

SUMMER 2025

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UNIVERSITY
OF WYOMING

School of
Energy Resources

QUARTERLY NEWSLETTER

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ABOUT THE SCHOOL OF ENERGY RESOURCES

The University of Wyoming (UW) School of Energy Resources (SER) was created in 2006 to enhance the University's energy-related education, research, and engagement. SER directs and funds cutting-edge energy research and technology development. It further bridges the gap between academics and industry through targeted engagement efforts. The partnerships formed between academics and industry ensure programs are relevant, current, and deliver impact and high value to stakeholders and the State.

Since its inception, SER has maintained flexibility in its focus and structure to meet the changing needs of Wyoming's energy industries and the State's economy—which is now more critical than ever.

This quarterly newsletter highlights SER's significant achievements from May 2025 through July 2025, in academics, research, newly emerging areas of focus, and engagement to keep UW and Wyoming at the forefront of the energy sector.



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ACADEMICS

SER's Rachel Gaukel Gives Student Commencement Address

University of Wyoming School of Energy Resources (SER) student **Rachel Gaukel** of Johnstown, Colo., represented the class of 2025 as the student commencement speaker at the undergraduate ceremony for the College of Arts and Sciences, College of Education, College of Engineering and Physical Sciences, and SER.

Gaukel graduated with a B.S. in Energy Resource Management and Development, with a concentration in Professional Land Management.



School of Energy Resources Celebrates Class of 2025 at Spring Commencement Ceremony

The School of Energy Resources celebrated the graduation of fourteen students in the spring 2025 commencement ceremony.

Festivities acknowledged the achievements of students completing a Bachelor of Science degree in Energy Resource Management and Development (ERMD), a minor in Energy Resource Management (ERM), as well as students that have earned a certificate in Land Administration.

Connor Fleming, Rachel Gaukel, Kendall Klos, Madalynn Gower, Gwen Andela, Addison Potts, and McKinzie Barnes earned their Energy Resource Management and Development degrees in the Professional Land Management concentration.

Aiden Kaus earned his Energy Resource Management and Development degree in the Energy and Environmental Systems concentration.

Students in other UW degree programs picking up a minor in Energy Resource Management included **Deegan Foley, Keegan March, Yan Zambrano Molinar, and Sean Kraemer.**

Students in other UW degree programs picking up a certificate in Land Administration included **Gabriella Haigler and Lena Schiller.**



Pictured right to left: Madalynn Gower, Rachel Gaukel, Gwen Andela, Kendall Klos, Addison Potts, Connor Fleming.

UW's Fogg Transitions to Law School as Part of 3+3 Accelerated Degree Program

Ryan Fogg, of Carpenter, a junior in the University of Wyoming School of Energy Resources' (SER) Energy Resource Management and Development (ERMD) degree program, is the first student to be accepted into the UW College of Law as part of the 3+3 accelerated degree program.

The Quickstart 3+3 program allows UW students to earn a bachelor's degree in ERMD through SER and a Juris Doctor through the College of Law, following the standard application requirements. If accepted into law school, students gain the combined professional credentials in six years instead of the traditional seven, with the first year of law school concurrently satisfying the final year of the undergraduate degree.

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ACADEMICS

UW Professor Publishes Study on Temperature's Impact on Energy Demand

Tim Considine, a University of Wyoming School of Energy Resources professor of energy economics, contributed an article to the Journal of the Association of Environmental and Resource Economists.

The journal is recognized as a premier publication covering the crucial intersection of human behavior and the natural environment.

The article, titled "The Effect of Temperature on Energy Demand and the Role of Adaptation," examines the effect of daily temperature on monthly energy demand for all major fuels – including electricity, natural gas and petroleum products – and end-use sectors in the United States. Based on over three decades of monthly, state-level data, the article further investigates the measurable human response to the impacts of increased fuel consumption resulting from higher temperatures.

Edward Manderson, a senior lecturer in environmental economics at the University of Manchester, was co-author of the piece.

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Addison Potts Nominated for UW Outstanding Graduate

In recognition of her academic achievements, **Addison Potts** was nominated and named as a finalist to receive the Tobin Memorial and Rosemarie Martha Spitaleri Awards, UW's prestigious recognition for outstanding graduates. She was one of 40 students to be considered for the honor, and one of 14 finalists. Students are considered for the award based on their scholarship, leadership, and contributions to UW.

A Tomé Scholar, Potts earned dual degrees in Energy Resource Management and Development at SER with a concentration in Professional Land Management and Environment and Natural Resources from the Haub School of Environment and Natural Resources.



Academics Highlights

- Six Energy Resource Management and Development students, all in the Professional Land Management concentration, successfully passed the Registered Landman (RL) Exam, administered by the American Association of Professional Landmen (AAPL). In order to be eligible for the exam, students must be active AAPL members and be in their final semester of coursework in an AAPL-accredited degree program. Newly Registered Landmen include **Gwen Andela**, **Connor Fleming**, **Rachel Gaukel**, **Madalynn Gower**, **Kendall Klos**, and **Addison Potts**.



- Representing SER's AAPL-accredited Professional Land Management (PLM) program, SER Academic Director **Kami Danaei** and student **David Meraz Ordonez** attended AAPL's 71st Annual Meeting in Kansas City.



- Save the Date: Registration is open for the 2026 NAPE Summit and Expo. A perennial event for the land industry, students from the School of Energy Resources attend to network, learn, and gain professional development opportunities. Register early to secure your spot. **REGISTER >**



RESEARCH

Center for Economic Geology Research

Sweetwater Carbon Storage Hub Project Completes First Deep Characterization Well

A significant carbon management project led by Frontier Carbon Solutions LLC (Frontier) – in partnership with the University of Wyoming School of Energy Resources (SER) – has completed the drilling of a deep characterization well. The team is drilling a second well in an effort to explore potential permanent carbon storage in southwest Wyoming.

Frontier's project, the Sweetwater Carbon Storage Hub (SCS Hub), is the beneficiary of a grant from the Office of Fossil Energy and Carbon Management's Carbon Storage Assurance Enterprise (CarbonSAFE) Initiative funded through the U.S. Department of Energy (DOE).

At a depth of more than 16,000 feet, it is among the deepest wells recently drilled in the State and will help characterize deep saline formations in the Green River Basin that are below known oil and gas targets.

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Pictured: Joe Nicholas and Alicia Summers, of Frontier Carbon Solutions; and David Lucke, Abdeldjalil Latrach, Autumn Eakin, Lily Jackson, Tao Bai and Zunsheng Jiao, of SER.

Center for Energy Regulation and Policy Analysis

CERPA Releases White Paper on the Rock Springs RMP

The Center for Energy Regulation and Policy Analysis (CERPA) at the University of Wyoming's School of Energy Resources (SER) has published a new white paper examining the potential effects of the Bureau of Land Management's (BLM) Rock Springs Resource Management Plan (RMP) on state revenues generated from energy development in Wyoming.

Authored by a collaborative team including **Kara B. Fornstrom**, president of f3 Energy LLC; **Dawson Kluesner**, assistant research professional at CERPA; **Bryan Leonard**, associate professor and SER Chair of Environment and Natural Resources; and **Esther Wagner**, CERPA senior research professional, the paper offers significant insights into the economic, legal, regulatory, and historical dimensions of the Rock Springs RMP.

The Rock Springs RMP has been a subject of considerable debate in Wyoming. In 2024, a task force was formed to gather recommendations from stakeholders and the public, leading to a finalized version in December 2024. Subsequently, under the new federal administration, a bill has been proposed that would replace the current RMP with a revised plan prioritizing energy development.

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CERPA Releases Final Paper in Nuclear White Paper Series Covering Electricity Generation

The Center for Energy Regulation and Policy Analysis (CERPA) in the School of Energy Resources (SER) released the last installment in its nuclear white paper series exploring and evaluating the components of a domestic integrated nuclear industry.

Authored by **Alex Gebben** and Daniel Cooley, energy economists in the UW Center for Business and Economic Analysis, the sixth and final paper examines the challenges and opportunities of fostering a nuclear electricity generation sector in Wyoming.

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3D Visualization Center

UW 3D Visualization Center Conducts Comprehensive Remote Sensing Field Work Amid Technology Upgrades

The 3D Visualization Center (Viz Center) in the University of Wyoming's School of Energy Resources (SER) is known to house state-of-the-art technology to enhance visual learning and innovative research.

Formerly home to the only four-walled 3D CAVE in Wyoming, the Viz Center has revolutionized its capabilities and upgraded its technology suite to significantly enhance energy-driven research within SER, the wider university, and the energy and mining industries in Wyoming.

Specifically, the Viz Center has made a major investment in its remote sensing program with the addition of a drone-based VNIR-SWIR hyperspectral imaging (HSI) system offering centimeter-scale resolution. The overarching goal is to build in-house capacity for both academic research and applied geospatial data collection.

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Pictured: Kyle Summerfield, program manager of the 3D Visualization Center, or Viz Center, within the University of Wyoming's School of Energy Resources, operates the HySpex Mjolnir VS-620 mounted on a heavy-lift drone in southwest Wyoming.

Hydrogen Energy Research Center

Examining Potential Use of Wyoming's Trona Deposits for Underground Hydrogen Storage

Researchers at the University of Wyoming have published a pioneering study in the *Journal of Energy Storage*. The study represents the first investigation of its kind into the geomechanical and geochemical changes in trona following hydrogen exposure, assessing its potential for underground hydrogen storage.

The paper, titled "Impact of hydrogen storage on the characteristics and mechanical properties of trona deposits," was written by the collaborative team of **Ehsan Dabbaghi**, a Ph.D. student in the UW Department of Civil and Architectural Engineering and Construction Management, working under the guidance of **Kam Ng**, the Provost's Term Professorship Professor, and **Tyler Brown**, interim program manager of mineral research in the Center for Economic Geology Research housed in the School of Energy Resources.

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Jurisprudence of Underground Law and Energy Group

UW's Righetti and Lewis Publish Valorization of Federal Pore Space Article in Top-Tier Legal Journal

A new publication from legal scholars in the University of Wyoming School of Energy Resources (SER) examines the conceptually unique challenge of valuing subsurface pore space in federal lands for the sequestration of carbon dioxide.

SER Professor of Law **Tara Righetti** and Associate Research Scientist **Madeleine Lewis** co-wrote the study that was published in the prestigious *Boston University Law Review*. Widely recognized as a top-tier legal journal, it is known for publishing rigorous and influential scholarship.

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Research

SER's Tiffany Bishop Named UW Employee of the Second Quarter

In recognition for her exceptional dedication, expertise and profound impact on the success of the School of Energy Resources (SER) and the broader university community, the University of Wyoming recognized **Tiffany Bishop** as the Employee of the Second Quarter.

Joining SER in 2022 as the inaugural project specialist, Bishop has paved the way for the successful execution of grant management, which has now expanded to include three additional team members. In her role, she assists with the administrative aspects of major grants, working with directors of research Centers of Excellence and principal investigators.

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Research Highlights

- Two publications resulting from funding under the Mowry Project in the *Center for Economic Geology Research (CEGR)* were released. The related articles explore both shale permeability and shale geomechanics.

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- School of Energy Resources Senior Research Professional **Davin Bagdonas** was interviewed in a recent article by *Popular Mechanics* Magazine. Stemming from a collaborative publication between Bagdonas and



researchers at The University of Texas at Austin, the article explores the author's research on utilizing coal and coal fly ash as an unconventional resource for critical minerals in the United States.

- Assistant Research Professional **Madison Mankin** in the *Energy Engagement, Leadership, and Careers (ELC)* program presented on training pathways for an emerging nuclear energy workforce to Wyoming's community leaders during Wyoming Community Days at Idaho National Laboratory.



- Researchers at the University of Wyoming School of Energy Resources have published a data article supporting subsurface characterization and resource evaluation for carbon storage projects, conventional oil and gas activities, and geothermal energy. The "Data in Brief" publication details comprehensive drill-stem test (DST) data from key geological formations in Sweetwater County, a region with high potential for carbon dioxide sequestration. [READ MORE >](#)

- The *Hydrogen Energy Research Center (H₂ERC)* hosted two workforce development workshops to discuss opportunities in a hydrogen industry for Wyoming. Led by Assistant Research Professional **Sarah Buckhold**, one workshop was held on the LCCC Cheyenne campus, and the other was hosted in Jackson. The workshops are part of the Phase II funding under the Wyoming Innovation Partnership (WIP) for blue hydrogen research.



- Assistant Research Professional **Resham Thapa** in the *Center for Carbon Capture and Conversion (CCCC)* conducted field work to monitor plant yield and soil health on a reclamation site at Peabody's North Antelope Rochelle Mine utilizing coal char soil amendment.

OUTREACH

SER Website Redesign

The Outreach team at the School of Energy Resources (SER) has successfully redesigned its website to align with the new university-wide update at the University of Wyoming. This initiative was part of a broader effort to create a cohesive and modern online presence across all university departments. The new website showcases SER's extensive research, outreach, and academic offerings in a user-friendly and visually appealing format. Visitors can now easily navigate the site to learn about groundbreaking energy research, discover community engagement programs, and explore academic opportunities available to prospective students. Check out our new look! www.uwyo.edu/ser

Wyoming-Japan Energy Summit

Managed by the School of Energy Resources, the Wyoming Integrated Test Center (ITC) played a pivotal role in the Wyoming-Japan Energy Summit, hosting Wyoming Governor **Mark Gordon** and the Japanese Consul General in Denver, along with key industry leaders from NEDO and JETRO. A significant part of the summit was the ITC tour, which highlighted a successful collaboration spanning five years. This partnership, forged between the State of Wyoming, the Japan Carbon Frontier Organization (JCOAL), and Kawasaki Heavy Industries, resulted in a successful demonstration of Kawasaki's carbon capture technology at the Dry Fork Plant. This achievement has since led to the technology's further deployment in Japan. Following the tour, Consul-General of Japan in Denver, **Hiroyuki Okajima**, underscored the collaborative efforts of JETRO and NEDO with the State of Wyoming and its energy sector leaders. The summit served as a powerful testament to the ongoing and productive energy partnership between Wyoming and Japan.



Outreach Highlights

- Please stay up to date on our upcoming events by checking the **EVENTS CALENDAR >**



- Save the Date: October 16, 2025 is the 2025 Landscape Discussion on Energy Law and Policy in the Rockies Conference. Now offered every other year, the conference focuses on energy-related legal, regulatory, and policy issues of current interest in Wyoming and the Rocky Mountain region.



- The dedicated staff from the School of Energy Resources demonstrated their commitment to the Laramie community by volunteering at the Laramie Soup Kitchen and the Eppson Center for Seniors.
- The collaborative SER team of **Charles Nye**, **Autumn Eakin**, and **Heather Chandler** participated in the "Youth in STEM" day at UW. The group provided an interactive "coffee-filter analogy for off-shore oil and gas" workshop.
- The annual Energy Day Celebration in conjunction with Wyoming Sports Properties and Cowboy Football will take place leading up to the October 11 game against San Jose State. Mark your calendars!



PHILANTHROPIC SUPPORT

Donor Spotlight: Rocky Mountain Power Foundation

The Rocky Mountain Power Foundation, a steadfast supporter of the University of Wyoming, has made a generous, expendable gift to the School of Energy Resources (SER) Excellence Fund. To be allocated at the discretion of the SER Executive Director, the funding is designated to fuel groundbreaking research and innovation, advancing the university's role as a leader in the energy sector.

Past contributions from the foundation have been instrumental in building the capacity of key initiatives within SER, including the Nuclear Energy Research Center and the Wind Energy Research Center. This new gift reinforces that commitment, providing SER with the flexibility to allocate resources to emerging opportunities and critical needs, ensuring its research remains at the forefront of energy technology.

The Rocky Mountain Power Foundation was created in 1988 by PacifiCorp, an electric utility serving 1.8 million customers in six Western states as Rocky Mountain Power in Utah, Wyoming, and Idaho and as Pacific Power in Oregon, Washington and California.

The foundation's mission, through charitable investments, is to support the growth and vitality of the communities served by Rocky Mountain Power and Pacific Power.



**Rocky Mountain Power
Foundation**

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