

Are solar cell efficiency records based on DOE research?

Approximately half the world's solar cell efficiency records, which are tracked by the National Renewable Energy Laboratory, were supported by the DOE, mostly by SETO PV research.

What does a solar office do?

The Solar office supports development of low-cost, high-efficiency photovoltaic (PV) technologies to make solar power more accessible. SETO supports CSP research and development to improve the performance, reduce the cost, and improve the lifetime and reliability of CSP technologies.

What is the annual solar DNI?

U.S. Annual Solar DNI (Print Format: 11"x17") This map provides annual average daily total solar resource using 1998-2016 data (PSM v3) covering 0.038-degree latitude by 0.038-degree longitude (nominally 4 km x 4 km). For more information, please visit NSRDB or email NSRDB.

Should local governments automate residential solar permitting?

The new designation requires local governments to automate residential solar permitting. This \$6.5M DOE funding opportunity is ideal for early-career solar energy researchers, supporting early-stage ideas in photovoltaics and concentrating solar-thermal power.

How much solar power does Florida have in 2022?

In 2022, Florida was third in the nation, after California and Texas, in total solar power generating capacity. About 77% of Florida's solar generating capacity was at utility-scale facilities and about 23% was at small-scale installations.

What is the DOE energy transitions initiative Partnership Project?

DOE also launched a prize to advance the co-location of solar energy production and cattle grazing. The Energy Transitions Initiative Partnership Project will engage communities in energy planning, natural disaster preparedness, and analysis of renewable technologies, including solar, wind, battery storage, and heat pumps.



WASHINGTON, D.C. ??? The U.S. Department of Energy (DOE) today announced it will enter into realty negotiations with Hecate Energy, LLC for a solar project capable of delivering up to one-gigawatt of clean energy within an 8,000-acre area of DOE owned land at the Hanford Site as part of the Cleanup to Clean Energy initiative. The Cleanup to Clean Energy initiative ???



On April 22, 2024, the U.S. Environmental Protection Agency (EPA) awarded the Connecticut Department of Energy and Environmental Protection (DEEP) with a \$62.45 million grant under its Solar for All initiative, including \$400,000 of in kind services from EPA in the form of technical assistance. Project SunBridge will focus on increasing access to storage and solar for multi ???



Key updates from the Summer 2024 Quarterly Solar Industry Update presentation, released August 20, 2024: Global Solar Deployment. About 560 gigawatts direct current (GW dc) of photovoltaic (PV) installations are projected for 2024, up about a third from 2023.; The five leading solar markets in 2023 kept pace or increased PV installation capacity in the first half of ???



The Department of Energy (DOE) Solar Energy Technology Office (SETO) launched the Equitable Solar Communities of Practice program in November 2023 to support the expansion of equitable benefits in solar adoption. The program consists of five communities of practice that work to identify resource gaps, support the development and dissemination of best practices and ???



Partnership Goals. The National Community Solar Partnership goal is to enable community solar systems to power the equivalent of five million households by 2025 and create \$1 billion in energy savings for subscribers. This target represents a 700% increase in community solar deployment, growing from 3 GW of community solar in 2020 to 20 GW in 2025.



WASHINGTON, D.C. ??? As part of the Biden-Harris administration's Investing in America agenda, the U.S. Department of Energy (DOE), through its Loan Programs Office (LPO), announced a \$861.3 million loan guarantee to finance the construction of two solar photovoltaic (PV) farms equipped with battery storage and two standalone battery energy storage systems ???



Solar Automated Permit Processing+, known as SolarAPP+, is a web-based platform that automates solar permitting for local governments and other authorities having jurisdiction. The Department of Energy (DOE) Solar Energy Technologies Office (SETO) funded the initial development and commercialization of the SolarAPP+ tool in 2019 through an award to the ???



The U.S. Department of Energy Solar Energy Technologies Office (SETO) funds solar energy research and development efforts in seven main categories: photovoltaics, concentrating solar-thermal power, systems integration, soft costs, manufacturing and competitiveness, equitable access to solar energy, and solar workforce development.



WASHINGTON, D.C. ??? As part of President Biden's Investing in America agenda, the U.S. Department of Energy (DOE) today announced \$52 million for 19 selected projects, including \$10 million from the Bipartisan Infrastructure Law, to strengthen America's domestic solar supply chain, and \$30 million in funding for technologies that will help integrate solar ???



The representative utility-scale system (UPV) for 2024 has a rating of 100 MW dc (the sum of the system's module ratings). Each module has an area (with frame) of 2.57 m² and a rated power of 530 watts, corresponding to an efficiency of 20.6%. The bifacial modules were produced in Southeast Asia in a plant producing 1.5 GW dc per year, using crystalline silicon solar cells ???



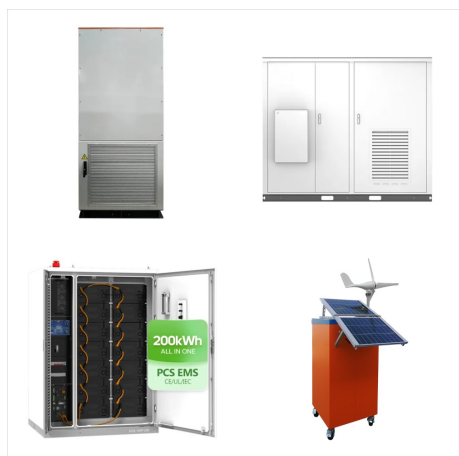
WASHINGTON, D.C. ??? As part of the Biden-Harris Administration's Investing in America agenda, the U.S. Department of Energy (DOE) today announced \$40 million in investments across the solar energy supply chain, including the selection of four projects to improve the lifecycle of photovoltaic (PV) solar systems. The selected projects will maximize ???



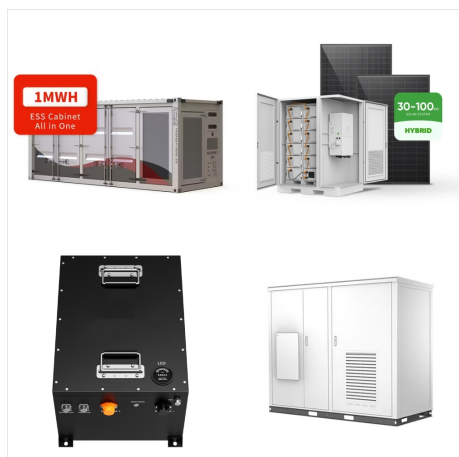
WASHINGTON, D.C. ??? In support of the Biden-Harris Administration's Investing in America agenda, the U.S. Department of Energy (DOE) today announced \$33 million for nine projects across seven states to advance concentrating solar-thermal (CST) systems technologies for solar fuel production and long-duration energy storage. CST technologies use mirrors to ???



The U.S. Department of Energy (DOE) Solar Energy Technologies Office (SETO) accelerates the advancement and deployment of solar technology in support of an equitable transition to a decarbonized economy no later than 2050, starting with a decarbonized power sector by 2035. To support this mission, SETO works to:



WASHINGTON, D.C. - Today, the U.S. Department of Energy (DOE) announced \$12 million in new funding for eight projects to advance predictive modeling capabilities for solar generation. These models will lead to more accurate forecasts of solar generation levels, enabling utilities to better manage the variability and uncertainty of solar power and improve grid reliability.



The Office of Energy Efficiency and Renewable Energy (EERE) strengthens U.S. energy security, environmental quality, and economic vitality. solar, wind, and water power. Learn more. Buildings and Industry U.S. Department of Energy Announces More Than \$43 Million in Projects To Drive Industrial Decarbonization Through Cross-Cutting



The U.S. Department of Energy supports a number of grant, loan and financing programs. Learn more about these programs and how they can help you -- whether you are a startup energy business looking to launch a pilot project, a company with proven technology that needs help reaching commercial scale, or a state, local or tribal government looking for funding resources ???



Solar costs have fallen dramatically. The cost of an average-size residential solar energy system decreased 55% between 2010 and 2018, from \$40,000 to \$18,000???and that's before factoring in incentives like the solar Investment Tax Credit. DOE is also focusing on reducing financing burdens and red tape for American families who choose to go



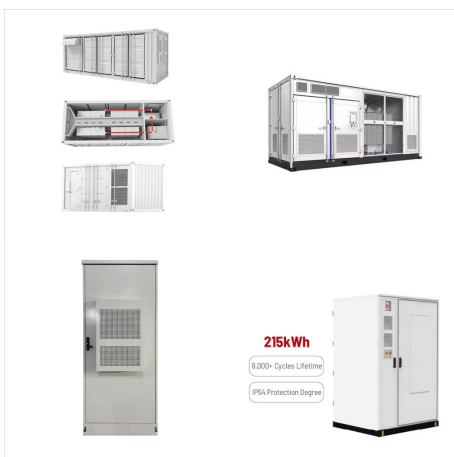
U.S. Department of the Treasury, IRS, and Department of Energy Announce Next Steps for 2024 Program Year of Inflation Reduction Act Program for Solar and Wind Energy in Low-Income Communities; Unallocated Environmental Justice Solar and Wind Capacity Limitation Carryover from the 2023 Program Year to the 2024 Program Year; Revenue Procedure 2024-19



Solar workforce research and development at the U.S. Department of Energy (DOE) Solar Energy Technologies Office (SETO) supports efforts to prepare and sustain a skilled and diverse clean energy workforce. Workforce development initiatives funded by SETO include online and in-person training and education programs, work-based learning opportunities such as ???



The U.S. Department of Energy's Solar Energy Technologies Office (SETO) is dedicated to ensuring solar panels can withstand the elements no matter your location. SETO funds five Regional Test Centers across the country -- each in a different climate -- to make sure panels perform as best they can, regardless of climate or weather.



The U.S. Department of Energy Solar Decathlon (R) is a collegiate competition that has inspired thousands of students worldwide to enter the clean energy workforce since its inception in 2002. Today, the 10 contests that are the foundation of Solar Decathlon challenge students to design and build high-performance, low-carbon buildings that mitigate climate ???



The U.S. Department of Energy (DOE) Solar Energy Technologies Office (SETO) supports funding opportunities across its research areas. Following an open, competitive solicitation process, these funding opportunities encourage collaborative partnerships among industry, universities, national laboratories, federal, state, and local governments and non-government ???



The U.S. Department of Energy (DOE) Solar Energy Technologies Office (SETO) held a webinar on September 27, 2022, to discuss the recent policy changes in the Inflation Reduction Act. Watch the recording, download the slides, and read the Q& A. Download a PDF version of this webpage: Federal Solar Tax Credits for Businesses.



WASHINGTON, D.C. ??? As part of the Biden-Harris Administration's Investing in America agenda, the U.S. Department of Energy (DOE), through its Loan Programs Office (LPO), today announced the closing of a \$72.8 million loan guarantee to finance the development of a solar-plus-long-duration-energy-storage microgrid. The microgrid will be located on the Tribal ???



Anyone who uses energy???energy consumers???can take advantage of solar energy to power their lives. These resources, compiled by the U.S. Department of Energy Solar Energy Technologies Office (SETO), cover a wide variety of topics, from the process of choosing and installing a solar energy system, to understanding how it impacts the value of a home.



Building-integrated photovoltaics is a set of emerging solar energy applications that replace conventional building materials with solar energy generating materials in the structure, like the roof, skylights, balustrades, awnings, facades, or windows.



Find and download solar resource map images and geospatial data for the United States and the Americas. For more information on NREL's solar resource data development, see the National Solar Radiation Database (NSRDB).



The U.S. Department of Energy (DOE) launched the \$500 million Renew America's Schools Program to promote the implementation of clean energy improvements at K-12 public schools across the country. These credits can support schools in accessing clean technologies: from solar, geothermal, and other renewables to energy storage. "Going Deeper



What is photovoltaic (PV) technology and how does it work? PV materials and devices convert sunlight into electrical energy. A single PV device is known as a cell. An individual PV cell is usually small, typically producing about 1 or 2 watts of power. These cells are made of different semiconductor materials and are often less than the thickness of four human hairs.