

Energy consumption planning report

Synthetic example home, Colorado, USA

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Report ID: SAMPLE-HOME-20260922

Model 2026.09.4 | Report 2026.09.2

Illustrative sample. This report uses a synthetic household and is not a customer assessment.

YOUR PURPOSE

Document consumption for solar planning

Consumption assumptions and load documentation. PV generation, system sizing and utility acceptance are not established by this estimate.

ESTIMATED ELECTRICITY / YEAR

31,808

kWh

ANNUAL TOTAL DIVIDED BY 12

2,651

kWh per average month

MODELED ENERGY CHARGE / YEAR

\$6,362

at 20 cents/kWh

Your energy-only electricity rate. The average-month figure is annual electricity divided by 12; it is not a seasonal forecast.

Energy-charge context excludes fixed fees and unmodeled tariff components. Actual bills can differ.

Largest modeled energy uses

End use	Annual kWh	Share
Heating	19,695.2	61.9%
Water Heater	4,115.2	12.9%
Cooling	2,056.2	6.5%
Electric Vehicles	1,800	5.7%

End uses allocate equipment energy by function. A heat pump can contribute to both heating and cooling; its inventory entry is counted once.

Review the 3 disclosed items in Assumptions and sources before using the totals for a decision.

Existing and planned energy use

Use this breakdown to explain which loads are already present, which are proposed, and which still need a status. Planned equipment is included in the report total.

Marked existing (37 equipment entries)	30,008.1 kWh/yr
Planned loads (1 equipment entries)	1,800 kWh/yr
Status not specified (0 equipment entries)	0 kWh/yr

Joint effect of planned equipment

Without planned equipment: 30,008.1 kWh/year.
With planned equipment: 31,808.1 kWh/year.
Incremental electricity: +1,800 kWh/year.
Energy-charge change: +\$360/year at the energy-only rate.

- Load status is supplied by the user. For a new-home purpose, unmarked loads are treated as planned; other unmarked equipment stays unspecified.
- This documents electricity consumption, not PV production, array size, electrical service capacity or utility approval. Gas/propane use and displaced fuel costs are not modeled.
- Incremental electricity compares this entire estimate with the same model excluding all loads marked planned. Shared-system effects are recalculated jointly, so the difference can differ from the sum of planned equipment rows.

For a utility or solar-planning conversation

- Review equipment status, fuel, occupancy, annual driving and home charging before using incremental demand.
- The incremental comparison recalculates the inventory together. Shared heating/cooling systems can interact, so the result can differ from adding individual planned rows.
- This report documents modeled consumption. It does not calculate PV production, prescribe system size, or establish compliance with a utility's requirements.

Equipment and modeled use

Each row comes from the canonical inventory for this report. Quantities are already included in annual kWh. Shared heating/cooling equipment is reconciled before totals are allocated to end uses.

This report preserves an existing saved equipment list. Questionnaire changes do not silently replace that list. Unspecified parameters use the recorded model version's defaults.

Displayed rows are rounded for readability. Totals use unrounded calculations; rounded rows may not sum exactly.

Equipment	Recorded specifications and assumptions	Annual kWh
Television tv peripherals Status: existing	Quantity 1; saved inventory 75 W (TV default) x 5.5 hours/day screen inches: 55 display type: LCD Daily; 2024 calendar	151 TV & Peripherals: 151
Television tv peripherals Status: existing	Quantity 1; saved inventory 75 W (TV default) x 3 hours/day screen inches: 40 display type: LCD Daily; 2024 calendar	82.4 TV & Peripherals: 82.4
PlayStation 5 tv peripherals Status: existing	Sony / PlayStation 5 Quantity 1; saved inventory 120 W x 1.5 hours/day 300 days/year; annual budget allocated across the calendar	54 TV & Peripherals: 54
Soundbar tv peripherals Status: existing	Quantity 1; saved inventory 28 W x 5.5 hours/day Daily; 2024 calendar	56.4 TV & Peripherals: 56.4
Router other Status: existing	Quantity 1; saved inventory 12 W x 24 hours/day Daily; 2024 calendar	105.4 Other: 105.4
Modem other Status: existing	Quantity 1; saved inventory 10 W x 24 hours/day Daily; 2024 calendar	87.8 Other: 87.8
Thermostat other Status: existing	Quantity 1; saved inventory 3 W x 24 hours/day Daily; 2024 calendar	26.4 Other: 26.4

Equipment detail, continued

Equipment	Recorded specifications and assumptions	Annual kWh
Vacuum Cleaner other Status: existing	Quantity 1; saved inventory Calculation: session based wattage: 1,200 sessions per week: 2 minutes per session: 30 Uses calculation-specific annual or weather timing	62.7 Other: 62.7
smoke detector other Status: existing	Quantity 4; saved inventory 1 W x 24 hours/day Daily; 2024 calendar	35.1 Other: 35.1
Bathroom Exhaust Fan other Status: existing	Quantity 2; saved inventory 25 W x 0.5 hours/day Daily; 2024 calendar	9.2 Other: 9.2
Smartphone other Status: existing	Quantity 3; saved inventory Calculation: flat annual kWh per unit: 18 Uses calculation-specific annual or weather timing	54 Other: 54
Laptop other Status: existing	Quantity 1; saved inventory 65 W x 4 hours/day 300 days/year; annual budget allocated across the calendar	78 Other: 78
Laptop other Status: existing	Quantity 1; saved inventory 65 W x 3 hours/day 300 days/year; annual budget allocated across the calendar	58.5 Other: 58.5
Tablet other Status: existing	Quantity 1; saved inventory 12 W x 2 hours/day Daily; 2024 calendar	8.8 Other: 8.8
Hair Dryer other Status: existing	Quantity 1; saved inventory Calculation: session based wattage: 1,500 sessions per week: 5 minutes per session: 10 Uses calculation-specific annual or weather timing	65.4 Other: 65.4

Equipment detail, continued

Equipment	Recorded specifications and assumptions	Annual kWh
ceiling fans ceiling fans Status: existing	Quantity 4; saved inventory 50 W x 3.5 hours/day Daily; 2024 calendar	256.2 Cooling: 256.2
Coffee Maker cooking Status: existing	Quantity 1; saved inventory Calculation: session based wattage: 900 sessions per week: 7 minutes per session: 12 Uses calculation-specific annual or weather timing	65.9 Kitchen: 65.9
Microwave cooking Status: existing	Quantity 1; saved inventory Calculation: session based wattage: 1,200 sessions per week: 21 minutes per session: 3 Uses calculation-specific annual or weather timing	65.9 Kitchen: 65.9
Toaster cooking Status: existing	Quantity 1; saved inventory Calculation: session based wattage: 850 sessions per week: 5 minutes per session: 5 Uses calculation-specific annual or weather timing	18.5 Kitchen: 18.5
Garbage Disposal cooking Status: existing	Quantity 1; saved inventory Calculation: flat annual kWh per unit: 14 Uses calculation-specific annual or weather timing	14 Kitchen: 14
Range Hood cooking Status: existing	Quantity 1; saved inventory Calculation: session based wattage: 200 sessions per week: 7 minutes per session: 30 Uses calculation-specific annual or weather timing	36.6 Kitchen: 36.6

Equipment detail, continued

Equipment	Recorded specifications and assumptions	Annual kWh
Electric Range cooking Status: existing	Quantity 1; saved inventory Calculation: electric cooking avg zone watt: 1,500 zones active: 1 cook hours per day: 0.75 oven hours per week: 2 has oven: true Uses calculation-specific annual or weather timing	662.7 Kitchen: 662.7
Electric Dryer dryer Status: existing	Quantity 1; saved inventory Calculation: dryer cef: 3.73 dryer loads per week: 5 dryer load size: medium Uses calculation-specific annual or weather timing	560.7 Laundry: 560.7
lighting led light use lighting Status: existing	Quantity 1; saved inventory 9 W x 3.2 hours/day Daily; 2024 calendar	10.7 Lighting: 10.7
lighting led moderate use lighting Status: existing	Quantity 2; saved inventory 9 W x 7 hours/day Daily; 2024 calendar	46 Lighting: 46
lighting led heavy use lighting Status: existing	Quantity 1; saved inventory 9 W x 14 hours/day Daily; 2024 calendar	46.2 Lighting: 46.2
lighting cfl light use lighting Status: existing	Quantity 1; saved inventory 14 W x 3.2 hours/day Daily; 2024 calendar	16.6 Lighting: 16.6
lighting cfl moderate use lighting Status: existing	Quantity 2; saved inventory 14 W x 7 hours/day Daily; 2024 calendar	71.5 Lighting: 71.5
lighting cfl heavy use lighting Status: existing	Quantity 1; saved inventory 14 W x 14 hours/day Daily; 2024 calendar	71.9 Lighting: 71.9

Equipment detail, continued

Equipment	Recorded specifications and assumptions	Annual kWh
lighting incandescent light use lighting Status: existing	Quantity 1; saved inventory 60 W x 3.2 hours/day Daily; 2024 calendar	71.2 Lighting: 71.2
lighting incandescent moderate use lighting Status: existing	Quantity 2; saved inventory 60 W x 7 hours/day Daily; 2024 calendar	306.6 Lighting: 306.6
lighting incandescent heavy use lighting Status: existing	Quantity 1; saved inventory 60 W x 14 hours/day Daily; 2024 calendar	308.3 Lighting: 308.3
Outdoor Lighting outdoor Status: existing	Quantity 2; saved inventory 10 W x 10 hours/day Daily; 2024 calendar	73.2 Lighting: 73.2
Refrigerator refrigerator Status: existing	Quantity 1; saved inventory Calculation: refrigerator fridge volume: 20 fridge type: top_mount ice maker: false door dispenser: false usage intensity: average Uses calculation-specific annual or weather timing	760 Kitchen: 760
Central Air Conditioner cooling Status: existing	Quantity 1; saved inventory Calculation: ac tons: 3 SEER: 14 ac equipment type: Central_air_conditioner Uses calculation-specific annual or weather timing	1,800 Cooling: 1,800
Electric Furnace heating Status: existing	Quantity 1; saved inventory Calculation: electric furnace BTU/hour: 48,000 Uses calculation-specific annual or weather timing	19,695.2 Heating: 19,695.2

Equipment detail, continued

Equipment	Recorded specifications and assumptions	Annual kWh
Water Heater water heating Status: existing	Quantity 1; saved inventory Calculation: water heater occupants: 3 heater type: Tank Uses calculation-specific annual or weather timing	4,115.2 Water Heater: 4,115.2
Planned electric vehicle ev Status: planned	Example specifications / Synthetic EV Quantity 1; saved inventory Calculation: ev annual miles: 12,000 kWh/100 miles: 30 home charging fraction: 0.5 mileage basis: total energy basis: wall Uses calculation-specific annual or weather timing	1,800 Electric Vehicles: 1,800
Total modeled electricity		31,808.1 kWh/year

Assumptions, sources and limits

This is a planning estimate based on self-reported inputs and a reproducible calculation. It is not a measurement of the property and has not received an independent professional review.

Key inputs to review

Home and floor area	Unconfirmed; 1,800 sq ft
Occupants	3
Windows and insulation	Unconfirmed windows; unconfirmed insulation
Space-heating fuel	electric
Water-heating fuel	electric
Primary cooking / dryer fuel	electric / electric
General thermostat	Heating 68 F; cooling 72 F

These are recorded answers or retained assumptions, not independently verified property facts. Existing home/away thermostat profiles can override general settings.

Items that need attention

- Your saved equipment list is protected. Questionnaire defaults will not replace your edits. Review a comparison before switching to refreshed defaults.
- Fuel answers do not replace your protected saved equipment list. Review the equipment comparison before adopting questionnaire defaults; saved electrical loads remain in this estimate.
- The modeled total includes planned equipment. Historical bills may predate those loads, so the model-minus-bill difference does not isolate existing-home estimation error.

Calculation assumptions

- Electricity only. Gas and other fuel costs are not included.
- Equipment and operating schedules are estimates unless you supplied specifications; no on-site measurements have been taken.
- Space-conditioning estimates use reference-weather equivalent hours and approximate building factors; they are not a calibrated building simulation.
- Energy cost is consumption multiplied by your energy-only rate. Fixed fees, taxes, tiered prices, time-of-use prices, and solar export credits are not modeled.
- Daily schedules use every actual calendar day, including February 29 in a leap reference year.
- Saved annual operating days are preserved and allocated uniformly across calendar days; this is not a measured monthly usage pattern.
- Daily and weekly appliance schedules use actual calendar days and days divided by seven; hot-water inlet temperature stays constant across months.
- Fixed annual energy and annual-mileage loads are allocated by calendar days without inventing a seasonal usage pattern.

- Space-conditioning months use hourly reference weather and the declared thermostat schedule, with building factors applied once.
- Thermostat day hours are 7am–9pm. The default away periods are weekdays 10am–6pm and Saturdays noon–4pm; nights and Sundays use home settings. These times use NASA local solar time, without civil time-zone or daylight-saving adjustment.
- Weekday presence was not supplied. Thermostat timing retains the default away schedule until confirmed.

Reference sources

Weather: Synthetic reference weather for this sample only (not observed NASA weather); reference year 2024; Synthetic calendar. Availability: available. Equivalent heating hours: 1,400; cooling hours: 700 after building adjustments.

Building factors applied to weather hours: heating 1; cooling 1.

Rate: Your energy-only electricity rate. Source: User-provided energy-only electricity rate. Applied rate: 20 cents/kWh.

Inputs and equipment: the user's saved assessment and any selected catalog specifications. Unverified defaults and inventory origins are disclosed in this report.

Snapshot input hash: 1734b80eb2bca820. Model 2026.09.4. Report 2026.09.2.

How to use this document

- Check fuel, equipment identity, occupancy and operating schedules before relying on the estimate. Unquantified or unknown loads mean the total may be incomplete.
- This report addresses electricity. Gas and other fuel consumption, future utility tariffs, PV generation and PV system sizing are outside the estimate.
- Give the assumptions and equipment detail to your installer or utility and confirm its specific documentation requirements. This report does not establish or guarantee utility acceptance.
- Actual use and bills can differ because of weather, behavior, equipment condition and charges that are not modeled. No guaranteed savings, installed prices or payback are provided.