

# Home Energy and the Inflation Reduction Act

January 22, 2025

AUGUST 2024

Keith Turner

Successfully completed Rewiring America's  
Electric Coach Certification of Knowledge (ECC)

The program includes 8 hours of instructor-led learning and  
associated coursework covering weatherization, heat pumps, whole  
home electrification technologies, and strategic communications.

Edith Buhs

EDITH BUHS  
Manager of Training  
and Development

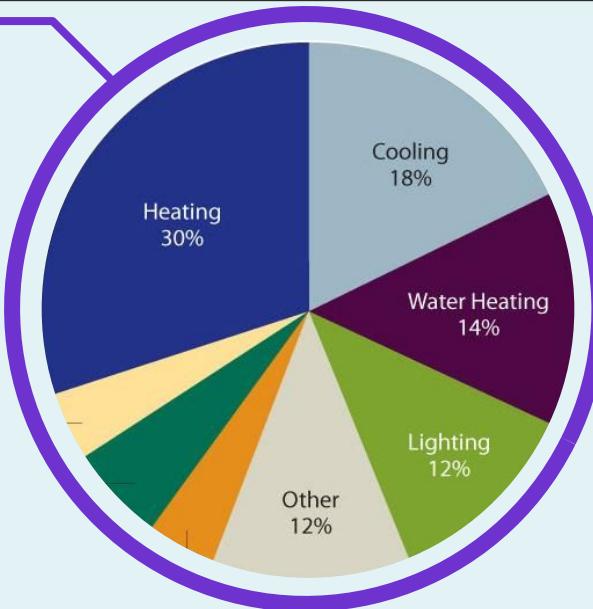
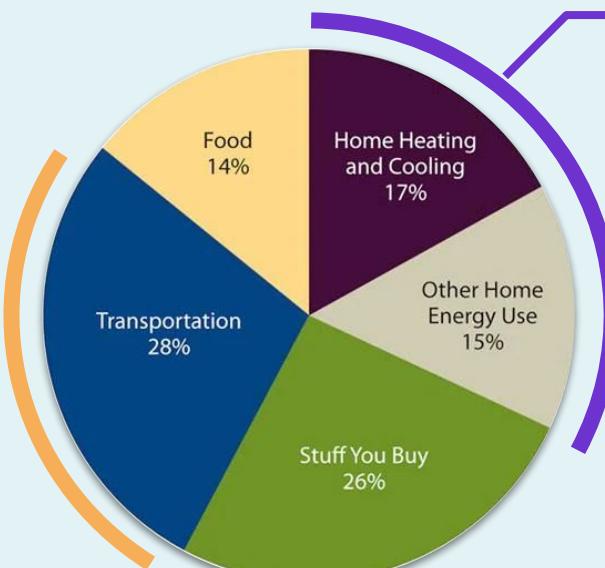


REWIRING  
AMERICA



REWIRING  
AMERICA

# Home Energy and the Inflation Reduction Act



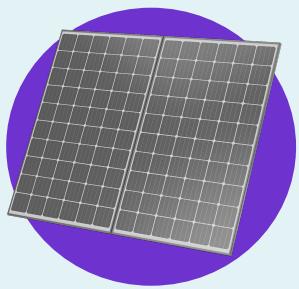
- U.S. households spent on average 5.6% of their income on energy (2022)
- Low-income households spent on average 17.8%
- One in Four (25%) households spent more than 12%
- Rural households 50% higher than urban households.

\*US Averages, EPA Data 2020-2022

11,000 kilowatt-hours (kWh) avg. = 9,700 lbs CO2e

96 million BTUs natural gas heating avg. = 11,232 lbs CO2e

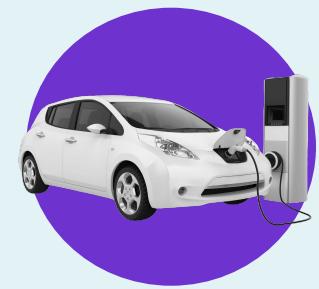
## THE INFLATION REDUCTION ACT



- 1. Climate Change and Energy Initiatives**
  - Investments
  - Tax credits
  - Domestic Manufacturing
  - Methane Emissions
- 2. Healthcare Provisions**
- 3. Corporate Tax Reform**
- 4. Deficit Reduction**

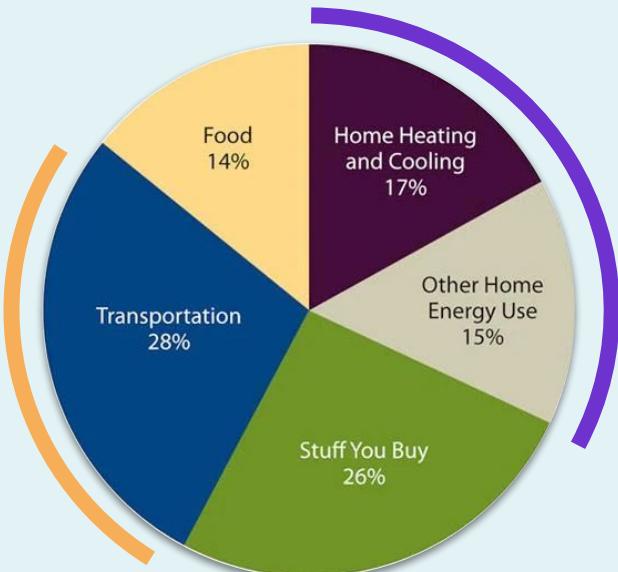


- 5(a). Consumer and Residential Benefits**
  - **Home Energy Efficiency Incentives:** rebates and tax credits
  - **Reduced Energy Costs**  
**\$500-\$1,000/yr utility savings**
  - **\$9,000 to \$18,000**  
lifetime electricity saving  
up to **\$14,000** in upfront costs  
(Income limited)



- 5(b). Consumer and Residential Benefits**
  - **Electric Vehicle Incentive**
  - **Expands tax credits**  
with conditions on  
manufacturing location and  
material sourcing.

# Home Energy and the Inflation Reduction Act



## Carbon Emissions

Graphs Source: Union of Concerned Scientists 2012

 **REGENALL**

[About Us](#) [Our Impact](#) [Our Priorities](#) [Take Action](#) [Donate](#)

[Carbon Footprint](#)  
[Carbon Offset](#)  
[Carbon Calculator](#)  
[Climate Action Plan](#)  
[FAQs](#)

## Carbon Footprint Calculator

**Demographic**

Number of people in your household

Zip Code

 Home Energy  
 Transportation  
 Food  
 Materials  
 Services  
 Annual CO<sub>2</sub> Footprint

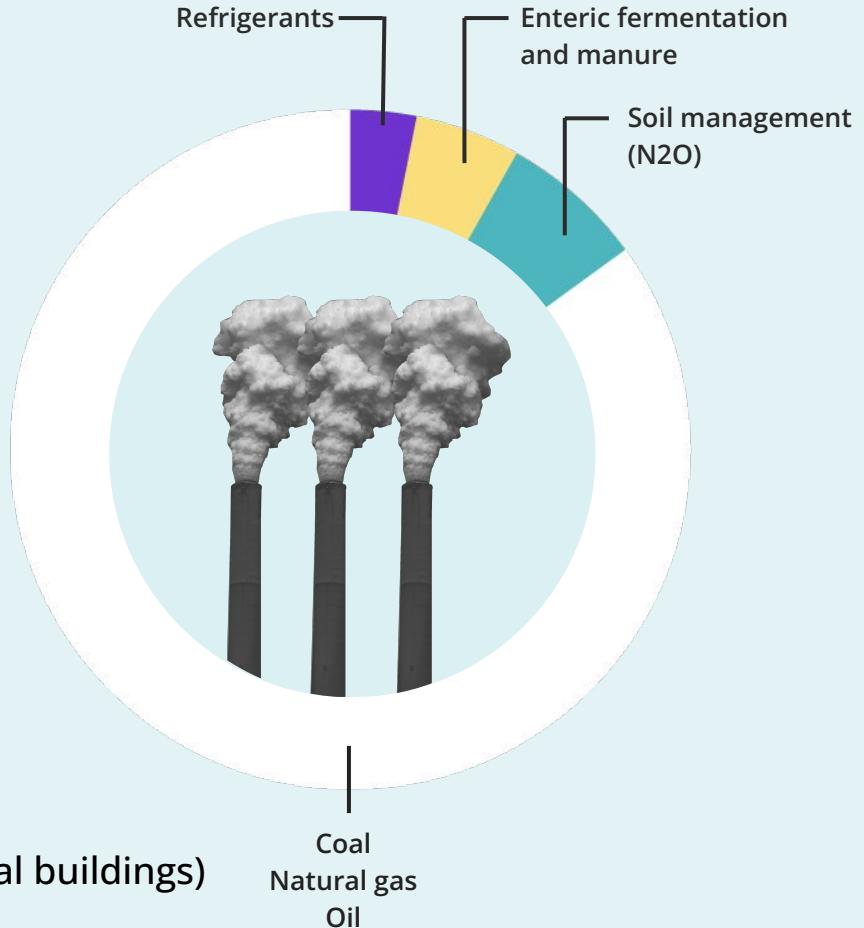
**Next**

## GREENHOUSE GAS EMISSIONS

87%

of emissions come from energy

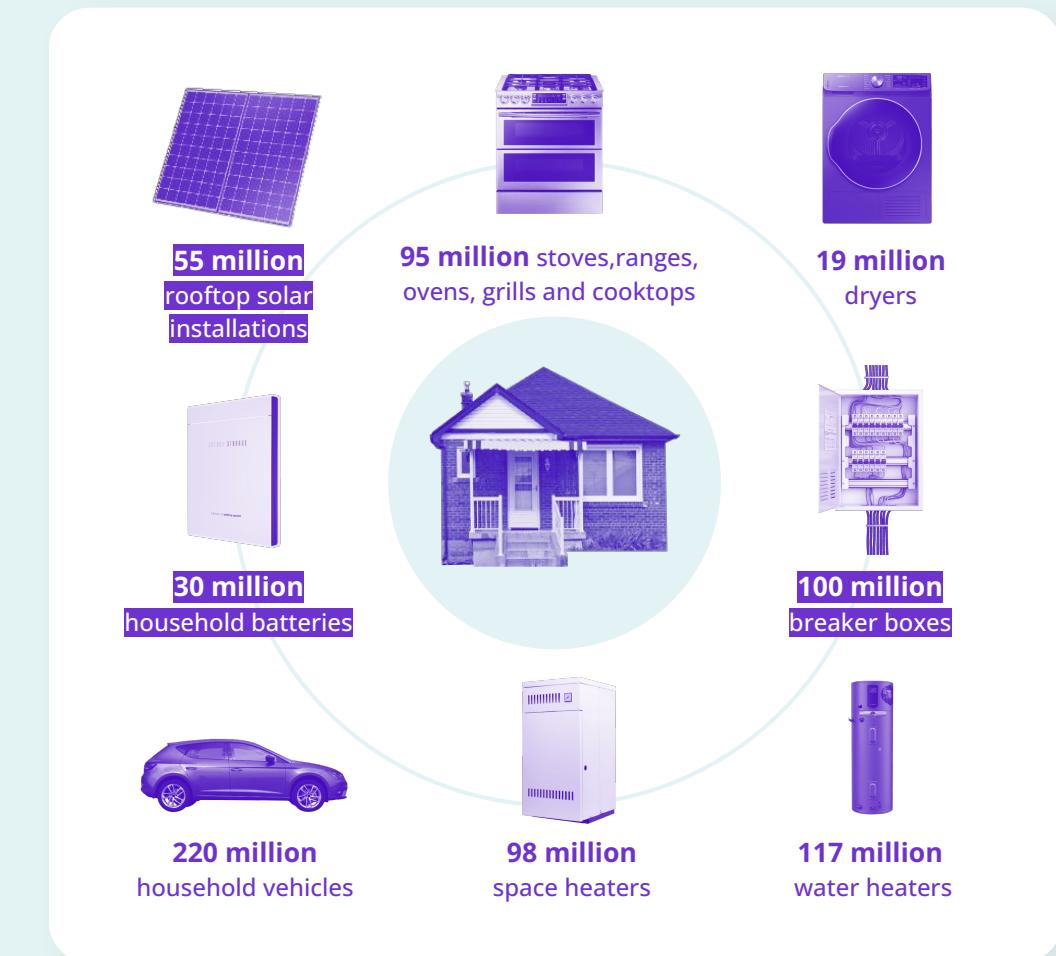
- Electricity
- Manufacturing (industrial heat)
- Transportation
- Heating & Cooling (residential & commercial buildings)



42%

of our energy-related emissions come from decisions made around the kitchen table.

That's how we heat and cool our homes, cook our food, dry our clothes, and get around. And it's a huge opportunity to take meaningful personal action. This doesn't have to happen all at once - in fact it's usually more efficient to replace appliances as they age out.



# The Big Idea

## Electrify Everything

# 1

Replace any machine that currently burns fossil fuels with an electric version.



# 2

Power that electric machine with clean, renewable energy.



## Not Capped

**1** The Solar Investment Tax Credit (ITC) is expanded to 30% for the next 10 years, which allows eligible households to receive higher tax refunds for solar panels.<sup>1</sup>

**SOLAR**  
**30%**  
**Solar ITC**  
**Extended**

**2** The Solar Investment Tax credit now includes credits for batteries and geothermal too.<sup>2</sup>

**STORAGE**  
**30%**  
**ITC**  
**established**

**GEOTHERMAL**  
**30%**  
**ITC**  
**established**

## Capped **\$3,200** aggregate

**HEAT PUMP WATER HEATER**  
Tax credit:  
**\$2000**  
max

**HEAT PUMPS**  
Tax credit:  
**\$2000**  
max

**HOME ENERGY AUDITS**  
Tax credit:  
**\$150**  
max

**HOME INSULATION**  
**WINDOWS/**  
**DOORS**

Tax credit:  
**\$600/**  
**\$500**

**30% of Cost**  
**\$1,200** /year

- \$250 Per window or door
- \$500 Max for doors
- \$600 Max for windows/skylights
- PPL Rebates for insulation

## Annual Limits on Energy Efficient Home Tax Credits

**\$3,200 Aggregate**

**\$1,200 for any combination of home envelope improvements**  
(windows/doors/skylights, insulation, electrical)

**Any combination of heat pumps, heat pump water heaters and biomass stoves/boilers are subject to an annual total limit of \$2,000.**

Note: ENERGY STAR certified [geothermal heat pumps](#) are eligible for a separate tax credit and not counted against these limits.

## Credit Limit for Each Property

- \$1,200 for insulation or air sealing material system.
- \$250 for one exterior door and \$500 for all exterior doors.
- \$600 for windows.
- \$600 for central air conditioners.
- \$600 for natural gas, propane, or oil water heaters.
- \$600 for natural gas, propane, or oil furnace or hot water boilers.
- \$600 for improvements or replacements of panelboards, sub panelboards, branch circuits, or feeders.
- \$150 for home energy audits.
- \$2,000 for heat pumps and heat pump water heaters; biomass stoves and biomass boilers.

THE IRA REBATES AND  
EV TAX CREDITS

PA PROGRAM PENDING

Tac Credit with  
Income Limits



EVs

**\$7500** for a  
new car

**\$4000** for a  
used car

**\$300,000** for married couples filing jointly or  
a surviving spouse  
**\$225,000** for heads of households  
**\$150,000** for all other filers

Source: <https://joinmosaic.com>

Rebate with  
Income Limits

HEAT PUMP  
WATER  
HEATER  
Rebate:  
**\$1750** max



HOME INSULATION  
WINDOWS/ DOORS  
Rebate:  
**\$1600** max



HEAT  
PUMPS  
Rebate:  
**\$8000** max



UPDATED  
BREAKER  
BOX  
**\$4000**  
max



UPDATED  
ELECTRIC  
WIRING  
**\$2500**  
max



HEAT  
PUMP  
DRYER  
**\$840**  
max



ELECTRIC  
STOVE  
**\$840**  
max



- State Administered
- Coming in 2025 (may be impacted by new administration)
- <150% of Median Income = 50% Rebate
- <80% of Median Income = 100% Rebate

## Income Limits

### For Individual Households

**Low Income** (Below 80% AMI): **100% of project costs**, up to the maximum rebate limit.

**Moderate Income** (81%-150% of AMI): **50% of project costs**.

### For Multifamily Buildings

At least 50% of the residents must meet the income limits.

#### 80% Area Median Income (AMI)

Household Size	1	2	3	4
	\$58,800	\$67,200	\$75,600	\$84,000

#### 150% Area Median Income (AMI)

	\$110,250	\$126,00	\$141,750	\$157,500
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## THE IRA REBATES

### PA PENDING

Upgrade Type	Qualified Product	Max Rebate
Appliance	Heat Pump Water Heater	\$1,750
	Heat Pump - Heating and/or Cooling	\$8,000
	Electric Stove, Cooktop, Range, Oven	\$840
	Heat Pump Clothes Dryer	\$840
Building Material	Electric Load Service Center	\$4,000
	Insulation, Air Sealing, Ventilation	\$1,600
	Electrical Wiring	\$2,500

**Maximum rebate \$14,000  
combined appliances & materials**

## THE IRA TAX CREDITS



The screenshot shows the ENERGY STAR website with a navigation bar for 'Find Products', 'Save at Home', 'New Homes', 'Commercial Buildings', and 'Industrial Plants'. The main content is titled 'Federal Tax Credits for Energy Efficiency' and includes a sidebar with links to various energy efficiency topics like 'How ENERGY STAR Works' and 'How ENERGY STAR Protects the Environment'. A central image shows a house with a car and a battery storage unit, with a 'Watch on YouTube' button. Text below states: 'Homeowners Can Save Up to \$3,200 Annually on Taxes for Energy Efficient Upgrades'. A sidebar on the right provides 'Efficient Home Upgrades Tax Credits & Rebates' and a 'Find Savings' button.



The IRS Fact Sheet page features the IRS logo and an American flag graphic. The title 'Fact Sheet' is displayed, along with the subtitle 'Updates to frequently asked questions about Energy Efficient Home Improvements and Residential Clean Energy Property Credits'. Below this, there is a section for the 'IRS Fact Sheet' and the 'IRS Website'.

### IRS Fact Sheet

<https://www.irs.gov/pub/taxpros/fs-2024-15.pdf>

### IRS Website

<https://www.irs.gov/credits-deductions/energy-efficient-home-improvement-credit>

### Energy Star Tax Credit Website

<https://www.energystar.gov/about/federal-tax-credits#homeowners>

### DOE Website

<https://www.energy.gov/save>

### DOE Resources

<https://www.energy.gov/energysaver/resources>

### DOE Inflation Reduction Act

<https://www.energy.gov/energysaver/articles/inflation-reduction-act-2022-what-it-means-you>

### DOE Solar

<https://www.energy.gov/eere/solar/homeowners-guide-federal-tax-credit-solar-photovoltaics>

Internal Revenue Service  
Media Relations Office  
Washington, D.C.  
Media Contact: 202-317-4000  
Public Contact: 800-829-1040  
[www.irs.gov/newsroom](http://www.irs.gov/newsroom)

## THE IRA TAX CREDITS

<b>Form 5695</b> Department of the Treasury Internal Revenue Service Name(s) shown on return		OMB No. 1545-0204 <b>2024</b> All Sequence No. 75 Your social security number
<b>Residential Energy Credits</b> Attach to Form 1040, 1040-SR, or 1040-NR. Go to <a href="https://www.irs.gov/Form5695">www.irs.gov/Form5695</a> for instructions and the latest information.		
<b>Part I Residential Clean Energy Credit</b> (See instructions before completing this part.) <b>Note:</b> Skip lines 1 through 11 if you only have a <b>credit carryforward</b> from 2023. Enter the complete address of the home where you installed the property and/or technology associated with lines 1 through 4 and 5b. For more than one home, see instructions. Number and street      Unit no.      City or town      State      ZIP code		
1	Qualified solar electric property costs	1
2	Qualified solar water heating property costs	2
3	Qualified small wind energy property costs	3
4	Qualified geothermal heat pump property costs	4
5a	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5b		
6a	Add lines 1 through 5b	
6b	Multiply line 6a by 30% (0.30)	
7a	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7b	If you checked the "No" box, you cannot claim a credit for qualified battery storage technology. Does the qualified battery storage technology have a capacity of at least 3 kilowatt hours? (See instructions) If you checked the "No" box, you cannot claim a credit for qualified battery storage technology.	
b	If you checked the "Yes" box, enter the qualified battery technology costs	
8	Qualified fuel cell property. Was qualified fuel cell property installed on, or in connection with, your main home located in the United States? (See instructions)	
9	Multiply line 8 by 30% (0.30)	
10	Kilowatt capacity of property on line 8 above	\$1,000
11	Enter the smaller of line 9 or line 10	
12	Credit carryforward from 2023. Enter the amount, if any, from your 2023 Form 5695, line 16	
13	Add lines 6b, 11, and 12	
14	Limitation based on tax liability. Enter the amount from the Residential Clean Energy Credit Limit Worksheet. (See instructions.)	
15	Residential clean energy credit. Enter the smaller of line 13 or line 14. Also include this amount on Schedule 3 (Form 1040), line 5a.	
16	Credit carryforward to 2023. If line 15 is less than line 13, subtract line 15 from line 13	
For Paperwork Reduction Act Notice, see your tax return instructions. Cat. No. 13540P      Form 5695 (2024)		

<b>Form 8936</b> Department of the Treasury Internal Revenue Service Name(s) shown on return		OMB No. 1545-2137 <b>2024</b> All Sequence No. 69 Identifying number
<b>Clean Vehicle Credits</b> Attach to your tax return. Go to <a href="https://www.irs.gov/Form8936">www.irs.gov/Form8936</a> for instructions and the latest information.		
<b>Notes:</b> • Complete a separate Schedule A (Form 8936) for each clean vehicle placed in service during the tax year. • Individuals who transferred the credit to the dealer at the time of sale must file this form and Schedule A (Form 8936).		
<b>Part I Modified Adjusted Gross Income (MAGI) Amount</b>		
1a	Enter the amount from line 11 of your 2024 Form 1040, 1040-SR, or 1040-NR. Estates and trusts, Form 1041, see instructions.	1a
1b	Enter any amount from Puerto Rico you excluded	1b
1c	Enter any amount from Form 2555, line 45	1c
1d	Enter any amount from Form 2555, line 50	1d
1e	Enter any amount from Form 4685, line 15	1e
2	Add lines 1 through 1e	2
3a	Enter the amount from line 11 of your 2023 Form 1040, 1040-SR, or 1040-NR. Estates, trusts, Form 1041, see instructions.	3a
3b	Enter any amount from Puerto Rico you excluded	3b
3c	Enter any amount from Form 2555, line 45	3c
3d	Enter any amount from Form 2555, line 50	3d
3e	Enter any amount from Form 4685, line 15	3e
4	Add lines 3a through 3e	4
5	Enter your 2023 filing status (S, MFS, etc., see chart below). Individuals, estates, or trusts exceeding the following MAGI limits for both 2023 and 2024 can't claim the applicable credit.	5
<b>Filing Status</b> <b>Part I/II Limits</b> <b>Part IV Limits</b>		
Single (S)	\$150,000	\$75,000
Married filing separately (MFS)	\$150,000	\$75,000
Head of household (HOH)	\$225,000	\$112,500
Married filing jointly (MFJ)	\$300,000	\$150,000
Qualified surviving spouse (QSS)	\$200,000	\$100,000
Estates and trusts	\$150,000	N/A
<b>Part II Credit for Business/Investment Use of Part of New Clean Vehicles</b>		
6	Enter the total credit amount figured in Part II of Schedule(s) A (Form 8936).	6
7	New clean vehicle credit from Schedule A and S corporations (see instructions).	7
8	Business/Investment use part of credit. If lines 6 and 7 are zero, enter 0 and S corporations, stop here and report this amount on Schedule K. All others, report this amount on Form 3800, Part III, line 1y	8
<b>Part III Credit for Personal Use of Part of New Clean Vehicles</b>		
9	Enter the total credit amount figured in Part III of Schedule(s) A (Form 8936).	9
10	Enter the amount from Form 1040, 1040-SR, or 1040-NR, line 18.	10
11	Personal credits from Form 1040, 1040-SR, or 1040-NR (see instructions).	11
12	Subtract line 11 from line 10. If zero or less, enter -0- and stop here. You can't claim the personal use part of the credit.	12
13	Personal use part of credit. Enter the smaller of line 9 or line 12 here and on Schedule 3 (Form 1040, line 18). If line 9 is zero or less, enter -0- and stop here. You can't claim the personal use part of the credit.	13
<b>Part IV Credit for Personally Owned Clean Vehicles</b>		
14	Enter the total credit amount figured in Part IV of Schedule(s) A (Form 8936).	14
15	Enter the amount from Form 1040, 1040-SR, or 1040-NR, line 18	15
16	Personal credits from Form 1040, 1040-SR, or 1040-NR (see instructions).	16
17	Subtract line 16 from line 15. If zero or less, enter -0- and stop here. You can't claim the Part IV credit.	17
18	Enter the smaller of line 14 or line 17 here and on Schedule 3 (Form 1040, line 6m. If line 17 is smaller than line 14, see instructions).	18
<b>Part V Credit for Qualified Commercial Clean Vehicles</b>		
19	Enter the total credit amount figured in Part V of Schedule(s) A (Form 8936).	19
20	Qualified commercial clean vehicle credit from partnerships and S corporations (see instructions).	20
21	Subtract line 19 and 20 from Form 1040, 1040-SR, or 1040-NR, line 18. K. All others, report this amount on Form 3800, Part III, line 18a	21
For Paperwork Reduction Act Notice, see separate instructions. Cat. No. 37751E      Form 8936 (2024)		

## Form 5695

<https://www.irs.gov/pub/irs-pdf/f5695.pdf>

## Form 5695 Instructions

<https://www.irs.gov/pub/irs-pdf/f5695.pdf>

## Form 8936 Clean Vehicle Credits

<https://www.irs.gov/pub/irs-pdf/f8936.pdf>

## PPL Electric Utilities Residential Energy Efficiency Program



Energy-efficient products can increase the comfort of your home while helping you save energy and money. We offer rebates to help customers save money and upgrade to the latest energy-efficient equipment. To apply for one of our rebates, visit [pplelectric.com/howtoapply](http://pplelectric.com/howtoapply).

Shop our online marketplace for instant discounts on energy-saving products. Visit [pplelectric.com/marketplace](http://pplelectric.com/marketplace) to explore rebates.

*Residential equipment rebates are for existing homes and residential rate code customers. See rebate webpage or application for full list of requirements.*

### Program Overview

[pplelectric.com/rebates](http://pplelectric.com/rebates)

*Major upgrades that qualify for Comprehensive Retrofit Bonus rebates are shown in bold.*

Home Improvement	Rebates	Qualifying Notes
<b>Home Energy Assessments</b>		

- **Energy Audit \$200-300**
- **Attic Insulation up to \$500**
- **Basement insulation up to \$200**
- **Thermostat \$50-100**
- **Heat Pump \$300-\$450**
- **Energy Star Refrigerator \$50**
- **Appliance recycling \$10-\$50**

## Inflation Reduction Act

- **Tax Laws re-written** but IRA likely to remain in some form
- **Bipartisan support** in house for portions of IRA
- **EV Tax Credits probably vulnerable**
- Rebate funding **committed, not distributed**
- Potential for slow roll-out or stalling?
- **Pennsylvania Rebate Program:** in-progress, **status?**

## Electricity Rates

- Electricity Demand Growth
- Electricity price generally linked to Natural Gas (this may change in the long term)

## Equipment Costs

- Tariffs - many already in place
- US manufacturing increasing



EV's



Transportation accounts for approximately **28% of CO2** emissions. It is the biggest single source of CO2 emissions, and the vast majority comes from cars and trucks. EVs are quieter, **less expensive to operate, last longer**

My plan My projects Settings

INTRODUCTION COSTS & BENEFITS REBATES & CREDITS PROJECT GUIDE CONTRACTORS LEARN MORE

More details

POSITIVE HEALTH IMPACT ?  
Low

FUTURE RESILIENCE ?  
High

TECH UPGRADE ?  
High

Energy bill impact

Our modeling shows that car owners save about ▼\$1,600 in fuel costs when upgrading to an EV that's a similar type to your current vehicle. ▼ \$1,600/yr

Climate Impact (10,362 lbs.)

Our modeling shows that car owners reduce emissions by about ▼4,700 kg when upgrading to an EV that's a similar type to your current vehicle. ▼ 4,700 kg CO2e

**Our Takeaway**

Many EVs on the market today have a range of more than 250 miles on a single charge. Electrifying your driving can save you over \$1,000 a year!



**Update 10/28/2022:**

Three-Year Ownership Cost Comparison  
Based on fuel, maintenance costs, and depreciation over a three-year period here's what we've found for the cost-of-ownership of our subject vehicles.

<https://www.caranddriver.com/shopping-advice/a32494027/ev-vs-gas-cheaper-to-own/>

**Hyundai Kona: \$19,385**

**Hyundai Kona Electric: \$13,926\***

**Ford F-150: \$26,505**

**Ford F-150 Lightning: \$16,340\***

**\*With Tax Credit**

**Net  
Savings  
w/ EV**

**\$5,459**

**\$10,165**

## Vehicle Comparisons

Vehicle Type	Internal Combustion Engine		Electric Vehicle	
	Vehicle (Upfront Price)	7-Year TCO	Vehicle (Upfront Price)	7-Year TCO
Compact Sedan	Toyota Corolla LE (\$22,050)	\$42,348	Chevrolet Bolt EUV* (\$22,550)	\$31,768
Sedan	Toyota Camry SE Nightshade (\$28,960)	\$44,307	Tesla Model 3 (\$38,990)	\$44,180
Compact SUV	Nissan Rogue SV (\$29,700)	\$44,209	Volkswagen ID.4 (\$31,495)	\$37,110
Full Size SUV	Toyota Highlander L (\$39,270)	\$48,286	Tesla Model Y (\$42,490)	\$43,925
Pickup Truck	Ford F-150 XL Supercrew (\$43,515)	\$50,622	Ford F-150 Lightning* (\$42,495)	\$47,797

Vehicles are model year 2024, except those with an asterisk (\*), which are model year 2023.

Total cost of ownership comparison for electric and gasoline-fueled vehicles | *Atlas Public Policy*

**Net  
Savings  
w/ EV**

**\$10,581**

**\$127\*\***

**\$7,099**

**\$4,361**

**\$2,825**

\*\*All three trims in the updated Tesla Model 3 lineup are now eligible for the full \$7500 tax credit. Car and Driver January 17, 2025

## HEAT PUMPS



Heat pumps move heat from outside to inside in the winter, and inside to outside in summer.



**A heat pump is 300%-400% more efficient than a gas furnace.**

A 2024 heat pump is **2X+** more efficient than 1980's HP.  
And they work at at below zero (with good efficiency ratings)

### Heat Pump Benefits

- **Less expensive** to operate than **Oil, Propane, Electric Baseboard (Radiant), Natural Gas** cost comparison - many variables
- **Quiet**
- **Zone-able - Saves money and increases comfort**
- **Space-saving (vs. Radiators)**
- **Reduced GHG Emissions**
- **Good Synergy w/ Solar Panels**



## HEAT PUMP IRA Tax Credits & Rebates

### Tax credits

**30%**

up to

**\$2,000 / yr.**

One (1) hot water or heating/cooling appliance per year

Except

**30%**

for ground source  
(geothermal) heat pump  
no maximum

### Rebates

up to

**\$8,000**

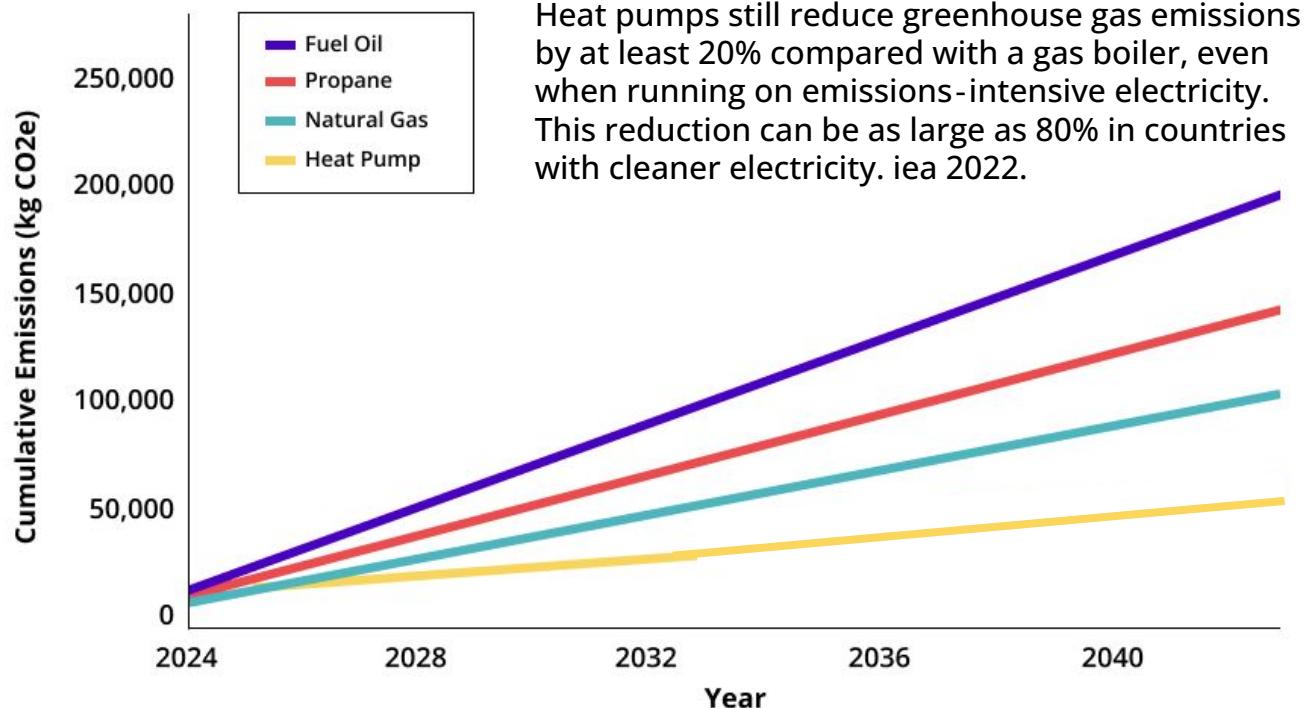
**NOT YET AVAILABLE**

### Income Limits

**Low Income (Below 80% AMI)  
100% of project costs**

**Moderate Income (81%-150% AMI):  
50% of project costs.**

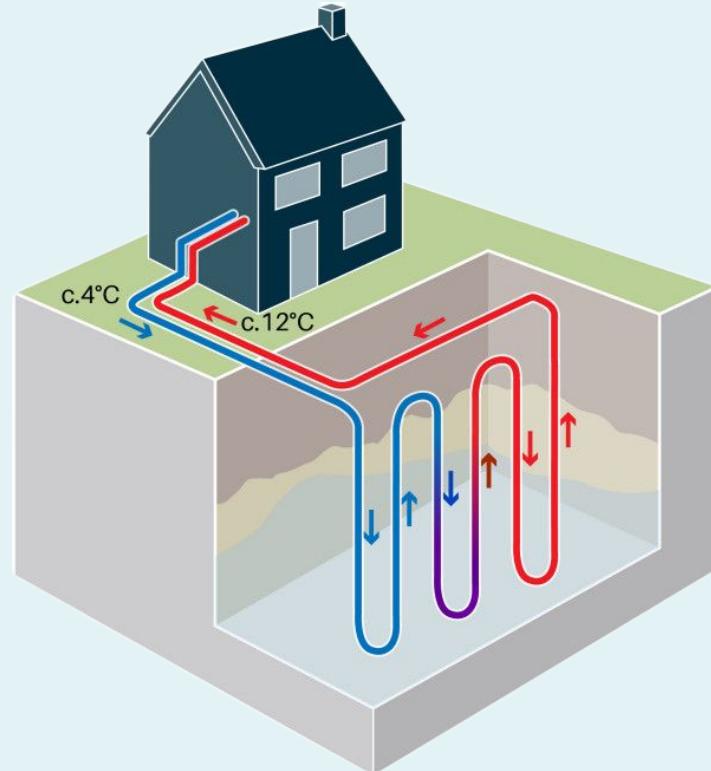
42-70% less CO2 emissions on average  
than fossil fuels appliances



## GROUND SOURCE HEAT PUMP

### Geothermal (ground source) heat pumps (GHPs)

- **Efficiency**  
300% to 600% 
- **Energy savings**  
GHPs can reduce energy consumption by **25% to 50%** compared to air source heat pump systems. They can also cut energy bills by up to **65%**.
- **Lifespan**  
GHPs can last around 25 years for indoor components and 50+ years for ground loops.
- **Payback period**  
The payback period for a geothermal system is typically between 5 and 10 years



## Heat Pump Hot Water Heaters & Dryers

- **50%-60% in annual energy savings**
- **HP Dryer with IRA tax credit or rebate plus \$500 lifetime energy saving will pay for itself.**
- **HP Hot Water heater with IRA tax credit or rebate plus \$3,800 lifetime energy saving will pay for itself.**



## ENERGY PLANNER

### Many Possible Priorities

- Lower my energy bills
- Lower my climate impact
- Future-proof my home
- Maximize incentives
- Improve health and comfort
- Replace aging equipment

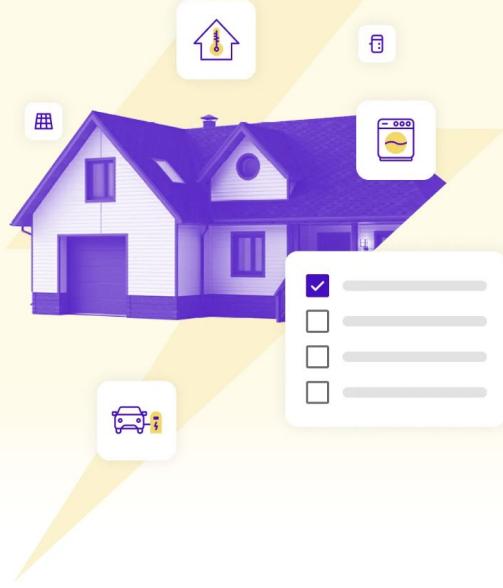
# REWIRING AMERICA

**Your situation is unique. Your plan to go electric should be, too.**

Interested in upgrading your home to all-electric appliances and vehicles? Generate a personalized electrification plan based on your particular home, lifestyle, and priorities — all in just a few minutes.

[Get started](#)

[Rent your home? Click here](#)



## ENERGY PLANNER

# REWIRING AMERICA

<https://homes.rewiringamerica.org/personal-electrification-planner>



Homeowners ▾ Renters ▾ Incentive calculator Find contractors

English Español

### YOUR SAVINGS CALCULATOR

## See how much you could save on electric appliance upgrades

There are many savings programs for energy-efficient appliances and upgrades.  
Enter your household info to see the programs you're eligible for.

### Your household info

Reset

RENT OR OWN ⓘ

Homeowner

ZIP ⓘ

12345

ELECTRIC UTILITY ⓘ

Select utility

HOUSEHOLD INCOME ⓘ

\$0

Enter your ZIP code to select a utility.

TAX FILING ⓘ

Single

HOUSEHOLD SIZE ⓘ

1 person

EMAIL ADDRESS (OPTIONAL)

you@example.com

View results

By sharing your email, you agree to our [terms](#) and to receive updates from Rewiring America. We'll store and protect your data in accordance with our [privacy policy](#).

Powered by the [Rewiring America API](#)

# REWIRING AMERICA

## Decision Points

- Home Energy Efficiency
- Aging Equipment and Appliances
- Fuel Source
- Heating and Cooling Type
- Finances
- Annual Mileage
- Rent or Own?
- Solar Orientation, Shade, Roof
- Policy Changes

My plan My projects Settings

### My electrification plan

I'm electrifying to:

- LOWER MY ENERGY BILLS
- IMPROVE HEALTH AND COMFORT

EDIT

HOW TO READ MY PLAN | HOW THE DATA WORKS

#### Prework

-  Get a home energy audit BILL IMPACT None [View project](#)
-  Pre-wire your home to get it ready BILL IMPACT None [View project](#)

#### Project list

-  Install solar panels BILL IMPACT -\$1,200/yr [View project](#)
-  Add an electric vehicle BILL IMPACT -\$810/yr [View project](#)
-  Upgrade to a heat pump water heater BILL IMPACT -\$250/yr [View project](#)



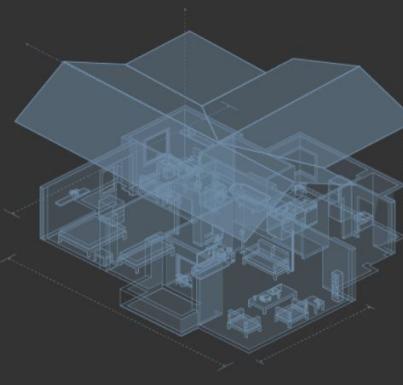
## ENERGY AUDIT

US homes lose **15 to 25 percent** of heating in winter / cooling in summer.  
**That's equivalent to leaving a window in your home wide open all the time.**



## Energy Saver 101: Home Energy Audits

Take the first step to improving your home's energy efficiency: get a home energy audit.



What is a  
**home energy audit?**

A home energy audit helps you pinpoint where your house is losing energy and **what you can do to save money**. A home energy auditor will also assess health and safety issues that might exist in your home.

The audit involves two parts: the **home assessment** and **analysis** using computer software.

<https://www.energy.gov/energysaver/articles/energy-saver-101-infographic-home-energy-audits>

### Energy Auditors

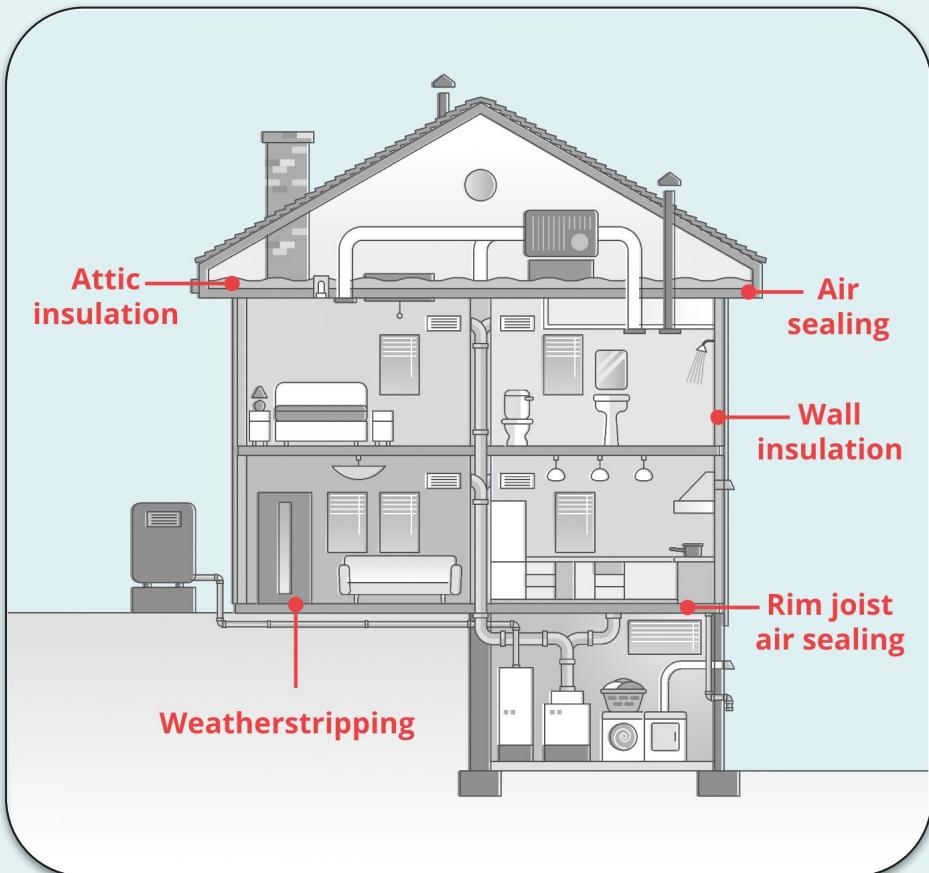
<https://www.energy.gov/eere/buildings/us-department-energy-recognized-home-energy-auditor-qualified-certification-programs>

## WEATHERIZATION



### Make your home heat pump and solar ready

- Low cost
- Quick payback
- Improved comfort
- Depending on the extent of the improvements, the payback period typically ranges from 2 to 5 years.
- May reduce HP and Solar requirements



## SOLAR ENERGY



**Tax credits**

**30%**  
**Uncapped**

**Solar Panels**

**Fuel Cells**

**Wind Turbine**

**Geothermal Power**

**Battery Storage**

**(3kWh min)**

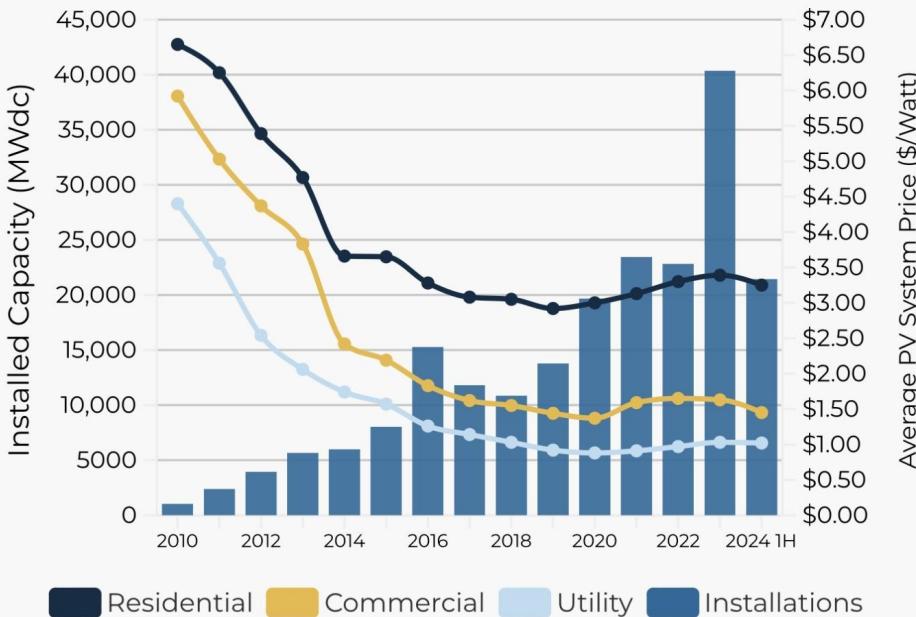


## Solar Economics

### Cost of PV System

- Residential solar systems cost about \$3 per watt
- Down from almost \$7 in 2010
- Varies by state and size of array
- Within a local area, price varies by installer

### U.S. Solar PV Pricing Trends & Deployment Growth



Source: [SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight Q3 2024](#)

## Vendor Marketplace

- Provide basic information on home, including electric bills
- Vendors submit detailed proposals by email within 1-2 days
- Vendors send follow-up emails, but stop when you tell them you've made a decision

The screenshot shows the EnergySage website. At the top, the EnergySage logo is displayed. Below it, a large heading reads "Sunny Savings in Under a Minute" with the subtext "Compare multiple offers online, no phone calls". A search bar with a location pin icon and the placeholder "ZIP code" is followed by an orange "NEXT" button. The main visual is a stylized illustration of a house with solar panels, surrounded by trees and people walking or cycling. A speech bubble above the house says "Save up to 22% with EnergySage!". Below this, the text "Shop for solar in 3 easy steps — no pushy sales calls." is followed by three icons: a person filling out a form, a person standing next to a table with solar panel options, and a person sitting at a desk comparing options. The bottom text for each step is: "Complete our short form", "Get matched with top-rated installers", and "Compare and choose the right installer for you".

ZIP code

NEXT

Save up to 22% with EnergySage!

Shop for solar in 3 easy steps — no pushy sales calls.

Complete our short form

Get matched with top-rated installers

Compare and choose the right installer for you

3 of 5

## Nova Solar | My Savings

## Utility Cost Without Solar

\$132,864

## Lifetime Savings

\$110,784

## Net System Price

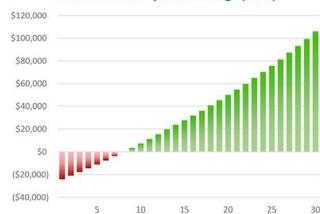
\$22,080

## Annual ROI

15.0%

System Price	\$42,400.00
Federal Tax Credit	\$12,720.00
Fairfax Property Tax	
Savings	\$2,400.00
SRECs	\$5,200.00
Cost after Incentives	<b>\$22,080.00</b>

## Lifetime Solar System Savings (Year)



## 30-Year Utility Price

\$132,863.63

## 30-Year Solar Price

\$22,080.00

## Savings Amount

\$110,783.63

## Savings %

83%

## Return on Investment

15.0%

## Break-even (Years)

8.1

## Est Home Value Increase

\$46,200.00

## 30

## Year

## Savings + SRECs

## Cumulative Cash Flow

1	\$3,083.40	\$24,196.61
2	\$3,163.90	\$21,032.71
3	\$3,246.81	\$17,785.89
4	\$3,332.22	\$14,453.68
5	\$3,420.18	\$11,033.49
6	\$3,510.79	\$7,522.70
7	\$3,604.11	\$3,918.59
8	\$3,700.24	\$218.35
9	\$3,799.24	\$3,580.89
10	\$3,901.22	\$7,482.12
11	\$4,006.26	\$11,488.37
12	\$4,114.45	\$15,602.82
13	\$4,225.88	\$19,828.70
14	\$3,940.66	\$23,769.36
15	\$4,058.88	\$27,828.23
16	\$4,180.64	\$32,008.87
17	\$4,306.06	\$36,314.94
18	\$4,435.24	\$40,750.18
19	\$4,568.30	\$45,318.48
20	\$4,705.35	\$50,023.83
21	\$4,846.51	\$54,870.34
22	\$4,991.91	\$59,862.24
23	\$5,141.66	\$65,003.91
24	\$5,295.91	\$70,299.82
25	\$5,454.79	\$75,754.61
26	\$5,618.43	\$81,373.04
27	\$5,786.99	\$87,160.03
28	\$5,960.60	\$93,120.62
29	\$6,139.41	\$99,260.04
30	\$6,323.60	\$105,583.63

## Nova Solar | My System

## Panels

35 Aptos DNA-144-MF26-440W

## Inverters

35 Enphase Microinverters

## System Size

15,400 W

## Solar Offset

102%

## Annual Production

19,877 kWh

## Monthly Production

1,656 kWh



## Solar Production vs. Home Electricity Usage



SOLAR ENERGY

# Solar United Neighbors

**Solar energy is under attack.  
Join the fight.**

This **Tuesday**: Join our Solar Advocacy 101 training to learn how to hold effective meetings with your elected officials to protect your energy rights.

[Register for Solar Advocacy 101](#)

Solar in your area [Get help](#) [En español](#)

[Get started with solar](#) [Resources](#) [About](#) [Get involved](#) [Donate](#)

**Energy freedom starts with solar.**

We help people go solar and fight for their energy rights.

[Join us](#) [Screenshot](#)

## IDEAL ELECTRIFICATION PATH

1

**Understand home performance and energy load**

### Tools

- Home energy audits
- Heat load calculation

2

**Reduce load and increase performance**

### Strategies

- Weatherization
- Efficient replacements for existing equipment

3

**Add New Load and New Supply**

### Systems

- New loads (heat pumps, induction, EV charging)
- Solar and batteries

## RESOURCES



**Regenall Carbon Footprint Calculator**  
<https://regenall.org/carbon-footprint/#calculator>



**Rewiring America Electrification Planner**  
<https://homes.rewiringamerica.org/personal-electrification-planner>

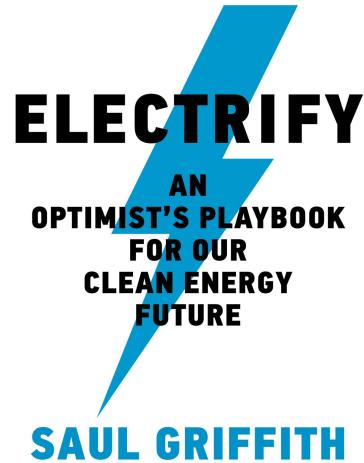


**Solar United Neighbors**  
<https://solarunitedneighbors.org/>



**Energysage (Solar)**  
<https://www.energysage.com/>

"Required reading for an economy-wide green transition in the USA."  
MARIANA MAZZUCATO, AUTHOR OF *MISSION ECONOMY*



<https://mitpress.mit.edu/9780262545044/electrify/>

## RESOURCES



**Energy Star Tax Credit Website**  
<https://www.energystar.gov/about/federal-tax-credits#homeowners>



**IRS Energy Efficient Homes**  
<https://www.irs.gov/credits-deductions/energy-efficient-home-improvement-credit>



**Energy Auditors**  
<https://www.energy.gov/eere/buildings/us-department-energy-recognized-home-energy-auditor-qualified-certification-programs>



**DOE Website**  
<https://www.energy.gov/save>



**DOE Inflation Reduction Act**  
<https://www.energy.gov/energysaver/articles/inflation-reduction-act-2022-what-it-means-you>

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# Thank you!



REWIRING  
AMERICA



<https://regenall.org>



<https://rewiringamerica.org>