

October 23, 2008

James C. Greenwood
President & CEO

Stephen L. Johnson
Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Administrator Johnson:

On behalf of the Biotechnology Industry Organization (BIO), I am writing to express concern over implementation of the Renewable Fuels Standards (RFS) lifecycle greenhouse gas (GHG) emissions standards mandated by the Energy Independence and Security Act of 2007 (EISA). BIO is the world's largest biotechnology organization, with more than 1,200 member companies worldwide. The Industrial and Environmental Section (IES) of BIO represents leading technology companies in the production of conventional and advanced biofuels and other sustainable solutions to energy and climate change. The Food and Agriculture Section (FAS) of BIO represents the leaders in developing new crop technologies for food, feed, fiber and fuel.

We applaud your significant efforts to help commercialize sustainable second and third generation biofuels. Your agency has made major contributions to moving the United States forward in terms of developing and deploying advanced technologies that can help us reduce dependence on foreign oil. For this reason members of BIO bring to your attention a matter of critical importance to the biofuels industry.

Section 201 of EISA requires the Environmental Protection Agency (EPA) to quantify lifecycle GHG emissions for renewable fuels seeking to qualify for the RFS established in EISA section 202. Our members in the biofuels industry agree that consideration of lifecycle greenhouse gas emissions is essential to identifying truly sustainable transportation fuel solutions. BIO's member companies are confident that if the RFS rulemaking is conducted with adequate scientific rigor, advanced biofuels can meet these standards and provide substantial benefits for the global climate. However, we have serious concerns with EPA's current stated approach to a proposed rulemaking as directed by this section of the law.

By sending this letter, we do not seek to delay the rulemaking, but we are concerned with EPA's apparent intention to publish preliminary numerical estimates in its proposed rulemaking of GHG emissions from indirect land use changes (ILUC) in other countries attributed to biofuels production in the United States. Given the exceptional degree of complexity, uncertainty and the absence of consensus in the scientific community on the methodology of estimating emissions from ILUC, a published estimate of potential indirect emissions from EPA at this time would be premature and ill-advised. Rather, EPA should



effects modeling to allow it to develop a tool of sufficient scientific accuracy to apply it in this regulatory context.

The growth of biofuel production can be done the wrong way or it can be done the right way. The advanced biofuels community supports building this industry in the most responsible and sustainable way possible. However, ILUC modeling is currently incapable of providing reliable indirect emissions estimates at this time. Modeling indirect global land use effects is a very complex undertaking. While direct impacts of production are relatively certain and traceable to the production, transportation and combustion of biofuels, indirect impacts are affected by a vast array of market and policy particulars and no model currently exists to accurately assess these factors. We do believe, however, that new and better models will be available in the near future.

There is currently no standardized modeling methodology or agreed data input for ILUC modeling. No ILUC model today comes close to capturing the interplay of economic, institutional, technological, cultural and demographic variables inherent in quantifying the indirect impact of a given fuel in an international setting. In fact, the economic equilibrium models being used by EPA were not designed for regulatory use – i.e. to assign specific compliance metrics to specific fuels. Minor changes in any number of assumptions about biofuel production, agricultural economics, or land use policy can dramatically affect the outcome of current ILUC models. While EPA is making every effort to produce a capable model, the simple fact that they are having to link together several separate models that were all designed for different purposes suggests how unready the model development process is. The accuracy of any values produced by such a modeling exercise, and thus whether the indirect land use effects rise to the “significant” level stipulated in the legislation for consideration, is seriously under question.

Premature publication of inaccurate numerical ILUC emissions estimates from EPA will erode the credibility of such modeling, threatens the integrity of the lifecycle assessment process and the future of the advanced biofuels industry, and risks poisoning the dialogue on how to maximize the sustainability of biofuels production.

If the proposed rule contains numerical results from flawed models published prior to the maturity of the modeling tools, it could have a range of perverse effects, including discouraging and chilling investment and curbing U.S. production and use of all biofuels. Even if uncertainties are adequately acknowledged in the proposed rule, representation of inaccurate quantitative estimates could threaten private capital investments in even the most sustainable new biofuel projects. Without a more sophisticated understanding of international land use change variables and interactions, a rule risks discouraging production of biofuels that truly do reduce U.S. GHG emissions and contribute to energy security.

We believe biofuels, using the most advanced science, will reduce U.S. GHG emissions compared to petroleum based gasoline. New biotechnology developments such as improved enzymes and high-yielding drought-tolerant crops are rapidly improving the GHG profile of both traditional and advanced biofuels. These and future advances that promise to improve the sustainability of biofuels production are threatened by premature action by EPA.

BIO's recommendation, to avoid inadvertent harm to the most promising advanced biofuels, and forestall polarizing misuse of preliminary GHG estimates, is to publish the proposed rule outlining EPA's proposed methodology for estimating ILUC emissions without including concrete ILUC emissions estimates. This course will allow EPA to take comments from the scientific community and others on the adequacy of the modeling tools and data used, and offer methods to improve them, and will allow the necessary time to solidify the modeling process before publishing quantitative estimates in the future.

In fact, while EPA was asked to quantify significant indirect emissions, Congress also made clear that indirect emissions are not well understood by adding a provision in Section 232(b) of EISA that amended the Biomass Research and Development Act of 2000 to include grants, contracts and assistance for research on "the improvement and development of analytical tools to facilitate the analysis of life-cycle energy and greenhouse gas emissions, including emissions related to direct and indirect land use changes, attributable to all potential biofuel feedstocks and production processes".

In short, EPA was given the power to make judgments that include evaluation of certain factors of currently unknowable scope and significance, leavened by the fact that Congress also contemporaneously indicated there currently was insufficient knowledge about tools to measure for such factors. There is nothing that requires EPA to plunge into the unscientific quagmire of questionable numbers, instead of waiting until calculation of defensible numbers, bottomed on appropriate, scientific methodology is possible.

Subjecting its methodology to scientific scrutiny is the best way for EPA to ensure its findings are robust and reliable, and is essential to providing clear and effective guidance to maximize the sustainability of the advanced biofuels industry. For instance, EPA may want the Scientific Advisory Board to review these matters. This vetting approach has a precedent and is the standard by which all other quantitative estimates of climate impacts are assessed under the deliberations of the Intergovernmental Panel on Climate Change (IPCC). We hope that EPA will follow the lead of the climate science community and not rush to publish premature and possibly misleading quantitative findings.

We hope you find our comments to be constructive and we look forward to helping the nation achieve your 20 in 10 alternative fuels vision.

Thank you for considering this important issue that can affect the U.S. economy, environment and energy security.

Sincerely,



James C. Greenwood
President and CEO
Biotechnology Industry Organization