



# Massachusetts Residential New Construction Program



## Program Terms and Conditions Acknowledgement

Massachusetts Residential New Construction Program is sponsored by the following Program Administrators: Berkshire Gas, Blackstone Gas Company, Cape Light Compact, Columbia Gas of Massachusetts, EVERSOURCE Electric & Gas, Liberty Utilities, National Grid Gas & Electric, and Unitil Electric & Gas.

Participants applying to the Massachusetts Residential New Construction Program, through a HERS Rater, are subject to the program terms and conditions identified below. By signing this document, the participant acknowledges and agrees to comply with these terms and conditions. HERS raters are required to obtain a signed copy of this form prior to applying to the Program.

Participant Signature

HERS Rater Company

Participant Name & Date

Incentive Recipient Name

Participant Email

Incentive Recipient Address

## Program Terms and Conditions

### 2018 Eligibility Requirements

- Homes can be individually metered, electric and/or gas customers of the Sponsors and may be eligible for additional Program incentives based on heat type requirements. Multi-family units sharing a natural gas master meter are eligible for participation, under the High-Rise Path guidelines.
- Single family and multi-family designations are as follows:
  - Single-family homes are defined as a single-family detached house OR each unit of one standalone 2-4 unit attached building.
  - Developments/projects that consist of multiple Single-family detached homes qualify as Single-family units.
  - Developments/projects consisting of multiple 2+ unit buildings totaling 5 or more units qualify as Multi-family units.
  - Buildings with 5+ units are considered multi-family.
- The following homes are eligible to participate in the Program:
  - Single-family homes; OR
  - Units in multi-family buildings with 3 stories or less; OR
  - Units in multi-family buildings with 3 stories or less that are located on top of commercial spaces (e.g., retail, restaurant, etc.), even if the structure is permitted as commercial.
- AHRI equipment numbers must be reported for all heating and cooling systems. Program participants should ask their contractors for AHRI certification numbers on the systems they install and provide that information to their HERS Rater. If an AHRI certificate is not available, a copy of OEM-provided catalog data indicating acceptable combination selection and performance data will be accepted.
- All heating and cooling equipment must be sized according to the latest editions of ACCA Manuals J and S, ASHRAE 2001 Handbook of Fundamentals, or an equivalent computation procedure. The maximum over sizing limit for air conditioners is 15%, 25% for heat pumps. Cooling systems with variable speed compressors are exempt from this requirement.
- Recommend appliances (refrigerator and dishwasher) be ENERGY

STAR® qualified.

- A Thermal Expansion Valve (TXV) or Electronic Expansion Valve (EXV) is recommended on all cooling systems.
- All homes must have at least one of the following Program outlined mechanical ventilation devices:
  - One bath fan rated for continuous use at < 1.5 sones and controlled by a 24-hour programmable timer OR
  - One whole house mechanical ventilation system (includes an ERV or HRV) OR
  - A balanced supply and exhaust system without heat recovery OR
  - A multi-port exhausts only system with a remote mounted fan

### 2018 Performance Path Eligibility Requirements

- All homes must achieve savings above the Massachusetts User Defined Reference Home (UDRH) that is in effect at the time that a project is registered as evidenced by a Rating Software file.
- A minimum of 80 percent of the lamps in permanently installed lighting fixtures shall be high efficacy lamps as verified by a HERS Rater during the final inspection.
- Homes with HVAC ducted systems have a leakage rate at or below six (6) CFM to outdoors per 100 sq. ft. of conditioned floor area. Testing is required on ALL ducted systems, including systems with all the ductwork located within conditioned space.
- Projects must generate positive electric and natural gas energy savings.
- All homes participating in the 2018 Performance Path will be required to have an air infiltration rate under 0.35ACHnat.
- Mechanical ventilation is required for all homes.
  - Homes must fully comply with all sections of R403.6 of the Massachusetts Residential Code, 8<sup>th</sup> Edition, which amended the 2015 International Energy Conservation Code (IECC). The intended design average measured flow rate (as installed) shall equal the design flow rate, as calculated using any of the approved calculation methods.
  - Supply and Exhaust only ventilation systems must not utilize an intake duct to the return side of the HVAC system unless the system is designed to operate intermittently and

automatically based on a timer and to restrict outdoor air intake when not in use (e.g., motorized damper).

- HERS Raters are required to report fan wattage ratings from manufacturer listed wattage rating; conversions of fan voltage or amperage rating are not acceptable.
- Envelope leakage must be determined by a RESNET certified HERS Rater using a RESNET approved testing protocol.
- Compliance with sections 2 and 4 of the EPA's ENERGY STAR® for Homes V3 Thermal Enclosure System Rater Checklist for Homes V3/3.1 (Rev.08) Rater Field Checklist

#### Incentive Guidelines

- The submission of this Application does not guarantee receipt of incentives. Written approval from the Program will state the number of incentives awarded, incentives will not be paid prior to home testing and verification.
- The incentives awarded are to assist in the defrayment of certification cost to the applicant and help cover some of the incremental costs, if applicable. The applicant may need to contribute to the construction costs to meet the program defined performance requirements. Program Administrators pay the HERS Rating Company a fixed certification incentive for verifying a home meets the program performance requirements. Any certification fee balance is the sole responsibility of the Participant and should be paid directly to the HERS Rating Company.
- Participants who receive performance incentives through the Program are not eligible to receive Mass Save Heating & Cooling equipment incentives, whether directly through Mass Save Heating & Cooling Electric program (formerly COOL SMART), Mass Save Heating & Cooling Gas program (GasNetworks) or the Mass Save C/I Upstream incentive programs. Exception: AC Check is available for every AC system by contacting the Mass Save Heating and Cooling Initiative.
- Participants who receive equipment incentives through the Mass Save Heating & Cooling programs (GasNetworks and formerly, COOL SMART) or the Mass Save C/I Upstream incentive programs are not eligible to participate in the Residential New Construction Program
- Incentive payments are directly tied to a home's modeled energy performance. Any changes to the design or specifications of the units may result in a reduction or loss of incentive(s).
- Participating homes must be located in a service territory of one of the participating Program Administrators as evidenced by town, zip code and, ultimately, a permanent electric and/or gas meter number.
- Incentives associated with this Agreement are paid for by the sponsoring electric utility or energy efficiency service provider, as well as by the sponsoring gas utility in the case of homes with individually metered natural gas heating
- Homes serviced by a municipal electric company are eligible for 100% sponsorship only when heated with natural gas by a participating gas Program Administrator. Municipal electric multifamily projects that are master-metered gas cannot participate in the Program. These projects will be referred to the appropriate commercial energy efficiency program.
- SPONSORS, ITS AGENTS, AND EMPLOYEES DO NOT WARRANT THE PERFORMANCE OF INSTALLED OR SERVICED EQUIPMENT EXPRESSLY OR IMPLICITLY. Program sponsors make no warranties or representation of any kind whether statutory, expressed or implied, including without limitations, warranties or merchantability or fitness for a particular purpose regarding the HVAC equipment or services provided by a manufacturer or vendor. Contact your contractor for details regarding equipment performance or warranties.
- Projects remain Active in the Program for 24 months, if no inspections are reported after 24 months the project will be updated to "Inactive" in Vision and the Rater/Participant will be notified that they will need to reapply.

#### Additional Information

- Prior to any payment of incentives, ICF reserves the right to verify the completion of homes to the level of the requested incentive. The Participant is responsible for any applicable permits as required by building codes/laws. A sampling of completed homes will be selected by ICF for a quality control inspection. No warranty or compliance to Massachusetts building code is implied by this inspection.
- The required home information and supporting documentation must be submitted via the Online Intake Tool and in compliance with the Terms and Conditions, in order to receive incentive payment. Invoices submitted in a given month will be processed during the following month.
- In order for a project to be labeled as ENERGY STAR, all minimum national ENERGY STAR guidelines must be met. Meeting the Massachusetts Residential New Construction Program Requirements does not guarantee the home will meet national ENERGY STAR guidelines.
- Participation in the Massachusetts Residential New Construction Program is voluntary on behalf of the Program Administrators and the applicants. The Program Administrators have the right to change or modify the existing Program at any time. The Program Administrators, its agents, and employees are indemnified against all loss, damage, expense, and liability resulting from injury to or death of persons, and against all injury to property arising out of or in any way connected with the performance of this Agreement.
- The Energy Efficiency Program Provider (EPPP) is entitled to 100% of the energy benefits associated with the Energy Cost Measurements, excluding the value of energy cost savings realized by the customer, but including all rights to all associated ISO-NE Energy Capacity and Reserves Products, and the customer agrees to provide the EPPP with such further documentation as the EPPP may request to confirm the EPPP's ownership of such benefits and product.
- Program Administrator's and its program implementer's liability is limited to paying the applicable incentive and ARE NOT LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL OR INDIRECT DAMAGES OF ANY KIND, OR FOR ANY DAMAGES IN TORT CONNECTED WITH OR RESULTING FROM PARTICIPATION IN THIS PROGRAM.

## **2018 Mass Save New Construction rebate program prescriptive air sealing requirements.**

As specified in the rebate program Terms and Conditions (application), the home must be compliant with two sections of the Energy Star Rater Checklist- section 2 and section 4 (see next page)

These are all common-sense air sealing details. The 2015 IECC building code requires that the home achieves an overall airtightness result of <3 ACH50.

If you follow these details and ensure all contractors are on board with the air barrier strategy, then you should pass this with flying colors.

As efficient building practices are now mainstream, we assume that you understand these construction details.

However, we are available for **any** questions you have, so **ask early in the construction process (at design phase is best!)** and we'll be happy to support your air sealing strategy with our expertise.

The most common missed or incorrectly executed items are:

- Walls 2.2 - air barrier behind shower units, before sheetrock goes up
- Foundation sill 4.3 - airtight gasket under bottom plate
- Attic Flat 4.5 - interior wall top plates are sealed with foam or caulk
- Attic Hatch 4.10 - attic hatch insulated and gasketed to be made airtight.

## Energy Star Thermal Enclosure System Rater Checklist - Sections 2 and 4

The home must include these practical air sealing details, to be confirmed by the HERS rater at the midpoint and final inspections.

<b>2. Fully-Aligned Air Barriers</b> <sup>5</sup> At each insulated location below, a complete air barrier is provided that is fully aligned as follows:				
<b>Ceilings:</b> At interior or exterior horizontal surface of ceiling insulation in Climate Zones 1-3; at interior horizontal surface of ceiling insulation in Climate Zones 4-8. Also, at exterior vertical surface of ceiling insulation in all climate zones (e.g., using a wind baffle that extends to the full height of the insulation in every bay or a tabbed baffle in each bay with a soffit vent that prevents wind washing in adjacent bays). <sup>6</sup>				
2.1 Dropped ceilings / soffits below unconditioned attics, and all other ceilings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Walls:</b> At exterior vertical surface of wall insulation in all climate zones; also at interior vertical surface of wall insulation in Climate Zones 4-8 <sup>7</sup>				
2.2 Walls behind showers, tubs, staircases, and fireplaces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3 Attic knee walls and skylight shaft walls <sup>8</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.4 Walls adjoining porch roofs or garages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.5 Double-walls and all other exterior walls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
<b>Floors:</b> At exterior vertical surface of floor insulation in all climate zones and, if over unconditioned space, also at interior horizontal surface including supports to ensure alignment. See Footnotes 10 & 11 for alternatives. <sup>9, 10, 11</sup>				
2.6 Floors above garages, floors above unconditioned basements or crawlspaces, and cantilevered floors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.7 All other floors adjoining unconditioned space (e.g., rim / band joists at exterior wall or at porch roof)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>4. Air Sealing (Unless otherwise noted below, "sealed" indicates the use of caulk, foam, or equivalent material)</b>				
4.1 Ducts, flues, shafts, plumbing, piping, wiring, exhaust fans, & other penetrations to unconditioned space sealed, with blocking / flashing as needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
4.2 Recessed lighting fixtures adjacent to unconditioned space ICAT labeled and gasketed. Also, if in insulated ceiling without attic above, exterior surface of fixture insulated to $\geq R-10$ in CZ 4-8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.3 Above-grade sill plates adjacent to conditioned space sealed to foundation or sub-floor. Gasket also placed beneath above-grade sill plate if resting atop concrete / masonry & adjacent to cond. space <sup>25,26</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.4 Continuous top plate or blocking is at top of walls adjoining unconditioned space, and sealed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.5 Drywall sealed to top plate at all unconditioned attic / wall interfaces using caulk, foam, drywall adhesive (but not other construction adhesives), or equivalent material. Either apply sealant directly between drywall and top plate or to the seam between the two from the attic above.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.6 Rough opening around windows & exterior doors sealed <sup>27</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-
4.7 Walls that separate attached garages from occupiable space sealed and, also, an air barrier installed and sealed at floor cavities aligned with these walls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.8 In multifamily buildings, the gap between the common wall (e.g. the drywall shaft wall) and the structural framing between units sealed at all exterior boundaries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.9 Doors adjacent to unconditioned space (e.g., attics, garages, basements) or ambient conditions made substantially air-tight with weatherstripping or equivalent gasket	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.10 Attic access panels, drop-down stairs, & whole-house fans equipped with durable $\geq R-10$ cover that is gasketed (i.e., not caulked). Fan covers either installed on house side or mechanically operated. <sup>28</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Effective for homes permitted <sup>29</sup> starting 07/01/2016

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Other resources:

A detailed photo rich guide to air sealing by [Energy Star can be downloaded here.](#)