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home energy consumption list

A list of electric household appliances, and their operating cost

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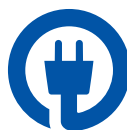
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Helping Northerners make wise electricity choices

by the numbers: electricity consumption

How much electricity do appliances and devices use?

Determine the wattage of each device and use this formula to calculate the cost per month:

$$\begin{aligned} \text{Watts}/1,000 \times \text{hours/day} \times \text{days/month} &= \text{kWh/month} \\ \text{kWh/month} \times \text{\$/kWh} &= \text{\$/month} \end{aligned}$$

For example, to determine the monthly cost of a 60 watt light bulb that is operated for eight hours each day, the calculation would be:

$$\begin{aligned} 60\text{W}/1,000 \times 8 \text{ hours/day} \times 30 \text{ days/month} &= 14.4 \text{ kWh/month} \\ 14.4 \text{ kWh/month} \times \$0.30/\text{kWh} &= \$4.32 \end{aligned}$$

Your 60 watt light bulb is costing you \$4.32 per month to operate for eight hours a day.

This formula will work for most household items that will draw the same amount of power 100% of the time. However, it does not apply to items that cycle, or draw different amounts of electricity at different times, such as a refrigerator. If you have any questions relating to an appliance's energy usage, please contact our office in Yellowknife at **867-873-4865**, or our office in Hay River at **867-874-6879 (toll-free: 1-800-264-5313)**.

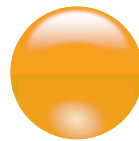
Following is a breakdown of common appliances and devices in your home and their typical usage and cost. The operating cost is based on \$0.30 per kWh and an average amount of time the appliance or device is used. This information is meant as a guideline only. For a more exact calculation, use the above formula with exact cost and usage data.

Watt (W): measure of energy
1,000 watts = 1 kilowatt (kW)

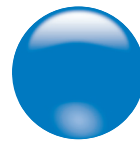
Kilowatt hour (kWh): measure of electrical energy used over a period of time.



hourly



12 hours



monthly

kitchen

item	kW per hour use	hourly cost
● blender (counter-top)	0.7	\$0.21
● blender (hand-held)	0.2	\$0.06
● bread maker	0.7	\$0.21
● coffee maker (brewing 12-14 cup)	1.0	\$0.30
● corn popper	1.2	\$0.36
● deep fryer	1.5	\$0.45
● food processor (9-12 cup)	0.6	\$0.18
● garbage disposal	1.0	\$0.30
● indoor grill/griddle	1.6	\$0.48
● kettle (1.2-1.8 litres)	1.5	\$0.45
● microwave (cooking)	1.4	\$0.42
● mixer (hand)	0.2	\$0.06
● mixer (counter-top)	0.4	\$0.12
● range (element)		
large element	2.4	\$0.72
small element	1.3	\$0.39
● rice cooker	0.6	\$0.18
● slow cooker		
low setting	0.1	\$0.03
high setting	0.2	\$0.06
● toaster (2 slice)	1.0	\$0.30
● toaster (4 slice)	1.5	\$0.45
● toaster oven (cooking)	1.5	\$0.45
● waffle iron	1.2	\$0.36
item	monthly kWh use	monthly cost
● dishwasher		
<i>based on 18 loads per month</i>		
standard (1997)	54	\$16.20
standard (2010)	30	\$9.00
ENERGY STAR® (2010)	25	\$7.50
● range (oven)		
self-cleaning (1997)	63	\$18.90
self-cleaning (2010)	44	\$13.20

● hourly ● 12 hours ● monthly

kitchen continued



item	monthly kWh use	monthly cost
refrigerator		
side-by-side (1997)	75	\$22.50
top-mounted (1997)	55	\$16.50
side-by-side (ENERGY STAR - 2010)	43	\$12.90
bottom-mounted (ENERGY STAR - 2010)	38	\$11.40
top-mounted (ENERGY STAR - 2010)	32	\$9.60

"top-mounted" = freezer on top, "bottom-mounted" = freezer on bottom



water cooler		
cold only	15	\$4.50
hot/cold	19	\$5.70



wine cooler	25	\$7.50
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living room



item	kW per hour use	hourly cost
Blu-ray™ player (playing movie)	0.02	<\$0.01



digital picture frame (7"-12")	0.01	<\$0.01
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DVD player (playing movie)	0.01	<\$0.01
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mp3 speakers	0.02	<\$0.01
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receiver		
200W	0.2	\$0.06
600W	0.6	\$0.18
1000W	1.0	\$0.30



stereo	0.1	\$0.03
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sub woofer	0.2	\$0.06
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item	monthly kWh use	monthly cost
aquarium	19	\$5.70



television		
<i>based on television on for 5 hrs/day</i>		
projection tv (65")	32	\$9.60
CRT (old style tv – 30" - 36")	20	\$6.00
light emitting diode (LED - 46")	16	\$4.80
liquid crystal display (LCD - 42")	15	\$4.50
plasma (42")	15	\$4.50

living room continued

item	monthly kWh use	monthly cost
television boxes		
<ul style="list-style-type: none"> ● PVR (1 hr/day) ● digital cable with PVR (4hrs/day – TV, 1 hr/day – recording) ● digital cable (5 hrs/day) ● satellite with PVR (4hrs/day – TV, 1 hr/day – recording) ● satellite (5 hrs/day) 	<ul style="list-style-type: none"> 27 36 19 21 12 	<ul style="list-style-type: none"> \$8.10 \$10.80 \$5.70 \$6.30 \$3.60
video game console		
<i>based on video game console on for 5 hrs/day</i>		
<ul style="list-style-type: none"> ● PlayStation 3® ● Xbox 360® ● Nintendo Wii® 	<ul style="list-style-type: none"> 30 28 3 	<ul style="list-style-type: none"> \$9.00 \$8.40 \$0.90

bedroom

item	kW per hour use	hourly cost
<ul style="list-style-type: none"> ● electric blanket ● electric heating pad 	<ul style="list-style-type: none"> 0.2 0.06 	<ul style="list-style-type: none"> \$0.06 \$0.02
item	monthly kWh use	monthly cost
<ul style="list-style-type: none"> ● alarm clock 	<ul style="list-style-type: none"> 3.6 	<ul style="list-style-type: none"> \$1.08

bathroom

item	kW per hour use	hourly cost
<ul style="list-style-type: none"> ● curling iron ● flat iron ● hair dryer ● jetted tub ● shaver (charging) ● toothbrush (charging) 	<ul style="list-style-type: none"> 0.08 0.14 1.8 0.8 0.003 0.002 	<ul style="list-style-type: none"> \$0.02 \$0.04 \$0.54 \$0.24 <\$0.01 <\$0.01

laundry

item	kW per hour use	hourly cost
● iron	1.1	\$0.33
● steamer	1.4	\$0.42
item	monthly kWh use	monthly cost
● clothes dryer <i>based on 35 loads per month</i>	76	\$22.80
● washing machine <i>based on 33 loads per month</i>		
top load (1997)	78	\$23.40
top load (2010)	33	\$9.90
front load (ENERGY STAR - 2010)	13	\$3.90

office

item	kW per hour use	hourly cost
● cell phone charger	0.003	<\$0.01
● computer printer		
ink jet printer (printing)	0.08	\$0.02
ink jet printer (idle)	0.02	<\$0.01
laser printer (printing)	0.5	\$0.15
laser printer (idle)	0.03	<\$0.01
● computer speakers	0.004	<\$0.01
● cordless phone	0.002	<\$0.01
● cordless phone (with answering machine)	0.004	<\$0.01
item	monthly kWh use	monthly cost
● computer & LCD monitor <i>in use for 2 hours per day, in sleep mode for 22 hours per day</i>		
monitor	2	\$0.60
computer	11	\$3.30
<i>in use for 2 hours per day, off for 22 hours per day</i>		
monitor	2	\$0.60
computer	5	\$1.50

lighting

item	12 hour kWh use	12 hour cost
compact fluorescent light (CFL) bulb		
15W (replaces 60W incandescent)	0.18	\$0.05
25W (replaces 100W incandescent)	0.3	\$0.09
40W (replaces 150W incandescent)	0.48	\$0.14
fluorescent tube lighting		
15W	0.18	\$0.05
75W	0.9	\$0.27
halogen lighting		
50W	0.6	\$0.18
150W (exterior floodlight)	1.8	\$0.54
holiday lighting		
string of incandescent (50 bulbs/string)	3.0	\$0.90
string of LED (70 bulbs/string)	0.04	\$0.01
incandescent light bulb		
60W	0.72	\$0.22
100W	1.2	\$0.36
150W	1.8	\$0.54
light emitting diode (LED)		
10.5W (replaces 50W incandescent)	0.13	\$0.04
night light		
incandescent	0.06	\$0.02
LED	0.004	<\$0.01

basement

item	monthly kWh use	monthly cost
deep freezer		
chest (1997)	44	\$13.20
chest (2010)	33	\$9.90
chest (ENERGY STAR)	30	\$9.00
furnace fan		
standard A/C* motor		
continuous operation	274	\$82.20
energy-efficient A/C* motor		
continuous operation	201	\$60.30
standard A/C* motor		
automatic operation	72	\$21.60
variable-speed D/C* motor		
continuous operation	51	\$15.30
energy-efficient A/C* motor		
automatic operation	50	\$15.00
variable-speed D/C* motor		
automatic operation	41	\$12.30
*D/C = direct current A/C = alternating current		
water heater		
mid-efficiency	406	\$121.80
high-efficiency	385	\$115.50

whole house

item	kW per hour use	hourly cost
air purifier	0.09	\$0.03
fans		
ceiling fan	0.08	\$0.02
ENERGY STAR ceiling fan	0.06	\$0.02
ventilation fan	0.08	\$0.02
ENERGY STAR ventilation fan	0.03	<\$0.01
portable fan	0.05	\$0.02

**whole house
continued**

item	kW per hour use	hourly cost
humidifier		
portable	0.06	\$0.02
on furnace	0.01	<\$0.01

vacuum cleaner		
portable	0.7	\$0.21
central	1.4	\$0.42

item	monthly kWh use	monthly cost
air freshener	1.8	\$0.54
space heater		
1000W for 6 hrs./day	180	\$54.00
1000W for 24 hrs./day	720	\$216.00
1500W for 6 hrs./day	270	\$81.00
1500W for 24 hrs./day	1080	\$324.00
2500W for 6 hrs./day	450	\$135.00
2500W for 24 hrs./day	1800	\$540.00

garage

item	kW per hour use	hourly cost
car block heater		
400W	0.4	\$0.12
600W	0.6	\$0.18

By plugging in your block heater for only 4 hrs per day instead of 12 hrs, your cost savings could be substantial over the course of the winter season!

	4 hrs per day	12 hrs per day
400W block heater	\$14.40/month	\$43.20/month
600W block heater	\$21.60/month	\$64.80/month

● hourly ● 12 hours ● monthly



garage
continued

item	kW per hour use	hourly cost
● circular saw	1.2	\$0.36
● drill	0.3	\$0.09
● garage door opener	0.4	\$0.12
● jigsaw	0.3	\$0.09
● sander	0.3	\$0.09
● snow blower	1.2	\$0.36
● table saw	1.4	\$0.42

outdoor

item	kW per hour use	hourly cost
● edger	0.5	\$0.15
● hedge trimmer	0.3	\$0.09
● lawn mower	1.2	\$0.36

item	monthly kWh use	monthly cost
● hot tub (300 gallons @ 41°C/106°F)		
water heating (indoor)	150	\$45.00
water heating (outdoor)	225	\$67.50
pumping (1/2 horsepower 8 hrs/day)	132	\$39.60
pumping (68% efficient continuous)	395	\$118.50

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