

## ESTIMATING YOUR ELECTRIC BILL

retrigerators	Typical Appliance KITCHEN	Watts	\$/Use (12¢/kWh)	x Your Estimated Use	\$/Month	
frost free (14-16 cu ft)						
frost free (17-12 ou ft)   503   \$10.38 /month   (130 hours/month) = \$ /mor frost free (19-22 ou ft)   557   \$12.03 /month   (180 hours/month) = \$ /mor frost free (over 22 ou ft)   606   \$13.09 /month   (180 hours/month) = \$ /mor frost free (over 22 ou ft)   606   \$13.09 /month   (180 hours/month) = \$ /mor frost free (over 22 ou ft)   606   \$13.09 /month   (240 hours/month) = \$ /mor frost free (over 22 ou ft)   607		473	\$10.22 /month	(180 hours/month) —	\$	/mont
frost free (19-22 cu ft)   557	The state of the s		•	,		
frost free (over 22 cu ft)	,		•	,		
Interezers (15-21 cu ft)	· ·			,		
manual defrost   347   \$9.99 /month   (240 hours/month) = \$		000	\$13.09 /IIIOIIIII			
frost free		0.47	ΦΩ ΩΩ /m = m4h			
dishwasher (hot water extra)   1200   \$0.14 /hoad   x   loads/month =   \$ //mor microwave   1500   \$0.02 /use   x   uses/month =   \$ //mor coffee maker: brew cycle   800   \$0.02 /brew   x   brews/month =   \$ //mor coffee maker: keep warm   70   \$0.01 /hour   x   hours/month =   \$ //mor mini deep fryer   1800   \$0.22 /hour   x   hours/month =   \$ //mor mini deep fryer   1800   \$0.22 /hour   x   hours/month =   \$ //mor mini deep fryer   800   \$0.10 /hour   x   hours/month =   \$ //mor crock pot/"slow" cooker   200   \$0.02 /hour   x   hours/month =   \$ //mor range top or frypan   1200   \$0.14 /meal   x   meals/month =   \$ //mor oven: baking   3500   \$0.42 /hour   x   meals/month =   \$ //mor oven: baking   3500   \$0.42 /hour   x   meals/month =   \$ //mor oven: baking   3500   \$0.42 /hour   x   meals/month =   \$ //mor toaster-oven: oven   1500   \$0.04 /use   x   uses/month =   \$ //mor toaster-oven: oven   1500   \$0.04 /use   x   uses/month =   \$ //mor toaster-oven: oven brilling   3100   \$0.07 /use   x   uses/month =   \$ //mor iron   \$ //mor toaster-oven: brilling   3100   \$0.07 /use   x   uses/month =   \$ //mor iron   \$ //mor   \$ /			·			
microwave			•	,		
Coffee maker: brew cycle		,	•			
Coffee maker: keep warm						
reg, deep fryer				· · · · · · · · · · · · · · · · · · ·		/mont
mini deep fryer	•		•			/mont
Crock pot/"slow" cooker   200   \$0.02 /hour   x   hours/month = \$ //mor range top or frypan   1200   \$0.14 /meal   x   meals/month = \$ //mor oven: baking   3500   \$0.42 /hour   x   meals/month = \$ //mor oven: self cleaning feature   6000   \$1.44 /clean   x   cleans/month = \$ //mor toaster   1100   \$0.03 /use   x   uses/month = \$ //mor toaster-oven: oven   1500   \$0.04 /use   x   uses/month = \$ //mor toaster-oven: broiling   3100   \$0.07 /use   x   uses/month = \$ //mor toaster-oven: broiling   3100   \$0.07 /use   x   uses/month = \$ //mor toaster-oven: broiling   3100   \$0.07 /use   x   uses/month = \$ //mor iron   1200   \$0.14 /hour   x   uses/month = \$ //mor iron   1200   \$0.14 /hour   x   uses/month = \$ //mor iron   1200   \$0.04 /lour   x   uses/month = \$ //mor iron   1200   \$0.04 /lour   x   uses/month = \$ //mor iron   1200   \$0.04 /lour   x   uses/month = \$ //mor iron   1200   \$0.05 /lour   x   uses/month = \$ //mor iron   1200   \$0.05 /lour   x   uses/month = \$ //mor iron   1200   \$0.05 /lour   x   uses/month = \$ //mor iron   1200   \$0.05 /lour   x   uses/month = \$ //mor iron   1200   12	reg. deep fryer	1800	\$0.22 /hour			/mont
range top or frypan 3500 \$0.14 /meal x meals/month = \$ /mor oven: baking 3500 \$0.42 /hour x meals/month = \$ /mor oven: self cleaning feature 6000 \$1.44 /clean x cleans/month = \$ /mor toaster	mini deep fryer	800	\$0.10 /hour	$x _{month} =$	\$	/mont
oven: baking	crock pot/"slow" cooker	200	\$0.02 /hour	$x _{month} =$	\$	/mont
oven: baking	range top or frypan	1200	\$0.14 /meal	x meals/month =	\$	/mont
oven: self cleaning feature toaster         6000         \$1.44 /clean         x	- · · · · · · · · · · · · · · · · · · ·	3500	\$0.42 /hour			/mont
toaster	oven: self cleaning feature	6000	\$1.44 /clean			/mont
toaster-oven: oven toaster-oven: broiling 3100 \$0.04 /use x uses/month = \$ //mor toaster-oven: broiling 3100 \$0.07 /use x uses/month = \$ //mor toaster-oven: broiling 3100 \$0.07 /use x uses/month = \$ //mor toaster-oven: broiling 3100 \$0.07 /use x uses/month = \$ //mor washing machine (cold H2O) \$0.14 /hour x uses/month = \$ //mor washing machine (cold H2O) \$0.05 \$0.06 /load x loads/month = \$ //mor washing machine (cold H2O) \$0.00 \$0.06 /load x loads/month = \$ //mor washing machine (cold H2O) \$0.00 \$0.06 /load x loads/month = \$ //mor more washing machine (cold H2O) \$0.00 \$0.06 /load x loads/month = \$ //mor more washing machine (cold H2O) \$0.00 \$0.06 /load x loads/month = \$ //mor more washing machine (cold H2O) \$0.00 \$0.00 /load x loads/month = \$ //mor DVD / VCR \$0.00 \$0.01 /load x loads/month = \$ //mor T.V. (35" Standard) 210 \$0.03 /load x hours/month = \$ //mor T.V. (42" Plasma) 290 \$0.03 /load x hours/month = \$ //mor T.V. (42" Plasma) 290 \$0.03 /load x hours/month = \$ //mor T.V. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mor N. (40" LCD) 180 \$0.05 /load x hours/month = \$ //mo	_	1100	\$0.03 /use			/mont
LAUNDRY         3100         \$0.07 /use         xuses/month = \$/mor         /mor           LAUNDRY         dryer         4800         \$0.43 /load         x loads/month = \$/mor         /mor           dryer iron         1200         \$0.14 /hour         x uses/month = \$/mor         /mor           ENTERTAINMENT         60         \$0.02 /hour         x hours/month = \$/mor         /mor           DVD / VCR         60         \$0.01 /hour         x hours/month = \$/mor         /mor           T.V. (35° Standard)         210         \$0.03 /hour         x hours/month = \$/mor         /mor           T.V. (42° Plasma)         290         \$0.03 /hour         x hours/month = \$/mor         /mor           T.V. (60° Plasma)         450         \$0.05 /hour         xhours/month = \$/mor         /mor           T.V. (60° Plasma)         450         \$0.05 /hour         x						/mont
Altonomy			•			/mont
dryer		0.00	φο.ο. γασσ	X	Ψ	,,,,,
iron washing machine (cold H2O) 500 \$0.06 /load x uses/month = \$ //mor washing machine (cold H2O) 500 \$0.06 /load x loads/month = \$ //mor ENTERTAINMENT		4800	\$0.43 /load	y loads/month -	\$	/mont
Washing machine (cold H2O)   500   \$0.06 /load   x	-					
Computer & monitor			·			
DVD / VCR	ENTERTAINMENT	) 300		X 10aus/111011111 =	Ψ	/1110111
T.V. (35" Standard)		200	\$0.02 /hour			/mont
T.V. (42" Plasma) 290 \$0.03 /hour x hours/month = \$ //mor T.V. (60" Plasma) 450 \$0.05 /hour x hours/month = \$ //mor T.V. (40" LCD) 180 \$0.02 /hour x hours/month = \$ //mor T.V. (40" LCD) 180 \$0.02 /hour x hours/month = \$ //mor Older Gaming Systems 20-70 Look at the power requirements on back of unit Newer Gaming Systems 145-400 Look at the power requirements on back of unit //mor PERSONAL hand-held hair dryer 1500 \$0.05 /use x uses/month = \$ //mor heating pad 60 \$0.01 /use x uses/month = \$ //mor 150 watt incandescent bulb 60 \$1.30 //month (180 hours or 6 hours/day) = \$ //mor 15 watt compact fluorescent 15 \$0.32 //month (180 hours or 6 hours/day) = \$ //mor 9.5 watt LED bulb 9.5 \$0.21 //month (180 hours or 6 hours/day) = \$ //mor 0000 outdoor flood light 75 \$0.01 /hour x hours/month = \$ //mor 00000 OTHER  hot tub 1200 \$0.14 /hour x hours/month = \$ //mor water pump ½ h.p. 547 \$0.07 /hour x hours/month = \$ //mor 1½ h.p. 1641 \$0.20 /hour x hours/month = \$ //mor 00000 OTHER  ### Not tub 1004 \$0.13 /hour x hours/month = \$ //mor 00000 OTHER  ### Not tub 1004 \$0.13 /hour x hours/month = \$ //mor 000000 OTHER  ### Not tub 1004 \$0.13 /hour x hours/month = \$ //mor 000000000000000000000000000000000000	DVD / VCR	60	\$0.01 /hour		\$	
T.V. (60" Plasma)	T.V. (35" Standard)	210	\$0.03 /hour		\$	/mont
T.V. (40" LCD)	T.V. (42" Plasma)	290	\$0.03 /hour	x hours/month =	\$	/mont
Older Gaming Systems	T.V. (60" Plasma)	450	\$0.05 /hour	x hours/month =	\$	/mont
Newer Gaming Systems	T.V. (40" LCD)	180	\$0.02 /hour	x hours/month =	\$	/mont
Newer Gaming Systems	Older Gaming Systems	20-70	Look at the power re	equirements on back of unit		/mont
PERSONAL           hand-held hair dryer         1500         \$0.05 / use         x uses/month = \$/mor           heating pad         60         \$0.01 / use         x uses/month = \$/mor           LIGHTING         60 watt incandescent bulb         60         \$1.30 /month         (180 hours or 6 hours/day) = \$/mor         /mor           15 watt compact fluorescent         15         \$0.32 /month         (180 hours or 6 hours/day) = \$/mor         /mor           9.5 watt LED bulb         9.5         \$0.21 /month         (180 hours or 6 hours/day) = \$/mor         /mor           9.5 watt LED bulb         9.5         \$0.21 /month         (180 hours or 6 hours/day) = \$/mor         /mor           9.5 watt LED bulb         9.5         \$0.21 /month         (180 hours or 6 hours/day) = \$/mor         /mor           OTHER         75         \$0.01 /hour         x hours/month = \$/mor         /mor           OTHER         1200         \$0.14 /hour         x hours/month = \$/mor         /mor           @ 75% Eff         1 h.p.         1094         \$0.13 /hour         x hours/month = \$/mor           WINTER         electric blanket         150         \$0.14 /night         x nights/month = \$/mor		145-400				/mont
heating pad   60   \$0.01 /use   x uses/month = \$ /mor	PERSONAL		•	•		
heating pad   60   \$0.01 /use   x uses/month = \$ /mor	hand-held hair dryer	1500	\$0.05 /use	x uses/month =	\$	/mont
LIGHTING  60 watt incandescent bulb  60 \$1.30 /month  (180 hours or 6 hours/day) = \$ /mor  15 watt compact fluorescent  15 \$0.32 /month  (180 hours or 6 hours/day) = \$ /mor  9.5 watt LED bulb  9.5 \$0.21 /month  (180 hours or 6 hours/day) = \$ /mor  180 hours/month =						/mont
60 watt incandescent bulb 60 \$1.30 /month (180 hours or 6 hours/day) = \$ /mor 15 watt compact fluorescent 15 \$0.32 /month (180 hours or 6 hours/day) = \$ /mor 9.5 watt LED bulb 9.5 \$0.21 /month (180 hours or 6 hours/day) = \$ /mor outdoor flood light 75 \$0.01 /hour x hours/month = \$ /mor OTHER  hot tub 1200 \$0.14 /hour x hours/month = \$ /mor water pump ½ h.p. 547 \$0.07 /hour x hours/month = \$ /mor @ 75% Eff 1 h.p. 1094 \$0.13 /hour x hours/month = \$ /mor 1½ h.p. 1641 \$0.20 /hour x hours/month = \$ /mor 2 h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winth = \$ /mor space heater 1500 \$0.14 /night x nights/month = \$ /mor \$	- ·		• • • • • • • • • • • • • • • • • • • •			
15 watt compact fluorescent 9.5 watt LED bulb 9.5 \$0.21 /month (180 hours or 6 hours/day) = \$ /mor 9.5 watt LED bulb 9.5 \$0.21 /month (180 hours or 6 hours/day) = \$ /mor outdoor flood light 75 \$0.01 /hour  x hours/month = \$ /mor  OTHER  hot tub 1200 \$0.14 /hour x hours/month = \$ /mor water pump ½ h.p. 547 \$0.07 /hour x hours/month = \$ /mor  ② 75% Eff 1 h.p. 1094 \$0.13 /hour x hours/month = \$ /mor 1½ h.p. 1641 \$0.20 /hour x hours/month = \$ /mor 2 h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter electric blanket space heater 1500 \$0.14 /night x nights/month = \$ /mor space heater 50.18 /hour x hours/month = \$ /mor x hours/month = \$ /mo		60	\$1.30 /month	(180 hours or 6 hours/day) =	\$	/mont
9.5 watt LED bulb 9.5 \$0.21 /month (180 hours or 6 hours/day) = \$ /mor outdoor flood light 75 \$0.01 /hour x hours/month = \$ /mor OTHER  hot tub 1200 \$0.14 /hour x hours/month = \$ /mor water pump ½ h.p. 547 \$0.07 /hour x hours/month = \$ /mor @ 75% Eff 1 h.p. 1094 \$0.13 /hour x hours/month = \$ /mor 1½ h.p. 1641 \$0.20 /hour x hours/month = \$ /mor 2 h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 2 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor 2 h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor 2 h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$0.26 /hour x hours/month = \$ /mor winter pump 1 / h.p. 2188 \$ / h.p. 2						/mont
outdoor flood light         75         \$0.01 /hour         x         hours/month         =         /mor           OTHER           hot tub         1200         \$0.14 /hour         x         hours/month         =         /mor           water pump         ½ h.p.         547         \$0.07 /hour         x         hours/month         =         /mor           @ 75% Eff         1 h.p.         1094         \$0.13 /hour         x         hours/month         =         /mor           1 ½ h.p.         1641         \$0.20 /hour         x         hours/month         =         /mor           VINTER         electric blanket         150         \$0.14 /night         x         nights/month         =         /mor           SUMMER						
OTHER         hot tub         1200         \$0.14 /hour         x						
hot tub		73	φο.στ /ποαι	X 110d15/111011t11 =	Ψ	/1110110
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		1200	¢0 14 /bour	y hours/month	¢	/mant
@ 75% Eff						
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			•			
2 h.p. 2188 \$0.26 /hour x hours/month = \$ /mor    WINTER electric blanket 150 \$0.14 /night x nights/month = \$ /mor   space heater 1500 \$0.18 /hour x hours/month = \$ /mor    SUMMER						
WINTER						
space heater 1500 $0.18 \text{ /hour} \times \text{ hours/month} = \text{ /mor}$ SUMMER	-	2188	\$∪.26 /nour	x nours/month =	<b>\$</b>	/mont
space heater 1500 $0.18 / \text{hour} \times \text{hours/month} = \text{mors/month} = \text{mors/month}$	electric blanket	150	\$0.14 /night	x nights/month =	\$	/mont
	space heater		-			/mont
- · · · · · · · · · · · · · · · · · · ·		75	\$0.01 /hour	x hours/month =	\$	/mont

Water Heating 20 Gallons of water per person per day heated to 125°F; \$10.00/Month/Person @ \$0.12/kWh. Assumptions: 40 kWh/month heat loss from electric water heater or \$4.80/month WATER HEATING SUBTOTAL: \$10.00/month/person x people + \$4.80/month = \$ /month \$ \_\_\_\_\_ YOUR ESTIMATED BASE BILL (appliance use + water heating sub-totals): **Central Air Conditioning Systems** Assumptions Design temperatures = 93°F outside; 78°F inside. Operates 2,640 hours for moderate season. Costs \$0.12/kWh. YEARLY COSTS FOR SEASONAL ENERGY EFFICIENCY RATING (SEER) SIZE 12 13 10 11 14 15 16 17 18 \$190 6,000 BTU's (0.5-ton)\$173 \$158 \$146 \$136 \$127 \$119 \$112 \$106 12,000 BTU's \$380 \$346 \$317 \$292 \$272 \$253 \$238 \$224 \$211 (1.0-ton)18.000 BTU's \$570 \$518 \$475 \$439 \$407 \$380 \$356 \$335 \$317 (1.5-ton)24,000 BTU's (2.0-ton)\$760 \$691 \$634 \$585 \$543 \$507 \$475 \$447 \$422 30,000 BTU's \$950 \$864 \$792 \$731 \$594 \$528 (2.5-ton)\$679 \$634 \$559 36,000 BTU's (3.0-ton)\$1,140 \$1,037 \$950 \$877 \$815 \$760 \$713 \$671 \$634 42,000 BTU's (3.5-ton)\$1,331 \$1,210 \$1,109 \$1,024 \$950 \$887 \$832 \$783 \$739 \$1,382 \$1,086 \$950 \$845 48,000 BTU's (4.0-ton)\$1,521 \$1,267 \$1,170 \$1,014 \$894 60,000 BTU's \$1,728 \$1,584 \$1,056 (5.0-ton) \$1,901 \$1,462 \$1,358 \$1,267 \$1,188 \$1,118 MONTHLY COOLING SUBTOTALS: April \$ \_\_\_\_\_ /year x 0.06 = \$ \_\_\_\_\_ = \$ \_\_\_\_\_ \$ \_\_\_\_\_ 0.13 May /year x = \$ \_\_\_\_\_ June \$ /year x 0.18 July 0.19 = \$ \$ /year x August \$ \_\_\_\_\_ /year x 0.19 = \$ \$\_ September 0.17 = \$\_ /year x October \$ /year x 0.08 = \$ \$\_ ESTIMATED SUMMER MONTH BILL (for desired month) (base + cooling) **Central Electric Heating Systems** Design temperatures = 31°F outside; 68°F inside. Assumptions Operates 1,159 hours - a moderate season. Costs \$0.12/kWh. **HEAT PUMP YEARLY COSTS - HEATING SEASON PERFORMANCE FACTOR** Heat 7.7 Size Strip **HSPF:** 5.1 6.8 8.5 9.4 10.2 11.1 11.9 \$ 978 654 \$ 491 433 \$ 393 355 \$ 327 \$ 301 280 24,000 (2.0-ton) \$ \$ \$ 30,000 (2.5-ton) \$1,223 \$ 818 \$ 614 \$ 542 \$ 491 \$ 444 \$ 409 \$ 376 \$ 351 36,000 (3.0-ton) \$1,467 \$ 982 \$ 736 \$ 650 \$ 589 \$ 533 \$ 491 \$ 451 \$ 421 \$1,145 \$ 859 \$ 759 \$ 687 \$ 621 \$ 573 \$ 526 \$ 42,000 (3.5-ton) \$1,712 491 \$ \$ \$1,309 \$ 982 \$ 867 785 710 \$ 654 \$ 601 \$ 561 48,000 (4.0-ton) \$1,957 60,000 (5.0-ton) \$2,446 \$1,636 \$1,227 \$1,084 \$ 982 \$ 888 \$ 818 \$ 752 \$ 701 72,000 (6.0-ton) \$ 1,963 \$ 1,473 \$ 1,300 \$ 1,178 \$ 1,065 \$ 982 902 \$ 2,935 MONTHLY HEATING SUBTOTALS: November \$ /year x 0.04 = \$ December \$ 0.33 = \$ /year x

## ESTIMATED WINTER MONTH BILL (for desired months) (base + heating)

January

March \$

While GRU can guarantee neither the accuracy of these estimates nor assume liability for their use, these estimates are reasonable and can be used as general guidelines for estimating your monthly bill. The magnitude of error of these estimates will be affected by equipment and condition, a home's heat loss and heat gain characteristics, operational and family usage patterns, and weather intensity.

Estimating appliance FY18.xlsx 9/25/2017

\$ \_\_\_\_\_

>> Disclaimer <<

February \$ \_\_\_\_\_

/year x

/year x

/year x

0.34

0.26

0.03

= \$ \_\_\_\_\_

= \$

= \$

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