Request for Proposal

Antigo Springbrook Wastewater Treatment Plant (WWTP)

N2420 Koszarek Rd, Antigo, WI 54409

2024 Solar Project

Release Date:	Friday, August 4, 2023
Site Visit Date*:	Thursday, August 10, 2023 (1:00pm)
Proposal Due Date:	Wednesday, September 6, 2023 (1:00pm)

*Full *timeline on next page*

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Contact Information:
To inquire, please contact one of the appointed representatives listed below.

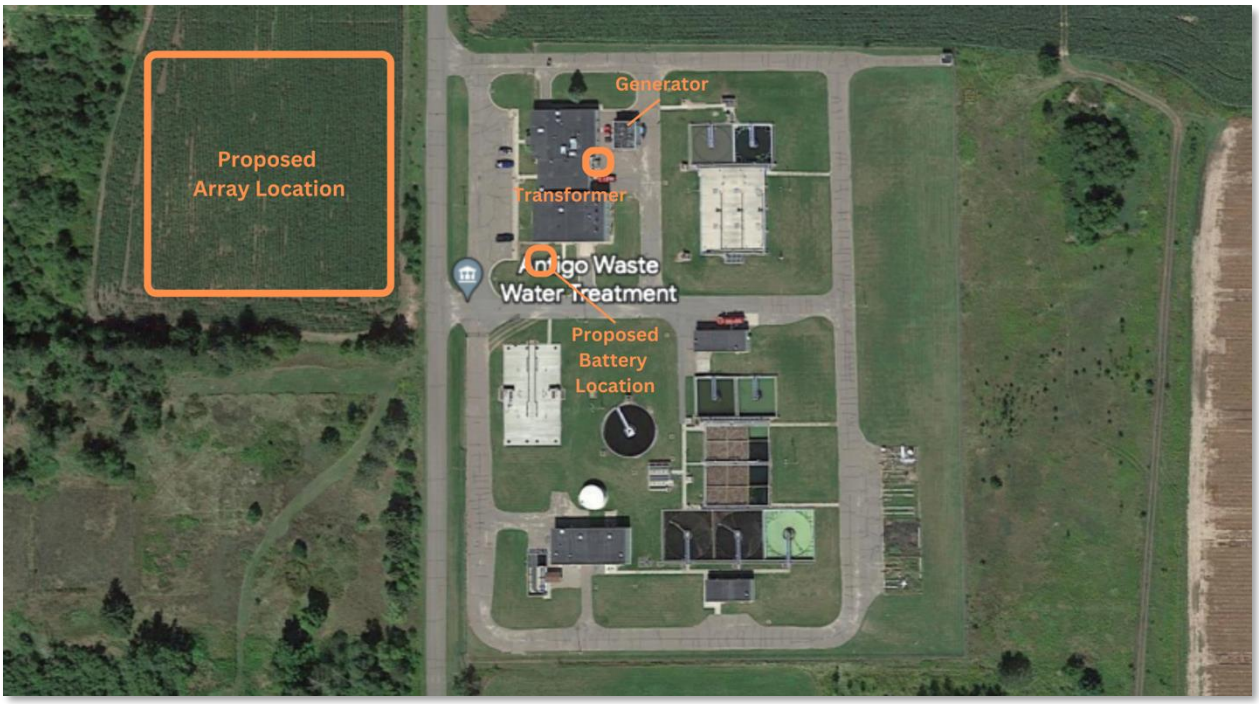
- Primary contacts
    - Tony Hartmann, Legacy Solar Co-op; (tony@legacysolarcoop.org; 608-215-4446)
    - Peter Fiala, Legacy Solar Co-op; (peter@legacysolarcoop.org; 608-443-7820)
- Site contacts
    - Terry Kubiaczyk, Assistant Building Inspector, City of Antigo (tkubiaczyk@antigo-city.org; 715-623-3633 ext. 120)
    - Tommy Horswill, Senior Project Manager, Infrastructure Alternatives, Inc (Contracted by City of Antigo) (thorswill@iaiwater.com; (715-216-6243)

Note: *The City of Antigo reserves the right to modify this RFP and send out amendments as needed, including expanding or contracting the scope of this project to fit optimal value parameters.*

1. Introduction

The **City of Antigo** has approved moving forward with this RFP document as a framework for adding onsite solar electric and battery storage to its Springbrook Wastewater Treatment Plant (WWTP). The time is right to move forward with this project given a PSC Energy Innovation Grant received in 2023 and newly available incentives through the Inflation Reduction Act (IRA). The City is anticipated to receive a 30% Direct Pay and may be eligible for additional incentives. LSC and vendors will advise the City on information available from the Department of the Treasury.

The City plans to sign a vendor contract after the review and approval of the vendor recommendation from the Public Works Department at the Wednesday, October 11 City Council meeting. Once the contract is approved, the chosen engineering, procurement, and construction firm (vendor) for this project will begin construction at a mutually agreed upon time in approximately the 1st quarter of 2024 and after final approval by City Council.



2. RFP Process

Legacy Solar Co-op and City of Antigo staff will review the submitted proposals and choose the best value proposition, or otherwise conform to any bidding requirements that may apply, including the 'lowest responsible bidder'. An installer will be announced according to the timeline below and will be contracted directly by the City of Antigo. **All project and RFP information, including a Schedule of Values document is available in this Google Drive folder.**

3. Site Background

Site Details

The WWTP, located at N2420 Koszarek Rd, Antigo, WI 54409, is an extended air, activated sludge facility that mainly serves the citizens of the City of Antigo. Infrastructure Alternatives, Inc. (IAI) of Rockford, Michigan has been the City's water and wastewater operation consultant and a valuable partner for 21

years, assisting Antigo with WWTP control system improvements and energy efficiency upgrades. They will be a valued partner in planning for ideal solar PV and battery placement onsite.

The City is planning to reduce its energy consumption from the local grid (WPS) and corresponding utility demand charges by installing a ground-mounted, 350 kW (DC) solar array with 125 kW battery energy storage system (BESS) at the location identified above. More information on the battery system is found below.

The WWTP sits on a little over 12 acres and is surrounded by City property. After considering all options, the City has identified a 2-acre section of currently farmed land directly west of Koszarek Road as the ideal location for a ground-mounted solar array. This plot has ample space for the array to be placed in a location that maintains contiguous farmed land, exists far enough from existing tree lines, and considers the distance from where high-speed snowplows deposit snow. If needed, the City is willing to take down trees to the west and south of this parcel of land. The City is working on rezoning the parcel from residential to industrial. Additionally, the City does not see boring underneath Koszarek Road as a barrier and frequently works with Langlade County on such projects. See images of this location and site diagrams in the **Google Drive folder**.

The best opportunity for residents and visitors to interact with the solar array will be through an educational kiosk planned for the Antigo/Langlade County Welcome Center. The Welcome Center receives some of the highest resident and visitor traffic in the area making it a prime location to showcase Antigo's solar efforts. The successful bidder will need to work with the City to connect system monitoring to this display.

Utility Information
The WWTP uses around 1,500,000 kWh/year, ranging between 110,000 and 145,000 kWh/month. The meter is billed at the CP billing rate (Large Commercial & Industrial Interruptible). Peak demand has been highest in April and May, ranging between 470 and 500 kW; base demands range between 190 and 380 kW. Interval data from 2022 and billing information can be found in the **Google Drive folder**.

4. Project Specifications

Scope of the project: Based on the WWTP's load and interval data, we are asking for installers to submit two proposals based on the following specifications:

1.) A proposal with the specifications below using vendor's proposed equipment to meet project needs and
2.) An additional proposal incorporating Inflation Reduction Act ***Domestic Content*** requirements.

These proposals should include the following project specifications:

a) A ground-mounted array of approximately 350 kW (DC), with a minimum 480,000 kWh of annual production, with panels placed in approximately 2 acres of currently farmed land directly to west of the WWTP, on the west side of Koszarek Road, with battery specification as listed below. Vendors should strive to be as close to this size as possible, with deviations from these specifications being acceptable to conform to appropriate equipment selection (i.e., AC vs DC ratio for chosen inverters) or to accommodate the discrete specs of available technology.

b) A 125 kW battery (BESS) located directly to the south of the WWTP building (identified in the **Google Drive folder**) to serve as primary backup -- before utilizing the plant's existing 625 kW, Cummins diesel generator.[1]

Electrical System: The installer will be responsible for all applicable PV and storage components, including solar modules, battery, inverters, conduit, racking system and balance of system.

a) There is a 3000-amp supply to the WWTP (all in the electrical room, all 277/480V 3-phase, 4-wire), split into panels as follows;
    i. 1600-amps;
    ii. 800-amps and;
    iii. 600-amps.
b) A 1200-amp automatic transfer switch connected to the 625 kW Cummins diesel generator, housed to the east of the Maintenance Building.
c) The electrical feed comes into the building from the Howard Industries transformer located directly to the east of the Maintenance Building on a concrete pad. The transformer is a 750 KVA, 24.9/14.4 KV, 480Y/277V.
d) The 625 kW diesel Cummins generator is housed directly to the east of the Maintenance Building in its own small building.

Electrical room photos and loads can be seen in the **Google Drive folder**.

Equipment: Proposals should include the vendor's best, cost-effective selection of equipment for the project for each proposal, along with any recommended alternatives and associated price deduction(s).

a) This project is made possible by a PSC Energy Innovation Grant, which consists of 2009 American Recovery and Reinvestment Act (ARRA) funds. Per the Federal grant requirements, proposals must comply with the Davis Bacon Act (prevailing wage). More information on prevailing wages in Langlade County can be found by visiting the SAM.gov Wage Determination page.
b) Please include pricing information for the maximum inverter warranty extension (20 or 25 years) in the **Schedule of Values**. Vendors should present figures based on what they believe to be correct at the time of submittal.

The vendor will also:

a) Comply with the Buy American Provision per PSC Energy Innovation Grant guidelines (See A Desk Guide to Buy American Provisions of the American Recovery and Reinvestment Act of 2009 (energy.gov) for more information).
b) Adhere to utility, local, state, and national code compliance for appropriate selection and implementation of equipment and will facilitate the interconnection agreement with Alliant Energy.
c) Agree to work with the City of Antigo to prevent or remedy any potential power factor issues that may arise with the interconnection of the PV and battery with the local distribution system.
d) Protect the grounds and buildings during the installation.
e) Provide a workmanship warranty to cover usual and customary items, covering at least 5 years
f) Complete project within 12 months of contract signing.

[1] See generator specifics in Google Drive shared folder for current operating specifics

5. Battery Energy Storage System (BESS)

The WWTP currently relies on backup from a 25-year-old, 625 kW, Cummins diesel generator. By adding solar, BESS and BESS programming to increase the sophistication of the current transfer switch, the existing system will gain from both redundancy and capacity. When operating off-grid, the system will prioritize the most important circuits at the facility in order to operate on the cleanest (newest) source of power while extending the period of off-grid plant operation for days at a time (year-round, and weeks at a time in the summer months). It will also extend the life of the current back-up generator. The plant is already outfitted with basic islanding technology such that power from the diesel generator will not back feed onto the local distribution grid in the event of a grid outage.

Multiple demand spikes occur across several hours in the daytime and are attributed to underground backwash sequence pumps. These pumps operate about 15 times per month and demand between 245-297 kW, and a 140-190 kW constant demand (see interval data in **Google Drive folder**). Incorporating a BESS will also reduce demand charges for the City, adding to the savings generated by the array.

The battery specified for this project should provide a minimum of 125 kWh (or approved equivalent) when fully charged. By incorporating a BESS, the facility should safely and operate off-grid for at least 3 days. With future IT/SCADA investment, the goal is for the system to become a full microgrid capable of operating for minimum 10 days non-stop.

The City has identified the most suitable location of the BESS and concrete pad outside below the southwest of the Maintenance Building inside the fenced in area (see image above). By not requiring an indoor BESS location, permitting and fire prevention costs are reduced significantly.

Emergency preparedness and shelter-in-place procedures are already part of Antigo's resiliency programs. Having innovative on-site power generation and storage will increase Antigo's ability to recover quickly in the event of catastrophe or natural disaster.

6. Required Documentation with Proposal

a) Summary Proposal

This can be a narrative description. Please fill out the **Schedule of Values** document provided with the breakdown of cost for each proposal. Vendors should present figures based on what they believe to be correct at the time of submittal.

b) Specific Proposal Details

The description should include the following information:

1) PV scope in DC and AC given the make/model of specified modules
2) PV inverter/s make and model with cut sheet, including information pertaining to warranty extension cost from base (10 or 12 or 15) to 20+ years
3) Racking make and model with cut sheet
4) Proposed battery option for a total of a minimum of a 125 kW output
5) Expected generation from PV from the proposed solar array size, including:
    a. Monthly kWh listed
    b. Reference source/s for generation data
6) PV (all in) cost should include the turn-key costs of all permitting, procurement, engineering, construction, commissioning, and Legacy Solar Co-op 5% administration

fee (to be considered part of vendor's overhead). See **Schedule of Values** Excel doc in shared **Google Drive folder**.

7) Breakdown of payment schedule. Please note: The City is willing to put down 10% of the project toward initial costs.

c) Supporting Documentation Required[2]

The following information should be provided for completeness of proposal:

1) Spec sheets for chosen modules, inverters, racking, attachments, and battery
2) Warranty information for each major class of equipment
3) PV estimated production calculations for each site (PV-Watts, Helioscope, or other)
4) Indicate siting layout and proposed trenching / boring route (generally)
5) At least 2 customer references for PV work history

7. Contracting Requirements

If chosen, City of Antigo will require evidence of City of Antigo insurance requirements listed in **Attachment A** at the end of this document.

By the contract date, vendor shall procure and maintain the minimum insurance coverage and limits of liability as designated in the contract and provide certificates of coverage at contract signing.

8. Supporting Documentation for RFP

The Google Drive folder for this project contains the following. If you are unable to access the folder, please email Peter Fiala at peter@legacysolarcoop.org.

a) Onsite photos and Google Earth imagery
b) WPS Electric Bills and interval data
c) Electrical room photos
d) City insurance and legal requirements

9. Timeline

The timeline for this project is indicated below, with the City of Antigo maintaining the right to adjust these dates and/or activities with notice to participating Vendors as appropriate.

Friday, Aug 4th	Release of request for proposal to qualified vendors
Thursday, Aug 10th (1:00pm)	Site tour
Tuesday, Aug 22nd (10:00am)	Zoom Q&A
Wednesday, Sept 6th (1:00pm)	Vendor proposals should be submitted to installer designated Dropbox folder *(sent by invitation)*
Wednesday, Oct 11th	Selection of vendor to be announced *(pending final City Council approval)*
October	Finalize installation contracts & contracts signing and agreed upon payment schedule
Q1 2024	Anticipated Installation

[2] Any proposal that is missing any major class of information will be required to submit within 36 hours of being notified of its absence by City of Antigo staff.

Attachment A

Insurance Requirements for the City of Antigo

1) **Insurance.** The Contractor shall not commence work under this contract until he/she has obtained all insurance required under this agreement and such insurance has been approved by the City. Nor shall the Contractor allow any subcontractor to commence work on a subcontract until all similar insurance required of the subcontractor has been so obtained and approved.

Worker's Compensation and Employer's Liability:	Statutory
General Liability:	
Bodily Injury, including death	$1,000,000 each person $ l,000,000 each occurrence
Property Damage	$1,000,000 each occurrence
Or Combined Single Limit	$1,000,000 each occurrence
Independent Contractor's (if applicable) (contingent liability):	
Bodily Injury, including death	$1,000,000 each person $l,000,000 each occurrence
Property Damage	$1,000,000 each occurrence
Automobile Liability:	
Bodily Injury, including death	$1,000,000 each person $1,000,000 each occurrence
Property Damage	$1,000,000 each occurrence
Professional Liability (if applicable)	$ 1,000,000 indicating if claims made type of policy
Performance and Payment Bond (if applicable)	Contract Amount

An umbrella policy of $1,000,000 may be used to satisfy the above requirements.
Insurance Requirements continued

Additional Insured:
The City of Antigo must be named as an additional insured with the following format:
City of Antigo
700 Edison Street
Antigo, WI 54409

Endorsement: A copy of the endorsement must be forwarded to the City Clerk-Treasurer's Office. No insurance shall be canceled without notifying the City in writing thirty (30) days prior to cancellation.

2) **Proof of Insurance.** The Contractor shall furnish the City with proof of insurance which shall consist of a certificate of insurance.

3) **Performance/Payment Bond.** The City may require a Performance Bond and Payment Bond in an amount of the estimated work to be completed for the faithful performance of this contract and for the payment of all persons performing labor and furnishing materials in connection with this contract.

4) **Hold Harmless.** Contractor hereby agrees to defend, indemnify, and hold harmless City of Antigo (including Antigo Public Library), its officers, agents, and employees from and against any and all claims, demands, causes of action, suits, and costs in any way connected with Contractor's performance of work related to this contract.