GREEN PLAINS RENEWABLE ENERGY, INC.
Form 10-K
March 30, 2009

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

. **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended _____

or

X . TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from April 1, 2008 to December 31, 2008

Commission file number 001-32924

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GREEN PLAINS RENEWABLE ENERGY, INC.

(Exact name of registrant as specified in its charter)

Iowa	**84-1652107**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
9420 Underwood Ave, Suite 100 Omaha, NE 68114	**(402) 884-8700**

(Address of principal executive offices, including zip code) (Registrant s telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act: **Common Stock, $.001 par value**

Name of exchanges on which registered: **NASDAQ Stock Market**

Securities registered pursuant to Section 12(g) of the Act: **None**

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Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes . No S

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes **X** . No .

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes **X** . No .

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. .

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See definition of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act.

Large accelerated filer . Accelerated filer . Non-accelerated filer **X** . Smaller reporting company .

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes . No **X** .

The aggregate market value of the Company s voting common stock held by non-affiliates of the registrant as of June 30, 2008 (the last business day of the second quarter), based on the last sale price of the common stock on that date of $6.00, was approximately $34.9 million. For purposes of this calculation, executive officers, directors and holders of 10% or more of the registrant s common stock are deemed to be affiliates of the registrant.

As of March 20, 2009, there were 24,903,408 shares of the registrant s common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant s definitive Proxy Statement for the 2009 Annual Meeting of Shareholders are incorporated by reference in Part III herein. The Company intends to file such Proxy Statement with the Securities and Exchange Commission no later than 120 days after the end of the transition period covered by this report on Form 10-K.

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Cautionary Information Regarding Forward-Looking Statements

This report contains forward-looking statements based on current expectations that involve a number of risks and uncertainties. The Securities and Exchange Commission (SEC) encourages companies to disclose forward-looking information so that investors can better understand a company s future prospects and make informed investment decisions. Forward-looking statements generally do not relate strictly to historical or current facts, but rather to plans and objectives for future operations based upon management s reasonable estimates of future results or trends, and include statements preceded by, followed by, or that include words such as anticipates, believes, continue, estimate expects, intends, outlook, plans, predicts, may, could, should, will, and words and phrases of si include, but are not limited to, statements regarding future operating or financial performance, business strategy, business environment, key trends, and benefits of actual or planned acquisitions. In addition, any statements that refer to expectations, projections or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. These statements are based upon the current beliefs and expectations of management and are subject to significant risks and uncertainties. The forward-looking statements are made pursuant to safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Any or all forward-looking statements in this report may turn out to be incorrect. They may be based on inaccurate assumptions or may not account for known or unknown risks and uncertainties. Consequently, no forward-looking statement is guaranteed, and actual future results may vary materially from the results expressed or implied in our forward-looking statements. The cautionary statements in this report expressly qualify all of our forward-looking statements. In addition, the Company is not obligated, and does not intend, to update any of its forward-looking statements at any time unless an update is required by applicable securities laws. Factors that could cause actual results to differ from those expressed or implied in the forward-looking statements include, but are not limited to, those discussed in *Item 1A Risk Factors* of this report. Actual results may differ from projected results due, but not limited, to unforeseen developments.

You are cautioned not to place undue reliance on the forward-looking statements. You should read this report completely and with the understanding that actual future results may be materially different from what we expect. The forward-looking statements specified in this report have been compiled as of the date of this report, are not considered to be exclusive, and should be evaluated with consideration of any changes occurring after the date of this report.

PART I

ITEM 1. BUSINESS.

References to we, us, our, Green Plains, or the Company in this report refer to Green Plains Renewable Energy an Iowa corporation, and its subsidiaries.

Green Plains was formed in June 2004 to construct and operate dry mill, fuel-grade ethanol production facilities. Ethanol is a renewable, environmentally clean fuel source that is produced at numerous facilities in the United States, mostly in the Midwest. In the U.S., ethanol is produced primarily from corn and then blended with unleaded gasoline

in varying percentages. The ethanol industry in the U.S. has grown significantly over the last few years as its use reduces harmful auto emissions, enhances octane ratings of the gasoline with which it is blended, offers consumers a cost-effective choice, and decreases the amount of crude oil the U.S. needs to import from foreign sources. Ethanol is most commonly sold as E10, the 10 percent blend of ethanol for use in all American automobiles. Increasingly, ethanol is also available as E85, a higher percentage ethanol blend for use in flexible fuel vehicles.

To execute our business plan, we entered into financial arrangements to build and operate two ethanol production facilities. Construction of our Shenandoah, IA plant began in April 2006, and operations commenced at the plant in August 2007. Construction of our Superior, IA plant began in August 2006, and operations commenced at the plant in July 2008. Each of these ethanol production facilities has expected production capacity of 55 million gallons per year (mmgy) of fuel-grade, denatured ethanol.

As part of our October 2008 merger with VBV and its majority-owned subsidiaries, which is discussed in further detail in *Merger and Acquisition Activities* below, the Company acquired two additional ethanol production facilities, located in Bluffton, IN and Obion, TN. Each of these ethanol production facilities has expected production capacity of 110 mmgy of fuel-grade, denatured ethanol.

At full capacity, the combined ethanol production of the four facilities is 330 million gallons per year. Processing at full capacity will (1) consume approximately 120 million bushels of corn, (2) produce approximately 1,020,000 tons of by-product known as distillers grains, and (3) produce approximately 960,000 tons of carbon dioxide. Although we are currently involved in research and development efforts surrounding the potential use of carbon dioxide to help produce an algae-based biofuel feedstock, we currently scrub and vent the carbon dioxide produced at the plants because we do not believe there is a viable market for carbon dioxide to justify the installation of the necessary capturing facilities at this time.

Merger and Acquisition Activities

To add shareholder value, we have expanded our business operations beyond ethanol production to integrate a full-service grain and agronomy business, ethanol marketing services, terminal and distribution assets, and next generation research and development in algae-based biofuels.

Merger with VBV LLC

In May 2008, we entered into definitive merger agreements with VBV and its subsidiaries. At that time, VBV held majority interest in two companies that were constructing ethanol plants. These two companies were Indiana Bio-Energy, LLC (IBE) of Bluffton, IN, an Indiana limited liability company which was formed in December 2004; and Ethanol Grain Processors, LLC, (EGP) of Obion, TN, a Tennessee limited liability company which was formed in October 2004. Additionally, VBV was developing an ethanol marketing and distribution business at the time of the merger announcement. The merger transaction was completed on October 15, 2008 (the Merger). For accounting purposes, the Merger has been accounted for as a reverse merger, which will be discussed in further detail later in this report. Pursuant to the terms of the Merger, equity holders of VBV, IBE and EGP received Company common stock and options totaling 11,139,000 shares. Upon closing of the Merger, VBV, IBE and EGP were merged into subsidiaries of the Company. Simultaneously with the closing of the merger, NTR plc (NTR), a leading international developer and operator of renewable energy and sustainable waste management projects and majority equity holder of VBV prior to the Merger, through its wholly-owned subsidiaries, invested $60.0 million in Company common stock at a price of $10 per share, or an additional 6.0 million shares (the Stock Purchase). With this investment, NTR is our largest shareholder. This additional investment is being used for general corporate purposes and to finance future acquisitions.

Operations commenced at the Bluffton and Obion plants in September 2008 and November 2008, respectively. As previously discussed, the VBV plants are each expected to produce approximately 110 million gallons of ethanol and 350,000 tons of distillers grains annually.

Merger with Great Lakes Cooperative

To complement and enhance our ethanol production facilities, on April 3, 2008, the Company completed its merger with Great Lakes Cooperative (Great Lakes), a full-service cooperative with approximately $146 million in fiscal 2007 revenues that specializes in grain, agronomy, feed and petroleum products in northwestern Iowa and southwestern Minnesota. Upon closing the merger with Great Lakes, Green Plains Grain Company LLC, a wholly-owned subsidiary of the Company, assumed Great Lakes assets and liabilities, with the exception of certain investments in regional cooperatives that were excluded from the merger. Green Plains Grain has grain storage capacity of approximately 20 million bushels that are used to support our grain merchandising activities, as well as our Superior ethanol plant operations. We believe that incorporating Great Lakes businesses into our operations increases efficiencies and reduces commodity price and supply risks. Pursuant to the merger agreement, all outstanding Great

Lakes common and preferred stock was exchanged for an aggregate of 550,352 shares of our common stock and approximately $12.5 million in cash.

Acquisition of Majority Interest in Blendstar, LLC

On January 20, 2009, which was subsequent to the Company s year end, we acquired majority interest in Blendstar, LLC, a biofuel terminal operator. The transaction involved a membership interest purchase whereby the Company acquired 51% of Blendstar from Bioverda U.S. Holdings LLC, an affiliate of NTR, our largest shareholder, for $9.0 million. Blendstar operates terminal facilities in Oklahoma City, Little Rock, Nashville, Knoxville, Louisville and Birmingham and has announced commitments to build terminals in two additional cities. Blendstar facilities currently have splash blending and full-load terminal throughput capacity of over 200 million gallons per year.

Renaming of Ethanol Production Subsidiaries

Our ethanol production subsidiaries have been renamed for consistency as follows:

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Green Plains Bluffton LLC was formerly known as Indiana Bio-Energy, LLC.

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Green Plains Obion LLC was formerly known as Ethanol Grain Processors, LLC.

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Green Plains Superior LLC was formerly known as Superior Ethanol, LLC.

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Green Plains Shenandoah LLC was formerly known as GPRE Shenandoah LLC.

Description of Dry Mill Ethanol Production Process

Primary Product Ethanol

Ethanol is a chemical produced by the fermentation of sugars found in grains and other biomass. Ethanol can be produced from a number of different types of grains, such as corn, wheat and sorghum, as well as from agricultural waste products such as rice hulls, cheese whey, potato waste, brewery and beverage wastes and forestry and paper wastes. At present, the majority of ethanol in the U.S. is produced from corn because corn contains large quantities of carbohydrates and is in greater supply than other grains. Such carbohydrates convert into glucose more easily than most other kinds of biomass. Outside the U.S., sugarcane is the primary feedstock used in ethanol production.

Our plants use a dry mill process to produce ethanol and by-products. The corn is received by truck or rail, which is then weighed and unloaded in a receiving building. Storage bins are utilized to inventory grain, which is passed through a scalper to remove rocks and debris prior to processing. Thereafter, the corn is transported to a hammer mill where it is ground into a mash and conveyed into a slurry tank for enzymatic processing. We add water, heat and enzymes to break the ground grain into a fine slurry. The slurry is heated for sterilization and pumped to a liquefaction tank where additional enzymes are added. Next, the grain slurry is pumped into fermenters, where yeast, enzymes, and nutrients are added, to begin a batch fermentation process. A beer column, within the distillation system, separates the alcohol from the spent grain mash. Alcohol is then transported through a rectifier column, a side stripper and a molecular sieve system where it is dehydrated to 200 proof. The 200 proof alcohol is then pumped to a holding tank and then blended with approximately two percent denaturant (usually natural gasoline) as it is pumped into finished product storage tanks.

By-Products

The spent grain mash from the beer column is pumped into one of several decanter type centrifuges for dewatering. The water (thin stillage) is pumped from the centrifuges and then to an evaporator where it is dried into a thick syrup. The solids (wet cake) that exit the centrifuge are conveyed to the dryer system. The wet cake is dried at varying degrees, resulting in the production of distillers grains. Syrup might be reapplied to the wet cake prior to drying, providing nutrients if the distillers grains are to be used as animal feed. Under certain circumstances, the syrup is independently marketed as a by-product. Distillers grains, the principal by-product of the ethanol production process, are principally used as high-protein, high-energy animal fodder and feed supplements marketed to the dairy, beef, swine and poultry industries. Distillers grains have alternative uses as burning fuel, fertilizer and weed inhibitors.

Dry mill ethanol processing potentially creates three forms of distillers grains, depending on the number of times the solids are passed through the dryer system: Wet Distillers Grains (WDG), Modified Wet Distillers Grains (MWDG) and Dried Distillers Grains (DDG). WDG is processed wet cake that contains approximately 65% to 70% moisture. WDG have a shelf life of approximately three days and can be sold only to dairies or feedlots within the immediate vicinity of an ethanol plant. MWDG, which have been dried further to approximately 50% to 55% moisture, have a

slightly longer shelf life of approximately three weeks and are marketed to regional dairies and feedlots. DDG, which have been dried more extensively to approximately 10% to 12% moisture, have an almost indefinite shelf life and may be stored, sold and shipped to any market regardless of its proximity to an ethanol plant. DDG are primarily marketed to domestic and international beef and poultry industries.

The thick syrup is also a marketable by-product for use as an animal feed supplement or as a base for further refining and processing. In particular, corn oil can be extracted from the thick syrup for production of biodiesel and other biofuel products.

Thermal Oxidizer

Ethanol plants such as ours may produce odors in the production of ethanol and its primary by-product, distillers grains, which some people find to be unpleasant. We employ thermal oxidizer emissions systems to reduce any unpleasant odors caused by the ethanol and distillers grains manufacturing process.

Corn Feedstock Supply

Our plants use corn as feedstock in the dry mill process. Our 55 million gallon plants each process approximately 20 million bushels of corn per year, or 54,800 bushels per day. At our 110 million gallon capacity plants, 40 million bushels of corn will be consumed on an annual basis, which equates to 109,600 bushels per day at each plant. Each bushel of corn produces approximately 2.8 gallons of denatured ethanol and 17 pounds of DDG. Our corn supply is obtained primarily from local markets. However, each of our plants is also situated on rail lines that we can use to receive corn from other regions of the country if local corn supplies are insufficient.

The price and availability of corn are subject to significant fluctuations depending upon a number of factors that affect commodity prices in general, including crop conditions, weather, governmental programs and foreign purchases. Because the market price of ethanol is not directly related to corn prices, ethanol producers are generally not able to compensate for increases in the cost of corn feedstock through adjustments in prices charged for their ethanol. We therefore anticipate that our plants profitability may be negatively impacted during periods of high corn prices.

We acquired Essex Elevator, Inc. in September 2007 to receive and store corn in support of our Shenandoah ethanol plant. The elevator is located approximately five miles northeast of the Shenandoah plant on the same rail line we use to transport products from our plant. In April 2008, we closed on our merger with Great Lakes Cooperative which augments the feedstock procurement at the Superior ethanol plant. We believe the integration of elevators and grain businesses into our operations helps secure our supply of corn at lower prices.

Green Plains Bluffton has contracted with Cargill Incorporated, through its AgHorizons Business Unit (Cargill), for all of its corn supplies. The contract runs for five consecutive years beginning in September 2008. Cargill will supply all of our corn requirements for ethanol production in such amounts and for delivery at such times as we may designate, subject to and in accordance with the terms and conditions of the agreement. Our Obion plant has entered into a sourcing agreement with Central States Enterprises, Inc. for its corn needs over and above that sourced locally and by Obion Grain Co., who is our exclusive supplier for corn obtained in Obion County, TN and the seven contiguous counties in Tennessee and Kentucky.

At our Shenandoah and Superior plants, we maintain relationships with local farmers, grain elevators and/or cooperatives to complement our grain origination programs. Most farmers in the areas where our plants are located have their own dry storage facilities, which allow us to purchase much of the corn needed to supply the plants directly from farmers throughout the year. We became licensed as an Iowa Grain Dealer in the fall of 2006, which allows us to contract to purchase Iowa grains. We purchase and sell futures contracts and options as a hedge in an effort to better manage margins. We also utilize cash and forward fixed-price contracts with grain producers and elevators for the physical delivery of corn to our plants.

Ethanol Markets

Ethanol has important applications as a gasoline extender and octane enhancer. Ethanol is a primary fuel that can be used in blended gasoline in quantities as high as 85% (E85) in flexible fuel vehicles. However, ethanol can also be used as a high quality octane enhancer and as an oxygenate capable of reducing air pollution and improving automobile performance. Historically, the ethanol industry has been dependent on economic incentives. However, the need for such incentives may diminish as the acceptance of ethanol as a primary fuel and as a fuel extender continues to increase.

Ethanol has replaced methyl tert-butyl ether (MTBE) as the most popular oxygenate used in domestic gasoline markets. In the U.S., ethanol is typically blended with gasoline at a rate of 10%. Most American automobiles can

operate on 10% blends without modification. Late model cars can often run on significantly higher percentage blends. Ethanol use has grown consistently year over year from a concentration in high metropolitan areas to acceptance in less densely populated areas. The metropolitan markets represent the need for ethanol as the preferred oxygenate to be blended with RFG gasoline to help reduce Ozone contamination. The migration of ethanol as a blending component in the less densely populated, non-urban markets is partly a function of the renewable fuel standard (RFS) mandate, but also a function of the competitive price nature of ethanol to gasoline. Ethanol blenders in these new markets have realized the economic incentive to be blending ethanol and have expedited the introduction into these market places. Ethanol blenders are generally engaged in the wholesale distribution of gasoline and other refined petroleum products. Flexible-fuel vehicles are becoming more common. We believe that the use of higher blends (up to E85) will continue to grow in the future. The proliferation of blender pumps across the nation will help accommodate these higher blends. At present, blend dispensers are not widely dispersed and flexible-fuel model vehicles are limited. However, as consumer acceptance increases, we expect this to have a significant impact on national ethanol markets. Additionally, Growth Energy, an ethanol industry trade organization, has requested a waiver from the Environmental Protection Agency (EPA) to increase the amount of ethanol blended into gasoline from the 10 percent blend up to a 15 percent blend (E15). We believe such a waiver, if granted, would have a positive and material impact on the business.

We market our products to many different customers on a local, regional and national basis. Local markets are, of course, the easiest to service because of their close proximity to our facilities. However, to achieve the best prices available, the majority of our ethanol is sold to regional and national markets. These markets are serviced by truck and rail. Each of our plants is designed with unit-train load out capabilities and access to railroad mainlines.

Federal Ethanol Programs

Ethanol was favorably affected by the 1990 amendments to the Clean Air Act. In particular, the Federal Oxygen Program, which became effective on November 1, 1992, and the Reformulated Gasoline Program, which became effective January 1, 1995, have had a profound impact on the ethanol industry. The Federal Oxygen Program requires the sale of oxygenated motor fuels during the winter months in certain major metropolitan areas to reduce carbon monoxide pollution. The Reformulated Gasoline Program requires the sale of reformulated gasoline in nine major urban areas to reduce pollutants, including those that contribute to ground level ozone.

The use of ethanol as an oxygenate has been aided by federal tax policy. The Energy Tax Act of 1978 exempted ethanol blended gasoline from the federal gas tax as a means of stimulating the development of a domestic ethanol industry and mitigating the country s dependence on foreign oil. The American Jobs Creation Act of 2004 created the Volumetric Ethanol Excise Tax Credit (VEETC or as commonly referred to, the blender s credit). VEETC was established to replace the partial tax exemption ethanol-blended fuel received from the federal excise tax on gasoline. Under VEETC, the tax incentive was shifted from a partial exemption from the federal excise tax to a tax credit based on the volume of ethanol blended with gasoline. VEETC provides companies that blend ethanol into retail grades with a tax credit to blend ethanol with gasoline, totaling $0.45 per gallon of pure ethanol, or approximately 4.5 cents per gallon for E10 and $0.38 per gallon on E85. VEETC provides the tax incentive through December 31, 2010.

The Energy Policy Act of 2005 (H.R. 6) essentially eliminated the use of MTBE as an oxygenate. The bill mandated that at least 7.5 billion gallons of ethanol were to be used annually within the United States by the year 2012. It also gave small ethanol producers producing less than 60 million gallons of ethanol per year a 10 cent per gallon federal tax credit on the first 15 million gallons produced on an annual basis.

On December 19, 2007, the Energy Independence and Security Act of 2007 (the Energy Act of 2007) was enacted. The Energy Act of 2007 mandated certain levels for renewable fuels, known as the renewable fuel standard. The RFS identified two different categories of renewable fuels: conventional biofuel and advanced biofuel. Corn-based ethanol is considered conventional biofuel, which will be subject to an RFS level of 10.5 billion gallons per year in 2009, increasing to 15.0 billion gallons per year by 2015. Advanced biofuel includes ethanol derived from cellulose, hemicellulose or other non-corn starch sources, biodiesel, and other fuels derived from non-corn starch sources. Advanced biofuel RFS levels are set to reach 21.0 billion gallons per year, resulting in a total RFS from conventional and advanced biofuels of at least 36.0 billion gallons per year, by 2022.

Beginning with the Energy Policy Act of 2005, energy independence has been a priority for federal lawmakers. Volatile petroleum prices, coupled with continued trouble in the Middle East, has led to policies, incentives and subsidies intended to reduce oil imports and create domestic capacity for producing alternatives to foreign oil.

To encourage growth in domestic production, federal policy has insulated the domestic ethanol industry from foreign competition, particularly from competition from Brazilian sugarcane ethanol. There is a $0.54 per gallon tariff on all imported ethanol. Legislative proposals have been introduced to eliminate the duty, citing as justification recent increases in food prices and the importance of Latin American agricultural development. However, as long as the duty remains in place, ethanol imports are not likely to depress domestic market prices significantly.

Changes in Corporate Average Fuel Economy (CAFE) standards have also benefited the ethanol industry by encouraging use of E85 fuel products. CAFE provides an effective 54% efficiency bonus to flexible-fuel vehicles running on E85. This variance encourages auto manufacturers to build more flexible-fuel models, particularly in trucks and sport utility vehicles that are otherwise unlikely to meet CAFE standards.

Utilities

The production of ethanol requires significant amounts of electricity and natural gas. Water supply and water quality are also important considerations.

Natural Gas

Ethanol plants produce process steam from their own boiler systems and dry the distillers grains by-product via a direct gas-fired dryer. Depending on certain production parameters, we believe our ethanol plants will use approximately 25,000 to 35,000 British thermal units (Btus) of natural gas per gallon of production. The price of natural gas is volatile; therefore we use hedging strategies to mitigate increases in gas prices. We have hired U.S. Energy Services, Inc. to assist us in procuring and hedging natural gas.

We have entered into service agreements with Trunkline Gas Company, LLC (a division of Panhandle Energy) to deliver the natural gas required by the Obion plant for a ten-year term. We have entered into service agreements with Northern Indiana Public Service (NIPSCO) to deliver the natural gas required by the Bluffton plant for a three-year term. We have entered into service agreements with Natural Gas Pipeline of America (NGPL), a division of Kinder Morgan, and with MidAmerican Energy to deliver gas to the Shenandoah plant. The term of the NGPL agreement is extended annually. At our Superior plant, we have entered into a service agreement with Northern Natural Gas Company (NNG) for a ten-year term.

We purchase natural gas from the best possible sources at any given time and pay tariff fees to Trunkline, NIPSCO, NGPL, MidAmerican and NNG for transporting the gas through their pipelines to our plants.

Electricity

Each of our 55 million gallon plants require between 34 and 40 million kilowatt hours of electricity per year, while our 110 million gallon plants use between 61 and 77 million kilowatt hours per year. We have entered into agreements with MidAmerican Energy concerning the purchase of electricity for the Shenandoah plant. In Superior, we have entered into agreements with Iowa Lakes Electrical Cooperative to supply electricity to the facility. Our Obion plant purchases its electricity from Gibson Electric Company under a multi-year agreement. At our Bluffton facility, electricity is purchased from Bluffton Utilities, the local municipal electrical utility.

Water

Each of our plants requires a significant supply of water. The water requirements for our 55 mmgy plants range from approximately 400 to 800 gallons per minute, while our 110 mmgy plants consume 900 to 1,200 gallons per minute. Much of the water used in an ethanol plant is recycled back into the process. The plants require boiler makeup water and cooling tower water. Boiler makeup water is treated on-site to minimize minerals and substances that would harm the boiler. Recycled process water cannot be used for this purpose. Cooling tower water is deemed non-contact water (it does not come in contact with the mash) and, therefore, can be regenerated back into the cooling tower process.

We are using grey water, which is discharge water from the local municipal water treatment facility, at the Shenandoah plant for the cooling tower. The City of Shenandoah has agreed to provide us this water for the cost of pumping the water from their treatment plant to our site. It is anticipated that this water will comprise about two thirds of the water that we will use at this plant. We also purchase the potable water, which is needed for the fermentation process itself (water that comes into contact with the mash) and for other requirements of the facility, from the City of Shenandoah.

At the Superior site, two onsite wells provide the water needed to operate the plant. The Superior plant operates a filtration system to purify the well water that is utilized for its operations.

Although each of our 110 mmgy plants expects to satisfy the majority of its water requirements from wells located on the respective properties, each anticipates that it will obtain potable water for certain processes from local municipal water sources at prevailing rates. Each facility operates a filtration system to purify the well water that is utilized for its operations.

Our Primary Competition

According to the Renewable Fuels Association, as of November 2008, there were 34 operational ethanol plants in Iowa, with an additional three ethanol plants under construction. The plants are concentrated, for the most part, in the northern and central regions of the state where a majority of the corn is produced. Green Plains Grain, which was acquired in April 2008, provides our Superior ethanol plant an integrated source of corn for ethanol production in an otherwise competitive market. This allows the plant to source corn directly from local producers who are customers of Green Plains Grain and at times provides a competitive advantage over other local ethanol producers. As of November 2008, the state of Indiana had ten operating ethanol plants with one under construction while the state of Tennessee had only two operational ethanol production facilities with one under construction. Competition for corn supply from other ethanol plants and other corn consumers exists in all areas and regions in which our plants operate.

We will also be in direct competition with numerous other ethanol producers located throughout the United States, many of whom have much greater resources. According to information obtained from the Renewable Fuel Association as of November 2008, there were 180 producing ethanol plants/companies within the United States, capable of producing 11.1 billion gallons of ethanol annually. As of that date, 21 new plants were under construction and two of the currently operating plants were expanding their capacity. Once completed, the new plants under construction and in various stages of expansion will be able to produce an additional 2.3 billion gallons per year. As a result, we believe that by the end of 2009, U.S. ethanol production capacity will be approximately 13.4 billion gallons on an annual basis. Therefore, we expect that our plants will compete with many other ethanol producers and we anticipate that such competition will be intense.

Even with news of expansion and increased production, there are many ethanol companies that are facing shutdowns or foreclosure due to the unstable nature of the economy. Large ethanol companies are reducing production because of compressed margins and limited liquidity. VeraSun Energy Corporation, the second largest ethanol producer in the U.S. and currently operating under bankruptcy protection, has shut down 12 of its 16 ethanol production facilities. Several other plants have filed for bankruptcy protection. The Company believes these developments may affect supply and demand of ethanol, corn and distillers grains. Bankruptcy filings and plant closures may also affect the pace of industry consolidation, which may provide additional opportunities for growth.

Proximity of other ethanol plants has increased competition for the supply of corn feedstock, which may cause higher prices for the corn we consume in our ethanol production. Our acquisitions of Green Plains Grain and the Essex grain elevator have helped our Iowa production facilities have a supply-side partner in the procurement of corn. In 2008, in addition to our production, the largest ethanol producers in the U.S. included Archer Daniels Midland, POET, VeraSun Energy Corporation and Aventine Renewable Energy Holdings, Inc.

We also face competition from foreign producers of ethanol and such competition may increase significantly in the future. Large international companies with much greater resources than ours have developed, or are developing, increased foreign ethanol production capacities. In 2006, the U.S. surpassed Brazil in the production of ethanol and became the world s largest ethanol producer. Brazil is the world s second largest ethanol producer. Brazil makes ethanol primarily from sugarcane for significantly less than what it costs to make ethanol from corn. This is due primarily to the fact that sugarcane does not need to go through the extensive cooking process to convert the feedstock to sugar. Although the U.S. has placed a tariff on imported ethanol, Brazil still markets significant amounts of ethanol in the U.S.

Competition from Alternative Feedstocks and Fuel Products

Alternative fuels, gasoline oxygenates and ethanol production methods are continually under development by ethanol and oil companies. New products or methods of ethanol production developed could provide competitors with advantages and harm our business.

Ethanol production technologies continue to change. Advances and changes in the technology of ethanol production are expected to occur primarily in the area of ethanol made from cellulose obtained from other sources of biomass such as switchgrass or fast growing poplar trees. If significant advances were made in the area of cellulosic ethanol production, such advances could make the current ethanol production technology that we use at our plants less desirable or even obsolete. Our plants are designed as single-feedstock facilities. There is limited ability to adapt the plants to a different feedstock or process system without substantial reinvestment and retooling. Additionally, our plants are strategically located in high-yield, low-cost corn production areas. At present, there is limited supply of alternative feedstocks near our facilities.

Sales and Marketing

There is limited seasonality, if any, to the ethanol production, marketing and distribution businesses.

Ethanol Marketing Services

The Company markets ethanol in different geographic locations around the U.S. and has built an in-house, fee-based marketing business that provides ethanol marketing services to other producers in the ethanol industry.

Initially, Green Plains Shenandoah and Green Plains Superior had contracted with RPMG, Inc. (RPMG), an independent marketer, to purchase all of the ethanol produced at our Iowa plants. In September 2008, we terminated our ethanol marketing contract with respect to the Shenandoah plant. In January 2009, our ethanol marketing contract for the Superior plant terminated. We brought ethanol marketing and distribution in-house for both Shenandoah and Superior.

Green Plains Bluffton and Green Plains Obion entered into ethanol marketing agreements with Aventine Renewable Energy, Inc. (Aventine) for the sale of all of the ethanol the respective plants produced. Under the agreements, we sold our ethanol production exclusively to Aventine at a price per gallon based on a market price at the time of sale, less certain marketing, storage, and transportation costs, as well as a profit margin for each gallon sold. In February 2009, the Aventine agreements terminated and a settlement was negotiated with respect to the agreements and related matters. We brought ethanol marketing and distribution in-house for both Bluffton and Obion.

Both RPMG and Aventine had entered into lease arrangements to secure sufficient availability of railcars to ship the ethanol produced at the respective plants with which they had contracted. Green Plains Superior, Green Plains Bluffton and Green Plains Obion have now assumed the various railcar leases.

Green Plains Trade Group LLC (Green Plains Trade), a wholly-owned subsidiary of the Company, is now responsible for the sales, marketing and distribution of all ethanol produced at our four production facilities. Green Plains Trade also provides ethanol marketing services to third-party ethanol producers with expected operating capacity of 305 million gallons per year. This ethanol is marketed in local, regional and national markets under short-term sales agreements with integrated energy companies, jobbers, retailers, traders and resellers. Under these agreements, ethanol is priced under fixed and indexed pricing arrangements. Our plan is to selectively expand our third-party ethanol marketing operations.

Distillers Grains

The market for the distillers grains by-product generally consists of local markets for DDG, WDG and WMDG, and national markets for DDG. If all of our distillers grains were marketed in the form of DDG, we expect that our ethanol plants would produce approximately 1,020,000 tons of distillers grains annually. In addition, the market can be segmented by geographic region and livestock industry. The bulk of the current demand is for DDG delivered to geographic regions without significant local corn or ethanol production.

Green Plains Trade markets the distillers grains for our Shenandoah, Bluffton and Obion facilities. For our Superior facility, approximately two-thirds of the plant s total distillers grains production is DDG, which is marketed by CHS, Inc. to the beef, dairy, swine, and poultry markets, along with various rail markets. The remaining one-third of our distillers grains production is marketed by Green Plains Trade in the form of WDG and syrup. The CHS marketing agreement for our Superior plant is set to expire in July 2009.

Most of the Shenandoah distillers grains are shipped in the form of MWDG and sold into the Iowa and Nebraska feedlot markets. The remainder is shipped as DDG into the Kansas feedlot and Arkansas poultry markets, as well as Texas and west coast rail markets. The eastern U.S. is a very important market for our Bluffton and Obion plants. The Bluffton plant ships distillers grains by truck to local dairy and beef operations, while our Obion plant ships distillers grains by truck to local dairy, beef and poultry operations. Also, with the proximity of Obion to the Mississippi River, at certain times of the year, the Obion plant will truck product to the Mississippi River to be loaded on a barge destined for export markets through the New Orleans export corridor. We also ship by railcars from both the Obion and Bluffton plants into Eastern and Southeastern feed mill, poultry and dairy operations, as well as to domestic trade companies. Access to these markets allows us to move product into the market that provides the highest equity return to these plants.

Transportation and Delivery

The use of truck and rail allows the plants to quickly move large quantities of ethanol to the markets that provide the greatest return. Deliveries to the majority of the local markets, within 150 miles of the plants, are generally transported by truck, and deliveries to more distant markets are shipped by rail using major U.S. rail carriers.

Our market strategy includes shipping a substantial amount of distiller grains as DDG to regional and national markets by rail. We also move DDG to market from Obion by barge to ports down the Mississippi River from loading facilities in Kentucky and Tennessee.

Each of our plants is designed with unit-train load out capabilities and access to railroad mainlines. To meet the challenge of marketing ethanol and distillers grains to diverse market segments, each of our plants have extensive rail siding capable of handling more than 150 railcars at their production facilities. At the Bluffton, Obion and Superior locations, we built a large set of loop tracks, which enables us to load unit trains of both ethanol and DDGS. Our Bluffton plant has two spurs connecting the site s rail loop to the Norfolk Southern railroad, which lies directly adjacent to the facility. Our Obion plant has a spur connecting the site s rail loop to the Canadian National railroad, which lies adjacent to the facility. Our Superior plant lies adjacent to the rail lines of the Union Pacific railroad. A spur of the Burlington Northern Santa Fe railroad runs adjacent to our plant in Shenandoah, which allows us to move and store railcars at the site. These rail lines allow us to sell our products to various regional and national markets. The rail providers for our ethanol production facilities can switch cars to most of the other major railroads, allowing the plants to easily ship ethanol and distillers grain throughout the U.S.

Agribusiness Operations

Green Plains Grain is a grain and farm supply business, which operates four lines of business: bulk grain, agronomy, livestock feed and petroleum. It has facilities in seven communities in Northwest Iowa near our Superior ethanol plant.

Green Plains Grain buys bulk grain, primarily corn, soybeans and oats from area producers and provides grain drying and storage services to those producers. The grain is then sold to grain processing companies and area livestock producers. Green Plains Grain sells diesel, soydiesel, gasoline (including E10, E20, E30, E50 and E85 blends) and propane, primarily to farmers and consumers who buy at retail. We also sell feed to area farmers and integrators for the production of swine, cattle and poultry in the area. Green Plains Grain has agronomists on staff who consult with producers; sell anhydrous ammonia, dry and liquid agricultural nutrients, and agricultural inputs (nutrients, chemicals, seed and supplies); and provide application services to area producers.

Seasonality is present within our agribusiness operations. The spring planting (fertilizer, seed, crop protection products, and fuel) and fall harvest (fuel, grain receipts, and grain drying and storage) periods have the largest seasonal impact, directly impacting the quarterly operating results of Green Plains Grain. This seasonality generally results in higher revenues and stronger financial results during the second and fourth quarters while the financial results of the first and third quarters generally will reflect periods of lower activity.

Segment Information

With the closing of the Merger, we began to review our operations in three separate operating segments. These segments are: (1) production of ethanol and related by-products (which we collectively refer to as Ethanol Production), (2) grain warehousing and marketing, as well as sales and related services of agronomy and petroleum products (which we collectively refer to as Agribusiness) and (3) marketing and distribution of Company-produced and third-party ethanol and distillers grains (which we refer to as Marketing and Distribution).

Financial information related to our business segments is included *Item 7 Management s Discussion and Analysis of Financial Condition and Results of Operations* of this report and in the notes to the consolidated financial statements included elsewhere in this report.

Employees

As of December 31, 2008, we had 308 full-time, part-time and temporary or seasonal employees. At that date, we employed 30 people in Omaha, 98 at Green Plains Grain and the remainder at our four ethanol production facilities. Our ethanol plants and agribusiness facilities are in rural areas with low unemployment. There is no assurance that we will be successful in attracting and retaining qualified personnel in these locations at a reasonable cost.

We have and intend to continue to enter into written confidentiality and assignment agreements with our officers and employees. Among other things, these agreements require such officers and employees to keep strictly confidential all proprietary information developed or used by us in the course of our business.

Available Information

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (the Exchange Act) are available free of charge on our website at *www.gpreinc.com* as soon as reasonably practicable after we file or furnish such information electronically with the SEC. Also available on our website in our corporate

governance section are the charters of our audit, compensation, and nominating committees, and a copy of our code of conduct and ethics that applies to our directors, officers and other employees, including our Chief Executive Officer and all senior financial officers. The information found on our website is not part of this or any other report we file with or furnish to the SEC.

ITEM 1A. RISK FACTORS.

We operate in an evolving industry that presents numerous risks. Many of these risks are beyond our control and are driven by factors that often cannot be predicted. Prospective purchasers of our securities should carefully consider the risk factors set forth below, as well as the other information appearing in this report, before making any investment in our securities. If any of the risks described below or in the documents incorporated by reference in this Form 10-K actually occur, the respective business, financial results, financial conditions of the Company and the stock price of the Company could be materially adversely affected. These risk factors should be considered in conjunction with the other information included in this Form 10-K.

Risks Related to the Company

Our business success is dependent on our ability to attract and retain key personnel.

Our ability to operate our business and implement our strategies effectively depends, in part, on the efforts of our executive officers and other key personnel. Our executive officers have developed expertise in ethanol and related industries, and they have hired qualified managers and key personnel to operate our plants, our grain business, and our marketing and distribution business. However, they have limited experience in managing a vertically-integrated ethanol company. We are evaluating and continuing to recruit for the areas of expertise that we need to facilitate management of a large, complex ethanol company. There is no assurance that we will be successful in attracting or retaining such individuals because of the limited number of individuals with expertise in this area and a competitive market with many new plants in operation and several under development. The inability to retain our executive officers, managers or other key personnel, or recruit qualified replacements, may negatively impact us by impairing our ability to operate efficiently or execute our growth strategies.

We have limited operating histories in the ethanol industry.

We were formed in June of 2004 and our first ethanol plant, located in Shenandoah, IA, began operations in August 2007. Our other ethanol plants, located in Superior, IA, Bluffton, IN and Obion, TN commenced operations in the third, third and fourth quarters of calendar 2008, respectively. Neither we nor any of our subsidiaries have any other history of operations as ethanol producers or grain business operators. Our new and proposed operations are subject to all the risks inherent in the establishment of new business enterprises. Even though our management team has substantial experience, with much of it in ethanol, other energy-related businesses and grain operations, there is no assurance that we will be successful in our efforts to operate our ethanol facilities. Even if we successfully meet these objectives, there is no assurance that we will be able to market the ethanol and distillers grains produced or operate the plants profitably.

We have a history of operating losses under reverse merger accounting rules and may never achieve profitable operations.

As a result of reverse merger accounting, VBV was considered the acquiring entity for financial statement purposes. At the time of the merger, VBV had an accumulated deficit. Although the accumulated deficit originated during the period prior to initial operations when VBV was a development stage company, the Company has generated a net loss since that time. No assurance can be given that we will be able to operate profitably in the future.

In addition, since the Merger occurred toward the end of our fiscal year and involved complex legal and accounting issues, we performed a tentative allocation of the purchase price using preliminary estimates of the values of the assets

and liabilities acquired. We have engaged an expert to assist in the determination of the purchase price allocation. We believe the final allocation will be determined during 2009 with prospective adjustments recorded to our financial statements at that time, if necessary. The true-up of the purchase price allocation could result in gains or losses recognized in our consolidated financial statements in future periods.

We may fail to realize all of the anticipated benefits of the merger with VBV.

In order to realize the anticipated benefits and cost savings of the Merger, we combined our businesses with those of VBV and its subsidiaries. If we are not able to achieve the objectives of the Merger, the anticipated benefits and cost savings may not be realized fully, or at all, or may take longer to realize than expected. It is possible that the integration process could result in the loss of key employees, disruption of the Company s ongoing businesses, or inconsistencies in standards, controls, procedures and policies that adversely affect our ability to maintain relationships with clients, customers and employees. Integration efforts, including diversion of management s attention and resources, could have an adverse effect on our results of operations during and following this transition period.

If we are unable to manage growth profitably, our business and financial results could suffer.

Our future financial results will depend in part on our ability to profitably manage our core businesses, including any growth that we may be able to achieve. We will need to maintain existing customers and attract new customers, recruit, train, retain and effectively manage employees, as well as expand operations, customer support and financial control systems. If we are unable to manage our businesses profitably, including any growth that we may be able to achieve, our business and financial results could suffer.

If our cash flow from operations is insufficient to service our indebtedness, then the value of our stock could be significantly reduced and our business may fail.

Our ability to repay current and anticipated future indebtedness will depend on our financial and operating performance and on the successful implementation of our business strategies. Our financial and operational performance will depend on numerous factors including prevailing economic conditions, volatile commodity prices, and financial, business and other factors beyond our control. If we cannot pay our debt service, we may be forced to reduce or delay capital expenditures, sell assets, restructure our indebtedness or seek additional capital. If we are unable to restructure our indebtedness or raise funds through sales of assets, equity or otherwise, our ability to operate could be harmed and the value of our stock could be significantly reduced.

Our lenders hold security interests in the respective subsidiary assets upon which they have provided financing, including their property and plants, which means that our shareholders would be subordinate to such lenders in the event of a liquidation of our assets.

If we fail to make debt service payments or if we otherwise default under our loan agreements, our lenders will have the right to repossess the secured assets. Such action would end our ability to continue operations and your rights as a shareholder upon a liquidation of our business would be inferior to the rights of our lenders and other creditors. In the event of our insolvency, liquidation, dissolution or other winding up of affairs, all of our indebtedness must be paid in full before any payment is made to the holders of our common stock. In such event, there is no assurance that there would be any remaining funds after the payment of all of our indebtedness for any distribution to shareholders.

Distressed industry conditions may severely constrain our ability to access incremental debt financing.

Ethanol producers have faced significant distress recently, culminating with several bankruptcy filings by various companies. The capital markets experienced volatility and disruption during late 2008 and early 2009. As a result of these conditions, securing incremental credit commitments from lenders and refinancing existing credit facilities is difficult. Although construction of our plants, along with anticipated levels of required working capital, were funded under long-term credit facilities and we believe we have sufficient liquidity to operate our businesses, increases in liquidity requirements could occur due to, for example, increased commodity prices. Also, our debt facilities have ongoing payment requirements which we expect to meet from our operating cash flow. Our operating cash flow is dependent on our ability to profitably operate our businesses and overall commodity market conditions for corn, ethanol, distillers grains and natural gas. In addition, we may need to raise additional debt financing to fund growth of our businesses. In this market environment, we have limited access to incremental debt financing. This could cause us to defer or cancel growth projects, reduce our business activity or, if we are unable to meet our debt repayment schedules, cause a default in our existing debt agreements. These events could have a materially adverse effect on our operations and financial position.

Casualty losses may occur for which we have not secured adequate insurance.

We have acquired insurance that we believe to be adequate to prevent loss from foreseeable risks. However, events occur for which no insurance is available or for which insurance is not available on terms that are acceptable to us. Loss from such an event, such as, but not limited to, earthquake, tornados, war, riot, terrorism or other risks, may not be insured and such a loss may have a material adverse effect on our operations, cash flows and financial performance.

Our Obion plant is located within a recognized seismic zone. The design of this facility has been modified to fortify it to meet structural requirements for that region of the country. We have also obtained additional insurance coverage specific to earthquake risk for this plant. However, there is no assurance that this facility would remain in operation if a seismic event were to occur.

Disruption or difficulties with our information technology could impair our ability to operate.

Our business depends on the effective and efficient use of information technology. A disruption or failure of these systems could cause system interruptions, delays in production and a loss of critical data that could severely affect our ability to conduct normal business operations.

We are subject to financial reporting and other requirements, for which our accounting and other management systems and resources may not be adequately prepared. Any failure to maintain effective internal controls could have a material adverse effect on our business, results of operations and financial condition.

We are subject to reporting and other obligations under the Securities Exchange Act of 1934, as amended (the Exchange Act), including the requirements of Section 404 of the Sarbanes-Oxley Act of 2002. Section 404 requires annual management assessment of the effectiveness of a company s internal controls over financial reporting and a report by its independent registered public accounting firm addressing the effectiveness of our internal controls over financial reporting. These reporting and other obligations place significant demands on our management, administrative, operational, internal audit and accounting resources. If we are unable to meet these demands in a timely and effective fashion, our ability to comply with our financial reporting requirements and other rules that apply to us could be impaired.

In the past, we identified and reported a material weakness in our internal controls over financial reporting, which we have remediated. A material weakness is a deficiency, or a combination of control deficiencies, resulting in a reasonable possibility that a material misstatement of the financial statements will not be prevented or detected. Any failure to remediate any material weaknesses or to implement new or improved controls, or difficulties encountered in their implementation, could cause us to fail to meet our reporting obligations. As discussed in *Item 9A Controls and Procedures* of this report, management did not perform an assessment of internal controls over financial reporting at December 31, 2008. We cannot provide assurance that management and/or our independent registered public accounting firm will be able to provide an assessment indicating effective operation of internal controls over financial reporting in 2009. In addition, we cannot assure you that we will have no future deficiencies or weaknesses in our internal controls over financial reporting. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our common stock.

We are exposed to credit risk resulting from the possibility that a loss may occur from the failure of another party to perform according to the terms of a contract with us.

We sell ethanol and distillers grains, which may result in concentrations of credit risk from a variety of customers, including major integrated oil companies, large independent refiners, petroleum wholesalers, other marketers and jobbers. We are also exposed to credit risk resulting from sales of grain to large commercial buyers, including other ethanol plants, which we continually monitor. Although payments are typically received within fifteen days from the date of sale for ethanol and distillers grains, we continually monitor this credit risk exposure. In addition, we may prepay for or make deposits on undelivered inventories. Concentrations of credit risk with respect to inventory advances are primarily with a few major suppliers of petroleum products and agricultural inputs. The inability of a third party to make payments to us for our accounts receivable or to provide inventory to us on advances made may cause us to experience losses and may adversely impact our liquidity and our ability to make our payments when due.

Risks Related to Our Operations

Our ability to produce ethanol and operate at a profit is largely dependent on prices of corn, natural gas, ethanol and distillers grains.

Our operations and financial condition are significantly affected by the cost and supply of grain and natural gas and by the selling price for ethanol and distillers grains. Prices and supplies are subject to and determined by market forces over which we have no control. We are heavily dependent on the price and supply of corn. There is no assurance of consistent and continued availability of feedstock. There is significant price pressure on local corn markets caused by nearby ethanol plants, livestock industries and other value-added enterprises. Additionally, the local corn supplies could be adversely affected by rising prices for alternative crops, increasing input costs, changes in government policies, shifts in global markets or damaging growing conditions such as plant disease, weather or drought.

As a result of price volatility for these commodities, our operating results may fluctuate substantially. Based on recent forward prices of corn and ethanol, we may be operating our plants at low to possibly negative operating margins. Increases in corn prices or decreases in ethanol or distillers grains prices may result in it being unprofitable to operate our plants. No assurance can be given that we will be able to purchase corn at prices anywhere near the historic averages of corn in the states in which our plants are located; that we will be able to purchase natural gas at, or near, its current price; that we will be able to sell ethanol at, or near, current prices; or that we will be able to sell distillers grains at, or near, current prices. Commodities prices have been extremely volatile in the past and are likely to be volatile in the future due to factors beyond our control, such as weather, domestic and global demand, shortages, export prices and various governmental policies in the U.S. and around the world.

We have been, and expect to continue, purchasing the corn for our plants, either directly in the case of Shenandoah and Superior, and indirectly in Obion and Bluffton, in the cash market from farmers and commercial elevators in the areas surrounding the plants, and hedging corn purchases through futures contracts or with options to reduce short-term exposure to price fluctuations. Additionally, when market conditions dictate, corn is purchased from other areas and transported to our plants by rail for our Obion and Bluffton plants. We may contract with third parties to manage our hedging activities and corn purchasing. Our purchasing and hedging activities may or may not lower our respective price of corn, and in a period of declining corn prices, these advance purchase and hedging strategies may result in paying a higher price for corn than our competitors. Further, hedging for protection against the adverse changes in the price of corn may be unsuccessful, and could result in substantial losses.

Substantial fluctuations in the price of corn over the past year have caused some ethanol plants to temporarily cease production or operate at a loss. Significant price fluctuations may occur in the future. Increased ethanol production from new or expanded ethanol production facilities may increase the demand for corn and increase the price of corn or decrease the availability of corn in areas where we intend to source corn for our plants. We may have to source corn from greater distances from our plants at a higher delivered cost. If a period of high corn prices were to be sustained for some time, such pricing may have a material adverse effect on our operations, cash flows and financial performance.

Our revenues will also be dependent on the market prices for ethanol and distillers grains. These prices can be volatile as a result of a number of factors. These factors include the overall supply and demand of ethanol and corn, the price of gasoline and corn, the level of government support, and the availability and price of competing products.

We attempt to manage price fluctuations of our inputs and outputs simultaneously using various hedging methods. We have been, and expect to continue, selling ethanol and distillers grains from our plants in the cash markets, and hedging through futures contracts or with options to reduce short-term exposure to price fluctuations. Our key objective is to lock in profitable margins between the cost of the corn and the value of the ethanol we process regardless of ethanol prices. Price relationships of ethanol, gasoline and corn are continually changing based on market forces and may result in reduced competitiveness of ethanol in the marketplace, which may have a material adverse effect on our operations, cash flows and financial performance.

Green Plains Obion and Green Plains Bluffton have entered into corn purchase agreements that limit their ability to purchase corn on the open market.

Green Plains Bluffton has contracted with Cargill Incorporated, through its AgHorizons Business Unit (Cargill), for all of its corn supplies. Green Plains Obion has contracted with Obion Grain as its exclusive supplier for corn obtained in Obion County, Tennessee and the seven contiguous counties in Tennessee and Kentucky. Our Obion plant has entered into an agreement with Central States Enterprises, Inc. (Central States) for its corn needs that are satisfied by rail shipment. Because of our Bluffton plant s corn purchase agreement with Cargill and our Obion plant s corn purchase agreements with Obion Grain and Central States, both our Obion and Bluffton plants are unable to purchase all, or any in the case of our Bluffton plant, of their corn supplies on the open market, which may place the plants at a greater risk to any price fluctuations that may arise and may have a material adverse effect on the operations, cash

flows and financial performance of such plants.

We do not have shareholder corn delivery agreements to assure that our plants have a source for corn and to protect from corn price fluctuations.

Many producers of ethanol have corn delivery programs that require their members or shareholders to deliver specified quantities of corn to the producer at established, formula or market prices. These agreements may, at times, protect producers from supply and price fluctuations. We do not have corn delivery agreements and are required to acquire substantial quantities of corn in the marketplace based on prevailing market prices. If the supplies of corn available to us are not adequate, we may not be able to procure adequate supplies of corn at reasonable prices. This could result in a utilization of less than the full capacity of the plants, reduced revenues, higher operating costs, and reduced income or losses.

We cannot provide any assurance that there will be sufficient demand for ethanol to support current ethanol prices.

Ethanol production has expanded rapidly in recent years. To support this rapid expansion of the industry, domestic ethanol consumption must continue to increase. In the past, the domestic market for ethanol was largely dictated by federal mandates for blending ethanol with gasoline The RFS level for 2009 of 10.5 billion gallons is approximately equal to current domestic production levels. Future demand will be largely dependent upon the economic incentives to blend based upon the relative value of gasoline versus ethanol, taking into consideration the blender s credit and the RFS. Any significant increase in production capacity beyond the RFS level might have an adverse impact on ethanol prices.

Ethanol production from corn has not been without controversy. There have been questions of overall economic efficiency and sustainability, given the industrialized and energy-intensive nature of modern corn agriculture. Additionally, ethanol critics frequently cite the moral dilemma of redirecting corn supplies from international food markets to domestic fuel markets. The controversy surrounding corn ethanol is dangerous to the industry because ethanol demand is largely dictated by federal mandate. If public opinion were to erode, it is possible that the federal mandates will lose political support and the ethanol industry will be left without a market.

Beyond the federal mandates, there are limited markets for ethanol. Discretionary blending and E85 blending is an important secondary market. Discretionary blending is often determined by the price of ethanol versus the price of gasoline. In periods when discretionary blending is financially unattractive, the demand for ethanol may be reduced. A reduction in the demand for our products may depress the value of our products, erode our margins, and reduce our ability to generate revenue or to operate profitably. Consumer acceptance of E85 fuels and flexible-fuel technology vehicles is needed before there will be any significant growth in market share. Additional infrastructure is also needed to deliver high-level blends to the end consumer. International markets offer possible opportunities. Certain states have adopted policies to encourage the use of mid-level blends which do not require flexible-fuel technology. Ethanol also has foreseeable applications as an aviation or locomotive fuel. Limited markets also exist for use of ethanol as an antiseptic, antidote or base compound for further chemical processing. Unfortunately, all these additional markets are undeveloped.

At present, we cannot provide any assurance that there will be any material or significant increase in the demand for ethanol beyond the increases in mandated gasoline blending. Increased production in the coming years is likely to lead to lower ethanol prices. Additionally, the increased production of ethanol could have other adverse effects as well. For example, the increased production could lead to increased supplies of by-products from the production of ethanol, such as distillers grains. Those increased supplies could lead to lower prices for those by-products. Also, the increased production of ethanol could result in a further increase in the demand for corn. This could result in higher prices for corn creating lower profits. There can be no assurance as to the price of ethanol, corn or distillers grains in the future. Adverse changes affecting these prices may have a material adverse effect on our operations, cash flows and financial performance.

We expect to compete with existing and future ethanol plants and oil companies, which may result in diminished returns on your investment.

We operate in a very competitive environment. We compete with large, multi-product, multi-national companies that have much greater resources than we currently have or will have in the future. We may face competition for capital, labor, management, corn and other resources. There is clearly a consolidation trend in the ethanol industry. As a result, firms are growing in size and scope. Larger firms offer efficiencies and economies of scale, resulting in lower costs of production. Absent significant growth and diversification, we might not be able to operate profitably in a more competitive environment. No assurance can be given that we will be able to compete successfully or that such competition will not have a material adverse effect on our operations, cash flows and financial performance.

At present, the ethanol industry is primarily comprised of firms that engage exclusively in ethanol production and large integrated grain companies that produce ethanol along with their base grain businesses. Until recently, oil companies, petrochemical refiners and gasoline retailers have not been engaged in ethanol production to a large extent. These companies, however, form the primary distribution networks for marketing ethanol through blended gasoline. If these companies seek to engage further in direct ethanol production, there will be less of a need to buy ethanol from independent ethanol producers. Such a structural change in the market could result in a material adverse effect on our operations, cash flows and financial performance.

The price of distillers grains is affected by the price of other commodity products, such as soybeans and corn, and decreases in the price of these commodities could decrease the price of distillers grains, which will decrease the amount of revenue we may generate.

Distillers grains compete with other protein-based animal feed products. The price of distillers grains may decrease when the prices of competing feed products decrease. The prices of competing animal feed products are based in part on the prices of the commodities from which these products are derived. Downward pressure on commodity prices, such as soybeans and corn, will generally cause the price of competing animal feed products to decline, resulting in downward pressure on the price of distillers grains. Decreases in the price of distillers grains will result in lower revenues.

Engaging in hedging activities to minimize the potential volatility of ethanol, corn, distillers grains and natural gas prices could result in substantial costs and expenses.

In an attempt to minimize the effects of the volatility of ethanol, corn, distillers grains and natural gas prices on operating profits, we have entered into hedging positions in futures markets and have utilized other derivative contracts, and will likely take additional hedging positions in these commodities in the future. Hedging means protecting the price at which we buy or sell a commodity product in the future. It is a way to attempt to reduce the risk caused by price fluctuations. The effectiveness of such hedging activities is dependent upon, among other things, the cost and the market liquidity of the underlying commodities. Although we will attempt to link hedging activities to sales plans and purchasing activities, such hedging activities can themselves result in costs because price movements in these commodities are highly volatile and are influenced by many factors that are beyond our control.

To the extent we buy and sell commodity derivatives on registered and non-registered exchanges, our derivatives are subject to margin calls. If there is a significant movement in prices in the derivatives market, we could be subject to significant margin calls which would impact our liquidity and our interest expense. There is no assurance that our efforts to mitigate the impact of the volatility of the prices of commodities will be successful, and any sudden change in the price of these commodities could have an adverse affect on our liquidity and profitability.

Our ability to successfully operate is dependent on the availability of energy and water at anticipated prices.

Our plants require a significant and uninterrupted supply of electricity, natural gas and water to operate. There is no assurance that we will be able to secure an adequate supply of energy or water to support current and expected plant operations. If there is an interruption in the supply of energy or water for any reason, such as supply, delivery or mechanical problems, we may be required to halt production. If production is halted for an extended period of time, it may have a material adverse effect on our operations, cash flows and financial performance.

We have entered into agreements with third parties to negotiate and purchase natural gas and secure related natural gas pipeline capacity for our respective plants from third-party providers. There can be no assurance given that we will be able to obtain a sufficient supply of natural gas for our respective plants or that we will be able to procure alternative sources of natural gas on acceptable terms. Higher natural gas prices may have a material adverse effect on our operations, cash flows and financial performance.

We also purchase significant amounts of electricity to operate the plants. Currently, our plants do not have onsite electric generation capability to support plant operations. All electricity must be purchased from third-party electric utilities. We have negotiated an agreement with MidAmerican Energy to supply electricity to the plant in Shenandoah for a period of five years. We have entered into an agreement with the Iowa Lakes Electric Cooperative and the Corn Belt Cooperative to supply electricity to the Superior plant. The Obion plant purchases its electricity from Gibson Electric Company under a multi-year agreement that provided for the infrastructure and provision of electricity over the term of the agreement. Green Plains Bluffton is served by the local, municipal electric utility, Bluffton Utilities.

No assurance can be given that we will be able to negotiate contract extensions at favorable rates after the current contract periods are completed. Electricity prices have historically fluctuated significantly. Sustained increases in the price of electricity in the future would increase the costs of production at the plants. As a result, these issues may have a material adverse effect on our operations, cash flows and financial performance.

Sufficient availability and quality of water are important requirements to produce ethanol. The water requirements at the Shenandoah plants are approximately 400 to 800 gallons per minute, depending on the quality of the water at the plants. We believe the City of Shenandoah has sufficient capacities of water to meet those needs and we have a contract with the city to supply grey water to the plant, which is discharge water from the local municipal water treatment facility, at a price that we believe is favorable to our operations. It is anticipated that this water will comprise about two thirds of the water that we will use at this plant. However, no assurance can be given that a prolonged drought could not diminish the water supplies in the areas of the Shenandoah plant, or that we would continue to have sufficient water supplies in the future. We obtain the water supply for the Superior ethanol plant from two wells on the site. The Obion and Bluffton plants require approximately 900 to 1,200 gallons of water per minute. We use onsite wells, supplemented by city services as necessary, for our water needs. If a drought were to occur, we may have to purchase water from other sources, such as the local rural water company or the local municipal water utility, which would cost more. If we ever had to do this, it may have a material adverse effect on its operations, cash flows and financial performance and could even cause one or more of our plants to cease production for periods of time.

Risk of foreign competition from producers who can produce ethanol at less expensive prices than producing it from corn in the United States.

There is an increased risk of foreign competition in the ethanol industry. At present, there is a $0.54 per gallon tariff on foreign ethanol. However, this tariff might not be sufficient to deter overseas producers from importing ethanol into the domestic market, resulting in depressed ethanol prices. It is also important to note that the tariff on foreign ethanol is the subject of ongoing controversy and disagreement amongst lawmakers. Many lawmakers attribute growth in the ethanol industry to increases in food prices. They see foreign competition in ethanol production as a means of controlling food prices. Additionally, the tariff on ethanol has sparked international criticism because it diverts corn from export and prevents Latin American agricultural development.

Foreign competitors are likely to have lower input, energy and labor costs, as well as less restrictive environmental practices and laws. International feedstocks might be less costly and more sustainable than corn. Additionally, the bulk of the domestic ethanol market is located on the coasts in areas of greater population density. It is possible that it could be cheaper to import foreign ethanol via tanker than transport our subsidiaries ethanol to coastal markets via rail or truck. The primary source of foreign competition is Brazil, which is the world s second largest producer after the U.S. Brazil produces ethanol from sugarcane, which as a feedstock costs about 30% to 40% less than corn. Additionally, in comparison to the U.S., the Brazilian ethanol industry is more mature and more fully developed. Much of the industrial infrastructure that the U.S. is lacking is already in place in Brazil.

Ethanol produced or processed in certain countries in Central America and the Caribbean region is eligible for tariff reduction or elimination upon importation to the United States under a program known as the Caribbean Basin Initiative. Large ethanol producers, such as Cargill, have expressed interest in building dehydration plants in participating Caribbean Basin countries, such as El Salvador, which would convert ethanol into fuel-grade ethanol for shipment to the United States. Ethanol imported from Caribbean Basin countries may be a less expensive alternative to domestically produced ethanol. Materially, the threat of imported ethanol either directly from Brazil even with the import tariff, or from a Caribbean Basin source, is very real. While transportation and infrastructure constraints may temper the market impact throughout the U.S., competition from imported ethanol may affect our ability to sell our ethanol profitably, which may have a material adverse effect on our operations, cash flows and financial performance.

If significant additional foreign ethanol production capacity is created, such facilities could create excess supplies of ethanol on world markets which may result in lower prices of ethanol throughout the world, including the U.S. We believe that an increased supply of ethanol in world markets may be mitigated to some extent by increased ethanol demand, due in part to higher oil prices. Such foreign competition is a risk to our businesses. Further, if the tariff on foreign ethanol is ever lifted, overturned, expired, repealed or reduced, our ability to profitably compete with low-cost international producers is questionable. Any penetration of ethanol imports into the domestic market may have a material adverse effect on our operations, cash flows and financial performance.

We depend on our technology providers for ongoing support services.

We are dependent upon our technology providers for ongoing support services at our ethanol plants. Our process technologies are licensed from others. If the plants do not operate to the level anticipated by us in our business plan, we will rely on our technology providers to adequately address such deficiencies. There is no assurance that they will be able to address such deficiencies in an acceptable manner. Failure to do so could have a material adverse effect on our operations, cash flows and financial performance.

If there are defects in the construction of one or more plants, it may negatively affect our ability to operate the plants.

There is no assurance that defects in materials and/or workmanship in the plants will not occur. Under the terms of the design-build contracts, our builders have warranted that the material and equipment furnished to build the plant would be new, of good quality, and free from material defects in material or workmanship at the time of delivery. Though the design-build contracts require our builders to correct all defects in material or workmanship for a period of one year after substantial completion of the plant, material defects in material or workmanship may still occur. Such defects could cause us to halt or discontinue the plant s operations. Any such event may have a material adverse effect on our operations, cash flows and financial performance.

Replacement technologies are under development that might result in product or process system obsolescence

Ethanol is primarily an additive and oxygenate for blended gasoline. Although use is currently mandated, there is always the possibility that a preferred alternative product will emerge and eclipse the current market. Critics of ethanol blends argue that ethanol decreases fuel economy, causes corrosion of ferrous components and damages fuel pumps. Any alternative oxygenate product would likely be a form of alcohol (like ethanol) or ether (like MTBE). Prior to federal restrictions and ethanol mandates, MTBE was the dominant oxygenate. It is possible that other ether products could enter the market and prove to be environmentally or economically superior to ethanol. More likely, it is possible that alternative biofuel alcohols such as methanol and butanol could evolve into ethanol replacement products. Such development an ethanol replacement product may have a material adverse effect on our operations, cash flows and financial performance.

Even if ethanol remains the dominant additive and oxygenate, technological innovation could have a profound impact on the corn ethanol system. The development of cellulosic ethanol obtained from other sources of biomass, such as switchgrass or fast growing poplar trees, could ultimately displace corn ethanol production. Federal policies suggest a long-term political preference for cellulosic processes using alternative feedstocks such as switchgrass, silage, wood chips or other forms biomass. Cellulosic ethanol has a smaller carbon footprint because the feedstock does not require energy-intensive fertilizers and industrial production processes. Additionally, cellulosic ethanol is favored because it is unlikely that foodstuff is being diverted from the market. Several cellulosic ethanol plants are under development. At present, it is unlikely that cellulose is an economically-viable alternative to corn. However, if research and development programs persist, there is the risk that cellulosic ethanol could displace corn ethanol at some point in the future. Although there are probably opportunities to incorporate cellulosic processes into our existing corn ethanol plants, it must be acknowledged that innovation in cellulose might have an adverse impact on our enterprises. Our plants are designed as single-feedstock facilities. Additionally, our plants are strategically located in high-yield, low-cost corn production areas. At present, there is limited supply of alternative feedstocks near our facilities. There is limited ability to adapt the plants to a different feedstock or process system without substantial reinvestment and retooling.

We use Delta T process technologies in Superior. The Shenandoah, Obion and Bluffton plants use ICM process technologies. These process technologies are industry standards. However, they use significant amounts of energy. There is the possibility that new process technologies will emerge that require less energy. The development of such process technologies would result in lower production costs. Our process technologies may become outdated and obsolete, placing us at a competitive disadvantage against competitors in the industry. The development of replacement technologies may have a material adverse effect on our operations, cash flows and financial performance.