

Comments on HB 1452

Chairman Porter, and members of the committee, my name is Charlie Gorecki. I am the CEO of the University of North Dakota (UND) Energy & Environmental Research Center, more commonly known as the EERC. The EERC is a nonteaching arm of UND, and under the auspices of the state of North Dakota, we are focused on providing practical pioneering solutions to the nation's vexing challenges at the nexus of energy and the environment.

The EERC is pleased to provide the following brief commentary regarding the challenges facing North Dakota's energy producers and our views on how HB 1452 could facilitate the sustainable development of North Dakota's abundant natural resources that are so vital to our existing and future economy. Our world-renowned Bakken resource represents approximately 10% of current domestic oil production. Similarly, our Fort Union lignite resource represents the largest minable lignite resource on the planet, with more than 800 years of minable resource at current mining rates. Finally, our state leads the nation in the production of barley, durum wheat, sunflowers, flaxseed, and honey and ranks among the top few producers of numerous additional agricultural commodities. Put simply, our state is a critical producer of those natural resources that mobilize, energize, and feed the world. Today, we see all of North Dakota's phenomenal natural resource production platforms undergoing severe economic hurdles. In addition, these platforms are challenged by global and domestic federal policies that demand a reduced environmental footprint and scrutinized by investors demanding sustainable technology for natural resource production.

In the last legislative session, the legislature established the EERC as the State Energy Research Center and provided funds to facilitate exploratory energy research. These funds, administered

through the State Energy Research Center, have allowed the bright minds at the EERC to develop nascent energy and environmental technologies with substantial future potential for the next generation of energy production. We greatly appreciate the state's support and see that investment already paying dividends, with an increase in invention and in the attraction of federal and commercial dollars for further development of several technologies.

For many years prior to the establishment of the EERC as the State Energy Research Center, and continuing today, the EERC has worked closely with industry, the state, and the federal government to research, develop, and demonstrate emerging technologies. Much of this research, development, and demonstration has been made possible through matching of significant industry investment with investment from the legislatively enabled Oil & Gas Research Program, the Lignite Research, Development & Demonstration Program, and the Renewable Energy Program. These research programs have provided essential funds to advance promising energy and environmental technologies that enhanced the lives of our citizens, our economy, and our environment.

The EERC believes that HB 1452 would provide critical funds to facilitate the deployment of clean and sustainable energy technologies in their final stages of development to help those technologies reach commercial reality. Essentially, HB 1452 provides the funds that encourage those first deployers of emerging technology to take that final leap to implementation.

First movers could be projects where CO<sub>2</sub> is captured from North Dakota's minemouth lignite-fired power plants and ethanol facilities, compressed, transported to, and injected into North

Dakota's Bakken petroleum system for enhanced oil recovery and carbon storage. Projects like this would not only further enhance the production of all these natural resources but would also reduce the environmental footprint of those activities, satisfying the societal demands of a rapidly evolving and challenging global market. Similarly, projects catalyzed with this funding could facilitate the deployment of energy storage technologies that provide critical resilience and reliability to our electrical grid that transports increasingly larger amounts of renewable energy.