

9th Edition Stretch Code Modeling Analysis

1,200 s.f. 2 BR Multifamily Unit Natural Gas Heat, Top Floor
Worcester, MA



2015 BASE CODE Three Compliance Options

HERS Index (ERI)

Base	65
------	----

Energy Rating Index (HERS)

PASS

Cost Alternative

PASS

REScheck – UA Alternative

PASS



Natural Gas Heat

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	55
---------	----

Energy Rating Index (HERS)

PASS

Changes to meet STRETCH CODE

Changes to meet STRETCH CODE		Cost or (Savings)
Builder Costs	Estimated cost of adjustments + HERS Rater fee	\$592
	Utility rebates ¹	(\$1,550)
	Cost compared to BASE CODE	(\$958)
Homebuyer Costs	Estimated energy cost change per year ²	(\$105)
	Change to downpayment ³	(\$96)
	Change to annual mortgage payment ³	(\$49)
	Year 1 cash flow	(\$250)
	Year 2+ cash flow	(\$154)

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

9th Edition Stretch Code Modeling Analysis

1,200 s.f. 2 BR Multifamily Unit Natural Gas Heat, Top Floor
Worcester, MA

BASELINE FEATURES

FOUNDATION	<i>N/A – Top Floor Unit</i>
Slab perimeter/Under Slab	<i>N/A – Top Floor Unit</i>
WALLS	<i>R21 fiberglass Grade 2</i>
WINDOWS (U-VALUE/SHGC)	<i>0.30/0.30</i>
CEILING – FLAT	<i>R19 + R30 Fiberglass Cross</i>
HEATING	<i>92% Furnace x1</i>
COOLING	<i>13 SEER x1</i>
DHW	<i>0.62 EF 40 gallon tank</i>
DUCT LEAKAGE TO OUTSIDE	<i>4%</i>
AIR INFILTRATION	<i>3.0 ACH50</i>
HIGH EFFICACY LIGHTING	<i>75%</i>

2015 STRETCH CODE HERS (ERI)

HERS Index (ERI)		Adjusted Features	Construction Cost/(savings)
Base	65		
Stretch	55	HERS Rating	\$500
		0.95 Tankless DHW	\$92
		100% LED lighting	\$0
		Total Cost	\$592

Incentive Breakdown	Incentive
MassSave RNC Program Tier I	\$650
MassSave RNC Program LED light bulbs ⁴	\$100
On-Demand, Tankless Water Heater with an Energy Factor ≥ 0.95 and electronic ignition	\$800
Total Incentive	\$1,550
Total Cost compared to BASE CODE	<u>(\$958)</u>