



# Residential Bill Impact Estimate

## GoGreen Home Energy Financing Program

GoGreen Home customers can use this Bill Impact Estimate to evaluate the potential annual energy and bill cost savings from common energy saving measures. The estimated bill impacts represent a statewide blended average and may not reflect your specific use case, climate zone, or utility provider.

While energy efficiency home improvements are designed to reduce your monthly energy consumption and costs, their actual impact can vary due to many factors such as utility rates, weather, and your usage patterns. A comprehensive approach can boost your savings; for example, heating and cooling upgrades will most likely have a greater impact if you also seal air leaks, replace drafty windows and/or add insulation.

Measure	Specification	Annual kWh Savings	Annual Therm Savings	Annual Bill Savings Estimate	
				Electric <sup>1</sup>	Gas <sup>2</sup>
Clothes Washer	ENERGY STAR clothes washer, top loading, weighted fuel type, Tier 2, IMEF 2.32 to < 2.76, replacing IMEF 1.08 clothes washer.	222	10	\$53 - \$71 <sup>3</sup>	\$13 - \$18 <sup>3</sup>
Refrigerator	ENERGY STAR refrigerator with bottom mount freezer and no through-the-door ice, large 18.1-22.5 cu. ft. replacing pre-existing appliance	114	N/A	\$27- \$36	N/A
Attic Insulation	Add R-38 attic insulation to existing insulation	947	111	\$225 - \$304 <sup>4</sup>	\$141 - \$191
Cool Roof	Cool roof with 50% solar reflectance replacing 1700 sq ft flat, black roof	1,083	N/A	\$257 - \$348 <sup>4</sup>	N/A
Wall Insulation	Add wall blown-in R-13 insulation (no pre-existing insulation) with weighted average HVAC type <sup>5</sup>	527	198	\$125 - \$169 <sup>4</sup>	\$252 - \$341
Windows	ENERGY STAR 2-pane, LSG Low-E, non-metal frame (U-factor 0.23-0.30) replacing single pane clear non-metal frame (U-factor 0.71-0.99)	1,034	34	\$246 - \$332	\$43 - \$59
Central Air Conditioner	3-ton, 20 SEER central A/C system with two-speed fan replacing 14 SEER central A/C with one-speed fan	436	N/A	\$104 - \$140	N/A
Evaporative Cooler	Direct-indirect evaporative cooler replacing 10 SEER split-system A/C	932	N/A	\$221 - \$300	N/A
Gas Furnace	AFUE 95 gas furnace replacing AFUE 80 gas furnace	N/A	27	N/A	\$35 - \$47
Mini Split Air Conditioning System	3-ton, 20 SEER mini split A/C replacing typical unit efficiency level for various building vintages	314	N/A	\$75 - \$101	N/A
Tank Storage Water Heater	50-gallon medium-draw gas tank water heater (UEF = 0.64) replacing 50-gallon medium-draw gas tank water heater (UEF= 0.56)	N/A	25	N/A	\$32 - \$43
Tankless Water Heater	Instantaneous gas water heater (UEF=0.87) replacing 40-gallon gas tank water heater (UEF=0.58)	N/A	52	N/A	\$66 - \$90

NOTE: See footnotes on following page for more information about usage data sources and assumptions.



## Heat Pumps: the Smart Choice for Your Home, Health & California

California has set a goal of becoming carbon-free and energy independent by 2045. Our homes and buildings play a key role in this statewide decarbonization movement, with residential natural gas consumption responsible for more than a quarter of all statewide carbon emissions.

Switching from a gas HVAC or water heater to modern heat pump technology can significantly reduce your home's greenhouse gas emissions, lower your energy usage and improve indoor air quality. And, today's "smart" appliances can help you reduce expenses by leveraging utility Time-of-Use rates and demand response programs during periods of peak demand.

For more information, visit [www.switchison.org](http://www.switchison.org).

Measure	Specification	Annual change in kWh usage	Annual change in Therm usage	Annual Bill Impact Estimate	
				Electric <sup>1</sup>	Gas <sup>2</sup>
Heat Pump Water Heater (Fuel Switch)	50-gallon electric heat pump water heater (UEF = 3.31) replacing 50-gallon medium-draw gas tank water heater (UEF = 0.56)	1,519 Increase	211 Savings	\$361 - \$488 Increase	\$267 - \$362 Savings
				Combined Annual Impact: \$94 - \$126 Increase	
Heat Pump HVAC (Fuel Switch)	3-ton, 18 SEER, 9.7 HSPF electric heat pump with two-speed fan replacing 14 SEER central A/C and 80% AFUE furnace with one-speed fan	1,266 Increase	217 Savings	\$301 - 407 Increase	\$275 - \$373 Savings
				Combined Annual Impact: \$26 - \$34 Increase	

### Data sources and assumptions

<sup>1</sup> Using the CPUC 2021 forecasted average California IOU residential bundled retail electricity rate of \$0.279/kWh, available at [https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2021/senate-bill-695-report-2021-and-en-banc-whitepaper\\_final\\_04302021.pdf](https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2021/senate-bill-695-report-2021-and-en-banc-whitepaper_final_04302021.pdf) (Table 17). The cost range was established using 85% and 115% of the average electric rate. References and assumptions are available in a separate document available on request.

<sup>2</sup> Using the EIA March 2021 average California residential natural gas rate of \$1.49/therm, available at [https://www.eia.gov/dnav/ng/NG\\_PRI\\_SUM\\_DCU\\_SCA\\_M.htm](https://www.eia.gov/dnav/ng/NG_PRI_SUM_DCU_SCA_M.htm). The cost range was established using 85% and 115% of the average gas rate. References and assumptions are available in a separate document available on request.

<sup>3</sup> Electric savings for washing machine measure are based on improved motor efficiency as well as more effective water removal resulting in reduced drying time (assumes electric clothes dryer). Gas savings are based on reduced hot water use (assumes use of a gas water heater).

<sup>4</sup> Electric savings for measures affecting the building envelope (wall and attic insulation, cool roof) are based on cooling cost savings and assume the use of air conditioning. Gas savings estimates assume the use of a gas furnace for heating.

<sup>5</sup> Weighted average HVAC type means savings as a weighted average across the following HVAC types: central AC with gas furnace, gas furnace with no cooling functionality, electric baseboard with no cooling functionality, and a central heat pump.