



Statement Of
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Before the
Agriculture Subcommittee for Conservation, Credit, and Energy

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Preamble:

Mr. Chairman and distinguished committee members, thank you for the opportunity to visit with you today. My name is Larry Ward. I am Vice President of Project Development for the Broin Companies. I would like to talk with you today about financing challenges for the cellulosic ethanol industry.

BROIN COMPANIES – INTRODUCTION

Broin Companies, headquartered in Sioux Falls, South Dakota, is the largest dry mill ethanol producer in the United States. Broin Companies is an established leader in the bio-refining industry through project development, design and construction, research and development, plant management, ownership, and product marketing. The 20-year old company has built twenty-five (25) ethanol production facilities and currently manages nineteen (19) plants in the United States while marketing more than one billion gallons of ethanol annually.

Since 2000, *Broin & Associates*, Broin Companies' design/build subsidiary, has constructed nineteen (19) green field ethanol plants in five (5) states and completed five (5) major expansions of existing facilities. The value of our design build contracts since 2000 has exceeded \$900,000,000. Additionally, four (4) green field projects of similar size and scope are currently under construction with several others in development. Each project has been successfully designed, built and managed by Broin Companies. These projects have resulted in the addition of 875 millions of gallons per year (MGPY) of new fuel ethanol capacity.

The Broin Companies development model is unique. It started on the Broin family farm in Minnesota and has spurred the growth of investment by thousands of farmers and individual main street investors. Broin Companies' business model is to invest in, develop, design, construct and manage ethanol production facilities called Premier Partner Plants. However, the facilities are independent limited liability companies (LLC) owned primarily by individuals and local farmers that provide the corn feedstock. Broin Companies employs the facilities general manager and on-site technical engineer. All other employees are employed by the LLC. Broin Companies also has Board of Director representation at each plant.

By leveraging business size and position, Broin Companies has created the most successful and profitable ethanol facilities in the industry. Broin Companies has achieved breakthrough progress beyond ethanol processing, extracting extraordinary new value from each kernel of corn.

COST OF CONSTRUCTION

Just 10 years ago, most ethanol plants' capacity was 10 – 15 MGPY. Broin's first plant was 1 MGPY and was one of the largest in operation at the time. Traditional ethanol plants were built in corn producing states which put incentives in place to stimulate

investment by farmers and other local main street investors. Incentives stimulated development of an industry at a time when new interest was sparked by technology advancements. Public policy, which was driving these incentives, was sparked by the oil crisis in the 1970's and the clean air initiatives that followed. The cost per gallon to build and fund working capital for these plants was approximately \$1.75 per gallon or a total of \$20 - 25 million dollars.

Those plants are small by today's standards. Most dry mill ethanol facilities are now designed at 50 – 125 MGPY capacity. The cost of an ethanol plant project just five years ago was ~\$1.20 per gallon capacity. Today, the design and construction costs exceed \$2 per gallon, reaching upwards of \$250,000,000 to \$300,000,000 or more to deliver a completed project. The significant increase is due to inflation of construction materials and labor. Most notably are stainless steel, concrete, other metals and qualified, skilled, manpower.

While certain economies of scale can be achieved in the capital cost of construction, it is not as much as you might think due to the volumetric nature of the process and equipment. The most influential cost factor in the success of the operation will be the cost of corn which is strongly influenced by supply and availability near the plant.

Due to additional storage, feedstock and waste handling, and pre-treatment equipment, the cost to expand an existing facility to a cellulosic ethanol facility is approximately 100% greater than a traditional corn-to-ethanol facility. Project LIBERTY, Broin & Associates' commercial cellulose project for converting corn fiber and corn cobs to ethanol, will expand an existing 50 MGPY traditional corn-to-ethanol plant in Emmetsburg, IA to a 125 MGPY bio-refinery. Expansion costs to an existing facility are projected in the range of \$4.00 per gallon expanded capacity. A cellulose facility designed and constructed on a "green field" site would be substantially greater due to utility and product handling infrastructure.

The following table depicts the design and construction costs (\$) per gallon of plant capacity:

Corn-to-Ethanol Facility 1995	Corn-to- Ethanol Facility 2000	Corn-to-Ethanol Facility 2007	Cellulose-to-Ethanol Expansion Facility 2009
\$1.75 - \$2.00	\$1.15 - \$1.35	\$2.00 - \$2.25	\$4.00 +

As technology develops and the cellulosic ethanol industry matures, the cost of construction is predicted to go down as long as the materials of construction do not inflate at a greater rate.

Historically, the majority of financing for ethanol plant construction has been accomplished using local individual investment and bank debt financing provided

through the farm credit system and a few other Midwestern lending groups. All Broin Companies projects have a strong local farmer investment component, which promotes not only delivery of corn to the plant but ownership as well. Common financing structures require a 40 – 55% equity contribution in the project with the rest provided by debt. Severe restrictive covenants are common; these, together with loan amortization schedules, commonly retire debt in a 6 – 12 year period. This timeframe is exceptionally short for this type of long term asset. Minimal opportunity has existed for the use of federal grants or loan guarantees.

In the last couple of years, public financing and venture capital began emerging with interest in the industry and will play a role in future growth along side traditional and other models.

In terms of financing cellulose-to-ethanol production facilities, success will be achieved using new cellulosic processing technology. To achieve production at commercial volumes, we believe federal grants and the use of properly designed loan guarantee programs will be absolutely necessary to attract investors, creditors and banks. The involvement of these groups is essential in supporting rapid development of these new, evolutionary cellulosic technologies.

CURRENT FEDERAL LOAN GUARANTEE PROGRAMS

Broin Companies has considered utilizing the three (3) programs below:

- DOE Loan Guarantees for Projects that Employ Innovative Technology in Support of the Advanced Energy Initiative
- USDA Business and Industry
- USDA Renewable Energy Systems and Energy Efficiency Improvements Guarantee program

Broin Companies has not utilized any of the above loan guarantee programs due to the challenges detailed in the next few paragraphs.

Department of Energy (DOE) Loan Guarantees for Projects that Employ Innovative Technology in Support of the Advance Energy Initiative

While the Broin Companies have submitted a pre-application to guarantee a \$137 million loan under this program for construction of a cellulosic ethanol facility, we see the following challenges to a successful final application and issuance of a loan guarantee:

- §1702(g)(2)(b) requires, with respect to any property acquired pursuant to a guarantee, “the secretary” shall be superior to the rights to any other person with respect to the property. This statutory provision requires DOE to possess a first lien priority in the assets of the project and other collateral security pledged. Therefore any holders of non-guaranteed debt have a subordinate claim to the DOE in the event of default and will not

receive payment on their debt until the DOE is paid in full.

Since the need for a guarantee is a result of a lender's perceived higher risk, when compared to other lending opportunities, it will be difficult, if not impossible to obtain commitments for the un-guaranteed portion of the loan, due to the un-guaranteed portions' subordinate position.

- The guaranteed portion of the loan must not be separated from, or stripped from the un-guaranteed portion of the loan, or sold in secondary debt markets. To meet this requirement, the lender that originated the guarantee is required to hold the un-guaranteed loan. It is highly probable that a lender's risk appetite, at least one who is willing to do a guaranteed loan, is much different than a lender who focuses on the subordinated debt market. Since the originating lender is required to hold both types of debt, it will be difficult, if not impossible to find a lender to hold both portions of the loan.
- Delays in processing our application may cause delays in start-up and delays in the commencement in construction of the project.
- The guaranteed loan cannot be subordinate to other debt. In some cases the new loan is for expansion of an existing facility with prior debt that is still outstanding.
- Payment of fees to cover administrative cost for DOE issuing the guarantee, servicing and monitoring costs of the DOE, and normal fees charged by the originating lender, are a significant challenge for a start-up or expanding company.
- The subsidy cost of the expected liability to the federal government from issuing the guarantee, which is the estimated net present value at the time the guaranteed loan is dispersed, is an extreme burden to a start-up or expanding company. The liability would be a result of default payments made to the originating lender on the loan, due to lack of payment by the company from cash-flow or liquidation of the collateral. The subsidy cost is wholly distinct and separate from fees for issuing and servicing the loan guarantee. The subsidy fee can either be an appropriation by congress or payment by the borrower.

At present, it is our understanding that the borrower is expected to make this payment and no appropriation has been made. Since we do not intend to bring a project that we do not expect to be successful, we do not feel a subsidy payment should be required. Should the DOE, through their analysis, require an upfront cash subsidy payment, this undo burden may keep the project from moving forward.

United States Department of Agriculture (USDA) Business and Industry Loan Guarantee Program

- The Maximum Loan amount of \$25 million is too low. Most renewable energy projects are now of a capacity in excess of 50 million gallons, with total project costs in excess of \$100 million. (current facilities cost \$2.00 - \$2.25 per gallon to construct).

- Loans greater than \$5 million require national office approval. (Due to the seasonal nature of construction in cold climates, if the time to receive a commitment for guarantee is lengthy, the project could be delayed for a full year.)
- The percent of the loan guarantee diminishes to 60% for loans greater than \$10 million. Lending institutions see almost no value in a guarantee at the 60% level.
- When adding the potential one-time 2% fee and the annual renewal fee for a guarantee to a lender's typical cost, the total financing costs are excessive and very challenging for an expanding or start-up company.
- Since in most circumstances ownership is by a large group of rural investors, personal and corporate guarantees are not possible.
- If the guarantee is contingent upon successful start up, performance guarantees and no substantial deterioration in financial position, limited or no-value will be given to the guarantee by a lender considering financing for the project.

USDA Renewable Energy Systems and Energy Efficiency Improvements Loan Guarantee Program

- Loans cannot exceed 50% of total project costs.
- The maximum loan amount is \$10 million. This is too low. (Current ethanol facilities cost \$2.00 to \$2.25 per gallon to construct with most project scopes being in excess of 50 million gallons.)
- Loans greater than \$5 million can only be guaranteed for a maximum of 70%. (This results in a maximum of 35% of the total project cost being guaranteed. Fifty percent of the total project costs times 70%.) This provides no value to the lender.
- Loans greater than \$5 million require national office approval. (Due to the seasonal nature of building in cold climates, if the time to receive a commitment for loan guarantee is lengthy, the project could be delayed for a full year.)
- The one-time 1% guarantee fee and annual renewal fee along with typical lender fees result in total financing costs that are very challenging for a start-up or expanding company.
- Personal and corporate guarantees are not possible due to the large number of investors and the need to treat investors equally regardless of percent ownership.

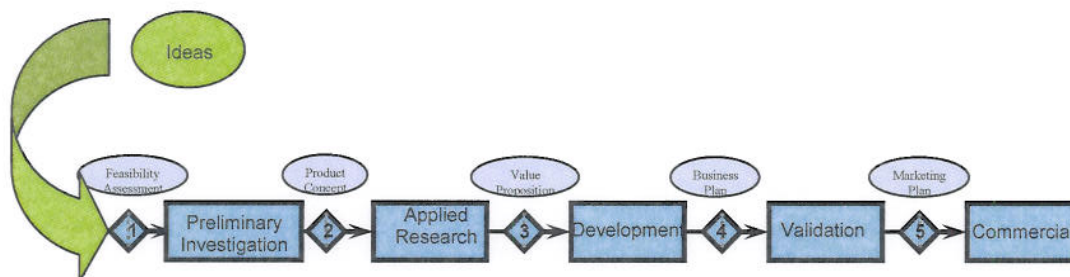
CURRENT FEDERAL GRANTS

Department of Energy (DOE)

The DOE utilizes the project management process called "stage gate management" to manage projects investigated internally and by industrial partners. The DOE has been instrumental in providing grant funding for applied research and development stages of

pre-treatment technologies and fermentative organisms for the conversion of lignocellulosic biomass to ethanol. Broin Companies' partners and suppliers, most notably NREL, DuPont and Novozymes, are past awardees and potential future recipients of such awards.

Broin Companies utilizes the same project management process to validate organisms and processes prior to scaling up to commercial scale. Broin Companies is self-funding a cellulosic ethanol demonstration plant at our Scotland, SD facility in 2007 in order to validate fermentation organisms and pre-treatment processes.



Broin & Associates was recently named a recipient of the DOE Integrated Bio-refinery Commercial Demonstration grant in which a 50 MGPY ethanol plant will be converted to a 125 MGPY bio-refinery. This grant represents the first commercial cellulosic ethanol demonstration project. Broin & Associates is honored to be a recipient.

The basis of the commercial integrated bio-refinery proposal was a 2002 DOE grant to validate an advanced corn dry milling technology, BFRAC™, which fractionates the corn kernel into three segments: endosperm, bran or fiber, and germ. The endosperm is processed in Broin's BPX™ fermentation process. The germ and bran are sold as animal feed product. However, the bran along with corn cobs will be utilized as feed products for the commercial cellulosic ethanol bio-refinery demonstration. Broin Companies and partners, DuPont and NREL, are leveraging knowledge and processes gained from past DOE grants to further cellulosic ethanol technology.

Broin Research is the only industrial ethanol partner in three DOE GTL Bioenergy Research Center applications. If awarded, Broin Research, along with university and industrial partners, will conduct comprehensive, integrated research and training programs in energy-related systems and synthetic biology.

United States Department of Agriculture (USDA)

USDA Rural Development Renewable Energy and Energy Efficiency Grants

Whereas the DOE is interested in applied research, development, and validation project stages, the USDA – Rural Development is primarily interested in technologies that have

been validated and ready for commercial application. The most notable grant program is the Renewable Energy Grants (up to \$500,000) and Energy Efficiency Grants (up to \$250,000). Similar to the comments above regarding the Renewable Energy and Energy Efficiency Loan Guarantee program, these grants are better suited for projects with limited cost scope. The grant application and approval process becomes cumbersome with eligible project costs above \$400,000 for Renewable Energy and \$250,000 for Energy Efficiency projects.

The Premier Partner Plants in which Broin Management operates would be interested in utilizing the above programs for solid fuel boilers and energy efficiency projects. Our cellulosic ethanol integrated bio-refinery design calls for anaerobic digesters. Again, the scope of these projects is above \$20 million – well above the designed scope of these grant programs.

USDA Cooperative State Research, Education, and Extension Service (CSREES)
National Research Initiative (NRI) Grant Program

Dakota Gold® Research Association, a non-profit organization associated with Broin Companies, is currently investigating a development research grant for animal nutrient studies utilizing dried distillers grain, a co-product of ethanol production.

Small Business Innovation Grants (SBIR)

The DOE, USDA, and National Science Foundation (NSF) offer SBIR grants for applied research (Phase I) and development (Phase II) stage projects. Broin Companies is currently investigating SBIR grants for our four independent research companies ranging from cellulosic ethanol fermentation organisms, animal nutrient studies, specialty chemical development, and alternative co-product utilization.

RECOMMENDATIONS

The primary economic challenges facing the developing cellulosic ethanol industry are (1) biomass collection and logistics; and (2) economic process to breakdown cellulosic sugars to convert to ethanol. Until biomass collection processes and cellulosic technology is proven, government support will be crucial to launch the cellulosic ethanol industry to a sustainable level.

Farmer Incentives - Biomass Collection and Logistics

The call to action to the biofuels industry and the American farmer to address the nation's energy demands via cellulosic ethanol is the most significant business and behavioral change the farm industry has seen in decades. In order for cellulosic ethanol to be economic on a large scale, the government, biofuels and farm industries need to remove barriers for the American farmer. The farmer needs to be engaged as soon as possible and as aggressively as possible, in order to meet specific plant requirements as well as the nation's goal of significantly replacing petroleum imports.

Government assistance is required to remove economic barriers in order to supply sufficient feedstock to the cellulosic ethanol facilities. Broin Companies respectfully

suggests an incentive to cellulosic growers for each ton of biomass delivered to an ethanol plant.

1. We suggest an incentive of a *\$50 per dry ton of biomass delivered to a cellulosic ethanol plant gate* based on modeling of farmer economics as well as the cellulosic ethanol plant economics.
2. The ethanol plant will make a payment in addition to the incentive directly to the farmer to make the cellulosic logistics sufficiently attractive to the farmer for infrastructure investment to take place.
3. This incentive payment would be terminated after the industry has proven the technologies and gained some critical mass.

Harvesting, drying, storing, and transporting biomass material is a new business model for the farmer, which means the economics behind changing their current business practices need to be very persuasive in order to motivate local farmers. Farmers will need to invest in additional equipment including: (1) combine modifications to harvest biomass; (2) storage to keep biomass relatively clean; (3) dryer equipment to meet specifications; and (4) trucks and specialized trailers to transport the biomass to ethanol plants.

The American farmer would benefit from several united fronts working together to provide education. The following is a suggested list of public and private agencies that can partner to provide education:

- USDA – Rural Development
- University Agricultural Extension Agents
- Farm and Commodity Organizations
- Cellulosic Ethanol Producers
- Harvest Machine Manufacturers
- Seed Corn and other Biomass Seed Companies

Loan Guarantee Program Recommendations

The 2007 Farm Bill has a USDA loan guarantee program for broad renewable energy initiatives as well as specific cellulosic ethanol projects. The \$2 billion DOE loan guarantee program targets broad renewable energy initiatives as well. Federal loan guarantee programs will be essential to commercialize cellulosic ethanol plants until technology is proven and the industry is matured to a point where conventional lending is feasible.

As outlined above, we have found challenges with all three (3) guarantee programs: USDA Business and Industry Loan Guarantee Program, USDA Renewable Energy Systems and Energy Efficiency Improvements Guarantee program, and DOE Loan Guarantees for Projects that Employ Innovative Technology in Support of the Advance Energy Initiative. An enhanced program that draws from aspects of all three programs, we believe, would be acceptable to the lending community and significantly increase

investments in new technologies that will enable renewable fuels to replace our dependence on imports of fossil fuels.

The following are specific recommendations for a proposed federal loan guarantee program supporting the Advanced Energy Initiative:

Eligible Areas

- Projects that employ innovative technologies for renewable energy and energy efficiency.
- Loans can be guaranteed in cities with a population of up to 50,000.
- Priority given to applications for working in rural communities of 25,000 or less.

Eligible borrowers

- Any legal entities, including individuals, public and private organizations and federally recognized Indian Tribal groups may borrow.
- There is no size restriction on the business.

Benefits to the business:

- Higher loan amounts, stronger loan application, less equity injection, lower interest rates, and longer repayment terms assist businesses that may not qualify for conventional lending or financing.
- Assist business in stability, growth, expansion, and rural development.
- Assist in bringing new technology to commercial scale much sooner.
- Assist in deploying new technology on a broad scale faster.

Eligible Lenders

Most lenders are eligible, including national and state chartered banks, farm credit system banks, and savings and loan associations. Other lenders, such as insurance companies and mortgage companies may be eligible if approved by USDA.

Benefits to Lenders

- Provide lenders with another tool to expand their loan portfolio.
- Improve the economic and environmental living climate in rural communities.
- Guaranteed and or/un-guaranteed portion can be sold to enhance liquidity and increase profitability while limiting financial exposure.
- Allows lender to make loans above its loan limits.

Eligible Project Costs

- Cost of acquisition, lease or rental of real property, including engineering fees, surveys, title insurance, recording fees, and legal fees incurred in connection with land acquisition, lease or rental, site improvements, site restoration, access roads and fencing.

- Engineering, architectural, legal, and bond fees, and insurance paid in connection with construction of the facility and materials, labor, services, travel and transportation for facility construction start-up and test.
- Equipment purchase and start-up testing.
- Cost to provide equipment, facilities, and services related to safety and environmental protection.
- Financial and legal services and costs, including other professional services and fees necessary to obtain required licenses and permits and to prepare environmental report and data.
- Interest cost and other normal charges affixed by lender.
- Necessary and appropriate insurance and bonds of all types.
- Costs of start-up, commissioning and shake-down.
- Cost of obtaining licenses to intellectual property necessary to design, construct and operate the project.
- Machinery, equipment and storage facilities to support the collection and storing of raw materials for the production of cellulosic ethanol.
- Other necessary and reasonable cost approved by the Secretary.

Maximum Loan Amount

Loans would be limited to a maximum of \$200 million per borrower. Loans greater than \$10 million require national office concurrence.

Loan Guarantee Limits

\$160 million (80% of \$200 million)

Loan to Appraise Market Value Ratios

- 80% Real Estate
- 75% receivables
- 75% inventory
- 80% machinery and equipment

Interest Rate

Interest rates for loans may be fixed or variable. The rate is negotiated between the lender and borrower and will not be more than those rates customarily charged to other borrowers in similar circumstances. The variable rate must be tied to a nationally published rate. Variable rates cannot be adjusted any more than every 30 days.

Borrower Equity Requirements

A minimum of 15% tangible balance sheet equity is required for exiting business. A minimum of 25% tangible balance sheet equity is required for new businesses. Personal and corporate guarantees are not required. Tangible balance sheet equity will be determined accordance with generally accepted accounting principles (GAAP).

Maximum Repayment Terms

- Working capital – 7 years
- Machinery and equipment – 10 years or useful life
- Real estate – 20 years
- Combination real estate, machinery and equipment – 15 years

Fees and Costs

A one-time guarantee fee not to exceed one half of 1% of the guarantee principle amount along with an annual renewal fee not to exceed one tenth of 1%. No subsidy costs should be assessed for potential future costs to the federal government for making payments due to lack of cash-flow or if upon liquidation, the proceeds received do not fully repay the loan. It is our belief that a subsidy payment by the borrower defeats the purpose of a guaranteed loan program. Other typical lender costs may also be incurred.

Appraisals and Appraisal Report

Appraisals and appraisal report prepared by an independent, qualified fee appraiser will be required on property that will serve as collateral. Appraisals will be made in accordance with the accepted format and standards of the industry.

Collateral

All collateral pertaining to the specific project supported by the guarantee shall secure the entire loan. Repayment of the loan must be reasonably assured. Personal and corporate guarantees are not required.

Loss Sharing

In the event of default if the liquidation of the collateral or cash-flow payments do not repay the guaranteed and un-guaranteed portions of the loan, shortages would be shared on a pro-ratio basis, 80% of the shortage being paid by the guarantor and 20% of the shortage being covered by the holder of the unguaranteed portion of the debt.

Loan Covenants/Conditions

Normal and customary commercial lending covenants that are reasonably acceptable to financial institutions. Contingencies of issuing the guarantee based on successful completion and start-up of the project without financial deterioration are not acceptable. A clause of this type will eliminate the value to a lender since the lender must commit the loan prior to commencing construction or expansion. The lenders greatest risk is during construction and start-up.

Report

Once the project has been constructed, the lender must provide the agency annual financial reports from the borrower.

Servicing Liquidation

Annual financial statements should continue to be required. Lender services and liquidates with USDA or appropriate agency concurrence.

The USDA is in a particularly good position to facilitate grant and loan guarantee programs due to personnel capacity and office location infrastructure. USDA has an established reputation and integrity with farmers. The local and state offices have outstanding personnel who are eager to assist with applications and knowledgeable about programs and processes. However, if one were to inquire with a local or state USDA Rural Development officer, they would agree both the loan guarantee and grant processes are ripe for improvement and stream lining. As much as the local director would like to assist, his/her hands are tied by application and approval processes and turnaround.

Grants

Broin Companies solidly supports the recommended appropriations for research grants: (1) DOE Biomass R&D ~\$500 million; and (2) USDA Biomass R&D ~\$500 million. The following suggestions further expand the referenced recommendations:

Feedstock development, production practices and collection logistics

The development of cellulosic feedstocks is limited by the current germplasm developed for corn protein and starch processing. The development of new genotypes for biofuels production (e.g. corn plants with starch potential and accessible and processible cellulose/hemicellulose) offers greater yield of biofuels per acre. The acceleration of no-till farming practices could yield significantly more biomass per acre while maintaining environmental benefits. Research to understand and develop corn no-till practices and corn-on-corn farming practices and implications is required. Collection, storage and transportation of low bulk density cellulose biomass remain a daunting challenge. Research to support each of these areas is needed to provide one billion tons of biomass desired in order to address our need for energy independence.

Analytical chemistry, instrumentation and data processing

The development of chemical and physical methods, instruments, and data processing capabilities used to understand the products of pretreatment, saccharification and fermentation will greatly accelerate the development of new and novel processes from which to produce biofuels. Real time analyses will also allow improved processing and reduced cost of operation.

Development of novel processes

The development of the potential to consolidate multiple bioprocesses will provide for reduction of biofuels production costs. The integration of pretreatment, saccharification and fermentation holds potential for a step change in ethanol and other biofuels development.

Development of specialty chemicals / materials at biofuel refineries

An important aspect of refineries is the ability to produce multiple products. The emerging bio-refineries are limited in the number of chemicals that can be cost effectively produced using biotechnology. Applied research, development, and validation of specialty chemicals and materials is needed to increase the economic viability of bio-refineries.

Evaluation of higher ethanol blends in conventional gasoline engines

The current market for gasoline/ethanol blended fuels is 10% or 85%. An effort to address the maximum ethanol/gasoline displacement potential using the existing gasoline engine is required.

Bio-refinery construction grants will be essential to validate bio-refinery research described above, incrementally drive down operations costs, and improve unit operations.

Carbon Credits

Broin Companies supports the system of monetizing greenhouse gas credits. Further, we support the recommendation for the USDA to develop a system to monetize greenhouse gas credits generated by production of ethanol and other products from agricultural feedstocks.

SUMMARY

Broin Companies is honored to testify to the Agriculture Subcommittee for Conservation, Credit, and Energy. On behalf of the renewable fuels industry, we applaud the Department of Agriculture 2007 Farm Bill recommendations. The initiatives outlined in the new Farm Bill will accelerate cellulose ethanol to the marketplace. Without the initiatives outlined, the industry would have difficult, and in some cases impassable, financial barriers to conduct research and development, validate, and commercialize renewable fuels technology, particularly cellulosic ethanol.

In order to launch the United States cellulosic ethanol industry, we respectfully submit the following recommendations for your review and consideration for the 2007 Farm Bill:

1. Incentive to the farmer to encourage adoption of new farm practices required to provide stover for cellulosic ethanol processing of \$50 per dry ton of biomass delivered to a cellulosic ethanol plant gate.
2. Modified loan guarantee programs will be essential to commercialize cellulosic ethanol plants until technology is proven and the industry is matured to a point where conventional lending is feasible. This document provides specific recommendations in the loan guarantee recommendation.
3. The proposed Department of Energy and United States Department of Agriculture research grants will accelerate the development of cellulosic ethanol technology.

Specific program suggestions are outlined in the grant recommendations in this document.

4. The expansion of a carbon credit system to monetize greenhouse gas credits.

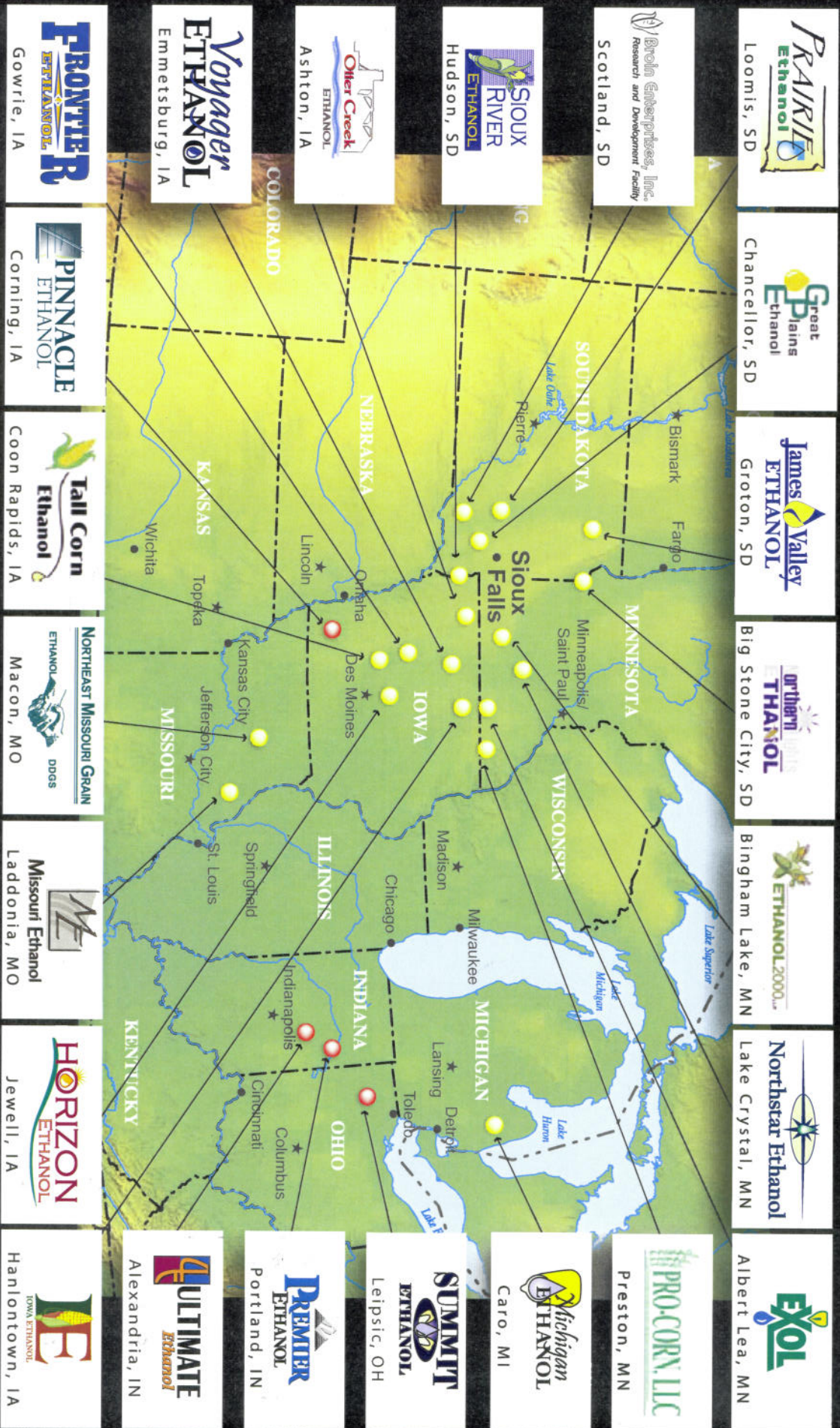
Thank you for the opportunity to submit recommendations. Broin Companies looks forward to working in partnership with the DOE and USDA to reach the national goal of 35 billion gallons of renewable fuel produced per year by the year 2017.

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Larry Ward has been involved in agribusiness for over 20 years and joined the Broin Companies in 1997. Mr. Ward began his employment with the Broin Companies as an ethanol plant General Manager and has since advanced through the company in various positions and is presently serving as Vice President of Project Development. Mr. Ward has played a vital role in the creation and development of many ethanol plant projects, including investor relations, project finance and project equity. In addition, Mr. Ward serves on the Board of Managers for more than 15 ethanol production companies and is also active with industry associations. Mr. Ward is serving on the Ethanol Promotion and Information Council (EPIC) Board of Directors and previously served on the Board of Directors of the Renewable Fuels Association (RFA). Mr. Ward received his Masters in Business Administration from the University of South Dakota in 1990.

BROIN COMPANIES PREMIER PARTNER PLANTS



MAP LEGEND

- = Plant In Operation
- = Plant Under Construction



ETHANOL. BIOPROCESSING. LEADING THE REVOLUTION

