MICROFILM DIVIDER

OMB/RECORDS MANAGEMENT DIVISION
SFN 2053 (2/85) 5M

ROLL NUMBER

DESCRIPTION

3011

2005 HOUSE INDUSTRY, BUSINESS AND LABOR

HCR 3011

2005 HOUSE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. HCR 3011

House Industry, Business and Labor Committee

☐ Conference Committee

Hearing Date 2-7-05

Tape Number	Side A	Side B	Meter #
2	xx		44.9--end
2		xx	0.0--10.0
Committee Clerk Signature	Pam Dever		

Minutes:**Chair Keiser:** Open the hearing on HCR 3011.

Brad Crabtree - Great Plains Institute, Ashley, ND: Here in support of HCR 3011.

(SEE ATTACHED TESTIMONY)

NOTE: BAD TAPE. NOTHING CAN BE HEARD.

Rep. Nottestad: I have some amendments. **I move a DO PASS on AMENDMENTS.**

Rep. Boe: I second.

VOTE: 13 YES, 0 NO, 1 AB Amendments PASSED

Rep. Thorpe: I move a DO PASS as AMENDED. Rep. Clark: I second.

VOTE: 11 - YES, 1 - NO, 2 - AB, PASSED. Rep. Dietrich will carry the bill.

53061.0101
Title.0200

Adopted by the Industry, Business and Labor Committee

February 7, 2005

House Amendments to HCR3011 - Industry, Business and Labor Committee 02/08/2005
RESOLUTION NO. 3011

Page 1, line 3, remove ", including the"

Page 1, remove line 4

Page 1, line 5, remove "of Engineering at North Dakota State University,"

Renumber accordingly

Date: 2-7-05

Roll Call Vote #: 1

2005 HOUSE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. HCR 3011

House **INDUSTRY, BUSINESS AND LABOR** Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken Adopt Amended as presented by Nottestad

Motion Made By Rep. Nottestad Seconded By Rep. Boe

Representatives	Yes	No	Representatives	Yes	No
G. Keiser-Chairman	✓		Rep. B. Amerman	✓	
N. Johnson-Vice Chairman	✓		Rep. T. Boe	✓	
Rep. D. Clark	✓		Rep. M. Ekstrom	AB	
Rep. D. Dietrich	✓		Rep. E. Thorpe	✓	
Rep. M. Dosch	✓				
Rep. G. Froseth	✓				
Rep. J. Kasper	✓				
Rep. D. Nottestad	✓				
Rep. D. Ruby	✓				
Rep. D. Vigesaa	✓				

Total (Yes) 13 No 0

Absent Rep. Ekstrom

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:

Date: 2-7-05

Roll Call Vote #: 2

2005 HOUSE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. HCR 3011

House **INDUSTRY, BUSINESS AND LABOR** Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken Do Pass As Amended

Motion Made By Rep. Thorpe Seconded By Rep. Clark

Representatives	Yes	No	Representatives	Yes	No
G. Keiser-Chairman	X		Rep. B. Amerman	A	A
N. Johnson-Vice Chairman	X		Rep. T. Boe	X	
Rep. D. Clark	X		Rep. M. Ekstrom	A	A
Rep. D. Dietrich	X		Rep. E. Thorpe	X	
Rep. M. Dosch	X				
Rep. G. Froseth	X				
Rep. J. Kasper		X			
Rep. D. Nottestad	X				
Rep. D. Ruby	X				
Rep. D. Vigesaa	X				

Total (Yes) 11 No 1

Absent (2) Rep. Ekstrom & Rep Amerman

Floor Assignment Rep. Dietrich

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

HCR 3011: Industry, Business and Labor Committee (Rep. Keiser, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (11 YEAS, 1 NAY, 2 ABSENT AND NOT VOTING). HCR 3011 was placed on the Sixth order on the calendar.

Page 1, line 3, remove ", including the"

Page 1, remove line 4

Page 1, line 5, remove "of Engineering at North Dakota State University,"

Renumber accordingly

2005 SENATE INDUSTRY, BUSINESS AND LABOR

HCR 3011

2005 SENATE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. HCR 3011

Senate Industry, Business and Labor Committee

❑ Conference Committee

Hearing Date 3-15-05

Tape Number	Side A	Side B	Meter #
1	xxx		0-1420
Committee Clerk Signature	Lisa VanBerkom		

Minutes: **Chairman Mutch opened the hearing on HCR 3011. All Senators were present. HCR 3011 urges the state's public research institutions of higher education to participate in a regional hydrogen and energy research and education consortium.**

Rep. Monson introduced the resolution.

Rep. Monson: My interest in this bill is that we have a great resource up there. There is need for moving toward more renewable fuels, such as hydrogen. Not just fuels, but for use in lots of different industrial uses. Hydrogen is very important and is in the future of North Dakota and the nation. What this resolution does is encouraging various institutions of higher learning, to cooperate together with other states around us, that might be able to, together, access federal funds. It's encouraging all of the player to be informed and work together.

There were no questions from the committee.

Brad Crabtree, Great Plains Institute, spoke in support of the bill.

See written testimony.

Senator Espegard: You are working with the EERC in Grand Forks with this?

Brad: Yes, and NDSU.

Andy Morck, Mandan electrical engineer, stated his support for the bill.

Senator Heitkamp: How do you get hydrogen from wind?

Andy: It is electrolysis.

There was no opposition.

Senator Heitkamp moved a DO PASS. Senator Klein seconded.

Roll Call Vote: 7 yes. 0 no. 0 absent.

Carrier: Senator Heitkamp

Date: 3-15-05
Roll Call Vote #: 1

2005 SENATE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. HCR 3011

Senate **Industry, Business, and Labor** Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken Do Pass

Motion Made By Heitkamp Seconded By Klein

Senators	Yes	No	Senators	Yes	No
Chairman Mutch	X		**Senator Fairfield**	X	
Senator Klein	X		**Senator Heitkamp**	X	
Senator Krebsbach	X				
Senator Espegard	X				
Senator Nething	X				

Total (Yes) 7 No 0

Absent 0

Floor Assignment Heitkamp

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

HCR 3011, as engrossed: Industry, Business and Labor Committee (Sen. Mutch, Chairman) recommends **DO PASS** (7 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). Engrossed HCR 3011 was placed on the Fourteenth order on the calendar.

2005 TESTIMONY

HCR 3011

House Concurrent Resolution 3011: Urging State Public Research Institutions of Higher Education to Participate in a Regional Hydrogen and Energy Research and Education Consortium

Testimony to the North Dakota House Industry, Business and Labor Committee
February 7th, 2005

Brad Crabtree
Powering the Plains Project
Great Plains Institute
Ashley, North Dakota
(701) 647-2041
bcrabtree@gpisd.net

Thank you Chairman Kaiser and members of the Industry, Business and Labor Committee for this opportunity to testify in favor of House Concurrent Resolution 3011. I would also like to recognize Representative Dave Monson for his efforts to encourage the development of hydrogen in North Dakota and to thank the other sponsors from both parties who support this legislation.

I am here today as director of the Powering the Plains project. PTP brings together representatives of industry and agriculture, government officials and legislators, and environmental advocates from the Dakotas, Iowa, Minnesota, Wisconsin and Manitoba to develop regional energy strategies, policies and projects.

A major objective of PTP is to help our region develop its potential for the production of hydrogen fuel from renewable energy sources such as wind, ethanol, biomass and hydro and from the gasification of coal. Toward that end, PTP launched the Upper Midwest Hydrogen Initiative two years ago. UMHI is a public-private consortium whose membership includes Fortune 500 companies such as 3M to small technology companies to research institutions from throughout our Upper Midwest region.

Two years ago, Representative Monson, Representative Jon Nelson, and Senator Joel Heitkamp served on a bipartisan delegation of North Dakota legislators to the regional Legislators Forum. They joined South Dakota, Minnesota and Manitoba legislative delegates in asking PTP and UMHI participants to recommend how legislators could advance hydrogen development on a regional basis. In response to this Legislators Forum request, a regional, bipartisan Policy Work Group was formed that included Representative Jon Nelson and Senator Mike Every, together with legislators from other states and representatives of industry, agriculture and nongovernmental groups. This Work Group met quarterly in 2004 to develop a set of recommendations for legislative consideration.

Formation of a regional hydrogen and energy research consortium, as encouraged by House Resolution 3011, advances a key Work Group recommendation. In addition to this bill, House Bill 1496 would exempt early hydrogen demonstration projects from sales and fuels taxes for a ten-year period, and Senate Bill 2365 would provide state cost share in support of a project to demonstrate the production and vehicle use of hydrogen fuel from wind energy. These bills enjoy bipartisan sponsorship from both chambers.

So, why hydrogen and why a regional hydrogen and energy research and education consortium? Since 9/11, Americans have devoted increasing attention to the need to develop greater energy independence for reasons of national security. Hydrogen has been a major focus of that attention, notably in President Bush's initiative to promote hydrogen-powered vehicles. Support is also evident in major urban states such as California, New York and Ohio, among others. Republican and Democrat administrations and legislatures alike in these states have committed tens of millions of dollars each to hydrogen and fuel cell research, development and commercialization. Finally, CEOs of some of the world's largest companies and top policy-makers see a transition to hydrogen fuel as the most viable long-term path to U.S. energy security.

Earth's most abundant element, hydrogen can be produced from multiple energy sources for use as a fuel through combustion or, more efficiently, in a fuel cell to produce electricity. All of North Dakota's renewable energy sources can produce hydrogen—wind energy and hydropower through electrolysis of water, and ethanol and biomass through of a variety of emerging technologies. In addition, hydrogen is an immediate product of coal gasification, along with carbon dioxide, which can then be captured and stored underground, as Dakota Gasification has pioneered with an oil company in Saskatchewan. Thus, our global leadership in coal gasification, world class wind potential, and significant potential in ethanol and biomass leave our State well-positioned to be a North American leader in the production of hydrogen.

North Dakota hydrogen leadership, however, will be dependent upon successful research, development and commercialization of fuel cells and hydrogen production, storage and delivery technologies suited to our particular energy resources and to our northern climate. North Dakota's institutions of higher education already have significant technical and research expertise in the realm of hydrogen. Other research institutions elsewhere in the region have their own hydrogen research and development programs and important strengths to bring to the table as well.

In this context, it is not necessary or desirable to create a new regional institution or bureaucracy, nor is that the purpose of the proposed consortium. Quite the contrary, the aim is to harness the sum of these various existing institutional parts into a stronger regional whole that enhances the ability of our Upper Midwest region to compete effectively for federal and industry hydrogen and other energy investments with more urbanized and industrialized states and regions.

Through the Upper Midwest Hydrogen Initiative, or UMHI, we are currently working with research institutions throughout the region to explore the formation and role of such a consortium. The University of Minnesota's Initiative on Renewable Energy and the Environment will co-host with UMHI a regional workshop in May to bring together North Dakota institutions with others in the region from Illinois, Iowa, Minnesota, South Dakota, Wisconsin and the province of Manitoba. Some of the ideas and opportunities for joint work through a consortium to be considered at this workshop include:

- ß Collaborative and interdisciplinary research, demonstration projects, and commercialization of market-ready technologies;
- ß Creation of undergraduate and graduate course offerings (and eventual degreed and vocational programs with reciprocity);
- ß Establishment of Hydrogen Fellows Programs to foster joint study, research and exchange; and
- ß Formation of an *Industry Advisory Committee* to focus consortium research and education efforts on the most critical issues.

As this workshop and regional consortium discussion moves forward, we are seeking similar resolutions from Iowa, Minnesota, South Dakota and Wisconsin legislators. The legislative expression of support contained in this resolution and the resolutions in other states will provide valuable encouragement for this effort.

Therefore, I respectfully request that you give a "do-pass" recommendation to House Resolution 3011 today. Thank you.

House Concurrent Resolution 3011:
Urging State Public Research Institutions of Higher Education to Participate in a Regional Hydrogen and Energy Research and Education Consortium

Testimony to the North Dakota Senate Industry, Business and Labor Committee
March 15th, 2005

Brad Crabtree
Powering the Plains Project
Great Plains Institute
Ashley, North Dakota
(701) 647-2041
bcrabtree@gpisd.net

Thank you Mr. Chairman and members of the Industry, Business and Labor Committee for this opportunity to testify in favor of HR 3011. I would also like to recognize Representative Dave Monson for his efforts to encourage the development of hydrogen in North Dakota and to thank the other sponsors from both parties who support this legislation.

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A major objective of PTP is to help our region develop its potential for the production of hydrogen fuel from renewable energy sources such as wind, ethanol, biomass and hydro and from the gasification of coal. Toward that end, PTP launched the Upper Midwest Hydrogen Initiative two years ago. UMHI is a public-private consortium whose membership includes Fortune 500 companies such as 3M to small technology companies to research institutions from throughout our Upper Midwest region.

Two years ago, Representative Monson, Representative Jon Nelson, and Senator Joel Heitkamp served on a bipartisan delegation of North Dakota legislators to the regional Legislators Forum. They joined South Dakota, Minnesota and Manitoba legislative delegates in asking PTP and UMHI participants to recommend how legislators could advance hydrogen development on a regional basis. In response to this Legislators Forum request, a regional, bipartisan Policy Work Group was formed that included Representative Nelson and Senator Mike Every, together with legislators from other states and representatives of industry, agriculture and nongovernmental groups. This Work Group met quarterly in 2004 to develop a set of recommendations for legislative consideration.

Formation of a regional hydrogen and energy research consortium, as encouraged by HR 3011, advances a key Work Group recommendation. In addition to this bill, HB 1496 would exempt early hydrogen demonstration projects from sales and fuels taxes for a six-year period, and SB 2018 includes state support for a project to demonstrate the production and vehicle use of hydrogen fuel from wind energy. All of these hydrogen bills enjoy bipartisan sponsorship from both chambers.

So, why hydrogen and why a regional hydrogen and energy research and education consortium? Since 9/11, President Bush, governors of both political parties, and CEOs of some of the world's largest companies

have devoted increasing attention to hydrogen for reasons of national security, energy independence and economic development. Earth's most abundant element, hydrogen can be produced from multiple energy sources for use as a fuel through combustion or, more efficiently, in a fuel cell to produce electricity. All of North Dakota's renewable energy sources can produce hydrogen—wind energy and hydropower through electrolysis of water, and ethanol and biomass through of a variety of emerging technologies. In addition, the gasification of coal produces hydrogen and carbon dioxide, the latter which can then be captured, sold and injected underground for enhanced oil recovery, a process that our state's very own Dakota Gasification has pioneered with an oil company in Saskatchewan.

Thus, our global leadership in coal gasification, world class wind potential, and significant potential in ethanol and biomass leave our State well-positioned to be a North American leader in the production of hydrogen. North Dakota hydrogen leadership, however, will be dependent upon successful research, development and commercialization of fuel cells and hydrogen production, storage and delivery technologies suited to our particular energy resources and to our northern climate. North Dakota's institutions of higher education already have significant technical and research expertise in the realm of hydrogen, and institutions elsewhere in the region have their own hydrogen research and development programs and important strengths to bring to the table.

It is neither necessary nor desirable to create a new regional institution or bureaucracy, and that is not the purpose of the proposed consortium. Quite the contrary, the aim is to harness the sum of these existing institutional parts into a stronger regional whole that enhances the ability of our Upper Midwest region to compete effectively for federal and industry hydrogen and other energy investments with more urbanized and industrialized states and regions.

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- Establishment of Hydrogen Fellows Programs to foster joint study, research and exchange; and
- Formation of an *Industry Advisory Committee* to focus consortium research and education efforts on the most critical issues.

We are also currently seeking similar resolutions from Iowa, Minnesota, and Wisconsin legislators. South Dakota legislators passed theirs last month. The legislative expression of support contained in this resolution and in those of other states will provide valuable encouragement for this important regional effort. Therefore, I respectfully request that you give a "do-pass" recommendation to HR 3011 today. Thank you.