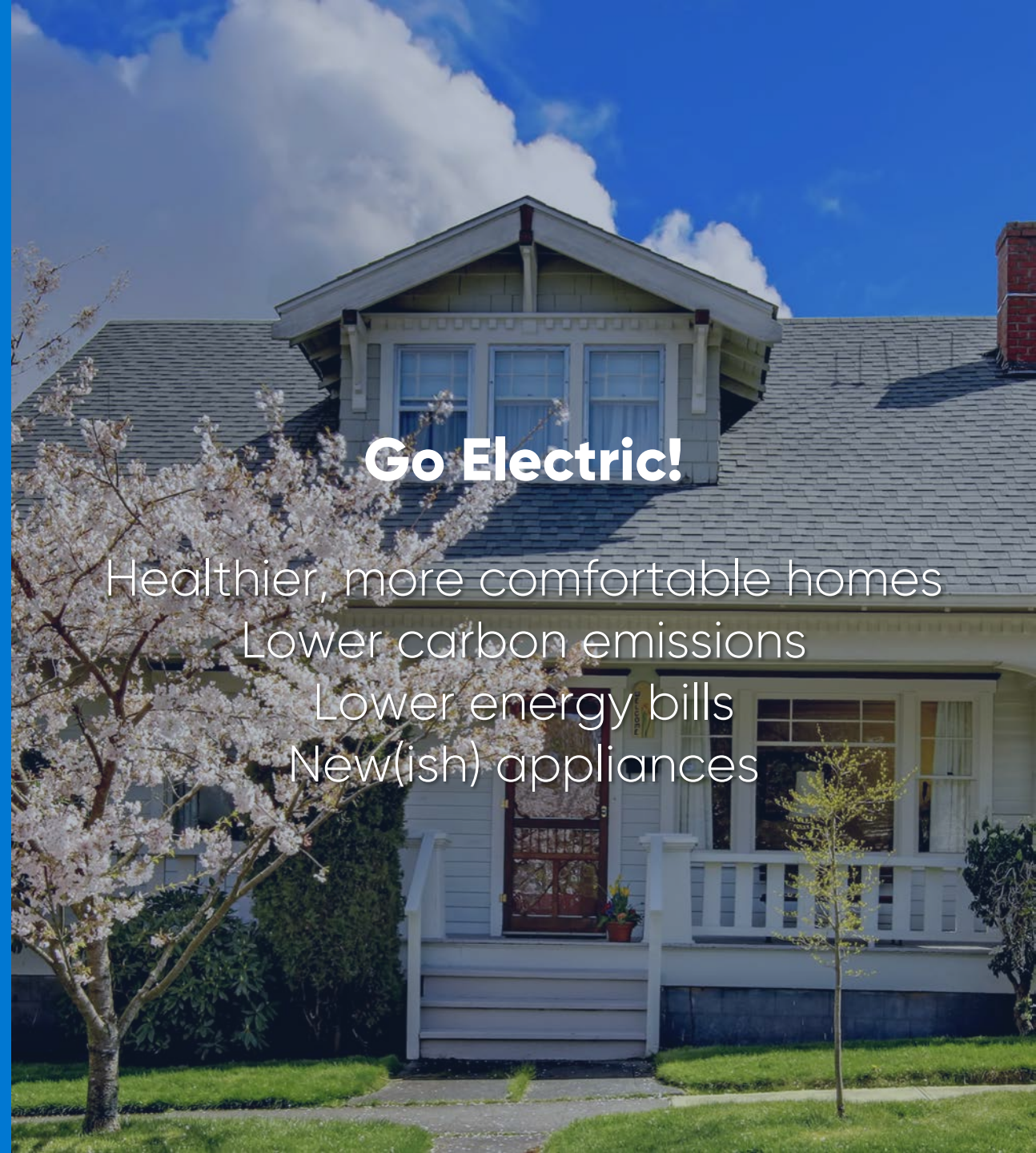




Go Electric!

Healthier, more comfortable homes
Lower carbon emissions
Lower energy bills
New(ish) appliances





Electricity

Coal & Natural Gas

29%

Of Oregon GHG



Transportation

Gasoline / Diesel

35%

Of Oregon GHG



Heat

Natural Gas

14%

Of Oregon GHG

Similar or worse than coal
Major source of air pollution

Renewable Natural Gas
will not save the day

Bad News

We have to stop burning fossil fuels

From Oregon DOE – 2022 Biennial Energy Report

Good News

Wind and solar are now the lowest cost sources of new energy

Solar \$355

Wind \$135

2009 \$/MWh

2021 \$/MWh

Gas Peaker \$124 - 159

Nuclear \$118-192

Coal \$66-152

Gas CC \$41-62

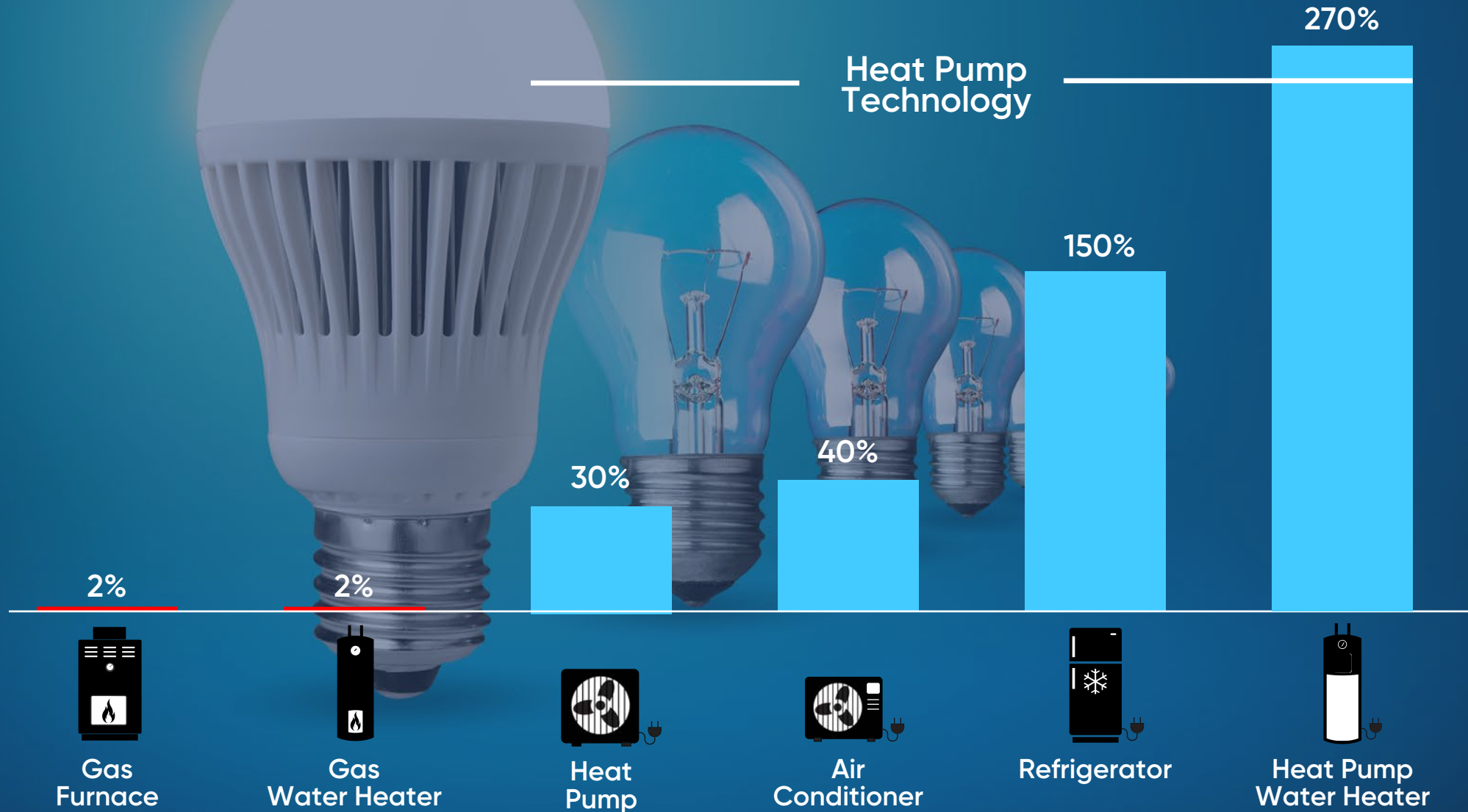
Solar \$30-41

Wind \$26-50

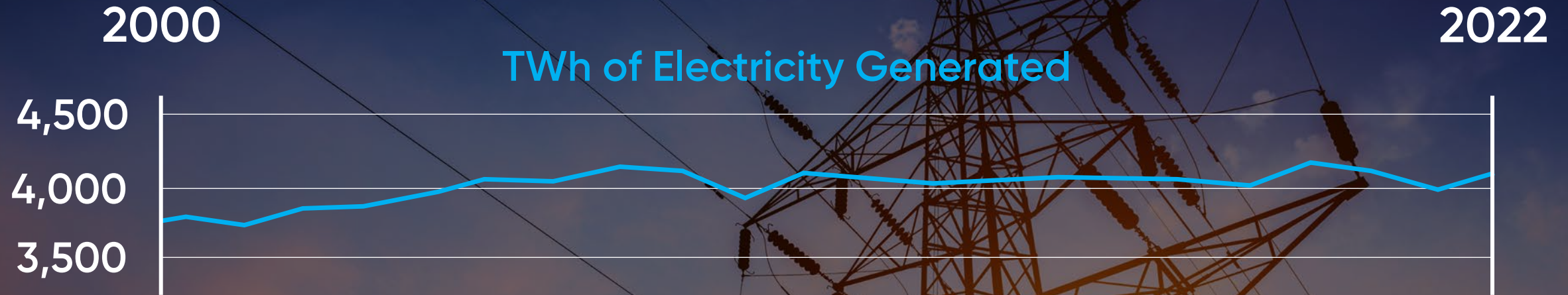


Electric Appliances are now dramatically more efficient

30 Year Energy Efficiency Increases



US Electricity Consumption



30 Million more people
Larger Homes
15 Million Heat Pumps
2.5 Million EVs
5,000 Data Centers
310 Million Smart Phones

from US EIA – US Electricity Generation

US Electricity Consumption

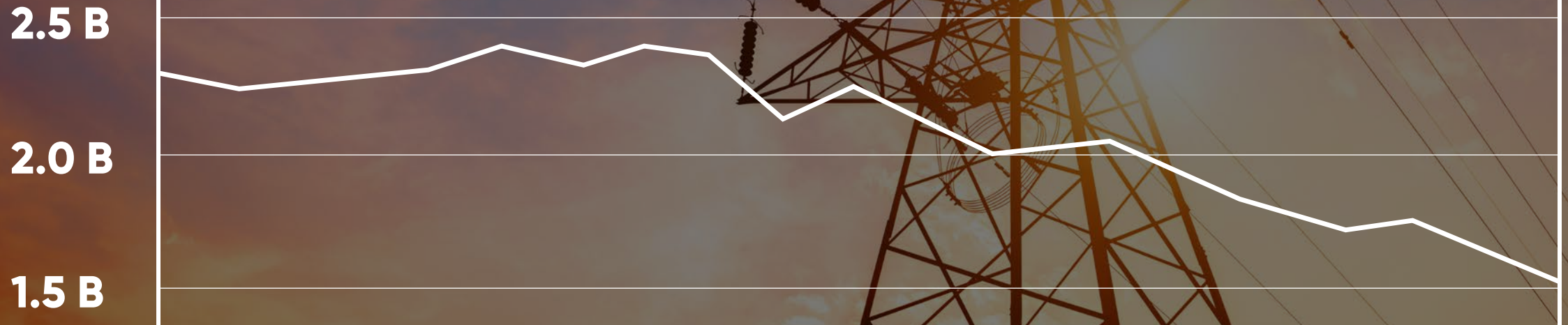
2000

2022

TWh of Electricity Generated



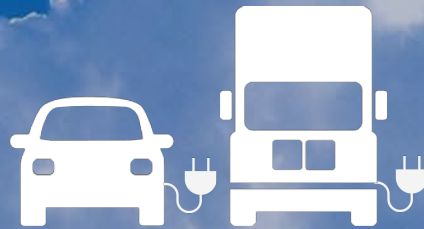
Metric Tons CO₂e Produced



from US EIA – US Electricity Generation

Electrify Everything

A sustainable future where the wind and sun powers **ALL** our primary energy needs



energy cost **Savings**
cleaner **Air**
cleaner **Water**
healthier **People**
stronger **Economy**



Electricity
3-6 Tons CO₂e/yr



Gas Car
4-8 Tons CO₂e/yr



Energy from
Fossil Fuels
= 60%
of household
emissions



Gas Furnace
4-8 Tons CO₂e/yr



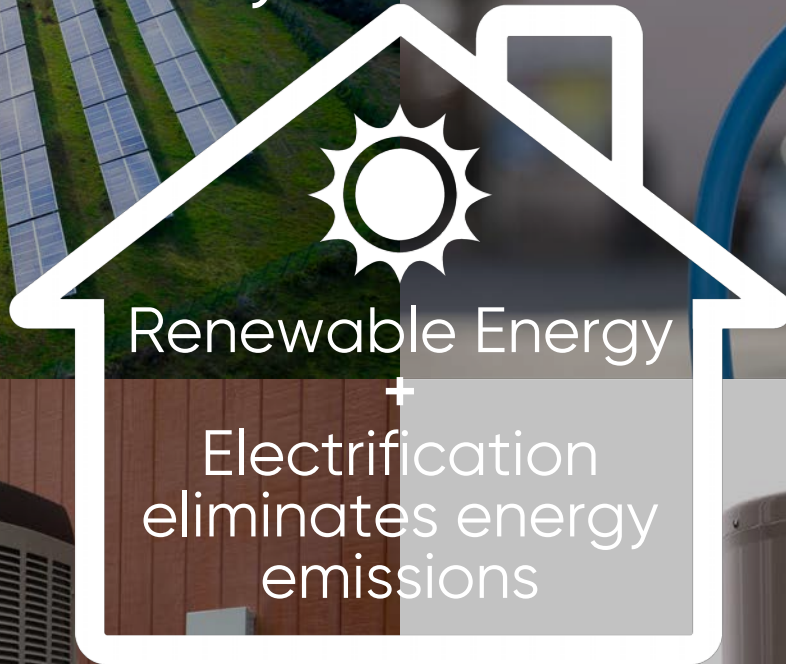
Gas Water Heater
1-3 Tons CO₂e/yr



100% Renewable Electricity
0 Tons/yr



EV
0 Tons/yr



Heat Pump
0 Tons/yr



Heat Pump Water Heater
0 Tons/yr



Typical Household
Energy Emissions

15–30 Tons CO₂/yr

Current Grid Mix Energy
+ Electrification

8–16 Tons CO₂/yr



Typical Household
Energy Emissions

15-30 Tons CO₂/yr

\$7,500/yr



Renewable Energy
+ Electrification

0 Tons CO₂/yr

\$3,000/yr



Oregon is headed to 100% Clean Energy by 2040

**Any Pacific Power or PGE customer can get 100%
clean energy right now with Community Solar**

Essential Electric Technologies

Ultra High Efficiency – High Performance – Low Carbon

Heat Pump
Water
Heater



Heat Pump
Space
Heating/AC



Induction
Range/
Cooktop



Electric
Fireplace,
HP Dryer



Electric
Vehicle





Heat Pump Water Heater

Reliable hot water
3-5 times more energy efficient
Lowest cost of operation
Longest product warranties
Grid interactive

10 year warranties

Rheem

AO Smith

Bradford
White

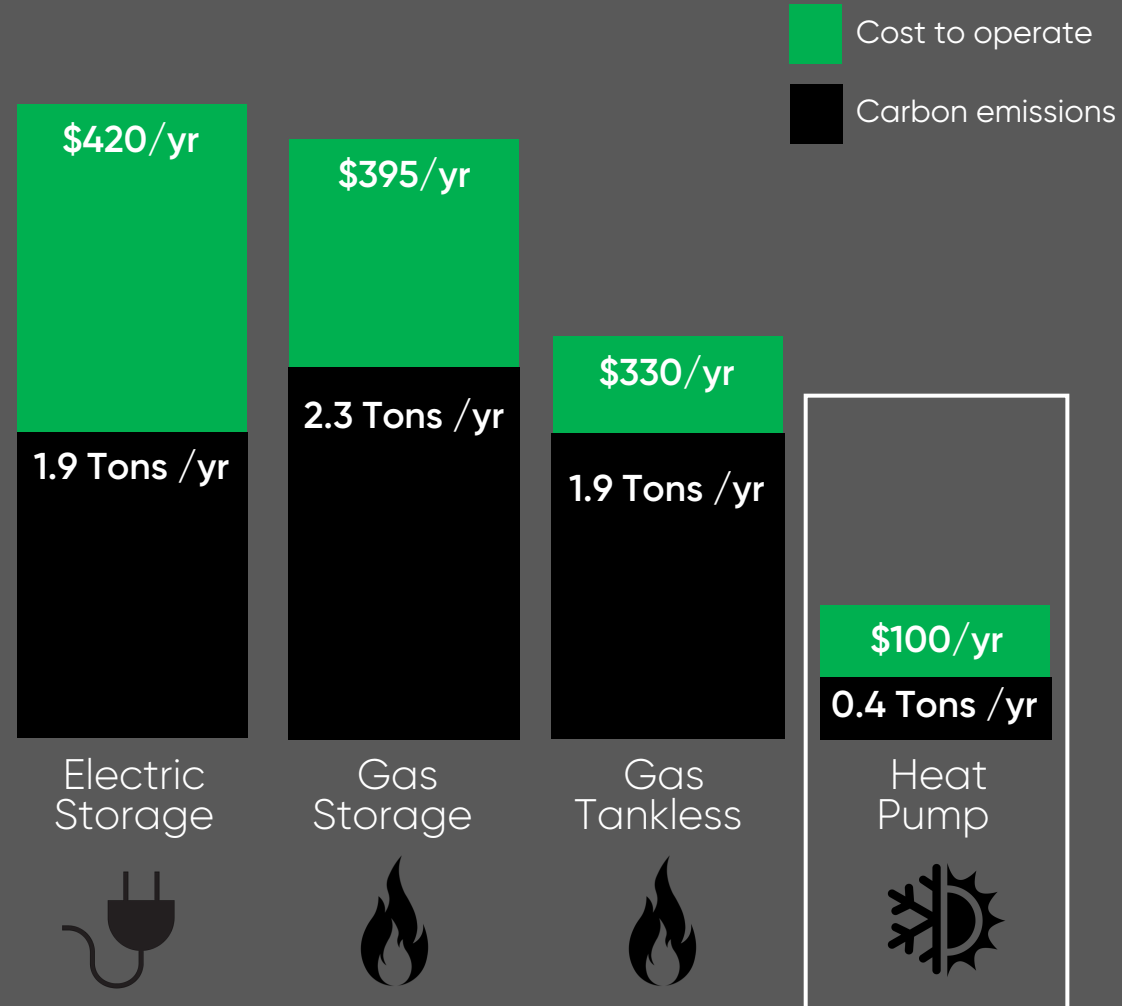


Heat Pump Water Heater

3-5 times more energy efficient

Lowest cost hot water

Demand-response ready



10 year warranties

Rheem

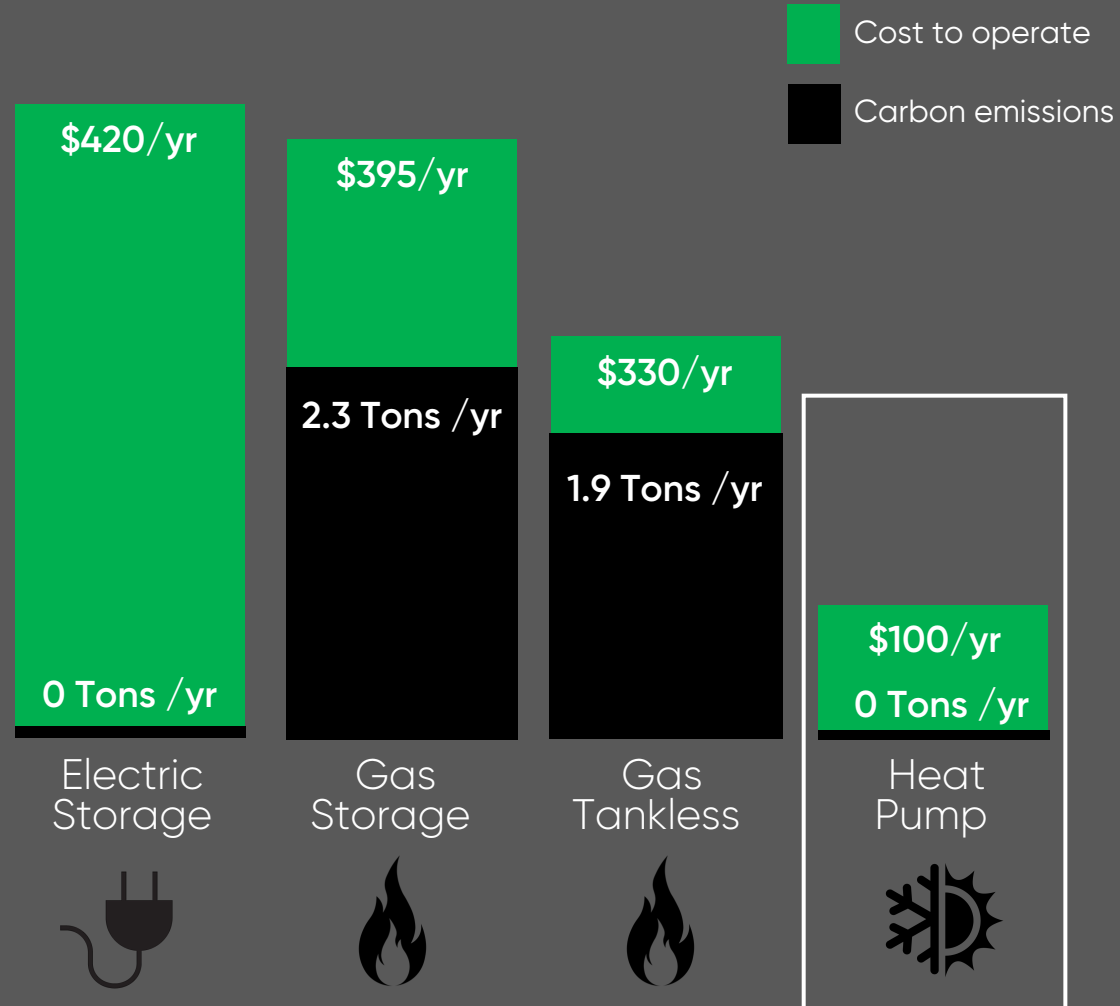
AO Smith

Bradford
White



Heat Pump Water Heater

3-5 times more energy efficient
Lowest cost hot water
With renewable energy



Heat Pump Space Heating/AC

Heating and Cooling with one system

More constant temperatures

More continuous air movement

More air filtration

Superior Comfort

Avoid 4-8 Tons carbon emissions



Ducted/Central Heat Pump



Ductless/Mini-Split Heat Pump

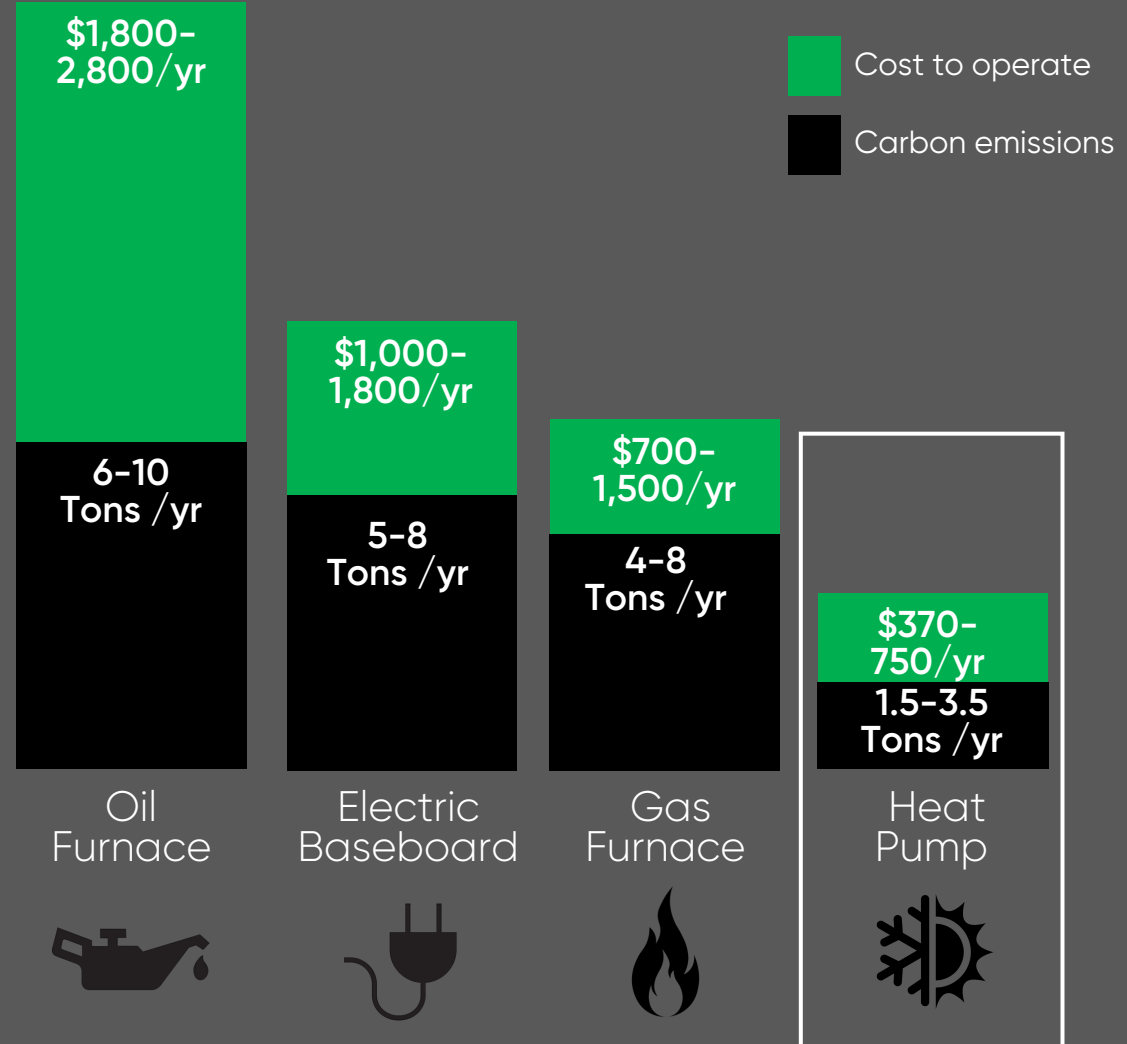


No gas backup needed!



Heat Pump Heating/AC

Lowest cost of operations
Lowest carbon emissions



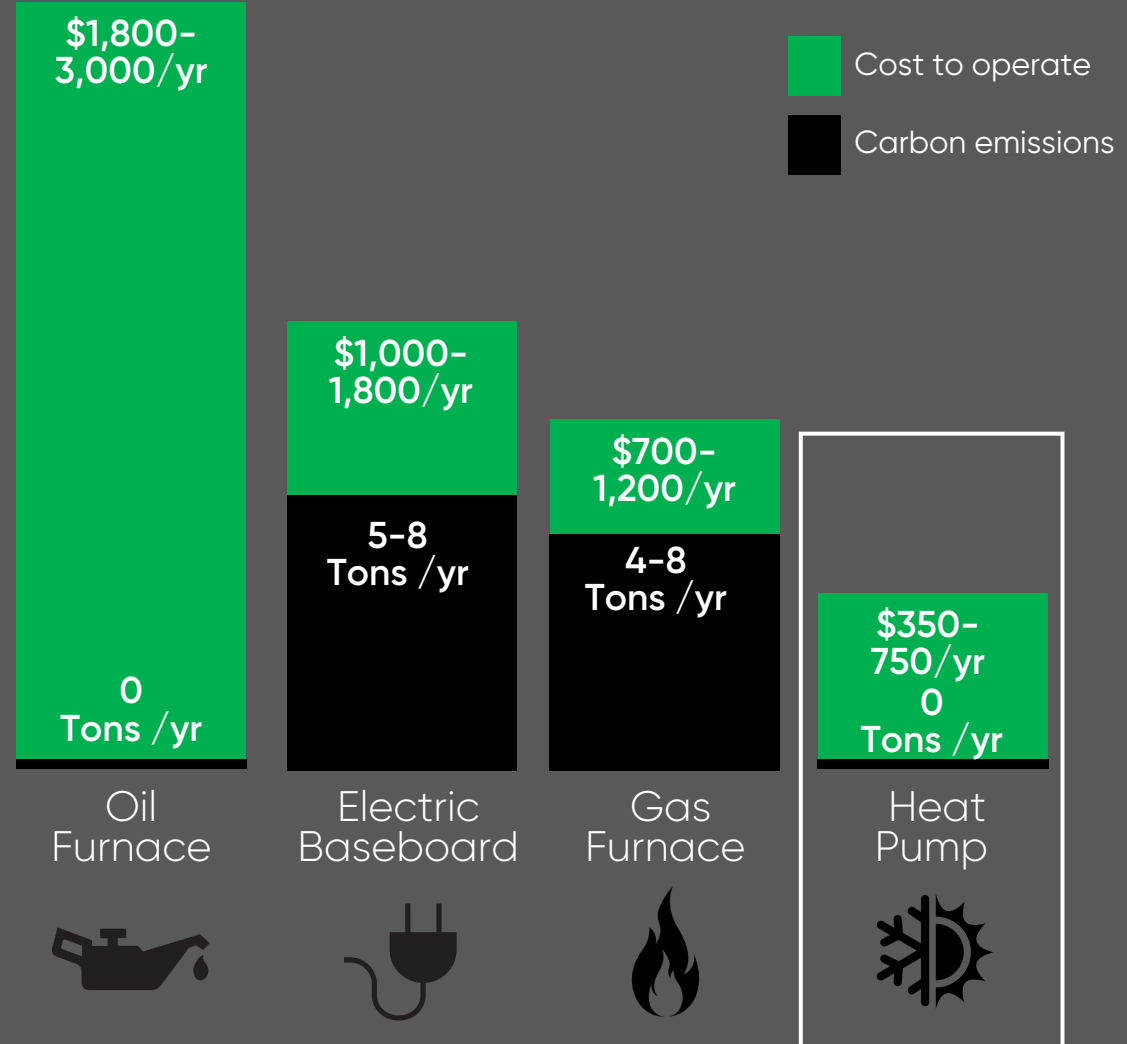


No gas backup needed!



Heat Pump Heating/AC

Cost effective and fewer emissions
With renewable energy



Induction Cooking

Better performance/ Superior indoor air quality

Precise temperature control
Faster heating and cooldown
Much easier to clean
Safer





Stanford
University

Use of a gas stove increases household air pollution and the risk of childhood asthma and asthma severity.

A single gas stove burner can create higher indoor concentrations of cancer causing benzene than second hand tobacco smoke

Indoor air pollution from gas stoves can reach levels that would be illegal outdoors

from: American Medical Association, RMI, Physicians for Social Responsibility, Sierra Club, Mothers Out Front, Stanford University

Safer

ZERO CO and NO₂ emissions
No leaking methane
Surface stays cool to the touch



Superior Performance

Time to boil 8 quarts of Water



9.3 min



Electric
Induction



17.8 min



Electric
Resistance



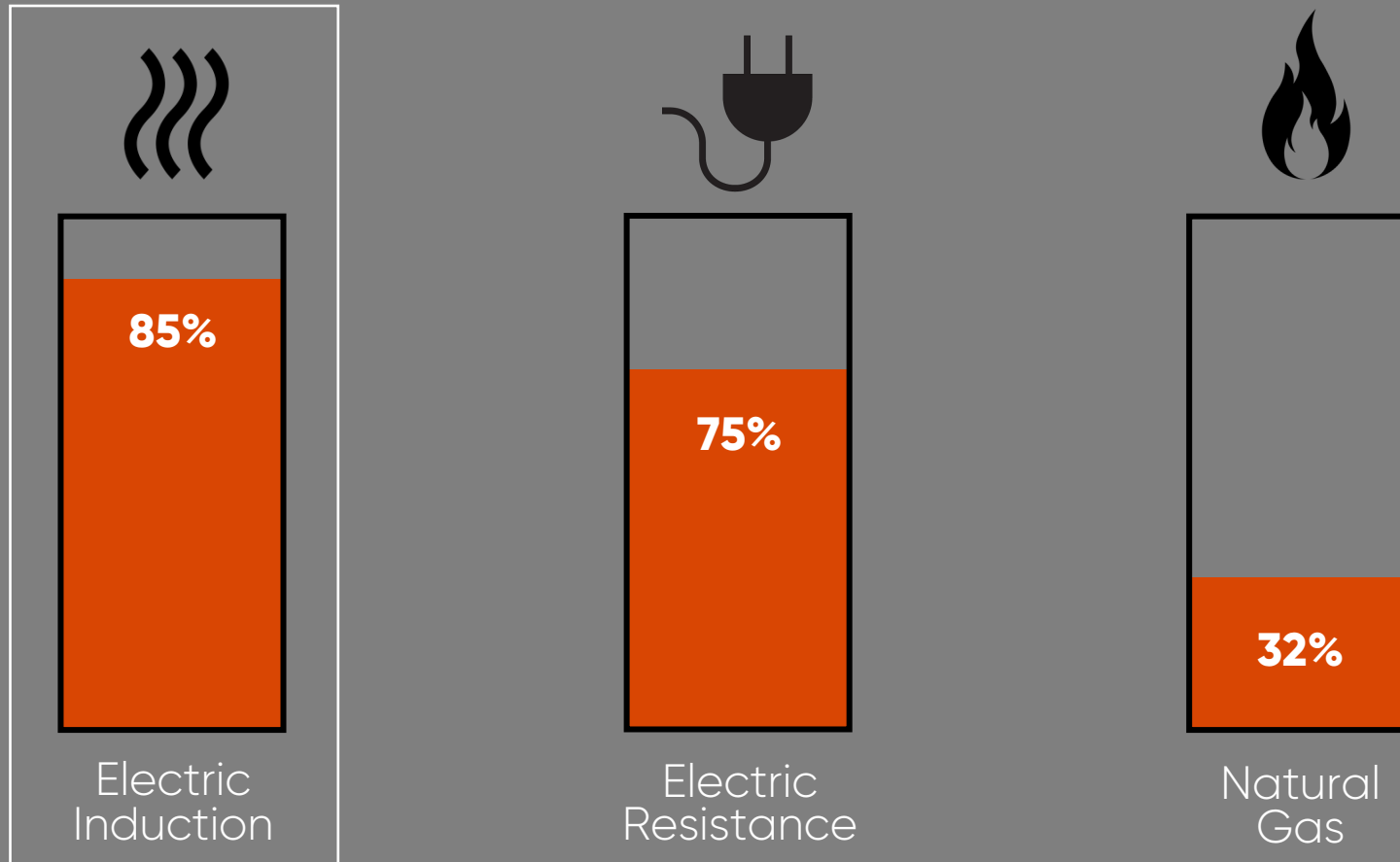
18.6min



Natural
Gas

Superior Efficiency

More useful energy delivered



Major Manufacturers

Frigidaire
\$650

Samsung
\$1,100

LG
\$3,000

Café
\$4,500

Bosch 36"
\$6,000





Induction Hot Plate

- Countertop unit
- All the speed and control of induction
- Cost around \$100 or less

Electric Vehicles

Better Performance
Dramatically lower operating costs
Charge from home
Very little maintenance
No gas stations!!!

EV's are far more energy efficient

More miles for the money

Hyundai Kona



66
miles

Hyundai Kona EV

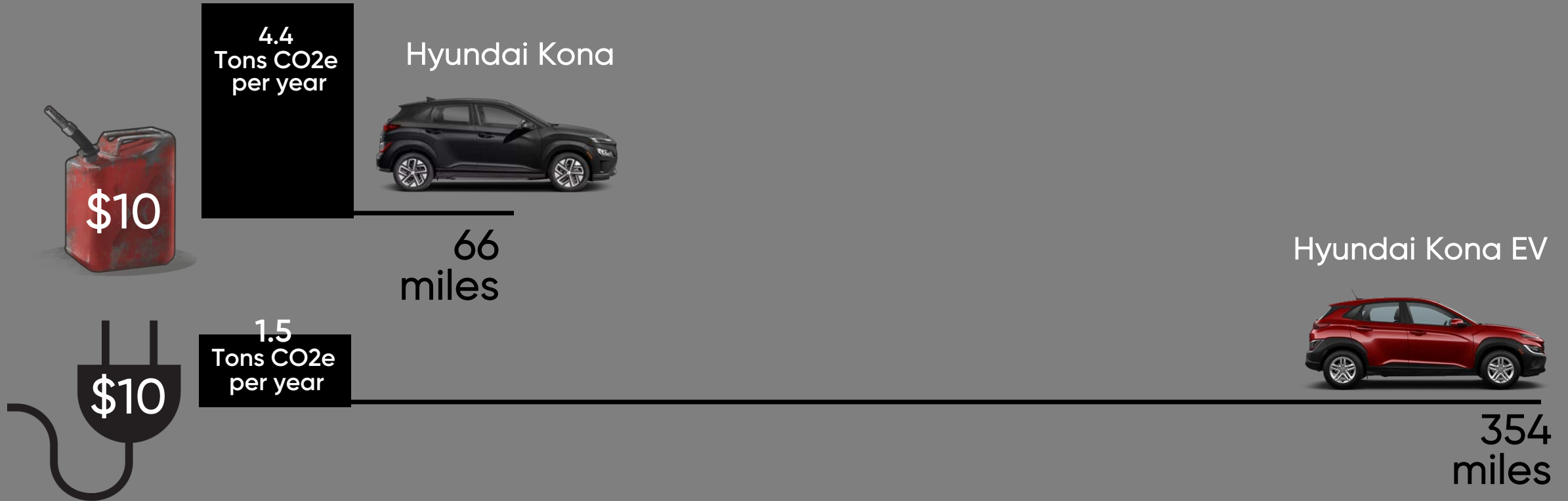


354
miles



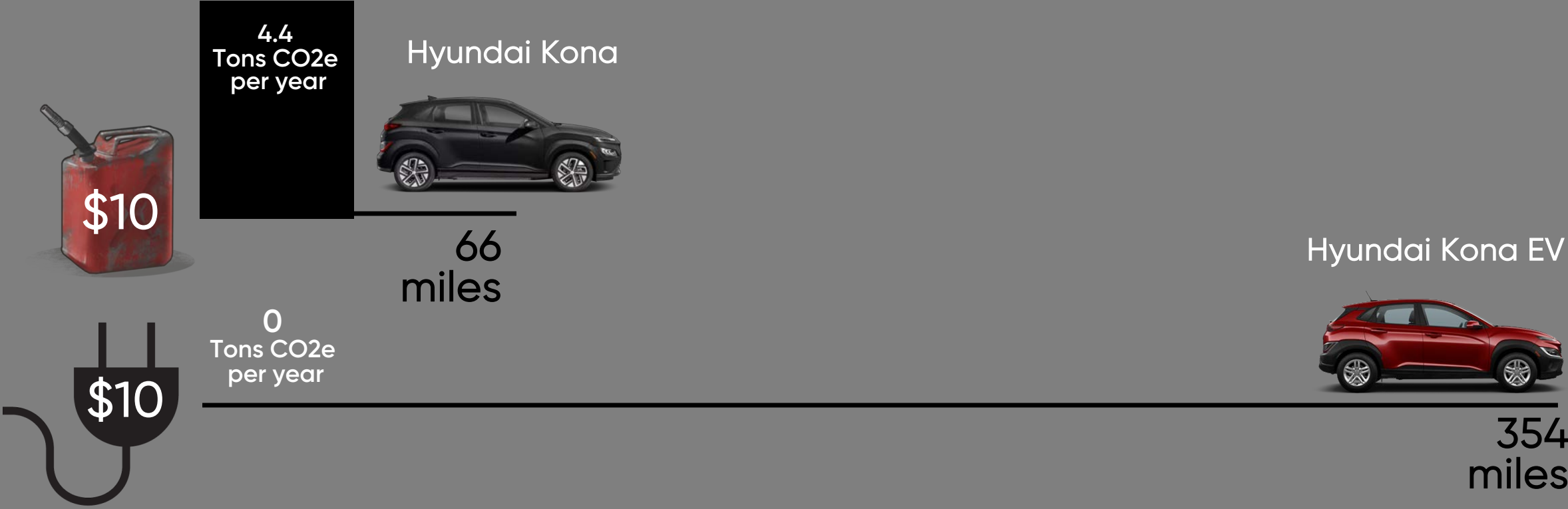
EV's are far more energy efficient

Fewer carbon emissions per mile



EV's are far more energy efficient

Zero emissions when charging with renewable energy



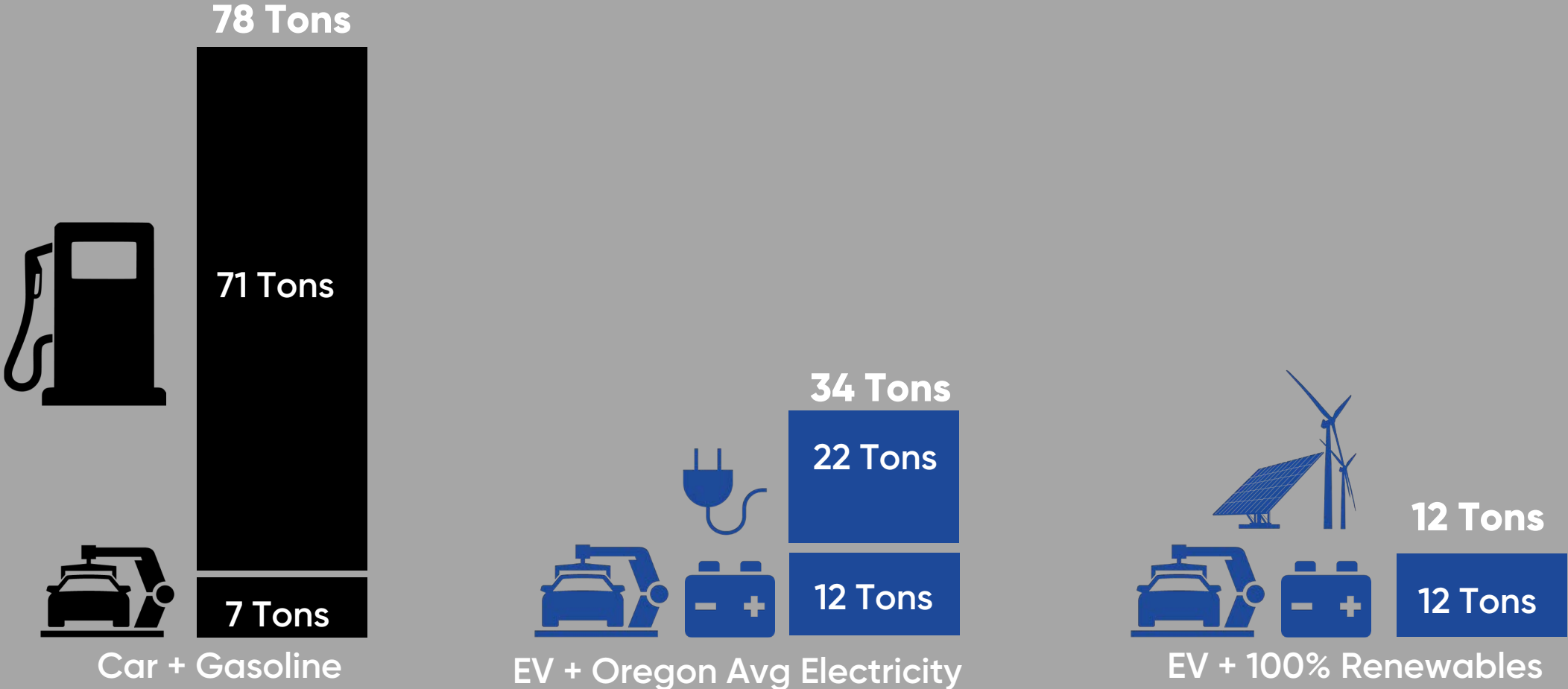
EV's are cheaper than you think!

	Kona	Kona EV
2023 List Price	\$23,950	\$33,550
Fed Tax Credit		-\$7,500
State Tax Credit		
	<hr/>	<hr/>
	\$23,950	\$26,050
5 yr fuel cost	\$8,850	\$1,770
5 yr maintenance	\$2,000	\$880
	<hr/>	<hr/>
Total 5 yr Cost	\$34,700	\$28,700

**You Save
\$6,000**

What about the manufacturing the batteries?

EV's produce far lower lifecycle emissions



Resilience and Grid Efficiency

Vehicle to Home
Vehicle to Grid

70 - 140kWh sitting in your driveway



Tips on how to get started

Get a home energy audit

Weatherize and insulate if needed

You may need electrical upgrades

Get 3 quotes from HVAC contractors

Take advantage of incentives



 electrify now



Save money by grouping electrical work



Load Calculation
Inspect Ducts and Insulation

 EnergyTrust of Oregon

 IRS

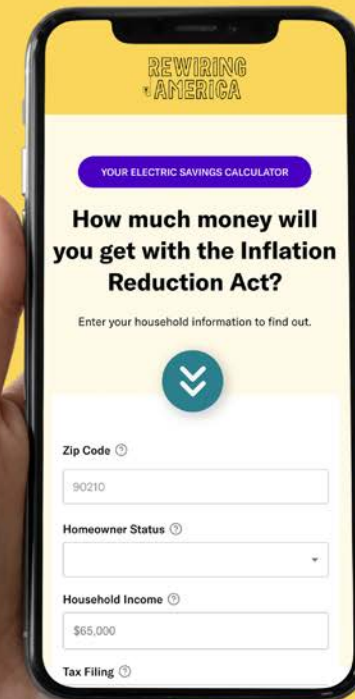
The Inflation Reduction Act

"...the single largest climate investment in American history"

\$ Billions in rebates, tax incentives, supply chain investments for:

Home energy upgrades
Clean energy infrastructure
Domestic manufacturing

REWIRING AMERICA




REWIRING AMERICA

YOUR ELECTRIC SAVINGS CALCULATOR

How much money will you get with the Inflation Reduction Act?

Enter your household information to find out.



Zip Code ⓘ
90210

Homeowner Status ⓘ
[Dropdown menu]

Household Income ⓘ
\$65,000

Tax Filing ⓘ



Household Electrification Incentives

All the savings you may be eligible for!

Tax Credits ⓘ

ITEM	AMOUNT
Battery Storage Installation	30%
Geothermal Heating Installation	30%
Electric Panel	\$600
New Electric Vehicle	\$7,500
Heat Pump Air Conditioner/Heater	\$2,000
Heat Pump Water Heater	\$2,000
Rooftop Solar Installation	30%
Weatherization	\$1,200
Electric Vehicle Charger	\$1,000
Used Electric Vehicle	\$4,000

Local, State and Federal incentives add up to big savings



\$3,050
HP Water Heater



\$3,650
Heat Pump



\$0
Induction



\$0
Heat Pump Dryer



\$8,000
EV and Charger



\$150
Energy Audit



\$5,300
Weatherization



\$1,600
Wiring/ Panel

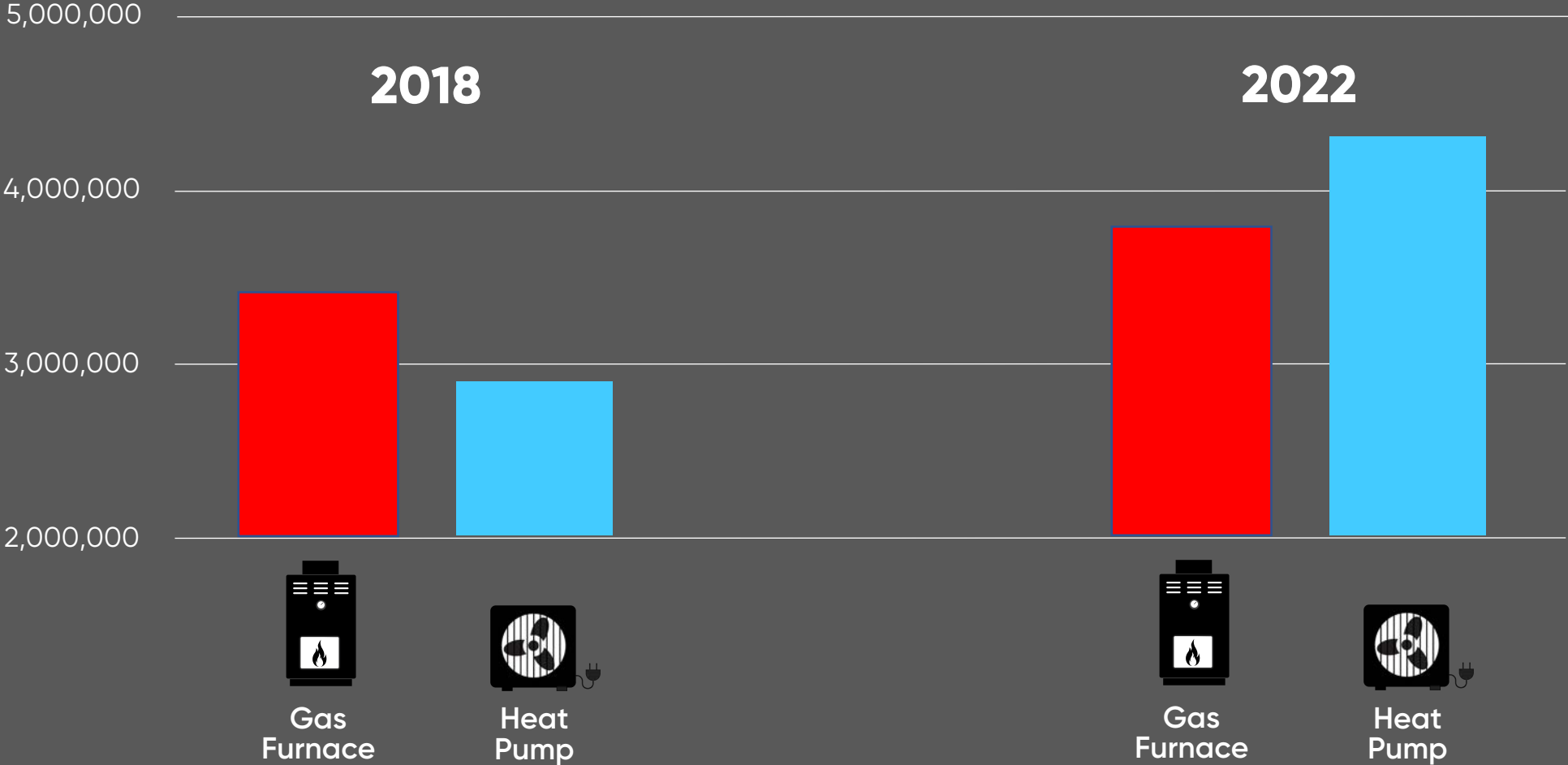


\$5,600
Rooftop Solar*

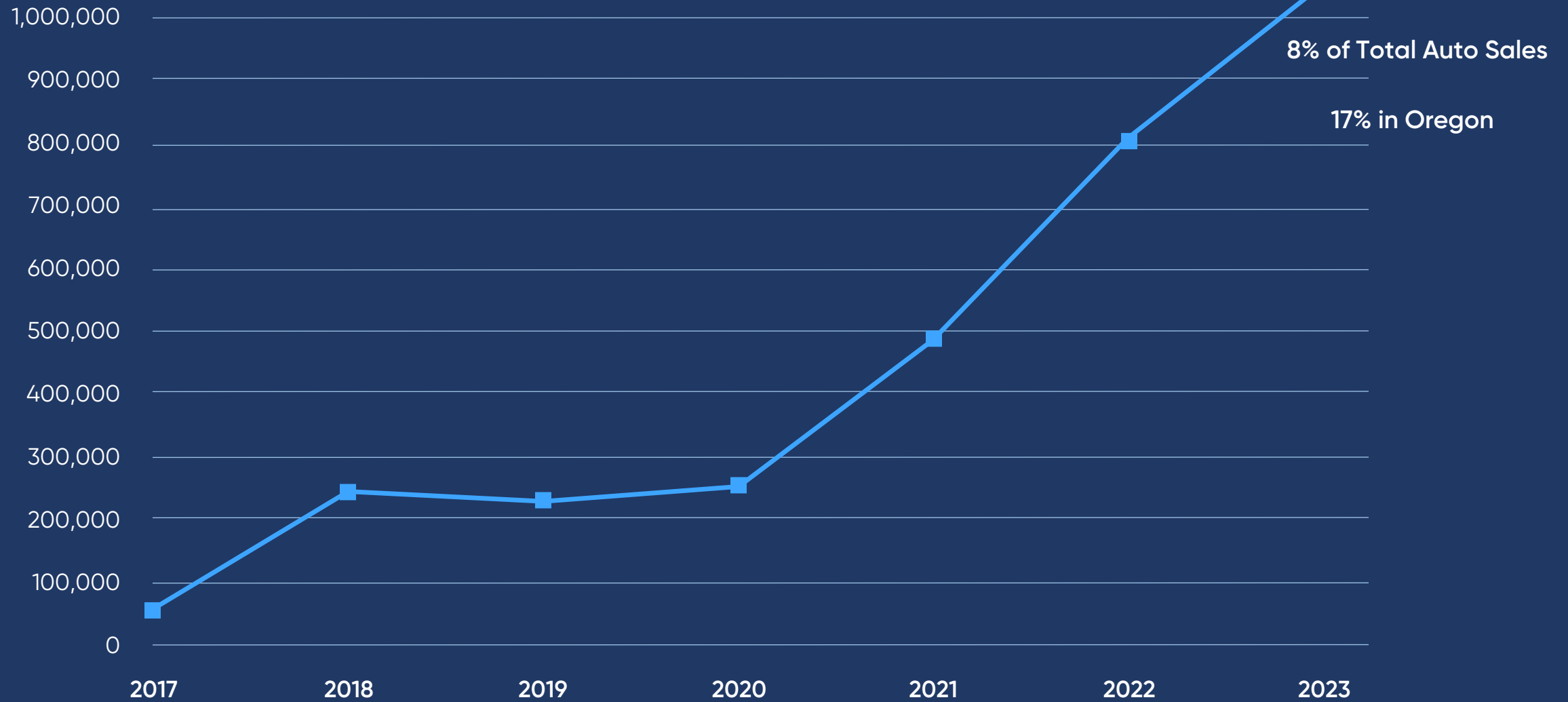


\$10,500
Battery Storage*

Americans prefer Heat Pumps!



US EV Sales



Cox Automotive – US Auto Sales

Take Action!



1. Clean up your electric supply
2. Electrify your home
3. Electrify your ride
4. Electrify Everyone

electrifynow.net

