



Homeowner Bulletin:
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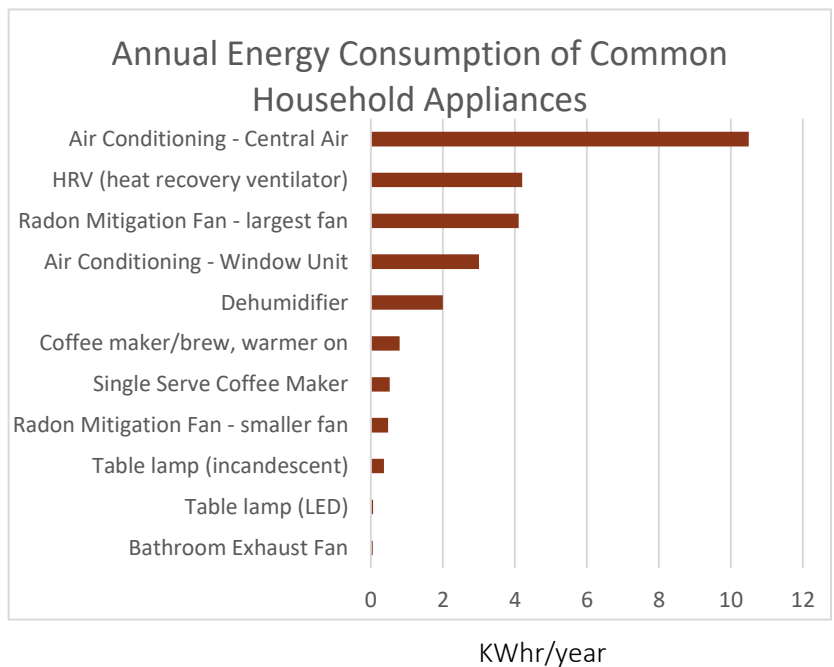
Understanding the Energy Use of a RADON MITIGATION FAN

An active radon mitigation system will lower radon levels in a building, but the fan must run continually. What impact will this have on energy consumption?

This bulletin puts the cost of electricity used by a radon fan into context by comparing its electrical consumption to other commonly used electric appliances.

An active radon mitigation system runs continuously to reduce the radon levels in a building to levels that are as low as reasonably achievable (ALARA). The ALARA concept is important when considering a radioactive gas. All types of radiation exposure are considered using this principal, and radon is no exception. Once a radon mitigation system is installed in a building, ensuring that it runs continuously is critical.

The cost of running an electrical appliance depends on how much electricity the appliance needs (measured in watts [W]), how often the appliance runs (several hours a day or continuously), and the cost of electricity in the region. In the chart to the right and in the table below, we've listed a variety of common household appliances for comparison. The chart provides a comparison of energy use and the table details the energy costs as well. In certain regions of the country, a variety of electricity rates are available: we've used the average rate for each region.



				Cost per Year									
				BC	AB	SK	MB	ON	QC	NB	NS	PE	NL
Appliance	Typical Energy Use	Use type	Rate	\$0.114	\$0.258	\$0.199	\$0.102	\$0.141	\$0.078	\$0.139	\$0.183	\$0.184	\$0.148
Radon fan - largest	171 W	continuous		\$170.77	\$386.47	\$298.09	\$152.79	\$211.21	\$116.84	\$208.22	\$274.13	\$275.62	\$221.70
Radon fan - smaller	20 W	continuous		\$19.97	\$45.20	\$34.86	\$17.87	\$24.70	\$13.67	\$24.35	\$32.06	\$32.24	\$25.93
HRV (heat recovery ventilator)	50 - 300 W (175W used)	continuous		\$174.76	\$395.51	\$305.07	\$156.37	\$216.15	\$119.57	\$213.09	\$280.54	\$282.07	\$226.88
Bathroom Exhaust Fan	5 - 36 W	2 hours/day		\$2.08	\$4.71	\$3.63	\$1.86	\$2.57	\$1.42	\$2.54	\$3.34	\$3.36	\$2.70
Table lamp (incandescent)	40 - 100 W	6 hours/day		\$14.98	\$33.90	\$26.15	\$13.40	\$18.53	\$10.25	\$18.26	\$24.05	\$24.18	\$19.45
Table lamp (LED)	7.5 - 15 W	6 hours/day		\$2.50	\$5.65	\$4.36	\$2.23	\$3.09	\$1.71	\$3.04	\$4.01	\$4.03	\$3.24
Single Serve Coffee Maker	0.26 kW per brew	twice/day		\$21.64	\$48.97	\$37.77	\$19.36	\$26.76	\$14.80	\$26.38	\$34.73	\$34.92	\$28.09
Coffee maker/brew, warmer on	0.4 kW per hour	2 hours/day		\$33.29	\$75.34	\$58.11	\$29.78	\$41.17	\$22.78	\$40.59	\$53.44	\$53.73	\$43.22
Energy rates were used as published: /www.energyhub.org/electricity-prices/ accessed December 2023													

It's worth noting that radon fans vary in size, as can be seen in the chart. A smaller radon fan will use approximately as much electricity as a coffee maker, while a larger radon fan will use approximately as much as a heat or energy recovery ventilator (HRV or ERV). The cost of running any electrical appliance will vary based on the region of the country and the rate being charged for electricity.

When it comes to radon mitigation fans, bigger is not always better. A C-NRPP certified radon professional will design a radon mitigation system to use the smallest fan possible so that the system is as efficient as possible. However, each house is unique, and as such each radon mitigation system is unique. The radon fan needs to be large enough to ensure that the system is functioning properly to keep all occupants safe.

You can find a C-NRPP Mitigation Professional in your area at: <https://c-nrpp.ca/find-a-professional>

