

THE *Core* SAMPLE

Internal Newsletter of the School of Energy Resources

October | 2023

UW TEAM RECEIVES WIP FUNDING FOR NEW BLUE HYDROGEN PROJECT

The Wyoming Innovation Partnership (WIP) has selected the University of Wyoming to receive \$693,514 in support of creating a new hydrogen economy.

The project, “Advancing Blue Hydrogen Production and Transport Infrastructure in Wyoming,” examines the technical, economic, environmental, social and policy issues related to nuclear-powered hydrogen produced from conventional and renewable gas resources in Wyoming.

The project phase will be completed at the end of a 12-month period and is led by faculty and researchers in UW’s Department of Civil and Architectural Engineering and Construction Management and the School of Energy Resources (SER), and in collaboration with Western Wyoming Community College (Western), the Wyoming Department of Workforce Services and Idaho National Laboratory.

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JCOAL AND KAWASAKI HEAVY INDUSTRIES COLLABORATE WITH UW’S SER ON MAJOR PROJECT

Japan Carbon Frontier Organization (JCOAL) and its partner, Kawasaki Heavy Industries (KHI), held a ceremony Oct. 9 to mark the construction completion of their solid sorbent capture technology at the Wyoming Integrated Test Center (ITC). The facility is adjacent to Basin Electric Power Cooperative’s Dry Fork Station near Gillette.



The ceremony came on the same day SER signed a memorandum of understanding (MOU) with JCOAL to further strengthen the partnership and bolster mutual interests and benefits from applied energy research.

The new partnership with SER will allow the parties to further share technical expertise and project guidance and will promote the transfer of clean coal technologies and CCUS in the U.S. and Japan.

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HIGHLIGHTS

Research Centers of Excellence

- Madeleine Lewis, Selena Gerace, and Erin Phillips in the *Center for Economic Geology Research (CEGR)* presented at the International Pittsburgh Coal Conference in Istanbul, Turkey in early October. All three presented a talk titled "Building Environmental Justice and Equity into the Development of Critical Minerals Industries" and Phillips presented a talk titled "Critical Minerals and Rare Earth Elements in Powder River Basin Coal and Associated Sediments, Wyoming, USA".



- Research Scientist Lily Jackson and Program Manager Erin Phillips in *CEGR* played major roles in the organization of the Geological Society of America meeting in Pittsburgh, Penn. Additionally, both presented at the meeting along with SER funded students in the department of Geology & Geophysics. Full profile coming soon!



To submit news and updates
email: Christine.reed@uwyo.edu



UNIVERSITY
OF WYOMING

School of
Energy Resources

SCHOOL OF ENERGY RESOURCES EXECUTIVE DIRECTOR HOLLY KRUTKA HONORED AS 2023 WOMAN OF INFLUENCE

UW's Executive Director of the School of Energy Resources **Holly Krutka** was honored by the Wyoming Business Report as a 2023 Woman of Influence.

Created in 2013, the Wyoming Business Report has been recognizing influential women working within the state that exemplify leadership, creativity, ethical business practices, innovative thinking, unquestionable character, and more, in order to acknowledge and celebrate their contributions to Wyoming communities. This year, the Wyoming Business Report received a record number of nominees with 89 nominations over 18 categories.

Krutka was recognized as the 2023 honoree in the category of Energy, Mining and Utilities, receiving multiple nominations from UW faculty, staff, community members, and industry partners around the state.

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UW STUDENT RECEIVES DOE GRADUATE STUDENT RESEARCH PROGRAM AWARD

A University of Wyoming graduate student will continue her research on rare earth elements, and she will do it at a renowned national laboratory.

Ellen Polites, a fifth-year Ph.D. geology student from York, Pa., is the recipient of a U.S. Department of Energy (DOE) Office of Science Graduate Student Research (SCGSR) Program Award. She will conduct her research fellowship at Pacific Northwest National




Laboratory in Richland, Wash., from January through June on the topic of "Unraveling new reactive transport pathways of multi-phase REE (rare earth element) cycling in low temperature basins."

In 2020, Polites was a recipient of DOE's Mickey Leland Energy Fellowship. She worked remotely with Pacific Northwest National Laboratory researchers and published a study titled "Exotic Carbonate Mineralization Recovered From a Deep Basalt Carbon Storage Demonstration" in the journal *Environmental Science & Technology*. That research was part of the UW School of Energy Resources' Wyoming CarbonSAFE Project, which is working to develop carbon capture, storage and utilization technologies. [Continue Reading >>>](#)



HIGHLIGHTS

Research Cont.

- **CEGR** was present at the public comment meetings for the proposed Class VI injection wells in Sweetwater County by Frontier Carbon Solutions on Oct. 4 in Green River and Oct. 24 in Rock Springs. 
- Research Scientist **Resham Thapa** in the *Center for Carbon Capture and Conversion* attended the Tri-Society (ASA, CSSA, SSSA) International Annual meeting of 2023 in St. Louis, Missouri. Thapa presented the SAREC Lingle field research results under the title of "Assessing Corn Grain Yield and Soil Properties with the Application of Pyrolyzed Coal As a Soil Amendment in Alkaline Sandy Loam Soil." 
- **Hydrogen Energy Research Center (H₂ERC)** Director **Eugene Holubnyak** presented at the SPE ATCE meeting on a panel about ESG tech and hydrogen.
- **Eugene Holubnyak** presented at the first EAGE Workshop on Hydrogen & Carbon Capture Sequestration in Latin America in Medellin, Colombia. 
- **Jonathan Naughton** in the *Wind Energy Research Center (WERC)* provided wind mechanical expertise to the NASA-Langley research team on a study of space launch systems in a wind tunnel.

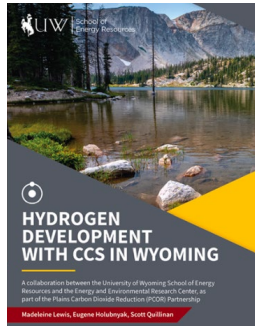


SER'S CENTER FOR ENERGY REGULATION AND POLICY ANALYSIS RELEASES PUBLICATION ON HYDROGEN DEVELOPMENT WITH CARBON CAPTURE AND STORAGE IN WYOMING

The School of Energy Resources' (SER) Center for Energy Regulation and Policy Analysis (CERPA) has released a study examining the development of a hydrogen industry in Wyoming when paired with carbon capture and storage (CCS) technology.

The paper is the result of a collaboration between SER and the Plains Carbon Dioxide Reduction (PCOR) Partnership.

Led by CERPA Research Scientist **Madeleine Lewis**, the paper provides an overview of existing and developing applications for hydrogen, a description of existing hydrogen production methods (aka the "Hydrogen Rainbow"), and the increasing demands and incentives for hydrogen deployment. [Continue Reading >>>](#)



UW HOSTED ENERGY LAW AND POLICY IN THE ROCKIES CONFERENCE OCT. 13

The University of Wyoming celebrated the 10th annual Landscape Discussion on Energy Law and Policy in the Rockies Friday, Oct. 13.



The conference focused on energy-related legal, regulatory and policy issues of current interest in Wyoming and the Rocky Mountain region. UW's School of Energy Resources (SER), the UW Haub School of Environment and Natural Resources and the UW College of Law's Center for Law and Energy Resources in the Rockies (CLERR) hosted the conference.

The conference brought in energy experts from across the nation to discuss important issues across the spectrum of energy topics in Wyoming. The agenda featured keynote speakers, including **Todd Parfitt**, director of the Wyoming Department of Environmental Quality; and **John Litynski**, former director of carbon transport and storage from the U.S. Department of Energy's Office of Fossil Energy and Carbon Management.

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HIGHLIGHTS

Academics

- SER Professor of Law and Occidental Professor Energy and Environmental Policies **Tara Righett** and Associate General Counsel **Kris Koski** from the Secretary of the Air Force spoke on a federal lands panel at an event hosted by the AAPL in Denver.
- SER Adjunct Professor **Temple Stoellinger** is going to be part of a Department of Energy grant exploring improved processes for consent-based siting for the storage of spent nuclear fuel. [READ MORE >](#)
- Students in the ERMD program held a pumpkin carving contest as part of their student activities led by the Student Chapter for Energy Resources.



Outreach

- SER Senior Director of Research was quoted in an article from *Cowboy State Daily* discussing the state's investment in the Mowry Project. [READ HERE >](#)
- The *Energy Solutions* podcast episode featuring *Center for Energy Regulation and Policy Analysis (CERPA)* Director **Kara Fornstrom** was released. [LISTEN NOW >](#)

SCHOOL OF ENERGY RESOURCES PARTICIPATES IN UW GIVING DAY 2023

The University of Wyoming (UW) is once again engaged in a campus-wide initiative to foster philanthropic giving in support of UW programs, departments, and students on October 25-26, 2023 from noon-noon.

Over the 24-hour period, donors are encouraged to give to their favorite programs and engage in challenges and matching fund opportunities to subsidize scholarship, enrichment activities, and program development for continued student success and in support of cutting-edge research.

While SER works diligently to provide innovative research to the state, it is also focused on providing a quality education for the future energy leaders of Wyoming. This year, the School of Energy Resources is hoping to reach a fundraising goal of \$15,000 in support of the Energy Resource Management and Development (ERMD) program and for general operations at SER.

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SCHOOL OF ENERGY RESOURCES REPRESENTS REGIONAL PARTNERSHIPS AT GLOBAL ASSEMBLY

Tara Righetti, the Occidental Chair in Energy and Environmental Policies and a professor of law, represented the School of Energy Resources (SER) at the Arctic Circle Assembly, Oct. 19-21 in Reykjavik, Iceland alongside SER Director of Outreach **Christine Reed**.



Righetti and Reed appeared with INL-led Emerging Energy Markets Analysis (EMA) initiative in a panel discussion focused on work conducted as part of the INL Frontiers Initiative, which is enabling global competition in low-emission industries, including the resulting impact on Arctic strategies and security.

The topics discussed at the assembly align well with EMA's role to help entities transition to low emission-based energy strategies, plus products and services to increase U.S competitiveness in regional and global markets. EMA provides information about integrated capabilities for the Frontiers Initiative, which works with stakeholders in nuclear first-mover states – Alaska, Wyoming, Idaho and Utah – to secure U.S. leadership in the new economic frontier.

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HIGHLIGHTS

Outreach Cont.

- SER Executive Director **Holly Krutka** visited the LaBarge facility operated by ExxonMobil along with representatives from UW leadership.



Integrated Test Center

- The Wyoming Integrated Test Center was featured on Season 15 Episode 7 of *Wyoming Chronicle* by Wyoming PBS. SER Senior Director of Research **Scott Quillinan** and ITC Stakeholder Relations Director **Jason Begger** discuss the exciting activities taking place at the ITC and how they can help the state. [WATCH NOW >](#)



General

- Individuals who drive on University of Wyoming business during 2024 need to make a new request by Sunday, Dec. 31. This applies to all driving, whether doing so in a personal, rental or UW vehicle. Electronic requests can be made [HERE >](#)

SCHOOL OF ENERGY RESOURCES WELCOMES SABRINA KAUFMAN TO OUTREACH TEAM

The School of Energy Resources (SER) welcomed **Sabrina Kaufman** to the outreach team in September.

A talented graphic artist and design professional, Kaufman will employ her creativity in support of the community outreach and engagement efforts for the research projects at SER. In particular, she will work with the research Centers of Excellence to assist with outreach deliverables and milestones on topics ranging from carbon management, carbon conversion, and advanced oil recovery to nuclear, hydrogen, and energy law and policy.

Having previously worked as a graphic designer at UW since 2019, Kaufman's work has graced departments all over campus, including the Residence Life & Dining Services and the Center for Student Involvement and Leadership. Prior to her employment at UW, she worked for vertical farm company Plenty, tasked with both marketing directives and creating educational materials.

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JAMES AMATO JOINS 3D VISUALIZATION CENTER IN THE SCHOOL OF ENERGY RESOURCES

The School of Energy Resources is pleased to welcome **James Amato** as a Research Scientist in the 3D Visualization Center. In his new role as a GIS Analyst, Amato will provide technical support to the research team at SER, specializing in 3D geologic models and interactive applications for outreach and analysis.

A native of Wisconsin, Amato received his B.S. and M.S. degrees in Geosciences from the University of Wisconsin-Milwaukee with an emphasis in sedimentology, glacial geomorphology, and geophysics.

At SER, Amato will be leveraging his extensive experience and technical expertise to help create tools that are useful to both industry partners looking to engage in emerging energy technologies, and also to stakeholders and community members looking to fully understand the changing energy landscape.

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UW CHEMICAL ENGINEERING GRADUATE JOINS SER'S CENTER FOR CARBON CAPTURE AND CONVERSION

The UW School of Energy Resources (SER) is pleased to welcome **Yi Yao** to the research team in the Center for Carbon Capture and Conversion (CCCC).

A native of Xian, China, Yao attended Northwest University in China earning both a bachelor's degree and master's degree in chemical engineering. He came to the University of Wyoming in 2016 to earn his Ph.D. in chemical engineering, graduating in spring 2023.

In September, Yao joined the CCCC in a permanent capacity as an assistant research scientist. In his new role, he will continue to work on the solvent extraction pilot plant in the hopes of scaling it up and optimizing the process technology.

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SER'S CENTER FOR ECONOMIC GEOLOGY RESEARCH WELCOMES DAN EAKIN TO THE RESEARCH TEAM

The School of Energy Resources (SER) is pleased to welcome Dan Eakin to the Center for Economic Geology Research (CEGR) as a senior research scientist. In his new role, he will lead the geophysics efforts in CEGR and manage projects.

A Wyoming and Laramie native, Eakin earned his B.S. in Geology and Geophysics from the University of Wyoming in 2009 followed by his Ph.D. in Marine Geology and Geophysics from the University of Texas at Austin in 2014. He went on to earn an additional M.E. degree in Data Science from Rice University in 2022.

He brings a multitude of leadership and project management skills to the new role having served at Chevron for nearly 7 years as a geoscientist, scrum master, and business analyst.

His industry background has also led to multiple publications, advancing research related to seismic activities and the geophysics of oil and gas production.

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SER BIRTHDAYS!

OCTOBER

Kristi Russow, Oct. 1

Will Lawler, Oct. 5

Erin Phillips, Oct. 8

James Amato, Oct. 8

Matt Johnson, Oct. 23

Kris Koski, Oct. 27

Stefan Holberg, Oct. 29

Reminder: If you want your birthday recognized, please update your information with Kristi Russow at krussow@uwyo.edu.

IMPORTANT DATES

- **CORE-CM Annual Meeting for the GGRB-WRB**
November 2, 2023
- **Slides Due for Presenting Directors**
November 10, 2023
- **ERC Joint Meeting with the UW Board of Trustees**
November 16-17, 2023
- **Thanksgiving Break**
November 23-24, 2023
- **Alex Epstein Public Presentation and Book Signing**
November 30, 2023
- **Last Day of Classes**
December 8, 2023
- **SER Holiday Gathering**
December 13, 2023
- **Fall 2023 Commencement Ceremony**
December 16, 2023
- **Holiday and Winter Closure**
December 25 - January 2, 2023

ENERGY JOKE

