

Home

Date

Climate zone

Equipment that is too big costs more, cycles on and off and leaves the room clammy. These three blocks size the three things people usually guess at.

1 · ROOM BY ROOM — HEATING AND COOLING

ROOM	SQ FT	CEILING FT	SUN	PEOPLE	BTU

About 20 BTU per square foot is the cooling baseline. Add for a sunny room, a ceiling above 8 ft, and roughly 600 BTU for each person past two.

2 · ATTIC INSULATION

Attic floor area

sq ft

Existing depth

in.

Existing material

R-value you have

R-value you want

Depth to add

in.

MATERIAL	R PER INCH	NOTE
Blown cellulose	R-3.5	One bag covers about 16 cu ft
Blown fiberglass	R-2.5	One bag covers about 40 cu ft
Fiberglass batts	R-3.7	Measure to the top of the joist, not the drywall
DOE attic target	R-49 to R-60	R-30 to R-49 in the warmest zones

3 · HOT WATER, BUSIEST HOUR

WHAT HAPPENS IN THAT HOUR	HOW MANY	GALLONS EACH	GALLONS

Shower 20 gal · low-flow head 14 · rainfall 30 · bath 25 · shave 2 · handwash 3 · dishwasher 7 · front-loading washer 15. Count the busiest single hour, not the day.