

WINTER
2024/25

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UNIVERSITY
OF WYOMING

School of
Energy Resources

QUARTERLY NEWSLETTER

Vol. 5, Issue 4

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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, which integrates with the formulation and conduct of academic programs at UW and bridges 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 November 2024 through mid-January 2025, in academics, research, newly emerging areas of focus, and engagement to keep UW and Wyoming at the forefront of the energy sector.



SER EXECUTIVE DIRECTOR

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ACADEMICS

SER's Kristen Pritchett Joins Ranks of Certified Professional Landmen

Kristen Pritchett, co-director of the Professional Land Management (PLM) program at the School of Energy Resources (SER), recently gained the prestigious credential within the energy management industry as a Certified Professional Landman (CPL).

One of three levels offered by the American Association of Professional Landmen (AAPL) – the accrediting body for the land profession – a CPL is the highest designation achievable. Other tiered certifications include Registered Landman (RL) and Registered Professional Landman (RPL), which each have varying requirements.

CPLs demonstrate a higher standard accepted among the industry, the public, clients and employers for their ability to handle complex legal issues related to land ownership, comprehensive competency, and ethical professionalism in the field.

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School of Energy Resources Celebrates Fall 2024 Graduates

The School of Energy Resources (SER) is pleased to announce the graduates for fall 2024.

The winter commencement ceremony acknowledged the achievements of students completing a Bachelor of Science degree in Energy Resource Management and Development (ERMD), a certificate in Land Administration, and a minor in Energy Resource Management (ERM).

Stratton Kohr of Gillette, Wyo. graduated with his ERMD degree with a concentration in Professional Land Management (PLM). **Hallie Jette** of Buffalo, Wyo., picked up her certificate in Land Administration. Jette, complements her ERMD degree with a concentration in Energy and Environmental Systems (EES), to bolster her credentials and create additional job opportunities for herself.

Finally, **Sasha Putnam** of Wheatland, Wyo. graduated with a minor in ERM. Putnam earned a Bachelor of Science in Geology from the College of Engineering and Physical Sciences



Pictured: Stratton Kohr

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UW Students Provide Disaster Mapping Assistance After Hurricane

Two Energy Resource Management and Development (ERMD) students joined the UW professor-led efforts to help with mapping damaged homes, buildings and other infrastructure in Florida caused by Hurricane Milton.

Led by Instructional Professor **Ramesh Sivanpillai** in the School of Computing and Wyoming Geographic Information Science Center, 32 UW students -- including SER's **Friets Menanti** and **Jaineth Youwe** -- participated in disaster mapping sessions. Federal and state management agencies will use the maps generated by UW and other volunteers to conduct field visits and assessments.

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ACADEMICS

UW Students Attend Denver Association of Professional Landman Event

Led by Senior Program Coordinator **Tanner McClure**, students in the Professional Land Management (PLM) concentration of the Energy Resource Management and Development degree program attended a networking event hosted by the Denver Association of Professional Landmen (DAPL).

As part of the PLM program, students are encouraged to attend networking events throughout the year to develop their professional skills and connect with industry partners.

Students that attended the regional event included **Ainsley Harris, Gwen Andala, Kendall Klos, Rachel Reese, Lars Quinlivan, Davod Moraz-Ordonaz, and Connor Fleming.**



Academics Highlights

- SER's Professional Land Management Program Co-Director **Kristen Pritchett** was named to The Energy Leadership Institute's EnGen Leadership Program for 2025.
- Wyoming will be represented at the 2025 NAPE Summit and Expo. In addition to a cohort of students from the School of Energy Resources in attendance and hosting a booth on the exhibition floor, **Governor Mark Gordon** will be speaking on the Governors Forum, and SER Professor of Law and Occidental Chair in Energy and Environmental Policies **Tara Righetti** will speak on a panel at the Energy Business Conference.
- Two new nuclear certificates in partnership with the College of Engineering and Physical Sciences were approved by the Board of Trustees. They are awaiting a final approval from the Higher Learning Commission before they are open to UW students.
- The School of Energy Resources will once again host the Rocky Mountain Professional Landman Conference in spring 2025! Mark your calendars and save the date!

Governors Forum

Join this panel of U.S. governors as they share perspectives on energy policy, state-level initiatives and the future of energy in their respective regions. Gain insight from Oklahoma Gov. Kevin Stitt and Wyoming Gov. Mark Gordon on how their state governments address challenges and opportunities in the evolving energy landscape.



Energy Business Conference Seekers

Explore the future of energy demand and the strategies needed to meet the world's growing energy needs. Panelists will discuss technological innovations, policy developments, and market dynamics shaping energy supply in the coming decades.



Future Energy Demand: Strategies to Meet Global Needs
Moderator: Dr. William J. D'Amico, PhD
Panelists: Josh Voss | EPP & CDD, Expanded Energy
Chris Wright | CCS, Unleash Energy
Tara Righetti | Occidental Chair of Energy & Environmental Policy,
University of Wyoming

ROCKY MOUNTAIN PROFESSIONAL LANDMAN CONFERENCE

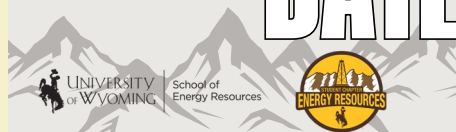
April 9th, 2025

Welcome Networking Reception
5 PM - 7 PM
Energy Innovation Center
2nd Floor Lobby

April 10th, 2025

Rocky Mountain Landman Conference
8:15 AM - 4:30 PM
UW Conference Center

SAVE THE DATE



RESEARCH

Center for Energy Regulation and Policy Analysis

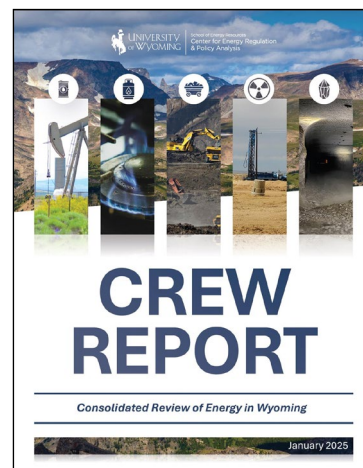
UW School of Energy Resources Releases 'Consolidated Review of Energy in Wyoming' Report

The "Consolidated Review of Energy in Wyoming (CREW)" report from the University of Wyoming School of Energy Resources' (SER) Center for Energy Regulation and Policy Analysis (CERPA) is now available. The CREW report will be updated each month to provide data and information about Wyoming's energy sector.

The CREW report summarizes key takeaways from current economic indicators; provides an overview of Wyoming's energy sectors, including crude oil, natural gas, coal, uranium, wind energy, soda ash and electricity generation; details employment trends; and provides updates on state tax collections.

The report was created and will be maintained by **Dawson Kluesner**, an assistant research professional specializing in energy economics in CERPA.

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CERPA Releases Fourth Paper in Nuclear White Paper Series on Heat Applications

The Center for Energy Regulation and Policy Analysis (CERPA) in the School of Energy Resources (SER) released a new white paper quantifying the economic outcomes of potential non-electricity uses of nuclear power in Wyoming.

Authored by **Alex Gebben**, an energy economist in the UW Center for Business and Economic Analysis, the paper is the fourth in a series of six white papers exploring and evaluating different aspects of developing an integrated nuclear industry in Wyoming.

Previous papers in the series explore the feasibility of uranium enrichment, uranium recovery, and nuclear component manufacturing in Wyoming. The forthcoming papers to round out the series will evaluate other aspects of the nuclear supply chain including spent fuel storage and recycling, and nuclear produced electricity.

[READ MORE >](#)

Hydrogen Energy Research Center

UW Research Group Publishes Two Articles in Leading Hydrogen Energy Journal

A University of Wyoming research group led by **Chengyi "Charlie" Zhang**, an associate professor in the Department of Civil and Architectural Engineering and Construction Management, published back-to-back articles in the *International Journal of Hydrogen Energy*, the leading journal for hydrogen research.

Dubbed the Construction Research and Innovation Lab, the group includes graduate and doctoral students, as well as postdoctoral researchers dedicated to advancing the field of construction research and innovation.

Both publications are a result of support from the Phase I request for proposals seed funding opportunity issued by SER's Hydrogen Energy Research Center (H₂ERC).

[READ MORE >](#)

Center for Economic Geology Research

UW SER Selected to Lead Critical Mineral and Material Coalition by DOE

The University of Wyoming School of Energy Resources (SER) has been selected to receive \$7.5 million from the U.S. Department of Energy's (DOE) Office of Fossil Energy and Carbon Management to lead a regional coalition expanding a domestic critical mineral and materials supply.

The project, totaling more than \$10.1 million, will assess the carbon ore, rare earth and critical mineral (CORE-CM) potential of the Great Plains and Interior Highlands, which is composed of 10 states and four basins first studied under Phase I of DOE's initiative.

Part of a national strategy to find alternative domestic sources of rare earth elements and critical minerals, the DOE investment will expand the focus from basin-level to regional-scale in order to accelerate the development of critical mineral and materials supply chains. These include novel nonfuel carbon-based products from secondary and unconventional feedstocks, such as coal and coal waste.

The project team is led by co-principal investigators **Tyler Brown**, an SER associate research professional; **Dave Aadland**, director of UW's Center for Business and Economic Analysis and a UW professor of economics; along with **Selena Gerace** and **Davin Bagdonas**, both SER senior research professionals.

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Wyoming Integrated Test Center

Wyoming Integrated Test Center 2024 Year-in-Review

2024 was a year marked with some of the greatest achievements yet for the Wyoming Integrated Test Center (ITC). A testing facility enabling technology developers to assess their carbon capture technologies using actual coal-based flue gas, the ITC continued to drive innovation and accelerate the feasibility of those technologies for a future deployment in various capacities to support wide-scale development and the fossil fuel industry.

The ITC continues to see strong interest from developers and the Department of Energy (DOE) with many contracts and leases in place to facilitate testing. Additionally, some tenants received notice of major funding selections in which the ITC playing an integral role in the success of their proposals. The year also saw the completion of one project, and the completed construction of another to commence the largest-scale testing in the history of the facility.

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Research Highlights

- *The Center for Carbon Capture and Conversion (CCCC)* successfully completed construction of its scaled-up Solvent Extraction Pilot Plant. Converting coal into a liquid feedstock for novel coal-derived products, the plant will provide much needed samples for both roofing and paving research facilities to vet the products for wide industrial use.

- *The 3D Visualization Center (Viz Center)* replaced the CAVE with a large, direct-view LED display. The new display is fully functional, with powerful visualization, collaboration, and development capabilities.



Pictured: Energy Resources Council board members visit the Viz Center to see technology upgrades.

OUTREACH

Hydrogen Energy Research Center Hosts Workforce Development Workshops

Led by Assistant Research Professional **Sarah Buckhold**, the Hydrogen Energy Research Center (H₂ERC) hosted two workshops at community colleges on workforce training opportunities in the hydrogen industry, in partnership with the Department of Workforce Services.

The workshops discussed potential opportunities in a hydrogen industry in Wyoming and connect attendees with resources. One workshop was held November 13 at the Cheyenne campus of Laramie County Community College, and the other presentation was held on November 15 at Casper College.



UW's Zhai Develops Upgrade to Fossil Fueled-Fire Power Plant Software Tool

Haibo Zhai, a University of Wyoming professor of civil and architectural engineering and construction management in the University of Wyoming College of Engineering and Physical Sciences, is spearheading the continued development and use of a software tool for calculating the performance, emissions and cost of fossil fuel-fired power plants.

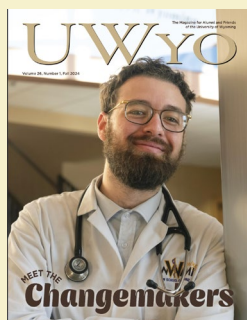
The Integrated Environmental Control Model (IECM) is a publicly available computer model for preliminary design and analysis of clean electricity generation technologies employing fossil fuels with carbon capture and storage. It is intended for use by engineers, researchers, technology developers and policy analysts to systematically analyze the cost and performance of fossil fuel power plants of various types and emission control designs. The IECM allows users to easily design the plant to be modeled, and to get results quickly for a variety of technology options.

This software tool has been applied to evaluate the technical and economic impacts of Wyoming's Reliable and Dispatchable Low-Carbon Energy Standards and to explore the potential for carbon capture and storage deployment in the state's electric power sector. The associated 2022 article was published in *Environmental Science & Technology* in collaboration with the School of Energy Resources.

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Outreach Highlights

- SER was featured multiple times in the latest edition of *UWyo Magazine*! Read articles about produced water, SER students and faculty, innovative outreach, and more! **READ HERE >**



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



- Senior Director of Research **Scott Quillinan** presented in his hometown of Evanston, Wyo. as part of **Governor Mark Gordon's** townhall meeting. Quillinan spoke on a panel alongside other energy professionals serving Wyoming.



- Don't forget to tune into the School of Energy Resources podcast, "*Energy Frontier: The Wyoming Landscape*," to learn about innovative energy research and projects in Wyoming! Available to listen to on all streaming platforms. **LISTEN NOW >**



PHILANTHROPIC SUPPORT

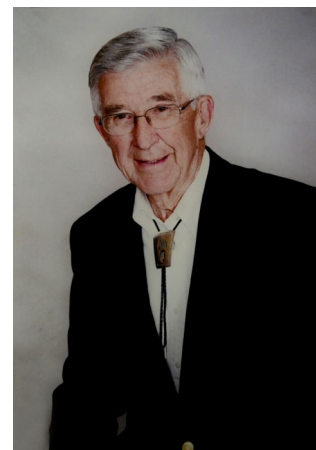
James Nielson Legacy Gift Continues to Make Lasting Impact at UW

A significant gift to the James Nielson Excellence Fund in the University of Wyoming School of Energy Resources (SER) will bolster the fund that has benefited energy-focused students, faculty and staff since its inception in 2006.

The gift from the estate of the late **James "Jim" Nielson** was matched dollar for dollar by the state of Wyoming.

In addition to supporting students within SER committed to making a difference in the energy sector, the Nielson Excellence Fund has provided a mechanism to support students in related fields on collaborative projects.

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EOG Resources' Gift for Reclamation Project Matched Through UW School of Energy Resources

The University of Wyoming's Sheridan Research and Extension Center has received a key gift from EOG Resources Inc. to advance research on reclamation and to combat invasive plant and grass species in northeast Wyoming.

The gift – part of the UW School of Energy Resources' (SER) mission to support the energy industry – was doubled by state matching funds through SER.

This long-term project is under development in the College of Agriculture, Life Sciences and Natural Resources' Sheridan Research and Extension Center in cooperation with the Buffalo Field Office of the Bureau of Land Management (BLM). It is focused on improving rangeland restoration in the state, particularly as it relates to native plant species in and around the Powder River Basin.

Specific work on the project is being spearheaded by **Donna Harris**, an assistant professor of plant sciences who also holds the E.A. Whitney Endowed Professorship of Agriculture, and **Brian Mealor**, director of the Sheridan Research and Extension Center.

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Donna Harris



Brian Mealor

Navajo Energy Company Partners with UW School of Energy Resources to Power Wyoming's Energy Future

The University of Wyoming has received a key gift from Navajo Transitional Energy Company (NTEC) to support research in UW's School of Energy Resources (SER).



The gift will establish the Navajo Transitional Energy Company School of Energy Resources Excellence Fund, which will facilitate SER's efforts to bolster Wyoming's energy industry. The gift was doubled by the state's matching program.

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MAKE A GIFT

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New Faces at the School of Energy Resources

The University of Wyoming School of Energy Resources experienced another year of tremendous growth and unprecedented project announcements. Throughout the year, our team worked tirelessly to recruit top tier talent to meet the workforce requirements to successfully execute our new projects. We would like to recognize the individuals that came on board during the year and share the same drive, passion and sense of commitment with the SER team in pursuit of our mission to advance energy-driven economic development for the State of Wyoming.



Pictures are in no particular order. Visit our [staff directory >](#) for more details.

Jurisprudence of Underground Law & Energy

Scarlett Forrest

Center for Carbon Capture and Conversion

Mark Behrens

Center for Economic Geology Research

Tim Fischer

Cole Messa

Energy Engagement, Leadership & Careers

Pallavi Pokharel

Madison Mankin

3D Visualization Center

Rachel Toner

Center for Energy Regulation & Policy Analysis

Matt Fry

Dawson Kluesner

Hydrogen Energy Research Center

Sarah Buckhold

Robert Cincotta

Outreach

Peighton Hayes

Academics

Ashli Tomisich

Heather Chandler

Bryan Leonard

Jennifer Bell

Administration and Finance

James Christensen

Research

Martha Reisch

Kaleb Peterson



School of
Energy Resources