



Preliminary Data on the IRA Energy Efficient Home Improvement Credit

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In August 2024, the Internal Revenue Service (IRS) released [preliminary 2023 data](#) on the residential clean energy credit (RCEC) and the energy efficient home improvement credit (EEHIC). The credits were scheduled to expire at the end of 2023 and 2021, respectively, before being [reinstated and expanded](#) by P.L. 117-169 (commonly known as the Inflation Reduction Act of 2022, IRA). This publication focuses on the EEHIC, describing its fiscal cost, uptake among high-income taxpayers, geographic distribution of credit recipients, and the technologies used for EEHIC claims. A companion Insight, *Preliminary Data on the IRA Residential Clean Energy Credit*, provides similar analysis of the RCEC.

The Energy Efficient Home Improvement Credit (EEHIC)

Between tax years 2023 and 2032, taxpayers may receive an EEHIC for making energy-efficiency upgrades to their homes. As described in [26 U.S.C. §25C](#), such upgrades must conform to standards set by [Energy Star](#), the [Consortium for Energy Efficiency](#), or the [International Energy Conservation Code](#), depending on the specific upgrade being made. Purchases of [energy-efficient appliances](#) installed at homes that are rented, owned and used as secondary residences, or owned and used as principal residences are eligible for the EEHIC. Upgrades to the [insulation, exterior doors, and exterior windows or skylights](#) of homes owned and used as principal residences are also EEHIC-eligible. In addition, [home energy audits](#) of taxpayers' principal residences (whether owned or rented) are eligible for the credit.

The EEHIC is equal to 30% of the costs of purchasing and installing [eligible energy-efficiency equipment](#). The credit is generally limited to \$1,200 per taxpayer and \$600 per item, with the following exceptions:

- the credit for installing energy-efficient exterior windows and skylights may not exceed \$600, even if taxpayers install more than one exterior window or skylight;
- the credit for installing energy-efficient exterior doors may not exceed \$250 per door and \$500 for all exterior doors;
- the credit for home energy audits is capped at \$150; and

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- taxpayers may claim an EEHIC of up to \$2,000 for installations of electric or natural gas heat pumps, electric or natural gas heat pump water heaters, biomass stoves, and biomass boilers. This \$2,000 amount is *in addition to* the normal \$1,200 maximum, allowing some taxpayers to receive as much as \$3,200 per year from the EEHIC.

The EEHIC is subject to annual limits but no lifetime limits, so taxpayers spacing their upgrades over multiple years may benefit more than taxpayers making all their upgrades in a single year.

The EEHIC is nonrefundable, meaning that if the value of the credit exceeds a taxpayer’s income tax liability, they may *not* receive a refund for the difference. Unlike with the RCEC, unused EEHIC credits may not be “carried forward” to reduce future tax liabilities. These features limit the value of the EEHIC for households with low tax liabilities, including most low-income households.

EEHIC Data

An estimate from December 2023 [projected](#) that the cost of the EEHIC would be \$4.0 billion in FY2023 before dropping to \$2.0 billion-\$2.1 billion annually between FY2024 and FY2027. The preliminary IRS data indicate that the EEHIC cost \$2.1 billion in tax year 2023.

The EEHIC disproportionately benefited higher-income households in 2023. Nearly three-fifths (58%) of tax filers receiving the EEHIC had incomes of \$100,000 or more, as compared with 24% of all tax filers. Because these high-income taxpayers also received larger-than-average credits, they received more than 62% of all EEHIC benefits in 2023. By contrast, taxpayers in the bottom 27% of the income distribution received 0.8% of EEHIC benefits (rounded to 1% in the table below).

Table 1. Energy Efficient Home Improvement Credits (EEHICs), by Taxpayer Income, 2023
Share of EEHIC beneficiaries, average EEHIC benefits, and share of total EEHIC benefits, by taxpayer income group

	Share of All Tax Returns	Share of EEHIC Beneficiaries	Average EEHIC per Beneficiary	Share of EEHIC Benefits Received
Incomes below \$25,000	27%	2%	\$393	1%
Incomes \$25,000 to \$49,999	23%	10%	\$711	8%
Incomes \$50,000 to \$99,999	26%	30%	\$842	29%
Incomes of \$100,000 or more	24%	58%	\$947	62%
Incomes of \$500,000 or more	1%	3%	\$1,121	3%

Source: CRS calculations based on preliminary 2023 income tax data from the Internal Revenue Service, available at <https://www.irs.gov/statistics/soi-tax-stats-clean-energy-tax-credit-statistics>.

Notes: Table includes early and on-time income tax filers. Late filers are not included. Taxpayers with incomes of \$500,000 or more are a subset of the group “Incomes of \$100,000 or more.” Shares rounded to the nearest percentage point.

As shown in **Table 2**, taxpayers in the Northeast were the most likely to claim the EEHIC, while taxpayers in southern states were the least likely to claim the credit. Just over 3% of tax filers in Maine claimed the EEHIC, more than six times the rate of EEHIC uptake in Hawaii.

Table 2. Highest and Lowest Shares of Taxpayers Benefiting from the EEHIC, by State, 2023
Share of taxpayers benefiting from the EEHIC, by state, 2023

Highest shares of taxpayers benefiting from the EEHIC:	
Maine	3.0%

New Hampshire	2.8%
Vermont	2.8%
Connecticut	2.6%
Massachusetts	2.6%
<i>Lowest shares of taxpayers benefiting from the EEHIC:</i>	
West Virginia	1.1%
Arkansas	1.1%
Louisiana	1.0%
Oklahoma	0.9%
Hawaii	0.5%

Source: CRS calculations based on preliminary 2023 income tax data from the Internal Revenue Service, available at <https://www.irs.gov/statistics/soi-tax-stats-clean-energy-tax-credit-statistics>.

Notes: Table includes early and on-time income tax filers. Late filers are not included.

The average credit per EEHIC recipient was broadly similar across states, with average amounts ranging from a low of \$743 in Iowa to a high of \$1,192 in Washington. Nationally, the average credit per EEHIC recipient was \$882.

Before counting late filers, more than 2.3 million taxpayers received the EEHIC in 2023. The services and appliances most commonly claimed by EEHIC recipients were insulation upgrades (claimed by 30% of EEHIC recipients), exterior windows and skylights (30%), central air conditioners (21%), and taxpayers’ “most expensive door” (17%). Taxpayers were least likely to claim the EEHIC for biomass stoves or boilers (2.1%) and home energy audits (1.6%). EEHIC recipients may claim the credit for more than one energy-efficiency upgrade.

Residential Energy Tax Credits: Combined Data

According to the IRS’s preliminary data release, at least 3.4 million taxpayers used the EEHIC, the RCEC, or both to reduce their income tax liabilities in 2023. Approximately 2.2 million taxpayers claimed only the EEHIC, while 163,000 taxpayers claimed both the EEHIC and the RCEC. Although dual receipt was rare for all types of taxpayers, it was most common among high-income households. Last year, 1 in 257 tax filers earning \$500,000 or more received both IRA residential energy credits, as compared to 1 in 33,769 tax filers earning less than \$25,000.

Initial EEHIC and RCEC costs roughly offset relative to initial projections: the EEHIC has cost less than expected, while the RCEC has cost more. The credits’ combined 2023 fiscal cost has thus far come out to \$8.4 billion, not counting late filers, tracking relatively closely to the Joint Committee on Taxation’s projected cost of \$7.6 billion for FY2023. Both the number of recipients and the fiscal cost of the credits are likely to increase as late filers continue to claim the RCEC and the EEHIC.

EEHIC claims are disproportionately high among taxpayers in the Northeast, and the RCEC is disproportionately claimed by taxpayers in the South. The income distributions for the credit claims, however, are similar. According to the preliminary IRS data, 0.3% of RCEC benefits, 0.8% of EEHIC benefits, and 0.4% of the two credits’ combined benefits went to taxpayers in the bottom 27% of the taxpayer income distribution in 2023. Taxpayers in the top 24% of the income distribution, on the other hand, received two-thirds (66%) of the credits’ combined benefits.

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