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STATEMENT OF CHRIS BLILEY, DIRECTOR OF REGULATORY AFFAIRS, GROWTH ENERGY

October 24, 2011

Thank you for the opportunity to present brief comments today on the SAB Biogenic Carbon Emission Panel's *Accounting Framework for Biogenic CO₂ Emissions from Stationary Sources*. My name is Chris Bliley and I am the Regulatory Affairs Director for Growth Energy.

Growth Energy is the leading trade association for America's ethanol producers and supporters. Growth Energy promotes reducing greenhouse gas emissions, expanding the use of ethanol in gasoline, decreasing our dependence on foreign oil, and creating American jobs here at home. I will be providing brief comments and then will submit my statement along with a letter from Professor Bruce Dale from Michigan State University's Department of Chemical Engineering and Material Science which I will reference in my remarks.

Currently, the U.S. fuel ethanol industry makes a significant contribution to the nation's environmental well-being by providing benefits for pollution reduction in the vehicle fleet and its resulting emissions. Today's modern ethanol production facilities operate effectively within a system of environmental regulation and oversight from both federal and state government.

The industry continues to implement environmentally-friendly technologies to lessen carbon impacts while enhancing air and water quality. The modern grain ethanol industry is part of an ecosystem in which the crops that are processed into food, feed, and fuel actually absorb large amounts of CO₂ from the atmosphere (most often generated by the conversion or use of fossil fuels) and hence serve as a means of cycling CO₂ rather than generating new additions to the overall loading of greenhouse gases in the environment.

We are pleased to see the Science Advisory Board attempt to draft a rigorous, defensible scientific examination framework for biogenic CO2 emissions that begins to recognize the unique characteristics of today's modern ethanol plants. However, while we certainly recognize that this is not an outline of policy, we are very concerned that a scientific examination of biogenic emissions may include a discussion of "leakage" or indirect land use change. As Dr. Dale states in the attached letter: "Three different groups of investigators have found, using differing methods based on empirical data, that there is no evidence for ILUC caused by the US corn ethanol or soybean diesel industries. Science is based on evidence, and thus far there is no evidence for ILUC."

We would be happy to work with you to provide whatever data may be necessary to inform your framework and any other information that you may need in the area of biofuel production.

Thank you again for the opportunity to appear today and your consideration of our comments.

MICHIGAN STATE UNIVERSITY

October 17, 2011

To Whom It May Concern

RE: Accounting Framework for Biogenic Carbon and Greenhouse Gases

The proposed accounting framework relating greenhouse gases and biogenic carbon is a significant step forward in developing a rational, scientific approach to this difficult problem. The methodology, based on the carbon cycle, is basically solid but with one crucial exception, as described below. Non carbon greenhouse gases are excluded from the framework.

The accounting framework assumes that carbon release *at the point of combustion* is zero for biogenic carbon and then attempts to account for potential additional release (or capture) of carbon within in the carbon cycle for a particular fuel using the Biogenic Accounting Factor (BAF). The BAF may be negative, zero or positive; indicating that a given product may sequester carbon (negative BAF), release no net carbon (zero BAF) or release net carbon (positive BAF). The equations and variables used to calculate BAF are clearly described. Example calculations to determine BAF are given to illustrate the BAF approach. Up to this point the framework is scientific, rigorous, defensible, easy to understand and implement, as claimed by EPA.

However, leakage effects (carbon releases outside the product supply chain, eg, indirect land use change or ILUC) are also included in the BAF equation, but no example calculations are given. It is explicitly stated that calculation of such leakage effects is a policy decision (implicitly, not a scientific decision) and no attempts to estimate ILUC are attempted in this framework. However, accounting for leakage effects such as ILUC is extremely difficult to understand and implement. To the degree that predictions of ILUC cannot be tested against empirical fact, ILUC is *not scientific*. The scientific method proceeds by testing hypotheses versus empirical facts.

Unfortunately, ILUC calculations cannot be mixed with this otherwise generally acceptable accounting framework without *invalidating* the very framework itself. The BAF estimate will cease to be rigorous, defensible and scientific. Three different groups of investigators have found, using



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different methods based on empirical data, that there is no evidence for ILUC caused by the US corn ethanol or soybean biodiesel industries. Science is based on evidence, and thus far there is no evidence for ILUC. Thus ILUC predictions cannot be regarded as based on science.

Furthermore the published estimates for ILUC for corn ethanol vary from about 100 to about 1 gram carbon dioxide per megajoule. With appropriate management techniques and assumptions, ILUC can even be negative. Thus there is no unique value for ILUC, nor even any reasonable range of values...therefore ILUC is not defensible. There are a multitude of models, data sets and assumptions used to calculate ILUC, and anyone connected with the models to calculate ILUC knows that they are not easy to use nor to understand.

Finally, as long as the carbon accounting framework is confined to direct, supply chain effects, then it may provide an adequate comparison with petroleum fuels (although this is yet to be demonstrated). However, the moment ILUC or leakage effects are taken into account for biogenic carbon, leakage effects must also be taken into account for petroleum fuels. Otherwise we will not be comparing fuel pathways on an equal basis. We will be including indirect (leakage) effects for biofuels, but not for petroleum fuels. As far as I am aware, no provision has been made to develop carbon leakage estimates (not supply chain associated) for petroleum fuels.

In summary, the BAF accounting framework appears to have real value for greenhouse gas estimates surrounding biogenic carbon. However, the BAF framework cannot be combined with leakage estimates and retain that value.

Respectfully submitted,



Bruce E. Dale, Ph. D.
Professor of Chemical Engineering