POLICY AMENDMENT FORM

Amendment to___Rural Development_____ 5
(Policy Title)

Section Number /Title to Be Amended ___13.8 Bioeconomy and Energy

Subject of Amendment __*Low Carbon Fuel Policies*_____

Submitted By____Bill Northey_____ _____Iowa_____
(Name) (State)

Amendment Text (Please write legibly):

Comprehensive Agriculture Energy Initiative to be amended to include:

We support creating low carbon fuel policies relying on life cycle assessment of direct emissions from biofuels that expand markets for low carbon fuels, spur innovation among biofuel producers to decrease their greenhouse gas emissions and create new types of advanced fuels, which have the potential for more jobs and rural development. We support a policy that relies on current updated information for the industry. Individual biofuels plants should have the ability to demonstrate and receive credit for their actual greenhouse gas emissions. We support the use of certified third party auditors to protect the confidentiality of individual plants. We support the use of Renewable Information Numbers (RINs) to track the life cycle greenhouse gas emissions of individual producers. Biofuels must be on a level playing field, and therefore the oil industry should also submit individualized data for a refinery or blending facility that has a batch of finished product. Inclusion of indirect land use change in life cycle assessment of biofuels should be phased in only after there has been more thorough debate in the scientific community about what the magnitude of this impact is. We are also concerned that indirect land use change costs not be unfairly imposed on biofuels without being imposed on other parts of the economy that may have similar impacts. Our preference is to deal with greenhouse gas emissions from land use change in a more balanced and scientific way, by dealing with only the direct impacts of various economic activities.

Signature_____ Date_____

Adopted _____
Adopted w/ Amend. _____
Not Adopted _____

Overview on Low Carbon Fuel Policies – Key Policy Features

What is a Low Carbon Fuel Policy (LCFP)?
A Low Carbon Fuel Policy can take many forms, but the common feature is that it seeks to lower the average greenhouse gas (GHG) intensity of liquid fuels over time. It may do this through incentives, mandates, objectives, or other policy implements.

What is the difference between a LCFP and a conventional Renewable Fuel Standard (RFS)?
Although the new federal RFS has features of an LCFP, an RFS generally specifies a type of fuel rather than a GHG intensity for that fuel. Because not all biofuels are produced in the same way, an RFS could in theory increase renewable fuels supply without decreasing GHG emissions.

Where are these policies being considered or implemented?

- **Federal RFS:** In the Energy Independence and Security Act of 2007, a new provision was added to the federal RFS requiring that new renewable fuels (from facilities launched after enactment of the Act) achieve a certain reduction in lifecycle GHGs relative to a baseline – 20% for conventional biofuels, 50% for advanced biofuels, and 60% for cellulosic biofuels. The U.S. EPA is currently developing rules for how the new federal RFS will be implemented.
- **California Low Carbon Fuel Standard:** Created by Executive Order of Governor Schwarzenegger, the California LCFS requires a 10% reduction in the GHG intensity of California's fuel supply by 2020. The California Air Resources Board is in the process of developing rules for how this program will be run.
- **Other states:** Massachusetts has passed an LCFS based on CA's program. Other U.S. states are considering similar policies.
- **Other countries:** The European Commission and the United Kingdom are considering Low Carbon Fuel Policies similar to CA's policy.

What fuels are likely to qualify?
Any fuel type can qualify for an LCFP, depending on its life cycle GHG emissions and how the policy is structured. Examples are thought to include:

- Conventional biofuels (ethanol, biodiesel);
- Advanced biofuels (cellulosic ethanol, algae-based diesel, thermochemical-based biofuels);
- Electricity to power vehicles;
- Hydrogen used to power vehicles;
- Compressed natural gas used to power vehicles.

What impact will this have on the biofuels industry?

Project Summary: Midwestern Low Carbon Fuels Policy Initiative

Background

The imposition of Low Carbon Fuel Standards in several states, and passage of the 2007 Energy Independence and Security Act require development of life-cycle methods to quantify the net impact of biofuels on greenhouse gas emissions. But recent academic studies have raised questions regarding the life cycle greenhouse gas emissions profile of biofuels – especially for corn ethanol. Meanwhile, there is a renewed focus on federal and state policies that transition the U.S. to a transportation system that results in decreased greenhouse gas emissions. One of the policy options as part of the Midwestern Governors Association Energy Security and Climate Stewardship platform, as signed by nine governors and one Canadian premier is to, "Create a uniform, regional low-carbon fuels policy – implemented at the state level as a standard, objective or incentive – and report annually on progress." The California Air Resources Board and the U.S. EPA are developing methods for assessing biofuel carbon intensity to allow implementation of policies explicitly favoring "low carbon" fuels. Various Midwestern states are individually pursuing a low carbon fuels policy.

Goals

The purpose of this initiative, staffed by the North Central Bioeconomy Consortium (NCBC) and chaired by Iowa Secretary of Agriculture Bill Northey, is to bring together key government officials, scientists, industry representatives, environmental groups, and other policy makers to:

- Improve understanding of the status, methods and impacts of low carbon fuel thresholds and standards under development by EPA (2007 EISA) and in several states;
- Identify appropriate communications channels and opportunities to reach policy makers and the general public about the importance of low carbon fuels accounting methods and impacts to the biofuel industry.
- Make recommendations to the North Central Bioeconomy Consortium, the Midwestern Governors Association Greenhouse Accord Advisory Group and Bioeconomy and Transportation Advisory Group on the key policy design features of a Midwestern Low Carbon Fuels Policy;
- Based on the policy design recommendations for the Midwest, consider making recommendations to the California Air Resources Board and the U.S. EPA;
- Make recommendations on research needs in order to:
    1. Improve life cycle estimates for corn ethanol to ensure they accurately reflect the current performance of the industry and can be adjusted to reflect any changes in performance;
    2. Determine what role LCFP can play in reducing GHG emissions from transportation (vs. vehicle standards, fuels in cap, VMT, incentives, etc.)

3. Determine how the Midwest could meet an LCFS, including expanded use of biofuels, electricity, and hydrogen?

- Determine whether any other information must be obtained to make decisions on the key policy design features for a Midwestern LCFP.
- Determine whether it is necessary to have a second meeting on this subject.

Process

We are convening, by invitation, key Midwestern participants from agriculture, biofuels industry, environmental NGOs, government, and academia to make recommendations in these areas. This process has thus far included several "webinars" dedicated to gaining a better understanding of the issues, and included an in-person meeting for more in depth discussion.

Schedule of Online Webinars and In-person Meeting

Webinar #1 (July 9)Overview of the process and time for questions and discussion

- Bill Northey, Iowa Secretary of Agriculture – Welcome to the process, introduction to NCBC
- Judith Greenwald, Pew Center on Global Climate Change – Introduction to the MGA Greenhouse Gas Accord process
- Ken Cassman, University of Nebraska-Lincoln - The need to improve life cycle greenhouse gas estimates for corn ethanol, and critical risks and opportunities for the Midwest.

Webinar #2 (July 15) Status of major Low Carbon Fuels Policy efforts. Briefings and discussion on various Low Carbon Fuels Policy efforts, including the process by the California Air Resources Board to write rules for the creation of a Low Carbon Fuels Standard for California, efforts by the US EPA to develop a life cycle assessment rule for meeting statutory requirements in the US Renewable Fuels Standard, the Low Carbon Fuel Standard amendment to the Lieberman-Warner climate bill, and Low Carbon Fuels Policy efforts in the European Union.

- Dean Simeroth, Criteria Pollutants Branch, California Air Resources Board
- Robert Larson, Associate Director of Transportation Division, U.S. Environmental Protection Agency
- Jessica Holiday, Senator Lamar Alexander
- Alexandra Langenheld, Directorate-General for Energy & Transport, European Union

Webinar #3 (July 25) Life Cycle GHG Assessment for Biofuels. Current best practice for estimating life cycle GHG emissions from biofuels and other low carbon fuels. Possible impact of indirect land use change due to biofuels policy. We will hear from both research teams that published thought-provoking articles in the Feb. 08 issue of Science Express on biofuels and land use and learn other academic and industry perspectives.

- Simla Tokgoz, Iowa State University FAPRI
- Joe Fargione, The Nature Conservancy
- Bruce Dale, Michigan State University
- Robert Nelson, Verasun Energy Corp.

Webinar # 4 (July 31) Midwestern state Low Carbon Fuels Policy initiatives. Various Midwestern states are pursuing a low carbon fuels policy. This webinar will be dedicated to understanding the status of various state efforts to create low carbon fuels policies.

- Steven J. Taff, University of Minnesota and Shalini Gupta, Izaak Walton League - Minnesota
- Charles Griffith, Ecology Center - Michigan
- Pete Taglia, Clean Wisconsin – Wisconsin
- Joe Shacter, Environmental Law and Policy Center - Illinois

- Mary Beth Stanek, General Motors
- Robert Craig, Michigan Department of Agriculture
- Charles Griffith, Ecology Center of Michigan
- Peter Taglia, Clean Wisconsin
- Chris Deisinger, Energy Foundation
- Gary Radloff, Wisconsin Department of Agriculture, Trade, and Consumer Protection
- Dennis Banasiak, Iowa State University Bioeconomy Institute
- Robert Brown, Iowa State University Bioeconomy Institute
- Shelby Neal, National Biodiesel Board
- Steve Taff, University of Minnesota
- Bruce Babcock, Iowa State University CARD
- Simla Tokgoz, Iowa State University CARD
- Kelly Davis, Renewable Fuels Association
- Pam Porter, WI Farmer's Union
- Doug Judge, Thomson Environmental Consulting
- Tom Mowrer, Renewable Energy Group
- Eric Jensen, Izaak Walton League of America
- Steve Falck, Renewable Energy Group
- Randy Olson, Iowa Biodiesel Board
- Scott Hedderich, Pioneer Hi-Bred
- Kerri Johanssen, Environmental Law and Policy Center
- Bill Northey, Iowa Secretary of Agriculture
- Matt Caswell, BP
- Mark Calmes, Archer Daniels Midland
- Rick Robinson, Iowa Farm Bureau
- Julie Vyskocil, Iowa Renewable Fuels Association
- Sen. Kathy Sheran, Minnesota State Senate
- Mary Blanchard, Virent
- Ken Cassman, University of Nebraska - Lincoln
- Jack Huggins, The Nature Conservancy
- Sanjana Ahmad, Pew Center on Global Climate Change

NCBC Staff

- Brendan Jordan, Great Plains Institute
- Sarah Wash, Great Plains Institute

An LCFP can be very beneficial to the biofuels industry and can expand opportunity, spur innovation, and increase rural economic development. Whether such a policy is effective, however, depends on the details of how the policy is structured and how GHG emissions are measured.

What features of these policies are attracting attention?

- **Lifecycle Greenhouse Gas Assessment.** How well biofuels do under an LCFP depends on what GHG "score" they receive under the rules established by the program.
    - **Current data:** Because the biofuels industry has become more efficient over time, it is important that current data be used in assessing the performance of biofuels producers and producers of other fuels that may qualify, and that data is updated frequently to reflect future improvements.
    - **Transparency:** Industry has a better ability to comply with a policy if the rules and models are as transparent as possible. Some in industry prefer to have the ability to input the characteristics of their facility into whatever model is used.

- **Flexibility.** A biofuel can either be given a default value or be assessed individually. With default values, every biofuel facility of a certain type (e.g. corn ethanol with natural gas heat) would have the same score. Many in the biofuels industry prefer to be given an individualized score. It would be possible to create a flexible, dynamic LCFP system that involves tagging and tracking of individual batches of biofuels using the same Renewable Identification Numbers (RINs) that are currently used for RFS compliance.
    - **Third Party Auditing.** Third party auditors could be used to generate individualized information about plants without compromising data confidentiality.
    - **Feedstock Source Certification.** Effective strategies for reducing the GHG emissions may involve changing the characteristics of the feedstock, for example by improving yields, decreasing fertilizer application rates, or altering irrigation. Using source certification in this way would create powerful incentives to reduce GHG emissions through agricultural best practices.

- **Indirect Land Use Change (ILUC).** Several recent academic studies have argued that biofuels production in the U.S. can cause emissions abroad by increasing demand for commodity crops that are grown by converting forests and other ecosystems to agricultural use. While most people agree that there is validity to this argument, there is disagreement both about the magnitude of this impact and whether a Low Carbon Fuel Policy is an appropriate and effective way to address it. Despite a lack of consensus, the U.S. EPA is required by EISA 2007 to include "direct emissions and significant indirect emissions such as significant emissions from land use changes" in the rules for the new RFS.

  According to analysis by Searchinger et al in the February issue of Science Express, ILUC impacts are so large that both current biofuels and even advanced biofuels would have higher lifecycle GHG emissions than gasoline and diesel. The implication is that they would not be low carbon fuels, and would not qualify for these policies.

  There are options for how to address ILUC in policy. Although some prefer to use some non-zero number despite scientific uncertainty, and others prefer not to use any number

at all, another option may be to speak to the importance of ILUC in a policy, but to wait until more research is done before actually using it in the lifecycle assessment of biofuels. ILUC calculations could be phased in when data quality improves.

- **Fossil Fuel Life Cycle Assessment.** Another issue is the treatment of fossil fuels under a low carbon fuel policy. Like biofuel facilities, there is variation in the GHG profile of gasoline and diesel fuel depending on type of crude oil, efficiency of refining, use of geologic carbon sequestration for enhanced oil recovery and other factors. In order to create incentives for innovation in fossil fuel production as well as biofuel production, it may be valuable to use individualized life cycle assessment rather than default values in this area as well.