: Encouraging New Construction and Promoting Preservation

HFA Staff Contact
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Rental Housing Category

Encouraging New Construction and Promoting Preservation Recognizes an HFA for a program that best supports the new construction or preservation of affordable rental housing.

Summary

The Clean Energy Initiative (CEI) Program is a collaborative program between New York's State Housing Agency, New York State Homes and Community Renewal (HCR), and State Energy Office, created to streamline access to utility incentive funds that have been traditionally challenging for affordable housing developers to utilize in tax credit and refinancing deal structures. Through an ongoing four-year collaboration between these offices, the program has evolved and adapted to market needs successfully, with over $70M awarded to over 70 projects. The program teams have adapted technical material, revised application material, and aligned with New York State's broader climate goals, creating an innovative platform and replicable model for other States. The CEI program supports HCR to create and preserve healthy and resilient affordable housing.

BACKGROUND

HCR is an umbrella agency with the mission to build, preserve, and protect affordable housing and increase homeownership across the state. HCR is responsible for achieving Governor Kathy Hochul's Housing Plan, a five-year, $25 billion initiative. This plan aims to create or preserve 100,000 affordable homes statewide, including 10,000 with supportive services and electrification of 50,000 additional homes

The Sustainability team at HCR, in partnership with New York State Energy Research and Development Authority (NYSERDA) and with support from the Department of Public Service (DPS), created an innovative, streamlined pathway to fund energy efficient existing building retrofits and new construction projects called the CEI. This partnership is aligned with New York State's nation-leading climate goals set forth within the Climate Leadership and Community Protection Act of 2019 (CLCPA) and places a high priority on the built environment, the largest sector contributor within New York State of carbon emissions based on 1990 reports, to reduce carbon emissions by at least 40% by 2030 and reductions of at least 85% by 2050. Deploying New York State's utility rate payer funds, NYSERDA typically operates incentive programs for housing developers to access for clean energy work scopes. Both New York State's Housing Finance Agency (HFA) and HCR's Housing Trust Fund Corporation (HTFC), encapsulated under the umbrella of HCR, deploy capital to affordable housing owners and developers. CEI combines these two existing efforts into one application for housing developers to access capital from HCR while simultaneously accessing capital for specific electrification and clean energy work scopes.

A pilot phase of CEI launched in 2021. The pilot program introduced three term sheets:

1. New construction (NC), eligible projects could receive up to $5500 per unit, with a project cap of $1.375M. Additional "Boost funding" was available to select New Construction projects, providing an additional $2,000 per unit with a max project funding of $1.5M.
2. Adaptive Reuse (AR) projects could receive up to $12,500 per unit with a maximum project award of $2.5M.

3. Existing Buildings (EB) eligible projects could receive up to $25,000 per unit if pursuing all three of the eligible scopes of space heating electrification, DHW electrification, and building envelope and ventilation upgrades.

Eligible projects were defined in the program terms as applying for either 4% Low-Income Housing Tax Credit ("LIHTC") Bond financing, 9% LIHTC, or stand-alone HCR Subsidy ("HCR's Multifamily funding sources"). The initial pilot made a total of $7.5M available and was fully committed to projects within six months of deployment.

In 2022, HCR released New Construction Sustainability Guidelines and Existing Building Sustainability Guidelines ("Sustainability Guidelines"); both new additions to the broader HCR Design Guidelines used for HCR's multifamily funding programs. The Sustainability Guidelines outline a required baseline and optional stretch suggestions for each area of building design, including HVAC, building envelope, and site. The primary focus of these guidelines is to ensure HCR is funding all-electric high-performance affordable housing in our new construction projects and achieving deep energy saving retrofits in our existing portfolio.

When applicants to HCR's multifamily funding sources reach the defined stretch standards, the applicant can then apply to HCR for CEI funds. The Sustainability Guidelines are referenced in HCR's CEI term sheet and are used as the method to set the minimum technical requirements for CEI funding eligibility. This has enabled HCR, in partnership with NYSERDA, to adjust as technical advances occur, has allowing for an agile approach and resulting in impactful changes in HCR funded projects.

CLEAN ENERGY INITIATIVE PROGRAM

Following the successful pilot phase of CEI in 2021, and then an initial launch of the formal program from 2022 through late 2023, HCR and NYSERDA recognized the need for programming to evolve and adapt to new market needs. In summer 2024, HCR began soliciting feedback through a collaborative process with a variety of stakeholders in the market including: housing operators and managers, housing developers, community partners, interagency groups, and technical assistance providers. HCR held six round table sessions with guiding questions to foster discussion amongst participants on our program approach, process, term sheet structure and updates to the Sustainability Guidelines. HCR received a host of ideas for adaptation of program pathways including requests for new term sheets reflective of the nuances within existing buildings retrofits, along with new substantial, moderate and adaptive reuse project types.

Lessons learned during this feedback session included:

1. The need to streamline resiliency requirements to minimize duplication of the required third-party certifications and focus the requirements on New York State specific hazards.
2. "Passive strategies" for building design, incorporating non-mechanical energy efficiency measures, often require complex and expensive energy models.
3. The demonstration of a gap in the market between housing developers and the consultants in their understanding and ability to comply with any basic embodied carbon standards.
4. The need to provide funding for solar readiness work such as roof repairs, utility grid coordination, and soft costs to analyze and/or tools to support analysis.

5. The importance of updating and clarifying requirements around equipment and system commissioning.

Various attendees requested a modification and update of our CEI scopes for existing buildings. The feedback we received highlighted cost prohibitive aspects based on level of renovation. For example, with moderate rehabilitation scopes of work, developers often are not doing CEI-related work, such as replacing mechanical equipment, at all. The CEI incentive was originally intended to cover only the additional cost of upgrading to all-electric systems, instead of replacing existing equipment with similar models, which is already covered by HCR financing sources. Therefore, CEI did not always cover the full cost of electrification. This was an important point of actual implementation, preventing moderate rehab projects from applying for CEI funds, because they did not always cover the full cost. Stakeholders also reported that full electrification in moderate rehabilitation scopes of work were also cost-prohibitive, with steps such as rewiring and panel upgrades being the costliest.

As a result of this feedback, HCR began the process of making two critical program updates in 2024. First, the Sustainability Guidelines are being updated to include clear guidance on New York-specific resiliency guidance and the inclusion of a new solar screening tool. Second, the CEI term sheets have been updated to reflect the additional pathways for existing buildings to apply for CEI funds, depending on the work scope the building is pursuing (moderate rehab, substantial rehab or adaptive reuse). *The updated term sheets are attached as visual aids to this application.*

RESULTS

Since the program pilot launched in late 2021, HCR has awarded over $70 million to 74 projects across the state in both existing building retrofits and new construction projects through CEI. These projects represent more than 45% of HCR's funding pipeline, based on recent awards. The core factor of CEI's success is the robust collaboration and working partnership between HCR, NYSERDA, and the affordable housing development community. All of the projects that receive financing from HCR Multifamily funding sources are complying with the Sustainability Guidelines, receiving technical support, and working with our Sustainability team to ensure all baseline requirements are being met at the application phase and executed on during construction. The approach to solicit feedback on our CEI program, rooted in the needs of the affordable housing market, with a focus to develop healthy and sustainable housing, is creating a meaningful opportunity for open discussion to keep innovating our sustainability programming, and effective interagency collaboration. This program model has a high opportunity for replication across other state HFAs and housing agencies, and the team at HCR is enthusiastic about amplifying it across the country.

Attachments

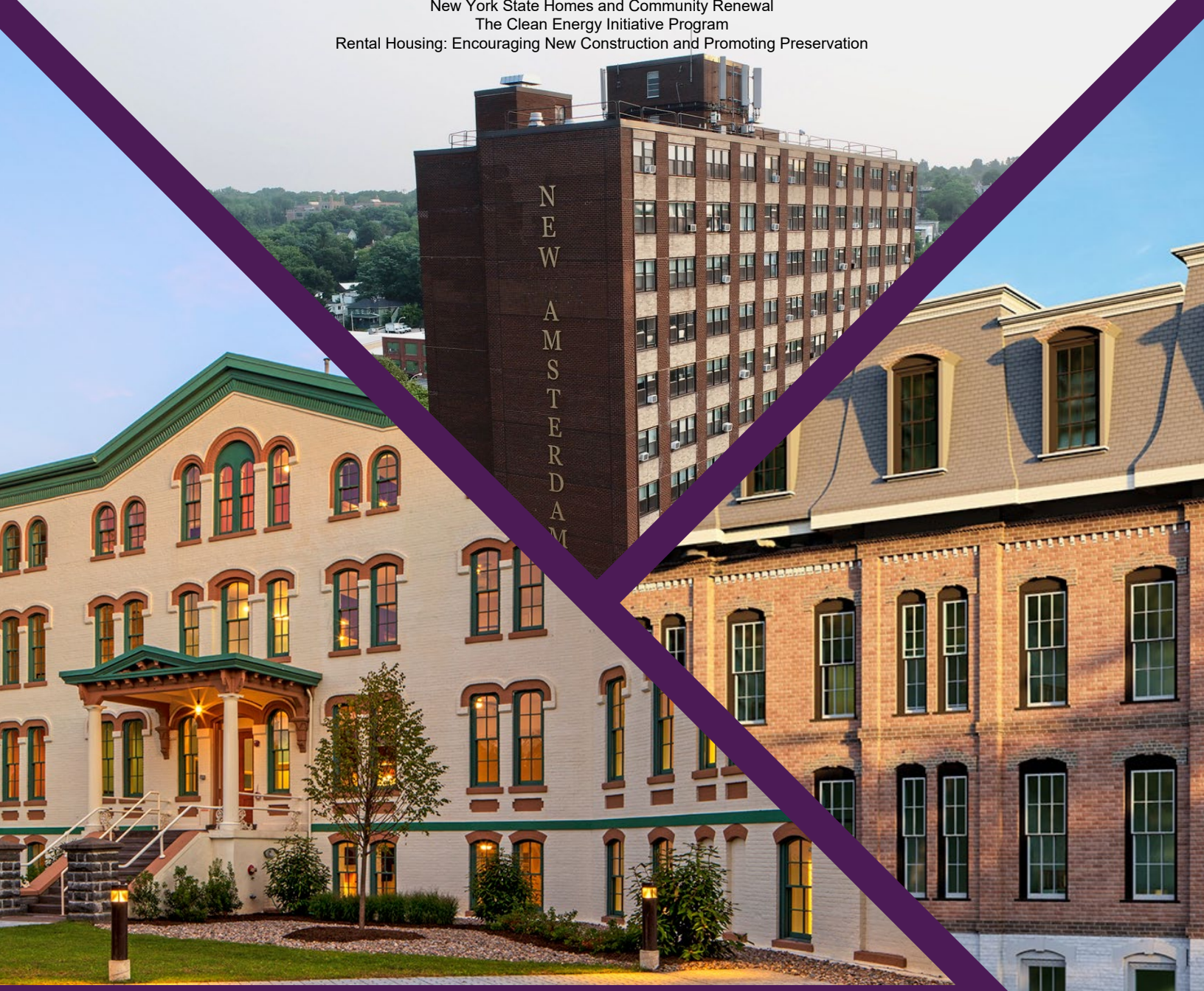
Case studies

CEI Term sheets (all current)

Sustainability Guidelines (all three)

Link to the Sustainability website

New York State Homes and Community Renewal
The Clean Energy Initiative Program
Rental Housing: Encouraging New Construction and Promoting Preservation



HCR SUSTAINABILITY GUIDELINES:
EXISTING BUILDING

HCR.NY.GOV
2023

NEW YORK STATE OF OPPORTUNITY. Homes and Community Renewal

Kathy Hochul, Governor
RuthAnne Visnauskas, Commissioner/CEO

New York State Homes and Community Renewal
The Clean Energy Initiative Program
Rental Housing: Encouraging New Construction and Promoting Preservation

Yates Village: Schenectady, NY

TABLE OF CONTENTS

Clinton Avenue Apartments: Albany, NY

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Overlook Terrace: Ithaca, NY

INTENT OF GUIDELINES

HCR is working to put current and future affordable housing projects on the path to meeting New York State's Climate Leadership and Community Protection Act ("Climate Act"), which mandates at least a 40% reduction in greenhouse gas emissions by 2030 and at least 85% reduction by 2050, compared to New York State's 1990 carbon emission levels.

For buildings, this will mean dramatically improving building efficiency by enhancing the building envelope performance and removing or significantly reducing onsite carbon emissions from fossil-fuel burning appliances. HCR developed these Sustainability Guidelines as a step towards meeting the State's climate goals.

HCR's Sustainability Guidelines are designed to produce high quality housing across the State of New York to provide low-income tenants with improved health, safety and well-being.

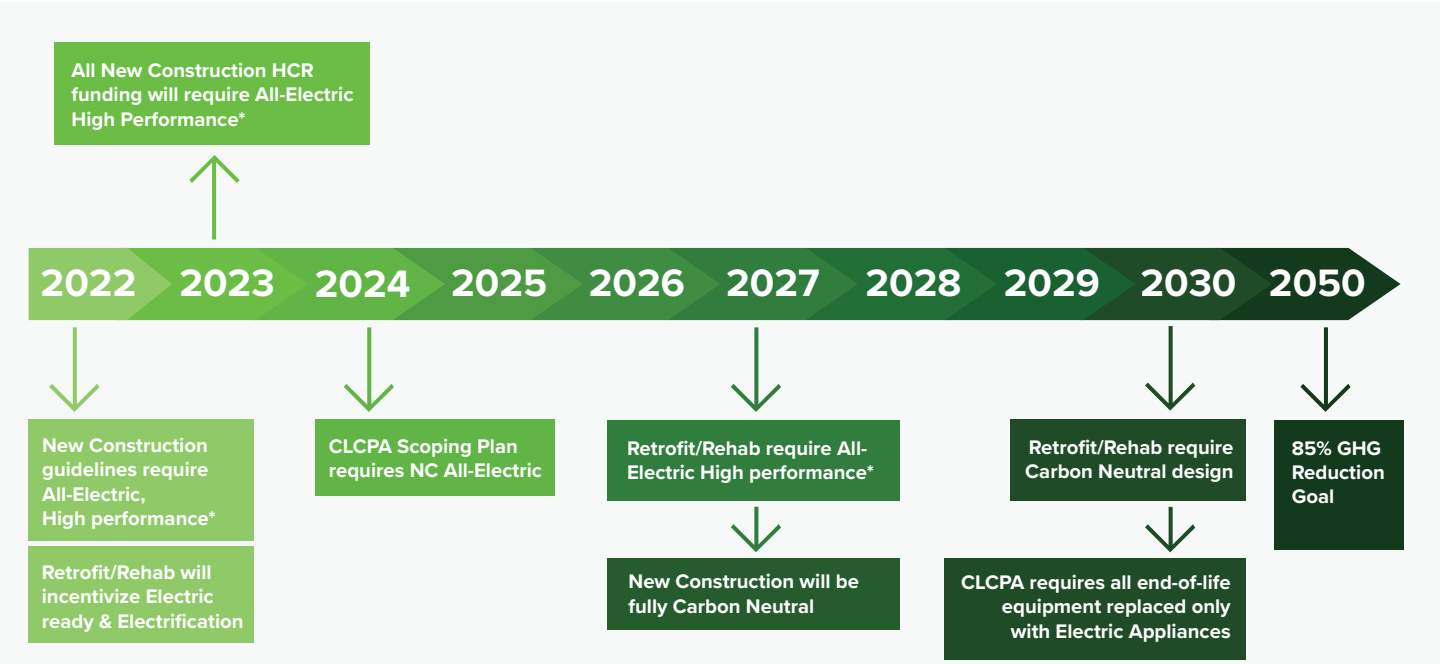
The Guidelines include criteria that advance these goals including energy efficient building shells, systems and equipment, reduction or removal of fossil fuel based sources, increased indoor environmental quality and resiliency measures.

New York State's goals for Greenhouse Gas Emissions Reductions

40% by 2030
85% by 2050

INTENT *Continued*

SUSTAINABILITY STANDARDS ROADMAP



Reduction or removal of fossil fuel based sources from buildings (i.e., electrification) not only aligns with the carbon-reduction goals of the CLCPA, it also has many benefits to tenants including reduced risk of fire, improved indoor air quality, and elimination of potential carbon monoxide exposure. In conjunction with electrification, it is imperative that buildings reduce their heating and cooling loads by addressing the efficiency of the building shell, which can reduce the energy demands of a building while dramatically improving comfort for tenants. HCR's priority is delivering building envelopes that are well sealed and insulated, while also addressing the need for delivery of fresh air into spaces. Addressing these priorities can result in reduced operational costs and creation of living environments that are healthier and more comfortable to live in.

IMPLEMENTATION OF NEW YORK'S CLIMATE ACT IS ON TRACK AND MOVING FORWARD EXPEDITIOUSLY.

APPLICATION OF SUSTAINABILITY GUIDELINES

The **HCR Sustainability Guidelines** are applicable to certain projects applying for financing through HCR. The list of **Applicable Financing Programs** are outlined in this section. Projects shall follow the Sustainability Guideline section(s) that apply to their project based on the financing and construction type outlined in the Application Matrix below.

APPLICATION MATRIX

Applicable Financing Programs:

- HTFC/DHCR 9% LIHTC RFP
- HFA 4% LIHTC Tax-exempt Bond Financing
- HCR Subsidy Financing

Project Type		New Construction Sustainability Guidelines	Existing Buildings Sustainability Guidelines	Preservation Guidelines: A Guidebook for Best Practices in Sustainability
Project applying for financing with HCR through **Applicable Financing Programs**	Residential New Construction	✓		
	Residential Adaptive Reuse Rehabilitation		✓	
	Residential Substaintial/ Gut Rehabilitation		✓	
	Residential Moderate Rehabilitation		✓	
	Mix of Residential New Construction and Residential Rehabilitation Buildings in Project	✓ Note 1	✓ Note 1	
	Mix of Residential New Construction and Residential Rehabilitation in a Single Building		✓ Note 2	
	Commercial and/or Community Service Facility	✓ Note 3	✓ Note 3	
Projects under regulation with HCR	Rehabilitation and/or Replacement work			✓

Footnotes

Note 1: Utilize Guidelines matching building scope for each building

Note 2: Follow Adaptive Reuse Guidelines

Note 3: Incorporate comparable energy efficiency strategies as those required for residential projects to achieve similar energy savings

APPLICATION *Continued*

CONSTRUCTION TYPES

The following construction types relate solely to the application of these Guidelines and shall not be used to define project requirements or scopes outside of the criteria defined in these Guidelines.

- **New Construction:** *Ground-up construction of a new building or buildings. For guidance on use-type, please reference the New Construction Sustainability Guidelines.*

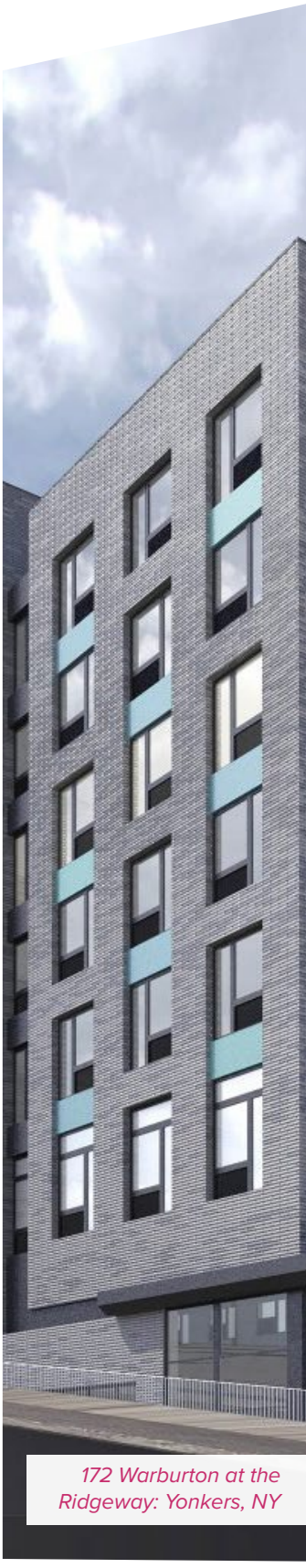
- **Adaptive Reuse Rehabilitation*:** *A substantial renovation that occurs in a building or space that undergoes a change of use to Residential occupancy, as defined by the applicable building code.*

- **Substantial Rehabilitation*:** *A renovation where the majority of the interior walls, finishes, systems and MEP (mechanical, electrical and plumbing) infrastructure are demolished and a new scope of work is constructed within the existing building shell. These projects are also sometimes referred to as "gut" rehabilitations.*

- **Moderate Rehabilitation Level 1*:** *A renovation where the dwelling unit demising walls, most interior walls and MEP infrastructure remain, and the new scope of work is built within the existing dwelling unit compartment. This type of rehabilitation often includes replacement of fixtures, finishes and equipment (FF&E) and roofing. It may include window replacement, siding replacement and additional roofing scopes.*

- **Moderate Rehabilitation Level 2*:** *A renovation where the dwelling unit demising walls and most of the interior walls remain. This type of rehabilitation includes many of the scoping items of a Level 1 Moderate Rehabilitation, but also includes replacement of (MEP) infrastructure and equipment, either in part or in full.*

***NOTE:** User should look for these color blocks in each section/ category for specific project construction-type directions.



172 Warburton at the Ridgeway: Yonkers, NY

APPLICATION *Continued*

WAIVERS

Minor deviations from these requirements will be allowed via a Design Waiver Request if necessary to avoid costly structural changes in rehabilitation projects or if they result in a superior design solution. Requests to waive a requirement will be reviewed on a case-by-case basis by the Vice President of Sustainability, the Vice President of the Design Construction & Environmental Unit (DC&E) and/or the respective DC&E Unit Director. Other offices of the Agency will be consulted when necessary. Evaluations of waiver requests will include the determinations of the appropriateness of the proposed alternative with emphasis on:

Tailor Square: Rochester, NY

- Alignment with the HCR Sustainability Standards Roadmap
- Impacts on operating costs/efficiency
- Impact to the residents
- Cost-effectiveness
- Functional appropriateness
- Durability and operating appropriateness

All waiver requests must be submitted via the Design Waiver Request Form and must be received 30 calendar days prior to each required submission. The Design Waiver Request Form can be obtained online at http://www.hcr.ny.gov.

Approved waivers are applicable for 18 months from date of issuance. If a project does not submit a formal application to HCR within 18 months, a new waiver must be submitted to HCR for review and approval against HCR's current guidance and standards.

Potential applicants and design professionals needing technical assistance on the criteria outlined in these Guidelines should contact the HCR Sustainability Team, the Design, Construction & Environmental Unit, or the program managers of the applicable funding sources.

PROJECTS WITH NYC HPD INVOLVEMENT

All projects located within New York City that involve the City of

APPLICATION *Continued*

New York Department of Housing Preservation and Development (HPD) funding, the more restrictive Guideline shall apply. All Sustainability Guideline criteria that is not met due to conflicts with the HPD criteria, must be presented to and approved by HCR as a Design Waiver Request.

DESIGN COMMITMENT

To ensure that the design is coordinated with other applicable submission criteria and program requirements, project applicants and architects should also refer to publications applicable to the funding sources for the project. HCR publications can be obtained online at http://www.hcr.ny.gov or from applicable program staff.

A project's design and construction shall comply with and may not vary from what is represented in the application for funding unless a change is specifically directed or recommended by HCR. Constructed projects shall not be diminished in quality, including aesthetics, choice of materials, or systems from that proposed and represented in the application for funding unless specifically altered by HCR at award. The applicant is responsible for ensuring that the project's scope of work, as represented by the plans, specifications and other pertinent documents are well defined and coordinated with the cost estimate.

The Guidelines do not exclude compliance with other criteria that may be required by the project funding source(s) or required by applicable codes, laws or regulations.

Bryant School Apartments: Hornell, NY

The Apartments at the Lyceum: Buffalo, NY

EXISTING BUILDINGS

The HCR Existing Building Sustainability Guidelines are applicable to all Existing Building Projects applying for financing with HCR under the Applicable Financing Programs. A list of Applicable Financing Programs can be found in the Application of Sustainability Guidelines section of this booklet. Existing Building Projects are defined as projects that utilize the shell of an existing building, including adaptive reuse, substantial rehabilitation, and moderate rehabilitation. The definitions for these project types can be found in the Application of Sustainability Guidelines of this booklet.

For projects that include a mix of New Construction and Rehabilitation, please see the *Application Matrix* included in this booklet.

STRUCTURE

SUSTAINABILITY GUIDELINE REQUIREMENTS

This booklet is divided into three sections:

Section 1:
Core Sustainability Requirements

Section 2:
Building Performance Requirements

Section 3:
Additional Sustainability Requirements

Each section addresses a specific set of goals or standards that HCR has established as a baseline for all Existing Building Projects to meet. These are referred to as **Baseline Requirements**. Each section also contains a number of **Stretch Goals** which all development teams are encouraged to meet, as they set the precedent for future baseline standards.

TERMINOLOGY: BASELINE REQUIREMENTS AND STRETCH GOALS

BASELINE REQUIREMENTS	STRETCH GOALS
Baseline Requirements outline **mandatory** criteria that are required on every project.	Stretch Goals are **not mandatory,** but projects should consider all Stretch Goals outlined in this document unless meeting those goals proves to be cost prohibitive to the project. Stretch standards can be met in whole or in part, meaning a developer can chose to achieve some Stretch Goals in one section but not another. Competitive projects can receive additional points for achieving some or all of the stretch standards as outlined in the applicable RFP.

STRUCTURE *Continued*

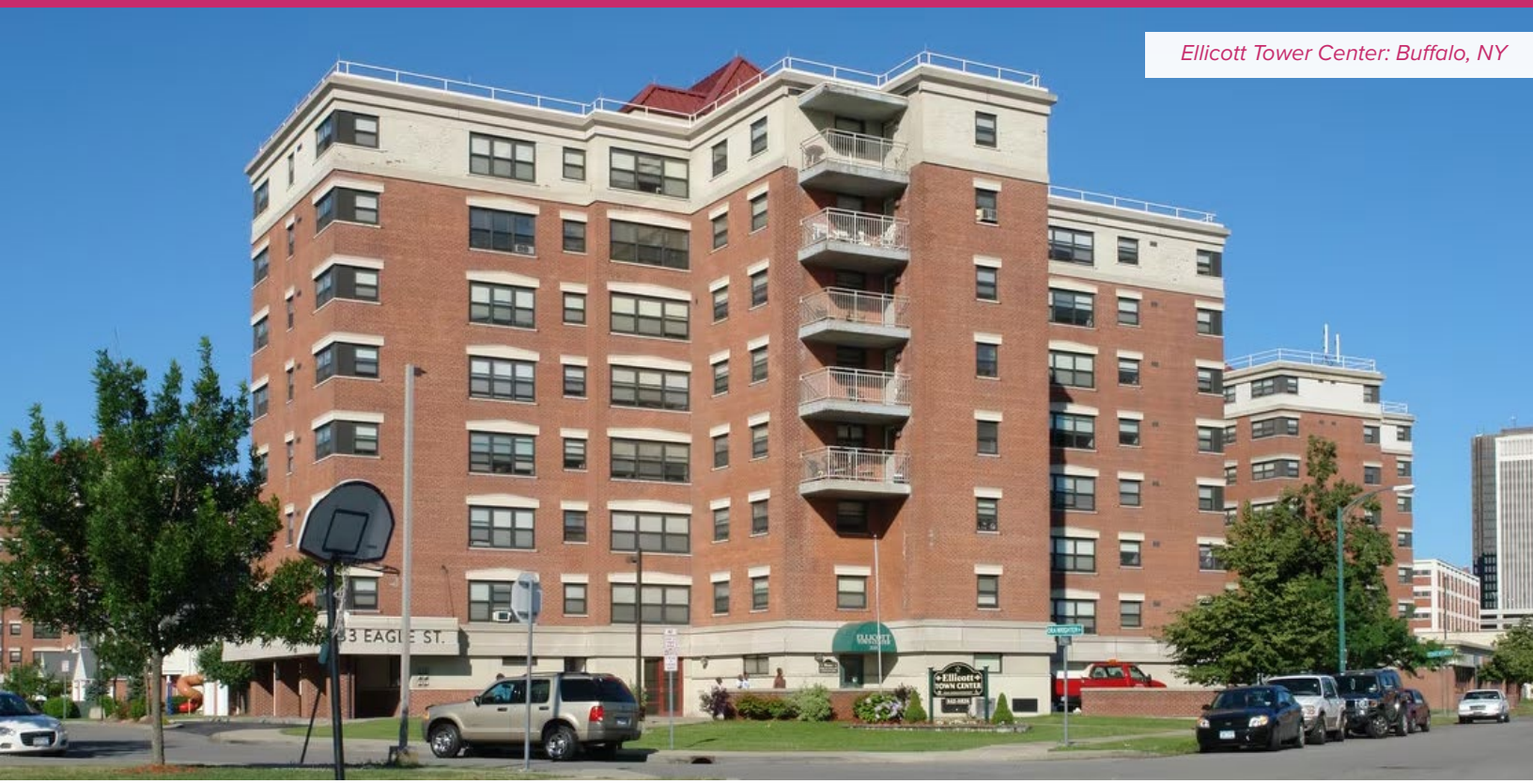
COMPLIANCE PATHS FOR EXISTING BUILDINGS SUSTAINABILITY GUIDELINES:

All projects must comply with baseline requirements in all three sections defined below, and where possible projects are encouraged to reach all or some of the stretch goals.

Section 1: Core Sustainability Requirements
Section 2: Building Performance Requirements
Section 3: Additional Sustainability Requirements

All projects must comply with the **Baseline Requirements** in all sections. Projects may choose to meet **Stretch Goals** outlined this section.

Each section will contain requirements for each Construction Type applicable in the Existing Buildings Sustainability Guidelines. Construction Types for this booklet include **Adaptive Reuse**, **Substantial Rehab**, **Moderate Rehabilitations Level II** and **Moderate Rehabilitations Level I**.



Ellicott Tower Center: Buffalo, NY

SECTION 1
CORE SUSTAINABILITY REQUIREMENTS

Section 1 of the Existing Buildings Sustainability Guidelines outlines core project requirements and eligible third-party certification programs that must be met by all projects. Please follow the "use-type" based on the Construction Type applicable to the project.

At a minimum, all projects must comply with the **Baseline Requirements** outlined below. Projects are encouraged to meet the criteria of the **Stretch Goals**, instead of, or in addition to, compliance with the **Baseline Requirements**.

GENERAL CONSIDERATIONS

Code compliance takes precedence for all building systems and design. If a conflict exists between building/energy codes or HCR sustainability requirements, a design waiver should be requested from HCR.

Please be advised that energy code requirements and the corresponding energy efficiency strategy must be considered when planning a Project's development schedule. Projects will be responsible, without any additional cost to HCR programs, to comply with the applicable energy efficiency standard and all energy code requirements.

Regardless of the type of existing building project and the sustainability standards selected in Section 1, all projects are encouraged to apply for New York State Affordable Multifamily Energy Efficiency Program (AMEEP), administered by a coalition of New York State utilities.

Projects are also encouraged to explore the New York State Clean Heat program if performing electrification upgrades, and utilize solar incentives (NY Sun or other) where applicable.

Nonresidential projects, or nonresidential spaces in a mixed-use project, shall incorporate comparable energy efficiency strategies as those required for residential projects to achieve similar energy savings.

Port Bryon Apartments: Port Bryon, NY

SECTION 1 *Continued*

ADAPTIVE REUSE PROJECTS:

Baseline Requirements:

A. All Electric: All projects must utilize high-performance all-electric heating/cooling and domestic hot water equipment and other in-unit or shared appliances such as dryers and cooktops, ovens or ranges, and;

B. Third-party Standard Certification: Select one of the following third-party certification programs to certify the project to:

1. Low Carbon Buildings Criteria Under Climate Bond Initiatives (CBI), which include one of the following:
   a. Energy Star MFNC ASHRAE pathway achieving minimum 30% energy savings, pre-PV
   b. Energy Star MFNC ERI pathway achieving:
      - Maximum ERI performance of 0.75 x MFNC c11 ERI target, pre-PV for Multifamily Buildings
      - Maximum ERI performance of 45, pre-PV for Townhomes
   c. Passive House certification through either PHI or PHIUS
2. 2020 Enterprise Green Communities Certification
   a. Projects in NYC should utilize the NYC overlay
3. LEED Residential – Silver or higher
   a. LEED v4
   b. LEED v4 with LEED 4.1 credit substitutions
   c. LEED 4.1
4. WELL OR Fitwel Building Certification
5. ICC/ASHRAE 700 – National Green Building Standard

Stretch Goals:

A. Third-party Standard Certification: Must still comply with the baseline All-Electric Requirements and select one of the following third-party certification programs to certify the project in lieu of the programs listed in the Baseline Requirements:

Lion Factory: Troy, NY

[1] HCR does not currently specifiy a required path for compliance under LEED Zero Energy porivded the proposed solution complies with the LEED Zero Energy requirements. The project team is responsible for securing funding sources to cover the purchase of procuring off-site renewable energy as HCR and CEI funds will not cover those expenses. The project team should include their approach to LEED Zero Energy in the application as well as funding sources.

SECTION 1 *Continued*

1. LEED Zero Energy[1] AND
   a. LEED v4 BD+C with a rating of Gold or higher OR
   b. LEED v4.1 BD+C with a rating of Gold or higher
2. 2020 Enterprise Green Communities Plus
3. Passive House PHI/PHIUS or equal

B. Alternate Third-Party Standard Certification: The following alternate third-party certification programs may be pursued, provided that the project team provides clear justification in the project narrative for HCR review and approval:

1. PHI Low Energy Building Standard
2. EnerPHIT

Adaptive Reuse Notes

If the project is a historic building governed by SHPO, project teams can opt to follow the Existing Building Substantial Rehabilitation pathway instead of Adaptive Reuse by submitting a waiver request. The Waiver Request Form can be obtained online at www.hcr.ny.gov.

If a project team believes there is a third-party rating or certification system that is equivalent to the options listed in the Sustainability Guidelines, the project team can submit a waiver request, with clear justification.

Exceptions to All-Electric Requirement

Projects who can provide evidence to any of the following may, at NYS HCR's sole discretion, be granted a waiver from the requirement to have all-electric heating/cooling and domestic hot water equipment:

- An electric load letter from grid demonstrating there is not enough electrical service to construct a new all-electric building.
- Use of on-site emergency back-up power generation with fossil fuel is acceptable; high-efficiency fossil fuel generators are permitted. Projects should provide a letter stating that onsite generators will only be used in no load test/exercise and for emergency purposes when the electric grid power fails.

New York State is a leader in adopting clean heat and energy efficiency measures, committing more than $6.8 billion to reduce the carbon footprint of New York's building stock.

Huntington Apartments: Seneca Falls, NY

SECTION 1 *Continued*

SUBSTANTIAL REHABILITATIONS:

Baseline Requirements:

A. Provide an energy model demonstrating at least 20% on-site reduction in energy use across the project (measured from the average whole building energy consumption for the past three years); AND

B. Third-party Standard Certification – Select one of the following third-party certification programs to certify the project to:
   1. Enterprise Green Communities
      a. Projects in NYC should utilize the NYC overlay
   2. LEED Residential – Silver or higher:
      a. LEED v4
      b. LEED v4 with LEED 4.1 credit substitutions
      c. LEED v4.1

Stretch Goals:

A. Advanced Envelope Performance: Upgrade the building envelope to achieve as close to a Passive House standard as possible. *See Section 2: Envelope Stretch Goal for full details.*

B. Existing buildings who are partially replacing or substantially repairing (more than 50% of value of the system) existing HVAC and/or Domestic Hot Water (DHW) distribution systems should pursue:
   1. Electrification of Heating Systems: Upgrade existing fossil fuel (e.g., gas, oil, propane fired) or electric baseboard systems to high-efficiency cold climate heat pumps or ground source heat pumps for space heating and cooling. Projects pursuing this Stretch Goal will be required to address envelope improvements and should follow *Section 2.C Stretch Goals 1* when choosing this stretch goal.
   2. Electrification of Domestic Hot Water (DHW): Replace/upgrade the existing fossil fuel

Ithaca Housing Authority: Ithaca, NY

SECTION 1 *Continued*

domestic hot water system with a high-performance heat pump hot water heater (ASHP or WSHP).

C. All projects, particularly those projects where the existing building conditions include fuel oil or natural gas systems that are less than 70% efficient, should consider achieving one of the below certifications[2]:
   1. Enterprise Green Communities Plus
   2. EnerPHit
   3. PHI Low Energy Building Standard

MODERATE REHABILITATIONS LEVEL 2:

Baseline Requirements:

A. Provide an energy model demonstrating at least 20% reduction in energy use across the project (measured from the average whole building energy consumption for the most recent past three years).

B. Provide a current Integrated Physical Needs Assessment (IPNA) for the project.
   1. All existing conditions, components and systems shall be evaluated utilizing the Integrated Physical Needs Assessment (IPNA) Standard for New York City and State Low/Moderate Income Multifamily Buildings recognized by HCR/HPD/HDC.
   2. Assessments shall include life expectancy values in accordance with the assessment format and account for local conditions, which may reduce life expectancies due to unique situations and project-specific conditions.
   3. IPNAs shall be completed within two years of the date of the project application.
   4. All projects must replace or repair components, finishes and systems which have less than a 15-year lifespan per the following criteria:
      a. Components, systems and finishes that will have a useful life of 5 years or less at the completion of the rehabilitation work shall be replaced as part of the project scope.
      b. Replacement of components, systems and finishes that will have a useful life of 5-10 years at the completion of the rehabilitation work is strongly recommended.
      c. Other systems may be replaced within the 15-year period if it is documented that there will be sufficient replacement reserves available when these replacements are anticipated.
      d. Exceptions for equipment that is in good working condition and can be verified as such by a third-party inspector may be permitted with approval from the Sustainability Unit.

[2] The project team should be clear to explain in their narrative why this alternative pathway was chosen. The project must still meet the Baseline Requirement of 20% on-site reduction in energy use across the project.

SECTION 1 *Continued*

Stretch Goals:

A. Advanced Envelope performance: Upgrade the building envelope to achieve as close to a Passive House standard as possible. *See Section 2: Envelope Stretch Goal for full details.*

B. Existing buildings with the ability to retrofit existing HVAC and Domestic Hot Water (DHW) distribution systems to accommodate the following should pursue:
   1. Electrification of Heating Systems: Upgrade existing fossil fuel (e.g. gas, oil, propane fired) or electric baseboard systems to high-efficiency heat pumps or ground source heat pumps for space heating and cooling. Projects pursuing this Stretch Goal will be required to address envelope improvements. *See Section 2.C Stretch Goals 1 when choosing this stretch goal.*
   2. Electrification of Domestic Hot Water (DHW): Replace/upgrade the existing fossil fuel domestic hot water system with a high-performance heat pump hot water heater (air-source heat pump (ASHP) or water-source heat pump (WSHP).

C. All projects, particularly those projects where the existing building conditions include fuel oil or natural gas systems that are less than 70% efficient, should consider achieving one of the following certifications, especially if replacing fossil fuel fired systems[3]:
   1. Enterprise Green Communities Plus
   2. EnerPHit

MODERATE REHABILITATIONS LEVEL 1:

Baseline Requirements:

A. Provide a current Integrated Physical Needs Assessment (IPNA) for the project.
   1. All existing conditions, components and systems shall be evaluated utilizing the Integrated Physical Needs Assessment (IPNA) Standard for New York City and State Low/Moderate Income Multifamily Buildings recognized by HCR/HPD/HDC.
   2. Assessments shall include life expectancy values in accordance with the assessment format and account for local conditions, which may reduce life expectancies due to unique situations and project-specific conditions.
   3. IPNAs shall be completed within two years of the date of the project application.
   4. All projects must replace or repair components, finishes and systems which have less than a 15-year lifespan per the following criteria:
      a. Components, systems and finishes that will have a useful life of 5 years or less at the completion of the rehabilitation work shall be replaced as part of the project scope.

[3] The project team should be clear to explain in the narrative why the Stretch pathway was chosen. The project must still meet the Baseline Requirements of providing a current Integrated Physical Needs Assessment (IPNA) for the project and demonstrate at least a 20% on-site reduction in energy use across the project.

SECTION 1 *Continued*

b. Replacement of components, systems and finishes that will have a useful life of 5-10 years at the completion of the rehabilitation work is strongly recommended.
c. Other systems may be replaced within the 15-year period if it is documented that there will be sufficient replacement reserves available when these replacements are anticipated.
d. Exceptions for equipment that is in good working condition and can be verified as such by a third-party inspector may be permitted with approval from the Sustainability Unit.

B. Retro-commission all central plant equipment (Space heating, mechanical ventilation, and domestic hot water systems) throughout the project.
C. Replace or retrofit all existing water fixtures (toilets, faucets and aerators) with the low-flow fixtures outlined in Section 2: Water Efficiency.
D. Replace or retrofit all existing lighting throughout the project to meet the requirements outlined in Section 2: Lighting.
E. Insulate all hot water and heat piping throughout the project to meet current NYS energy code.

Stretch Goals:

A. Provide an energy model demonstrating at least 20% reduction in energy use across the project (measured from the average whole building energy consumption for the past three years).
B. Path to Electrification: Create a "Path to Electrification" for the project, including technology needed, costs and potential timeline of when anticipated technology would be available and implemented. Future electrification costs should be included in the property's operating budget/reserve sizing or future sources of funding to support electrification.
C. Electrification ready: Include upgrades to the building that will allow for future electrification to occur. Scopes of work should be focused on providing adequate space and electrical service for future.equipment. Areas of focus should be on ranges/cooking appliances, heating and cooling equipment, water heating, and building electrical systems.

Folwell Senior Apartments: Buffalo, NY

SECTION 2
BUILDING PERFORMANCE REQUIREMENTS

Section 2 shall only apply to the scope of work applicable to the project (i.e., scopes of work already in the project, those required by Section 1, or those required to be included in the scope of work per HCR IPNA requirements).

Although not required, projects should consider all **Stretch Goals** listed in Section 2 as applicable to the proposed scope of work. The **Baseline Requirements** should only be used when the **Stretch Goals** proved to be cost prohibitive to the project.

A. APPLIANCES

Baseline Requirements: Projects must meet all the following requirements:

1. All refrigerators, dishwashers, and clothes washers included in the project or supplied by vendors must meet or exceed Energy Star or CEE Tier 1 certification where available. Commercial third party-owned and operated washing machines may be non-ENERGY STAR rated when no other options are available, provided they meet or exceed the energy efficiency, quality, and reduced operational costs associated with ENERGY STAR rated appliances.
2. **ADAPTIVE REUSE AND SUBSTANTIAL REHAB ONLY:** All ranges, cooktops, ovens and clothes dryers included in the project or supplied by vendors shall be all-electric. This provision extends to commercial and community kitchens.

Stretch Goals: Projects should consider incorporating the following into the project:

1. **MODERATE REHABS LEVEL 1 AND LEVEL 2**: All ranges, cooktops, ovens and clothes dryers included in the project or supplied by vendors shall be all-electric. This provision extends to commercial kitchens.
2. All refrigerators, dishwashers, and clothes washers included in the project or supplied by vendors are Energy Star Most Efficient or CEE Tiers 2,3,4 or Advanced.

Winston Gaskin: Syracuse, NY

SECTION 2 *Continued*

B. LIGHTING

This section applies to all interior and exterior lighting fixtures and bulbs included in the project.

Baseline Requirements: Projects must meet all the following requirements:

1. All interior and exterior lighting shall be LED and Energy Star Certified or provide the equivalent in energy savings and quality.
2. All exterior lighting fixtures shall be DarkSky approved or meet the intent of DarkSky label, meaning fixtures that:
   a. Are fully shielded to restrict upward light and
   b. Emit no light above the horizontal plane and
   c. Are warm toned (max 3000K) white light or filtered LED light scones.
3. All exterior lighting shall have either motion sensor controls, photosensors, or astronomic time-clock operation to limit lighting when there is adequate daylight.
4. Interior common area lighting shall be controlled by occupancy sensors or automatic bi-level lighting controls. Exemptions are permitted in areas where 24-hour consistent light levels are required by code and in mechanical and utility rooms.

Stretch Goals: Projects should consider incorporating the following into the project:

1. Living spaces and/or common areas should be designed to optimize natural daylighting, minimize glare and minimize excessive heat gain during cooling months.
2. Integrated photovoltaic cells on exterior light fixtures.

C. BUILDING ENVELOPE

This section applies to the project's envelope, or the physical barrier between the conditioned and unconditioned environment of a building.

Baseline Requirements: Projects must meet all the following requirements:

1. **SUBSTANTIAL AND MODERATE REHABILITATIONS LEVEL 1/ LEVEL 2 ONLY**: If the project scope of work includes:
   a. Replacement or upgrade to building insulation ONLY: Insulation shall meet prescriptive requirements in 2020 NYS Energy Conservation Construction Code (ECCC) for opaque thermal envelope assembly.
   b. Replacement of exterior windows ONLY: All windows shall meet the prescriptive requirements in 2020 NYS ECCC for Building Envelope Fenestration Maximum U-Factor and Solar Heat Gain Coefficient (SHGC)
   c. Enhancement to building insulation AND exterior windows: Provide an Area-Weighted

SECTION 2 *Continued*

Average U-factor calculation for the proposed envelope and window scope that is at least 15% better than 2020 NYS Energy Conservation Construction Code (ECCC) for envelope elements. Calculations can be submitted in the form of DOE COMcheck or REScheck reports or other supplemental calculation.

2. **ADAPTIVE REUSE ONLY:**
   a. Provide a building-wide UA calculation that demonstrates a building envelope that is 15% better than 2020 NYS Energy Conservation Construction Code (ECCC), as applicable per project type. Calculations can be submitted in the form of DOE COMcheck or REScheck reports or other supplemental calculation.
   b. Provide thermal isolation between residential use spaces and separately leased or commercial spaces, as defined in the Design Guidelines (if applicable). Commercial spaces should be considered as exterior spaces and thermal envelope assemblies meeting 2020 NYS ECCC prescriptive envelope requirements must be provided.

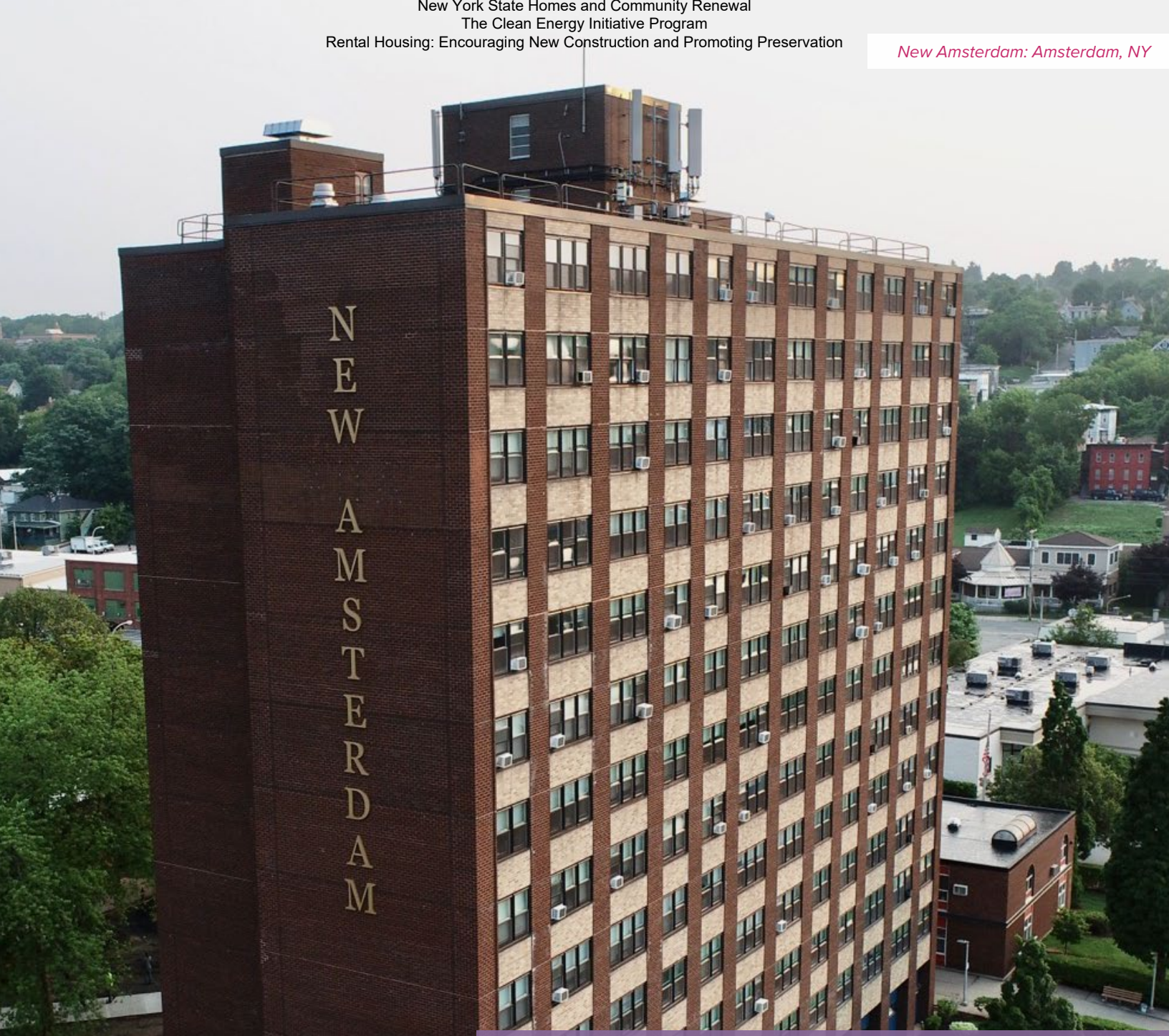
Stretch Goals: Projects should consider incorporating the following into the project:

1. **SUBSTANTIAL AND MODERATE REHABILITATIONS LEVEL 1/ LEVEL 2**: Achieve a building-wide UA calculation that demonstrates the entire building envelope that is at least 15% more energy efficient than 2020 NYS ECCC. Calculations can be submitted in the form of DOE COMcheck or REScheck reports or other supplemental calculation.
2. **ADAPTIVE REUSE**: Provide an energy model that demonstrates a building envelope that is 30% more energy efficient than 2020 NYS ECCC. Calculations can be submitted in the form of DOE

Angela's House: Cheektowaga, NY

New York State Homes and Community Renewal
The Clean Energy Initiative Program
Rental Housing: Encouraging New Construction and Promoting Preservation

New Amsterdam: Amsterdam, NY



HCR is in the midst of a five year, $20B Housing Plan, which is planned to build and preserve at least 100,000 units of affordable housing and improve efficiency at an additional 50,000 units

SECTION 2 *Continued*

COMcheck or REScheck reports or other supplemental calculation;

OR

3. **ADAPTIVE REUSE AND SUBSTANTIAL REHABILITATIONS:** Achieve an envelope performance that is as close to a Passive House standard as possible. Projects should include a detailed description of how they will ensure adequate ventilation of the building as airtightness increases. The installation of balanced ventilation systems like energy recovery ventilation (ERV) and heat recovery ventilation (HRV) systems should be explored. Passive House envelope standards include:
   a. Heating: Load Calculation Standards
      i. Heating Demand: [kWh(m2a)] ≤ 15
      ii. Heating Load: [W/m2] ≤ 10
   b. Air Tightness: Pressurization test result n50: [1/h] ≤ 0.6

D. HVAC

This section applies to the project's heating, ventilation and air conditioning systems. Please refer to each subsection for baseline requirements and stretch goals.

Heating and Cooling

Baseline Requirements: Projects must meet all the following requirements:

1. **MODERATE REHABILITATIONS LEVEL 1/ LEVEL 2 AND SUBSTANTIAL REHABILITATIONS ONLY**:
   a. Demonstrate that the existing heating system is a high efficiency Energy Star or equivalent appliance(s) via Steady State Efficiency (SSE) for equipment with an AFU above 85%. SSE test results should exceed 85%. If the system is not able to achieve these standards, proceed to item b below.
   b. If the system does not meet Energy Star standards, the project shall clean and tune the system and re-test via Steady State Efficiency (SSE). If the results, or AFU does not exceed 85%, or still does not meet or exceed Energy Star standards, proceed to item c below.
   c. Repair the existing system to meet or exceed Energy Star standards, or
   d. Replace the system with a high performance all-electric cold climate heat pump(s)[4] or equal. See Adaptive Reuse section below for a full list of allowable heat pump systems.
      NOTE: Additional funding may be available for eligible projects through HCR's Clean Energy Initiatives program or the local utilities Clean Heat Programs.

[4] If the project team can demonstrate a high efficiency, all electric system is cost prohibitive or would result in increased utility costs to tenants, replace the system with an Energy Star rated heating system that can be converted to an electric system at a future date.

SECTION 2 *Continued*

2. **ADAPTIVE REUSE** ONLY:
   a. All HVAC equipment must be high-efficiency, all-electric, and carry an ENERGY STAR certification or provide the equivalent in energy savings, quality and operational costs.
   b. Equipment shall be either ground source heat pumps OR cold climate air source heat pumps (ccASHPs). Cold climate air source heat pumps must be either:
      i. Listed on the Northeast Energy Efficiency Partnership (NEEP) cold climate air source heat pump product list OR
      ii. Meet NEEP's Cold Climate Air Source Heat Pump Specification (Version 4.0 Effective January 1, 2023).
   c. Acceptable equipment includes the following (either ducted or ductless distribution):
      i. Variable Refrigerant Flow (VRF) with Heat Recovery (simultaneous heating and cooling). VRF with Heat Recovery must be thermally zoned to take advantage of heat recovery between spaces and realize nameplate efficiencies.
         - VRF systems without heat recovery will be permissible if the project demonstrates the system is thermally zoned to account for climate variations (exterior wall exposures, internal heat gain, etc.). Project must also provide details on the operational mode switchover strategy (manual switchover, outdoor air sensor, thermostat mode, etc.).
         - All VRF systems (with or without heat recovery) must be appropriately thermally zoned. The project team must include thermal zoning strategy in the application. Design of thermal zones shall include analysis of unbalanced solar heat gains and internal heat gains considering

HEATING & COOLING TERMINOLOGY

COP (Coefficient of Performance): *Coefficient of Performance* is the relationship between the power (kW) that is drawn out of the heat pump (cooling or heat), and the power(kW) that is supplied to the compressor.

Cold Climate Air-Source Heat Pumps (ccASHP): *Air-Source Heat Pumps* that are suitable for cold climates and specifically designed to efficiently extract heat from outdoor air at very low outdoor air temperatures and transfer that energy to indoor spaces through a reverse air-conditioning process.

Reference the Northeast Energy Efficiency Partnerships (NEEP) cold climate heat pump list to identify compliant ASHP products: ashp.neep.org

Ground Source Heat Pump (GSHP): *Ground Source Heat Pumps* uses the year-round relatively constant temperature of the earth to transfer heat, even in winter months. GSHPs typically achieve higher COPs than ASHPs.

SECTION 2 *Continued*

exposure and potential occupant load.

ii. Mini-split or multi-split units

iii. Cold Climate Air to Water Heat Pumps (AWHPs)

iv. Other solutions or combinations of solutions, at HCR's sole discretion, may be considered if demonstrated to provide adequate performance and not use any fossil fuel in its operation.

d. HVAC systems shall meet the following requirements as applicable:

i. System shall utilize compressor inverter technology efficiently to at least 0 degrees Fahrenheit, without reliance on electric resistance heat

ii. Heat pumps with back-up electric resistance heating must include controls to limit operation above 0 degrees Fahrenheit.

iii. Distribution systems must be designed to provide adequate conditioned heating/cooling to each habitable space within the dwelling unit.

iv. VRF Multi-Split Air Conditioner and Heat Pump equipment must meet the Air Conditioning, Heating and Refrigeration Institute (AHRI) standard 1230 - 2021 with the AHRI label affixed to the equipment.

v. For central VRF-type systems, provide BACnet connection between the heating distribution systems to allow for monitoring capability of the temperature setpoints within units. The installed system must be capable of monitoring temperature setpoints and transmitting data to an external interface. Front-end Building Management System is not required, although encouraged.

vi. Heat pumps must provide heating and cooling. Owners can submeter cooling operation during June 1 through September 30 if applicable.

vii. Refrigerant pipes for VRF systems must be properly protected during installation and installed, tested, insulated, and charged per current NYS energy code and manufacturer's requirements.

- Refrigerant piping must be protected during construction to prevent debris contamination by either capping or covering the ends of piping during installation.
- Nitrogen pressure testing and system vacuum evacuation per manufacturer's testing procedures must be included and must be completed prior to system charging.
- Refrigerant pipe insulation must be installed per 2020 NYS ECCC and any insulation exposed to the exterior must be provided with PVC or aluminum jacketing to protect pipe insulation.
- System refrigerant charging must be performed per manufacturers' requirements and

SECTION 2 *Continued*

be calculated based on as-built refrigerant pipe lengths. Final charge weight should be documented in start-up documentation, O&M manuals, and/or on the equipment itself.

3. HVAC systems shall meet the following design considerations as applicable:
   a. Ducted systems should be used to the greatest extent feasible.
   b. Surface mounted units when used must be coordinated between Architectural and Mechanical, Electrical, and Plumbing divisions to avoid loss of usable wall space within unit while still complying with manufacturer's requirements for clearance.
   c. Exterior mounted condensers shall be placed in a suitable inconspicuous location that does not interfere with exiting path used by the residents and is not directly visible through windows of dwelling units. If the condensers are roof mounted, the installation shall be such that it does not damage the roofing system nor detract from the exterior view of the building.
   d. All repaired, replaced, or upgraded HVAC equipment should be commissioned prior to occupancy following one of the below standards, whichever is most stringent:
      i. ASHRAE/IES Standard 202 OR
      ii. Comply with the projects selected third-party certification standard
      iii. Local or state building code (such as 2020 NYS ECCC)

      All balancing/commissioning reports must be submitted to the project Energy Consultant for review and approval

Adaptive Reuse: HVAC Notes

Project can demonstrate any of the "Exceptions to All-Electric Requirement" listed in Section 1 of this booklet may be exempt from this requirement.

Alternate high-performance decarbonized solutions may be acceptable, at the sole discretion of HCR, if a proposer provides a waiver request and substantial justification to support an alternative HVAC system or design that supports decarbonization.

Areas such as stair towers, and vestibules with no access to a central system can use lower efficiency electric heating components, such as electric resistance heating units, which should only be considered in limited quantities.

SECTION 2 *Continued*

Founders Way Apartments: Ithaca, NY

Stretch Goals: Projects should consider incorporating the following into the project:

1. **MODERATE REHABILITATIONS LEVEL 1/ LEVEL 2 AND SUBSTANTIAL REHABILITATIONS**: Projects should consider the heating and cooling equipment listed in the Adaptive Reuse baseline requirements above.

Thermostats and Controls

Baseline Requirements: Projects must meet all the following requirements:

1. **MODERATE REHABILITATIONS LEVEL 1/ LEVEL 2 ONLY**: Projects without existing thermostats and not replacing HVAC equipment are not required to comply with this section. Projects with existing thermostats that do not include full replacement of HVAC equipment shall:
   a. Commission the existing thermostats (not less than 20% sample size) to ensure they provide the ability to program nighttime setbacks and properly distribute space conditioning in accordance with the system setpoints
   b. If existing thermostats do not properly condition the indoor air temperature based on settings, or are not programmable, the units should be replaced in accordance with the specifications for Adaptive Reuse and Substantial Rehabilitation projects below.

2. **ADAPTIVE REUSE AND SUBSTANTIAL REHABILITATIONS ONLY**: Thermostats shall meet the following requirements:
   a. All apartments shall be treated as individual heating zones controlled by a wall mounted

SECTION 2 *Continued*

programmable thermostat in each apartment capable of maintaining different temperature set points at different times of the day.

i. In buildings with common heating systems, provide either programmable thermostats in each apartment or building system set-back controls, as allowable by the applicable building codes.

b. In common areas, remote wall thermostats accessible to the public should be in a locked enclosure and controlled by the building operations team.

Stretch Goals: Projects should consider incorporating the following into the project:

1. Provide central control capabilities of heating set points through BACnet infrastructure or other equal.
2. Min. and max. set points. Set all units with a reasonable minimum (cooling) and maximum (heating) set point. For example, 68 as a low for cooling, and 78 for high for heating.

Domestic Hot Water

Baseline Requirements: ts: Projects must meet all the following requirements:

1. **MODERATE REHABILITATIONS LEVEL 1/ LEVEL 2 ONLY**:
   a. For existing fossil fuel domestic hot water systems:
      i. Demonstrate that the existing heating system is a high efficiency Energy Star or equivalent appliance(s) via Steady State Efficiency (SSE) for equipment with an AFU above 85%. SSE test results should exceed 85%. If the system is not able to achieve these standards, proceed to item b below.
      ii. If the system does not meet Energy Star standards, the project shall clean and tune the system and re-test via Steady State Efficiency (SSE). If the results, or AFU does not exceed 85%, or still does not meet or exceed Energy Star standards, proceed to item c below.
      iii. Repair the existing system to meet or exceed Energy Star standards; or
      iv. Replace the system with high performance all- electric heat pump(s) domestic hot water system. See Adaptive Reuse section below for a full list of allowable heat pump systems.

   b. For existing electric resistance domestic hot water systems:
      i. Existing systems not included in the project's scope for replacement can remain in place unless there is 5 years or less left in the system's useful life.
      ii. If the system has 5 years or less in useful life, replace the system with high performance

SECTION 2 *Continued*

all-electric heat pump(s) domestic hot water system. See Adaptive Reuse section below for a full list of allowable heat pump systems.

2. **ADAPTIVE REUSE AND SUBSTANTIAL REHABILITATION ONLY**: N ONLY: Projects must utilize high- efficiency electric domestic hot water systems. Acceptable domestic hot water systems include the following:
   a. Central Air to Water Heat Pumps (AWHPs)
   b. Heat pump water heaters (HPWHs)
      i. HPWHs are only permitting in units if sufficient detail is provided to ensure proper airflow for heat extraction and to prevent cold drafts that impact tenant comfort. Project must also provide details to mitigate noise concerns.
      ii. Multiple HPWHs in a central configuration serving multiple units are not permitted unless sufficient design detail is provided in a design waiver, subject to HCR's approval.
   c. Electric resistance storage water heaters that provide hot water to a distribution loop serving a single zone or a single floor, whichever is smaller in terms of linear feet of piping. These units must be insulated per 2020 NYS ECCC requirements.
   d. In-unit electric resistance water heaters. Electric resistance storage water heaters must be insulated per 2020 NYS ECCC requirements.

Exceptions: Project can demonstrate any of the **"Exceptions to All-Electric Requirement"** listed in Section 1 of this booklet may be exempt from this requirement.

Stretch Goals: Projects should consider incorporating the following into the project.

1. **MODERATE REHABILITATIONS LEVEL 1/ LEVEL 2**: Utilize high-efficiency electric domestic hot water systems listed in the Adaptive Reuse baseline requirements above.
2. Utilize solar thermal systems designed to pre-heat domestic hot water. When applicable, pair

Silver Lake Meadows: Perry, NY

SECTION 2 *Continued*

with heat pumps or instantaneous hot water heaters to bring water up to temperature.

3. Ground source heat pumps that either operate on their own or in conjunction with heat pumps or instantaneous hot water heaters.

Ventilation

Baseline Requirements: Projects must meet all the following requirements:

1. **SUBSTANTIAL AND MODERATE REHABILITATIONS LEVEL 1/ LEVEL 2 ONLY:** When the proposed scope of work includes repair or replacement of the ventilation system(s), including natural ventilation via window replacement, projects shall:
   a. For central exhaust systems (single mechanical/whole building system serving more than one unit or common space), clean and seal the ductwork to 5 CFM50/ register + 5 CFM50/floor leakage and provide adjustable constant airflow regulator (CAR) to provide code-compliant mechanical exhaust at each terminal.
   b. For unitized exhaust systems (every unit has its own system), provide code-compliant mechanical exhaust of 25 CFM continuous or 100 CFM intermittent ventilation for each kitchen. Provide code-compliant 20 CFM continuous or 50 CFM intermittent ventilation for each bathroom.
   c. For natural ventilation (via windows), ensure the new windows meet the natural ventilation requirements per applicable code.
2. **ADAPTIVE REUSE PROJECTS ONLY:**
   a. Meet the ventilation criteria required by the third-party certification program selected in Section 1. Historic projects subject to SHPO review and approval that are not able to fully meet the requirements of the third-party certification shall meet the requirement for the Substantial and Moderate Rehabs listed above,
   b. Provide Energy Recovery Ventilation (ERV) or Heat Recovery Ventilation (HRV) for public spaces, such as community rooms, corridors, etc. per 2020 NYS ECCC requirements.

True Bethel Commons (Exterior, Interior): Niagara Falls, NY

New Yorkers consume less total energy per capita than the residents in all but two other states, California and Rhode Island.

Landmark Place: Kingston, NY

SECTION 2 *Continued*

Stretch Goals: Projects should consider incorporating the following into the project.

1. **SUBSTANTIAL AND MODERATE REHABILITATIONS LEVEL 1/ LEVEL 2**: Projects with natural ventilation systems in dwelling units must provide mechanical ventilation with Energy Recovery Ventilation (ERV) or Heat Recovery Ventilation (HRV).
2. Utilize proper passive ventilation. Design the project to account for building mass, pressure differentials, and fresh air/natural ventilation (not just operable windows) to generate sufficient natural ventilation flows to reduce energy consumption and operate in whole or in part even during power outages. Advanced design should consider directing natural air flows through filtration systems.

E. WATER EFFICIENCY

Baseline Requirements: Projects must meet all the following requirements:

1. All fixtures listed below must meet the following requirements:
   a. When replacing toilets – WaterSense or equal AND 1.28 GPF, or dual flush (1.28 GPF max, 0.8 GPF min)
   b. Showerheads – WaterSense or equal AND 1.75 GPM max.
   c. Kitchen Faucets – 1.5 GPM, or dual flow (2.2 GPM max, 1.0 GPM min)
   d. Bathroom lavatory faucets and all other fixtures in dwelling units – WaterSense or equal AND 1.0 GPM max.

Stretch Goals: Projects should consider incorporating the following into the project

1. Utilize water fixtures that are more efficient than the baseline requirements listed above.
2. Incorporate grey water systems such as on-site filtration, grey water reuse for non-potable uses, and water cisterns, where appropriate
3. Install a water monitoring system that is capable of transmitting data to a website or external interface AND monitors water consumption in the following areas of the building:
   a. Each cold-water branch from the apartment line riser for each dwelling unit.
   b. Each cold-water riser and domestic hot water and cold-water feed in the building.
   c. Common laundry room (if applicable).
   d. Outdoor water lines.
   e. Cold water lines in non-residential spaces of the project (if applicable and if property owner is responsible for water utilities).

SECTION 3
ADDITIONAL SUSTAINABILITY REQUIREMENTS

Section 3 applies to all Existing Building Projects. At a minimum, all projects are required to meet the **Baseline Requirements** for each category listed in Section 3. Although not required, projects should consider some or all of the **Stretch Goals** listed in Section 3.

A. INDOOR ENVIRONMENTAL QUALITY PRACTICES

Baseline Requirements: Projects must meet all the following requirements:

1. **Low VOC Building Materials** - Where applicable to the project's scope of work, the following must be met:
   a. All interior paints, coatings and primers shall have a VOC content less than or equal to the thresholds provided by the most recent version of SCAQMD 1113 available at time of product specification. VOC emissions shall be verified as compliant with CDPH Standard Method for all wall finish paints. All wallpaper shall be phthalate free.
   b. All interior adhesives and sealants shall have a VOC content less than or equal to the thresholds provided by the most recent version of SCAQMD 1168 available at time of product specification for all interior adhesives and sealants.
   c. All flooring products must comply with CDPH emission requirements, including carpeting and hard surfaces. Flexible PVC with phthalates is prohibited, regardless of whether the phthalates were intentionally added or added via recycled content.
   d. Fiberglass or mineral wool batt insulation must be formaldehyde-free.
   e. Spray foam insulation shall be applied by applicators certified by the manufacturer, the American Chemistry Council, or other recognized industry standards. The application of spray foam shall be in accordance with such certification to limit harmful off-gassing after the curing period. Scheduling of spray foam applications shall be

Lion Factory: Troy, NY

SECTION 3 *Continued*

done in a manner that allows sufficient ventilation to occur to dissipate any residual off-gassing prior to the spray foam insulation becoming enclosed by other materials.

f. Composite Wood in products such as cabinets and doors shall have formaldehyde emissions less than or equal to the thresholds provided by CARB Phase 2 and/or TSCA Title IV for plywood, particleboard and MDF. For any other composite wood products not covered by CARB/TSCA requirements, but used in interior spaces, these must at minimum be NAUF (have no added urea formaldehyde).

2. **Integrated Pest Management:** All projects are to incorporate integrated pest management during construction that includes sealing all openings, cracks and joints to prevent the infestation of insect and animal pests from entering the building or migrating from one apartment or common area to another. After occupancy, the building management shall incorporate environmentally friendly pest management strategies and extermination practices that are safe for the health of the residents and the environment. A service contract with scheduled service or documentation should be provided as part of the project close out binder.

3. **Mechanical Ventilation Requirements – During and Post Construction:** Projects with unitized or central ventilation systems: In all dwelling units, seal all heating, cooling, and ventilation return and supply ducts and returns throughout construction to prevent construction debris from entering. Flush all dwelling units with a MERV 13 filter or better after completion of construction and prior to occupancy for either 48 hours or with at least 14,000 ft3 per ft2 of floor area, then replace all air handling equipment filters.

B. SUSTAINABLE CONSTRUCTION PRACTICES

Baseline Requirements: Projects must meet all the following requirements:

1. Develop and implement a construction waste management plan that reduces non-hazardous construction and demolition waste through recycling, salvaging, or diversion strategies; maintain documentation on diversion rate for each selected strategy.

Stretch Goals: Projects should consider incorporating the following into the project:

1. Projects are encouraged to select one the following advanced construction waste management strategies to pursue:
   a. Provide a construction waste management plan that diverts at least 75% of construction waste away from the landfill.

SECTION 3 *Continued*

b. Implement a construction waste management plan such that the total construction waste sent to landfill or incinerator is less than 2.5 lbs/SF of building.

C. OPERATIONS

Baseline Requirements: Projects must meet all the following requirements:

1. **Energy and Water Benchmarking:** Projects over 25,000 square feet, upload whole building (owner and tenant paid) energy and water performance data into online utility benchmarking platform at least annually and share with HCR. For details on HCR Benchmarking requirements see: https://hcr.ny.gov/steps-hcr-benchmarking-program
2. **Building Operations and Maintenance:** Provide HCR with a digital copy of an Operator's Manual prepared by the project's Energy Management Consultant that includes the following:
   a. Overview of how mechanical systems are operated, including:
      i. Ideal set points
      ii. Summarized warranty information
      iii. Retro commissioning reports
      iv. Summarized mechanical systems manufacturers information. *Please reach out to HCR if you require a sample document.*
   b. Maintenance schedule/key contact for maintenance
3. **Emergency Management Manual**
   a. Develop an Emergency Plan for building management and residents, including evacuation plans with specific instructions for a flood event, if applicable.

Canal Commons: Rochester, NY

SECTION 3 *Continued*

4. **Resident Manual**
   a. List of sustainability features in the community spaces and resident units
   b. Provide residents with key equipment manual information
   c. Work order request process
   d. Where applicable, control manuals with key set points
5. **Training and Walkthroughs for Building Staff**
   a. Building operators should be present for system start up
   b. General contractor should provide at least one mechanical systems on-site training with building management and operators prior to resident occupancy
6. **Establishment of maintenance log for key building systems**, including but not limited to, when and who services equipment including annual service and emergency repair/work.

D. SITE

This section pertains to requirements for the project site.

Baseline Requirements: Projects must meet the following requirements:

1. **ADAPTIVE REUSE AND SUBSTANTIAL REHABILITATION ONLY**: Provide at least one Level 2 electric vehicle (EV) charging station for every twenty parking spaces provided in a project. EV charging stations shall be equitably distributed throughout the project to allow residents equal convenience in accessing the EV charging stations.
   a. Projects shall not be required to provide more than five EV charging stations in total.
   b. Projects that do not provide parking in a lot are exempt from this requirement
2. Projects with individual driveways for dwelling units should provide, when feasible, a dedicated branch circuit that is not less than 40-ampere and 208/240-volt assigned for electric vehicle supply equipment terminating in a receptacle located adjacent to the driveway for EV charging capabilities.

Stretch Goals:

1. **MODERATE REHABILITATIONS LEVEL 1/ LEVEL 2 ONLY**: Provide at least one Level 2 electric vehicle (EV) charging station for every twenty parking spaces provided in a project. EV charging stations shall be equitably distributed throughout the project to allow residents equal convenience in accessing the EV charging stations.
   a. Projects shall not be required to provide more than five EV charging stations in total.
   b. Projects that do not provide parking in a lot are exempt from this requirement.
2. Sites should include considerations for raised planter beds to accommodate resident gardens. All

SECTION 3 *Continued*

resident gardens shall be located on an accessible route and include at least one accessible planting area. Resident gardens shall also be located in close proximity to a spigot for access to water.

3. Sites should include considerations for walking trails or other outdoor fitness areas for adults and adolescents.

E. SOLAR CONSIDERATIONS

HCR requires that all projects pursuing solar energy, or any other alternative energy sources must incorporate the design, operating cost and development cost assumptions associated with those measures into the project by the time an application is submitted for funding. Any changes to the energy efficiency strategy or green building practices after application submission will not be allowed

East End II:: Newburgh, NY

Baseline Requirements: Projects must meet the following requirement:

1. All NYC projects must evaluate the project for solar feasibility. The solar feasibility study should include proposals for potential locations such as rooftops and other locations throughout the site, identification of preliminary solar components and basic electricity production estimates. The study should also include a cost benefit analysis, including the estimated payback period for the solar installation.

Stretch Goals: Projects should consider incorporating the following into the project:

1. All non-NYC projects should evaluate the project for solar feasibility. The solar feasibility study should include proposals for potential locations such as rooftops and other locations throughout the site, identification of preliminary solar components and basic electricity production estimates. The study should also include a cost benefit analysis, including the estimated payback period for the solar installation.
2. If solar photovoltaic systems (PV) are not included in the project, projects planning roof replacements should include solar ready design to allow for future installation of solar PV. Design considerations should include:
   a. Panel Location and Orientation:

SECTION 3 *Continued*

i. Space reserved on site or on building roof that is free of shade including trees, buildings and building parapets/penthouses.
ii. Potential for south-facing exposure for solar PV panel array

b. Solar Ready Zones:
i. Solar-ready zones shall be designated on the roofs and comply with the provisions outlined in Section CA103.2-CA103.8 or Section RA103.2-RA103.8 of the 2020 Energy Conservation Construction Code of New York State, as applicable per project type.
ii. Roofing warranty shall allow for future installation of solar PV panels without voiding warranty

3. Incorporate passive solar design principles by specifically considering the following:
a. Shade buildings by incorporating landscaping elements.
b. Incorporate brise soleil or other architectural shading devices into the façade where appropriate.
c. Reduced Heat Gain in Windows:
i. If replacing windows, select windows with a Solar Heat Gain Coefficient of less than or equal to 0.40.
ii. If not replacing windows, install solar reduction window film to lower the solar radiation admitted through the windows.

NOTES: Projects are encouraged to explore the NY-Sun program for solar incentives: nyserda.ny.gov/All-Programs/ny-sun

172 Warburton at the Ridgeway: Yonkers, NY

SECTION 3 *Continued*

Parkedge Townhomes: Utica, NY

F. RESILIENCY

This section applies to the project's ability to adapt and provide protection from the adverse effects of climate change.

ADAPTIVE REUSE AND SUBSTANTIAL REHABILITATION ONLY

Baseline Requirements: Projects must meet the following requirements:

1. Conduct a resiliency assessment:
   a. If pursing Enterprise Green Communities certification, conduct a resiliency assessment equivalent to the assessment listed in criterion 1.6 "Resilient Communities: Multi-Hazard/Vulnerability Assessment." Projects should demonstrate how the building is being designed to address the risks identified in the resiliency assessment.
   b. If not pursing Enterprise Green Communities certification, provide a report and supporting narrative describing the applicable hazards to the project as identified on FEMA's National Risk Index map (https://hazards.fema.gov/nri/map), and determine steps the project will take to mitigate the identified risks.
2. All elderly projects (senior housing) providing housing to 50% Persons with Specials Needs as defined by the Capital Programs Manual, must provide the following:
   a. Adequate back up power generation to:
      i. At least one elevator in the building (if applicable) that incorporates resilient design features, and;
      ii. The building's water pump system to provide residents with potable water in the event of a power outage.
   b. A community room at least 15 square feet per bedroom in size should serve as a shelter-in-place location for residents. The community room must include back up power generator that would last at least 4 days to the following:
      i. Electrical outlets,
      ii. At least one refrigerator, kitchen sink and microwave or range,
      iii. At least one accessible bathroom,
      iv. Heating and cooling, and
      v. Domestic hot water

SECTION 3 *Continued*

Additionally, other residential common areas may be combined with the Community Room to meet the area requirement, as long as those spaces are also provided with back-up power generation.

Projects should apply for a design waiver if site conditions prohibit compliance. Projects may utilize either a solar energy system with battery storage or an efficient, low-emission generator to provide power. Fossil fuel back up power is exempt from the all-electric building requirement. Projects should document how long the backup power generation will be able to carry the loads selected and at time of CO, include copy of their refueling contract that includes provisions during periods of power outages.

Stretch Goals:

Projects should consider incorporating the following into the project:

MODERATE REHABILITATIONS LEVEL 1/ LEVEL 2 ONLY: Consider implementing the Baseline Requirements for Adaptive Reuse and Substantial Rehab listed above when feasible.

1. For projects located in Urban Areas (UAs) as designed by the U.S. Department of Commerce, U.S. Census Bureau, should design the project to mitigate the impacts of urban flooding.
   a. **Enhanced Stormwater Management:** Urban flooding is defined as the inundation of stormwater infrastructure due to rainfall that overwhelms the capacity of the stormwater/ sewer systems. Projects should include additional stormwater management techniques to reduce the volume of stormwater runoff and to mitigate unintended effects to the building and tenants during extreme weather scenarios. Project should consider utilizing the USEPA Storm Water Management Model (SWMM) or the Green Infrastructure Flexible Model (GIFMod) to help inform enhanced storm water management.
   b. **Building Design**: Buildings should be designed to mitigate the potential for stormwater damage or mitigate the loss of services to the building during extreme weather scenarios by incorporating one or more of the following strategies:
      i. Do not construct dwelling unit spaces below grade level.
      ii. Elevate key mechanical, electrical and control gears above grade or flood proof any equipment that cannot be elevated.
      iii. Install backwater control plugs in floor drains and backwater valves on sewer lines
2. Install sump pumps in the lowest levels of the basement floor, where applicable.
3. Projects located in the 500-year floodplain or in levee-protected or dam breakage inundation areas should design the project as follows:
   a. Locate key mechanical, electrical and control gears above the 500-year flood level or flood

SECTION 3 *Continued*

Legacy City ACCESS Program: Rehabilitation of Single-family properties in Kingston, NY

proof any equipment that cannot be elevated.

b. Utilize flood resistant construction for all areas below the 500-year flood level.
c. Locate habitable building space above the 500-year flood level.
d. Install backwater control plugs in floor drains and backwater valves on sewer lines.
e. Install sump pumps in the lowest levels of the basement floor, where applicable.

4. Projects should design buildings to maximize **active resiliency** by incorporating the following where feasible:
   a. Renewable PV with battery storage or efficient fossil fuel backup generator to power critical loads. Project should select three or more of the following critical loads:
      i. Heating systems
      ii. Operation of water pumps if needed to make potable water available to occupants
      iii. Lighting and Electric load
         - Plug load in common area spaces or offices
         - Adequate lighting for common area spaces for a "shelter in place" scenario
      iv. Operation of a fan sufficient to provide emergency cooling if mechanical air conditioning equipment cannot operate
      v. Ventilation systems
      vi. Sufficient power for operation of critical medical equipment for residents
      vii. Operation of cable modem and wireless router or other means of providing online access within the building, if applicable
      viii. Operation of one elevator in building, if applicable
   b. Community Shelter or Place of Refuge: Include a common space designated as an emergency shelter

SECTION 3 *Continued*

area for building occupants, or formal place of refuge. Consider providing the following in the community shelter or place of refuge with back up power generation to provide power to the following:

i. Electrical outlets,
ii. At least one refrigerator, kitchen sink and microwave or range,
iii. At least one accessible bathroom,
iv. Heating and cooling, and
v. Domestic hot water

c. Design the building with a rainscreen and windows that can withstand hurricane force winds and rain in coastal areas or special wind regions as defined in NYS Residential Code.

5. Where active resiliency is not utilized, projects should design buildings to maximize **passive survivability** in the event of an extreme weather event or power loss. Projects should incorporate the following considerations into the building design where feasible:
   a. Passive survivability of indoor spaces via highly-efficient building envelopes by maximizing the number of hours that a building stays within comfortable and survivable temperatures without heating or cooling equipment.
   b. Natural ventilation techniques that allow fresh/filtered air ventilation to occur even in the event of power loss.
   c. Maximize natural lighting so that living, common spaces and stairwells all use natural daylighting to the maximum amount feasible.

LaFayette Apartments: Waterloo, NY

New York State Homes and Community Renewal
The Clean Energy Initiative Program
Rental Housing: Encouraging New Construction and Promoting Preservation

Cover Photo Images (Clockwise):

Landmark Place: Kingston, NY
New Amsterdam: Amsterdam, NY
Huntington Apartments: Seneca Falls, NY

2023

NEW YORK STATE OF OPPORTUNITY. Homes and Community Renewal

New York State Homes and Community Renewal
The Clean Energy Initiative Program
Rental Housing: Encouraging New Construction and Promoting Preservation

Newburgh Progress: Newburgh, NY

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Homes and Community Renewal

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The Clean Energy Initiative Program
Rental Housing: Encouraging New Construction and Promoting Preservation

HCR SUSTAINABILITY GUIDELINES:
NEW CONSTRUCTION

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NEW YORK STATE OF OPPORTUNITY. Homes and Community Renewal

Kathy Hochul, Governor
RuthAnne Visnauskas, Commissioner/CEO

New York State Homes and Community Renewal
The Clean Energy Initiative Program
Rental Housing: Encouraging New Construction and Promoting Preservation

El Borinquen: Bronx, NY

TABLE OF CONTENTS

Vital Brooklyn, Brookdale: Brooklyn, NY

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INTENT OF GUIDELINES

HCR is working to put current and future affordable housing projects on the path to meeting New York State's Climate Leadership and Community Protection Act ("Climate Act"), which mandates at least a 40% reduction in greenhouse gas emissions by 2030 and at least 85% reduction by 2050, compared to New York State's 1990 carbon emission levels.

For buildings, this will mean dramatically improving building efficiency by enhancing the building envelope performance and removing or significantly reducing onsite carbon emissions from fossil-fuel burning appliances. HCR developed these Sustainability Guidelines as a step towards meeting the State's climate goals.

HCR's Sustainability Guidelines are designed to produce high quality housing across the State of New York to provide low-income tenants with improved health, safety and well-being.

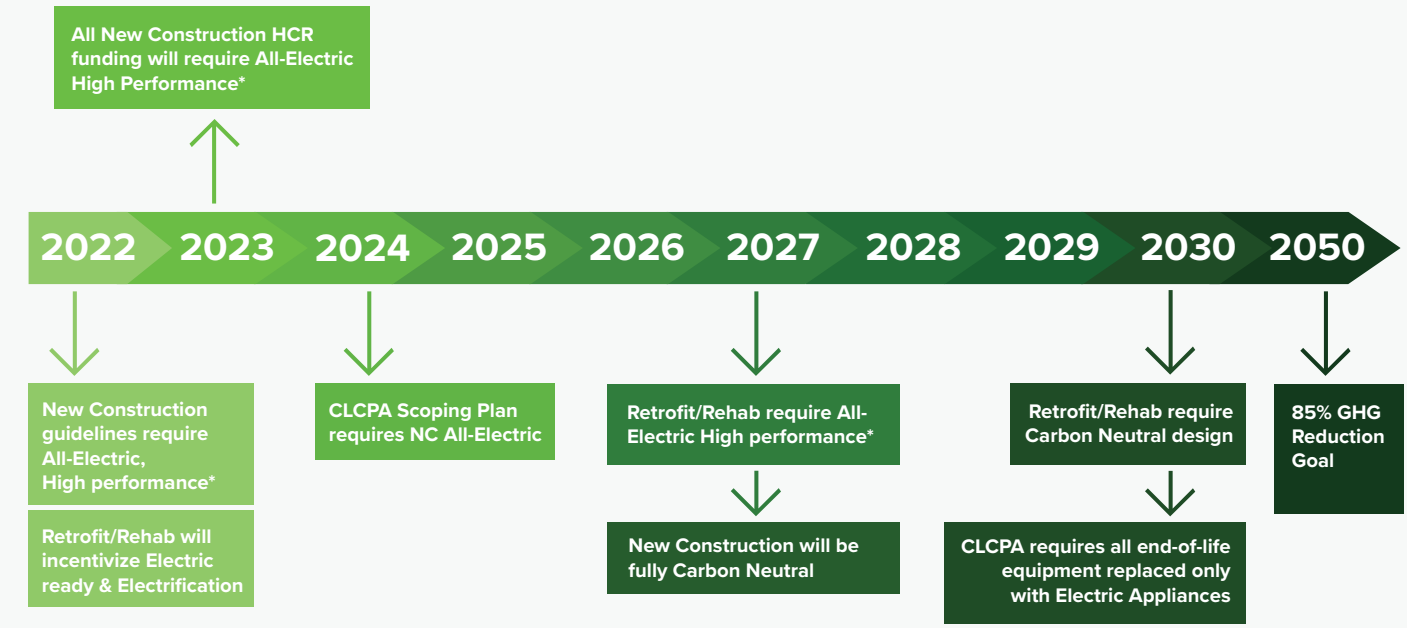
The Guidelines include criteria that advance these goals including energy efficient building shells, systems and equipment, reduction or removal of fossil fuel based sources, increased indoor environmental quality and resiliency measures.

New York State's goals for Greenhouse Gas Emissions Reductions

40% by 2030
85% by 2050

INTENT *Continued*

SUSTAINABILITY STANDARDS ROADMAP



Reduction or removal of fossil fuel based sources from buildings (i.e., electrification) not only aligns with the carbon-reduction goals of the CLCPA, it also has many benefits to tenants including reduced risk of fire, improved indoor air quality, and elimination of potential carbon monoxide exposure. In conjunction with electrification, it is imperative that buildings reduce their heating and cooling loads by addressing the efficiency of the building shell, which can reduce the energy demands of a building while dramatically improving comfort for tenants. HCR's priority is delivering building envelopes that are well sealed and insulated, while also addressing the need for delivery of fresh air into spaces. Addressing these priorities can result in reduced operational costs and creation of living environments that are healthier and more comfortable to live in.

IMPLEMENTATION OF NEW YORK'S CLIMATE ACT IS ON TRACK AND MOVING FORWARD EXPEDITIOUSLY.

APPLICATION OF SUSTAINABILITY GUIDELINES

The **HCR Sustainability Guidelines** are applicable to certain projects applying for financing through HCR. The list of **Applicable Financing Programs** are outlined in this section. Projects shall follow the Sustainability Guideline section(s) that apply to their project based on the financing and construction type outlined in the Application Matrix below.

APPLICATION MATRIX

Applicable Financing Programs:

- HTFC/DHCR 9% LIHTC RFP
- HFA 4% LIHTC Tax-exempt Bond Financing
- HCR Subsidy Financing

Project Type		New Construction Sustainability Guidelines	Existing Buildings Sustainability Guidelines	Preservation Guidelines: A Guidebook for Best Practices in Sustainability
Project applying for financing with HCR through **Applicable Financing Programs**	Residential New Construction	✓		
	Residential Adaptive Reuse Rehabilitation		✓	
	Residential Substantial/ Gut Rehabilitation		✓	
	Residential Moderate Rehabilitation		✓	
	Mix of Residential New Construction and Residential Rehabilitation Buildings in Project	✓ Note 1	✓ Note 1	
	Mix of Residential New Construction and Residential Rehabilitation in a Single Building		✓ Note 2	
	Commercial and/or Community Service Facility	✓ Note 3	✓ Note 3	
Projects under regulation with HCR	Rehabilitation and/or Replacement work			✓

Footnotes

Note 1: Utilize Guidelines matching building scope for each building

Note 2: Follow Adaptive Reuse Guidelines

Note 3: Incorporate comparable energy efficiency strategies as those required for residential projects to achieve similar energy savings

APPLICATION *Continued*

CONSTRUCTION TYPES

The following construction types relate solely to the application of these Guidelines and shall not be used to define project requirements or scopes outside of the criteria defined in these Guidelines.

- **New Construction:** *Ground-up construction of a new building or buildings.*

- **Adaptive Reuse Rehabilitation:** *A substantial renovation that occurs in a building or space that undergoes a change of use to Residential occupancy, as defined by the applicable building code.*

- **Substantial Rehabilitation:** *A renovation where the majority of the interior walls, finishes, systems and MEP infrastructure are demolished and a new scope of work is constructed within the existing building shell. These projects are also sometimes referred to as "gut" rehabilitations.*

- **Moderate Rehabilitation Level 1:** *A renovation where the dwelling unit demising walls, most interior walls and MEP infrastructure remain, and the new scope of work is built within the existing dwelling unit compartment. This type of rehabilitation often includes replacement of fixtures, finishes and equipment (FF&E) and roofing. It may include window replacement, siding replacement and additional roofing scopes.*

- **Moderate Rehabilitation Level 2:** *A renovation where the dwelling unit demising walls and most of the interior walls remain. This type of rehabilitation includes many of the scoping items of a Level 1 Moderate Rehabilitation, but also includes replacement of mechanical, electrical and plumbing (MEP) infrastructure and equipment, either in part or in full.*

John P. Taylor Apartments: Troy, NY

APPLICATION *Continued*

WAIVERS

Minor deviations from these requirements will be allowed via Design Waiver Request if necessary to avoid costly structural changes in rehabilitation projects or if they result in a superior design solution. Requests to waive a requirement will be reviewed on a case-by-case basis by the Vice President of Sustainability, the Vice President of the Design Construction & Environmental Unit (DC&E) and/or the respective DC&E Unit Director. Other offices of the Agency will be consulted when necessary. Evaluations of waiver requests will include the determinations of the appropriateness of the proposed alternative with emphasis on:

- Alignment with the HCR Sustainability Standards Roadmap
- Impacts on operating costs/efficiency
- Impact to the residents
- Cost-effectiveness
- Functional appropriateness
- Durability and operating appropriateness

Mount Hope Walton Apartments: Bronx, NY

All waiver requests must be submitted via the Design Waiver Request Form and must be received 30 calendar days prior to each required submission. The Design Waiver Request Form can be obtained online at http://www.hcr.ny.gov.

Waivers are applicable for 18 months from date of issuance. If a project does not submit a formal application to HCR within 18 months, a new waiver must be submitted to HCR for review and approval against HCR's latest guidance and standards.

Potential applicants and design professionals needing technical assistance on the criteria outlined in these Guidelines should contact the HCR Sustainability Team, the Design, Construction & Environmental Unit, or the program managers of the applicable funding sources.

PROJECTS WITH NYC HPD INVOLVEMENT

All projects located within New York City that involve the City of New York Department of Housing Preservation and Development (HPD)

APPLICATION *Continued*

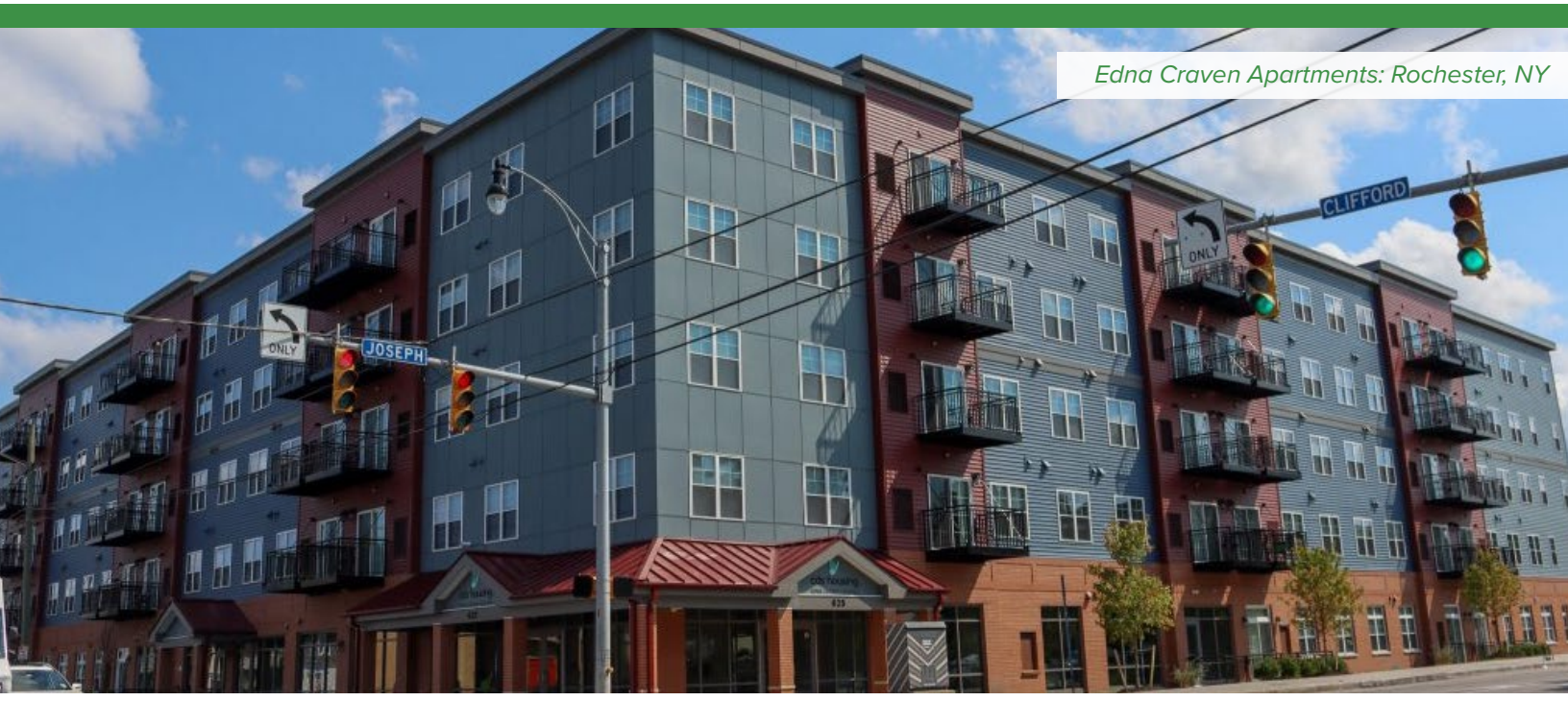
funding, the more restrictive Guideline shall apply. All Sustainability Guideline criteria that is not met due to conflicts with the HPD criteria, must be presented to and approved by HCR as a Design Waiver Request.

DESIGN COMMITMENT

To ensure that the design is coordinated with other applicable submission criteria and program requirements, project applicants and architects should also refer to publications applicable to the funding sources for the project. HCR publications can be obtained online at http://www.hcr.ny.gov or from applicable program staff.

A project's design and construction shall comply with and may not vary from what is represented in the application for funding unless a change is specifically directed or recommended by HCR. Constructed projects shall not be diminished in quality, including aesthetics, choice of materials, or systems from that proposed and represented in the application for funding unless specifically altered by HCR at award. The applicant is responsible for ensuring that the project's scope of work, as represented by the plans, specifications and other pertinent documents are well defined and coordinated with the cost estimate.

The Guidelines do not exclude compliance with other criteria that may be required by the project funding source(s) or required by applicable codes, laws or regulations.



Edna Craven Apartments: Rochester, NY

Lewisboro Commons: Lewisboro, NY

NEW CONSTRUCTION

The **HCR New Construction Sustainability Guidelines** are applicable to all New Construction Projects applying for financing with HCR under the Applicable Financing Programs. A list of the Applicable Financing Programs can be found in the Application of Sustainability Guidelines section of this booklet. New Construction Projects are defined as projects that include the ground-up construction of a new building or buildings. They can also include portions of a project that include new additions to existing buildings.

For projects that include a mix of New Construction and Rehabilitation, please see the *Application Matrix* included in this booklet.

STRUCTURE

SUSTAINABILITY GUIDELINE REQUIREMENTS

This booklet is divided into three sections:

Section 1:
Core Sustainability Requirements

Section 2:
Building Performance Requirements

Section 3:
Additional Sustainability Requirements

Each section addresses a specific set of goals or standards that HCR has established as a baseline for all New Construction Projects to meet. These are referred to as **Baseline Requirements**. Each section also contains a number of **Stretch Goals** which all development teams are encouraged to meet, as they set the precedent for future baseline standards.

TERMINOLOGY: BASELINE REQUIREMENTS AND STRETCH GOALS

BASELINE REQUIREMENTS	STRETCH GOALS
Baseline Requirements outline **mandatory** criteria that are required on every project.	Stretch Goals are **not mandatory,** but projects should consider all Stretch Goals outlined in this document unless meeting those goals proves to be cost prohibitive to the project. Stretch standards can be met in whole or in part, meaning a developer can chose to achieve some Stretch Goals in one section but not another. Competitive projects can receive additional points for achieving some or all of the stretch standards as outlined in the applicable RFP.

STRUCTURE *Continued*

COMPLIANCE PATHS FOR NEW CONSTRUCTION SUSTAINABILITY GUIDELINES:

Section 1: Core Sustainability Requirements

Projects choosing to meet the **Baseline Requirements** in Section 1 must also comply with the **Baseline Requirements** in Section 2 and Section 3. Projects may choose to meet the **Stretch Goals** in any Section. Projects that commit to compliance with criteria in the **Stretch Goals** in Section 1 of these Guidelines must meet the **Baseline Requirements** outlined in Section 2D HVAC. Projects pursuing **Stretch Goals** in Section 1 shall be considered automatically in compliance with all other **Baseline Requirements**. All projects must comply with all **Baseline Requirements** in Section 3 of these Guidelines.

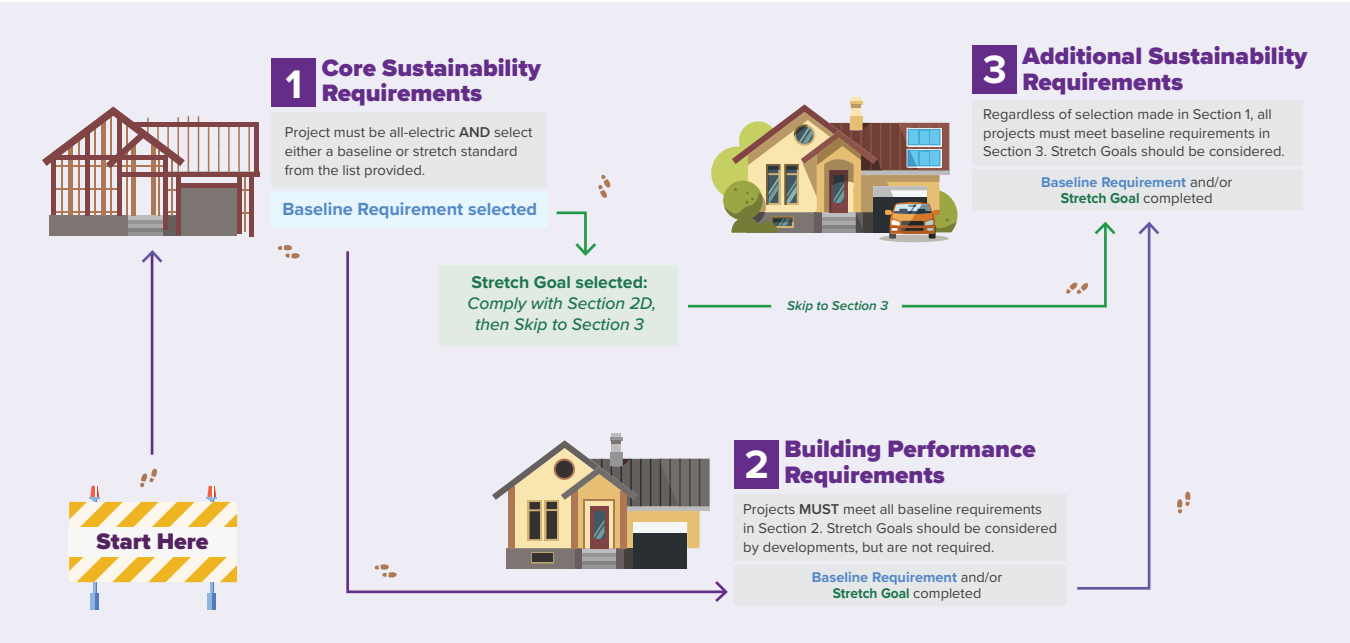
Section 2: Building Performance Requirements

Projects that selected a **Baseline Requirement** in Section 1, will be required to meet the **Baseline Requirements** and may choose to comply with some or all of the **Stretch Goals** in this section. Projects that commit to compliance with criteria in the **Stretch Goals** in Section 1 of these Guidelines must meet the **Baseline Requirements** outlined in Section 2D HVAC. Projects pursuing **Stretch Goals** in Section 1 shall be considered automatically in compliance with all other **Baseline Requirements** in this section.

Section 3: Additional Sustainability Requirements

All projects must comply with the **Baseline Requirements** in Section 3. Projects may choose to meet some or all of the **Stretch Goals** outlined in this section.

The graphic (below) illustrates the possible compliance paths for meeting the HCR New Construction Sustainability Guidelines.



SECTION 1

CORE SUSTAINABILITY REQUIREMENTS

Section 1 of the New Construction Sustainability Guidelines outlines core project requirements and eligible third-party certification programs that must be met by all projects.

At a minimum, projects must meet the all-electric standard and comply with one of the **Baseline Requirement** third-party certifications. Projects are encouraged to select a third-party certification from the **Stretch Goal** section, while still meeting the all-electric standard. Projects that commit to compliance with criteria listed in the **Stretch Goals** in Section 1 of these Guidelines must meet the **Baseline Requirement** outlined in Section 2D HVAC. Projects pursuing **Stretch Goals** in Section 1 shall be considered automatically in compliance with all other **Baseline Requirements** in Section 2. All projects must comply ith **Baseline Requirements** in Sectoin 3 of these Guidelines.

GENERAL CONSIDERATIONS

Code compliance takes precedence for all building systems and design. If a conflict exists between building/energy codes or HCR sustainability requirements, a design waiver should be requested from HCR.

Please be advised that energy code requirements and the corresponding energy efficiency strategy must be considered when planning a Project's development schedule. Projects will be responsible, without any additional cost to HCR programs, to comply with the applicable energy efficiency standard and all energy code requirements.

Nonresidential projects, or nonresidential spaces in a mixed-use project, shall incorporate comparable energy efficiency strategies as those required for residential projects to achieve similar energy savings.

Selkirk Landing: Oswego, NY

Baseline Requirements:

A. All Electric: All projects must utilize high-performance all-

SECTION 1 *Continued*

electric heating/cooling and domestic hot water equipment and other in-unit or shared appliances such as dryers and cooktops, ovens or ranges, and;

B. Third-party Standard Certification: Select one of the following third-party certification programs to certify the project to:

1. Low Carbon Buildings Criteria Under Climate Bond Initiatives (CBI), which include[1]
   a. Energy Star Multifamily New Construction (MFNC) ASHRAE Pathway achieving 30% energy savings, pre-photovoltaic (PV)
   b. Energy STAR MFNC ERI pathway achieving:
      i. For Multifamily Buildings: Maximum ERI performance of 0.75 x MFNC c11 ERI target, pre-PV
      ii. For Townhomes: Maximum ERI performance of 45, pre-PV
   c. Passive House Certification through either PHI or PHIUS
2. 2020 Enterprise Green Communities Certification
   c. Projects in NYC should utilize the NYC overlay
3. LEED Residential – Silver or higher:
   a. LEED v4
   b. LEED v4 with LEED 4.1 credit substitutions
   c. LEED 4.1
4. WELL or Fitwel Building Certification
5. ICC/ASHRAE 700 – 2020 National Green Building Standard Silver or higher

   If a project team believes there is a third-party rating or certification system that is equivalent to the options listed in the Sustainability Guidelines, the project team can submit a waiver request, with clear justification. The Waiver Request Form can be found online at hcr.ny.gov. Should the rating system be deemed equivalent, a project specific waiver would be made available.

Stretch Goals:

A. Third-party Standard Certification[2]**:** Select one of the following third-party certification programs to certify the project in lieu of the programs listed in the Baseline Requirements:

1. LEED Zero Energy[3] AND:

[1] All projects applying for Multifamily Finance 4% HFA Tax-exempt Bond and Subsidy Financing are required to achieve this standard.

[2] All projects choosing a Stretch Third-party Standard must still comply with the baseline All-Electric Requirement.

[3] HCR does not currently specify a required path for compliance under LEED Zero Energy 3, provided the proposed solution complies with the LEED Zero Energy requirements. The project team is responsible for securing funding sources to cover the purchase of procuring off-site renewable energy as HCR and CEI funds will not cover those expenses. The project team should include their approach to LEED Zero Energy in the application as well as funding sources. If a project team believes there is a third-party rating or certification system that is equivalent to the options listed in the Sustainability Guidelines, the project team can submit a waiver request, with clear justification.

SECTION 1 *Continued*

a. LEED v4 BD+C with a rating of Gold or higher OR
b. LEED v4.1 BD+C with a rating of Gold or higher

2. 2020 Enterprise Green Communities Plus
3. Passive House PHI/PHIUS or equal

Exceptions to All-Electric Requirement

Projects who can provide evidence to any of the following may, at HCR's sole discretion, be granted a waiver from the requirement to have all-electric heating/cooling and domestic hot water equipment:

a. An electric load letter from grid demonstrating there is not sufficient electrical service to construct a new all-electric building.
b. Use of on-site emergency back-up power generation with fossil fuel is acceptable; high-efficiency fossil fuel generators are permitted. Projects should provide a letter stating that onsite generators will only be used in no load tests/exercise and for emergency purposes when the electric grid power fails.

Vital Brooklyn, The Rise: Brooklyn, NY

SECTION 2
BUILDING PERFORMANCE REQUIREMENTS

Section 2 applies to those projects who chose the Baseline Requirements compliance path in Section 1. Projects that commit to compliance with criteria listed in the **Stretch Goals** in Section 1 must meet the **Baseline Requirements** outlined in Section 2D HVAC. Projects pursuring **Stretch Goals** in Section 1 shall be considered automatically in compliance with all other **Baseline Requirements** in this Section. All projects must comply with **Baseline Requirements** in Section 3 of these Guidelines.

A. APPLIANCES

This section applies to all cooking and clothes drying appliances included in the project.

Baseline Requirements: Projects must meet all the following requirements:

1. All refrigerators, dishwashers, and clothes washers included in the project or supplied by vendors must meet or exceed Energy Star or CEE Tier 1 certification where available. Commercial washing machines may be non-ENERGY STAR rated provided they meet or exceed the energy efficiency, quality, and reduced operational costs associated with ENERGY STAR rated appliances.
2. All ranges, cooktops, ovens and clothes dryers included in the project or supplied by vendors shall be all-electric. This provision extends to commercial and community kitchens.

Stretch Goals: Projects should consider incorporating the following into the project:

1. All appliances are Energy Star Most Efficient or CEE Tiers 2,3,4 or Advanced

B. LIGHTING

This section applies to all interior and exterior lighting fixtures and bulbs included in the project.

Baseline Requirements: Projects must meet all the following requirements:

1. All interior and exterior lighting shall be LED and Energy Star Certified or provide the equivalent in energy savings and quality.

SECTION 2 *Continued*

2. All exterior lighting fixtures shall be DarkSky approved or meet the intent of DarkSky label, meaning fixtures that:
   a. Are fully shielded to restrict upward light ;and
   b. Emit no light above the horizontal plane; and
   c. Are warm toned (max 3000K) white light or filtered LED light sources.
3. All exterior lighting shall have either motion sensor controls, photosensors, or astronomic time-clock operation to limit lighting when there is adequate daylight.
4. Interior common area lighting shall be controlled by occupancy sensors or automatic bi-level lighting controls. Exemptions are permitted in areas where 24-hour consistent light levels are required by code and in mechanical and utility rooms.

Stretch Goals: Projects should consider incorporating the following into the project:

1. Living spaces and/or common areas shall be designed to optimize natural daylighting, minimize glare and minimize excessive heat gain during cooling months.
2. Interior common area lighting shall be controlled by occupancy sensors or automatic bi-level lighting controls. Exemptions are permitted in areas where 24-hour consistent light levels are required by code and in mechanical and utility rooms.
3. Integrated photovoltaic cells on exterior light fixtures.

C. BUILDING ENVELOPE

This section applies to the project's envelope, or the physical barrier between the conditioned and unconditioned environment of a building.

SECTION 2 *Continued*

Baseline Requirements: Projects must meet all the following requirements:

1. Provide a building-wide UA calculation that demonstrates the proposed building envelope is at least 15% better than 2020 NY State Energy Conservation Construction Code (ECCC). Calculations can be submitted in the form of DOE COMcheck or REScheck reports or other supplemental calculation.
2. Provide thermal isolation between residential use spaces and separately leased commercial spaces, as defined in the Design Guidelines (if applicable). Commercial spaces should be considered as exterior spaces and thermal envelope assemblies meeting 2020 NYS ECCC prescriptive envelope requirements must be provided.

Stretch Goals: Projects should consider incorporating the following into the project:

1. Provide a building-wide UA calculation that demonstrates the proposed building envelope is at least 30% better than 2020 NYS ECCC. Calculations can be submitted in the form of DOE COMcheck or REScheck reports or other supplemental calculations.

D. HVAC

This section applies to the project's heating, ventilation, and air conditioning systems. Please refer to each subsection for baseline requirements and stretch goals.

Heating and Cooling

Baseline Requirements: Projects must meet all the following requirements:

1. All HVAC equipment must be all high-efficiency, all-electric, and carry an ENERGY STAR certification or provide the equivalent in energy savings, quality and

HEATING & COOLING TERMINOLOGY

COP (Coefficient of Performance): *Coefficient of Performance* is the relationship between the power (kW) that is drawn out of the heat pump (cooling or heat), and the power(kW) that is supplied to the compressor.

Cold Climate Air-Source Heat Pumps (ccASHP): *Air-Source Heat Pumps* that are suitable for cold climates and specifically designed to efficiently extract heat from outdoor air at very low, outdoor air temperatures and transfer that energy to indoor spaces through a reverse air-conditioning process.

Reference the Northeast Energy Efficiency Partnerships (NEEP) cold climate heat pump list to identify compliant ASHP products: ashp.neep.org

Ground Source Heat Pump (GSHP): *Ground Source Heat Pumps* uses the year-round relatively constant temperature of the earth to transfer heat, even in winter months. GSHPs typically achieve higher COPs than ASHPs.

Bedford Green House II: Bronx, NY

New York State is a leader in adopting clean heat and energy efficiency measures, committing more than $6.8 billion to reduce the carbon footprint of New York's building stock.

SECTION 2 *Continued*

operational costs.

2. Equipment shall be either ground source heat pumps OR cold climate air source heat pumps. Cold climate air source heat pumps must be either:
   a. Listed on the Northeast Energy Efficiency Partnership (NEEP) Cold Climate Air Source Heat Pump Product List OR
   b. Meet NEEP's Cold Climate Air Source Heat Pump Specificiation (Version 4.0 effective January 1, 2023)
   c. Acceptable equipment includes equal to or better efficiency than the following (either ducted or ductless distribution):
      i. Variable Refrigerant Flow (VRF) with Heat Recovery (simultaneous heating and cooling). VRF with Heat Recovery must be thermally zoned to take advantage of heat recovery between spaces and realize nameplate efficiencies.
         - VRF systems without heat recovery will be permissible if the project demonstrates the system is thermally zoned to account for climate variations (exterior wall exposures, internal heat gain, etc). Project must also provide details on the operational mode switchover strategy (manual switchover, outdoor air sensor, thermostat mode, etc).
      ii. All VRF systems (with or without heat recovery) must be appropriately thermally zoned. The project team must include thermal zoning strategy in the application. Design of thermal zones shall include analysis of unbalanced solar heat gains and internal heat gains considering exposure and potential occupant load. Cold Climate Mini- and Multis-plit units.
      iii. Cold Climate Packaged Terminal Heat Pumps (PTHPs) provided that the project demonstrates/includes all of the following:
         - Thermal break details that mitigate thermal bridging from PTHP sleeve

Ithaca Housing Authority: Ithaca, NY

SECTION 2 *Continued*

- Air sealing details around PTHP penetrations
- Deductions in the project's UA calculations or COMcheck/REScheck reports to account for minimized thermal performance at PTHP openings [4]
- If a project is pursuing Passive House certification, the project's energy consultant must provide written confirmation on company letter head confirming that the project is pursuing the alternate compliance pathway for PTHPs
- Sample air leakage test/mock-up

b. Cold Climate Air to Water Heat Pumps (AWHP)

Alternate high-performance decarbonized solutions may be acceptable, at the sole discretion of HCR, if a proposer provides a waiver request and substantial justification to support an alternative HVAC system or design that supports decarbonization. Areas such as stair towers, and vestibules with no access to a central system can use lower efficiency electric heating components, such as electric resistance heating units, which should only be considered in limited quantities.

3. HVAC systems shall meet the following requirements as applicable:
   a. System shall utilize compressor inverter technology efficiently to at least 0 degrees Fahrenheit, without reliance on electric resistance heat.
   b. Heat pumps with back-up electric resistance heating must include controls to limit operation above 0 degrees Fahrenheit.
   c. Distribution systems must be designed to provide adequate conditioned heating/ cooling to each habitable space within the dwelling unit.
   d. VRF Multi-Split Air Conditioner and Heat Pump equipment must meet the Air Conditioning, Heating and Refrigeration

[4] Project team can use a higher thermal performance value if sufficient documentation is provided to the HCR Sustainability Unit from the manufacturer showing added insulation within the PTHP assembly.

SECTION 2 *Continued*

Institute (AHRI) standard 1230 - 2021 with the AHRI label affixed to the equipment.

e. For central VRF-type systems, provide BACnet connection between the heating distribution systems to allow for monitoring capability of the temperature setpoints within units. The installed system must be capable of monitoring temperature setpoints and transmitting data to an external interface. Front-end Building Management System is not required.

f. Heat pumps must provide heating and cooling. Owner can submeter cooling as needed.

g. Refrigerant pipes for VRF systems must be properly protected during installation and installed, tested, insulated, and charged per Energy Code and manufacturer's requirements.

- Refrigerant piping must be protected during construction to prevent debris contamination by either capping or covering the ends of piping during installation.
- Nitrogen pressure testing and system vacuum evacuation per manufacturer's testing procedures must be included and must be completed prior to system charging.
- Refrigerant pipe insulation must be installed per 2020 NYS ECCC requirements and any insulation exposed to the exterior must be provided with PVC or aluminum jacketing to protect pipe insulation.
- System refrigerant charging must be performed per manufacturers' requirements and must be calculated based on as-built refrigerant pipe lengths. Final charge weight should be documented in start-up documentation, O&M manuals, and/or on the equipment itself.

4. HVAC systems shall meet the following design considerations as applicable:

a. Ducted systems should be used to the greatest extent feasible.

b. Surface mounted units, when used, must be coordinated between Architectural and Mechanical, Electrical, and Plumbing divisions to avoid loss of usable wall space within unit

Johnson Park Green Apartments: Utica, NY

SECTION 2 *Continued*

while complying with manufacturer's requirements for clearance.

c. Exterior mounted condensers shall be placed in a suitable inconspicuous location that does not interfere with exiting path used by the residents and is not directly visible through windows of dwelling units. If the condensers are roof mounted, the installation shall be such that it does not damage the roofing system nor detract from the exterior view of the building.

5. Thermostats shall meet the following requirements:
   a. All apartments shall be treated as individual heating zones controlled by a wall-mounted programmable thermostat in each apartment capable of maintaining different temperature set points at different times of the day. In buildings with common heating systems, provide either programmable thermostats in each apartment or building system set-back controls, as allowable by the applicable building codes.
   b. In common areas, remote wall thermostats accessible to the public should be in a locked enclosure and controlled by the building operations team.
6. All HVAC equipment must be commissioned prior to occupancy following one of the below standards, whichever is most stringent:
   a. ASHRAE/IES Standard 202 OR
   b. A third-party certification standard
   c. Local or state building code (such as 2020 NYS ECC). All balancing/commissioning reports must be submitted to the project Energy Consultant for review and approval.

Stretch Goals:

1. Provide central control capability of heating units through BACnet infrastructure or other equal.

Domestic Hot Water

Baseline Requirements: Projects must meet all the following requirements:

1. All projects must utilize high-efficiency electric domestic hot water systems. Acceptable domestic hot water systems include the following:
   a. Cold Climate Air to Water Heat Pumps
   b. Heat pump Water Heaters
      - In-unit heat pump water heaters must include enough clearance to ensure proper airflow for heat extraction and to prevent cold drafts that impact tenant comfort. Project must also provide details to mitigate noise concerns.
      - Multiple HPWHs in a central configuration serving multiple units are not permitted unless sufficient design detail is provided in a design waiver, subject to HCR's approval.

SECTION 2 *Continued*

c. Electric resistance storage water heaters that provide hot water to distribution loop serving a single zone or a single floor, whichever is smaller in terms of linear feet of piping. Water heaters must be insulated per 2020 NYS ECCC Requirements.

d. In-unit electric resistance water heaters. Electric resistance storage water heaters must be insulated per 2020 NYS ECCC requirements.

Exceptions:

Project can demonstrate any of the "Exceptions to All-Electric Standard" listed in Section 1 of this booklet may be exempt from this requirement.

Stretch Goals: Projects should consider incorporating the following into the project:

1. Solar thermal systems designed to pre-heat domestic hot water. These systems are often paired with heat pumps or instantaneous hot water heaters to bring water up to temperature.
2. Ground source heat pumps that either operate on their own or are in conjunction with heat pumps or instantaneous hot water heaters.

Ventilation

Baseline Requirements: Projects must meet all the following requirements:

1. Meet the ventilation criteria required by the third-party certification program in Section 1.
2. Provide Energy Recovery Ventilation (ERV) or Heat Recovery Ventilation (HRV) for public spaces, such as community rooms, corridors, etc. per 2020 NYS ECCC requirements.

Stretch Goals: Projects should consider incorporating the following into the project:

1. Provide mechanical ventilation using Energy Recovery Ventilation (ERV) or Heat Recovery Ventilation (HRV) in dwelling units to increase indoor air quality. In-unit ERVs must include properly located access panels to clean louvers/grilles.
2. Proper Passive Ventilation: Utilize proper passive ventilation. Design the project to account for building mass, pressure differentials, and fresh air/natural ventilation (not just operable windows) to generate sufficient natural ventilation flows to reduce energy consumption and operate in whole or in part even during power outages. Advanced design should consider directing natural air flows through filtration systems.

E. WATER EFFICIENCY

Baseline Requirements: Projects must meet all the following requirements:

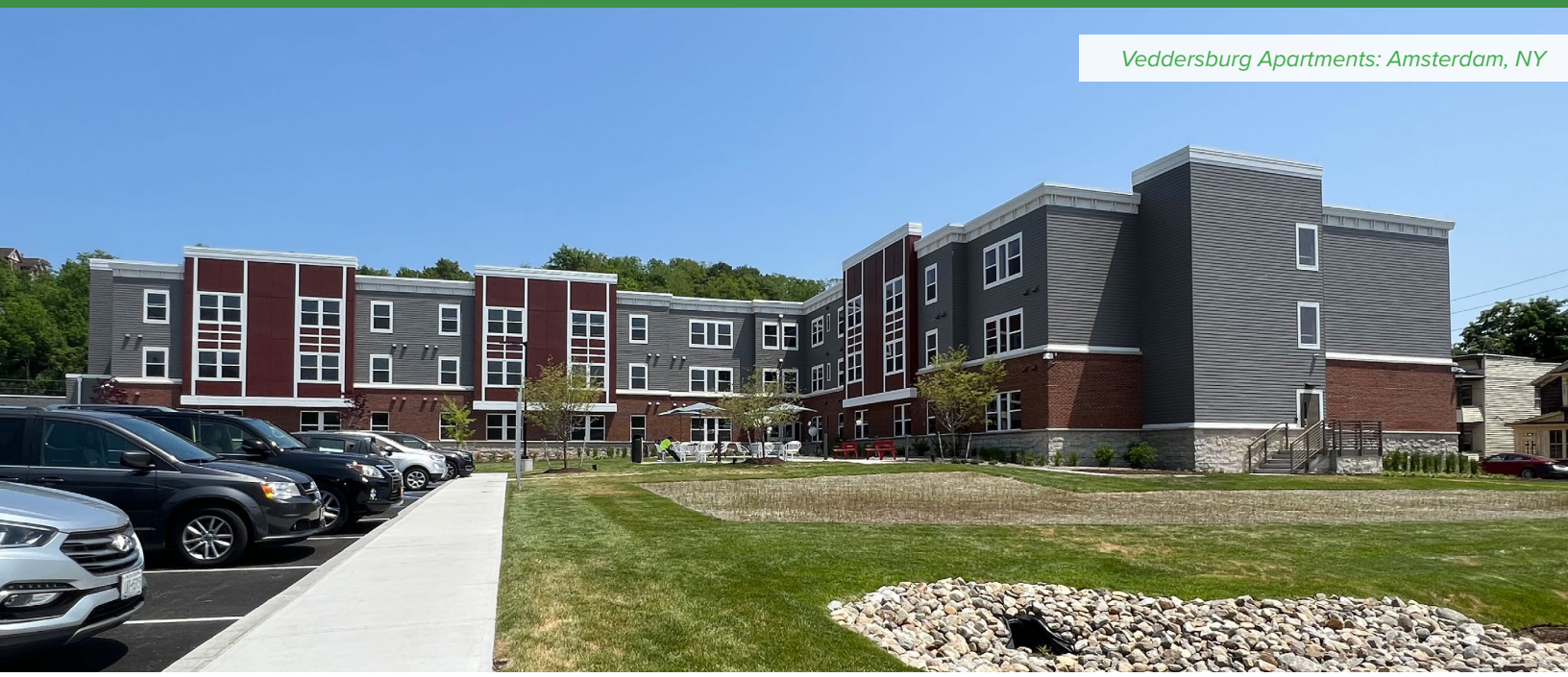
1. All fixtures listed below must meet the following requirements:

SECTION 2 *Continued*

a. Toilets – WaterSense or equal AND 1.28 GPF, or dual flush (1.28 GPF max, 0.8 GPF min)
b. Showerheads – WaterSense or equal AND 1.75 GPM max
c. Kitchen Faucets – 1.5 GPM, or dual flow (2.2 GPM max, 1.0 GPM min)
d. Bathroom lavatory faucets and all other fixtures in dwelling units – WaterSense or equal AND 1.0 GPM max

Stretch Goals: Projects should consider incorporating the following into the project:

1. Utilize water fixtures that are more efficient than the baseline requirements listed above.
2. Incorporate grey water systems such as on-site filtration, grey water reuse for non-potable uses and water cisterns, where appropriate.
3. Install a water monitoring system that is capable of transmitting data to a website or external interface AND monitors water consumption in the following areas of the building:
   - Each cold-water branch from the apartment line riser for each dwelling unit.
   - Each cold-water riser and domestic hot water and cold-water feed in the building.
   - Common laundry room (if applicable).
   - Outdoor water lines.
   - Cold water lines in non-residential spaces of the project (if applicable and if property owner is responsible for water utilities).



Veddersburg Apartments: Amsterdam, NY

SECTION 3

ADDITIONAL SUSTAINABILITY REQUIREMENTS

Section 3 applies to all New Construction Projects. At a minimum, all projects are required to meet the **Baseline Requirements** for each category listed in Section 3. Although not required, projects should consider some or all of the **Stretch Goals** listed in Section 3.

A. INDOOR ENVIRONMENTAL QUALITY PRACTICES

Baseline Requirements: Projects must meet all the following requirements:

1. **Low VOC Building Materials:**
   a. All interior paints, coatings and primers shall have a VOC content less than or equal to the thresholds provided by the most recent version of SCAQMD 1113 available at time of product specification. VOC emissions shall be verified as compliant with CDPH Standard Method for all wall finish paints. All wallpaper shall be phthalate free.
   b. All interior adhesives and sealants shall have a VOC content less than or equal to the thresholds provided by the most recent version of SCAQMD 1168, available at time of product specification, for all interior adhesives and sealants.
   c. All flooring products must comply with CDPH emission requirements, including carpeting and hard surfaces. Flexible PVC with phthalates is prohibited, regardless of whether the phthalates were intentionally added or added via recycled content.
   d. Fiberglass or mineral wool batt insulation must be formaldehyde-free.
   e. Spray foam insulation shall be applied by applicators certified by the manufacturer, the American Chemistry Council, or other recognized industry standards. The application of spray foam shall be in accordance with such certification to limit harmful off-gassing after the curing period. Scheduling of spray foam applications shall be done in a manner that allows sufficient ventilation to occur to dissipate any residual off-gassing prior to the spray foam insulation becoming enclosed by other materials.

Lewisboro Commons: Lewisboro, NY

SECTION 3 *Continued*

Tremont Residence: Bronx, NY

f. Composite Wood in products such as cabinets and doors shall have formaldehyde emissions less than or equal to the thresholds provided by CARB Phase 2 and/or TSCA Title IV for plywood, particleboard and MDF. For any other composite wood products not covered by CARB/TSCA requirements, but used in interior spaces, these must at minimum be NAUF (have no added urea formaldehyde).

2. Integrated Pest Management:

All projects are to incorporate integrated pest management during construction that includes sealing all openings, cracks and joints to prevent the infestation of insect and animal pests from entering the building or migrating from one apartment or common area to another. After occupancy, the building management shall incorporate environmentally friendly pest management strategies and extermination practices that are safe for the health of the residents and the environment. A service contract or documentation should be provided as part of the project close out binder.

3. Ventilation Requirements – During and Post Construction:

In all dwelling units, seal all heating, cooling, and ventilation return and supply floor ducts and returns throughout construction to prevent construction debris from entering. Flush all dwelling units with a MERV 13 filter or better after completion of construction and prior to occupancy for either 48 hours or with at least 14,000 ft3 per ft2 of floor area, then replace all air handling equipment filters.

B. SUSTAINABLE CONSTRUCTION PRACTICES

Baseline Requirements: Projects must meet all the following requirements:

1. Develop and implement a construction waste management

SECTION 3 *Continued*

plan that reduces non-hazardous construction and demolition waste through recycling, salvaging, or diversion strategies; maintain documentation on diversion rate for each selected strategy.

Stretch Goals: Projects should consider incorporating the following into the project:

1. Projects are encouraged to select one of the following advanced construction waste management strategies to pursue:
   a. Provide a construction waste management plan that diverts at least 75% of construction waste away from the landfill; or
   b. Implement a construction waste management plan such that the total construction waste sent to landfill or incinerator is less than 2.5 lbs/SF of building.

C. OPERATIONS:

Baseline Requirements: Projects must meet all the following requirements:

1. **Energy and Water Benchmarking:** Projects over 25,000 square feet, upload whole building (owner and tenant paid) energy and water performance data into online utility benchmarking platform annually and share with HCR. For details on HCR Benchmarking requirements see: https://hcr.ny.gov/steps-hcr-benchmarking-program
2. **Building Operations and Maintenance:** Provide HCR with a digital copy of an Operator's Manual prepared by the project's Energy Management Consultant that includes the following:
   a. Overview of how mechanical systems are operated, including:
      i. Ideal set points

Sterling Green: Long Island, NY

SECTION 3 *Continued*

ii. Summarized warranty information
iii. Retro commissioning reports
iv. Summarized mechanical systems manufacturers information. Please reach out to HCR if you require a sample document.

b. Maintenance schedule/key contact for maintenance

3. **Emergency Management Manual**
   a. Develop an Emergency Plan for building management and residents, including evaluation plans with specific instructions for a flood event, if applicable.
4. **Resident Manual**
   a. List of sustainability features in the community spaces and resident units
   b. Provide residents with key equipment manual information
   c. Work order request process
   d. Where applicable, control manuals with key set points
5. **Training and Walkthroughs for Building Staff**
   a. Building operators should be present for system start up
   b. General contractor should provide at least one mechanical systems on-site training with building management and operators prior to resident occupancy
6. **Establishment of maintenance log for key building system** including but not limited to, when and who services equipment, including annual service and emergency repair/work.

Williamsbridge Gardens: Bronx, NY

SECTION 3 *Continued*

D. SITE

Baseline Requirements: Projects must meet the following requirement:

1. Provide at least one Level 2 electric vehicle (EV) charging station for every twenty parking spaces provided in a project. EV charging stations shall be equitably distributed throughout the project to allow residents equal convenience in accessing the EV charging stations.
   a. Projects shall not be required to provide more than five EV charging stations in total.
   b. Projects that do not provide parking in a lot are exempt from this requirement.
2. Projects with individual driveways for dwelling units should provide a dedicated branch circuit that is not less than 40-ampere and 208/240-volt assigned for electric vehicle supply equipment terminating in a receptacle located adjacent to the driveway for EV charging capabilities.

Windsor Terrace: Schenectady, NY

Stretch Goals:

1. Provide at least one Level 2 electric vehicle (EV) charging station for every ten parking spaces provided in a project. EV charging stations shall be equitably distributed throughout the project to allow residents equal convenience in accessing the EV charging stations.
2. Sites should include considerations for raised planter beds to accommodate resident gardens. All resident gardens shall be located on an accessible route and include at least one accessible planting area. Resident gardens shall also be located in close proximity to a spigot for access to water.
3. Sites should include considerations for walking trails or other outdoor fitness areas for adults and adolescents.

E. SOLAR CONSIDERATIONS

HCR requires that all projects pursuing solar energy, or any other alternative energy sources must incorporate the design, operating cost and development cost assumptions associated with those measures into the project by the time an application is submitted for funding. Any changes to the energy

New York State Homes and Community Renewal
The Clean Energy Initiative Program
Rental Housing: Encouraging New Construction and Promoting Preservation

405-407 West 207th Street: New York, NY

New Yorkers consume less total energy per capita than the residents than all but two other states, California and Rhode Island.

SECTION 3 *Continued*

efficiency strategy or green building practices after application submission will not be allowed.

Baseline Requirements: Projects must meet the following requirement:

1. All NYC projects must evaluate the project for solar feasibility. The solar feasibility study should include proposals for potential locations such as rooftops and other locations throughout the site, identification of preliminary solar components and basic electricity production estimates. The study should also include a cost benefit analysis, including the estimated payback period for the solar installation.

Stretch Goals: Projects should consider incorporating the following into the project:

1. All non-NYC projects should evaluate the project for solar feasibility. The solar feasibility study should include proposals for potential locations such as rooftops and other locations throughout the site, identification of preliminary solar components and basic electricity production estimates. The study should also include a cost benefit analysis, including the estimated payback period for the solar installation.
2. If solar photovoltaic systems (PV) are not included in the project, include solar ready design to allow for future installation of solar PV . Design considerations should include:
   a. Panel Location and Orientation:
      i. Space reserved on site or on building roof that is free of shade including trees, buildings and building parapets/penthouses.
      ii. Potential for south-facing exposure for solar PV panel array.
   b. Solar Ready Zones:

Energy Square: Kingston, NY

SECTION 3 *Continued*

i. Solar-ready zones shall be designated on the roofs and comply with the provisions outlined in Section CA103.2-CA103.8 or Section RA103.2-RA103.8 of the 2020 Energy Conservation Construction Code of New York State, as applicable per project type.

ii. Roofing warranty shall allow for future installation of solar PV panels without voiding warranty.

3. Design the building with passive solar design principles including orientation and shading. Specifically consider the followings:
   a. Shade buildings by incorporating landscaping elements.
   b. Incorporate brise soleil or other architectural shading devices into the façade where appropriate.

F. RESILIENCY

This section applies to the project's ability to adapt and provide protection from the adverse effects of climate change.

Baseline Requirements: Projects must meet the following requirements:

1. Conduct a resiliency assessment:
   a. If pursuing Enterprise Green Communities certification, conduct a resiliency assessment equivalent to the assessment listed in criterion 1.6 "Resilient Communities: Multi-Hazard/ Vulnerability Assessment." Projects should demonstrate how the building is being designed to address the risks identified in the resiliency assessment.
   b. If not pursuing Enterprise Green Communities certification provide a report and supporting narrative describing if applicable: Applicable hazards to the project as identified on FEMA's National Risk Index map (https://hazards.fema.gov/nri/map). Steps the project will take to mitigate the identified risks.
2. Elderly Projects (Senior Housing) and projects providing housing to Persons with Special Needs, in at least 50% of the dwelling units, must provide the following:
   a. Adequate back up power generation to:
      i. At least one elevator in the building (if

La Mora Senior Apartments: Yonkers, NY

SECTION 3 *Continued*

applicable) that incorporates resilient design features, and;

ii. The building's water pump system to provide residents with potable water in the event of a power outage.

b. A community room at least 15 square feet per bedroom in size that could serve as a shelter-in- place location for residents. The community room must include back up power generation that would last at least 4 days to the following:

i. Electrical outlets,

ii. At least one refrigerator, kitchen sink and microwave or range,

iii. At least one accessible bathroom,

iv. Heating and cooling, and

v. Domestic hot water

Additionally, other residential common areas may be combined with the Community Room to meet the area requirement, as long as those spaces are also provided with back-up power generation.

Projects may utilize either a solar energy system with battery storage or an efficient, low-emission generator to provide power. Fossil fuel back up power is exempt from the all-electric building requirement. Projects should document how long the backup power generation will be able to carry the loads selected and at time of CO, include copy of their refueling contract that includes provisions during periods of power outages.

Stretch Goals:

Projects should consider incorporating the following into the project:

1. For projects located in Urban Areas (UAs) as designed by the U.S. Department of Commerce, U.S. Census Bureau, design the project to mitigate the impacts of urban flooding.

   a. **Enhanced Stormwater Management:** Urban flooding is defined as the inundation of stormwater infrastructure due to rainfall that overwhelms the capacity of the stormwater/ sewer systems. Projects should include additional stormwater management techniques to reduce the volume of stormwater runoff and to mitigate unintended effects to the building and tenants during extreme weather scenarios. Projects should consider utilizing the USEPA Storm Water Management Model (SWMM) or the Green Infrastructure Flexible Model (GIFMod) to help inform enhanced storm water management.

SECTION 3 *Continued*

b. Building Design: Buildings should be designed to mitigate the potential for stormwater damage or mitigate the loss of services to the building during extreme weather scenarios by incorporating one or more of the following strategies:

i. Do not locate dwelling unit spaces below grade

ii. Elevate key mechanical, electrical and control gears above grade or flood proof any equipment that cannot be elevated.

iii. Install backwater control plugs in floor drains and backwater valves on house sewer lines.

2. Install sump pumps in the lowest levels of the basement floor, where applicable.
3. Projects located in the 500-year floodplain or in levee-protected or dam breakage inundation areas should design the project as follows:
   a. Locating key mechanical, electrical and control gears above the 500-year flood level or flood proof any equipment that cannot be elevated.
   b. Utilize flood resistant construction for all areas below the 500-year flood level.
   c. Locate habitable building space above the 500-year flood level.
   d. Install backwater control plugs in floor drains and backwater valves on house sewer lines.
   e. Install sump pumps in the lowest levels of the basement floor, where applicable.
4. Projects should design buildings to **maximize active resiliency** by incorporating the following where feasible:
   a. Renewable PV with battery storage or efficient fossil fuel backup generator to power critical loads. Project should select three or more of the following critical loads:
      i. Heating systems
      ii. Operation of water pumps if needed to make potable water available to occupants
      iii. Lighting and Electric load
         - Plug load in common area spaces or offices
         - Adequate lighting for common area spaces for a shelter-in-place scenario
      iv. Operation of a fan sufficient to provide emergency cooling if mechanical air conditioning equipment cannot operate
      v. Ventilation systems
      vi. Sufficient power for operation of critical medical equipment for residents
      vii. Operation of cable modem and wireless router or other means of providing online access within the building, if applicable
      viii. Operation of one elevator in building, if applicable

SECTION 3 *Continued*

b. Community Shelter or Place of Refuge: include a common space designated as an emergency shelter area for building occupants, or formal place of refuge. Consider providing the following in the community shelter-in-place of refuge with back-up power generation to provide the following:

i. Electrical outlets,
ii. At least one refrigerator, kitchen sink and microwave or range,
iii. At least one accessible bathroom,
iv. Heating and cooling, and
v. Domestic hot water

c. Design the building with a rainscreen and windows that can withstand hurricane force winds and rain in coastal areas or special wind regions as defined in NYS Residential/ Building Code.

5. Where active resiliency is not utilized, projects should design buildings to **maximize passive survivability** in the event of an extreme weather event or power loss. Projects should incorporate the following considerations into the building design where feasible:
   a. Passive survivability of indoor spaces via highly-efficient building envelopes by maximizing the number of hours that a building stays within comfortable and survivable temperatures without heating or cooling equipment.
   b. Natural ventilation techniques that allow fresh/filtered air ventilation to occur even in the event of power loss.
   c. Maximize natural lighting so that living, common spaces and stairwells all use natural daylighting to the maximum amount feasible.

Bethany Senior Terrance: Brooklyn, NY

New York State Homes and Community Renewal
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Rental Housing: Encouraging New Construction and Promoting Preservation

Cover Photo Images (Clockwise):

Veddersburg Apartments: Amsterdam, NY
Edna Craven Apartments: Rochester, NY
Williamsbridge Gardens: Bronx, NY

2023

NEW YORK STATE OF OPPORTUNITY. Homes and Community Renewal

New York State Homes and Community Renewal
The Clean Energy Initiative Program
Rental Housing: Encouraging New Construction and Promoting Preservation

Sumner Homes: Brooklyn, NY

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HCR's Clean Energy Initiative

Apartments at the Lyceum

A Case Study in Historic Preservation and Energy Innovation

HCR is working to put affordable housing projects on the path to meeting the goals of New York State's Climate Leadership and Community Protection Act, which mandates an 85% reduction in greenhouse gas emissions by 2050, compared to New York State's 1990 carbon emission levels. The Developer, Community Services for Every1, leveraged $525,000 in Clean Energy Initiative financing in a shining example of innovative urban renewal to transform a historic Catholic school into 42 energy-efficient affordable apartments while also creating a community service hub. All design work has celebrates the building's history, adhering to New York State Historic Preservation Office (SHPO) and the Department of the Interior's Standard's for Historic Preservation.

IMPACT

Critical energy improvements enabled the complete electrification of the building while meeting both historic preservation requirements and exceeding Energy Star Multifamily New Construction standards by over 25%.

SCOPE OF WORK

The development features the innovative adaptation of St. John Kanty Lyceum, serving households at 50-60% AMI, though many are expected to come in under 30% AMI, with 12 units designated for survivors of domestic violence. The project includes accessible units for residents with mobility, hearing, and visual impairments.

This unique project showcases the successful integration of modern energy systems within historic architecture, demonstrating the flexibility of the CEI program while adhering to New York State Historic Preservation Office requirements.

Upgrades Enabled by CEI		
Building Detail	**Original Plans**	**CEI-enabled Scope**
Space Heating and Cooling	Electric	Electric – high efficiency heat pumps
Domestic Hot Water	Natural Gas, Central Boiler	Electric – high efficiency heat pumps
Building Envelope	R-13 exterior	R-13 or better throughout
Windows	U-value of 0.3	U-value of 0.3

LESSONS LEARNED

The Apartments at the Lyceum was the first historic preservation project to participate in CEI. Particularly when decarbonizing an existing building that requires a sophisticated approach, it is crucial for developers to assemble a strong team, including sustainability experts, engineers, and contractors with experience in electrification and energy efficiency.

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HCR's Clean Energy Initiative

Ithaca Housing Authority:
A Case Study in Flexibility and Sustainability

HCR is working to put affordable housing projects on the path to meeting the goals of New York State's Climate Leadership and Community Protection Act, which mandates an 85% reduction in greenhouse gas emissions by 2050, compared to New York State's 1990 carbon emission levels.

The Ithaca Housing Authority utilized $1.5 million in Clean Energy Initiative financing in a groundbreaking effort to transform a 118-unit townhouse complex into an all-electric model of sustainability and affordability.

IMPACT

Critical envelope improvements to the three buildings reduced operating costs and the need for natural gas on-site, setting a precedent for future projects.

SCOPE OF WORK

The development features three buildings– the newly constructed Northside, and the moderately rehabilitated Southview Gardens and Overlook Terrace. The Northside building is slated to achieve advanced levels of Energy Star Certification.

Originally planned with natural gas systems, the development's use of CEI funding facilitated a transition to highly efficient all-electric systems, in line with the State's Climate Leadership and Community Protection Act goals.

This project is unique in its implementation of all-electric systems in both new construction and moderate rehabilitation units, showcasing the flexibility of the CEI program and HCR's dedication to sustainability.

The success of the Ithaca Housing Authority's project is an example of the potential for replicating similar achievements in future developments as HCR works to integrate these strategies into all its projects.

Northside Building Scope of Work and Building Specifications		
Building Detail	**Original Plans**	**CEI-enabled Scope**
Heating and Cooling	*Gas* furnaces per apartment & split system AC	Ducted *electric* air-source heat pumps per apartment
Domestic Hot Water	Standard *gas* hot water system	*Electric* heat pump hot water heaters
Envelope	R-5 exterior insulation, R-21 foam interior insulation	Addition of double hung highly insulated windows and doors with advanced air sealing
Operating Costs	**$96,144/year**	**$93,662/year**

Southview and Overlook Buildings Scope of Work and Building Specifications		
Building Detail	**Original Plans**	**CEI-enabled Scope**
Heating and Cooling	Ducted *gas* furnace	Ducted *electric* air-source heat pumps per apartment*
Domestic Hot Water	*Gas* instant water heaters	*Electric* heat pump hot water heaters**
Operating Costs	**$59,542/year**	**$58,211/year**

**The operation of heat pumps is very different from previous systems tenants and operations staff have encountered. Efficient operation will depend highly on set points, which is why training and educational materials are critical.*
***Heat pump hot water heaters generate cold air during operation which must be considered in design.*

LESSONS LEARNED

Lessons learned from this pioneering endeavor include the importance of early and frequent engagement with utility providers to navigate the complexities of electrification.

Scan this QR Code to learn more about the HCR Clean Energy Initiative Program

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HCR's Clean Energy Initiative

Lion Factory

A Stand-Out Model for Sustainable Construction and Decarbonization in Affordable Housing

HCR is working to put affordable housing projects on the path to meeting the goals of New York State's Climate Leadership and Community Protection Act, which mandates an 85% reduction in greenhouse gas emissions by 2050, compared to New York State's 1990 carbon emission levels. Regan Development's adaptive reuse of the Lion Factory leveraged Clean Energy Initiative financing to transform a historic industrial building into 151 affordable housing units, achieving advanced levels of ENERGY STAR performance while preserving historical features.

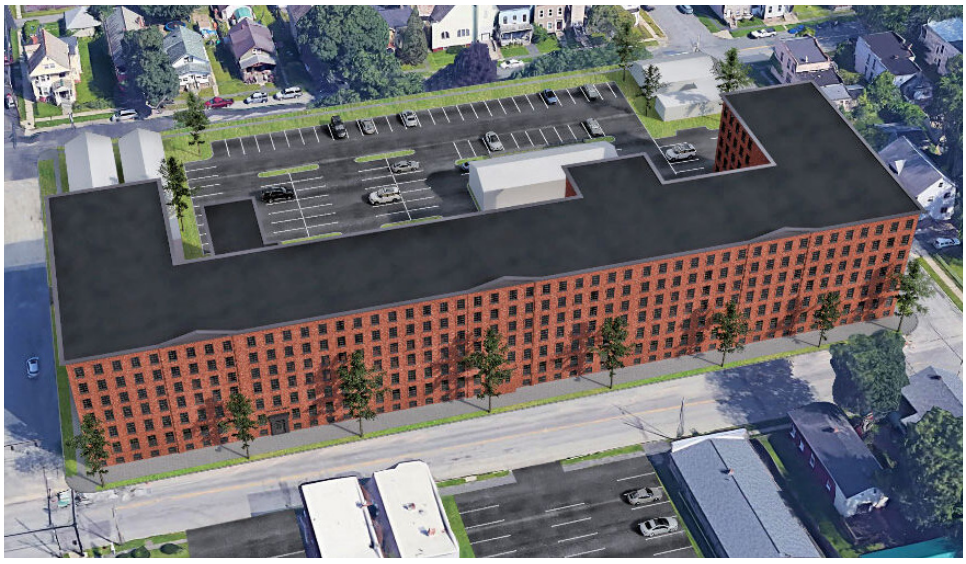
IMPACT

Critical envelope improvements and installation of geothermal systems reduced operating costs by 48% while eliminating natural gas usage on-site, setting a precedent for future historic preservation projects.

SCOPE OF WORK

The development features the rehabilitation of a six-story, 215,000 square foot historic building originally constructed between 1884 and 1897. The project includes 145 deeply affordable units serving households earning 40% to 60% Area Median Income, with 25 units designated for survivors of domestic violence, plus 8,800 square feet of commercial space.

Originally planned with natural gas systems, the development's use of CEI funding facilitated a transition to highly efficient all-electric systems, in line with the State's Climate Leadership and Community Protection Act goals.



Upgrades Enabled by CEI		
Building Detail	**Original Plans**	**CEI-enabled Scope**
HVAC	Gas furnances & split system AC	Ground Source Heat Pump
Domestic Hot Water	Standard *gas* hot water system	*Ground source heat pump domestic hot water*
Ventilation	No ERV planned	ERV added to each unit
Windows	U-values between 0.34 - 0.40	U-values between 0.25-0.27
Insulation	At or above code	Significant insulation improvements to exterior walls

This project is unique in its successful integration of clean energy systems within a historic structure, showcasing HCR's dedication to both sustainability and preservation.

LESSONS LEARNED

ERV systems were placed in conditioned spaces in mechanical rooms on each floor, protected from ambient outdoor temperatures. Thoughtful placement of ERV systems dramatically improves performance of the system.

NEW YORK STATE | Homes and Community Renewal

HCR's Clean Energy Initiative

Steamboat Square Revitalization

A Case Study in Historic Retrofit and Environmental Justice

HCR is working to put affordable housing projects on the path to meeting the goals of New York State's Climate Leadership and Community Protection Act, which mandates an 85% reduction in greenhouse gas emissions by 2050, compared to New York State's 1990 carbon emission levels.

The developer, the Albany Housing Authority leveraged $1.1 million in Clean Energy Initiative financing in a shining example of environmental justice to transform a historic high-rise building into an all-electric model of mixed-use affordable housing, achieving the highest tier of NYSERDA's Multifamily Performance Program.

IMPACT

Critical envelope improvements and ground-source heat pump installation reduced energy use by 45% while eliminating natural gas on-site, setting a precedent for the future revitalization of over 300 additional apartments in the community.

SCOPE OF WORK

The development features the innovative retrofit of 20 Rensselaer Street, one of four historic high-rise buildings in Albany's walkable Capital South neighborhood. The project includes 88 one- and two-bedroom apartments, with 74% of units serving households at 50% AMI and 16% reserved for homeless households.

This groundbreaking project showcases the successful integration of all-electric systems in a historic brick building, demonstrating the flexibility of the CEI program while improving resident comfort through noise mitigation and fresh air systems.

Upgrades Enabled by CEI		
Building Detail	**Original Plans**	**CEI-enabled Scope**
Air Conditioning	Central *gas* space heating	High efficiency heating and cooling with ERV
Domestic Hot Water	Central *gas* hot water system	*Central* water-to-water heat pump water heater w/ electric resistance backup
Envelope	R-5 Insulation	R-6 Insulation and Air Sealing
Roof Insulation	R-30 Insulation	R-49 Insulation
Geothermal	None	2 ground wellfields for ground source heat pump

LESSONS LEARNED

Key to the success of this project was early coordination with all subcontractors to ensure a tight building envelope. The pairing of CEI with other decarbonization incentives enabled the project to pursue highly innovative solutions.

NEW YORK STATE OF OPPORTUNITY. Homes and Community Renewal

HCR's Clean Energy Initiative

Tailor Square:

Rochester's Historic Hickey Freeman Factory Becomes a Shining Example of Innovative Urban Renewal

HCR is working to put affordable housing projects on the path to meeting the goals of New York State's Climate Leadership and Community Protection Act, which mandates an 85% reduction in greenhouse gas emissions by 2050, compared to New York State's 1990 carbon emission levels.

Rochester's **Tailor Square** is a testament to innovative urban renewal. The project is putting $2.8 million in Clean Energy Initiative funds, along with an array of local, state, and federal resources to work redeveloping the historic Hickey Freeman factory in Rochester into a vibrant mixed-use senior community featuring 134 affordable apartments, with one-third set aside for seniors in need of supportive services.

IMPACT

Tailor Square's holistic approach to sustainability, which includes critical envelope improvements, whole building electrification, and renewable energy integration, is poised to yield significant long-term cost savings.

SCOPE OF WORK

The project's historical significance as the long-time home of the Hickey Freeman men's apparel company adds a layer of complexity to its redevelopment. While 77,000 square feet will be retained by Hickey Freeman for manufacturing space, the remainder is being transformed into affordable homes, all while adhering to state and federal historic preservation standards.

CEI funding facilitated a bold shift from central gas to electric systems by embracing ground source heat pumps for space conditioning and domestic hot water, freeing up space for solar panels.

Upgrades Enabled by CEI		
Building Detail	**Original Plans**	**CEI-enabled Scope**
Heating, Cooling, & Domestic Hot Water	Natural Gas Central Boiler	Ground Source Heat Pump*
Building Envelope	Foam insulation only to be added under windows; roof insulation of R-30	Foam insulation on entire exterior wall; roof insulation improved to R-49
Windows	U-value of 0.35	U-value of 0.30
Ventilation	No ERV planned	ERV added to each unit
Renewables	None Planned	Solar to offset on-site energy costs

**Selected scope item as geothermal frees up roof space to take advantage of solar for additional renewable energy.*

LESSONS LEARNED

Tailor Square stands as a pioneering example of adaptive reuse, achieving ambitious decarbonization goals while navigating regulatory hurdles and financing complexities. It sets a benchmark for future urban renewal projects in New York, demonstrating the viability of sustainable, mixed-income housing models that prioritize both environmental stewardship and community affordability.

Scan this QR Code to learn more about the HCR Clean Energy Initiative Program

Clean Energy Initiative Program
for the Small Building Participation Loan Program

HCR's Clean Energy Initiative ("CEI") program provides funding for decarbonization work aligned with HCR's Sustainability Guidelines reaching the Stretch Goal standards. As part of the State's commitment to reduce greenhouse gas emissions aligned with the goals outlined in the Climate Leadership and Community Protection Act of 2019, HCR makes capital available through a partnership with NYSERDA for improved decarbonization scopes of work.

CEI Funding for decarbonization is available for existing buildings who comply with the terms described below and who are eligible projects ultimately awarded HCR's Small Building Participation Loan Program ("PLP") funding. CEI funds can be applied for at the same time as the application for PLP. Projects will be required to submit a supplemental application for the CEI program. Final award amounts must be recommended by HCR staff, NYSERDA staff, and approved by HFA Credit Committee, and the HFA Board as applicable.

July 2024

Eligible Uses	Existing Building projects applying for the Small Building Participation Loan Program and meet all program requirements in the Existing Buildings ("EB") Sustainability Guidelines by construction type (defined in the EB Sustainability Guidelines). The awarded funding can be used for eligible decarbonization work, including up to $1,000/unit of the total award in soft costs for design, certification, or measurement and verification, and should include eligible hard costs related to reaching the selected CEI Goals outlined below. CEI funds are sourced from utility System Benefit Charges ("SBC"). As a result, the project site must be in a territory served by a utility that pays into SBC*. **If a project is located outside of SBC territory, a limited amount of funding is available. Projects applying outside of SBC territory will be awarded on a first come first served basis, at the discretion of HCR, based on availability of funding. Projects should include this request at application to be considered.*
In-Eligible Uses	**CEI awarded projects are not eligible to receive incentives from the following programs in conjunction with CEI funding:** • NYSERDA Buildings of Excellence for Demonstration • NYSERDA Low-Carbon Pathways • NYSERDA Multifamily Performance Program • Con Edison Affordable Multifamily Energy Efficiency Program ("AMEEP") • NYSERDA RetrofitNY *At HCR's and NYSERDA's sole discretion, additional programs, beyond those listed here, may be identified as a duplicative source and would not be eligible for use on the same project.* CEI funded projects **may** pursue NYS Clean Heat incentives but are required to demonstrate that CEI funding plus NYS Clean Heat incentives do not exceed 100% of the costs to perform the CEI scope of work. Projects must clearly demonstrate in their application that they intend to receive NYS Clean Heat funding in addition to CEI funding.
Eligible Applicants	For-profit and not-for-profit corporations or charitable organizations, or a wholly owned subsidiary of such corporations or organizations, cooperative boards, or limited partnerships/limited liability corporations
Program Funding	**CEI funding:** Up to $25,000/unit for projects that comply with all Existing Building ("EB") Sustainability Guidelines Baseline Requirements and select at least one of the goals outlined below. The project's CEI funding should be calculated by adding up the total for each goal selected. Up to $1,000/unit of the awarded funding can be used for eligible soft costs defined above in Eligible Uses. Moderate Rehab Level 1 and 2 projects are required to demonstrate through the project's Physical Needs Assessment (PNA) and an electrification feasibility report prepared by a qualified energy consultant, that any equipment being replaced as part of the CEI scope of work must have a remaining useful life of less than 10 years.

Goal 1: Electrification of Heating – $8,500/unit maximum

Replace existing fossil-fuel (e.g., gas, oil, propane fired) based heating equipment or electric resistance baseboard systems with high-efficiency, all- electric heat pumps and meet the following requirements:

1. Project must demonstrate electrification of heating is cost prohibitive without CEI funding.
2. Equipment must comply with the Adaptive Reuse Baseline Requirements for Heating and Cooling equipment listed in Section 2 of the Existing Building Sustainability Guidelines (p 26-27).

Required Building Envelope Conditions

A high-performance envelope is required when electrification of heating is being pursued. Project teams are required to submit comprehensive information about existing envelope conditions and planned improvements and comply with one of the following options:

- Option 1: Demonstrate existing envelope or envelope with planned improvements will comply with 2020 NYSECC prescriptive values.
- Option 2: Demonstrate existing space heating load is less than 8 Btu/HDD/ft2.

Goal 2: Electrification of Domestic Hot Water – $4,000/unit maximum

Replace existing domestic hot water systems with high performance all-electric heat pump system and meet the following requirements:

1. Project must demonstrate electrification of DHW is cost prohibitive without CEI funding.
2. Equipment must comply with the Adaptive Reuse Baseline Requirements for Domestic Hot Water equipment listed in Section 2 of the Existing Building Sustainability Guidelines (p 30).

In addition, high efficiency designs that utilize the following measures should include a description of the measures in the CEI application. Projects that incorporate these measures will be prioritized for funding, where possible:

- Centralized DHW heat pump approach
- Solar thermal systems
- Ground source heat pumps that operate independently or in conjunction with heat pumps or instantaneous hot water heaters
- Other high-efficiency design measures not mentioned above

Goal 3: Advanced Envelope and Ventilation – $12,500/unit maximum

Projects pursuing this goal should have been planning envelope improvements in their original scope of work. CEI funding is intended to cover the incremental costs to reach more advanced envelope and ventilation standards than originally planned. All envelope components included in the scope of work must comply with the 2020 Energy Conservation Construction Code of New York State ("ECC") prescriptive values as part of the base building design.

Envelope: Pursue Envelope Stretch Goals listed in Section 2 of the Existing Building Sustainability Guidelines (p23-24) including:

1. Envelope improvements that contribute to an overall building envelope that is at least 15% more energy efficient than 2020 Energy Conservation Code of New York
2. Achieve envelope performance beyond ECC and as close to a passive-

	house building envelope as feasible within the maximum incentive amount provided **Ventilation:** Pursue Ventilation Stretch Goals listed in Section 2 of the Existing Building Sustainability Guidelines (p31) including: 1. Implementation of an engineered natural ventilation system in compliance with ASHRAE 62.1 Section 6.4 Natural Ventilation Procedure 2. Existing buildings with natural ventilation systems installing through- wall exhaust fans in kitchen and bathrooms 3. Installation of energy recovery ventilator ("ERV") or heat recovery ventilator ("HRV") equipment.
Maximum Award	The maximum CEI award per project, regardless of building size or configuration, will not exceed $3,750,000.
Loan Terms	During the construction phase, CEI proceeds will be invested in parallel with PLP proceeds as part of a participation loan with the PLP-approved senior lender, who will service the combined construction loan. The senior lender may charge a one-time, up-front servicing fee of no more than 0.5% of the CEI subsidy amount in connection with servicing CEI proceeds during construction. (This one-time servicing fee, if charged, is not an eligible use of CEI or PLP funds and must be paid from another source.) **Interest rate**: 0% during construction 0% permanent Term: 30 years following permanent conversion
Priorities	Existing Building projects able to meet full electrification and incorporate on-site solar systems or geothermal systems as part of the proposed scopes of work to reach deep decarbonization.
Program Requirements	Funded projects will be required to add the following language to the standard PLP regulatory agreement. Project must report requested data related to the CEI scope of work to HCR including but not limited to: 1. Benchmarking data submitted on an annual basis either through Energy Star Portfolio Manager account as designated by the HCR agency or submitted through shared aggregated utility data directly from the utility company, as determined or requested by the agency. 2. Construction cost data: The awarded projects will submit incremental decarbonization scope cost data to the PLP-approved senior lender before construction closing, and then again at construction close out before conversion to permanent financing. 3. Provide operational cost data related to servicing and repairing electrified HVAC systems over time to the asset management unit assigned to the property. 4. Provide an operational manual to all end users including residents and operators for all HVAC equipment as applicable. This should include but not be limited to servicing requirements, control setpoint guidance, operational instructions, and guidance on repair requests and service requests.

CEI awards are subject to availability of funding. HCR retains the right to revise this term sheet from time to time and to waive any requirement contained therein, subject to the applicable statutes and program regulations. HCR also retains the right to not award any or all its funds under this program and to not commit all awarded funds. All proposals must comply with all applicable federal, state, and local laws.

Clean Energy Initiative Program: Existing Buildings – Moderate Rehabs

Clean Energy Initiative PROGRAM: HCR's Clean Energy Initiative ("CEI") program provides funding for decarbonization work aligned with HCR's Sustainability Guidelines Stretch Goal standards. As part of the State's commitment to reduce greenhouse gas emissions aligned with the goals outlined in the Climate Leadership and Community Protection Act of 2019, HCR makes capital available through a partnership with NYSERDA for improved decarbonization scopes of work.

Funding for decarbonization is available for existing buildings who comply with the terms described below. Projects receiving CEI funds must be applying for and ultimately awarded through either HCR's LIHTC programs or through HCR's Subsidy Financing. CEI funds can be applied for within the same tax credit application for eligible LIHTC programs, including HFA 4% LIHTC tax-exempt bond financing and HTFC/DHCR 9% LIHTC Request for Proposals ("RFP"). Projects receiving Subsidy Financing, where HCR subsidy is the sole source of project financing, will be required to submit a supplemental application for the CEI program. Final award amounts must be recommended by HCR staff, NYSERDA staff, and approved by HCR Credit Committee, the HTFC and/or HFA Board as applicable.

Eligible Uses	Existing Building projects including Moderate Rehabilitation Levels 1 & 2, as defined in HCR's Sustainability Guidelines, are eligible to apply for **CEI Existing Buildings – Moderate Rehab** funding when they are applying for either the HFA 4% LIHTC tax-exempt bond financing, HTFC/DHCR 9% LIHTC RFP, or Subsidy Financing and meet all program requirements accordingly. The awarded funding can be used for eligible decarbonization work, including up to $1,000/unit of the total award in soft costs for design, certification, or measurement and verification. Funding applications should include eligible hard costs related to reaching the selected CEI Goals outlined below. For projects applying through the HTFC/DHCR 9% LIHTC RFP, CEI funds can only be accessed as permanent financing. For projects applying for HFA 4% LIHTC tax-exempt bond financing and Subsidy Financing, both construction and permanent financing are available. CEI funds are sourced from utility System Benefit Charges ("SBC"). As a result, the project site must be in a territory served by a utility that pays into SBC. *If a project is located outside of SBC territory, a limited amount of funding is available. Projects applying outside of SBC territory will be awarded on a first come first served basis, at the discretion of HCR, based on availability of funding. Projects should include this request at application to be considered.* **CEI awarded projects are not eligible to receive incentives from the following programs in conjunction with CEI funding:** • NYSERDA Buildings of Excellence for Demonstration • NYSERDA Multifamily Performance Program • NYSERDA Low-Carbon Pathways • NYSERDA RetrofitNY • Con Edison Affordable Multifamily Energy Efficiency Program ("AMEEP") **At HCR's and NYSERDA's sole discretion, additional programs, beyond those listed here, may be identified as a duplicative source and would be ineligible for use on the same project.** CEI funded projects **may** pursue NYS Clean Heat incentives but are required to demonstrate that CEI funding plus NYS Clean Heat incentives do not exceed 100% of the costs to perform the CEI scope of work. Projects must clearly demonstrate in their application that they intend to receive NYS Clean Heat funding in addition to CEI funding.
Eligible Applicants	For-profit and not-for-profit corporations or charitable organizations, or a wholly owned subsidiary of such corporations or organizations, cooperative boards, or limited partnerships/limited liability corporations.

Program Funding	**CEI Funding:**
	• Up to $21,500/unit for projects that comply with all Existing Building "EB" Sustainability Guidelines Baseline Requirements and achieve at least one of the goals outlined below.
	• Up to $1,000/unit of the awarded funding may be used for eligible soft costs, defined above in **Eligible Uses**.
	• *A project's CEI funding is calculated by adding the total for each goal pursued*.
	
	Moderate Rehab Level 1 & 2 projects are required to demonstrate through the project's IPNA that any equipment being replaced as part of the CEI scope must have a remaining useful life of less than 10 years.
	
	<u>Goal 1: Partial Electrification of Heating → $13,500/unit x Percent Electrified (See below)</u>
	
	<u>Requirements:</u>
	Electrification of Heating: Replace existing fossil fuel (e.g., gas, oil, propane fired) heating equipment or electric resistance baseboard systems with high-efficiency, all-electric heat pumps and meet the following requirements:
	• Demonstrate electrification of heating would have a gap in funding without CEI funding[1]
	• Achieve partial electrification of heating, defined below
	• Demonstrate equipment complies with the Adaptive Reuse Baseline Requirements for Heating and Cooling equipment listed in Section 2 of the existing Building Sustainability Guidelines (p 26-27)
	• Provide a "Path to Electrification" for the project, via an electrification roadmap. For guidance on developing the electrification roadmap, refer to HCR's Preservation Sustainability Guidelines, page 11.
	
	<u>Partial Electrification of Heating:</u> Projects must meet the following requirements:
	• Implement a part-load electrification solution. Incentive may be claimed based on the percentage of the building's peak heating load served by the all-electric equipment.
	  ○ Calculate Heating Electrification Percentage
	  ▪ *Electrification Heating Percentage = (Installed Heat Pump Capacity for Space Heating) / (Peak Full-Building Heating Load)*
	  ○ Calculate Total Incentive
	  ▪ *If Electrification Heating Percentage is between 50%-74%: Total Incentive = $7,500 x Total Number of Units*
	  ▪ *If Electrification Heating Percentage is between 75% - 90%: Total Incentive = $10,500 x Total Number of Units*

[1] Refer to **HCR Clean Energy Initiative Program: *Cost Justification Guidance*** resource on the HCR Clean Energy Initiative webpage for guidance.

	▪ *If Electrification Heating Percentage is greater than 90%: Total Incentive = $13,500* Existing fossil fuel system may be used to provide the remainder of the heating load. **Goal 1 Mandatory Envelope Improvements:** Projects must meet one of the following envelope conditions to receive Goal 1 funding. *CEI funds may be used to incorporate these improvements*: • Option 1: Demonstrate existing envelope or envelope with planned improvements will comply with 2020 NYSECC prescriptive values. • Option 2: Demonstrate existing space heating load or space heating load with planned envelope improvements is less than 8 Btu/HDD/ft2.[2] **<u>Goal 2: Partial Electrification of Domestic Hot Water → $4,000/unit x Percent Electrified (See Below)</u>** <u>Requirements:</u> To receive Goal 2 funding, projects must: • Demonstrate electrification of DHW would have a gap in funding without CEI funding[3] • Achieve partial electrification of DHW, defined below • Demonstrate equipment complies with Adaptive Reuse Baseline Requirements for Domestic Hot Water equipment listed in Section 2 of the Existing Building Sustainability Guidelines (p30) • Provide a "Path to Electrification" for the project, via an electrification roadmap. For guidance on developing the electrification roadmap, refer to HCR's Preservation Sustainability Guidelines, page 11. <u>Partial Electrification of DHW</u>**:** Applicants must meet the requirements for one of the following: • For projects pursuing a hybrid, part-load electrification solution for DHW, the applicable incentive amount per unit scales by the percentage of the *peak DHW heating load* served by the all-electric equipment. o Calculate DHW Electrification Heating Percentage ▪ *DHW Electrification Heating Percentage = (Installed Heat Pump Capacity for DHW) / (Peak DHW Heating Load)* o Calculate Total Incentive ▪ *If DHW Electrification Heating Percentage is between*

[2] Refer to **HCR Clean Energy Initiative Program: *Space Heating Load Calculation Guidance*** resource on the HCR Clean Energy Initiative webpage for guidance.

[3] Refer to **HCR Clean Energy Initiative Program: *Cost Justification Guidance*** resource on the HCR Clean Energy Initiative webpage for guidance.

	50 – 80%: Total Incentive = $2,000 x Total Number of Units ▪ *If DHW Electrification Heating Percentage is greater than 80%: Total Incentive = $4,000 x Total Number of Units* Existing fossil fuel system may be used to provide the remainder of the heating load. The following highest efficiency technologies will be prioritized where possible for Goal 2 funding. If included in the project's scope, please provide a description: • DHW heat pump • Solar thermal systems • Ground-source heat pumps that operate independently or in tandem with heat pumps or instant hot water heaters • Other high-efficiency design measures not mentioned above **Optional Adder to Goals 1 & 2 : Enabling Upgrades → $4,000/unit Maximum** *The Enabling Upgrades Additional Funding may only be claimed in tandem with Goal 1, Goal 2, or Both, not exceeding $4,000/unit.* <u>Requirements:</u> To receive Enabling Upgrades Funding, the applicant must submit a full list of enabling work proposed to support Goals 1 and/or 2. Enabling upgrades include, but are not limited to: • Electrical Panel upgrades/replacement • Electrical wiring to support electric equipment **<u>Goal 3: Stretch Energy Goal → $15,000/unit Maximum</u>** Goal 3 is only available for Moderate Rehabs Level 1. For projects not planning MEP replacement as a part of their renovation scope, Goal 3 may be selected to support future electrification. Goal 3 funding may **<u>not</u>** be combined with Goals 1 and/or 2. <u>Requirements:</u> Projects must achieve the following. Applicants should submit a cost breakdown for the proposed use of funds and demonstrate that the proposed scope is cost prohibitive without CEI funds. • **Energy Reduction & Envelope Improvements:** o Demonstrate with an energy model that planned envelope work will reduce energy consumption by at least 20% compared to the past 3 years of whole building utility data. o Demonstrate that the existing space heating load is less than 8 Btu/HDD/ft2 based on utility data or will be after planned improvements as demonstrated by energy modeling.

	○ Includes all envelope work or other efficiency upgrade beyond the project's base renovation scope needed to meet the requirements above. ▪ Must include window replacement and attic insulation where applicable. ▪ May also include but not limited to air sealing, insulation, appliance upgrades, etc. • **Path to Electrification:** Provide a "Path to Electrification" for the project, via an electrification roadmap. For guidance on developing the electrification roadmap, refer to HCR's Preservation Sustainability Guidelines, page 11. • **Electrical Infrastructure:** Include all enabling electrical work needed for full electrification. ○ Includes improvements and space for future electric equipment and electrical service.
Maximum Award	The maximum CEI Award for a Moderate Rehab Level 1 Project (utilizing Goal 3), regardless of building size or configuration, will not exceed **$2,250,000.** The maximum CEI Award for a Moderate Rehab Level 2 Project (utilizing Goals 1 and/or 2), regardless of building size or configuration, will not exceed **$3,225,000.**
Loan Terms	0% during construction (only available for HFA 4% LITHC tax-exempt bond financing) and permanent All projects: Minimum of 30-year term, maximum of 50 years.
Priorities	Existing Building projects able to meet full electrification and incorporate on-site solar systems or geothermal systems as part of the proposed scopes of work to reach deep decarbonization.
Program Requirements	Funded projects will be required to add the following language to their standard regulatory agreements for HFA 4% LIHTC tax-exempt bond financing, HTFC/DHCR 9% LIHTC RFP, or Subsidy Financing. Project must report requested data related to the CEI scope of work to HCR including but not limited to: 1. Benchmarking data submitted on an annual basis either through Energy Staff Portfolio Manager account as designated by the HCR agency or submitted through shared aggregated utility data directly from the utility company, as determined or requested by the agency. 2. Construction cost data: The awarded projects will submit incremental decarbonization scope cost data to the agency before construction closing, and then again at construction close out before conversion to permanent financing. 3. Provide operational cost data related to servicing and repairing electrified HVAC systems over time to the asset management unit assigned to the property. 4. Provide an operational manual to all end users including residents

	and operators for all HVAC equipment as applicable. This should include but not be limited to servicing requirements, control setpoint guidance, operational instructions, and guidance on repair requests and service requests.

CEI awards are subject to availability of funding. HCR retains the right to revise this term sheet and to waive any requirement contained therein, subject to the applicable statutes and program regulations. HCR also retains the right to not award any or all its funds under this program and to not commit all awarded funds. All proposals must comply with all applicable federal, state, and local laws.

Clean Energy Initiative Program: Existing Buildings – Substantial Rehabs

Clean Energy Initiative PROGRAM: HCR's Clean Energy Initiative ("CEI") program provides funding for decarbonization work aligned with HCR's Sustainability Guidelines Stretch Goal standards. As part of the State's commitment to reduce greenhouse gas emissions aligned with the goals outlined in the Climate Leadership and Community Protection Act of 2019, HCR makes capital available through a partnership with NYSERDA for improved decarbonization scopes of work.

Funding for decarbonization is available for existing buildings who comply with the terms described below. Projects receiving CEI funds must be applying for and ultimately awarded through either HCR's LIHTC programs or through HCR's Subsidy Financing. CEI funds can be applied for within the same tax credit application for eligible LIHTC programs, including HFA 4% LIHTC tax-exempt bond financing and HTFC/DHCR 9% LIHTC Request for Proposals ("RFP"). Projects receiving Subsidy Financing, where HCR subsidy is the sole source of project financing, will be required to submit a supplemental application for the CEI program. Final award amounts must be recommended by HCR staff, NYSERDA staff, and approved by HCR Credit Committee, the HTFC and/or HFA Board as applicable.

Eligible Uses	Existing Building projects classified as substantial rehabilitation and Adaptive Reuse with historic designation by SPHO, as defined in HCR's Sustainability Guidelines, are eligible to apply for **CEI Existing Buildings – Substantial Rehab** funding when they are applying for either the HFA 4% LIHTC tax-exempt bond financing, HTFC/DHCR 9% LIHTC RFP, or Subsidy Financing and meet all program requirements accordingly. The awarded funding can be used for eligible decarbonization work, including up to $1,000/unit of the total award in soft costs for design, certification, or measurement and verification. Funding applications should include eligible hard costs related to reaching the selected CEI Goals outlined below. For projects applying through the HTFC/DHCR 9% LIHTC RFP, permanent financing only. For projects applying for HFA 4% LIHTC tax-exempt bond financing and Subsidy Financing, both construction and permanent financing available. CEI funds are sourced from utility System Benefit Charges ("SBC"). As a result, the project site must be in a territory served by a utility that pays into SBC. *If a project is located outside of SBC territory, a limited amount of funding is available. Projects applying outside of SBC territory will be awarded on a first come, first served basis, at the discretion of HCR, based on availability of funding. Projects should include this request at application to be considered.* **CEI awarded projects are not eligible to receive incentives from the following programs in conjunction with CEI funding:** • NYSERDA Buildings of Excellence for Demonstration • NYSERDA Multifamily Performance Program • NYSERDA Low-Carbon Pathways • NYSERDA RetrofitNY • Con Edison Affordable Multifamily Energy Efficiency Program ("AMEEP") **At HCR's and NYSERDA's sole discretion, additional programs, beyond those listed here, may be identified as a duplicative source and would be eligible for use on the same project.** CEI funded projects **may** pursue NYS Clean Heat incentives but are required to demonstrate that CEI funding plus NYS Clean Heat incentives do not exceed 100% of the costs to perform the CEI scope of work. Projects must clearly demonstrate in their application that they intend to receive NYS Clean Heat funding in addition to CEI funding.

Eligible Applicants	For-profit and not-for-profit corporations or charitable organizations, or a wholly owned subsidiary of such corporations or organizations, cooperative boards, or limited partnerships/limited liability corporations.

Program Funding	**CEI Funding:**
	• Up to $30,000/unit for projects that comply with all Existing Building "EB" Sustainability Guidelines Baseline Requirements and achieve at least one of the goals outlined below.
	• Up to $1,000/unit of the awarded funding may be used for eligible soft costs, defined above in **Eligible Uses**.
	• *A project's CEI funding is calculated by adding the total for each goal pursued*.
	
	<u>Goal 1: Electrification of Heating → $13,500 - $22,000/unit</u>
	Projects may select either the baseline incentive ($13,500/unit) or enhanced incentive ($22,000/unit).
	
	<u>Baseline Incentive Requirements</u>: ($13,500/unit)
	Electrification of Heating: Replace existing fossil fuel (e.g., gas, oil, propane fired) heating equipment or electric resistance baseboard systems with high-efficiency, all-electric heat pumps and meet the following requirements:
	• Demonstrate electrification of heating would have a gap in funding without CEI funding[1]
	• Achieve full electrification of heating systems
	• Demonstrate equipment complies with the Adaptive Reuse Baseline Requirements for Heating and Cooling equipment listed in Section 2 of the existing Building Sustainability Guidelines (p 26-27)
	• **Envelope Improvements:** Projects must meet one of the following envelope conditions. *CEI funds may be used to incorporate these improvements*:
	  ○ Option 1: Demonstrate existing envelope or envelope with planned improvements will comply with 2020 NYSECC prescriptive values.
	  ○ Option 2: Demonstrate existing space heating load or space heating load with planned envelope improvements is less than 8 Btu/HDD/ft2.[2]
	
	<u>Enhanced Incentive Requirements</u>: ($22,000/unit)
	Electrification of Heating: Meet the Baseline Incentive Requirements AND the following requirements:
	• **Enhanced Envelope Improvements:** Projects must meet the following envelope conditions. *CEI funds may be used to incorporate these improvements*:

[1] Refer to **HCR Clean Energy Initiative Program: *Cost Justification Guidance*** resource on the HCR Clean Energy Initiative webpage for guidance.
[2] Refer to **HCR Clean Energy Initiative Program: *Space Heating Load Calculation Guidance*** resource on the HCR Clean Energy Initiative webpage for guidance.

	○ Demonstrate existing building envelope or envelope with planned improvements is at least 10% more energy efficient than 2020 NYSECC. Optional Scope for Goal 1 • Projects may also utilize Goal One funding for ventilation work in addition to the requirements above. Pursue Ventilation Stretch Goals listed in Section 2 of the Existing Building Sustainability Guidelines (p31) including: ○ Implementation of an engineered natural ventilation system in compliance with ASHRAE 62.1 Section 6.4 Natural Ventilation Procedure ○ Existing Buildings with natural ventilation systems installing through-wall exhaust fans in kitchen and bathrooms ○ Installation of energy recovery ventilation (ERV) or heat recovery ventilation (HRV) equipment. **Goal 2: Electrification of Domestic Hot Water → $4,000/unit maximum** Requirements: To receive Goal 2 funding, projects must: • Demonstrate electrification of DHW would have a gap in funding without CEI funding[3] • Achieve full electrification of DHW • Demonstrate equipment complies with Adaptive Reuse Baseline Requirements for Domestic Hot Water equipment listed in Section 2 of the Existing Building Sustainability Guidelines (p30) The following highest efficiency technologies will be prioritized where possible for Goal 2 funding. If included in the project's scope, please provide a description: • DHW heat pump • Solar thermal systems • Ground-source heat pumps, especially if they are being installed for the space heating system • Other high-efficiency design measures not mentioned above **Optional Adder to Goals 1 & 2: Enabling Upgrades → $4,000/unit Maximum** *The Enabling Upgrades Additional Funding may only be claimed in tandem with Goal 1, Goal 2, or Both, not to exceed $4,000/unit.*

[3] Refer to **HCR Clean Energy Initiative Program: *Cost Justification Guidance*** resource on the HCR Clean Energy Initiative webpage for guidance.

	Requirements: To receive Enabling Upgrades Funding, the applicant must submit a full list of enabling work proposed to support Goals 1 and/or 2. Enabling upgrades include, but are not limited to: • Electrical Panel upgrades/replacement • Electrical wiring to support electric equipment
Maximum Award	The maximum CEI award per project, regardless of building size or configuration, will not exceed **$9,000,000**.
Loan Terms	0% during construction (only available for HFA 4% LITHC tax-exempt bond financing) and permanent All projects: Minimum of 30-year term, maximum of 50 years.
Priorities	Existing Building projects able to meet full electrification and incorporate on-site solar systems or geothermal systems as part of the proposed scopes of work to reach deep decarbonization.
Program Requirements	Funded projects will be required to add the following language to their standard regulatory agreements for HFA 4% LIHTC tax-exempt bond financing, HTFC/DHCR 9% LIHTC RFP, or Subsidy Financing. Project must report requested data related to the CEI scope of work to HCR including but not limited to: • Benchmarking data submitted on an annual basis either through Energy Staff Portfolio Manager account as designated by the HCR agency or submitted through shared aggregated utility data directly from the utility company, as determined or requested by the agency. • Construction cost data: The awarded projects will submit incremental decarbonization scope cost data to the agency before construction closing, and then again at construction close out before conversion to permanent financing. • Provide operational cost data related to servicing and repairing electrified HVAC systems over time to the asset management unit assigned to the property. • Provide an operational manual to all end users including residents and operators for all HVAC equipment as applicable. This should include but not be limited to servicing requirements, control setpoint guidance, operational instructions, and guidance on repair requests and service requests.

CEI awards are subject to availability of funding. HCR retains the right to revise this term sheet from time to time and to waive any requirement contained therein, subject to the applicable statutes and program regulations. HCR also retains the right to not award any or all its funds under this program and to not commit all awarded funds. All proposals must comply with all applicable federal, state, and local laws.