



Branch Chief  
Regulations and Paperwork Management Branch  
U.S. Department of Agriculture  
300 7<sup>th</sup> Street, SW, 7<sup>th</sup> Floor  
Washington, DC 20024

***RE: Comment on Biorefinery Assistance Guaranteed Loans (75 Fed. Reg. 20044, April 16, 2010)***

To Whom It May Concern:

The Algal Biomass Organization (“ABO”) respectfully submits this comment on the Rural Business-Cooperative Service (RBS)—United States Department of Agriculture’s (USDA’s) notice of proposed rulemaking set forth at 75 Fed. Reg. 20044 (April 16, 2010) (“NOPR”) relating to the Biorefinery Assistance Program authorized by the Food, Conservation, and Energy Act of 2008 (“2008 Farm Bill”).<sup>1</sup>

The ABO is a non-profit, 501(c)(6) trade association with a mission to promote the development of viable commercial markets for renewable and sustainable products derived from algae. Our membership is comprised of individuals, companies and organizations that represent the entire value chain for algal-based products, including, but not limited to, advanced biofuels, biogas for renewable power, bioplastics and polymers, biochemicals, fertilizer, animal feeds, nutraceuticals, food supplements, as well as services utilizing algae such as wastewater treatment, carbon-dioxide (CO<sub>2</sub>) emissions reduction through biofixation and recycling, and soil remediation.

On behalf of more than 170 members in the algae industry, the ABO, works to: (a) facilitate commercialization and market development of products derived from microalgae (blue-green and cyanobacteria) and macroalgae (seaweeds) biomass; (b) deliver information to the public and governments on the industry’s development, technologies, initiatives and funding opportunities; (c) provide networking and collaboration opportunities; (d) establish leading research and commercialization events and meeting opportunities open both to the public and members; (e) develop and maintain a clearinghouse of information on algal biomass technology, science, products, processes, patents and economics; (f) develop quality and measurement best practices and standards; and (g) to aggregate and formalize advocacy efforts for the improvement of Federal, state and local policies that would aid in the commercialization and expanded use of algal-based products.

The ABO has reviewed the NOPR, and, on behalf of its members, encourage the USDA to consider the comments and suggestions that are attached to this letter when developing the final rule. In summary, the attached comments address the following issues:

1. **Project Eligibility:** The ABO encourages USDA to (a) discard the 70% revenue-from-fuels requirement or completely reconsider how this requirement is structured, (b) resist excluding feedstocks as being “eligible” if such feedstocks would qualify under Section 9003, and (c)

consider the contributions of other real and personal property in addition to cash for purposes of the 20% equity requirement.

2. Amount of Loan Guaranteed: The rule should provide for the full 90% guarantee for the principal and interest up to \$250 million and should at a minimum provide for a 90% guarantee of up to \$125 million and 80% guarantee of principal and interest up to \$250 million.
3. Priority of Liens: If USDA will be guaranteeing less than 90% of the principal and interest, USDA should reconsider taking a first priority position.
4. Citizenship Requirement: Local job growth and geographic location of the projects receiving guaranteed loans, not the citizenship of shareholders, members or owners of the company developing the project. The United States should welcome foreign investment in its domestic renewable energy infrastructure.
5. Eligible Project Costs: A broad interpretation of “eligible project costs” will facilitate lending and achievement of the purposes of the Biorefinery Assistance Program. Upfront transaction costs on these projects are significant, therefore, borrowers should receive credit for their contributions of real and personal property, including, without limitation, laboratory equipment, intellectual property, and reasonable fees paid to critical service providers.
6. Producer Association Advantage: The ABO recognizes the requirements in Section 9003(e)(1)(C) and the critical importance of producer associations to the development of the agriculture industry in the United States; however, the ABO implores the USDA to avoid imposing existing models on new industries. Disproportionate benefits should not be afforded to certain business structures that may be inapplicable to certain sectors of the bioenergy industry. USDA should minimize such benefits.
7. Resource Conservation Scoring: The ABO supports basing scoring criteria on lifecycle assessments and encourages USDA to employ established methods being utilized by other agencies (e.g., the Environmental Protection Agency). If the Biorefinery Assistance Program is a means to achieve the ends required by the Renewable Fuel Standard (“RFS”) Program, then requirements imposed on borrowers as producers of renewable fuel for sale to Obligated Parties should be synchronous.
8. Local Ownership: The scoring benefits proposed by USDA for “local ownership” should be avoided for the same reasons mentioned with respect to #4 and #6. If USDA insists on providing a benefit to locally-owned companies, then ABO suggests this be increased to 200 miles from 20 miles.
9. Program Obstacles: The ABO encourages USDA to consider the following proposals as ways to reduce program obstacles: (a) a pre-application process similar to the two-phase process employed by the Department of Energy in its current solicitation (DE-FOA-0000140) for Title XVII loan guarantees; and (b) utilization of bond financing mechanisms in order to expand opportunities for debt finance where traditional credit markets are tight.

10. Comments for Consideration During Reauthorization of the 2008 Farm Bill: Although not directly related to this rulemaking, when making proposals to Congress for the reauthorization of the 2008 Farm Bill, the ABO encourages USDA to consider: (a) revising the definition of “renewable biomass” in Section 9001(12)(B) so that biorefineries using algal feedstocks and other feedstocks grown on Federal land can still qualify for Title IX program funding; and (b) requesting authorization for funding demonstration plants using feedstocks that have not received significant previous funding support.

Please note that these issues have not been ranked in order of importance. The ABO comments on these issues keeping in mind the Congressionally-stated purpose of the Biorefinery Assistance Program, namely: to "(1) increase the energy independence of the United States; (2) promote resource conservation, public health, and the environment; (3) diversify markets for agricultural and forestry products and agricultural waste material; and (4) create jobs and enhance the economic development of the rural economy."<sup>2</sup>

The ABO and its members believe that the rapid development of advanced biofuels as an alternative to petroleum fuels is a critical matter of national and economic security. Risks must be taken to achieve technological advances that will enable the United States to offset a substantial portion of its petroleum use, and the federal government should help bear the risk of these early-stage technologies that stand to contribute to achieving major national policies. To this end, the USDA, in its final rule, should ardently pursue the purpose of the program, restricted only by limitations specifically imposed by Congress in Section 9003 and any other applicable law, and assume the mantle the lead agency for commercialization of advanced biofuels and the guarantor of the United States' energy security.

Thank you for your attention to and consideration of ABO's comments (attached) on the proposed rule. We would be pleased to discuss any of our comments in greater detail. If this is of interest, please do not hesitate to contact us.

Respectfully,

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**Comments by the Algal Biomass Organization on the United States Department of  
Agriculture's Proposed Rule for Biorefinery Assistance Guaranteed Loans  
(75 Fed. Reg. 20,044 April 16, 2010)**

**1. PROJECT ELIGIBILITY**

**A. Advanced Biofuels Revenue Requirement (6 C.F.R. 4279.228(d))**

USDA is proposing that, for a project to be eligible for a loan guarantee, "more than 70 percent of the *revenue* generated by the biorefinery must be from the sale of advanced biofuel."<sup>3</sup> This requirement is not contained in Section 9003 and may cause significant problems, both in terms of deterring companies from using the Biorefinery Assistance Program and then increasing the chance of default if a loan guarantee is issued.

The ABO recognizes that the primary purpose of Title IX is "Energy"; however, Title IX also recognizes that, like petroleum, coproducts provide essential revenue streams. Liquid transportation fuels has been the "holy grail" of the algae industry since its inception, but many companies are shifting their business plans away from a fuel-dominant approach in the short term and dedicating more efforts to developing higher-value coproducts such as chemicals, agricultural soil remediation and fertilization, and plastics. This has been driven primarily by high production costs for lipids and having to compete with low-cost crude oil. One of the primary reasons for the high production costs of algal-based fuels is the lack of commercial-scale (and even demonstration-scale) projects that provide opportunities to optimize and de-risk technologies and reduce costs with scale. The algae industry views the Biorefinery Assistance Program as a much-needed financing tool to develop projects and bring down costs and risks. As the USDA notes, "byproducts are an important revenue source for many biorefineries." They will be even more important for the long-term success of the algae industry and the ability of the industry and its technologies to mature to the point where algal-based liquid transportation fuels are price competitive with petroleum gasoline, diesel or jet fuel.

For this reason, the ABO strongly encourages USDA to interpret the purposes of Section 9003 broadly and in a way that will most likely accelerate the ultimate development and production of advanced biofuels. Imposing a 70% revenue requirement defeats this purpose.

First, it is unclear what the ramifications would be to the applicant if, in practice, this 70% threshold was violated. Would this constitute a default under the credit facility or security agreement? If so, this injects an artificial limit into the operation of projects that may, at points, obligate the applicant to run the project in a commercially unreasonable or imprudent way by producing products that fail to provide sufficient revenue to meet debt service.

Second, and related to the first, it is much more difficult to control price for a product (unless long-term offtake contracts are in place) than volume produced. Price fluctuations may inadvertently cause a breach of any loan agreement or security document.

Third, there is a significant pricing differential for feed, nutraceuticals, bioplastics, and biochemicals compared to fuel. This pricing differential could distort financial models and disqualify early algae projects that will rely on coproduct sales to make the fuels portion of the project “pencil out”. Borrowers should not be penalized for capitalizing on multiple value streams. If any limit on product mix is imposed, this should be volumetric rather than revenue-based.

Fourth, Section 9003 imposes no such specific threshold for purposes of a biorefinery’s eligibility for the Biorefinery Assistance Program. Section 9003 provides that “eligible technology” for purposes of qualifying for a loan guarantee is “technology that is being adopted in a viable commercial-scale operation of a biorefinery that produces an advanced biofuel” as well as “technology . . . that has been demonstrated to have technical and economic potential for commercial application in a biorefinery that produces an advanced biofuel.”<sup>4</sup> Nothing in this sentence requires anything more than a biorefinery to produce *some quantity* of advanced biofuel, and it certainly doesn’t base a requirement on a percentage of revenue. Further, a “biorefinery” is defined as a “facility (including equipment and processes) that—(A) converts renewable biomass into biofuels *and biobased products*; and (B) may produce electricity”<sup>5</sup> (emphasis added). On the face of the statute, Congress did not require a project’s eligibility to be based on production and sale of a specific product mix or revenue mix, and biobased products and electricity are specifically anticipated to be key attributes of any biorefinery. USDA’s exercise of administrative discretion on this issue goes too far and jeopardizes the success of a much-needed program.

This limit on the revenue mix from products produced by the project is counterproductive to the purpose of the Biorefinery Assistance Program. Imposing an arbitrary limit on the product and revenue mix unsupported by Section 9003 will negatively affect borrower’s ability to make prudent business choices and maximize revenues based on market demand for certain products at any given time during the loan term. This is not in the lender’s best interest, it is not in the borrower’s best interest, and it is not in the taxpayer’s best interest when the borrower defaults.

Based on these reasons, USDA should consider the merits of (most desirable to least desirable): (i) completely eliminating this requirement for project eligibility in favor of a certification by the borrower that the primary purpose of the project over the term of the loan is the production of advanced biofuels; (ii) imposing a volumetric requirement rather than a revenue requirement with the volumetric requirement being a “majority” rather than 70%; (iii) reducing the 70% revenue threshold to a “majority”; (iv) providing a waiver process to avoid default; and (v) permitting the carry-forward and carry-backward of surpluses and deficits so that the 70% revenue requirement is imposed over multiple years. In any event, we encourage the USDA to clarify its intent here and the ramifications for failing to meet such a requirement.

#### **B. Feedstock Eligibility (6 C.F.R. 4279.228(c))**

The USDA has requested comment regarding “whether a specific type of material that could serve as a feedstock for the production of advanced biofuels, as it relates to project eligibility for this program, should *not* be an eligible feedstock. . .”<sup>6</sup> The ABO encourages USDA to refrain from limiting feedstock eligibility for the Biorefinery Assistance Program unless a particular feedstock is prohibited by Section

9003. We agree that “the statute clearly defines eligible feedstock and no further clarification is required.”<sup>7</sup>

Section 9001(3) defines “advanced biofuel” as “fuel derived from renewable biomass other than corn kernel starch.” The definition of “renewable biomass” contained in Section 9001(12) imposes further restrictions on feedstock eligibility, primarily geographical. However, both Section 9001(3) and 9001(12) contain lists of feedstocks that are *included*. These lists should not be construed as limiting these definitions to those feedstocks listed but rather as examples of the term being defined.

The ABO strongly asserts that any fuel derived from algae, whether blue-green, cyanobacteria, or seaweeds, meets the definition of “advanced biofuel” in all respects, perhaps limited only by Section 9001(12)(B).<sup>8</sup> Algae is not corn starch, and it is explicitly included as an example of “renewable biomass”.<sup>9</sup> The ABO would vehemently object to any efforts by the USDA or other stakeholders to exclude algae by administrative discretion. This would be contrary to clear Congressional support for the inclusion of algae as “renewable biomass” and therefore an eligible feedstock. We believe the USDA views algae as an important feedstock to meeting the mandates imposed by the Renewable Fuel Standard as evidenced by the loan guarantee issued to Sapphire Energy in 2009. We applaud the USDA for taking the leading role in supporting the development of the algae industry as a vital sector of the broader agricultural industry poised to play an important role in securing America’s energy independence and rural job growth.

Finally, the ABO applauds removal of cellulosic feedstocks as a scoring criterion. All advanced biofuels should compete on a “level playing field,” and cellulosic ethanol has already received substantially greater government investment when compared to other advanced biofuels that could serve as “drop-in” replacements for existing petroleum fuels.

### **C. Cash Equity Requirement (6 C.F.R. 4279.228(e))**

USDA is proposing that, for a project to be eligible for a loan guarantee, “the project must have *cash* equity injection of not less than 20 percent of eligible project costs”<sup>10</sup> (emphasis added). As with cost-sharing in the grants context, consideration should be given to a borrower's contributions of land, personal property, intellectual property, and other assets. USDA could use the type of “equity” composing the 20% (or the borrower's contribution in general) as part of the scoring criteria, but contributions of assets other than cash should not operate to disqualify a project for failing to meet eligibility criteria.

### **2. AMOUNT OF LOAN GUARANTEED**

9003 permits guarantees of up to 90% of the principal and interest. The NOPR (Sec. 4279.229) provides for guarantees of a lower amount: (1) If loan is less than \$80m, then guarantee can be up to 80% of principal and interest; (2) if loan is \$80m or more but less than \$125m, 80% of the first \$80m and 70% of the loan amount that is greater than \$80m; and (3) if the loan amount is more than \$125m, 60% of the entire loan amount. The level of guarantees may be appropriate for existing, commercially available technologies; however, these levels fall significantly short of providing sufficient risk reduction

for new, emerging technologies, and will not incentivize private institutions to lend. Low guarantee amounts limit the number of lenders who will be willing to assume the risks of capital-intensive, first-of-their-kind projects. As a result, entire fledgling industries may disappear and technologies will be deployed slowly and perhaps not at all.

The rule should provide for the full 90% guarantee for the principal and interest up to \$250 million and at a minimum should at a minimum provide for a 90% guarantee of up to \$125m and 80% guarantee of principal and interest up to \$250m. It is important to note that the Senate version of the program (known as Section 9001 Biorefinery and Repowering Assistance Program) provided for a 100% guarantee. The guarantee was reduced to 90% in conference due to House negotiators wanting project developers and lenders to have some "skin in the game". This is not objectionable, but the intent of Congress was clear that the guarantee of a significant amount of the loan is necessary for lenders to finance new technologies.

### **3. PRIORITY OF LIENS**

USDA's proposed rule would require that the guarantee be secured by a first lien on all collateral necessary to run the project in the event of a borrower's default because of the size of the guaranteed loans. Lenders would therefore be subordinate to the government. This becomes an issue if the guaranteed portion of the loan is low (e.g., only 60% of a loan of \$125m or more). In the event of default, the lender's position is only protected up to the percentage of the principal and interest guaranteed; therefore, if USDA is going to guarantee less than 90%, it should re-consider taking a first-priority position.

### **4. CITIZENSHIP REQUIREMENT FOR BORROWER ELIGIBILITY**

USDA is proposing that a borrower's eligibility be conditioned upon certain citizenship requirements.<sup>11</sup> For purposes of eligibility, individual borrowers must either be citizens of the United States, the Republic of Palau, the Federated States of Micronesia, the Republic of the Marshall Islands, or American Samoa, or reside in the U.S. after legal admittance for permanent residence. For entities other than individuals, eligibility requires the entity to be 51% owned by persons who are either citizens or legally admitted permanent residents residing in the U.S. If an entity owns an interest in the borrower, then the citizenship of that entity is determined by the citizenship of the individuals who own an interest in the entity based on their ownership interest. Corporate borrowers traded on major U.S. exchanges are presumed to meet this requirement.

The ABO believes that job growth and the domestic development of a bioenergy industry are of paramount importance. The geographical origin of the investment in such technology and infrastructure development is of less importance. The citizenship requirement is not imposed by Section 9003 (except to the extent of the scoring system takes into account the "level of local ownership proposed in the application") and is an unnecessary and artificial restriction and may prevent international investors from investing in U.S. markets and developing U.S. projects through equity ownership of project entities. This may particularly harm the algae industry, as many companies in the industry are seeking capital from foreign investors in an attempt to broaden the pool of investors in the wake of the current financial crisis.

The project's physical *location*, not ownership, should be the measure of eligibility, as it is the project's location that directly satisfies purpose of the Biorefinery Assistance Program, not the citizenship of the project's owners. To impose such a restriction without being mandated to do so by statute is counterproductive and will delay the development of new technologies and the thwart achievement of the Biorefinery Assistance Program's purpose. To the extent the USDA considers citizenship of the borrower, it should be limited to the requirements of Section 9003 and consider it only as one of many factors in evaluating and scoring an application.

## **5. ELIGIBLE PROJECT COST**

USDA requested comment on whether certain processing technology owned by borrower should be included as an eligible project cost. Similar to the discussion above relating to the 20% equity share, the ABO believes that a liberal interpretation of what qualifies as a "project cost" would help to facilitate achievement of the Biorefinery Assistance Program's purpose. Laboratory and equipment costs should, without reservation, be considered eligible project costs. In addition, the valuation of intellectual property should also be a critical component in the consideration of costs. To the extent permitted by law, USDA should also consider including reasonable, documented consulting, engineering, permitting, marketing, public relations, and attorney's fees as eligible project costs if those fees are directly related to the project. These fees can be substantial, up-front costs that are often a barrier to completing a significant application as is required for this program. If there is the opportunity to wrap these into the loan or apply them towards the borrower's equity contributions, additional companies with promising technology may choose to avail of the Biorefinery Assistance Program as a financing mechanism.

## **6. PRODUCER ASSOCIATIONS**

Under the proposed rule, the value of feedstock supplied by producer associations and cooperatives is used as a scoring factor for evaluating applications. ABO strongly opposes USDA's proposed 60% threshold for such purchases. The advanced biofuel feedstock markets, particularly for algae and cellulosic ethanol, are immature and have not developed to date using the agricultural cooperative model. Given transportation costs and other logistical issues, algal feedstocks will likely be grown by the same companies that harvest the lipids/triacylglycerides and convert the same to advanced biofuels or other biobased products at the same or an adjacent site.

While we encourage and support the premise that "algae is agriculture", we implore the USDA to avoid making the same mistakes that Congress and other agencies have made in the past when crafting legislation or policy with traditional agricultural food crops in mind. USDA should not impose an existing model on a new industry at this point in its development, despite the fact that cooperatives and producer associations have served the terrestrial agricultural industry well. To do so in terms of awarding points when scoring applications would severely disadvantage biorefineries seeking to use algal feedstocks (and other feedstocks) *vis-à-vis* other project who that would, for example, use corn stover, cobs, straw, sugar, or other cellulosic feedstocks.



The ABO recognizes the requirements in Section 9003(e)(C) and the fact that Congress has directed USDA to consider whether the applicant is proposing to work with producer associations or cooperatives; however, USDA should minimize the weight given to this when scoring applications.

## **7. RESOURCE CONSERVATION SCORING CRITERIA**

USDA requested comments on metrics used for measuring a project's worth based on its resource conservation, public health and environmental attributes.<sup>12</sup> Projects receiving very favorable lifecycle GHG analyses *vis-à-vis* conventional fuels they replace would receive higher scores in the loan guarantee selection process than projects with moderate improvements or no improvements.

The ABO strongly supports using lifecycle assessment data as scoring criteria, as this would reflect other regulatory requirements and policy decisions embedded in the Renewable Fuel Standard Program. To the extent lifecycle analyses are part of the scoring of applications, the ABO encourages USDA to employ established methods being utilized by other agencies and respected non-governmental organizations (e.g., the Environmental Protection Agency, National Academy of Sciences, etc.). For example, if certain renewable fuel will be produced at a biorefinery that has been found by the EPA in its Final Rule to the RFS Program to achieve a particular GHG reduction threshold, then EPA's findings can be used as a proxy for scoring criteria. For advanced biofuels that have not been qualified by the EPA, then USDA should require the same data and use the same process as EPA would use in evaluating the new fuel.

If the Biorefinery Assistance Program is a means to achieve the ends required by the Renewable Fuel Standard Program, then requirements imposed on borrowers as producers of renewable fuel for sale to Obligated Parties should be synchronous. On the other hand, separate and different requirements would impose unnecessary burdens on borrowers and applicants and may decrease the number of applications.

## **8. LOCAL OWNERSHIP**

Section 9003(e)(1)(C) requires the USDA to consider the "level of local ownership proposed in the application" in scoring an application. USDA is proposing to specifically award points based on local ownership with "local owner" having to live within 20 miles of the area supplying feedstock to the biorefinery.

Similar to the discussion of producer associations, above, the ABO recognizes that the USDA must implement Congressional directives. This required scoring criteria, like the produce association scoring criteria, benefits certain sectors of the bioenergy industry and not others and actually serves as a way for producer associations to get "double points" for the same thing. Owners of companies developing large-scale algae growth and cultivation biorefineries unlike their counterparts using corn stover or wheat straw, will likely be located far away from these production facilities. This is due to the fact that these production facilities are best located in desolate areas where terrestrial agriculture activities requiring fresh water would be impossible.

In order to reduce possible double benefits for producer associations in the scoring criteria and to more realistically account for project finance-type investment by funds with urban domiciles into these \$100+ million facilities, ABO proposes that “local ownership” should be based on owners living either within the state in which the project is located or 200 miles.

## **9. PROGRAM OBSTACLES**

USDA specifically requested comment on provisions in the proposed rule that may serve as obstacles for stakeholders applying for assistance. The ABO believes many of the issues addressed above are specific obstacles for successfully carrying out the purpose of the program as set forth in Section 9003 and that incorporating the recommendations would reduce these obstacles. The ABO encourages USDA to consider the following additional obstacles for applying for assistance and the proposed solutions.

### **A. Application Contents and Process – Preapplication Process**

Comments were specifically requested by USDA on the topic of whether a preapplication process would be beneficial. This process would be beneficial to the extent the “preapplication process” is similar to the two-phase process that the Department of Energy is using in its current solicitation (DE-FOA-0000140) for Title XVII loan guarantees. Requiring less than a “full-blown” application in Phase I so that USDA can determine eligibility and “invite” those applicants with a reasonable likelihood of success to apply in Phase II would relieve some burdens from applicants. Phase I could include a basic application, a letter commitment from the borrower to pursue Phase II if invited to apply and the applicant (lender) to lend a specified amount to the project if USDA agrees to guarantee the loan (subject to other customary conditions precedent), along with an overview of the project reflective of the scoring criteria. This would reduce the level of diligence that lenders would have to conduct for Phase I and shift this diligence to Phase II when the success of an application is more likely. This may entice additional qualified lenders to participate and result in USDA receiving more Phase I applications. A phased application process would also reduce the burden on borrower, who may, prior to issuance of the loan (or a greater likelihood as evidenced by an invitation to submit a Phase II application), may choose not to apply and instead allocate limited personnel resources to other tasks.

### **B. Lender Reluctance – Consideration of Bond Finance Proposal**

Under the proposed rule, an eligible lender must apply to the program on behalf of a borrower.<sup>13</sup> To be deemed an eligible lender, the lender must be a regulated or supervised lender, maintain minimum acceptable levels of capital, possess experience with similar projects and the expertise to make, secure, service, and collect loans.<sup>14</sup> Moreover, the proposed rule specifies that at no time during the life of the guarantee may the original lender hold less than 50 percent of their original unguaranteed position in the loan.<sup>15</sup>

ABO believes that these requirements dramatically reduce the number of lenders that are willing to work with the program due to the current bank market and high-risk associated with this new industry. USDA can address this problem by expanding the definition of eligible lender to enable utilization of the bond market in addition to the bank market. The bond market is favorable at this time because it is

largely untapped in comparison with the bank market, it is more flexible than traditional commercial lending, and it eliminates a substantial portion of the risk for the lender. This can be accomplished by permitting a corporate trustee and investment bank to, collectively, function as an "eligible lender" for purposes of taxable corporate bond transactions.

## **10. General Comments for Consideration During Reauthorization of the 2008 Farm Bill**

Although not directly related to this rulemaking, when making proposals to Congress for the reauthorization of the 2008 Farm Bill, the ABO encourages USDA to consider: (a) revising the definition of "renewable biomass" in Section 9001(12)(B) so that biorefineries using algal feedstocks and other feedstocks grown on Federal land can still qualify for Title IX program funding; and (b) requesting authorization for funding demonstration plants using feedstocks that have not received significant previous funding support.

The ABO has focused its advocacy efforts with the Federal government on several key issues: (a) tax parity between algal-based renewable fuels and cellulosic-based renewable fuels; (b) revising the Renewable Fuel Standard to ensure recognition of algal-based renewable fuels as a more significant contributor to achieving advanced biofuels targets than is currently recognized; and (c) increasing funding for development of biorefineries converting algal feedstocks into renewable fuels and other coproducts. Both of the above issues relate to increased funding for development of the algae industry and are therefore of keen interest to the ABO.

### **A. Federal Lands Restriction**

Of particular interest and concern to the ABO is the definition of "renewable biomass" in Title IX. *Renewable biomass* is defined as:

(B) any organic matter that is available on a renewable or recurring basis from *non-Federal land* or land belonging to an Indian or Indian tribe that is held in trust by the United States or subject to a restriction against alienation imposed by the United States, including – . . . (IV) Algae."<sup>16</sup>

As a result of this definition, projects or products that would otherwise be eligible for Title IX programs may be rendered ineligible if the project is built on, or the products are derived from, biomass grown on Federal land.

This is of concern to the algae industry, as some of the best locations for siting algae production facilities is in the desert Southwest. A significant proportion of this land is Federal land managed by the Bureau of Land Management or the Department of Defense. Much of it is desert without fresh water and is unsuitable for growing terrestrial agricultural crops; however, dry, marginal lands with saline or brackish water is ideal for production of algae as a bioenergy feedstock. In fact, many military bases that have undergone BRAC closures may be ideal sites.

While the ABO recognizes the policy drivers behind discouraging deforestation of Federal lands for bioenergy production, these policies were created with cellulosic feedstocks (e.g., wood waste, forest

thinnings, wood chips, etc.) in mind, not algae. This overly-broad restriction is counterproductive to the United States' national energy policy, and new language should be considered that permits responsible, environmentally-conscious use of Federal land for feedstock development without simultaneously depriving project developers of the very financial tools that Title IX seeks to provide in order to meet its purpose. The ABO welcomes a dialogue regarding how to re-craft this definition.

## **B. Funds for Demonstration Plants**

Only in the past several years could reference be made to an "algae industry". Given the time that has elapsed since some of the first companies received private financing in 2006, this industry has made major strides in many areas, including technology development, public and government awareness, financial support from public and private sources, and the dedication of substantial resources by dozens of educational institutions seeking to develop an expertise in phycology in order to train the leaders of an ever-growing industry.

Timing, however, has not necessarily favored the algae industry. Major policies such as the 2008 Farm Bill and the Renewable Fuel Standard were drafted before significant awareness of the potential for algal-based fuels or products and with traditional agricultural and bioenergy crops in mind. Funding followed these policy routes. For example, the Department of Energy's funding for its Biorefinery Assistance Program focused almost exclusively on cellulosic ethanol. Only the last solicitation for the demonstration of integrated biorefineries included algae as a possible feedstock (DE-FOA-0000096).

For a variety of reasons, only a handful of fully integrated algae biofuel production facilities exist globally. The recession and credit crises greatly reduced the availability of private funds for *and* the tolerance for risk involved in developing first-of-a-kind, capital-intensive projects. This is especially true for projects producing commodity products.

*We must get steel in the ground in order to test, optimize and de-risk these technologies, and in order to bring down anticipated cost. Federal support for demonstration projects will be critical to achieving this and to leveraging private, follow-on capital for industry-wide development.* Many Federal programs currently provide funding for research and development (critical), and many Title IX programs assist existing businesses using established pathways for feedstock development (9011 – Biomass Crop Assistance Program), or existing biorefineries (9004 Repowering Assistance). Loan guarantees are useful tools for developing commercial-scale facilities, but much of the technology being developed in the algae industry requires construction of smaller-scale production and refining facilities to address scale-up challenges before jumping straight to a commercial facility with a \$200+ million price tag.

The ABO welcomes a discussion about how to increase and deploy funds for crucial demonstration projects.

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<sup>1</sup> References to sections in the 2008 Farm Bill are references to sections to the United States Code added by the 2008 Farm Bill, which amends the Farm Security and Rural Investment Act of 2002 (7 U.S.C. 8101 et seq.).

<sup>2</sup> 2008 Farm Bill, Section 9003(a).

<sup>3</sup> 7. C.F.R. 4279.228(d); 75 Fed. Reg. 20,062 (April 16, 2010).

<sup>4</sup> 2008 Farm Bill, Section 9003(b)(2).

<sup>5</sup> 2008 Farm Bill, Section 9003(b)(7).

<sup>6</sup> 75 Fed. Reg. 20,058 (April 16, 2010).

<sup>7</sup> 75 Fed. Reg. 20,050 (April 16, 2010).

<sup>8</sup> Section 9001(12)(B) provides that the term *renewable biomass* means “any organic matter that is available on a renewable and recurring basis from *non-Federal land* or land belonging to an Indian or Indian tribe that is held in trust by the United States . . . including, . . . (IV) algae . . .” Algae, like all other eligible feedstocks, would be rendered ineligible based on the location of its growth.

<sup>9</sup> *Id.*

<sup>10</sup> 7. C.F.R. 4279.228(e); 75 Fed.Reg. 20,062 (April 16, 2010).

<sup>11</sup> 75 Fed. Reg. 20,049; Notice of Funding Availability, 73 Fed. Reg. 70,549-70,550 (Nov. 20, 2008).

<sup>12</sup> 75 Fed. Reg. 20,058.

<sup>13</sup> 75 Fed. Reg. 20062 (7 C.F.R. 4279.225, as proposed, requiring loan processing to comply with, *inter alia*, 7 C.F.R. 4279.161).

<sup>14</sup> 75 Fed. Reg. 20,057; 7 C.F.R. 4279.202(c).

<sup>15</sup> 75 Fed. Reg. 20,062 (7 C.F.R. 4279.202(k), as proposed).

<sup>16</sup> Farm Security and Rural Investment Act of 2002 (7 U.S.C. 9003), as added by the Food, Conservation, and Energy Act of 2008, 122 Stat. 2065, 416 (2008) (emphasis added).