

Elephant Energy & Home Electrification

June 2024





Agenda

- 1 Who is Elephant Energy?
- 2 Customer Journey: Climate Friendly Homes
- 3 Q&A



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We're on a mission to **accelerate** the end of fossil fuel use by **electrifying everything**, starting with homes.

Heat Pumps /
HPWH

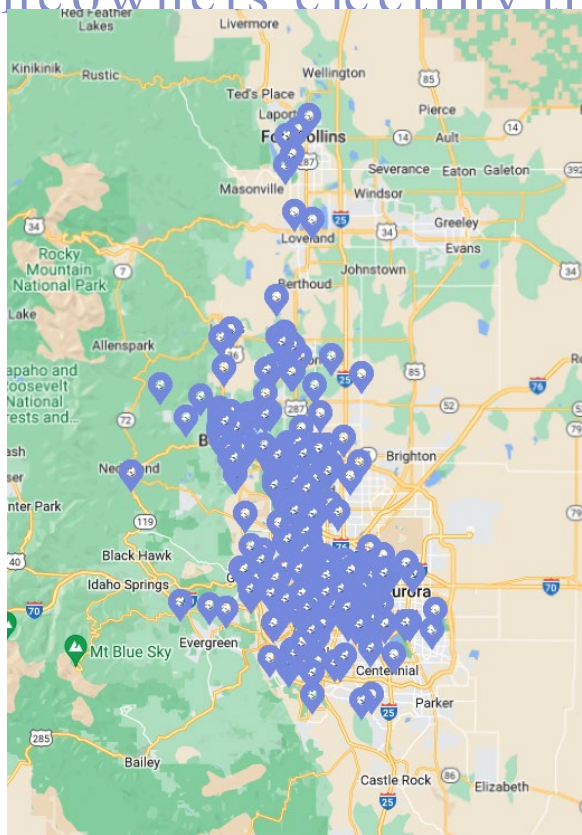
Weatherization

EV Chargers

Electric
Appliances



Elephant Energy has helped 600+ Colorado homeowners electrify their homes!

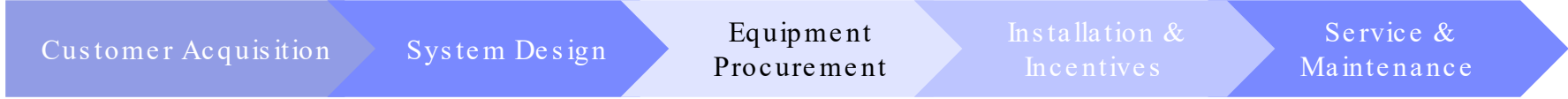


“Elephant Energy was very **friendly, responsive, and transparent** throughout the whole process...They set us up with the **right solution for our family** .” - Jeffrey P.

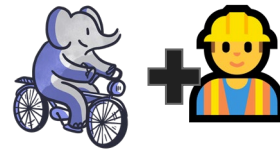
“Great local company who take a **different (and proper) approach to home electrification** ...Rather than try and just sell to me, they provided lots of recommendations for **remediating my current issues.**” - Beau C.

“Highly recommended! They worked with **experienced contractors** to help us ditch fossil fuels...**Great service and competitive pricing.** Elephant Energy rocks!” - Sam H.

Business Model - we manage end-to-end project delivery for all of our customers



Elephant Model



We work with a network of carefully vetted contractor partners, who each hold the requisite licenses for their respective trade. Our in-house Project Managers oversee every installation.



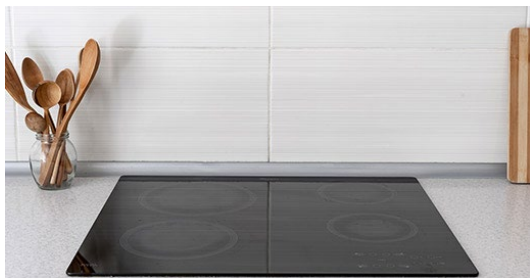
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3 Rules for a Climate - Friendly Home

Don't burn stuff.



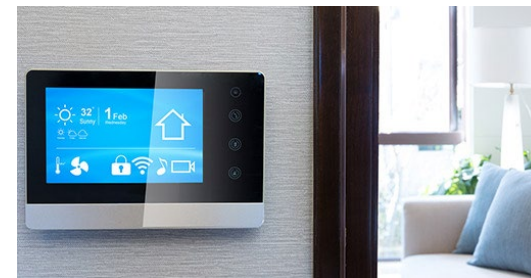
- Switch to a heat pump for heating and cooling
- Heat your water with a heat pump water heater
- Change out your gas stove for induction
- Install an EV charger

Don't use energy made from burning stuff.



- Get rooftop or community solar
- Or, go all-green with your local electric utility
- Purchase a battery backup

Be efficient.



- Weatherize your house with insulation and air sealing
- Schedule regular maintenance for your appliances
- Install a smart panel



Why Electrify?



Cleaner Planet

An electric home emits substantially **less carbon** –between **25 % and 93 %** less over 15 years.¹



Increase Comfort

Electrification and weatherization upgrades ensure **more consistent temperature control** .



Save Money

Homeowners who have electrified save an **average of \$1,050 -2,585 each year** on energy bills.²



Add Home Value

Upgrading to a heat pump can **increase the value of your home by an average of 4-7%**.³



Increase Health & Safety

Almost **13 %** of current childhood asthma is attributable to gas stove use.⁴

¹ Rocky Mountain Institute, [The New Economics of Electrifying Buildings](#) (2020)

² Rewiring America, [Household Savings Report](#) (2020)

³ Shen, X., *et al.* [Estimation of change in house sales prices in the United States after heat pump adoption](#) (2021)

⁴ International Journal of Environmental Research and Public Health, [Population Attributable Fraction of Gas Stoves and Childhood Asthma in the United States](#) (2022)

Our tool, “Your Electrification Roadmap”, helps homeowners to chart their unique paths



Click **GET STARTED** on our website, and fill out the below form:

Ready to electrify?

This form will collect information about your home and your electrification goals. Once we've finished up, we'll email **Your Electrification Roadmap** within a few minutes.

This form takes about 5 minutes to complete.

Let's go

press Enter ↵



Example Output:

YOUR JOURNEY TO FULL-HOME ELECTRIFICATION

Your Electrification Goals:

- Decrease the carbon footprint of my home
- Replace outdated or broken-down appliances
- Lower my monthly utility bills

Every home has a unique path to full electrification. Based on your goals and the information you supplied, here's what we recommend:

- 01 Heat pump HVAC**
Upgrade to a ductless heat pump system
- 02 Heat pump water heater**
Replace your existing water heater
- 03 Weatherization**
Re-insulate and air seal your home
- 04 Solar**
Install rooftop solar to power your home
- 05 EV charger**
Add electric vehicle (EV) charging to your home

FULL-HOME NOW

Upgrade your gas dryer to a more efficient, more energy-efficient heat pump dryer.

Heat pump dryers are closed-loop systems that use heat to dry clothes. They operate at a much lower temperature, producing a slightly longer but more gentle drying cycle that extends the lifespan of your clothes! Since your current gas dryer upgrade will require some electrical work, it may be time for a new one!

The average life expectancy of a gas dryer is 10 years, so we recommend you upgrade now. Since your install will require some electrical work, it may be time for a new one!

HOW TO ELECTRIFY

Weatherization and weatherization upgrades ensure your home has proper temperature control and comfort in all seasons.

Energy-efficient upgrades can cost a bit more upfront, but they will save you money in the long run. On average, homeowners can save \$65 each year on energy bills.^{1,2}

Weatherization can increase your home's value – by an average of 7% for heat pump HVAC systems and solar systems.^{3,4}

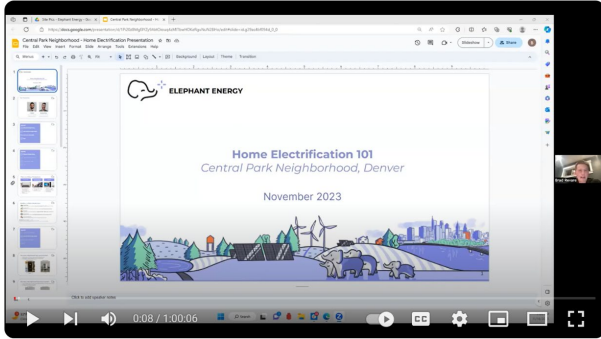
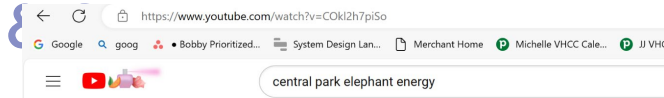
Weatherization and weatherization upgrades ensure your home is safer for your family.

1 HomeAdvisor Network, 2020. 2 EnergySaver.com, 2020. 3 Zillow, 2020. 4 Zillow, 2020.

Our "Secret Sauce": Homeowner Education



admaps



CPUN Sustainability Committee featuring Elephant Energy discussing heat pumps +rebates+tax savings



Prepared For:

Customer
:)

Home Comfort Proposal

5/2/24

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ELEPHANT ENERGY

Thank You!

<https://elephantenergy.com/>

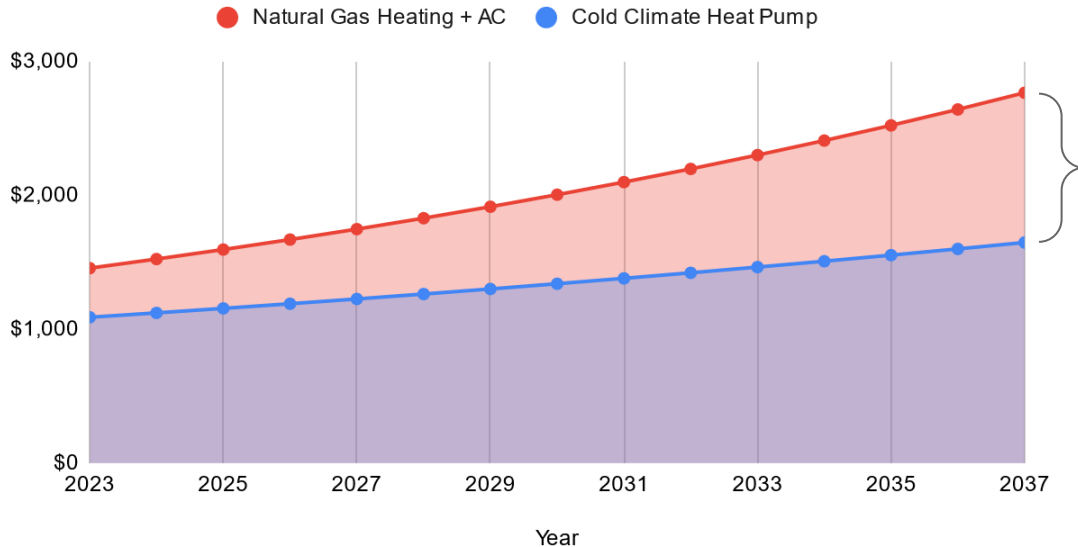


APPENDIX

SAMPLE: Cost and Carbon Implications



Annual Heating & Cooling Costs: Gas Furnace vs Heat Pump



Estimated 15 Year Savings of:

\$9,350

Carbon Savings 113,278 lbs of CO₂

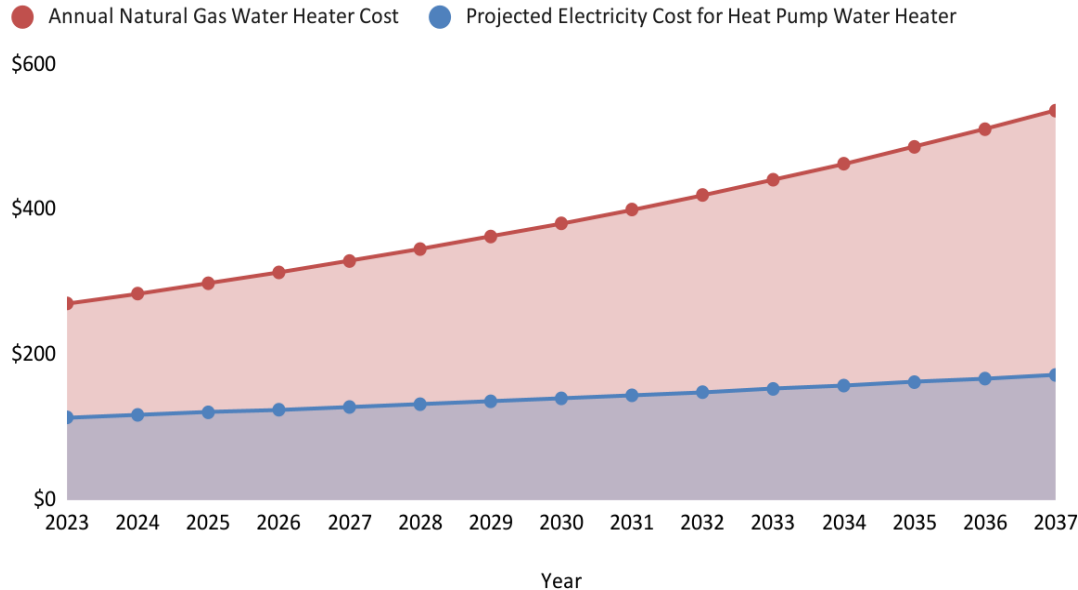
% Reduction 77%

*Heat Pumps will reduce your annual heating bills and carbon emissions by using technology that is **significantly** more efficient.*

Water Heater: Cost & Carbon Implications



Annual Costs: Gas Water Heater vs Heat Pump Water Heater



Estimated 12 Year Savings of:
\$3,728

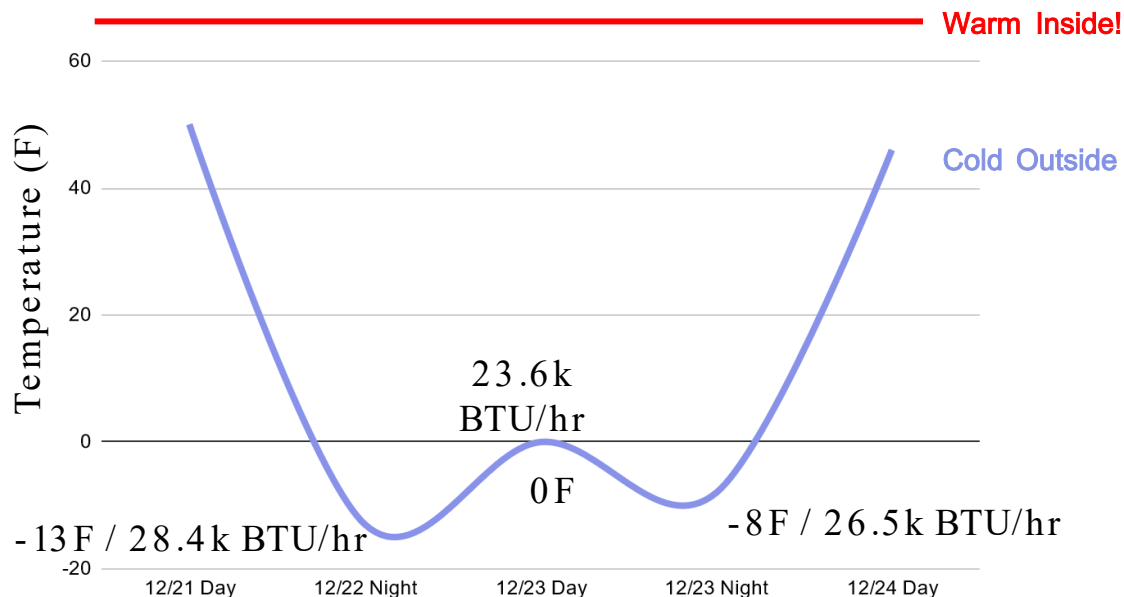
Carbon Savings **34,803** lbs of CO₂
% Reduction **89%**

*Heat Pump Water Heaters will reduce your annual heating bills and carbon emissions by using technology that is **significantly** more efficient.*



SAMPLE: Covering Heat Load in a Central Park Home

Modeling Your Home During the Dec '22 Cold Snap *Colorado's Coldest Weather in 30 Years!*



System Selection

Outside Temp (F)	Your Heating Need (k BTU/hr)
-20.00	29.3
-10.00	25.8
0.00	22.4
10.00	19.0
20.00	15.5

Our recommended heat pump can produce over 36,000 BTU/hr and has a thermal shutoff of -23 F

Programs CEO will administer with IRA funding:

Title	Description	CO Amount
IRA 50122: Home Electrification and Appliance Rebates (HEAR) or (HEERA)	Electrification of efficient appliances	\$70.3M
IRA 50121: Home Energy Performance -Based, Whole Home Rebates (HOMES)	Energy efficiency retrofits with savings based on energy saved, either modeled or measured	\$69.9M



**** Home Energy Rebate Program funds are not yet available.**



Q: Will any State IRA-funded rebates be available for customers with income higher than 150% of AMI?

A: No

Q: When will state-administered, IRA-funded rebates be available?

A: We are in the process of building and designing the rebate program. Advise customers not to wait to purchase equipment if they are ready to purchase equipment.





What does a ducted Heat Pump system look like?

- Reuses existing ductwork from previous furnace/air conditioner/heat pump
- More airflow than most furnaces (good for more even heating/cooling!)
- 3x more efficient than high efficiency furnaces

Indoor Air Handler Unit



Can be vertical (as shown) or horizontal

Outdoor Condenser



52" tall



What does a Mini Split Heat Pump system look like?

- A single minisplit can treat up to 1,000 sqft, but total MS needed *depends* on how many rooms in the home
- Outdoor condenser powers indoor mini-splits
- Very efficient and utility bill friendly system!

Mini - Split Heads



Can be ceiling cassettes, wall mounts or floor mounts

Outdoor Condenser



52" tall



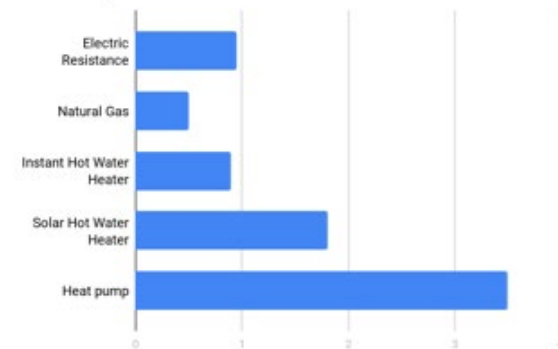
How Heat Pump Water Heaters Work

Use electricity to pull heat from surrounding air & transfer it to water in your tank - i.e., a refrigerator in reverse

- ✦ 2-3x+ more energy efficient vs. conventional electric resistance water heaters
- ✦ Since they don't generate heat, gas leaks & toxic emissions are non-existent
- ✦ Installing them in space w/ excess heat (furnace room) → greater efficiency



Efficiency in hot water heaters



Feel good *in* your home. Feel good *about* your home.

Benefits to an Energy Audit



- ✦ a comprehensive evaluation of a home, a building, or a facility to determine how energy is being used and where energy is being wasted.

What you need to know about energy audit

What it includes

Thorough examination of a building's lighting, HVAC systems, insulation, and appliances to identify inefficiencies and areas where energy usage can be reduced

Blower door test

A diagnostic tool used to measure air leakage in a building. It involves sealing all openings in the building envelope and using a special fan to create a pressure differential, allowing the auditor to measure the rate of air infiltration.

Output/Report

Breakdown of energy consumption by area, a list of potential upgrades or repairs, and an estimate of the cost savings based on the recommendations

Cost

\$150 after Xcel Rebate

Advantages

- Identify opportunities for energy savings and efficiency improvements, which can help reduce energy costs, improve indoor comfort, and lower greenhouse gas emissions
- Improve the a home's sustainability
- identify opportunities for financial incentives or rebates offered by utility companies or government programs for energy efficiency upgrades