



Overview

The U.S. Department of Energy (DOE) established the Office of Clean Energy Demonstrations (OCED) to help scale the emerging technologies needed to tackle our most pressing climate challenges and achieve net-zero emissions by 2050.










OCED received more than \$25 billion in funding from the Bipartisan Infrastructure Law and Inflation Reduction Act to deliver clean energy demonstration projects at scale in partnership with the private sector to accelerate deployment, market adoption, and the equitable transition to a decarbonized system.

Project Oversight

To ensure the success of its projects, OCED is focused on demonstration project management oversight excellence. OCED will apply lessons learned from past DOE demonstrations and the private sector to enhance how it oversees projects. OCED will also support other offices to ensure a consistent approach to implementing these projects across DOE.

OCED also seeks to ensure excellence as it advances energy and environmental justice in large-scale demonstration projects to support an equitable clean energy transition. OCED will ensure the workforce and local communities are a key part of the solution to build an equitable clean energy future.

Project Portfolio

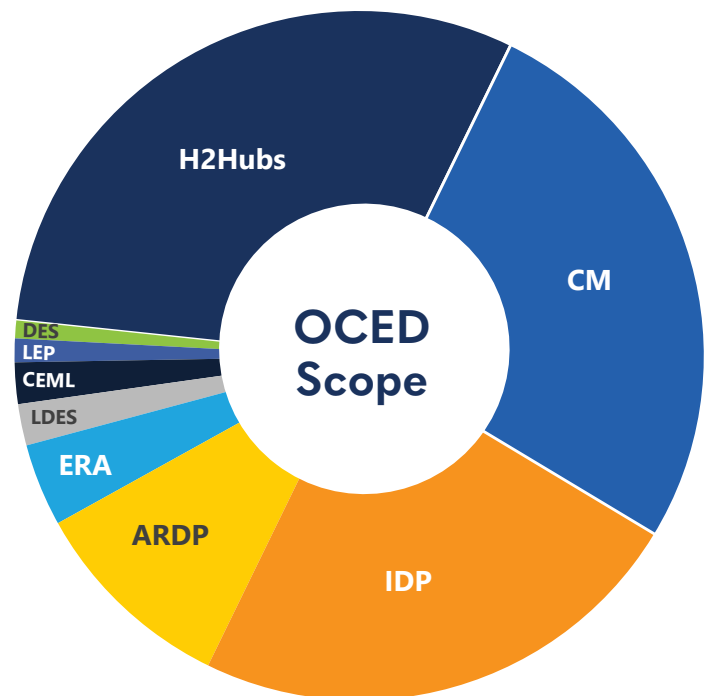
 Regional Clean Hydrogen Hubs (H2Hubs) \$8 billion	 Energy Improvements in Rural or Remote Areas (ERA) \$1 billion
 Carbon Management (CM) Regional Direct Air Capture Hubs, Carbon-Capture Demos & Large-Scale Pilot Projects \$7 billion	 Long-Duration Energy Storage Demonstrations (LDES) \$505 million
 Industrial Demonstrations (IDP) \$6.3 billion	 Clean Energy Demonstrations on Mine Land (CEML) \$500 million
 Advanced Reactor Demonstration Projects (ARDP) \$2.5 billion	 Liftoff Enabling Programs (LEP) \$133 million
	 Distributed Energy Systems Demonstrations (DES) \$50 million

What Does OCED Do?

OCED is a multi-technology office with demonstrations that include clean hydrogen, carbon management, industrial decarbonization, distributed energy systems, advanced nuclear reactors, long-duration energy storage, demonstration projects in rural or remote areas and on current and former mine land, and more.

The technologies in OCED's portfolio face significant barriers to scale. OCED's role is to address these barriers and help de-risk them. Central to OCED's approach is consistent engagement with a wide range of stakeholders and pursuit of projects that advance an equitable transition by providing benefits to communities across America.

Most of OCED's projects are structured as collaborative partnerships that use cost share agreements. OCED will provide up to 50 percent of the funding in its public-private partnerships, assisting its industry partners with the early steps to commercialization and deployment.



OCED Programs



Regional Clean Hydrogen Hubs Amount: \$8 billion

Purpose: Build six to 10 regional clean H2Hubs across the country to create networks of clean hydrogen producers, consumers, and local connective infrastructure to accelerate use of clean hydrogen.



Carbon Capture Demonstration & Large-Scale Pilot Projects Amount: \$3.5 billion

Purpose: Develop carbon capture pilot projects and demonstration projects to improve costs, emissions reductions, and environmental effects from coal and natural gas.



Long-Duration Energy Storage Demonstrations Amount: \$505 million

Purpose: Develop long-duration energy storage demonstrations to validate new technologies and enhance the capabilities of customers and communities to integrate grid storage more effectively.



Industrial Demonstrations Program Amount: \$6.3 billion

Purpose: Establish commercial-scale demonstration projects that test and support technologies to reduce greenhouse gas emissions in energy-intensive industries.



Advanced Reactor Demonstration Projects Amount: \$2.5 billion

Purpose: Support design, licensing, construction, and operation of two advanced nuclear reactors to assure next generation American nuclear reactor designs can transition from concept to demonstration: TerraPower Sodium Reactor and X-Energy Xe-100.



Clean Energy Demonstrations on Mine Land Amount: \$500 million

Purpose: Demonstrate technical and economic feasibility of up to five clean energy projects on current and former mine land.



Regional Direct Air Capture (DAC) Hubs Amount: \$3.5 billion

Purpose: Develop four domestic Regional DAC Hubs to accelerate commercialization and demonstrate the processing, transport, secure geologic storage, and conversion of CO₂ captured from the atmosphere.



Energy Improvements in Rural or Remote Areas Amount: \$1 billion

Purpose: Improve resilience, safety, reliability, and availability of energy in rural or remote areas and increase environmental protection from adverse impacts of energy.



Distributed Energy Systems Amount: \$50 million

Purpose: Develop reliable, resilient, and cost-effective energy systems to better support our rapidly changing electric grid and the growth of electric vehicles, energy storage, and the electrification of buildings and industry.

OCED Mandate



SCALE EQUITABLE, CLEAN ENERGY

Help enable 100% clean electricity by 2035 & net-zero emissions by 2050 through an equitable energy transition



UNLOCK NEW INVESTMENT

Unlock and scale trillion-dollar clean energy follow on investment from the private sector and other sources of capital



DE-RISK TECHNOLOGY

Maintain risk-based, balanced, and defensible portfolio of investments



PROVIDE PROJECT OVERSIGHT

Serve as primary DOE office to deliver full scale clean energy demonstration projects and project management oversight excellence



ENGAGE & COLLABORATE

Leverage private sector and broader energy ecosystem to inform OCED and DOE technology commercialization efforts