

MEET DOE'S

Office of Infrastructure



U.S. DEPARTMENT OF
ENERGY

OFFICE OF THE UNDER SECRETARY FOR
INFRASTRUCTURE

Supercharging a New Clean Energy Economy

Building on decades of research and innovation, clean energy technologies are now less expensive, better performing, and ready to play a rapidly growing role in the U.S. energy economy, to the benefit of our communities and long-term energy security. Thanks to historic laws passed by Democrats and Republicans in Congress, the U.S. Department of Energy (DOE) has entered a new era to modernize the American energy economy and energy infrastructure by catalyzing private sector investment and assisting communities and local, state, and Tribal governments. Trillions are expected to be invested globally, and the greatest benefits—jobs, bill savings, economic growth, and improvements to health and the environment—will flow to the communities, states, regions, and countries that move quickly to remove barriers to investment. The anticipated result: **an affordable, reliable, resilient, secure, and equitable clean energy transition.**

DOE established the **Office of Infrastructure** in 2022 to deploy energy infrastructure investments from the Energy Act of 2020, the Infrastructure Investment and Jobs Act (IIJA), and the Inflation Reduction Act (IRA). The office serves as the new demonstration and deployment arm of DOE, tasked with stewarding billions in historic investments from IIJA, IRA, and annual appropriations to **renew our nation's infrastructure, rebuild domestic manufacturing, create millions of good-paying jobs, address climate change, and increase American competitiveness.**

By forging ahead on IIJA and IRA, alongside annual funding, this new Office of Infrastructure is working to position the U.S. as a clear global leader in the new clean energy economy. Over the next 10 years, this work will be critical to ensuring that our nation stays at the forefront of the clean energy transition in the face of a rapidly changing global economy, and that we are harvesting the benefits year after year, with an emphasis on supporting communities historically left behind and those that have built the energy economy of today but could be at risk in an accelerating energy transition.

A New Face for DOE at a Pivotal Time

The new Office of Infrastructure actively supports efforts critical to a new clean energy economy:

- energy planning
- energy security
- cybersecurity
- infrastructure financing
- project development
- project management
- industrial emissions reduction
- manufacturing and energy supply chains
- electricity grid modernization
- state, community, and Tribal assistance
- economic development
- workforce development
- Federal facilities leadership
- equitable outcomes

The Office of Infrastructure continues to build a unique series of teams across program offices that integrate the deep expertise of both career public servants at DOE and experts from the public and private sectors, who are now connecting every corner of the country with historic opportunities through financial assistance, loans, formula funding, technical assistance, and rebate programs.

These teams are working with urgency to help rebuild U.S. manufacturing and an industrial base aligned with the economic opportunities the new global energy economy offers; support the private sector and state and local governments seeking to take advantage of trillions in investments at play; and achieve the goals of revitalizing communities, improving access to affordable, clean power, and ensuring that both historically disadvantaged communities and energy-producing communities facing the energy transition experience its benefits.

With every project milestone, we chart a course toward lower energy costs for Americans, improved reliability and energy security, and a strengthened U.S. position in leading the world in manufacturing the energy products of the future.

Historic Laws Creating a Historic New Era of DOE

This historic new era for DOE is made possible by Democrats and Republicans who came together to create and fund new programs and strategies to help more communities navigate the energy transition and create a foundation for more American businesses to be part of a new energy economy.

With **The Energy Act of 2020**, Democrats and Republicans came together and created many of the programs later funded by IIJA. These include programs to upgrade and modernize the nation's electrical grid, energy storage projects to advance new technologies for grid reliability, the Advanced Reactor Demonstration Program to launch the next generation of emission-free nuclear reactor technology, carbon capture demonstration and pilot programs to reduce emissions where fossil fuels cannot be replaced by clean energy, industrial emissions reduction projects to help U.S. manufacturers increase efficiency and competitiveness, and more.

Both parties in Congress worked together again, passing **The IIJA** and providing more than \$62 billion for programs from the Energy Act as well as additional programs under the purview of DOE. The department has now launched 60 new programs, including 16 demonstration and 32 deployment programs, and is expanding funding for 12 existing Research, Development, Demonstration, and Deployment programs.

The Inflation Reduction Act invested \$35.5 billion in programs administered by DOE, including \$8.8 billion for a new rebates program to help American families replace appliances or renovate homes to bring energy bills down, nearly \$6 billion to help decarbonize U.S. manufacturing and industrial facilities, and increased funding for the Loan Programs Office to invest in innovative energy technologies, clean energy and electric vehicle manufacturing, and upgrading and modernizing energy infrastructure.

These historic Federal investments significantly increase and broaden benefits made available to communities across the nation. Many of DOE's funding provisions require funding partners to bring 50% of the project costs to the table or provide a backstop for loans from the private sector, so these combined resources will unlock tens of billions or more in private sector investment.

Driving Job Creation through Technology Commercialization

The Office of Infrastructure, fueled by the Energy Act of 2020, IRA, and IIJA, will drive transformative change. Infrastructure deployment constraints, such as the ability to build out transmission infrastructure as well as the pace of technology advancement and improved cost and performance profiles, will affect the speed of change.

As the new deployment and implementation arm of DOE, the Office of Infrastructure works closely with its partners in DOE's Office of Science and Innovation to develop a coordinated strategy for moving clean energy technologies along the continuum from Research and Development through Demonstration and Deployment to keep the U.S. at the forefront of energy innovation as the country accelerates commercialization and deployment to the pace needed to meet national goals.

The Office of Infrastructure also engages with DOE's nationwide system of national labs. The labs are integral to the implementation of IIJA and IRA programs and provide critical expertise and data to inform program design and implementation; provide in-depth technical assistance to the private sector, states, Tribes, and communities; and build the analytical backbone supporting efforts that range from technology deployment to supply chain improvement.

This integrated support from leading technology and industry experts expands DOE's ability to connect with more private sector organizations and fuel commercial liftoff and market adoption for new clean technologies—the foundation for a new wave of construction, manufacturing, and energy jobs.



The Office of Infrastructure is guided by a powerful mission, set of values, and community-serving priorities.

Mission Statement

To accelerate the deployment and adoption of critical clean energy infrastructure and technologies by catalyzing private sector investment and supporting local, state, and Tribal communities in the transition to an affordable, reliable, secure, resilient, and equitable clean energy economy.

Strategic Pillars

Catalyze

solutions to help all communities, including those that have historically been left behind—like rural and Tribal communities—and energy-producing communities facing energy transition embrace, engage in, and benefit from the growing clean energy economy.

Collaborate

with local, state, and Tribal governments, the broader public sector, and the private sector to invest in upgrading and modernizing energy infrastructure and building the clean energy economy to the benefit of the American public.

Enable

American entrepreneurs, innovators, and businesses to catalyze commercial technologies in America and lead the global clean energy economy.

Ensure

effective use of Federal funding to achieve the goal of cutting emissions and reducing pollution in our communities.

Influence

the global approach to climate change by positioning the United States as a leader on clean energy and engage with international allies to secure the clean energy future.

Foster

American energy security and independence through a relentless focus on domestic energy sources, manufacturing, and supply chains.

Improve

access to affordable, reliable, resilient, and secure clean energy.

90B
in Grants and Rebates

250B+
in Loans and Loan Guarantees



Workforce



**Critical Minerals/
Materials**



Buildings:
Efficiency & Electrification



**State,
Local, Tribal
Partnership**



**Clean Energy
Projects**



**Domestic
Supply Chains**



Energy Storage



**EVs and
Chargers**



Electric Grid



Cybersecurity



**Carbon
Management**



Hydrogen



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LPO

THE LOAN PROGRAMS OFFICE

provides public financing and long-term partnership that accelerates high-impact energy and manufacturing investments to advance America's economic future.

MESC

THE OFFICE OF MANUFACTURING AND ENERGY SUPPLY CHAINS

supports clean energy capital deployment, across manufacturing and workforce, and houses the department's supply chain analytics backbone.

GDO

THE GRID DEPLOYMENT OFFICE

mission is to upgrade and expand the grid.

OCED

THE OFFICE OF CLEAN ENERGY DEMONSTRATIONS

helps de-risk and scale the emerging technologies needed to tackle our most pressing climate challenges and achieve net zero emissions by 2050.

IE

THE OFFICE OF INDIAN ENERGY POLICY AND PROGRAMS

strengthens Tribal energy sovereignty.

PMA_s

THE POWER MARKETING ADMINISTRATIONS

provide power from Federal hydropower facilities to tens of millions of Americans served by the nation's electric cooperatives, municipal utilities, and other public power entities.

SCEP

THE OFFICE OF STATE AND COMMUNITY ENERGY PROGRAMS

partners with state, local, and Tribal governments, nonprofit organizations, schools, and community partners to provide technical assistance and invest in place-based clean energy projects.

FEMP

THE FEDERAL ENERGY MANAGEMENT PROGRAM

helps the Federal Government lead by example in its buildings, fleets, and procurement.

CESER

THE OFFICE OF CYBERSECURITY, ENERGY SECURITY, AND EMERGENCY RESPONSE

ensures the security and resilience of the U.S. energy sector from cyber, physical, and climate-based risks.



DOE'S NEW DIVISION FOR DEMONSTRATING AND DEPLOYING NEW ENERGY TECHNOLOGIES AND SUPPORTING CRITICAL ENERGY INFRASTRUCTURE

The Office of Infrastructure is made up of mission-oriented offices that each have defined roles supporting the energy transition and accelerating our path to the new clean energy economy and collaborating with the private sector and communities across the country, as well as with technology experts across DOE, to integrate technologies on the ground and achieve lasting impacts.

The Office of Clean Energy Demonstrations (OCED) is a **multi-technology office** managing more than \$25 billion in clean energy **demonstration projects at a commercial scale**, in partnership with the private sector, to accelerate market adoption of new technologies as part of an equitable transition to a decarbonized energy economy.

The Office of Manufacturing and Energy Supply Chains (MESCC) is **revitalizing the U.S. manufacturing base** with over \$20 billion of direct investment in **manufacturing capacity, industrial decarbonization, and workforce development**. MESCC also houses the DOE's supply chain analytics backbone, informing investment decisions and policy across and beyond DOE.

The Loan Programs Office (LPO) accelerates high-impact energy investments with over \$350 billion in loan authority, acting as a **"Bridge to Bankability"** for emerging clean energy technologies. It enables the **expansion of domestic manufacturing and supply chains, reinvests in energy infrastructure, and makes clean energy transformation affordable and achievable** for consumers and communities and beneficial for American workers.

The Office of Indian Energy Policy and Programs (IE) works with Tribes and organizations, and across government agencies, to catalyze Tribal energy development, reduce or stabilize Tribal energy costs, strengthen Tribal energy infrastructure, and deliver affordable energy to more Tribal households **to improve the social, environmental, and economic well-being of Tribes**.

The Office of Federal Energy Management Programs (FEMP) helps the biggest energy user in the U.S.—the Federal Government—**lead by example** and achieve deep energy efficiency, emission reductions, and improved energy resilience in its **buildings, vehicle fleets, and procurement**. FEMP builds agency capacity by providing workforce training, tools, technical assistance, and project financing support.

The Grid Deployment Office (GDO) oversees a \$26 billion portfolio supporting states, utilities, and grid operators in deployment, regulatory, and operational activities to upgrade and **expand the nation's transmission grid, increase resilience against increasing extreme weather and fires, accelerate the transition to smart grids deploying new energy resources, and maintain existing clean energy generation** by retaining the civilian nuclear fleet and upgrading hydroelectric facilities.

The Office of Cybersecurity, Energy Security, and Emergency Response (CESER) plays a critical role in enhancing our **national security and the resilience** of the U.S. energy sector against **all hazards**, including physical attacks and cyberattacks and natural and climate change-related risks like hurricanes and wildfires. CESER also includes the **Office of Petroleum Reserves**, which operates the Strategic Petroleum Reserve and other critical fuel reserves.

The Office of State and Community Energy Programs (SCEP) assists state, local, and Tribal governments and community-based stakeholders to **accelerate local, state, and Tribal energy improvements, energy planning, workforce training and development, low-income weatherization, home and electrification rebates, and related efforts**.

The Power Marketing Administrations operate tens of thousands of miles of electricity transmission lines and provide power from Federal hydropower facilities to tens of millions of households and businesses served by the nation's electric cooperatives, municipal utilities, and other public power entities.



Power Marketing Administrations

The Office of Infrastructure works with DOE's **four Federal Power Marketing Administrations (PMAs)**, which operate tens of thousands of miles of transmission infrastructure and provide power from hydropower facilities owned and operated by the Federal Government to utilities, primarily smaller municipal and rural utilities serving historically underserved communities, and Tribes at some of the lowest electricity rates in the country. PMAs have also served as a critical mechanism for expanding access to power generation, particularly in the West.

The four PMAs—Bonneville Power Administration (BPA), Western Area Power Administration (WAPA), Southeastern Power Administration (SEPA), and Southwestern Power Administration (SWPA)—operate electric systems and deliver carbon-free electricity across 34 states.

BONNEVILLE POWER ADMINISTRATION delivers reliable, affordable, carbon-free electricity from the Federal hydropower system in the Pacific Northwest, Columbia Generating Station, and several small non-Federal carbon-free power plants to nearly 150 power customers (mostly public power utilities), and manages 15,000 miles of grid infrastructure serving more than 300 transmission customers.



WESTERN AREA POWER ADMINISTRATION manages 17,000 miles of transmission infrastructure and delivers hydroelectric power from facilities owned by the Bureau of Reclamation and the Army Corps of Engineers. WAPA serves 40 million Americans in 15 Western states by safely providing reliable, cost-based hydropower and transmission to around 700 preference customers.

SOUTHWESTERN POWER ADMINISTRATION maintains 1,380 miles of high-voltage transmission lines that deliver Federal hydroelectric power from 24 Corps multipurpose projects to preference customers in a six-state area.

SOUTHEASTERN POWER ADMINISTRATION markets and delivers hydroelectric power from 22 U.S. Army Corps of Engineers-owned facilities at low rates to public bodies and cooperatives in 11 states from Illinois to Florida and Mississippi to Virginia.

Embedding Key DOE Priorities into Our Work

By **prioritizing community benefits**, we can ensure that the next chapter in America's energy story is marked by greater justice, equity, security, and resilience. Strong community benefit plans also help reduce project risk by shoring up public support.

Community and Labor Engagement

To ensure people impacted by energy development have a role in decisions that affect their lives.

Investing in the American Workforce

To build the skilled workforce needed to power the energy transition long-term, and ensure high-quality jobs are accessible to all Americans.

Diversity, Equity, Inclusion, and Accessibility

To support equitable access to wealth-building opportunities for all, especially those facing systemic barriers to quality employment and training.

Justice40 Initiative

To maximize project benefits, minimize harms, and ensure that at least 40% of benefits accrue to disadvantaged communities.



Priorities that Catalyze Solutions to Help All Communities

We are **expanding affordable, reliable, resilient, and secure clean energy** for all communities by:

- **Building out a better grid** that provides clean, reliable, secure, and resilient power to all Americans, with emphasis on Tribal nations, rural and remote communities, disadvantaged communities, and energy transition communities.
- **Providing all Americans access to today's affordable clean energy sources**, including distributed energy and storage systems that increase reliability, affordability, and energy security.
- **Reducing energy costs for homes, schools, buildings, and transportation** while improving comfort, health, convenience, and safety.
- **Securing our energy systems against all hazards**, including doubling down on cyber hazards, and quickly responding to emergency and disaster-related events.

We are **renewing the industrial base to build the new clean energy economy** with American-made products and **competitively positioning the U.S. industrial sector and workers** in a decarbonizing global economy by:

- **Catalyzing new manufacturing** to ensure that American workers make the products of the new energy economy, from vehicles to grid equipment, from hydrogen production systems to energy generation technology.
- **Securing key U.S. clean energy supply chains**, including for critical minerals and materials essential to the clean energy future.
- **Positioning U.S. energy-intensive industries to supply globally competitive zero-carbon products** through transformative industrial solutions like hydrogen, carbon management, energy storage, clean fuels, and advanced nuclear.
- **Supporting small- and medium-sized manufacturers** in improving efficiency and productivity while reducing emissions.
- **Expanding the U.S. industrial energy and manufacturing workforce** and retaining and creating high-quality jobs for workers in all communities.

We are **building a clean energy economy that works for all communities** by:

- **Ensuring benefits flow to communities at risk of being left behind**, from today's energy-producing communities as they face a major energy transition to communities that have too often borne the downsides of past energy systems without sharing in the economic upsides.
- **Creating high-quality, accessible, and career-track jobs** with fair wages and benefits and the free and fair choice to collectively bargain and join a union.





Where We're Going

The Office of Infrastructure will be working with partners across the country to effectively leverage Federal funding for an equitable and affordable clean energy future. Some **flagship indicators of progress by 2030** that the office is working toward and that reflect the large and diverse potential impact of these investments include:



More than 1.5 million American families helped to upgrade their homes, improve home comfort, and **reduce their energy bills by an average of \$400 a year**, most of who are low- or moderate-income families.



Expansion in long-distance transmission line capacity of **16% by 2030**, including building 7,500 miles of new transmission lines so as to connect low-cost energy with more communities.



New and/or sustained clean electric generation capacity of **more than 1,000 GWh** including new renewables, fossil fuels with Carbon Capture, Utilization & Storage, storage, new nuclear, and maintenance of the existing nuclear and hydropower fleet so as to expand clean energy options and capacity on the path to 100% clean electricity.



Establishment of a domestic electric vehicle (EV) supply chain that can source, process, and manufacture EV battery components with **100% domestic content by 2030** with substantive progress on an array of additional domestic supply chains and manufacturing.



New and growing hydrogen economy on the path to **10 million metric tons** of clean hydrogen per year, and supporting industrial, transportation, and other uses in multiple regions across the country.



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