

ACCESS YOUR NEW IRA ACCOUNT

FINANCIAL INCENTIVES FROM THE 2022 INFLATION REDUCTION ACT
TO REDUCE ENERGY NEEDS AND ELECTRIFY EVERYTHING
IN YOUR HOME OR APARTMENT (AND YOUR RIDE)



IRA Workshop Topics

- Federal income tax credits and point-of-sale rebates
- Incentives for home
 - weatherization
 - energy efficiency
 - electrification
 - clean energy systems
 - electric vehicle (EV) and electric vehicle charging



IRA Incentives Available Now

Tax credits

- home energy audits
- home electrical panel upgrades
- home appliance upgrades
- heating / cooling system upgrades
- clean energy systems
- purchase of a new or used EV and installation of home charging
- lease of an EV

SPECIFIC CRITERIA APPLY FOR EACH CATEGORY AND APPLIANCE



Tax Credits for Home Energy Upgrades

- For purchase and installation* from 1-1-23 through 12-31-32
- For existing home and principal residence
- Efficiency tax credit capped at \$3,200/yr (\$2,000 + \$1,200)
- Heat pump and biomass appliances** (heating / cooling, water heaters, biomass furnaces/boilers) capped at \$2,000/yr
- Furnace /boiler & central cooling + home envelope improvements (electrical, windows, doors, air sealing etc.) capped at \$1,200/yr

*Installation charges for windows/doors not included

**Geothermal heat pumps subject to separate, higher limits



Tax Credits for Weatherization & Efficiency Upgrades

- Home Energy Audits – 30% of costs up to \$150
- Insulation – 30% up to \$1,200
- Electrical panel upgrades that enable new efficient or clean appliances – 30% up to \$600
- Air source heat pumps (ducted and ductless) – 30% up to \$2,000
- Heat pump water heaters – 30% up to \$2,000
- Windows and skylights – 30% up to \$600
- Exterior doors – 30% up to \$500 (\$250 /door)



Tax Credits for Home Energy Audits



The infographic features a dark background with a faint house silhouette. At the top, the 'energy saver' logo is displayed. The title 'Energy Saver 101: Home Energy Audits' is prominently shown, with 'Home Energy Audits' in orange. Below the title, a subtitle encourages taking the first step to improve home energy efficiency. On the left, a 3D wireframe house diagram illustrates energy loss points. The central text explains the purpose of a home energy audit, highlighting energy loss, potential savings, and health/safety assessments. It also details the two-part process: home assessment and analysis using computer software. At the bottom, a 'DID YOU KNOW?' section uses a lightbulb icon and a 30% circular gauge to state that energy bills can be reduced by 5 to 30 percent through identified upgrades.

energy saver

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.

{ DID YOU KNOW? }

30%

You could **save 5 to 30 percent** on your energy bill by making efficiency upgrades identified in your home energy audit.

April 20, 2023



Home Energy Audits contd.



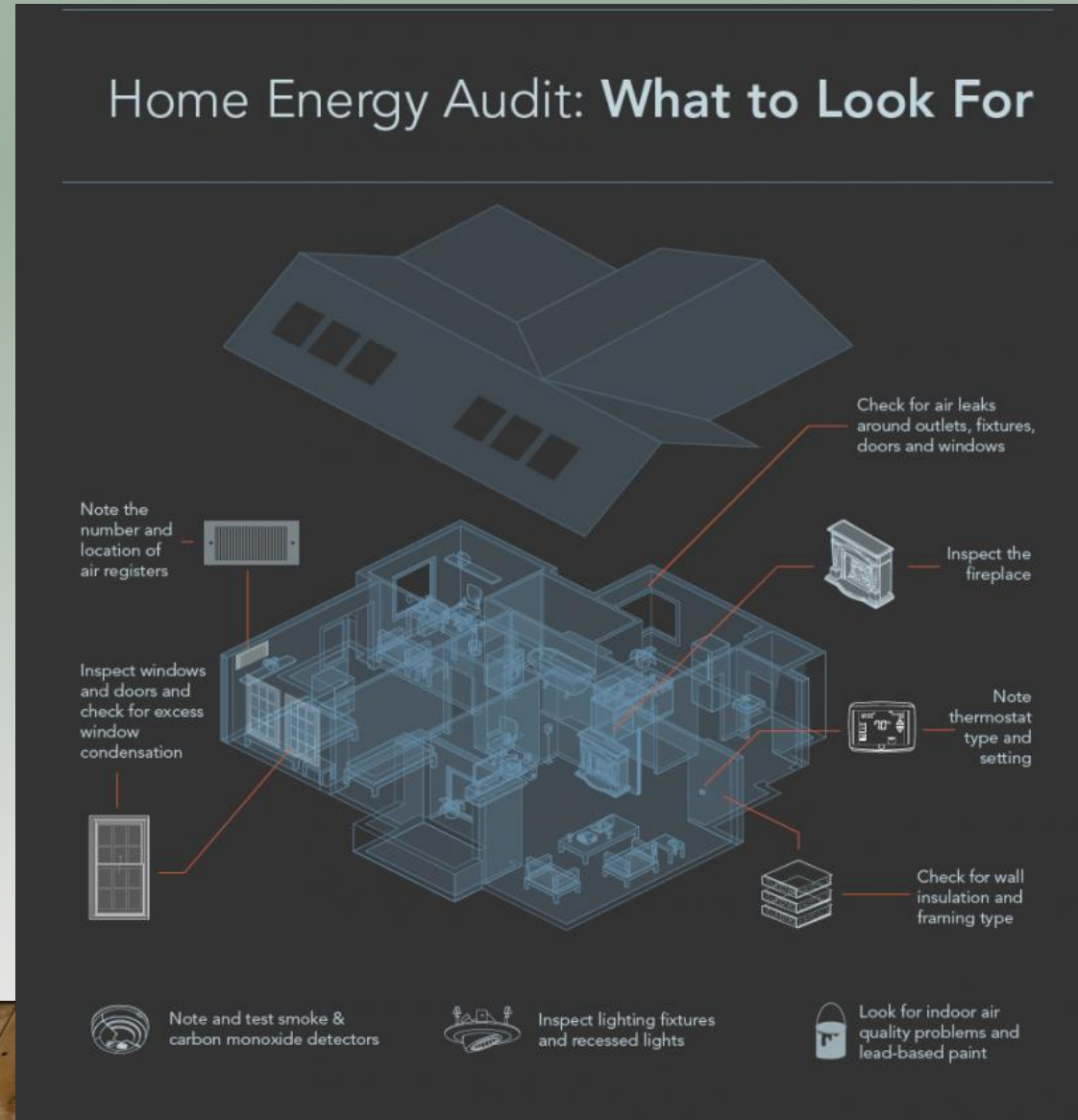
The Home Energy Audit Checklist

Certified home energy auditors should go through the following steps in a home energy audit.

- 1 Analyze past year's fuel bills to determine base energy consumption
- 2 Interview the homeowner to learn about problems and how the home operates
- 3 Explain the audit process
- 4 Conduct exterior inspection
- 5 Health and safety inspection
- 6 Interior visual inspection
- 7 Assess electrical system for safety concerns
- 8 Combustion appliance inspection
- 9 Blower door test
- 10 Analyze findings & create a comprehensive home energy report



Home Energy Audits contd.



April 20, 2023



Home Energy Audits contd.



Attic

- ✓ Inspect insulation
- ✓ Check for major air leakage issues in places like chimney bypasses, recessed lighting and HVAC ducts
- ✓ Inspect wiring for safety issues
- ✓ Note any signs of water leakage



Basement & Utility Room

- ✓ Furnace: Test for fuel leaks, change the furnace filter, clean the furnace blower
- ✓ Water heater: Note thermostat setting and insulation on tank and piping; test draft hood
- ✓ Perform Combustion Appliance Zone Testing on all combustible fuel fired appliances
- ✓ Inspect duct system and dryer venting



Kitchen/Bathroom

- ✓ Look for electrical or other hazards
- ✓ Assess electrical appliance energy use with a watt meter or manufacturer nameplate
- ✓ Check for moisture and excess water vapor
- ✓ Assess vent fans for flow rate

What is the Blower Door Test?



A blower door test locates air leaks by using a special fan to depressurize a house. Blower tests are conducted before and after air sealing to measure the effectiveness of the work.



DID YOU KNOW?

The average home has enough air leakage to add up to a two-foot-square hole. That's like leaving a medium-sized window wide open **24 hours a day.**



Tax Credits for Residential Clean Energy

- Solar panels (from 2022!) and solar water heaters
 - not for pool or hot tub
- Geothermal (from 2022!)
- Small wind turbines (from 2022!)
- Battery storage – from 2023
- Available through 2034 (but start to reduce after 2032)
 - currently 30% (no cap!)
 - existing homes, new construction but *not* rentals
 - does not need to be principal residence
 - *can* rollover credit to subsequent tax year!
- Fuel cells – different criteria apply (\$500 per ½ kW etc.)
 - principal residence only
 - same time period as other technologies above



Tax Credits for Renters

- Portable appliances owned by renter – e.g. induction stovetop, countertop oven, efficient clothes washer/dryer, heat pump clothes dryer
- Window-insert heat pumps for heating and cooling – to roll-out ~2024
- Used EV and new EV purchases (see later)

Educate landlord regarding incentives based on tenants' low income

- Electrical system and wiring upgrades
- Heating / cooling system upgrades, heat pump water heater
- Efficient, heat pump technology laundry appliances
- Efficient kitchen appliances



Available Soon – Appliance Rebates

- Starting in late 2023 or early 2024, through 2031
- Energy Efficiency and Electrification categories
- Point-of-sale discounts up to \$14,000/household
- For single-family, multi-family, owners and renters
- Income qualification
- Exact details still being determined



Up to \$4,000



Up to \$1,750



Up to \$540



Up to \$8,000



Available Soon – Home Energy Rebates

- Electrification rebates restricted to those making <150% Area Median Income (AMI)
- No income limit for efficiency rebates
- Rebate amounts related to modeled or measured energy savings
- Exact details still being determined

| HUD 2022 | 1 person household | 2 Person Household | 3 Person Household | 4 Person Household |
|----------------------|--------------------|--------------------|--------------------|--------------------|
| Cheshire | | | | |
| 80% AMI | 52,950 | 60,500 | 68,050 | 75,600 |
| 150% AMI | 99,300 | 113,400 | 127,650 | 141,750 |
| Hillsborough* | | | | |
| 80% AMI | \$61,350 | \$70,100 | \$78,850 | \$87,600 |
| 150% AMI | \$115,050 | \$131,400 | \$147,900 | \$164,250 |
| Sullivan | | | | |
| 80% AMI | 52,950 | 60,500 | 68,050 | 75,600 |
| 150% AMI | 99,300 | 113,400 | 127,650 | 141,750 |

*excludes Greenville, which is part of Nashua Metro area, with separate figures



How Much Money is Potentially Available Per Household?

| | | |
|---|-------------------------|---|
| Households with Incomes above 80% Area Median Income¹ | Efficiency ² | Lower energy savings: 50% of project costs up to \$2,000 Higher energy savings: 50% of project costs up to \$4,000 |
| | Electrification | 50% of project costs up to \$14,000 (Household income must be below 150% AMI) |
| Households with Incomes Below 80% AMI¹ | Efficiency ² | Lower energy savings: 80% of project costs up to \$4,000 Higher energy savings: 80% of project costs up to \$8,000 |
| | Electrification | 100% of project costs up to \$14,000 |
| Multifamily/Rental Housing Building Owner | Efficiency ² | Lower energy savings: \$2,000/unit up to \$200,000 Higher energy savings: \$4,000/unit up to \$400,000 |
| | Electrification | 50% of project costs up to \$14,000/unit (>50% of units must have income <150% AMI) |
| Multifamily/Rental Housing Building Owner with >50% of Households <80% AMI¹ | Efficiency ² | Lower energy savings: 80% of the project cost up to \$4,000/housing unit Higher energy savings: 80% of the project cost up to \$8,000/housing unit |
| | Electrification | Lesser of 100% of project costs or \$14,000/unit |

¹See Area Median Income (AMI) for your area: https://www.huduser.gov/portal/datasets/il/il2022/select_Geography.odn

²Other rebate amounts (roughly within these ranges) may be available if efficiency rebate rates are determined through measured performance.



Upfront Rebate Examples of Two Households

Smith Household in Allentown, PA

The Smiths want to insulate their home to make their home more comfortable and save on energy bills.

Smith income: \$68,000

80% AMI for Allentown, PA: \$72,500

Eligible for lower-income rebate level? **Yes**

| Project Scope | |
|---------------------------|----------------|
| Attic Insulation | \$3,000 |
| Whole-home air sealing | \$1,000 |
| Duct sealing & insulation | \$1,500 |
| Smart thermostat | \$200 |
| Gross project cost | \$5,700 |

Modeled energy savings from project: **24%**

Eligible Rebate: **\$4,000**

Project Cost to Smith Household: **\$1,700**

Jones Household in Columbia, SC

The Jones' want to update their home's dated electrical systems and save on their energy bills.

Jones income: \$72,000

80% AMI for Columbia, SC: \$64,500

Eligible for lower-income rebate level? **No**

| Project Scope | |
|---------------------------|-----------------|
| Electrical panel upgrade | \$3,700 |
| Electrical wiring upgrade | \$1,800 |
| Electric heat pump | \$6,500 |
| Kitchen hood ventilation | \$800 |
| Gross project cost | \$12,800 |

Over cost limits for technologies or total cost? **No**

Eligible Rebate: **\$6,400 (50%)**

Project Cost to Jones Household: **\$6,400**

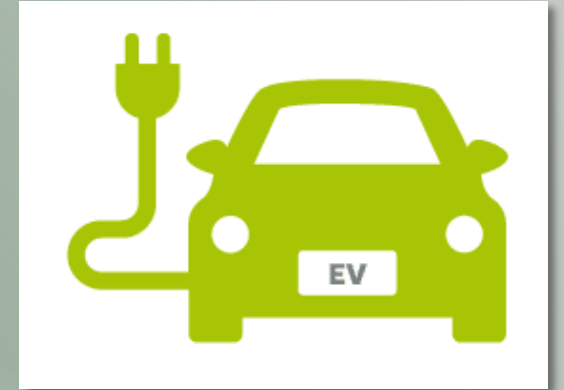


Electric Vehicles

- US car purchases – mostly used
- EV sale proportion of new car sales rising
 - 4.3% (1-'22) ->7% (1-'23)
- EV lease proportion rising dramatically
- EV prices falling
 - Tesla leads, others follow
 - Tesla Model Y price have fallen 20% so far in 2023
- Best EV buyer candidates:
 - New – long commute, gas-guzzler owners, car dead, new EV available
 - Used - short commute, can find used EV
 - Have access to charging, ability to install home charger
- Wait times for new orders highly variable



Electric Vehicle Incentives



- Up to \$7,500 tax credit for new, \$4,000 for used
- Expected to convert to up-front rebate on 1-1-24
- Lots of specifics including
 - Buyer modified adjusted gross income (\$150k / \$225k / \$300k) in current or previous year (often = Line 11 of 1040), buyer use
 - Buyer's federal income tax owed *in year vehicle placed into service (exception: business use)*
 - Date of purchase (8-17-22->12-31-22 vs 1-1-23->4-17-23 vs. 4-18-23 onwards)
 - EV details – for full credit on new purchases:
 - MSRP <\$55k / \$80k
 - Final assembly in N. America (US, CA and MX) – sales from 8-17-22 onwards
 - Source of minerals, other components - from 4-18-23 onwards



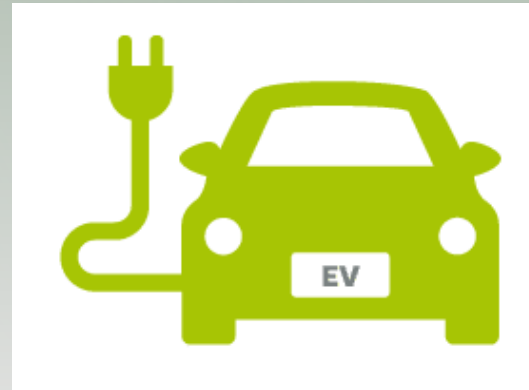
Calculating New EV Tax Credit for 2023 Purchases Before April 18

\$2,500 base amount

+ \$417 for EV with at least 7 kilowatt hours of battery capacity

+ \$417 for each kilowatt hour of battery capacity beyond 5 kilowatt hours

Up to \$7,500 total



Buying a Used EV

- For tax credit to apply, income limits same as for new sales (\$150k / \$225k / \$300k)
- Only dealer purchases qualify, not private ones
- Model year at least 2 years prior
- Have not claimed Clean Vehicle credit within previous 3 years
- Purchase price no more than \$25,000
- First re-sale of any EV “new” after 8-16-22
- Qualified vehicle, qualified manufacturer



Considerations at Time of EV Purchase

- Date of delivery (not of order) is date of purchase
- Verify vehicle qualified for tax credit with VIN decoder
- Obtain required documentation from dealer, including max. credit amount
 - For sales from 1-1-24, need documentation of transfer credit applied
 - Dealer must file documentation with IRS within 15 days



Home EV Charging

- Some new EV sales include incentive or coverage for home charger installation
- Rural / Low-income census tract EV owners can claim tax credit for 30% up to \$1,000
 - NH has 295 census tracts
 - Census tract with poverty rate $\geq 20\%$ or
 - Census tract with MFI $< 80\%$ state MFI
 - State MFI \$83,449, $\times 80\% = \$66,759$



Claiming Clean Vehicle Tax Credit

- When filing annual federal taxes complete Tax Form 8936 Qualified Electric Plug-In Electric Drive Motor Vehicle Credit
- Lower-income earners may owe less than applicable credit but *cannot* carry-over credit to another year
 - Businesses may be able to carry-over credit
- Consider reducing withholding in year of acquisition - discuss with tax professional

EV Tax Credit Converts to Up-front Rebate in 2024!



Strategies to Maximize Your “Free Money”

- Check eligibility for NH Saves Home Performance with Energy Star
- Arrange energy audit to identify deficiencies and lowest-hanging fruit
- Evaluate useful remaining life of appliances and personal vehicle
- Determine “tax burden” for max. eligible tax credit per year
 - *Consider spreading out upgrades over several years to take most advantage of incentives*
- Determine income category for rebate program eligibility
- Learn about choices among home appliances of interest
- Learn about heat pump technology
- Can stack rebate and tax credit incentives!
- Look at EV market, available new, leased and used vehicles



Strategies to Maximize Your "Free Money"

| Fill In Year! | Buying | Up-front discount, low-income | Up-front discount, moderate-income | Tax credit |
|---------------|---|--|------------------------------------|--|
| 2022 | Clean electricity | | | |
| | Electrical wiring (pre-wire outlets early!) | 100% up to \$2,500 (HEEHRA) | 50% up to \$2,500 (HEEHRA) | |
| | Electrical panel (if under 100-amps) | 100% up to \$4,000 (HEEHRA) | 50% up to \$4,000 (HEEHRA) | 30% up to \$600 (25C) or 30% uncapped (25D), depending on the corresponding upgrade ⁹ |
| | Weatherization | 100% up to \$1,600 (HEEHRA) | 50% up to \$1,600 (HEEHRA) | 30% up to \$1,200 (25C) |
| | Heat pump | 100% up to \$8,000 (HEEHRA) | 50% up to \$8,000 (HEEHRA) | 30% up to \$2,000 (25C) |
| | Heat pump water heater | 100% up to \$1,750 (HEEHRA) | 50% up to \$1,750 (HEEHRA) | 30% up to \$2,000 (25C) |
| | Electric/induction stove | 100% up to \$840 (HEEHRA) | 50% up to \$840 (HEEHRA) | |
| | Heat pump clothes dryer | 100% up to \$840 (HEEHRA) | 50% up to \$840 (HEEHRA) | |
| | New EV | \$7,500 (30D) ¹⁰ | | |
| | Used EV | 30% up to \$1,000 (30C) ¹¹ | | |
| | EV Charger | 30% up to \$1,000 for some census tracts (30C) | | |
| | Rooftop solar | 30% (25D) | | |
| | Geothermal heat pump | 30% (25D) | | |
| | Battery storage | 30% (25D) | | |

33 GO ELECTRIC + REWIRING AMERICA

⁹ 25C provides households a 30% tax credit for an electrical panel upgrade, capped at \$600, if it's upgraded in conjunction with another upgrade covered by 25C (like a heat pump or heat pump water heater). 25D provides households a 30% uncapped tax credit for an electrical panel upgrade if it's upgraded in conjunction with rooftop solar.

^{10,11} In 2023, the electric vehicle incentives will be accessible as tax credits. Starting in 2024, these incentives will be transferable to dealerships in exchange for up-front discounts.

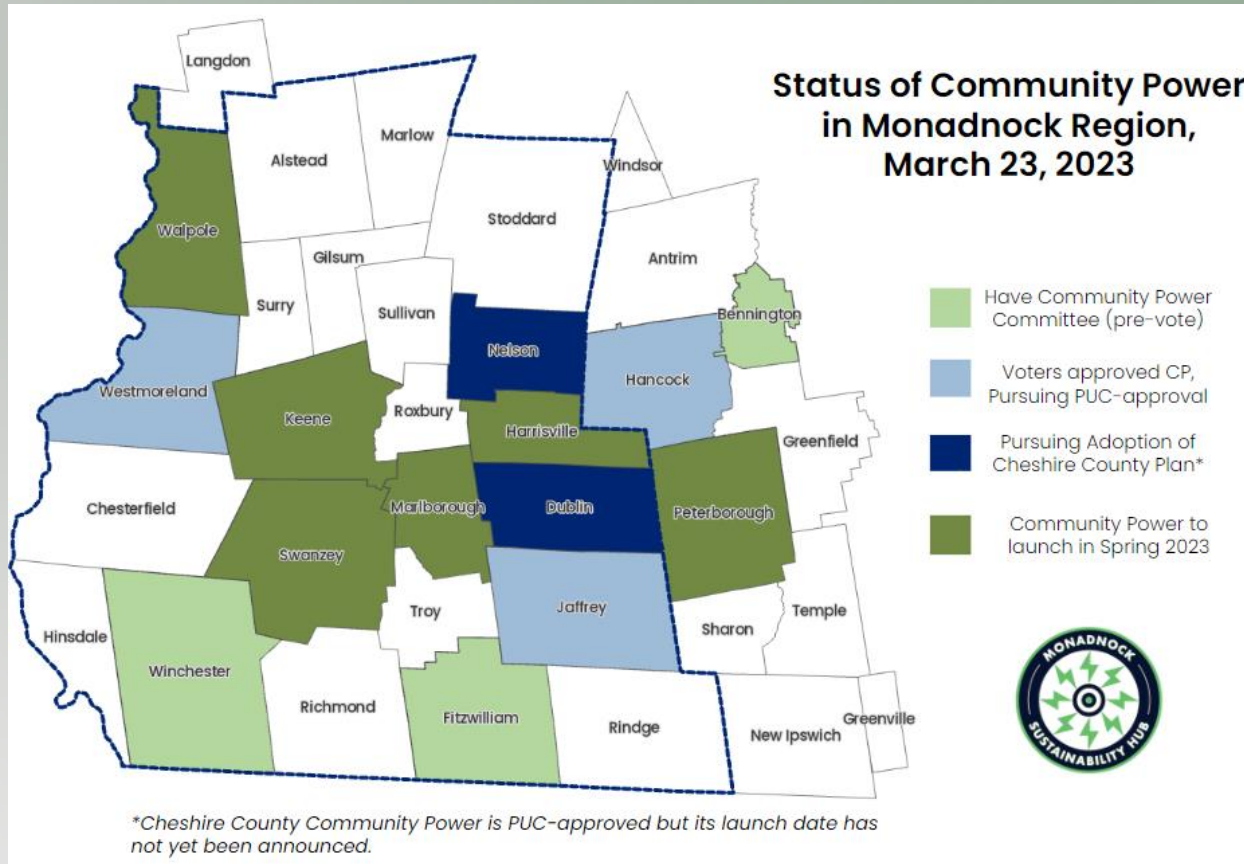
^{*}Not every household will be eligible for every incentive: product standards, income limits, and other eligibility requirements apply. For more information on the incentives, check out [our calculator](#).



April 20, 2023

From Rewiring America
Guide to the IRA

Perfect Matches: Home Electrification + Community Power or Rooftop Solar



COMMUNITY POWER

100% RENEWABLES OPTION
IS CHEAPER THAN YOUR
CURRENT DEFAULT PLAN!



HARRISVILLE, KEENE, MARLBOROUGH,
SWANZEY, PETERBOROUGH, WALPOLE

OPT-UP

100% RENEWABLE
ELECTRICITY
HELPS US ACHIEVE
CLIMATE GOALS



Resources

- NH Saves / Home Performance with Energy Star
 - <https://energyaudit.nhsaves.com/>
- State IRA webpage
 - <https://www.energy.nh.gov/rules-and-regulatory/inflation-reduction-act-funding-programs>
- Internal Revenue Service
 - Details on tax credit eligibility rules, qualifying EV manufacturers and qualifying EVs
 - New and used EV purchase factsheet <https://www.irs.gov/pub/taxpros/fs-2023-08.pdf>
- fueleconomy.gov – Advanced vehicles and fuels tab and <https://fueleconomy.gov/feg/tax2023.shtml> tax credit amounts for new EVs purchased in 2023
- US DOE VIN decoder <https://afdc.energy.gov/laws/electric-vehicles-for-tax-credit>
- Rewiring America – great handouts on savings specifics ie Go Electric guide to the IRA <https://www.rewiringamerica.org/>

Late-breaking addition - launched on 4-24-23:
US Dept. of Energy Savings Hub
for homeowners, renters, drivers to
determine their personal tax credit and
rebate options <https://www.energy.gov/save>



Monadnock Sustainability Hub Programs

- Weatherization and Energy Efficiency
- Community Power
- Community Solar
- Outreach & Education
- Transportation
 - Fleet electrification
 - Drive Electric Expos
 - EV charging infrastructure

monadnocksustainabilityhub.org
info@monadnocksustainabilityhub.org

Improve the energy efficiency of your home.
FREE Home Energy Workshop

NHSaves Button Up Workshop is a 1½ hour presentation about improving the energy efficiency of your home. It covers energy saving tips and NHSaves energy efficiency programs. Learn about saving electricity, insulation and air sealing, energy audit and weatherization programs, rebates on electric and gas appliances, and other incentives from NH's energy utilities. New Hampshire residents that want to use energy wisely and save money will find the information very useful.

PRESENTATION:
Join us for a NHSaves Button Up Workshop
WHEN:
Monday, May 1, 2023 at 6:30-8:00 P.M.
WHERE:
Keene Parks and Recreation Center
312 Washington Street
Keene, New Hampshire
PRESENTER:
Andy Duncan, Energy Trainer
QUESTIONS:
email: carolynj1947@gmail.com
SPONSORED BY:
NHSaves: www.nhsaves.com
LOCAL PARTNERS:
Clean Energy Team Keene
Keene Energy and Climate Committee
Monadnock Sustainability Hub

Visit https://nhsaves.com/learn/?resource_type=event for dates and locations of all Button Ups.
Workshops are organized by Plymouth Area Renewable Energy Initiative, (PAREI) www.PlymouthEnergy.org • 803-535-5030

WHEN NEW HAMPSHIRE SAVES, we all win.

The workshops are FREE thanks to funding provided by

NHSaves **EVERSOURCE** **Liberty** **Monadnock Electric Co-op** **Unitil**

 **DRIVE ELECTRIC EVENT**
APRIL 22 12-4 PM
AT MONADNOCK FOOD CO-OP
<https://monadnocksustainabilityhub.org>

ELECTRIC POLICE CARS = SMART INVESTMENTS

Electric vehicles (EVs) have clearly demonstrated lower operating costs, superior handling, quick acceleration and less vehicle downtime for police departments across the country.

The report *Making the Case for Electric Police Cars* shows that Police EVs have saved taxpayers over \$5,000 per year, per car. The Inflation Reduction Act of 2022 provides an added incentive of \$7,500 available as a direct payment to municipalities, per eligible vehicle purchased.

While most police department experiences have been with Teslas, the Model Y is replacing the Model 3, a Ford Pro Mustang Mach-E became available in 2022 and a Chevy E Blazer SUV designed for police use is expected in 2023. More options and availability will fuel the use of electric vehicles by police departments.

COST SAVINGS

There are significant cost savings in switching from traditional internal combustion engine (ICE) police vehicles to electric vehicles (EVs).

- EVs have a **lower total cost of ownership** by providing significant savings to taxpayers, in vehicle maintenance and fueling. Police Departments report the higher initial EV cost has been recovered in the first or second year, before the new \$7,500 Federal incentives.
- EVs **do not require oil changes, exhaust or transmission repairs**, plus regenerative braking reduces the wear on the conventional brakes while recharging the battery.
- EVs significant fuel cost savings are due to being **three times more efficient** plus the cost of electricity is about half that of gasoline.

PERFORMANCE & SAFETY

EVs offer **superior handling, quick acceleration, silence, less downtime, cleaner air** and, for some, a 5-Star safety rating. Superior handling derives from the low center of gravity in the undercarriage which reduces rollover potential. The direct torque provides smooth, quick acceleration. With significantly fewer parts, EVs need fewer trips to the mechanic which results in less vehicle downtime. With significantly fewer parts, EVs need fewer trips to the mechanic which results in less vehicle downtime. The police department in Fremont, CA reported "...an average of 27 fewer days of downtime per year..."

HEALTH & ENVIRONMENTAL IMPACT

EVs provide a healthier and more comfortable environment inside and outside the vehicle with **no engine noise or exhaust**. The **lack of noise while idling** makes communications easier. The absence of toxic carbon monoxide and other exhaust gases improves air quality for officers and others. Burning a gallon of gas releases roughly 19 pounds of CO₂, a major contributor to the dangerous warming of our planet.

NH Fuel Cost
(as of January 2023)

| Fuel Type | Cost per Gallon |
|-----------|-----------------|
| Gasoline | \$3.37 |
| eGallon | \$1.85 |

