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

	Units	Rating
Cooling:		
Electric Evaporative Cooling.	EER_{rc}	30
Gas Absorption Cooler	COP	0.40
Water Heating:		
Heat Pump	COP	2.00
Instantaneous Electric	EF	0.87
Instantaneous Gas	EF	0.75
Solar (Use SRCC Adjustment Procedures).	EF	2.00

§ 437.105 Operating condition assumptions.

To conduct each rating under these guidelines, each HERS provider shall estimate the annual purchased energy consumption for heating, cooling and water heating for both the rated home and the reference home using the following assumptions—

(a) Temperature control set points for heating and cooling of 68° F and 78° F;

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(b) Where programmable offsets are available in the rated home, 5° F temperature control point offsets with an 11 PM to 7 AM schedule for heating and a 9 AM to 3 PM schedule for cooling, and with no offsets assumed for the reference home;

(c) Internal heat gains from lights, people and equipment of 3000 Btu/hr for detached homes and 1500 Btu/hr for attached homes;

(d) Estimated hot water usage based on Equation 3.

Equation 3

Gallons/day=30 gallons+(10 gallons * number of bedrooms).

(e) the climatologically most representative TMY or equivalent weather data, which may be interpolated between weather sites if interpolation is established or approved by the accrediting body and consistent for each HERS provider operating within a state.

(f) Corrections for climate conditions and mis-sizing of equipment, using correction factors to HSPF, SEER and AFUE that are established or approved by the accrediting body and consistent for each HERS provider operating within a state.

(g) Local residential energy or utility rates that—

(1) Include fuel/energy unit rates;

(2) Include fuel/energy unit demand rates;

(3) Include fuel/energy block rates;

(4) Include customer service and fuel charges;

(5) Are updated at least annually; and

(6) Are confirmed by the accrediting body

§ 437.106 Non-rated energy consuming devices.

Consistent with § 437.102(a) (3) and (4) of these guidelines each HERS provider shall calculate and report the annual purchased energy consumption and energy cost for the operation of all non-rated energy consuming devices in the rated and reference homes. Actual efficiency of these devices is not considered and usage estimates are based on Table 8. The data in table 8 may be modified if they are established or approved by the accrediting body and consistent for each HERS provider operating within the state.

TABLE 8.—ANNUAL ENERGY USE FOR NON-RATED FEATURES

End use	Units/year	Energy estimate	Applicability
Ceiling Fan	kWh	220/ea	If present.
Dishwasher	kWh	299/per cooking area	If present, or if space is dedicated for DW.
Dryer, electric	kWh	875/ea	If present, or if 220V wiring is present @ dryer location.
Dryer, gas	Therms	60/ea	If present, or if gas piping is present @ dryer location.
	kWh	100/ea	
Lights	kWh	940	All homes.
Microwave Oven-built-in	kWh	191/per cooking area	If permanently installed.
Miscellaneous Plug Loads	kWh	500	All homes.
Pool Pump	kWh	1700/ea	If present.
Range/Oven Combo-electric	kWh	450/per cooking area	If present, or if 220V wiring is present @ range location.
Range/Oven Combo-gas w/pilot	Therms	44/per cooking area	If present, or if gas piping is present @ range location.
Range/Oven Combo-gas w/o pilot	Therms	22/per cooking area	If present.
Refrigerator	kWh	1150	Each one present.
Television	kWh	720	All homes.
Washer, clothes	kWh	99/ea	If present, or facilities present for washer.
Well pump	kWh	288/ea	If present.

§ 437.107 Projected ratings for to-be-built homes.

(a) A HERS provider may calculate the projected rating of a to-be-built home based on architectural drawings with material, mechanical and electrical specifications; and by—

(1) Using a default value for air leakage of 0.67 air changes per hour; and

(2) Using the planned location and orientation of the proposed home, or if the proposed orientation is unknown, calculating ratings for the home facing each of the four cardinal directions, north, south, east and west, and using the lowest rating score as the projected rating.

(b) Upon completion of construction and verification of the proposed specifications, the rating may be revised using the air leakage rate based on on-site testing and the actual orientation of the home.

Subpart C—How To Administer a Home Energy Rating System

§ 437.200 Energy analysis tool requirements.

(a) In order to be certified for the purpose of providing home energy ratings under these guidelines, an energy analysis tool must—

(1) Demonstrate the ability to calculate annual purchased energy consumption for each building type for which ratings are provided;

(2) Estimate the total annual purchased energy consumption associated with the minimum rated features set forth in § 437.104;

(3) Calculate energy use of non-rated energy consuming devices set forth in § 437.105 of these guidelines;

(4) Reflect the operating conditions assumptions described in § 437.105 of these guidelines; and

(5) Pass all tests in Tier 1 and Tier 2 of the Home Energy Ratings System Building Energy Simulation Test (HERS-