

School of Energy Resources Update
May 11, 2022

1. SER Academics program update:
 - a. SER has recently emphasized increasing enrollment in its academic program and is now seeing results. For example, for the following fall, in May 2021 SER had 3 admitted students, while in May 2022 SER has 20 admitted students.
 - b. SER and the College of Law have submitted the quick start proposal for a 3+3 program in which students could earn a BS in Energy Resource Management and Development and a Juris Doctorate in six years. In addition to being a recruiting tool, this program may help retain top-performing students interested in attending law school. This is in the final step of approval – UW Faculty Senate.
 - c. SER hosted the reaccreditation team in April for its Professional Land Management (PLM) concentration. This reaccreditation is required every five years.
2. SER is in the process of hiring several research staff positions, many of which are soft funded. It is currently challenging to hire and retain entry-level researchers.
3. The SER research program received funding in the latest legislative session to administer several new initiatives in the upcoming biennium, including:
 - a. Complete an economic feasibility study on using anthropogenic carbon dioxide in concrete used in public work projects
 - b. Investigate feasibility of a Wyoming Carbon Storage Hub
 - c. Support the creation of the Hydrogen Energy Research Center
 - d. Support capacity building at UW and across Wyoming focused on nuclear energy

SER also continues to recruit and grow the talent within the SER-supported Centers of Excellence. SER Centers of Excellence are created to focus multidisciplinary teams on a shared energy topic, funding opportunity, or specific emerging energy challenge. An updated list of the staff and faculty led Centers of Excellence supported by the School of Energy Resources includes:

Staff led centers include:

- Center for Economic Geology Research
- Center for Carbon Capture and Conversion
- Center for Energy Regulation and Policy Analysis
- Hydrogen Energy Research Center
- Nuclear Energy Research Center
- 3D Visualization Center

Faculty led centers include:

- Center for Air Quality, housed in Atmospheric Science
- Center for Produced Water Management, housed in Civil & Architectural Engineering
- Wind Energy Research Center, housed in Mechanical Engineering

The Nuclear Energy Research Center (NERC) is charged with organizing UW efforts on nuclear energy and to catalyze capacity building statewide. Recently, NERC issued a campus wide RFP

for summer graduate assistantships and incentives for competitive proposal prep. NERC received several responses for each request and awarded four students to receive summer GA's, (two in Mechanical Engineering, one in Chemistry, and one in the Haub School) and two faculty members for proposal prep (Mechanical Engineering and the Haub School).

4. SER's Center for Economic Geology Research (CEGR) continues its research on carbon storage, hydrogen and critical minerals research. Select highlights include:
 - a. In SER's flagship CO₂ storage project, the Wyoming CarbonSAFE project, two wells have been completed to Class VI standards (the type of wells required for CO₂ injection). Interference testing is scheduled for June and several high-level Department of Energy officials have expressed an interest in observing the project.
 - b. The CORE-CM projects, which are focused on building new industries in carbon ore, rare earths and critical minerals in the Powder River Basin and the Greater Green River Basin, continued to hold stakeholder meetings, with over 100 entities involved in those projects.

5. SER's Center of Excellence for Carbon Capture & Conversion (CCCC) continues to progress research and technology development associated with the future of Wyoming coal.
 - a. SER has worked with the UW legal and facilities teams to prepare a contract and lease to be presented to the BOT required for field demonstration construction of a coal refinery.
 - b. The coal-derived building products demonstration house is largely complete. It will be tested over the coming year to observe the impact of Wyoming's extreme weather conditions on these coal-derived building products.

6. The Center for Energy Regulation and Policy Analysis (CERPA)
 - a. This center is preparing a research report on Wyoming natural gas and how increased production in other regions is pressuring production in the state – and potential solutions for the state to sustain production.
 - b. CERPA is also supporting the Center for business and Economic Analysis on the impact of land ownership (federal, state and private) for Wyoming wind development.