

Building Characteristics for Residential Hourly Load Data

Building America Climate Zone Map: <http://energy.gov/eere/buildings/building-america-climate-specific-guidance>

Base Load Model (Building America B10 Benchmark - <http://www.nrel.gov/docs/fy11osti/49246.pdf>):

Selected Building Fuel Types					
	Very Cold/Cold	Mixed-Humid	Mixed-Dry/Hot-Dry	Hot-Humid	Marine
Space Heating	Natural Gas	Natural Gas	Natural Gas	Electric	Natural Gas
Air Conditioning	Yes	Yes	Yes	Yes	No
Water Heating	Natural Gas	Electric	Natural Gas	Electric	Natural Gas
Selected Building Structure Types					
	Very Cold/Cold	Mixed-Humid	Mixed-Dry/Hot-Dry	Hot-Humid	Marine
Total Size (sq. ft.)	2696	2546	2000	2023	2090
Urban and Rural	Urban	Urban	Urban	Urban	Urban
Metropolitan and Micropolitan	Metro	Metro	Metro	Metro	Metro
Number of Stories / Levels	1 Story	1 Story	1 Story	1 Story	1 Story
Major Outside Wall Construction	Siding (Aluminum, Vinyl, Steel)	Siding (Aluminum, Vinyl, Steel)	Stucco	Brick	Wood
Major Roofing Material	Ceramic or Clay Tiles	Ceramic or Clay Tiles	Ceramic or Clay Tiles	Ceramic or Clay Tiles	Ceramic or Clay Tiles
Foundation/Basement of Single-Family	Basement	Concrete Slab	Concrete Slab	Concrete Slab	Crawlspace
Bedrooms	3	3	3	3	3
Full Bathrooms	1	1	2	2	1
Half Bathrooms	None	None	None	None	None
Basement Single-Family Homes	Yes	No	No	No	No
Finished Basement	No	No Basement	No Basement	No Basement	No Basement
Type of Glass in Windows	Double-pane Glass	Double-pane Glass	Single-pane Glass	Single-pane Glass	Double-pane Glass
Selected Building Design Type					
ALL OTHER OPTIONS SET TO B10 BENCHMARK HOUSE					

High Load Model Characteristics:

Selected Building Fuel Types					
	Very Cold/Cold	Mixed-Humid	Mixed-Dry/Hot-Dry	Hot-Humid	Marine
Space Heating	Natural Gas	Natural Gas	Natural Gas	Electric	Natural Gas
Air Conditioning	Yes	Yes	Yes	Yes	No
Water Heating	Natural Gas	Electric	Natural Gas	Electric	Natural Gas
Selected Building Structure Types					
	Very Cold/Cold	Mixed-Humid	Mixed-Dry/Hot-Dry	Hot-Humid	Marine
Total Size (sq. ft.)	4044	3819	3000	3034	3135
Urban and Rural	Urban	Urban	Urban	Urban	Urban
Metropolitan and Micropolitan	Metro	Metro	Metro	Metro	Metro
Number of Stories / Levels	2 Story	2 Story	2 Story	2 Story	2 Story
Major Outside Wall Construction	Siding (Aluminum, Vinyl, Steel)	Siding (Aluminum, Vinyl, Steel)	Stucco	Brick	Wood
Major Roofing Material	Ceramic or Clay Tiles	Ceramic or Clay Tiles	Ceramic or Clay Tiles	Ceramic or Clay Tiles	Ceramic or Clay Tiles
Foundation/Basement of Single-Family	Basement / Crawlspace	Basement / Crawlspace	Crawlspace	Crawlspace	Crawlspace
Bedrooms	4	4	4	4	4
Full Bathrooms	2	2	2	2	2
Half Bathrooms	1	1	1	1	1
Basement Single-Family Homes	Yes	Yes	No	No	No
Finished Basement	Basement / Crawlspace	Basement / Crawlspace	Crawlspace	Crawlspace	Crawlspace
Type of Glass in Windows	Single-pane Glass	Single-pane Glass	Single-pane Glass	Single-pane Glass	Single-pane Glass
Selected Building Design Type					
	Very Cold/Cold	Mixed-Humid	Mixed-Dry/Hot-Dry	Hot-Humid	Marine
Heating Set Point (degrees)	74	74	74	74	74
Cooling Set Point (degrees)	74	74	74	74	74
Water Flow Rate (Showers / Sinks)	Benchmark	Benchmark	Benchmark	Benchmark	Benchmark
Natural Ventilation	No natural ventilation	No natural ventilation	No natural ventilation	No natural ventilation	No natural ventilation
Wall Insulation Type	R7	R7	R7	R7	R7
Unfinished Attic Insulation Type	R19	R19	R19	R19	R19
Finished Basement Wall Insulation	8ft R5 Rigid	8ft R5 Rigid	8ft R5 Rigid	8ft R5 Rigid	8ft R5 Rigid
Exposed Floor (%)	80	80	80	80	80
Infiltration	Leaky	Leaky	Leaky	Leaky	Leaky
Refrigerator	Standard Side-By-Side	Energy Star Side-By-Side	Energy Star Side-By-Side	Energy Star Side-By-Side	Energy Star Side-By-Side
Cooking Range	Electric Conventional	Electric Conventional	Electric Conventional	Electric Conventional	Electric Conventional
Dishwasher	Standard	Standard	Standard	Standard	Standard
Clothes Washer	Standard	Standard	Standard	Standard	Standard
Clothes Dryer	Electric	Electric	Electric	Electric	Electric
Lighting	20% Fluor. 80% Incan.	20% Fluor. 80% Incan.	20% Fluor. 80% Incan.	20% Fluor. 80% Incan.	20% Fluor. 80% Incan.
Air Conditioning Unit Type	SEER 10	SEER 10	SEER 10	SEER 10	SEER 10
Water Heater	Gas Standard	Electric Standard	Gas Standard	Electric Standard	Gas Standard
Furnace	Gas, AFUE 78%	Gas, AFUE 78%	Gas, AFUE 78%	Electric, AFUE 98%	Gas, AFUE 78%

Low Load Model Characteristics:

Selected Building Fuel Types					
	Very Cold/Cold	Mixed-Humid	Mixed-Dry/Hot-Dry	Hot-Humid	Marine
Space Heating	Natural Gas	Natural Gas	Natural Gas	Electric	Natural Gas
Air Conditioning	Yes	Yes	Yes	Yes	No
Water Heating	Natural Gas	Electric	Natural Gas	Electric	Natural Gas
Selected Building Structure Types					
	Very Cold/Cold	Mixed-Humid	Mixed-Dry/Hot-Dry	Hot-Humid	Marine
Total Size (sq. ft.)	1348	1273	1000	1011	1045
Urban and Rural	Urban	Urban	Urban	Urban	Urban
Metropolitan and Micropolitan	Metro	Metro	Metro	Metro	Metro
Number of Stories / Levels	1 Story	1 Story	1 Story	1 Story	1 Story
Major Outside Wall Construction	Siding (Aluminum, Vinyl, Steel)	Siding (Aluminum, Vinyl, Steel)	Stucco	Brick	Wood
Major Roofing Material	Ceramic or Clay Tiles	Ceramic or Clay Tiles	Ceramic or Clay Tiles	Ceramic or Clay Tiles	Ceramic or Clay Tiles
Foundation/Basement of Single-Family	Slab	Slab	Slab	Slab	Slab
Bedrooms	2	2	2	2	2
Full Bathrooms	1	1	1	1	1
Half Bathrooms	0	0	0	0	0
Basement Single-Family Homes	No	No	No	No	No
Finished Basement	No	No	No	No	No
Type of Glass in Windows	Double-Pane Glass	Double-Pane Glass	Double-Pane Glass	Double-Pane Glass	Double-Pane Glass
Selected Building Design Type					
	Very Cold/Cold	Mixed-Humid	Mixed-Dry/Hot-Dry	Hot-Humid	Marine
Heating Set Point (degrees)	66	66	66	66	66
Cooling Set Point (degrees)	78	78	78	78	78
Water Flow Rate (Showers / Sinks)	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Natural Ventilation	B10 Benchmark	B10 Benchmark	B10 Benchmark	B10 Benchmark	B10 Benchmark
Wall Insulation Type	R21 Foam	R21 Foam	R21 Foam	R21 Foam	R21 Foam
Unfinished Attic Insulation Type	R38	R38	R38	R38	R38
Finished Basement Wall Insulation	N/A	N/A	N/A	N/A	N/A
Exposed Floor (%)	20	20	20	20	20
Infiltration	Tight	Tight	Tight	Tight	Tight
Refrigerator	Energy Star Top Mount	Energy Star Top Mount	Energy Star Top Mount	Energy Star Top Mount	Energy Star Top Mount
Cooking Range	Gas Conventional	Gas Conventional	Gas Conventional	Gas Conventional	Gas Conventional
Dishwasher	Energy Star	Energy Star	Energy Star	Energy Star	Energy Star
Clothes Washer	Energy Star	Energy Star	Energy Star	Energy Star	Energy Star
Clothes Dryer	None (Clothes Line)	None (Clothes Line)	None (Clothes Line)	None (Clothes Line)	None (Clothes Line)
Lighting	100% Fluor.	100% Fluor.	100% Fluor.	100% Fluor.	100% Fluor.
Air Conditioning Unit Type	SEER 16	SEER 16	SEER 16	SEER 16	SEER 16
Water Heater	Gas Premium	Electric Premium	Gas Premium	Electric Premium	Gas Premium
Furnace	Gas, AFUE 92.5%	Gas, AFUE 92.5%	Gas, AFUE 92.5%	Electric, AFUE 98%	Gas, AFUE 92.5%