INDUSTRY PROFILE

NUCLEAR

Wyoming BUSINESS COUNCIL

ENERGY LEADER

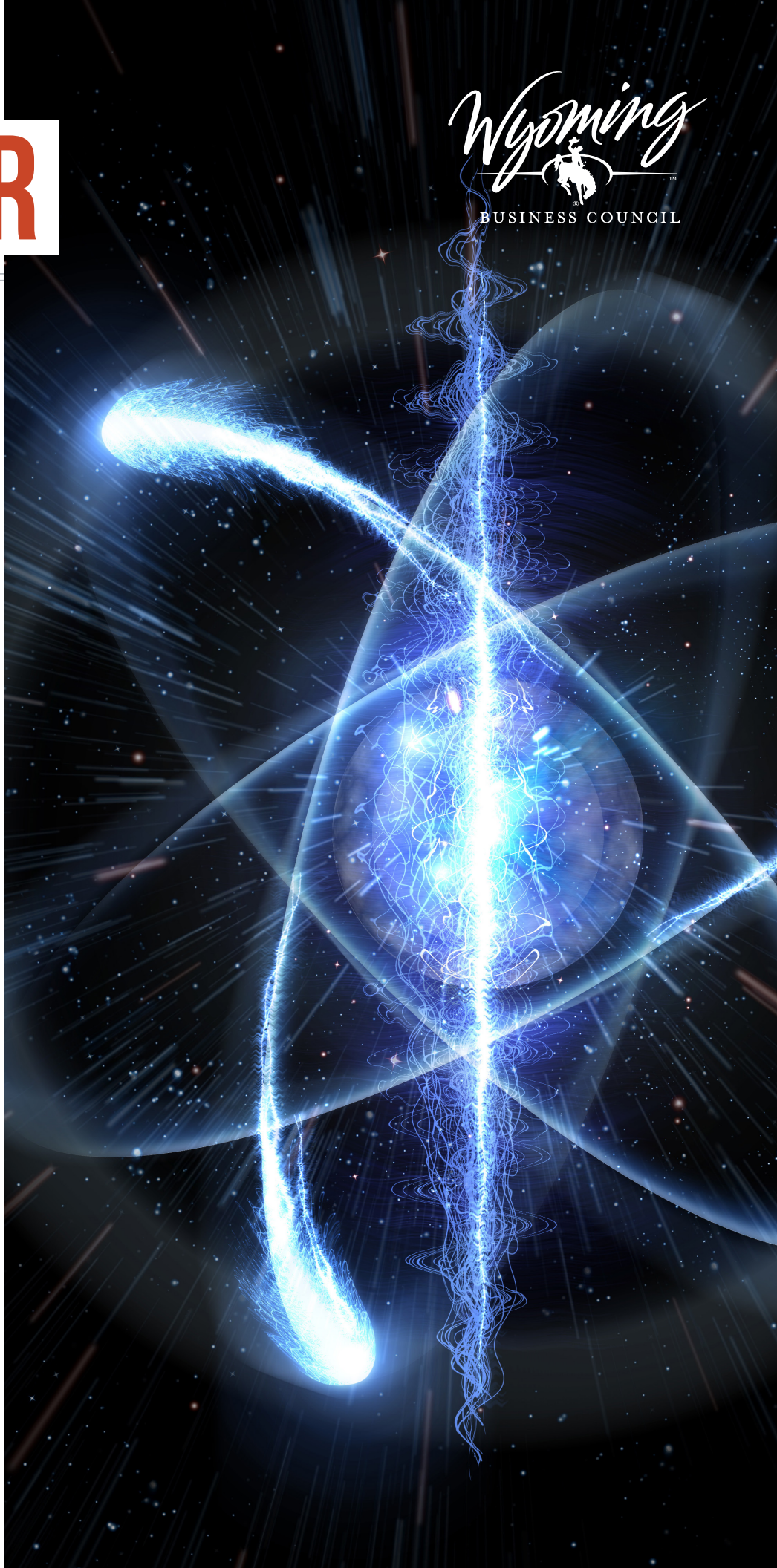
Wyoming is known as the “Energy State,” and for good reason. Wyoming consistently ranks high in traditional, emerging, and renewable energy sources. In November 2021, TerraPower and PacifiCorp announced the selection of the Naughton Plant in Kemmerer, Wyoming, as the site of the Natrium™ advanced nuclear reactor demonstration project.

BUSINESS ENVIRONMENT

Wyoming has been a leader in energy for more than 100 years and is home to a highly-skilled, well-trained workforce. Wyoming knows what it takes to support major energy projects, and the state has a history as the nation’s leader on energy issues. Many utilities have made significant investments in Wyoming’s grid. Our state is pleased to be the home of this next generation of nuclear power facilities.

NUCLEAR ENERGY INDUSTRIAL DEVELOPMENT

As nuclear energy undergoes a renaissance in the United States, the state of Wyoming is on the forefront of nuclear energy research, development, and value-added industrial development in this space. Repatriating and growing the nation’s energy supply chain, especially the supply chain around nuclear energy, is critical for our nation’s security. Wyoming companies are engaged with leading nuclear energy companies to supply critical components ensuring new nuclear technologies will be ready to deploy.



SUPPORTED ENERGY RESEARCH CENTER

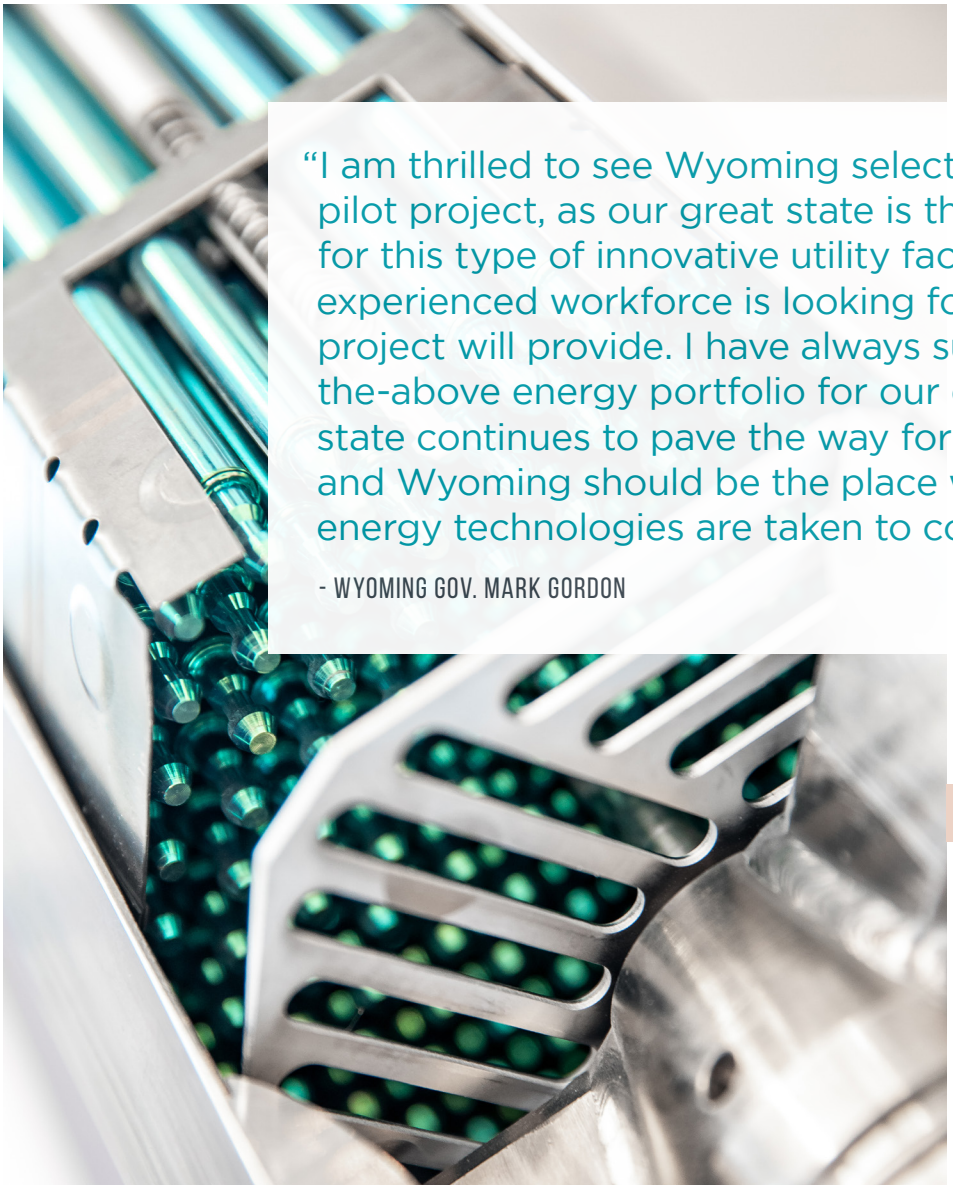
University of Wyoming, School of Energy Resources Nuclear Energy Research Center. NERC seeks to connect and provide opportunities for research, economics, regulation and more in emerging nuclear energy markets and tackle important issues to help create a robust nuclear economy in Wyoming and the region.

ADVANCED REACTOR TECHNOLOGY

The Natrium technology enhances safety, relying on natural forces and advanced design making it inherently safe. The reactor has a net negative power coefficient, which means that if the temperature goes up, the reactor will naturally respond by reducing power. In addition, the Natrium reactor operates at atmospheric pressure and uses sodium, instead of water, as its coolant. The reactor operates at a temperature more than 350 degrees C below the boiling point of sodium. This gives the operator plenty of time to respond to any unusual event. Further, the Natrium reactor is a pool-type reactor, so there are no penetrations in the reactor vessel below the upper closure, which eliminates the possibility of a leak or loss of coolant accident. The design also relies on natural forces, like gravity and hot air rising, to cool the reactor if an unexpected shutdown occurs.

DEMONSTRATION SITE

The demonstration plant is intended to validate the design, construction, and operational features of the Natrium technology. The energy storage capability allows the plant to integrate seamlessly with renewable resources. Along with PacifiCorp and GE Hitachi Nuclear Energy, members of the demonstration project team include engineering and construction partners Bechtel, Energy Northwest, Duke Energy, and nearly a dozen additional companies, universities, and national laboratories.



"I am thrilled to see Wyoming selected for this demonstration pilot project, as our great state is the perfect place for this type of innovative utility facility, and our coal-experienced workforce is looking forward to the jobs this project will provide. I have always supported an all-of-the-above energy portfolio for our electric utilities. Our state continues to pave the way for the future of energy, and Wyoming should be the place where innovative energy technologies are taken to commercialization."

- WYOMING GOV. MARK GORDON

FOR MORE INFORMATION

Wendy Lopez
wendy.lopez@wyo.gov
307.777.2806

Chance Price
chance.price@wyo.gov
307.286.2550