

UT Energy Bulletin | September 2025

Energy@UT News



UT Austin Researchers Seek Global Input on Draft Methane Verification Protocol

Researchers at UT Austin's Center for Energy and Environmental Systems
Analysis (CEESA) have released a draft protocol aimed at verifying methane emissions from oil and gas destined for the EU market. The proposed framework addresses gaps in the upcoming EU Methane Regulation, offering a science-based standard for global emissions accountability. Stakeholders are invited to review and provide feedback during a 60-day consultation period.

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TACC is Transforming How Scientists Study and Prepare for Natural Disasters

Over the last decade, the National Science Foundation's DesignSafe platform has become the nation's leading cyberinfrastructure for research on natural hazards. Hosted and powered by UT Austin's Texas Advanced Computing Center (TACC), DesignSafe enables thousands of researchers, including scientists, engineers, and students, to manage, analyze, and share data on earthquakes, hurricanes, floods, wildfires, and more.

Read the article



Alternative Carbon Carrier Technology Could Improve Oil Production and Carbon Storage

Researchers at UT Austin's Jackson School of Geosciences and Cockrell School of Engineering have developed an innovative alternative carbon carrier technology for enhanced oil recovery. By converting CO₂ into a formate solution, this method significantly boosts both oil production and carbon storage. Computer models based on Permian Basin data show it can recover up to 19.5% more oil and store up to 17.9% more carbon compared to traditional CO₂ injection methods. This approach also improves storage security by reducing the amount of free-flowing CO₂ in the reservoir.

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Texas Engineer Wins UAE's Global Water Award

Professor Guihua Yu has been awarded the Mohammed bin Rashid Al Maktoum Global Water Award from the United Arab Emirates for his breakthrough work to provide clean, drinkable water using renewable solar energy. Yu, a professor in the Cockrell School of Engineering's Walker Department of Mechanical Engineering and Texas Materials Institute, was selected as the sole winner in the Distinguished Researcher Award category of this year's awards.

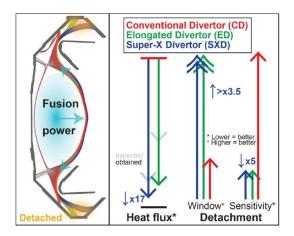
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HotRock Geothermal Research Consortium Hosts 2025 Semiannual Sponsors' Meeting

The event brought together nearly 50 participants, including representatives from over 10 energy companies and state regulators, and featured technical presentations on enhanced geothermal systems, AI/ML heat-flow prediction, dynamic reservoir modeling, thermal demand mapping, and integration with the power grid.

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UT Research Brings Solution to Major Challenge in Nuclear Fusion Energy Closer

Researchers at the Institute for Fusion Studies at UT Austin originated the concept behind the Super-X divertor, a breakthrough exhaust system now being tested in the UK. This new design helps safely manage the intense heat produced in fusion reactors, moving the world closer to practical nuclear fusion energy.

Read more



LBJ School Students Gain Policy Experience in Nuclear Energy and Global Leadership

Master of Global Policy Studies students gained hands-on experience in nuclear energy policy this summer working with policy research group Good Energy Collective. Their work focused on the policy and community side of nuclear waste storage and translating technical research into policy communications for broad audiences.

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UT Faculty Respond to Executive Order on Research Funding

The *Daily Texan* quoted UT Austin faculty from fields as diverse as neurology and public affairs discussing the insertion of political appointees into federal grantmaking processes.

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Featured Research

Extending the Lifespan of Large-Scale Safe Energy Storage with Iron-Chromium Flow Batteries

In a collaborative effort, researchers from The University of Texas at Austin and Pacific Northwest National Laboratory developed a new electrolyte formula that enhances the performance and safety of iron chromium redox flow batteries. These large-scale, explosion-proof systems are used to store renewable energy over long durations, and the new chemistry extends battery lifespan significantly.

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EnergizeUT 2025

EnergizeUT: September 23, 2025

EnergizeUT 2025 is The University of Texas at Austin's premier energy innovation showcase, bringing together students, industry leaders, and entrepreneurs to explore the future of energy.

Join us to connect, collaborate, and spark ideas that will shape the next generation of energy solutions.

Learn more

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News From Around Campus

Jackson School of Geosciences

<u>Susan Hovorka</u>, senior research scientist at the Bureau of Economic Geology, told <u>The Washington Post</u> that concerns over carbon storage limits may be overstated, noting that many challenges are already being addressed through best practices and real-world experience.

<u>Geeta Persad</u>, assistant professor at the Jackson School of Geosciences, spoke to <u>The Austin Chronicle</u> about a new UT study that reveals a decline in aerosol pollution may be intensifying heat waves. The research highlights how cleaner air, while beneficial for health, can reduce atmospheric reflection of sunlight, thereby increasing surface temperatures.

Energy Institute, University of Texas at Austin

<u>Carey W. King</u>, assistant director of the Energy Institute, told the <u>Times Union</u> that Texas is able to outpace New York in affordability gains from renewable energy because the state is much "windier and sunnier," making development of those resources much more cost effective in Texas.

<u>Jorge Piñón</u>, a researcher at the Energy Institute, spoke with the <u>AP</u> about Cuba's worsening energy crisis, estimating that resolving the situation could take three to five years and cost up to \$8 billion.

Cockrell School of Engineering | Hildebrand Department of Petroleum and Geosystems Engineering

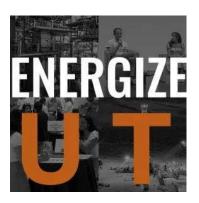
<u>Arvind Ravikumar</u> told <u>WBUR News</u> that New England's limited natural gas pipeline capacity is causing major supply constraints. "The ability of natural gas to be delivered to New England is very constrained," he said.

<u>Wen Song</u> told <u>National Defense Magazine</u> that, while the United States has sufficient critical minerals to meet demand, the real challenge lies in extracting them economically from the earth.

Webber Energy Group

Joshua Rhodes, an electricity expert and research scientist at UT Austin, told the <u>Los</u> <u>Angeles Times</u>, "We're in an energy crunch. We should be doubling down on everything we can build right now. Making things more expensive is antithetical to that." Rhodes also spoke with <u>E&E News</u>, commenting on the ambitious 11-gigawatt Al data center plan backed by Rick Perry, saying that the "devil is in the details"

Upcoming Events



EnergizeUT 2025

September 23, 2025 The University of Texas at Austin

Register to attend



European Union Methane Regulation

Webinar: Verification Protocol

September 23, 2025

Register to attend



EPIXC Workshop #1

Roadmap Results and Jumpstart Project Learnings

September 24, 2025 The University of Texas at Austin Commons Conference Center Pickle Research Campus

Register to attend



LBJ Business Policy Forum

Connecting the Future of U.S. Business to Smarter Policy

September 29, 2025 Robert B. Rowling Hall

Register to attend



Hydrogen Day 2025

October 7-8, 2025
The University of Texas at Austin

Register now



EEMDL 2025 Annual Event:

Advancing MMRV Initiatives in Global Greenhouse Gas Emissions Management

October 21-23, 2025 AT&T Hotel and Conference Center The University of Texas at Austin

More information



New Mexico Energy Initiatives 2025 Symposium and Stakeholders Forum

November 18-19, 2025 Fidel Center, New Mexico Tech, Socorro, NM

Learn more



Save the Date for UTCCS-8

January 27-29, 2026 JJ Pickle Research Center



Save the Date for Energy Week 2026

April 6–10, 2026 The University of Texas at Austin

Add to calendar

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