



Inflation Reduction Act of 2022 (IRA)

EMT Summary of H.R. 5376 for October 2022 Board Update

October 26, 2022

[Bill text \(as enacted\)](#)

Inflation Reduction Act (IRA) Relevant sections

- **Tax credits & deductions for energy efficiency upgrades**
 - Sec 13301: 25C Energy Efficient Home Improvement Credit (UPDATED)
 - Sec 13303: 179D Energy Efficient Commercial Buildings Deduction (UPDATED)
 - Sec 13304: 45L New [construction] energy efficient home tax credit (UPDATED)
- **Rebates for energy efficiency upgrades**
 - Sec 50121: Home energy performance-based whole-house rebates (NEW)
 - Sec 50122: High-efficiency electric home rebate program (NEW)
- **Clean vehicle (EV) tax credits**
 - Sec 13401: 30D Clean vehicle (EV) tax credit (UPDATED)
 - Sec 13402: 25E Credit for previously owned vehicles (NEW)
 - Sec 13403: 45W Credit for qualified commercial clean vehicles (NEW)
 - Sec 13404: 30C Alternative fuel refueling property credit (UPDATED)
- **Other items**
 - Storage-related provisions
 - **Sec 60103: Greenhouse Gas Reduction Fund/Green Bank (NEW)**
 - Sec 50123: State-based home energy efficiency contractor training program (NEW)
 - Sec 50131: Assistance for updating Building Codes (NEW)

Tax Credits for Energy Efficiency and Building Upgrades

Sec 13301: 25C Energy Efficient Home Improvement Credit

- Overview: Reinstates and expands the [Sec 25C tax](#) credit (“Non-business Energy Property”) that expired in 2021
- Effective dates: Previous 25C credit extended through 2022; new provisions take effect for property **installed in 2023-2032**

| Provision | Previous Sec 25C (in effect through 2022) | Revised Sec 25C (effective 2023-2032) |
|--|--|---|
| Allowable credit (overall) | 10% of amount paid for qualified efficiency improvements and property up to \$500 <i>lifetime</i> cap | 30% of amt paid for qualified Improvements and Property, up to a \$1,200 annual cap (\$2,000 annual cap for heat pumps, heat pump water heaters, certain biomass stoves & boilers) |
| Cap on “Qualified energy property” | \$50 for circulating fan; \$150 for furnace/hot water boiler; \$300 for energy-efficient building property | \$600/year (qualifying water heaters, central AC, furnaces, circuit panel upgrades) |
| Circuit panel upgrade | Not eligible | Eligible (counts toward \$600/year cap) |
| Cap on Heat pumps, Heat pump water heaters, Biomass stoves & boilers | \$300 (Biomass stoves & boilers not qualified) | \$2,000/year (Biomass stoves & boilers added as qualified property) |
| Cap on Windows | \$200 | \$600/year |
| Cap on Doors | \$500 | \$250 for a single exterior door; \$500 max/year |
| Other building envelope components (includes insulation) | See 25C(c) text (pre-IRA) | <ul style="list-style-type: none"> • Standards updated (See Sec 25C(c)(2)) • Air sealing added; building roofs disqualified |
| Home energy audits | Not eligible | Qualified up to \$150 |
| Product identification number | N/A | Required for tax credit beginning in 2025 |

Sec 13303: 179D Energy Efficient Commercial Buildings Deduction

- Overview: Revises the [Sec 179D](#) deduction to increase credit rate and expand eligibility
- Effective dates: Updated requirements apply beginning in tax year 2023

| Provision | Previous Sec 179D (in effect through 2022) | Revised Sec 179D (effective beginning in 2023) |
|---------------------------------------|--|---|
| Deduction rate | Credit/sq foot of building area: \$1.88 (inflation adjusted) | Credit/sq foot of building area: <ul style="list-style-type: none"> • Base: \$0.50, increased by \$0.02/sq foot for each %-point of energy and power costs reduced more than 25% (up to \$1) • Bonus for prevailing wage and apprenticeship requirements met:* \$2.50, increased by \$0.10/sq foot for each %-point in energy & power costs reduced over 25% (up to \$5). *Bonus rate also available to projects with qualified retrofit plan where installation begins before the date 60 days after prevailing wage and apprenticeship guidance is issued |
| Min efficiency threshold for upgrades | 50% or more compared to reference building | 25% or more reduction in energy & power costs compared to reference building. DOE to provide further guidance. |
| Eligible recipients | Commercial building owners and designers of gov't buildings | Adds eligibility for tax-exempt entities (via allocation to EE property designer) and REITs |
| Deduction frequency | One deduction permitted/lifetime | Deduction allowed every three years (every four years in certain circumstances) |
| Other items | | <ul style="list-style-type: none"> • Reference standard for min efficiency threshold updated (w/r/t Standard 90.1 published by ASHRAE) • Partial credit under previous Sec 179D eliminated • Credit added for qualified building retrofit (alternative deduction) |

Sec 13304: 45L New [Construction] Energy Efficient Home Credit

- Overview: Reinstates and expands the [Sec 45L](#) tax credit, which expired in 2021
- Effective dates: Expired credit retroactive for 2022; revised credit available beginning with tax year 2023

| Provision | Revised Sec 45L (effective 2023-2032) |
|--------------------------------------|---|
| Single-family and manufactured homes | <ul style="list-style-type: none">• If meet most recent Energy Star Single-Family program requirements (ES 3.1 for 2023-2024; ES 3.2 beginning 2025): \$2,500.• If certified zero energy ready home under DOE Zero Energy Ready program or successor: \$5,000 |
| Multifamily homes | <ul style="list-style-type: none">• Meeting recent Energy Star program requirements: Base credit: \$500. Bonus credit: \$2,500/unit (prevailing wage/apprenticeship requirements met)• Meeting Zero Energy Ready requirements: Base credit \$1,000/unit; Bonus credit \$5,000/unit (prevailing wage/apprenticeship requirements met) |

Rebates for efficiency upgrades

Sec 50121: HOMES Rebate program (1)

- Overview: \$4.3B available through FY 2031 or until expended for grants to States via State Energy Program (SEP) to implement “Home Owner Managing Energy Savings” rebate program
 - Performance-based rebates for efficiency retrofits; distinct requirements for Measured vs. Modeled energy savings
 - **\$36M allocation to ME** (SEP formula)
- Eligible rebate recipients: Individuals or aggregators “carrying out upgrades”
- Timeline: Law qualifies retrofits commenced no earlier than Aug 16, 2022. Rebate availability expected **no earlier than late 2023**. DOE must develop guidance; States must develop applications and additional administrative process
- Rebate cannot be combined with any other Federal grant or rebate, including Sec 50122 rebates

Sec 50121: HOMES Rebate program (2)

| Provision | Energy savings | Rebate amount |
|--|--|--|
| Retrofits of single-family homes | 20-34% Modeled | 50% of project costs up to \$2,000 |
| | Over 35% Modeled | 50% of project costs up to \$4,000 |
| | At least 15% Measured | Payment per kWh equivalent to \$2,000 for a 20% reduction in energy use for avg. home in State; up to 50% of project costs |
| LMI single-family homes (<80% of area median income) | Rebate rate doubled – maximum rebate amount increased to 80% of project costs up to \$8,000 | |
| Multifamily homes | 20-34% Modeled | \$2,000 per dwelling unit up to \$200,000 per building |
| | Over 35% Modeled | \$4,000 per dwelling unit up to \$400,000 per building |
| Multifamily homes or portfolio of homes | At least 15% Measured | Payment per kWh equivalent to \$2,000 for a 20% reduction for avg. multi-family building in State up to 50% of project costs |
| LMI multifamily homes (homes >50% occupied by LMI) | Rebate rate doubled – maximum rebate amount increased to 80% of project cost. (States may seek approval for higher rebate amounts for LMI) | |
| Additional rebate for installer | \$200 for every home located in disadvantaged community | |

Sec 50121: HOMES Rebate program (3)

- State-level implementation: Once DOE has established federal guidance, State must submit an application that includes a plan
 - For MODELED performance rebates: to use software compliant with BPI 2400 (additional DOE guidance pending)
 - For MEASURED performance rebates: to use open-source advanced measurement and verification software (DOE approved) for determining monthly/hourly weather-normalized energy use of home before and after retrofit
 - For quality monitoring via a certificate provided by contractor to the homeowner and CERTIFIED by a THIRD PARTY that provides details of work performed/materials installed and projected energy savings
 - To value savings based on time, location, or GHG
- Up to 20% of award to State energy office may be spent on administrative costs and technical assistance; activities of State energy offices administering grants not subject to [10 CFR 420.18](#) (SEP) restrictions
- Definitions
 - “Disadvantaged community” – TBD by DOE
 - LMI household – *individual or family the total annual income of which is <80% of the median income of the area in which the individual or family resides, as reported by the Department of Housing and Urban Development, including an individual or family that has demonstrated eligibility for another Federal program with income restrictions equal to or below 80% of area median income.*

Sec 50122: High Efficiency Electric Home Rebate Program for LMI (1)

- Overview: \$4.275B available through FY 2031 or until expended for grants to States via State Energy Program to implement High Efficiency Electric Home Rebate Program (HEEHR); additional \$225M for Indian Tribes
 - Program to provide point-of-sale rebates for electrification projects
 - **\$36M allocation to ME** (SEP formula)
- Timeline: Rebate availability expected **no earlier than late 2023**. DOE must develop guidance; States must develop applications and additional administrative process
- Eligible rebate recipients:
 - (A) LMI household – income <150% of area median income
 - (B) Owner of multifamily building at least 50% occupied by LMI households
 - (C) Gov, commercial, or nonprofit entity (as determined by DOE) carrying out project on behalf of (A) or (B)

Sec 50122: High Efficiency Electric Home Rebate Program for LMI (2)

| "Qualified electrification project" | Max rebate amount |
|--|---|
| Overall MAX AMOUNT eligible recipient may receive in rebates | \$14,000 AND shall not exceed <ul style="list-style-type: none"> • 100% of project cost for household with annual income <80% of area median • 50% of cost for household with annual income >80% and <150% of area median |
| Heat pump water heater | \$1,750 |
| Heat pump | \$8,000 |
| Electric stove, cooktop range, oven, heat pump clothes dryer | \$840 |
| Electric load service center (panel) upgrade | \$4,000 |
| Insulation, air sealing, ventilation | \$1,600 |
| Electric wiring | \$2,500 |
| Additional rebate for installer | \$500 (DOE guidance pending) |

Sec 50122: High Efficiency Electric Home Rebates for LMI (3)

- “Qualified electrification project”
 - New construction, replacement of nonelectric appliance, or first-time purchase of the appliance
 - All appliances, systems, components allowed in Qualified electrification projects must be Energy Star certified
- Rebate cannot be combined with any other Federal grant or rebate, including Sec 50121 rebates, for “same single upgrade”
- Implementation: DOE to prescribe guidelines, including for providing point of sale rebates (no deadline). State energy office application must include a plan
 - For verifying income of eligible entities
 - For allowing rebates at point of sale (including verifying income at point of sale)
 - For ensuring the same electrification project does not receive a rebate/grant from more than one fed program
- Up to 20% of award to State energy office may be spent on administrative costs and technical assistance. Activities of State energy offices administering grants not subject to [10 CFR 420.18](#) (SEP) restrictions
- Definitions
 - “Qualified electrification project” – project to install one or more of the items/systems listed in table on previous slide
 - “LMI household” -- *individual or family with total income <150% of the median income of the area in which they reside, as reported by HUD, including an individual or family that has demonstrated eligibility for another Federal program with income restrictions ≤150% of area median income.*

Clean Vehicle Tax Credits

Sec 13401: 30D EV (“Clean vehicle”) Credits for new vehicles

- Overview: 30D tax credit modified and extended through 2032; see next slide for summary of effective dates
- 200k vehicle/manufacturer cap lifted (eff. 2023)
- Qualifying vehicles
 - Min battery size increased from 4 kWh to 7 kWh (eff. 2023)
 - MSRP caps (eff. 2023) – for Vans, SUVs, Pickups: \$80,000; for other vehicles \$55,000
 - All vehicles must be manufactured in North America (eff. Aug 16, 2022); Restrictions on battery assembly in “foreign entities of concern” (e.g., China, Russia) and critical battery minerals sourcing in these foreign entities (eff. 2024 and 2025, resp.)
- \$7,500 tax credit is split into two \$3,750 tranches awarded based on new battery requirements
 - Materials sourcing requirements – “critical minerals” extracted or processed in the U.S. or any country where U.S. has a free trade agreement OR recycled in North America. Min amount increases from 40% in 2023 to 80% in 2027+
 - Component assembly requirements – battery components manufactured or assembled in North America must be 50% in 2023, increasing to 100% in 2028
- New income restrictions for qualifying buyers (eff. 2023): \$300,000 for joint returns; \$225,000 for head of household; \$150,000 for all others
- Buyer may transfer tax credit to the dealer (eff. 2024) for time-of-sale credit; subject to restrictions enumerated in the law and further guidance to be developed (e.g., dealer must register with the Treasury)

Sec 13401: 30D “Clean vehicle” credits for new vehicles (cont.)

| Updated requirement | Provision effective date applies to |
|--|--|
| Final assembly must occur in U.S., Canada, or Mexico | All vehicles <i>sold</i> on/after Aug 16, 2022 |
| Requirements for geographic sourcing of battery minerals and component assembly | Vehicles <i>placed in service</i> in 2023 or the date Treasury issues implementing regs/guidance (whichever earlier) |
| Cap removed on # of manufacturer’s vehicles eligible for credits | Vehicles <i>sold</i> in 2023 or subsequent years |
| Customer can transfer tax credit to dealer | Vehicles <i>placed in service</i> in 2024 or subsequent years |
| No battery components assembled by a foreign “entity of concern” (e.g., China, Russia) | Vehicles <i>placed in service</i> in 2024 or subsequent years |
| No battery minerals sourced from a foreign “entity of concern” (e.g., China, Russia) | Vehicles <i>placed in service</i> in 2025 or subsequent years |
| Other updates to Sec 30D | Vehicles <i>placed in service</i> in 2023 or subsequent years |

Transition provision: customers may receive tax credit under pre - IRA requirements if a written binding contract to purchase a qualifying EV was entered prior to Aug 16, 2022

Sec 13402: 25E Used clean vehicle tax credit

- Overview: Available 2023-2032; credit **30% of vehicle sale price up to \$4,000**
- Qualifying vehicles
 - Gross weight <14,000 lbs
 - Battery is at least 7 kWh
 - Model year must be 2 years earlier than the calendar year of taxpayer acquisition
 - Original owner is not the taxpayer
 - Sale price must be <\$25,000
 - Must be sold by a dealer
 - Only the first sale of the vehicle post December 31, 2022; credit may only be applied for vehicle once
- Qualifying buyers
 - Modified adjusted gross income can be up to \$150,000 for joint returns; \$125,000 for head of household; \$75,000 for all others
 - May not be purchasing vehicle for resale
 - May only claim credit once every three years
- Customer can transfer tax credit to dealer beginning 2024, same rules as new vehicles

Sec 13403: 45W Commercial clean vehicle tax credit

- Overview: Available 2023-2032: new credit (Sec 45W) for qualified EVs and fuel cell vehicles
- Credit per vehicle
 - Lesser of 30% of the basis of the clean vehicle OR Incremental cost of clean vehicle (excess cost relative to price of comparable ICE vehicle – IRS to issue guidance)
 - Capped at \$7,500 for vehicles <14,000 lbs; capped at \$40,000 for vehicles >14,000 lbs
- “Qualified commercial clean vehicles”
 - Plug-in vehicles <14,000 lbs with battery >7kWh; plug-in vehicles >14,000 lbs with battery >15 kWh
 - Fuel cell vehicles
 - “Mobile machinery” (e.g., construction equipment) as defined in [Sec 4053\(8\)](#)
- Tax credit may be transferred to dealer for TAX-EXEMPT buyers only; available beginning in 2024. Not allowed for leased vehicles.
- Credit cannot be claimed under both Sec 30D (private use) and Sec 45W (commercial use)

Sec 13404: 30C Alternative Fuel Refueling Property Credit

- Overview: Reinstates and extends the Sec [30C tax credit](#) through 2032
- Effective dates: expired tax credit extended through 2022; new requirements take effect in 2023. Treasury to develop rules/guidance as needed to implement this section
- Credit for EV chargers allowed only in census tracts that are low income ([Sec 45D\(e\)](#)) OR not urban area (as defined by Bureau of the Census)
- Credit amount:
 - For residential property, credit amount continued at 30% up to \$1,000
 - For business property
 - Cap lifted to \$100,000 for item of qualifying property from \$30,000
 - 30% credit if prevailing wage and apprenticeship requirements are met
 - 6% credit if wage and apprenticeship requirements *not* met

Other provisions

Select provisions related to energy storage

Sec 13102: Sec 48 Tax Credit (ITC)

- Standalone storage systems qualified for ITC; min size 5 kWh
- Thermal storage also qualified for ITC
- Prevailing wage and apprenticeship requirements apply, bonuses for domestic content and affordable housing
- Direct pay (full refundability) available for non-taxable entities; tax credit may also be transferred

Sec 13302: 25D Residential Clean Energy Credit

- Overview: Extends and expands the [Sec 25D tax](#) credit
- Credit returns to maximum 30% for property placed in service between Dec 31, 2021, and Jan 1, 2033, then phases down.
- **Battery storage property added as an eligible expenditure, biomass disqualified.** These changes apply to expenditures made after Dec 31, 2022
- Battery storage system must be at least 3 kWh and installed in residence of taxpayer located in the U.S.

Sec 13502: 45X Advanced Manufacturing Production Credit

- Sec 45X Credit expanded to cover up to 30% credit for energy storage systems

Sec 60103: Greenhouse Gas Reduction Fund (re: Green Bank) (1)

- \$27B allocated to the EPA to fund green bank financing, including \$15 targeted to support low-income and disadvantaged communities.
 - Funds allocated for fiscal year 2022 and to remain available through September 2024. EPA directed to begin making grants by February 12, 2023.
 - Funding to be available on a competitive basis.
- Funding is allocated in three buckets:

(1) Support low-income recipients in deploying zero emission technologies and “other GHG reduction activities”

- Funding amount: \$7B
- Eligible recipients: States, municipalities, tribal governments, green banks or equivalent nonprofit
- Eligible uses: Provide grants, loans, or other financial or technical assistance to enable low-income/disadvantaged communities to deploy zero-emission technologies and other approved [and not yet specified] GHG reduction activities

Sec 60103: Greenhouse Gas Reduction Fund (re: Green Bank) (2)

(2) General assistance for Qualified Projects

- Funding amount: \$12B
- Eligible recipients: Green banks or equivalent non-profits
- Eligible uses:
 - Direct investment in Qualified Projects at national, regional, State, AND local levels
 - Indirect investment to establish or support existing public/quasi public, nonprofits that provide financial assistance to qualified projects
- Qualified Projects: Includes any project, activity, or technology that
 - Reduces or avoids GHG emissions or other air pollution leveraging private sector investment
 - Assists communities in reducing or avoiding GHG emissions or other air pollution

(3) Assistance for Qualified Projects for low-income and disadvantaged communities

- Funding amount: \$8B
- Eligible recipients: Green banks or equivalent nonprofits
- Eligible uses: Same as (2) above, except that financial and technological assistance must be dedicated to supporting low-income and disadvantaged communities

Sec 50123: State-based Home energy efficiency contractor training program

- \$200M for DOE to provide financial assistance to States to develop training and education programs for EE contractors as part of State energy conservation plan under the State Energy Program ([See 42 U.S.C. Sec 6322\(d\)\(13\)](#))
- Allowed use of funds
 - Reduce cost of training contractor employees
 - Provide testing and certification of contractor employees
 - Partnering with nonprofits to develop/implement a State program for reducing cost of training contractor employees
- States may use up to 10% of funds on administrative expenses

Sec 50131: Assistance for Latest and Zero Building Energy Code Adoption

\$1B for DOE to provide financial assistance to States and local government to adopt improved building codes that meet or exceed 2021 International Energy Conservation Code or ANSI/ASHRAE/IES Standard 90.1-2019

Summary of effective dates

Most significant **efficiency**-related changes take effect in 2023

| Section | Name | Effective date(s) | Implementation |
|---------|---|--|---|
| 13301 | 25C Non-business energy property credit | Expired credit reinstated and retroactive for 2022; revised credit effective 2023 | Treasury to issue regs or guidance for auditor qualifications within 1 year (for audit tax credit) |
| 13303 | 179D Energy Efficient Commercial Bldgs Deduction | Revised credit effective 2023 | Treasury to issue regs or guidance on prevailing wage & apprenticeship, tax-exempt entities, & baseline determination |
| 13304 | 45L New [Construction] Energy Efficient Home Credit | Expired credit reinstated and retroactive for 2022; revised credit effective 2023 | Treasury to issue regs or guidance on prevailing wage & apprenticeship |
| 50121 | HOMES Rebate (Performance-based) | Retrofits begun on or after 8/16/2022 and completed before 9/30/2031. Rebates not expected to be available before mid/late 2023 | DOE to allocate funding and develop certain definitions and standards; States to develop application and operate |
| 50122 | High Efficiency Electric Home Rebate | Funding appropriated for FY2022-2031. Rebates not expected to be available before mid/late 2023 | DOE to allocate funding and develop certain standard; States to develop application and operate |

Most significant **EV**-related provisions take effect in 2023

| Section | Name | Effective date(s) | Implementation |
|---------|--|---|--|
| 13401 | 30D Clean vehicle (EV) tax credit | North America assembly restrictions effective August 2022; most other changes effective beginning in 2023 | Treasury to issue regs or other guidance on new battery requirements by December 31, 2022 |
| 13402 | 25E Credit for previously owned vehicles | 2023 | Treasury to issue regs or guidance, incl. related to transfer of credit |
| 13403 | 45W Credit for commercial vehicles | 2023 | Treasury to issue regulations or guidance, incl. for determining incremental cost of clean vehicle |
| 13404 | 30C Alternative fuel refueling credit | Expired credit reinstated and retroactive for 2022; revised credit effective 2023 | Treasury to issue regs or guidance on prevailing wage, apprenticeship |