

Texas Water Development Board



City of Mount Vernon

CWSRF GREEN PROJECT RESERVE BUSINESS CASE EVALUATION

STATE FISCAL YEAR 2012 INTENDED USE PLAN

PROJECT NUMBER 73649

COMMITMENT DATE: December 6, 2012

DATE OF LOAN CLOSING: APRIL 5, 2013

GREEN ESTIMATE AT CLOSING: \$251,918

Subsidy awarded for Green components, (if any) \$37,788

March 9, 2012

Mr. Eddie Turner
City of Mount Vernon
P.O. Drawer 597
Mount Vernon, TX 75457-0597

**Re: State Fiscal Year 2012 Clean Water State Revolving Fund
Green Project Eligibility**

Dear Mr. Turner:

The Texas Water Development Board (TWDB) received Green Project Information Worksheets from the City of Mount Vernon (City) for project #9429 in response to a request letter dated December 9, 2011. The letter states that the City is eligible for loan forgiveness in an amount up to 15% of the green component cost if it can demonstrate that the project has green costs that are greater than or equal to 30% of the total project cost. After reviewing the worksheets, TWDB staff determined the City does meet the 30% green cost threshold based on the following:

- The City's Green Project Information Worksheets dated January 5, 2012 requested that \$251,918 of the City's total project cost of \$560,000 be considered eligible for the CWSRF Green Project Reserve (GPR). The green element(s) described include the construction of renovations to the existing WWTP which will seek to reduce energy consumption and to allow for a more efficient operation.
- The Environmental Protection Agency's (EPA) *Green Project Reserve Guidance for Determining Project Eligibility* (TWDB-0161) lists "Renewable energy projects, which are part of a public health project, such as wind, solar, geothermal, and micro-hydroelectric that provide power to a utility" as categorically eligible under the energy efficiency category for the GPR (Part A, 3.2-1). Specifically this applies to the 2 solar powered mixers for the oxidation ditch.
- The EPA's guidance also lists "Projects that achieve a 20% reduction in energy consumption are categorically eligible for GPR" (Part A, 3.2-2). Specifically this applies to the VFD's, probes and electrical controls that are necessary to achieve the approximately 52% reduction in energy usage described in the Green Project Information Worksheets.

Our Mission : **Board Members**

To provide leadership, planning, financial assistance, information, and education for the conservation and responsible development of water for Texas

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- Therefore, at this time, the TWDB considers project costs in the amount of \$251,918 (45%) to be eligible for the CWSRF GPR. This includes estimated construction costs in the amount of \$175,600 and a proportionate share of project engineering and financing costs.
- Please note that the City's application for financial assistance must be consistent with the project scope presented on the Green Project Information Worksheets. Inclusion of the green elements within the project will be verified prior to TWDB commitment.

For SFY 2012, the TWDB is required by federal law to allocate no less than 20% of the capitalization grant toward green component costs (also referred to as the Green Project Reserve). Therefore, the TWDB gives first preference for invitations to entities that have a documented percentage of green component cost of at least 30% of the total project cost. The City has demonstrated that it meets/exceeds the 30% green cost threshold. A letter inviting the City to apply for Mainstream-Tier II funding will be sent separately.

If you have any questions regarding green project eligibility, please feel free to contact John Muras, Project Engineer, by phone at 512-463-1706 or by email at john.muras@twdb.texas.gov.

The TWDB appreciates the City's interest in the CWSRF program.

Sincerely,



Stacy L. Barna
Director of Program Development
Program & Policy Development

SB:rf

- Attachments:
1. Green Project Information Worksheets
 2. Green Project Cost Summary

Green Project Reserve

Green Project Information Worksheets

Clean Water State Revolving Plan

Intended Use Plan

The Federal Appropriation Law for the current fiscal year Clean Water and Drinking Water State Revolving Fund programs contains the Green Project Reserve (GPR) requirement. The following Green Project Information Worksheets have been developed to assist TWDB Staff in verifying eligibility of potential GPR projects.

TEXAS WATER DEVELOPMENT BOARD
CLEAN WATER STATE REVOLVING FUND (CWSRF)
GREEN PROJECT INFORMATION WORKSHEETS

PART I – GREEN PROJECT INFORMATION SUMMARY

Check all that apply and complete applicable worksheets:

Categorically Eligible

- Green Infrastructure \$ _____
- Water Efficiency \$ _____
- Energy Efficiency \$ 175,600.00
- Environmentally Innovative \$ _____

Business Case Eligible

- Green Infrastructure \$ _____
- Water Efficiency \$ _____
- Energy Efficiency \$ _____
- Environmentally Innovative \$ _____

Total Requested Green Amount \$ 251,918.00

Total Requested Funding Amount \$ 560,000.00

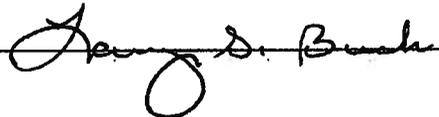
Type of Funding Requested:

- PAD (Planning, Acquisition, Design)
- C (Construction)

Completed by:

Name: Lanny S. Buck, P.E.

Title: Principal

Signature: 

Date: January 5, 2012

**TEXAS WATER DEVELOPMENT BOARD
CLEAN WATER STATE REVOLVING FUND (CWSRF)
GREEN PROJECT INFORMATION WORKSHEETS**

PART II - CATEGORICALLY ELIGIBLE

Complete this worksheet for projects being considered for the Green Project Reserve (GPR) as categorically eligible. Categorically eligible projects or project components are described in the following sections of the EPA GPR guidance (TWDB-0161):

Green Infrastructure	Part A, Section 1.2
Water Efficiency	Part A, Section 2.2
Energy Efficiency	Part A, Section 3.2
Environmentally Innovative	Part A, Section 4.2

Information provided on this worksheet should be of sufficient detail and should clearly demonstrate that the proposed improvements are consistent with EPA and TWDB GPR guidance for categorically eligible projects. Refer to **Information on Completing Worksheets** for additional information.

Section 1 – General Project Information

Applicant: City of Mt. Vernon, Texas PIF #: 9429

Project Name: 2012 Wastewater Treatment System Improvements Project

Contact Name: Eddie Turner

Contact Phone and e-mail: 903-537-2252; cityadm@comvtx.com

Total Project Cost: 560,000.00 Green Amount: 175,600.00
(Categorically Eligible)

Brief Overall Project Description:

The City of Mount Vernon, Texas is seeking funding for the planning, design, and construction of renovations to the existing Wastewater Treatment Plant (WWTP). The purpose of the project is to reduce energy consumption at the plant and to allow for a more efficient operation of the wastewater treatment plant. The proposed project will include installation of solar mixers which will be automated based on DO levels in the plant, installation of RAS/WAS flow meters, MLSS sensors, weir washers, scum removal arms and pump controls to improve plant operation efficiency.

Section 2 – Green Infrastructure

Certain green infrastructure improvements are considered categorically eligible for the GPR according to EPA GPR guidance (TWDB-0161) Part A, Section 1.2. List categorically eligible green infrastructure contained within the project in the table below. Also provide a detailed description of the categorically eligible green infrastructure improvements. The detailed description should provide sufficient detail that clearly demonstrates that the proposed improvements are consistent with EPA GPR guidance (TWDB-0161).

Green Infrastructure Description	Project / Component Cost

Detailed Description (attach additional pages if necessary):

Dissolved Oxygen (DO) probes and mixed liquor suspended solids (MLSS) probes will be installed into the oxidation ditch at the City’s wastewater treatment plant. The probes will monitor DO and MLSS to reduce power required for mixing as required to maintain optimum DO and MLSS in the oxidation ditch and reduce excessive mixing. Addition of solar powered mixers will further reduce energy required for mixing operations. Variable Frequency Drives will be installed on the existing aerators to allow for mixing and movement of wastewater in the oxidation ditch.

Additional work will include the addition of flow meters on the RAS and WAS lines in order to allow better operator control of the return and waste activated sludge; addition of weir washers for the clarifiers in order to allow the clarifier to operate as effectively as possible by reducing build up on the clarifier weirs and thus reducing the possibility of short circuiting; and reconditioning/replacement of scum removal arms in the clarifier to allow better scum removal from the clarifier.

Green amount associated with green infrastructure (categorically eligible): \$ 0.00

The addition of the solar mixers, monitoring equipment and variable frequency drives for the existing system is anticipated to reduce the speed of operation of the remaining two horizontal brush aerators to allow them to operate at approximately 70% of the existing horsepower requirement. Therefore, based on the anticipated parameters noted above, the cost of operation can be calculated as follows:
70% of the year 3 aerators at 15 Hp each or 45 Hp * .7457 = 33.56 kilowatts of power

Estimated that approximately 100% of the year, 2 aerators at will operate at 70% of 30 Hp * .7457 = 15.66 kilowatts of power per day

Cost of operation for 100% of year is $\$0.080/\text{kwh} * 15.66 \text{ kw} * 24 \text{ hours/day} = \$30.01/\text{day}$

Cost of operation per year estimated as $(\$30.01/\text{day} * 365 \text{ days/year} = \$10953.65/\text{year}$

Annual Power Savings estimated as $\$21,167.49 \text{ minus } \$10,953.65 = \$10,213.84/\text{year}$

Power Savings over the 20 year life of the improvements estimated as $\$10,200 * 20 = \$204,000.00$

Reduction in energy cost is estimated as $1 - \$10,213.84/\$21,167.49 = 52\%$ reduction in energy cost per year. Savings associated with elimination of 13.5 Hp per year is roughly the same cost as maintaining the solar mixers.

A copy of the Solar Bee system being proposed for use in the Mt. Vernon Wastewater Treatment Plant is included at the end of this form.

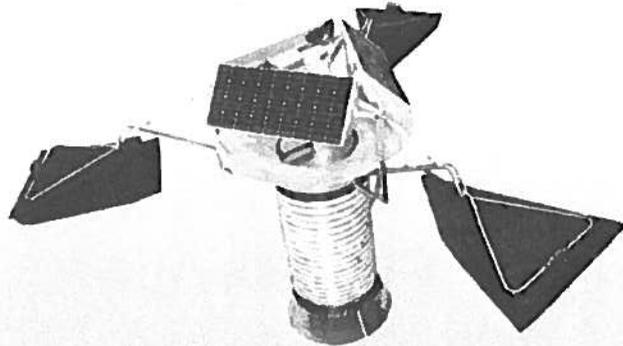


Bert Hibl - Regional Manager
303-955-7914 • Bert@SolarBee.com

Darren Tessier - Inside Sales
866-437-8076 • Darren@SolarBee.com

Proposal for:

City of Mt. Vernon, TX
c/o Bala Vairavan, P.E.
KSA Engineers, Inc.



February 25, 2011

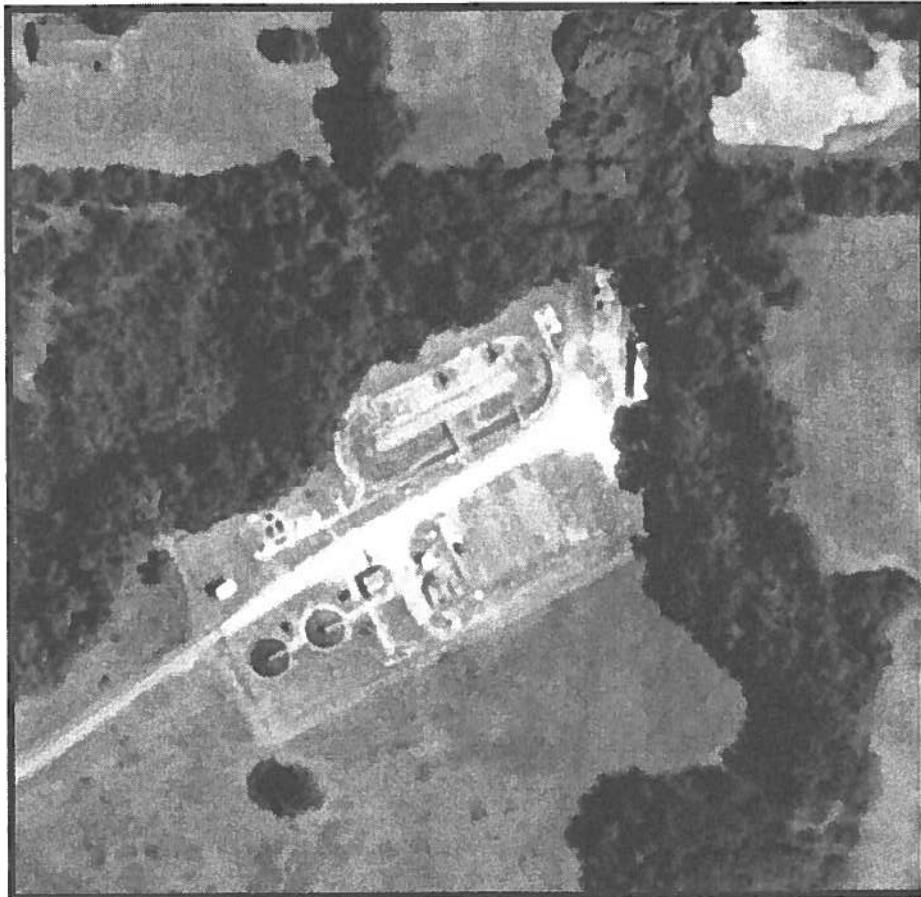


Photo of Mount Vernon WWTTP provided by Google Earth

3225 Highway 22 • Dickinson, ND 58601
Tel: (701) 225-4495 • Toll Free: (866) 437-8076 • Fax: (701) 225-0002
www.SolarBee.com

1.0 PROJECT DESCRIPTION

1.1 Facility Name:

Mount Vernon WWTP

1.2 Address or Location of Facility:

326 Kaufman Street, Mount Vernon, TX 75457 (GPS Coordinates: 33.193739°, -95.218938°)

1.3 Description of Facility:

This is an activated sludge system, utilizing a bar screen and grit chamber for preliminary screening, an oxidation ditch, and clarifier. The oxidation ditch covers 0.5 acres with a 0.05-acre median. The operating volume is about 785,000 gallons (104,900 cubic feet), and the operating depth is 6 feet. Currently, 75 hp of aeration are operated, but these brush aerators are antiquated and inefficient and, therefore, dissolved oxygen levels have been low. The inflow to the plant is higher than what would be typical for a population of this size due to infiltration problems.

1.4 SolarBee Objectives, the Problems to Solve:

Primary Objectives: To provide long-distance circulation in order to increase dissolved oxygen levels, to improve treatment, and to reduce electric grid-powered aeration usage and cost in the oxidation ditch.

1.5 Quantity and Model of SolarBees Recommended:

We recommend the installation of two (2) SB10000 v18 machines in the oxidation ditch. This recommendation is based on an influent flow rate of 485,000 gpd (to account for higher future flows), an influent BOD concentration of 200 mg/L, and an influent ammonia concentration of 50 mg/L. (See Appendix D - Assumptions section below.)

Note: although the SolarBees should displace 50 to 60 percent of the horsepower currently being operated, generally, by law, they cannot replace electric aeration. If the current aerators cannot be repaired, we recommend that permitting guidelines or officials be consulted to determine how much aeration needs to be installed to remain in compliance with state regulations. Our evaluation shows that approximately 30 hp are needed to meet the dissolved oxygen requirement and, at a mixing rate of 60 hp per million gallons, 47 hp are required for mixing (57 hp if a 20 percent redundancy is needed). The SolarBees, after a short transition period, should cover the full mixing requirement, leaving a need to operate about 30 hp. If the WWTP is permitted to do so, we recommend installing four (4) 15-hp aerators (Aire-O2 aspirators or brush aerators). If the horsepower requirement is higher per state regulations, then we recommend the installation of four (4) 20-hp aerators.

1.6 Placement of Machines:

Once it is determined whether the existing aerators are salvageable or if new aerators must be installed, then the placement of the SB10000 v18 machines can be discussed with KSA Engineers and the WWTP's staff.

2.0 INVESTMENT OPTIONS

2.1 Budget Estimate for the Recommended Machines:

Equipment Purchase (See Appendix A)			
Quantity	Description	Purchase Cost Each	Purchase Cost Total
2	SB10000 v18 machines per above:	\$45,500.00	\$91,000.00
Total Equipment Cost:			\$91,000.00
Applicable Taxes:			to be determined
2	Factory delivery, installation and startup:	\$6,500.00	\$13,000.00
Multiple unit delivery discount:		10%	(\$1,300.00)
Total Delivery, Installation, and Startup Cost:			\$11,700.00
Total Investment (excluding taxes):			\$102,700.00
Beekeeper cost of	\$2,568	per year for years 1 & 2 (see Appendix C):	- Optional -
Beekeeper cost of	\$6,162	per year for years 3, 4 & 5 (see Appendix C):	- Optional -

5-Year Lease-Purchase (See Appendix E)	
Cost for recommended machines per above:	- Included -
Factory delivery, installation and startup:	- Included -
Beekeeper cost for years 1 & 2 (see Appendix C):	- Included -
Beekeeper cost for years 3, 4 & 5 (see Appendix C):	- Included -
Total Monthly Lease Purchase Cost (excluding taxes):	\$2,375.00

Rental (See Appendix F)	
Monthly rental cost for recommended machines per above:	\$2,375.00
Monthly Beekeeper cost during the term of the rental:	- Included -
Factory delivery, installation and startup:	\$11,700.00

3.0 FINANCIAL ANALYSIS

The installation of SolarBee circulation equipment will provide a payback of about 4 years and a total savings of approximately \$975,000, when compared to maintaining the cost of operating the current amount of aeration horsepower. The following table provides the estimated costs, accounting for inflation, over the 25-year expected life of the SolarBee equipment.

Year	Annual Costs		Cumulative Costs		Difference
	Current System	System with SolarBee	Current System	System with SolarBee	
0	\$0	\$102,700	\$0	\$102,700	-\$102,700
1	\$45,000	\$19,500	\$45,000	\$122,200	-\$77,200
2	\$46,400	\$20,100	\$91,400	\$142,300	-\$50,900
3	\$47,800	\$20,700	\$139,200	\$163,000	-\$23,800
4	\$49,200	\$21,300	\$188,400	\$184,300	\$4,100
5	\$50,700	\$21,900	\$239,100	\$206,200	\$32,900
10	\$58,800	\$25,400	\$516,400	\$326,200	\$190,200
15	\$68,200	\$29,500	\$838,100	\$465,300	\$372,800
20	\$79,000	\$34,200	\$1,210,800	\$626,600	\$584,200
25	\$91,600	\$39,700	\$1,642,800	\$666,300	\$976,500

3.1 Cost Basis:

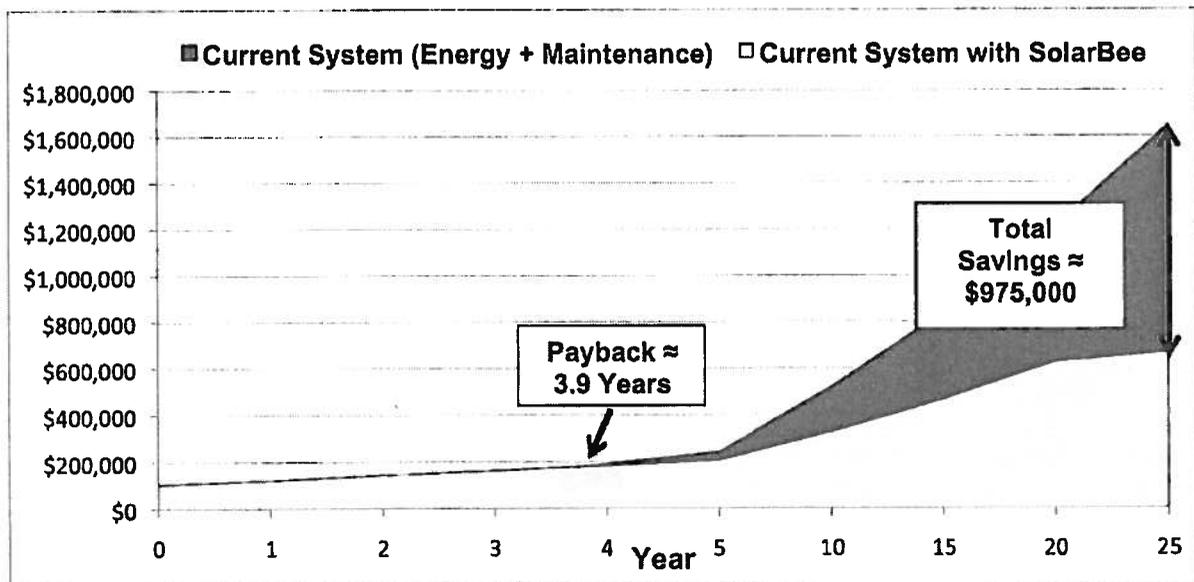
No SolarBee equipment installed, 75 hp of aeration equipment operating:

Electrical costs based on: operating a total of 75 hp of aeration equipment 24 hours per day for the next 25 years; an electricity cost of \$0.0591 per kWh (cost obtained from U.S. Energy Administration); and a demand cost of \$10/hp. Maintenance costs based on aeration maintenance cost of \$50 per hp per year. An inflation rate of 3% per year was applied. No costs were included for purchasing new aeration equipment.

SolarBee equipment installed and 30 hp of aeration equipment operating:

Cost to purchase two (2) SolarBee Model SB10000 v18 machines. Electrical costs based on: operating a total of 30 hp (reduction of 45 hp) of aeration equipment 24 hours per day for the next 25 years; an electricity cost of \$0.0591 per kWh; and a demand cost of \$10/hp. Maintenance costs based on: aeration maintenance cost of \$50 per hp per year and SolarBee maintenance cost of \$750 per machine per year. An inflation rate of 3% per year was applied. No costs were included for purchasing new aeration equipment.

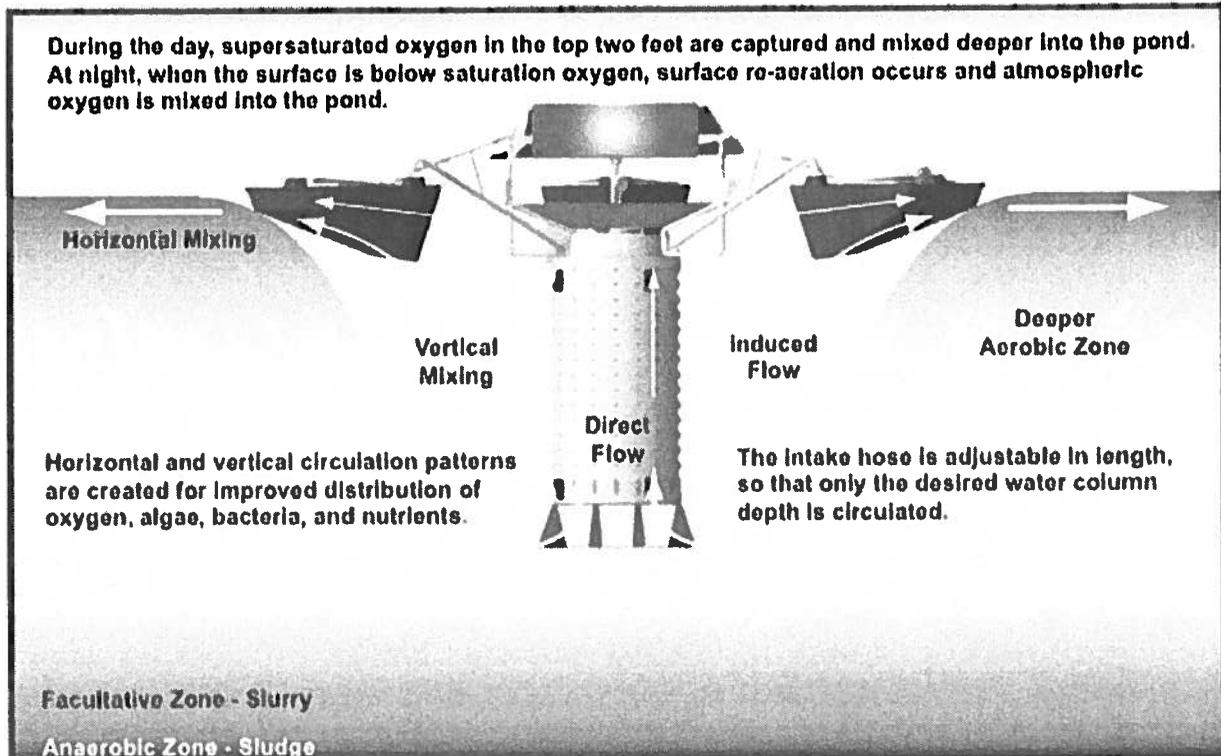
3.2 Cumulative Cost:



Appendix A: Equipment

SB10000 v18

The SB10000 v18 features 10,000 gpm (14.4 MGD) total flow leaving the machine, near-laminar flow output for long-distance circulation, 316-stainless steel and non-corrosion polymer construction, 25-year life high-efficiency brushless electric motor design that provides day and night operation with a solar-charged battery power system, digital control system for intelligent power management with factory programmed reverse functions and anti-jam routines specific to this application, SCADA outputs, three (3) 80-watt solar panels, 36" diameter intake hose, anchoring system and bird deterrent. See Appendix D - SolarBee Limited Replacement Warranty for information on the most extensive warranty in the industry.



Appendix B: Factory Delivery and Field Services

SolarBee, Inc. sends a factory trained Delivery & Field Services Team with specialized equipment to deliver, assemble, place, and start up your SolarBee machine(s). A training session on operation and maintenance is also provided for your personnel. Each Team member undergoes training such as Fall Protection, Confined Space Entry, Working Over Water, and Water Quality Testing.

As part of our standard operating procedures, the factory trained Delivery & Field Services Team will conduct vertical profiles with a YSI multi-parameter submersible probe, and at each test point measure dissolved oxygen, pH, temperature and specific conductance at every foot from the surface down to a depth of 25 feet, and at 5-foot intervals thereafter. A Secchi depth measurement will also be made at each test location. GPS coordinates are recorded for each machine and test point location.

Your water quality is our highest priority. Our commitment continues long after the Delivery & Field Services Team leaves your location and we strive to maintain contact with all our customers. Our Customer Service, Application Engineering, and Science Departments are available for any questions regarding machine operation and water quality.

Slurry and Sludge Pre-testing (Optional): In many wastewater systems, we have found that instead of the lagoon having, for instance, 6 feet of water as expected by the owner, the lagoon actually had 4 feet of slurry and sludge, and only 2 feet of water in some places. A SolarBee crew should evaluate the slurry and sludge levels - preferably before this quotation is accepted - unless there are current sludge testing results from other sources that can be provided. Please contact us for pricing.

Appendix C: Beekeeper Service Program

The Beekeeper is a program that utilizes factory crews to service and maintain proprietary designed equipment. The Beekeeper provides for more than just maintenance and service:

- It extends the warranty during the term of the Beekeeper
- It covers damage from Acts of God and vandalism
- It provides for power system upgrades and updates
- It provides hardware, firmware, and software for computer upgrades
- It provides scientific and technical support
- It provides for scheduled and unscheduled field service calls
- And much more, please request the Beekeeper brochure for more details.

Appendix D: General Provisions

This is a Budget Estimate, please call for a firm Quotation:

This budget estimate replaces all prior budget estimates for this project. It is valid until replaced by a subsequent budget estimate, or for 60 days, whichever occurs first.

Purchase of the SolarBee circulation equipment in this quotation is an "Equipment Purchase," not a "Construction Project":

SolarBee circulation equipment is portable, and can be easily relocated or removed entirely from the premises at any time. They do not become an integral part of any building or other structure, and never become part of "real estate". Therefore, to purchase SolarBee circulation equipment, the city or other organization purchasing SolarBees should use the same procedure as for purchasing other portable equipment, such as a forklift, a drill press, or an office desk. SolarBee reserves the right not to accept an order if the purchase is incorrectly characterized as a "construction" project. SolarBee, Inc. has not found any state or other jurisdiction where construction or contractor statutes apply to portable equipment that is sold by a factory, with on-site final assembly and startup performed by factory personnel.

Assumptions:

This quotation may be based on worksheets and calculations that have been provided to the customer, either previously or else attached to this quotation. The customer should bring to our attention any discrepancies in data used for these calculations.

SolarBee Limited Replacement Warranty:

All new and factory-refurbished SolarBee equipment is warranted to be free of defective parts, materials, and workmanship for a period of 2 years from the date of installation. In addition, the SolarBee brushless motor is warranted for a period of 10 years from the date of installation. Photovoltaic modules (solar panels) carry manufacturer warranties, some ranging up to 25 years (see manufacturer's warranty for details). This warranty is valid only for SolarBee equipment used in accordance with the owner's manual, and consistent with any initial and ongoing factory recommendations. This warranty is limited to the repair or replacement of defective components, at SolarBee's discretion. The first 2 years of the warranty also includes both parts and labor. In lieu of sending a factory service crew to the site for minor repairs, SolarBee, Inc. may choose to send the replacement parts to the owner postage-paid and, in some cases, may pay the owner a reasonable labor allowance to install the parts.

Except as stated above, SolarBee and its affiliates expressly disclaim any and all express or implied conditions, representations and warranties on products furnished hereunder, including without limitation all implied warranties of merchantability or fitness for a particular purpose.

Please consult your state law regarding this warranty as certain states may have legal provisions affecting the scope of this warranty.

Appendix E: Lease Provisions

Standard Agreement:

Pricing in the above quotation is based on 5 years, 60 monthly payments, and a \$0 down payment. For a quotation based on other terms, please call SolarBee, Inc., at 1-866-437-8076.

Non-Appropriation Provision:

Lessee's (borrower's) payment obligation will terminate if the lessee fails to appropriate in future budgets the funds needed to make the lease payments. Because of this non-appropriation provision, neither the lease nor the lease payments are considered debt, and payments can be made from the energy savings in your operating budget.

Maintenance of the Equipment:

Lessee is to provide minor routine care and maintenance of the Equipment as described in the owners manual. The Beekeeper Service Program (Beekeeper) is required, and is included in the cost shown above for the term of the lease. See above Appendix C for description of the Beekeeper.

Additional Lease Provisions:

If the lease-purchase option is selected, a master equipment lease-purchase agreement will be sent to the lessee that shall cover all terms and conditions of the lease.

Appendix F: Rental Provisions

Rental payment terms:

The installation day of the month is the anniversary day for determining when a new rental month begins. There are no partial months; if the equipment is in place on the first day of the rental month, a whole month of rental is due. Rental invoices will be provided each month and payment is due 30 days from the invoice date. The installation charge mentioned above will be added to the first month's rental invoice.

Rental period, month-to-month:

The rental period shall be for one month, beginning on the installation date, and shall continue automatically, for one month at a time beginning on each monthly anniversary of the installation date, until the longer of (a) 12 months, or (b) 90 days after written notice is received by SolarBee, Inc. from the renter to terminate the rental. Furthermore, SolarBee, Inc. has the right to terminate the rental agreement and re-possess the equipment at any time, without notice to the renter, if the renter becomes delinquent in rent payments.

Periodic rental cost adjustment:

The rental cost may be adjusted periodically by SolarBee, Inc. upon 90 day written advance notice to the renter, after the minimum rental period mentioned above. SolarBee, Inc. expects, but does not promise, to make such adjustments only once per year on the annual anniversary of the installation, and expects that adjustments will be limited to reflect (a) a general inflationary adjustment equal to the Consumer Price Index, and (b) any additional costs by the factory associated with keeping the rental equipment functioning properly and meeting the renter's goals for the project. The renter, at its option as mentioned above, may cancel the rental agreement with 90 day notice if the proposed new rental costs are ever not acceptable.

Rental conversion to purchase:

The renter may convert this rental to a purchase, at the price shown in the Equipment Purchase section above. To convert this rental to a purchase, the renter should request SolarBee Inc, at least 60 days before the desired purchase date, to supply a firm quotation to convert the rental to a purchase. When conversion to a purchase is made, 50% of prior rents paid will be applied to the purchase price, up to a maximum of 50% of the equipment purchase price. Title to the rental equipment does not pass to the renter unless and until payment of all outstanding rental invoices, and the conversion purchase price for the equipment, is received by the SolarBee, Inc.

Rental Equipment Availability:

SolarBee, Inc. has a limited supply of rental machines available; either new or slightly used or "demonstrator" equipment may be installed at the factory's option. If the equipment installed for a rental is slightly used, then the factory warrants that: (1) the equipment is clean, current, and in like-new condition with a full new-equipment warranty, and (2) the equipment is equivalent to new equipment with the very latest technology and improvements. Also note that SCADA or other remote monitoring options may have been included in the purchase cost in Section 2 above, but these components are not included with rental equipment. If a rental is desired, the SCADA remote monitoring equipment would be installed only after the equipment had been converted to a purchase, unless other provisions have been made.

Maintenance of the Equipment.

Renter is to provide minor routine care and maintenance of the Equipment as described in the owners manual. The Beekeeper Service Program (Beekeeper) is required and is included in the cost shown above for the term of the rental. See above Appendix C for description of the Beekeeper.

CITY OF MOUNT VERNON PIF #8429				
WASTEWATER TREATMENT PLANT IMPROVEMENTS				
PROJECT BUDGET				
Uses	Total TWDB Cost	Non-Green Component	Green Component	Total Cost
Construction				
Construction	\$347,804	\$172,204	\$175,600	\$347,804
Subtotal Construction Fees	\$347,804	\$172,204	\$175,600	\$347,804
Basic Engineering Fees				
Planning, Preliminary Engineering Report	\$7,500	\$5,150	\$2,350	\$7,500
Design	\$26,625	\$18,283	\$8,342	\$26,625
Construction Engineering	\$8,875	\$6,094	\$2,781	\$8,875
Basic Engineering Other **				\$0
Subtotal Basic Engineering Fees	\$43,000	\$29,527	\$13,473	\$43,000
Special Services				
Application				\$0
Environmental Report	\$7,500	\$7,500		\$7,500
Design Phase Surveying	\$6,500	\$4,463	\$2,037	\$6,500
Construction Phase Surveying	\$2,500	\$1,717	\$783	\$2,500
Testing	\$6,000	\$6,000	\$0	\$6,000
Permits (TxDOT & Railroad)	\$0			\$0
Inspection	\$57,200	\$39,296	\$17,904	\$57,200
Operation & Maintenance Manual	\$4,500	\$0	\$4,500	\$4,500
Miscellaneous Postage, Mileage, Printing	\$4,500	\$3,090	\$1,410	\$4,500
Subtotal Special Services	\$88,700	\$62,066	\$26,634	\$88,700
Other				
Administration				\$0
Land/Easements Acquisition	\$0			\$0
Water Rights Purchase (If Applicable)				\$0
Capacity Buy-In (If Applicable)				\$0
Project Legal Expenses				\$0
Subtotal Other Services	\$0	\$0	\$0	\$0
Fiscal Services				
Financial Advisor	\$20,868	\$14,329	\$6,539	\$20,868
Bond Counsel	\$0		\$9,388	\$0
Issuance Cost	\$0			\$0
Bond Insurance/Surety	N/A	N/A	N/A	N/A
Fiscal/Legal				\$0
Capitalized Interest				\$0
Bond Reserve Fund			\$4,576	\$0
Loan Origination Fee	\$10,183	\$6,992	\$3,191	\$10,183
Subtotal Fiscal Services	\$31,051	\$21,321	\$9,730	\$31,051
Contingency				
Contingency	\$49,445	\$33,969	\$15,476	\$49,445
Subtotal Contingency	\$49,445	\$33,969	\$15,476	\$49,445
TOTAL COSTS	\$560,000	\$319,087	\$240,913	\$560,000

\$22,248
\$251,918

Per Engineer's email



Lanny S. Buck
2/5/12