**Climate Ready Housing Program Application 2024**

# All full applications must include:

Application Narrative (The narrative should be no more than 10 pages and brevity is encouraged.)

Site plan, floor plans, elevations, typical wall sections (existing/proposed), window details (existing/proposed), and roof section (existing/proposed) of the building

Operational and embodied carbon analyses (if available)

Add/Deduct Alternate Schedule as relevant to DER/ZOT and Building Electrification scope from the Construction Contract (if available)

DER/ZOT Cost Documentation Spreadsheet (download template from Climate Ready Housing program web page ([www.lisc.org/climatereadyhousing](https://www.lisc.org/boston/our-work/green-homes/climate-ready-housing-program/)))

**Application Narrative Outline**

Prepare an Application Narrative responding to the outline below. Include headings in the outline. The narrative should be no more than 10 pages in length, excluding attachments. Please number all pages. NOTE: MassHousing/Massachusetts Housing Partnership understands that applications for ZOT funding may not include all of these elements.

1. **Sponsor Experience with Building Decarbonization, Electrification, Renewable Energy, and Climate Readiness**
   1. What are your portfolio goals for building decarbonization, electrification, on-site renewable energy production, and climate ready buildings?
   2. What experience does Sponsor have in high performance building design and construction, building decarbonization including DER and/or ZOT planning, building electrification, on-site renewable energy production, and climate readiness?
   3. List any green building credentials or certifications gained by the Sponsor employees/representatives that will be working on the project (e.g. Certified Passive House Consultant, PHIUS Certified Builders Training, LEED AP, etc.).
   4. Describe the last two years of experience that Sponsor has with Low Income Housing Tax Credit (LIHTC) or other Massachusetts Department of Housing and Community Development (DHCD) subsidy awards (if applicable).
2. **Design Team Experience with Building Decarbonization, Electrification, Renewable Energy, and Climate Readiness**
   1. List who is on the project design team including Architect, Engineering Firms, Building Science Consultant(s), Envelope Consultant, General Contractor, and Proposed Sub Contractors to the extent they have been identified.
   2. What experience do design team members have with high performance building design, building decarbonization including DER and/or ZOT planning, building electrification, on-site renewable energy production, and climate readiness?
   3. Describe the last two years of experience that design team members have with LIHTC or other DHCD subsidy awards (if applicable).
3. **General Contractor Experience with Building Decarbonization, Electrification, Renewable Energy, and Climate Readiness**
   1. What experience does General Contractor have in high performance building construction, DER, building electrification, on-site renewable energy, and climate ready construction? List any current DER projects in construction.
   2. List any green building credentials or certifications gained by the General Contractor employees/representatives that will be working on the project (e.g. Certified Passive House Consultant, PHIUS Certified Builders Training, LEED AP, etc.).
   3. Describe the last two years of experience the General Contractor has with LIHTC or other DHCD subsidy awards (if applicable).
4. **Commitment to Diversity and Inclusion**
   1. Indicate whether the Sponsor and consultants including the Design Team, General Contractor, and Proposed Sub Contractors (to the extent they have been identified) are MBE and/or WBE business enterprises.
   2. Discuss in detail the Sponsor’s track record with MBE and WBE business contracting in both hard and soft costs, including numerical performance data (as a percentage of total hard costs).
   3. Describe existing and proposed efforts to identify and solicit bids from MBE/WBE consultants including the Design Team, General Contractor, and Proposed Sub Contractors.
5. **Project Plan and Anticipated Outcomes**
   1. Describe planned envelope improvements (e.g. siding, roofs, windows) to minimize heating and cooling demands. *Include in the attachments a site plan, floor plans, elevations, typical wall sections (existing/proposed), window details (existing/proposed), and roof section (existing/proposed) of the building.* Any additional information to effectively communicate proposed envelope improvements is encouraged.
   2. Provide a narrative of the existing and proposed mechanical (including space heating, cooling, and energy or heat recovery ventilation) and hot water system(s). This should be prepared by the architecture and engineering team and include justification for decisions made in the equipment selection process.
   3. Is project electrifying all domestic hot water (DHW) systems? Y/N
      1. If not, why not and what is your plan for transitioning to all-electric DHW systems in the future?
   4. Is project electrifying all cooking appliances? Y/N
   5. Describe indoor air quality scope of work and/or monitoring being integrated.
   6. Describe project’s planned on-site renewable energy systems and battery storage (if applicable) and integration into project’s capital approach.
   7. Describe any climate-resilient related upgrades (e.g. elevating critical equipment, creating community room(s)/other critical facilities with island-able power (via battery storage) to ensure electricity for critical building loads, device charging, refrigeration of critical medications and other supplies, and/or emergency-level heating and cooling).
   8. What is project’s existing and proposed site Energy Use Intensity (EUI) in thousand British thermal units per square foot per year (kBtu/SF/year)? In kBtu/person/year?
   9. What is anticipated energy use reduction percent from existing conditions baseline?
   10. What is project’s existing and proposed air tightness in cubic feet of air per minute at 50 Pascals of pressure difference per square foot of surface area (CFM50/SF)? Please provide the whole building metric rather than the unit compartmentalization number.
   11. What is project’s existing and proposed air tightness in air changes per hour at 50 Pascals (ACH50)? Please provide the whole building metric.
   12. What is project’s current and proposed operational carbon emissions level in kilograms of carbon dioxide equivalent per square foot per year (kgCO2e/SF/yr)?
   13. Describe project team plan to reduce project’s operational and embodied carbon emissions. Has design team performed any quantitative or comparative operational and/or embodied carbon analysis? *Include as attachments.*
   14. If ZOT approach: What is your project’s Zero Carbon Emissions Over Time (ZOT) plan? Which system(s) are you converting to all-electric systems now? Describe what you plan to do later with timeline. What do you propose for outcomes from a performance perspective?
6. **Cost Reasonableness and Leveraging** 
   1. Outline scope of measures taken to creatively and efficiently address upfront costs, potential cost overruns, and long-term costs with the proposed design while maximizing performance outcomes. This should be prepared by the Design Team and reference direct feedback from the General Contractor in the decision-making process regarding cost impacts.
   2. Describe your approach to documenting incremental costs of DER/ZOT and Building Electrification. *Include in the attachments the Add/Deduct Alternate Schedule as relevant to DER/ZOT and Building Electrification scope from the Construction Contract (as applicable).*
   3. Describe how you will ensure that costs that would have been incurred by the project without DER/ZOT and Building Electrification are not included in the incremental cost estimates.
   4. *Include in the attachments the DER/ZOT Cost Documentation Spreadsheet (see Climate Ready Housing web page (*[*www.lisc.org/climatereadyhousing*](https://www.lisc.org/boston/our-work/green-homes/climate-ready-housing-program/)*) for template).*
   5. List all other sources committed or being pursued for incremental cost gap funding (e.g., Mass Save Income Eligible Deep Energy Retrofit Incentives, City of Boston Mayor’s Office of Housing Decarbonization Funding, etc.).
7. **Project Schedule**
   1. Provide an estimated date for Notice to Proceed (NTP).
   2. Provide an estimated date for Substantial Completion.
8. **Additional Questions on Occupied Building Rehabs (if applicable)**
   1. What experience does your team have with occupied building rehabs? List projects done.
   2. How does the fact that this will be an occupied building rehab influence your design decisions (i.e., exterior v. interior insulation, window replacements, mechanical system choices and ducting, timing, etc.)?
   3. Do you have a resident relocation plan and how do you propose to do the work in the occupied building(s)?