



Preliminary Data on the IRA Residential Clean Energy Credit

Updated April 13, 2026

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, or IRA). These credits were more recently repealed by [P.L. 119-21](#), the FY2025 reconciliation law (commonly known as the One Big Beautiful Bill Act), with the RCEC not applying to expenditures made after December 31, 2025.

This publication focuses on the RCEC, describing its fiscal cost, its uptake among high-income taxpayers, the geographic distribution of credit recipients, and the types of energy equipment most commonly claimed by credit recipients. A companion Insight, CRS Insight IN12422, *Preliminary Data on the IRA Energy Efficient Home Improvement Credit*, provides similar analysis of the EEHIC.

The Residential Clean Energy Credit (RCEC)

The RCEC, authorized in [26 U.S.C. §25D](#), subsidized taxpayer purchases of renewable energy equipment used at taxpayer residences. Between 2022 and 2025, individuals and couples installing solar electric panels, solar water heaters, small wind energy property, geothermal heat pumps, and other renewable energy equipment could receive an RCEC equivalent to 30% of the costs of [purchasing, assembling, and installing](#) such equipment. Both [renters and homeowners](#) could claim the credit for domestically located homes in which they resided; landlords who rented property to others were not eligible. The RCEC was nonrefundable, meaning that if a taxpayer's RCEC was greater than their income tax liability, the taxpayer could *not* receive a refund for the difference. However, unlike the EEHIC, [unused credit amounts](#) may be “carried forward” to [offset income tax liabilities](#) in future years (including [after 2025](#)).

RCEC Data

IRS data appear to show that the RCEC was utilized more than initially estimated. A December 2023 estimate [projected](#) that the RCEC would cost \$3.6 billion in FY2023. The [IRS data](#), released in August

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2024, show that the RCEC reduced federal revenues by \$6.3 billion in tax year 2023. These data do not account for late filer claims.

The tax benefits of the RCEC were concentrated, by both income and location. As shown in **Table 1**, taxpayers with incomes of \$100,000 or more received 67% of RCEC benefits, while taxpayers in the bottom quarter received 0.3%. High-income taxpayers were disproportionately likely to claim the RCEC, and they also received a larger average credit than low-income taxpayers. Approximately 43% of RCEC beneficiaries had incomes of \$100,000 or more, and taxpayers in this income range received an average credit of \$7,841. About 2.5% (rounded to 3% in the table) of RCEC beneficiaries had incomes below \$25,000; these taxpayers received an average credit of \$518.

These preliminary IRS data may understate the benefits to low-income taxpayers (who often have [low annual income tax liabilities](#)) if they use excess credits from this year to offset future tax liabilities. (**Table 1** also does not include approximately 142,000 taxpayers who carried their entire RCEC forward to 2024.)

Table 1. Residential Clean Energy Credits (RCECs), by Taxpayer Income, 2023

Share of RCEC beneficiaries, average RCEC benefits, and share of total RCEC benefits, by taxpayer income group

| | Share of All Tax Returns | Share of RCEC Beneficiaries | Average RCEC per Beneficiary | Share of RCEC Benefits Received |
|-------------------------------|--------------------------|-----------------------------|------------------------------|---------------------------------|
| Incomes below \$25,000 | 27% | 3% | \$518 | <0.5% |
| Incomes: \$25,000 to \$49,999 | 23% | 17% | \$1,618 | 6% |
| Incomes: \$50,000 to \$99,999 | 26% | 37% | \$3,778 | 27% |
| Incomes of \$100,000 or more | 24% | 43% | \$7,841 | 67% |
| Incomes of \$500,000 or more | 1% | 2% | \$11,657 | 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>. As of April 8, 2026, final 2023 income tax data have not yet been released.

Notes: Table includes early and on-time income tax filers. Late filers are not included. Taxpayers who carry their entire credits forward to 2024 are not considered 2023 RCEC beneficiaries. Taxpayers with incomes of \$500,000 or more are a subset of the group “Incomes of \$100,000 or more”—and are included there as well. Shares are rounded to the nearest percentage point.

RCEC beneficiaries are predominantly from Southern and Western states. Ranked from highest to lowest, about 2% of Nevadan taxpayers claimed the RCEC in 2023, as compared with 0.9% of taxpayers nationally and 0.2% of taxpayers in North Dakota (see **Table 2**).

Table 2. States with the Highest and Lowest Shares of Taxpayers Benefiting from the RCEC, 2023

Share of taxpayers benefiting from the RCEC, by state, 2023

| <i>States with the highest shares of taxpayers benefiting from the RCEC:</i> | |
|--|------|
| Nevada | 2.0% |
| Florida | 1.8% |
| Arizona | 1.6% |
| Hawaii | 1.6% |
| Texas | 1.6% |
| <i>States with the lowest shares of taxpayers benefiting from the RCEC:</i> | |
| Wisconsin | 0.3% |

| | |
|---------------|------|
| Nebraska | 0.3% |
| West Virginia | 0.2% |
| South Dakota | 0.2% |
| North Dakota | 0.2% |

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>. As of April 8, 2026, final 2023 income tax data have not yet been released.

Notes: Table includes early and on-time income tax filers. Late filers are not included. Taxpayers who carry their entire credits forward to 2024 are not considered 2023 RCEC beneficiaries. Percentages are rounded to the nearest tenth of a percentage point.

Despite their lower *shares* of tax credit recipients, northern states still received nontrivial benefits from the RCEC due to their higher average credit amounts per recipient. The 10 states with the highest RCECs per credit recipient included northern coastal states such as New Hampshire, Connecticut, Massachusetts, Rhode Island, Washington, and Oregon. The average credit nationally was \$5,084, more than double the average RCEC in Mississippi (\$2,248; shown in **Table 3**).

Table 3. States with the Highest and Lowest Average RCEC Amounts, 2023

Average RCEC per credit recipient, by state, 2023

| <i>States with the highest average RCEC per credit recipient:</i> | |
|---|---------|
| New Hampshire | \$7,581 |
| Hawaii | \$7,055 |
| Connecticut | \$6,642 |
| Minnesota | \$6,538 |
| Massachusetts | \$6,251 |
| <i>States with the lowest average RCEC per credit recipient:</i> | |
| Indiana | \$3,682 |
| Louisiana | \$3,551 |
| Georgia | \$3,394 |
| Tennessee | \$3,110 |
| Mississippi | \$2,248 |

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>. As of April 8, 2026, final 2023 income tax data have not yet been released.

Notes: Table includes early and on-time income tax filers. Late filers are not included. Taxpayers who carry their entire credits forward to 2024 are not counted as 2023 RCEC beneficiaries.

Solar power was the most common qualifying energy source. Approximately 752,000 taxpayers claimed the RCEC for solar electricity panel installations, while 139,000 claimed the credit for solar water heaters. Nearly 81,000 RCEC recipients installed geothermal heat pumps, and another 42,000 claimed RCECs for small wind properties.

Overall, more than 1.2 million taxpayers (not including late filers) used the RCEC to reduce their income tax liabilities in 2023. Roughly half (601,000) carried part of their credit forward to 2024, while 645,000 used their entire credit in 2023. Another 142,000 taxpayers carried their full RCECs to 2024.

Residential Energy Tax Credits: Combined Data

According to the IRS's preliminary data release, at least 3.4 million taxpayers used the RCEC, the EEHIC, or both to reduce their income tax liabilities in 2023. Approximately 1.1 million taxpayers claimed only the RCEC, while 163,000 taxpayers claimed both the RCEC and the EEHIC. Although dual receipt was rare for all types of taxpayers, it was most common among high-income households: in 2023, 0.4% of taxpayers earning \$500,000 or more received both IRA residential energy credits, as compared with 0.003% of taxpayers earning less than \$25,000.

Initial EEHIC and RCEC costs roughly offset each other relative to initial projections: the EEHIC cost less than expected, while the RCEC 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 costs of the credits are expected to increase once late filings are included in the data. The IRS's preliminary 2023 data only include [138 million tax returns](#), whereas [over 160 million returns](#) were filed in 2021 and 2022.

RCEC claims are disproportionately high among taxpayers in the South and West, and the EEHIC is disproportionately claimed by taxpayers in the Northeast. 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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