2021 HOUSE ENERGY AND NATURAL RESOURCES

HB 1491

2021 HOUSE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee
Coteau AB Room, State Capitol

HB 1491
1/28/2021

To provide an appropriation to the industrial commission for contracting with the energy and environmental research center to develop a roadmap for the implementation of hydrogen energy

Chairman Porter opened the hearing at 3:31 PM.
Present: Representatives Porter, Damschen, Anderson, Bosch, Devlin, Heinert, Keiser, Lefor, Marschall, Roers Jones, M Ruby, Zubke, Guggisberg, and Ista.

Discussion Topics:

- GM goal all electric by 2035
- Designated center for hydrogen technology
- ND goal to lead in fuel cells

#4153 Rep Mitskog
#4062 Charlie Gorecki, CEO of the UND EERC

Closed 3:44 PM

Kathleen Davis, Committee Clerk

House Energy and Natural Resources Committee

Rep. Alisa Mitskog

HB 1491

January 27, 2021

Chairman Porter and Members of the House Energy and Natural Resources Committee:

HB 1491 is a bill that would provide an appropriation to the North Dakota Industrial Commission for contracting with the Energy and Environmental Research Center to develop a plan for the implementation of hydrogen energy roadmap or plan in North Dakota.

As North Dakota forges ahead as a leader in a diversified, above all energy producing state. It is important that we engage in research and emerging technologies.

The EERC has been involved in hydrogen research for number of years. Recently, there has been renewed interest in hydrogen with its potential in helping tackle some of the critical challenges facing the energy sector, namely the carbon issue.

Hydrogen is the simplest and most abundant element in the universe. It is a versatile energy carrier and can be used to store and deliver energy. Hydrogen offers advantages that could bridge our nation's energy resources, renewables, fossil fuels and nuclear. It enables innovations in energy production and end uses that can help decarbonize three of the most energy intensive sectors of our economy: transportation, electricity generation, and manufacturing. There are three colors of hydrogen derived from different sources with different carbon footprints. A separate handout shows these sources.

	Transportation Applications	Chemicals and Industrial Applications	Stationary and Power Generation Applications	Integrated/Hybrid Energy Systems
Existing Growing Demands	• Material-Handling Equipment • Buses • Light-Duty Vehicles	• Oil Refining • Ammonia • Methanol	• Distrubuted Generation: Primary and Backup Power	• Renewable Grid Integration (with storage and other ancillary services)
Emerging Future Demands	• Medium-and Heavy-Duty Vehicles • Rail • Maritime • Aviation • Contruction Equipment	• Steel and Cement Manufacturing • Industrial Heat • Bio/Synthetic Fuels	• Reversible Fuel Cells • Hydrogen Combustion • Long-Duration Energy Storage	• Nuclear/Hydrogen Hybrids • Gas/Coal/Hydrogen Hybrids with CCUS • Hydrogen Blending

Hydrogen is a relevant and important issue for our state. I also believe this could be a part of the necessary ERG policy. In order to remain competitive in the quickly evolving energy industry, North Dakota needs to embrace innovation and adopt a plan. We can do this by investing in the EERC. This will ensure that we are not left behind in this emerging aspect of the energy sector.

I ask the committee to support this bill.

Source: US Dept. of Energy

Comments on HB 1491

Chairman Porter, and members of the committee, my name is Charles 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 opportunity surrounding hydrogen energy and the potential for North Dakota to play a substantial role in the design and proliferation of a hydrogen economy. Hydrogen energy, when utilized in fuel cells or even in internal combustion engines, can provide nonpolluting fuel for mobile sources, such as heavy trucks, automobiles, and farm equipment. Hydrogen can be generated from a variety of feedstocks, including North Dakota crops, North Dakota lignite, North Dakota natural gas, and even water. The EERC has historically worked closely with state, federal, and commercial partners in all of these arenas. However, at this time, needed improvements in the efficiency of hydrogen production, transportation, storage, and end use are all areas where research and development offer substantial promise.

The EERC was designated the National Center for Hydrogen Technology in 2004. At that time, there was substantial federally sponsored research on hydrogen. However, until recently, federal funding for hydrogen-focused research has substantially lagged. The EERC's portfolio has historically seen substantive work on hydrogen production from both renewable and fossil resources, as well as on hydrogen storage, transportation, and utilization platforms.

Having specific additional funds available via any or all of the legislatively funded research councils (Lignite, Oil & Gas, or Renewable) that could be used as leverage in anticipated federal research opportunities would be particularly helpful as the EERC strives to competitively secure federal funds designated for hydrogen research. Research opportunities typically have a requirement for matching nonfederal funds, and the lack of a mature hydrogen industry today challenges the EERC's ability to find those matching resources.

The EERC is well-positioned, and we would be delighted to help navigate the numerous opportunities that an emerging hydrogen economy might present to North Dakota. The proposed road map embodied in HB 1491 would allow for a strategic assessment of North Dakota's natural resources, existing infrastructure, and intellectual capital. Such a road map would facilitate prioritization of subsequent investments and policies to ensure North Dakota's role in the anticipated hydrogen economy.

2021 HOUSE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee
Coteau AB Room, State Capitol

HB 1491
2/4/2021

To provide an appropriation to the industrial commission for contracting with the energy and environmental research center to develop a roadmap for the implementation of hydrogen energy

11:11 AM

Chairman Porter opened the hearing.
Present: Representatives Porter, Damschen, Anderson, Bosch, Devlin, Heinert, Keiser, Lefor, Marschall, Roers Jones, M Ruby, Zubke, Guggisberg, and Ista.

Discussion Topics:

- EERC and Energy Center research
- Multiple funding sources
- Hydrogren in pipelines
- Clean coal technology

Rep Zubke moved a Do Not Pass, seconded by Rep M Ruby.

Representatives	Vote
Representative Todd Porter	Y
Representative Chuck Damschen	Y
Representative Dick Anderson	AB
Representative Glenn Bosch	AB
Representative Bill Devlin	N
Representative Ron Guggisberg	N
Representative Pat D. Heinert	Y
Representative Zachary Ista	N
Representative George Keiser	N
Representative Mike Lefor	Y
Representative Andrew Marschall	Y
Representative Shannon Roers Jones	Y
Representative Matthew Ruby	Y
Representative Denton Zubke	Y

Roll call vote. 8 – 4 – 2 Motion carried. Rep Porter is carrier.

11:15 AM

Kathleen Davis, Committee Clerk

REPORT OF STANDING COMMITTEE

HB 1491: Energy and Natural Resources Committee (Rep. Porter, Chairman) recommends **DO NOT PASS** (8 YEAS, 4 NAYS, 2 ABSENT AND NOT VOTING). HB 1491 was placed on the Eleventh order on the calendar.