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2026 Strategic Energy Seed Grants Awarded

Energy Institute Funds 19 New Projects to Drive Climate and Energy Security

2026 Strategic Energy Seed Grant Program Awardees

Nineteen research projects that accelerate innovation in the global energy landscape have been selected to receive a 2026 Strategic Energy Seed Grant from the UT Energy Institute. The interdisciplinary research projects span power and infrastructure for data centers, global energy security, water resources, carbon management, catalysis, hydrogen, geothermal systems, critical minerals, and advanced energy technologies.

“Global energy demand is high, pushed by electrification, data centers, and economic growth. At the same time, the need to ensure that the energy ecosystem at home and abroad is secure has never been more urgent,” said Brian Korgel, director of the UT Energy Institute and

Rashid Engineering Regents Chair Professor in the McKetta Department of Chemical Engineering. “Tackling that means innovating across the entire energy system...from how we generate and store power, move energy assets from their sources to concentrated population centers to how we sustainably manage infrastructure and resources. The University of Texas at Austin is built for this, leveraging its sheer scale, deep expertise, and tight relationships with industry that turn lab breakthroughs into real-world solutions. “

The program is made possible through the support of the Energy Institute’s industry partners and is designed to advance interdisciplinary, cutting-edge research at The University of Texas at Austin. The seed grants enable collaboration across departments, colleges, and schools while supporting graduate students and postdoctoral researchers working on high-impact energy challenges.

“The UT Energy Institute is leading critical research across a wide range of transformative topics that underlie the energy ecosystem,” said Ashley Grosh, vice president of Breakthrough Energy. “For example, the Institute’s research and systems thinking are helping hyperscalers build the efficient infrastructure our country needs, tackling the upfront, hard, and complex problems related to multifaceted power generation and water resourcing.”

Grosh added: “The Institute is fostering cutting-edge, interdisciplinary research across multiple departments, colleges, and schools at UT. These strategic seed projects are digging deep into the real challenges facing industries and communities today, and we are excited to keep supporting their path toward providing commercial solutions. This is a unique set of thought leaders coming together for the greater good.”

Projects were selected from a competitive pool of 79 proposals submitted by multidisciplinary teams across campus. The selected projects will support research that can scale toward commercial solutions and attract future funding from federal, industry, and philanthropic partners.

The following research projects were selected for funding in the 2026 Strategic Energy Seed Grant program:

From Backlash to Buy-in: Addressing Misperceptions and Crafting Communication Strategies to Build Stakeholder Support for Sustainable Data Centers

- **Lucy Atkinson**, School of Advertising and Public Relations, Moody College of Communication
- **Deidra Miniard**, LBJ School of Public Affairs

Scaling and Corrosion-Free Distillation to Enable Saline Water Use for Data Centers

- **Vaibhav Bahadur**, Walker Department of Mechanical Engineering, Cockrell School of Engineering
- **Andrew Fix**, Maseeh Department of Civil, Architectural and Environmental Engineering, Cockrell School of Engineering

Next-Generation Enhanced Geothermal Systems for Powering Data Centers: Characterization, Optimization, and Delivery

- **Shuvajit Bhattacharya**, Bureau of Economic Geology, Jackson School of Geosciences
- **Mojdeh Delshad**, Hildebrand Department of Petroleum and Geosystems Engineering, Cockrell School of Engineering
- **Jani Das**, Bureau of Economic Geology, Jackson School of Geosciences

Derisking Fault-Related Fluid Flow for Secure Carbon Storage

- **Alex Bump**, Bureau of Economic Geology, Jackson School of Geosciences
- **Carlos Uroza**, Bureau of Economic Geology, Jackson School of Geosciences

Securing the Battery Supply Chain: Mapping Graphite, Cathode, and Anode Vulnerabilities and Evaluating Government Equity Stakes in Mining

- **Josh Busby**, LBJ School of Public Affairs
- **Nathan Jensen**, Department of Government, College of Liberal Arts
- **Michael Webber**, Walker Department of Mechanical Engineering, Cockrell School of Engineering, LBJ School of Public Affairs

Reducing Water Stress in Texas: Membrane-Based Atmospheric Water Capture

- **Andrew Fix**, Fariborz Maseeh Department of Civil, Architectural and Environmental Engineering, Cockrell School of Engineering
- **Manish Kumar**, Fariborz Maseeh Department of Civil, Architectural and Environmental Engineering, Cockrell School of Engineering

A Game-Theoretic Framework to Ensure Resilient and Reliable Operation of a Rapidly Expanding Power Grid

- **David Fridovich-Keil**, Oden Institute for Computational Engineering and Sciences, Cockrell School of Engineering
- **Shannon Strank**, Center for Electromechanics, Cockrell School of Engineering

Scaling Carbon Management Systems

- **Benjamin Leibowicz**, Walker Department of Mechanical Engineering, Cockrell School of Engineering
- **Arvind Ravikumar**, Hildebrand Department of Petroleum and Geosystems Engineering, Cockrell School of Engineering
- **Hugh Daigle**, Hildebrand Department of Petroleum and Geosystems Engineering, Cockrell School of Engineering

Probabilistic Readiness & Infrastructure Suitability Model (PRISM) for Deliverable Data Center Load

- **Ning Lin**, Jackson School of Geoscience, Bureau of Economic Geology
- **Kasey Faust**, Fariborz Maseeh Department of Civil, Architectural and Environment, Cockrell School of Engineering
- **Lars Koesterke**, Texas Advanced Computing Center

Improving Catalyst Durability for CO2 Conversion by Electrolyte Engineering

- **Yuanyue Liu**, Mechanical Engineering, Cockrell School of Engineering
- **Joaquin Resasco**, McKetta Department of Chemical Engineering, Cockrell School of Engineering

Environmental Fate of Amine Emissions from Carbon Capture: Atmospheric, Aqueous, and Photochemical Transformation Pathways

- **Pawel Misztal**, Fariborz Maseeh Department of Civil, Architectural and Environmental Engineering, Cockrell School of Engineering
- **Lea Hildebrandt Ruiz**, McKetta Department of Chemical Engineering, Cockrell School of Engineering
- **Lynn Katz**, Fariborz Maseeh Department of Civil, Architectural and Environmental Engineering, Cockrell School of Engineering

The Water-Energy Nexus: Assess and Evaluate Sustainable Industrial Water Sourcing via Brackish Water Resources – the Dockum Aquifer, West Texas

- **Jean-Philippe Nicot**, Bureau of Economic Geology, Jackson School of Geosciences
- **Vaibhav Bahadur**, Walker Department of Mechanical Engineering, Cockrell School of Engineering
- **Lucy Tingwei Ko**, Bureau of Economic Geology, Jackson School of Geosciences

Digital Twin for Commercial Water Electrolyzers: An Automated Intelligent Platform for the Scale-Up of Green Hydrogen

- **Laxminarayan L. Raja**, Aerospace Engineering and Engineering Mechanics, Cockrell

School of Engineering

- **Mike Lewis**, Center for Electromechanics, Cockrell School of Engineering

Advanced Remote Monitoring of Offshore Energy Infrastructure Using Robotic Ultrasonic Inspection

- **Salvatore Salamone**, Civil, Architectural and Environmental Engineering, Cockrell School of Engineering
- **Christopher Rausch**, Fariborz Maseeh Department of Civil, Architectural and Environmental Engineering, Cockrell School of Engineering
- **Othman Oudghiri-Idrissi**, Fariborz Maseeh Department of Civil, Architectural and Environmental Engineering, Cockrell School of Engineering

Subsynchronous Resonance Risk Assessment and Mitigation for Bring-Your-Own-Generator (BYOG) Island-Capable AI Data Center Microgrids

- **Surya Santoso**, Chandra Family Department of Electrical and Computer Engineering, Cockrell School of Engineering
- **Shannon Strank**, Center for Electromechanics, Cockrell School of Engineering

Downhole Lithium Sensing and In Situ Extraction from Oilfield Brines

- **Wen Song**, Hildebrand Department of Petroleum and Geosystems Engineering, Cockrell School of Engineering
- **Zoya Heidari**, Hildebrand Department of Petroleum and Geosystems Engineering, Cockrell School of Engineering

Plasma-Assisted Catalysis for Nonoxidative Methane Conversion into Hydrogen and Carbon Nanotubes

- **Thomas Underwood**, Aerospace Engineering and Engineering Mechanics, Cockrell School of Engineering
- **Charles Buddie Mullins**, McKetta Department of Chemical Engineering and Department of Chemistry, Cockrell School of Engineering & Natural Sciences
- **Michael Webber**, Walker Department of Mechanical Engineering, Cockrell School of Engineering | LBJ School of Public Affairs

A Geothermal Cooling Cycle for Data Centers

- **Kenneth Wisian**, Bureau of Economic Geology, Jackson School of Geosciences
- **Shuvajit Bhattacharya**, Bureau of Economic Geology, Jackson School of Geosciences

Multi-Time-Scale Power Smoothing for Next-Generation Datacenters: From Chip-Edge to

Grid-Edge

- **Yicheng Zhu**, Electrical and Computer Engineering, Cockrell School of Engineering
- **Hao Zhu**, Electrical and Computer Engineering, Cockrell School of Engineering

Program Details

View the program details including deadlines and application links.

[View Details](#)

Grant Awardees

2026

2025

2024

2023

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Research Partnerships

To learn about research partnerships, reach out to sponsorships@energy.utexas.edu.



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