

of 0.67 to be used only when the rater observes features that denote tight construction; and

(ii) for duct leakage, default values approved or established by the accrediting body.

(f) For existing homes, the energy efficiency of the mechanical equipment set forth as building elements 12 through 14 in Table 5 is determined by

data collected on site using the following sources listed in preferential order of use:

- (1) current on-site diagnostic test data;
- (2) name plate data;
- (3) manufacturer's data sheet; or
- (4) equipment directories.

(g) If information on the energy efficiency of mechanical equipment cannot be determined from the sources

listed in paragraph (f) of this section, the values set forth in Tables 6 and 7 shall be used.

(h) Any HERS provider may base annual purchased energy consumption estimates for the rated home on additional features if the HERS provider's energy analysis tool is capable of doing so.

TABLE 5.—MINIMUM RATED FEATURES

Building element	Minimum rated features
1. Floor/Foundation Assembly.	Construction type (slab-on-grade, crawl space, basement), insulation (edge, under slab, cavity, sheathing), vented or unvented (crawl space), capacitance (if slab or basement receives appreciable solar gain).
2. Walls	Construction type, insulation value (cavity, sheathing), capacitance, color (light, medium, or dark).
3. Roof/Ceiling Assembly	Construction type, insulation value (cavity, sheathing), roof color (light, medium, or dark).
4. Rim Joist	Insulation value (cavity, sheathing).
5. Doors	Construction type, insulation value.
6. Windows	Construction type, orientation, U-value (of complete assembly), solar heat gain coefficient, shading.
7. Skylights	Construction type, orientation, tilt, U-value (of complete assembly), heat gain coefficient, shading.
8. Passive Solar System (Direct Gain System).	Solar aperture area and orientation, thermal storage mass.
9. Solar Domestic Hot Water Equipment.	System type, collector type and area, orientation, tilt, efficiency, storage tank size, pipe insulation value.
10. Air Leakage	Air leakage measurement type (estimate, blower door test, tracer gas test), volume of conditioned space.
11. Distribution System	System type, location, insulation value (duct and pipe), air leakage (ducted systems only).
12. Heating Equipment	Equipment type, location, efficiency (AFUE, HSPF).
13. Cooling Equipment	Equipment type, location, efficiency (SEER, COP).
14. Domestic Hot Water Equipment.	Equipment type, location, energy factor or seasonal efficiency, extra tank insulation value, pipe insulation value.
15. Control Systems	Thermostat type.

TABLE 6.—MECHANICAL

Mechanical Systems	Units	Pre-1960	1960-69	1970-74	1975-83	1984-87	1988-91	1992 to present
Heating:								
Gas Furnace	AFUE	0.60	0.60	0.65	0.65	0.68	0.76	0.78
Gas Boiler	AFUE	0.60	0.60	0.65	0.65	0.70	0.77	0.80
Oil Furnace or Boiler	AFUE	0.60	0.65	0.72	0.75	0.80	0.80	0.80
Air-Source Heat Pump	HSPF	4.50	4.50	4.70	5.50	6.30	6.80	6.80
Ground-Water Geothermal Heat Pump.	COP	2.70	2.70	2.70	3.00	3.10	3.20	3.50
Ground-Coupled Geothermal Heat Pump.	COP	2.30	2.30	2.30	2.50	2.60	2.70	3.00
Cooling:								
Air-Source Heat Pump	SEER	5.00	6.10	6.50	7.40	8.70	9.40	10.00
Ground-Water Geothermal Heat Pump.	EER	10.00	10.00	10.00	13.00	13.00	14.00	16.00
Ground-Coupled Geothermal Heat Pump.	EER	8.00	8.00	8.00	11.00	11.00	12.00	14.00
Central Air Conditioner	SEER	5.00	6.10	6.50	7.40	8.70	9.40	10.00
Room Air Conditioner	EER	5.00	6.10	6.10	6.70	7.70	8.10	8.50
Water Heating:								
Storage Gas	EF	0.47	0.47	0.47	0.49	0.55	0.56	0.56
Storage Oil	EF	0.47	0.47	0.47	0.48	0.49	0.54	0.56
Storage Electric	EF	0.79	0.80	0.80	0.81	0.83	0.87	0.88

TABLE 7.—MECHANICAL EQUIPMENT EFFICIENCY VALUES(Not Age-Based)

	Units	Rating
Heating:		
Gas Wall Furnace (Fan).	SE	0.70
Gas Wall Heater (Gravity).	SE	0.65
Gas Floor Furnace	SE	0.60

TABLE 7.—MECHANICAL EQUIPMENT EFFICIENCY VALUES(Not Age-Based)—Continued

	Units	Rating
Gas Water Heater (Space Heating).	AFUE	0.75
Electric Furnace	HSPF	3.413
Electric Radiant	HSPF	3.413

TABLE 7.—MECHANICAL EQUIPMENT EFFICIENCY VALUES(Not Age-Based)—Continued

	Units	Rating
Heat Pump Water Heater (Space).	HSPF	5.11
Electric Water Heater (Space).	HSPF	2.73