



DOE Zero Energy Ready Home Prescriptive Efficiency Levels for PTHPs June 2020

Background

The DOE Zero Energy Ready Home Program Requirements have previously not addressed the use of Packaged Terminal Heat Pump (PTHP) units. In some cases, PTHPs may be used in high performance multifamily projects seeking DOE ZERH certification.

In response to partner inquiries about the use of PTHPs when meeting the DOE ZERH program through the Prescriptive pathway, the program has established minimum Prescriptive efficiency levels for PTHPs in DOE ZERH projects.

At the current time there are not PTHP efficiency benchmarks available from the ENERGY STAR program or the Consortium for Energy Efficiency (CEE). Utility program rebates for PTHPs vary considerably in terms of both the efficiency levels and the categorization of PTHPs by capacity. For these reasons, the DOE ZERH Prescriptive Efficiency Levels for PTHPs are based on a roughly 10% increase above the federal minimum efficiency levels for this equipment category.

PTHP Prescriptive Efficiency Levels for DOE ZERH

The PTHP efficiency levels which are required for Prescriptive compliance with the DOE Zero Energy Ready Home program are shown in the table below.

DOE Zero Energy Ready Home Prescriptive Efficiency Values for PTHPs

PTHP Cooling Capacity (BTU)	Minimum EER Cooling	Minimum COP Heating	PTHP Cooling Capacity (BTU)	Minimum EER Cooling	Minimum COP Heating
≤ 7000	13.0	3.6	11100	11.7	3.4
7100	13.0	3.6	11200	11.7	3.4
7200	13.0	3.6	11300	11.7	3.4
7300	13.0	3.6	11400	11.6	3.4
7400	13.0	3.6	11500	11.6	3.4
7500	12.9	3.6	11600	11.6	3.4
7600	12.9	3.6	11700	11.5	3.4
7700	12.9	3.6	11800	11.5	3.4
7800	12.8	3.6	11900	11.5	3.4
7900	12.8	3.6	12000	11.4	3.4
8000	12.8	3.6	12100	11.4	3.4
8100	12.7	3.6	12200	11.4	3.4
8200	12.7	3.6	12300	11.3	3.4
8300	12.7	3.6	12400	11.3	3.4



PTHP Cooling Capacity (BTU)	Minimum EER Cooling	Minimum COP Heating	PTHP Cooling Capacity (BTU)	Minimum EER Cooling	Minimum COP Heating
8400	12.6	3.6	12500	11.3	3.4
8500	12.6	3.6	12600	11.2	3.4
8600	12.6	3.6	12700	11.2	3.3
8700	12.5	3.6	12800	11.2	3.3
8800	12.5	3.6	12900	11.1	3.3
8900	12.5	3.6	13000	11.1	3.3
9000	12.4	3.6	13100	11.1	3.3
9100	12.4	3.6	13200	11.0	3.3
9200	12.4	3.5	13300	11.0	3.3
9300	12.3	3.5	13400	11.0	3.3
9400	12.3	3.5	13500	10.9	3.3
9500	12.3	3.5	13600	10.9	3.3
9600	12.2	3.5	13700	10.9	3.3
9700	12.2	3.5	13800	10.8	3.3
9800	12.2	3.5	13900	10.8	3.3
9900	12.1	3.5	14000	10.8	3.3
10000	12.1	3.5	14100	10.7	3.3
10100	12.1	3.5	14200	10.7	3.3
10200	12.0	3.5	14300	10.7	3.3
10300	12.0	3.5	14400	10.6	3.2
10400	12.0	3.5	14500	10.6	3.2
10500	11.9	3.5	14600	10.6	3.2
10600	11.9	3.5	14700	10.5	3.2
10700	11.9	3.5	14800	10.5	3.2
10800	11.8	3.5	14900	10.5	3.2
10900	11.8	3.4	15000	10.5	3.2
11000	11.8	3.4	> 15000	10.4	3.2

Additional Information

DOE ZERH partners with additional questions regarding the use of PTHPs should email the program at zero@newportpartnersllc.com.