

Climate Smart Handbook

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help you reduce your climate footprint....

The Inflation Reduction Act – a.k.a. the historic federal climate bill signed into law earlier this month – has a lot of incentives for people looking to make the switch to clean energy. There are incentives for home efficiency, heat pumps, electric vehicles, home solar and battery storage, and more. But my favorite part of the bill (if I had to pick just one) is that, at its core, it incentivizes planning ahead. If you’ve looked through this website before you may have noticed that I’m a big believer in making a plan for how you’re going to take the steps needed to lower your personal greenhouse gas emissions. In the wise words of Yogi Berra, “[If you don’t know where you’re going, you might not get there.](#)” With the Inflation Reduction Act in place, the opposite is true too: if you have a solid plan for how to shrink your climate footprint, the IRA can do a lot to help you carry it out.

How? By establishing a series of tax credits and rebates that you can layer year-over-year to help make Steps [Zero](#), [One](#), and [Two](#) more affordable. Even assuming you consider energy efficient homes and electric vehicles likely to be cost-effective over the long term, their upfront costs may not always fit in your “[climate budget](#),” and financing options aren’t always ideal. In that context, the opportunity to save thousands of dollars over several years of clean energy investments can make a “climate smart” home a lot more accessible.

Reflecting the need for more [energy equity](#) in the United States, a big focus of the IRA is supporting clean energy investments for low- and moderate-income households and communities. That does mean people at higher income levels may not qualify for all of the available incentives. For a quick check on what you might be eligible for, I recommend you use this handy-dandy [calculator](#) prepared by a non-profit called Rewiring America. With that said, here’s the full array of possibilities (noting that *although* I’m a lawyer, one of this is legal advice):

Tax Credits

- **Energy Efficient Home Improvement Credit** (formerly the “Nonbusiness Energy Property Credit”): A nonrefundable tax credit for 30% of the costs of certain home efficiency investments, effective January 1, 2022 through December 31, 2032 (with new eligibility and caps applicable starting in 2023).
 - Eligible costs (subject to qualifying criteria):
 - Home energy audits
 - Insulation and air sealing materials or systems
 - Exterior windows/skylights
 - Exterior doors
 - Efficient heating and cooling appliances (electric or natural gas heat pump water heater; electric or natural gas heat pump; central air conditioning system; natural gas, propane, or oil water heater; natural gas, propane, or oil furnace or hot water boiler; biomass stove or boiler for home heating/hot water; oil furnace or hot water boiler)
 - Electric panel upgrades to equipment with a load capacity of at least 200 amps (in conjunction with other efficiency improvements)
 - Maximum credit amounts:
 - \$1200 per year in total (except for efficient heat pumps, heat pump water heaters, and biomass stoves and boilers)
 - \$150 per year for a qualifying home energy audit for your principal residence
 - \$600 per year for any individual item besides heating and cooling equipment
 - \$600 per year in aggregate for exterior windows and skylights
 - \$250 per year for any exterior door
 - \$500 per year in aggregate for all exterior doors
 - \$2000 per year for heating and cooling equipment
- **Residential Clean Energy Credit**: A nonrefundable tax credit for 30% of the costs of home installations of clean energy, phasing down to 26% for 2033 and 22% for 2034 (extended from prior version which was due to phase out next year).
 - Applies to solar, solar water heating, fuel cell, distributed wind energy property expenditures, geothermal heat pump, biomass, and battery storage with a capacity of at least 3 kwh
 - Effective January 1, 2022 through December 31, 2034, except 30% credit for battery storage is available as of January 1, 2023 for storage not charged from solar panels
- **Clean Vehicle Credit**: Nonrefundable tax credit of up to \$7500 for new electric vehicle purchases, replacing the

previously available \$7500 tax credit, effective January 1, 2023 through December 31, 2032. (More information on the transition is available from the Internal Revenue Service [here](#).)

- Tax credit of \$3750 available for vehicles which meet the requirement to have a certain percentage of “critical minerals” extracted or processed in the US or any free trade agreement country, or recycled in North America (40% in 2023, 50% in 2024, 60% in 2025, 70% in 2026, 80% after 2026)
- Tax credit of \$3750 available for vehicles that meet the requirements for the value of battery components manufactured or assembled in North America (50% for 2023, 60% for 2024 or 2025, 70% for 2026, 80% for 2027, 90% for 2028, 100% after 2028)
- Final assembly of vehicle must occur in North America
- Eliminates per-manufacturer cap on number of eligible vehicles (i.e., vehicles from manufacturers like Tesla and Chevrolet are back on the table)
- No tax credit for taxpayers with gross income above \$300,000 for joint return/surviving spouse, \$225,000 for head of household, or \$150,000 for individual taxpayer
- No tax credit for vehicles with an MSRP above \$80,000 for van, SUV, or pickup truck, or \$55,000 for any other vehicle type
- Buyer can transfer credit to dealer for upfront payout toward price of car
- **Previously-Owned Clean Vehicle Credit:** New, nonrefundable tax credit for up to \$4000 or 30% of the sale price of the vehicle for purchases of previously-owned electric vehicles.
 - Vehicle must be at least 2 years old, and sold for less than \$25,000
 - No tax credit for taxpayers with gross income above \$150,000 for joint return/surviving spouse, \$112,500 for head of household, or \$75,000 for individual taxpayer
 - Can’t claim deduction more than once every three years
 - Credit can be transferred to seller for upfront payout toward price of car
- **Alternative Fuel Refueling Property Credit:** Renews tax credit for 30% of the cost for the purchase and installation of an EV charger, up to \$1000 maximum, retroactively effective as of December 31, 2021 and extended through December 31, 2032.

Rebates

As long as your state claims the funding, the Inflation Reduction Act provides a total of \$8.8 billion in grants to be used toward home efficiency and electrification rebate programs.

- **HOMES Rebate Program:** Provides \$4.3 billion for state programs providing performance-based rebates for whole-home energy saving retrofits through December 31, 2031.

- For single-family homes, a rebate of the lesser of \$2000 or 50% of the project cost for a retrofit project providing energy savings of at least 20%, and a rebate of the lesser of \$4000 or 50% of project cost for a retrofit providing energy savings of at least 35%
- Low- and moderate-income households (earning less than 80% of the area median income) receive rebates of the lesser of \$4000 or 80% of the project cost for a retrofit project providing energy savings of at least 20%, and a rebate of the lesser of \$8000 or 80% of project cost for a retrofit providing energy savings of at least 35%
- Equivalent rebates per dwelling unit for multifamily buildings
- Can't be combined with other federal rebates/grants
- **High-Efficiency Electric Home Rebate Program:** Provides \$4.5 billion for state home electrification rebate programs for low/moderate income households (earning less than 150% of the area median income)
 - Maximum rebates of \$1750 for a heat pump water heater, \$8000 for a heat pump (for space heating/cooling), and \$840 for an electric stove, cooktop, range, oven, or electric heat pump clothes dryer
 - Maximum rebate of \$4000 for electric panel upgrades, \$1600 for insulation, air sealing, and ventilation, and \$2500 for electric wiring
 - Project must be part of new construction or to replace a nonelectric appliance or first-time purchase of that appliance for the home
 - No more than total of \$14000 in rebates
 - Rebate must be under 50% of cost of project for household with income between 80%-150% of the area median income
 - Rebate can be 100% of cost of project for household earning less than 80% of the area median income
 - Equivalent rebates for income-eligible multifamily buildings
 - Can't combine with other federal rebates/grants

I know that's a lot – but hopefully in a good way! So how do you make sense of it all and get the most help you can from the IRA? I'll say it again: planning. Since the most universally available incentives are in the form of tax credits that are capped on a yearly basis, you may want to stagger your clean energy investments across multiple years – especially given that the credits are non-refundable, i.e., you can zero out your tax bill for a year but can't get any refund past that point. Everyone will have a different approach depending on your circumstances, but here's a high-level sketch of what it might look like as you go through the steps toward a climate smart home:

Find Your Contractors

At this point, we may share the suspicion that home contractors (energy auditors, electricians, HVAC professionals, plumbers, solar installers, etc.) are going to be in high demand going forward as people realize the next 10 years are a

great window to leverage the IRA to help meet their clean energy goals. If you did any home improvement during COVID, you know what that means: long waits. So sooner is better than later to figure out which contractors might be a good fit and try to get on their calendars well in advance – before you're stuck with a dying furnace and no luck finding someone good to install a heat pump.

Get a Home Energy Audit

2023: the Year of the Home Energy Audit. It has a certain ring to it, maybe? In all seriousness, if you cross this off the list up front, you can do some vital prep work to identify what you'll need to do going forward to cost-effectively reduce energy waste in your home and lower the overall costs of clean energy supply. You might be able to start implementing those efficiency measures right away (as makes sense to maximize tax benefits), or if you'd be able to get enough of an efficiency improvement to qualify for an upfront payment through the HOMES program you may want to wait until your state gets that set up. Most importantly, you can get an expert analysis done to figure out what HVAC equipment will meet the sizing and performance needs for your home (and will actually be available in the supply chain going forward) – since, as experts have [noted](#), the equipment that qualifies for IRA incentives might always be the best fit for you. There's a reason I already had this as [Step Zero](#), and now that makes more sense than ever.

Do Some Electric Vehicle Research

The landscape for EV rebates has now gotten a lot more complicated given the various restrictions on the EV tax credits under the IRA, but one thing that seems unlikely to change is that demand for EVs is outpacing supply. Is your car getting to the end of its lifespan, or is your lease up in a year or two? You may need to get on a waitlist for a new EV now if you want to be able to get one when you're ready. Or you may decide the right EV for you isn't one that qualifies for a tax credit, and free yourself up to stop worrying about that angle. Either way, knowing what you're getting into ahead of time can be a big help as you try to address an area that may represent a large part of your climate footprint.

Look at Home Solar (or Other Self-Generation Options)

As I explain in Step One, installing home solar or other renewable generation is not a great option for everyone. And hopefully other choices like community solar will only get cheaper as the IRA's overall [support for carbon-free power](#) takes effect. However, if you've been on the fence about installing renewables at your own home, the IRA can make that more affordable. It's worth taking a look, and figuring out how the IRA's clean energy credits might intersect with your tax bill.

Electrify Your Home

The IRA does a ton for clean energy, but perhaps the most important thing it does is to help people move toward using efficient electric appliances that can run off that clean energy. As you're tackling [Step Two](#), it's worth assessing how the IRA can help reduce your upfront costs for home electrification. Of course, don't forget [Step Three](#) along the way – depending on where you live, using “smart” electric appliances in conjunction with special rates and programs to tap into the grid at the times when prices are lower may be just as important as rebates and tax credits in making sure that clean energy will fit in your budget.

Kudos to you if you've stuck with me this far! Even if this is all still something of a blur, I hope you'll remember the one message I started out with: **start planning out your climate smart roadmap now**, and the Inflation Reduction Act could end up helping you with a lot of the steps along the way.

So you want to know how much it costs to run a heat pump....

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