



ENHANCING OPPORTUNITIES FOR INNOVATORS



Inflation Reduction Act Summary

AJW, Inc. and the Institute of Clean Air Companies | August 2022



Inflation Reduction Act of 2022 Overview



Manchin and Schumer Climate Agreement

On July 27th, Senators Joe Manchin and Chuck Schumer [announced](#) they reached an agreement to move forward with a package that includes significant energy and tax provisions.

- The agreement follows months of careful negotiations and serious doubt among stakeholders that a deal would even be put to a vote.
- The package includes provisions to address concerns with inflation and reducing the deficit.
- The deal will be offered as a substitute amendment to the House-passed Build Back Better package, [H.R. 5376 \(117\)](#).

Overview

The bill is titled “[The Inflation Reduction Act of 2022](#)” and it invests in a variety of fuel types and other advanced energy technologies and solutions. President Biden offered [remarks encouraging](#) Congress to pass the bill on July 28th.

- Authorizes ~\$370 billion in tax credits to help stimulate adoption of clean energy technologies
- Similar to the 2021 Bipartisan Infrastructure Law, there is significant spending dedicated to environmental justice and energy communities



Bill Status

- The Senate passed bill on Sunday, August 7th
- House consideration targeted for later in the week of August 8th or the week of August 15th
- Assuming House passage, President Biden will sign the bill

Please note: the following summaries of each provision are based on the version of this bill that passed the Senate. The House may make additional changes before the bill is finalized.



Inflation Reduction Act



On the following slides, AJW has identified a comprehensive, but not exhaustive, summary of provisions from the IRA of potential interest for future engagement or ongoing monitoring.

Goal: Compile the priority climate and energy provisions included in the bill for **the Institute of Clean Air Companies** to prepare and position **ICAC** for opportunities in advance and explore strategies for engagement when the time is right.

For each provision, we have shown key details, including:

- Type of funding
- Government agency managing the section
- Appropriation of funding
- Timing
- Summary of the provision
- Targeted projects or activities
- Eligible Recipients
- Other important details



Summary of IRA Topics Areas of Interest

- 1 Clean Electricity, Grid Reliability, and Transmission
- 2 Clean Fuels and Transportation
- 3 Advanced Manufacturing and Construction
- 4 Methane Abatement and Monitoring & Other Fossil Fuels Provisions
- 5 Air Quality Monitoring & Reporting
- 6 DOE Loan and Grant Programs Funding



Direct Pay

The IRA establishes a new section in the IRC for direct pay options

- Sec. 13801. establishes Sec. 6417 of the Internal Revenue Code titled “Elective Payment of Applicable Credits”
- Compared to the Build Back Better (BBB) text passed by the House in 2021, the scope of direct pay options is much narrower.
 - BBB would have allowed taxpayers to receive a cash refund
 - IRA generally limits direct pay to certain tax-exempt and governmental entities but is available to taxpayers in certain and more restricted capacities

See the following slides on the carbon oxide sequestration credit (45Q), clean hydrogen production credit (45V), and advanced manufacturing production credit (45X) for more information.



To Qualify for Top Tax Credit Rates ...

Credit Structure

- Many of the clean energy tax credits have a base rate that could be increased up to **five times** if the taxpayer meets certain criteria.
- In most cases, taxpayers would be required to meet **prevailing wage** and **apprenticeship** requirements.

Prevailing Wage and Apprenticeship Requirements

- Pay prevailing wages at the local rate for the construction, maintenance, and operation of facilities
- Ensure that the applicable percentage of total labor hours is performed by qualified apprentices

Domestic Content Bonus

- To qualify for a **10% bonus**, the taxpayer must certify that any steel, iron, or manufactured product that is a component of the facility was **produced in the U.S.**
 - 20% bonus if the facility is an offshore wind facility.

Energy Community Bonus

- To qualify for a **10% bonus**, projects are eligible if they are in an **energy community** and begin construction in 2024 onward.
 - Energy community: (i) a brownfield site; (ii) a census tract or adjoining tract in which a coal mine closed after Dec. 31, 1999, or a coal-fired electric power plant was retired after Dec. 31, 2009; and (iii) an area that has (or, at any time after Dec. 31, 1999, had) significant employment related to the extraction, processing, transport or storage of coal, oil or natural gas.

The background is a composite image. The left half features a low-angle shot of a high-voltage power transmission tower, with its complex lattice structure and insulators highlighted by a warm, orange-yellow glow. The right half shows a similar tower structure but with a cool, teal-green color overlay. The two halves are separated by a vertical line.

Clean Electricity, Grid Reliability, and Transmission

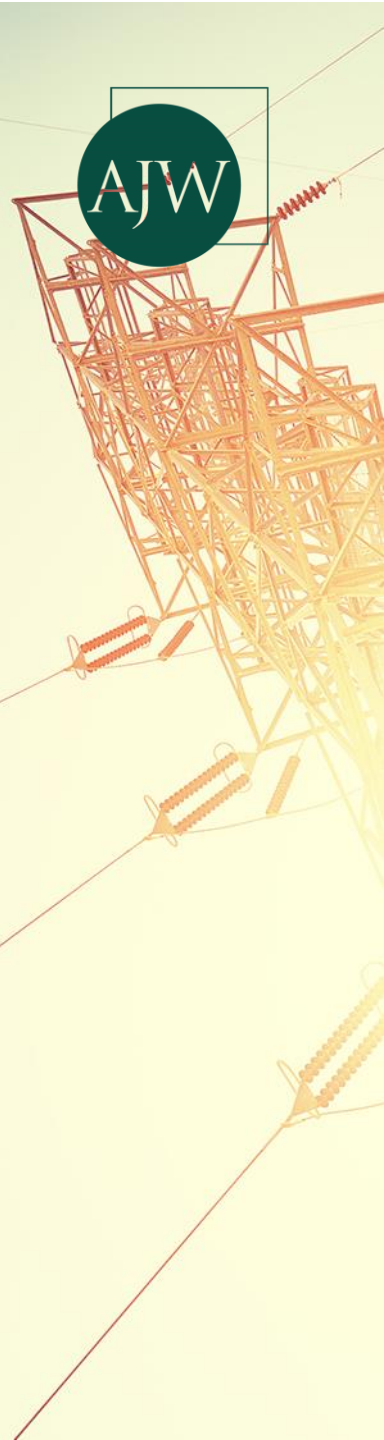
Overview - Clean Electricity, Grid Reliability, and Transmission

The IRA provides significant support for the advancement of clean electricity and resilient power grids.

An array of clean energy technologies to support both renewable and low-carbon fossil energy are included as highlighted in key provisions below.

The IRA Includes Funding for:

- Renewable power (hydroelectricity, solar, wind) and nuclear
- Carbon capture and sequestration
- Biogas to electricity
- Energy storage
- Distributed energy resources
- Transmission upgrades
- Grid resiliency and energy efficiency



Sec 13101. Extension and Modification of Credit for Electricity Produced from Certain Renewable Resources

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$51,062,000,000	Extended to 12/31/2024

Summary: Changes to Section 45 Production Tax Credit

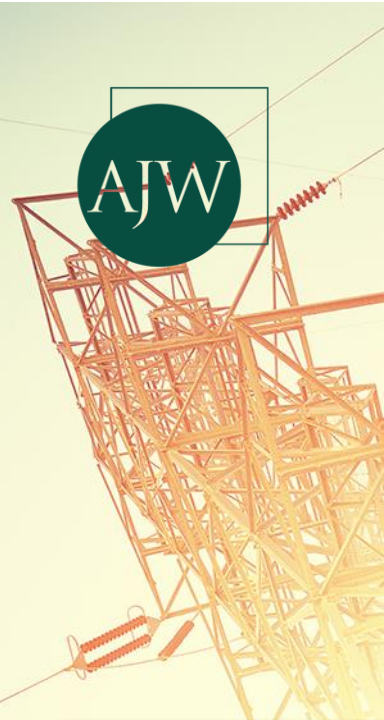
- The legislation extends all existing credits for clean energy generation to 12/31/2024.

Targeted Activities

- Reinstates the PTC for **solar projects** that begin construction before January 1, 2025
- Further extends the beginning-of-construction-deadline for **geothermal projects**
- Eliminates the credit reduction for qualified **hydroelectric** production and **marine** and **hydrokinetic** renewable energy projects

Credit Value

- Base credit: .3 cents per kWh
- Top, bonus credit: 2.6 cents per kWh (if project meets prevailing wage and apprenticeship requirements)
- Additional 10% bonus if project meets domestic content (Buy America) or energy community requirements (see slide 9).



Sec. 13102. Extension and Modification of Investment Tax Credit

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$13,962,000,000	Extended to 12/31/2024 (1/1/2035 for geothermal property)

Summary: Sec. 48 ITC

- Expands the Section 48 ITC to include standalone **energy storage**, qualified **biogas** property, and **microgrid** controllers (construction must begin by 12./31/2024)

Eligible Recipients and Credit Value

- Top and bonus rate achieved if the prevailing wage and apprenticeship requirements are met*
- 6% (base) / 30% (top, bonus rate) for (1) qualified fuel cell property; (2) solar energy used to produce electricity, heat or cool a structure, providing solar process heat; (3) equipment that uses solar energy for certain lighting applications; (4) qualified small wind energy property; (5) waste energy recovery property; and (6) combined heat and power systems
- 6% (base) / 30% (top, bonus rate) for geothermal
- 2% (base) / 10% (top, bonus rate) for other energy property

Relation to Section 45 Credit

- Biogas facilities cannot qualify for section 45 credit if it elects a credit under section 48.

Qualified biogas property definition:

Expanded to include property that:

- Converts biomass into a gas that consists of not less than 52% methane by volume, or is concentrated into a gas that consists of not less than 52% methane, and
- Captures such gas for sale or productive use, and not for disposal via combustion.
- Property that is part of a system that cleans or conditions such gas is also included



Sec. 13103 Increase in Energy Credit for Solar and Wind Facilities placed in Service in Connection with Low-Income Communities

Agency	Total Funding Appropriated	Timing
Department of the Treasury	N/A: Included in Sec. 13101-13102 credits	Effective 1/1/2023

Qualified low-income residential building project definition:

- Installed on a residential rental building which participates in a covered housing program and the financial benefits of the electricity produced are allocated equitably among the occupants of the dwelling units.

Qualified low-income economic benefit project definition:

- At least 50 percent of the financial benefits of the electricity produced are provided to households with income of:
 - Less than 200% of the poverty line applicable to a family of the size involved, or
 - Less than 80% percent of area median gross income

Summary: Sec. 48, subsection (e)

- Provides an enhanced tax incentive for wind and solar projects built in or connected to low-income communities.
- Must generate electricity solely from solar and wind energy and have a maximum net output of less than 5 megawatts

Credit Value

- 10% for a facility located in a low-income community
- 20% for a facility part of a qualified low-income residential building project or a qualified low-income economic benefit project.



Sec. 13104. Extension and Modification of Credit for Carbon Oxide Sequestration

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$3,229,000,000	Dec 31, 2022

Project Type	IRA Capture Threshold
Electric Generating Facility	18,750 mt CO ₂ per year
Direct Air Capture	1,000 mt CO ₂ per year
Other Facilities	12,500 mt CO ₂ per year

Fig. 1

Project Type	Existing 45(q)	Proposed in IRA
Sequestration	\$50/ton	\$85/ton
Utilization & EOR	\$35/ton	\$60/ton
Direct Air Capture + Sequestration	\$50/ton	\$180/ton
Direct Air Capture + EOR	\$35/ton	\$130/ton

Fig. 2

Summary: Sec. 45Q

Extends and modifies the Section 45Q tax credit as follows:

- **Commence Construction Window:** Projects commencing construction by January 1, 2033, qualify
- **Direct Pay:** Direct pay option for the first 5 years after the carbon capture equipment is in service
 - Nonprofit organizations, states or local government, Indian tribes, & co-ops can receive direct pay for all 12 years
- **Transferability of Credit:** Option to monetize credit through a cash sale on an annual basis throughout duration of 12-year credit period to unaffiliated third parties
- **Dramatically Lowers Capture Thresholds:** see Fig. 1
- **Design Capacity Requirement:** Point-source capture projects on EGUs required to design capture equipment to capture at least 75% of unit CO₂ production
- **Enhanced Credit Values for Industry and Power:** Note: values are fixed until 2026, then indexed to inflation post-2026) see Fig. 2



Sec. 13105. Zero-Emission Nuclear Power Production Credit

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$30,001,000,000	Applied Dec 31, 2023 Terminates Dec 31, 2032

Summary: Sec. 45U PTC

- Creates a new, zero-emission nuclear power production credit for producing electricity at a nuclear power facility.

Advanced nuclear power facility definition:

In general, the term means any advanced nuclear facility—

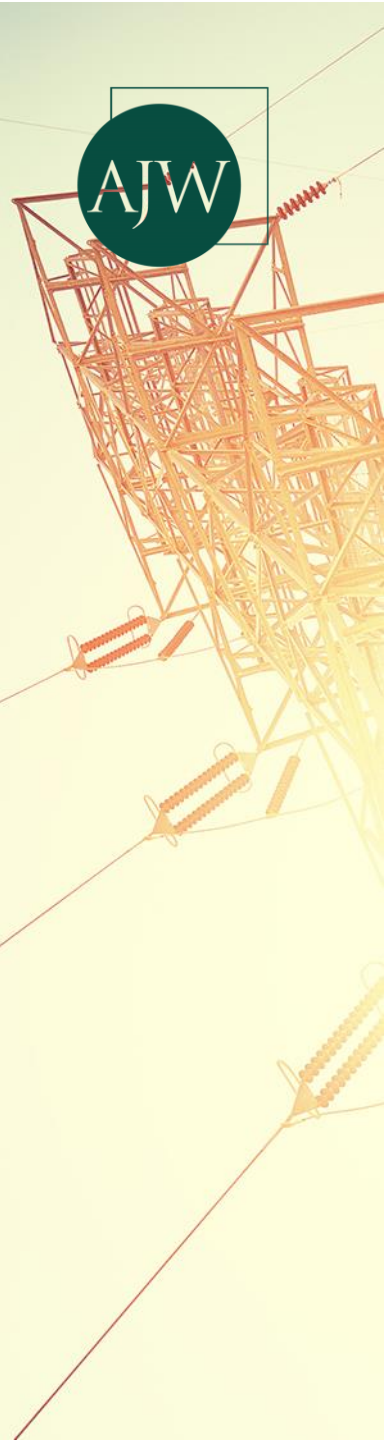
- Which is owned by the taxpayer, and which uses nuclear energy to produce electricity, and
- Which is placed in service after the date of the enactment of this paragraph and before January 1, 2021.

Eligible Recipients

- Facility must be owned by the taxpayer and uses nuclear energy to produce electricity
- Facility cannot be an advanced nuclear power facility as defined in IRC Section 45J(d)(1)
- Must be placed in service before the enactment of this section.

Credit Value

- Base credit: \$0.3 cents per kWh
- Top, bonus credit: up to 1.5 cents per kWh (assuming the prevailing wage requirements are met).



Sec. 13701. Clean Electricity Production Tax Credit (PTC)

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$11,204,000,000	Must be placed in service after 2024

Summary: Sec. 45Y PTC

- New technology-neutral, 10-year PTC for **net-zero electric generating or storage** facilities that produce electricity in the U.S. Bonus credits available for domestic content and energy communities.

Eligible Recipients

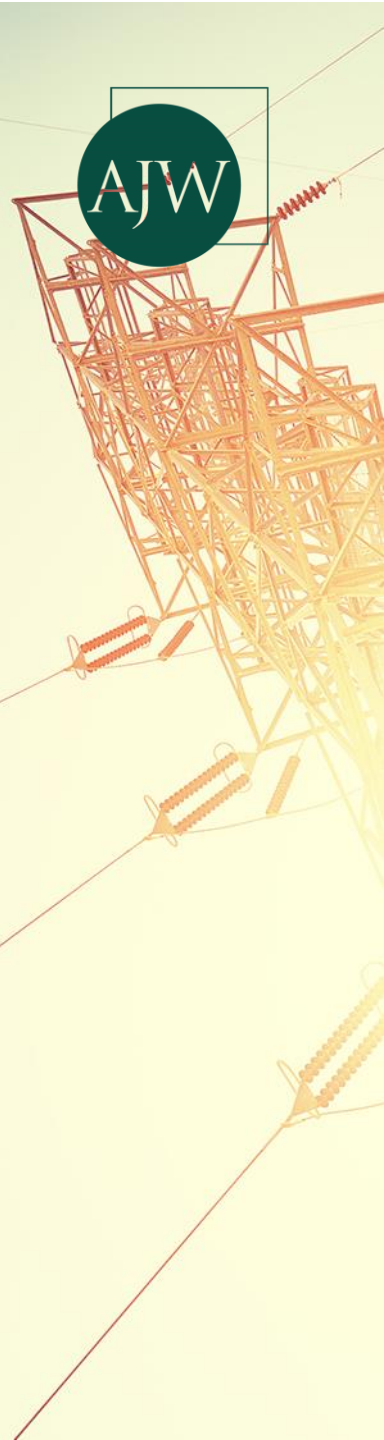
- Available for qualified facilities or additions of capacity: that are placed in service after December 31, 2024, that are used to generate electricity, and have a greenhouse gas emissions rate equal to zero.

Credit Value

- Base credit: \$0.003 per kWh of electricity produced
- Top, bonus credit: \$0.015 per kWh

Incentive Stacking

- Not available for facilities for which a credit determined under section 45, 45J, 45Q, 45U, 48, 48A, or 48D is allowed



Sec. 13702. Clean Electricity Investment Tax Credit (ITC)

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$50,858,000,000	After 2024 - 2032

Summary: Sec. 48D ITC

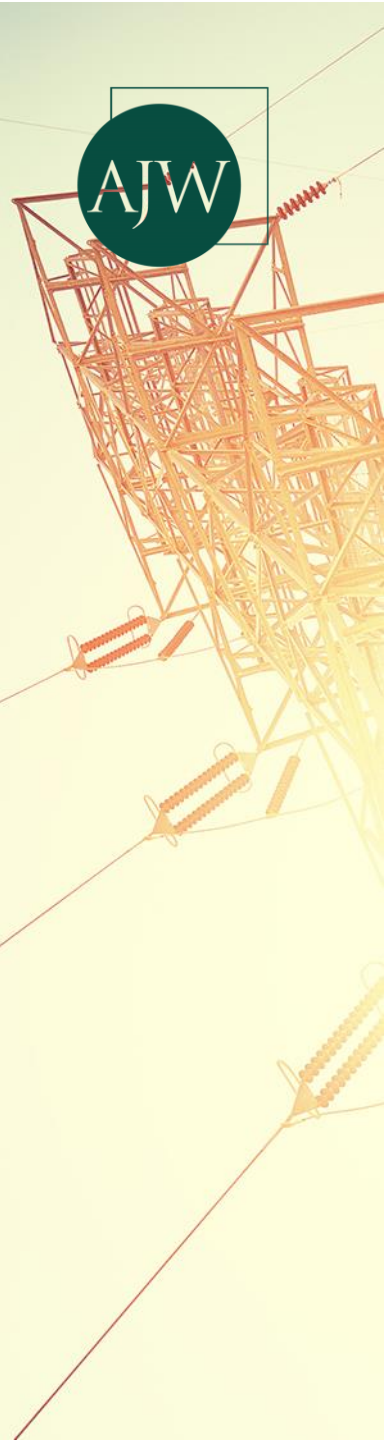
- Creates a new technology-neutral ITC for **electric generating facilities** and any **energy storage** technologies.

Eligible Recipients

- A qualified facility must be owned by the taxpayer, used for the generation of electricity, in service after 12/31/2024, and have a GHG emissions rate equal to zero.
- 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).

Credit Value

- Base credit: 6%
- Top, bonus credit: 30% if the prevailing wage and apprenticeship requirements are met
 - Taxpayer would need to meet both the prevailing wage and apprenticeship requirement.
 - Includes a domestic content, which would allow taxpayers to increase their PTC by 10%, if:
 - Components are mined, produced or manufactured in the US; or
 - Facility is in an applicable energy community
 - An additional 10% or 20% bonus credit may be available for certain solar and wind facilities located in low-income communities



Sec. 22001. Additional Funding for Rural Electric Loans for Renewable Energy

Agency	Total Funding Appropriated	Timing
Department of Energy	\$1,000,000,000	Available until Sept 30, 2031

Summary

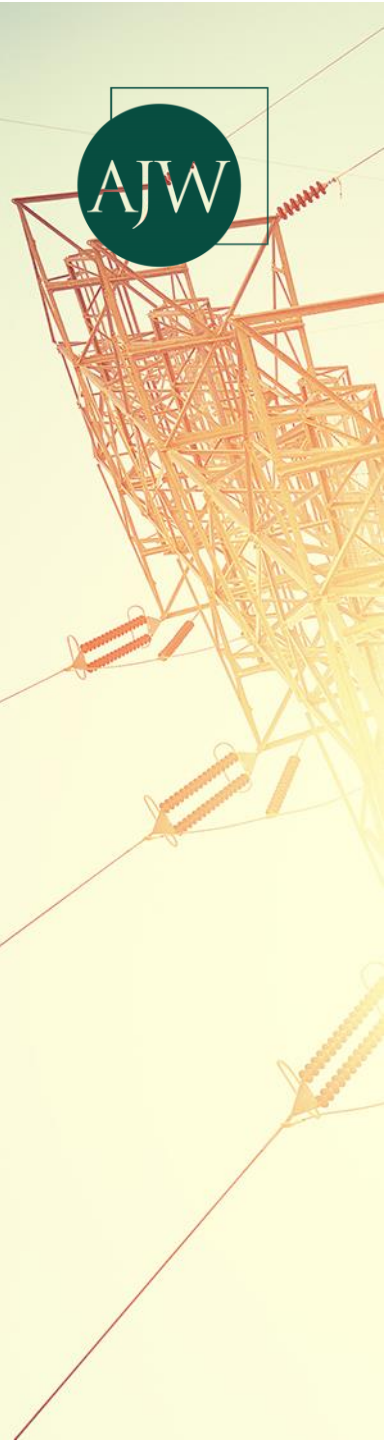
- Appropriates \$1 billion for the cost of loans under [7 U.S.C. 940g](#), (Rural Electric Loan Program) including for projects that **store electricity** that support the electric generation from **renewable energy** resources for resale to rural and nonrural residents.

Eligible Recipients

- Renewable energy source is defined as an energy conversion system fueled from a solar, wind, hydropower, biomass, or geothermal source of energy

Other Details

- Loans may be forgiven based on how the borrower and the project meets terms and conditions for loan forgiveness (not greater than 50% of the loan)
- DOE will not enter a loan agreement that could result in disbursements after September 30, 2031.



Sec. 22002. Rural Energy for America Program

Agency	Total Funding Appropriated	Timing
Department of Energy	\$1,177,090,000 total	Available until Sept 30, 2031

Summary

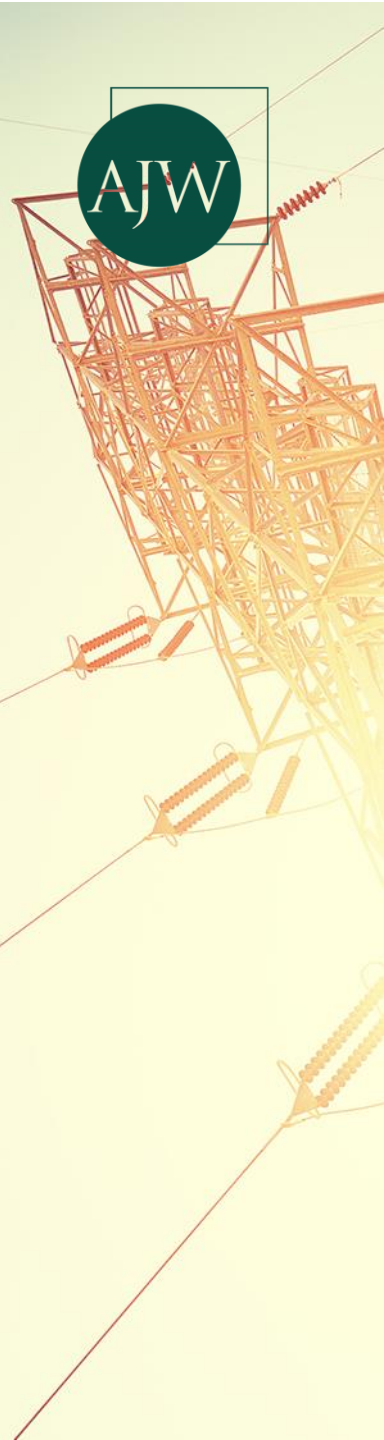
- Appropriates \$1.17 billion in funding under section 9007 of the Farm Security and Rural Investment Act of 2002 ([7 U.S.C. 8107](#)) to promote **energy efficiency** and **renewable energy** development for agricultural producers and rural small businesses.

Targeted Activities

- Grants for energy audits and renewable energy development assistance
- Financial assistance for energy efficiency improvements and renewable energy systems.
- Provides additional funding for grants, loans, and technical assistance for underutilized renewable energy technologies

Other Details

- DOE will not enter a grant or loan agreement that could result in disbursements after September 30, 2031.



Sec. 22004. USDA Assistance for Rural Electric Co-ops

Agency	Total Funding Appropriated	Timing
Department of Energy	\$9,700,000,000	Available until Sept 30, 2031

Summary

- Appropriates \$9.7 billion for funding for the long-term **resiliency, reliability**, and affordability of rural **electric systems** and for reducing reliance on nonrenewable energy resources USDA loan assistance for rural electric co-ops

Targeted Activities

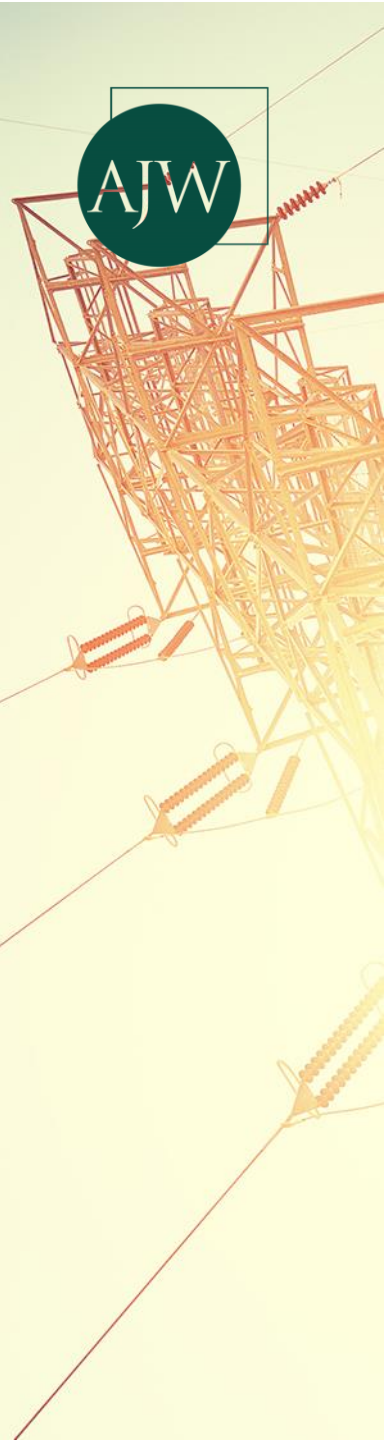
- Financial assistance, including loans and the cost of loans and modifications, for:
 - Solar energy systems and other renewable energy systems (wind energy systems/anaerobic)
 - Other **zero-emissions** systems
 - **Carbon capture and storage systems**
 - Modification of **existing** systems

Eligible Recipients

- Electric cooperative described in the Internal Revenue Code of 1986 ([see page 54](#) for details)
- Is or has been a Rural Utilities Service electric loan borrower or serving a predominantly rural area or a wholly or jointly owned subsidiary of such electric cooperative

Other Details

- DOE will not enter a loan agreement that could result in disbursements after Sept. 30, 2031.



Sec. 50151. Transmission Facility Financing

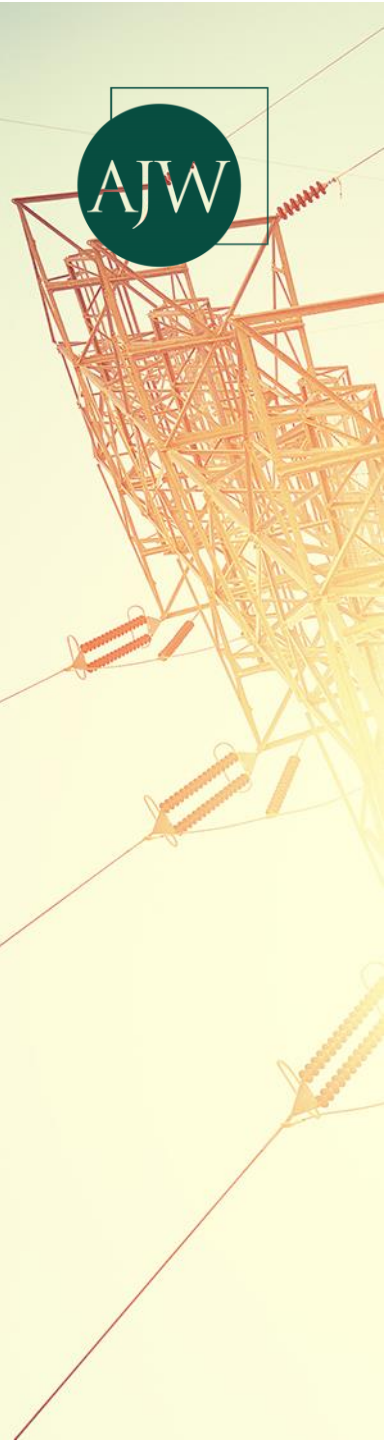
Agency	Total Funding Appropriated	Timing
Department of Energy	\$2,000,000,000	Available through Sept 30, 2030

Summary:

- Appropriates \$2 billion for loan guarantees for the construction or modification of **electric transmission facilities** designated by DOE to be necessary in the national interest (See: [16 U.S.C. 824p\(a\)](#) for more information)

Loan Terms

- Term does not exceed the lesser of:
 - 90 percent of the projected useful life, in years, of the eligible transmission facility; or
 - 30 years;
- Term does not exceed 80% of the project costs
- Subject to the condition that the direct loan is not subordinate to other financing.
- DOE will not enter a loan agreement that could result in disbursements after September 30, 2031.



Sec. 50152. Grants to Facilitate the Siting of Interstate Electricity Transmission Lines

Agency	Total Funding Appropriated	Timing
Department of Energy	\$760,000,000	Available through Sept 30, 2029

Summary

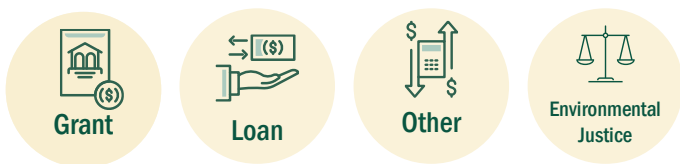
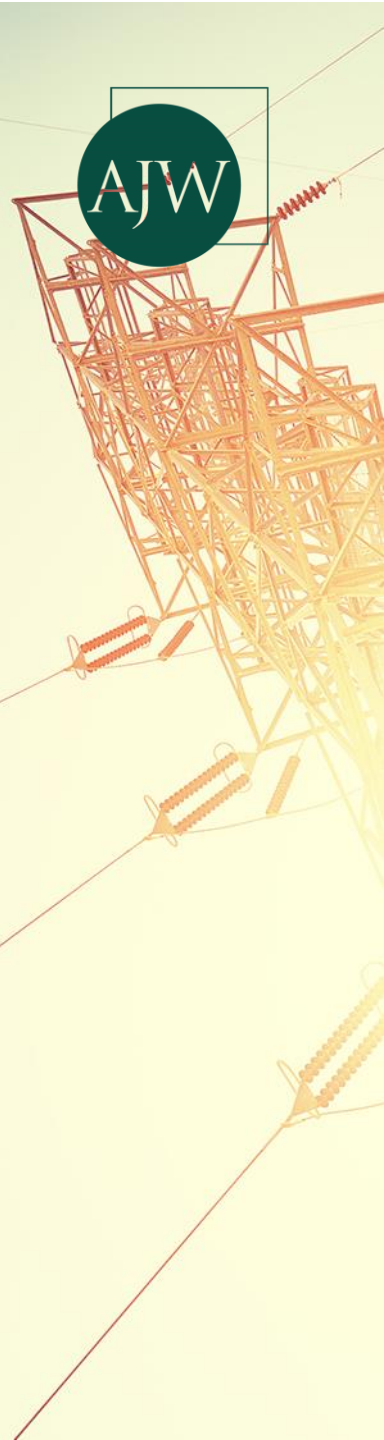
- Appropriates \$760 million to fund a grant to a siting authority for a covered **transmission** project.
- DOE may also make a grant to a siting authority, or other State, local, or Tribal governmental entity, for economic development activities for communities that may be affected by the construction and operation of a covered transmission project,

Targeted Activities

- Studies and analyses of the impacts of the covered transmission project
- Examination of up to 3 alternate siting corridors
- Hosting and facilitation of negotiations in settlement meetings involving the siting authority, the project applicant, and opponents of the project
- Participation by the siting authority in regulatory proceedings or negotiations in another jurisdiction that is also considering the siting or permitting of the project.
- Participation by the siting authority in regulatory proceedings at the Federal Energy Regulatory Commission or a State regulatory commission
- Other measures and actions

Other Details

- Federal cost share is not to exceed 50%



Sec. 80003. Tribal Electrification Program

Agency	Total Funding Appropriated	Timing
Bureau of Indian Affairs	\$145,500,000	Available through Sept 30, 2031

Summary

- Appropriates funding to electrify tribal homes.

Targeted Activities

- Providing electricity to unelectrified Tribal homes through zero-emissions energy systems
- Transitioning electrified Tribal homes to zero-emissions energy systems
- Associated home repairs/retrofitting to install zero-emissions energy systems

Other Details

- None of the funds provided under this section are subject to cost-sharing or matching requirements.



Clean Fuels and Transportation



Overview – Clean Fuels and Transportation

The IRA provides significant support, both for consumers and producers, for the advancement of clean transportation. The bill contains various tax incentives and other funding mechanisms to bolster the adoption of low- and zero-emission fuels and electric vehicles.

The IRA Includes Funding for:

- Biofuels
- Clean Hydrogen
- Sustainable Aviation Fuel
- Clean Fuel Production
- Fuel Cell Vehicles
- Electric Vehicles and Charging Infrastructure
- Ports



Sec. 13201. Biodiesel Tax Credit

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$5,571,000,000	Extended to Dec 31, 2024

Summary: Sec. 40A Tax Credit

- Extends the income and excise \$1.00/gallon tax credits for biodiesel mixtures, extends the \$0.10/gallon small agri-biodiesel producer credit, and extends the \$0.50/gallon excise tax credits for alternative fuels and alternative fuel mixtures all through Dec 31, 2024.

Biodiesel definition:

In general, the term means the mono-alkyl esters of long chain fatty acids derived from plant or animal matter which meet —

- the registration requirements for fuels and fuel additives established by the Environmental Protection Agency under section 211 of the Clean Air Act (42 U.S.C. 7545)
- the requirements of the American Society of Testing and Materials D6751

From: 26 U.S. Code § 40A

Eligible Recipients

- Applies to fuel sold or used after December 31, 2021.
- Treasury Secretary would establish procedures for credit claims for periods after December 31, 2021, and before the date of enactment.



Sec. 13202. Extension of Second-Generation Biofuels Incentives

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$54,000,000	Extended to Dec 31, 2024

Second generation definition:

- Derived by, or from, qualified feedstocks, and
- Meets the registration requirements for fuels and fuel additives established by EPA under section 211 of the Clean Air Act (42 U.S.C. 7545).
- Exclusions for fuels if:
 - More than 4% of such fuel (determined by weight) is any combination of water and sediment
 - The ash content of such fuel is more than 1% (determined by weight)
 - Such fuel has an acid number greater than 25.

Qualified feedstock definition:

- Any lignocellulosic or hemicellulosic matter that is available on a renewable or recurring basis, and
- Any cultivated algae, cyanobacteria, or lemna.

Summary: Sec. 40B Tax Credit

- Extends the tax credit for second-generation biofuels to December 31, 2024

Eligible Recipients

- Applies to qualified second-generation biofuel produced after December 31, 2021



Sec. 13203. Sustainable Aviation Fuel Tax Credit

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$49,000,000	2023-2024

Summary: Sec. 40B Tax Credit

- Establishes a tax credit for sale or use of qualified mixtures of Sustainable Aviation Fuel (SAF)

Credit Value

- Gallons of qualifying SAF x \$1.25 + applicable supplementary amount
- Applicable Supplementary amount is \$0.01 for each 1% the GHG emissions reduction exceeds 50%. Not to exceed \$0.50

SAF definition:

- ASTM D7566 standard
- Fischer Tropsch ASTM D1655 standard (Annex A1)
- Not derived from coprocessing with a material that is not biomass
- Not derived from palm fatty acid distillates or petroleum
- Certified GHG emissions reduction of at least 50%

Eligibility

- Any mixture of SAF and kerosene produced in the U.S. Must meet the definition of SAF (see left)
- Emissions reduction calculations methods:
 - CORSIA or “similar” methodology used for calculating GHG reductions. “Similar” methodology satisfies criteria under Clean Air Act
 - With this GREET model can be used in addition to CORSIA model
- Fuel producer registration
 - Must demonstrate supply chain traceability and information transmission compliance with CORSIA or “similar” methodology (same definition as above)



Sec. 13204. Clean Hydrogen Production Tax Credit

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$13,166,000,000	Applies January 1, 2023

Summary: 45V Tax Credit

- Establishes a PTC for clean hydrogen with lifecycle emissions no greater than 4kg of CO₂e per kg of hydrogen

Qualified clean hydrogen definition:

- Hydrogen which is produced through a process that results in a lifecycle GHG emissions rate of not greater than 4 kg of CO₂e per kg of hydrogen
- Must be produced in the U.S. in the ordinary course of a trade or business of the taxpayer
- The production and sale or use is verified by an unrelated party.

Lifecycle GHG calculation:

- Lifecycle GHG emissions only includes emissions through the point of production (well-to-gate), as determined under the most recent GREET model

Applicable Percentage

- 20% - 2.5-4 kg CO₂e/kg H₂
- 25% - 1.5-2.5 kg CO₂e/kg H₂
- 33.4% - .45-1.5 kg CO₂e/kg H₂
- 100% - less than .45 kg CO₂e/kg H₂

Credit Value

- Base credit: \$0.60 per kg of hydrogen produced
- Top, bonus credit: \$3.00 per kg of hydrogen produced, if prevailing wage and apprenticeship requirements are met
- Direct pay is available for the first five years of the credit

Incentive Stacking

- Cannot be stacked with 45Q

Qualified Facility

- Facility is owned by the taxpayer
- Produces qualified clean hydrogen
- Construction began before 1/1/2033
- Includes retrofit facilities



Sec. 13401. Clean Vehicle Credit

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$7,541,000,000	Begins: after 12/31/2022 Terminates: 2032

Summary: Sec. 30D Tax Credit

- Amends the Section 30D "new qualified plug-in electric drive motor vehicles credit" to a "clean vehicle credit."
- Credit is a reduction of federal income taxes for new clean vehicles placed in service by a taxpayer before January 1, 2033. Taxpayers could receive up to \$7,500 in credit.

Eligibility

- Generally, motor vehicles from qualified manufacturers meeting requirements in [26 U.S. Code § 30D](#) qualify, though there are amendments included in the IRA that make adjustments to the text.
- New electric vehicles and fuel cell electric vehicles are eligible.
- Puts a price cap of \$80,000 for Vans, SUVs, and Pickup Trucks; All other vehicles: \$55,000.
- Limitations on the taxpayer's gross income would apply.

Credit Value: Two parts –

- Eligible for up to **\$3,750** of the credit for the critical minerals, depending on the percentage extracted in the US (or a country with a free trade agreement in effect), or recycled in North America. **Applicable percentage: 40%** for vehicles in service before 2024; increases over time.
- Eligible for up to **\$3,750** of the credit for the battery components, depending on the percentage of the value of the components manufactured or assembled in the US. **Applicable percentage: 50%** for vehicles placed in service before 2024; increases over time.



Sec. 13402. Credit for Previously-Owned Clean Vehicles

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$1,347,000,000	Before 1/1/2033

Summary: 25E Tax Credit

- Allows taxpayers who acquire a used clean vehicle to claim a federal tax credit during the tax year the vehicle is placed in service.

Eligibility

- Used vehicle must be at least two years old, original use commenced by previous owner, and made by a qualified manufacturer.
- Other requirements in [26 U.S. Code § 30D](#) apply, though there are amendments included in the IRA that make adjustments to the text.

Credit Value

- Credit equal to the lesser of \$4,000 or 30% of the sales price.

Other Details

- The credit can be used once every three years for clean vehicles sold for \$25,000 or less
- Limitations on the taxpayer's adjusted gross income would apply



Sec. 13403. Credit for Qualified Commercial Clean Vehicles

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$3,583,000,000	Must be acquired before Dec. 31, 2032

Summary: Sec. 45W Tax Credit

- New commercial tax credit for qualified commercial clean vehicles.

Eligibility: Qualified Commercial Vehicle means –

- Manufactured primarily for use on public streets, roads, and highways (not exclusively on rails); or
- Mobile machinery (vehicles not designed to transport load over public highway.
- Only electric and fuel cell electric vehicles are eligible

Credit Value

- Credit equal to the lesser of 30% of the basis of a vehicle not powered by a gasoline or diesel internal combustion engine, or the incremental cost of such vehicle (i.e., the excess of the purchase price of such vehicle over the price of a comparable vehicle)
- Limitation: The amount determined shall not exceed –
 - \$7,500 for vehicle which has a gross vehicle weight of 14,000
 - \$40,000 for any vehicle not described in the above bullet

Incentive Stacking

- This credit cannot be stacked with Sec. 30D



Sec. 13404. Alternative Fuel Refueling Property Credit

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$1,738,000,000	Terminates Dec. 31, 2032

Summary: Sec. 30C

- Extends the 30% alternative fuel refueling property credit to January 1, 2033.

Clean burning fuel definition:

- Any fuel at least 85% of the volume of which consists of one or more of the following: ethanol, natural gas, compressed natural gas, liquified natural gas, liquefied petroleum gas, or hydrogen.
- Any mixture which consists of two or more of the following:
 - biodiesel (see section 40A(d)(1)), diesel fuel (see section 4083(a)(3)), or kerosene
 - At least 20% of the volume of which consists of biodiesel determined without regard to any kerosene in such mixture.
 - Electricity

Eligibility: “Qualified clean-fuel vehicle refueling property” means any property, either for:

- The storage or dispensing of a clean-burning fuel into the fuel tank of a motor vehicle propelled by such fuel, but only if the storage or dispensing of the fuel is at the point where such fuel is delivered into the fuel tank of the motor vehicle, or
- the recharging of motor vehicles propelled by electricity, but only if the property is located at the point where the motor vehicles are recharged.

Credit Value

- Base credit for depreciable alternative fuel vehicle refueling property: 6%
- Top, bonus rate: 30% credit if certain wage and apprenticeship requirements
- \$100,000 limit: for depreciable alternative fuel vehicle refueling property
- \$1,000 limit: for any other alternative fuel vehicle refueling property



Sec. 13704. Clean Fuel Production Credit

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$2,946,000,000	Available after December 31, 2025, but before January 1, 2028.

Qualified facility definition:

- A facility used for the production of transportation fuels, and
- Does not allow any facility for which one of the following credits is allowed under section 38 for the taxable year:
 - The credit for production of clean hydrogen under section 45V
 - The credit determined under section 46 to the extent that such credit is attributable to the energy credit determined under section 48 with respect to any specified clean hydrogen production facility for which an election is made under subsection 19 (a)(16)
 - The credit for carbon oxide sequestration under section 45Q.

Summary: Sec. 45Z

- The bill would add a new Section 45Z clean fuel production credit for low-emissions transportation fuel.

Eligible Recipients

- Produced by a taxpayer at a qualified facility and sold by the taxpayer
- Emissions Factor: 50 kilograms of CO₂e mmBTU, minus the emissions rate for such fuel, divided by 50 kilograms of CO₂e per mmBTU.
 - If the fuel emissions are less than 75 kg of CO₂e per MMBtu, the factor is 100%

Credit Value

- Base credit: \$0.20 per gallon (\$0.35 per gallon for aviation fuel) multiplied by the emissions factor
- Top, bonus credit: \$1.00 per gallon (or \$1.75 per gallon for aviation fuel) multiplied by the emissions factor

Incentive Stacking

- See definition for facilities that are **not eligible**.



Sec. 22003. Biofuel Infrastructure and Agriculture Product Market Expansion

Agency	Total Funding Appropriated	Timing
Department of Energy	\$500,000,000	Available through Sept 30, 2031

Summary

- Grants to increase the sale and use of agricultural commodity-based fuels through infrastructure improvements for blending, storing, supplying, or distributing biofuels
- Exception: Transportation infrastructure not on location where such biofuels are blended, stored, supplied, or distributed

Targeted Activities

- Installing, retrofitting, or upgrading fuel dispensers, pumps, storage tank system components, and other relevant infrastructure
- Building and retrofitting home heating oil distribution centers and distribution systems for ethanol and biodiesel blends.

Eligible Recipients

- Individual, entity, Indian tribe, or unit of State or local government, including a corporation, farm cooperative, farmer cooperative organization, association of agricultural producers, National Laboratory, institution of higher education, rural electric cooperative, public power entity, or a consortium

Cost Share

- Federal share: not more than 75% of the total cost of carrying out a project



Sec. 40007. Alternative Fuel and Low-Emission Aviation Program

Sustainable aviation fuel definition:

- Consists of synthesized hydrocarbons;
- Meets the requirements of—
 - ASTM International Standard D7566; or
 - The co-processing provisions of ASTM International Standard D1655, Annex A1
- Derived from biomass, waste streams, renewable energy sources, or gaseous carbon oxides
- Is not derived from palm fatty acid distillates
- Achieves at least a 50% lifecycle GHG emissions reduction in comparison with petroleum-based jet fuel

Low-emission aviation technologies definition:

- Technologies, produced in the U.S. that significantly:
 - Improve aircraft fuel efficiency;
 - Increase utilization of SAF; or
 - Reduce GHG emissions produced during operation of civil aircraft.

Agency	Total Funding Appropriated	Timing
Department of Energy	\$500,000,000	Available through 9/30/2031

Summary

- Establishes a competitive grant program for projects that produce, transport, blend, or store SAF; or develop, demonstrate, or apply low-emission aviation technologies.

DOE Considerations

- The capacity for the eligible entity to increase the domestic production and deployment of SAF or the use of low-emission aviation technologies among the U.S. commercial aviation and aerospace industry
- The projected GHG emissions from such project, including emissions resulting from the development of the project, and the potential the project has to reduce or displace, on a lifecycle basis, U.S. GHG emissions associated with air travel;
- The capacity to create new jobs and develop supply chain partnerships in the U.S.
- For SAF producers: the projected lifecycle GHG emissions benefits from the project, which includes feedstock and fuel production, and potential direct and indirect GHG emissions
- The benefits of ensuring a diversity of feedstocks for SAF, including the use of waste carbon oxides and direct air capture.

Cost Share

- Federal share: not more than 75% of the total cost of carrying out a project



Grant



Other

Sec. 60101. Clean Heavy-Duty Vehicles

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$1,000,000,000	Available until September 30, 2031

Summary

- Provides grants and rebates for clean (zero-emission) heavy-duty vehicles (classes 6 and 7) such as school buses, transit buses, and garbage trucks.
- \$400,000,000 of the appropriated funding is allocated to proposals to replace eligible vehicles (non-ZEVs) that serve 1 or more communities located in an air quality area designated as nonattainment for any air pollutant.

Targeted Activities

- Incremental costs of replacing an eligible vehicle with a ZEV
- Purchasing, installing, operating, and maintaining the necessary charging, fueling, or maintenance infrastructure
- Workforce development and training to support the maintenance, charging, fueling, and operation of ZEVs
- Planning and technical activities to support adoption and deployment of ZEVs

Eligible Recipients

- State, municipalities, Indian tribes; or nonprofit school transportation associations



Sec. 60102. Grants to Reduce Air Pollution at Ports

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$3,000,000,000	Available until September 30, 2027

Summary

- Grants to support the purchase and installation of zero-emission equipment and technology at ports
- \$750,000,000 of the appropriated funding is allocated to proposals to for ports located in an air quality area designated as nonattainment for any air pollutant.

Zero-emissions port equipment or technology definition:

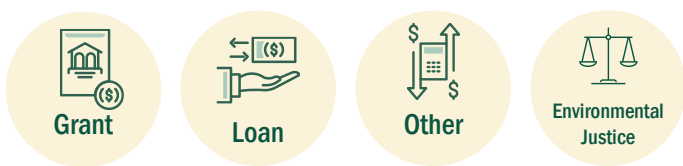
- Human-operated equipment or human-maintained technology that—
 - Produces zero emissions of any air pollutant that is listed pursuant to [section 108\(a\)](#) (or any precursor to such an air pollutant) and any greenhouse gas other than water vapor; or
 - Captures 100% of the emissions described in the bullet above that are produced by an ocean-going vessel at berth

Targeted Activities

- Purchase or install zero-emission port equipment or technology for use at, or to directly serve, one or more ports
- Conduct any relevant planning or permitting in connection with the purchase or instillation of such equipment and technology
- Develop climate action plans

Eligible Recipients

- Port authorities; State, regional, local, or tribal agency with jurisdiction over a port authority or port; or an Air pollution control agency
- A private entity in partnership with one of the above or that owns, operates, or uses the facility, cargo-handling or transportation equipment, or related technology of a port



Sec. 60104. Diesel Emissions Reductions

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$60,000,000	Available until 9/30/2031

Summary

- Appropriates \$60 million to EPA to provide grants, rebates, and loans to identify and reduce diesel emissions resulting from goods movement facilities, and vehicles servicing goods movement facilities, in low-income and disadvantaged communities.

Eligible Recipients

- A regional, State, local, or tribal agency or port authority with jurisdiction over transportation or air quality
- A nonprofit organization or institution that
 - Represents or provides pollution reduction or educational services to persons or organizations that own or operate diesel fleets; or
 - Has, as its principal purpose, the promotion of transportation or air quality
- Any private individual or entity that
 - Is the owner of record of a diesel vehicle or fleet operated pursuant to a contract, license, or lease with an entity described above; and
 - Meets requirements EPA establishes for vehicle use and for notice to and approval by the Federal department, agency or entity which the owner has entered into a contract, license, or lease.



Sec. 60108. Funding for the Renewable Fuel Standard

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$15,000,000	Available until 9/30/2031

Summary

- This section provides earmarked funding for the Renewable Fuel Standard program administered by EPA.

Targeted Activities

- \$5 million to EPA to:
 - Develop and establish tests and protocols regarding the environmental and public health effects of a fuel or fuel additive.
 - Data collection and analyses to regularly updates applicable regulations, guidance, and procedures for determining lifecycle GHG emissions of a fuel.
 - Review, analyze, and evaluate the impacts of all transportation fuels
 - Includes fuel lifecycle implications, impacts on the general public and on low-income and disadvantaged communities
- \$10 million for:
 - New grants to industry and other related activities under the Renewable Fuel Program ([42 U.S.C. 7545\(o\)](#)) to support investments in advanced biofuels.



Sec. 60501 Neighborhood Access and Equity Grant Program

Agency	Total Funding Appropriated	Timing
Department of Transportation	\$3,045,100,000	Available until September 30, 2026

Summary

- Appropriates funding to the Federal Highway Administration support neighborhood equity, safety, and affordable transportation access. FHWA will provide grants to reconnect communities divided by existing infrastructure barriers, mitigate adverse impacts of transportation facilities or construction projects on disadvantaged communities, and support equitable transportation planning.

Targeted Activities include, but not limited to:

- \$1,893,000,000 – Grants for eligible entities to improve walkability, safety, and affordable transportation access through construction, to mitigate or remediate negative impacts on the human or natural environment, for planning and capacity building activities in disadvantaged communities to monitor and assess emissions and equity.
- \$1,109,950,000 – Grants for investments in economically disadvantaged communities. Must have an anti-displacement policy, a community land trust, or a community advisory board in effect and have a demonstrated a plan for employing local residents impacted by the activity or project.
- \$42,150,000 – to FHWA for technical assistance and capacity building

Eligibility and Cost Sharing

- A state, a unit of local government, political subdivision of a state, territory, nonprofit or higher ed institute with a partnership in place, metropolitan planning organization.
- Cost Share: Federal share will not exceed 80%, but may be up to 100% for projects in disadvantaged or underserved communities.



Sec. 70002. USPS Electric Vehicles

Agency	Total Funding Appropriated	Timing
United States Postal Service	\$3,000,000,000	Available until September 30, 2031

Summary

- Funding for USPS to purchase zero-emission electric delivery vehicles and install charging infrastructure

Targeted Activities

- Purchase of zero-emission delivery vehicles
- Purchase, design, and instillation of infrastructure to support such vehicles at USPS owned and leased facilities



Advanced Manufacturing and Construction



Overview - Advanced Manufacturing and Construction Provisions

The IRA provides significant funding in the form of tax incentives to increase domestic clean energy manufacturing, industrial emissions reduction programs, and other mechanisms to bolster the use of low-embodied carbon materials.

As with other programs within the IRA, the advanced manufacturing and construction provisions place an emphasis on the creation of good-paying union jobs. U.S. made materials are preferred or required.

The IRA Includes Funding for:

- Extension of advanced energy ITC
- Establishes an advanced manufacturing PTC
- Additional funding for the Defense Production Act
- Advanced Industrial Facilities Deployment Program
- Low-embodied carbon construction materials program
- Additional funds for the Federal Buildings Fund



SEC. 13501. Extension of the Advanced Energy Project Credit

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$6,255,000,000	Takes effect on 1/1/2023

Summary: Sec. 48C Tax Credit

- 48C provides an ITC for projects that equip or expand manufacturing facilities that produce renewable energy equipment (solar, wind, geothermal, CCUS, fuel cells and microgrids).
 - An applicant which receives a certification shall have 2 years to place the project in service
 - At least \$4,000,000,000 must go toward investments located within energy communities

Targeted Activities

- The IRA expands the ITC to include a variety of projects (non-exhaustive list):
 - Manufacturing of **energy storage** systems and components
 - Property used to produce energy **conservation** technology
 - Electric **grid modernization** equipment
 - Re-equips a manufacturing facility with equipment designed to reduce **GHG emissions** by >20%
 - Electric and hybrid **vehicles**

Credit Value

- Base credit: 6 %
- Top, bonus credit: 30% assuming the prevailing wage and apprenticeship requirements

Incentive Stacking

- A facility cannot generate credits under this section for any qualified investment for which a credit is allowed under section 48, 48A, or 48B, 48D, 45Q, or 45V.



SEC. 13502. Advanced Manufacturing Production Credit

Agency	Total Funding Appropriated	Timing
Department of the Treasury	\$30,632,000,000	Available 1/1/2023; phased out by 2032

Summary: Sec. 45X Tax Credit

- Establishes a new PTC for advanced manufacturers for certain eligible components.

Targeted Activities

- Eligible components include:
 - any solar energy component
 - any wind energy component
 - central inverters, utility inverters, commercial inverters, residential inverters, microinverters, distributed wind inverters
 - electrode active materials, battery cells, or battery modules.
 - Battery cell or battery module cannot exceed a capacity-to-power ratio of 100:1
 - any applicable critical mineral

Credit Value

- Each component is eligible for a different credit value ([see page 415 for more details](#))
- Direct pay is available for the first five years

Incentive Stacking

- Cannot be stacked with credits under section 48C.



SEC. 30001. Enhanced Use of Defense Production Act of 1950

Agency	Total Funding Appropriated	Timing
Department of Energy	\$500,000,000	Available until 9/30/2024

Summary

- Appropriates \$500 million to carry out the Defense Production Act (DPA).

Targeted Activities

- The IRA does not specify any targeted activities or sections of the DPA that this funding will be directed toward.
- Some IRA summary documents assume that it will be used to accelerate domestic clean energy manufacturing for energy technologies based on the recent announcement linked below, but this is not guaranteed.
- [On June 6th](#): President Biden issued presidential determinations providing the Department of Energy with the authority to utilize the DPA to accelerate domestic production of five key energy technologies:
 - solar;
 - transformers and electric grid components;
 - heat pumps;
 - insulation; and
 - electrolyzers, fuel cells, and platinum group metals.



Sec. 50161. Advanced Industrial Facilities Deployment Program

Agency	Total Funding Appropriated	Timing
Department of Energy	\$5,812,000,000	Available until September 30, 2026

Summary

The IRA establishes an Advanced Industrial Facilities Deployment Program to be administered by the Office of Clean Energy Demonstrations. OCED will provide financial assistance (grant, rebate, direct loan, cooperative agreement) to facilities to deploy advanced industrial technology.

Advanced industrial technology definition:

- A technology directly involved in an industrial process, as described in any of paragraphs (1) through (6) of section 454(c) of the Energy Independence and Security Act of 2007 ([42 U.S.C. 17113\(c\)](#)), and
- Designed to accelerate greenhouse gas emissions reduction progress to net-zero at an eligible facility, as determined by DOE.

Eligibility

- Eligible facilities: a domestic, non-Federal, nonpower industrial or manufacturing facility engaged in energy intensive industrial processes, including production processes for iron, steel, steel mill products, aluminum, cement, concrete, glass, pulp, paper, industrial ceramics, chemicals, and other energy intensive industrial processes

Targeted Activities

- The purchase and installation, or implementation, of advanced industrial technology
- Retrofits, upgrades to, or operational improvements at an eligible facility to install or implement advanced industrial technology
- Engineering studies and other work needed to prepare an eligible facility for activities described in the bullets above



Sec. 60109. Funding for Implementation of the American Innovation and Manufacturing Act

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$38,500,000	Available until 9/30/2026

Summary

- Appropriates \$20 million in funds to EPA to carry out various sections of the American Innovation and Manufacturing Act. ([42 USC 7675](#))

Targeted Activities

- To support EPA efforts in carrying out the American Innovation and Manufacturing Act, this section provides an additional:
 - \$3,500,000 to deploy new implementation and compliance tools
 - \$15,000,000 for grants for reclaim and innovative destruction technologies



Sec. 60112. Environmental Product Declaration Assistance

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$250,000,000	Available until 9/30/2031

Summary

- Appropriates \$250,000,000 to EPA to develop and carry out a program to support the development, and enhanced standardization and transparency, of environmental product declarations for construction materials and products

Embodied carbon definition:

- Quantity of GHG emissions associated with all relevant stages of production of a material or product, measured in kilograms of carbon dioxide equivalent per unit of such material or product

Targeted Activities

- Grants to businesses that manufacture construction materials and products for developing and verifying environmental product declarations, and to States, Indian Tribes, and nonprofit organizations that will support such businesses;
- Technical assistance to such entities
- Other activities that assist in measuring, reporting, and reducing the quantity of embodied carbon of construction materials and products.



Sec. 60116. Low-Embodied Carbon Labeling for Construction Materials

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency in partnership with FHWA and GSA	\$100,000,000	Available until 9/30/2026

Summary

- Appropriates funding to EPA for administrative costs to develop a program to identify and label low-embodied carbon construction materials and products for transportation projects and Federal buildings.

Identification and Labeling will be based on:

- Environmental product declarations
- Determinations of the California Department of General Services Procurement Division, in consultation with the California Air Resources Board; or
- Determinations by other State agencies, as verified by EPA



Sec. 60503. Use of Low-Carbon Materials

Agency	Total Funding Appropriated	Timing
General Services Administration	\$2,150,000,000	Available until 9/30/2026

Summary

- Appropriates \$2.15 billion to be deposited in the [Federal Buildings Fund](#)

Embodied carbon definition:

- Quantity of GHG emissions associated with all relevant stages of production of a material or product, measured in kilograms of carbon dioxide equivalent per unit of such material or product

Low-embodied carbon materials and products definition:

- Materials and products identified by EPA as having substantially lower levels of embodied carbon as compared to estimated industry averages of similar products or materials

Targeted Activities

- Acquire and install low-embodied carbon materials and products for use in the construction or alteration of buildings under the jurisdiction, custody, and control of the General Services Administration



Sec. 60504. General Services Administration Emerging Technologies

Agency	Total Funding Appropriated	Timing
General Services Administration	\$975,000,000	Available until 9/30/2026

Summary

- Appropriates \$975 million to be deposited in the [Federal Buildings Fund](#)

Targeted Activities

- For emerging and sustainable technologies, and related sustainability and environmental programs. Guidance/criteria on eligible technologies or relevant programs is not included in the IRA text.



Sec. 60505. Environmental Review Implementation Funds

Agency	Total Funding Appropriated	Timing
Department of Transportation	\$100,000,000	Available until 9/30/2026

Summary

- Appropriates \$100 million to the Federal Highway Administration to facilitate the development and review of documents for the environmental review process for proposed projects.

Targeted Activities

- Providing guidance, technical assistance, etc. to facilitate the environmental review process for surface transportation projects
- Providing to funding eligible entities to build capacity and facilitate the environmental review process, including—
 - Defining the scope or study areas;
 - Identifying impacts, mitigation measures, and reasonable alternatives;
 - Preparing planning and environmental studies and other documents
 - Conducting public engagement activities
 - Other activities (i.e., permitting)

Cost Share

- Federal cost share will not exceed 80% of the costs of the proposed project.



Sec. 60506. Low-Carbon Transportation Materials Grants

Agency	Total Funding Appropriated	Timing
Department of Transportation	\$2,000,000,000	Available until 9/30/2026

Summary

- Funding for the Federal Highway Administration to reimburse or provide incentives for the use of low-embodied carbon construction materials and products in projects.

Eligible Projects

- Reimbursements are for projects on a federal-aid highway, tribal transportation facility, federal lands transportation facility; or Federal lands access transportation facility.
- Cannot be used for projects that result in additional through travel lanes for single occupant passenger vehicles

Eligible Recipients

- A State, unit of local government, political subdivision of a State, territory of the U.S., an Indian tribe, recipient of funds under [23 U.S. Code § 203](#), a metropolitan planning organization, or a special purpose district or authority with a transportation function.

Incentive Values

- Amount of reimbursement is equal to the incrementally higher cost of using such materials relative to the cost of using traditional materials
- Amount of an incentive is equal to 2% of the cost of using low-embodied carbon construction materials and products on a project.



Sec. 70006. FEMA Building Materials Program

Agency	Total Funding Appropriated	Timing
Federal Emergency Management Agency	N/A	N/A

Summary

- Provides authority to FEMA to provide financial assistance for costs associated with low-carbon materials and incentives that encourage low-carbon and net-zero energy projects, which may include an increase in the Federal cost share for those projects.

FEMA Authorities

- FEMA is able to provide the above financial assistance under these relevant sections of the Robert T. Stafford Disaster Relief and Emergency Assistance Act:
 - Pre-disaster hazard mitigation: [42 U.S.C. 5133\(h\)](#)
 - Hazard mitigation: [42 U.S.C. 5170c\(a\)](#)
 - Repair, restoration, and replacement of damaged facilities: [42 U.S.C. 5172\(b\)](#)



Methane Abatement and Monitoring and Other Fossil Fuels Provisions

Overview - Methane and Other Fossil Provisions

The IRA takes considerable steps to address methane emissions. In 2021, the Biden-Harris Administration launched its Methane Emissions Reduction Action Plan and leads with the European Union a Global Methane Pledge to reduce overall methane emissions by 30% below 2020 levels by 2030.

To meet those goals, the bill creates a program to provide financial assistance for methane reduction efforts and imposes a fee on those who exceed methane limits.

The IRA Includes Funding for:

- Provides grants and other funding for methane emission monitoring, measurement, and mitigation
- Imposing fees on waste emissions
- Collecting royalties on extracted methane

SEC. 60113. Methane Emissions Reduction Program

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$1,550,000,000	Depends on the section – see <i>following slides</i>

The Methane Emissions Reduction Program (MERP) establishes various incentives to reduce CH₄ emissions from petroleum and natural gas systems.

Key Program Elements

Information on these subsections is included in the following slides

- Incentives for Methane Mitigation and Monitoring
- Incentives for Methane Mitigation from Conventional Wells
- Waste Emissions Charge (Methane Fee)

Eligible Entities: Applicable facilities under this program include –

- Offshore petroleum and natural gas production.
- Onshore petroleum and natural gas production.
- Onshore natural gas processing.
- Onshore natural gas transmission compression.
- Underground natural gas storage.
- Liquefied natural gas storage.
- Liquefied natural gas import and export equipment.
- Onshore petroleum and natural gas gathering and boosting.
- Onshore natural gas transmission pipeline.

SEC. 60113. Methane Emissions Reduction Program

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$850,000,000	Available until 9/30/2028

Summary: Incentives for Methane Mitigation and Monitoring

- \$850 million for grants, rebates, contracts, loans, and other activities of the EPA to provide financial and technical assistance to owners and operators of applicable facilities

Targeted Activities

- Prepare and submit GHG reports
- Improve methane emission estimates and monitoring
- Reduce methane and other GHG emissions from petroleum and natural gas systems
- Mitigate legacy air pollution from petroleum and natural gas systems
- Provide support for communities (i.e., improving/deploying industrial equipment, plugging wells on non-Federal land, etc.)

SEC. 60113. Methane Emissions Reduction Program

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$700,000,000	Available until 9/30/2028

Summary: Incentives for Methane Mitigation from Conventional Wells

- \$700 million for grants, rebates, contracts, loans, and other activities of the EPA to provide financial and technical assistance to owners and operators at **conventional marginal wells**.

Targeted Activities

- Prepare and submit GHG reports
- Improve methane emission estimates and monitoring
- Reduce methane and other GHG emissions from petroleum and natural gas systems
- Mitigate legacy air pollution from petroleum and natural gas systems
- Provide support for communities (i.e., improving/deploying industrial equipment, plugging wells on non-Federal land, etc.)

SEC. 60113. Methane Emissions Reduction Program

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	N/A	Available until 9/30/2028

Summary: Waste Emissions Charge (Methane Fee)

- Provides EPA with authority to impose and collect a charge on CH₄ emissions that exceed an applicable waste emissions threshold (more info below) from an owner or operator of an applicable facility that reports more than 25,000 metric tons of CO₂ equivalent of GHGs emitted per year.
- EPA may issue guidance or regulation to carry out this section.

Waste Emissions Threshold

- EPA would impose and collect the charge on the reported metric tons of CH₄ emissions from a facility that exceeds:
 - 0.20 percent of the natural gas sent to sale; or
 - 10 metric tons of methane per million barrels of oil sent to sale, if a facility sent no natural gas to sale.
 - 0.05 percent of the natural gas sent to sale from nonproduction petroleum and natural gas systems (onshore natural gas processing, liquefied natural gas storage, liquefied natural gas import and export equipment, onshore petroleum and natural gas gathering and boosting)

SEC. 60113. Methane Emissions Reduction Program

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	N/A	Available until 9/30/2028

Waste Emissions Charge details continued

Charge Amount

- The amount of a charge is equal to the number of metric tons of methane emissions reported that exceed the applicable annual waste emissions threshold and:
 - \$900 for emissions reported for 2024
 - \$1,200 for emissions reported for 2025
 - \$1,500 for emissions reported for 2026 and thereafter.

Exemptions for Regulatory Compliance

- Charges are not imposed:
 - On facilities that are subject to and in compliance with methane emissions requirements pursuant to subsections (b) and (d) of section 111; OR
 - If compliance with such requirements will result in equivalent or greater emissions reductions as would be achieved by the proposed rule entitled 'Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review', if such rule is finalized and implemented.

SEC. 60105(e). Funding to Address Air Pollution

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$20,000,000	Available until 9/30/2031

For information on other subsections included in Sec. 60105, see the following slides on Air Quality Monitoring and Controls.

Summary: Subsection(e) – Methane Monitoring

- Appropriates \$20 million to EPA for grants and other activities authorized under (42 U.S.C. 7403(a)–(c), 7405) for monitoring emissions of methane.

Targeted Activities (non-exhaustive list)

- Research, investigations, demonstrations, etc., relating to the causes, effects, extent, prevention, and control of air pollution
- Provide technical and financial support to air pollution control agencies
- Establish technical advisory committees composed of recognized experts in various aspects of air pollution
- Make grants to air pollution control agencies for the prevention and control of air pollution or implementation of national primary and secondary ambient air quality standards

Sec. 50263. Royalties on All Extracted Methane

Agency	Total Funding Appropriated	Timing
Department of the Interior	N/A	Applies to all leases issued after date of enactment of the IRA

Summary

- Royalties would be required to be paid for gas produced from Federal land and on the outer Continental Shelf
- Would be assessed on all gas produced, including all gas that is consumed or lost by venting, flaring, or negligent releases through any equipment during upstream operations.

Exceptions

- Royalties would not apply with for:
 - Gas vented or flared for not longer than 48 hours in an emergency situation that poses a danger to human health, safety, or the environment
 - Gas used or consumed within the area of the lease, unit, or communitized area for the benefit of the lease, unit, or communitized area; or
 - Gas that is unavoidably lost.

Sec. 50264. Lease Sales Under the 2017-2022 Outer Continental Shelf Leasing Program

Agency	Total Funding Appropriated	Timing
Department of the Interior	N/A	Varies – see below

Summary

- Requires DOI to conduct oil and gas lease sales.

Targeted Activities

- Lease Sale 257 Reinstatement:
 - No later than 30 days after the date of enactment of this Act, DOI must
 - Accept the highest valid bid for each tract or bidding unit of Lease Sale 257 for which a valid bid was received on November 17, 2021; and
 - Provide the appropriate lease form to the winning bidder to execute and return.
 - DOI then must promptly issue to the high bidder a fully executed lease
- No later than December 31, 2022, the Secretary shall conduct the 2022 Lease Sales
- No later than September 30, 2023, the Secretary shall conduct Lease Sale 261



Air Quality Monitoring & Reporting

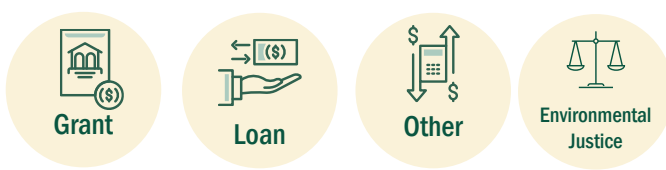


Overview – Air Quality Monitoring and Reporting

The IRA dedicates funding to meet U.S. environmental justice goals in nearly every section of the bill. Many provisions either directly support or allocate a portion of the total appropriated funding to address legacy pollution and support overburdened, underserved, and disadvantaged communities.

The IRA Includes Funding for:

- Enhanced tax incentives for wind and solar projects
- Greenhouse Gas Reduction Fund
- Addressing diesel and other air pollutant emissions
- Enhanced air quality monitoring
- Improved data transparency and collection
- Support for Tribal communities



Sec. 60103. Greenhouse Gas Reduction Fund

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$27,000,000,000	Available until Sept 30, 2024

Also referred to as the Clean Energy Accelerator or Green Bank

Summary

- Establishes a GHG reduction fund to accelerate deployment of low-carbon technologies.
- Requires that at least 40% of these investments' benefits are directed to low-income and coal-transitioning communities.

Qualified project definition:

Includes any project, activity, or technology that—

- Reduces or avoids greenhouse gas emissions and other forms of air pollution in partnership with, and by leveraging investment from, the private sector; or
- Assists communities in the efforts of those communities to reduce or avoid greenhouse gas emissions and other forms of air pollution

Eligible Recipients: A nonprofit organization that:

- Is designed to provide capital, including by leveraging private capital, and other forms of financial assistance for the deployment of low- and zero-emission products, technologies, and services;
- Does not take deposits other than deposits from repayments and other revenue received from financial assistance provided using grant funds
- Is funded by public or charitable contributions; and
- Invests in or finances projects alone or in conjunction with other investors.

Targeted Activities

- Grants for financial and technical assistance to eligible entities
- Grants to States, municipalities, Tribal governments, and eligible recipients for grants, loans, and technical assistance, to enable low-income and disadvantaged communities to deploy or benefit from zero-emission technologies
- Financial and technical assistance to eligible recipients in low-income and disadvantaged communities

Sec. 60105. Funding to Address Air Pollution

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$235,500,000	Available until 9/30/2031

Summary

- Provides EPA funding to issue grants for a variety of air pollution monitoring, testing, and control technologies and solutions.

Targeted Activities

- \$117,500,000 to deploy, integrate, support, and maintain fenceline air monitoring, screening air monitoring, national air toxics trend stations, and other air toxics and community monitoring.
- \$50,000,000 to expand the national ambient air quality monitoring network with new multipollutant monitoring stations; and to replace/repair/etc. existing monitors
- \$3,000,000 to deploy, integrate, and operate air quality sensors in low-income and disadvantaged communities
- \$15,000,000 for testing and other activities to address emissions from wood heaters
- \$20,000,000 for monitoring methane emissions (*see section on methane monitoring*)
- \$25,000,000 – For Clean Air Act (CAA) grants
 - Research and development program for prevention and control of air pollution
 - Air pollutant monitoring, analysis, modeling, and inventory research
 - Grants for support of air pollution planning and control programs
- \$5,000,000 – For States to adopt and implement GHG and zero-emission standards for mobile sources



Sec. 60106. Funding to Address Air Pollution at Schools

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$50,000,000	Available until 9/30/2031

Summary

- Appropriates \$37.5 million to EPA for grants and other activities to monitor and reduce air pollution and GHG emissions at schools in low-income and disadvantaged communities.

Targeted Activities

- An additional \$12,500,000 will be allocated to EPA for providing technical assistance to:
 - Address environmental issues
 - Develop school environmental quality plans (standards for building, design, construction, and renovation)
 - Identify and mitigate ongoing air pollution hazards.



Sec. 60110. Funding for Enforcement Technology and Public Information

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$25,000,000	Available until September 30, 2031

Summary

- This section provides funds to update EPA’s Integrated Compliance Information System, and any associated systems, necessary information technology (IT) infrastructure, or public access software tools to ensure access to compliance data and related info.

Targeted Activities

- In addition to the above, \$3,000,000 for grants to States, Indian tribes and air pollution control agencies to update their systems to ensure communication with the Integrated Compliance Information System and associated systems.
- \$4,000,000 to EPA to acquire or update inspection software or to acquire necessary devices to run such inspection software.

Sec. 60111. Greenhouse Gas Corporate Reporting

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$5,000,000	Available until September 30, 2031

Summary

- This section provides funding for EPA to support corporate reporting of GHG emissions.

Targeted Activities

- Support for enhanced standardization and transparency of corporate climate action commitments and plans to reduce GHG emissions
- Support for enhanced transparency regarding progress towards meeting such commitments and implementing such plans
- Support for progress toward meeting such commitments and implementing such plans



Sec. 60114. Climate Pollution Reduction Grants

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$250,000,000	Available until September 30, 2031

Sec. 60114 is divided into two parts. The first includes appropriations for *Greenhouse Gas Air Pollution Planning Grants*. See additional info on the next slide.

Summary

- EPA will make a grant available to at least one eligible entity in each State for the costs of developing a plan for the reduction of greenhouse gas air pollution to be submitted with an application for a grant under subsection (c) (Greenhouse Gas Air Pollution Reduction Implementation Grants).

Targeted Activities

- Each plan will include programs, policies, measures, and projects that will achieve or facilitate the reduction of greenhouse gas air pollution.

Eligible Recipients

- A State, air pollution control agency, municipality, Indian tribe, or a group of one or more entities listed here.



Sec. 60114. Climate Pollution Reduction Grants

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$4,750,000,000	Available until September 30, 2026

Greenhouse Gas Air Pollution Reduction Implementation Grants

Summary

- The EPA will competitively award grants to the eligible entities who submitted plans under the Greenhouse Gas Air Pollution Planning Grants subsection (see previous slide) to implement such plans.

Targeted Activities

- To apply for the grant, an eligible entity will submit an application that includes the following information:
 - The degree to which greenhouse gas air pollution is projected to be reduced, including with respect to low-income and disadvantaged communities
 - The quantifiability, specificity, additionality, permanence, and certifiability of such projected greenhouse gas air pollution reduction.

Eligible Recipient

- A State, air pollution control agency, municipality, Indian tribe, or a group of one or more entities listed here.



SEC. 60201 Environmental and Climate Justice Block Grants

Agency	Total Funding Appropriated	Timing
Environmental Protection Agency	\$3,000,000,000	Available until September 30, 2026

Summary

- Appropriates funding to EPA to award grants for periods of up to 3 years that benefit disadvantaged communities and reduce GHGs and other air pollutants.

Targeted Activities

- Community-led air and other pollution monitoring/prevention/remediation, investments in low- and zero-emission and resilient technologies, and related infrastructure, and workforce development
- Projects mitigating climate and health risks from urban heat islands, extreme heat, wood heater emissions and wildfire events
- Climate resiliency and adaptation
- Reducing indoor toxics and air pollution
- Facilitating disadvantaged community engagement (workshops, rulemaking, advisory groups, etc.)

Eligible Recipients

- Partnership between: Indian tribe, local government or institution of higher education or a community-based nonprofit organization; community-based nonprofit organization or partnership of these organizations.



Sec. 60401. Environmental and Climate Data Collection

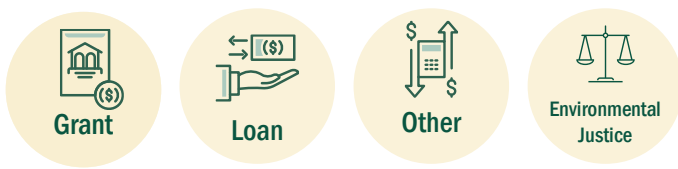
Agency	Total Funding Appropriated	Timing
Council on Environmental Quality	\$32,500,000	Available until September 30, 2026

Summary

- Appropriates funding to the White House CEQ to support climate and environmental data collection.

Targeted Activities

- Support data collection relating to disproportionate negative environmental harms and climate impacts and cumulative impacts of pollution and temperature rise.
- Establish expand and maintain efforts to track disproportionate burdens and cumulative impacts, including academic and workforce support for analytics and informatics infrastructure and data collection systems
- Support efforts to ensure that any mapping or screening tool is accessible to community-based organizations and community members.



Sec. 80001, 80002, 80004. Funding for Tribal Communities

Agency	Total Funding Appropriated	Timing
Bureau of Indian Affairs	Varies – see below	Available until September 30, 2031

For information on Sec. 80003 – Tribal Electrification Program – see slides on clean electricity, grid reliability, and transmission.

Summary

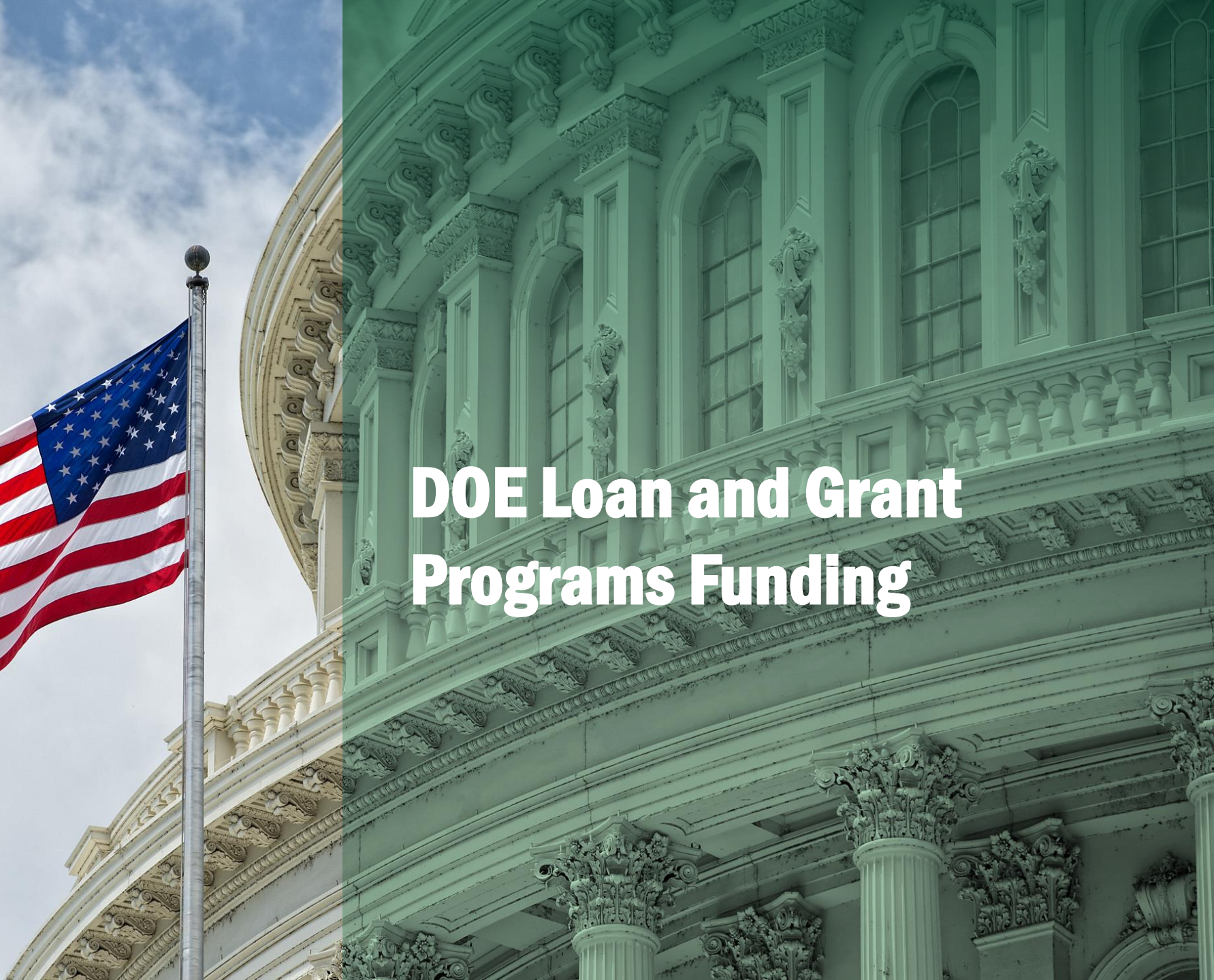
- These sections of the IRA provide various funding opportunities and programs to Tribal communities to support climate resiliency, electrification, and other relief measures.

Targeted Activities

- Sec. 80001 – Tribal Climate Resilience
 - \$220,000,000 for Tribal climate resilience and adaptation programs
 - \$10,000,000 for fish hatchery operations and maintenance
- Sec. 80002 – Native Hawaiian Climate Resilience
 - \$23,500,000 to carry out, through financial assistance, technical assistance, direct expenditure, grants, contracts, or cooperative agreements, climate resilience and adaptation activities that serve the Native Hawaiian Community
- Sec. 80004 – Emergency Drought Relief for Tribes
 - \$12,500,000 for near-term drought relief actions and to assist with drinking water shortages
 - Timing for this section: Available until September 30, 2026



DOE Loan and Grant Programs Funding





Overview – DOE Loan and Grant Programs Funding

The DOE Loan Programs Office has just begun issuing its first loans since 2011. The IRA provides additional appropriations to the Office to continue to revamp its operations and rapidly deploy large-scale clean energy projects in the U.S.

The IRA Includes Funding for:

- DOE Loan Programs Office
- Bolstering Domestic Manufacturing
- Financing for Energy Infrastructure and Advanced Manufacturing
- Loans for Tribal Energy and Advanced Technology Vehicle Manufacturing



SEC. 50141. Funding for the DOE Loan Programs Office

Agency	Total Funding Appropriated	Timing
Department of Energy Loan Programs Office	\$3,600,000,000	Funding authorized through 9/30/2026

Summary

- Provides authority to LPO to make commitments to guarantee loans for eligible projects up to the total principal amount of \$40,000,000,000.
- Appropriates \$3,600,000,000 to LPO for the costs of guarantees made

Targeted Activities

- Projects that avoid, reduce, utilize, or sequester air pollutants or anthropogenic emissions of GHGs; and employ new or significantly improved technologies. (See more info here: [42 U.S.C. 16513](#))

Eligible Recipients

- Projects must be located in the U.S. **LPO can still provide commitments to:**
 - Projects benefitting from Federal tax benefits
 - Projects benefitting from being located on Federal land
 - Projects benefitting from the Federal insurance program under ([42 U.S.C. 2210](#));
 - Electric generation projects using transmission facilities owned or operated by a Federal Power Marketing Administration or the Tennessee Valley Authority that have been authorized, approved, and financed independent of the project receiving the guarantee.



SEC. 50142. Advanced Technology Vehicle Manufacturing

Agency	Total Funding Appropriated	Timing
Department of Energy Loan Programs Office	\$3,000,000,000	Funding authorized through 9/30/2028

Summary

- Appropriates \$3,000,000,000 for the costs of providing direct loans under the ATVM program.
- Eliminates the loan program cap of \$25,000,000,000.

Targeted Activities

- Reequipping, expanding, or establishing a manufacturing facility in the U.S. to produce qualifying advanced technology vehicles (ATVs), or qualifying components; or
- Engineering integration for qualifying ATVs and qualifying components; or
- Manufacturing, recycling, processing, reprocessing, remediation, or reuse of materials, components, or subcomponents involving critical minerals, critical minerals production, or the supply chain for such materials.

Eligible Recipients

- Manufacturers of advanced technology vehicles that achieve defined fuel economy targets.
- Manufacturers of components or materials that support eligible vehicles' fuel economy performance.



SEC. 50143. Domestic Manufacturing Conversion Grants

Agency	Total Funding Appropriated	Timing
Department of Energy	\$2,000,000,000	Available until September 30, 2026

Summary

- Appropriates \$2,000,000,000 to provide grants for domestic production of efficient hybrid, plug-in electric hybrid, plug-in electric drive, and hydrogen fuel cell electric vehicles. A 50% cost-share structure is required.

Targeted Activities

- In addition to the types of vehicle production listed above, projects must avoid, reduce, utilize, or sequester air pollutants or anthropogenic emissions of GHGs; and employ new or significantly improved technologies. (See more info here: [42 U.S.C. 16513](#))

Eligible Recipients

- Automobile manufacturers and suppliers and hybrid component manufacturers. (*Priority given to the refurbishment or retooling of manufacturing facilities that have recently ceased operation or will cease operation soon.*)

Coordination with States

- DOE may coordinate implementation of this program with State and local programs designed to accomplish similar goals, including retention and retraining of skilled workers and **by establishing matching grant arrangements.**



50144. Energy Infrastructure Reinvestment Financing

Agency	Total Funding Appropriated	Timing
Department of Energy Loan Programs Office	\$5,000,000,000	Funding authorized through 9/30/2026

Summary

- \$5,000,000,000, to carry out a new amendment of the Energy Policy Act of 2005
- LPO may make commitments up to the total principal amount of \$250,000,000,000.

Targeted Activities

- Projects that: Retool, repower, repurpose, or replace energy infrastructure that has ceased operations; or enable operating energy infrastructure to avoid, reduce, utilize, or sequester air pollutants or anthropogenic emissions of GHGs.
- A project may include the remediation of environmental damage associated with energy infrastructure.

Energy infrastructure definition:

- Facility and associated equipment used for generating/transmitting electric energy; or for the production, processing, and delivery of fossil fuels, fuels derived from petroleum, or petrochemical feedstocks.

Other Details

- A project that involves electricity generation using fossil fuels is required to have controls or technologies to avoid, reduce, utilize, or sequester air pollutants and GHGs.
- Term of the loan NOT to exceed 30 years



SEC. 50145. Tribal Energy Loan Guarantee Program

Agency	Total Funding Appropriated	Timing
Department of Energy Loan Programs Office	\$75,000,000	Funding authorized through 9/30/2028

Summary

- Appropriates \$75,000,000 for the Tribal Energy Loan Guarantee Program (TELGP).
- Amends ([25 U.S.C. 3502\(c\)](#)) by expanding the aggregate outstanding amount allowed to be guaranteed by under this subsection from \$2,000,000,000 to \$20,000,000,000.

Targeted Activities

- The TELGP can support a broad range of projects for the development of energy resources, products, and services that utilize commercial technology (innovative technologies are allowed).
- Non-exclusive list of potential types of Eligible Projects:
 - Electricity generation, transmission and/or distribution facilities, utilizing renewable or conventional sources
 - Energy storage facilities
 - Energy resource extraction, refining or processing facilities
 - Energy transportation facilities, including pipelines
 - Distributed energy project portfolios

Eligible Recipients

- See the most recent [open solicitation for TELGP projects](#) for details on eligible projects, eligible borrowers, and eligible applicants.



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Washington, D.C.
2200 Wilson Boulevard
Suite 310
Arlington, VA 22201

Sacramento, CA
1121 L Street
Suite 309
Sacramento, CA 95814



(P) 202-296-8086
(F) 877-303-4532