

9th Edition Stretch Code Modeling Analysis

2200 sq. ft. 3 BR Single Family Electric Heat
Worcester, MA

2015 BASE CODE Three Compliance Options

HERS Index (ERI)

Base	57
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Energy Rating Index (HERS)

PASS ☐

Cost Alternative

PASS ☐

REScheck – UA Alternative

PASS ☒



Electric Heat Pump

ERI compliance requires a HERS Index of max. 55 and a Certified HERS Rating

2015 STRETCH CODE HERS (ERI) Compliance Option

HERS Index (ERI)

Stretch	49
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Energy Rating Index (HERS)

PASS ☒

Changes to meet STRETCH CODE

Cost or (Savings)

Builder Costs

Estimated cost of adjustments + HERS Rater fee

\$2,066

Utility rebates¹

(\$4,793)

Cost compared to BASE CODE

(\$2,727)

Homebuyer Costs

Estimated reduced energy cost per year²

(\$567)

Change to downpayment³

(\$273)

Change to annual mortgage payment³

(\$141)

Year 1 cash flow

(\$980)

Year 2+ cash flow

(\$708)

1 - Incentives revised annually around July 1

2 - Energy costs are based on 21 cents/kWh / \$1.01/therm, savings are compared with BASE CODE home

3 - 30 Year Mortgage assumes 10% downpayment at 4% APR

March 2016

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BASELINE FEATURES

FOUNDATION	<i>Unconditioned, uninsulated basement</i>
FLOOR	<i>R30 fiberglass Grade 1</i>
WALLS	<i>R21 fiberglass Grade 1</i>
WINDOWS (U-VALUE/SHGC)	<i>0.30/0.30</i>
CEILING – FLAT	<i>R-19 + R-30 fiberglass cross</i>
CEILING – SLOPED	<i>R-30 fiberglass Grade 1</i>
HEATING	<i>10 HSPF Heat Pump</i>
COOLING	<i>19 SEER Heat Pump</i>
DHW	<i>0.95 EF Tank Electric Resistance WH</i>
DUCT LEAKAGE TO OUTSIDE	<i>N/A Ductless</i>
AIR INFILTRATION	<i>3.0 ACH50</i>
LED/CFL LIGHTING	<i>75%</i>

2015 STRETCH CODE HERS (ERI)

HERS Index (ERI)

Base	57
Stretch	49

Adjusted Features

HERS Rating	\$1,350
Floor R30 Grade 2	(\$64)
Walls R21 Grade 2	(\$120)
Ceiling – Sloped R30 Grade 2	(\$20)
11.3HSPF/19.1SEER Heat Pump	\$500
3.25 EF Heat Pump DHW	\$419
LED Lighting 100%	\$0
Total Cost	\$2,066

MassSave Incentive Breakdown

Incentive

RNC Program Tier II	\$1,250
Heat Pump – MassSave and MassCEC	\$2,593
Heat Pump Water Heater Incentive	\$750
RNC Program LED light bulbs ⁴	\$200
Total Incentive	\$4,793
Total Cost compared to BASE CODE	<u>(\$2,727)</u>