



Heat Pumps, how low do we go?

At what temperature outside is my heat pump going to cost more than my furnace to operate?

Heat pumps lose efficiency and heat output as the temperatures go down. The changeover point will vary on your utility company, your heat pump installed, and your primary heat source and it's efficiency.

Fuel Source	Natural Gas	Liquid Propane	LP (Special)*	Fuel Oil	Electric (WE)	Electric (MEN)	Electric (KAU)
Measured In	Therms	Gallon	Gallon	Gallon	kWh	kWh	kWh
Cost Per Unit	\$1.09	\$2.06	\$1.65	\$3.43	\$0.195	\$0.114	\$0.101
BTUs per Unit	95,000 (95%)	86,925 (95%)	86,925 (95%)	117,725 (85%)	3412 (100%)	3412 (100%)	3412 (100%)
BTUs per \$1.00	87,155.96	42,196.60	52,681.82	34,322.16	17,497.44	29,929.83	33,782.18

* LP (Special) is for those who have great deals with local co-ops. LP price is average Wisconsin price for March 2026.

Amana S-Series Heat Pump System

Temp	COP	WE (\$1)	MEN (\$1)	KAU (\$1)
50	3.83	67015	114631	129385
45	3.60	62990	107747	121615
40	3.35	58616	100264	113170
35	2.76	48292	82606	93238
30	2.62	45843	78416	88509
20	2.50	43743	74824	84455
10	2.27	39719	67940	76685

We understand this page has a lot of information on it. The real point we want to compare is, "At what COP (Coefficient of Performance) does it make sense to run a heat pump down to before switching to a backup fuel source?"

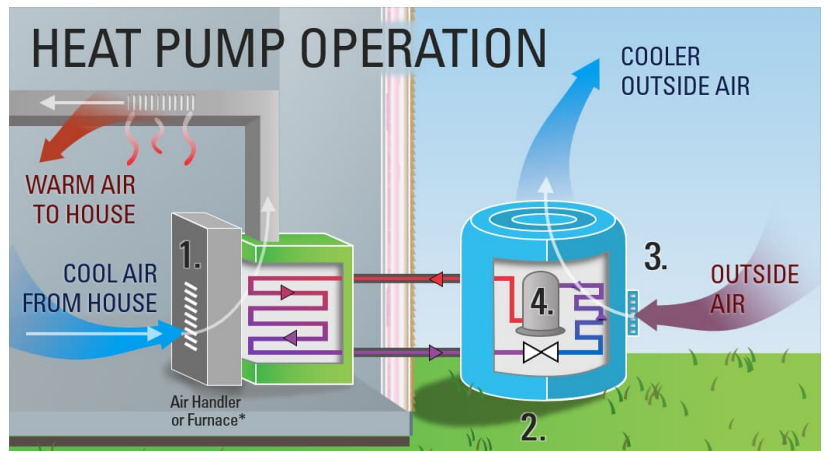
Take a look at the chart below based on your electric utility.

WE	MEN	KAU	Fuel Source
4.98	2.91	2.58	Natural Gas @ 95%
2.41	1.41	1.25	Liquid Propane @ 95%
3.01	1.76	1.56	LP (Deal) @ 95%
1.96	1.15	1.02	Fuel Oil @ 85%
1.00	1.00	1.00	Electric Baseboard @ 100%

York Cold Climate Heat Pump System

Temp	COP	WE (\$1)	MEN (\$1)	KAU (\$1)
60	4.05	70864	121215	136817
47	3.50	61241	104754	118237
35	3.09	54067	92483	104386
30	2.93	51267	87694	98981
17	2.54	44443	76021	85806
10	2.27	39719	67940	76685
5	2.10	36744	62852	70942
0	1.90	33245	56866	64186
-5	1.71	29920	51180	57767
-10	1.58	27645	47289	53375

The charts to the left show you how much \$1.00 in electricity gets you for BTU output. That can be compared with the BTUs per \$1.00 in the chart at the top of the page. Menasha & Kaukauna Utilities is a huge benefit for heat pumps.



Ruud Universal Heat Pump 18

Temp	COP	WE (\$1)	MEN (\$1)	KAU (\$1)
47	3.60	62990	107747	121615
17	2.60	45493	77817	87833

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Price points were determined in March 2026, and will change with time.