

Tax Credit Auto-Gen Test Results:
(see RESNET Publication 001-16)

Software Name: EnergyGauge USA 6.0

User input data fields indicated by pale yellow

Reference Home Building Component	Test 1	Results	Test 2	Results	Test 3	Results	Test 4	Results
Above-grade walls (U_o)	0.082	0.082	0.082	0.082	0.082	0.082	0.06	0.06
Above-grade wall solar absorptance (α)	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Above-grade wall infrared emittance (ϵ)	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Basement walls (U_o)	n/a	n/a	n/a	n/a	n/a	n/a	0.059	0.059
Above-grade floors (U_o)	0.047	0.047	0.047	0.047	n/a	n/a	n/a	n/a
Slab insulation R-Value	n/a	n/a	n/a	n/a	0	0	0	0
Ceilings (U_o)	0.03	0.03	0.035	0.035	0.035	0.035	0.03	0.03
Roof solar absorptance (α)	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Roof infrared emittance (ϵ)	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Attic vent area* (ft^2)	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13
Crawlspace vent area* (ft^2)	n/a	n/a	10.26	10.26	n/a	n/a	n/a	n/a
Exposed masonry floor area* (ft^2)	n/a	n/a	n/a	n/a	307.8	307.8	307.8	307.8
Carpet & pad R-Value	n/a	n/a	n/a	n/a	2	2	2	2
Door Area (ft^2)	40	40	40	40	40	40	40	40
Door U-Factor	0.4	0.4	0.65	0.65	1.2	1.2	0.35	0.35
North window area* (ft^2)	67.50	67.50	67.50	67.50	67.50	67.50	50.02	50.02
South window area* (ft^2)	67.50	67.50	67.50	67.50	67.50	67.50	50.02	50.02
East window area* (ft^2)	67.50	67.50	67.50	67.50	67.50	67.50	50.02	50.02
West window area* (ft^2)	67.50	67.50	67.50	67.50	67.50	67.50	50.02	50.02
Window U-Factor	0.40	0.40	0.65	0.65	1.20	1.20	0.35	0.35
Window SHGC _o (heating)	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Window SHGC _o (cooling)	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
SLA _o * (ft^2/ft^2)	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036	0.00036
Sensible Internal gains* (Btu/day)	55,470	55,481	52,794	52,801	48,111	48,117	83,103	83,116
Latent Internal gains* (Btu/day)	13,807	13,809	12,698	12,701	9,259	9,263	17,934	17,937
Labeled heating system rating and efficiency	AFUE = 78%	78%	HSPF = 7.7	7.7	HSPF = 7.7	7.7	AFUE = 78%	78
Labeled cooling system rating and efficiency	SEER = 13	13	SEER = 13	13	SEER = 13	13	SEER = 13	13
Air Distribution System Efficiency	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Thermostat Type	Manual	Manual	Manual	Manual	Manual	Manual	Manual	Manual
Heating thermostat settings	68 F (all hours)	68	68 F (all hours)	68	68 F (all hours)	68	68 F (all hours)	68
Cooling thermostat settings	78 F (all hours)	78	78 F (all hours)	78	78 F (all hours)	78	78 F (all hours)	78
e-Ratio		1.000		0.998		0.998		1.000

Reference Home Characteristics

FSEC
111 Anywhere Lane
Baltimore, MD,
Registration #:

Title: TaxCredit-AutoGen_case1
TaxRef13

TMY City: MD_BALTIMORE_BL
Elec Util: EnergyGauge Default
Gas Util: EnergyGauge Default
Run Date:

HERS BESTEST basecase home

Above-grade Walls (Uo)	0.082
Above-grade Wall Solar Absorptance	0.75
Above-grade Wall Infrared Emittance	0.90
Basement Walls (Uo)	n/a
Above-grade Floors (Uo)	0.047
Slab Insulation R-Value	n/a
Ceilings (Uo)	0.030
Roof Solar Absorptance	0.75
Roof Infrared Emittance	0.90
Attic Vent Area (ft²)	5.13
Crawlspace Vent Area (ft²)	n/a
Exposed Masonry Floor Area (ft²)	n/a
Carpet & Pad R-Value	n/a
Door Area (ft²)	40
Door U-Factor	0.40
North Window Area (ft²)	67.50
South Window Area (ft²)	67.50
East Window Area (ft²)	67.50
West Window Area (ft²)	67.50
Window U-Factor	0.40
Window SHGC (Heating)	0.3400
Window SHGC (Cooling)	0.280
SLA (ft²/ft²)	0.00036
Internal Gains Sensible (Btu/day)	55481.3
Internal Gains latent (Btu/day)	13809.1
Internal Gains Total (Btu/day)	69290.4
Labeled Heating System Rating and Efficiency	AFUE = 78%
Labeled Cooling System Rating and Efficiency	SEER = 13.0
Air Distribution System Efficiency	0.80
Gallons per day	49.02
Thermostat Type	Manual
Mechanical Ventilation (kWh/y)	0.0
DHW pipe length (ft)	88.5
DHW loop length (ft)	156.9
Heating Thermostat Settings	68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0
	68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0
	68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0
Cooling Thermostat Settings	78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0
	78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0
	78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0

Reference Home Characteristics

FSEC
111 Anywhere Lane
Dallas, TX,
Registration #:

Title: TaxCredit-AutoGen_case2
TaxRef13

TMY City: TX_ABILENE_DYES
Elec Util: EnergyGauge Default
Gas Util: EnergyGauge Default
Run Date:

HERS BESTEST basecase home

Above-grade Walls (Uo)	0.082
Above-grade Wall Solar Absorptance	0.75
Above-grade Wall Infrared Emittance	0.90
Basement Walls (Uo)	n/a
Above-grade Floors (Uo)	0.047
Slab Insulation R-Value	n/a
Ceilings (Uo)	0.035
Roof Solar Absorptance	0.75
Roof Infrared Emittance	0.90
Attic Vent Area (ft²)	5.13
Crawlspace Vent Area (ft²)	10.26
Exposed Masonry Floor Area (ft²)	n/a
Carpet & Pad R-Value	n/a
Door Area (ft²)	40
Door U-Factor	0.65
North Window Area (ft²)	67.50
South Window Area (ft²)	67.50
East Window Area (ft²)	67.50
West Window Area (ft²)	67.50
Window U-Factor	0.65
Window SHGC (Heating)	0.3400
Window SHGC (Cooling)	0.280
SLA (ft²/ft²)	0.00036
Internal Gains Sensible (Btu/day)	52801.2
Internal Gains latent (Btu/day)	12701.4
Internal Gains Total (Btu/day)	65502.6
Labeled Heating System Rating and Efficiency	HSPF = 7.7
Labeled Cooling System Rating and Efficiency	SEER = 13.0
Air Distribution System Efficiency	0.80
Gallons per day	44.61
Thermostat Type	Manual
Mechanical Ventilation (kWh/y)	0.0
DHW pipe length (ft)	88.5
DHW loop length (ft)	156.9
Heating Thermostat Settings	68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0
	68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0
	68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0
Cooling Thermostat Settings	78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0
	78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0
	78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0

Reference Home Characteristics

FSEC
111 Anywhere Lane
Miami, FL,
Registration #:

Title: TaxCredit-AutoGen_case3
TaxRef13

TMY City: FL_MIAMI_INTL_AP
Elec Util: Florida Average
Gas Util: Florida Average
Run Date:

HERS BESTEST insulated slab case

Above-grade Walls (Uo)	0.082
Above-grade Wall Solar Absorptance	0.75
Above-grade Wall Infrared Emittance	0.90
Basement Walls (Uo)	n/a
Above-grade Floors (Uo)	n/a
Slab Insulation R-Value	0
Ceilings (Uo)	0.035
Roof Solar Absorptance	0.75
Roof Infrared Emittance	0.90
Attic Vent Area (ft²)	5.13
Crawlspace Vent Area (ft²)	n/a
Exposed Masonry Floor Area (ft²)	307.8
Carpet & Pad R-Value	2.0
Door Area (ft²)	40
Door U-Factor	1.20
North Window Area (ft²)	67.50
South Window Area (ft²)	67.50
East Window Area (ft²)	67.50
West Window Area (ft²)	67.50
Window U-Factor	1.20
Window SHGC (Heating)	0.3400
Window SHGC (Cooling)	0.280
SLA (ft²/ft²)	0.00036
Internal Gains Sensible (Btu/day)	48116.5
Internal Gains latent (Btu/day)	9262.5
Internal Gains Total (Btu/day)	57379.0
Labeled Heating System Rating and Efficiency	HSPF = 7.7
Labeled Cooling System Rating and Efficiency	SEER = 13.0
Air Distribution System Efficiency	0.80
Gallons per day	32.10
Thermostat Type	Manual
Mechanical Ventilation (kWh/y)	0.0
DHW pipe length (ft)	88.5
DHW loop length (ft)	156.9
Heating Thermostat Settings	68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0
	68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0
	68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0
Cooling Thermostat Settings	78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0
	78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0
	78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0

Reference Home Characteristics

FSEC
111 Anywhere Lane
Colorado Springs, CO,
Registration #:

Title: TaxCredit-AutoGen_case4
TaxRef13

TMY City: CO_COLORADO_SP
Elec Util: Colorado Average
Gas Util: Colorado Average
Run Date:

HERS BESTEST insulated basement case

Above-grade Walls (Uo)	0.060
Above-grade Wall Solar Absorptance	0.75
Above-grade Wall Infrared Emittance	0.90
Basement Walls (Uo)	0.059
Above-grade Floors (Uo)	n/a
Slab Insulation R-Value	0
Ceilings (Uo)	0.030
Roof Solar Absorptance	0.75
Roof Infrared Emittance	0.90
Attic Vent Area (ft²)	5.13
Crawlspace Vent Area (ft²)	n/a
Exposed Masonry Floor Area (ft²)	307.8
Carpet & Pad R-Value	2.0
Door Area (ft²)	40
Door U-Factor	0.35
North Window Area (ft²)	67.50
South Window Area (ft²)	67.50
East Window Area (ft²)	67.50
West Window Area (ft²)	67.50
Window U-Factor	0.35
Window SHGC (Heating)	0.3400
Window SHGC (Cooling)	0.280
SLA (ft²/ft²)	0.00036
Internal Gains Sensible (Btu/day)	83115.7
Internal Gains latent (Btu/day)	17936.9
Internal Gains Total (Btu/day)	101052.6
Labeled Heating System Rating and Efficiency	AFUE = 78%
Labeled Cooling System Rating and Efficiency	SEER = 13.0
Air Distribution System Efficiency	0.80
Gallons per day	60.91
fmix	0.709
Thermostat Type	Manual
Heating Thermostat Settings	68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0 68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0 68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0, 68.0
Cooling Thermostat Settings	78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0 78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0 78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0, 78.0