

Project Name: Parnell House

Address: , Alachua, FL

OUTDOOR DESIGN CONDITIONS

Weather station: Gainesville Regional AP

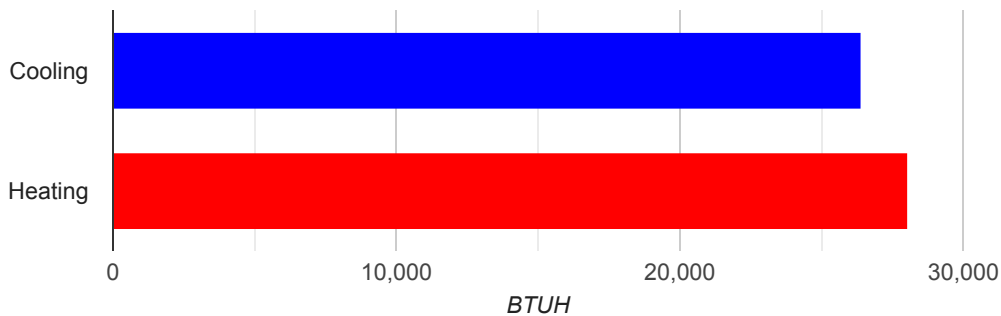
Summer Outdoor F:	92	Summer Indoor F:	68	Design Grains:	47	Daily Range:	Medium
Winter Outdoor F:	33	Winter Indoor F:	72	Cooling RH:	50	Elevation (Ft):	164

LOAD CALCULATION TOTALS

HVAC System: HVAC

Heated square footage:	1,961	Heating BTUH:	28,025
Cooled square footage:	1,961	Cooling BTUH:	26,371
Heated volume (above grade CF):	18,488	CFM:	1,132
Cooled volume (above grade CF):	18,488	Sensible cooling:	22,423
Exposed wall area (SF):	1,560	Latent cooling:	3,948
		SHR:	0.85

Load Calculation



Approved ACCA MJ8 Calculations

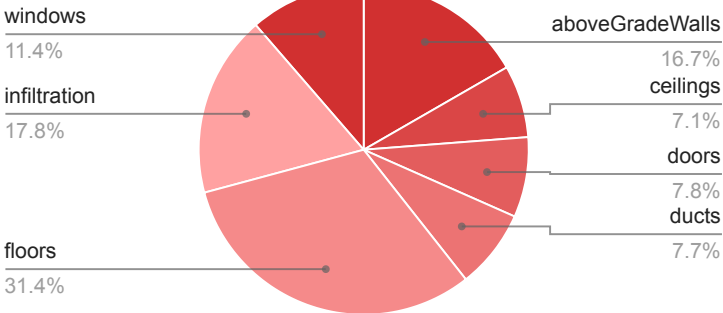
Calculations are based on the ACCA Manual J 8th Edition and are approved by ACCA. All computed calculations are estimates on building use, weather data, and inputted values such as R-Values, window types, duct loss, etc. Equipment selections should meet both the latent and sensible gain as well as building heat loss.



HEATING AND COOLING LOADS

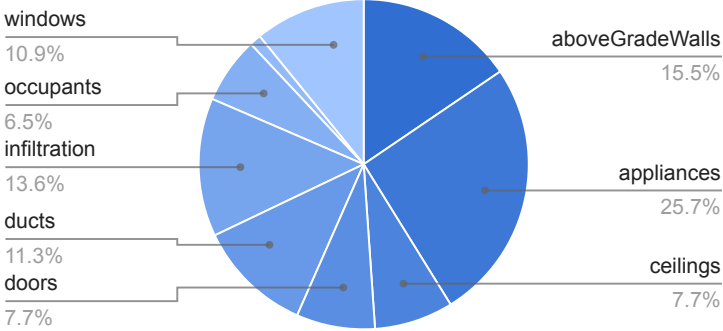
HEATING LOADS		
SECTION	AREA	HEAT LOSS
aboveGradeWalls	1,236	4,676
ceilings	1,961	1,988
doors	120	2,200
ducts	0	2,172
floors	1,961	8,810
infiltration	0	4,998
skylights	0	0
windows	204	3,182
Totals		28,025

Heating Loads



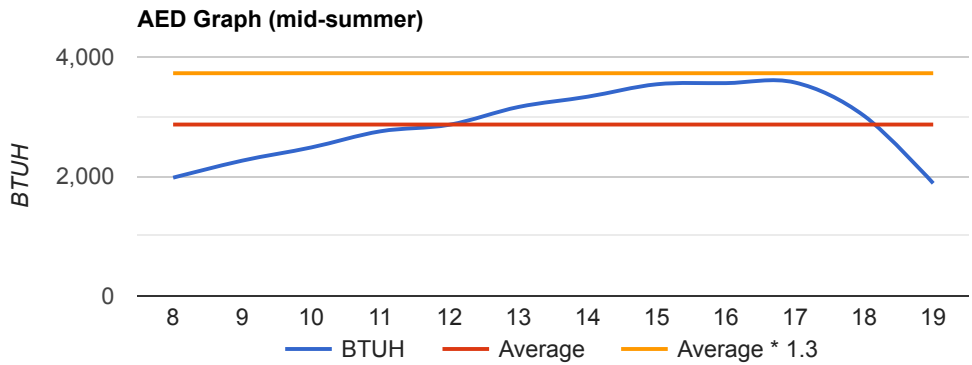
COOLING LOADS			
SECTION	AREA	SENSIBLE	LATENT
AEDExcursion	0	0	0
aboveGradeWalls	1,236	4,088	0
appliances	0	6,410	358
ceilings	1,961	2,039	0
doors	120	2,030	0
ducts	0	2,452	530
floors	1,961	0	0
infiltration	0	1,619	1,960
occupants	0	920	800
plants	0	0	300
skylights	0	0	0
windows	204	2,865	0
Totals		22,423	3,948

Cooling Loads

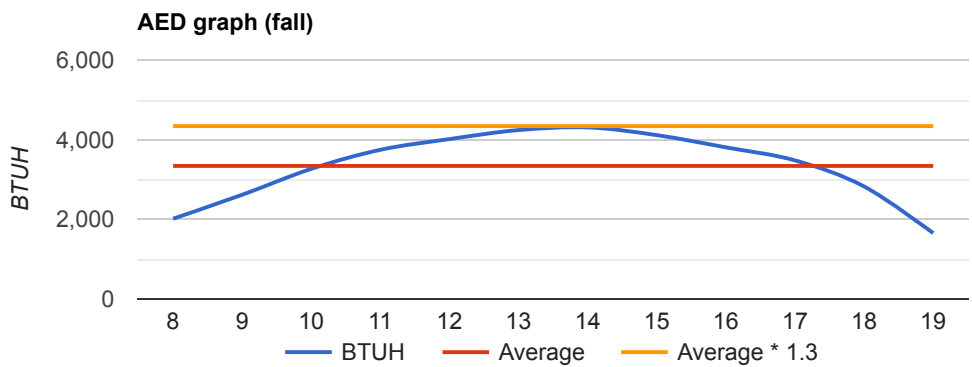


FENESTRATION LOADS

Warning (0): The sensible load for this application peaks during late fall or early winter. This behavior is caused by glass that faces SouthEast, South or SouthWest. Some rooms may be noticeably cooler or warmer than the temperature set point if zoning is not provided. Simultaneous heating and cooling may be required.



This graph represents hourly aggregate fenestration loads in mid-summer.



This graph represents hourly aggregate fenestration loads in October.

COMPONENT LOADS

ABOVE GRADE WALLS						
System generated wall - E						
Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	E 80	Heating BTUH: Cooling BTUH:	303 265
System generated wall - E						
Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	E 114	Heating BTUH: Cooling BTUH:	431 377
System generated wall - S						
Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	S 96	Heating BTUH: Cooling BTUH:	363 318
System generated wall - N						
Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	N 104	Heating BTUH: Cooling BTUH:	393 344
System generated wall - E						
Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	E 64	Heating BTUH: Cooling BTUH:	242 212
System generated wall - N						
Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	N 24	Heating BTUH: Cooling BTUH:	91 79
System generated wall - W						
Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	W 74	Heating BTUH: Cooling BTUH:	280 245
System generated wall - N						
Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	N 72	Heating BTUH: Cooling BTUH:	272 238
System generated wall - W						
Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	W 80	Heating BTUH: Cooling BTUH:	303 265
System generated wall - N						
Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	N 72	Heating BTUH: Cooling BTUH:	272 238
System generated wall - W						
Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	W 78	Heating BTUH: Cooling BTUH:	295 258
System generated wall - S						
Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	S 80	Heating BTUH: Cooling BTUH:	303 265
System generated wall - W						
Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	W 90	Heating BTUH: Cooling BTUH:	340 298
System generated wall - S						
Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.	Construction nr: U Value:	12B-0s w 0.097	Exposure: Area:	S 168	Heating BTUH: Cooling BTUH:	636 556

ABOVE GRADE WALLS

System generated wall - N

Frame Wall, Wood framing, R-11 cavity insulation, Stucco or Siding.

Construction nr: 12B-0s w
U Value: 0.097

Exposure: N
Area: 40

Heating BTUH: 151
Cooling BTUH: 132

BELOW GRADE WALLS

There are no components for this section.

WINDOWS

Default small windows for wall id 9106453

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 12
Exposure: E

U Value: 0.4
SHGC: 0.25

Heating BTUH: 187
Cooling BTUH: 209

Default medium windows for wall id 9106453

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 12
Exposure: E

U Value: 0.4
SHGC: 0.25

Heating BTUH: 187
Cooling BTUH: 209

Default small windows for wall id 9106455

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 6
Exposure: E

U Value: 0.4
SHGC: 0.25

Heating BTUH: 94
Cooling BTUH: 104

Default small windows for wall id 9106456

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 12
Exposure: S

U Value: 0.4
SHGC: 0.25

Heating BTUH: 187
Cooling BTUH: 123

Default medium windows for wall id 9106456

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 12
Exposure: S

U Value: 0.4
SHGC: 0.25

Heating BTUH: 187
Cooling BTUH: 134

Default small windows for wall id 9106529

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 12
Exposure: N

U Value: 0.4
SHGC: 0.25

Heating BTUH: 187
Cooling BTUH: 135

Default medium windows for wall id 9106529

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 12
Exposure: N

U Value: 0.4
SHGC: 0.25

Heating BTUH: 187
Cooling BTUH: 135

Default small windows for wall id 9106503

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 6
Exposure: W

U Value: 0.4
SHGC: 0.25

Heating BTUH: 94
Cooling BTUH: 115

Default small windows for wall id 9106478

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 12
Exposure: W

U Value: 0.4
SHGC: 0.25

Heating BTUH: 187
Cooling BTUH: 230

Default medium windows for wall id 9106478

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 12
Exposure: W

U Value: 0.4
SHGC: 0.25

Heating BTUH: 187
Cooling BTUH: 230

Default small windows for wall id 9106519

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 6
Exposure: W

U Value: 0.4
SHGC: 0.25

Heating BTUH: 94
Cooling BTUH: 115

Default medium windows for wall id 9106519

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 12
Exposure: W

U Value: 0.4
SHGC: 0.25

Heating BTUH: 187
Cooling BTUH: 230

Default small windows for wall id 9106471

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 12
Exposure: S

U Value: 0.4
SHGC: 0.25

Heating BTUH: 187
Cooling BTUH: 123

Default medium windows for wall id 9106471

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 12
Exposure: S

U Value: 0.4
SHGC: 0.25

Heating BTUH: 187
Cooling BTUH: 134

Default small windows for wall id 9106472

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 6
Exposure: W

U Value: 0.4
SHGC: 0.25

Heating BTUH: 94
Cooling BTUH: 115

Default small windows for wall id 9106531

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 12
Exposure: S

U Value: 0.4
SHGC: 0.25

Heating BTUH: 187
Cooling BTUH: 123

Default medium windows for wall id 9106531

Window, NFRC rated, Clear glass.

Construction nr: 1G
Area: 36
Exposure: S

U Value: 0.4
SHGC: 0.25

Heating BTUH: 562
Cooling BTUH: 402

Window cooling BTUHs shown here are daily average values. See AED graphs for details of fenestration loads during the day.

CEILINGS					
System generated ceiling. Ceiling under attic or attic knee wall, Asphalt shingles, Light, R-38.	Construction nr: U Value:	16DR-38 al 0.026	Area:	256	Heating BTUH: 260 Cooling BTUH: 266
System generated ceiling. Ceiling under attic or attic knee wall, Asphalt shingles, Light, R-38.	Construction nr: U Value:	16DR-38 al 0.026	Area:	225	Heating BTUH: 228 Cooling BTUH: 234
System generated ceiling. Ceiling under attic or attic knee wall, Asphalt shingles, Light, R-38.	Construction nr: U Value:	16DR-38 al 0.026	Area:	128	Heating BTUH: 130 Cooling BTUH: 133
System generated ceiling. Ceiling under attic or attic knee wall, Asphalt shingles, Light, R-38.	Construction nr: U Value:	16DR-38 al 0.026	Area:	36	Heating BTUH: 37 Cooling BTUH: 37
System generated ceiling. Ceiling under attic or attic knee wall, Asphalt shingles, Light, R-38.	Construction nr: U Value:	16DR-38 al 0.026	Area:	120	Heating BTUH: 122 Cooling BTUH: 125
System generated ceiling. Ceiling under attic or attic knee wall, Asphalt shingles, Light, R-38.	Construction nr: U Value:	16DR-38 al 0.026	Area:	156	Heating BTUH: 158 Cooling BTUH: 162
System generated ceiling. Ceiling under attic or attic knee wall, Asphalt shingles, Light, R-38.	Construction nr: U Value:	16DR-38 al 0.026	Area:	144	Heating BTUH: 146 Cooling BTUH: 150
System generated ceiling. Ceiling under attic or attic knee wall, Asphalt shingles, Light, R-38.	Construction nr: U Value:	16DR-38 al 0.026	Area:	300	Heating BTUH: 304 Cooling BTUH: 312
System generated ceiling. Ceiling under attic or attic knee wall, Asphalt shingles, Light, R-38.	Construction nr: U Value:	16DR-38 al 0.026	Area:	156	Heating BTUH: 158 Cooling BTUH: 162
System generated ceiling. Ceiling under attic or attic knee wall, Asphalt shingles, Light, R-38.	Construction nr: U Value:	16DR-38 al 0.026	Area:	400	Heating BTUH: 406 Cooling BTUH: 416
System generated ceiling. Ceiling under attic or attic knee wall, Asphalt shingles, Light, R-38.	Construction nr: U Value:	16DR-38 al 0.026	Area:	40	Heating BTUH: 41 Cooling BTUH: 42

SKYLIGHTS					
There are no components for this section.					

Skylight cooling BTUHs shown here are daily average values. See AED graphs for details of fenestration loads during the day.

DOORS					
Default doors for wall id 9106453 Wood Door, Hollow Core.	Construction nr: U Value:	11 0.47	Area: Exposure:	24 E	Heating BTUH: 440 Cooling BTUH: 406
Default doors for wall id 9106524 Wood Door, Hollow Core.	Construction nr: U Value:	11 0.47	Area: Exposure:	24 N	Heating BTUH: 440 Cooling BTUH: 406
Default doors for wall id 9106477 Wood Door, Hollow Core.	Construction nr: U Value:	11 0.47	Area: Exposure:	24 N	Heating BTUH: 440 Cooling BTUH: 406

DOORS					
Default doors for wall id 9106518 Wood Door, Hollow Core.	Construction nr:	11	Area:	24	Heating BTUH: 440
	U Value:	0.47	Exposure:	N	Cooling BTUH: 406
Default doors for wall id 9106531 Wood Door, Hollow Core.	Construction nr:	11	Area:	24	Heating BTUH: 440
	U Value:	0.47	Exposure:	S	Cooling BTUH: 406

FLOORS					
System generated floor. Concrete slab on grade floor, R-10 slab insulation.	Construction nr:	22C-10ph	Heating U Value:0	Heating BTUH:	762
	Area:	256	Cooling U Value:0	Cooling BTUH:	0
				F Value:	1.221
System generated floor. Concrete slab on grade floor, R-10 slab insulation.	Construction nr:	22C-10ph	Heating U Value:0	Heating BTUH:	1,429
	Area:	225	Cooling U Value:0	Cooling BTUH:	0
				F Value:	1.221
System generated floor. Concrete slab on grade floor, R-10 slab insulation.	Construction nr:	22C-10ph	Heating U Value:0	Heating BTUH:	1,143
	Area:	128	Cooling U Value:0	Cooling BTUH:	0
				F Value:	1.221
System generated floor. Concrete slab on grade floor, R-10 slab insulation.	Construction nr:	22C-10ph	Heating U Value:0	Heating BTUH:	286
	Area:	36	Cooling U Value:0	Cooling BTUH:	0
				F Value:	1.221
System generated floor. Concrete slab on grade floor, R-10 slab insulation.	Construction nr:	22C-10ph	Heating U Value:0	Heating BTUH:	476
	Area:	120	Cooling U Value:0	Cooling BTUH:	0
				F Value:	1.221
System generated floor. Concrete slab on grade floor, R-10 slab insulation.	Construction nr:	22C-10ph	Heating U Value:0	Heating BTUH:	1,190
	Area:	156	Cooling U Value:0	Cooling BTUH:	0
				F Value:	1.221
System generated floor. Concrete slab on grade floor, R-10 slab insulation.	Construction nr:	22C-10ph	Heating U Value:0	Heating BTUH:	1,143
	Area:	144	Cooling U Value:0	Cooling BTUH:	0
				F Value:	1.221
System generated floor. Concrete slab on grade floor, R-10 slab insulation.	Construction nr:	22C-10ph	Heating U Value:0	Heating BTUH:	0
	Area:	300	Cooling U Value:0	Cooling BTUH:	0
				F Value:	1.221
System generated floor. Concrete slab on grade floor, R-10 slab insulation.	Construction nr:	22C-10ph	Heating U Value:0	Heating BTUH:	1,190
	Area:	156	Cooling U Value:0	Cooling BTUH:	0
				F Value:	1.221
System generated floor. Concrete slab on grade floor, R-10 slab insulation.	Construction nr:	22C-10ph	Heating U Value:0	Heating BTUH:	952
	Area:	400	Cooling U Value:0	Cooling BTUH:	0
				F Value:	1.221
System generated floor. Concrete slab on grade floor, R-10 slab insulation.	Construction nr:	22C-10ph	Heating U Value:0	Heating BTUH:	238
	Area:	40	Cooling U Value:0	Cooling BTUH:	0
				F Value:	1.221

VENTILATION					
There are no components for this section.					

HOT WATER PIPING					
There are no components for this section.					

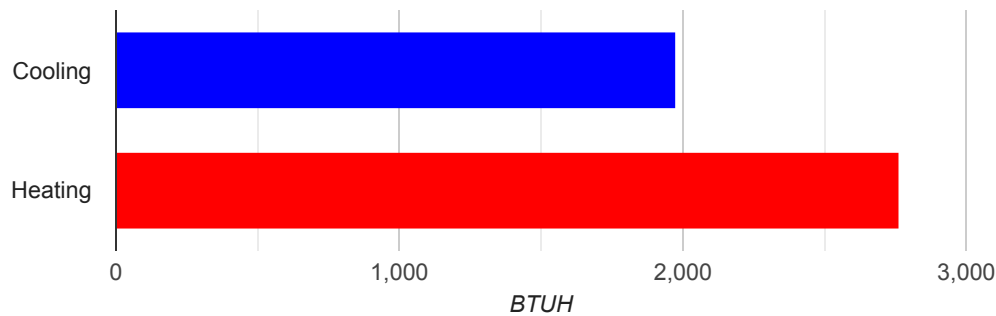
DUCTS				
System generated ducts (above conditioned space)		EHLF:	0.084	Heating BTUH: 2,172
Attic - Radial		ESGF:	0.123	Sensible BTUH: 2,452
		ELG:	530	Latent BTUH: 530
INFILTRATION				
Leakage Category: Average		NCFM Heating:	117	Heating BTUH: 4,998
		NCFM Cooling:	62	Sensible BTUH: 1,619
				Latent BTUH: 1,960
BLOWER MOTOR				
There are no components for this section.				
WINTER HUMIDIFICATION				
There are no components for this section.				
OCCUPANTS				
Nr. Occupants: 4		Sensible BTUH:	920	Latent BTUH: 800
APPLIANCES				
Computer and monitor	Quantity:	1	Sensible BTUH: 538	Latent BTUH: 0
Range with hood and exhaust to outdoors	Quantity:	1	Sensible BTUH: 0	Latent BTUH: 0
Dishwasher	Quantity:	1	Sensible BTUH: 1,024	Latent BTUH: 358
Refrigerator or Freezer - 16CuFt	Quantity:	1	Sensible BTUH: 1,000	Latent BTUH: 0
Color television	Quantity:	1	Sensible BTUH: 683	Latent BTUH: 0
Computer and monitor	Quantity:	1	Sensible BTUH: 538	Latent BTUH: 0
Light Fixture - 100W	Quantity:	3	Sensible BTUH: 1,023	Latent BTUH: 0
Vented clothes dryer	Quantity:	1	Sensible BTUH: 427	Latent BTUH: 0
Vented clothes dryer	Quantity:	1	Sensible BTUH: 427	Latent BTUH: 0
Clothes washing machine	Quantity:	1	Sensible BTUH: 51	Latent BTUH: 0
Refrigerator or Freezer - 12CuFt	Quantity:	1	Sensible BTUH: 700	Latent BTUH: 0
PLANTS				
Plant Size: small	Quantity:	5	Latent BTUH:	50
Plant Size: medium	Quantity:	5	Latent BTUH:	100
Plant Size: large	Quantity:	5	Latent BTUH:	150

ROOM DETAIL

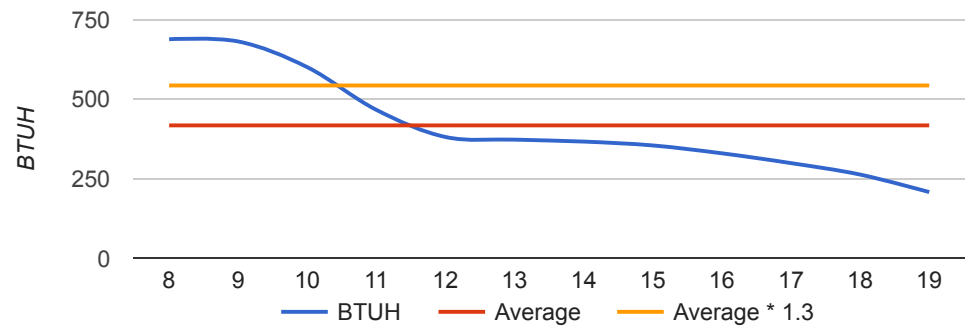
Room name: Master

Heated square footage:	256	Total Cooling BTUH:	1,976
Cooled square footage:	256	Total Heating BTUH:	2,763
Heated volume (above grade CF):	2,048	CFM:	91
Cooled volume (above grade CF):	2,048		
Exposed wall area (SF):	128		

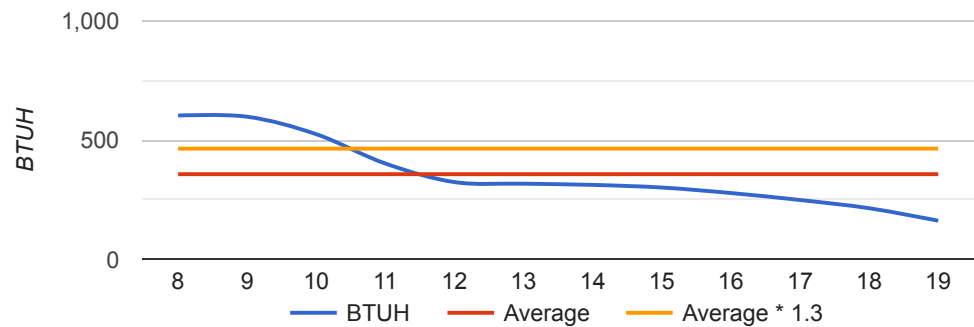
Load Calculation



AED Graph (mid-summer)



AED graph (fall)

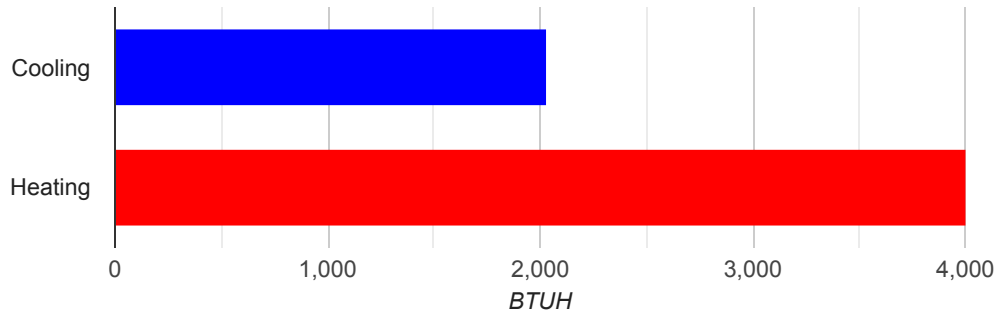


ROOM DETAIL

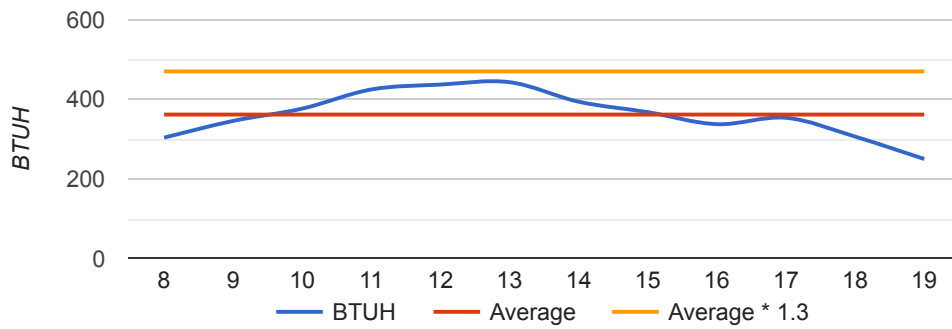
Room name: Master bath

Heated square footage:	225	Total Cooling BTUH:	2,030
Cooled square footage:	225	Total Heating BTUH:	3,998
Heated volume (above grade CF):	1,800	CFM:	87
Cooled volume (above grade CF):	1,800		
Exposed wall area (SF):	240		

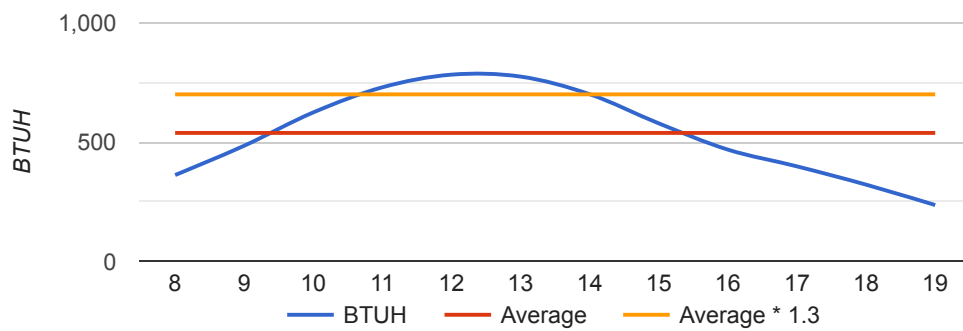
Load Calculation



AED Graph (mid-summer)



AED graph (fall)

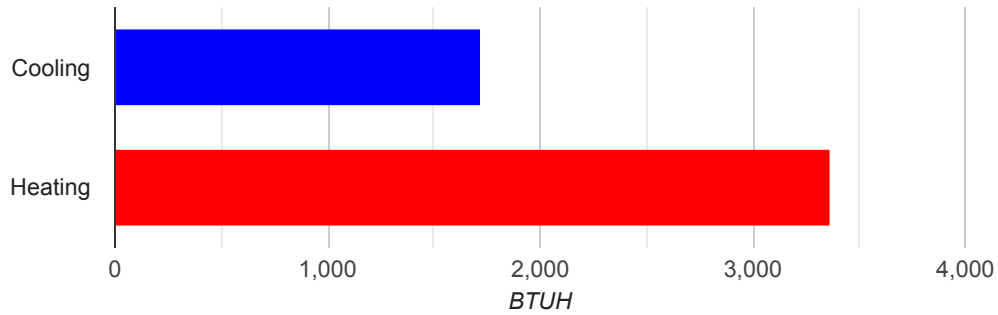


ROOM DETAIL

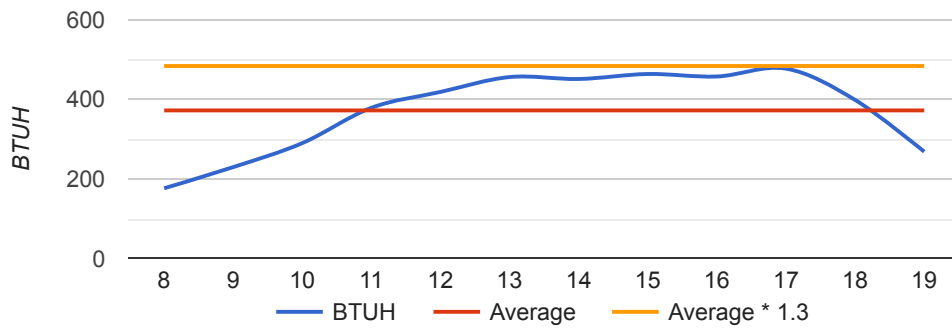
Room name: Bedroom 2

Heated square footage:	156	Total Cooling BTUH:	1,715
Cooled square footage:	156	Total Heating BTUH:	3,361
Heated volume (above grade CF):	1,248	CFM:	73
Cooled volume (above grade CF):	1,248		
Exposed wall area (SF):	200		

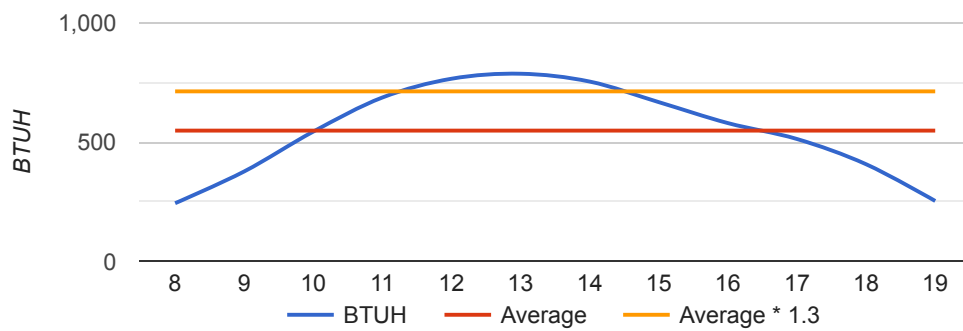
Load Calculation



AED Graph (mid-summer)



AED graph (fall)

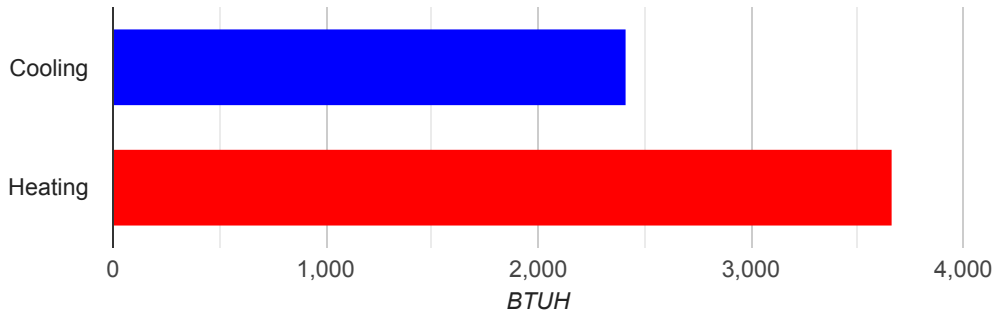


ROOM DETAIL

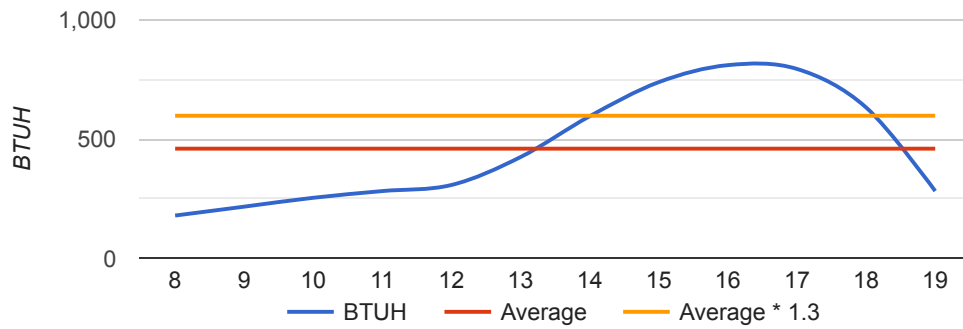
Room name: bedroom 3

Heated square footage:	156	Total Cooling BTUH:	2,415
Cooled square footage:	156	Total Heating BTUH:	3,663
Heated volume (above grade CF):	1,248	CFM:	109
Cooled volume (above grade CF):	1,248		
Exposed wall area (SF):	200		

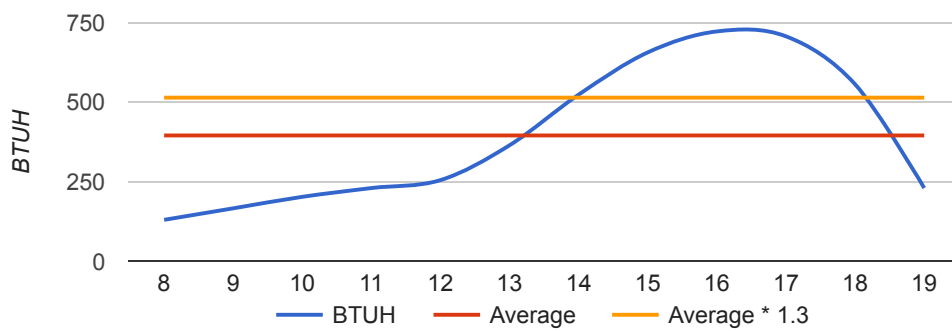
Load Calculation



AED Graph (mid-summer)



AED graph (fall)

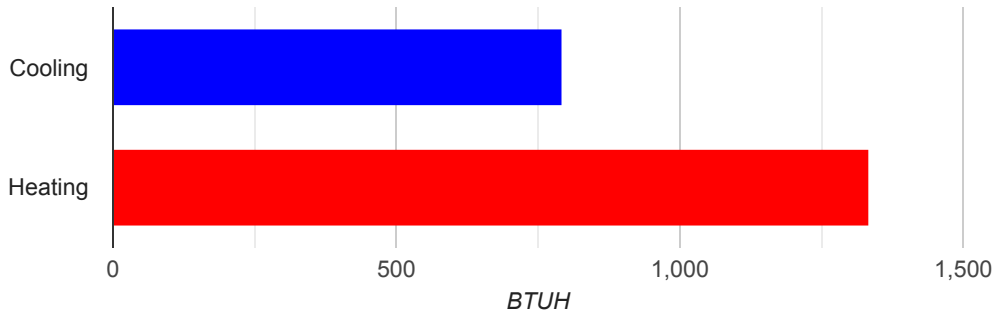


ROOM DETAIL

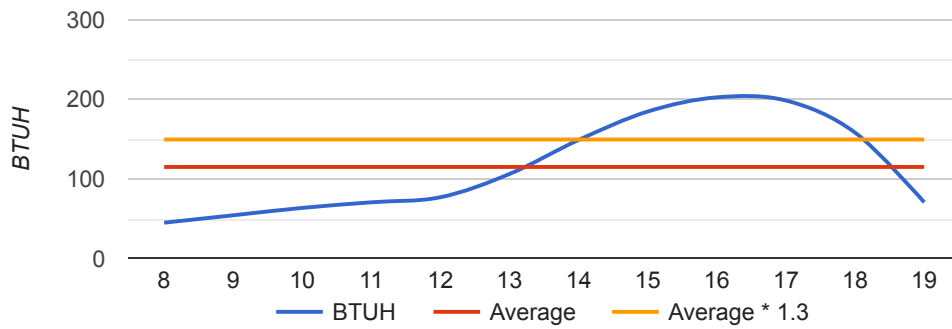
Room name: Bathroom

Heated square footage:	120	Total Cooling BTUH:	791
Cooled square footage:	120	Total Heating BTUH:	1,331
Heated volume (above grade CF):	960	CFM:	34
Cooled volume (above grade CF):	960		
Exposed wall area (SF):	80		

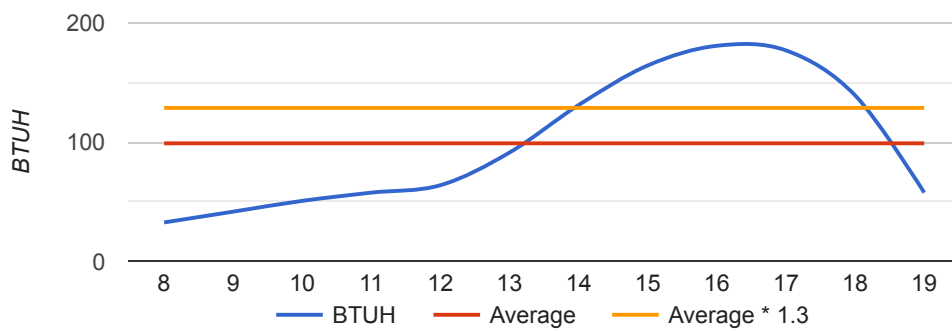
Load Calculation



AED Graph (mid-summer)



AED graph (fall)



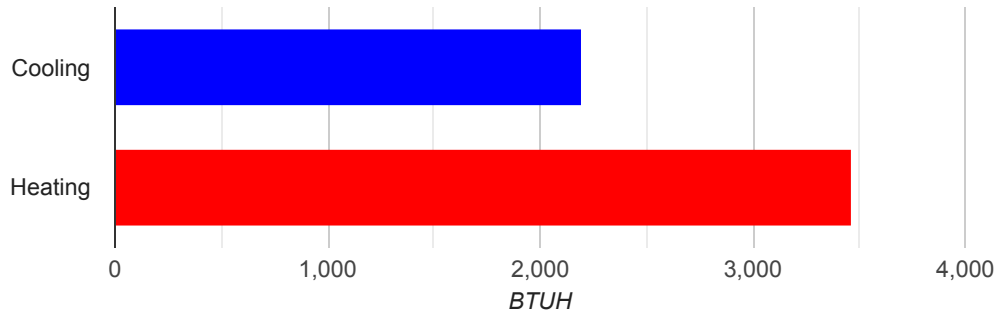
ROOM DETAIL

Room name: Dining

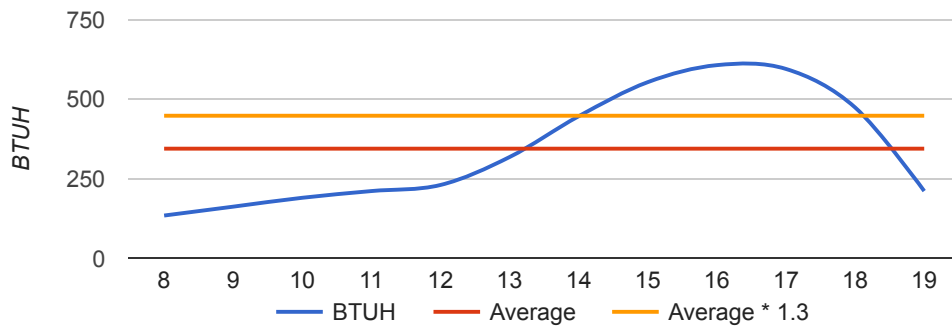
Heated square footage: 144
Cooled square footage: 144
Heated volume (above grade CF): 1,152
Cooled volume (above grade CF): 1,152
Exposed wall area (SF): 192

Total Cooling BTUH: 2,192
Total Heating BTUH: 3,460
CFM: 98

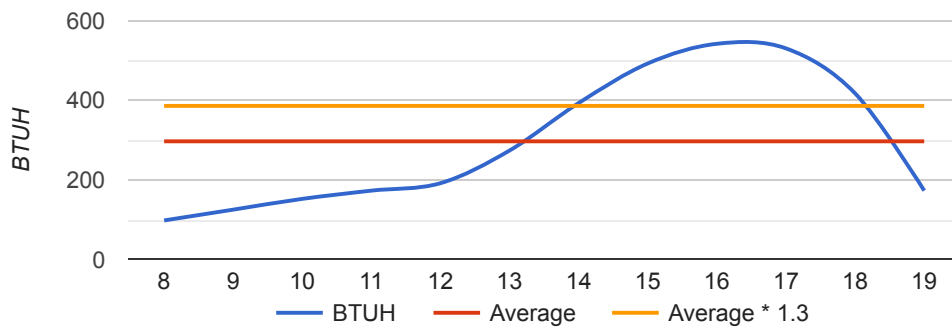
Load Calculation



AED Graph (mid-summer)



AED graph (fall)

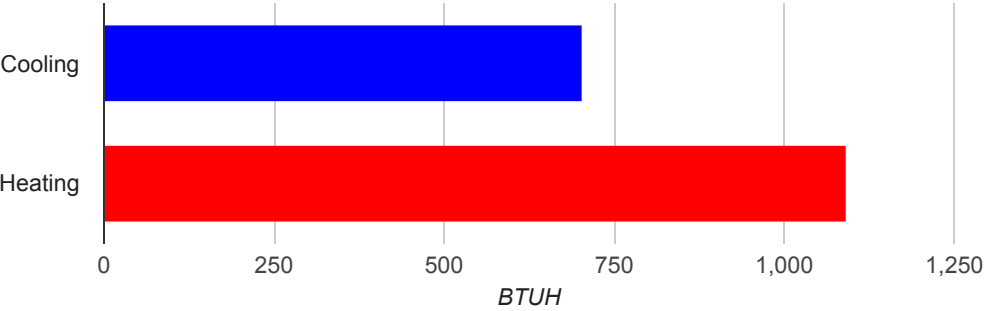


ROOM DETAIL

Room name: 1/2 bath

Heated square footage:	36	Total Cooling BTUH:	703
Cooled square footage:	36	Total Heating BTUH:	1,091
Heated volume (above grade CF):	288	CFM:	32
Cooled volume (above grade CF):	288		
Exposed wall area (SF):	48		

Load Calculation

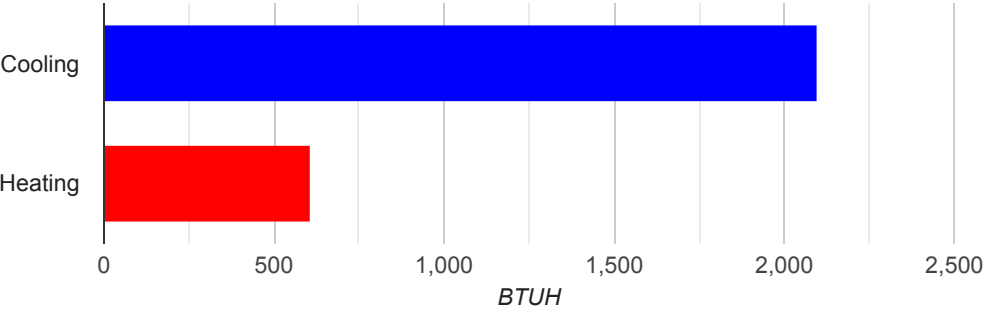


ROOM DETAIL

Room name: Laundry

Heated square footage:	40	Total Cooling BTUH:	2,094
Cooled square footage:	40	Total Heating BTUH:	605
Heated volume (above grade CF):	320	CFM:	103
Cooled volume (above grade CF):	320		
Exposed wall area (SF):	40		

Load Calculation

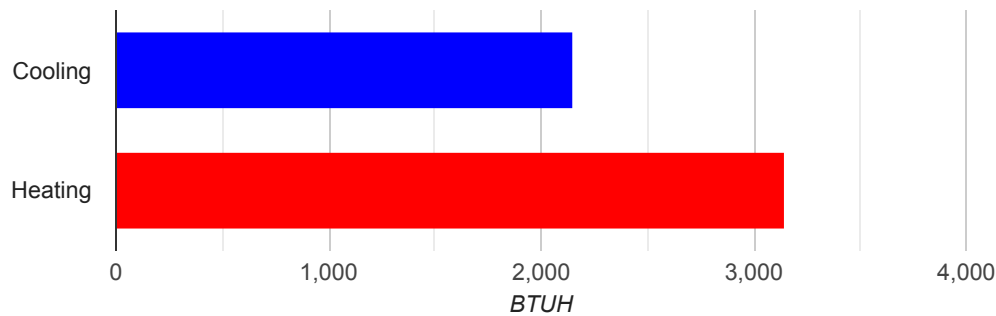


ROOM DETAIL

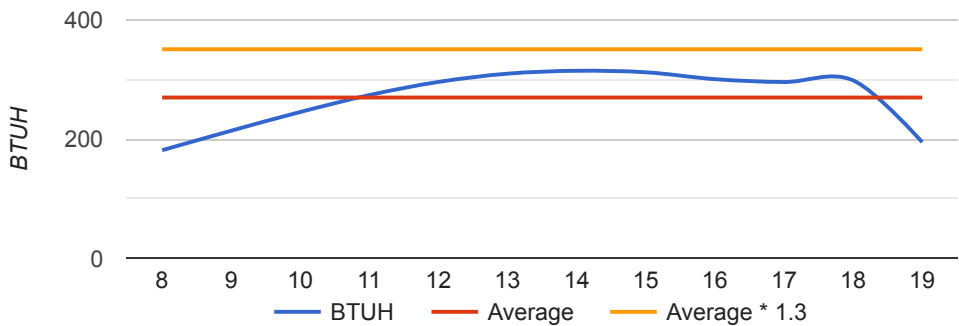
Room name: office

Heated square footage:	128	Total Cooling BTUH:	2,144
Cooled square footage:	128	Total Heating BTUH:	3,141
Heated volume (above grade CF):	1,024	CFM:	96
Cooled volume (above grade CF):	1,024		
Exposed wall area (SF):	192		

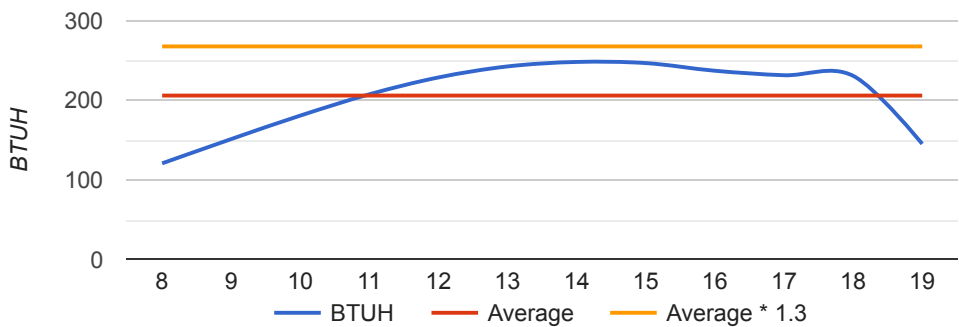
Load Calculation



AED Graph (mid-summer)



AED graph (fall)

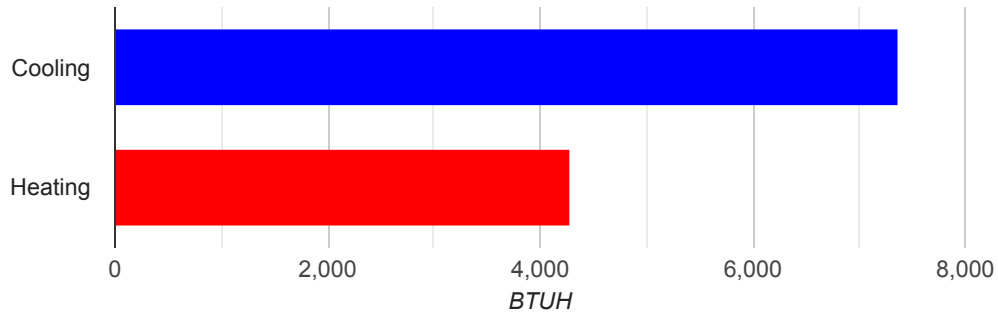


ROOM DETAIL

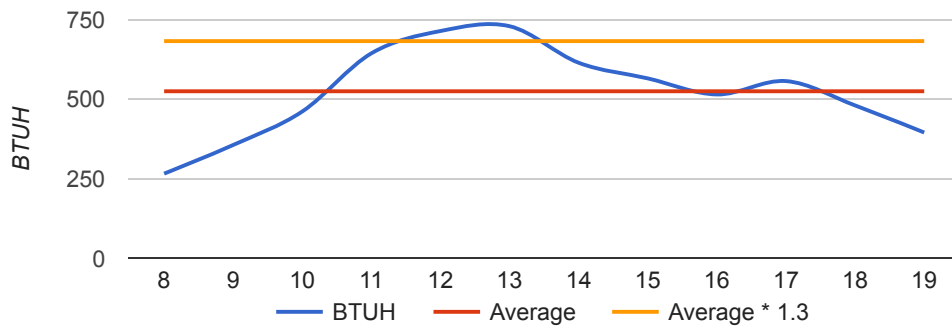
Room name: Great Room

Heated square footage:	400	Total Cooling BTUH:	7,366
Cooled square footage:	400	Total Heating BTUH:	4,283
Heated volume (above grade CF):	4,800	CFM:	273
Cooled volume (above grade CF):	4,800		
Exposed wall area (SF):	240		

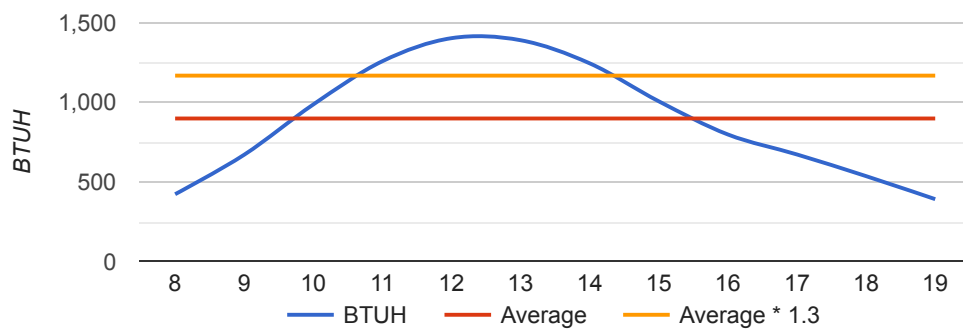
Load Calculation



AED Graph (mid-summer)



AED graph (fall)



ROOM DETAIL
Room name: kitchen

Heated square footage:	300	Total Cooling BTUH:	3,031
Cooled square footage:	300	Total Heating BTUH:	330
Heated volume (above grade CF):	3,600	CFM:	132
Cooled volume (above grade CF):	3,600		
Exposed wall area (SF):	0		

Load Calculation

