

# DOMESTIC ENERGY STORAGE DEMONSTRATION PROJECTS



What is long-duration energy storage (LDEs)? This long-duration energy storage (LDES) project aims to be a key demonstration of critical power backup of an acute care hospital in the U.S. and provide resiliency in a region that is increasingly at-risk for significant power outages due to fires, storm surges, floods, extreme heat, and earthquakes.



Why is multiday energy storage important? Project Summary: Multiday energy storage is essential for the reliability of renewable electricity generation required to achieve our clean energy goals and provides resiliency against multiday weather events of low wind or solar resources.



Where is Alliant Energy demonstrating a CO<sub>2</sub> long-duration energy storage system? Locations: Pacific, WI Project Summary: Through the Columbia Energy Storage project, Alliant Energy plans to demonstrate a compressed carbon dioxide (CO<sub>2</sub>) long-duration energy storage (LDES) system at the soon-to-be retired coal-fired Columbia Energy Center power station in Pacific, Wisconsin.



What is a CO<sub>2</sub> energy storage project? The project plans to store excess energy from the grid that can be deployed when needed, taking excess energy from the grid and converting the CO<sub>2</sub> gas into a compressed liquid form, which reduces the typical complexity and costs associated with storage.



How can LDEs technology reach liftoff? To reach liftoff, LDES technologies could go through three phases of commercialization with in-field projects: Deploy many small demonstrations to create a visible set of commercial-scale case studies across the market landscape.

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Could a successful demonstration enable market adoption of urban electric power's LDES system? A successful demonstration could enable market adoption of Urban Electric Power's LDES system by proving decreased technology risk, reducing demand on grid infrastructure through reduced peak demand load, and reducing total costs of installation and operation as compared to a Lithium-Ion system.



Energy Storage Demonstrations Three programs (\$500M) Long-Duration Energy Storage (LDES) Demonstrations: Develop energy storage technology to supply energy at peak periods of demand, improve energy efficiency, reduce peak load, provide ancillary services, and increase microgrid feasibility. 15 Projects selected 6 projects from LDES lab call



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 domestic Regional DAC Hubs to accelerate commercialization and demonstrate the processing, transport, secure geologic storage, and conversion



As the earliest domestic institution in the research on compressed air energy storage, IET has already set up a research and development system with complete independent intellectual property rights through 19 years of efforts. Energy Storage Demonstration Projects are Publicized Nov 24, 2020 Nov 24, 2020 China's First Independent



BIL Section 41001 Energy Storage Demonstration Projects . ISSUE DATE: May 12, 2022 . SUBJECT: Request for Information (RFI) on the Long Duration Energy Storage for Everyone, job growth through investments in supply chains and domestic manufacturing is a key goal set by President Biden and is discussed in depth in his Executive Orders

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This program will fund technology demonstrations for energy storage solutions at the pilot-scale. The Project Funding \$5M - \$20M DOE share, 50% minimum required non-Federal cost share Private energy storage company To qualify as a domestic entity, the entity must be organized, chartered, or incorporated (or otherwise



On October 22, the 100MW/200MWh energy storage demonstration project in Jinzhai County, Lu'an City, Anhui Province officially started. The Jinzhai Energy Storage Demonstration Project is the first large-scale energy storage project jointly invested by Shanghai Electric Group, State Grid Comprehensive Energy Company, and China Energy Construction ???



Delivered by Invinity Energy Systems plc (AIM:IES), a leading global manufacturer of utility-grade energy storage, in partnership with Pivot Power, has been awarded over ?700,000 funding for a feasibility study into the development of the UK's largest co-located solar and energy storage project as well as the purchase of two Invinity VS3 units.



Long-Duration Energy Storage Demonstrations (\$505 million) Energy Improvements in Rural domestic energy storage supply chain Enhance resiliency of the grid and at critical facilities (e.g., hospitals, affordable ??? Of the 1,325 current energy storage projects in North America, only 25 (or 2%) have duration of over 10 hours.



domestic energy storage industry for electric-drive vehicles, stationary applications, and electricity transmission and distribution. The Electricity Advisory Committee (EAC) submitted its last five-year energy storage plan in 2016. DOE should increase the use of demonstration projects in all ESGC areas to more rapidly evaluate the

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Multiday Iron Air Demonstration (MIND) (Becker, MN and Pueblo, CO) ??? Led Xcel Energy, in partnership with Form Energy, this project seeks to accelerate the commercialization and market development of multiday storage, including by deploying two 10 megawatt 100-hour LDES systems at retiring coal plants in Minnesota and Colorado.



Stream 2 aims to accelerate commercialisation of innovative longer duration energy storage projects through to first-of-a-kind (FOAK) full-system prototypes. Phase 1 projects will be expected to deliver a feasibility study report for their proposed technology and contribute to knowledge dissemination and sector capacity-building. The following 19 projects have ???



WASHINGTON, D.C. ??? As part of President Biden's Investing in America agenda, a key pillar of Bidenomics, the U.S. Department of Energy (DOE) today announced up to \$325 million for 15 projects across 17 states and one tribal nation to accelerate the development of long-duration energy storage (LDES) technologies. Funded by President Biden's Bipartisan ???



On August 18, the main construction of the "Salt Cave Compressed Air Energy Storage National Test and Demonstration Project" begin in Xuebu town, marking the project's entrance into the critical period of construction. The Jintan salt cave CAES project is a first-phase project with planned

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Today, the U.S. Department of Energy (DOE) announced three winners of the Manufacture of Advanced Key Energy Infrastructure Technologies (MAKE IT) Prize Facilities Track. These winners have each received \$5 million throughout the prize for demonstrating they are ready to begin building a manufacturing facility that will produce critical clean energy ???



domestic energy storage industry for electric-drive vehicles, stationary applications, and DOE needs to further promote the deployment of demonstration projects . 2021 Five-Year Energy Storage Plan: Recommendations for the U.S. Department of Energy Final???April 2021 3 4. DOE needs to focus on modeling and helping the industry make a



Deliver clean energy technology demonstration projects at scale in partnership with the Long-Duration Energy Storage Demonstrations (\$505 million) Energy Improvements in Rural H2Hubs Overview. 12 What is Hydrogen? ??? Hydrogen can be made using a variety of domestic energy resources. ??? Hydrogen can be produced through several



The \$68 million Longer Duration Energy Storage Demonstration competition is funded through the Department for Business, Energy and Industrial Strategy's \$1 billion Net Zero Innovation



This long-duration energy storage (LDES) project aims to be a key demonstration of critical power backup of an acute care hospital in the U.S. and provide resiliency in a region that is ???

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As part of these programs, DOE has set a goal to reduce the cost of grid-scale energy storage by 90% by 2030 for systems that deliver 10+ hours of duration. These initiatives represent DOE's ???



basic and applied research so that the United States retains a globally competitive domestic energy storage industry for electric drive vehicles, stationary applications, and electricity demonstration projects, public-private partnerships, bankable business model development, and the dissemination of high-quality market



Difficulties in justifying pilot and demonstration plants or deployment policy are hardly restricted to CCS, and can be found for nuclear power, renewables and indeed virtually any novel



Energy Storage Demonstration and Validation: DE-FOA-0003036:  
Opportunity: Energy Storage Demonstration and Validation DOE Invests Nearly \$7.6 Million to Develop Energy Storage Projects: 8/13/2020: Office of Energy Efficiency and Renewable Energy: National Laboratory Call for Proposals Strengthening Domestic Capabilities in Solid-State



Demonstration Projects (ARDP) \$2.5 billion Energy Improvements in Rural or Remote Areas (ERA) \$1 billion Long-Duration Energy Storage Demonstrations (LDES) \$505 million Clean Energy Demonstrations on Mine Land (CEML) \$500 million Overview The U.S. Department of Energy (DOE) established the Office of Clean Energy Demonstrations (OCED)



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OCED will engage in early, frequent, and meaningful engagement with communities that host the Industrial Demonstrations Program projects. Communities will have substantive opportunities to engage with both OCED and the projects???starting during the negotiation process and extending throughout the full life cycle of each awarded project.



The US Department of Energy's (DOE) Office of Clean Energy Demonstrations (OCED) issued a Notice of Intent (NOI) on Tuesday for up to \$100 million to fund pilot-scale energy storage demonstration projects, focusing on non-lithium technologies, 10+ hour discharge systems, and stationary storage applications.



.ENERGY.GOV/OCED Meeting Objectives Introduce Lewis Ridge Project (Coal-to-Pumped Storage Hydropower) in Kentucky selected for award negotiations by the Office of Clean Energy Demonstrations (OCED). Provide transparency on the award process and other resources related to the Clean Energy Demonstrations Program on Current and Former Mine Land.