

What makes ARPA-E projects exciting?

The high-risk, high-reward nature of ARPA-E projects is what makes them exciting. NREL researchers use their most creative problem-solving approaches to tackle these projects. This year, ARPA-E-funded projects will be showcased at the 12th annual ARPA-E Energy Innovation Summit, to be held on May 23-25 in Denver, Colorado.

How does ARPA-E support NREL?

NREL has played a key role in approximately \$2.93 billion in R&D funding from ARPA-E since 2009. This funding has been used for over 1,270 potentially transformational energy technology projects, including developing new solar cell material growth techniques, improving grid control, and reducing energy use in transportation.

What is the mission of ARPA-E?

ARPA-E's mission is to advance promising technologies that are not yet ready for private-sector investment with the goal of developing new ways to generate, store, and use energy.

How does ARPA-E work?

ARPA-E supports projects to the point where they can secure follow-on funding so that they can further develop their technologies and then ultimately deploy game-changing energy technologies. The Advanced Research Projects Agency-Energy (ARPA-E) funds game-changing energy technologies that are too early for private-sector investment.

What is ARPA-E funding?

ARPA-E funding refers to financial support from the Advanced Research Projects Agency-Energy (ARPA-E). Jody Robins and his team are utilizing this funding to tap into a vast, untapped source of clean electricity--geothermal energy. Geothermal rock is harder, higher-temperature, and less porous than the rock typically found in oil and gas wells, making drilling more difficult and expensive.

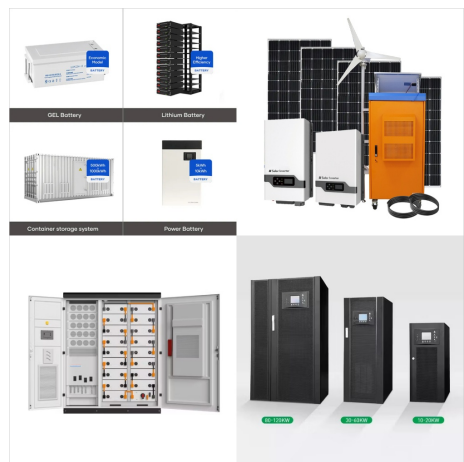
What is the ARPA-E Energy Innovation Summit?

The ARPA-E Energy Innovation Summit is an annual event where ARPA-E-funded projects are showcased.

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This year's summit will be held on May 23-25 in Denver, Colorado. In the lead-up to the summit, NREL researchers reflect on how ARPA-E funding has enabled them to advance innovative research and develop industry partnerships.



SwRI's storage system is based on an innovative thermodynamic cycle to store energy in hot and cold fluids. This technology features a simplified system, high round-trip conversion efficiencies (the ratio of energy put in to energy retrieved from storage), and low plant costs. At full scale, the technology would provide more than 10 hours of electricity at rated ???



October 1-2, 2024 Alexandria, VA The Advanced Research Projects Agency - Energy (ARPA-E) is hosting a workshop to engage technical experts to discuss a potential program in superhot (> 375°C and 22 MPa) geothermal power stations for generating electricity and other uses. The potential program will address technical and techno-economic challenges related to superhot ???

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Investments in solar photovoltaics and wind turbines are soaring as costs fall and governments and companies seek to reduce greenhouse-gas emissions. But fluctuating power from the wind and sun threatens to destabilize electricity grids. As more intermittent sources are connected, the power surges and crashes. This increases variability in voltage, in power and in the frequency ???



Air travel is responsible for a growing portion of U.S. energy usage and associated greenhouse gas (GHG) emissions. In 2017, air travel in the U.S. consumed nearly 3.5 quadrillion BTUs of jet fuel and accounted for about 175 million metric tons of CO₂ or about 2.6% of domestic GHG emissions.



Monday, July 12, 2010 WASHINGTON, DC -- U.S. Secretary of Energy Steven Chu today announced 43 cutting-edge research projects that aim to dramatically improve how the U.S. uses and produces energy. Funded with \$92 million from the American Recovery and Reinvestment Act through the Department of Energy's Advanced Research Projects Agency-Energy (ARPA ???

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The Energy Department's Advanced Research Projects Agency-Energy (ARPA-E) advances high-potential, high-impact energy technologies that are too early for private-sector investment. The projects funded by ARPA-E are developing ???



Americans spend a lot of time ??? and energy ??? driving and flying. The average U.S. driver logs about 13,000 miles every year. To fuel our commutes and summer road trips, Americans last year consumed more than 136 billion gallons of gasoline, which accounts for 60% of U.S. oil demand and is responsible for a quarter of the nation's greenhouse gas emissions.



Energy ResearchEnergy Research . . t t t. The ARPA Model: Different by design Transformational approaches to energy storage to enable wide deployment at very low cost . Thank you. Brenda HH PhD aendl dler, Ph.D.
Brenda.Haendler@hq.doe.gov . 28. Title: ARPA-E: A New Paradigm in Energy Research

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WASHINGTON, D.C. ??? The U.S. Department of Energy (DOE) Advanced Research Projects Agency-Energy (ARPA-E) today announced up to \$50 million in open-ended funding for the commercial scale-up of disruptive energy technologies. The SCALEUP Ready program will support advancing technologies from ARPA-E's portfolio toward market ???



ARPA-E, the Department of Energy's blue-sky research program, this week announced \$28 million in R&D grants for 10 projects aimed at delivering energy storage systems that can last not



Dr. Scott Litzelman is a Program Director at ARPA-E. We recently sat down with him to discuss how he became interested in energy, his experience working in the industry, and how he's hoping to transform America's energy future. How did you first become interested in energy? I first became interested in energy in grad school. My doctoral thesis was on nanomaterials for fuel ???

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Under ARPA-E's statutory charter, one of our key goals is to develop technology that contributes to the reduction of energy-related emissions. Our recently announced FLExible Carbon Capture and Storage (FLECCS) program - led by Program Director Dr. Scott Litzelman - focuses on this goal, by developing CCS technologies that enable power generators to be ???



Southwest Research Institute (SwRI) is developing a battery management system to track the performance characteristics of lithium-ion batteries during charge and discharge cycles to help analyze battery capacity and health. No two battery cells are alike???they differ over their life-times in terms of charge and discharge rates, capacity, and temperature characteristics, ???



DOE/ARPA-E July 2023 Page 1 of 2 U.S. Department of Energy Advanced Research Projects Agency ??? Energy Announcement of Teaming Partner List for Upcoming Funding Opportunity Announcement: New Program in High Energy Density Energy Storage Systems The Advanced Research Projects Agency-Energy (ARPA-E) intends to issue a Funding Opportunity

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Palo Alto Research Center (PARC) is developing a new way to manufacture Li-Ion batteries that reduces manufacturing costs and improves overall battery performance. Traditionally, Li-Ion manufacturers make each layer of the battery separately and then integrate the layers together. PARC is working to manufacture a Li-ion battery by printing each layer ???



The Advanced Research Projects Agency ??? Energy (ARPA-E) was established under the America COMPETES Act of 2007 as a new agency within the U.S. Department of Energy (DOE) to fund innovative energy research. ARPA-E research authorizations for Fiscal projects span transformative technologies in energy storage, carbon capture, advanced biofuels



WASHINGTON, D.C. ??? Today, the U.S. Department of Energy (DOE) Advanced Research Projects Agency-Energy (ARPA-E) announced U.S. Secretary of Energy Jennifer M. Granholm, Jonathan Scott of Scott Brothers Global, and ARPA-E Director Evelyn N. Wang as Main Stage speakers at the 2024 ARPA-E Energy Innovation Summit. This year, the annual ???

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WASHINGTON, D.C. ??? The U.S. Department of Energy (DOE) today announced up to \$38 million in funding to develop sustainable carbon-containing liquids from renewable energy through the Grid-free Renewable Energy Enabling New Ways to Economical Liquids and Long???term Storage (GREENWELLS) program. Managed by the DOE Advanced Research ???



The Advanced Research Projects Agency ??? Energy (ARPA-E) is considering issuing a Funding Opportunity Announcement (FOA) to support the discovery of plasma-facing and structural first wall materials that are suitable for fusion power plants. Models to Optimize Train Infrastructure, Vehicles, and Energy Storage (LOCOMOTIVES): CLOSED - FA



Long-duration electricity storage (LDES) ??? storage systems that can discharge for 10 hours or more at their rated power??? have recently gained a lot of attention and continue to be a technology space of interest in energy innovation discussions. The increased interest stems from a growing appreciation and acknowledgement of the need for "firm" low-carbon energy ???

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ARPA-E intends to make the Teaming Partner List available on ARPA-E eXCHANGE (<https://arpa-e-foa.energy.gov>), ARPA-E's online application portal, starting in July 2022. Once posted, The Teaming Partner List will be updated periodically, until the close of the Full Application period, to reflect the addition of new Teaming Partners who



WASHINGTON, D.C. — The U.S. Department of Energy (DOE) Advanced Research Projects Agency-Energy (ARPA-E) today announced \$9.9 million for 7 projects to support the Biden-Harris Administration's efforts to strengthen domestic supply chains and ensure America leads the world in the emerging clean energy economy. These projects will seek to



The Advanced Research Projects Agency-Energy (ARPA-E) is considering issuing a Notice of Funding Opportunity (NOFO) to support the development of new technologies to recover high energy-value materials from wastewater to reduce reliance on foreign imports, domestic energy demands, and greenhouse gas emissions associated with conventional

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Grid-free Renewable Energy Enabling New Ways to Economical Liquids and Long-term Storage. Electricity Generation and Delivery. Grid. Status: Active. Release Date: 12/12/2023
ARPA-E-Comms@hq.doe.gov. Project Listing. Click Here to See Program Highlights. Advanced Research Projects Agency - Energy; U.S. Department of Energy; 1000 ???



WASHINGTON, D.C. ??? The U.S. Department of Energy (DOE) today announced \$36 million for 11 projects seeking to increase the deployment, and use of, nuclear power as a reliable source of clean energy and limit the amount of waste produced from Advanced Nuclear Reactors (AR). Nuclear power is one of the most reliable sources of energy in America, and ???



Day 2 of the Summit featured Fast Pitches, Breakout Panels, the Student PITCHES session, the Tech Showcase, and more! Day 2 of the 2024 ARPA-E Energy Innovation Summit began with "Coffee with ARPA-E" and the "Women in Energy Breakfast," where attendees had the opportunity to network with ARPA-E leadership, program directors, tech-to-market ???