Live Oak Bank
Mr. Max Vernier

USDA 9003 Loan Guarantee Feasibility Study
BC Organics
Brown County, Wisconsin

TETRA TECH

March 29,2019

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TETRA TECH
661 Andersen Drive, Suite 200 | Foster Plaza 7 | Pittsburgh, PA | 15220-2700
Phone: 412.921.7090 | Fax: 412.921.4040

tetratech.com

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PRESENTED TO

Max Vernier
Bioenergy Lending – Team Lead
Live Oak Bank
1741 Tiburon Drive
Wilmington, NC 28403

PRESENTED BY

Tetra Tech
661 Andersen Drive
Suite 200
Foster Plaza 7
Pittsburgh, PA 15220

P +1-417-921-7090
F +1-417-921-4040
tetratech.com

Prepared by:

March 29, 2019

David Palmer **Date**
Senior Energy Project Manager

March 29, 2019

Keith Henn **Date**
Vice President, Bioenergy

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(A) EXECUTIVE SUMMARY

1. Project description

Tetra Tech has been engaged by Live Oak Bank and Dynamic Holdings, Inc. (Dynamic) as a qualified vendor to provide an independent third-party Feasibility Study (FS) in support of a [redacted] loan that will be used to develop and implement a project in Brown County Wisconsin. The project is understood to be located at Parcel HL-367 Lamers Clancy Rd, Holland, WI 54130 (Project). Dynamic is headquartered at W 175 N 11117 Stonewood Dr. Suite 209 Germantown, WI 53022.

This FS is based upon information provided to Tetra Tech project from other qualified parties including independent engineer reports, marketing studies, feedstock studies, business plans and financial statements. This project was conceptualized and developed by Dynamic and the information that this FS is based upon has primarily been provided to Tetra Tech from Dynamic and secondarily by Live Oak Bank.

The State of Wisconsin through the Wisconsin Department of Natural Resources; the Department of Agriculture, Trade and Consumer Protection; and the Public Service Commission of Wisconsin, issued a competitive Request for Proposal (RFP) for an Integrated Anaerobic Digester System Program. The RFP was designed to accomplish certain objectives, including to:

- Greatly improve agricultural wastewater quality;
- Improve the agricultural benefits of materials that are land applied;
- Maximize the renewable energy benefits of anaerobic digesters;
- Add efficiency to agricultural solids and liquids handling;
- Reduce related hauling costs;
- Reduce related pathogens; and,
- Incorporate processing of off-farm _____ to enhance renewable energy production.

In response to the RFP, Dynamic developed a consortium of dairies, vendors and other partners and formed BC Organics, LLC (BC Organics). In 2017, BC Organics was notified that they were awarded a $15,000,000 incentive grant to assist in the completion of construction of the project.

The project will be located in the southern portion of Brown County, Wisconsin, centrally located to serve the participating dairies.

The project, as envisioned by BC Organics, will collect dairy manure from over 20,000 dairy cows and up to 50,000 gallons per day of food waste and fat, oils and grease. The feedstocks will be converted to biogas and digestate through anaerobic degradation. The utilization of anaerobic digestion, one of the central technologies proposed for this project, is well documented and implemented as a proven technology used in the conversion of organic materials such as those proposed in this project to biogas and other products. This technology has been implemented commercially over many decades across the world. The digestate, the liquid material exiting the digester, will be further processed to remove large sized solid material (fiber) that will be dried and sold as bedding for dairies or for use as soil amendment. The liquids removed from the fiber will be further processed to remove smaller particles and to create a non-potable water and concentrated liquid that is rich in nutrients. This concentrated liquid will either be sold or returned to the dairies to offset fertilizer use.

The biogas generated will be processed, removing the impurities such as carbon dioxide and hydrogen sulfide to create high concentration of methane which is often referred to as biomethane or renewable natural gas (RNG). With the impurities removed from the biogas the RNG can be a direct substitute for

"fossil fuel" derived natural gas. The RNG will be compressed and injected into the natural gas pipeline owned by Guardian Pipeline. It will then be transported to end users which will utilize that RNG for vehicular fuel.

The project will provide extensive environmental benefits, many of which generate revenue and other monetary value, including:

- The RNG produced by the facility will be the equivalent of 12,000 gallons per day of diesel gallon equivalents (dge). This is more commonly referred to as compressed natural gas (CNG) by the end user.
- Offsetting the otherwise discharge of approximately 75,000 tons per year of greenhouse gases (GHG) from the area.
- Production of a concentrated nutrient rich product, reducing the amount of manure hauling currently required to manage the manure. This will also result in operational cost avoidance of having to purchase fertilizers on the market (that are often chemical based), by the farms supplying manure to the facility.
- The removal of phosphorous entering the watershed (both the groundwater and surface water) of Brown County. The facility will convert a significant amount of the phosphorous as a solid product fertilizer that will be sold on the market. In addition, the nitrogen removed will be in a form that is more readily available for crop uptake and thus will increase crop yield, with less environmental impacts on groundwater due to surplus of this nutrient that would otherwise not be utilized in the situation.
- The food waste and fat, oils and grease (i.e., co-_____) projected for the facility that will be consumed in the digestion process will be obtained in a cost competitive manner location with respect to the otherwise disposal with no environmental or monetary value. This project is believed to demonstrate the conversion of these waste products to a beneficial use.

2. Economic feasibility determination

Based on the assumptions inherent in the planning documents supplied by BC Organics, the project is expected to be able to generate sufficient revenues to cover expenses and repay the loan. Calculations indicate that the net income will provide a debt coverage ratio [redacted] throughout the loan term. The feedstock that are anticipated to be received at the facility are either under contract or there are letters of intent.

The Project site is planned to be geographically located in a centralized location to minimize the cost of bringing manure to the facility, while being reasonably close to the natural gas pipeline where the RNG will be injected. The site is adequate in size with topographic features that will not be difficult for construction. There is trained labor pool in Wisconsin due to the number of dairy digesters in the state. The Management team has operated these type facilities in Wisconsin and have contacts with qualified personnel. The roadway infrastructure is adequate for the intended truck traffic. The site does not have sufficient electrical nor natural gas utilities for the project, however bringing these to the site is included in the project budget.

3. Market feasibility determination

Based upon the information provided, the Project appears to have good market feasibility. The management team has extensive experience in developing and operating similar facilities, although not at the scale of the proposed facility. They have secured contracts for the majority of the feedstocks (20-year agreements

for the manure), letters of intent for the RNG sales and a contract for the fiber. The project will not be competing for the feedstocks nor the sale of the outputs, with the exception of the RNG sales.

Because the Renewable Fuel Standard and the LCFS markets are well established, at least thru 2022 there is good market visibility and, thus good indications that this project is feasible based upon renewable fuel market.

4. Technical feasibility determination

The Project is based on proven technologies and components which have been applied to similar projects over many decades and across the world. The project does, however, combine the components and thus the logistics into a unique arrangement that increase the complexity and technical risk, but should produce the desired marketable and salable products. BC Organics has started the permitting for the site and no adverse environmental conditions have been identified. The assumptions related to project performance are based on previous operating history and represent reasonable assumptions on which to base project performance. Tetra Tech's review has not revealed any technical issues that would negatively affect the ability of the facility to produce the expected financial performance.

5. Financial feasibility determination

Tetra Tech reviewed the financial model and the projected mass and energy balance of the Project by BC Organics. The estimated capital costs are based on preliminary design of the facility and estimates from the construction contractor appear to accurately reflect the total cost of constructing the facility. The estimated operation and maintenance costs were also reviewed and adequately represent the expected cost of operating the facility. Tetra Tech has determined that the financial model adequately represents the expected economic performance of the project based on the input assumptions relating to product sales. It should be noted that the commodity pricing used in the product sales is conservative and could be exceed when actual sales are begun. The volume of manure was estimated from the dairies under contract should produce the stated biogas, but there are additional sources of manure that could be utilized to supplement the contracted farms should there be a shortfall in supplied manure.

6. Management feasibility determination

Dynamic will provide management of the project and operations for the facility. Dynamic has extensive experience in developing projects, including the development of feedstock and offtake agreements and overseeing the design and construction of subcontractors. Dynamic has hands on experience in operating and managing similar facilities. Dynamic is expected to be able to operate and manage the facility to produce the economic performance required to repay the loan.

7. Recommendations for implementation

Tetra Tech has concluded, based upon the information provided and our careful and independent review:

- The project has been adequately developed with careful consideration,
- The technical aspects of the proposed facility are adequate to produce the revenue producing products,
- The financial proforma adequately represents the capital and operating cost of the facility,
- The revenue projections are based on reasonable, and in some cases conservative, assumptions of market values, and,
- The site is adequate and properly located for both the receipt of feedstocks and the sale of products.

Tetra Tech recommends receiving a final determination of the RNG carbon intensity score, finalization of the RNG marketing agreement and continued finalization of requirements of the incentive grant. Once this is received the likelihood of the project success improves. Completing these concurrently with the USDA application process are all reasonable and typical steps in our view.

(B) ECONOMIC FEASIBILITY

[redacted]

1. Description of feedstock and confirmation that the feedstock is not used elsewhere in the production of Advanced Biofuels or Biobased Products, including Renewable Chemicals. Feedstock:

The central feedstock proposed to be used for the Project is manure. This is critical as it is the central revenue stream as it is tied to the more valuable D3 RINS. The manure feedstock has been secured under an agreement between Dynamic and each farm. Based upon our review of these contracts, the feedstock is secured and is not anticipated to be used elsewhere in production of Advanced Biofuels or Biobased Products, including Renewable Chemicals.

Other feedstock, such as FOG and food waste, is not under long term agreement. This material will be secured on a market or spot price basis and is therefore not fully committed contractually. This arrangement is typical for this market and it is an acceptable risk. In 2017, Dynamic commissioned a study to determine the availability and market pricing of available _____ and this report has been utilized for the volume and pricing assumed for the project.

(a) Feedstock source management

Dynamic has identified that the feedstock source will include manure and _____ as the primary components of the digestion process. The main feedstock source includes the manure

collection from the dairy farms within Brown County. The manure management process involves increase buildup on the soil surrounding the main farm area, causing nutrient levels to increase, which becomes a conflict when managing nutrient level limitations. Looking further into transporting the source out of the main farm area leads to increase of operating and transportation costs.

Dynamic's direction on implementing an anaerobic digester system and nutrient concentration systems that involves utilizing not only manure waste, but also food processing by-product, or substrate, as another feedstock source, is a practical solution that overcomes the challenges of the financial returns of digestion systems through achieving the generation of renewable biogas energy and profitable by-products, odor pollution, along with manure and nutrient management from nutrient loading to soil and surface waters.

The non-manure component of the feedstock, or the _____, will consists of food waste and fat, oil, and grease (FOG). Dynamic has provided memorandum of understandings (MOU's) that confirms a list of possible substrate suppliers, shown below:

- Liquid Environmental Solutions
- Covanta Environmental Solutions
- CP BioEnergy LLC
- Veolia Environmental Services

(b) Estimates of feedstock volumes and costs

Dynamic's estimations on the manure and substrate receiving process outlines at an overall total feedstock of about 925,000 gallons/day to the system. The feedstock includes about 665,000 gal/day of manure, 50,000 gal/day of _____. In addition, up to 210,000 gal/day of ultrafiltration (UF) concentrate will be recycled.

(c) Collection, pre-treatment, transportation, and storage

Manure will be collected at each farm as is current practice. At each farm that will be transporting its manure via pipeline, a collection and pumping station will be built. The manure will be pumped from the pumping station to a receiving station at the central digestion facility. Manure that will be transported by truck will be loaded at the farm and transported to a manure dump station at the facility. As currently designed, approximately 83% of the manure volume will be pumped to the site and 17% will be trucked. Both the pumped and trucked manure will be placed into two (2) one million gallons in-ground concrete storage structures. The trucked manure will be unloaded in an enclosed manure and substrate receiving building. The manure trucks will unload via gravity into the manure storage tanks.

(d) Feedstock risks

Manure supply has been secured by agreements between the participating farms and BC Organics. The non-manure components of the feedstock, the _____, are supplied through short-term agreement contracts, there is no long-term commitment between the substrate suppliers and Dynamic, but rather arrangements dependent on spot price basis. Given that this is a represented behavior within this market, this can be deemed as an acceptable risk.

2. Documentation that woody biomass feedstock from National Forest system lands or public lands cannot be used for a higher-value product

This project is focused on biomass feedstock other than woody feedstock sourced from forest or other public lands. Therefore, this section does not apply to this Project and therefore has not been addressed in this FS.

3. Impacts on any other similar Biorefineries in the area in which the Borrower proposes to place the Project, defined as the area that will supply the feedstock to the proposed Project, if any

The feedstock proposed to be used for the project has been secured under agreements between Dynamic and each farm. Based upon our review of these contracts, the feedstock is secured and therefore, there are no conflicts for feedstock with any similar Biorefineries in the area in which Dynamic proposes to place the Project.

4. Impacts on existing manufacturing plants or other facilities that use similar feedstock if the Borrower's proposed production technology is adopted

There are no impacts on existing facilities because the feedstock is not currently being used. The manure in Brown County is currently being used as land application that comes with the challenge of managing nutrient levels in the soil, which this project can certainly assist with by reducing the land application. Despite the lack of implementation, the feedstock is being secured under agreement and therefore is secured for the project.

5. Projected impact on resource conservation, public health, and the environment

There are no projected negative impacts on resource conservation, public health, and the environment. However, this project will provide tremendous benefits. On the positive impacts on resource conservation, it has stated previously that this project can improve nutrient management by reducing and controlling land application of manure.

According to The Public Service Commission of Wisconsin (PSC) press release statement on announcing the approved award of the $15 million grant to this project, it identifies several expected impacts and outcomes that can be resulted from this project. The PSC highlights the project's approach on solid and liquid by-products that can be used in the redistribution of any nutrient-deficient land areas for crop production. Another beneficial impact on resource conservation that this project can provide can be shown through its capability of removing phosphorus from the water stream and improving surface and groundwater.

As this project incorporates an anaerobic digester system, this project's positive impact on the public health involves the reduction of odor and those issues associated with land application of manure. An effective impact that this project encompasses in terms of its environmental influence includes an overall greenhouse gas reduction due to an anaerobic digestion system. According to the PSC release statement, the RNG production from this project is estimated to provide heating for about 7,600 Wisconsin homes. With these advantages that this project acquires regarding resource conservation, public health, and the environment, it presents this project as a valued opportunity for the state of Wisconsin. The project was begun under an RFP process to address environmental concerns in Brown County. The BC Organics project was awarded a grant to assist in its implementation. See "*PSC Approves Innovative Bioenergy Project in Brown County*"

http://apps.psc.wi.gov/pdffiles/News%20Releases/2017/09%20-%20September/BiodigesterRFPAnnouncement_091517.pdf

6. Information regarding Project site

The project is anticipated to be located at Parcel HL-367 Lamers Clancy Rd, Holland, WI 54130 in Brown County, WI. To better understand the Project location site, the figure below describes the distribution of farms in Brown County. There are a total of 34 dairies and 125,000 cows and young stock replacement.

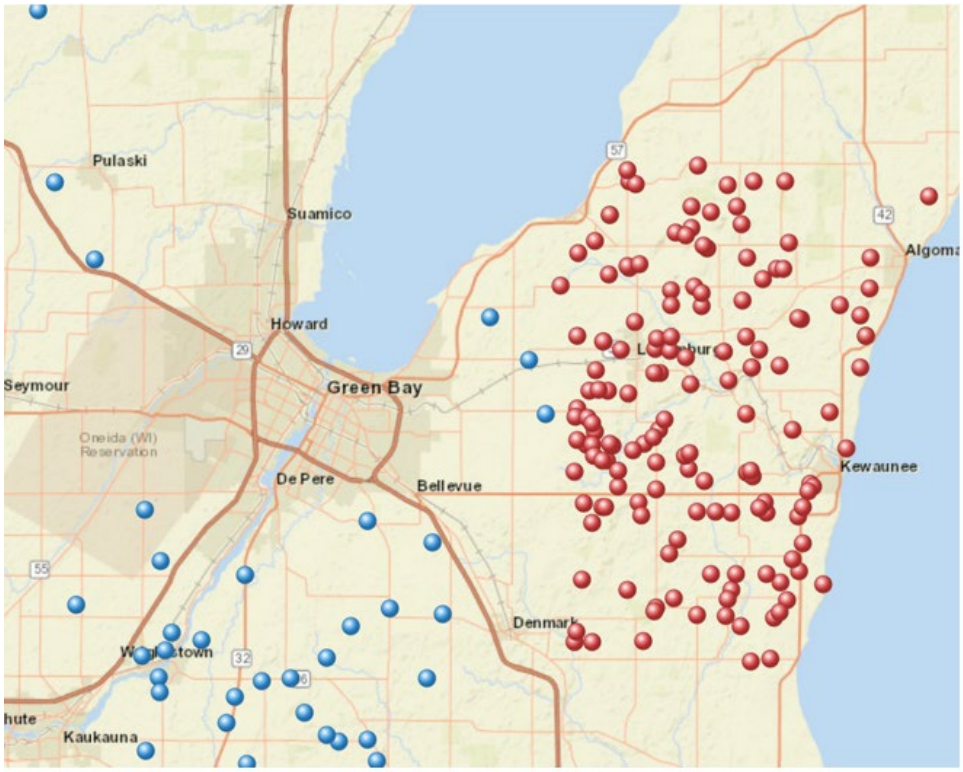

Figure 1. Map showing farms in Brown County (blue dots) as provided by BC Organics

Shown below demonstrates the potential project clusters in southern Brown County, where there is an interstate natural gas transmission pipeline running through the southwest side of Brown County, which helps in determining the possible locations of the community digesters. One of the main benefits of this chosen location area is the near proximity to the proposed Brown County South Landfill, which can be an advantage if the landfill decides to upgrade to RNG.

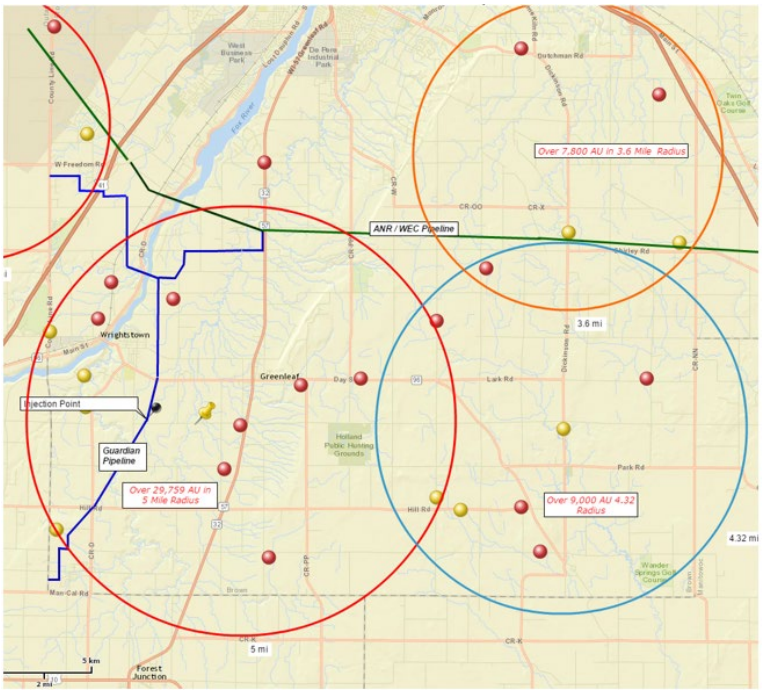

Figure 2. Map showing southern Brown County and its projected clusters near Guardian transmission line (blue) as provided by BC Organics

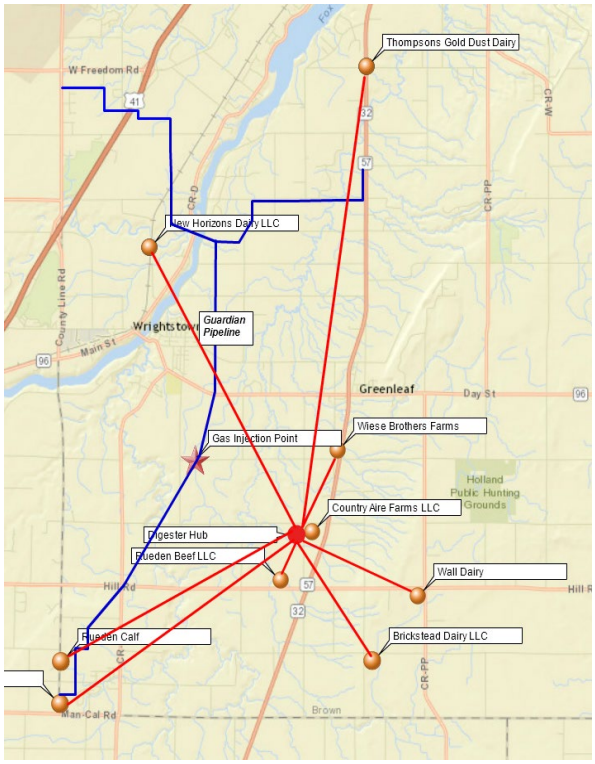

Figure 3. Map showing project site as provided by BC Organics

The site is designed to serve multiple dairy producers, large and small, using a central location as a community hub-and-spoke system for collecting and processing manure, with multiple satellite farms providing manure and food producers supplying _____ to the digester system. This hub-and-spoke system is illustrated in the figure above. The proposed site is indicated with a red dot, while participating farms are indicated with orange dots. The nearby Guardian interstate natural gas pipeline is indicated with the blue line.

The location of the project is owned by the County, and an approved Letter of Intent (LOI) between Dynamic and the Brown County Port & Resource Recovery Department describes an agreement relating to the development, design, construction, and operation of this project.

7. Availability of trained or trainable labor

There are over 30 operating biogas plants in Wisconsin, indicating a well-trained work force is available to the Project. A summary of required labor is summarized in the Brown County Project O&M Budget Estimate report. BC Organics will need to provide competitive wages in order to attract the required employees. Dynamic has operating experience in Wisconsin and has contacts with many qualified persons. It is likely they will be able to provide adequately, trained staff for the project.

8. Availability of infrastructure, including utilities, and rail, air and road service to the site

Needed infrastructure for the project includes roads, electricity, water and access to a natural gas transmission line. One option is to discharge excess treated water to a waterway. The site is located centrally to the farms suppling the manure. Estimated truck traffic is 33 semi-truck loads per day. The roads should not be negatively impacted by this traffic.

As mentioned previously, the Guardian transmission line is an available interstate natural gas pipeline that acts as the closest access within Southern Brown County. While not adjacent to the project site, the pipeline is within reasonable distance to allow cost-effective transmission of the RNG. The related required permits for the pipeline from WDNR are acknowledged within this project's approximate timeline for obtaining permits. According to Dynamic's Summary of Permitting Status report, those pipeline permits are waiting for route confirmation.

The site does not presently have adequate electric or natural gas service to support the project. BC Organics has contacted WEC Energy group to bring electric and natural gas service to the site. This cost is accounted for in the project proforma.

Because there is no application in incorporating air and rail service for this project, there is no applicability in providing such services to the site.

9. Overall economic impact of the Project, including direct jobs, indirect jobs, additional markets created for agricultural and forestry products and agricultural waste material, and the potential for rural economic development

According to The Public Service Commission of Wisconsin (PSC) press release statement on announcing the approved award of the $15 million grant to this project, it identifies several expected impacts and outcomes that can be resulted from this project. The PSC highlights the project's approach on solid and liquid by-products, which can be profited and improve the agricultural and farmstead markets. According to the PSC release statement, the RNG production from this project will be injected into the natural gas

transmission system, which can be sold into the markets that pay a premium for the renewable gas. The PSC also mentions the anticipation of employing up to 20 full-time employees, creating the opportunity for direct jobs from this project.

Direct jobs:

There will be 10 to 20 permanent full-time positions involved in the supply of feedstocks and operation of the facility. The plant payroll is projected at $650,000 with additional direct impact to parts and maintenance supplied by local businesses. The impact of these is estimated at about one million dollars per year.

Construction:

While the economic impact of construction will be temporary, spread over the estimated one-year construction period, the impacts will be significant. During construction, considerable numbers of personnel will be employed. Many of these will come from local companies and others will be temporarily housed on the project area, adding significantly to the local economy. In addition, many construction materials and equipment will either be purchased or rented from local companies. Some of the permanent equipment will be sourced from Wisconsin companies.

RNG:

The RNG produced by the facility will be the equivalent of 12,000 gallons per day of diesel fuel. In addition, the facility will remove 75,000 tons per year of greenhouse gases, significantly improving environmental conditions in Brown County.

Manure management, hauling costs:

The project is designed to produce a concentrated nutrient stream, reducing the amount of manure-hauling currently required to manage the manure nutrients. This will result in operational cost savings for the farms supplying manure to the facility.

Groundwater protection:

One of the major concerns that the project addresses is the removal of phosphorous entering the ground and surface waters of Brown County. The facility will convert a significant amount of the phosphorous to a solid product that will be sold. In addition, the nitrogen content will be in a form that is more readily available for crop growth, with less impact on groundwater.

Savings for disposal of other wastes:

The _____ projected for the facility will be obtained by providing a cost competitive location for their disposal. The cost savings include both the actual disposal cost as well as any reduced hauling costs.

10. Feasibility/plans of the Project to work with producer associations or cooperatives and the estimated amount of annual feedstock purchased from or sold to producer associations and cooperatives

As currently configured, the project does not rely on producer associations or cooperatives for the receipt of feedstocks or sale of produced products.

(C) MARKET FEASIBILITY

In order to produce the projected economic performance of the project, it is essential that the market for the supply and sale of products exists and is expected to continue. The critical products are:

- manure
- _____
- nutrients
- solids
- RNG

1. Information on the sales organization and management

BC Organics will handle the marketing of products through third parties. These include the marketing and sale of the RNG by ampRenew Offtake I LLC**,** the sale of the fiber through Oldcastle, the sale of liquid nutrients through BioStar Renewables. Dynamic Group will manage the delivery of manure and _____.

ampRenew Offtake I LLC is a renewable gas marketer and has been a leader in RNG since 2100.

Oldcastle has been a leading marketer of mulch, soils and decorative rocks since 2007.

BioStar Renewables develops renewable energy projects and has developed a patented process for producing sterilized liquid nitrogen fertilizer.

Dynamic Group has managed the delivery of manure and _____ to multiple anaerobic facilities in Wisconsin.

2. Nature and extent of market and market area

The nature and extent of market and market area is well defined by Dynamic.

The location of the feedstock is defined in the figure below, with additional sources of manure located in the market area.

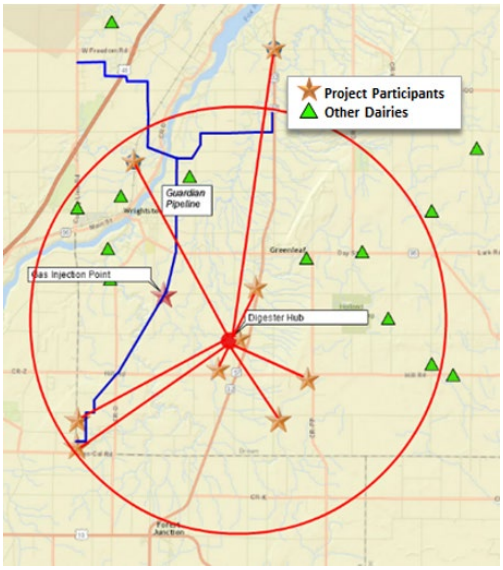

Figure 4. Map showing project site location and additional manure locations.

3. Marketing plans for the sale of projected output-principal products and Byproducts

The project produces saleable products:

- RNG. Sold through a third-party agreement. Revenues split between BC Organics and marketer with the marketer incentivized to produce maximum revenue.
- Fiber. Under contract with Oldcastle.
- Nutrients. BioStar Renewables has agreed to market the concentrated liquid nutrients. This function will be an adjunct to the planned facility and is not included in the project proforma.
- Tipping fees. Letters of Intent with multiple suppliers.
- Manure delivery. Under contract with participating farms.

The majority of project revenues are generated by the sale of RNG. The following is intended to detail how the sale of RNG operates and the income potential from RINS and LCFS.

Renewable Natural Gas (RNG):

> *Removing carbon dioxide and impurities such as hydrogen sulfide to bring the methane content up to the same specifications required of fossil-based natural gas results in high-Btu gas that is pipeline quality and can be used for transportation fuel when compressed (CNG) or liquefied (LNG). CNG has been the most common fuel used by fleets where medium-duty trucks are close to the fueling station, such as city fleets, local delivery trucks and waste haulers. LNG is typically used for heavy-duty trucks traveling along the growing network of LNG fueling stations. RNG currently sells at premiums over traditional natural gas due to the value of the environmental credits produced through the use of renewable fuels.*
>
> *RNG is eligible for renewable identification numbers (RINs) that are used to identify and track biofuel production that obligated parties need to demonstrate blending for compliance with the renewable fuel standard (RFS). D3 of the renewable fuel standard is the RIN code for cellulosic ethanol, cellulosic diesel, and renewable natural gas produced from animal manure. D5 of the renewable fuel standard is the RIN code for sugarcane ethanol, renewable heating oil, and renewable natural gas produced from food processing residuals. RINs are environmental credits that are used to demonstrate compliance with renewable fuel standards.*
>
> a. *In addition to the RINs, renewable natural gas is also eligible for credit with California's Low Carbon Fuel Standard (LCFS). The LCFS was developed to encourage the use of cleaner low-carbon fuels in California and to encourage the production of these fuels. The LCFS standards are expressed in terms of the carbon intensity (CI) of gasoline and diesel fuel and their respective substitutes. The LCFS is performance-based and fuel-neutral, allowing the market to determine how the carbon intensity of California's transportation fuels will be reduced.[1]]*
>
> *[1] California Air Resources Board; https://www.arb.ca.gov/fuels/lcfs/lcf/htm*

4. Extent of competition, including other similar facilities, in the market area

The figure below describes where the digesters are located (blue), and digesters being converted to RNG (red flags) within the state of Wisconsin. Existing anaerobic digesters in the area may be considered as

competitors from a biogas generation standpoint. However, Dynamic has already established feedstock and offtake agreements with its suppliers, providing certainty, term, and financial control of the project.

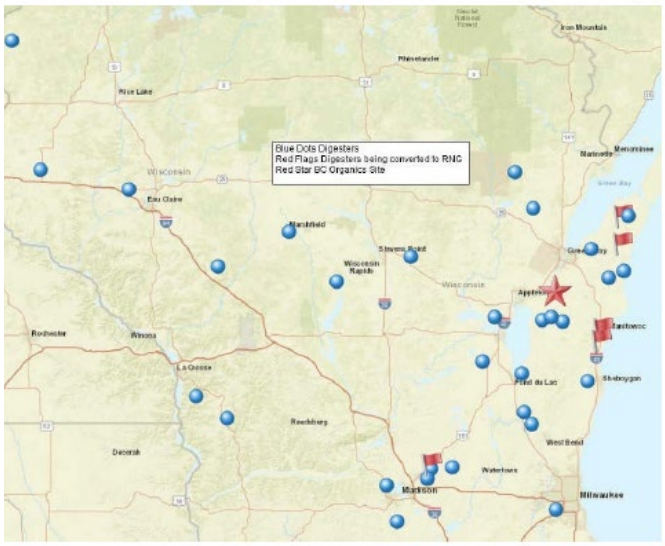

Figure 5. Map showing digester locations in Wisconsin.

The ability to receive LCFS is dependent on the ability of the gas marketer to establish a pathway to California and the carbon intensity (CI) of the feedstock used for generating the RNG, the lower the greater the value of the LCFS. Based on a proposal from BP Energy, the RNG generated from dairy manure would have a CI of -250. This low CI will benefit the ability of the project to receive LCFS payments as the program is designed to utilize lowest CI RNG in a preferential basis.

5. Commitments from purchasers of off-take -principal products and secondary products, degree of commitment, duration or terms of Off-Take Agreements, and financial strength of counterparties.

The Manure Supply and Easement agreements with producers have been executed that outlines its plans of this project. The agreements are for a twenty-year term. The list of producers of manure supply includes:

- County Aire Farms
- New Horizons Dairy, LLC
- Thompson's Gold Dust Dairy, LLC
- Rueden Beef, LLC
- Wiese Bros.
- Brickstead Dairy, LLC

These dairies are financially stable; however, other dairies operate in the target area which could be used to provide manure in the event of a default by any of the contracted dairies.

The non-manure component of the feedstock, or the _____, will consists of food waste and fat, oil, and grease (FOG). Dynamic has provided MOU's that confirms a list of possible substrate suppliers, shown below:

- Liquid Environmental Solutions
- Covanta Environmental Solutions

- CP BioEnergy LLC
- Veolia Environmental Services

The RNG will be marketed by ampRenew Offtake I LLC. Under the agreement, BC Organics will receive a commodity price for the sale of the RNG plus 75% of the RIN and LCFS credit values.

Fiber will be under an organic fiber supply agreement between BC Organics LLC and Oldcastle as the Buyer. The term of the agreement is 3 years.

BioStar Renewables has expressed an interest in creating and marketing a liquid fertilizer from the liquids generated at the facility. This agreement would be an adjunct to the facility and any revenues from the agreement have not been considered in the project proforma.

6. Risks related to the industry, including

(a) Industry Status

The BC Organics project is a combination of multiple industries and is an example of how one industry can complement another. The project was originally envisioned to accomplish several goals, including:

- Greatly improve agricultural wastewater quality;
- Improve the agricultural benefits of materials that are land-applied;
- Maximize the renewable energy benefits of anaerobic digesters;
- Add efficiency to agricultural solids and liquids handling;
- Reduce related hauling costs;
- Reduce related pathogens; and,
- Incorporate processing of off-farm _____ to enhance renewable energy production.

In order to accomplish these goals, the project combines anaerobic digestion, water purification, nutrient management and production of renewable natural gas. All of these are proven, and their interaction allows the project to accomplish the stated goals.

Any risks associated with the project are more in the long-term sustainability of the components, primarily the use of proven technologies and a comprehensive maintenance program. BC Organics has selected technologies with proven history and that Dynamic is familiar with the requirements for proper maintenance.

(b) Specific market risks

Market risks for this project relate to the delivery of feedstocks and the sale of products.

BC Organics has secure long-term contracts for the supply of dairy manure but has elected to rely on market conditions for the supply of other _____. Dynamic has experience with the collection and delivery of _____ in a competitive market and this risk is expected to have minimal impact on the project. This is especially relevant to this project as the majority of revenues come from the processing of the dairy manure.

BC Organics has a three-year agreement for the sale of the separated fiber after digestion. This product should have intrinsic value and its sale is essential to the stated goals of the project. There

is some risk in the ability to sell this product at assumed value beyond the initial period. Dynamic has experience in marketing separated fiber from digestate and this should minimize any risk.

The project contains many provisions for the concentration of the liquid from the digestate. This product should have widespread acceptance as natural fertilizer. The current proforma does not assume any revenue associated with the sale of this product. However, BC Organics has identified a vendor and marketer of this product, which could allow the sale in the future.

BC Organics has elected to sell the RNG without a long-term sale agreement. This decision was based on the substantial variance between current market pricing and the offer received. BC Organics has received a term sheet from ampRenew Offtake I LLC to market the RNG under a shared revenue basis. One risk is the price of the RINS and the value of the LCFS may vary over the project period. However, the current emphasis on the use of non-fossil fuel-based energy should continue over the loan period.

(c) Competitive threats and advantages

The project has been developed with the cooperation of both Brown County and the Wisconsin Department of Natural Resources and is the result of an RFP issued to determine the feasibility of such a project. BC Organics has secured manure supply agreements that assure manure delivery eliminating any threat that the source of this feedstock will not be available. The combination of the support of the County and the DNR combined with the manure supply agreements should alleviate any concerns that a competing project would affect the current project.

(D) TECHNICAL FEASIBILITY

1. Suitability of the selected site for the intended use

In compliance with the concentration of cows, the project participants, the relative location to the Guardian natural gas transmission pipeline, and land ownership of Brown County, the prospective facility site in Southern Brown County is considered suitable in providing adequate space and infrastructure.

This Project is proposed to be sited in the Lake Michigan watershed, on 40 acres of land to be leased from Brown County near Highways 32 and 57. The 40 acres are part of the proposed Brown County landfill complex.

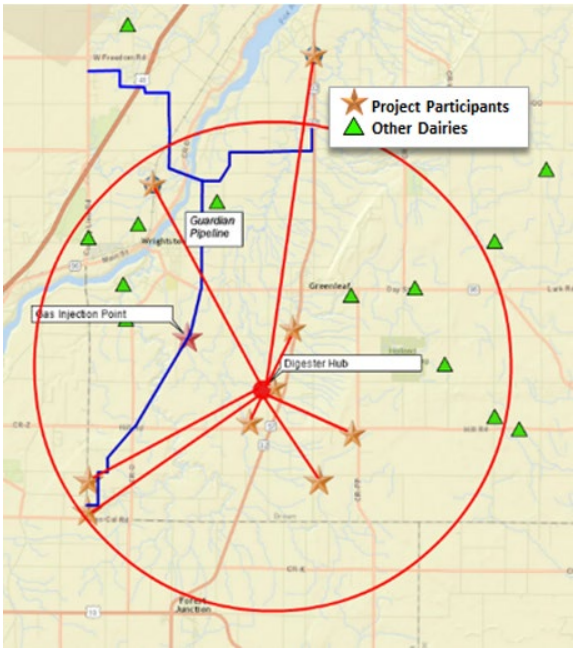

Figure 6. Map showing project site location and additional manure locations.

The project is designed to serve multiple dairy producers, large and small, using a central location as a community hub-and-spoke system for collecting and processing manure, with multiple satellite farms providing manure and food producers supplying _____ to the digester system. This hub-and-spoke system is illustrated in the figure above. This project is indicated with a red dot, while participating farms are indicated with orange stars. These farms are confirmed suppliers of interest and combine for over 20,000 animal units, including three farms with fewer than 700 animal units. The nearby Guardian interstate natural gas pipeline is indicated with the blue line.

2. Scale of development for which the process technology has been proven (i.e., pilot, demonstration, or Semi-Work Scale Facility). Provide results from pilot, demonstration, or semi-work scale facilities that prove that the technology proposed is feasible and stands a good chance of being successful. The proposed technology must meet the definition of eligible technology.

Anaerobic Digestion is a tried and true technology and has been proven with a well understood economic and investment profile. This technology is modular in design and can be scaled.

This technology is proven and well understood among various livestock and human waste handling systems.

- Over 7,500 biogas plants in Germany alone (source: German Biogas Association)
- 16,000 Wastewater Treatment Plants in the U.S. and 3,500 of these employ anaerobic digestion (source: U.S. Department of Energy).
- 250 ag based operational systems in the U.S. (source: EPA AgSTAR Database)
- 37 systems in the state of WI located on dairy farms (source: EPA AgSTAR Database)
- 32 of these systems operate CHPs (source: EPA AgSTAR Database)

The first installation of the digesters being used for this project was commissioned in February 2007 by US Biogas Principals at the Crave Brothers Farm in Waterloo, WI. Since 2011, the technology has been deployed and is operating at the sites listed below.

- Dane County Community Digester, a three tank 2 MW system
- Waste No Energy LLC in Monticello, IN, a one tank 1 MW system
- GL Dairy Biogas LLC in Springfield, WI, a three tank 2 MW system (The Second Dane County Community Digester)
- Sunny Side Digester LLC in Sun Prairie, WI, a one tank 633 kW system

RNG production is a proven technology. BC Organics has chosen Durr Megtec to supply the RNG plant. Durr Megtec is providing a performance guarantee through the construction contract.

The separation technologies are well proven and have many operating facilities. Dynamic Group has installed these in multiple plants.

3. The degree of integration of all processes should be detailed, and a summary of any integrated demonstration unit test results should be submitted.

The BC Organics project is a compilation of multiple technologies combined to produce a defined result. The Basis of Design document states:

> *The plant is designed to process manure and _____ from neighboring farms and convert it into renewable natural gas, a soil amendment product, and a liquid fertilizer product. The goal of the project is to reduce the phosphorus loading in the Lower Fox River watershed by significantly reducing or eliminating the application of manure on the cropland within the watershed.*
>
> *The manure will be either pumped or trucked to site. As currently designed, approximately 83% of the manure volume will be pumped to the site and 17% will be trucked. Both the pumped and trucked manure will be placed into two (2) one million gallons in-ground concrete storage structures.*

The trucked manure will be unloaded in an enclosed manure and substrate receiving building. The manure trucks will unload via gravity into the manure storage tanks.

The system is also designed to utilize non-manure _____ which typically consist of food and beverage processing waste products and trap grease from area restaurants and fast food chains. The _____ are delivered to site via tanker truck and will be directly pumped to two (2) 100,000 gallon above ground bolted stainless steel tanks for storage.

Additionally, the manure and substrate receiving building will also have a (2) 50,000 gallon above ground stainless steel storage tanks for the concentrated nutrients from the ultrafiltration and reverse osmosis processes. These tanks will allow the trucks that are transporting the manure to site to be reloaded with the concentrated nutrients for delivery back to the farm without having to move their trucks while on site. It will also allow the concentrated nutrients to get pumped back to the neighboring farms or recycled back into the process.

From the storage tanks, the manure and _____ will be fed to the digesters on site. Both the manure and _____ will pass through the processing building where the flow will be measured and then directed to one of up to sixteen (16) digesters on site. The process building will also house the hot water boilers that will be utilized to provide the heat for the digesters.

Each digester consists of a 1,378,000 gallon above ground bolted stainless steel tank that has a series of internal mixers, stainless steel tubes inside the digester with hot water flowing through them to maintain the 95-100˚F temperature required to maintain the biological activity inside the digester, a dual membrane roof in which the outer membrane remains fully inflated for weather protection while the inner membrane is allowed to raise and fall to provide variable biogas storage space, a stainless steel pipe to remove the biogas from the top of the tank, and insulation and siding around the outside of the tank. The digesters are designed to provide a hydraulic retention time of 20-25 days. During this period, the volatile organics in the manure and _____ are broken done by bacteria inside the digesters which produces biogas. Biogas is primarily comprised of about 55-65% methane, carbon dioxide, trace amounts of hydrogen sulfide, and water vapor.

Following the digestion process, the digestate will be pumped from the digesters, through the process building where the flow will be measured and then directed to the two 50,000 gallon digestate storage tanks. The digestate will be pumped to a bank of ten screw press separators to separate the coarse solids out of the digestate. These solids will go through a pair of rotary drum dryers to reduce the moisture from approximately 70% to about 50%. This process will also significantly reduce the pathogens in the solids. The solids will be available for use as bedding or transported to a horticultural wholesaler for use as a soil amendment product.

The liquid pressate from the screw presses will gravity flow into three storage tanks. The liquid pressate will be pumped from these tanks to a stainless steel ultrafiltration (UF) system. The UF system is comprised of ¾" tubular membranes with an average pore size of 0.02 microns. The liquid pressate is pumped through the inside of the tubular membranes, which retain nearly all suspended solids, phosphorus, organic nitrogen, and pathogens. The liquid that passes through the wall of the tubular membranes is a transparent fluid called the UF permeate and is collected in the UF permeate storage tank. The material which does not pass through the wall of the tubular membranes is a slurry called the UF concentrate. The UF concentrate is pumped back to the UF concentrate storage tank adjacent to the manure receiving building in order to be recycled back through the digestion process or supplied back to the farms for storage and land application.

The UF permeate from the storage tank is pumped through a forward osmosis (FO) system comprised of membrane elements arranged into groups called stacks. As the UF permeate flows through each membrane element, water is extracted through the membrane and into a salt water solution. The concentrated UF permeate which exits the stacks is called the FO concentrate and is collected in a storage tank for later evaporation to create fertilizer rich in ammonia nitrogen and potassium.

The salt water solution is pumped into a high-pressure reverse osmosis (RO) system, which is comprised of spiral-wound RO membranes in horizontal fiberglass housings. The RO system produces a clean water product called RO permeate and a brine called RO reject. The RO permeate is collected in the RO permeate storage tank and the RO reject is pumped back to the FO system to recycle the salt water solution.

The RO permeate is processed prior to final discharge to ensure it meets all WPDES permit standards. First, the RO permeate is aerated to remove unwanted dissolved gases and increase the concentration of dissolved oxygen. During this process, an oxidizer such as hydrogen peroxide may also be added. Next, the aerated water will be pumped through a low-pressure RO system which generates a second RO permeate and RO reject. This RO reject will go back to the UF permeate tank to be processed by the FO system again. The RO permeate from the low-pressure RO system will pass through an ion-exchange system to remove any remaining ammonia nitrogen. Finally, the water temperature will be adjusted and some hardness will be added. The final clean water will be stored in a tank that will allow the facility to re-use the water onsite, send a portion of it back to the participating farms to offset their groundwater usage, or discharge it.

The evaporation process removes water from the FO concentrate as water vapor, which is then condensed and collected in the RO permeate storage tank. The concentrated product from the evaporator is stored in a 1,370,000 gallon above ground bolted stainless steel tank which will utilize a digester roof to prevent rain or snow from entering the tank and diluting the product.

The biogas that is produced by the digester tanks is stored in the head space of the tanks at a pressure of 2-4" of water column until it is ready to be processed by the biogas upgrading system. Biogas contains approximately 55-65% methane while natural gas is typically 95-99% methane. By removing the carbon dioxide and trace contaminants from the biogas, it can be upgraded to a renewable source of natural gas.

The biogas upgrading system compressors draw the biogas out of the digester tanks. The biogas passes through a chiller unit to remove most of the water vapor from the biogas. It then passes through a membrane filtration system that separations the methane from the carbon dioxide and hydrogen sulfide. The methane that passed through the membranes goes through a final hydrogen sulfide polishing system and final drying system to ensure the methane meets the sulfur and water requirements of the interstate natural gas pipeline. The tail gas from the membrane system goes through a thermal oxidizer or a flare to combust any methane and volatile organics prior to exhausting them tot eh atmosphere.

The renewable natural gas is piped to the injection point at the interstate natural gas pipeline where it is tested for quality, compressed to pipeline operating pressure, and injected into the natural gas pipeline system.

With the conversion of most of the manure generated by the project participants to soil amendment products, a liquid organic nitrogen and potassium fertilizer, and clean water, this helps accomplish the goal of reducing the phosphorus loading in the Lower Fox River Watershed and assists in protecting groundwater in areas with shallow soils or fractured bedrock. This project will assist the

area farms with their manure management allowing them to remain successful, sustainable businesses for future generations.

Dynamic has tested and installed these components at various projects. The project at Middleton Wisconsin represents the best example of the integration of the various technologies to accomplish the stated goals of the project. The system includes manure and food waste-based _____, anaerobic digestion, separation and the nutrient concentration system. Additionally, Dynamic installed the nutrient concentration system on an existing swine waste facility in Illinois.

4. Specific volume produced from the technology of the process (expressed either as volume of feedstock processed [tons per unit of time] or as product [gallons per unit of time])

Dynamic's estimations on the manure and substrate receiving process outlines at an overall total feedstock of about 925,000 gallons/day to the system. The feedstock includes about 665,000 gal/day of manure, 50,000 gal/day of _____. In addition, up to 210,000 gal/day of ultrafiltration (UF) concentrate will be recycled.

Through the nutrient concentration separation, it is proposed to clean and process organic wastes. Of the organic wastes, up to 90% is water from the manure, 7% solids, and 3% liquid fertilizer when 100% of the UF concentrate is recycled.

With the amount of feedstock into the AD system, the product-distribution from the nutrient concentration systems projected volumes of approximately 620,000 gal/day of water, 47,000 gal/day of solids, and 23,000 gal/day of liquid fertilizer.

Based on Dynamic's calculations, the estimated biogas production is about 650,000 cubic feet of biogas per day. The manure gas production is about 1438 MMBtu/day, and the estimated substrate gas production is about 376 MMBtu/day. The estimated projected RNG generation is about 662,110 MMBtu annually.

5. Identification and estimation of Project operation and development costs. Specify the level of accuracy of these estimates and the assumptions on which these estimates have been based. Detailed analysis of Project costs including:

(a) Project management and professional services; resource assessment

Based on assumptions provided by Dynamic, the capital expense specifically on project development is estimated at $4.5 million.

(b) Project design and permitting

Design services are included under the Miron contract, see (d) below.

This project requires the following permits:

- WPDES
- Air
- Storm water
- Wetland
- Pipeline
- Manure storage

Based on Dynamic's Financial Model, it is projected that the building permit would cost $46,750.

(c) Land agreements and site preparation

[redacted]

(d) Equipment requirements and system installation; startup, and shakedown

The project is to be constructed under an EPC (Engineer, Procure and Construct) contract. The cost for the anaerobic digesters, solid separation and RNG portions of the [redacted]

(e) Warranties, insurance, financing, and operation and maintenance costs

Under the EPC contract Miron Construction is providing performance guarantees for the digesters, the RNG plant, and the effluent filtration system.

[redacted]

- [redacted]

Based on assumptions provided by Dynamic, the total Operational and Maintenance cost is estimated about $11M. The O&M Budget is broken down to the following categories:

- Management Services & Labor
- Material Processing & Digestion
- Gas Conditioning & Compression
- Coarse Separation
- Fine Solids Separation
- UF/RO Water Treatment
- Fiber Drying
- BioStar Processing Fee
- Misc. Expenses

[redacted]

6. A projected timeline detailing Borrower plans from the time of loan application through plant construction, commissioning, and ramp up should be included.

The following table summarizes BC Organics' projected timeline from the time of loan application through plant construction, commissioning, and ramp up.

Task Name	Duration	Start	Finish
Complete Phase 1 USDA Application	31 days	3/15/19	4/26/19
Complete Phase 2 USDA Application	60 days	4/1/19	6/21/19
Notice to Proceed with Purchasing and Construction	0 days	6/21/19	6/21/19
Final Engineering	60 days	6/24/19	9/13/19
Complete Permit Process	75 days	7/29/19	11/8/19
Purchase long Leadtime Items	180 days	6/24/19	2/28/20
Construction	245 days	6/24/19	5/29/20
Plant Start-Up and Commissioning	230 days	11/11/19	9/25/20
Ramp Up to projected production	26 weeks	3/30/20	9/25/20

Table 1. Projected timeline.

7. Ability of the proposed system to be commercially replicated

The proposed system can be commercially replicated. However, the overall design is unique, and integration of the technologies is complicated. The Dynamic team has done extensive work in developing the mixture of technologies that will be utilized in the project. The project's overall size is unique to the location of the project.

8. Risks related to:

(a) Construction of the Biorefinery

Miron has constructed over $200 million in energy projects, including other anaerobic digester facilities and industrial facilities, and is highly qualified to provide the EPC services for the project.

(b) Production of the Advanced Biofuel and Biobased Product, including Renewable Chemical

Production of the product is dependent on quality components and maintenance. The facility uses proven technology and the management team has experience in operating and maintaining these facilities.

(c) Regulation and governmental action

Risks from governmental actions or regulations are a possibility. Entities regulated by renewable fuel standards include oil refiners and gasoline and diesel importers. The volumes required of each obligated party are based on a percentage of its petroleum product sales. Obligated parties can meet their renewable volume obligations (RVOs) by either selling required biofuels volumes or purchasing RINs from parties that exceed their requirements. Failure to meet requirements results in a significant fine

The EPA has set the required volume obligations (RVOs) through the end of 2023, at that time they will reassess those obligations and decide whether to continue to increase them or decrease them. Due to the uncertainty surrounding the RVOs, beginning in year 2023 the project has a reserve mechanism which is discussed in more detail below.

Due to some level of uncertainty from the EPA regarding expansion of the required volume obligations (RVOs), for RIN credits, LOB will require a cash sweep reserve building to 50% of outstanding principal balance. This mechanism will reserve against potential worst-case scenarios in which the RVOs are severely decreased or eliminated, and concurrently CARB eliminates the LCFS all-together. This is an unlikely outcome as both the RFS and the LCFS program are written into federal and state law respectively and would take an act of Congress and CA Senate to overturn.

Biogas projects generate LCFS credits based on their CI scores, the lower the CI score the more credits the gas will generate and the establishment of a pathway to an LCFS state. Over 13 million LCFS credits were traded in 2018. BC Organics site will produce approximately 200,000 credits per year, comprising 1.51% of 2018 volume. It would take 67 new projects the size of BC Organics to meet today's LCFS credit market. Additionally, the demand for credits is scheduled to increase by 75% over today's volume, making BC Organics' production a drop in the bucket of the total LCFS credit demand

[redacted]

(d) Design-related factors that may affect Project success

We do not believe there are any design-related risks that would affect this project.

(e) Technology scale up risk

The risk for upscale of this project is relatively low as the technology is modular in design.

(E) FINANCIAL FEASIBILITY

1. Reliability of the financial projections and the assumptions on which the financial statements are based, including all sources and uses of Project capital, private or public, federal and non-federal funds. Provide detailed analysis and description of projected balance sheets, income and expense statements, and cash flow statements over the useful life of the Project.

Review of the projected income statements indicates that the proforma was developed with conservative assumptions and represents the reasonable economic performance of the project.

Sources and uses:

- *Loans* [redacted]
- *Grants* [redacted]
- *Equity* [redacted]

Review of project proforma:

Capital:

The review of the project proforma has evaluated the estimates of required capital, the expected operation and maintenance cost, and the projected revenues. Sufficient detail has been provided to establish that the estimated capital is adequate to complete the construction of the facility. Documents reviewed included the proposal from Miron Construction, the drawings developed to date, and supporting information on equipment.

O&M:

The operation and maintenance estimate is $11 million per year and includes 10 full time employees, contract maintenance services, energy required for drying and digester heating, and cost for operating RNG facility. The estimated O&M costs were compared to data from other facilities and appear reasonable and adequate.

Revenue:

The base assumption of revenues is calculated using conservative values for the sale of RINs and LCFS and the calculations support the estimated revenues.

2. A detailed description of and the degree financial feasibility is dependent on:

(a) Investment incentives

The financial model developed for the project does not include any potential investment incentives.

(b) Productivity incentives

The financial model developed for the project does not include any potential productivity incentives.

(c) Loans and grants

Live Oak Bank has provided a conditional term sheet for a construction and permanent loan for the project. The project proforma represents this term sheet.

The Focus on Energy grant program within the State of Wisconsin, through the Public Service Commission of Wisconsin, partnered with the Wisconsin Department of Natural Resources, and the Department of Agriculture, Trade and Consumer Protection, is a grant funding program that this Integrated Anaerobic Digester System project can be eligible for. A submitted RFP by BC Organics proposes a conceptual design on the farms located in southwestern Brown County. Under consideration, the Commission of Wisconsin awarded $15 million to this AD project on September 27, 2017.

3. Other Project authorities, RINs value, tax credits, other credits, and subsidies that affect the Project

A substantial percentage of the projected revenues are from the sale of RINS and LCFS. The proforma shows 90% of the projected revenue is generated from these sources.

4. Any constraints or limitations in the financial projections

The estimated capital is based on quotations for equipment and construction based on 4th quarter 2018 costs. These costs will vary depending on actual date of execution of contracts and purchase orders.

5. Ability of the business to achieve the projected income and cash flow

Sufficient details have been provided on the supply of _____, the equipment, the process, the cost of construction and operations, as well as the ability of the management company to properly operate and maintain the facility. To conclude, the project should be able to meet the projected income and cash flow as contained in the project proforma.

6. Assessment of the cost accounting system

The cost accounting system utilized in developing the project proforma accurately reflects the cash flow, taxes and debt service for the project.

7. Availability of short-term credit or other means to meet seasonal business costs

The project proforma utilizes a monthly projection of revenues and costs that is used to predict the annual budget. However, many maintenance items are based on a percentage of first cost. This is reasonable for

a proforma that reflects the term of the loan, but expenditures do not readily follow this. It would be recommended that a maintenance reserve be established to cover any unforeseen or scheduled expenses. Unused funds from the operation budget should be carried forward until needed.

8. Adequacy of raw materials and supplies

The project economics is based on contracted volumes of manure and estimated _____ delivery. Studies commissioned by Dynamic indicate that the percent of manure utilized by the facility is less than 3% of available and the percent of _____ utilized is less than 7% of available.

While this project is a large anaerobic digester compared to existing projects in Wisconsin, there is an established supply chain of products normally consumed in digester operation, which will allow for availability and competitive pricing for these items.

9. Sensitivity analysis, including feedstock and energy costs and product and Byproduct prices

[redacted]

10. Risks related to:

(a) The Project

The largest risk identified is the sale of RINs and LCFS credits. Management has developed an arrangement for their sale that should present the greatest revenues to the project.

(b) Borrower financing plan

The successful completion of the project requires a significant equity contribution.

(c) The operational units

There are only minor risks from the operation.

(d) Tax issues

There appears to be no tax-related risks.

(F) MANAGEMENT FEASIBILITY

Dynamic personnel have collectively over 75 years of project development, engineering, project management, financial analysis and operations experience within the areas of anaerobic digestion, landfill diversion, and nutrient concentration/water treatment. Dynamic has over a decade experience in designing, installing, and operating biogas facilities. The team has designed and installed 12 digesters including 2 community digesters. They have operated and managed 4 digesters in the Midwest, and currently operate one in Fremont, MI. They have provided O&M and staffing for 10 other facilities over the last 12 years. They have developed a proprietary technology that monitors the input and output of the digesters ensuring they remain in compliance with their contracted output quality. They have specialized in taking over failing digesters and turning them around. The projects that they have taken over have exceeded the previous operators considerably, and the sites have produced more gas, electricity, and _____ under Dynamic's management. Dynamic will perform long term O&M on the system.

The existing Dynamic management team consists of Duane Toenges, Daniel Nemke, Daniel Meccariello, and Karl Crave.

Duane Teonges, Chief Executive Officer, has over 37 years of business experience, with the first two decades working in the Agribusiness field. He has experience in both business and finance management. At Dynamic, he leads business development such as identifying stakeholders, stakeholder meetings, accessing financial feasibility, creating proformas and sensitivity analysis, system ownership, management and business structure, financial assistance. In 2011, Duane was a founding partner of U.S. Biogas LLC and is currently one of the partners of Dynamic.

Daniel Nemke, Chief Technology Officer, has gained significant experience from his prior role of General Manager at Clear Horizons LLC, as he took such responsibilities like business development, overseeing engineering, estimating, project and financial management, and operations and maintenance. Dan oversees the coordination and execution of the group to deliver successful projects. In 2011, Dan was a founding partner of U.S. Biogas LLC and is currently one of the partners of Dynamic.

Daniel Meccariello, Chief Operating Officer, oversees the design, engineering, and controls systems integration of Dynamic. Dan has led the engineering of a variety of anaerobic digestion systems including multiple community systems, dairy manure systems, swine manure systems, co-digestion systems with food and animal waste and food waste digesters as well as agricultural water treatment systems. In 2011, Dan was a founding partner of U.S. Biogas LLC and is currently one of the partners of Dynamic.

Karl Crave, Vice President of Operations and Training, has had previously work on design, engineering, and construction back at Clear Horizons, and now uses his expertise on onsite construction supervision and operation training within the overall aspect of a biogas plant.

1. Borrower and/or management's previous experience concerning:

(a) Production of Advanced Biofuel and Biobased Product, including Renewable Chemicals, as applicable

(b) Acquisition of feedstock

(c) Marketing and sale of off-take

(d) The receipt of Federal financial assistance, including amount of funding, date received, purpose, and outcome

Dynamic will self-perform O&M for the site. Dynamic has designed and installed 12 digesters, with 2 of them being community digesters similar to the BC Organics site. They have been managing anaerobic digesters since 2006. They currently operate and manage a food waste digestion facility in Freemont, MI, which they helped to redesign and restart operations.

Operations for the site will track the amount of manure and _____ coming into the site daily. Since 93% of the feedstock is cattle manure, managing feedstock quality is not as difficult. There will be a flow meter attached to each pump that is pumping manure to the site to keep track of the volume of inflow. Each truck providing manure will likewise have the volume amounts metered and measured. The substrate trucks will be tested and monitored on a per-truck basis to ensure the proper type of waste is being delivered and will not adversely affect the system.

Crave Brothers Dairy, Waterloo, WI (2006-Present)

A digester system plant was designed and constructed back in 2006 under an agreement between Piper Power Company Powers (PPC) and Clear Horizons, where Dynamic owners Nemke, Crave, and Meccariello, at the time were responsible for the engineering and design. The plant consists of an above-ground digester, CHP system, and a fiber separation and composting system. Expansion and replacement onto the site have been implemented. Separated fiber is sold as bedding and as soil amendment.

Dane County Community Digester (2010-2011)

The Dane County Community Digester, in Dane County Wisconsin, incorporated manure waste and non-manure substrate, FOG, that generated biogas as renewable power, along with profitable fiber offtake material as solid by-products. Acquisition of feedstock involved three dairy farms for manure waste (Endres Dairy, Ripp's Valley Dairy, and White Gold Dairy). The non-manure substrate was sourced from Veolia ES. Dynamic's services included a preliminary design, project feasibility, and engineering procurement construction on a centralized anaerobic digester system. This project received a $3.3 million grant from the State of Wisconsin, administered by the Dane County government prior to start of construction. Electrical energy was sold under a 10-year agreement. Separated fiber is sold as soil amendment. Dynamic principals' role in the project included:

- Project feasibility
- Preliminary design
- Supply agreements
- Off take agreements
- Re-zoning

- Permitting
- Engineering procurement construction

Waste No Energy, Monticello, IN (2012-2013)

Dynamic's work on the Waste No Energy project in Monticello, IN, included a digester and CHP unit operating system design, financial and total project cost analysis and estimation. This project utilized a feedstock mixture of 90% non-manure substrate from BioEnergy LLC and Kremer Family Farms and 10% hog manure from RAKR Farms. Dynamic's services for this facility included:

- Total System Design
- Detailed Financial Analysis
- Total Project Cost Estimate
- Substrate Agreements with all applicable parties
- Currently Providing Operational Consulting Services
- Interconnection Agreement and Power Purchase with NIPSCO
- Led Engineering, Procurement, and Construction Management of Project
- Obtained all Necessary Permit and Zoning Requirements for Placement, Construction and Operation of Project

GL Dairy Biogas Springfield Community Digester, Middleton, WI (2013-2014)

In the Town of Springfield, Dane County, Wisconsin, Dynamic took part of designing and operation of an anaerobic digester biogas facility from manure and non-manure feedstock and converted to renewable energy and obtained solid and liquid profitable by-products such as fiber offtake and centrate for land application. The three dairy farms that supplied the manure source were Blue Star Dairy, Zeigler Dairy, and Hensen Dairy. The non-manure substrate was sourced from CP BioEnergy LLC. The project received a 1603 Treasury Grant in 2012, which was applied to the cost of the CHP. Electrical energy is sold to Madison Gas and Electric under a long-term agreement. Dynamic's services for the GL Dairy Biogas LLC Springfield Community Digester Project included:

- Total System Design
- Total Project Cost Estimate
- Detailed Financial Analysis
- Fiber Product Sales Agreement
- Identification and Selection of Dairy Farm Participants
- Feedstock and Land Purchase Agreements with Dairy Farms
- Provided Management and Operations of the Facility (2013-2017)
- Led Engineering, Procurement, and Construction Management of Project
- Pipeline Easement and Substrate Agreements with all applicable parties
- Interconnection and Power Purchase Agreement with Madison Gas & Electric
- Obtained all Necessary Permit and Zoning Requirements for Placement, Construction and Operation of Project

Sunny Side Digester, Sun Prairie, WI (2013-2014)

Dynamic also spearheaded this system project of implementing manure and non-manure substrate to produce renewable power, which was sold to Alliant Energies, and profitable by-products such as fiber offtake, sold to Maunesha River Dairy LLC for bedding. The manure source came from Maunesha River Dairy LLC, and the non-manure substrate came from CP Bio Energy. The

Wisconsin Energy Conservation Corporation (WECC) awarded $500,000 to this project on June 16, 2009, as part of the Wisconsin's Focus on Energy program. Dynamic's services for this facility included:

- Total System Design
- Detailed Financial Analysis
- Total Project Cost Estimate
- Substrate Agreement(s) with all applicable parties
- Feedstock and Land Lease Agreements with Dairy Farm
- Provided Management and Operations of the Facility (2013-2017)
- Interconnection and Power Purchase Agreement with Alliant Energy
- Led Engineering, Procurement, and Construction Management of Project
- Obtained all Necessary Permit and Zoning Requirements for Placement, Construction and Operation of Project

Fremont Community Digester, Freemont MI (2015-Present)

Generate Capital engaged Dynamic to acquire, upgrade, reactivate and operate the idled 3 MW Fremont Community Digester in Fremont, Michigan. The project is currently processing approximately 165,000 tons annually of organic food waste, creating renewable electricity. Dynamic recently completed facility upgrades and has a long-term agreement for the operations and management of the facility.

Fremont Community Digester currently takes in approximately 165,000 tons per year of both organic waste and agricultural waste into "green" biogas (methane) which is used to generate approximately 3MW of renewable electricity. The power sold to Consumers Energy under a long-term contract.

The Fremont Community Digester anaerobic digester system creates and captures methane gas to be consumed in a combined heat and power (CHP) generator. Fremont Community Digester is capable of accepting manure and other farm residues, pre- and post-consumer food residuals, ethanol production byproducts, and industrial glycerin and alcohols. The Fremont Community Digester plant has the capacity of processing approximately 350-450 tons/day of organic feedstock material and has been designed to accommodate future expansion as additional feedstock is contracted.

2. Management plan for procurement of feedstock and labor, marketing of the off-take, and management succession

Management has secured long term agreements for the supply of manure, which represents 93% of projected feedstock for the system. Should the contracted dairy fail to provide the projected volume of manure, management has identified additional dairies in the project area that can cover any shortfall. Management has contacted haulers that they have worked with on previous projects to determine interest in these haulers supplying the additional _____. Management has obtained MOU from these haulers.

3. Risks related to:

(a) Borrower as a company (e.g., development-stage)

BC Organics is a special purpose entity formed for this project and as such, there is no corporate guarantees available to the project.

(b) Conflicts of Interest

No conflicts of interest have been identified.

(c) Management strengths and weaknesses.

Management has extensive experience in the development, design and operation of facilities similar to this project. Management has extensive experience in procuring feedstocks and developing offtake agreements.

(G) QUALIFICATIONS

A resume or statement of qualifications of the author and contributors of the Feasibility Study, including prior experience, must be submitted.

This FS was conducted by Tetra Tech. Tetra Tech is a leading provider of consulting, engineering, and technical services worldwide. We are a diverse company, offering science, engineering, and construction capabilities in numerous markets including a recognized leader in the implementation of anaerobic digestion/biogas, biomass, bioenergy, and waste to energy markets in North America. We have been ranked ***#1 in Water consecutively for 15 years in a row, #1 in Environmental*** *among numerous other top rankings across the US by ENR.*

Tetra Tech has completed more than 300 projects producing thousands of megawatts of electricity, millions of cubic feet of natural gas, billions of BTUs of heat energy, and thousands of GGE of renewable natural gas (RNG) and renewable (R-CNG) vehicle fuel. We have best-in-class service and expertise in the Agriculture, Solid Waste, Industrial, Federal, State and Municipal sectors in biological and thermochemical conversion of agriculture, MSW, biomass, food residuals, wastewater, and landfill gas utilization. We have conducted bioenergy projects across of the world.

Figure 1. Tetra Tech is a trusted contractor of AgSTAR, a US govt *outreach program sponsored by the EPA, USDA, and DOE*. Tetra Tech is currently authoring a new AD/Biogas Project Development Handbook and the new Operator Guidebook anticipated to be released in 2019.

The specific members of Tetra Tech whom conducted this study include Keith Henn, David Palmer, Chris Doherty and others from Tetra Tech. Our team has an average of more than 30 years of experience in all types of anaerobic digestion/biogas/energy projects and technologies. Tetra Tech does not represent a technology, rather we are poised to help our customers choose the best technology/vendor to fit the project needs. To that end, the Tetra Tech Team has implementation expertise with numerous technologies of all types and from numerous vendors. Having a broad, independent yet agnostic view provides our customers impartiality.

Tetra Tech have implementation experience on new or “greenfield” projects as well as integration or augmentation of new technologies/additions into current operations. This expertise is critical as it requires innovative evaluation and thinking to optimize the process and integration. This often includes troubleshooting existing projects that may have operational limitations. The experience of what has NOT worked is as critical as what will work as it helps our customers avoid missteps frequently made by others.

Please refer to the following Appendices for the information requested.

- Appendix A: Tetra Tech’s Statement of Qualifications (SOQ) focused on bioenergy and a supplemental SOQ focused on Anaerobic Digestion and Biogas
- Appendix B: Resumes of key Tetra Tech staff that conducted this FS

APPENDIX A – STATEMENT OF QUALIFICATIONS

APPENDIX B – RESUMES OF KEY STAFF