

Global Clean Energy Holdings, Inc.
Form 10-K
March 25, 2011

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

ANNUAL REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2010

TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____

Commission file number: 0-12627

GLOBAL CLEAN ENERGY HOLDINGS, INC.
(Exact name of Small Business Issuer as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

87-0407858
(I.R.S. Employer
Identification Number)

100 W. Broadway, Suite 650
Long Beach California 90802
(Address of principal executive offices)

(310) 641-4234
Issuer's telephone number:

Securities registered under Section 12(b) of the Act: None.

Securities registered under Section 12(g) of the Act: Common Stock, no par value.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

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 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 No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) 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 the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company
(Do not check if a 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

The aggregate market value of the common stock held by non-affiliates of the registrant as of June 30, 2010 (the last business day of the registrant's most recently completed second fiscal quarter) was approximately \$6,955,000.

The outstanding number of shares of common stock as of March 24, 2011 was 270,464,478.

Documents incorporated by reference: None

Table of Contents

Form 10-K

	Page
PART I	1
ITEM 1. BUSINESS	1
ITEM 1A. RISK FACTORS	11
ITEM 1B. UNRESOLVED STAFF COMMENTS	20
ITEM 2. PROPERTIES	20
ITEM 3. LEGAL PROCEEDINGS	20
ITEM 4. RESERVED	21
PART II	21
ITEM 5. MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED SHAREHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES	21
ITEM 6. SELECTED FINANCIAL DATA	22
ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	22
ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA	26
ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE	27
ITEM 9A. CONTROLS AND PROCEDURES	27
ITEM 9B. OTHER INFORMATION	28
PART III	28
ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE	28
ITEM 11. EXECUTIVE COMPENSATION	30
ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS	34
ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE	35
ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES	36
PART IV	37
ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES	37

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report, including any documents which may be incorporated by reference into this Annual Report, contains “Forward-Looking Statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements other than statements of historical fact are “Forward-Looking Statements” for purposes of these provisions, including our plans to cultivate, produce and market non-food based feedstock for applications in the biofuels market, any projections of revenues or other financial items, any statements of the plans and objectives of management for future operations, any statements concerning proposed new products or services, any statements regarding future economic conditions or performance, and any statements of assumptions underlying any of the foregoing. All Forward-Looking Statements included in this document are made as of the date hereof and are based on information available to us as of such date. We assume no obligation to update any Forward-Looking Statement. In some cases, Forward-Looking Statements can be identified by the use of terminology such as “may,” “will,” “expects,” “plans,” “anticipates,” “intends,” “believes,” “estimates,” “potentially,” “continue,” or the negative thereof or other comparable terminology. Although we believe that the expectations reflected in the Forward-Looking Statements contained herein are reasonable, there can be no assurance that such expectations or any of the Forward-Looking Statements will prove to be correct, and actual results could differ materially from those projected or assumed in the Forward-Looking Statements. Future financial condition and results of operations, as well as any Forward-Looking Statements are subject to inherent risks and uncertainties, including any other factors referred to in our press releases and reports filed with the Securities and Exchange Commission. All subsequent Forward-Looking Statements attributable to the company or persons acting on its behalf are expressly qualified in their entirety by these cautionary statements. Additional factors that may have a direct bearing on our operating results are described under “Risk Factors” and elsewhere in this report.

Introductory Comment

Throughout this Annual Report on Form 10-K, the terms “we,” “us,” “our,” and “our company” refer to Global Clean Energy Holdings, Inc., a Delaware corporation that was formerly a Utah corporation known as Global Clean Energy Holdings, Inc. and prior to its name change in 2008, was Medical Discoveries, Inc., and, unless the context indicates otherwise, also includes our wholly-owned subsidiary, MDI Oncology, Inc., a Delaware corporation; Global Clean Energy Holdings LLC, a wholly-owned Delaware limited liability company; and Technology Alternatives, Limited, a wholly-owned subsidiary formed under the laws of Belize. To the extent applicable, depending on the context of the disclosure, the terms “we,” “us,” “our,” and “our company” may also include GCE Mexico I, LLC a Delaware limited liability company, in which we own 50% of the common membership interests, and Asideros Globales Corporativo 1 and Asideros Globales Corporativo 2, two Mexican corporations of which we own 1%, and the balance is owned by GCE Mexico I, LLC.

Global Clean Energy Holdings, Inc. is not related to, or affiliated in any manner with “Global Clean Energy, Inc.” Readers are cautioned to confirm the entity that they are evaluating or in which they are making an investment before completing any such investment.

PART I

ITEM 1. BUSINESS.

Overview

Global Clean Energy Holdings, Inc. is a California-based energy agri-business focused on the development of non-food based bio-fuel feedstock. We have full service in-house development and operations capabilities, which we provide to our own Jatropha farms and to third parties. With international experience and capabilities in eco-friendly bio-fuel feedstock management, cultivation, production and distribution, we believe that we are well suited to scale our existing business.

Since 2007, our focus has been on the commercialization of oil and biomass derived from the seeds of *Jatropha curcas* (“Jatropha”) - a native non-edible plant indigenous to many tropical and sub-tropical regions of the world, including Mexico, the Caribbean and Central America. Jatropha trees generally require less water and fertilizer than many conventional crops, and can be grown on land that is not normally suitable for the production of food. Jatropha oil is high-quality plant oil used as a direct replacement for fossil fuels, as feedstock for the production of high quality bio-fuels. The term “bio-fuels” refers to a range of biological based fuels including bio-diesel, renewable diesel, green diesel, synthetic diesel and biomass, most of which have environmental benefits that are the major driving force for their introduction. Using bio-fuels instead of fossil fuels reduces net emissions of carbon dioxide and other green house gases, which are associated with global climate change. Jatropha oil can also be used as a chemical feedstock to replace fossil and non-food based products that use edible oils in their manufacturing or production process. The residual material derived from the oil extraction process is called press cake, which is a high-quality biomass that has been proven and tested as a replacement for a number of fossil based feedstocks, fossil fuels and other high value products such as fertilizers, and animal feed.

Our business plan and current principal business activities include the planting, cultivation, harvesting and processing of Jatropha to generate plant based oils and biomass for use as replacements for fossil fuels and other high value products. Our strategy is to leverage our agriculture and energy knowledge, experience and capabilities through the following means:

- Own and operate Jatropha farms for our own account.
- Own, operate and manage Jatropha farms through joint ownership agreements. We currently operate two farms located in Mexico under joint ownership arrangements: the first farm comprises 5,149 acres; the second farm, consisting of 3,700 acres. The first farm is fully planted and is expected to produce commercial quantities of Jatropha in 2011. We anticipate that planting at the second farm will be substantially completed by the summer of 2011 and that the second farm will begin producing Jatropha seeds in 2012.
- Provide Jatropha farm development and management services to third party owners of Jatropha farms. We plan to greatly expand this initiative in the next 12 months.
- Provide turnkey Franchise Operations for individuals and/or companies that wish to immediately establish Jatropha farms in suitable geographical areas.

In addition to generating revenues from the sale of non-food based plant oils and biomass, we plan to monetize the carbon credits from the farms we own and manage. The worldwide carbon market is still in a state of reorganization, but was significantly solidified by the climate summit in Cancun in 2010. Under the original 1997 Kyoto Protocol, a worldwide carbon credit trading market was established where sellers sell their excess carbon credits and buyers purchase the carbon credits they need to meet their greenhouse gas reduction requirements. In addition to the market established under the Kyoto Protocol, there are other carbon certification systems that allow these carbon credits to be monetized. We have commenced the certification process necessary to sell carbon credits, but have not yet made any carbon credit sales.

We are engaged in research and development activities concerned with optimizing the quality of our Jatropha yields, enhancing the plant characteristics, reducing operating costs and improving our production capacity and efficiency. Specifically, our research activities focus on (i) optimizing genetic development (i.e., the quality of the Jatropha plants), (ii) optimizing agronomic development and plant nutrition (i.e., soil conditions optimal for Jatropha cultivation), and (iii) improving agricultural technologies relating to the care and custody of the Jatropha plant, and the processing of resulting products. We continue our research and development efforts toward the improved commercialization of Jatropha at our research and test facility in Tizimin, Mexico.

In connection with our research and development activities, we have sponsored the formation of a non-profit research entity, The Center for Sustainable Energy Farming (www.CfSEF.org). The Center's mission is to perform cutting-edge plant science research in genetics, breeding, soil science, plant nutrition and horticulture technologies and practices, and further develop leading-edge processes to allow for the economic commercialization and sustainability of energy farms globally. The Center for Sustainable Energy Farming will initially focus its research efforts on the Jatropha plant. Research at the Center will be focused on increasing agricultural production, creating a sustainable feedstock supply, reducing inputs including the use of fossil fuels, pesticides, water and fertilizers, and developing new and sustainable biofuels. The Center will sponsor specific research through agreements with scientists and laboratories at public and private universities, private research entities and in collaboration with other companies performing cutting-edge research in these areas.

Organizational History

This company was incorporated under the laws of the State of Utah on November 20, 1991. Until 2007, the Company was a developmental-stage bio-pharmaceutical company engaged in the research, validation, and development of two drug candidates. In 2007, the Company decided to change the course of its business and focus its efforts and resources on the emerging alternative energy fuels business. In order to be successful in this industry, we decided to acquire the intellectual property and expertise needed to develop and manage our new business. Accordingly, on September 7, 2007, we acquired Global Clean Energy Holdings, LLC, a Delaware limited liability company that owned certain trade secrets, know-how, business plans and relationships relevant to the cultivation and production of Jatropha. In addition, at that time, we hired Richard Palmer, our current Chief Executive Officer. In 2008 we changed our name to "Global Clean Energy Holdings, Inc." to reflect our energy agricultural business.

On July 19, 2010, we changed the state of our incorporation from Utah to Delaware. Our principal executive offices are located at 100 W. Broadway, Suite 650, Long Beach, Los Angeles County, California 90802, and our current telephone number at that address is (310) 641-GCEH (4234). We maintain a website at: www.gceholdings.com. Our annual reports, quarterly reports, current reports on Form 8-K and amendments to such reports filed or furnished pursuant to section 13(a) or 15(d) of the Securities and Exchange Act of 1934, as amended (the "Exchange Act"), and other information related to this company are available on our website as soon as we electronically file those documents with, or otherwise furnish them to, the Securities and Exchange Commission. Our Internet website and the information contained therein, or connected thereto, are not and are not intended to be incorporated into this Annual Report on Form 10-K.

Developments During 2010

During the fiscal year ended December 31, 2010, we achieved the following milestones in the development of this company:

2

- We increased the size of our Mexico farms by acquiring an additional 3,458 acres (i.e., an increase of over 66%);
 - We increased our full time employees by 75% to over 375;
- We increased our asset base by more than \$3.5 million, and we plan to continue to invest in assets and expand our farming operations;
- We formed our non-profit research center, the Center for Sustainable Energy Farming (www.CfSFE.net) to continue our genetic, agronomy and horticulture research effort;
- We have prepared all of our newly acquired land (3,458 additional acres) and are planting that acreage this season;
 - We have increased the amount of Jatropha oil, biomass and seeds that we sell from our farms;
 - We increased the amount of management and advisory services that we provide to partners and third parties;
 - We raised an additional \$3.7 million in project equity and financing;
- We have applied for approximately \$20 million of financing through the Overseas Private Investment Corporation, (OPIC), a U.S. governmental agency designed to assist U.S. companies with international development in targeted countries; and
- We supplied Jatropha oil to Aeropuertos y Servicios Auxiliares, the Mexican National Airport authority, to be converted by Honeywell's UOP division, into bio-jet fuel for commercial testing with Boeing planned for 2011. This is part of a national bio-jet initiative within Mexico.
- We executed an off-take agreement with a renewable biofuel company pursuant to which the biofuel company conditionally agreed to purchase crude Jatropha oil from us over the next 20 years. The agreement is conditioned upon our ability to acquire land and develop a new Jatropha farm large enough to support the biofuel company's requirements. We will have to obtain a substantial amount of project financing to acquire a dedicated farm that can support that contract.

Business Operations

We are an energy agri-business with international development and operations capabilities. We maintain in-house staff for the development, management, cultivation, production and distribution of plant-based feedstock used to offset fossil fuels. Our business plan and current principal business activities include the planting, cultivation, harvesting and processing of Jatropha to generate seed oils and biomass for use in the bio-fuels industry, including the production of bio-diesel and green diesel as well as alternative feedstocks for fertilizers, animal feed and for green chemicals and other products which can use non-edible oils to replace edible oils.

Our vision and strategy is to grow and expand our farming and processing business to the level where economies of scale and our methods of operations allow us to generate significant profits without the need for subsidies. The processes and procedures we employ to plant and cultivate Jatropha for our business are being continually refined in order to produce "best practices" for Jatropha farm operations. By focusing on improving our Jatropha operations and the technology we apply to our operations, we plan to operate economically sustainable Jatropha farms (i.e. without use of subsidies), which can replace fossil fuels at a production cost below \$42 per barrel or \$1.00 per gallon. By continuing to invest in leading-edge genetic, agronomic (soil) and horticulture technology research and development, we are confident that we will develop high-yielding Jatropha trees that deliver renewable energy feedstock into the

market at very competitive prices.

3

Our strategy is to leverage our farming and energy knowledge, experience and capabilities through the following means:

Company Farms –Previously, we operated farms that are classified as “Company farms” in Belize and in Mexico. Both were developed as research and test farms, and seed supply farms. We have since centralized and consolidated these efforts at our larger commercial farms in Mexico, where our field research station is located. This allows us to centralize our scientific research and make more efficient use of our plant and soil scientists and facilities. As our commercial farms in Mexico have expanded, it is more economical to perform these functions at our farms and we have the additional benefit of applying our research to commercial farming practices. We have, therefore, reclassified our Belizean farm as an investment property and are currently in discussions to sell that farm.

Partnership Farms Owned Via Joint Ventures. We currently own two farms through joint venture arrangements with third party financing sources. Our first farm in Mexico is our largest farm with approximately 5,149 acres of land near Tizimin, Mexico. The entire farm has been prepared and planted with almost 4.0 million *Jatropha* trees. All the necessary roads and other support infrastructure have been developed on the farm. In addition, we have acquired and installed seed oil extraction equipment on-site to extract oil from the harvested seeds. We have leased an industrial facility near our farm for the larger scale extraction of “crude *Jatropha* oil” (CJO) and biomass. Sales up to this point have primarily consisted of seeds for propagation, biomass used in specialty purposes, and oil and biomass for testing by potential customers. We anticipate that we will sell CJO and biomass in commercial quantities from this farm commencing in fiscal 2011.

In March 2010, we acquired approximately 3,460 acres of additional land that is contiguous to this existing operation for the development of our second farm. As of the date of this report, the land is fully prepared and we are currently planting, with plans to be complete by the end of the second quarter of 2011. We expect that this second farm will commence production by the end of 2012.

For additional information regarding our joint venture operations, see “*Jatropha* Farming Operations—Tizimin—Mexico Farm,” below.

***Jatropha* Farm Development and Management Services.** The company currently provides development and management services to unaffiliated companies and individuals who are planning the development and implementation of *Jatropha* farms. These services are provided on a fee-for-service basis and generally begin with feasibility studies, and are often followed by management contracts that provide us with the ability to develop and operate these farms on a go-forward basis. During the fiscal year ended December 31, 2010, we provided such services in connection with the development of large *Jatropha* farm operations. Our plan is to substantially increase the level of development and management services that we provide as a means of generating near-term revenue and profits, and to allow us to fund the continued expansion of our technical services team.

Contract *Jatropha* Farms. We have established a strategy and the processes to allow us to contract the farming operation on non-company owned farms, which are located near our core farms, to third party farmers. The farmers will farm their own land under our direct supervision, utilizing our “best practices processes” for *Jatropha* cultivation with the support of our technical services team of agri-business professionals. This program will allow us to expand our business while still ensuring success. We have not yet entered into any agreements under this format.

Franchise *Jatropha* Farms. The Company has established a program for offering franchise operations for *Jatropha* Farms. This program consists of all of the necessary programs and procedures to establish and operate a *Jatropha* farm profitably. The program also entails establishing and providing methods to obtain all necessary equipment and supplies. The Company is in discussions with several parties, but as of this filing, no franchise agreements have been executed.

Our core activities consist of planting, cultivating, harvesting and processing of Jatropha feedstock to generate seed oils and biomass for use in the bio-fuels industry and other high value industrial processed which use fossil based or plant based oils as their feedstock, including the production of bio-diesel and renewable diesel, and other high value bio-fuels.

We have identified the Jatropha curcas plant as our primary feedstock for producing bio-diesel and other bio-fuels. The Jatropha plant is a perennial tree that produces an inedible fruit with large seeds containing a high percentage of high quality inedible oil. The entire fruit, including the seeds, has excellent properties necessary for the production of bio-fuels or as a direct replacement for fossil fuels. Our plan is to utilize the entire fruit of the Jatropha plant for bio-fuel production, including the oils produced from the fruit, and the seed cake (press cake). We will utilize the fruit (hull) as a fertilizer for our trees to reduce our fertilizer costs.

We have identified strategic locations in North America, the Caribbean, Central America and South America ideally suited to our Jatropha planting, cultivation, harvesting and processing activities. These locations have been selected for a number of key strategic reasons, including proximity to large ports for logistics purposes, relatively stable democratic governments, favorable trade agreements with the United States, low-cost land, reasonably priced labor, favorable weather conditions and acceptable soil conditions. We presently maintain farm properties in Tizimin, Mexico, on which we have commenced planting Jatropha. We also maintain a facility adjacent to our Tizimin farm operations where we conduct research and development activities focusing on plant genetics, soil sciences, plant breeding and other related activities and work closely in sponsorship with The Center for Sustainable Energy Farming (www.CfSEF.org). We continue to sponsor and support the research to identify and develop improved Jatropha varieties, as well as to establish ideal growing conditions, in order to maximize our output of Jatropha fruit, seed oil and biomass while reducing inputs and maximizing resistance to pests and diseases.

Our business plan also includes the further development of more efficient seed oil extraction technologies and techniques and the expansion of our seed oil extracting facility's capacity to support our expanding farming operations. The seed oil extraction facility is used to extract the "crude Jatropha oil" ("CJO") from the Jatropha seed, and thereafter to collect the remaining biomass for sale to interested buyers.

We anticipate that our primary focus will remain in the feedstock oil market, and we will continue expanding our operations, primarily in the areas of planting, harvesting and sale of feedstock oil to end users in the energy and oil chemical industry for production of biofuels and green chemicals. In the short term, as we develop our Jatropha farms and prepare for our initial large-scale harvest of Jatropha seeds, we expect to generate short-term revenues through the sale of Jatropha seeds for germination, through forward sale contracts for feedstock oil and biomass to be produced at our facilities, through the forward sale of carbon offset credits and through our development and management services. We are also having active discussions with firms that have a non-fuel use for Jatropha oil for such things as the production of candles, "green chemicals" and "green plastics". Although we may engage in such ancillary sales, sales for these purposes are not expected to constitute a major source of future revenues.

Our board, management, employees, partners, technical advisors and consultants are senior energy, agricultural and business professionals possess extensive experience in the energy and alternative fuels market, the production of bio-fuels, in the renewable energy sector in general, in agriculture and in general business. Accordingly, we have the resident expertise to provide development and management services to other companies regarding their bio-fuels and/or feedstock development operations, on a fee for services basis. As described below, we currently provide such bio-fuel consulting services in locations that are not directly competitive to our existing or planned sites.

Jatropha Farming Operations

Tizimin – Mexico Farm. Effective April 23, 2008, we entered into a limited liability company agreement for GCE Mexico I, LLC, a Delaware limited liability company (“GCE Mexico”), with six other investors affiliated with two of our largest stockholders. GCE Mexico was organized primarily to acquire 2,000 hectares (approximately 5,149 acres) of land, directly or through subsidiaries, located in Tizimin, in the State of Yucatan in Mexico to be used primarily for the (i) cultivation of *Jatropha curcas*, (ii) the marketing and sale of the resulting fruit, seeds, or pre-processed crude *Jatropha* oil, whether as bio-diesel feedstock, biomass or otherwise, and (iii) the sale of carbon value, green fuel value, or renewable energy credit value (and other similar environmental attributes) derived from activities at this *Jatropha* farm. In March 2010, GCE Mexico acquired approximately 3,460 acres of additional land that is contiguous to our existing 5,149-acre farm for the development of a second *Jatropha* farm. GCE Mexico acquired each of the *Jatropha* farms through a Mexican subsidiary in which GCE Mexico owns a 99% interest, and we own a 1% interest.

We have begun harvesting seeds from the *Jatropha* trees that we planted at this farm in 2008 and early 2009, which we are using for our own expansion; we are selling the balance of these seeds to third parties for propagation. We anticipate that the first material harvest of this farm will occur in 2011, and that we will, at that time, commence extraction of commercial quantities of *Jatropha* oil from the harvested fruit (seeds).

We currently own 50% of the issued and outstanding common membership units of GCE Mexico. The remaining 50% in common membership units were issued to five investors affiliated with two of our largest stockholders (This company and the other members of GCE Mexico holding the common membership units are collectively referred to as “Common Members.”) In addition, an aggregate of 1,000 preferred membership units were issued to two investors also affiliated with two of our largest stockholders (the “Preferred Members”). As of March 24, 2011, the Preferred Members have contributed a total of \$8,908,858 to GCE Mexico. It is expected that the Preferred Members will continue to fund the ongoing operation in accordance with the approved annual budgets provided by management. This funding will continue until the *Jatropha* farms generate adequate funds to sustain operations, which is expected to occur for both farms by the end of 2012. The Preferred Members are entitled to a preferential return on their investment.

The two Preferred Members also directly funded the purchase by GCE Mexico of the approximately 5,149 acres of land in the State of Yucatan in Mexico by making a \$2,051,282 loan to pay the purchase price of that land. The land was acquired in the name of GCE Mexico’s Mexico subsidiary and is secured by a mortgage in the amount of \$2,051,282 in favor of the Preferred Members. The mortgage bears interest at the rate of 12% per annum, and interest is required to be paid quarterly. However, GCE Mexico has agreed that interest shall accrue until such time as there is sufficient cash flow to pay all accrued interest. The entire mortgage, including any unpaid interest, is due April 23, 2018. The two Preferred Members also have made a \$742,652 mortgage loan to purchase the approximately 3,460 acres of additional farmland in Mexico that GCE Mexico acquired in March 2010.

GCE Mexico is managed under the supervision of a board of directors comprising four members, two of whom we have appointed, and two of whom were appointed by the Preferred Members. However, as the manager of the joint venture, GCEH manages the day-to-day operations of GCE Mexico and the operations in Mexico.

The following is a summary of certain factors relevant to an understanding of the operations of the Tizimin farms:

- The first *Jatropha* trees that we planted on the Tizimin farm approximately two years ago are now flowering, and we expect to start harvesting commercial quantities of *Jatropha* fruit in the late spring of 2011 with a larger harvest expected at the end of 2011. As a result, we expect to commence generating our first revenues from the commercial sale of *Jatropha* seeds/oil as a result of that harvest. *Jatropha* seeds can be harvested twice a year. Accordingly, as the trees that we planted during the past two years mature, our harvests of *Jatropha* seeds will increase in 2011 and

thereafter and increase our future revenues from our Tizimin operations.

- Although some of our Jatropha trees produced fruit and seeds in 2010, the initial harvest was lower than previously anticipated primarily due to the extended rainy season.
- Our Tizimin operations are eligible for agricultural and other subsidies provided to certain foreign owned farming operations by the federal government of Mexico. In October 2010, we received \$368,000 as the first installment of the subsidy and have received the second and third installments in February 2011 (expected to total \$100,000). These subsidies will help defray some of the initial start-up costs (capital) that we have incurred in establishing these farms.
- We continue to operate two commercial sized nurseries for the germination of new Jatropha seedlings in the Tizimin area, which is essential to our ability to plant and cultivate the remaining portions of our second farm and any additional farms that we may acquire and develop in the future.
- Oil extraction facilities, germplasm resources, and sheep herding capabilities are all being increased in anticipation of our expanding Jatropha farming operations. Industrial oil extraction facilities are expected to be located offsite of the present farms.
- Our Tizimin farms are being developed for the purpose of providing feedstock for the production of bio-fuels and olio-chemicals, from Jatropha oil and biomass. However, our development and cultivation of these farms has also enabled us to generated ancillary revenues from these operations. For example, we now receive revenue from the sale of biomass (waste wood removed from our farms as the land is cleared for Jatropha planting), sales of sheep that graze on our lands and control weeds, and sale of the press-cake of the Jatropha seeds that remain after oil extraction.
- Total capital for expenses and operations, since inception, for the two farms in the Tizimin area (through February 28, 2011) are approximately \$6.5 million for the first farm and \$2.4 million for the second farm. All funding has to date been provided by the investing partners of the joint venture that owns both Tizimin farms. These investment partners will have a priority right to receive revenues generated from these farms until their investment, plus a preferred return, have been paid.

Belize.

On July 2, 2009, we purchased Technology Alternatives Limited, a company formed under the laws of Belize (“TAL”). TAL owns an existing Jatropha farm in subtropical Belize, Central America. The research functions from this farm have been relocated to our commercial farms in Mexico and the Belize farm currently is inactive, and we are currently evaluating the future use and/or disposition of this farm. The net assets of the Belize farm are classified as held for sale on the consolidated balance sheet. In connection with the acquisition, we owe the former owners \$516,139 Belize Dollars (US \$268,036 based on exchange rates in effect at March 15, 2011). The notes are secured by a mortgage on the land and related improvements. The notes, plus any related accrued interest, were originally due on December 29, 2009, but the due date has now been extended to July 15, 2011.

Principal Products

The *Jatropha curcas* plant will continue to be our primary agricultural focus for the foreseeable future. The *Jatropha* plant is a perennial, inedible tree, and all of its by-products can be used for fuel, non-edible vegetable oil uses and biomass energy production. It is a very efficient tree that produces high quality seed oil and high-energy content biomass. We expect our principal products to include the bio-fuels oil feedstock, vegetable oil replacement and biomass derived from the cultivation and processing of the *Jatropha* plant. In addition, we expect to generate revenues from the sale of carbon credits earned from our agricultural operations.

Bio-fuels Oil Feedstock

The feedstock oil needed for the production of bio-diesel, renewable diesel and green diesel that is currently available on the market today is primarily supplied from edible plant seed oils including soy, canola (rapeseed) and palm. There are other types of feedstock utilized including animal fats and recycled cooking grease, but they make up a small portion of the market supply. Our primary source of bio-fuels feedstock will be from the oil produced from the *Jatropha* plant. One advantage of the *Jatropha* plant is that its oil and meal is inedible, and the cultivation of the plant, which will primarily be for use in the bio-fuels industry, does not compete for resources with other crops grown primarily for food consumption.

Biomass Feedstock

The *Jatropha* plant produces a fruit (about the size of a walnut) containing three large seeds that contain 32%-38% oil content by weight. The non-oil components of the fruit, which represents 62-68% of the total fruit, contain high energy biomass (carbon values) that is an excellent source of feedstock for a number of energy producing processes including direct combustion, gasification, power production, and cellulosic ethanol (alcohol) production. Fifty percent of the energy in the *Jatropha* seed resides in the biomass.

Carbon Credits

Bio-fuels production and use is a very effective means to reduce both local and global pollution from emissions that cause climate change. Growing trees and plants that sequester carbon from the atmosphere and burning bio-fuels offset the production of greenhouse gasses resulting from the consumption of petroleum or other fossil-based fuels. Many bio-fuels produce less pollution, including fewer quantities of CO₂, NO_x, SO_x and PM₁₀. Through the 1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change (Kyoto Protocol), signatory countries are required to reduce their overall greenhouse gas emissions or carbon footprint. The worldwide carbon market is still in a state of reorganization, but was significantly solidified by the climate summit in Cancun in 2010. As of November 2007, 174 parties are signatories to and have ratified the Kyoto Protocol. The United States of America is not a signatory to the Kyoto Protocol. Signatory countries require local industry and other local energy end-users to either reduce their greenhouse gas emissions, or purchase greenhouse gas emission credits (carbon credits). This requirement has created a worldwide "Carbon Credit Trading Market" where sellers sell their excess carbon credits and buyers purchase the carbon credits they need to meet their greenhouse gas reduction requirements. The development of agricultural-based energy projects may produce carbon credits through the sequestration (storing) of carbon by the growing of trees and plants, or by the offset of other sequestered carbon. Selling carbon credits represents potential additional revenue that will help to offset capital requirements for our plantation and other development activities.

In our case, Certified Emission Reductions (CERs) may be generated through Clean Development Mechanism projects in non-Annex 1 nations, which include Mexico, the Caribbean, Central and South America. Our current business plan contemplates the cultivation of multiple 20,000-hectare *Jatropha* energy farms. Assuming full maturity

of a 20,000-hectare Jatropha farm, we have calculated that we will generate more than 250,000 metric tons of sellable carbon credits annually. This will come from the offset of use of fossil fuels. If we include the potential to use the Jatropha trees as a carbon sink, we estimate this will increase the sellable carbon credits to over 350,000 metric tons per year.

Technology

We do not currently possess any patentable technology relating to our operations in the feedstock and bio-fuels market. However, we are currently engaged in research and development activities focused on improved *Jatropha* varieties, technical know-how and proprietary processes for optimizing the quality of our *Jatropha* yields, reducing operating costs and improving our production capacity and efficiency. These research and development activities currently consist of plant biology and molecular genetic research, and are being conducted primarily through in-house research and in joint development activities in concert with the Center for Sustainable Energy Farming, through Penn State University. We continue to develop our procedures and Intellectual Property (IP) Sustainable Energy Farming Systems. It is expected that patentable technologies will result from our research activities; however, there can be no assurance that patentable technologies will be developed, or if they are developed, that we would be the sole owners of such patents.

Any technology we develop will be in three main categories: (i) plant and soil sciences, (ii) agricultural technology and procedure development, and (iii) material processing and end use applications. Such technologies developed are expected to assist in reducing costs, improving efficiency and allowing us to move the products higher in value creation.

Market

According to both the International Energy Agency (“IEA”) and the US Department of Energy’s Energy Information Administration (“EIA”) estimates, the world demand for crude oil in 2010 was approximately 88 million barrels per day, with approximately 25% of that demand being diesel and fuel oil (distillate fuel oil). This equates to a global consumption of distillate fuel oil of approximately 22.0 million barrels per day, or 337 billion gallons per year. At a 5% blend with bio-diesel, the world market for bio-diesel exceeds 16.8 billion gallons per year.

U.S. diesel fuel oil consumption for 2009 was over 50 billion gallons. At a 5% bio-diesel blend, the US bio-diesel market is over 2.5 billion gallons per year, which we expect will continue to grow.

As reported by the National Biodiesel Board, in 2009 U.S. bio-diesel refineries produced approximately 506 million gallons of neat (100%) bio-diesel fuel from a reported 122 active producers with a total capacity of over 2 billion gallons. This is just over 25% of capacity and represents less than 1% of US demand for diesel fuel. The trend of production and consumption is growing. In 2005, U.S. refineries produced approximately 75 million gallons, in 2006 approximately 250 million gallons were sold, in 2007 450 million gallons were sold and in 2008, 678 million gallons. The reduction in 2009 is primarily due to increased feedstock costs.

Our primary market is the direct sale of *Jatropha* feedstock oil for bio-diesel, renewable diesel and biomass energy production, and the sale of carbon credits we generate from our agricultural operations. Our primary customers are processors of bio-fuels. We estimate that there are approximately 122 bio-diesel plants in the United States alone, which can utilize up to 100% of our crude or refined *Jatropha* oil. However, we expect to generate our highest revenues and greatest margins from customers who have logistical capacity on a water port accessible from the Gulf of Mexico. This will reduce redundant transportation costs and allow us to ship large quantities economically. These customers have historically paid a higher price for feedstock oil, since the majority of feedstock oil supplies have been shipped from the Midwestern United States. We anticipate that our key customer profile will include well-financed, low-cost bio-diesel refiners.

Oil made from the seeds of the *Jatropha* plant has also recently been tested as an aviation fuel supplement by a number of airlines, including Air New Zealand, Japan Airlines, Continental Airlines and the US Air Force. The ability of *Jatropha* oil to replace kerosene-based jet fuel is being studied to reduce the aviation world’s dependence on

high-pollution crude oil.

9

As our business develops, we expect to utilize some distributors for sale of the Jatropha feedstock oil and the biomass by-products that we will produce.

Environmental Impact

Bio-fuels, and especially bio-diesel, have environmental benefits that are a major driving force for their introduction. Using bio-fuels instead of fossil fuels reduces net emissions of carbon dioxide and other greenhouse gasses, which are associated with global climate change. Bio-fuels are produced from renewable plant resources that “recycle” the carbon dioxide created when bio-fuels are consumed. Life-cycle analyses consistently show that using bio-fuels produced in modern facilities results in net reductions of greenhouse gas carbon emissions compared to using fossil fuel-based petroleum equivalents. These life-cycle analyses include the total energy requirements for the farming and production of the biomass resource, as well as harvesting, conversion and utilization. Bio-fuels help nations achieve their goals of reducing carbon emissions. Bio-fuels burn cleanly in vehicle engines and reduce emissions of unwanted products, particularly unburned hydrocarbons and carbon monoxide. These characteristics contribute to improvements in local air quality. In a life-cycle study published in October 2002, entitled “A Comprehensive Analysis of Bio-diesel Impacts on Exhaust Emissions, 2002,” the U.S. Environmental Protection Agency (“EPA”) analyzed bio-diesel produced from virgin soy oil, rapeseed (canola) and animal fats. The study concluded that the emission impact of bio-diesel potentially increased NOx emissions slightly while significantly reducing other major emissions.

Competition

Although there are a number of producers of bio-fuels, few are utilizing non-edible oil feedstock for the production of bio-diesel. The following table lists the companies we are aware of that are cultivating Jatropha for the production of bio-diesel:

Valero	Invested in a Australian Jatropha farming operation and has entered into offtake agreements to purchase the resultant CJO.
Van Der Horst Corporation (Singapore)	Building a 200,000-tpy bio-diesel plant in Jurong Island in Singapore that will eventually be supplied with Jatropha from plantations it operates in Cambodia and China, and possible new plantations in India, Laos and Burma.
Mission Biofuels (Australia)	Hired Agro Diesel of India to manage a 100,000-hectare Jatropha plantation, and a contract-farming network in India to feed its Malaysian and Chinese bio-diesel refineries. Mission Biofuels has raised in excess of \$80 million to fund its operations.
D1 Oils (UK)	As of June 2007, together with its partners, D1 Oils has planted or obtained rights to offtake from a total approximately 172,000 hectares of Jatropha under cultivation worldwide. D1’s Jatropha plantations are located in Saudi Arabia, Cambodia, Ghana, Indonesia, the Philippines, China, India, Zambia, South Africa and Swaziland. In June 2007, D1 Oils and British Petroleum entered into a 50:50 joint venture to plant up to an additional 1 million hectares of Jatropha worldwide. British Petroleum funded the first £31.75 million of the Joint Venture’s working capital requirements through a purchase of D1 Oils equity, and the total Joint Venture funding requirement is anticipated to be £80 million over

the next five years.

NRG Chemical
Engineering (UK)

Signed a \$1.3 billion deal with state-owned Philippine National Oil Co. in May 2007. NRG Chemical will own a 70% stake in the joint venture, which will involve the construction of a bio-diesel refinery, two ethanol distilleries and a \$600 million investment in Jatropha plantations that will cover over 1 million hectares, mainly on the islands of Palawan and Mindanao.

Note: 1 hectare = 2.47 acres

We believe there is sufficient global demand for alternative non-edible bio-fuel feedstock to allow a number of companies to successfully compete worldwide. In particular, we note that we are the only U.S.-based public company producer of non-edible oil feedstock for the production of bio-diesel, which gives us a unique competitive advantage over many foreign competitors when competing in the U.S.

The price basis for our non-edible oil and biomass feedstock will be equivalent to other edible seed oil and biomass feedstock. We have not found any substantial effort towards the production of any other non-edible oil worldwide that could compete with Jatropha. With the growing demand for feedstock, and the high price of oil and bio-fuels, we anticipate that we will be able to sell our Jatropha oil and biomass feedstock profitably.

Employees.

As of December 31, 2010, we had 378 full time employees, contract employees and consultants, of which 372 are employed by our subsidiaries in Mexico. As business levels require and as capital resources permit, we expect to hire full-time employees. Neither this company, nor any of our subsidiaries is a party to any collective bargaining agreements.

ITEM 1A RISK FACTORS.

An investment in our securities involves a high degree of risk. You should carefully consider the risks described below before deciding to invest in or maintain your investment in our company. The risks described below are not intended to be an all-inclusive list of all of the potential risks relating to an investment in our securities. If any of the following or other risks actually occurs, our business, financial condition or operating results and the trading price or value of our securities could be materially and adversely affected.

Risks Related To Our Business

We have operated at a loss and will likely continue to operate at a loss in 2011.

We have incurred an operating loss since our inception. We had an accumulated deficit of approximately \$26,933,000, and a working capital deficit of approximately \$5,035,000 as of December 31, 2010. In addition, we incurred a net loss of \$625,000 for the fiscal year then ended. Although we had net income for the fiscal year ended December 31, 2009, that net income was primarily the result of a gain that we recognized due to our sale of our SaveCream legacy medical asset. In addition, most of the gain we recognized from the sale of the SaveCream asset resulted from the liabilities that were released or assumed, and did not result in any payments to us. We are likely to continue to incur losses unless and until we are able to generate significantly more revenues from the sale of Jatropha products, the sale of carbon credits, or from fees generated by providing Jatropha consulting services. Although we anticipate that our revenues from these sources will significantly increase during fiscal 2011 and thereafter, no assurance can be given that these revenues will be sufficient to generate net income in the future. Losses have had, and will continue to have an adverse effect on our stockholders' equity and the trading price of our common stock. Because of the numerous risks and uncertainties associated with our Jatropha operations, we are unable to predict when we may become profitable, if at all. If we do not become profitable or are unable to maintain future profitability, the market value of our common stock will be adversely affected.

It is not certain that we will have sufficient funds available to us to fund all of our operating expenses for 2011 and thereafter.

As of March 24, 2011, we believe that we will have sufficient cash available, and sufficient anticipated future revenues, to fund our anticipated working capital needs through 2011. However, our projected revenue sources are tenuous, and no assurance can be given that all anticipated revenues will, in fact, be received. In addition, our current liabilities still significantly exceed our current assets, and the amount of revenues that we expect to generate in 2011 from our Jatropha-related consulting services and other sources may not be sufficient to fund all of our working capital needs. In fiscal 2010, our sources of cash consisted primarily of reimbursement payments we received from GCE Mexico I, LLC and management consulting fees we received for services we provided to third parties. Although we anticipate that our Mexico farms will, in 2011, commence generating significant revenues, all proceeds received from those harvests will be used to operate the Mexico farms and, other than management fee reimbursements that we receive, none of those revenues will be available to defray our corporate overhead expenses or pay any of our on-going costs of operations. If funds we receive from these sources are not sufficient to fund our operating needs, we will have to raise funds from other sources, such as the sale of securities, strategic partnerships, or governmental grants or loans. No assurance can be given that we will be able to obtain such funding, if needed. In the event that we receive less revenues or funding than we need, we may have to reduce our operations.

We may need significant additional capital in order to fund our expansion and the implementation of our business plan, which we may be unable to obtain. If we do not receive additional funding, we may not be able to achieve our business plan of further developing our bio-fuels business and we may even be forced to reduce our future operations.

In addition to generating funds to cover our operating expenses, we will need a significant amount of additional funding in order to acquire and operate additional Jatropha farms and to otherwise implement our bio-fuels operations in accordance with our business plan. Our capital requirements for expanding our operations will be significant, and we do not currently have any of the funds that we expect to need for these purposes. Accordingly, we will need to obtain a significant amount of additional capital to continue to fund our operating expenses and to expand our Jatropha business. To date, we have acquired approximately 8,600-acre of Jatropha farms that we own in Mexico through a joint venture with our financing partners. In 2010, we received \$3.7M from our joint venture partners, and acquired approximately 3,460 acres of additional Jatropha farm land that we are developing. No assurance can be given that we will be able to obtain additional funding from our joint venture investors in the future, nor have we identified alternative sources for the additional financing that we will require if we are to achieve our business plan. We do not have commitments from any third parties to provide us with additional funds to finance the acquisition, development and operation of the Jatropha farms that represent the foundation of our business plan. Certain investors may be unwilling to invest in our securities since we are traded on the OTC Bulletin Board and not on a national securities exchange, particularly if there is only limited trading in our common stock on the OTC Bulletin Board at the time we seek financing. There is no assurance that sufficient funding through a financing will be available to us at acceptable terms or at all. Historically, we have raised capital through the issuance of debt and equity securities. However, given the risks associated with a relatively new and untested bio-fuels business, the risks associated with our common stock (as discussed below), the worldwide financial crisis that has severely affected the capital markets, and our status as a small, unknown public company, we expect in the near future, we will have a great deal of difficulty raising capital through traditional financing sources. Therefore, we cannot guarantee that we will be able to raise capital, or if we are able to raise capital, that such capital will be in the amounts needed. Our failure to raise capital, when needed, and in sufficient amounts, will severely impact our ability to develop our Jatropha bio-fuels business. Any additional funding that we obtain in an equity or convertible debt financing is likely to reduce the percentage ownership of the company held by our existing security holders. The amount of this dilution may be substantial if the trading price of our common stock is low at the time of any financing from its current levels. There can be no assurance that financing will be available in amounts or on terms acceptable to us, if at all. If we are unable to obtain the needed additional funding, we will have to reduce or even totally discontinue our operations, which

would result in a total loss to all of our shareholders.

We have limited operating history in the feedstock and bio-diesel industries, which makes it difficult to evaluate our financial position and our business plan.

We commenced our current feedstock and biofuels operations in 2007. Since then, we have focused our efforts on developing our Jatropha business, including, among other things, acquiring our Jatropha farms through a joint venture, and cultivating Jatropha plants for the subsequent production and sale of Jatropha seeds, oil and biomass. Because our operations thus far have concentrated on growing our Jatropha business, and because the Jatropha trees on our farms are only now starting to produce commercial quantities of Jatropha fruit, we have had limited sales of Jatropha seeds, oil and by-products to date. Thus, we have little operating history as a feedstock/biofuels company on which a decision to invest in our company can be based. The future of our company currently is dependent upon our ability to successfully harvest, market and sell the Jatropha products that we expect will be generated during fiscal 2011 and thereafter, and to otherwise implement our business plan in the Jatropha business. While we believe that our business plan, if implemented as conceived, will make our company successful in the long term, we have limited operating history against which we can test our plans and assumptions, and therefore cannot evaluate the likelihood of success.

Our Jatropha operations are subject to all of the risks normally associated with large farming operations, including risks related to the weather.

Through our GCE Mexico I, LLC joint venture, we currently own approximately 8,600 acres of farm land in the Yucatan peninsula, Mexico, which land is dedicated to the production of Jatropha bio-fuel and other related products. Of those 8,600 acres, 5,600 acres have been planted and contain Jatropha trees. The cultivation, planting, maintenance and harvesting of Jatropha trees is subject to all of the risks normally associated with the operation of large farms, including risks related to the weather, soil conditions, pests, insects, plant diseases, and plant selection and breeding. For example, during the fourth quarter of 2010, our Mexico farms did not produce a significant harvest of Jatropha fruit because of the heavy rains and extended rainy season.. No assurance can be given that the weather or other conditions will not adversely affect future harvests of Jatropha fruit at our Mexico farms.

Because our interest in cash distribution from our Mexico joint venture is subordinated to the return of our investors' investment and a 12% compounded annual return, we do not expect to receive any cash from our Mexico Jatropha farms for a number of years.

The Jatropha trees we planted in 2008 in the first of our Mexico Jatropha farms are now beginning to mature, and, as a result, we anticipate that in 2011 our Mexico farms will generate revenues (particularly from the second harvest in the fourth quarter of 2011). However, under our GCE Mexico I, LLC operating agreement, revenues from the Jatropha crop are first applied to our farm operating expenses, and then any excess cash flow is first used to a return of our GCE Mexico I, LLC investors' investment in these farms and a cumulative 12% per annum preferential return on their investment. As of December 31, 2010, the total amount we have to pay our investors, including the preferential return, before any cash is distributed to us, was \$10,361,602. We currently do not anticipate that the Mexico farms we jointly own through GCE Mexico I, LLC will generate sufficient cash to repay this amount for several years. Accordingly, other than management fees that GCE Mexico I, LLC is required to pay us, we do not expect to receive any cash distributions from our majority ownership interest in this entity for several years. No assurance can be given that our investment in GCE Mexico I, LLC will ever generate sufficient revenues to repay our joint venture investors and return capital to this company.

Our Jatropha biofuels business is a new and highly risky business that has not been conducted on a similar scale in North America.

Our business plan calls for a large scale planting and harvesting of Jatropha plants, primarily outside of the United States, and for the subsequent production and sale of Jatropha oil (and other Jatropha byproducts) for use as a bio-fuel in Mexico and in the United States. In addition to all of the risks normally associated with developing a new line of business, we will be subject to certain risks unique to our Jatropha bio-fuels business, including the large scale production of plants that have not heretofore been grown in large scale farms in Mexico, logistical issues related to the oil and biomass produced at such farms, market acceptance, uncertain pricing of our products, developing governmental regulations, and the lack of an established market for our products.

Our business could be significantly impacted by changes in government regulations over energy policy.

Our planned operations and the properties we intend to cultivate are subject to a wide variety of federal, provincial and municipal laws and regulations, including those governing the use of land, type of development, use of water, use of chemicals for fertilizer, pesticides, export or import of various materials including plants, oil, use of biomass, handling of materials, labor laws, storage handling of materials, shipping, and the health and safety of employees. As such, the nature of our operations exposes us to the risk of claims with respect to such matters and there can be no assurance that material costs or liabilities will not be incurred in connection with such claims. In addition, these governmental regulations, both in the United States and in the foreign countries in which we may conduct our business, may restrict and hinder our operations and may significantly raise our cost of operations. Any breach by our company of such legislation may also result in the suspension or revocation of necessary licenses, permits or authorizations, civil liability and the imposition of fines and penalties, which would adversely affect our ability to operate and our financial condition.

Further, there is no assurance that the laws, regulations, policies or current administrative practices of any government body, organization or regulatory agency in the United States or any other jurisdiction, will not be changed, applied or interpreted in a manner which will fundamentally alter the ability of our company to carry on our business. The actions, policies or regulations, or changes thereto, of any government body or regulatory agency, or other special interest groups, may have a detrimental effect on our company. Any or all of these situations may have a negative impact on our operations.

Our future growth is dependent upon strategic relationships within the feedstock and bio-diesel industries. If we are unable to develop and maintain such relationships, our future business prospects could be significantly limited.

Our future growth will generally be dependent on relationships with third parties, including alliances with feedstock oil and bio-diesel processors and distributors. In addition, we will likely rely on third parties to oversee the operations and cultivation of the Jatropha plants in our non-U.S. properties. Accordingly, our success will be significantly dependent upon our ability to establish successful strategic alliances with third parties and on the performance of these third parties. These third parties may not regard their relationship with us as important to their own business and operations, and there is no assurance that they will commit the time and resources to our joint projects as is necessary, or that they will not in the future reassess their commitment to our business. Furthermore, these third parties may not perform their obligations as agreed. In the event that a strategic relationship is discontinued for any reason, our business, results of operations and financial condition may be materially adversely affected.

A significant decline in the price of oil could have an adverse impact in our profitability.

Our success is dependent in part upon the historic high price of crude oil and on the high price of seed oils that are currently used to manufacture bio-diesel. A significant decline in the price of either crude oil or the alternative seed

oils will have a direct negative impact on our financial performance.

There are risks associated with conducting our business operations in foreign countries, including political and social unrest.

All of our currently operating farms are located in Mexico. We expect that most, if not all, of our future agricultural operations will also be primarily located in foreign countries, particularly in Mexico. Accordingly, we are subject to risks not typically associated with ownership of U.S. companies and therefore should be considered more speculative than investments in the U.S.

For example, Mexico is a developing country that has experienced a range of political, social and economic difficulties over the last decade. Our operations could be affected in varying degrees by political instability, social unrest and changes in government regulation relating to foreign investment, the biofuels industry, and the import and export of goods and services. Operations may also be affected in varying degrees by possible terrorism, military conflict, crime, fluctuations in currency rates and high inflation.

In addition, Mexico has a nationalized oil company, and there can be no assurance that the government of Mexico will continue to allow our business and our assets to compete in any way with their interests. Our operations could be adversely affected by political, social and economic unrest in Mexico and any other foreign countries in which we commence agricultural operations.

We plan to grow rapidly and our inability to keep up with such growth may adversely affect our profitability.

We plan to grow rapidly and significantly expand our operations. We currently have a very small staff and few resources. If we succeed in significantly expanding our operations, our growth may place a significant strain on our management team and other company resources. We will not be able to implement our business strategy in a rapidly evolving market without effective planning and management processes. If we grow significantly, we will have to manage multiple farms in various foreign locations, hundreds of foreign employees, and relationships with various domestic and foreign strategic partners. To manage the expected growth of our operations and personnel, we will have to significantly supplement our existing managerial, financial and operational staff, systems, procedures and controls. We may be unable to supplement and complete, in a timely manner, the improvements to our systems, procedures and controls necessary to support our future operations, and consequently our operations will not function effectively. In addition, our management may be unable to hire, train, retain, motivate and manage required personnel, or successfully identify, manage and exploit existing and potential market opportunities. As a result, our business and financial condition may be adversely affected.

Our business will not be diversified because we will be primarily concentrated in one industry. As a consequence, we may not be able to adapt to changing market conditions or endure any decline in the bio-diesel industry.

We expect our business will be substantially dependent upon the success of Jatropha as a bio-fuel. Accordingly, we expect that virtually all of our revenues will be derived from some form of Jatropha (either from the sales of feedstock oil harvested from our Jatropha farms, the bio-diesel production and sales of Jatropha oil, the sale of carbon credits produced from Jatropha farms, and the development and management services related to the cultivation and production of Jatropha plants and bio-fuel). We do not have any other lines of business or other sources of revenue to rely upon if the Jatropha business does not become viable and if we are unable to produce and sell feedstock oil and bio-diesel, or if the markets for such products decline. Our lack of diversification means that we may not be able to adapt to changing market conditions or to withstand any significant decline in the bio-diesel industry.

Reductions in the price of bio-diesel, and decreases in the price of petroleum-based fuels could affect the price of our feedstock, resulting in reductions in our revenues.

Historically, bio-diesel prices have been highly correlated to the Ultra Low Sulfur (“ULS”) diesel prices. Increased volatility in the crude oil market has an effect on the stability and long-term predictability of ULS diesel, and hence the biofuels prices in the domestic and international markets. Crude oil prices are impacted by wars and other political factors, economic uncertainties, exchange rates and natural disasters. A reduction in petroleum-based fuel prices may have an adverse effect on bio-diesel prices and could apply downward pressure on feedstock, affecting revenues and profits in the feedstock industry, which could adversely affect our financial condition.

Delays due to, among others, weather, labor or material shortages, permitting or zoning delays, or opposition from local groups, may hinder our ability to commence operations in a timely manner.

We could incur delays in the implementation of our plans to plant and harvest *Jatropha*, or our plans for the construction of support facilities, due to permitting or zoning delays, opposition from local groups, adverse weather conditions, labor or material shortages, or other causes. In addition, changes in political administrations at the federal, state or local level that result in policy changes towards the large scale cultivation of *Jatropha*, or towards biofuels in general, could result in delays in our business plan timetable. Any such delays could adversely affect our ability to fully commence operations and generate revenues.

We may be unable to locate suitable properties and obtain the development rights needed to build and expand our business.

Our business plan focuses on identifying and developing agricultural properties (farms, nurseries, etc.) for the production of biofuels feedstock. The availability of land for this activity is a key element of our projected revenue generation. Our ability to acquire appropriate land in the future is uncertain and we may be required to delay planting, which may create unanticipated costs and delays. In the event that we are not successful in identifying and obtaining rights on suitable land for our agricultural and processing facilities, our future prospects for profitability will likely be affected, and our financial condition and resulting operations may be adversely affected.

Technological advances in feedstock oil production methods in the bio-diesel industry could adversely affect our ability to compete and the value of your investment.

Technological advances could significantly decrease the cost of producing feedstock oil and biofuels. There is significant research and capital being invested in identifying more efficient processes, and lowering the cost of producing feedstock oil and biofuels. We expect that technological advances in feedstock oil/biofuel production methods will continue to occur. If improved technologies become available to our competitors, they may be able to produce feedstock oil, and ultimately biofuels, at a lower cost than us. If we are unable to adopt or incorporate technological advances into our operations, our ability to compete effectively in the feedstock/biofuels market may be adversely affected, which in turn will affect our profitability.

The development of alternative fuels and energy sources may reduce the demand for biofuels, resulting in a reduction in our profitability.

Alternative fuels, including a variety of energy alternatives to biofuels, are continually under development. Technological advances in fuel-engines and exhaust system design and performance could also reduce the use of biofuels, which would reduce the demand for bio-diesel. Further advances in power generation technologies, using cleaner hydrocarbon based fuels, fuel cells and hydrogen are actively being researched and developed. If these technological advances and alternatives prove to be economically feasible, environmentally superior and accepted in the marketplace, the market for biofuels could be significantly diminished or replaced, which would adversely affect our financial condition.

Our ability to hire and retain key personnel and experienced consultants will be an important factor in the success of our business and a failure to hire and retain key personnel may result in our inability to manage and implement our business plan.

We are highly dependent upon our management and on Richard Palmer (our Chief Executive Officer) in particular. The loss of the services of any of our management personnel may impair management's ability to operate our company or our ability to locate and develop new Jatropha farms. We have not purchased key man insurance on any of our officers, which insurance would provide us with insurance proceeds in the event of their death. Without key man insurance, we may not have the financial resources to develop or maintain our business until we could replace such individuals or to replace any business lost by the death of such individuals. We may not be able to attract and retain the necessary qualified personnel. If we are unable to retain or to hire qualified personnel as required, we may not be able to adequately manage and implement our business.

Our operating costs could be higher than we expect, and this could reduce our future profitability.

In addition to general economic conditions, market fluctuations and international risks, significant increases in operating, development and implementation costs could adversely affect our company due to numerous factors, many of which are beyond our control. These increases could arise for several reasons, such as:

- Increased cost for land acquisition;
- Increased unit costs of labor for nursery, field preparation and planting;
- Increased costs for construction of facilities;
- Increased transportation costs for required nursery and field workers;
- Increased costs of supplies and sub-contacted labor for preparing of land for planting;
- Increase costs for irrigation, soil conditioning, soil maintenance; or
- Increased time for planting and plant care and custody.

In addition, our Jatropha farm operations will also subject us to ongoing compliance with applicable governmental regulations, including those regulations governing land use, water use, pollution control, worker safety and health and welfare and other matters. We may have difficulty complying with these regulations and our compliance costs could increase significantly. Increases in operating costs would have a negative impact on our operating income, and could result in substantially decreased earnings or a loss from our operations, adversely affecting our financial condition.

Fluctuations in the Mexican peso to U.S. dollar exchange rate may adversely affect our reported operating results.

The Mexican peso is the primary operating currency for our current business operations while our financial results are reported in U.S. dollars. Because our costs will be primarily denominated in pesos, a decline in the value of the dollar to the peso could negatively affect our actual operating costs in U.S. dollars, and our reported results of operations. We do not currently engage in any currency hedging transactions intended to reduce the effect of fluctuations in foreign currency exchange rates on our results of operations. We cannot guarantee that we will enter into any such currency hedging transactions in the future or, if we do, that these transactions will successfully protect us against currency fluctuations.

Our future profitability is dependent upon many natural factors outside of our control. If these factors do not produce favorable results our future business profitability could be significantly affected.

Our future profitability is mainly dependent on the production output from our agricultural operations. There are many factors that can effect growth and fruit production of the Jatropha plant including weather, nutrients, pests and other natural enemies of the plant. Many of these are outside of our direct control and could be devastating to our

operations.

17

Risks Relating to Our Common Stock

Our stock is thinly traded, so you may be unable to sell your shares at or near the quoted bid prices if you need to sell a significant number of your shares.

The shares of our common stock are thinly-traded on the OTC Bulletin Board and on the OTCQB market, meaning that the number of persons interested in purchasing our common shares at or near bid prices at any given time may be relatively small or non-existent. This situation is attributable to a number of factors, including the fact that we are a small company which is relatively unknown to stock analysts, stock brokers, institutional investors and others in the investment community that generate or influence sales volume, and that even if we came to the attention of such persons, they tend to be risk-averse and would be reluctant to follow an unproven, early stage company such as ours or purchase or recommend the purchase of our shares until such time as we became more seasoned and viable. As a consequence, there may be periods of several days or more when trading activity in our shares is minimal or non-existent, as compared to a seasoned issuer which has a large and steady volume of trading activity that will generally support continuous sales without an adverse effect on share price. We cannot give you any assurance that a broader or more active public trading market for our common shares will develop or be sustained, or that current trading levels will be sustained. Due to these conditions, we can give you no assurance that you will be able to sell your shares at or near bid prices or at all if you need money or otherwise desire to liquidate your shares.

Our existing directors, officers and key employees hold a substantial amount of our common stock and may be able to prevent other shareholders from influencing significant corporate decisions.

As of March 24, 2011, our directors and executive officers beneficially owned approximately 27.99% of our outstanding common stock. These shareholders, if they act together, may be able to direct the outcome of matters requiring approval of the shareholders, including the election of our directors and other corporate actions such as:

- our merger with or into another company;
- a sale of substantially all of our assets; and
- amendments to our articles of incorporation.

The decisions of these shareholders may conflict with our interests or those of our other shareholders.

The market price of our stock may be adversely affected by market volatility.

The market price of our common stock is likely to be volatile and could fluctuate widely in response to many factors, including:

- fluctuation in the world price of crude oil;
- market changes in the biofuels industry;
- government regulations affecting renewable energy businesses and users;
- actual or anticipated variations in our operating results;
- our success in meeting our business goals and the general development of our proposed operations;

- general economic, political and market conditions in the U.S. and the foreign countries in which we plan to operate; and
- the occurrence of any of the risks described in this Annual Report.

Obtaining additional capital through the sale of common stock will result in dilution of shareholder interests.

We may raise additional funds in the future by issuing additional shares of common stock or other securities, which may include securities such as convertible debentures, warrants or preferred stock that are convertible into common stock. Any such sale of common stock or other securities will lead to further dilution of the equity ownership of existing holders of our common stock. Additionally, the existing options, warrants and conversion rights may hinder future equity offerings, and the exercise of those options, warrants and conversion rights may have an adverse effect on the value of our stock. If any such options, warrants or conversion rights are exercised at a price below the then current market price of our shares, then the market price of our stock could decrease upon the sale of such additional securities. Further, if any such options, warrants or conversion rights are exercised at a price below the price at which any particular shareholder purchased shares, then that particular shareholder will experience dilution in his or her investment.

We are unlikely to pay dividends on our common stock in the foreseeable future.

We have never declared or paid dividends on our stock. We currently intend to retain all available funds and any future earnings for use in the operation and expansion of our business. We do not anticipate paying any cash dividends in the foreseeable future, and it is unlikely that investors will derive any current income from ownership of our stock. This means that your potential for economic gain from ownership of our stock depends on appreciation of our stock price and will only be realized by a sale of the stock at a price higher than your purchase price.

Trading of our stock may be restricted by the Securities and Exchange Commission's penny stock regulations, which may limit a shareholder's ability to buy and sell our stock.

The Securities and Exchange Commission has adopted regulations which generally define "penny stock" to be any equity security that has a market price less than \$5.00 per share or an exercise price of less than \$5.00 per share, subject to certain exceptions. Our securities are covered by the penny stock rules, which impose additional sales practice requirements on broker-dealers who sell to persons other than established customers and "accredited investors". The term "accredited investor" refers generally to institutions with assets in excess of \$5,000,000 or individuals with a net worth in excess of \$1,000,000 or annual income exceeding \$200,000 or \$300,000 jointly with their spouse. The penny stock rules require a broker-dealer, prior to a transaction in a penny stock not otherwise exempt from the rules, to deliver a standardized risk disclosure document in a form prepared by the Securities and Exchange Commission, which provides information about penny stocks and the nature and level of risks in the penny stock market. The broker-dealer also must provide the customer with current bid and offer quotations for the penny stock, the compensation of the broker-dealer and its salesperson in the transaction and monthly account statements showing the market value of each penny stock held in the customer's account. The bid and offer quotations, and the broker-dealer and salesperson compensation information, must be given to the customer orally or in writing prior to effecting the transaction and must be given to the customer in writing before or with the customer's confirmation. In addition, the penny stock rules require that prior to a transaction in a penny stock not otherwise exempt from these rules, the broker-dealer must make a special written determination that the penny stock is a suitable investment for the purchaser and receive the purchaser's written agreement to the transaction. These disclosure requirements may have the effect of reducing the level of trading activity in the secondary market for the stock that is subject to these penny stock rules. Consequently, these penny stock rules may affect the ability of broker-dealers to trade our securities. We believe that the penny stock rules discourage investor interest in and limit the marketability of our common stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

Not applicable.

ITEM 2. PROPERTIES.

Executive Offices. Currently, we operate out of offices located at 100 W. Broadway, Suite 650, Long Beach California 90802. Our leased offices consist of approximately 2,000 square feet and are leased at a monthly rate of \$1.70 sq. ft per month. The term of the lease expires on August 31, 2012.

As of March 24, 2011, we own the following two Jatropha farms through our GCE Mexico I, LLC joint venture:

1. Our first farm consists of seven separate parcels of land collectively representing 2,084 hectares (approximately 5,149 acres). We purchased these parcels in 2008. The farm is located approximately 12 miles northeast of Tizimin, Yucatan, Mexico and is approximately 110 miles from Merida and the port of Progreso, and 75 miles from Cancun. Irrigation systems have been installed in test areas of the farm. All of the land has been improved and we have completed planting on all of the planned farmland. We financed the purchase of this farm through a mortgage loan in the amount of \$2,051,282, which bears interest at a rate of 12% per annum.

2. In March 2010, we purchased approximately 3,460 acres of additional land that is contiguous to our first farm. We have commenced preparing this farmland for Jatropha plantation and expect that the new farm will be fully planted by the end of the second quarter of 2011. We financed the purchase of this farm through a mortgage loan in the amount of \$742,652. That loan bears interest at a rate of 12% per annum.

ITEM 3. LEGAL PROCEEDINGS.

On April 12, 2010, Mobius Risk Group, LLC ("Mobius") filed a complaint against the Company in the United States District Court Southern District of Texas Houston Division, alleging that the Company breached that certain Services Agreement, dated April 30, 2007, between Mobius and the Company. Under the Services Agreement, Mobius was required to provide professional services in connection with growing, producing, manufacturing, and selling seed oils. As permitted by the Services Agreement, the Company terminated the Services Agreement on July 11, 2008. In its complaint, Mobius has alleged that the Company failed to pay Mobius a total of \$551,178. The Company has disputed the Mobius claim, and has asserted a counter claim against Mobius for direct damages sustained by the Company from the lack of performance of Mobius under the terms of the Service Agreement. Furthermore, the Company has also filed a counterclaim for breach of fiduciary duty against Eric Melvin, the CEO of Mobius and a former member of the Company's Board of Directors, for conduct arising from his prior position as a director of the Company.

On July 13, 2010, Dee Burgess, a former consultant of Medical Discoveries, Inc. (the name of our company until changed in connection with our new Jatropha business), filed a complaint against the Company in the Third Judicial District Court, State of Utah. The complaint alleges that Ms. Burgess is owed \$80,000 for services allegedly provided to the Company in 2004, 2005, and 2006. The Company has not yet been served with the complaint.

ITEM 4.

RESERVED.

PART II

ITEM MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED SHAREHOLDER MATTERS, AND
5. ISSUER PURCHASES OF EQUITY SECURITIES.

Shares of our common stock are traded on the OTC Bulletin Board and on the OTCQB market under the symbol "GCEH." The following table sets forth the range of closing prices for our common stock for the quarters indicated. Such quotations reflect inter-dealer prices, without retail mark-ups, markdowns or commissions, and may not represent actual transactions.

Fiscal Year Ended December 31, 2009	High Bid	Low Bid
First Quarter	\$.038	\$.015
Second Quarter	\$.030	\$.010
Third Quarter	\$.022	\$.010
Fourth Quarter	\$.028	\$.010

Fiscal Year Ended December 31, 2010	High Bid	Low Bid
First Quarter	\$.020	\$.010
Second Quarter	\$.140	\$.010
Third Quarter	\$.050	\$.030
Fourth Quarter	\$.040	\$.030

Shareholders

As of March 24, 2011, there were approximately 1,500 holders of record of our common stock, not including any persons who hold their stock in "street name."

Dividends

We have not paid any dividends on our common stock to date and do not anticipate that we will pay dividends in the foreseeable future. Any payment of cash dividends on our common stock in the future will be dependent upon the amount of funds legally available, our earnings, if any, our financial condition, our anticipated capital requirements and other factors that the Board of Directors may think are relevant. However, we currently intend for the foreseeable future to follow a policy of retaining all of our earnings, if any, to finance the development and expansion of our business and, therefore, do not expect to pay any dividends on our common stock in the foreseeable future.

Securities Authorized For Issuance Under Equity Compensation Plans

The following table contains information regarding our equity compensation plans as of December 31, 2010:

Plan Category	Number of Securities to be Issued upon Exercise of Outstanding Options, Warrants and Rights	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuance under Equity Compensation Plans (Excluding Securities Reflected in the First Column)
Equity compensation plans approved by security holders			
1993 Incentive Plan (1)	3,383,000	\$ 0.13	—
2002 Stock Incentive Plan	19,200,000	\$ 0.04	800,000
2010 Equity Incentive Plan	14,400,000	\$ 0.03	8,600,000
Equity compensation plans not approved by security holders			
Options	1,350,000	\$ 0.02	
Warrants	57,674,145	\$ 0.02	
Total	96,007,145		9,400,000

(1) The 1993 Incentive Plan has expired and no additional options or awards can be granted under this plan.

Recent Issuances Of Unregistered Securities

We did not issue any unregistered securities during the three-month period ended December 31, 2010 that were not previously reported in a Current Report on Form 8-K.

Repurchase of Shares

We did not repurchase any of its shares during the fourth quarter of the fiscal year covered by this report.

ITEM 6.

SELECTED FINANCIAL DATA.

Not applicable to a “smaller reporting company” as defined in Item 10(f)(1) of SEC Regulation S-K.

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

Overview

Until recently, this company was a developmental stage company. In October 2009, the Company achieved two milestones:

- o The substantial completion of the planting of all Jatropha trees on our primary 5,149-acre farm.
- o The commencement of sales of Jatropha (and related by-products) and revenues generated thereby.

Consequently, management determined that the Company has commenced its planned principal operations and, therefore, it was appropriate to discontinue reporting as a development stage company.

During the past two years, the Company has focused on acquiring, improving, and planting Jatropha farms (which are located in Mexico). To date, the Jatropha trees that we planted in our new farms have not been mature enough to bear significant amount of Jatropha fruit from which we could produce commercial quantities of Jatropha oil. The first trees that we planted are now, however, maturing to the point that we anticipate being able to harvest substantial quantities of fruit in 2011. As a result, we anticipate that our farms will commence generating increased revenues in 2011. We currently are preparing the new properties that we recently purchased for planting and we expect to continue to plant Jatropha trees on our farms during the next four months. As these newly planted trees mature they will bear fruit from which we can produce Jatropha oil. With the additional productive trees, revenues from our farm are expected to significantly increase in the future.

During the past year, our principal sources of revenues have been fees for providing advisory and consulting services to third parties regarding Jatropha farms and the uses of Jatropha bio-diesel, and subsidy revenue.

Critical Accounting Policies

The preparation of financial statements in conformity with accounting principles generally accepted in the United States require management to make estimates and assumptions that affect the reported assets, liabilities, sales and expenses in the accompanying financial statements. Critical accounting policies are those that require the most subjective and complex judgments, often employing the use of estimates about the effect of matters that are inherently uncertain.

Operational Company. On October 1, 2009, we commenced our planned principal operations, which indicated that we were no longer subject to the accounting standards for accounting and reporting by development stage enterprises. Our financials therefore are presented for an operational company.

Agricultural Producer. All costs incurred until the actual planting of the Jatropha plant are capitalized as plantation development costs, and are included in "Property and Equipment" on the balance sheet. Plantation development costs are being accumulated in the balance sheet during the development period and will be accounted for in accordance with accounting standards for Agricultural Producers and Agricultural Cooperatives. The direct costs associated with each farm and the production of the Jatropha revenue streams have been deferred and accumulated as a noncurrent asset and are included in "Deferred Growing Costs" on the balance sheet. Other general costs without expected future benefits are expensed when incurred.

Certain other critical accounting policies, including the assumptions and judgments underlying them, are disclosed in Note A to the Consolidated Financial Statements included in the Annual Report on Form 10-K for the fiscal year ended December 31, 2010. However, we do not believe that there are any alternative methods of accounting for our operations that would have a material effect on our financial statements.

Results Of Operations

Revenues. During the years ended December 31, 2010 ("fiscal 2010") and 2009 ("fiscal 2009"), we recognized revenues of \$848,808 and \$373,060, respectively. The revenues that we generated in 2010 and 2009 represented fees for Jatropha related advisory services we rendered to third parties and sales of Jatropha seeds and other products (waste wood, Jatropha seed husks, etc.) from our Mexico farms. The Jatropha plants that we have planted are maturing and will be harvested beginning in 2011. The increase in revenues in fiscal 2010 compared with fiscal 2009 is the result of an increase in our Jatropha farm advisory services to third parties, subsidy payments and, to a lesser extent, from revenues generated from the sale of our Jatropha farm products. Our goal is to increase the amount of advisory services that we render to third parties in 2011. In addition, now that some of the Jatropha trees that we planted are maturing, we anticipate that sales of Jatropha seeds will become a material source of revenues for our Mexico operations commencing in 2011.

General And Administrative Expenses. Our general and administrative expenses for fiscal 2010 and fiscal 2009 were \$2,659,588 and \$1,516,395, respectively. General and administrative expenses principally consist of officer compensation, outside services (such as legal, accounting, and consulting expenses), share-based compensation, and other general expenses (such as insurance, occupancy costs and travel). The net increase in general and administrative expenses in fiscal 2010 compared to the prior year was principally the result of a \$925,000 increase in administrative costs for the wholly owned subsidiaries of our joint venture, GCE Mexico I, LLC. As our operations have expanded, the related administrative staffing and other administrative costs have increased, along with an increase in the cost of outside services for legal, accounting, and consulting services at the corporate level.

Plantation and Operating Costs. We recorded plantation and operating costs of \$389,738 and \$738,759 for fiscal 2010 and fiscal 2009, respectively. Even though we had 12 months of plantation and operating costs in fiscal 2010 as compared to three months of such costs in fiscal 2009, the costs decreased as a result of the change from being a development stage company to becoming an operational company. This decrease is related to the leftover planting costs in fiscal 2009, which were incurred in the 4th quarter after becoming an operational company. However, in fiscal 2010, materially all costs incurred were related to cultivation and harvesting. These costs were deferred into the long-term asset, "Deferred Growing Cost".

Other Income/Expense. The principal component of Other Income/Expense for fiscal 2010 was the \$601,114 gain that we recognized from the settlement of liabilities. Gain on settlement of liabilities represents gains we realized by discharging historic liabilities (most of which were incurred while this company operated as a developmental-stage bio-pharmaceutical company) at less than the accrued amount of such liabilities. There was no gain on the settlement of liabilities in fiscal 2009.

In fiscal 2010, we incurred \$489,039 of interest expense, compared to interest expense of \$334,313 in fiscal 2009. This increase in interest expense is primarily due to the increase in debt associated with the acquisition of additional land for our farm operations in Tizimin, Mexico. We currently own approximately 8,600 acres of land in Mexico that is subject to interest bearing mortgages, compared to approximately 5,150 acres of such land owned in 2009.

Income from Discontinued Operations. During the fourth quarter of fiscal 2009, we sold the SaveCream legacy assets related to our former bio-pharmaceutical business. In connection with that sale, we recognized a gain of \$3,298,511 for fiscal 2009. During the fiscal 2010, we recognized income from discontinued operations of \$31,266 as a result of foreign currency exchange rate gains on remaining liabilities associated with our former bio-pharmaceutical business, which are denominated in euros.

Net loss attributable to the non-controlling interest. Our Mexico farm operations are owned through GCE Mexico I, LLC, a Delaware limited liability company ("GCE Mexico"). We own 50% of the common membership interests of GCE Mexico and five investors own the other 50% of the common membership interests. The proceeds from the sale of the preferred membership units, and from subsequent capital contributions, have been used to fund the operations of Asideros Globales Corporativo 1 ("Asideros 1") and Asideros Globales Corporativo 2 ("Asideros 2"), each of which have acquired the land in Mexico that, collectively, constitute our Jatropha farms. We own 1% of Asideros 1 and Asideros 2, and the balance is owned by GCE Mexico. Accordingly, we own 50.5% of Asideros 1 and Asideros 2 either directly or through our common membership interest in GCE Mexico. As such, our consolidated financial statements include the accounts of both Asideros farm entities. Under GCE Mexico's LLC Agreement, the net loss allocated from Asideros 1 and Asideros 2 to GCE Mexico is then further allocated to the members of GCE Mexico according to the investment balances. Accordingly, since the common membership interest did not make a capital contribution, all of the losses allocated to GCE Mexico have been further allocated to the preferred membership interest. The net loss attributable to the non-controlling interest in the accompanying Consolidated Statement of Operations represents the allocation of the net loss of GCE Mexico to the preferred membership interests.

Net income/loss attributable to Global Clean Energy Holdings, Inc. In fiscal 2010, we incurred a net loss from continuing operations of \$2,088,358 because of limited revenues and significant general and administrative expenses. However, we realized \$601,114 of gains from the settlement of liabilities, which reduced the amount of the losses. Our net loss from continuing operations in fiscal 2009 was \$2,226,196. Of the net loss from continuing operations in fiscal 2010, \$1,431,805 was attributable to the investors who own the other GCE Mexico membership interests. As a result, excluding the net losses attributable to these non-controlling interests, our net loss for fiscal 2010 was \$625,287. In fiscal 2009, we recognized income of \$3,167,098, most of which was attributable to the gain on the sale of our former bio-pharmaceutical asset. As a result, although we had a loss from continuing operations of \$2,226,196 in fiscal 2009, we had net income of \$2,238,365 in fiscal 2009.

Liquidity and Capital Resources

As of December 31, 2010, we had \$1,097,000 in cash and a working capital deficit of \$5,035,000, as compared with \$834,000 in cash and a working capital deficit of \$4,986,000 at December 31, 2009. However, virtually all of the cash reflected on our balance sheet is reserved for the operation of GCE Mexico and our Jatropha farms. Accordingly, most of those funds are not available to finance our general and administrative or other operating expenses. Based on the funds we have available and the proceeds we expect to receive during this year, we believe that we will have sufficient funds to pay our administrative and other operating expenses during 2011. However, we do not have sufficient cash to repay all of our current liabilities should we be required to do so, nor do we have any funds available to make any capital investments.

Since our inception, we have financed our working capital needs primarily (i) through private sales of equity and debt financing, and (ii) from fees that we have generated by providing consulting and advisory fees to third parties related to Jatropha farm operations and the uses of Jatropha as a biofuel. During fiscal 2010, the total amount of such advisory/consulting fees was \$354,774. In addition, on a monthly basis, GCE Mexico pays us a fee to reimburse us for a portion of our corporate overhead and for costs associated with managing the Jatropha farms in Mexico. In fiscal 2010, the total amount of payments that we received from GCE Mexico was \$280,476. The amount of these fees/reimbursements is based on the size of the farms that we manage. Since we have purchased additional farms in fiscal 2010, the total amount of monthly fees will increase in 2011. We currently anticipate that the projected amount of advisory/consulting fees and the projected payments from GCE Mexico will, collectively, be sufficient to fund our corporate overhead during 2011. However, no assurance can be given that we will, in fact, receive all of these projected amounts, or that our costs will not exceed our projections. If we do not receive all of these payments, or if our actual costs exceed our expectations, we will have to obtain funding from alternative sources or reduce the scope of our future operations. We currently do not have any bank facilities or other sources of additional capital.

In fiscal 2010 we obtained both debt and equity funding. In March 2010, we raised \$500,000 from the sale of common stock to two accredited investors, which funds were used for working capital purposes. In addition, in order to repay certain secured loans that we obtained in September 2007, which secured loans matured on January 31, 2010, in March 2010 we obtained \$567,000 of unsecured loans. The March 2010 convertible notes mature on the earlier of (i) March 16, 2012, and (ii) upon written demand of payment by the investors following our default thereunder. The maturity date of the convertible notes may be extended by written notice made by the holders at any time prior to March 16, 2012. Interest accrues on the convertible notes at a rate of 5.97% per annum, and is payable quarterly in cash, in arrears, on each three-month anniversary of the issuance of the convertible notes. However, we have the right, exercisable at our option, in lieu of paying interest in cash, to pay interest by delivering a number of unregistered shares of our common stock equal to the quotient obtained by dividing the amount of such interest by the arithmetic average of the volume weighted average price (VWAP) for each of the five consecutive trading days immediately preceding the interest payment date. At any time following the first anniversary of the issuance of the convertible notes, at the option of the holders of these convertible notes, the outstanding balance thereof (including accrued and unpaid interest thereon) may be converted into shares of our common stock at a conversion price equal to \$0.03. The conversion price may be adjusted in connection with stock splits, stock dividends and similar events affecting our capital stock. As of March 24, 2011, the convertible notes rank senior to all other indebtedness, and thereafter will remain senior or pari passu with all accounts payable and other similar liabilities incurred by us in the ordinary course of business. We may not prepay the convertible notes without the prior consent of the note holders. Virtually all of the proceeds from these convertible notes were used to fully repay and extinguish the outstanding secured loans that had matured and were due and payable.

Our business plan calls for us to acquire, develop and operate large Jatropha farms for the purpose of harvesting Jatropha oil for use as a bio-fuel. The cost of acquiring and developing these farms has exceeded our funding capabilities. Accordingly, we have funded the acquisition of the Mexico Jatropha farms through the GCE Mexico joint venture. In fiscal 2010, we purchased approximately 3,460 acres of additional farmland in Mexico. The purchase of that land was financed through a \$742,652 mortgage loan. As a result, the purchase of the land did not negatively impact our current liquidity. We anticipate that we may make additional land purchases in Mexico through the GCE Mexico joint venture.

Our business plan also calls for significant infusion of additional capital to establish additional Jatropha farms in Mexico and other locations that are owned primarily by this company. Because of our negative working capital position, we currently do not have the funds necessary to acquire and cultivate additional farms solely for our own account. In order to purchase additional Jatropha farms, or to acquire or build facilities to process our Jatropha oil, we will have to obtain significant additional capital through the sale of equity and/or debt securities, the forward sale of Jatropha oil and carbon offset credits, and from other financing activities. No assurance can be given that we will be able to obtain sufficient capital from these sources. The trading price of our common stock and the downturn in the equity and debt markets are expected to make it more difficult to obtain financing through the issuance of equity or debt securities. The sale of additional equity or debt securities may result in further dilution to our existing stockholders, and new equity securities that we may issue may have rights, preferences or privileges senior to those of existing holders of our common stock. If additional financing is not available or is not available on acceptable terms, we will not be able to complete our business plan and expand our operations as planned.

Effective July 2, 2009, we purchased all of the outstanding capital stock of Technology Alternatives Limited, a company formed under the laws of Belize (“TAL”), from its four shareholders. TAL owns a 400-acre farm in subtropical Belize, Central America, which was used for Jatropha farming purposes. In consideration for the purchase of all of the shares of TAL, among other consideration, we issued four promissory notes to the four former owners. These notes are secured by a lien on the 400-acre farm and had an aggregate initial principal balance of \$516,139 Belize Dollars (US \$268,036 based on exchange rates in effect at July 2, 2009). The maturity date of these notes has been extended to July 15, 2011. Since the TAL promissory notes are secured by a mortgage on the 400-acre farm, our failure to pay this note upon its maturity could result in the loss of that farm and our investment in the Belizean Jatropha farm. We have determined that the Belizean farm was not operating to our expectations and was not an efficient use of corporate capital. Therefore, we have ceased operations at that farm and have relocated its research and farm assets to our Mexico farms. We have reclassified the Belizean farm as an investment property and are currently in discussions with various potential purchasers of the property. If the land is sold, we will use a portion of the proceeds to repay the outstanding four secured notes.

Inflation and changing prices have had no effect on our continuing operations during our two most recent fiscal years.

We have no off-balance sheet arrangements as defined in Item 303(a) of Regulation S-K.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable to a “smaller reporting company.”

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

Financial Statements are referred to in Item 15, listed in the Index to Financial Statements and filed and included elsewhere herein as a part of this Annual Report on Form 10-K.

ITEM CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND
9. FINANCIAL DISCLOSURE.

None.

ITEM 9A. CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures which are designed to ensure that the information required to be disclosed in the reports it files or submits under the Securities Exchange Act of 1934 (as amended, the “Act”) is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including the Chief Executive Officer and the Chief Financial Officer (“Certifying Officers”), to allow timely decisions regarding required financial disclosures.

In connection with the preparation of this Annual Report, our Certifying Officers evaluated the effectiveness of management’s disclosure controls and procedures, as of December 31, 2010, in accordance with Rules 13a-15(b) and 15d-15(b) of the Exchange Act. Based on that evaluation, the Certifying Officers concluded that management’s disclosure controls and procedures were effective as of December 31, 2010.

Management’s Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 15d-15(f) under the Exchange Act, and for assessing the effectiveness of internal control over financial reporting.

Internal control over financial reporting is intended to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States. Internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets, (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors, and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisitions, use, or disposition of our assets that could have a material effect on our financial statements.

Management, with the participation of our principal executive and financial officers, conducted an evaluation of the effectiveness of our internal control over financial reporting, as of December 31, 2010, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on that evaluation, management concluded that, as of December 31, 2010, our internal control over financial reporting was effective.

This annual report does not include an attestation report of our independent registered public accounting firm regarding internal control over financial reporting. Management’s report was not subject to attestation by our independent registered public accounting firm as such attestation is not required for non-accelerated filers such as us pursuant to applicable SEC rules.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2010 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

27

9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE.

The following table sets forth the name, age and position held by each of our executive officers and directors. Directors are elected for a period of one year and thereafter serve until the next annual meeting at which their successors are duly elected by the stockholders.

Name	Age	Position
David R. Walker (1)	66	Chairman of the Board
Richard Palmer	50	President, Chief Executive Officer and Director
Bruce Nelson	56	Executive Vice President, Chief Financial Officer and Secretary
Mark A. Bernstein, Ph.D. (1)	57	Director
Martin Wenzel	52	Director

(1) Member of our Audit Committee

Business Experience and Directorships

The following describes the backgrounds of current executive officers and directors. Our Board of Directors has determined that Mr. Walker, Mr. Wenzel and Dr. Bernstein are independent directors as defined in the Nasdaq rules governing members of boards of directors.

David R. Walker

David R. Walker joined the Board of Directors on May 2, 1996, and was appointed Chairman of the Board of Directors on May 10, 1998. He has served as Chairman of the Audit Committee since its establishment in 2001. For over 20 years, Mr. Walker has been the General Manager of Sunheaven Farms, the largest onion growing and packing entity in the State of Washington. In the capacity of General Manager, Mr. Walker performs the functions of a traditional chief financial officer. Mr. Walker holds a Bachelor of Arts degree in economics from Brigham Young University with minors in accounting and finance.

The Board believes that Mr. Walker's experience regarding the operation and management of large-scale agricultural farms and his experience as a financial officer are valuable resources to our Board in formulating business strategy, addressing business opportunities and resolving operational issues that arise from time to time.

Richard Palmer

Richard Palmer was appointed as our President and Chief Operating Officer in September 2007, and been a member of the Board of Directors since September 2007. Mr. Palmer became our Chief Executive Officer on December 21, 2007. Mr. Palmer has over 25 years of hands-on experience in the energy field, holding senior level management positions with a number of large engineering, development, operations and construction companies. He is a co-founder of Mobius Risk Group, LLC, an energy risk advisory services consulting company, and was a principal

and Executive Vice President of that consulting company from January, 2002 until September 2007. From 1997 to 2002, Mr. Palmer was a Senior Director at Enron Energy Services. Prior thereto, from 1995 to 1996 Mr. Palmer was a Vice President of Bentley Engineering, and a Senior Vice President of Southland Industries from 1993 to 1996. Mr. Palmer received his designation as a Certified Energy Manager in 1999, holds two Business Management Certificates from University of Southern California's Business School, and is an active member of both the American Society of Plant Biologists and the International Tropical Farmers Association.

Over the last 25 years, Mr. Palmer has held senior level management positions with a number of large engineering, development, operations and construction companies, and, as a result, he has garnered a wealth of experience in the energy field. Mr. Palmer's experience is important to the development and execution of the Company's business plan. Mr. Palmer is the only member of management who serves as a director of the Company.

Mark A. Bernstein

Mark A. Bernstein, Ph.D., joined our Board of Directors on June 30, 2008. Dr. Bernstein is current a teaching professor at The University of Southern California (USC) where he also serves as the Managing Director of USC's Energy Institute. Dr. Bernstein is an internationally recognized expert on energy policy and alternative energy technologies. Dr. Bernstein was awarded a Ph.D. in Energy Management and Policy from the University of Pennsylvania, holds a Masters degree in Mathematics from Ohio State University, and a B.A. from State University of New York at Albany.

Mr. Bernstein's expertise in energy policy and alternative energy technologies led to the conclusion that he should serve as a director of the Company.

Bruce Nelson

Bruce Nelson was appointed as our Chief Financial Officer in March 2008. He has served as our Executive Vice-President and Secretary since August 2010. Prior to commencing his relationship with the Company, Mr. Nelson served as Chief Financial Officer of US Modular, a private technology company located in Irvine, California. From April 2002 through February 2007, Mr. Nelson served as Chief Financial Officer of netGuru, Inc., a NASDAQ-listed global engineering software and IT service company. Prior to netGuru, Mr. Nelson founded and operated Millennium Information Technologies from 1997 to 2002. From 1992 to 1997 he served as President and CFO of Comprehensive Weight Management, a national healthcare service provider. From 1985 to 1991 he served as Treasurer of Comprehensive Care Corporation, a NYSE listed national healthcare provider. Mr. Nelson served as a U.S. Naval Officer after graduating from the University of Southern California, majoring in finance. He holds a MBA degree from Bryant University in Smithfield, R.I. He has also served on the board of directors of two commercial banks, a NASDAQ-listed technology company, and a privately held specialty hospital.

Martin Wenzel

Martin Wenzel joined our Board of Directors in April 2010, and serves on the Board's audit committee. Mr. Wenzel is currently the President and Chief Executive Officer of Colorado Energy, the operating entity of Bicent Power, LLC, which is a privately owned limited liability company that owns and operates power generating stations in Colorado, Montana and California. From 2005 until August 2007, he served as the Senior Vice President (Sales and Marketing) of Miasole Inc. Prior thereto, from 2001 to 2004, Mr. Wenzel was President and Chief Executive Officer of Alpha Energy LLC. He is also a member of the Board of the Deming Center of Entrepreneurship at the University of Colorado. Mr. Wenzel holds an Executive MBA from Columbia Business School; a Masters degree in Systems Management from the University of Southern California; and a Bachelors degree in Engineering and Management from the US Naval Academy.

Mr. Wenzel has an extensive background in the energy industry, including over 25 years of developing, constructing and operating energy projects, marketing energy commodities and operating energy assets in the U.S. and internationally. The Board concluded that Mr. Wenzel's expertise in energy policy and alternative energy technologies is a valuable asset for the Board of Directors of the Company.

Compliance with Section 16(a) of the Exchange Act

Section 16(a) of the Securities Exchange Act of 1934 requires our executive officers and directors, and persons who own more than 10% of a registered class of our equity securities, to file reports of ownership and changes in ownership with the SEC. Executive officers, directors and greater than 10% shareholders are required by SEC regulations to furnish us with copies of all Section 16(a) forms they file.

Based solely on information provided to us by our officers and our review of copies of reporting forms received by us, we believe that during fiscal year ended December 31, 2010, our current officers and directors complied with the filing requirements under Section 16(a).

Code of Ethics

Our Board of Directors has adopted a code of ethics that applies to our principal executive officers, principal financial officer or controller, or persons performing similar functions (“Code of Ethics”). A copy of our Code of Ethics will be furnished without charge to any person upon written request. Requests should be sent to: Secretary, Global Clean Energy Holdings, Inc., 100 W. Broadway, Suite 650, Long Beach, California 90802.

Board Committees

Our Board of Directors has an Audit Committee, but does not currently have a Compensation Committee or a Nominating Committee.

The Audit Committee meets periodically with management and with our independent registered public accounting firm to, among other things, review the results of the annual audit and quarterly reviews and discuss the financial statements. The audit committee also hires the independent registered public accounting firm, and receives and considers the accountant’s comments as to controls, adequacy of staff and management performance and procedures. The Audit Committee is also authorized to review related party transactions for potential conflicts of interest. During the fiscal year ended December 31, 2010, Mr. Walker and Dr. Bernstein constituted all of the members of the Audit Committee. Both Mr. Walker and Dr. Bernstein are non-employee directors and independent as defined under the Nasdaq Stock Market’s listing standards. Mr. Walker has significant knowledge of financial matters, and our Board has designated Mr. Walker as the “audit committee financial expert” of the Audit Committee. The Audit Committee met four times during fiscal 2010 in connection with this Annual Report and our Quarterly Reports on Form 10-QSB. The Audit Committee operates under a formal charter that governs its duties and conduct.

ITEM 11.

EXECUTIVE COMPENSATION.

Summary Compensation Table.

The following table set forth certain information concerning the annual and long-term compensation for services rendered to us in all capacities for the fiscal years ended December 31, 2010 and 2009 of all persons who served as our principal executive officer and principal financial officer during the fiscal year ended December 31, 2010. No other executive officers earned annual compensation during the fiscal year ended December 31, 2010 that exceeded \$100,000. The principal executive officer and the other named officers are collectively referred to as the “Named Executive Officers.”

Summary Compensation Table

Name and Principal Position	Fiscal Year Ended 12/31	Salary Paid or Accrued (\$)	Bonus Paid or Accrued (\$)	Stock Awards (\$)	Option Awards (\$)	All Other Compensation (\$)	Total (\$)
Richard Palmer	2010	\$ 250,000	\$ 250,000		0	23,200	523,200
	2009	\$ 250,000	0	0			