Accessing Federal Funding for the Energy Supply Sector in US States, Regions, and Localities

Infrastructure Investment and Jobs Act and Inflation Reduction Act

Briefing Summary

This summary memo provides an **overview of the funding opportunities for the energy supply sector under the Infrastructure Investment and Jobs Act (IIJA, also known as the Bipartisan Infrastructure Law, or BIL) and the Inflation Reduction Act (IRA).** It covers funding opportunities that can be leveraged by state and local governments to support climate change investments, economic progress, and disadvantaged and rural communities.

This memo was developed as part of the "Accessing federal funding in US" project implemented by the Green Recovery Alliance.[1] This is the **third of a series of memos** that are developed during the project implementation. The fourth and last memo will be focused in more detail on specific funding opportunities for the energy demand sector and the requirements of environmental justice.

Infrastructure Investment and Jobs Act

Objectives

The passage of IIJA on November 5th, 2021, came with several key **objectives** for the Biden Administration. The bill's primary goals include major investments in upgrading the US's infrastructure, investing in climate change mitigation and adaptation, expanding, and developing America's workforce, and addressing environmental justice issues.

Scale

The IIJA authorizes **$1.2 trillion for transportation and infrastructure spending with $550 billion going toward "new" investments and programs**. Funding from the IIJA covers energy and power infrastructure, transportation, water, climate resilience and access to broadband internet. This memo focuses only on the energy supply sector.

Funding from IIJA includes **formula-based programs** where specific grant awards are allocated to specific recipients and **competitive or discretionary grant programs** where grant awards are allocated to applicants based on merit. Both competitive and formula-based programs are open to governmental and nongovernmental organizations unless specified otherwise.

Eligible recipients for funding are states, tribes, local governments, communities, and utilities.

---

[1] The Green Recovery Alliance is a partnership between the Climate Group and the Center for Climate Strategies, and this project is implemented with support from the New York Community Trust.

Timing

Funding programs under the IIJA have many upcoming deadlines with many already passed. More details on deadlines and application requirements for energy supply funding programs are provided below.

Coverage

Energy Supply

Many of the programs and grants address grid infrastructure upgrades , workforce development, and other carbon reduction activities across the sector. In particular, the IIJA contains:

- $5 billion for grid infrastructure and resilience upgrades
- Additional and elimination of matching funding for the State Energy Program
- $2.5 billion for the planning and upgrading of large-scale transmission infrastructure
- $225 million for building code upgrades and adoption
- $20 million for establishing training centers and educational programs for building auditors

Environmental Justice

Many IIJA programs and grants must meet certain requirements under the **Justice 40 (J40)** initiative to be eligible for funding. J40 is a whole-of-government effort to ensure that at least 40 percent of overall benefits from federal investments in climate change and clean energy are directed to disadvantaged communities (DACs).[2] The White House Environmental Justice Council has provided a variety of recommendations and principles to guide the work of J40.[3] Federal agencies are still in the process of defining criteria for J40 compliance and are relying on interim guidance and tools, and some of them have come up with their own interim criteria[4] for determining whether a community is disadvantaged. The Climate and Economic Justice Screening Tool (CEJST) under development by the White House Council on Environmental Quality (CEQ) can be used to determine whether any given community is considered disadvantaged or not for the purpose of J40 and federal funding.[5] It is unclear how other state and federal screening tools will factor into agency awards under J40.

---

[2] https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/

[3] https://www.epa.gov/environmentaljustice/whejac-justice40-climate-and-economic-justice-screening-tool-executive-order

[4] Such as, (1) *US DOT Transportation Disadvantaged Census Tracts (Historically DACs) Tool* developed by US Department of Transportation (USDOT) to help grant applicants determine whether the locations of their proposed projects were in a DAC based on the above indicators:
https://usdot.maps.arcgis.com/apps/dashboards/d6f90dfcc8b44525b04c7ce748a3674a
(2) *The Electric Vehicle (EV) Charging Justice40 Map Tool* developed by USDOT and UD Department of Energy (USDOE) is a tool to help EV charging planning efforts align with the Justice40 goal by displaying multiple data layers identifying DACs, Federal Highway Administration (FHWA) designated EV corridors, public DC fast charge stations (non-Tesla), and electrical substations:
https://anl.maps.arcgis.com/apps/webappviewer/index.html?id=33f3e1fc30bf476099923224a1c1b3ee
(3) *The Low-Income Energy Affordability Data (LEAD) Tool*, developed by USDOE is a mapping tool design to help states, communities and other stakeholders to understand low-income housing and energy characteristics such as annual energy burden (% of income), and annual energy cost: https://www.energy.gov/eere/slsc/maps/lead-tool

[5] https://www.whitehouse.gov/ceq/news-updates/2022/02/18/ceq-publishes-draft-climate-and-economic-justice-screening-tool-key-component-in-the-implementation-of-president-bidens-justice40-initiative/

IIJA Federal Funding Programs

Federal Funding Program (IIJA Section)	Applicable Actions	Key Dates
Grid Hardening Grants[6]	Grid modernization, resilience upgrades, distributed resources integration, workforce development.	NOFO expected November 2022
Grid Resilience Demonstration Grants	Innovative resilience, storage, and transmission projects.	NOFO expect 4th Quarter 2022
Transmission Facilitation Program	Technical assistance for developing large scale transmission plans.	1st solicitation late 2022 (operation by end of 2027), 2nd solicitation in 2023
Smart Grid Grants	Grid resilience upgrades; EV integration	Applications expected end of 2022
State Energy Program	Deployment of renewable energy systems; Security and resilience plans; Expansion of domestic resources	Next round TBD
Career Skills Training	Additional funding to programs providing workforce training to underserved communities.	Expected 1st Quarter 2023
Energy Efficiency and Conservation Block Grant Program	Installation of onsite renewable energy sources; Financing programs for renewable energy deployment.	Expected 4th Quarter 2022
Energy Storage Demonstration Projects	Innovative energy storage projects	Expected 4th Quarter 2022

[6] This program is also sometimes referred to as "Grid Resilience" grants. It is referred to as "Grid Hardening" here to avoid confusion with the Grid Resilience Demonstration grants.

1. Preventing Outages and Enhancing Resilience of the Electric Grid (Grid Hardening Grants)

Scope and Level of Funds

- $5 billion in grants, including $2.3 in formula funds
- Grid modernization activities are eligible
    - Undergrounding equipment
    - Utility pole upkeep
    - Extreme weather resilience
    - Monitoring and controls for real-time updates
    - Integration of distributed energy resources
- Funding may also be used for the **training, recruitment, retention, and reskilling** of skilled and properly credentialled workers in order to perform the work required for the particular resilience measures listed above.
- Formula grants: 15% recipient cost share, up to 5% for technical assistance
- Subgrantees must match 100% (unless designated as "small utility" generating less than 4 million MWh per year)

Eligible Parties

- States, Tribes, Territories (formula grants)
- Subgrant eligible entities
    - Electric grid operators
    - Storage operators
    - Generators
    - Transmission owner and operators
    - Fuel supplier
    - Any other relevant party determined by Secretary

Important Dates and Next Steps

- Notice of Intent (NOI)/Request for Information (RFI) for formula grant program; application release expected on or around July 1, open for 60 days – opportunity for stakeholders to provide comment
- NOI/RFI for utilities /industry competitive program expected Summer 2022
- Applications Anticipated to Open 1st Quarter 2023.

Resources

- Program page: https://www.energy.gov/bil/preventing-outages-and-enhancing-resilience-electric-grid-grants

2. Electric Grid Reliability and Resilience, Research, Development, and Demonstration (Grid Resilience Demonstration)

Scope and Level of Funds

- $5 billion, (50% formula grants / 50% matching grants to industry)
- $1 billion appropriated annually from FY22 to FY26 (to remain available until expended)

- Projects must demonstrate innovative approaches to transmission, storage, and distribution, improving resilience and reliability.
- Show new approaches to enhance regional grid resilience, implemented through rural and public electric cooperative entities on a cost shared basis.

Eligible Parties

- States
- Combination of two or more states
- Tribes
- Public utility commissions

Important Dates and Next Steps

- NOI/RFI expected Summer 2022
- NOFO expected 4th quarter 2022

Resources

- Program page: https://www.energy.gov/bil/program-upgrading-our-electric-grid-and-ensuring-reliability-and-resiliency

3. Transmission Facilitation Program

Scope and Level of Funds

- $2.5 billion revolving fund program
- provide federal support to overcome the financial hurdles in the development of **new large-scale transmission lines** and **upgrading existing transmission**
- not less than (a) 1,000 megawatts (MW); or (b) in the case of a project that consists of upgrading an existing transmission line or constructing a new transmission line in an existing transmission, transportation, or telecommunications infrastructure corridor, 500 MW.
- Funding Mechanism: Loan, Direct Financing, or Capacity Purchase

Eligible Parties

- Transmission Developers

Important Dates and Next Steps

- First solicitation later in 2022 (limited to applicants seeking capacity contracts that will commence operation by end of 2027)
- Second solicitation in 2023 (open to all forms of support)

Resources

- NOI/RFI: https://www.energy.gov/sites/default/files/2022-05/TFP%20NOI%20RFI%2005062022.pdf

4. Deployment of Technologies to Enhance Grid Flexibility (Smart Grid Grants)

Scope and Level of Funds

- $3 Billion for FY22 through FY26 in grants.
- $600 million appropriated annually, available until expended.
- Upgrades for grid resilience including:
    - Monitoring software
    - Distributed energy resources
    - Demand response and control
    - Extreme weather anticipations and mitigation controls
    - Integration of EV charging infrastructure
- **Workforce training** associated with Smart grid installation and maintenance is also eligible.

Eligible Parties

- Utilities

Important Dates and Next Steps

- Applications Expected at the end of 2022

Resources

- Program page: https://www.energy.gov/bil/deployment-technologies-enhance-grid-flexibility

5. State Energy Program

Scope and Level of Funds

- The US DOE Energy Program (SEP) provides funding and technical assistance to states and territories for energy conservation measures, renewable energy measures, and programs to increase deployment of energy efficiency and renewable energy.
- SEP's objectives are to increase energy efficiency, implement energy security, resiliency, and emergency preparedness plans, reduce energy costs and energy waste, expand the use of energy resources, promote economic growth
- A State Energy Security Plan is required as part of the submission starting from FY 2023
- J40 requirements: specify how to engage disadvantaged communities (DACs) as well as how much of annual SEP funding will be delivered to these communities and how delivery or benefit to these communities is measured.

Eligible Parties

- States

Important Dates and Next Steps

- Closed, next round TBD

Resources

- Program page: https://www.energy.gov/eere/wipo/state-energy-program

6. Career Skills Training

Scope and Level of Funds

- $10 million for FY22 in grants
- Through State and Community Energy Program
- Programs must have experience in implementing and operating workforce skills training and education.
- Programs must target populations that would benefit from training and be involved in energy efficiency and renewable energy industries.
- Demonstrate ability to help individuals to gain economic self-sufficiency.
- 50% Federal cost share

Eligible Parties

- Nonprofit partnerships that include:
    - Industry
    - Public or private employers
    - Labor organizations including labor management training programs
- May include:
    - Workforce investment boards
    - Community based organizations
    - Qualified service and conservation corps
    - Educational institutions
    - Small businesses and cooperatives
    - State and local veterans agencies

Important Dates and Next Steps

- Expected 1st Quarter 2023

Resources

- Program page: https://www.energy.gov/bil/career-skills-training

7. Energy Efficiency and Conservation Block Grant Program

Scope and Level of Funds

- Assists States, Local Governments, and Tribes to reduce energy and fossil fuel use while improving energy efficiency.
- $550 Million in block and competitive grants

Eligible Parties

- States
- Local Governments
- Tribes

Important Dates and Next Steps

- Applications are expected to open at the end of 2022.

Resources

- Program page: https://www.energy.gov/bil/energy-efficiency-and-conservation-block-grant-program

8. Energy Storage Demonstration and Pilot Grant Program

Scope and Level of Funds

- Agreements to carry out three energy storage demonstrations
- $355 million in grants, cooperative agreements, and others.

Eligible Parties

- States
- Local Governments
- Technology Developers
- Tribal Organizations
- Community Based Organizations
- National Laboratories
- Universities
- Utilities

Important Dates and Next Steps

- Applications are expected to open 4th Quarter 2022.

Resources

- Program page: https://www.energy.gov/bil/energy-storage-demonstration-and-pilot-grant-program

Inflation Reduction Act

Objectives

The passage of the IRA on August 12th, 2022 came with several key objectives. The bill's primary goals include **reducing inflation and hastening economic recovery, while at the same time investing in climate change mitigation, environmental justice, and increasing workforce diversity**.

Scale

The IRA results in **$369 billion in spending** for climate change related programs and grants. Two-thirds of this funds is in the form of federal tax credits. Analysts suggest the bill would put the U.S. on a path to roughly **40% emissions reduction by 2030**.[7]

Timing

[7] Please refer to the following analyses: https://rhg.com/research/inflation-reduction-act/?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosgenerate&stream=top; https://energyinnovation.org/wp-content/uploads/2022/08/Modeling-the-Inflation-Reduction-Act-with-the-US-Energy-Policy-Simulator_August.pdf; https://www.moodysanalytics.com/-/media/article/2022/assessing-the-macroeconomic-consequences-of-the-inflation-reduction-act-of-2022.pdf

The Treasury released a request for comment on six tax credits and extensions October 5th. The deadline to reply was November 4th, 2022. EPA has announced a Request for Information (RFI) for the Greenhouse Gas Reduction Fund open until December 5th, 2022. Other agencies are expected to issue funding guidance for grants and loans by early 2023.

Key Components

Tax Credits and Direct Pay

The IRA creates a range of **tax credits applying across multiple sectors including energy**. A **direct pay option** equal to the amount of certain specified credits is also established with corporations, nonprofits and tax-exempt organizations, local governments, and community organizations eligible. For tax-exempt entities that do not file tax returns, guidance will be issued by the Treasury Department addressing the timing and process for claiming the direct pay tax credit.

Key incentive programs for energy supply include:

- Investment and Production tax credits for clean energy projects and facilities
- Credits for upgrading to innovative technologies
- Credits for nuclear energy production

Grants and Loans

New grant and loan programs managed by multiple government agencies will become available to support **low carbon activities by both government and private entities**. The grants and loans will largely be managed by the US Department of Energy, Department of Transportation, EPA, and Department of Agriculture, with others as well. For the transportation sector, this includes:

- $5 billion in grants from the EPA to reduce climate air pollution
- $40 billion in loan guarantees for innovative clean energy technologies
- $250 billion in loans for energy infrastructure upgrade

Environmental Justice

The IRA will continue to **support the Biden Administration's J40 initiative** with targeted loans and grants. A 10% investment tax credit is included in the bill along with workforce diversity and domestic content requirements. More specifically:

- $60 billion in funds for environmental justice related projects.
- $3 billion for the Environmental and Climate Justice Block Grants program for projects in disadvantaged communities related to environmental and climate justice.

IRA Energy Supply Grants and Loans

1. Climate Pollution Reduction Grant Program

Scope and Level of Funds

- Funding for greenhouse gas air pollution reduction planning and implementation.

- Application must include policies and programs submitted to EPA
- $5 billion in grants managed by EPA
- Implementation funding available through FY26
- Planning funding available through FY31

Eligible Parties

- States, local governments, government entities

Important Dates and Next Steps

- NOFO expected nine months after IRA enactment

2. Low Emissions Electricity Program

Scope and Level of Funds

- To establish plans and programs that reduce emissions under the Clean Air Act, from domestic electricity generation and use
- Funding for outreach, technical assistance, education, focused on low-income and disadvantaged communities, Industry, Tribes, State and Local governments
- $17 million administered by EPA
- Funding available through FY31

Eligible Parties

- States and Local governments

Important Dates and Next Steps

- Guidance to be issued soon.

3. Department of Energy Loan Program Office

Scope and Level of Funds

- $40 billion in loan guarantees to DOE for the Innovative Clean Energy loan program.
- Loans for various projects that reduce emissions including:
    - Energy Storage
    - Renewable energy systems
    - Advanced fossil fuel energy technologies
    - Hydrogen
    - Carbon capture

Eligible Parties

- States and local governments

Important Dates and Next Steps

- Guidance to be issued soon.

4. Temporary Loan Program to Fund Energy Infrastructure

Scope and Level of Funds

- $250 billion in loan guarantee to DOE for qualified energy infrastructure loan program
- Eligible projects include:
    - Replace or repurpose existing energy infrastructure
    - Enable operational energy infrastructure reduce emissions
- Infrastructure that qualifies is defined as
    - Generate or transmit electricity
    - Produce, process, and deliver fossil fuels

Eligible Parties

- State and Local governments.

Important Dates and Next Steps

- Guidance to be issued soon.

5. Transmission Facility Siting Grant Program

Scope and Level of Funds

- Allows DOE to issue grants to siting authorities
- Eligible activities include:
    - Impact studies
    - Studies of up to three alternative corridors for transmission
    - Participation of siting authority in regulatory process or negotiations in other jurisdictions
    - Participation in FERC or state process in determining rate and cost allocation in a transmission project
    - Methods to improve the siting process and expediting the approval process
- Projects include high voltage interstate or offshore transmission line that operates at:
    - A minimum of 275 kilovolts of alternating or direct current
    - Offshore with a minimum of 200 kilovolts of alternating or direct current
- Funding available through FY 2029
- 50% Federal cost share

Eligible Parties

- Siting Authorities, States, Local Governments

Important Dates and Next Steps

- Guidance to be issued soon

6. Interregional Offshore Wind Electricity Transmission Planning, Modeling, and Analysis

Scope and Level of Funds

- $100 million for all stages of offshore wind deployment including:
    - Planning
    - Modeling
    - Development of interregional transmission and integration
- Goal of 10 GW of offshore wind power by 2031
- Funding available through FY31

Eligible Parties

- States

Important Dates and Next Steps

- Guidance to be issued soon

7. USDA Assistance for Rural Electric Cooperatives

Scope and Level of Funds

- $9.7 billion in loans and financial assistance for rural electric cooperatives
- Projects will result in emissions reductions through:
    - Renewable energy
    - Zero emissions systems
    - Energy efficiency improvements
    - Generation and transmission upgrades
- Funding available through FY31

Eligible Parties

- Rural electric cooperatives

Important Dates and Next Steps

- Guidance to be issued soon
- Comment period is open until November 28th, 2022

8. Greenhouse Gas Reduction Fund/National Green Bank Accelerator

Scope and Level of Funds

- The IRA established the Greenhouse Gas Reduction Fund (GGRF) and a National Green Bank (NGB) Accelerator.
- $27 billion total
    - $7 billion (estimated) from EPA to state designated entities for clean energy and climate investment, such as green banks and clean energy finance centers

- $20 billion (estimated) to the National Green Bank (NGB) accelerator for distribution via:
  - Direct investment by NGB in large infrastructure projects
  - Indirect investment by NGB to state and local intermediaries
    - Distribution instruments include direct loans, grants, equity, secondary market investment to intermediaries
- Intermediaries receiving funds from EPA or NGB can distribute to end users through a range of financial instruments, including loans, equity investments, and grants
  - For example, a state/local intermediary could receive national grant funding from EPA or NGB for distribution to consumers through low or no cost loans for purchase of EVs

Eligible Parties

- State designated clean energy or green bank financing entities for the EPA $7 billion
- State, local, and nonprofit entities for the distribution of $20 billion in NGB funds
- Redistribution to public and private parties including localities, public institutions, businesses, and households

Important Dates and Next Steps

- Guidance to be issued soon by Treasury, EPA, and NGB.

IRA Energy Supply Tax Credits

1. Production Tax Credit

Scope and Level of Funds

- Extends previous tax credit for projects that begin before January 1st, 2025
- Per kWh credit for ten years generated from wind, biomass, geothermal, and solar
- $0.05 per kWh, with $0.025 bonus for facilities that meet wage and workforce development requirements.
  - 10% bonus for meeting domestic content requirements or placed in a qualifying energy community
  - Energy community defined as an area with significant employment from fossil fuel industry or brownfield sites.
- Direct Pay Eligible

Eligible Parties

- State and Local governments.

Important Dates and Next Steps

- Guidance to be issued soon.

2. Investment Tax Credit

Scope and Level of Funds

- Extension of previous tax credit for facilities that begin construction before January 1st, 2025
- Eligible projects include:
    - Solar
    - Fuel Cells
    - Small wind
    - Offshore wind
    - Combined heat and power
    - Waste energy recovery
- Geothermal heat pumps extended through 2034
- Energy storage, microgrid controllers, and biogas are now included in the credit
- Base credit rate of 6% with a 30% bonus if wage and workforce development requirements are met. Additional 10% bonus available if domestic content and energy community requirements are met.
- Direct Pay Eligible

Eligible Parties

- State and Local governments.

Important Dates and Next Steps

- Guidance to be issued soon.

3. Zero Emission Nuclear Tax Credit

Scope and Level of Funds

- Credit available for nuclear power sold after 2023
- Base rate of $0.03 per kWh with $0.015 bonus if wage and workforce development requirements are met.
- Credit reduced as price of electricity increases
- Expires in 2032
- Direct Pay Eligible

Eligible Parties

- State and Local governments.

Important Dates and Next Steps

- Guidance to be issued soon.

4. Clean Electricity Investment and Production Tax Credit

Scope and Level of Funds

- Technology neutral emissions-based tax credit allowing for a choice between clean energy or production tax credits.
- Tied to emissions from electricity generated from any power source if operated at zero-emissions
- 0.5 cents per kWh produced and sold for ten years after the facility begins service for Production tax credit.
- Up to 6% for Investment tax credit for ten years.
- Up to 2.5 cent per kWh bonus for Production tax credit and 30% bonus for Investment tax credit if wage and workforce development requirements are met
- Credit expires in 2032 or when emissions goals are met
- Direct Pay Eligible

Eligible Parties

- State and Local governments.

Important Dates and Next Steps

- Guidance to be issued soon

5. Advanced Energy Project Tax Credit

Scope and Level of Funds

- Extends credit, adding an additional $10 billion
- 30% credit for projects that reequip, expand, and establish clean energy manufacturing facilities
- Extended to facilities that recycle renewable energy equipment material, grid modernization equipment, and carbon capture facilities.
- Direct Pay Eligible

Eligible Parties

- State and Local governments.

Important Dates and Next Steps

Guidance to be issued soon.