



IDEAS
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RESULTS

Inflation Reduction Act Summary

ENERGY AND CLIMATE PROVISIONS

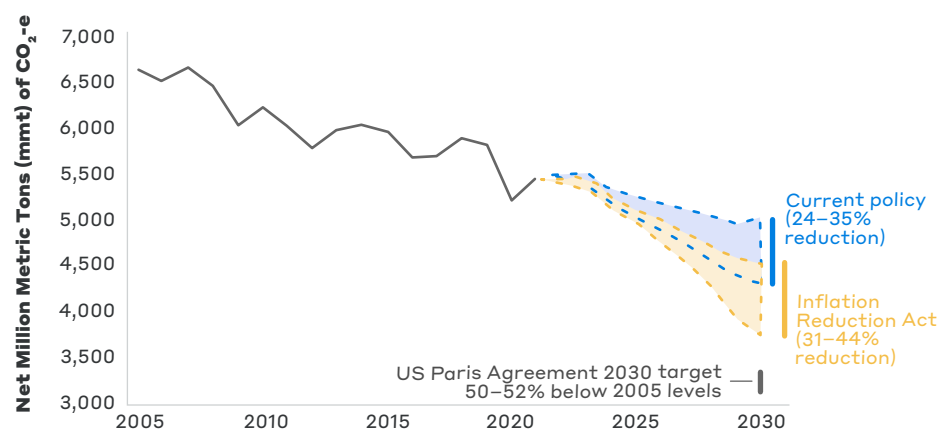
Introduction

Hot on the heels of the bipartisan [CHIPS and Science Act](#) being signed into law—a major victory for energy and climate policy—the Inflation Reduction Act (IRA) reconciliation package would make significant progress towards America’s mid-century climate goals. While the Bipartisan Policy Center does not support the use of reconciliation to pass major legislation, many of the energy and climate provisions in the IRA have enjoyed bipartisan support and match our previous recommendations. Clean energy provisions in the bill would accelerate the deployment of clean energy technologies, reduce global emissions, lower energy prices, help export American innovation, strengthen our economy and build a reliable and affordable energy sector.

Clean energy tax credits and other provisions included in the bill would increase energy production at home and accelerate energy innovation abroad. Additionally, by investing in disadvantaged communities, prioritizing projects that reutilize retired fossil fuel infrastructure and employ displaced workers, and including incentives for climate-smart agricultural practices, the IRA would make meaningful progress towards a fair, equitable, and economic clean energy transition.

Recent modeling by Rhodium Group highlights the substantial emissions reduction impact of these provisions. Under a business-as-usual scenario, the United States is on track to reduce greenhouse gas (GHG) emissions by between 24% to 35% by 2030 compared to 2005 levels. Under the IRA, this would increase to between 31% to 44% by 2030.

Figure 1: U.S. Greenhouse Gas Emissions



Source: [Rhodium Group](#). The range reflects uncertainty around future fossil prices, economic growth, and clean technology costs. It corresponds with high, central, and low emissions scenarios detailed in [Taking Stock 2022](#).

BPC summarizes below the key energy and climate provisions included in the IRA. To assist our readers, we also include the following notes and context:

- Tax credit values throughout this summary assume that facilities or projects satisfy prevailing wage and apprenticeship requirements and thus receive bonus credits for a total credit value of 5 times the base amount.
- For the Renewable Electricity Production Tax Credit, Energy Investment Tax Credit, and new Clean Electricity Investment Tax Credit (ITC) and Production Tax Credit (PTC), facilities with maximum net output less than 1 megawatts (MW) are exempt from the labor requirements and receive the bonus automatically.

- Many of the tax credits included in the legislation allow direct payments to be made in lieu of a reduction in tax liability (“direct pay”) and/or an option to monetize the credits by transferring them to an entity with greater tax liability (“transferability”). Direct pay is limited to certain tax exempt and governmental entities for most of the eligible tax credits. This limitation does not apply to the first 5 years of the section 45V clean hydrogen credit, section 45Q carbon capture and sequestration credit, and section 45X advanced manufacturing credit. For more on why direct pay is essential, see BPC’s explainer on [direct pay](#).
- Provisions listed with a superscript are associated with bipartisan legislation.

Clean Energy Tax Credits

PRODUCTION TAX CREDITS

New Clean Hydrogen Production Tax Credit (45V)¹

Creates a new 10-year incentive for clean hydrogen production with four tiers and a maximum of 4 kilograms of CO₂ equivalent (CO₂e) per kilogram of hydrogen (H₂).

- Projects must begin construction by 2033.
- Eligibility includes retrofit facilities.
- Cannot stack with the Carbon Capture and Sequestration Tax Credit (45Q).
- Includes [Direct Pay](#) and Transferability.
- Intensity calculated with [GREET model](#).

Carbon Intensity (kg CO ₂ e/kg H ₂)	Max Hydrogen PTC Credit (\$/kg H ₂)
0-0.45	\$3.00
0.45-1.5	\$1.00
1.5-2.5	\$0.75
2.5-4	\$0.60

New Advanced Manufacturing Production Tax Credit (45X)

Creates a tax credit for the production of clean energy technology components that are produced in the United States or by a U.S. possession.

- Eligible components include solar components, wind turbine and offshore wind components, inverters, many battery components, and the critical minerals needed to produce these components.
- Begins to phase out in 2029 and phases out completely in 2032.
- Includes [Direct Pay](#) and Transferability.

Nuclear Power Production Tax Credit (45U)²

- Provides a nuclear power production credit of 1.5 cents multiplied by kilowatt hours (kWh) of electricity produced minus 16% of the facility's gross recipients in excess of 2.5 cents per kWh.
- Becomes available to facilities already in service in 2024 and ends after 2032.
- Includes [Direct Pay](#) and Transferability.

Extension of Renewable Electricity Production Tax Credit (Section 45)

Extends the existing production tax credit for applicable renewable energy sources. This tech-specific PTC ends in 2024 and is replaced by the new tech-neutral Clean Electricity PTC (45Y) which begins in 2025.

- Revives the PTC for solar facilities which ended in 2006 and extends to 2024.
- Extends the date of construction for geothermal, wind, closed- and open-loop biomass, landfill gas, municipal solid waste, hydropower, and marine and hydrokinetic facilities to 2024.
- Maintains a credit amount of 1.5 cents per kWh.
 - Applies a 10% bonus for meeting domestic manufacturing requirements for steel, iron, or manufactured components.
 - Applies a 10% bonus for facilities located in energy communities (defined as brownfield sites or fossil fuel communities).
- Increases hydropower, municipal solid waste, and marine and hydrokinetic credit to full value (was previously halved).
- Strikes the offshore wind credit phaseout for facilities placed into service before 2022.
- Includes [Direct Pay](#) and Transferability.

New Clean Electricity Production Tax Credit (45Y)

This newly established, tech-neutral PTC replaces the above Renewable Electricity Production Tax Credit once it phases out at the end of 2024. 45Y is an emissions-based incentive that is neutral and flexible between clean electricity technologies. Taxpayers choose between a PTC (45Y) and an ITC (48E).

- Creates a PTC credit of 1.5 cents per kWh of electricity produced and sold or stored at facilities placed into service after 2024 with zero or negative GHG emissions.
 - Applies a 10% bonus for projects located in energy communities (defined as brownfield sites or fossil fuel communities).
 - Applies a 10% bonus for meeting domestic manufacturing requirements for steel, iron, or manufactured components.
 - Applies a 10% bonus for projects located in low-income communities or on Tribal land; 20% bonus for projects located in low-income residential buildings or part of low-income economic benefit projects.
- Facilities may use carbon capture, utilization, and storage (CCUS) to reach qualifying emissions levels.
- Credits are set to phase out the later of 2032 or when emission targets are achieved (i.e., the electric power sector emits 75% less carbon than 2022 levels). Facilities will be able to claim a credit at 100% value in the first year, then 75%, then 50%, and then 0%.
- Includes [Direct Pay](#) and Transferability.

INVESTMENT TAX CREDITS

Extension of Energy Investment Tax Credit (Section 48)

Extends the existing energy investment tax credit for applicable energy projects. This tech-specific ITC ends in 2024 for most technologies and is replaced by the new tech-neutral Clean Electricity ITC (48E), which begins in 2025.

- Extends date of construction in most cases to 2024 and maintains a 10% or 30% credit.
 - Maintains 30% credit for solar energy property, geothermal property, fiber-optic solar property, fuel cell property, microturbine property, small wind property, offshore wind property, combined heat and power property, and waste energy recovery property constructed before January 1, 2025.

- Creates 30% credit for energy storage technology,^{3,4} biogas property, microgrid controllers, dynamic glass, and linear generators constructed before January 1, 2025.
- Extends 10% credit for microturbine projects constructed before January 1, 2025.
- 30% credit for geothermal heat pump projects constructed before January 1, 2033. Credit reduces to 26% in 2033 and 22% in 2034.
- Applies a 10% bonus for meeting domestic manufacturing requirements for steel, iron, or manufactured components.
- Applies a 10% bonus for projects located in energy communities (defined as brownfield sites or fossil fuel communities).
- Includes [Direct Pay](#) and Transferability.

New Clean Electricity Investment Tax Credit (48E)

This newly established, tech-neutral ITC (48E) replaces the above Energy ITC once it phases out at the end of 2024. 48E is an emissions-based incentive that is neutral and flexible between clean electricity technologies. Taxpayers choose between a PTC (45Y) and an ITC (48E).

- Creates an ITC credit of 30% of the investment in the year the facility is placed in service.
 - Applies a 10% bonus for projects located in energy communities (defined as brownfield sites or fossil fuel communities).
 - Applies a 10% bonus for meeting domestic manufacturing requirements for steel, iron, or manufactured components.
 - Applies a 10% bonus for projects located in low-income communities or on Tribal land; 20% bonus for projects located in low-income residential buildings or part of low-income economic benefit projects.
- Clean electricity projects smaller than 5 MW can include the costs of interconnection under the ITC.
- The Treasury Department is directed to publish emission rates for similar technologies each year for taxpayers to use for purposes of determining their eligibility.
- Credits are set to phase out the later of 2032 or when emission targets are achieved (i.e., the electric power sector emits 75% less carbon than 2022 levels). Facilities will be able to claim a credit at 100% value in the first year, then 75%, then 50%, and then 0%.
- Includes [Direct Pay](#) and Transferability.

Advanced Energy Project Credit (48C)⁶

Extends the 30% investment tax credit to clean energy projects to strengthen domestic energy manufacturing and support the production and recycling of clean energy products. It also expands credit to include projects at manufacturing facilities that want to reduce their GHG emissions by at least 20%.

- Tax credit is funded at \$10 billion for eligible projects.
- Can be applied to low-carbon industrial heat, carbon capture, transport, utilization and storage systems, and equipment for recycling, waste reduction, and energy efficiency.
- Includes [Direct Pay](#) and Transferability.

FUEL TAX CREDITS

New Clean Fuel Production Credit (45Z)

Creates a new technology neutral 2-year tax credit for low-carbon transportation fuel.

- Maximum credit is \$1 per gallon (or \$1.75 per gallon for sustainable aviation fuel) multiplied by an emissions factor.
- Emission factor is calculated proportional to a maximum emission rate standard of 50 kilograms of CO₂e per 1 million British thermal units (mmBTU).
- Emission rate is calculated with [GREET model](#).
- Includes [Direct Pay](#) and Transferability.

New Sustainable Aviation Fuel (SAF) Credit (40B)⁷

Creates an incentive to lower aviation transportation emissions.

- Credit starts at \$1.25 per gallon for aviation fuel that reduces GHG emissions by 50% and increases by one cent for each additional percent reduction, maxing at \$1.75 per gallon.
- Credit is authorized through 2026.

Extension of Second Generation Biofuel Incentives

- Extends existing second generation biofuel incentives through 2024.

Extension of Biodiesel and Renewable Diesel Credit^{8,9}

- Extends the current credit of \$1 per gallon through 2024.

CLEAN VEHICLE TAX CREDITS

Clean Vehicle Credit (30D)

- Maintains the existing \$7,500 consumer credit for the purchase of a qualified new clean vehicle, including electric vehicles, plug-in hybrids, and hydrogen fuel cell vehicles.
 - Credit is reduced or eliminated if a certain percentage of the critical minerals utilized in battery components are not extracted or processed in the U.S. or a Free Trade Agreement country or recycled in North America. The percentage required increases from 40% in 2024 to 80% in 2026.
 - Credit is reduced or eliminated if EV is not assembled in North America or if the majority of battery components are sourced outside of North America. The percentage increases from 50% in 2024 to 100% in 2028.
- Implements a maximum of \$80,000 per vehicle for vans, SUVs and pickups and \$55,000 for other vehicles.
- Implements an income eligibility limit of \$150,000 or \$300,000 for joint filers.
- Eliminates the previous manufacturer quota, which phased out the tax credit for manufacturers as they neared 200,000 clean vehicles sold.
 - Some models of Tesla, General Motors, and the most popular EV brands would now qualify for the tax credit.

New Previously Owned Clean Vehicle Credit (25E)

- Creates a consumer tax credit for the purchase of previously owned clean non-commercial vehicles, including electric vehicles and plug-in hybrids. Credit is equal to the lesser of \$4,000 or 30% of the vehicle cost.
- Sets a maximum sale price of \$25,000. Model must be at least 2 years older than the year of sale.
- Implements an income eligibility limit of \$75,000 or \$150,000 for joint filers.

New Commercial Clean Vehicle Credit (45W)

- For class 1-3 (under 14,000 lbs.) vehicles for commercial use, creates a \$7,500 tax credit for the purchase of electric vehicles or other qualified clean vehicles.
- For class 4 and above (over 14,000 lbs.) vehicles for commercial use, increases the credit to \$40,000.

Extension of Alternative Fuel Refueling Property Credit (30C)¹⁰

- Extends tax credit for alternative fuel refueling property credit to property placed into service before 2033.
- Increases the tax credit to 30% of the cost of alternative fuel refueling property up to \$100,000.
- Includes [Direct Pay](#) and Transferability.

Carbon Management

Carbon Capture and Sequestration Tax Credit (45Q)^{11,12,13,14,15,16}

Enhances the tax credit for carbon capture and direct air capture (DAC).

- Extends the deadline for construction to January 1, 2033 and increases the credit amount:
 - From \$50 to \$85 per ton for CCUS for industrial facilities and power plants for saline geologic formations.
 - From \$35 to \$60 per ton for utilization of captured CO₂ and its precursor carbon monoxide to produce low and zero-carbon fuels, chemicals, building materials and other products, or for enhanced oil recovery (EOR).
 - From \$50 to \$180 per ton for DAC stored in saline geologic formations and from \$35 to \$130 per ton for utilization or EOR.
- Decreases minimum plant size eligibility threshold:
 - From 100,000 to 1,000 tons per year for DAC.
 - From 500,000 to 18,750 metric tons per taxable year for Electric Generating Facility paired with design capacity requirement below.
 - From 25,000 to 12,500 metric tons per taxable year for any other facility.
- Design Capacity Requirement: Point-source carbon capture projects on electric generating units will be required to design capture equipment to capture at least 75% of unit (not facility) CO₂ production, subject to a review if facility emissions increase in future years.
- Direct Pay Compromise: Projects will receive direct pay for the first 5 years

after the carbon capture equipment is placed in service (no direct pay option for the final 7 years of the credit). Nonprofit organizations and co-ops can receive direct pay for all 12 years of the credit.

Investment in Low-Carbon Materials & Buildings

Supports low-carbon materials procurement for federal projects, along with multiple efforts to standardize environmental impact disclosure, labeling and verification of low-carbon concrete and construction materials—an essential component of federal procurement.

- \$250 million for the Environmental Protection Agency (EPA) to support the development of standardized, high-quality, transparent environmental product declaration of greenhouse gas emission associated with construction materials.
- \$100 million for EPA to identify and label low-carbon construction materials used for federal buildings and federal transportation projects in consultation with Federal Highway Administration (FHA) and the General Services Administration (GSA).
- Procurement of low-carbon materials in federal projects:
 - New authority granted to the Federal Emergency Management Agency (FEMA) to cover costs associated with low-carbon materials or to encourage low-carbon and net-zero energy projects when administering disaster relief.
 - \$2 billion for FHA to reimburse or provide a 2% incentive in federal transportation projects for the use of low-carbon construction materials that cost the same or incrementally more than traditional construction materials.
 - \$2.15 billion to the Federal Buildings Fund for GSA to acquire and install low-carbon building materials and products.

Biomass, Carbon Removal, and Forest Management

- \$50 million in competitive grants from the U.S. Forest Service to states and eligible entities to pay forest landowners for practices that increase carbon removal on private lands.
- \$100 million for the U.S. Forest Service Wood Innovation Grant Program to support solutions that utilize forestry residue for innovative end uses.
- New Clean Electricity Production Credit (45Y) includes net-negative emission electricity production using solutions like Biomass Energy with Carbon Capture and Storage (BECCS). Net emission for facilities which use combustion and gasification technologies (used to breakdown biomass) is accounted for through cradle-to-gate life cycle assessment.

Residential Energy Efficiency

Credit for Residential Clean Energy (25D)¹⁷

- Extends credit through 2034 for residential solar, wind, geothermal, and biomass fuel.
- Maintains the previous credit rate but adjusts the project dates. Applies a 30% credit for projects started between 2022 and 2032. Credit decreases to 26% for projects started in 2033 and 22% for projects started in 2034.
- Expands eligibility to battery storage technology.

Credit for Energy Efficiency Home Improvements (25C)¹⁸

- Extends credit for energy efficiency home improvements through 2032.
- -Increases credit from 10% to 30%.
- Replaces lifetime cap on credits with a \$1,200 annual credit limit, including \$600 for windows and \$500 for doors. Increases limit to \$2,000 for heat pumps and biomass stoves. Removes eligibility on roofs.
- Updates language to reflect advances in energy efficiency.
- Expands credit to cover the cost of home energy audits up to \$150 and electrical panel upgrades up to \$600.

Home Energy Performance-Based Whole House Rebates (HOMES)¹⁹

- \$4.3 billion through 2031 to DOE to help state energy offices implement a HOMES rebate program to provide rebates to homeowners and aggregators for whole-house energy saving retrofits. Additional funding can be provided to low- and moderate-income individuals, who earn less than 80% of the area median income.

High-Efficiency Electric Home Rebate Program

- \$4.5 billion through 2031 for grants from DOE to States and Tribes to implement a high-efficiency electric home rebate program.
- Provides up to \$14,000 per household including \$8,000 for heat pumps, \$1,750 for heat pump water heaters, and \$840 for electric stoves.
- Also includes rebates for improvements to electrical panels or wiring and home insulation or sealant.
- Eligible recipients must fall below 150% of the area median income.

Grants for Energy Efficiency Contractor Training

- \$200 million through 2031 for DOE to provide state energy offices with grants for the training of contractors to carry out energy efficiency upgrades, including those in the above residential energy efficiency incentives.

Energy Innovation

Advanced Industrial Facilities Deployment Program⁶

Creates a new \$5.8 billion program under the Office of Clean Energy Demonstration (OCED) to invest in projects aimed at reducing emissions from energy intensive industries.

- Includes iron, steel, concrete, glass, pulp, paper, ceramics, and chemical production.
- Funding of \$5.8 billion in grants, rebates, direct loan, or cooperative agreements.
- Requires 50% non-federal cost share.
- Includes retrofit facilities.
- Prioritizes projects with greatest GHG reduction benefit & greatest benefit to largest number of people at facility location.

National Laboratory Infrastructure

Funds infrastructure improvements at the Department of Energy (DOE) National Laboratories, which host multi-million-dollar facilities and equipment that advance science and technology development.

- Appropriates funding to the DOE Office of Science through 2027 to invest in national lab infrastructure:
 - \$133.2 million for laboratory infrastructure projects.
 - \$321.6 million for laboratory facilities.
 - \$800.7 million for laboratory construction and equipment.
 - \$294.5 million for energy sciences projects.
- Appropriates \$150 million for the Office of Fossil Energy and Carbon Management for infrastructure and general plant projects through 2027.

- Appropriates \$150 million for the Office of Nuclear Energy for infrastructure and general plant projects through 2027.
- Appropriates \$150 million for the Office of Energy Efficiency and Renewable Energy for infrastructure and general plant projects through 2027.

Availability of High-Assay Low-Enriched Uranium (HALEU)

Appropriates \$700 million in additional funding to the DOE Advanced Nuclear Fuel Availability program through 2026, which will be used to increase availability of HALEU fuel for civilian domestic research, development, demonstration, and commercial use.

Offshore Wind and Oil & Gas Systems

Offshore Wind

- Requires an oil and gas lease sale of 60 million acres in the prior year for offshore wind lease issuance, for the next 10 years.
- Makes \$100 million available for the planning, modeling, analysis, and development of interregional transmission and optimized integration of energy generated from offshore wind.
- Lifts the offshore wind moratorium in the southeastern U.S. and Eastern Gulf and allows leasing in the U.S. territories.
- Coastal states must use funding for specified purposes such as coastal restoration, conservation or to finance resilient infrastructure.

Oil & Gas

- Increases offshore oil & gas royalty rates to a minimum of 16.66% from 12.5% for the next 10 years after the enactment of this bill.
- Increases onshore oil & gas leasing minimum bid from \$2 to \$10 per acre for the next 10 years after the enactment of this bill.
- Increases annual rental rates for new onshore oil & gas leases.
- Coastal states must use funding for specified purposes such as coastal restoration, conservation, or to finance resilient infrastructure.

Methane Emissions Reduction Program

- \$1.55 billion for EPA to provide incentives, grants, contracts, loans, and rebates for facilities, well operators, and communities to enable methane emission reduction activities like monitoring, reporting, source plugging, obtain technical and financial assistance, install innovative solutions, mitigate negative health impacts, and perform environmental restoration.
- Establishes a maximum annual methane waste emission rate of 25,000 metric tons of CO₂e (vented, released, or flared) for a facility and imposes penalty charges starting at \$900 per ton in 2024 and increasing to \$1,500 per ton by 2026 for facilities emitting more than that.

Community Investment and Energy Justice

Environmental and Climate Justice Block Grants

- \$2.8 billion to the EPA for grants and \$200 million for technical assistance.
- 3-year grants are available for projects related to climate change and air pollution, including air pollution monitoring, extreme heat risk mitigation, resiliency and adaptation, indoor pollution reduction, and community engagement.
- Tribes, local governments, and universities in partnership with community-based non-governmental organizations (NGOs) are eligible, as well as individual or groups of community-based NGOs.

Neighborhood Access and Equity Grants

- \$3 billion, with \$1.1 billion set aside for disadvantaged communities, to the FHA for grants to improve transportation access and mitigate negative safety or environmental impacts in underserved communities.
- Grants may be used for improvements to reduce air pollution and GHG emissions, manage stormwater run-off, address urban heat islands, and to monitor air quality, transportation related GHG emissions and pollution, and gaps in tree canopy coverage.
- State, local, territory, and Tribal government entities are eligible.
- Federal cost share of a project in a disadvantaged or underserved community may be up to 100%.

Grants to Reduce Air Pollution at Ports^{20,21}

- \$3 billion to the EPA to award rebates and grants to port authorities, state, regional, local, or Tribal agencies, air pollution control agencies, or private entities for the purchase or installation of zero-emission port equipment, for associated planning, and to develop climate action plans.
- \$750 million set aside for ports located in nonattainment areas (areas with high air pollution).

Clean Heavy-Duty Vehicles^{22,23}

- \$1 billion, with \$400 million set aside for communities located in nonattainment areas, for grants and rebates for up to 100% of costs for clean heavy-duty vehicles (e.g., school buses and garbage trucks) as well as associated maintenance, workforce training, and planning.
- States, municipalities, Tribes, and nonprofit school transportation associations are eligible.

Low Emissions Electricity Program

- \$68 million in total to the EPA, including \$17 million for education, \$17 million for technical assistance, and \$17 million for partnerships within low-income and disadvantaged communities related to GHG emissions reductions.
- An additional \$18 million appropriated to carry out activities of the program and ensure GHG emissions reductions are achieved from domestic electricity generation and use.

Energy Credit for Solar and Wind in Low-Income Communities

- Creates a 40% investment tax credit for solar or wind projects located in a low-income community or on Tribal land and 20% for facilities part of low-income residential housing or low-income economic benefit projects.

USDA Assistance for Rural Electric Cooperatives

- \$9.7 billion to the Department of Agriculture (USDA) until 2031 for financial assistance (including loans) to improve resiliency, reliability, and affordability of rural electric systems, including:
 - Purchase of renewable energy and renewable energy systems, zero-emission systems, or carbon capture and storage systems;
 - Deployment of these systems;
 - Improvements to electric generation and transmission systems.
- Maximum award is \$970 million and must not exceed 25% of the total project cost.

Rural Energy for America Program (REAP)

Provides financial assistance for adoption of clean energy technologies in rural communities.

- \$2 billion for the USDA REAP program until 2031 to provide competitive grants and loan guarantees to farmers, ranchers, and rural small businesses for renewable energy systems or energy efficiency improvements.
- More than \$300 million is set aside to provide grants and loans to provide financial & technical assistance for “underutilized renewable energy technologies” that are not as widely adopted.
- Federal cost share for grants is raised from 25% to a maximum of 50%.

Investments in the Permitting Process

Grants to Facilitate the Siting of Interstate Electricity Transmission Lines

- \$760 million through 2026 for DOE to provide grants to facilitate and accelerate the siting and permitting of interstate transmission projects.

Federal Permitting Improvement Steering Council Environmental Review Improvement Fund

- \$350 million through 2026 for the Environmental Review Improvement Fund of the Fixing America’s Surface Transportation (FAST) Act that seeks to accelerate and streamline the environmental review process.

EPA Efficient, Accurate, And Timely Reviews

- \$40 million through 2026 for EPA to invest in staffing and equipment that provides for more accurate and timely environmental reviews.

Environmental Review Implementation Funds

- \$100 million through 2026 for EPA to develop review documents and a process that provides for a timelier environmental review process.

NOAA Efficient and Effective Reviews

- \$20 million through 2026 for NOAA to invest in staffing and equipment that provides more accurate and timely reviews.

Grants To Reduce Air Pollution at Ports

- Permitting required for zero emission equipment is also an allowable use of the \$2.25 billion in funding through 2027 for EPA to provide grants to purchase and install zero emission equipment at ports.
- This provision is discussed in the Community Investment and Energy Justice section above.

Clean Energy Financing

DOE Loan Programs Office (LPO)

LPO has over \$40 billion in available loan and loan guarantee authority under its three programs: \$21.9 billion for Title 17, \$15.1 billion for Advance Vehicles Technology Manufacturing (AVTM), and \$2 billion for Tribal Energy Loan Guarantee Program (TELGP). IRA increases loan authority for these programs, appropriates additional funds for credit subsidies, and provides new authorities for LPO to focus on the reutilization of energy infrastructure.

- \$40 billion in new Title 17 loan authority available through 2026 with \$3.6 billion for credit subsidies.
- \$3 billion for AVTM credit subsidies and eliminates \$25 billion loan authority cap.
- \$75 million for TELGP loan authority through 2028 for direct loans and loan guarantees and increases loan authority cap from \$2 billion to \$20 billion.
- The Energy Infrastructure Reinvestment Financing provision provides LPO with new authorities to make loan guarantees, including refinancing, for projects that:
 - Retool, repower, repurpose, or replace energy infrastructure that has ceased operation (including environmental remediation and carbon management on fossil fuel projects), or
 - Enable operating energy infrastructure to avoid, reduce, utilize, or sequester greenhouse gas emissions.
 - Provides \$5 billion to carry out program authorities and \$250 billion in loan authority through 2026.

Greenhouse Gas Reduction Fund

Provides EPA funding for grants to state, local, regional, and Tribal programs that provide financial support to low and zero carbon technologies and can act as seed capital for regional, local, state, or Tribal green banks that provide financial support for low or zero emission projects.

- Eligible programs must prioritize projects that would not otherwise have access to financing and any repayments derived from grants must be recycled into the program for additional grants or operation.
- The program also provides grants to entities that would then in turn provide funding or technical assistance to establish a financial program as described above.
- Provides \$11.97 billion through 2024 to make grants for eligible financial entities or entities that would in turn provide financial or technical support to establish such financial entities.
- Provides \$15 billion through 2024 to make grants for eligible entities to provide financial and technical support and support the deployment of clean energy technologies in low-income and disadvantaged communities.
- Provides \$30 million for administrative costs of the program through 2031.

Domestic Manufacturing Conversion Grants

- \$2 billion through 2031 for grants to retool existing auto manufacturing facilities to promote domestic production of clean vehicles, including hybrids, plug-in hybrids, EVs, and hydrogen fuel cell vehicles.

Enhanced Use of Defense Production Act

- \$500 million to carry out the Defense Production Act of 1950 for critical mineral processing and heat pumps—available until September 30, 2024.

Biofuel Infrastructure²⁴

- \$10 million to EPA for new grants to support advanced biofuel (excluding corn-starch ethanol) industries that provide 50% GHG emission reduction compared to conventional fuels.
- \$500 million until 2031 for competitive grants with up to 75% cost share to support infrastructure improvements for blending, storing, supplying, or distributing biofuels with higher levels of ethanol and biodiesel.

Agriculture & Forestry

Across the agriculture and forestry programs described below, \$24.9 billion is provided to help farmers, ranchers, and forest landowners adopt climate-smart conservation practices that enhance landscape resilience. Investments support access to the robust [technical assistance](#) resources that enable meaningful adoption of [natural climate solutions](#), including activities that improve soil carbon storage or decrease emissions of nitrous oxide or other GHGs, including practices to reduce enteric methane emissions. Within the agriculture provisions, the increased investments are to existing USDA programs under the Natural Resources Conservation Service (NRCS).

- Additionally, the bill provides funding to rural electric cooperatives to ensure reliability and affordability for rural electric systems as well as competitive grants and loan guarantees to farmers, ranchers, municipal utilities, and rural small businesses for renewable energy systems or energy efficiency improvements. These provisions are discussed in the Community Investment and Energy Justice section above.

AGRICULTURE PROGRAMS

Environmental Quality Incentives Program (EQIP)

- \$8.45 billion for grants for practices or enhancements that directly improve soil carbon storage or decreased emissions of nitrous oxide or other GHGs, prioritizing activities that reduce enteric methane emissions.
- This includes financial and technical assistance resources for producers and landowners to plan and install structural, vegetative, and land management practices on eligible lands to alleviate natural resource concerns.

Conservation Stewardship Program (CSP)

- \$3.25 billion for financial and technical assistance for producers to maintain and improve existing conservation systems and to adopt additional conservation activities comprehensively across a producer's entire operation.
- Eligible practices or enhancements will directly improve soil carbon storage or decrease emissions of nitrous oxide or other GHGs, allowing for aggregation of activities.

Agricultural Conservation Easement Program (ACEP)

- \$1.4 billion is provided for this program which enables financial and technical assistance through agricultural land easements that limit nonagricultural uses on productive farm or grass lands, and wetland reserve easements that protect and restore wetlands.

Regional Conservation Partnership Program (RCPP)

- \$4.95 billion provided for financial and technical assistance for state, multistate, or watershed-scale projects, establishing partnership opportunities that optimize federal conservation funding for specific areas and resource concerns.

Conservation Technical Assistance (CTA)

- \$1.3 billion for conservation technical assistance provided through the NRCS to ensure broader and more equitable access to the tools and information farmers and ranchers need to carry out climate-smart practices.
 - This program provides conservation planning and implementation assistance through field staff in nearly every county in the United States and its territories.
 - \$300 million allocated for NRCS to cooperate with technical service providers and other partners to collect field-based data. This information will be used to evaluate the carbon sequestration and GHG emissions reduction results of the practices supported by CTA.

FORESTRY PROGRAMS

National Forest System Restoration and Fuels Reduction Projects

- \$1.8 billion for the National Forest System (via U.S. Forest Service) to support wild-fire risk reducing activities within wildland-urban interface including eligible biomass removal.
- \$350 million for vegetation management, environmental reviews, and inventory of old-growth forests on National Forest System land.

Grants for Non-Federal Forest Landowners

- \$400 million in competitive grants and cost share from the U.S. Forest Service to support the participation of forest landowners that are underserved or own less than 2,500 acres in forest resilience activities and climate mitigation markets.
- Additional provisions are discussed in the Biomass, Carbon Removal, and Forest Management section above.

State and Private Forestry Conservation Programs

- \$700 million in competitive grants to states through the Forest Service Forest Legacy Program to conserve environmentally important forest areas that are threatened by conversion to non-forest uses.
- \$1.5 billion in competitive grants through the Urban and Community Forestry Assistance program for tree-planting and related activities in urban areas.

Endnotes

- 1 [S.1266 - Hydrogen Utilization and Sustainability Act](#)
- 2 [H.R.4024 - Zero-Emission Nuclear Power Production Credit Act of 2021](#)
- 3 [S.627 - Energy Storage Tax Incentive and Deployment Act of 2021](#)
- 4 [H.R.1684 - Energy Storage Tax Incentive and Deployment Act of 2021](#)
- 5 [S.622 - American Jobs in Energy Manufacturing Act of 2021](#)
- 6 [S.3112 - Hydrogen for Industry Act of 2021](#)
- 7 [H.R.3440 - Sustainable Skies Act](#)
- 8 [S.1806 - Biodiesel Tax Credit Extension Act](#)
- 9 [H.R. 3472 - Biodiesel Tax Credit Extension Act](#)
- 10 [S.1753 - Home Energy Savings Act](#)
- 11 [H.R. 3456 - HOPE for HOMES Act of 2021](#)
- 12 [S.975 - Securing America's Clean Fuels Infrastructure Act](#)
- 13 [S.986 - CCUS Tax Credit Amendment Act](#)
- 14 [S.661 - Carbon Capture Modernization Act](#)
- 15 [H.R.1760 - Carbon Capture Modernization Act](#)
- 15 [H.R.3538 - CATCH Act](#)
- 17 [S.2230 - CATCH Act](#)
- 18 [H.R.1062 - ACCESS 45Q Act](#)
- 19 [S.3111 - Hydrogen for Ports Act of 2021](#)
- 20 [H.R. 7065 - Hydrogen for Ports Act of 2022](#)
- 21 [S.3806 - Hydrogen for Trucks Act of 2022](#)
- 22 [H.R. 7064 Hydrogen for Trucks Act of 2022](#)
- 23 [H.R. 2267 - Improving State and Local Government Access to Performance Contracting Act](#)
- 24 [S.2271 - Biofuel Infrastructure and Agricultural Product Market Expansion Act of 2021](#)

