

9th Edition Stretch Code Modeling Analysis

2550 sq.ft. 3 BR Single Family Home with Natural Gas Heat
Worcester, MA



HERS Index (ERI)	
Target	55
Example Base	66
Example Stretch	55

Costs and Benefits to Meet Stretch Code

	COSTS		BENEFITS	NET	
BUILDER	Adjustments + HERS Rater Fee		Utility Rebates ¹	Cost Compared to Base Code	
	+\$(2,606)		-\$1,630	\$(976)	
HOMEBUYER	Change to Downpayment ³	Change to Annual Mortgage Payment ³	Estimated Reduced Energy Cost per Year ²	Year 1 Cash Flow	Year 2+ Cash Flow
	+\$(97)	+\$(77)	-\$213	\$37	\$135

1 – Incentives are determined using the Blended Savings Approach calculator. Savings compared to MA reference home.

BSA Incentive = \$0.35 * kWh savings + \$35 * MMBtu savings + \$3000 * 0.xx percent savings (single family home)

2 – Energy costs are based on 19 cents/kWh, \$0.97/therm, \$2.88 gal propane, \$2.58 gal oil. Savings are compared with Base Code home

3 – 30-year mortgage assumes 10% down payment at 4% APR



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Breakdown of Construction Costs to Meet Stretch Code

FEATURE	Base Code	Stretch Code	Construction Cost
HERS RATING	66	55	\$500
WINDOWS (U-VALUE/SHGC)	.30/.30	.27/.30	\$500
HEATING	92% gas furnace	96% gas furnace	\$290
COOLING	13 SEER	15 SEER	\$392
DHW	0.62 EF 40 Gallon tank Gas	0.96 EF Tankless Gas	\$724
DUCT LEAKAGE TO OUTSIDE	4 CFM25 / 100 CFA	2 CFM25 / 100 CFA	\$200
HIGH EFFICACY LIGHTING	100% CFL	<i>No change required</i>	\$0
AIR INFILTRATION	3.0 ACH50	<i>No change required</i>	\$0
FOUNDATION	Unconditioned, uninsulated basement	<i>No change required</i>	\$0
FLOOR	R38 fiberglass Grade 1	<i>No change required</i>	\$0
WALLS	R21 fiberglass Grade 1	<i>No change required</i>	\$0
CEILING – FLAT	R-50 blown in cellulose	<i>No change required</i>	\$0
TOTAL			\$2,606