



# *GREEN LAKE COUNTY*

*571 County Road A, Green Lake, WI 54941*

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**Original Post Date: 6/12/2026**

**Amended Post Date:**

**The following documents are included in the packet for the Special Finance & Insurance Committee Meeting on June 16<sup>th</sup>, 2026:**

- 1) Agenda
- 2) Bids for solar project
- 3) Budgetary Adjustment
  - Solar Project



# GREEN LAKE COUNTY OFFICE OF THE COUNTY CLERK

Samantha Stobbe  
County Clerk

Office: 920-294-4005  
FAX: 920-294-4009

## Special Finance & Insurance Committee Meeting Notice

**Date: Tuesday June 16<sup>th</sup>, 2026 Time: 4:00 PM**  
**The Green Lake County Government Center, County Board Room**  
**571 County Road A, Green Lake WI**

### AGENDA

#### **Finance & Insurance Committee Members**

*Harley Reabe - Chair*  
*Donald Lenz*  
*Dennis Mulder*  
*Robert Grim*  
*Brian Floeter - Vice  
Chair*

*Samantha Stobbe,  
Secretary*

Virtual attendance at meetings is optional. If technical difficulties arise, there may be instances when remote access may be compromised. If there is a quorum attending in person, the meeting will proceed as scheduled.

This agenda gives notice of a meeting of the Finance Committee. It is possible that individual members of other governing bodies of Green Lake County government may attend this meeting for informative purposes. Members of the Green Lake County Board of Supervisors or its committees may be present for informative purposes but will not take any formal action. A majority or a negative quorum of the members of the Green Lake County Board of Supervisors and/or any of its committees may be present at this meeting. See State ex rel. Badke v. Vill. Bd. of Vill. of Greendale, 173 Wis.2d 553, 578, 494 N.W. 2d 408 (1993).

1. Call to Order
2. Certification of Open Meeting Law
3. Pledge of Allegiance
4. Discussion and Possible Action on Bids for Solar Project
5. Budget Adjustment
  - Solar Project
6. Committee Discussion
  - Future Meeting Dates: June 24<sup>th</sup>, 2026
  - Future Agenda items for action & discussion
7. Adjourn

### **Microsoft Teams meeting**

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Please accept at your earliest convenience. Thank you!

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Kindly arrange to be present, if unable to do so, please notify our office.  
Samantha Stobbe, County Clerk

**Please note: Meeting area is accessible to the physically disabled. Anyone planning to attend who needs visual or audio assistance, should contact the County Clerk's Office, 294-4005, not later than 3 days before date of the meeting.**

**From:** [Van Meel, Michael](#)  
**To:** [Stobbe, Samantha](#)  
**Subject:** Solar Array Project Recommendation  
**Date:** Friday, June 12, 2026 3:52:26 PM  
**Attachments:** [Outlook-w3ezq45k.png](#)

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Hello all staff and members,

I realize there is a lot of information with the number of bidders for the Solar Project and the complex nature of this type of undertaking. I wanted to add just a few words to hopefully clarify some of the information and help you to navigate through it. The lowest dollar amount isn't the only consideration with a project like this because there are many variables that one needs to consider and I believe it's very important to compare apples to apples at least as much as possible. In the (RFB) that I sent out and was advertised, I clearly indicated that a site visit was required so vendors all had equal chance to get a complete picture of the electrical system here at the Justice Center as well as the site and construction needs. The vendor "IKIO" did not follow this instruction, nor was there any correspondence with the possible exception of a phone call (I don't remember) had I heard from them prior to their bid arriving on Friday morning. Also indicate in the (RFB) was a system that would offset approximately 50% of our electrical usage, most complied well with this except "Arch Solar" that estimates theirs to be 33.4%, this makes them a strong contender but not automatically the lowest bid by comparison to those who's system proposes to offset approximately 50%. Based on these ideas and the many calls, emails, and the site visits the two front runners I would recommend are: "Northwind Solar" and "Midwest Solar" I will be happy to discuss this further after each of you have had time to look this information over when we meet on the 16th. Thank you for your time and consideration on this project.

Michael J Van Meel

Maintenance & Parks Supervisor  
Green Lake County  
571 CTH A  
Green Lake, WI 54941  
920-229-5119 Cell  
920-294-4012 Office

 [Book time to meet with me](#)

**From:** [Van Meel, Michael](#)  
**To:** [Stobbe, Samantha](#)  
**Subject:** Fw: RFP Response - Green Lake County Justice Center Solar Project - Bid 4  
**Date:** Friday, June 12, 2026 1:02:20 PM  
**Attachments:** [image001.png](#)  
[Arch Solar C&I Response.pdf](#)

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**From:** Harlan Ward <harlan@archsolar.com>  
**Sent:** Friday, June 12, 2026 10:51 AM  
**To:** Van Meel, Michael <mvanmeel@greenlakecountywi.gov>  
**Subject:** RFP Response - Green Lake County Justice Center Solar Project

[CAUTION: EXTERNAL SENDER This email originated from outside Green Lake County. Do not click links or open attachments unless you recognize the sender and know the content is safe.]

Please find our attached response to **Request For Bid (RFB) 05-2026**. All listed Attachments and Exhibits in our Response can be viewed and downloaded at the following link:

[mvanmeel@greenlakecountywi.gov](mailto:mvanmeel@greenlakecountywi.gov)

In response to the questions in the RFB documents...

Arch Solar C&I recognizes that successful solar projects depend on clear communication, proactive project management, and a collaborative approach throughout the project lifecycle. Upon award, a dedicated Project Manager will be assigned as the primary point of contact and will coordinate all aspects of project development, engineering, permitting, procurement, construction, commissioning, and closeout. Regular project updates will be provided through scheduled meetings, progress reports, and email communications to ensure all stakeholders remain informed of project status, upcoming milestones, and any issues requiring attention. Our team emphasizes transparency and responsiveness, allowing potential concerns to be identified and addressed early to minimize impacts to schedule and budget.

For a project of this scope, the typical timeline from notice to proceed through commissioning is approximately **3 to 4 months**, depending on permitting requirements, utility interconnection review timelines, equipment lead times, weather conditions, and site-specific factors. Based on our review of the project requirements, we anticipate completing engineering, permitting, procurement, construction, commissioning, and utility approval within this general timeframe. Upon selection, Arch Solar C&I will develop a detailed project schedule identifying key milestones and critical path activities. **Final interconnection of the solar PV system will require an estimated 3–4 hour facility power outage.** Arch Solar C&I will coordinate closely with County staff to schedule this work at least two weeks in advance and will make every effort to perform the outage during a time that minimizes operational impacts.

Arch Solar C&I offers ongoing operations and maintenance (O&M) services to help maximize

system performance and ensure long-term reliability. Our O&M offerings can include remote system monitoring, performance analysis, warranty support, preventive maintenance inspections, troubleshooting, corrective maintenance, vegetation management for ground-mounted systems, and annual reporting. Standard workmanship warranties and manufacturer equipment warranties are included with the project, and customized O&M service agreements are available to meet the Owner's long-term operational objectives. For all projects, Arch Solar C&I includes O&M services for the first year after the system has been installed.

While every effort is made during project development to identify site conditions and project requirements, unforeseen conditions can occasionally arise during construction. Arch Solar C&I manages change orders through a structured and transparent process. Any condition that may affect project scope, schedule, or cost will be documented and promptly communicated to the Owner. We will provide a written description of the issue, proposed solution, schedule impacts, and associated costs for review and approval before proceeding with any additional work. Our objective is to minimize disruptions, maintain project momentum, and ensure the Owner remains fully informed throughout the decision-making process.

Feel free to reach out if you have any questions or need further information.

Shine Bright,

**Harlan Ward – Senior Business Developer**

OSHA 30, CEM 24008, FAA Pilot #: 5177624

**Arch Solar C&I** | [www.archelec.com](http://www.archelec.com)

Phone: (608) 206-6006 | Email: [harlan@archsolar.com](mailto:harlan@archsolar.com)



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# PROPOSAL RESPONSE

## Green Lake County Justice Center

### Solar Photovoltaic Project



#### **Arch Solar's Mission:**

To educate, inspire, and empower current and future generations to choose a clean, sustainable form of energy.



THE SOLAR + ENERGY STORAGE EXPERTS



June 11, 2026

Green Lake County/Maintenance Dept.  
c/o; Mike Van Meel  
[mvanmeel@greenlakecountywi.gov](mailto:mvanmeel@greenlakecountywi.gov)

**Re: Green Lake County Justice Center Solar Project**

On behalf of Arch Solar C&I, we are pleased to submit our proposal and appreciate the opportunity to partner with Green Lake County and the Maintenance Department for the design, procurement, installation, commissioning, and interconnection of a turnkey ground-mounted solar photovoltaic (PV) system at the Green Lake County Justice Center located at 571 County Road A, Green Lake, Wisconsin.

We have thoroughly reviewed RFB 05-2026, evaluated the project site, and examined the existing electrical and building infrastructure. Based on our assessment, we are confident in our ability to deliver a high-quality solar energy solution that aligns with the County's operational, financial, and sustainability objectives.

Arch Solar C&I brings a proven history of successfully delivering solar energy projects throughout Wisconsin and the Midwest. Our Plymouth and Milwaukee offices are staffed by more than thirty energy professionals, including twenty-two team members who hold NABCEP Associate, PV Technical Sales, PV Design Specialist, or PV Installation Professional certifications. This depth of expertise enables us to provide comprehensive in-house project development, engineering, procurement, construction, commissioning, and long-term service support.

Since 2003, the Arch family of companies has been dedicated to advancing renewable energy solutions for municipalities, counties, schools, utilities, commercial businesses, and industrial facilities. To date, Arch has deployed more than 776.6 kW of solar PV systems for municipal and local government clients and over 200 MW of solar capacity for commercial and industrial customers. This experience reflects both our commitment to Wisconsin communities and our ability to successfully execute projects of varying sizes and complexities.

We are committed to delivering a safe, dependable, and high-performing solar PV system that will provide Green Lake County with long-term energy savings and environmental benefits. We look forward to the opportunity to establish a lasting partnership and contribute to the County's sustainability initiatives.

Thank you for your consideration of our proposal. We appreciate the opportunity to serve Green Lake County and look forward to collaborating with you on this important project.

Sincerely,

A handwritten signature in blue ink, appearing to read "Harlan D. Ward".

Harlan D. Ward, CEM, LEED Green Associate, OSHA 30 | C&I Solar Senior Business Developer  
(608) 206-6006 | [harlan@archsolar.com](mailto:harlan@archsolar.com)

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[Part I Table of Content](#)

Part II - EXECUTIVE SUMMARY .....	6
Proposed System Design .....	7
Major Equipment.....	8
Solar Offset .....	9
Financial Rewards .....	23
Non-Financial Elements .....	23
Project Financial Summary .....	24
Cost Options .....	24
Part III – COMPANY PROFILE .....	27
Company Overview.....	27
Lead Personnel .....	29
Main Point of Contact.....	30
Who We Work With .....	31
Portfolio .....	32
References .....	33
Litigation .....	33
Part IV - TECHNICAL QUALIFICATIONS.....	35
Equipment Selection.....	35
Installation Approach .....	35
Energy Prediction Documentation .....	36
Energy Savings Calculations.....	37
Performance Assurance & Project Guarantees .....	37
PV Monitoring and Metering.....	38
Automated Alerts .....	38
Reporting .....	38
Operation/Maintenance & Training .....	38
Code and Standards Compliance .....	40
Timeline/Schedule .....	41
Conceptual Drawings/Site Plan .....	41
Interconnection Process .....	42
Equipment Datasheets .....	42
Part V EMERGING AND DISADVANTAGE BUSINESS PARTICIPATION.....	44
Women-Owned Business Enterprise (WBE).....	44
Diversity and Inclusion.....	44

Plan for Diversity and Inclusion .....	45
Part VI PROJECT PROPOSAL .....	47
Approach .....	47
Basis of Design .....	47
Financial Modeling Reports .....	47

APPENDICES

- EXHIBIT A: HELIOSCOPE PRODUCTION AND SHADING REPORT
- EXHIBIT B: STATEMENT OF WORK
- EXHIBIT C: ARCH C&I PROPOSAL
- EXHIBIT D: SYSTEM SOILING LOSS

ATTACHMENTS

- ATTACHMENT A – MODULE DATASHEET
- ATTACHMENT B – INVERTER DATASHEET
- ATTACHMENT C – POWER OPTIMIZER DATASHEET
- ATTACHMENT D - RACKING SYSTEM BROCHURE
- ATTACHMENT E – SYSTEM SOILING LOSSES
- ATTACHMENT F – RESUME OF POINT OF CONTACT
- ATTACHMENT G – PAST PROJECT LIST
- ATTACHMENT H – CASE STUDIES
- ATTACHMENT I – SAMPLE SAVINGS CONTRACT OBLIGATION

**Cover:** *Photo of the 166.2 kW-dc roof-mounted solar PV system that Arch Solar C&I installed at Ozaukee County Justice Center. The Ozaukee County Justice Center was one of three projects that Arch Solar C&I completed for the county in the Fall of 2025.*

PLEASE NOTE THAT THIS REPORT PROVIDES THE BASIC ECONOMIC TERMS ON WHICH ARCH WOULD BE WILLING TO PERFORM THE SCOPE OF SERVICES OUTLINED HERE. THIS RESPONSE DOES NOT COVER ALL OF THE TERMS AND CONDITIONS RELEVANT TO A DEFINITIVE AGREEMENT ABOUT THESE SERVICES. NOTHING IN THIS RESPONSE APPROVES LEGAL TERMS SUCH AS WARRANTIES, INDEMNIFICATION, INSURANCE REQUIREMENTS, AND LIMITATIONS OF LIABILITY, EVEN IF THOSE TERMS WERE INCLUDED IN THE REQUEST FOR PROPOSAL. THE DETAILS OF THOSE TERMS MUST BE NEGOTIATED BY THE PARTIES AND SET FORTH IN A DEFINITIVE AGREEMENT WITH RESPECT TO ARCH'S SERVICES.



## EXECUTIVE SUMMARY

## Part II - EXECUTIVE SUMMARY

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Arch Solar C&I, hereafter referred to as Arch, is a division of the Arch Electric family specializing in providing solar solutions to commercial and industrial clients across the Fox Valley, the greater Milwaukee area, and southern Wisconsin. With over two decades of experience and collaboration with trusted industry partners, Arch delivers both design/build and plan/spec solar solutions that are cost-effective and firmly grounded in industry-leading standards.

We recognize that every project site presents unique challenges and that each client has distinct goals when implementing renewable energy systems. To ensure our design meets the highest standards of safety, efficiency, and compliance, we have carefully considered the following project-specific factors:

### Site-Specific Considerations

1. **Available Space**
  - Ground or rooftop area available for solar array installation.
2. **Wind and Snow Loads**
  - Local conditions to ensure structural stability and code compliance.
3. **Shading**
  - Year-round solar access to maximize energy production.
4. **Accessibility**
  - Safe, practical access for installation, maintenance, and future repairs.
5. **Under-Array Vegetation and Maintenance** (for ground-mount Solar PV Systems)
  - Minimize long-term operations and maintenance requirements.
  - Increase ground reflectivity (albedo) to enhance bifacial solar module energy production.

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### Utility and Electrical Factors

5. **Utility Interconnection**
  - Requirements, timelines, and associated costs from the utility.
6. **Load Profile**
  - Current and projected energy usage to properly size the system.
7. **Grid Capacity**
  - Ability of the local grid to accommodate additional solar generation.
8. **Tariffs and Incentives**
  - Applicable rate structures, demand charges, and available credits.

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### Regulatory and Compliance

9. **Permitting**
    - Local, state, and federal permits, zoning laws, and environmental reviews.
  10. **Codes and Standards**
    - Compliance with NEC, IBC, and other applicable building codes.
  11. **Fire and Safety**
    - Adherence to fire codes and safety regulations.
-

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**Economic and Financial****12. Budget**

– Capital and operational costs, funding sources, and ROI expectations.

**13. Incentives and Grants**

– Federal, state, and local programs supporting project economics.

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**Environmental and Sustainability****14. Carbon Reduction Goals**

– Alignment with organizational or community sustainability objectives.

**15. Environmental Impact**

– Consideration of wetlands, protected species, or ecological sensitivities.

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**Project Management and Coordination****16. RFP and Documentation**

– Client-specific requirements for proposals, reporting, and submittals.

**17. Schedule**

– Critical deadlines and coordination with contractors, suppliers, and stakeholders.

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By addressing these constraints systematically, the project can be designed and implemented effectively, ensuring it meets technical, financial, and sustainability objectives.

## Proposed System Design

Based on our assessment of the sites, stated project goals, and desired outcomes, and to offer a solution that provides the best long-term value for the County, Arch is proposing the following solar photovoltaic (PV) systems:

System Size (kW-dc)	System Size (kW-ac)	Panel Tilt	Azimuth	Solar Efficiency (kWh/kWp)	Year One Production (MWh)
404.74*	300.00	25°	180°	1,220.00	493.8**

**\*Main Switchboard Capacity Considerations:**

*If the Owner desires a larger solar PV system, one potential option would be to reduce (derate) the existing main breaker, thereby increasing the allowable PV backfeed capacity under NEC 705. However, determining whether the main breaker can be safely derated would require a detailed engineering evaluation, including a load study utilizing a temporary power logger to monitor facility demand. The*

collected data would then need to be reviewed by a licensed Professional Engineer (PE) to establish an acceptable main breaker rating and provide an engineering recommendation.

At this time, Arch Solar C&I has not assumed that the existing main breaker can be derated. This approach is based on the available as-built electrical drawings, which indicate several load increases since the original installation, including the upsizing of ATS-fed breakers from 400A to 600A and from 125A to 250A, as well as the addition of a new 125A breaker serving the inline duct heater in Room 2009. These modifications suggest that facility electrical demand may have increased and warrant further analysis before any reduction in main breaker capacity is considered.

If selected as the installing contractor, Arch Solar C&I will perform a detailed interconnection and load capacity study during the engineering phase to determine whether the existing main breaker can be safely derated and whether the proposed solar PV system can be increased in size without requiring major electrical infrastructure upgrades. Any recommendations to increase system capacity will be based on monitored load data, engineering analysis, applicable code requirements, and utility interconnection constraints.

**\*\*Proposed Solar PV System Production:**

Projected solar PV energy production has been calculated using the system soiling loss and module degradation factors identified in Exhibit D.

## Major Equipment

Quantity	Equipment Description*
686	<b>Modules</b> - Qcells Q.PEAK DUO XL-G11S (590W)
3	<b>Inverters</b> - SolarEdge SE100K-US
686	<b>Optimizers</b> – SolarEdge C651U
1	<b>Ground-Mount Racking</b> - SkyRack 2.0 (25° Fixed Tilt)**
1	<b>Monitoring &amp; Energy Management Platform</b> – SolarEdge One

**\*Equipment Datasheets:**

Please refer to the equipment data sheets in Attachment A-D for detailed product specifications and performance information.

**\*\*Solar Array Tilt Optimization:**

The proposed solar PV system design has been evaluated for optimal module tilt to balance energy

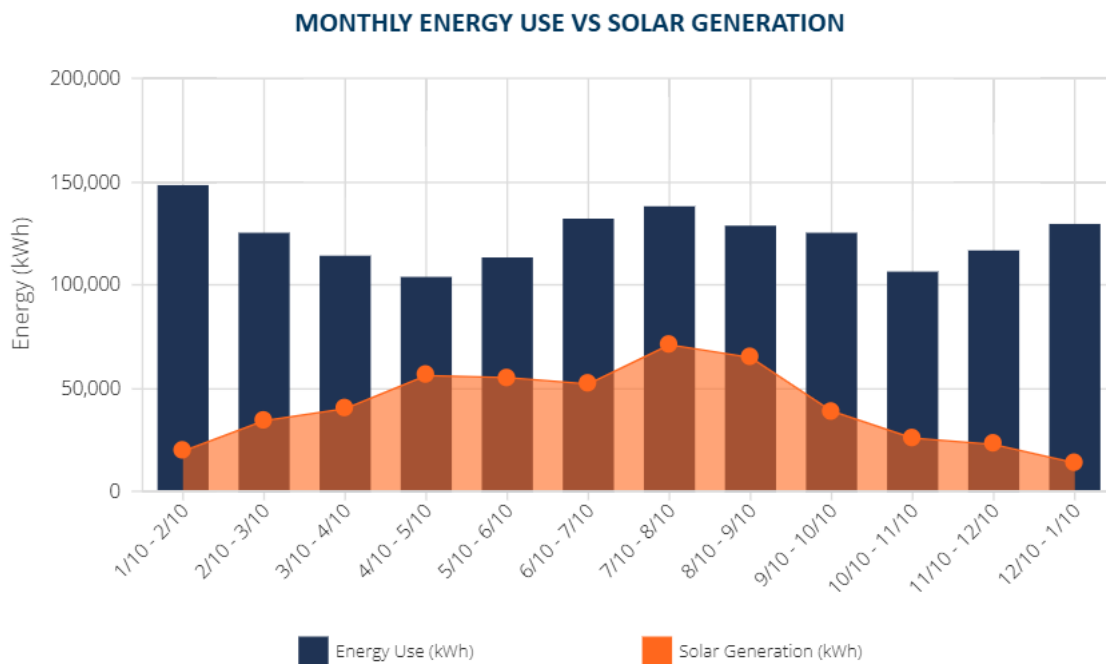
production, snow shedding performance, structural loading, and inter-row spacing efficiency. Adjusting the fixed-tilt racking configuration from 35 degrees to 25 degrees reduces row-to-row shading losses, improves packing density within the available site footprint, and enhances overall annual energy yield consistency, particularly during shoulder and winter production periods.

Based on energy modeling results, this optimized 25-degree tilt configuration produces a net increase in lifetime system performance that translates into an estimated additional electrical bill savings of approximately **\$37,687 over the term of the project**. This design refinement improves system economics while maintaining structural integrity and supporting long-term operational reliability under Wisconsin climate conditions.

## Solar Offset

Our proposed design delivers a streamlined, cost-effective solar solution that leverages best-in-class equipment to reduce upfront installation costs, maximize long-term energy production, and minimize ongoing operations and maintenance requirements.

The system is designed to offset approximately **33.44% of the site's total annual energy consumption**.



Bill Date Ranges			Energy Before PV/ESS (kWh)	PV Generation (kWh)				Energy After PV/ESS (kWh)
Start Date	End Date	Season	Total	Total	High Rate	Regular Rate	Low Rate	Total
1/10/2026	2/10/2026	W	148,155	19,458	44	13,370	6,044	128,697
2/10/2025	3/1/2025	W	90,855	19,829	121	15,682	4,025	71,026
3/1/2025	3/10/2025	T1	33,708	14,389	0	10,030	4,359	19,319
3/10/2025	4/10/2025	T1	113,346	40,071	0	29,823	10,248	73,275
4/10/2025	5/10/2025	T1	103,484	56,076	0	39,464	16,612	47,408
5/10/2025	6/1/2025	T1	77,929	43,515	0	30,885	12,630	34,414
6/1/2025	6/10/2025	S	35,222	11,564	5,516	2,093	3,955	23,657
6/10/2025	7/10/2025	S	131,209	51,952	28,148	10,645	13,159	79,257
7/10/2025	8/10/2025	S	137,588	70,998	38,646	13,248	19,105	66,589
8/10/2025	9/1/2025	S	93,751	47,682	23,388	8,385	15,909	46,069
9/1/2025	9/10/2025	T2	34,370	17,170	0	12,969	4,200	17,200
9/10/2025	10/10/2025	T2	124,988	38,823	0	29,718	9,105	86,165
10/10/2025	11/10/2025	T2	106,169	25,735	0	19,547	6,187	80,434
11/10/2025	12/1/2025	T2	76,218	16,901	0	13,282	3,619	59,317
12/1/2025	12/10/2025	W	40,310	5,769	0	5,098	671	34,542
12/10/2025	1/10/2026	W	129,388	13,869	0	10,602	3,267	115,519
Total	-	-	1,476,690	493,801	95,863	264,841	133,095	982,888

As illustrated in this column, the proposed solar PV system offsets only a portion of the facility’s annual electricity consumption, leaving a substantial amount of energy to be purchased from the utility at retail rates. To maximize long-term energy cost savings and increase energy independence, it is recommended that opportunities be evaluated to expand the solar PV system capacity. Subject to available space, electrical infrastructure limitations, and utility interconnection requirements, a larger system could offset a greater percentage of the facility’s energy usage, reducing future exposure to utility rate increases and lowering overall operating expenses.



Further supporting the consideration of a larger solar PV system, the following Demand Profiles indicate that little energy is exported to the utility grid on a monthly basis. This suggests that the facility has sufficient on-site electrical demand to absorb additional solar generation throughout much of the year. As a best practice, solar PV systems should be sized to maximize on-site consumption and energy offset while minimizing excess exports. Increasing the system size could therefore provide additional utility cost savings by offsetting a greater portion of the facility’s electrical load without significantly increasing exported energy.

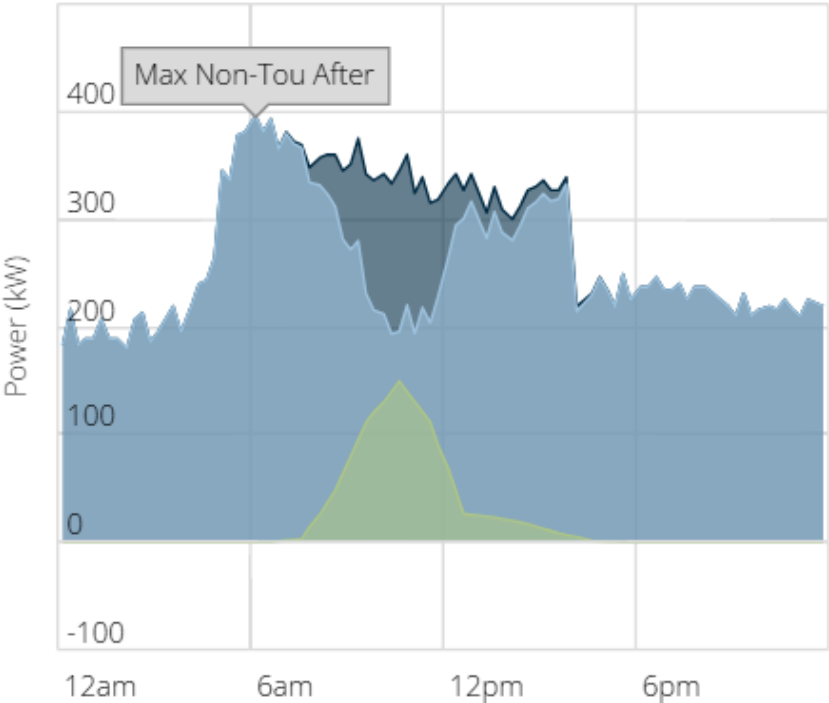
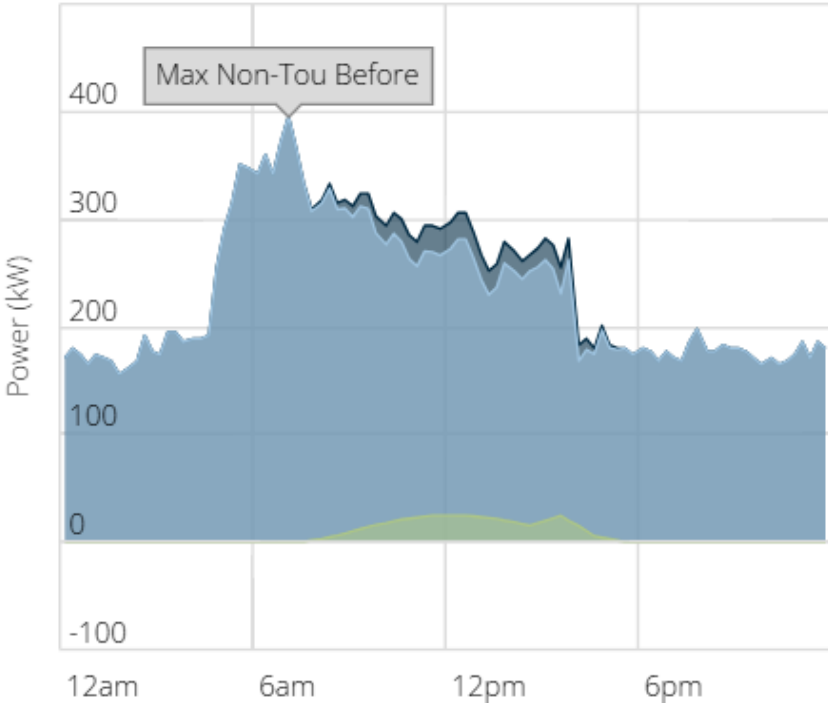
# Demand Profiles

Date Range: 1/10/2026 - 2/10/2026

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 1/19/2026

Max Demand After 1/23/2026



**Legend:** Demand Before (dark blue), Solar PV (green), Energy Storage (light blue), Demand After (medium blue)

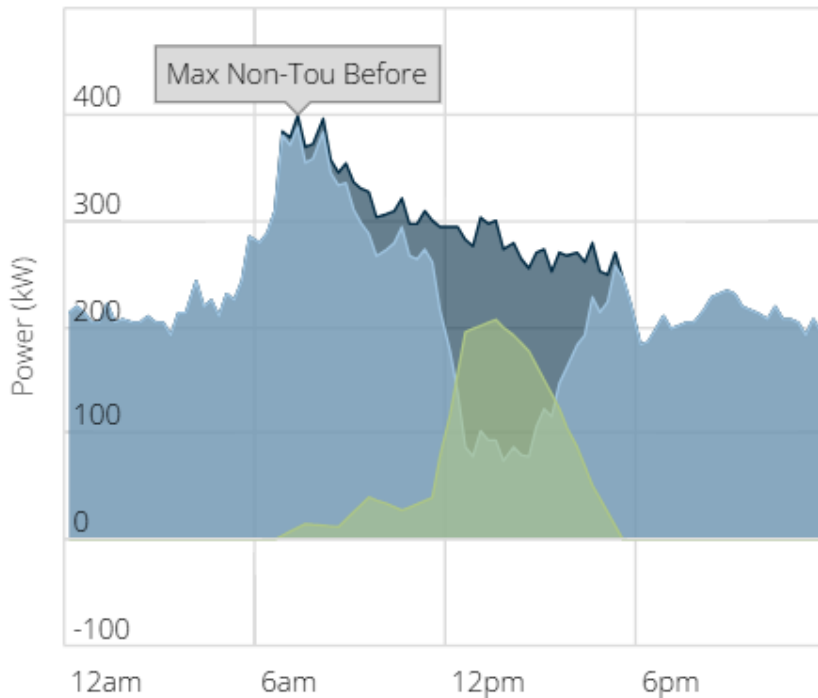
**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

# Demand Profiles

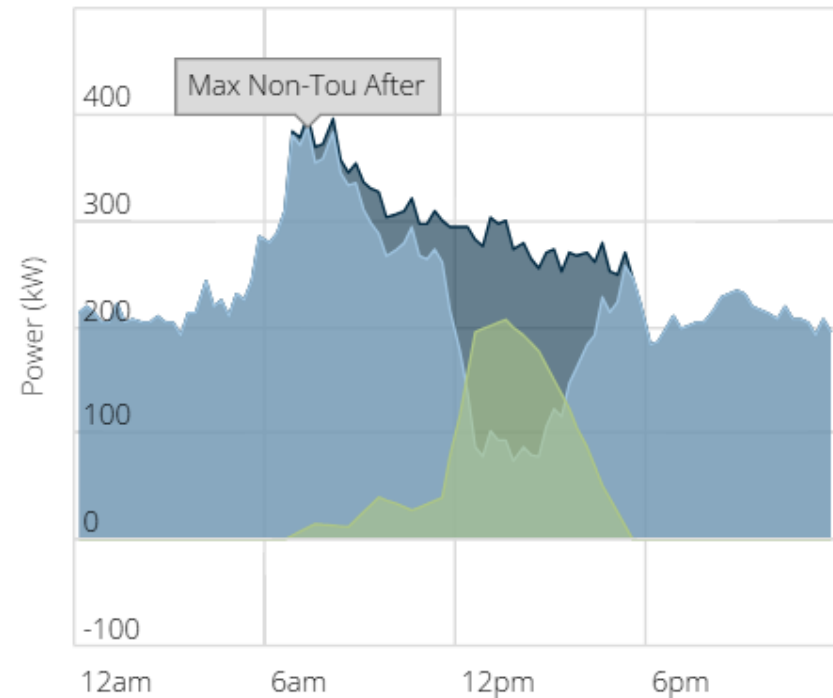
Date Range: 2/10/2025 - 3/10/2025

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 2/18/2025



Max Demand After 2/18/2025



**Legend:** Demand Before (dark blue), Solar PV (green), Energy Storage (orange), Demand After (light blue)

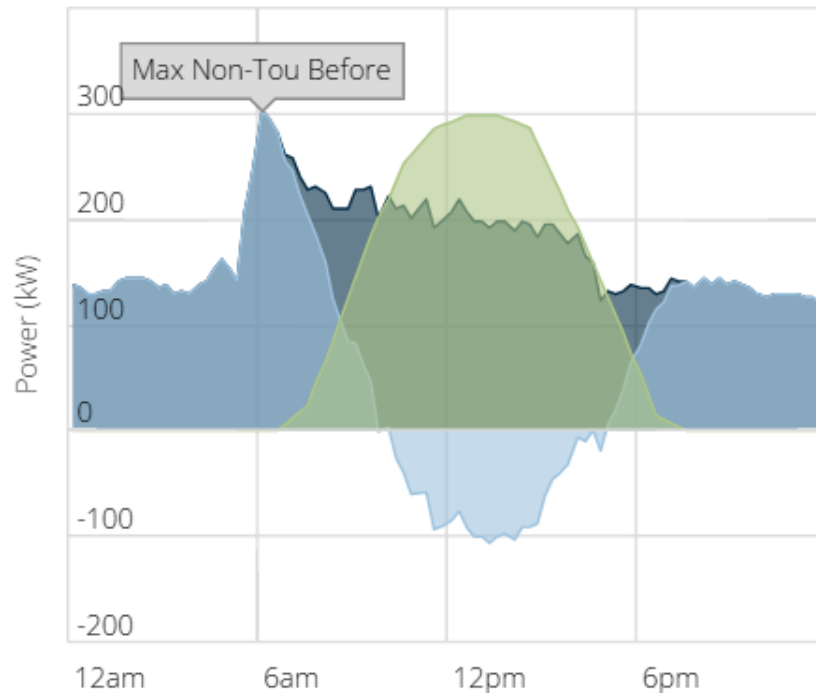
**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

# Demand Profiles

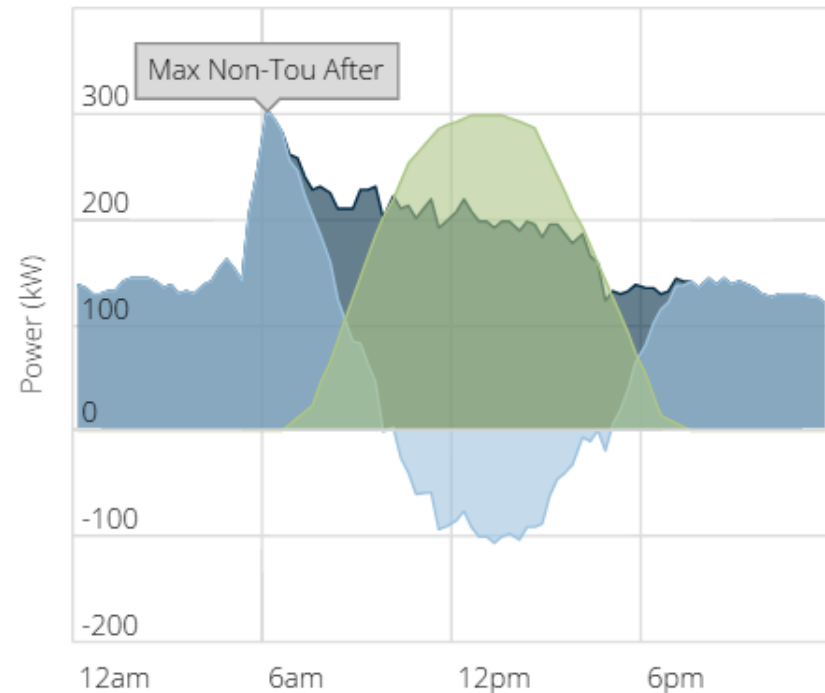
Date Range: 3/10/2025 - 4/10/2025

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 3/25/2025



Max Demand After 3/25/2025



**Legend:** Demand Before (dark blue), Solar PV (green), Energy Storage (orange), Demand After (light blue)

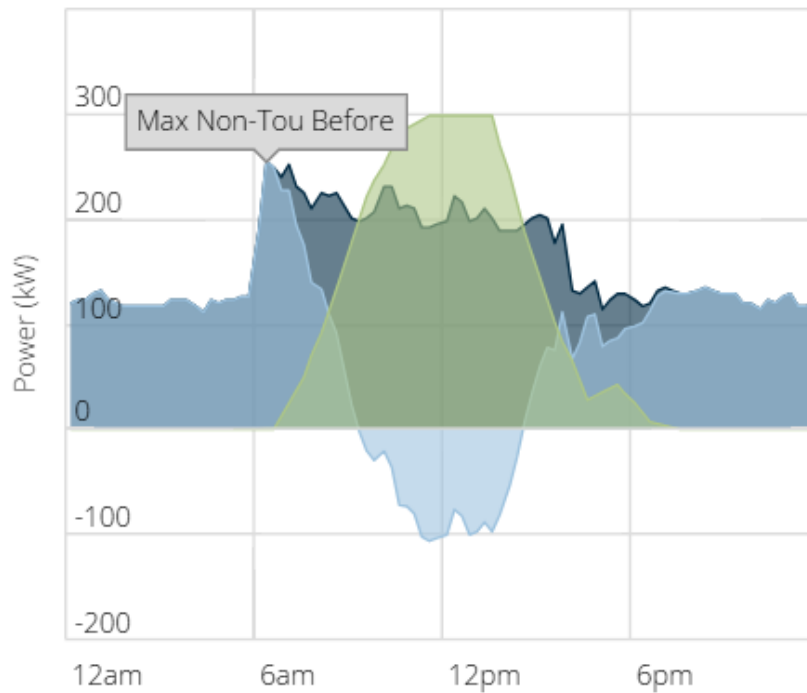
**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

# Demand Profiles

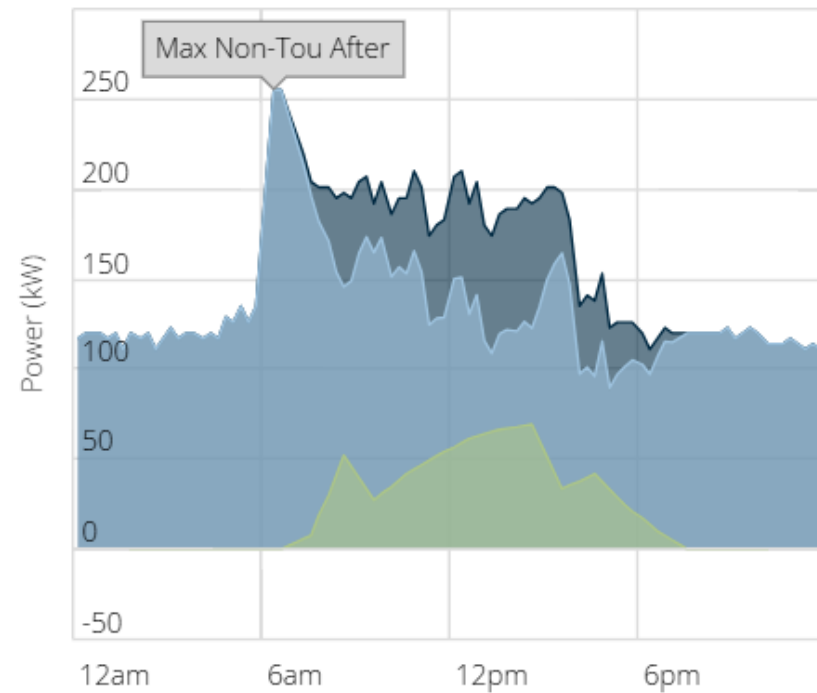
Date Range: 4/10/2025 - 5/10/2025

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 4/10/2025



Max Demand After 4/11/2025



**Legend:** Demand Before (dark blue), Solar PV (green), Energy Storage (orange), Demand After (light blue)

**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

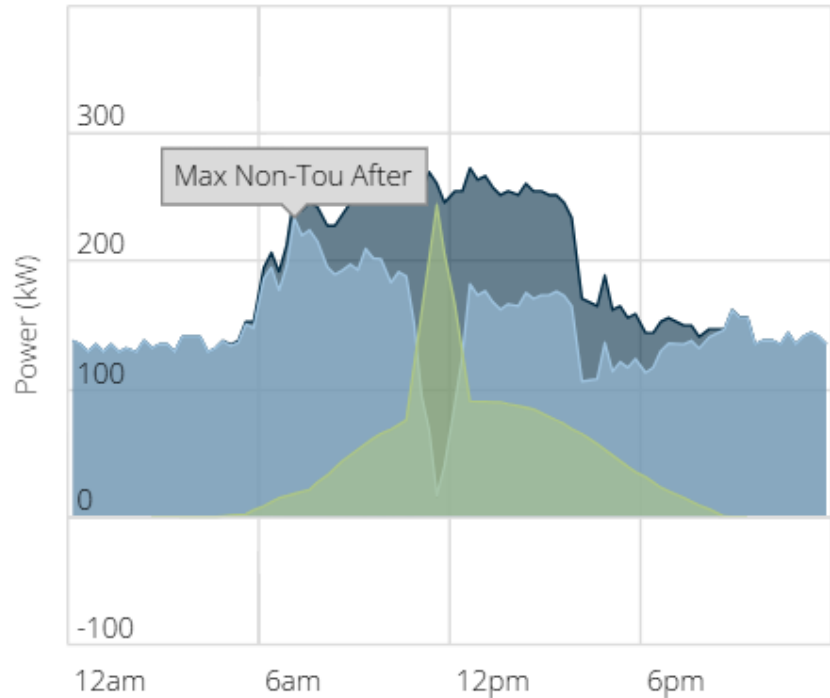
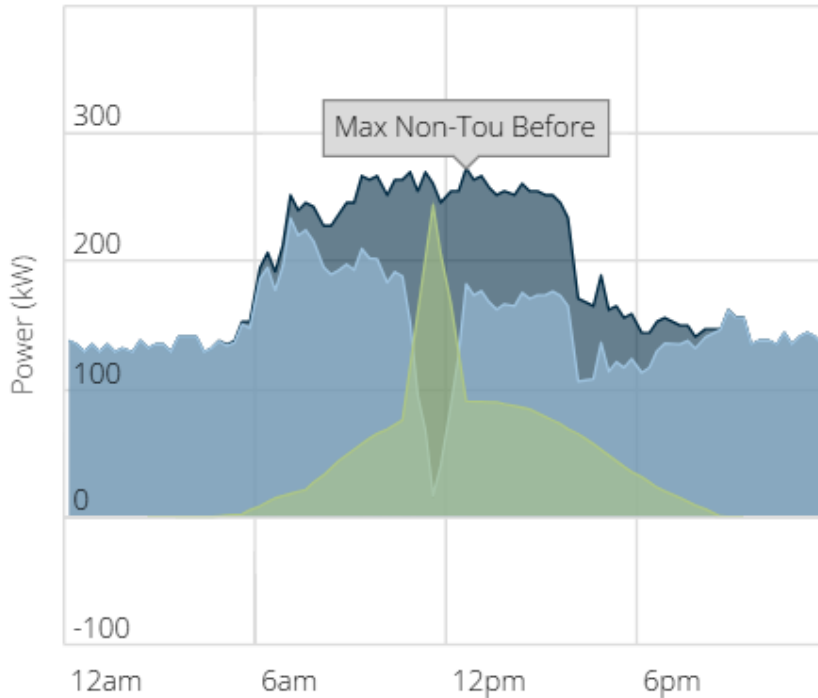
# Demand Profiles

Date Range: 5/10/2025 - 6/10/2025

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 6/3/2025

Max Demand After 6/3/2025



**Legend:** Demand Before (dark blue), Solar PV (green), Energy Storage (orange), Demand After (light blue)

**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

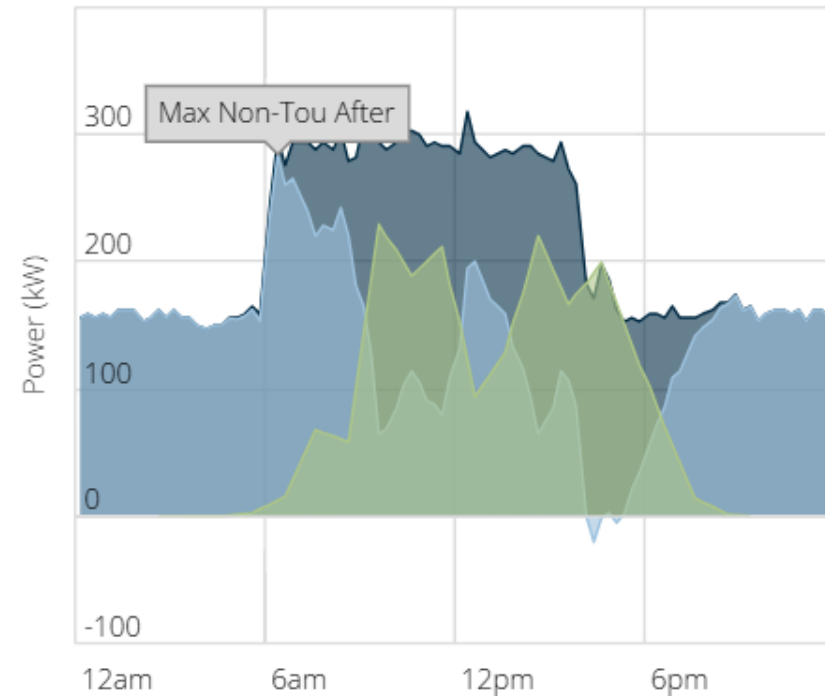
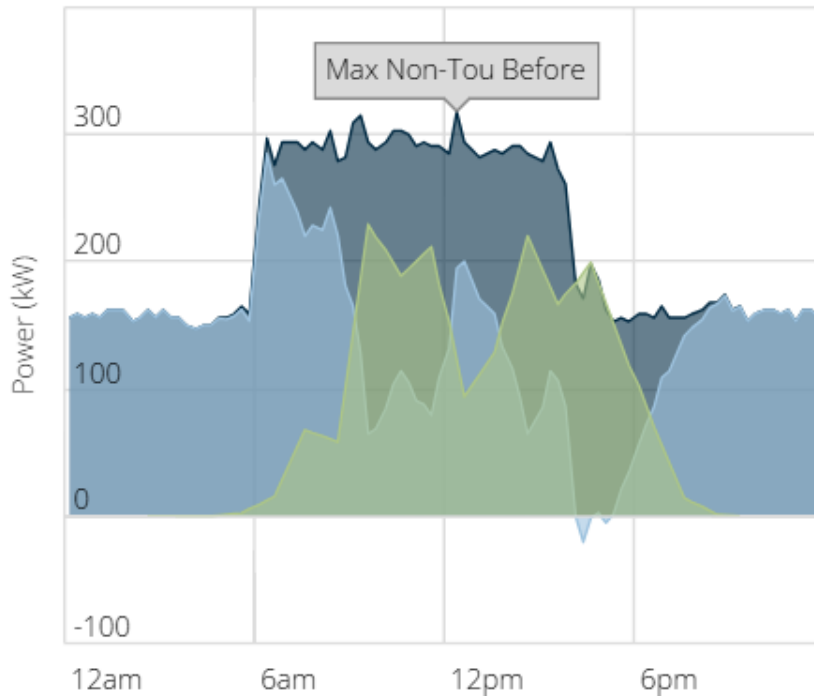
# Demand Profiles

Date Range: 6/10/2025 - 7/10/2025

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 6/23/2025

Max Demand After 6/23/2025



**Legend:** Demand Before (dark blue), Solar PV (green), Energy Storage (orange), Demand After (light blue)

**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

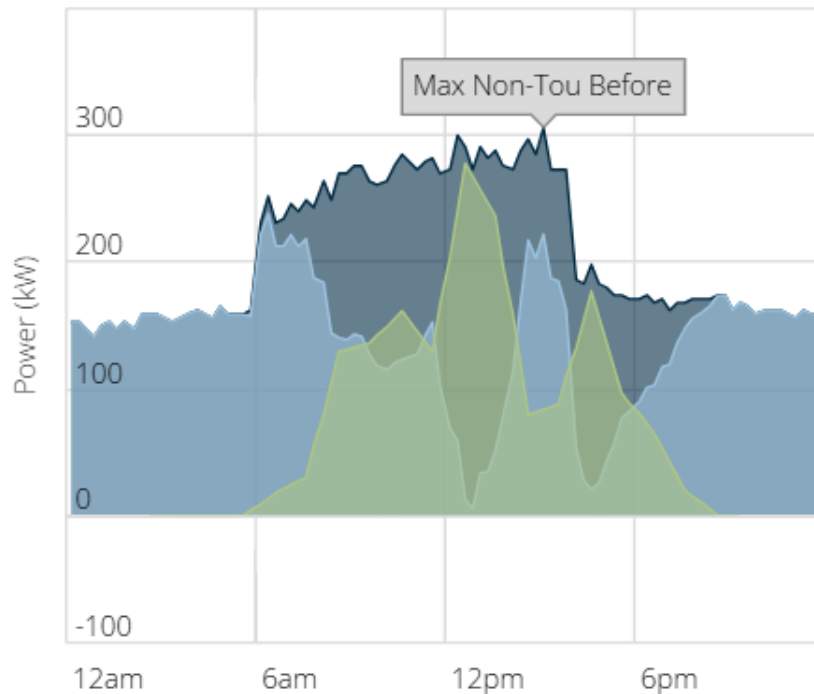
Charts Not Applicable

# Demand Profiles

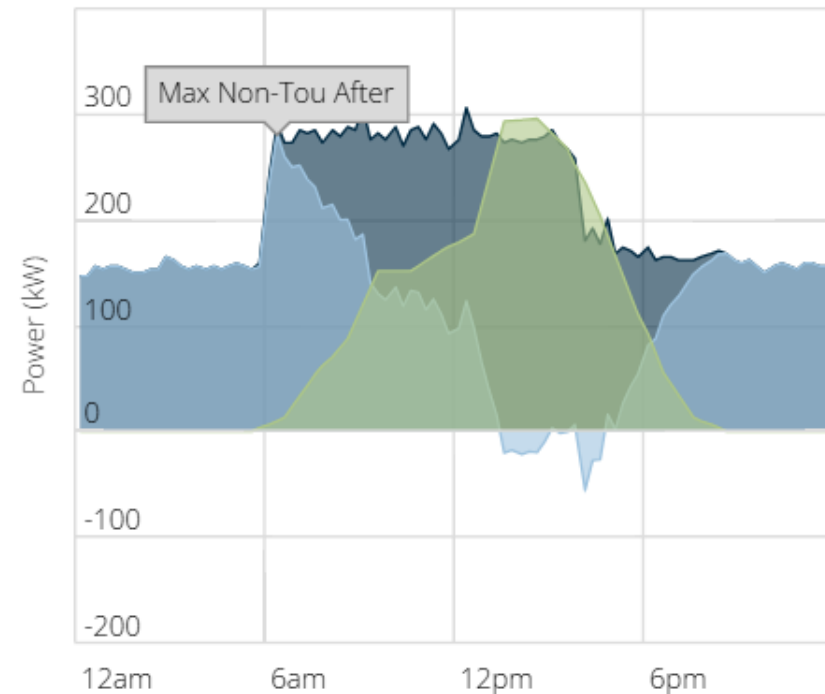
Date Range: 7/10/2025 - 8/10/2025

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 7/23/2025



Max Demand After 7/28/2025



**Legend:** Demand Before (dark blue), Solar PV (green), Energy Storage (orange), Demand After (light blue)

**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

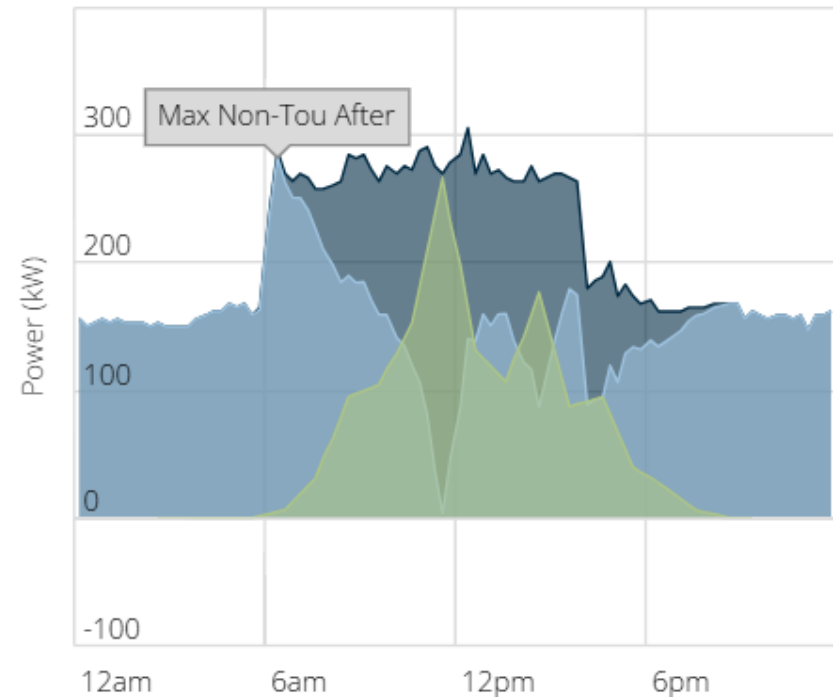
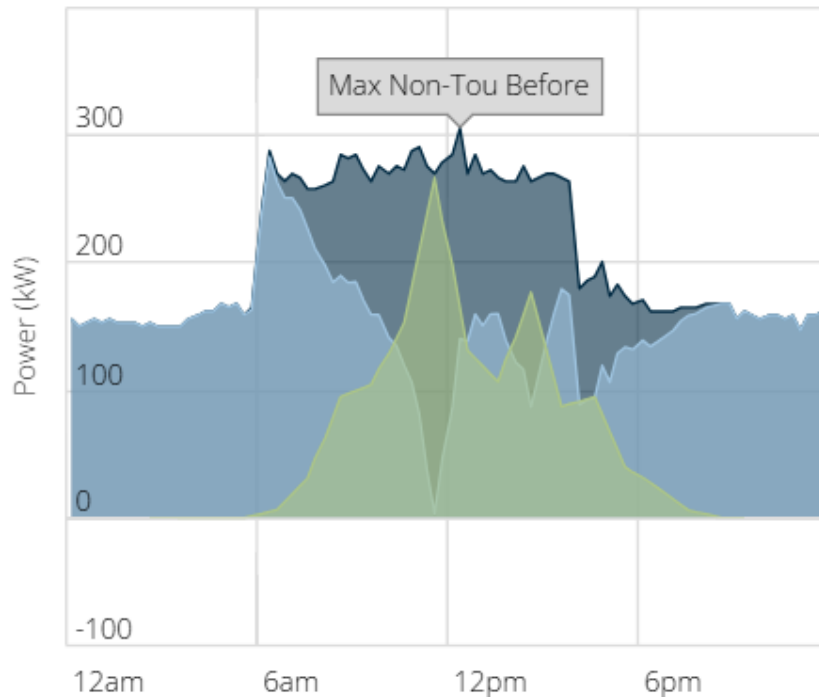
# Demand Profiles

Date Range: 8/10/2025 - 9/10/2025

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 8/11/2025

Max Demand After 8/11/2025



**Legend:** Demand Before (dark blue), Solar PV (green), Energy Storage (orange), Demand After (light blue)

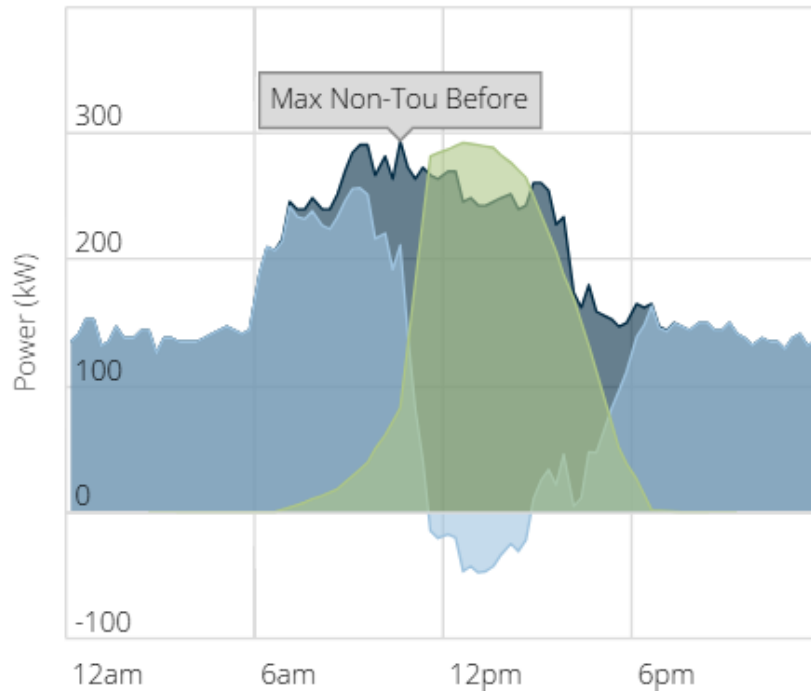
**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

# Demand Profiles

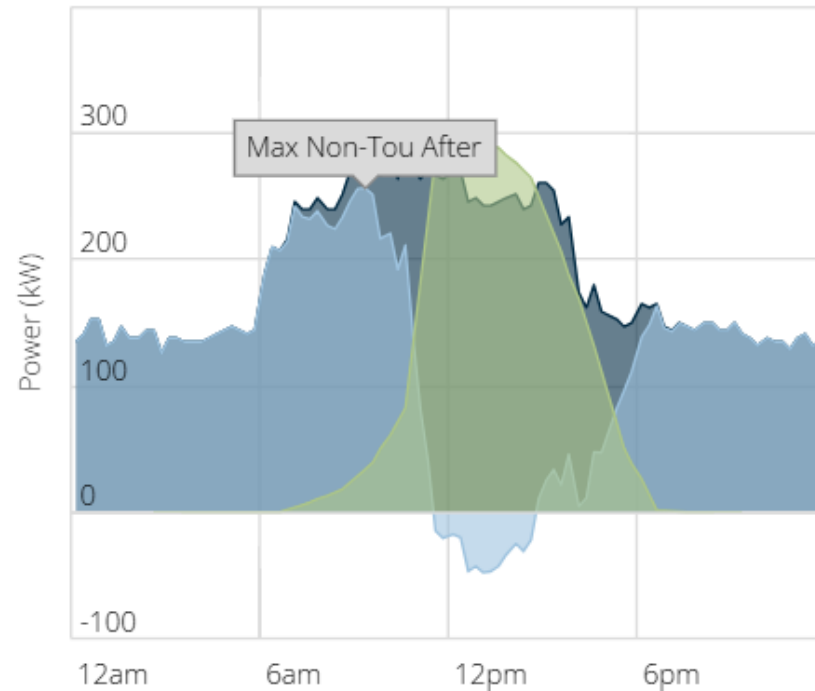
Date Range: 9/10/2025 - 10/10/2025

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 9/30/2025



Max Demand After 9/30/2025



**Legend:** Demand Before (dark blue), Solar PV (green), Energy Storage (orange), Demand After (light blue)

**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

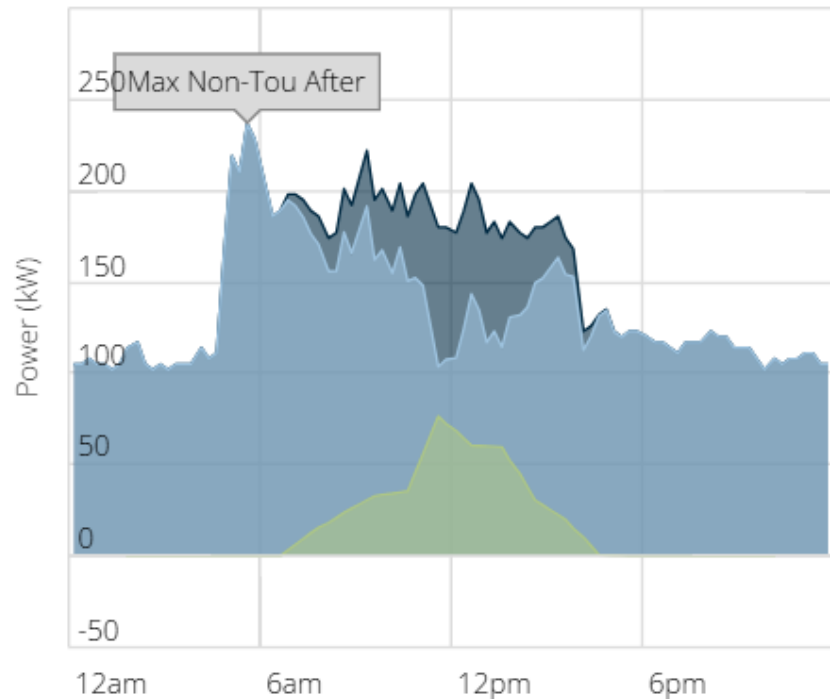
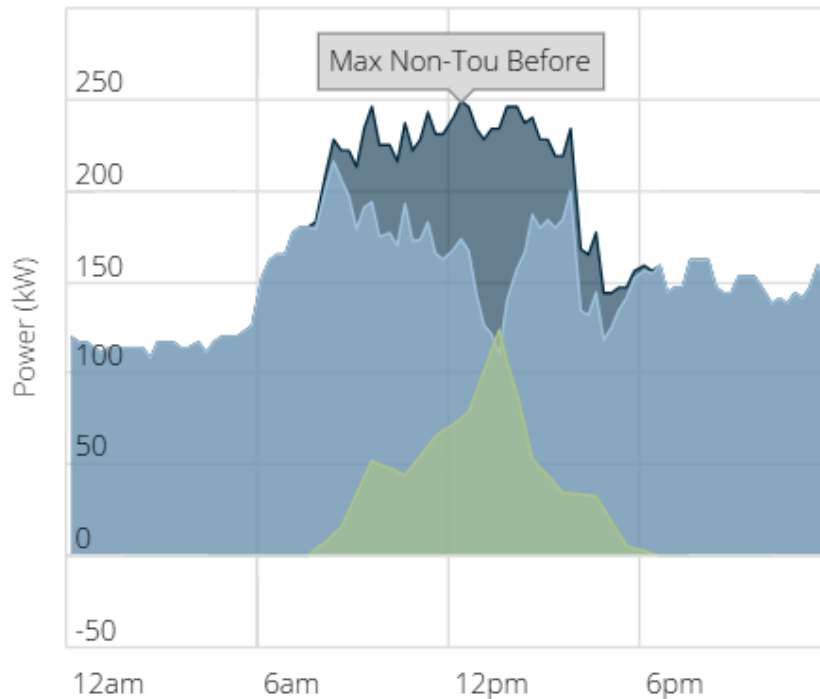
# Demand Profiles

Date Range: 10/10/2025 - 11/10/2025

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 10/17/2025

Max Demand After 11/3/2025



**Legend:** Demand Before (Dark Blue), Solar PV (Green), Energy Storage (Orange), Demand After (Light Blue)

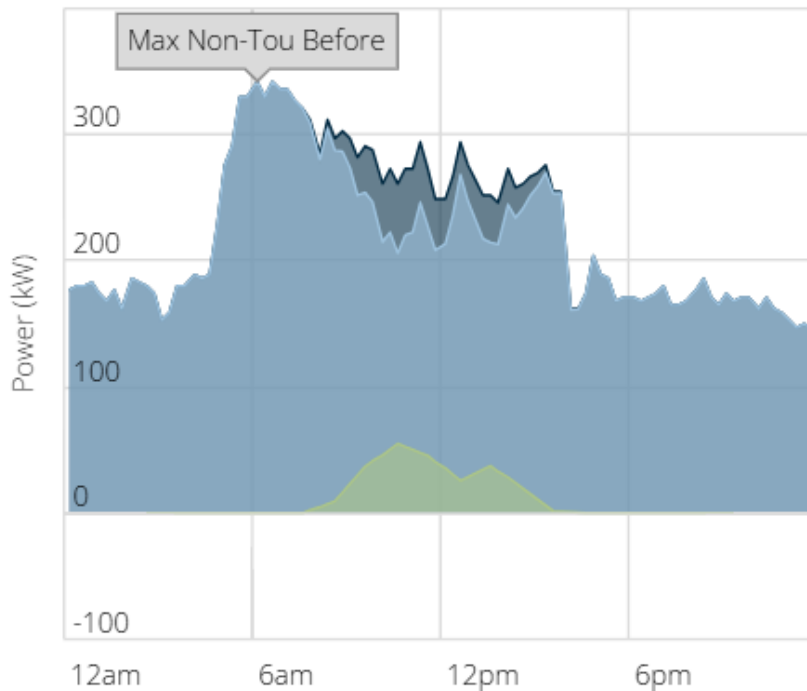
**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

# Demand Profiles

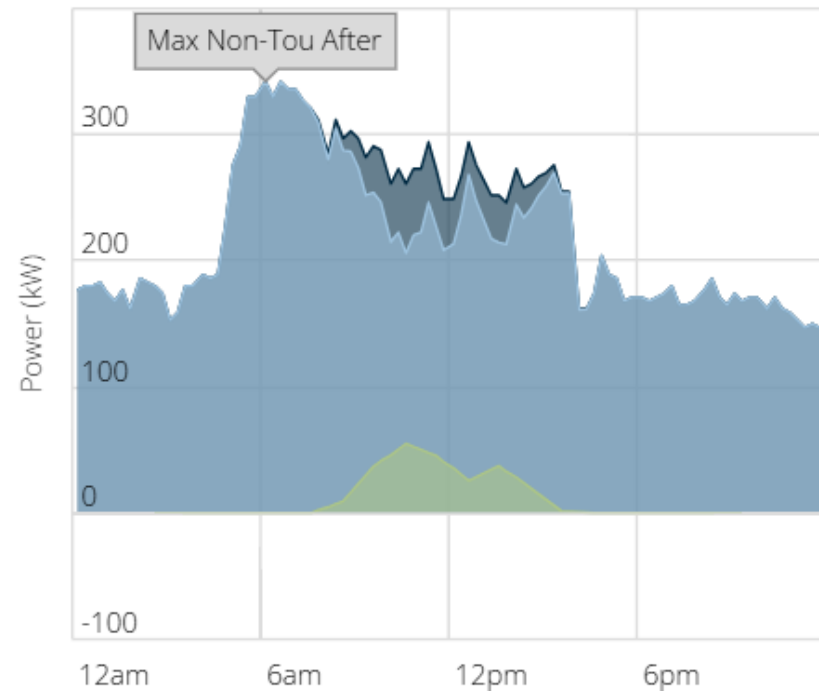
Date Range: 12/10/2025 - 1/10/2026

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 12/15/2025



Max Demand After 12/15/2025



**Legend:** Demand Before (dark blue), Solar PV (green), Energy Storage (orange), Demand After (light blue)

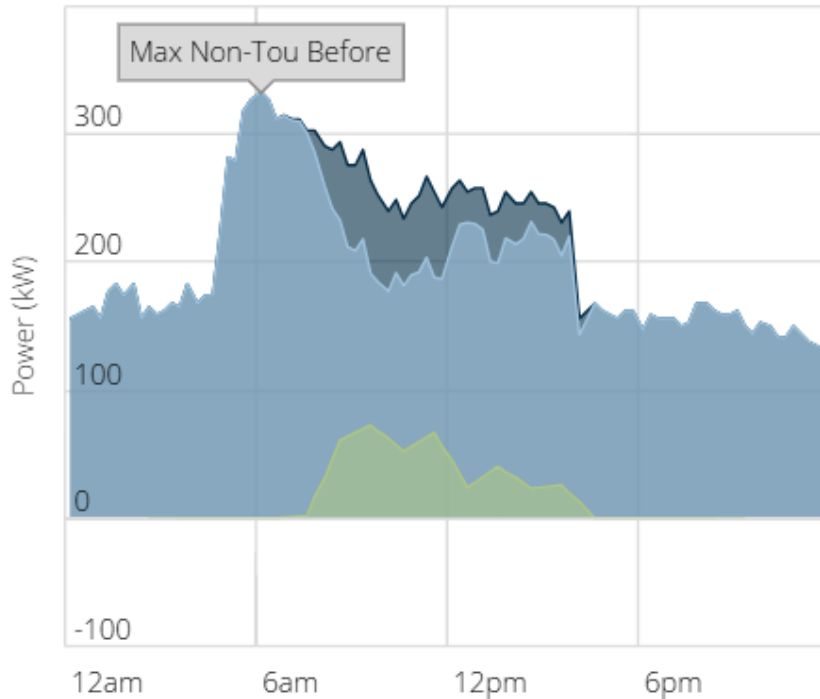
**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

# Demand Profiles

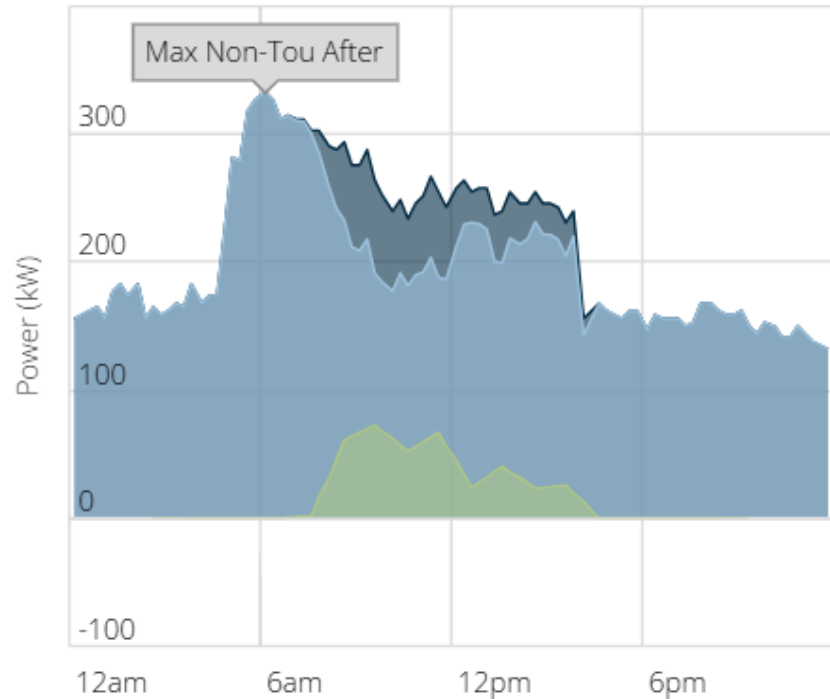
Date Range: 11/10/2025 - 12/10/2025

**Max NC Demand:** The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 12/8/2025



Max Demand After 12/8/2025



**Legend:** Demand Before (dark blue), Solar PV (green), Energy Storage (orange), Demand After (light blue)

**Max On-Peak Demand:** The charts below show when the maximum on-peak demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

## Financial Rewards

Based on the equipment and materials utilized and the work being performed, the County may be eligible for the following financial rewards in addition to all other grants or financial rewards already secured, if applicable:

### 1. Federal Solar Tax Credits\* for Businesses

- Section 48 (ITC 30% Tax Credit)\*\*
- Additional 10% Domestic Content Bonus

\*Tax-exempt and governmental entities that do not owe federal income tax can choose to claim the elective pay for the full value of the investment tax credit if they meet all the requirements, including a pre-filing registration requirement.

*\*\*There is a 15% penalty on the credit available if the project is financed via Tax-Exempt Bonds*

### 2. Focus on Energy

- Business Customer Solar PV Rebates
  - \$600 per kW, up to \$2,400
  - \$50 per kW thereafter, up to \$25,000

### 3. Utility buyback of any excess generation.

Commercial systems larger than 20 kW-AC are placed on Alliant's Parallel Generation (PgS-1) tariff. Under this tariff:

- Energy exported to the grid is **not credited at the retail electric rate**.
- Imports and exports are metered separately.
- Excess generation is purchased by Alliant at its **avoided cost rate**, which varies by time period (low, regular, and high periods) and is updated annually.

Our team is dedicated to guiding you through the process to ensure all eligible incentives are identified and maximized, optimizing the financial and environmental benefits of your project.

## Non-Financial Elements

Adding solar PV systems can provide the County with a range of non-financial rewards, including:

1. Sustainability Leadership: Demonstrating a commitment to renewable energy enhances the County's reputation as a leader in sustainability, attracting environmentally conscious residents and businesses.
2. Community Engagement: A visible commitment to clean energy fosters goodwill among the local community and sets an example for sustainable practices.
3. Carbon Footprint Reduction: Using renewable energy directly contributes to the County's climate action goals by reducing greenhouse gas emissions.
4. Public Relations Benefits: Highlighting the County's investment in renewable energy can improve branding and marketing efforts, distinguishing it as an innovative and forward-thinking municipality.
5. These non-financial benefits can contribute to the County's long-term strategic goals while fostering a culture of sustainability and innovation.

## Project Financial Summary

Guaranteed Maximum Cost*	Focus on Energy	ITC – 30%	10% Domestic Content Bonus	Net Solar PV System Cost	Net \$/W
\$846,520.00	\$22,437.00	\$253,956.00	\$338,608.00	\$485,475.00	\$1.199

*\*Cost based on project specifics herein.*

### **Disclaimer:**

*Available incentives, including rebates, tax credits, and other financial benefits for solar installations, are subject to change or termination at any time by federal, state, or local authorities. Arch makes no guarantee regarding the continued availability, value, or eligibility of such programs, and customers are responsible for consulting with their tax advisor to determine individual qualification.*

### Cost Options

To provide the Owner with maximum flexibility during project evaluation and contract negotiations, the following optional items have been separately identified and priced. These options may be accepted, rejected, or modified at the Owner’s discretion without affecting the base scope of work.

Optional Cost Items:

- 1. Payment and Performance Bond** – Furnish and maintain a Payment and Performance Bond in the amount required by the contract documents. **Add \$6,300.00**
- 2. Pollinator-Friendly Seeding and Maintenance** - This option includes site preparation consisting of up to two herbicide application visits to prepare the site for successful establishment, installation of a low-growing native prairie seed mix specifically selected to provide pollinator habitat while maintaining visibility and avoiding shading of the solar panels, and up to

three stewardship visits during the first growing season following installation to monitor establishment and perform necessary maintenance activities. **Add \$15,300.00**

3. Additional Value Engineering and/or cost-saving measures can be provided if desired.



GENERAL TEAM INFORMATION  
AND FIRM'S DATA

## Part III – COMPANY PROFILE

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### Company Overview

Since its founding, Arch has grown into a recognized leader in the solar industry, advancing the adoption of renewable energy across Wisconsin. Guided by a commitment to integrity and trust—what we call "handshake ethics"—we take pride in our diverse team of licensed NABCEP-certified solar professionals, who collectively bring over 100 years of experience to every project.

Our leadership team actively serves as instructors, inspectors, and consultants for many of the nation's leading energy organizations, ensuring our work consistently meets the highest standards of quality and innovation, both locally and nationally.

The Arch family of companies has been serving customers since 2003. In 2020, we expanded our focus on commercial and industrial clients by establishing a resolute business unit, Arch Solar C&I.

Over the past four years, Arch C&I alone has completed more than **12.99 MW of solar PV installations** in Wisconsin, including:

- **2022:** 1.67 MW
- **2023:** 3.7 MW
- **2024:** 3.66 MW
- **2025:** 3.96 MW

To date in 2026, we have completed over **1.59 MW** of solar PV, continuing our consistent record of delivering high-quality projects on schedule.

### **ARCH SOLAR C&I, INC.**

*Headquarters:* 1237 Pilgrim Rd., Plymouth, WI 53073 | Phone: (920) 893-8388

*Milwaukee Office:* 7764 B 81st Street, Milwaukee, WI 53223 | Phone: (920) 838-0483

*Madison Office:* 214 North Hamilton St, Madison, WI 53703 | Phone: (608) 949-3429

### **ACCREDITATIONS AND ACCOLADES**

- Certified Women-Owned Business Enterprise and Veteran Entities
- Better Business Bureau A++ Rating
- OSHA Perfect Rating
- Craft Construction Professional Award recipient.
- Solar Power Magazine Top Contractor in US; [Link](#)
- Staffed AEE Certified Energy Manager (CEM)
- Staffed North American Board of Certified Energy Practitioners (NABCEP) professionals
- Proud Sustainability Partner for the Milwaukee Bucks
- Member/Sponsor for the following:



Amicus Solar is a member-owned purchasing cooperative of 73 high-quality, independent, values-driven solar energy companies.



RENEW Wisconsin is a nonprofit organization that promotes renewable energy in Wisconsin, working on policies and programs that expand solar power.



Focus on Energy offers rebates of up to \$50,000 for businesses and, up to \$60,000 for agricultural producers installing a PV system.



PROUD SUSTAINABILITY PARTNER

## Lead Personnel

We have an experienced and collaborative team that the County can rely on to understand your needs, develop a comprehensive project plan, and successfully execute that plan

### ARCH MANAGEMENT TEAM



**Mindy Zinthefer, Owner**

Mindy has been with Arch since its inception in 2003. She encouraged Ed to take a giant leap of faith and follow their vision for a company with the utmost regard to quality, service, and environmental stewardship. Her role in Arch centers on administration, strategic development, and overall business sustainability.



**Ed Zinthefer, President**

Ed brings over 20 years of experience as a Master Electrician and is a NABCEP-certified PV Installation Professional. He is also one of only nine IREC-certified Master PV Trainers nationwide. His background includes serving as a Compliance Agent for Focus on Energy and as an instructor at the MREA. Within this project, Ed contributes expertise in system design, procurement, and overall quality control.



**Jeff Ray, Chief Financial Officer (CFO)**

Jeff joined Arch in 2017, bringing more than 25 years of comprehensive financial and accounting expertise in both public and private sectors. He earned his accounting degree from Ohio State University in 1988 and completed his MBA in 2004.



**Mike Cornell, Chief Instigation Officer (CIO)**

Mike began his renewable energy career in 2015 as a solar experience consultant and marketing manager and is now the CIO of Arch Electric. Mike is a NABCEP associate, MREA certified site assessor, holds a MIT Information Technology for Executives Certificate, and is currently a board member of RENEW Wisconsin (2019-present).

# Your Solar Experts

## Energy Consultants



### Cody Van Ginkel

*General Manager*

920-838-6543 | [cvanginkel@archsolar.com](mailto:cvanginkel@archsolar.com)

- Journeyman Electrician
- NABCEP PV Installation Professional
- OSHA 30 Certified, NFPA 70E Certified



### Andrew Holmstrom

*Business Development Supervisor*

920-838-0483 | [andrew@archsolar.com](mailto:andrew@archsolar.com)

- NABCEP PV Technical Sales
- MREA Certified Site Assessor
- FAA Certified Drone Pilot
- OSHA 30 Certified



### Harlan Ward

*Senior Business Developer*

608-206-6006 | [harlan@archsolar.com](mailto:harlan@archsolar.com)

- LEED Green Associate
- Certified Energy Manager
- OSHA 30 Certified



### Quintin Bendixen

*Business Developer*

920-838-8056 | [quintin@archsolar.com](mailto:quintin@archsolar.com)

- TRUE Advisor for Zero Waste
- Electric Coach Certified
- OSHA 30 Certified



### Dan Steinhardt

*Business Developer*

920-838-4108 | [dan@archsolar.com](mailto:dan@archsolar.com)

- Master Electrician
- NABCEP PV Installation Professional
- OSHA 30 Certified



### Erik Summers

*Solar Project Facilitator*

920-838-6955 | [esummers@archsolar.com](mailto:esummers@archsolar.com)

- NABCEP Associate PVA
- FAA Certified Drone Pilot
- Associate Degree in Electrical Engineering

## Operations



### Admin

#### Jillian Rooker

*Accountant*

920-838-3923 | [jillian@archsolar.com](mailto:jillian@archsolar.com)



### Field

#### Ryan Hakala

*Senior Project Manager*

608-622-9590 | [ryan@archsolar.com](mailto:ryan@archsolar.com)

- Journeyman Electrician
- NABCEP Associate PVA
- OSHA 30 Certified



### Safety

#### Josh Hooper

*EHS Specialist*

920-838-6810 | [jhooper@archelec.com](mailto:jhooper@archelec.com)



### Marketing

#### Bri Dobiesz

*Marketing Manager*

920-838-6916 | [bri@archsolar.com](mailto:bri@archsolar.com)

## Main Point of Contact

**Harlan Ward**, Commercial & Industrial – Senior Business Developer  
(608) 206-6006 | [harlan@archsolar.com](mailto:harlan@archsolar.com)

Additional background and experience are provided in the attached resume, Attachment F.

## Who We Work With

We are proud to partner with a diverse range of clients, including healthcare providers, municipalities (or government), nonprofits, financial institutions, manufacturers, and global brands. Our work spans across organizations such as Advocate Aurora Health, IKEA, Hunger Task Force, Froedtert & the Medical College of Wisconsin, and many more community leaders who trust us to deliver innovative solar and energy solutions.

## Who We Work With

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... and many more!

## Portfolio

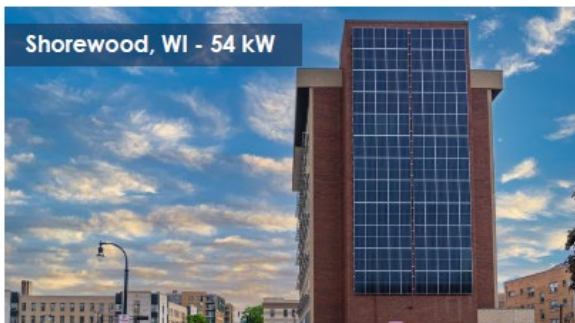
We are proud to deliver high-performing solar solutions for businesses, municipalities, and organizations across Wisconsin. From large-scale rooftop installations to innovative wall-mounted and ground-mounted systems, our portfolio reflects the trust of diverse clients and the impact of renewable energy in action.



**IKEA - Oak Creek**



**Bliffert Lumber**



**Dominion Properties Wall**



**Hotel Verdant**



**Ongna Wood**



**MATC Oak Creek**

Our portfolio highlights just a few of the many solar projects we have successfully delivered. For a complete list of past projects, please refer to Attachment I – Past Project List.

## References

### Industry

**Nate Ongna**

*Vice President*

Ongna Wood Products

Phone: 920-564-3123

**Doug Bayerlein**

*President*

Woodway USA Inc.

Email: DGB@Woodway.com

**Don Marx**

*President*

Milwaukee Plate Glass Company

Phone: 414-771-5560

**Ty Weinhold**

*Chief Operating Officer*

Viking Masek

Phone: 920-564-5331

### Municipality

**Andy Pederson**

*Village Manager*

Village of Bayside

Email: apederson@baysidewi.gov

**Larry Bierke**

*Iowa County Administrator*

Iowa County

Phone: 608-935-0318

### Non-Profit

**Matt King**

*Executive Director*

Hunger Task Force

Email: matt.king@hungertaskforce.org

**Jess Vroman**

*Director of Facilities & Security*

Gan Ami Jewish Community Center

Email: jvroman@jccmilwaukee.org

### Other

**Brad Weinert**

*Project Manager*

Froedtert Hospital

Email: brad.weinert@froedtert.com

**Jedd Winkler**

*Energy Manager*

Aurora Healthcare

Email: jedd.winkler@aah.org

*More references available upon request.*

## Litigation

Arch Solar C&I confirms that it has not been involved in any litigation or arbitration.

Part

IV



TECHNICAL  
QUALIFICATIONS

## Part IV - TECHNICAL QUALIFICATIONS

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### Equipment Selection

Several factors are evaluated when selecting equipment for a solar PV project. While some may carry greater weight than others, each decision is made on a case-by-case basis. Key considerations include:

- **Energy Efficiency** – Multiple equipment options may meet project requirements, but we prioritize solutions that maximize efficiency and long-term performance.
- **Financial Strength of Manufacturers** – Solar modules are expected to last 25+ years. Through Arch’s membership in Amicus Solar, we source exclusively from manufacturers with established histories and the financial stability to honor warranties well into the future.
- **Physical Size and Compatibility** – Equipment dimensions vary by manufacturer. We carefully evaluate site conditions to ensure proper fit and replacement compatibility.
- **Performance and Quality** – Reliability and proven performance are critical. Arch selects high-quality equipment from tier-one manufacturers with demonstrated success in similar applications. Our evaluation also considers manufacturer viability to ensure warranty support throughout the project’s lifecycle, reducing long-term maintenance costs.
- **Lead Times and Delivery** – Timely procurement is essential to maintaining the schedule and controlling costs. We require a full equipment review and team approval prior to purchase to mitigate risk.
- **Best Value vs. Lowest Cost** – Lowest upfront cost does not always provide the best long-term value. We assess the total cost of ownership, including efficiency, maintenance requirements, and expected service life, to ensure the County receives durable, cost-effective solutions.

### Installation Approach

Solar projects are inherently scalable and can be tailored to meet budget requirements, cash flow objectives, available incentives, and public engagement goals. Our first step is to understand the County’s priorities and drivers, then develop the most feasible solution that maximizes long-term value from your investment.

This proposal includes a preliminary, realistic project schedule that reflects both the complexity of the work and the expected timelines for regulatory approvals and installation. While finalizing the installation agreement and securing permits are the primary schedule drivers, Arch views the schedule as a living document. Like the County, our goal is to place systems into operation as quickly as reasonably possible.

Our team has experience deploying multiple projects under strict deadlines and will work to accelerate approvals, engineering, procurement, and construction wherever possible. Major project milestones include:

- **Contract Execution** – Upon selection, Arch will finalize the construction agreement, interconnection agreement, and any remaining documents required to close financing.
- **Permitting and Utility Submissions** – We coordinate closely with local authorities and utilities to ensure complete, accurate applications that minimize review delays.
- **Final Design and Client Approval** – System designs are refined and finalized based on feedback from the County and the Authority Having Jurisdiction (AHJ).
- **Permitting and Utility Approvals** – Once approvals are secured, Arch proceeds with procurement and construction.
- **Project Management Tools** – We utilize Microsoft Project and Excel to create a clear, detailed schedule outlining major tasks, completion dates, task status, responsible parties, potential risks, and initiative-taking mitigation measures.
- **Safety First** – Arch prioritizes safety at every stage of work, backed by strong safety ratings and established protocols.
- **Material Procurement** – Long-lead items are identified early and released as soon as permitting and utility approvals are obtained to avoid delays.
- **Kickoff and Mobilization** – Arch hosts kickoff meetings with County staff to review project sequencing, safety standards, site logistics, and staging areas, ensuring clear communication and alignment.
- **Construction** – Arch manages and reports on construction progress, deliverables, and milestones. Work is conducted with a focus on efficiency, safety, schedule, and budget, with limited disruption to building occupants.
- **Inspections** – Arch coordinates all required inspections and utility testing to ensure compliance throughout construction and at project closeout.
- **Commissioning and Testing** – Our QA/QC protocols verify that the system meets design intent, code requirements, workmanship standards, and equipment performance. We complete a full inspection and conduct comprehensive testing to deliver a system built to the highest industry standards.

## Energy Prediction Documentation

Arch's design team has developed comprehensive Helioscope layouts and production models for the proposed systems. Helioscope is an industry-standard software that allows designers to run hourly PV system simulations using site-specific weather data and to evaluate multiple design variations to ensure optimal system performance. The software generates detailed reports summarizing key system components, weather inputs, and all modeled system losses, including LID (year one), inverter efficiency, climate conditions, wiring, soiling, shading, and system availability.

To further enhance system analysis, Arch also leverages **Energy Toolbase (ETB)** to model solar

production alongside utility tariffs. ETB provides a detailed assessment of financial performance, energy savings, and system economics, ensuring the proposed systems are both technically and financially optimized.

Helioscope annual production and shading reports, along with financial modeling reports generated via ETB, are provided in the Appendices.

## Energy Savings Calculations

Energy savings for the proposed systems will be calculated and used as the basis for establishing our energy savings. Calculations are derived from one or more of the following methods:

- Billed utility usage
- Equipment specifications and operating parameters
- Custom engineering calculations
- Project production simulation models

For most projects, the process begins with collecting and analyzing billed utility data. This provides an annual usage profile, total consumption, and any anomalies in usage patterns. To ensure accuracy, utility data is weather-normalized, producing a “typical year” usage model. This step is critical for weather-dependent systems, such as solar PV, to avoid overstating or understating savings. Weather-normalized data also provides a reliable baseline against which pre- and post-project performance can be measured.

Arch can also work directly with the serving utility to obtain interval data, which provides a more granular understanding of usage patterns. This additional insight allows us to further optimize solar PV system designs and align system production with the facility’s actual load profile.

Before finalizing system sizing and design, Arch will conduct a detailed utility bill analysis for each facility to determine historical usage and to properly size the system for the desired solar offset.

Baseline and proposed utility data (usage and costs) for each site will be provided to clearly demonstrate the anticipated energy savings.

## Performance Assurance & Project Guarantees

Arch designs and installs each solar PV system for optimal performance, leveraging a rigorous design, commissioning, and quality assurance process. Projected energy savings are calculated using utility billing data, interval data (where available), system simulations, and equipment specifications to establish a reliable performance baseline.

System performance can be monitored in real time, tracking key metrics such as availability, inverter output, and weather-adjusted energy production. Arch offers a preventive maintenance and optimization service—including inspections, performance analysis, and corrective actions—to help systems maintain peak efficiency. Annual performance reports are available to compare projected versus actual energy production and identify opportunities for optimization.

For projects requiring a formal performance guarantee, Arch can provide a Savings Contract Obligation agreement, detailing agreed-upon savings estimates, annual reporting, and reconciliation procedures.

A sample Savings Contract Obligation is provided in Attachment I.

## PV Monitoring and Metering

Arch's solar PV system design will include comprehensive performance monitoring and metering to ensure optimal energy production and system reliability. Each system will leverage the SolarEdge One Monitoring platform provided by the inverter manufacturer, offering real-time visibility into system performance, energy generation, and key operational metrics. Additionally, Arch will utilize the SolarEdge API to integrate system data into a centralized monitoring interface, enabling seamless reporting, analytics, and performance verification.

## Automated Alerts

The system will be monitored 24/7, with alerts sent via email or text as soon as issues are detected. These alerts cover not only hardware faults and communication failures but also performance-based deviations, indicating when the PV system is producing less than expected based on its design. Arch includes ongoing monitoring of system alerts for its legacy clients and often addresses issues proactively, resolving them without requiring action from the end user. This approach enables early detection and resolution of even minor issues, minimizing potential economic impacts and ensuring consistent system performance.

## Reporting

The monitoring system can be configured to automatically send out reports on a specified schedule. Examples include PPA invoices and monthly production summaries with associated carbon offsets. Where applicable, production reports are electronically delivered to the appropriate agencies for incentive programs.

## Operation/Maintenance & Training

Building occupants have a direct impact on ensuring annual savings are achieved, occupant comfort is maintained, and that equipment life is extended. Training is a critical component for all projects, large or small. With the complexity of modern technology and equipment, it is critical that applicable county staff and tenants thoroughly understand all aspects of system operation. Arch offers the following standard training package for every applicable project:

<b><i>On-Site Training Session</i></b>	<p>Arch will host an on-site training session for all appropriate aspects of the project. Arch will lead the training session. An Arch team member will review the entire system and the appropriate equipment specifics.</p> <p>Arch first develops a training agenda. We will collaborate with you to incorporate any specific desires you have and to assess an appropriate schedule for your staff. Arch engages as many staff personnel as appropriate; typically, this includes building operators, maintenance personnel, and other staff members.</p> <p>As part of the training program, Arch provides instructions on a proper maintenance plan and strategy. While operating the system is important, it is equally important to know how to maintain the building for long-term sustainability of savings and occupant comfort.</p>
<b><i>List of Major Vendors</i></b>	Arch will provide you with contact information for vendor representatives for all major materials and equipment used on the project.
<b><i>Warranty Information</i></b>	Arch will provide you with a list of contacts for the equipment that has been installed and the current process for submitting issues under warranty.
<b><i>As-Built Documentation</i></b>	Arch will develop detailed as-built drawings for the project and combine these into a comprehensive set of record drawings that depict the actual work completed.

## POST-INSTALLATION TRAINING AND MANUALS

Your building occupants will have a direct impact on ensuring the annual savings are achieved, occupant comfort is maintained, and equipment life is extended, thus training them is a critical component of our work. To accomplish that, Arch will host an on-site training session (or multiple sessions, if needed) for all appropriate aspects of the project. We will conduct the training, reviewing entire systems with members of your team as needed. In addition, Arch will provide hard copies of the following documentation:

- A list of major suppliers
- Warranty information
- As-built documentation
- Contact Information

Our approach focuses on lowering the first cost of installation to create a better return on investment.

**TRAINING GOAL**

To extend new and existing equipment life, to ensure proper operation and maintenance procedures are performed, and to empower your occupants for the long-term.

*Training Key Points*

- *Comprehensive*
- *Tailored to the county's design and construction information.*

## Code and Standards Compliance

Arch is committed to full compliance with all applicable codes, standards, and utility requirements. In designing your project, we carefully consider project-specific constraints, including:

- Utility tariffs and net metering policies
- Utility interconnection rules
- Local permitting requirements
- Design wind speed for the project sites
- Available space for array placement
- Access requirements for fire safety and ongoing maintenance

Our design, installation, and commissioning will comply with the following codes and standards (as applicable):

### **Electrical and Fire Codes**

- 2017 *National Electrical Code (NEC)*: Chapters 1–4, 6, 7; Article 690 (Solar PV); Article 705 (Interconnected Electric Power Production Sources)
- 2018 *International Fire Code* – Chapter 12 (Solar Photovoltaic Power Systems; Electrical Energy Storage Systems)
- NFPA 853: Installation of Fuel Cell and Photovoltaic Systems Near Buildings

### **Equipment Standards**

- UL 1703: Flat-Plate PV Modules and Panels
- UL 1741: Static Inverters and Charge Controllers for PV Systems
- FM Approved: Fire Protection Tests for Solar Components

### **Performance and Interconnection Standards**

- IEC 62446: Grid-Connected PV Systems – System Documentation, Commissioning, and Inspection Requirements
- IEEE 1547: Standard for Interconnection of Distributed Energy Resources
- ASME PTC 50: Performance Test Code for Photovoltaic Systems
- ANSI Z21.83: Solar PV Performance and Safety

### **Structural and Roofing Standards**

- ASCE/SEI 7: Minimum Design Loads for Buildings and Other Structures
- NRCA: National Roofing Contractors Association Guidelines

## Timeline/Schedule

We have developed an approach that accounts for the project’s complexity and the anticipated timeline for completing regulatory approvals and installation. The primary factors influencing the schedule include finalizing the construction agreement, securing regulatory permits, and equipment procurement. While the project schedule serves as a guiding plan, it remains a living document. Like the County, our goal is to have the system operational as efficiently as possible. With experience managing large-scale projects under strict deadlines, Arch Solar will actively work to streamline regulatory approvals, design engineering, procurement, and construction to minimize overall project duration.

A tentative timeline is provided in the accompanying table for reference.

Task Name	Duration	Start	Finish
<b>PROJECT DURATION</b>	<b>120 days</b>	<b>6/12/2026</b>	<b>10/9/2026</b>
RFP Due	0 days	6/12/2026	6/12/2026
Agreement Execution	14 days	6/16/2026	6/29/2026
Design & Engineering	14 days	6/30/2026	7/13/2026
Interconnection Application	21 days	7/13/2026	8/2/2026
Material Procurement	32 days	7/26/2026	8/26/2026
Construction/Installation*	41 days	8/16/2026	9/25/2026
Commissioning / Project Closeout	15 days	9/25/2026	10/9/2026
<b>Substantial Completion</b>	<b>0 days</b>	<b>10/9/2025</b>	<b>10/9/2025</b>

**\*Will require a power outage of 3-4 hours for final connection into AC Switchgear.**

## Conceptual Drawings/Site Plan

Arch will provide all necessary design and engineering services required for a complete solar PV system, encompassing both AC and DC work. This includes preparation of Arch Engineering Documents:

- A.1 – Scope of Work
- A.2 – Site Plan
- A.3 – Array Details
- A.4 – One-Line Diagram

In addition, our team will deliver value engineering services to support the utility interconnection process and approval requirements. Upon project completion, we will provide comprehensive as-built construction drawings to document the final installation.

## Interconnection Process

The installation and interconnection of the proposed solar PV systems will be completed in full compliance with **PSC 119** and all additional processes and procedures established by **Wisconsin Power and Light (Alliant Energy)**. Arch's basis of design identifies the point of interconnection:

- Load-side breaker in MSB/H located in Electrical Room #0018.

This approach ensures that the system is interconnected in accordance with utility requirements while maintaining safe, dependable, and code-compliant operation.

## Equipment Datasheets

Please refer to Attachments A through C for datasheets of the major equipment specified for this project. Datasheets for all other PV system components can be provided upon request to ensure full transparency and technical clarity.



EMERGING AND  
DISADVANTAGED BUSINESS  
PARTICIPATION

## Part V EMERGING AND DISADVANTAGE BUSINESS PARTICIPATION

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### Women-Owned Business Enterprise (WBE)

Arch is proud to be both a **certified Women-Owned Business Enterprise (WBE)** and a **Veteran-Owned Business (VOB)**. Our dual certifications reflect our ongoing commitment to diversity, inclusion, and creating opportunities within the renewable energy industry. By choosing Arch Solar, your project directly supports participation from historically underrepresented and disadvantaged business groups while also benefiting from our proven technical expertise and history in delivering high-quality solar PV systems.

### Diversity and Inclusion

Arch Solar C&I is steadfast in our commitment to fostering diversity across all aspects of our organization, including workforce development and subcontracting practices. Through initiative-taking outreach and recruitment efforts, we aim to cultivate and sustain a workforce that reflects the diversity of the communities we serve. To help achieve these goals, we partner with Empower HR, a nationally recognized human resources provider, to support our diversity and inclusion objectives through strategic outreach initiatives.

We believe a representative workforce enhances our ability to deliver exceptional service and fosters stronger community connections. Additionally, we prioritize partnerships with entities that share our values, such as Small Business Enterprises (SBEs), Minority-Owned Business Enterprises (MBEs), Women-Owned Business Enterprises (WBEs), Veteran-Owned Business Enterprises (VBEs), and Disabled Veteran-Owned Business Enterprises (DVBES).

Arch Solar C&I maintains a strict non-discrimination policy. We do not discriminate against employees, students, or applicants based on age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, genetic information, veteran status, or any other legally protected status.

#### **Current Workforce Participation\***

##### **1. Arch Solar C&I:**

- Percentage Veterans: 0%
- Percentage Minority: 12.5%
- Percentage Women: 12.5%

##### **2. Arch Companies:**

- Percentage Veterans: 7.64%
- Percentage Minority: 36.36%
- Percentage Women: 17.36%

\*Data is based on voluntary employee disclosures. As disclosure is optional, these figures may not fully represent the workforce.

## Plan for Diversity and Inclusion

Arch Solar C&I is an equal-opportunity employer dedicated to investing in staff development while promoting diversity and inclusiveness. Below is a detailed description of our planned initiatives and engagements to enhance access to a diverse workforce:

### **1. Hiring Diverse Employees and Contractors**

- Arch Solar C&I is owned by Mindy Zinthefer and Ed Zinthefer, a U.S. Army veteran.
- We actively recruit and hire individuals from MBEs, WBEs, DBEs, and VBEs.

### **2. Participation in Industry Organizations and Community Outreach**

- Arch Solar C&I serves as an educator for the Midwest Renewable Energy Association (MREA) and other groups, promoting industry knowledge and inclusivity.

### **3. Ensuring Free and Open Competition in Contractor Bidding**

- We provide technical assistance to smaller contractors and break down scopes of work (SOWs) to facilitate the participation of diverse enterprises.
- Subcontractor selection is merit-based, with an emphasis on partnering with diverse enterprises whenever possible.
- Our staff also mentor new solar industry participants, including future competitors and small businesses, by sharing best practices and technical expertise through platforms like MREA.

### **4. Supporting Apprenticeships through Associated Builders & Contractors (ABC)**

- Arch Solar C&I offers a fully accredited electrical apprenticeship program in partnership with ABC Wisconsin, certified by the state's Bureau of Apprenticeship Standards.
- Apprentices receive classroom instruction, continuing education credits, and 8,000 hours of on-the-job training, progressing toward their Journeyman Electrician's License.
- Currently, Arch Solar C&I employs four apprentices.

### **5. Target Project Goals for Staffing**

- **Veterans: 10%**
- **Minority: 40%**
- **Women: 15%**



PROJECT PROPOSAL

## Part VI PROJECT PROPOSAL

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### Approach

Arch is one of the largest and most experienced solar installers in Wisconsin and has 20+ years of solar construction experience. We have pricing and cost control down to a science and constantly collaborate with our clients and suppliers to reduce costs for our projects. However, Arch does not just focus on the initial cost for a project but rather on the complete life cycle cost of a project. Solar PV systems will last for decades if the system is designed correctly, top quality products are deployed, the system installed to the highest standards and then maintained with experienced staff. With Arch, the County can be confident that their investment in this project will perform as expected for years to come.

We continuously track our costs on our projects, so we can convey this information to clients. This enables us to accurately invoice for work completed, provide final cost substantiation, and identify any construction savings that clients could use for added project work or reducing the contract amount.

You are insulated from unforeseen issues because Arch makes construction-grade estimates early in projects, employs well-proven calculation tools, adheres to guaranteed maximum pricing, and operates under a no-change-order philosophy. This means we will not submit change orders to complete the scope of work detailed in the contract.

### Basis of Design

- Solar PV systems are engineered for a minimum 40-year design life, assuming periodic inverter replacements.
- SolarEdge One monitoring and Energy Management Platform.
- Warranties and Services:
  - 1-year of Arch O&M services included
  - 5-year Arch Solar C&I Workmanship
  - Equipment Limited Manufacture Warranty for equipment to be free from defects in workmanship and materials.
  - Module manufacturer performance guarantee.

Refer to the Arch Solar C&I Statement of Work in the Appendices for the complete scope of work provided by Arch.

### Financial Modeling Reports

Arch provides detailed financial modeling reports for proposed solar PV system, measuring key metrics such as projected energy production, utility cost savings, and financial returns.

Project-specific proposal, including these financial modeling reports, is included in Exhibit C, providing the county with a clear, data-driven view of expected system performance and economic benefits.

**From:** [Van Meel, Michael](#)  
**To:** [Stobbe, Samantha](#)  
**Subject:** Fw: RFB 05-2026 Proposal Submission – Green Lake County Justice Center Solar Project - Bid 2  
**Date:** Friday, June 12, 2026 1:01:30 PM  
**Attachments:** [image.png](#)  
[image.png](#)  
[image.png](#)  
[image.png](#)  
[image.png](#)  
[IKIO Submission.pdf](#)

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**From:** Inder Singh <[isingh@ikioledlighting.com](mailto:isingh@ikioledlighting.com)>  
**Sent:** Friday, June 12, 2026 8:40 AM  
**To:** Van Meel, Michael <[mvanmeel@greenlakecountywi.gov](mailto:mvanmeel@greenlakecountywi.gov)>  
**Subject:** RFB 05-2026 Proposal Submission – Green Lake County Justice Center Solar Project

[CAUTION: EXTERNAL SENDER This email originated from outside Green Lake County. Do not click links or open attachments unless you recognize the sender and know the content is safe.]

Mr. Van Meel,

Please find attached the proposal from IKIO in response to RFB 05-2026 for the Green Lake County Justice Center Solar Project.

Our submission includes the proposed system design, technical specifications, energy production analysis, project schedule, financial proposal, and supporting documentation as requested in the RFB.

Thank you for the opportunity to submit our proposal. Should you require any additional information or clarification, please do not hesitate to contact me.



**Inder Singh**  
**Mobile:** (+1) 317-737-4287 | **Office:** (+1) 844-533-4546  
**Email:** [isingh@ikioledlighting.com](mailto:isingh@ikioledlighting.com)  
**Web:** [www.ikioledlighting.com](http://www.ikioledlighting.com)  
8470 Allison Pointe Blvd, Suite 128 Indianapolis, IN 46250



**Request For Bid (RFB) 05 – 2026  
Green Lake County Justice Center  
Project Title: Green Lake County Justice Center Solar  
Project**

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**Submitted To:**

**Green lake County Justice center**  
571 county road Green lake WI

**Attn.:** Mike Van Meel

**Submitted By:**



**IKIO USA  
&  
SOLAR ALLIANCE**

June 12, 2026

Mike Van Meel  
Maintenance Director  
Green Lake County Justice Center  
571 County Road A  
Green Lake, WI 54941

RE: Proposal for Green Lake County Justice Center Solar Project (RFB 05-2026)

Dear Mr. Van Meel and Green Lake County Evaluation Committee,

Solar Alliance, in partnership with IKIO LED Lighting, is pleased to submit our proposal for the Green Lake County Justice Center Solar Project. We appreciate the opportunity to support Green Lake County's continued commitment to sustainability, energy independence, and responsible stewardship of taxpayer resources.

We understand that Green Lake County seeks a comprehensive, turnkey photovoltaic solution capable of offsetting approximately 50% of the Justice Center's annual electrical consumption while maximizing the benefits available through the Federal Investment Tax Credit (Elective Pay), Wisconsin Office of Energy Innovation Energy Innovation Grant Program (EIGP), and Focus on Energy incentives. Our team has developed a solution specifically designed to meet these objectives while providing long-term reliability, operational savings, and compliance with all applicable federal and state requirements.

Solar Alliance brings extensive experience in the design, engineering, construction, and commissioning of commercial and municipal solar energy systems throughout the United States. Combined with IKIO's manufacturing expertise, financial strength, and long-standing commitment to energy efficiency solutions, our partnership offers Green Lake County a highly qualified team capable of delivering a successful project from initial development through final commissioning and long-term support.

Our proposal includes:

- A complete turnkey ground-mounted solar photovoltaic system designed to achieve the County's energy production objectives
- Comprehensive engineering, permitting, procurement, construction, interconnection, and commissioning services
- FEOC-compliant equipment meeting current federal requirements for incentive eligibility
- Support for ITC Elective Pay, OEI EIGP grant applications, and available Focus on Energy incentives
- Advanced monitoring and public display capabilities to showcase system performance and environmental benefits
- Dedicated project management and transparent communication throughout the project lifecycle
- Long-term warranties and optional operations and maintenance services to ensure continued system performance

We recognize the importance of delivering a reliable, cost-effective project that provides measurable value over the life of the system. Our team is committed to maintaining open communication, meeting project milestones, and working collaboratively with Green Lake County staff, consultants, and utility representatives to ensure a successful outcome.

Thank you for your consideration of our proposal. We appreciate the opportunity to partner with Green Lake County on this important sustainability initiative and look forward to discussing our qualifications and proposed solutions in greater detail.

Sincerely,  
Team – IKIO USA

# 1. COMPANY OVERVIEW

## Who Are We?

**IKIO USA** is a multidisciplinary Engineering, Procurement, and Construction (EPC) firm headquartered in Indianapolis, Indiana. The company delivers turnkey project solutions for the energy, commercial, industrial, and municipal infrastructure sectors. With an integrated delivery approach, IKIO ensures cost efficiency, schedule reliability, and high-quality outcomes that support long-term client needs.

## Integrated EPC Delivery Model

IKIO provides end-to-end project delivery through a unified EPC structure. Key advantages include:

-  **Single-source accountability**
-  **Streamlined communication**
-  **Improved schedule control**
-  **Consistent quality**
-  **Lifecycle-focused support**



## Engineering Capabilities

IKIO USA engineering team covers multiple technical disciplines, delivering design solutions that meet the performance, safety, and regulatory requirements of complex projects.

### Core engineering services include:

- Mechanical, electrical, civil, and structural design
- Feasibility studies and conceptual planning
- Site assessments and technical evaluations
- Load analysis, system modeling, and design optimization
- Permitting support and code-compliant documentation
- Development of detailed construction drawings and specifications



## Procurement Expertise

IKIO USA manages complete procurement services backed by a robust supplier and manufacturer network.

### Procurement strengths include:

- Strategic sourcing of materials, equipment, and specialty systems
- Vendor qualification and contract management
- Logistics planning and delivery coordination
- Cost tracking, budgeting, and procurement controls
- Integration of Tier-1, industry-standard components



## Constructions Field Execution

IKIO USA provides full-scale construction management and site execution, supported by strong safety and QA/QC processes.

### Construction services include:

- Project scheduling and site mobilization
- Installation, construction supervision, and field coordination
- On-site quality assurance and inspection programs
- Safety management and regulatory compliance
- Commissioning, performance verification, and turnover documentation



## Markets s Project Types

IKIO USA supports a broad range of industries with tailored EPC solutions.

### Primary markets include:

- Energy infrastructure and distributed energy systems
- Commercial and industrial facilities
- Municipal and public-sector buildings and utilities
- Ground-mounted and site-engineered installations
- Environmental and site-specific infrastructure developments



## Commitment to Quality's Resilience

- Rigorous quality assurance processes
- Transparent communication and progress reporting
- Engineering choices focused on lifecycle value, not short-term cost
- Resilient design practices aligned with industry standards
- Continuous improvement through data-driven project insights



## Associated Partner- Solar Alliance

Solar Alliance Southeast is the engineering, procurement and construction source for Commercial and Industrial solar projects. Bringing years of professional experience, the Solar Alliance team is committed to helping you realize organizational objectives, evaluate and design the most appropriate solution, then deliver your project on budget.

### Core Competencies

- Solution-focused objective alignment for your project
- Energy monitoring, project design, project management
- NABCEP-certified professional team leaders
- Experience with federal, municipality, utility clients
- Solar photovoltaic (PV) and energy storage solutions
- Turnkey capabilities
- Coordination with local power companies and inspectors
- Safety EMR 0.78 (2025)

### NAICS Codes

**221114:** Solar Electric Power Generation

**238210:** Electrical Contractors and Other Wiring Installation Contractors

**237130:** Power and Communication Line and Related Structures Construction

# COST PROPOSAL

## Green Lake County Justice Center Solar Project

### Proposed Project

IKIO USA, in partnership with Solar Alliance Energy, Inc., proposes to furnish, install, test, commission, and place into operation a complete turnkey ground-mounted solar photovoltaic system for the Green Lake County Justice Center.

### System Summary

Description	Value
DC System Capacity	550.0 kWdc
AC System Capacity	500.0 kWac
Estimated Annual Production	796,910 kWh
Estimated Energy Offset	Approximately 53%
System Type	Ground-Mounted Solar PV
Utility Provider	Alliant Energy

### Contract Price

#### Total Turnkey Contract Amount

**\$929,500.00**

(Nine Hundred Twenty-Nine Thousand Five Hundred Dollars)

The Contract Amount includes all labor, materials, equipment, engineering, permitting support, procurement, construction, testing, commissioning, project management, and closeout services necessary to deliver a complete and operational photovoltaic system as described in this proposal.

### Estimated Incentive Summary

The following incentives are not included in the Contract Amount and are presented for informational purposes only.

Incentive Program	Estimated Value
Federal Investment Tax Credit (Elective Pay - 30%)	\$278,850
Focus on Energy Incentive (Estimated)	\$25,000
Potential Wisconsin OEI Grant Funding	To Be Determined
<b>Total Identified Incentives</b>	<b>\$303,850</b>

### Estimated Net Cost After Incentives

Description	Amount
<b>Contract Amount</b>	<b>\$929,500</b>
Less Estimated Federal ITC (Elective Pay)	(\$278,850)
Less Estimated Focus on Energy Incentive	(\$25,000)
<b>Estimated Net Project Cost</b>	<b>\$625,650</b>

*All incentive values are estimates only and remain subject to program eligibility requirements, application approval, funding availability, and final determination by the applicable agencies*

### Proposed Payment Schedule

Milestone	Percentage	Amount
Contract Execution	10%	\$92,950
Completion of Engineering & Permitting	15%	\$139,425
Equipment Procurement	35%	\$325,325
Construction Mobilization	15%	\$139,425
Mechanical Completion	20%	\$185,900
Final Commissioning & Acceptance	5%	\$46,475
<b>Total</b>	<b>100%</b>	<b>\$929,500</b>

### Clarifications & Exclusions

The Contract Amount is based upon the project scope outlined in this proposal and excludes the following:

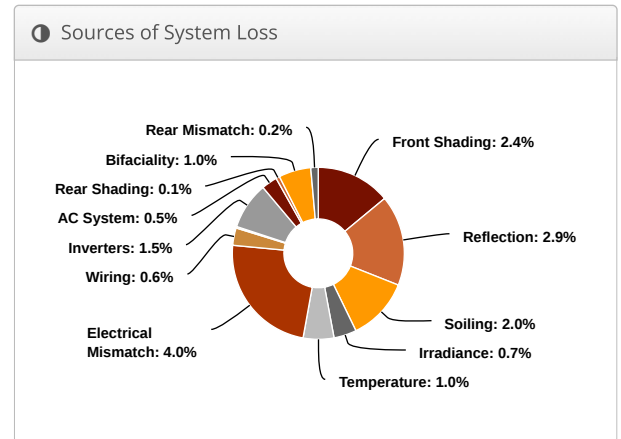
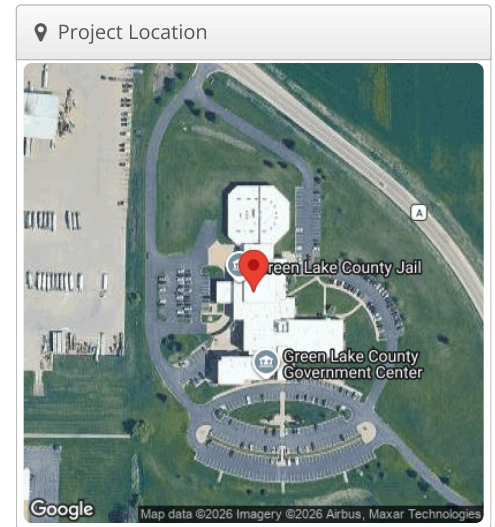
- Utility infrastructure upgrades, including distribution system upgrades, protection upgrades, meter upgrades, feeder upgrades, substation upgrades, or other utility-required improvements.
- Transformer replacement, utility-owned transformer upgrades, or utility-side electrical modifications unless specifically identified in the final engineered scope.
- Geotechnical investigations, rock excavation, unsuitable soil remediation, environmental remediation, or unforeseen subsurface conditions.
- Wetland mitigation, environmental permitting, archaeological investigations, or endangered species studies if required by authorities having jurisdiction.
- Sales taxes, use taxes, tariffs, or governmental fees imposed after proposal submission.
- Any scope additions or modifications requested after contract execution.

Any utility-required upgrades or unforeseen conditions identified after completion of utility review shall be addressed through a mutually agreed change order process.

# Design 1 IK GLJC WI, Green Lake County/Maintenance Department, 571 County Road A, Green Lake, WI 54941

Report	
Project Name	IK GLJC WI
Project Address	Green Lake County/Maintenance Department, 571 County Road A, Green Lake, WI 54941
Prepared By	Colleen McWilliams service@solaralliance.com

System Metrics	
Design	Design 1
Module DC Nameplate	550.00 kW
Inverter AC Nameplate	500.00 kW Load Ratio: 1.10
Annual Production	796.9 MWh
Performance Ratio	87.5%
kWh/kWp	1,448.9
Weather Dataset	TMY, MADISON, NSRDB (tmy2)
Simulator Version	df10dd1b80-9f46d909c3-816c4e4c07-c3dc638566



⚡ Annual Production				
	Description	Output	% Delta	
Front Irradiance (kWh/m <sup>2</sup> )	Annual Global Horizontal Irradiance	1,436.4		
	POA Irradiance	1,655.6	15.3%	
	Shaded Irradiance	1,616.3	-2.4%	
	Irradiance after Reflection	1,569.6	-2.9%	
	Irradiance after Soiling	1,538.2	-2.0%	
	<b>Total Front Collector Irradiance</b>	<b>1,538.2</b>	<b>0.0%</b>	
Rear Irradiance (kWh/m <sup>2</sup> ) <i>Supported only for fixed tilt racking</i>	Surface Irradiance in Collector Plane	Global Incident Irradiance on Surface	762.7	-
		Surface Reflected Irradiance after Albedo	152.5	-80.0%
		Conversion from Surface Area to Collector Area	321.4	
		<b>Surface Irradiance in Collector Plane</b>	<b>40.1</b>	<b>-87.5%</b>
	Unshaded Irradiance on Rear Side	Surface Irradiance in Collector Plane	40.1	
		Sky Diffuse	16.5	
		Beam Effective	0.2	
		<b>Total Unshaded Irradiance on Rear Side</b>	<b>56.8</b>	
		Shaded Irradiance on Rear Side	54.0	-5.0%
		<b>Total Rear Collector Irradiance</b>	<b>54.0</b>	
		<b>Effective Rear Collector Irradiance</b>	<b>37.8</b>	<b>-30.0%</b>
		<b>Total Collector Irradiance</b>	<b>1,576.0</b>	
	Energy (kWh)	Nameplate	866,970.4	
Output at Irradiance Levels		860,679.6	-0.7%	
Output at Cell Temperature Derate		852,235.7	-1.0%	
Output after Electrical Mismatch		818,028.6	-4.0%	
Output after Rear Mismatch		816,083.3	-0.2%	
Optimal DC Output		813,505.9	-0.6%	
Constrained DC Output		813,117.0	0.0%	
Inverter Output		800,915.0	-1.5%	
	<b>Energy to Grid</b>	<b>796,910.5</b>	<b>-0.5%</b>	
Temperature Metrics				
	Avg. Operating Ambient Temp		11.3 °C	
	Avg. Operating Cell Temp		18.9 °C	
Simulation Metrics				
	Operating Hours		4710	
	Solved Hours		4710	

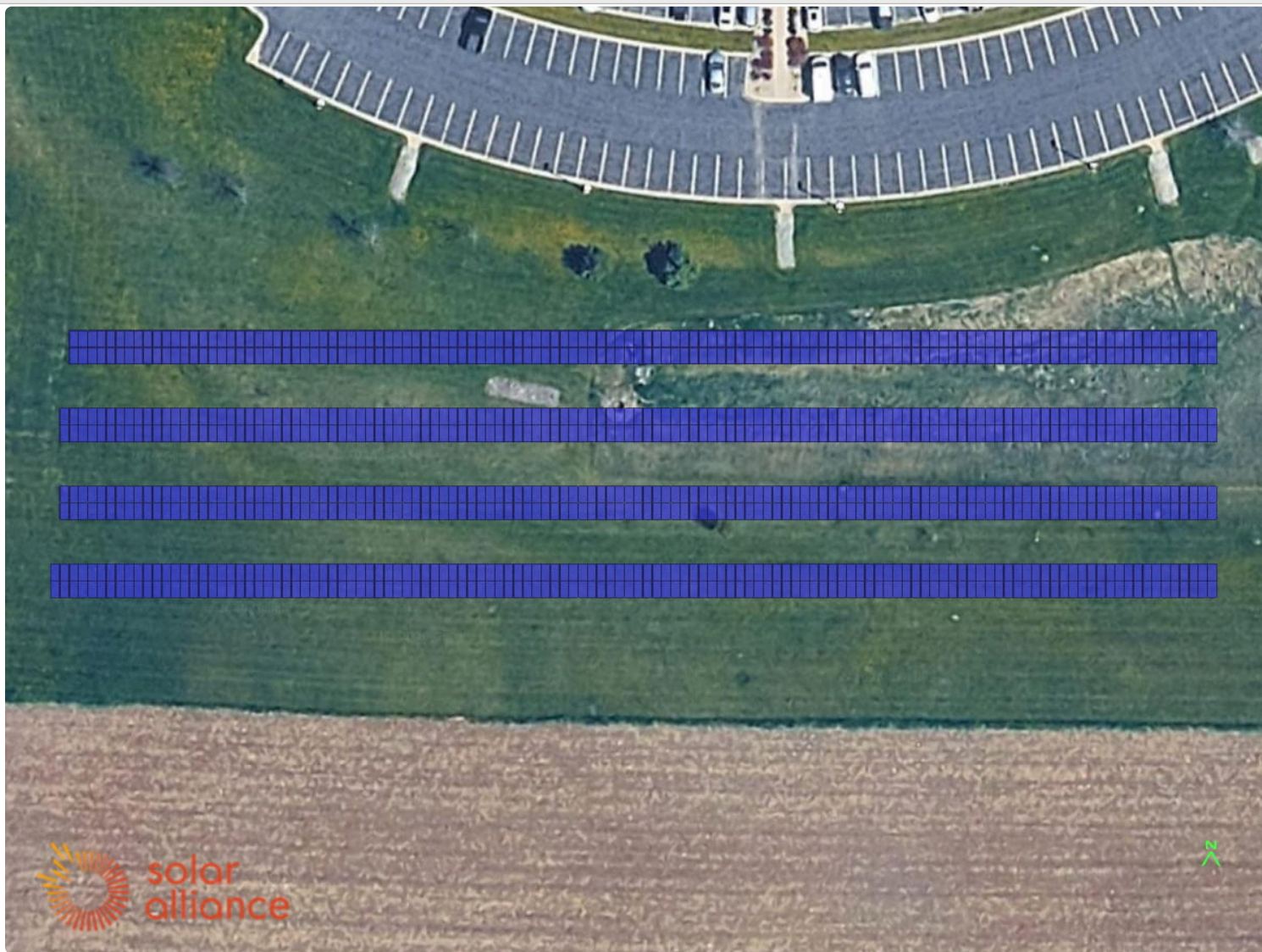
☁ Condition Set													
Description	Condition Set 1												
Weather Dataset	TMY, MADISON, NSRDB (tmy2)												
Solar Angle Location	Meteo Lat/Lng												
Transposition Model	Perez Model												
Temperature Model	Sandia Model												
Temperature Model Parameters	Rack Type	a	b	Temperature Delta									
	Fixed Tilt	-3.56	-0.075	3°C									
	Flush Mount	-2.81	-0.0455	0°C									
	East-West	-3.56	-0.075	3°C									
	Carport	-3.56	-0.075	3°C									
Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D	
	2	2	2	2	2	2	2	2	2	2	2	2	
Albedo	J	F	M	A	M	J	J	A	S	O	N	D	
	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	
Rear Mismatch Loss	10%			Rear Shading Factor					5%				
Module Transparency	0%												
Irradiation Variance	5%												
Cell Temperature Spread	4° C												
Module Binning Range	-2.5% to 2.5%												
AC System Derate	0.50%												
Module & Component Characterizations	Type	Component						Characterization				Bifacial	
	Module	AA-550US-6x24GG 550 (Bila Solar)						Spec Sheet Characterization, PAN				True	
	Inverter	Sunny Highpower PEAK3 125-US (SMA)						Spec Sheet				N/A	

Components		
Component	Name	Count
Inverters	Sunny Highpower PEAK3 125-US (SMA)	4 (500.00 kW)
Strings	10 AWG (Copper)	40 (10,722.1 ft)
Module	Bila Solar, AA-550US-6x24GG 550 (550W)	1,000 (550.00 kW)

Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	18-26	Along Racking

Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Portrait (Vertical)	Module: 25°	Module: 180°	18.0 ft	2x1	500	1,000	550.00 kW

Detailed Layout2





**Tier1**  
BloombergNEF

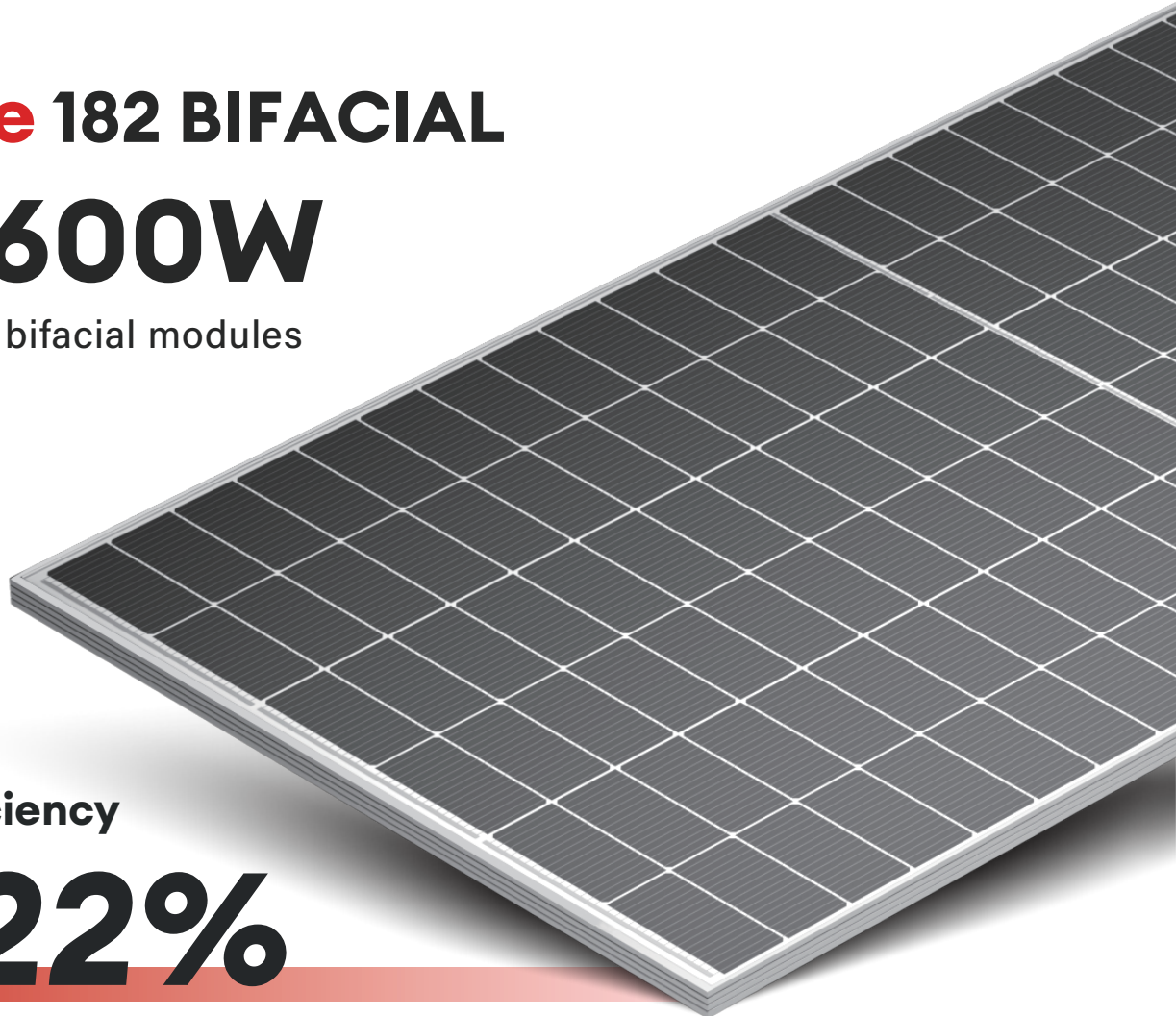
**FEOC**  
**FREE**

*Power the future*

# **N-Type** 182 BIFACIAL

# 585-600W

High efficiency bifacial modules



Module efficiency

# 23.22%



Better leveled cost of energy



Better high temperature stability

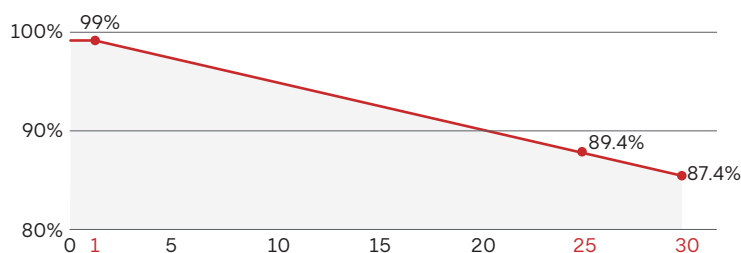


Improved low-light performance



Excellent bifacial performance

Linear performance guarantee for 30 years



## WARRANTY

Extended warranty is available at additional cost

Quality Guarantee **15** years

Power Warranty **30** years

## CERTIFICATE



## ELECTRIC CHARACTERISTICS

## SPDG (585/600W)-N144M10

Model of modules	SPDG585-N144M10		SPDG590-N144M10		SPDG595-N144M10		SPDG600-N144M10	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Power ( Pmax/W )	585	437.30	590	441.00	595	444.60	600	448.4
Maximu power current ( Vmp )	42.72	39.90	42.87	40.00	43.03	40.20	43.18	40.3
Maximu power current ( Imp )	13.7	10.96	13.77	11.02	13.83	11.07	13.90	11.13
Open circuit voltage ( Voc )	51.58	48.30	51.7	48.40	51.84	48.50	51.97	48.7
Short circuit current ( Isc )	14.41	11.61	14.48	11.67	14.55	11.72	14.62	11.78
Module efficiency	22.64%		22.83%		23.02%		23.22%	

STC ( Electrical parameters at standard test conditions (STC:AM=1.5, 1000W/m<sup>2</sup>, Cells Temperature25°C )

NMOT ( Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C , AM1.5,Wind Speed 1m/s )

## ELECTRICAL CHARACTERISTICS WITH 15% REAR SIDE POWER GAIN

Front power Pmax/W	672.75	678.50	684.25	690.00
Maximu power voltage ( Vmp )	42.72	42.87	43.03	43.18
Maximu power current ( Imp )	15.75	15.83	15.90	15.98
Open circuit voltage ( Voc )	51.58	51.70	51.84	51.97
Short circuit current ( Isc )	16.57	16.65	16.73	16.81

## STRUCTURAL CHARACTERISTICS

Module size (L*W*H)	2278x1134x30mm
Weight	31kg
Cell	144 cells, N type Mono-Crystalline , 182mm×91mm
Front glass	2.0mm , Anti-Reflection Coating
Back glass	2.0mm , Heat Strengthened Glass
Frame	Anodized aluminum alloy
Junction box	IP68 , 3 bypass diodes
Output wire	4mm <sup>2</sup>
Wire length	Line length 1300mm/customized
Connector	Stäubli MC4
Packing Specification	37 pcs/Pallet ; 740 pcs/40' HQ

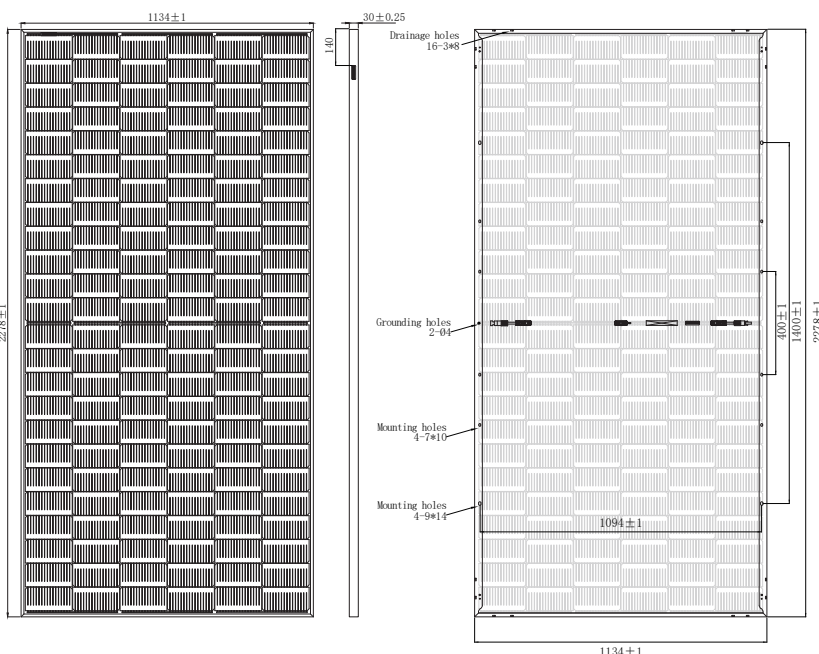
## OPERATING PARAMETERS

Power tolerance (W)	(0~+5W)
Maximum system voltage (V)	1500V
Maximum rated fuse current (A)	30A
Current operating temperature (C)	-40~+85°C
Mechanical load	+5400Pa/-2400Pa

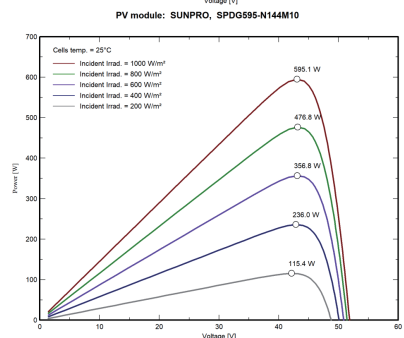
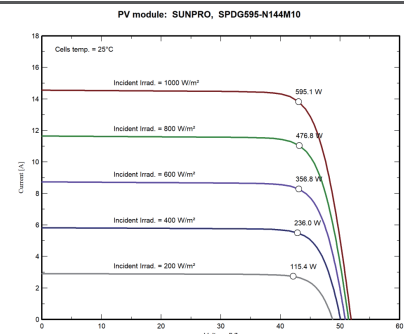
## TEMPERATURE CHARACTERISTICS

Temp. Coeff. of Isc (TK Isc)	0.046% / °C
Temp. Coeff. of Voc (TK Voc)	-0.25% / °C
Temp. Coeff. of Pmax (TK Pmax)	-0.30% / °C
Normal Operting Cell Temperature	45±2°C

## MODULE DIMENSIONS(MM)



## I-V CHARACTERISTICS AT DIFFERENT IRRADIATION



**SUNPRO POWER NORTH AMERICA INC.**

ADD: STE 2, 206 N Randolph St, Champaign, IL 61820

E-MAIL: info@sunpropower.com WEBSITE: www.sunpropower.us

\*All data may have a lag, for reference only. Sunpro has the final right of interpretation.



20-345 County Road X, PO Box 224  
Ridgeville Corners, OH 43555

Office: 419.267.5280  
Fax: 419.267.5214

December 7, 2022

To Whom It May Concern:

This letter outlines the percentage compliance by which APA satisfies the Domestic Content requirement per the Inflation Reduction Act (IRA) (H.R. 5376).

Hardware with 100% Domestic Content today

- APA Ready Rack Helical - 100% IRA Domestic Compliant
- APA TITAN Pile - 100% IRA Domestic Compliant
- TITAN Pour-N-Go Ballast - 100% IRA Domestic Compliant

Hardware with Domestic Content options

- TITAN DUO Ground Screw system (75% to 85% Domestic)
  - Option for 100% IRA Domestic Compliant Option available Feb 2023
- A-FRAME Helical and Ground Screw (60 to 75% Domestic)
  - Option for 100% IRA Domestic Compliant Option available Feb 2023

If you have any questions, please reach out to your Business Development Manager.

Sincerely,

Cameron A. Tilkins

APA Solar Racking

Business Manager

419-267-5280



/ SHP 125-US-21 / SHP 150-US-21 / SHP 165-US-21 / SHP 172-US-21



# Sunny Highpower PEAK3-US

125 / 150 / 165 / 172

A superior distributed generation  
solution for large-scale power plants

**25** YEAR  
DESIGN LIFE



## Cost effective

- Modular architecture reduces BOS and maximizes system uptime
- Compact design and high power density maximize transportation and logistical efficiency

## Maximum flexibility

- Scalable 1,500 VDC building block with best-in-class performance
- Flexible architecture creates scalability while maximizing land usage

## Simple install, commissioning

- Ergonomic handling and simple connections enable quick installation
- Centralized commissioning and control with SMA Data Manager

## Highly innovative

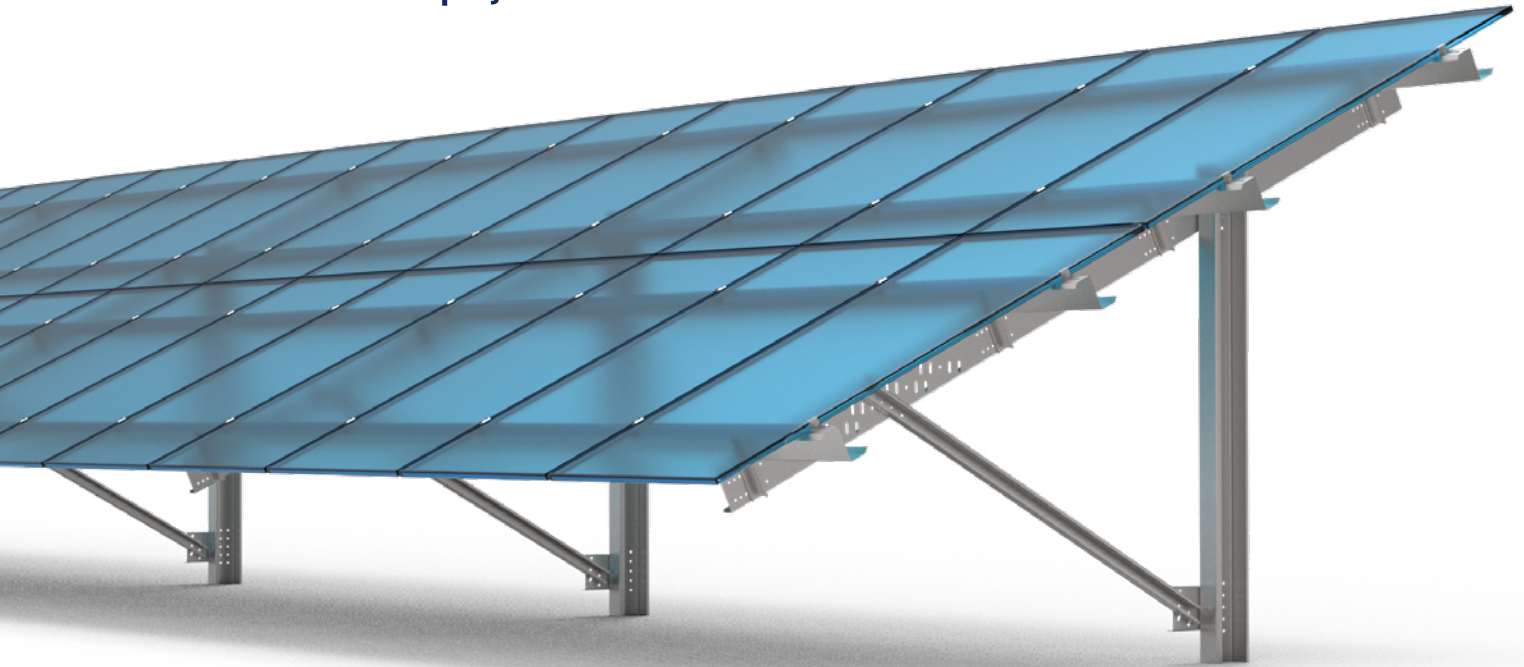
- SMA Smart Connected reduces O&M costs and simplifies field-service
- Powered by award winning ennexOS cross sector energy management platform

The Sunny Highpower PEAK3 1,500 VDC inverter offers high power density in a modular architecture that achieves a cost-optimized solution for large-scale PV integrators.

With fast, simple installation and commissioning, the PEAK3 is accelerating the path to energization. SMA has also brought its field-proven Smart Connected technology to the PEAK3, which simplifies O&M and contributes to lower lifetime service costs. The PEAK3 power plant solution is powered by the ennexOS cross sector energy management platform, 2018 winner of the Intersolar smarter E AWARD.

Technical Data	Sunny Highpower PEAK3 125-US	Sunny Highpower PEAK3 150-US	Sunny Highpower PEAK3 165-US	Sunny Highpower PEAK3 172-US
<b>Input (DC)</b>				
Maximum array power <sup>1)</sup>	250 kWp	300 kWp	330 kWp	344 kWp
Maximum system voltage	1500 Vdc			
Rated MPP voltage range	705 V ... 1450 V	880 V ... 1450 V	924 V ... 1450 V	968 V ... 1450 V
MPPT operating voltage range	684 V ... 1500 V	855 V ... 1500 V	898 V ... 1500 V	941 V ... 1500 V
MPP trackers	1			
Maximum operating input current	180 A			
Maximum input short-circuit current	325 A			
<b>Output (AC)</b>				
Nominal AC power	125 kW	150 kW	165 kW	172 kW
Maximum apparent power	125 kVA	150 kVA	165 kVA	172 kVA
Output phases / line connections	3 / 3-PE			
Nominal AC voltage	480 V	600 V	630 V	660 V
Compatible transformer winding configuration	Wye-grounded			
Maximum output current	151 A			
Rated grid frequency	60 Hz			
Grid frequency / range	50 Hz, 60 Hz / -6 Hz ... +6 Hz			
Power factor at rated power / adjustable displacement	1 / 0.8 leading ... 0.8 lagging			
Harmonics (THD)	<3%			
<b>Efficiency</b>				
CEC efficiency	98.5 %	99.0 %	99.0 %	99.0 %
<b>Protection and safety features</b>				
Ground fault monitoring: Riso / Differential current	● / ●			
DC reverse polarity protection	●			
AC short circuit protection	●			
Monitored surge protection (Type 2): DC / AC	● / ●			
Protection class / overvoltage category (as per UL 840)	I / IV			
<b>General data</b>				
Device dimensions (W / H / D)	770 / 830 / 462 mm (30.3 / 32.7 / 18.2 in)			
Device weight	99 kg (218 lbs)			
Operating temperature range	-25 °C ... +60 °C (-13 °F ... +140 °F)			
Storage temperature range	-40 °C ... +70 °C (-40 °F ... +158 °F)			
Audible noise emission (full power @ 1m and 25 °C)	< 69 dB(A)			
Internal consumption at night	< 5 W			
Topology	Transformerless			
Cooling concept	OptiCool (forced convection, variable speed fans)			
Enclosure protection rating	Type 4X			
Maximum permissible relative humidity (non-condensing)	100%			
<b>Additional information</b>				
Mounting	Rack mount			
DC connection	Terminal lug (up to 600 kcmil CU/AL)			
AC connection	Screw terminal (up to 300 kcmil CU/AL)			
LED indicators (Status/Fault/Communication)	●			
SMA Speedwire (Ethernet network interface)	● (2 x RJ45 ports)			
Data protocols: SMA Modbus / SunSpec Modbus	● / ●			
Integrated Plant Control / Q on Demand 24/7	● / ●			
Off-grid capable / SMA Hybrid Controller compatible	- / ●			
<b>Monitoring</b>				
SMA Sunny Portal (monitoring portal)	No cost for the lifetime of the system			
SMA Smart Connected (monitoring and remote O&M service)	No cost on inverters under warranty			
Supported protocols for outbound data	SMA external API, Modbus, FTP			
<b>Certifications</b>				
Certifications and approvals (pending)	UL 62109, UL 1998, CAN/CSA-C22.2 No.62109			
Manufacturer's Declaration of Design Life	25 years			
FCC compliance	FCC Part 15, Class A			
Grid interconnection standards	IEEE 1547:2018, UL 1741-SA - CA Rule 21, HECO Rule 14H, UL1741SB			
Advanced grid support capabilities	L/HFRT, L/HVRT, Volt-VAR, Volt-Watt, Frequency-Watt, Ramp Rate Control, Fixed Power Factor			
<b>Warranty</b>				
Standard	5 years			
Optional extensions (total warranty coverage cannot exceed 25 years)	+5 / +10 / +15 / +20 years			
1) Higher DC array power permitted via site inverter load modeling in SMA Sunny Design				
Type designation	SHP 125-US-21	SHP 150-US-21	SHP 165-US-21	SHP 172-US-21
● Standard features   ○ Optional features   – Not available				

SHP150-US-21 - Changes to products and services, including those resulting from country specific requirements, as well as deviations from technical data are subject to change at any time without notice. SMA assumes no liability for typographical or other errors. Please visit www.SMA-Solar.com for the latest information.



## STANDARD SPECIFICATIONS

**Engineering:** ASCE 7-10/7-16/CPP Wind Tunnel Tested

**Grounding:** Fully Integrated UL2703

**Foundation:** Driven C-Pile

**Tilt Angles:** 5°-35° Tilt Options

**Racking Coating:** Galvanized; G90

**Foundation Coating:** G235

**Wind Loading:** Up to 165mph

**Snow Loading:** Up to 100psf

**Mounting Orientation:** 2-High in Portrait

**Warranty:** 25 Years



Note: APA offers both domestic and non-domestic foundation options. A domestic foundation must be purchased to qualify as Domestic Content.

## POWERHOUSE PILES™

TITAN comes standard with the industry's strongest C-pile. The Powerhouse Pile™ allows us to use a cost-effective C-pile, while maintaining the strength of a driven I-beam. Roll forming C-piles allows us to incorporate additional hole patterns for adjustability, heavy galvanized coatings for durability, and shorter lead times for our customers, all while maintaining an aggressive price point.

# TITAN™

Designed by installers for installers, **TITAN™** is the most advanced hardware in the industry. TITAN's innovative features allow for flexibility in the field while streamlining the install process. With the lowest part count per MW and integrated grounding and cable trays, TITAN is installers preferred choice. The 4-rail design is an excellent solution for areas with high snow loads and large format modules. TITAN comes standard with driven C-Pile foundation.

*In business since 2008, APA offers a versatile line of racking and foundation solutions for projects in even the most challenging environments. With projects nationwide, APA is a trusted racking partner.*

# WHY USE TITAN™ 4-RAIL?

## WIRE MANAGEMENT

Integrated cable trays and custom wire clips keep your project organized, safe, and code compliant for the life of the project, without costly third-party solutions.



## 4-RAIL DESIGN

- Capable of handling snow loads up to 100psf
- Works with large format modules
- 2-High Portrait, ideal for split cell modules
- Low back panel shading for bifacial modules



## BUILT IN ADJUSTABILITY

TITAN has incorporated hole patterns into several key connections. This allows for in-the-field adjustments, which improve both installation and aesthetics.

±3° ROTATION

±2° PLUMB

±12"      ±2"      ±2"

## POWERHOUSE PILES

Made from heavy gauge steel, our roll formed C-Piles are the strongest in the industry, allowing for long spans and excellent drivability, even in very dense soils.

## PILE PLACEMENT

Our racking is designed with the installer in mind. That's why we have forgiving pile placement tolerances in the North-South and East-West directions.



**SMA America**

3925 Atherton Road  
Rocklin, CA 95765  
Tel.: +1 916 625 0870  
Fax: +1 916 625 0871  
info@SMA-America.com  
www.SMA-America.com

December 5, 2025

**FEOC Statement of Information\***

SMA Solar Technology America LLC (SMA) - String Inverters

This statement provides information regarding SMA's ownership structure as it relates to Foreign Entity of Concern (FEOC) requirements under the Inflation Reduction Act (IRA) and the subsequent One Big Beautiful Bill Act (OBBBA).

For specifics on how these statements affect individual projects or your ability to seek certain tax credits, we strongly recommend you confer with your own legal counsel. Because final regulations related to "effective control" has not yet been issued by the U.S. Department of the Treasury and/or the U.S. Department of Energy, SMA cannot confirm FEOC compliance at this time. No organization can state with certainty that its products or supply chains meet FEOC requirements until formal federal regulations are published. To provide support in the interim, we can confirm the following facts regarding SMA and the products listed below:

*Information listed herewith is true and correct as of the date of this statement and will be superseded by a new statement as more information becomes available.*

- SMA is a German corporation.
- SMA is indirectly wholly owned by SMA AG and is not a FEOC under The United States National Defense Authorization Act of 2021.
- SMA is not categorized as a Chinese Military Company under The United States National Defense Authorization Act of 2021.
- SMA is not on the UFLPA list of entities.
- SMA is not under the control of China, Russia, North Korea, or Iran.
- SMA is not under the control of a citizen/national of China, Russia, North Korea or Iran.
- SMA is not based in, nor have its principal place of business in, China, Russia, North Korea or Iran.

*\* This statement is based on information available as of the date listed and does not constitute legal advice.*

- A “Specified Foreign Entity” or “SFE” does not own or control 25% or more of the shares of SMA. For purposes of this FEOC Statement, an SFE is the government, or an entity, citizen, or national, of China, Russia, North Korea or Iran.
- An SFE does not own 15% or more of SMA’s debt.
- An SFE does not have the power to appoint officers or directors of SMA.
- Multiple SFE’s do not collectively own 40% or more of the shares of SMA.

SMA remains committed to upholding the highest standards of product design, quality and security, among all products including those listed below. As the regulatory landscape continues to evolve, we encourage all partners and customers to consult with their own financial advisors and legal counsel to determine how future FEOC-related guidance under the OBBBA may apply to their specific projects and compliance requirements.

### SMA String Inverters

Product Line	Included Part Numbers	FEOC-Sourced Component %
SMA Sunny Boy Smart Energy	SBSE3.8-US-50 SBSE4.8-US-50 SBSE5.8-US-50 SBSE7.7-US-50 SBSE9.6-US-50 SBSE11.5-US-50	<13%
SMA Sunny Tripower X-US	03-13-800-2-50 03-20-1000-2-50 03-25-1000-2-50 03-30-1000-2-50	<13%
SMA Sunny Tripower CORE1-US	03-33-1000-2-41 03-50-1000-2-41 03-62-1000-2-41	<4%
SMA Sunny Highpower PEAK3	3-125-1500-2-21	<14%

*\* This statement is based on information available as of the date listed and does not constitute legal advice.*

	3-150-1500-2-21 3-165-1500-2-21 3-172-1500-2-21 3-FLE-1500-2-21	
SMA Sunny Highpower Storage PEAK3	SHPS-125-1500-2-30 SHPS-150-1500-2-30 SHPS-172-1500-2-30 SHPS-180-1500-2-30	<14%
Sunny Island X	SI27-US208-20 SI60-US480-20	<14%

DocuSigned by:  
  
F702D9A52DF6401...  
 Charles Smith  
 Managing Director, Home & Business Division  
 SMA America

*\* This statement is based on information available as of the date listed and does not constitute legal advice.*



# PAST PROJECT DEVELOPMENT

## Project References

Organization / Company	Contact Person	Email Address	Phone Number
AESSEAL Inc.	Chris Staackmann	<a href="mailto:chris.staackmann@aes seal.com">chris.staackmann@aes seal.com</a>	865-210-1655
Knoxville Utilities Board	Chasity Hobby	<a href="mailto:chasity.hobby@kub.org">chasity.hobby@kub.org</a>	865-558-2745
City of Knoxville	Patience Melnik	<a href="mailto:pmelnik@knoxvilletn.gov">pmelnik@knoxvilletn.gov</a>	865-215-3083
App. Sustainable Dev.	Kathlyn Terry Baker	<a href="mailto:kterry@asdevelop.org">kterry@asdevelop.org</a>	276-431-3385
Clayton Homes	William Jenkins	<a href="mailto:william.jenkins@claytonhomes.com">william.jenkins@claytonhomes.com</a>	865-380-3000
TENTE	Pierce Kohls	<a href="mailto:pkohls@tente.com">pkohls@tente.com</a>	859-572-1891

Please let us know once you reach out to our reference so we can let them know in advance.

### PAST PROJECTS



US Army Corps of Engineers

Lake Cumberland  
90 kW Solar Carport and  
Roof Mount System



2.4 MW Ground Mount Array



Community Solar  
1 MW Array



BETTER MOBILITY. BETTER LIFE.

500 kW Roof Mount Array



63kW Roof Mount Array



Market Street Properties  
48 kW solar + 30 kWh battery  
USDA REAP Grant



# Meeting NetZero Goals with Solar + Storage

## Performance Criteria



**Cost Savings:** Utility bill savings are significantly lowering operations costs each month.

**Sustainability:** The facility, although grid-tied, can use approximately 70% to 100% clean, solar energy to run operations.

**Resilience:** On-site energy production with storage means virtually no downtime, even if the surrounding power grid experiences an outage.

## Project Highlights

This renewable energy system supports the 50,000 square foot North American Headquarters for providing customized mechanical seals to other industries around the continent.

- Solar Alliance designed and installed the 526-kilowatt rooftop solar array.
- AESSEAL enlisted a UK partner for a 500-kilowatt battery storage system.
- Rockford, TN



## Customer Outcomes

AESSEAL Inc. is meeting corporate sustainability goals in the United States to follow the example it already has shown at other facilities globally. It showcases what is possible for manufacturers looking to enhance their energy independence and operational efficiency through sustainability solutions.

“We need clean energy partners like Solar Alliance that understand our vision and can be a part of it.”

- AESSEAL Inc. Head of Operations Chris Staackmann



# Community Solar in Knoxville

## Performance Criteria



**Community Solar:** Makes clean, solar photovoltaic (PV) energy accessible to anyone in the community who wants to participate.

**Environmental Benefit:** Avoids 964 metric tons of CO2 emissions annually.

**Land Stewardship:** Utilizes restricted acreage on former industrial site that also shared utility easements.

## Project Highlights

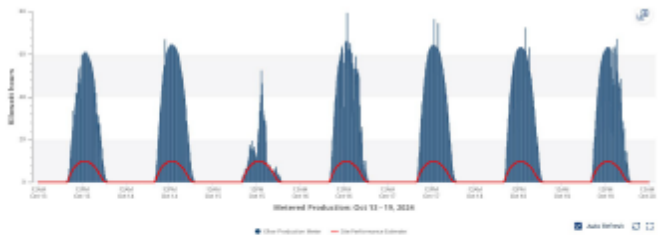
Knoxville Utilities Board, the Tennessee Valley Authority, and the City of Knoxville show a commitment to clean, solar energy through a highly visible community solar array near Interstate 40 in Knoxville.

- Solar Alliance designed the >1 MW ground-mounted solar array.
- Project is KUB's first community solar project in its territory.
- Knoxville, TN



## Customer Outcomes

KUB Community Solar reached 100% subscription in August 2024. Businesses and residents who subscribed can participate in supporting the project, even if they lack the location or resources to obtain solar individually. The array produces enough energy to power 100 homes annually.



“We are excited to provide our community with this simple way to support locally sourced solar power. This opens the door for customers who otherwise would not be able to directly support Knoxville solar power, and I’m proud that we, along with our partners, could make this a reality.” - KUB President & CEO Gabriel Bolas.

# Public City Facility Runs on Renewables

## Performance Criteria

**Lower Operating Costs:** Renewables can cut utility bills, which are a major operating expense for Dr. EV Davidson Recreation Center.

**Federal Energy Grant:** This project is supported by a US Department of Energy Efficiency and Conservation Block Grant (EECBG).

**Sustainability Commitment:** Adding this solar project keeps the City of Knoxville on track to meet its goal of reducing municipal emissions by 50% by 2030.

## Project Highlights

- Dr. EV Davidson Recreation Center
- Abundant, clean energy from the sun can now supply most of the energy needs at the City of Knoxville's EV Davidson Recreation Center with its 59.5 kW PV system.
  - The City of Knoxville chose Solar Alliance to implement its first Battery Energy Storage System (BESS) with 122 kWh, along with the solar arrays.
  - Knoxville features our General Manager here in its video: <https://youtu.be/r0l6RvsNMuM>



## Customer Outcomes

The City of Knoxville continues on track to meet its sustainability goals, with plans for more solar and storage on its public facilities in the coming years. It highlights Dr. EV Davidson Recreation Center as an example of what can be done to reduce operating expenses and promote clean air. This is the second of its recreation centers where Solar Alliance has installed a solar photovoltaic system.

"Nearly 40 percent of Knoxville's carbon emissions come from buildings," she said. "When we can make our buildings more energy efficient or operate them with renewable energy, we can make a big dent in our emissions while reducing our utility bills." - Patience Melnik, Director of Knoxville's Office of Sustainability

# Solar Alliance Designs Resilience Hub in Virginia

## Performance Criteria

**Cost Savings:** Utility bill savings are significantly lowering operations costs each month.

**Sustainability:** The facility, can use clean, solar energy to run a large portion of operations that support food for the region.

**Resilience:** On-site energy production with storage means no downtime, even if the surrounding power grid experiences an outage.

## Project Highlights

- Solar Alliance is honored to be selected to design and build a community resilience hub funded by Google and created by Appalachian Voices and Appalachian Sustainable Development.
- This renewable energy system at the Appalachian Harvest building in Duffield, Virginia will support a regional nonprofit food hub engaged in building a stronger food and agriculture economy.
- The 75.6 kW system is paired with a 246 kWh Battery Energy Storage System (BESS).



## Customer Outcomes

This is one of multiple resilience hubs that Appalachian Sustainable Development and its partners are constructing. It shows the growing movement toward lowest-cost, distributed energy to support communities. Solar Alliance is increasingly being called upon to design and implement hubs like this one.

“We’re proud to collaborate with Appalachian Voices to help bring more low-cost, reliable power to Southwest Virginia,” said Kaitlin Savage, Energy Market Development, Google.



# Fortune 500 Manufacturer Uses Energy Monitoring, Diversifies with Solar

## Performance Criteria

**Energy Monitoring:** This first step identifies areas for updating and conservation prior to adding solar.

**Utility Cost Savings:** Once online, solar immediately starts curbing monthly utility bill expenses.

**Sustainability:** Solar photovoltaics add a layer to this leading company's sustainability commitment.

## Project Highlights

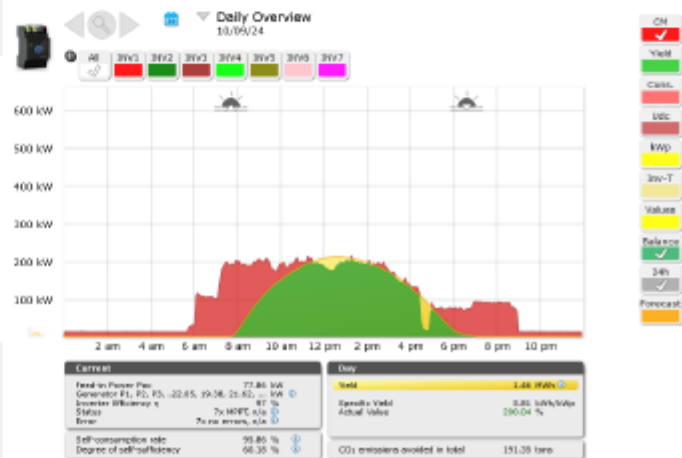
When a Fortune 500 manufacturer needs to cut its utility costs, it enlists Solar Alliance to help solve this challenge.

- Solar Alliance designed the 260.6 - kilowatt ground mounted array.
- This energy monitoring process prior to adding solar PV can be replicated at multiple plants.
- East Tennessee



## Customer Outcomes

Solar after monitoring at this plant is providing overhead cost savings on utility bills. Solar Alliance was enlisted to add solar to another company plant, as well. Clean, solar energy is helping produce a made-in-the USA manufacturing product.



# Environmental, Social, and Governance with Sustainability

## Performance Criteria

**Sustainability:** Enable attainment of corporate goals for significant renewable energy resources by 2030.  
**Carbon Offset:** Clean energy production equal to sequestering carbon from 543 acres of forest annually.  
**Utility Bill Savings:** Significant reduction in utility bill costs optimizing available space and understanding of load profile data.

## Project Highlights

A major manufacturer of casters for a variety of industries adds solar as part of its ESG and sustainability objectives:

- Solar Alliance initially installed a data monitoring system to allow owner to understand load and utility usage.
- Solar Alliance designed the 500.85-kilowatt rooftop solar array to optimize space and system cost based on load profile data.
- Hebron, KY



## Customer Outcomes

This global leader in manufacturing is bringing its environmental commitment along with economic development to rural Kentucky. Now clean, renewable solar energy is cutting operating costs and supporting corporate values in North America.



“ESG and sustainability is something that fits our mold and image here at TENTE so it was never a question of ‘if’ we would implement some type of renewable energy source, but rather ‘when.’ We set a goal for ourselves here in North America that by 2030 over 50% of our energy needs would come from a renewable energy source. The current project being supplied by Solar Alliance gets us halfway there.” - TENTE CFO Pierce Kohls.

## NARRATIVE SUMMARY

IKIO USA, in partnership with Solar Alliance Energy, Inc., is pleased to submit this proposal for the Green Lake County Justice Center Solar Project. Our proposed solution consists of a turnkey 550 kWdc / 500 kW AC ground-mounted solar photovoltaic system designed to generate approximately 796,900 kWh annually, offsetting approximately 53% of the Justice Center's annual electricity consumption.

The proposed system utilizes high-efficiency bifacial solar modules, SMA commercial inverters, engineered fixed-tilt ground-mount racking, advanced monitoring capabilities, and all required balance-of-system components. The scope of work includes engineering, permitting, utility interconnection coordination, procurement, construction, commissioning, testing, training, and project closeout.

IKIO USA, in partnership with Solar Alliance, has designed this system to maximize long-term energy production, reliability, and value while supporting Green Lake County's sustainability goals. Our team will also assist the County in identifying and pursuing available incentives, including Federal Investment Tax Credit (Elective Pay) benefits, Wisconsin Office of Energy Innovation grant opportunities, and applicable Focus on Energy incentives.

### **How does your company ensure consistent and effective communication with the customer throughout the project?**

IKIO USA, in partnership with Solar Alliance, maintains a proactive communication process throughout every phase of the project. A dedicated Project Manager will serve as the primary point of contact and will coordinate all project activities, schedules, documentation, and stakeholder communications.

Our communication approach includes regular progress meetings, written project status updates, milestone reviews, utility coordination updates, and prompt response to customer inquiries. Any issues that may impact schedule, scope, or performance are communicated immediately so that appropriate decisions can be made without delay.

This structured communication process ensures transparency, accountability, and efficient project execution from project award through final commissioning.

### **What is the typical timeline for a project of this scope, and what do you anticipate for this project?**

The overall project schedule is primarily driven by engineering review, permitting approvals, utility interconnection requirements, and equipment procurement. Based on our experience with similar municipal and commercial solar projects, these pre-construction activities typically require approximately 4-6 months.

Once utility approvals, permitting, and equipment procurement have been completed, IKIO USA and Solar Alliance anticipate completing on-site construction, commissioning, and project closeout within approximately two to three months.

Our anticipated project schedule includes:

- Engineering and design: 4–8 weeks
- Permitting and utility interconnection review: 8–16 weeks
- Equipment procurement and delivery: Concurrent with permitting and utility review

- Site preparation and construction: 6–8 weeks
- Electrical installation, testing, and commissioning: 2–4 weeks
- Final training and project closeout: 1–2 weeks

**Do you provide ongoing operations and maintenance services? If so, what is included and duration?**

Yes. We offer ongoing Operations and Maintenance (O&M) services designed to maximize long-term system performance and reliability.

Available services include remote monitoring, annual preventive maintenance inspections, performance verification, warranty support, troubleshooting assistance, system performance reporting, and recommendations for vegetation management and site maintenance.

A workmanship warranty is included with the project, and customized O&M service agreements are available based on the County's desired level of support.

**How do you handle change orders or unexpected conditions during installation?**

We strive to minimize change orders through detailed engineering, site evaluations, and pre-construction planning. If unforeseen site conditions or project modifications arise, we follow a structured and transparent management process.

The issue is documented, evaluated for impacts to scope, schedule, and cost, and presented to Green Lake County through a written change order. No work outside the original contract scope is performed without review, discussion, and written authorization from the County.

This process ensures that all project changes are clearly communicated, properly documented, and approved before implementation.

**From:** [Van Meel, Michael](#)  
**To:** [Stobbe, Samantha](#)  
**Subject:** Fw: Midwest Solar Power RFB Response for GLC Grnd Mnt - Bid 7  
**Date:** Friday, June 12, 2026 1:03:41 PM  
**Attachments:** [Midwest Solar Power System Quote Green Lake County Justice Center 20260612.pdf](#)

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**From:** Barrett Lione-Seaton <barrett@mwsolarpower.com>  
**Sent:** Friday, June 12, 2026 11:59 AM  
**To:** Van Meel, Michael <mvanmeel@greenlakecountywi.gov>  
**Subject:** Midwest Solar Power RFB Response for GLC Grnd Mnt

[CAUTION: EXTERNAL SENDER This email originated from outside Green Lake County. Do not click links or open attachments unless you recognize the sender and know the content is safe.]

Hello, Mike.

I am providing our bid for the project. I opted for the highest level of incentives with our direct relationship with Heliene Solar and their domestically produced solar cell. I have taken into account the project timeline in our pricing and fluctuations in the market.

This is a full turn key proposal.

Please reach out if you have any questions regarding the bid. I understand the bid will go to the lowest responsible bidder.

I greatly appreciate your time and that you reached out to us for this project.

--

**Barrett Lione-Seaton**  
Business Development Lead  
Midwest Solar  
(608) 354-2063 Ext. 3  
[Barrett@mwsolarpower.com](mailto:Barrett@mwsolarpower.com)



# SOLAR SYSTEM QUOTE



[mwsolarpower.com](http://mwsolarpower.com)



# SOLAR QUOTE

## CUSTOMER:

Green Lake County Justice Center

## ADDRESS:

571 County Road A Green Lake, WI  
54941

## Alliant USAGE:

1,482,000 kWh/yr



## SYSTEM OVERVIEW:

Heliene 156HC N-Type Bifacial Modules  
SolarEdge 3-phase 480Y SE120KUS Inverters  
SolarEdge C651U Optimizers

Proposed system size: 496.00 kWDC/360 kWAC  
Projected usage offset: 47%  
Projected Year 1 Production ~ 693904 kWh/year  
Shading ~ 2.0%

**System Cost - \$1,066,078**

Incentives:

Focus On Energy Cashback - \$25,000  
Tax Credit + Domestic Content (40%) - \$416,431  
OEI Grant - \$250,000

**Post Incentive Cost - \$374,647**

**TOTAL: \$1,066,078.00**

## SYSTEM NOTES:

Heliene 156HC N-Type Bifacial panels offer 23.08% maximum module efficiency paired with a 15 year product warranty and a 25 year performance warranty of 90% at year 25.

SolarEdge inverters include system monitoring, rapid shutdown compliance, and come standard with a 12 year warranty. SolarEdge power optimizers come with a standard 25-year warranty.

Sinclair racking is made in the USA and comes with a 25-year warranty.

*For a non domestic content option with Hyundai 640W modules and 3 SMA SHP Peak 3 125kWAC inverters that are compliant for the 48E 30% tax credit the upfront cost would be \$958,567.00. 499kWDC/375kWAC This system would not qualify for the EIGP grant.*

# SOLAR SYSTEM QUOTE



820 Walsh Road  
Madison, WI  
53714  
608.354.2063  
mwsolarpower.com

## SYSTEM ENERGY QUOTATION

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<b>Customer</b>	<b>Green Lake County Justice Center</b> 571 County Road A Green Lake, WI 54941	<b>Designer:</b>	<b>Barrett Lione-Seaton</b>
		<b>Date:</b>	<b>June 12, 2026</b>
		<b>Lead Time:</b>	<b>100 days</b>
		<b>Valid For:</b>	<b>10 days</b>

## SYSTEM DESCRIPTION

---

496,000 Watt (peak DC), grid connected photovoltaic system; ground mounted facing south via Sinclair racking system at 571 County Rd A, Green Lake, WI 54941. The system should produce ~ 693,904 kWh of electricity in the first annual year of production.

<b>Qty:</b>	<b>Description:</b>
800	Heliene 156HC N-Type Bifacial Modules - 15-year warranty and 25-year power guarantee
9	SolarEdge SE120K-USR0INNN8 480V string inverter; 12-year warranty (Or approved alternative)
3	SolarEdge TRI-US00IBNS4 Three-Phase Synergy Managers; 12-year warranty (Or approved alternative)
800	SolarEdge C651U - Commercial Power Optimizers; 25-year warranty (Or approved alternative)
16	Sinclair Sky Rack 2.0 ground solar mounts; 25-year warranty
1	Fittings, wire support, hardware
1	5 year installation warranty
1	Facilitate all paperwork needed for incentive applications and utility interconnect
1	Includes all permitting required
1	Includes all materials and labor required to trench from the solar arrays to the building
1	All labor required to construct and connect PV system up to the inverters.
1	<b>All labor and materials to install an 8' chain link fence and 20's gate around the solar array</b>

---

All of the above to be completed for the sum of: **\$1,066,078.00**

Respectfully submitted:

Midwest Solar Power

By: Barrett Lione-Seaton

Accepted: \_\_\_\_\_

Date: \_\_\_\_\_

# Narrative Summary & Proposer Questions

We have designed this system to have the highest level of compliance for the 48E Direct Pay, ITC Domestic Content 10% Bonus Adder, and EIGP requirements. We have adhered to all Davis Bacon wage requirements according to the EIGP grant, though this can be removed if the award is not granted and the project moves forward. We can place in our contract terms for release and repayment of the 10% deposit to Green Lake County Justice Building if GLC decides to cancel the contract. We would return the deposit minus any permits or work towards the project. Any costs would be itemized and shown in the receipt. We can also alter the contract for equipment that is compliant with the 48E direct pay IRS requirements and this would reduce the upfront cost by \$107,512.

We have chosen to work with two subcontractors on this project if it moves forward and they are listed later. They are Ethos Green Power and Midwest Electric. We have extensive history with both companies. All of their work is included in the price and Midwest Solar Power will be fully responsible in managing their scope of work.

The system is designed as a 496 kWDC solar ground mounted system enclosed in a 8' galvanized chain link fence with one 20' gate access. The inverter output is 360kWAC and will be trenched and directional bored back to the CT Cabinet where we will interconnect into 2 open lugs inside the cabinet. There will be a PV disconnect located on the wall next to the meter and CT cabinet.

## Questions

- How does your company ensure consistent and effective communication with the customer throughout the project?

Midwest Solar provides a dedicated project manager to the project throughout the entire project from permitting to commissioning. We utilize PM software to ensure all items are actioned on time and on budget.

- What is the typical timeline for a project of this scope, and what do you anticipate for this specific project?

From contract to installation is typically 12 months. This project would follow that timeline according to our current trajectories +/- 2 weeks. Putting installation at early June of 2027 if the project is actioned at the end of September with some work needing to be done on permitting, zoning, and project coordination before the EIGP grant is awarded.

- Do you provide ongoing operations and maintenance services? If so, what is included and for how long?

Midwest Solar Power will always be there for issues throughout the life of the system. We stand by our 5 years workmanship warranty and would handle all warranty issues for the life of the equipment. We will continue service at our standard service rates after warranties have expired and can offer a yearly or bi-annual maintenance package.

- How do you handle change orders or unexpected conditions during installation?

We react quickly and we almost never pass costs on to our customers unless it is an "act of god". We keep everyone in the project informed during every step and as quickly as possible to ensure the project stays on time and on budget.

# FEOC Compliance and Domestic Content

*\*It is the full responsibility of the taxpayer to ensure full compliance and to apply for the 48E tax incentive*

We have worked with all major suppliers and manufacturers to ensure the following equipment will be following the proper guidance to the best of our abilities.

Heliene Solar Modules - Domestic Content Approved with 3.2 mm solar glass  
SolarEdge String Inverters and Optimizers  
Sinclair Fixed Mount Racking System

**Novogradic AUP Report Provided for both Heliene and SolarEdge. Sinclair Racking is 100% US Made Steel. This is the highest level of compliance for both 48E, Domestic Content Bonus and BABA.**

## FEOC Restrictions

- **Three Important FEOC Restrictions**

- Taxpayer Test
- Material Assistance Test
- Contract & Licensing Test

- **Material Assistance Cost Ratio (MACR)**

MACR Thresholds for Qualified Facilities		MACR Thresholds for Energy Storage	
BOC during Calendar Year 2026	40%	BOC during Calendar Year 2026	55%
BOC during Calendar Year 2027	45%	BOC during Calendar Year 2027	60%
BOC during Calendar Year 2028	50%	BOC during Calendar Year 2028	65%
BOC during Calendar Year 2029	55%	BOC during Calendar Year 2029	70%
BOC after Calendar Year 2029	60%	BOC after Calendar Year 2029	75%

- **Two Paths to Substantiate Compliance**

- Direct Cost Approach
- Safe Harbor Approach utilizing the IRS 2025-08 tables

# Schedule of Values

Itemized List	Quantity	Unit Cost	Total
Heliene 620W Modules	800	\$398	\$318,356
Sinclair Fixed Tilt Racking	16	\$5,309	\$84,946
SolarEdge Inverter and Optimizers	3	\$29,776	\$89,327
Electrical components incl. disconnects, fuses, wire, conduit and misc	1	\$154,536	\$154,536
Labor including all laborers and electricians	1	\$259,250	\$259,250
Design and engineering	1	\$15,996	\$15,996
Fence	1500	\$59	\$88,143
Other costs such as boring, travel/lodging, permit, bonding, AUP	1	\$55,525	\$55,525
<b>Total System Cost</b>			<b>\$ 1,066,078</b>
Cost/Watt			<b>\$ 2.15</b>

# Subcontractors

## [Ethos Green Power Cooperative](#)

Out of Viroqua WI since 2013

They will be contracted to assist in the design, layout and construction of the Sinclair racking.

We have subcontracted Ethos for several years in installations of Sinclair ground mounts.

## [Midwest Electric](#)

Out of Johnson Creek, WI since 2000

They will be contracted for the AC work from the array to the point of interconnection.

We have a long standing relationship working together on both residential and commercial solar projects when the scope demands more work than our electrical team and master electrician can perform.

# History

Total Installations: ~716 Residential and ~62 Commercial Projects

Total kW Installed: ~ 6.8 MW

Total kWh Generated 9/30/2009 - 12/31/2025: ~30.5 GWh total. 21.0GWh SolarEdge, 8.5GWh Enphase, and 1 GWh from SMA

Total Years of Experience: 17 Years of experience as a company

All Midwest Solar Power employees are on track to be NABCEP certified from PV Associates to PVIP Certified with more than  $\frac{2}{3}$  certified.

Since 2020, over half of all our work in both residential and commercial has been with Alliant Energy.



## COMMERCIAL SOLAR INSTALLATIONS

Midwest Solar Power | Project Portfolio

Portfolio Year Range: 2018 - 2025

01



800 University Bay Drive

LOCATION	SYSTEM SIZE	YEAR
Madison, WI	118 kW	2018

02



General Beverage

LOCATION	SYSTEM SIZE	YEAR
Fitchburg, WI	143 kW	2018

03



River Food Pantry

LOCATION	SYSTEM SIZE	YEAR
Madison, WI	113 kW	2025

04



Summit Ridge

LOCATION	SYSTEM SIZE	YEAR
Madison, WI	112 kW	2024

# History



## COMMERCIAL SOLAR INSTALLATIONS

Midwest Solar Power | Project Portfolio

Portfolio Year Range: 2019 - 2025

01



Oak Grove Development

LOCATION	SYSTEM SIZE	YEAR
Horicon, WI	102 kW	2020

02



Broadhead Retirement Facility

LOCATION	SYSTEM SIZE	YEAR
Broadhead, WI	106 kW	2023

03



River Food Pantry

LOCATION	SYSTEM SIZE	YEAR
Madison, WI	113 kW	2025

04



Goodwill

LOCATION	SYSTEM SIZE	YEAR
Middleton, WI	100 kW	2019

# Reference Statements

## River Food Pantry

"The River Food Pantry deeply appreciates Midwest Solar's efforts in designing and installing our new building's rooftop solar array. They were able to smoothly integrate their work with that of our general contractor, creating a system that maximizes our power generation and provides a firm foundation for meeting The River's long-term sustainability goals. We look forward to continuing to work with Midwest Solar in coming years to further expand the pantry's solar capacities."

Ryan Holley (he/him/his)  
Grants Manager | The River Food Pantry  
(319) 750-5428 | [riverfoodpantry.org](http://riverfoodpantry.org)

## Habitat for Humanity

### Attic Angel - Coming May 29, 2026confirmed

"Attic Angel Community partnered with Midwest Solar Power on the installation of 76 residential solar arrays. While their technical expertise and provided education has been outstanding, what impressed us most was their attentive, responsive, and genuinely friendly customer service to not only our staff but our senior residents. Despite challenges including extreme weather and changes in tax credits, their team navigated every obstacle with ease, providing steady support to our team from start to finish. In addition to their work on our installations, they have consistently provided thorough inspection and repair services to our two commercial solar arrays and additional residential arrays. We highly recommend Midwest Solar Power for businesses seeking a knowledgeable and dependable solar partner."

Janelle Taylor, Prairie Point Housing &  
Sustainability Manager

## Aldo Leopold Center

Our non-profit organization worked with Midwest Solar Power to install a 35 kW system on our facility in 2025. From scope of work proposals to commissioning and everything in between, the team at Midwest was professional, communicative, and helpful. We always felt like we were staying informed and being treated fairly. We have a busy facility with childcare programming and daily visitors and the team at Midwest worked with us to ensure minimal impact on staff and visitors. I would highly recommend Midwest Solar Power for your next solar installation.

Brian Schneider, Director of Land Management & Conservation

# ROI & LCOE

8/12/26, 7:35 AM

PVWatts Calculator

Enhance PVWatts® with features tailored to your specific needs!  
 We collaborate with companies, universities, and organizations to privately fund new capabilities or analyses.  
 Your investment drives innovation while benefiting the broader energy community.  
 Email [PVWatts@nlr.gov](mailto:PVWatts@nlr.gov) to learn more.



Caution: Photovoltaic system performance predictions calculated by PVWatts include many inherent assumptions and uncertainties and do not reflect variations between PV technologies nor site-specific characteristics except as represented by PVWatts inputs. For example, PV modules with better performance are not differentiated within PVWatts from lesser performing modules. Both NLR and private companies provide more sophisticated PV modeling tools (such as the System Advisor Model at [sam.nrel.gov](http://sam.nrel.gov)) that allow for more precise and complex modeling of PV systems.

The expected range is based on 30 years of actual weather data at the given location and is intended to provide an indication of the variation you might see. For more information, please refer to this NLR report: The Error Report.

Disclaimer: The PVWatts Model ("Model") is provided by the National Lab of the Rockies ("NLR"), which is operated by the Alliance for Energy Innovation, LLC ("Alliance") for the U.S. Department Of Energy ("DOE") and may be used for any purpose whatsoever.

The names DOE/NLR/ALLIANCE shall not be used in any representation, advertising, publicity or other manner whatsoever to endorse or promote any entity that adopts or uses the Model. DOE/NLR/ALLIANCE shall not provide any support, consulting, training or assistance of any kind with regard to the use of the Model or any updates, revisions or new versions of the Model.

YOU AGREE TO INDEMNIFY DOE/NLR/ALLIANCE, AND ITS AFFILIATES, OFFICERS, AGENTS, AND EMPLOYEES AGAINST ANY CLAIM OR DEMAND, INCLUDING REASONABLE ATTORNEYS' FEES, RELATED TO YOUR USE, RELIANCE, OR ADOPTION OF THE MODEL FOR ANY PURPOSE WHATSOEVER. THE MODEL IS PROVIDED BY DOE/NLR/ALLIANCE AS IS AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. IN NO EVENT SHALL DOE/NLR/ALLIANCE BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO CLAIMS ASSOCIATED WITH THE LOSS OF DATA OR PROFITS, WHICH MAY RESULT FROM ANY ACTION IN CONTRACT, NEGLIGENCE OR OTHER TORTIOUS CLAIM THAT ARISES OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE MODEL.

The energy output range is based on analysis of 30 years of historical weather data, and is intended to provide an indication of the possible interannual variability in generation for a fixed (open rack) PV system at this location.

## RESULTS

# 688,950 kWh/Year\*

System output may range from 645,064 to 730,562 kWh per year near this location.

Month	Solar Radiation ( kWh / m <sup>2</sup> / day )	AC Energy ( kWh )
January	1.99	28,363
February	3.56	44,938
March	5.45	67,108
April	5.33	63,978
May	6.04	74,142
June	6.47	75,967
July	6.64	79,121
August	5.85	71,122
September	5.49	65,660
October	3.97	51,881
November	2.98	39,048
December	1.95	27,621
<b>Annual</b>	<b>4.64</b>	<b>688,949</b>

### Location and Station Identification

Requested Location	54941, USA
Solar Resource Data Location	NSRDB Lat/Lng: 43.85, -88.98
Latitude	43.85° N
Longitude	88.98° W

### PV System Specifications

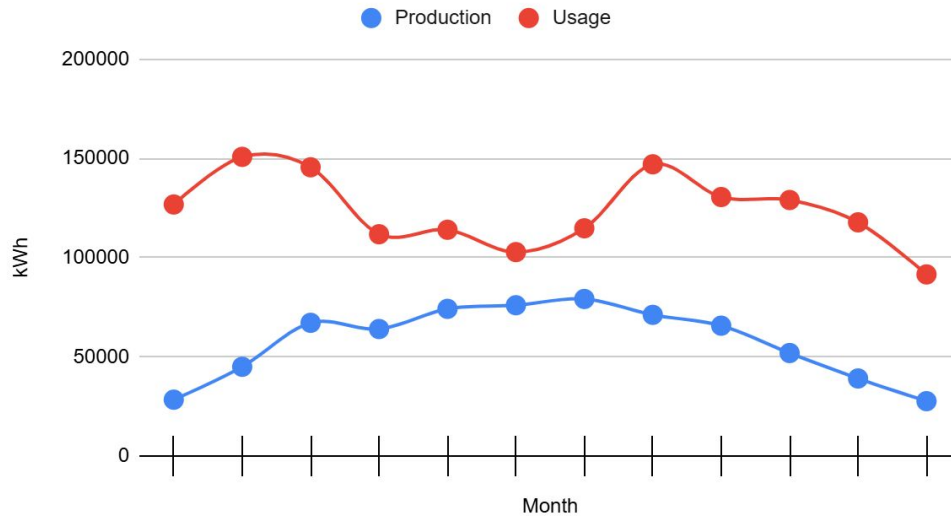
DC System Size	496 kW																								
Module Type	Premium																								
Array Type	Fixed (open rack)																								
System Losses	11.42%																								
Array Tilt	30°																								
Array Azimuth	180°																								
DC to AC Size Ratio	1.38																								
Inverter Efficiency	98.5%																								
Ground Coverage Ratio	0.4																								
Albedo	From weather file																								
Bifacial	Yes (0.7)																								
Monthly Irradiance Loss	<table border="1"> <tr><td>Jan</td><td>Feb</td><td>Mar</td><td>Apr</td><td>May</td><td>June</td></tr> <tr><td>42%</td><td>29%</td><td>10%</td><td>3%</td><td>0%</td><td>0%</td></tr> <tr><td>July</td><td>Aug</td><td>Sept</td><td>Oct</td><td>Nov</td><td>Dec</td></tr> <tr><td>0%</td><td>0%</td><td>0%</td><td>0%</td><td>0%</td><td>12%</td></tr> </table>	Jan	Feb	Mar	Apr	May	June	42%	29%	10%	3%	0%	0%	July	Aug	Sept	Oct	Nov	Dec	0%	0%	0%	0%	0%	12%
Jan	Feb	Mar	Apr	May	June																				
42%	29%	10%	3%	0%	0%																				
July	Aug	Sept	Oct	Nov	Dec																				
0%	0%	0%	0%	0%	12%																				

### Performance Metrics

DC Capacity Factor	15.9%
--------------------	-------

# ROI & LCOE

AC Output Production vs Usage



**Lifetime Savings  
After System Payback** **\$1,391,072**

**LCOE of Solar Energy  
over 30 years** **\$0.019**

**Lifetime Energy  
Produced in MWh** **19,513**

**All values are based on a 2.5% utility escalation rate over the next 30 years and solar panel degradation of 1% in year 1 and 0.4% every year after.**

PV Watts Projected Production	
Month	AC Energy Output (kWh)
January	28363
February	44938
March	67108
April	63978
May	74142
June	75967
July	79121
August	71122
September	65660
October	51881
November	39048
December	27621

Monthly Customer Usage	
Month	Usage (kWh)
January	126750
February	150750
March	145500
April	111750
May	114000
June	102750
July	114750
August	147000
September	130500
October	129000
November	117750
December	91500

# Project Timeline & Payment Schedule

- Contract Award - Mid June
- Begin initial design for zoning and permitting approval within 1 month
- Apply to FOE for reservation within 1 month of contract award
- Wait until final approval in Sept for any equipment procurement
- All equipment procured no less than 2 months prior to the date of installation
- Install sometime in Q2 of 2027
- Install time of 7-8 weeks
- Electrical outage to last up to 8 hours
- Inspections and Utility sign off up to 2 months
- Work with SolarEdge and Delta Controls for monitoring integration through ModBus and BACnet.
- Commissioning and final walk through 2 months after installation.

## **Payment Schedule (Typical for small commercial projects)**

10% deposit at contract signing

45% at 2 months from project start date

45% after system is commissioned and final walk through

*\*Payment Schedule can be negotiated.*

# Project Timeline & Payment Schedule

## **Scheduling and installation procedure:**

- **Submissions**  
Submit Focus on Energy and Alliant Energy Interconnect Documents including Docu-Sign
- **Contract conditions and payment schedule**  
Clarification of contract conditions and payment schedules; if financing is required work with financial institutions to provide supporting materials.
- **Scheduling**  
Define schedule and coordination all project logistics (for example – installation after a re-roof or during/around client vacations, etc.)
- **Materials List**  
Detailed job materials list including specific site needs;
- **Permitting**  
Prepare and submit documents for permitting
- **Pre-Install Review**  
Clarify materials delivery and any client changes with client two weeks prior to install
- **Utility Coordination**  
Schedule utility service interruption and reconnect (if required) as well as commissioning plan
- **Installation Prep**  
Deliver staging materials to site
- **Installation**
  1. layout to prep for install
  2. Install racking, module electronics, module installation.
  3. Electrical interconnection, utility service disconnect/reconnect (if required) electrical inspection and system start-up testing
- **Schedule utility commissioning**
- **Post Install**  
Provide manuals and datasheets including monitoring and warranty procedure.  
Train client on how to manage the system.

# Three Phase Inverter with Synergy Technology USA Domestic Content Eligible

For North America

SE50KUS / SE80KUS / SE100KUS / SE110KUS / SE120KUS



INVERTER



## SolarEdge's USA-manufactured Offering for C&I rooftops and carports

- Eligible for domestic content\*: SolarEdge USA-manufactured inverters, when paired with certain SolarEdge USA-manufactured power optimizers, are intended to be eligible for the enhanced federal income tax credit for domestic content
- Pre-commissioning feature for automated validation of system components and wiring during the site installation process and prior to grid connection
- Easy two-person installation with lightweight, modular design (each inverter consists of two or three Synergy units and one Synergy Manager)
- Independent operation of each Synergy unit enables higher uptime and easy serviceability
- Built-in thermal sensors detect faulty wiring, ensuring enhanced protection and safety
- Built-in arc fault protection and rapid shutdown
- Built-in PID mitigation for maximized system performance
- Monitored\*\* and field-replaceable surge protection devices, to better withstand surges caused by lightning or other events
- Built-in module-level monitoring with Ethernet or cellular communication for full system visibility

\* For more details, see Eligibility for Domestic Content on the last page.

\*\* Applicable only for DC and AC SPDs.

[solaredge.com](http://solaredge.com)

**solar**edge

# / Three Phase Inverter with Synergy Technology

## USA Domestic Content Eligible for North America

### SE50KUS / SE80KUS / SE100KUS / SE110KUS / SE120KUS

Applicable to inverters with part numbers	SE-DBL- USxxIBNxx	SE-TRI-USxxIBNxx				
Model Number	SE80KUS	SE50KUS	SE100KUS	SE110KUS	SE120KUS	UNITS
<b>OUTPUT</b>						
Total Rated AC Output Capacity	80,000	120,000				W
Rated AC Active Output Power	80,000	50,000	100,000	110,000	120,000	W
Maximum AC Apparent Output Power	80,000	50,000	100,000	120,000	120,000	VA
AC Output Line Connections	3W + PE, 4W + PE					
Supported Grids	WYE: TN-C; TN-S; TN-C-S; TT, IT; Delta: IT					
AC Output Voltage Minimum-Nominal-Maximum <sup>(1)</sup> (L-N)	244 – 277 – 305	105 – 120 – 132.5	244 – 277 – 305			Vac
AC Output Voltage Minimum-Nominal-Maximum <sup>(1)</sup> (L-L)	422.5 – 480 – 529	183 – 208 – 229	422.5 – 480 – 529			Vac
AC Frequency Minimum-Nominal-Maximum <sup>(2)</sup>	59.5 – 60 – 60.5					Hz
Maximum Continuous Output Current (per phase, PF=1)	96.5	139.5	120	144.3		Aac
GFDI Threshold	1					A
Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds	Yes					
Total Harmonic Distortion	≤ 3					%
Power Factor Range	±0.85 to 1					
<b>INPUT<sup>(2)</sup></b>						
Maximum DC Power (Module STC) Inverter / Synergy Unit	140,000 / 70,000	87,500 / 29,165	175,000 / 58,300	210,000 / 70,000		W
Transformer-less, Ungrounded	Yes					
Maximum Input Voltage DC+ to DC-	1000	600	1000			Vdc
Operating Voltage Range	850 – 1000	370 – 600	850 – 1000			Vdc
Maximum Input Current	2 x 48.25	3 x 46.5	3 x 40	3 x 48.25		Adc
Reverse-Polarity Protection	Yes					
Ground-Fault Isolation Detection	167kΩ sensitivity per Synergy Unit <sup>(3)</sup>					
CEC Weighted Efficiency	98.5	97	98.5			%
Nighttime Power Consumption	< 8	< 12				W
<b>ADDITIONAL FEATURES</b>						
Supported Communication Interfaces <sup>(4)</sup>	2 x RS485; Ethernet; Wi-Fi (optional); Cellular (optional)					
Smart Energy Management	Export Limitation					
Inverter Commissioning	With the SetApp mobile application using built-in Wi-Fi access point for local connection					
Arc Fault Protection	Built-in, user configurable (according to UL 1699B)					
Photovoltaic Rapid Shutdown System	NEC 2014 – 2023, built-in, if paired with C651U					
PID Rectifier	Nighttime, built-in					
RS485 Surge Protection (ports 1+2)	Type II, field replaceable, integrated					
AC, DC Surge Protection	Type II, field replaceable, integrated					
<b>DC SAFETY SWITCH</b>						
DC Disconnect	Built-in					
<b>STANDARD COMPLIANCE</b>						
Safety	UL 1699B; UL 1741; UL 1741 SA; UL 1741 SB; UL 1998; CSA C22.2#107.1; Canadian AFCI according to T.I.L. M-07					
Grid Connection Standards	IEEE 1547-2018, Rule 21, Rule 14 (H)					
Emissions	FCC Part 15 Class A					

(1) For other regional settings please contact SolarEdge support.

(2) For compatibility of inverters and power optimizers, see this [technical note](#).

(3) Where permitted by local regulations.

(4) For specifications of the optional communication options, visit the [Communication product page](#) or the [Knowledge Center](#) to download the relevant product datasheet.

# / Three Phase Inverter with Synergy Technology

## USA Domestic Content Eligible for North America

### SE50KUS / SE80KUS / SE100KUS / SE110KUS / SE120KUS

Applicable to inverters with part numbers		SE-DBL- USxxIBNxx	SE-TRI-USxxIBNxx				
Model Number		SE80KUS	SE50KUS	SE100KUS	SE110KUS	SE120KUS	UNITS
<b>INSTALLATION SPECIFICATIONS</b>							
Number of Synergy Units per Inverter		2	3				
AC Maximum Conduit Size		2 1/2"					in
AC Maximum Conductor Size Line / PE		4/0 AWG / 1/0 AWG					
DC Maximum Conduit Size		1 x 3"; 2 x 2"					in
Inverter Unit / Synergy Manager	Multi-input (fuse-less) <sup>(5)</sup> (SE-xxx-USxxbSx)	6 / 3 pairs; 6 – 12 AWG	9 / 3 pairs; 6 – 12 AWG				
	Combined input (fuse-less) (SE-xxx-USxxbWx)	N/A	3 pairs / 1 pair, 2 – 4 AWG; copper or aluminum				
Dimensions (H x W x D)		Synergy Unit: 22 x 12.9 x 10.75 / 558 x 328 x 273 Synergy Manager: 14.17 x 22.4 x 11.6 / 360 x 560 x 295					in / mm
Weight		Synergy Unit: 70.4 / 32 Synergy Manager: 39.6 / 18					lb / kg
Operating Temperature Range		-40 to +140 / -40 to +60 <sup>(6)</sup>					*F / °C
Cooling		Fan (user replaceable)					
Noise		< 67					dBA
Protection Rating		NEMA 3R					
Mounting		Brackets provided					

(5) Fusing is not included with the multi-input version of the Synergy Manager.

(6) For power derating information, see the [Temperature Derating](#) technical note for North America.

#### \*Eligibility for Domestic Content

As it relates to the domestic content rules, the U.S. Department of Treasury and the IRS have not yet issued proposed or final regulations. Rather, the IRS has issued three notices - Notice 2023-38, Notice 2024-41 and Notice 2025-08. These notices provide guidance regarding the domestic content rules. SolarEdge products referenced herein are manufactured with the intent to be eligible for inclusion under the elective safe harbor table in calculating the Domestic Cost Percentage under the "Rooftop (MLPE)" category (under IRS Notices 2024-41 and 2025-08, depending on the PN used - see chart below). Eligibility is subject to the installation of qualified USA-Manufactured inverters and Power Optimizers (C651U) in the same project. SolarEdge does not provide tax and/or legal advice. You should consult with your own legal and/or tax advisor(s) regarding the eligibility of your project for the ITC or PTC, including the 10% Domestic Content bonus, to determine how the applicable rules apply to your project. The forward-looking statements in this document are accurate as of the date herein and are subject to change. For more information, please contact your local SolarEdge sales representative.

PN	Domestically produced MPCs per notice 2024-41*	Domestically produced MPCs per notice 2025-08*
USESUK-USROININ6, when paired with C651U	Printed Circuit Board Assemblies, Electrical Parts, Enclosure (35.6%)	Printed Circuit Board Assemblies (DC-DC) and (AC-AC), Enclosure, Production (24.8%)
USESUK-USROININ8, when paired with C651U	Printed Circuit Board Assemblies, Enclosure (17.6%)	Printed Circuit Board Assemblies (DC-DC) and (AC-AC), Enclosure, Production (24.8%)

SolarEdge is a global leader in smart energy technology. By leveraging world-class engineering capabilities and with a relentless focus on innovation, SolarEdge creates smart energy solutions that power our lives and drive future progress.

SolarEdge developed an intelligent inverter solution that changed the way power is harvested and managed in photovoltaic (PV) systems. The SolarEdge DC optimized inverter maximizes power generation while lowering the cost of energy produced by the PV system.

Continuing to advance smart energy, SolarEdge addresses a broad range of energy market segments through its PV, storage, EV charging, UPS, and grid services solutions.

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**Cautionary Note Regarding Market Data and Industry Forecasts:** This brochure may contain market data and industry forecasts from certain third-party sources. This information is based on industry surveys and the preparer's expertise in the industry and there can be no assurance that any such market data is accurate or that any such industry forecasts will be achieved. Although we have not independently verified the accuracy of such market data and industry forecasts, we believe that the market data is reliable and that the industry forecasts are reasonable.

The SolarEdge logo features the word "solar" in a white, lowercase sans-serif font, followed by "edge" in a white, lowercase sans-serif font. The "e" in "edge" is partially enclosed by a red horizontal bar that extends to the right.



# 156HC M10 NTYP SL Bifacial Module

156 Half-Cut Monocrystalline 615W – 645W

## 23.08%

Utilizes the latest M10 size super high efficiency N-type Silicon Solar Cells. Half cut design further reduces cell to module (CTM) losses.

## Stability & Looks

3.2mm fully tempered frontside glass for superior hail resistance. Enhanced frame design to withstand higher wind, snow, and other mechanical stresses. Framed Glass-Backsheet aesthetic is ideal for high visibility

## High Energy Yield

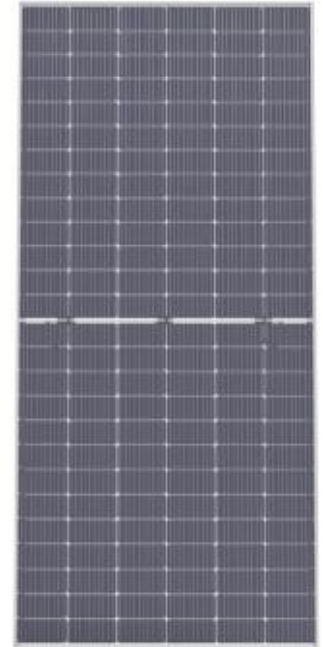
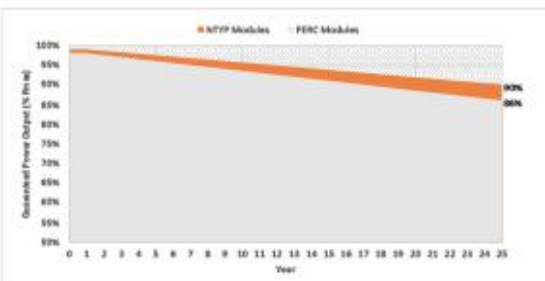
Highest efficiency, Excellent Bifaciality & Low temperature coefficient of N-type silicon solar cells enable High Energy yield

## High Reliability

N-type silicon solar cells result in low LID, reducing annual degradation and guaranteeing more power throughout the lifetime.

## No Compromise Guarantee

15 Year Product Warranty  
25 Year Linear Performance Guarantee



Highly efficient N-type Silicon Solar Cells

Low LCOE enabled by High Power Output & Low BOS Cost

1% First year degradation & 0.4% Annual Power degradation

### World-class Quality

- Heliene's fully automated manufacturing facilities with state-of-the-art robotics and computer aided inspection systems ensure the highest level of product quality and consistency
- All manufacturing locations are compliant with international quality standards and are ISO 9001 certified
- Heliene modules have received Top Performer rankings in several categories from PV Evolution Labs (PV EL) independent quality evaluations

### Bankable Reputation

- Established in 2010, Heliene is recognized as highly bankable Tier 1 manufacturer of solar modules and has been approved for use by the U.S. Department of Defense, U.S. Army Corps of Engineers and from numerous top tier utility scale project debt providers
- By investing heavily in research and development, Heliene has been able to stay on the cutting edge of advances in module technology and manufacturing efficiency

### Local Sales, Service, and Support

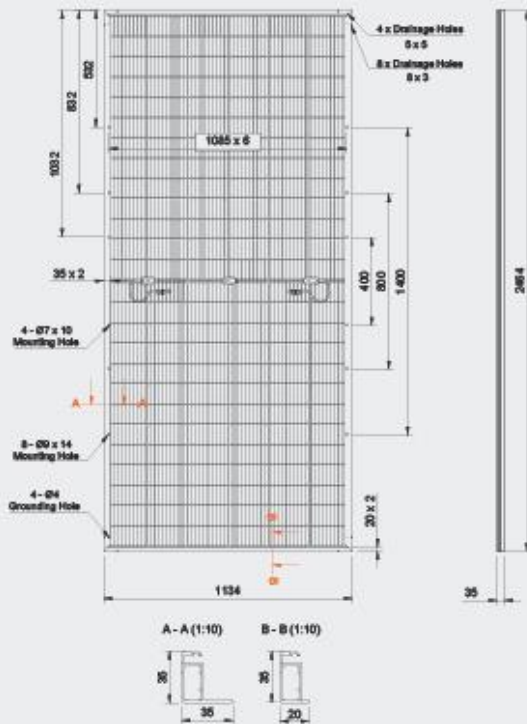
- With sales offices across the U.S. and Canada, Heliene prides itself on unsurpassed customer support for our clients. Heliene has become the brand of choice for many of the leading residential installers, developers and Independent Power Producers due to our innovative technology, product customization capability and just in time last-mile logistics support
- Local sales and customer support means answered phone calls and immediate answers to your technical and logistics questions. We understand your project schedules often change with little warning and endeavor to work with you to solve your project management challenges



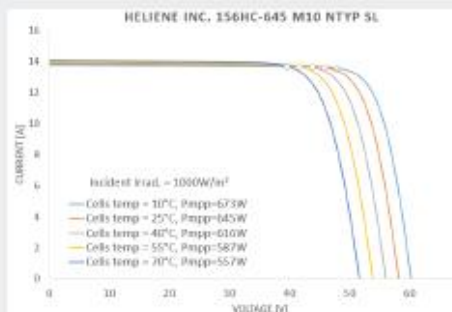
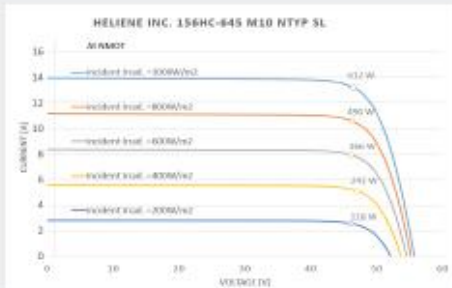
[www.heliene.com](http://www.heliene.com)



## Dimensions for 156HC M10 NTYP SL Bifacial Series Modules



## I-V Curves for 156HC M10 NTYP SL Bifacial Series Modules



## Electrical Data (STC)

Peak Rated Power*	$P_{mpp}$ (W)	645	640	635	630	625	620	615
Maximum Power Voltage	$V_{mpp}$ (V)	49.01	48.77	48.59	48.40	48.22	48.00	47.75
Maximum Power Current	$I_{mpp}$ (A)	13.16	13.12	13.07	13.01	12.96	12.92	12.88
Open Circuit Voltage*	$V_{oc}$ (V)	57.85	57.69	57.54	57.38	57.23	57.08	56.92
Short Circuit Current**	$I_{sc}$ (A)	13.86	13.83	13.79	13.75	13.71	13.67	13.64
Module Efficiency	Eff (%)	23.08	22.90	22.73	22.55	22.37	22.19	22.01
Maximum Series Fuse Rating	MF (A)	30	30	30	30	30	30	30

Power Sorting Range

[- 0/+3%]

Bifaciality Factor\*\*\*

80 ± 5%

STC - Standard Test Conditions: Irradiation 1000 W/m<sup>2</sup> - Air mass AM 1.5 - Cell temperature 25 °C,\*P<sub>mp</sub> Production Tolerance ± 3%, V<sub>mp</sub> Production Tolerance ± 3%, I<sub>mp</sub> Production Tolerance ± 4%,\*\*I<sub>sc</sub> Production Tolerance ± 3%, \*\*\*Bifaciality Factor = P<sub>mp,back</sub>/P<sub>mp,front</sub>, where P<sub>mp,back</sub> and P<sub>mp,front</sub> are tested at STC

## Electrical Data (NMOT)

Maximum Power	$P_{mp}$ (W)	490	486	482	478	475	471	467
Maximum Power Voltage	$V_{mp}$ (V)	46.92	46.70	46.53	46.34	46.17	45.96	45.72
Maximum Power Current	$I_{mp}$ (A)	10.44	10.41	10.36	10.32	10.28	10.24	10.21
Open Circuit Voltage	$V_{oc}$ (V)	55.39	55.24	55.09	54.95	54.80	54.65	54.50
Short Circuit Current	$I_{sc}$ (A)	11.18	11.15	11.11	11.08	11.05	11.02	11.00

NMOT - Nominal Module Operating Temperature:

Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind speed 1m/s

## Mechanical Data

Solar Cells	156 Half Cut, M10x, N-type Cells
Module Construction	Framed Glass-Backsheet
Backsheet	Transparent Backsheet (White Pattern Optional)
Dimensions (L x W x D)	2464 x 1134 x 35 mm (97.01 x 44.65 x 1.38 inch)
Weight	31 kg (68.34 lbs)
Frame	Double Webbed 15-Micron Anodized Aluminum Alloy
Glass	3.2mm Fully Tempered, High-Transmission, PV Solar Glass with Anti Reflective Coating
Junction Box	IP-68 rated with 3 bypass diodes
Output Cables	4mm <sup>2</sup> (12 AWG), 0.3-meter Symmetrical Cables - other cable lengths optional
Connectors	Multi-Contact/ Stäubli MC4

## Certifications

UL Certification UL61215, UL61730, CSA C22.2 No. 61730

## Temperature Ratings

Nominal Module Operating Temperature (NMOT)	+42°C (±2°C)
Temperature Coefficient of P <sub>max</sub>	-0.30%/°C
Temperature Coefficient of V <sub>oc</sub>	-0.25%/°C
Temperature Coefficient of I <sub>sc</sub>	0.045%/°C

## Maximum Ratings

Operational Temperature	-40°C to +85°C
Max System Voltage	1500V
Mech. Load Test (Front)	113 psf / 5400Pa
Mech. Load Test (Back)	50 psf / 2400 Pa
Fire Type	Type 1

## Warranty

15 Year Product Warranty

25 Year Linear Power Guarantee

## Packaging Configuration

Modules per Pallet 40' Container:	31 pieces
Modules per 40' Container:	496 pieces
Modules per Pallet 53' Trailer:	28 pieces
Modules per 53' Trailer:	588 pieces





# SKY-RACK 2.0 Ground Mount

*"A Cost-Effective Fixed Tilt or  
Season Adjustable System"*

- Average Lead Time is 7 Business Days For Projects Under 3MW
- Only 4 Main Components Required (All Inclusive)
- Designed for Fast Installation
- UL 2703 Listed

Galvanized Steel  
Components & Hardware

15-60 Degrees of Adjustability

In 2020, **Sinclair Designs & Engineering** introduced the SKY-RACK 2.0 Ground Mount System (Fixed Tilt & Season Adjustable). This product was designed for heavy snow areas. During the winter months, 60 Degrees is an optimal angle for production and snow shedding. This cantilevered design distributes the loads better and offers superior aesthetics.

Since the pandemic began, we manufactured and delivered over 150 Megawatts to support residential and commercial installations across the country. Our average lead time is 10 business days for projects under 3 Megawatts. We also provide Solar Carports, ballasted roof mounts, and Dual Axis Tracking Pole Mount Systems.



Easy to Install Vinyl  
Wire Management Extrusion

*"The COVID pandemic presented us with a unique opportunity." A large majority of US Solar racking suppliers outsource manufacturing, so they were challenged with extended lead times and material shortages. EPC's were looking for alternate solutions to get product faster.*

*"That's when our phones started ringing. Customers needed our short lead times; and are now repeat buyers because of our quality and customer service. We manufacture product in house and answer the phones when you call."*



[www.sinclair-designs.com](http://www.sinclair-designs.com)



877-517-0311



SINCLAIR DESIGNS & ENGINEERING

## MANUFACTURER'S CERTIFICATION FOR AMERICAN IRON & STEEL (AIS) COMPLIANCE



I, Kyle Sinclair, certify that all SDE products adhere to the standards set forth by the Build America, Buy America (BABA), the Infrastructure Investment Jobs Act (IIJA), and the American Iron & Steel (AIS) requirements as mandated in the EPA's State Revolving Fund Programs. Furthermore, I confirm that all products are 100% domestic content in accordance with the Inflation Reduction Act. All components are manufactured at 1104 Industrial Boulevard, Albion, MI 49224.

### PRODUCT LIST:

SKY-RACK 1.0 FIXED TILT GROUND MOUNT ASSEMBLY  
SKY-RACK 2.0 FIXED TILT GROUND MOUNT ASSEMBLY  
SKY-RACK 2.0 SEASON ADJUSTABLE GROUND MOUNT ASSEMBLY  
SKY-WALL 3.0 FIXED TILT GROUND MOUNT ASSEMBLY  
L-FRAME 7 DEGREE CARPORT CANOPY ASSEMBLY  
T-FRAME 7 DEGREE CARPORT CANOPY ASSEMBLY  
Y-FRAME 7 DEGREE CARPORT CANOPY ASSEMBLY  
GENMOUNTS LT VECTOR BALLASTED ROOF MOUNT ASSEMBLY

ISO-9001 QMS & UL-2703 Compliance Certificates can be downloaded from our website: <https://www.sinclair-designs.com/>

Material Certifications are also saved with individual Sales Orders. Email [kyle@sinclair-designs.net](mailto:kyle@sinclair-designs.net) to receive project specific USA mill certs.

If any compliance statements change, customers will be notified immediately.

*Kyle Sinclair*

### **Kyle Sinclair**

**Sinclair Designs &  
Engineering 1104 Industrial Blvd,  
Albion, MI 49224**

**Phone: 877-517-0311**

**E-mail: [kyle@sinclair-designs.net](mailto:kyle@sinclair-designs.net)**

# NEXT STEPS

YOUR NEXT STEPS TO UNLOCKING ENERGY INDEPENDENCE.

- 1 Sign a contract and pay a deposit.
- 2 Relax while we get your project approved by the utility.
- 3 Pay half of the cost of the project.
- 4 Your system gets installed.
- 5 Thorough walkthrough after install.
- 6 Receive Permission to Operate (PTO) from your utility and pay your balance.
- 7 Turn your system on.  
Save Energy. Save Money.

## WHY CHOOSE MSP?



**750+** INSTALLATIONS



**5 YEARS** WORK GUARANTEE



IN BUSINESS SINCE **2009**



**5.0** ★ ★ ★ ★ ★  
BASED ON 130+ REVIEWS

## THE MIDWEST SOLAR DIFFERENCE



Expert craftsmanship you can trust:  
Attention to every detail.



Peace of mind service: We've got all your details covered.



Personalized care: Your business deserves the utmost attention.



Lasting relationship: Like your solar panels, our service lasts.

CONTACT US TODAY TO SCHEDULE YOUR INSTALLATION



**BARRETT LIONE-SEATON**

Business Development Lead

820 Walsh Road  
Madison, WI 53714  
barrett@mwsolarpower.com  
(608) 354-2063 ext. 3



[mwsolarpower.com](http://mwsolarpower.com)

**From:** [Van Meel, Michael](#)  
**To:** [Stobbe, Samantha](#)  
**Subject:** Fw: Green Lake Co. Gov't Center solar RFP response - Bid1  
**Date:** Friday, June 12, 2026 1:00:36 PM  
**Attachments:** [Green Lake Co. Gov't Center 557kW RFP response FINAL.pdf](#)  
[GLCGC equipment specs.pdf](#)  
[Letters of Recommendation-Northwind Solar.pdf](#)

---

**From:** Jordan Kaiser <jordan@northwindre.com>  
**Sent:** Thursday, June 11, 2026 2:43 PM  
**To:** Van Meel, Michael <mvanmeel@greenlakecountywi.gov>  
**Subject:** Green Lake Co. Gov't Center solar RFP response

[CAUTION: EXTERNAL SENDER This email originated from outside Green Lake County. Do not click links or open attachments unless you recognize the sender and know the content is safe.]

Mike,

Thank you in advance for the opportunity to provide you with this proposal and the chance to work for Green Lake County. Attached is our formal price proposal and performance analysis for a 557kW grid-tied, ground-mounted PV system at Green Lake County Government Center. Equipment data sheets are also attached for your reading.

A few project highlights and points of consideration:

- Excited to share - and as you'll see - we were able to come in significantly lower in project cost than my original proposal!
- With regards to some of the EIGP grant application requirements- The receipt of that award will require laborers to be paid prevailing wage through Davis-Bacon. Our proposal includes the labor cost increases associated with those requirements.
- Additionally, the EIGP program will require equipment source certifications from vendors which we'll be able to provide in support of your grant requirements.
- I've also attached a few letters of recommendation from past customers and industry partners on their experience working with Northwind Solar over the years.

We hope you find our proposal comprehensive, please don't hesitate to contact me with any questions. Also, please confirm that you've received this proposal. We look forward to hearing of your decision on contractor selection and are hopeful we have the opportunity to serve your community!

--

Always Sunny in WI,

Jordan Kaiser  
Northwind Solar  
Solar Design & Sales, Member-Owner  
NABCEP Certified PV Technical Sales Professional  
SUAS Remote Pilot #5143076  
c: 715-572-1032  
o: 715-630-6451  
[www.northwindre.com](http://www.northwindre.com)

"Community Choice Awards: Best of Portage County for Solar Services 2025"

# Green Lake County Government Center Response to Solar RFP Proposal

June 2026



**Prepared By:**

Jordan Kaiser

Solar Design Consultant, Member-Owner

NABCEP Certified PV Technical Sales Professional

578 Allen St.

Amherst, WI 54406

O: 715.630.6451

C: 715-572-1032

[jordan@northwindre.com](mailto:jordan@northwindre.com)

[info@northwindre.com](mailto:info@northwindre.com)



## Company Profile

Northwind Solar was established in 2007, making it one of the oldest and most experienced solar companies in the state of Wisconsin. Specializing in the design and installation of solar power systems and battery backup systems, Northwind employs 31 full-time employees, including two master electricians, three journeyman electricians, two electrical apprentices, one NABCEP-certified installer, one NABCEP-certified PV Technical Sales Professional, eight NABCEP PV Associates, and Mid-State Technical College A.A.S. graduates with degrees in renewable energy. In addition to the education and certifications, Northwind Solar collectively offers our customers over 250 years of collective industry experience in renewable energy design and installation, covering over 1,200 installations and totaling over 15 megawatts of PV and BESS capacity. In 2020, Northwind Solar was named “Wisconsin’s Renewable Energy Business of the Year” by RENEW Wisconsin. Northwind Solar is employee-owned through North Wind Renewable Energy Cooperative, which strengthens our company and incentivizes us to ensure every project is successful. By choosing Northwind, your system will literally be designed and built by owners of the company, further incentivizing us to ensure your project is a success!

North Wind Renewable Energy Cooperative

- Wisconsin Dwelling Contractor #DCQ-101901014 (Expires 10/1/2028)
- Wisconsin Electrical Contractor #123237 (Expires 6/30/2028)

## Project Experience

Here’s a list of some of the projects we’ve installed over recent years similar in size and/or scope to the proposed system for Green Lake County:

- UWSP-Albertson Hall, Stevens Point, WI (2026) 213kW roof mount, grid-tied PV
- Tomorrow River School District, Amherst, WI (2025) 120kW roof mount, grid-tied PV
- Rib Mountain Wastewater Facility, Wausau, WI (2025) 620kW ground mount, grid-tied PV
- Daigle Bros. Inc., Tomahawk, WI (2025) 337kW ground mount, grid-tied PV
- Kolbe Windows & Doors, Wausau, WI (2024) 1MW roof mount, grid-tied PV
- Antigo Wastewater Treatment Plant (2024) 352kW grid-tied w/ 125kW battery backup
- Holy Wisdom Monastery, Middleton, WI (2023) 320kW ground mount, grid-tied PV
- City of Waupaca, Waupaca, WI (2023) 117kW grid-tied w/ (3) Tesla battery backup
- Aspirus Cardiology Clinic, Medford, WI (2020) 140.4kW roof-mount, grid-tied PV
- Aspirus Hospital, Wausau, WI (2019) 200kW roof mount, grid-tied PV
- Aspirus Hospital, Antigo (2019) 120kW roof mount, grid-tied PV



## Professional References

- Mike Gengalo, Kolbe Windows & Doors, Wausau, WI (715) 842-5666
- Ryan Ruggles, Tomorrow River School District, Amherst, WI (715) 824-5521
- Dan Kremer, City of Stevens Point Parks & Recreation Dept. (715) 346-1531
- Rich Rasmussen, CAP Services Inc, Stevens Point, WI (715) 343-7500
- Chris Radford, NorthCentral Conservancy Trust, Stevens Point, WI (715) 344-1910

## Project Team

Matt Rice

NWS General Manager/Member-Owner, 2022 – Present

Areas of Specialization: Leadership, Customer Service, Project Management, System Design and Specification

Dennis Wroblewski

NWS Master Electrician/Member-Owner, 2021 - Present

Areas of Specialization: Grid tied PV installation, residential and commercial PV system design and installation, Tesla Powerwall design and installation, SPAN smart panel installation, PV system commissioning, PV system troubleshooting.

Affiliations and Certifications:

Wisconsin Master Electrician #913154 (expires 6/30/27)

Josh Stolzenburg

Sales Director/NWS Member-Owner, Founder 2007 – Present

Areas of Specialization: Project Coordination, Site Evaluation, Electric Load Analysis, Energy Storage Systems, Utility Policy, Regulatory Climate, Financial Analysis and System Design and Specification.

Affiliations and Certifications

NABCEP-Certified PV Installation Professional (PVIP) - 031310-211

Justin Liszewski

Journeyman Electrician, 2010 - Present

Areas of Specialization: Grid Tied PV Installation, PV System Commissioning, PV System Troubleshooting, Energy Storage Design and Installation.

Affiliations and Certifications:

WI Residential Journeyman Electrician #1182877 (Expires 6/30/2027)

Jordan Kaiser

Sales & Design Consultant/Member-Owner, 2014 to Present

Areas of Specialization: Customer Service, Financial Analysis, Utility Policy, System Design and Specification, Project Development, Project Permitting, Community Outreach.

Affiliations and Certifications:



Commercial Solar Proposal -  
Green Lake Co. Gov't Center 557kW GMT-G2



NABCEP PV Technical Sales Professional -031023-013632.....2022-Present  
NABCEP PV Associate.....2021-Present  
AAS degree from Mid-State Technical College – Solar Thermal Technician.....2013  
AAS degree from Mid-State Technical College – Renewable Energy Specialist.....2013  
SUAS Remote Pilot #5143076.....2025-Present  
OSHA 10 Certification.....2014-Present

Robin Dostal

Journeyman Electrician/Member-Owner, 2014 - Present  
Areas of Specialization: Residential and Commercial Grid tied PV installation, PV system commissioning, PV system online monitoring, PV system troubleshooting.  
Affiliations and Certifications:  
WI Journeyman Electrician #1184016 (Expires 6/30/2027)  
A.A.S. Degree from Mid-State Technical College – Solar Electric Technician.....2014

Ben Wild

Master Electrician/Member-Owner, 2021 - Present  
Areas of Specialization: Residential and Commercial Grid tied PV installation, PV system commissioning, PV system online monitoring, PV system troubleshooting.  
Affiliations and Certifications:  
WI Journeyman Electrician #1348910 (Expires 6/30/2027)  
A.A.S. Degree from Madison Area Technical College – Electronics..... 2012

Isaiah Miller

NWS Commercial Project Manager/Member-Owner, 2018- Present  
Areas of Specialization: Residential and Commercial Grid tied PV installation, Ballasted Flat Roof Racking, Array racking construction, DC wiring.

Dylan Jenkins

NWS Project Manager/Member-Owner, 2020 - Present  
Areas of Specialization: Residential and Commercial Grid tied PV installation, Residential pitched roof installation, Array racking construction, DC wiring.  
Associate Degree in Renewable Energy Mid-State Tech College.....2019

John “JP” Pankratz

NWS Field Manager/Member-Owner, 2025 - Present  
Areas of Specialization: Residential and Commercial Grid tied PV installation, Residential pitched roof installation, Array racking construction, DC wiring.



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# NORTHWIND SOLAR PHOTOVOLTAIC SYSTEM PROPOSAL



*Northwind Solar Headquarters, Amherst, WI*

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## SOLAR POWER SYSTEM DESIGNED FOR: GREEN LAKE COUNTY GOVERNMENT CENTER

### Table of Contents

1. System Size Overview and General Work Scope
2. Proposed System Modeling
3. Proposed System Equipment
4. Project Pricing
5. Solar Energy Investment Performance Analysis
6. General Notes & Terms

## 1) System Size Overview, General Work Scope & Execution

Northwind Solar proposes to install a 557kW ground-mounted PV system for the Green Lake County Government Center. This system would be built with (944) QCells 590w PV modules, (3) Solectria XGI 175kW 480V inverters and Sinclair fixed-tilt PV array racking. The system will also be equipped with solar performance monitoring. NWS will prepare and submit all paperwork with your utility provider and permitting authority.

Description	System Size
Direct Current (DC) - from PV array	557kW
Alternating Current (AC) - from inverters	525kW

- Modules installed per manufacturer specifications on mounting equipment with stainless steel and anodized aluminum hardware.
- Conduit and wiring to a disconnecting means and inverter per specifications.
- System commissioning and coordination with utility and/or permitting officials, if necessary.
- All materials and workmanship will meet National Electrical Code and all other applicable codes.
- Northwind Solar honors our professionalism and attention to detail and **offers a 5-year warranty on our workmanship.**



## Project Approach

Northwind Solar approaches each of our projects with a team mindset. We pride ourselves on quality of installation, being thorough and detail-focused, and aim to make each project smooth through to completion. We have experienced designers and electricians on staff that ensure your system is designed for optimal performance and meets all code requirements. Our project management team directs coordination and client communication throughout each phase of the project. Our certified technicians and electricians ensure the system is installed at the highest standard of quality. Once construction has been completed and powered up, we provide support and training during the project “hand-off” to ensure you’re fully comfortable with the system operation and all questions have been answered.

Estimated job-task timelines for project phases:

- EPC project agreement executed by, or about: Dec 2026
- Equipment procurement: Jan-March 2027
- Utility application and permitting: March-April 2027
- Scheduling and coordination: March-April 2027
- Construction commencement: April-May 2027
- Construction complete: Aug-Sept 2027
- Inspections, utility commissioning, and permission to operate: Sept 2027



## 2) Proposed System Modeling



### 3) Proposed System Equipment

Qty	Model	Warranty
944	HANWHA QCELLS Q.PEAK DUO XL-G11S.3/BFG 590W	12 year product and 30 year performance
3	YASKAWA SOLECTRIA XGI 175TL 480V	10 year
1	YASKAWA SOLECTRIA SOLREVIEW MONITORING SERVICE 5-YEAR	5 year
1	Ground Mounted - Sinclair Racking System	25 year limited warranty

### Optional System Adders:

- **3-Year Operations & Maintenance (O&M) Service Agreement**
  - We can provide you with a proposal for an O&M service agreement covering annual system health check and preventative maintenance whether you choose us or another solar contractor to install the system. Option to negotiate an extended term after two years if agreeable to both parties
  - Estimated cost: \$2,800/year
  
- **eGauge Energy Consumption Monitoring**
  - Would provide whole building energy monitoring, allowing you to view in real-time your solar generation and how the building is consuming energy
  - Estimated cost: \$6,500
  
- **Inverter Warranty Extensions**
  - Options to extend inverter warranty from 12 years, to 20 or 25 years.
  - Estimated cost: \$2,000 per inverter
  
- **Pollinator Habitat**
  - We can coordinate with a landscape architect to provide pollination habitat services under and around the solar arrays.
  - Estimated cost: TBD



## 4) Project Pricing

**Total Contract Price: \$1,100,500 (\$1.98/watt)**

### Payment Schedule (negotiable)

<b>Milestone</b>	<b>Amount</b>
Project Down Payment, due upon signed contract	\$110,050.00
Progressive Payment, equipment and design fulfillment	\$385,175.00
Progressive Payment, due upon commencement of installation	\$275,125.00
Progressive Payment, due upon substantial completion of installation	\$220,100.00
Balance Due, upon completion and permission to operate	\$110,050.00
<b>TOTAL</b>	<b>\$1,100,500</b>

<b>PV Project Cost Breakdown</b>	
<b>Client: Green Lake Co. Gov't Center</b>	
<b>Component</b>	<b>Cost</b>
PV Modules	\$228,000
Inverter(s)	\$73,000
PV Array Racking & Hardware	\$155,000
Monitoring	\$4,500
BOS	\$147,000
Labor & Travel inc. Davis-Bacon wages	\$332,000
Shipping	\$26,000
Permit & Interconnection fees	\$20,000
Equipment inc. boring & trenching	\$40,000
Administration	\$50,000
Warranty ext.	-
Misc/incidentals	\$25,000
<b>TOTAL</b>	<b>\$1,100,500</b>



## 5) Solar Energy Investment Performance Analysis

### Capacity & Performance:

- **Estimated AC output (Year 1):** 759,500 kWh
- Estimated offset of historical electrical usage per year: 51-54%

### Pricing & Incentives:

	w/o EIGP	w/EIGP
Contract System Cost	\$1,100,500	\$1,100,500
Federal Elective Pay (30%)	-\$330,150	-\$255,150
OEI EIGP Grant	\$0	-\$250,000
Focus on Energy Incentive	-\$25,000	-\$25,000
Net Project Cost	\$745,350	\$495,350
Year 1 Energy + Export Value	\$38,779	\$38,779
Year 1 Demand Savings	\$5,685	\$5,685
Year 1 Total Value	\$44,464	\$44,464



# Commercial Solar Proposal - Green Lake Co. Gov't Center 557kW GMT-G2



## 25-Year Financial Performance (without EIGP):

### SOLAR INVESTMENT ANALYSIS

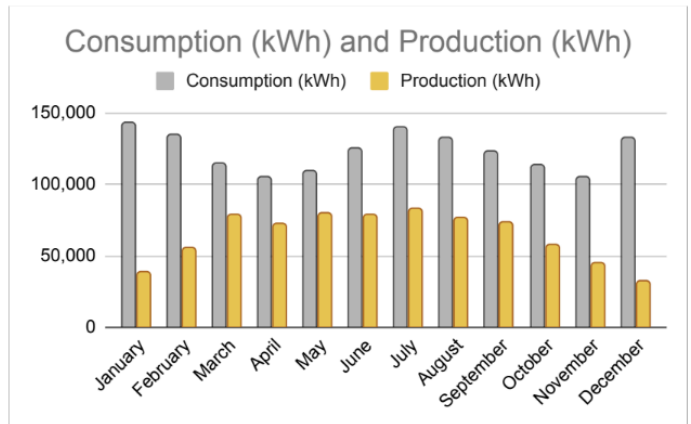
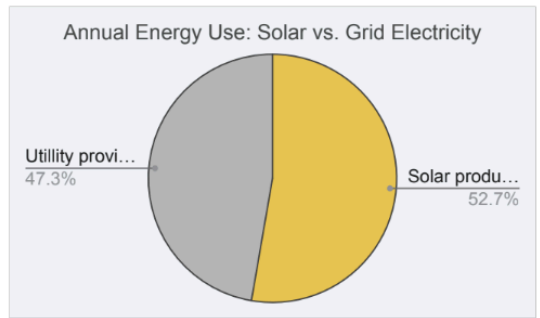
Green Lake County - Justice Center Prepared: June 11, 2026

#### SYSTEM OVERVIEW

System Size (DC)	556.96 kW	Utility	Alliant
System Size (AC)	525 kW	Consumption Rate	Alliant Cp-1
Entity Type	MUSH	Generation Rate	Alliant PgS-1
Capacity Credit	Option A		

#### INVESTMENT & INCENTIVE SUMMARY

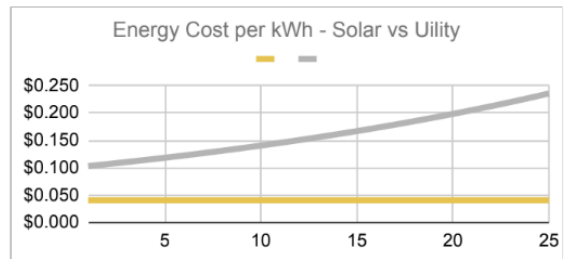
Gross System Cost	\$1,100,500
Price per Watt	\$1.98/W
ITC	-\$330,150
Focus on Energy	-\$25,000
Net Project Cost	\$745,350.00
Year 1 Total Solar Value	\$48,558
Energy + Export Credits	\$38,779
Demand Savings	\$6,950
Capacity Credit	\$2,829



#### 25-YEAR FINANCIAL PERFORMANCE

Simple Payback (years)	13.1 years
IRR (25-Year)	6.68%
ROI (25-Year)	127.5%

LCOE - \$/kWh 25-Year \$0.041/kWh

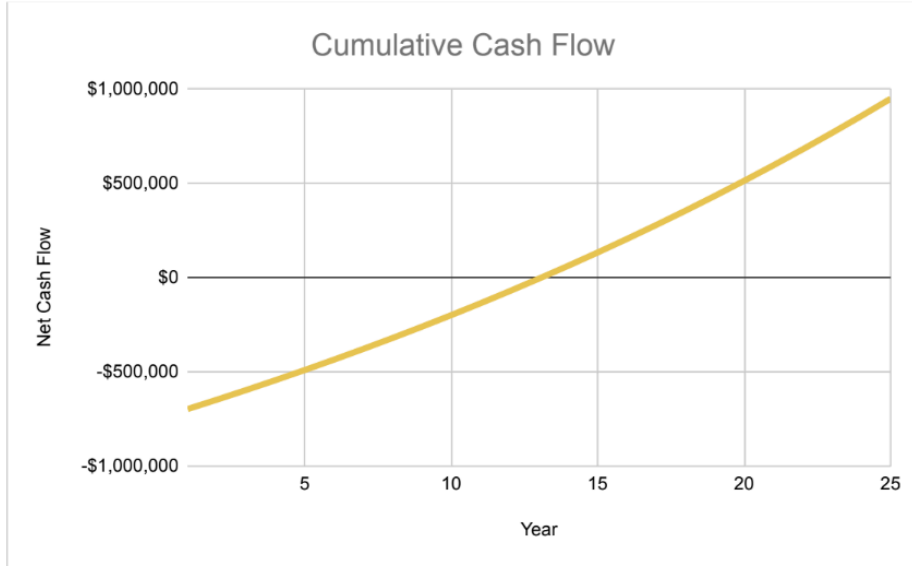
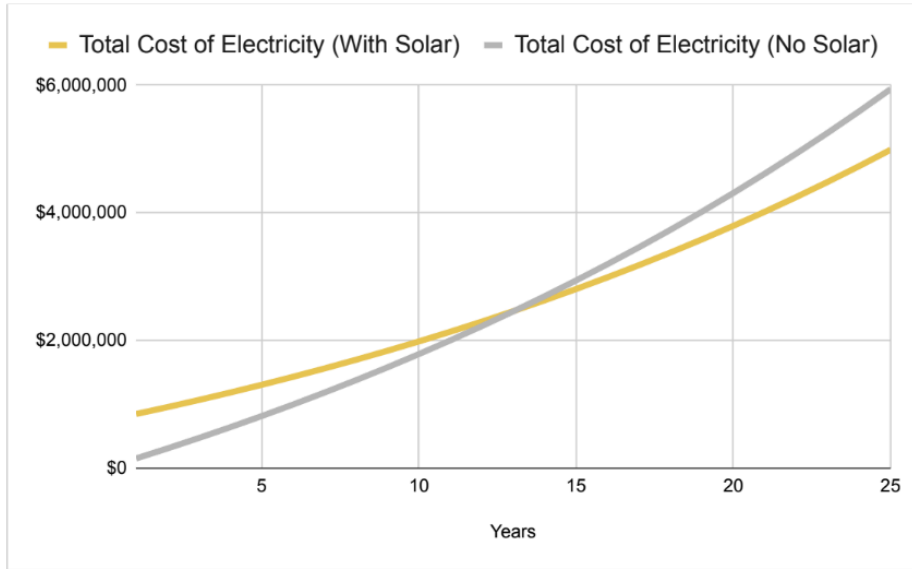


# Commercial Solar Proposal - Green Lake Co. Gov't Center 557kW GMT-G2



## COST COMPARISON — 25 YEARS

Cost of Doing Nothing (25-yr utility bills)	\$5,941,012
25-Year Cumulative Solar Value	\$950,506.75



## Definitions and Explanation

The **levelized cost of energy (LCOE)** is a financial metric that represents the average net present cost of electricity generation for a power-generating asset over its entire lifetime. The LCOE allows for an "apples-to-apples" cost comparison of different generation technologies, such as solar, wind, and natural gas, on a consistent basis.

For most people, the crucial comparison is with their local utility electricity price.

- **Good Value:** If your utility company charges more than the LCOE for your solar project, that means generating your own power will be cheaper in the long run than buying from the grid, making the investment worthwhile. The utility charges are expected to increase over time. This makes the solar option very compelling!
- **Traditional Fossil Fuels:** The LCOE for new natural gas and coal plants currently ranges from \$0.114-\$0.48/kWh.

The "**cost of business as usual**" in the context of a solar system refers to the ongoing expenses of continuing to use the traditional energy system, which is an alternative to installing solar. This cost includes your current electricity bills, which are based on historical usage and projected future prices. Comparing the cost of business as usual (e.g., paying the utility company) with the costs of a solar installation (capital expenditures, like panels and inverters, plus operational expenditures, like maintenance) helps determine the long-term savings and payback period of the solar investment.

For a solar system, the **Internal Rate of Return (IRR)** is the annualized percentage return the investment is expected to generate, considering all costs and savings over the system's lifetime. It is the discount rate where the present value of all cash inflows (like electricity savings and incentives) equals the present value of all cash outflows (like the initial installation cost and ongoing maintenance). A higher IRR indicates a more profitable investment and is used to compare the solar project's potential return against other investments.

A **cash flow chart** for a solar system investment visually represents all money spent (outflows) and received/saved (inflows) over the system's lifetime, typically 25 years. It helps determine the investment's financial viability by showing the payback period, total return on investment (ROI), and net present value (NPV).

Key Components of the Chart



**Commercial Solar Proposal -**  
Green Lake Co. Gov't Center 557kW GMT-G2



- Year 0 (Initial Investment): The chart typically starts with a large negative cash flow (a downward arrow or bar) representing the upfront costs of equipment, installation, permits, and fees. This is the primary initial outflow. Any immediate incentives, like the federal Investment Tax Credit, are factored in to show the *net* initial investment.
- Years 1-25+ (Ongoing Cash Flows): For the remaining years, the cash flow is primarily positive (upward arrows or bars), representing savings from avoided electricity bills and potential additional incentives (like net metering credits).
- Savings over time: These positive cash flows often increase over time because utility electricity rates tend to rise (inflation), making the self-generated solar power more valuable each year.



## 6) General Notes & Terms

1. Upon acceptance of this bid, both parties shall sign an **EPC Purchase Agreement** and the buyer shall supply the down payment. Your signed Purchase Agreement and down payment reserve your place in our construction schedule.
2. **Allowances (if applicable):** Allowance lines cover NWS labor, materials, subcontractors, and outside services for undefined scopes; actual costs may vary from allowance values, with overages billed or underruns credited.
3. Any alteration or deviation from the above work description involving extra costs will be treated as an **additional scope** and performed on a time-and-materials basis (labor at NWS billable rates, actual expenses, and appropriate markup).
4. All agreements are contingent upon strikes, accidents, weather delays, or other circumstances beyond NWS control. NWS is responsible for ensuring all system components are functional; manufacturer failures or shipping delays may impact schedule.
5. **Warranties:** Manufactured items are covered by manufacturer warranties only; NWS workmanship is warranted for **5 years** for a grid-tied solar electric system.
6. **Site Access:** NWS will need access to your property (and a bathroom) and free use of electrical power during the project.
7. **Insurance:** The owner is responsible for carrying fire, tornado, and other necessary insurance on equipment once delivered to site.
8. **Cleanup:** Debris generated by our work will be hauled away; areas will be left in broom-clean condition.
9. This proposal may be withdrawn or modified at NWS discretion if not accepted within **60 days** from the date issued.
10. **Disclaimer:** Supporting documentation (energy generation estimates, key points, cash-flow documents, etc.) is not legal or tax advice; consult legal/IRS guidance for tax matters.
11. **Power shut down during installation:** During system interconnection and shutdown of the Main 3000A switchboard we would initiate the generator and get backup loads online before having the utility drop the grid power at the transformer.
  - a. We estimate we would need to drop power to the Main switchboard and all the non backed up grid powered loads for about 1.5-2 hrs.
  - b. We can schedule this time of shutdown any time or day that you see as the best option for your facility.
  - c. With enough notice, the utility will coordinate shutdowns evenings or weekends.
  - d. If you have a regular schedule of tests for the generator/backup power system for facility maintenance records, we can align solar interconnection with your testing if it coincides with our system install schedule.
12. If Green Lake County decides it cannot proceed with project construction post-contract, Northwind reserves the right to assess a 3% (of contracted project cost) fee plus reimbursement for costs of any equipment that has been procured at time of breach of contract.
13. Upon acceptance of this proposal and down payment, NWS will schedule the installation. The schedule of work may be affected by weather and the queue of jobs already contracted. NWS will coordinate with you to accommodate your needs at each phase of installation.



# Q.PEAK DUO XL-G11S SERIES



590 - 605 Wp | 156 Cells  
21.7% Maximum Module Efficiency

MODEL Q.PEAK DUO XL-G11S.3/BFG



## Bifacial energy yield gain of up to 21%

Bifacial Q.ANTUM solar cells make efficient use of light shining on the module rear-side for radically improved LCOE.



## Low electricity generation costs

Q.ANTUM DUO technology with optimized module layout to boost module power and improve LCOE.



## A reliable investment

Double glass module design enables extended lifetime with 12-year product warranty and improved 30-year performance warranty<sup>1</sup>.



## Enduring high performance

Long-term yield security with Anti LID and Anti PID Technology<sup>2</sup>, Hot-Spot Protect.



## Frame for versatile mounting options

High-tech aluminum alloy frame protects from damage, enables use of a wide range of mounting structures and is certified regarding IEC for high snow (5400 Pa) and wind loads (2400 Pa).



## Innovative all-weather technology

Optimal yields, whatever the weather with excellent low-light and temperature behavior.

<sup>1</sup> See data sheet on rear for further information.

<sup>2</sup> APT test conditions according to IEC/TS 62804-1:2015 method B (-1500V, 168 h) including post treatment according to IEC 61215-1-1 Ed. 2.0 (CD)

### The ideal solution for:



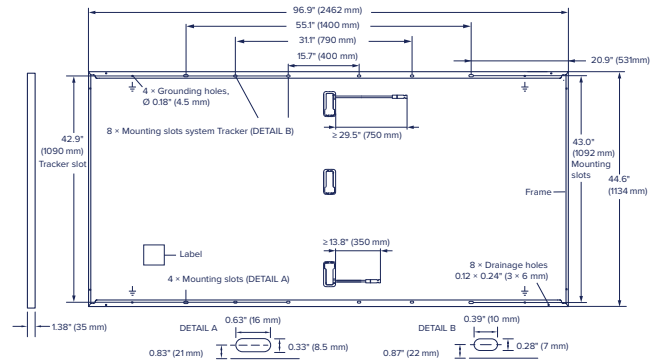
Ground-mounted solar power plants



# Q.PEAK DUO XL-G11S SERIES

## Mechanical Specification

Format	96.9 in × 44.6 in × 1.38 in (including frame) (2462 mm × 1134 mm × 35 mm)
Weight	76.9 lbs (34.9 kg)
Front Cover	0.08 in (2.0 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	0.08 in (2.0 mm) semi-tempered glass
Frame	Anodised aluminium
Cell	6 × 26 monocrystalline Q.ANTUM solar half cells
Junction box	2.09-3.98 × 1.26-2.36 × 0.59-0.71 in (53-101 mm × 32-60 mm × 15-18 mm), Protection class IP67, with bypass diodes
Cable	4 mm <sup>2</sup> Solar cable; (+) ≥ 29.5 in (750 mm), (-) ≥ 13.8 in (350 mm)
Connector	Stäubli MC4; Stäubli MC4-Evo2; - IP68



## Electrical Characteristics

POWER CLASS			590	595	600	605				
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC <sup>1</sup> (POWER TOLERANCE +5W/-0W)										
Minimum	Power at MPP <sup>1</sup>	$P_{MPP}$ [W]	590	BSTC* 645.4	595	BSTC* 650.8	600	BSTC* 656.3	605	BSTC* 661.8
	Short Circuit Current <sup>1</sup>	$I_{SC}$ [A]	13.74	15.04	13.77	15.07	13.80	15.10	13.82	15.13
	Open Circuit Voltage <sup>1</sup>	$V_{OC}$ [V]	53.60	53.79	53.63	53.82	53.66	53.85	53.68	53.87
	Current at MPP	$I_{MPP}$ [A]	13.12	14.36	13.17	14.41	13.22	14.46	13.27	14.52
	Voltage at MPP	$V_{MPP}$ [V]	44.96	44.95	45.18	45.17	45.39	45.38	45.60	45.59
	Efficiency <sup>1</sup>	$\eta$ [%]	≥ 21.1		≥ 21.3		≥ 21.5		≥ 21.7	

Bifaciality of  $P_{MPP}$  and  $I_{SC}$  70% ± 5% • Bifaciality given for rear side irradiation on top of STC (front side) • According to IEC 60904-1-2

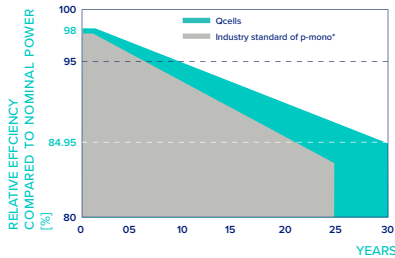
<sup>1</sup>Measurement tolerances  $P_{MPP}$  ± 3%;  $I_{SC}$ ,  $V_{OC}$  ± 5% at STC: 1000 W/m<sup>2</sup>; <sup>2</sup>at BSTC: 1000 W/m<sup>2</sup> +  $\phi$  × 135 W/m<sup>2</sup>,  $\phi$  = 70%, 25 ± 2 °C, AM 1.5 according to IEC 60904-3

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT<sup>2w</sup>

Minimum	Power at MPP	$P_{MPP}$ [W]	444.2	448.0	451.8	455.5
	Short Circuit Current	$I_{SC}$ [A]	11.07	11.09	11.11	11.13
	Open Circuit Voltage	$V_{OC}$ [V]	50.69	50.72	50.75	50.77
	Current at MPP	$I_{MPP}$ [A]	10.34	10.38	10.42	10.47
	Voltage at MPP	$V_{MPP}$ [V]	42.97	43.15	43.34	43.52

<sup>1</sup>Measurement tolerances  $P_{MPP}$  ± 3%;  $I_{SC}$ ,  $V_{OC}$  ± 5% at STC: 1000 W/m<sup>2</sup>, 25 ± 2 °C, AM 1.5 according to IEC 60904-3 • <sup>2</sup>800 W/m<sup>2</sup>, NMOT, spectrum AM 1.5

## Qcells PERFORMANCE WARRANTY

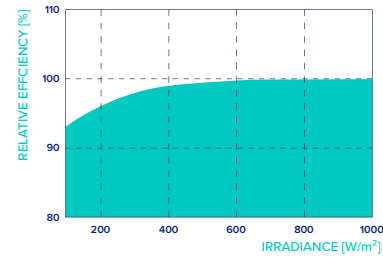


At least 98% of nominal power during first year. Thereafter max. 0.45% degradation per year. At least 93.95% of nominal power up to 10 years. At least 84.95% of nominal power up to 30 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Qcells sales organisation of your respective country.

\*Standard terms of guarantee for the 5 PV companies with the highest production capacity in 2021 (February 2021)

## PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m<sup>2</sup>).

## TEMPERATURE COEFFICIENTS

Temperature Coefficient of $I_{SC}$	$\alpha$ [%/K]	+0.04	Temperature Coefficient of $V_{OC}$	$\beta$ [%/K]	-0.27
Temperature Coefficient of $P_{MPP}$	$\gamma$ [%/K]	-0.34	Nominal Module Operating Temperature	NMOT [°F]	108 ± 5.4 (42 ± 3 °C)

## Properties for System Design

Maximum System Voltage	$V_{SYS}$ [V]	1500	PV module classification	Class II
Maximum Series Fuse Rating	[A DC]	30	Fire Rating based on ANSI/UL 61730	TYPE 29 <sup>4</sup>
Max. Design Load, Push/Pull <sup>3</sup>	[lbs/ft <sup>2</sup> ] / [Pa]	75 (3600 Pa)/33 (1600 Pa)	Permitted Module Temperature on Continuous Duty	-40 °F up to +185 °F (-40 °C up to +85 °C)
Max. Test Load, Push/Pull <sup>3</sup>	[lbs/ft <sup>2</sup> ] / [Pa]	113 (5400 Pa)/50 (2400 Pa)		

<sup>3</sup> See Installation Manual

<sup>4</sup> New Type is similar to Type 3 but with metallic frame

## Qualifications and Certificates

UL61730-1 & UL61730-2, CE-compliant, IEC 61215:2016, IEC 61730:2016, U.S. Patent No. 9.893.215 (solar cells)



Contact your Qcells Sales Representative for details regarding the module's eligibility to be Buy American Act (BAA) compliant.

## Qcells pursues minimizing paper output in consideration of the global environment.

Note: Installation instructions must be followed. Contact our technical service for further information on approved installation of this product.

Hanwha Q CELLS America Inc. 400 Spectrum Center Drive, Suite 1400, Irvine, CA 92618, USA | TEL +1 949 748 59 96 | EMAIL hqc-inquiry@qcells.com | WEB www.qcells.com



qcells

# SOLECTRIA® XGI 1500-250 SERIES

## PREMIUM 3-PHASE TRANSFORMERLESS UTILITY-SCALE INVERTERS

### FEATURES

- NEW and MORE POWERFUL!
  - XGI 1500-250/250-600
  - XGI 1500-225-600 (Selectable: 225kW/225kVA or 225kW/250kVA)
  - XGI 1500-200/200-480
  - XGI 1500-175-480 (Selectable: 175kW/175kVA or 175kW/200kVA)
- Industry-leading maximum DC/AC Ratio of 2.0
- Accepts two input PV Output Circuits, with no overcurrent protection required
- Made in the USA with global components
- Buy American Act (BAA) compliant
- 99.0% peak efficiency
- Flexible solution for distributed and centralized system architecture
- Advanced grid-support functionality Rule 21/UL1741SB
- Robust, dependable and built to last
- Lowest O&M and installation costs
- Access all inverters on site via WiFi from one location
- Remote diagnostics and firmware upgrades
- SunSpec Modbus Certified
- Tested compatible with the TESLA PowerPack Microgrid System

### OPTIONS

- PV Source Circuit Combiners
- Web-based monitoring
- Extended warranty



Yaskawa Solectria Solar is pleased to introduce its most powerful XGI 1500 inverters, with the XGI 1500-250 models at 600 Vac, and the XGI 1500-200 models for 480 Vac service.



The XGI 1500-250 and XGI 1500-200 feature SiC technology, high power and high efficiency that places them at the top end of the utility-scale string inverters in the market.

Yaskawa Solectria Solar designs all XGI 1500 utility-scale string inverters for high reliability and builds them with the highest quality components -- selected, tested and proven to last beyond their warranty. The XGI 1500 inverters provide advanced grid-support functionality and meet the latest IEEE 1547 and UL 1741 standards for safety.

The XGI 1500 inverters provide ideal solutions for ground-mounted utility-scale PV systems, with models available for service connections at 600 Vac and 480 Vac. Designed and engineered in Lawrence, MA, the SOLECTRIA XGI inverters are assembled and tested at Yaskawa America's facilities in Buffalo Grove, IL. The XGI 1500 inverters are Made in the USA with global components, and are compliant with the Buy American Act.

# SOLECTRIA® XGI 1500-250 SERIES TECHNICAL DATA

## SPECIFICATIONS

PRODUCT SPECIFICATION		XGI 1500 INVERTER MODEL			
		XGI 1500 250/250-600	XGI 1500 225-600	XGI 1500 200/200-480	XGI 1500 175-480
DC Input	Absolute Maximum Input Voltage	1500 VDC			
	Maximum Power Voltage Range (MPPT)	860-1250 VDC		750-1250 VDC	
	Operating Voltage Range (MPPT)	860-1450 VDC		750-1450 VDC	
	Number of MPP Trackers	1 MPPT			
	Maximum Operating Input Current	296.7 A	267 A	237.3 A	207.6 A
	Maximum Operating PV Power	255 kW	230 kW	204 kW	179 kW
	Maximum DC/AC Ratio   Max Rated PV Power	2.0   500 kW	2.22   500 kW	2.5   500 kW	2.86   500 kW
	Max Rated PV Short-Circuit Current ( $\Sigma I_{sc} \times 1.25$ )	800 A			
AC Output	Nominal Output Voltage	600 VAC, 3-Phase		480 VAC, 3-Phase	
	AC Voltage Range	-12% to +10%			
	Continuous Real Output Power	250 kW	225 kW	200 kW	175 kW
	Continuous Apparent Output Power (kVA)	250	250 225	200	200 175
	Maximum Output Current ( $A_{RMS}$ )	240.6	XGI 1500- 225/225: 216.5 225/250: 240.6	240.6	XGI 1500- 175/175: 210.5 175/200: 240.6
	Fault Current Contribution (1 cycle RMS)	390 A	390 A 351 A	312 A	312 A 273 A
	Conductor Compatibility	600 kcmil max, Cu or Alum, 1 or 2 conductors with lugs			
	Nominal Output Frequency	60 Hz			
	Power Factor (Unity default)	+/- 0.80 Adjustable			
	Total Harmonic Distortion (THD) @ Rated Load	< 3%			
	Grid Connection Type	3-Ph + N/GND			
	Efficiency	Peak Efficiency	99.0%		
CEC Average Efficiency		98.5%			
Tare Loss		<1 W			
Temperature	Ambient Temperature Range	-40°F to 140°F (-40°C to 60°C)			
	De-Rating Temperature	113°F (45°C)	127°F (53°C)	113°F (45°C)	131°F (55°C)
	Storage Temperature Range	-40°F to 167°F (-40°C to 75°C)			
	Relative Humidity (non-condensing)	0 - 95%			
	Operating Altitude	9,840 ft (3 km)			
Communications	Advanced Graphical User Interface	WiFi			
	Communication Interface	Ethernet			
	Third-Party Monitoring Protocol	SunSpec Modbus TCP/IP			
	Web-Based Monitoring	Optional			
	Firmware Updates	Remote and Local			
Testing & Certifications	Safety Listings & Certifications	UL 1741, IEEE 1547, UL 1998, UL 1699b Photovoltaic Arc-Fault Circuit Protection Certified			
	Advanced Grid Support Functionality	Rule 21, UL 1741SB			
	Testing Agency	ETL			
Warranty	FCC Compliance	FCC Part 15 (Subpart B, Class A)			
	Standard and Options	5 Years Standard; Option for 10 Years			
Enclosure	Acoustic Noise Rating	73 dBA @ 1 m ; 67dBA @ 3 m			
	DC Disconnect	Integrated 2-Pole 400 A DC Disconnect			
	Mounting Angle	Vertical only			
	Dimensions	Height: 29.5 in. (750 mm)   Width: 44.3 in. (1125 mm)   Depth: 15.4 in. (390 mm)			
	Weight	290 lbs (131.5 kg)			
	Enclosure Rating and Finish	NEMA 4X, IEC IP66, Type 3R, Polyester Powder-Coated Aluminum			

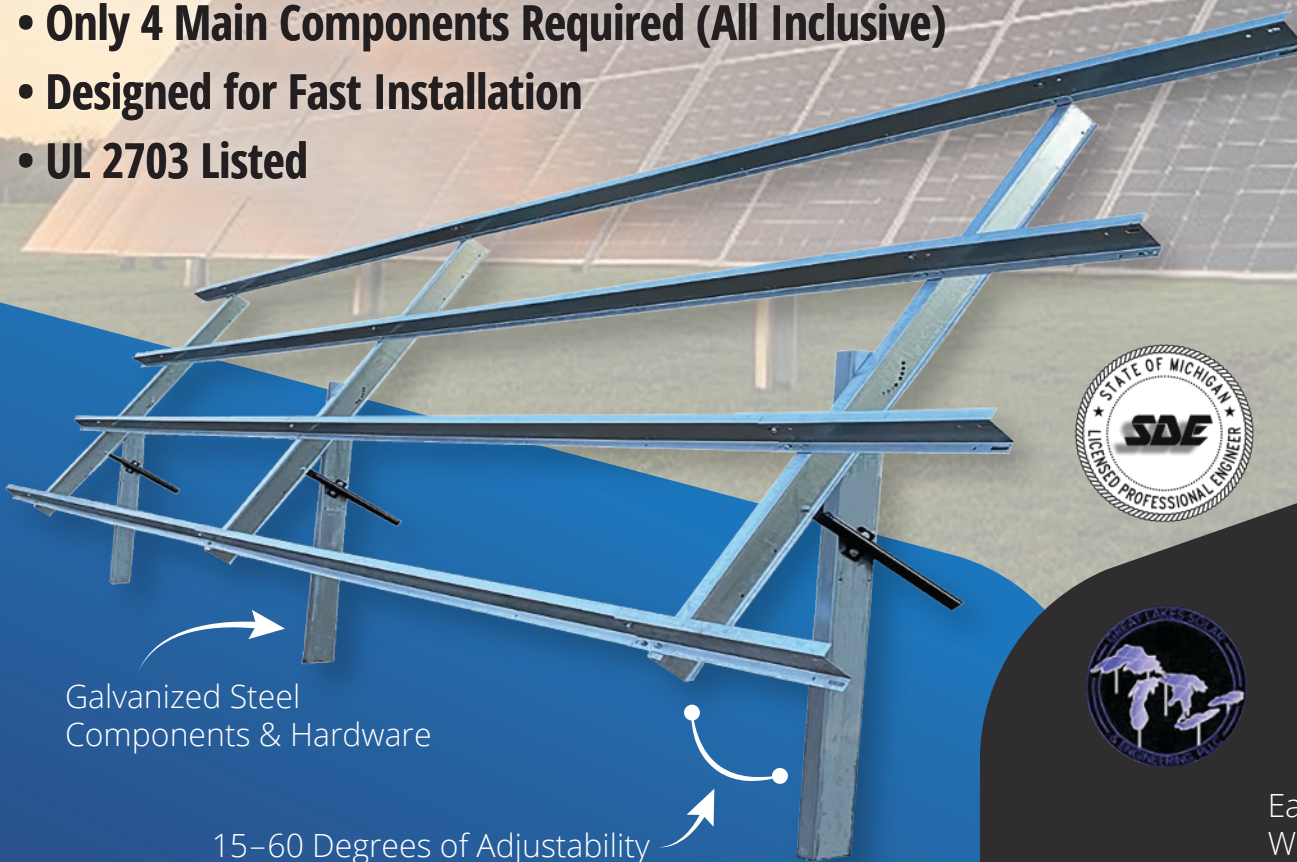




# SKY-RACK 2.0 Ground Mount

*"A Cost-Effective Fixed Tilt or Season Adjustable System"*

- Average Lead Time is 7 Business Days For Projects Under 3MW
- Only 4 Main Components Required (All Inclusive)
- Designed for Fast Installation
- UL 2703 Listed



Galvanized Steel  
Components & Hardware

15-60 Degrees of Adjustability



Easy to Install Vinyl  
Wire Management Extrusion

In 2020, **Sinclair Designs & Engineering** introduced the SKY-RACK 2.0 Ground Mount System (Fixed Tilt & Season Adjustable). This product was designed for heavy snow areas. During the winter months, 60 Degrees is an optimal angle for production and snow shedding. This cantilevered design distributes the loads better and offers superior aesthetics.

Since the pandemic began, we manufactured and delivered over 150 Megawatts to support residential and commercial installations across the country. Our average lead time is 10 business days for projects under 3 Megawatts. We also provide Solar Carports, ballasted roof mounts, and Dual Axis Tracking Pole Mount Systems.

*"The COVID pandemic presented us with a unique opportunity."* A large majority of US Solar racking suppliers outsource manufacturing, so they were challenged with extended lead times and material shortages. EPC's were looking for alternate solutions to get product faster.

*"That's when our phones started ringing. Customers needed our short lead times; and are now repeat buyers because of our quality and customer service. We manufacture product in house and answer the phones when you call."*



[www.sinclair-designs.com](http://www.sinclair-designs.com)



877-517-0311

# SDE



## ***SKY-RACK 2.0 Ground Mount Season Adjustable System***

### ***INSTALLATION GUIDE***



For more information contact: [kyle@sinclair-designs.net](mailto:kyle@sinclair-designs.net)

Sinclair Design and Engineering 1104 Industrial Avenue, Albion, Michigan, 49224 USA

Tel: (01) 877.517.0311  
[www.sinclair-designs.com](http://www.sinclair-designs.com)

# PRODUCT SPEC SHEET



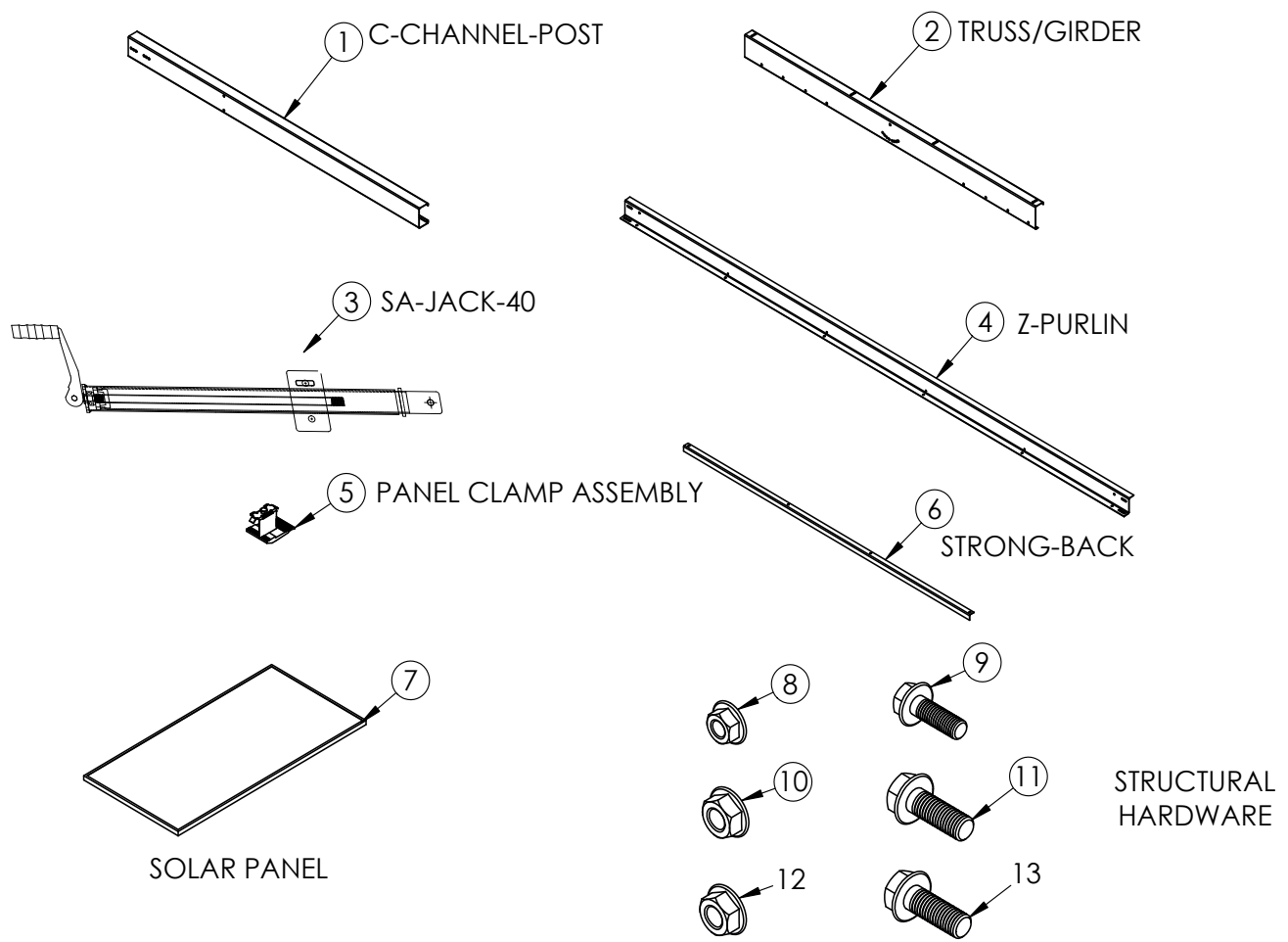
*Fixed Tilt System or Season Adjustable - Module Clamp Kits or Direct to Frame*



<b>FIXED TILT ANGLES</b>	<b>FIXED TILT - 20, 25, 30, 35 DEGREES</b>	<b>TERRAIN</b>	<b>+/- 5DEG E/W</b>
<b>SEASON ADJUST ANGLES</b>	<b>15 - 60 DEGREES</b>	<b>WIRE MANAGEMENT</b>	<b>OPTIONAL POLY U-GUARD</b>
<b>MODULE ORIENTATION</b>	<b>TWO HIGH PORTRAIT</b>	<b>WARRANTY</b>	<b>20-25 YEARS</b>
<b>WIND LOAD</b>	<b>125 MPH</b>	<b>MATERIAL</b>	<b>GRADE 50-60 HSLA STEEL</b>
<b>SNOW LOAD</b>	<b>60 PSF</b>	<b>COATING</b>	<b>GALVANIZED W/CHEM TREAT</b>
<b>GROUND CLEARANCE</b>	<b>24 - 36 IN STANDARD</b>	<b>MANUFACTURING INFO</b>	<b>MADE IN THE USA</b>
<b>MODULE CLAMPS</b>	<b>SDE CLAMP KITS</b>	<b>STRUCTURAL CERTIFICATIONS</b>	<b>UL 2703 LISTED</b>
<b>OR DIRECT TO RAME</b>	<b>OPTIONAL</b>	<b>QUALITY CERTIFICATION</b>	<b>ISO-9001 2015</b>



# CLAMP DESIGN: Included Parts List



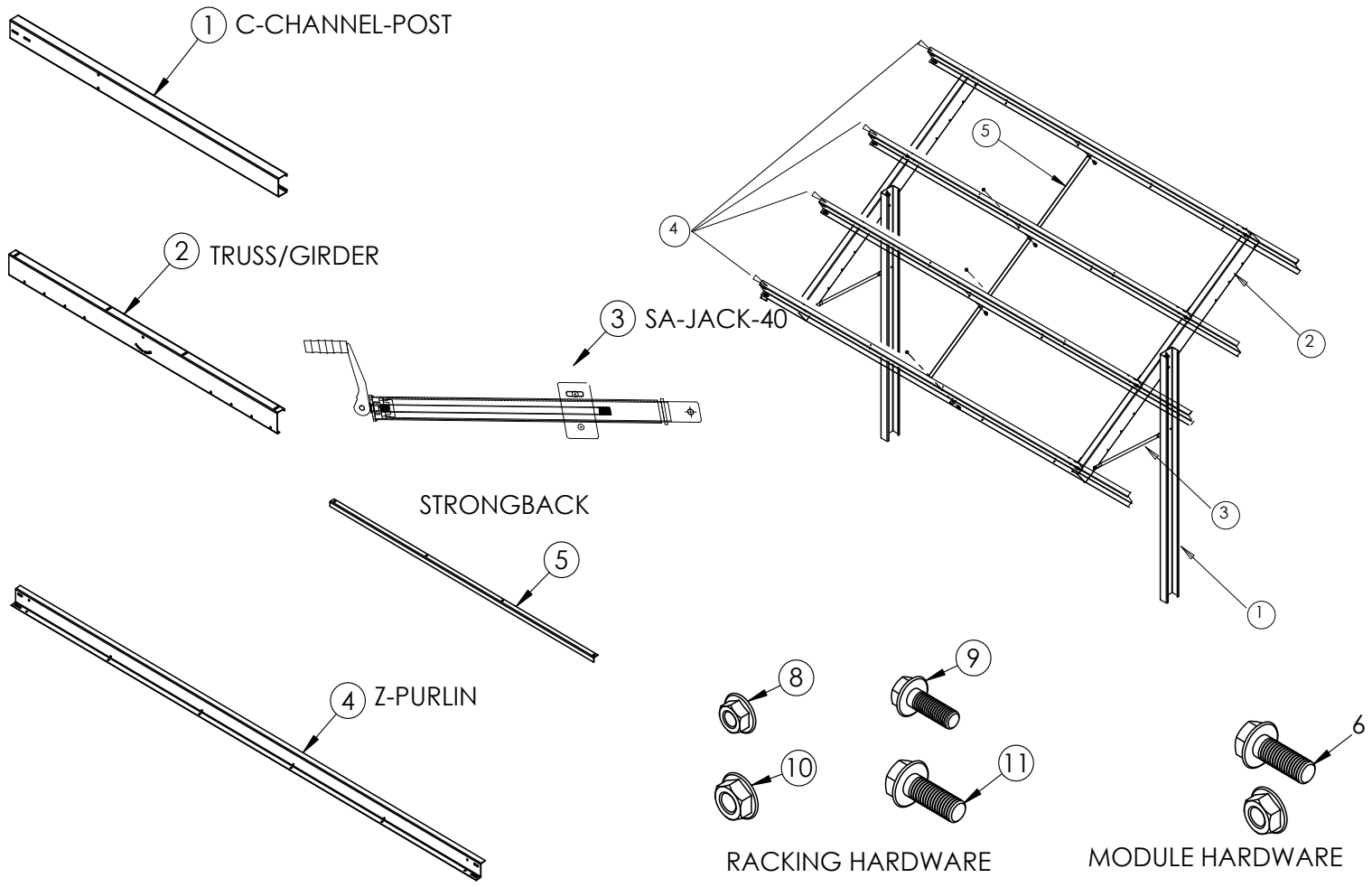
ITEM NO.		QTY
1	C-CHANNEL-POST	2
2	TRUSS/GIRDER	2
3	SA-JACK-40	2
4	Z-PURLIN	4
5	PANEL CLAMP ASSEMBLY	20
6	STRONG-BACK	1
7	PV MODULE	10
8	1/2-13 FLANGE HEAD NUT	14
9	1/2-13 X 1.5 FLANGE HEAD BOLT	14
10	5/8-11 FLANGE HEAD NUT	4
11	5/8-11 X 1.75 FLANGE HEAD BOLT	4

ITEM NO.	Recommended Installation Tools:	QTY
	1/4 or 1/2 1500 in/lb MIN Impact Driver 1/2 - 3/4 - 15/16 in Impact Sockets (Always take extra batteries)	
5	<b>TORQUE SPEC = 10 ft/lbs</b>	20
<b>Over Torque of Clamps Could Result in Module Damage</b>		
9	<b>TORQUE SPEC = 57 ft/lbs</b>	14
11	<b>TORQUE SPEC = 112 ft/lbs</b>	2

Note: Z-PURLIN 49.5 East & West Cantilevers are available - See Design Requirements & Bill of Materials

# DIRECT TO FRAME DESIGN:

## Included Parts List



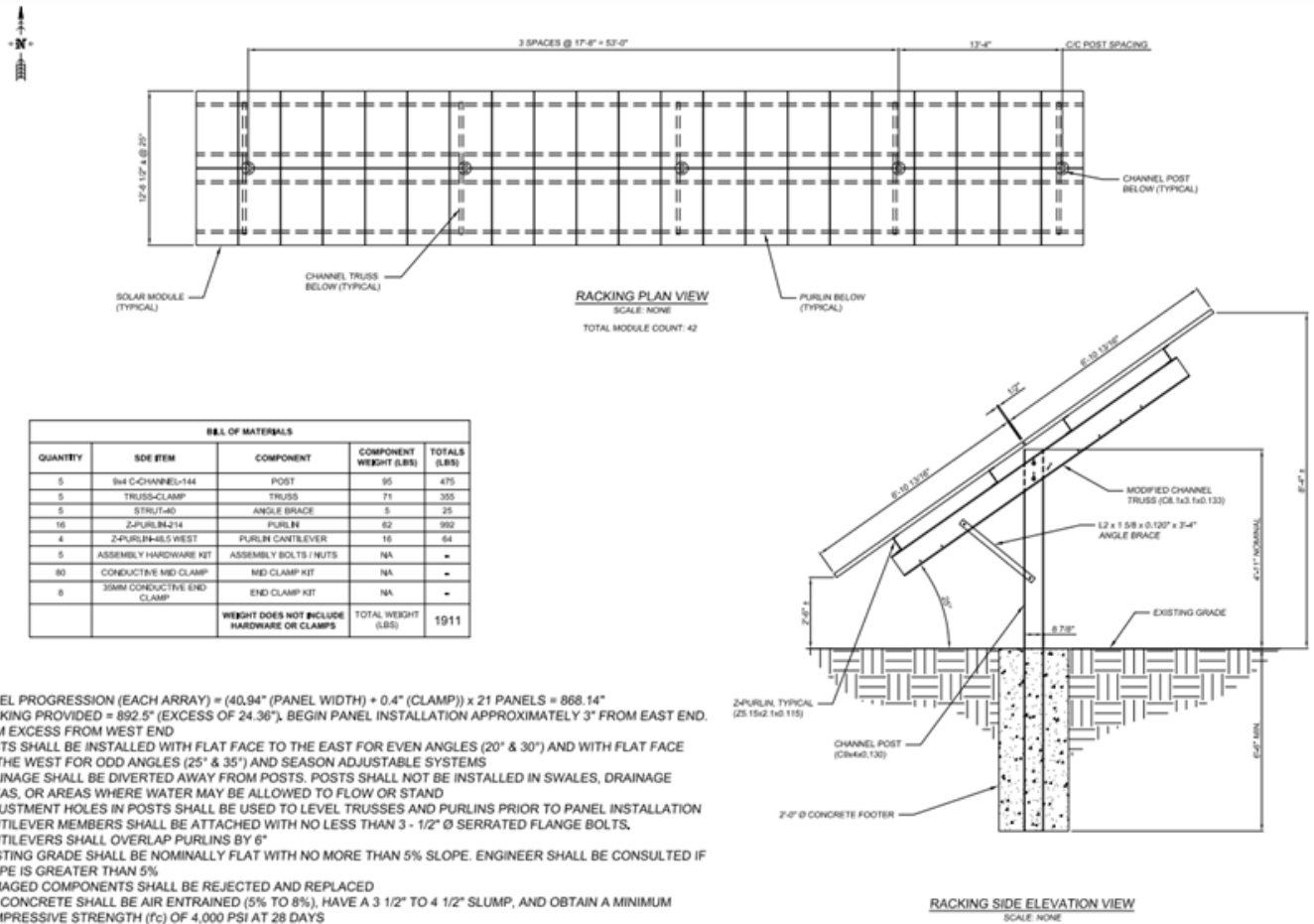
ITEM NO.	DESCRIPTION	QTY
1	C-CHANNEL-POST	2
2	TRUSS/GIRDER	2
3	SA-JACK-40	2
4	Z-PURLIN	4
5	STRONGBACK	1
6	1/4-20 SERRATED FLANGED BOLT/NUT	40
7	PV MODULE	10
8	1/2-13 FLANGE HEAD NUT	14
9	1/2-13 X 1.5 FLANGE HEAD BOLT	14
10	5/8-11 FLANGE HEAD NUT	4
11	5/8-11 X 1.75 FLANGE HEAD BOLT	4

TORQUE	Recommended Installation Tools:	
	1/4 or 1/2 1500 in/lb MIN Impact Driver 1/2 - 3/4 - 15/16 in Impact Sockets (Always take extra batteries)	
6	<b>TORQUE SPEC = 6 ft/lbs</b>	40
9	<b>TORQUE SPEC = 57 ft/lbs</b>	14
11	<b>TORQUE SPEC = 112 ft/lbs</b>	4

Note: Z-PURLIN 48.5 East & West Cantilevers are available - See Design Requirements & Bill of Materials

# 1.0 System Set-up Procedure

**1.4 DESIGN EXAMPLE.** Note, please reference your SDE draw package that is specific to your project.



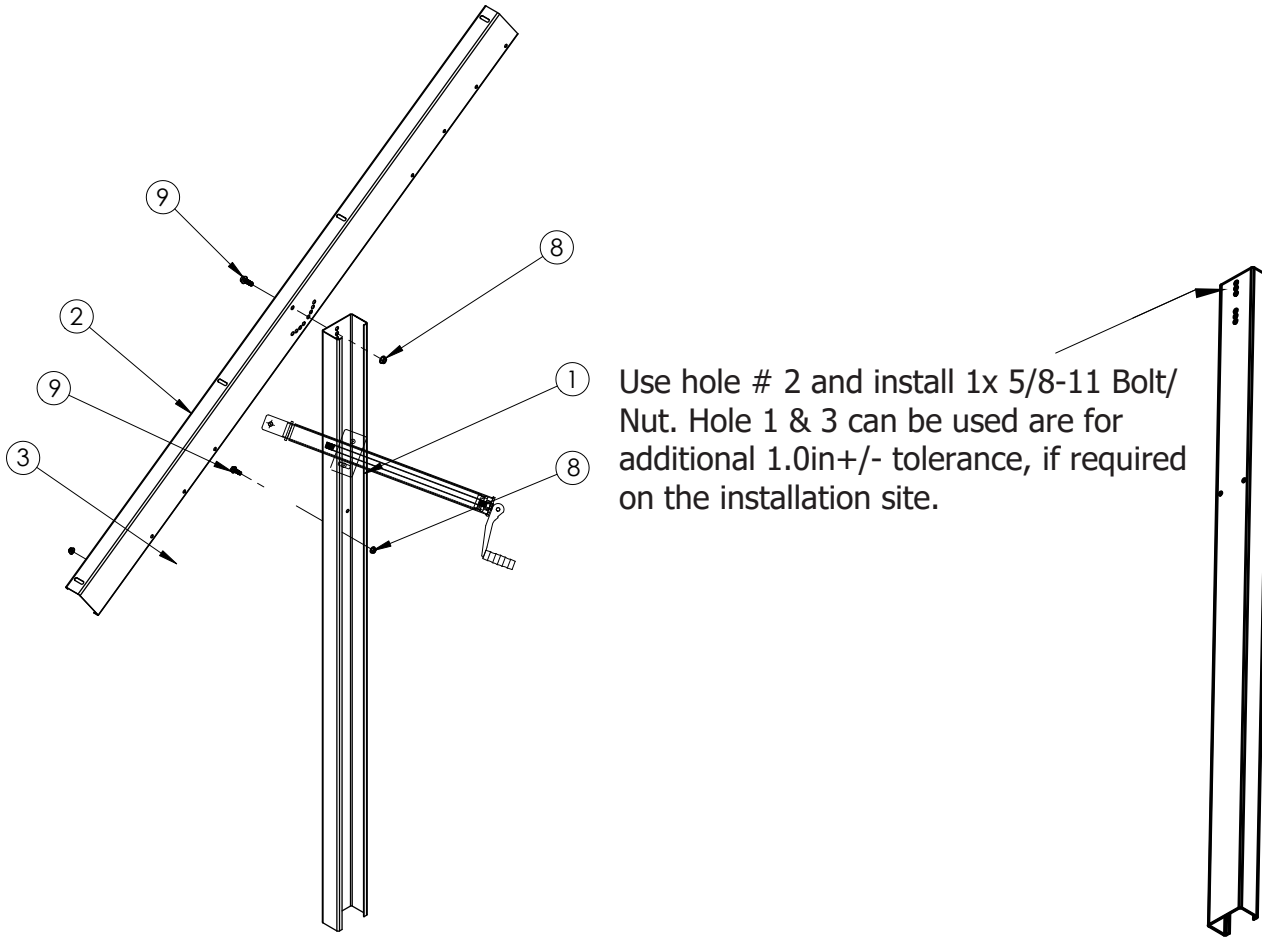
BILL OF MATERIALS				
QUANTITY	SDE ITEM	COMPONENT	COMPONENT WEIGHT (LBS)	TOTALS (LBS)
5	9/4 C-CHANNEL-144	POST	95	475
5	TRUSS-CLAMP	TRUSS	71	355
5	STRUT-40	ANGLE BRACE	5	25
16	Z-PURLIN-214	PURLIN	62	992
4	Z-PURLIN-48.5 WEST	PURLIN CANTILEVER	16	64
5	ASSEMBLY HARDWARE KIT	ASSEMBLY BOLTS / NUTS	NA	-
80	CONDUCTIVE MID CLAMP	MID CLAMP KIT	NA	-
8	39MM CONDUCTIVE END CLAMP	END CLAMP KIT	NA	-
		<b>WEIGHT DOES NOT INCLUDE HARDWARE OR CLAMPS</b>	<b>TOTAL WEIGHT (LBS)</b>	<b>1911</b>

- NOTES**
- PANEL PROGRESSION (EACH ARRAY) = (40.94" (PANEL WIDTH) + 0.4" (CLAMP)) x 21 PANELS = 868.14"
  - RACKING PROVIDED = 892.5" (EXCESS OF 24.36"), BEGIN PANEL INSTALLATION APPROXIMATELY 3" FROM EAST END. TRIM EXCESS FROM WEST END
  - POSTS SHALL BE INSTALLED WITH FLAT FACE TO THE EAST FOR EVEN ANGLES (20° & 30°) AND WITH FLAT FACE TO THE WEST FOR ODD ANGLES (25° & 35°) AND SEASON ADJUSTABLE SYSTEMS
  - DRAINAGE SHALL BE DIVERTED AWAY FROM POSTS. POSTS SHALL NOT BE INSTALLED IN SWALES, DRAINAGE AREAS, OR AREAS WHERE WATER MAY BE ALLOWED TO FLOW OR STAND
  - ADJUSTMENT HOLES IN POSTS SHALL BE USED TO LEVEL TRUSSES AND PURLINS PRIOR TO PANEL INSTALLATION
  - CANTILEVER MEMBERS SHALL BE ATTACHED WITH NO LESS THAN 3 - 1/2" Ø SERRATED FLANGE BOLTS. CANTILEVERS SHALL OVERLAP PURLINS BY 6"
  - EXISTING GRADE SHALL BE NOMINALLY FLAT WITH NO MORE THAN 5% SLOPE. ENGINEER SHALL BE CONSULTED IF SLOPE IS GREATER THAN 5%
  - DAMAGED COMPONENTS SHALL BE REJECTED AND REPLACED
  - ALL CONCRETE SHALL BE AIR ENTRAINED (5% TO 8%), HAVE A 3 1/2" TO 4 1/2" SLUMP, AND OBTAIN A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 4,000 PSI AT 28 DAYS

## 1.0 System Set-up Procedure

### 1.2 TRUSS-120 ASSEMBLY TO POST

Fasten angled mount on driven post with provided hardware. Then add season adjustable jack with 3x 1/2-13x 1/2 Serrated Flanged Bolts/nuts. Note: the C-Channel has a 6x hole pattern for +/- 1.0 in tolerance.



**STEP 1: Install TRUSS to the C-Channel Post with 2x 5/8-11 x 1 1/2in Bolts/Nuts.**

**STEP 2: SEASON ADJUST SYSTEM:** When installing the SA-JACK-40, we recommend hand tightening the hardware, backing off the nut 1/2 turn, and adding a second nut at each location. This will allow the jack to pivot freely, while also preventing further movement of the hardware.

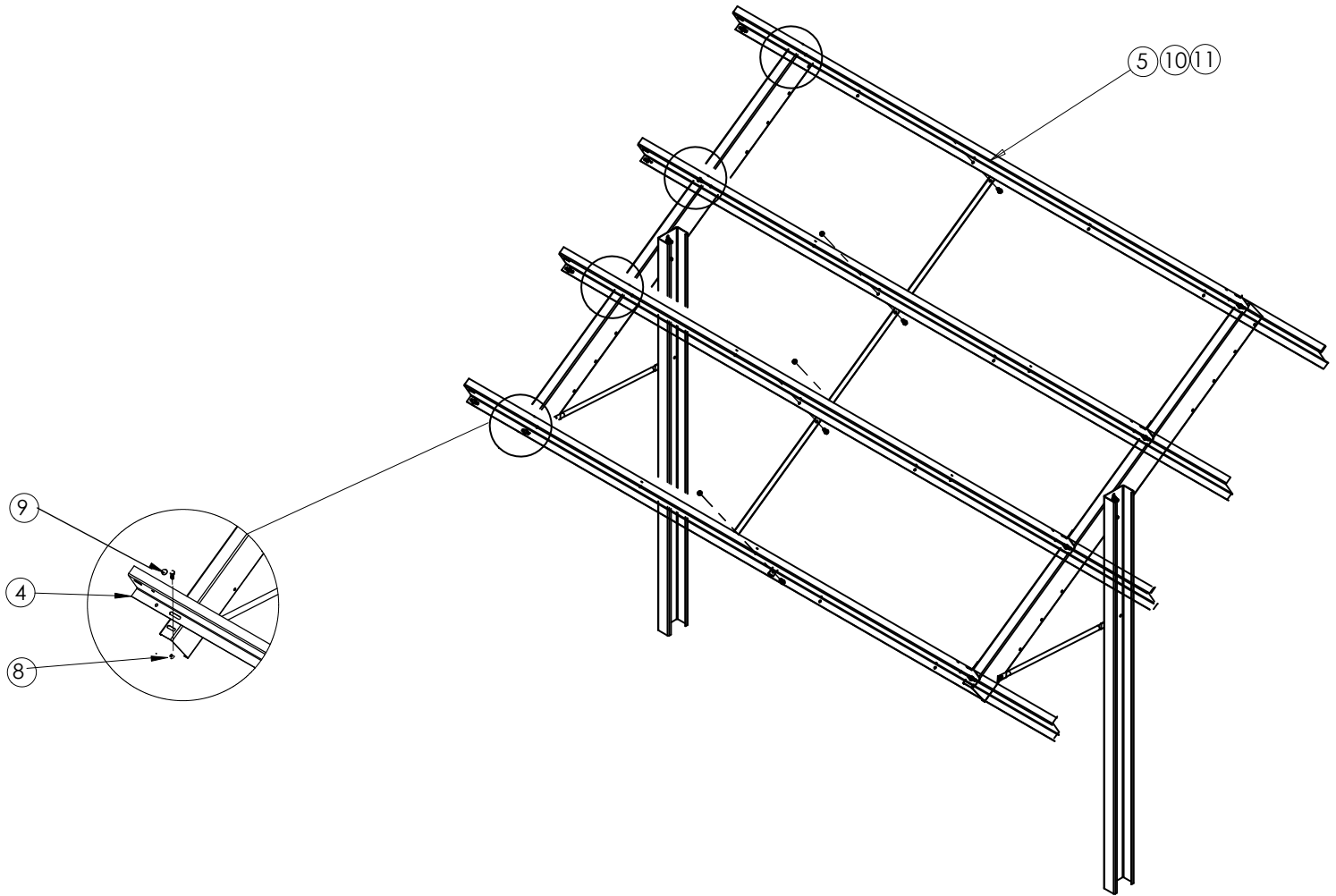
**Install SA-JACK-40 to the C-Channel Post & Truss with 3x 1/2-13 x 1 1/2in Bolts & 6x 1/2-13 Nuts. Of note, if adjusting the system alone, only adjust each jack in 5x Degree Increments.**

## 1.0 System Set-up Procedure

### 1.4 Z-PURLIN to TRUSS ASSEMBLY

Attach 4x Z-Purlins to the SLR-TRUSS with 1/2-13 x 1 1/2 Hardware.

Face Top Z-Purlin Flanges North



### 1.5 STRONG-BACK Install

Install STRONG-BACK to Z-purlins with 4x 1/2-13 hardware as detailed above.

Note: These are rarely required to be installed by our Professional Engineers.

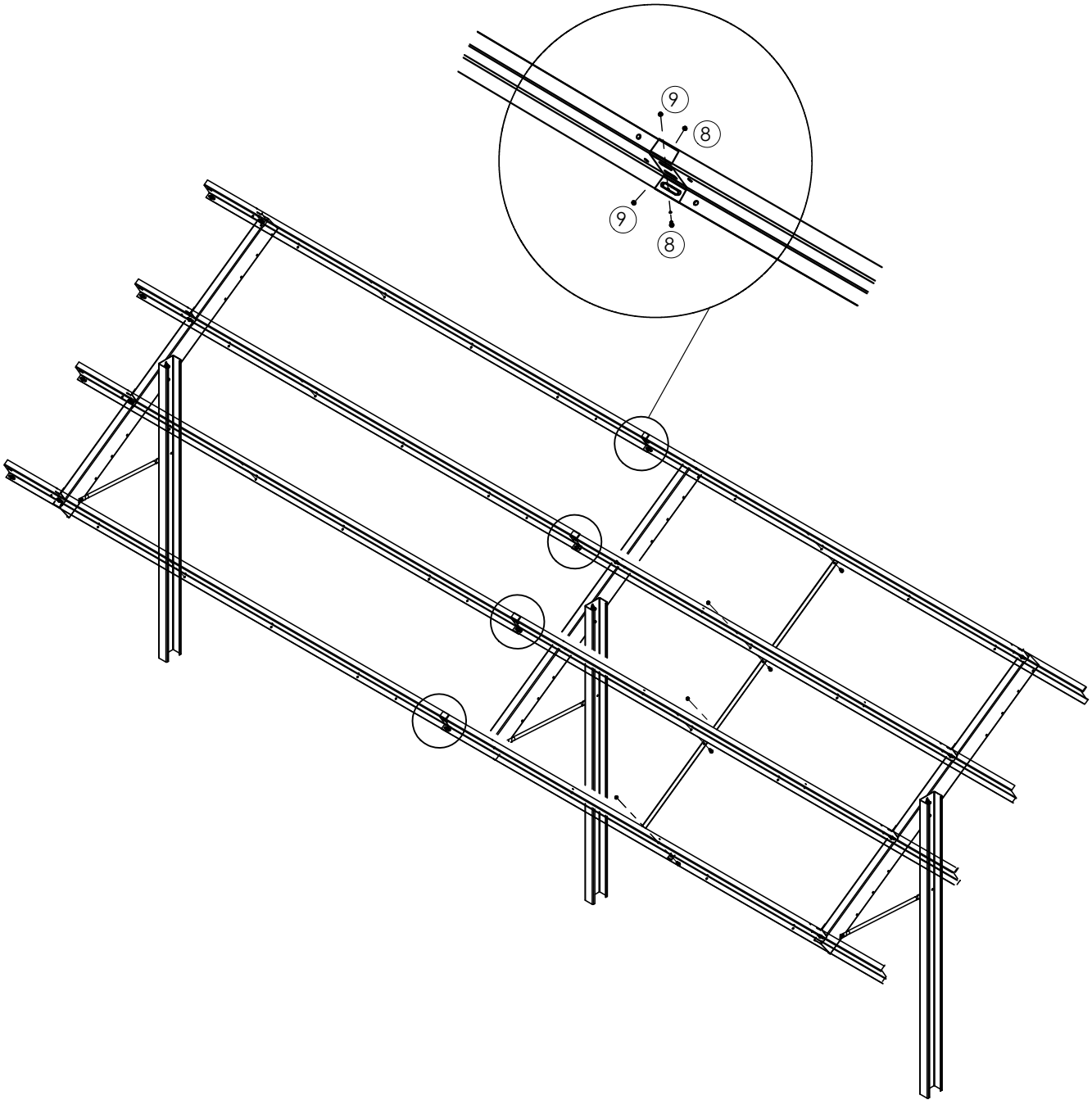
Mainly used in Hurricane Zones.

## 1.0 System Set-up Procedure

### Z-PURLIN OVERLAP

Attach 4x Z-Purlins to 4x Z-Purlins with 1/2-13 x 1 1/2 Hardware.

**AA-PURLIN-204, 214's, 186's** (Overlap by 2 inches and install 2x 1/2-13 x 1 2/2 Serrated Flanged Hardware



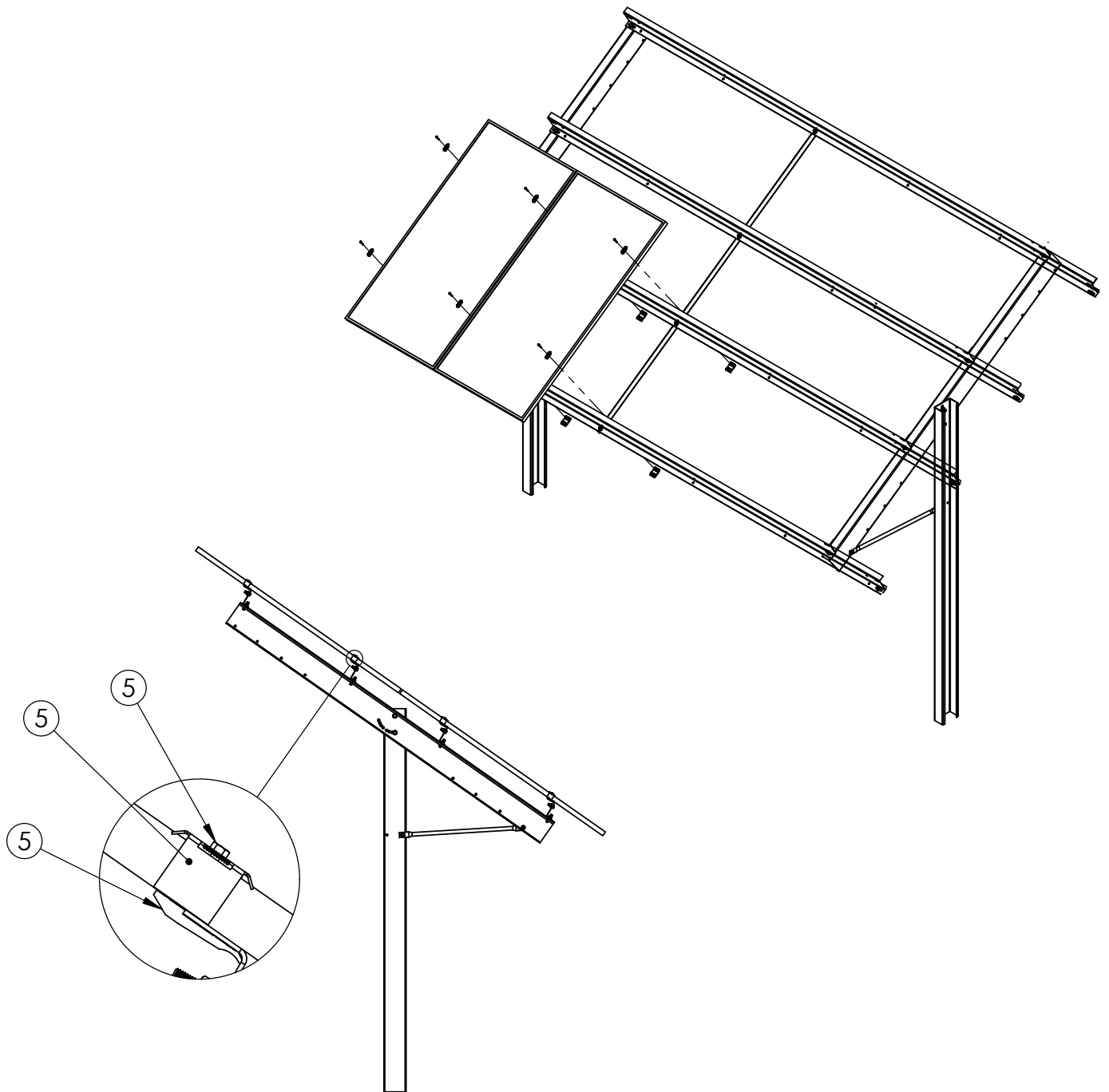
## 1.0 System Set-up Procedure

### 1.6 Panel Installation with Clamps

If Panels are to be installed with provided clamp assemblies. This clamp consists of three parts:  
1x 5/16 x 2 1/2 Serrated Flanged Bolt - 1x UL Stainless Mid Clamp - 1x Tapped Aluminum Extrusion

#### 1.6.1 Panel Installation without Clamps

If Panels are to be installed direct to frame, line up the module frame holes with the Z-Purlin slots and install 1/4-20 x 5/8 stainless serrated flanged bolts & nuts.



Good News Project  
1106 N. Fifth Street  
Wausau, WI 54403  
715-843-5985  
goodnewswi.com

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August 4, 2025

To Whom it May Concern,

I am writing to highlight our partnership with Northwind Solar. I call it a partnership because when our non-profit organization first decided in 2022 to explore solar, the Northwind Solar employees did a great job from day 1 educating our leadership about the costs, installation process, and available energy rebates to tap into should we choose solar. One of their employees, Jordan Kaiser, offered to attend a board meeting to answer any questions.

Northwind Solar made it easy to understand the timeline and process of installing 3 solar arrays on our roof once we made the decision to move forward. With the arrays going live at the end of 2023, our energy prices are now stabilized at the same rate for the next 20+ years. We even received a bill from our local utility, WPS, one summer month in the amount of \$ -1.65. It was thrilling!

Because of Jordan and the Northwind Solar team's ability to educate the general public about the benefits of solar, I have purposefully stayed in touch with the team. Upon my request, Jordan did an educational presentation and fielded questions at our Wausau Noon Optimist meeting and has since agreed to offer information and education on a local radio station as our city contemplates moving forward with solar arrays near the wastewater treatment center.

My favorite part about solar, besides the lower bills, has been the thorough education that accompanies this big decision.

If you have any questions about the process from a business-owners' point of view, I welcome inquiries at 715-843-5985 x 103

Christine Daniels  
Executive Director

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Wisconsin Rapids Area Habitat for Humanity  
P. O. Box 1134, Wisconsin Rapids, WI 54495-1134  
<https://wrahfh.org> | Voicemail: 715-422-1925

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Our Wisconsin Rapids Area Habitat for Humanity affiliate has worked with Northwind Solar cooperative on two consecutive Habitat homes in Wisconsin Rapids. We first approached Northwind in 2022 to inquire if it would be interested in partnering with our affiliate on installing solar panels for our Habitat house. There was no hesitation from Northwind. It had a keen interest in working with a non-profit organization such as ours that builds affordable homes for low-middle income families.

Northwind outlined the type of panels and inverter that we should expect in the contract, plus what it required of us. Northwind quoted us a very reasonable total cost for the entire project. True to its word, Northwind delivered quality solar panels, inverter and an expert crew to do the installation. The installation took 1 – 2 days. The Habitat partner family was educated on how to track electricity usage and informed of the warranty of the panels by Northwind. It was a very seamless and professional installation.

In addition, Northwind assisted our affiliate with filing all necessary paperwork required for Focus on Energy rebates and tax credits. We received our monies without any issues. This extra step taken by Northwind was most reassuring to us and appreciated.

Our relationship with Northwind has grown with each year that our Habitat affiliate has installed solar panels. We are currently working on our next contract. This will be our third house that will have solar panels, and Northwind is working diligently with us to make the project even more affordable. I strongly believe that because of the relationship that we have built with Northwind our Habitat families now have and will have lower electrical bills making their homes even more affordable.

It is a pleasure to work with Northwind knowing that they stand behind their products and workmanship. I, personally, have come to know the leadership teams of this cooperative and realize that they care as much about our Habitat for Humanity mission as do our board of directors and volunteers.

*"Having solar power has really opened our eyes to renewable energy. With the basic setup [8 panels], we save an average of 29% on our electricity costs year-round and are seriously considering the investment to upgrade our system for holding capacity because clearly solar panels work!" – Samantha & Matthew G., Habitat Partner Family 2023*

Guadalupe Ancel  
President, Wisconsin Rapids Area Habitat for Humanity  
Wisconsin Rapids, WI



August 7, 2025

To whom it may concern:

I'm writing this letter in support of Northwind Solar, a trusted Central Wisconsin company, a highly valued customer of the International Bank of Amherst, and a skilled local contractor helping homes, businesses, and organizations across our region benefit from clean energy.

As a community banker for over 50 years, I stand behind solar as a smart financial investment with a strong return on investment. I offer my full recommendation of Northwind Solar as a reliable, professional, and community minded solar contractor.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "H B Pomeroy", is written over a light blue horizontal line.

H B Pomeroy, President



October 6<sup>th</sup>, 2026  
Custer, Wisconsin

To whom it may concern,

Please accept this letter as a recognition, on behalf of the Midwest Renewable Energy Association (MREA), of the contributions, quality, and reliability of Northwind Solar in their work advancing solar energy and energy resiliency in Wisconsin.

MREA has worked with Northwind Solar in a variety of capacities. Most significantly, Northwind has been selected by competitive procurement for six separate solar group purchase programs serving multiple counties in Central Wisconsin. Since 2013, the MREA has managed 72 programs in 6 states, resulting in nearly 30 megawatts of solar installed on homes and businesses. As part of this effort, Northwind has proven themselves to be a leading regional contractor in regards to customer service, installation quality, and price.

In addition, Northwind has been a reliable partner supporting demonstration projects, education initiatives, and workforce development efforts at MREA. As a worker-owned cooperative, Northwind internalizes the relationship that they work to create with their partners, community, and customers. Their commitment to their employees and customers is evident in their work.

Please consider this letter as strong recommendation for Northwind Solar as a partner in you solar and energy resilience efforts. Feel free to contact me using the information below if you have any questions.

Sincerely,

Nick Hylla, Executive Director  
715-900-2106, [nickh@midwestrenew.org](mailto:nickh@midwestrenew.org)



Northwind Solar has been an outstanding business in our community and our county. But why?

They don't just sell a solar solution, they are focused on providing a reliable solution for everyone in Central Wisconsin. From the first meeting you will understand right away their ability and capabilities to deliver a renewable energy solution for you. From the design by their in-house designers through installation by their licensed electricians and commissioning your system they provide a seamless process to customize an energy solution to your needs.

I have personally toured their operation to more directly understand the technology that goes into their solutions whether it is for residential, commercial or government buildings their team has the know how and expertise to deliver the best renewable energy solution for the need.

The team at Northwind Solar is also involved in our community. They participated in our video production explained who the Business Council is in Portage County and are involved through our organization attending many different functions letting community partners learn more about solar solutions. They are a well-respected member of our community and I have no hesitation in recommending Northwind Solar to create a sustainable energy solution for you.

Respectfully Submitted,

Michael W. Witte  
President and CEO  
Portage County Business Council, Inc.  
5501 Vern Holmes Drive  
Stevens Point, WI 54482

**Your Chamber & Economic Development Partner**

5501 Vern Holmes Drive • Stevens Point, Wisconsin 54482 • P 715-344-1940 • F 715-344-4473  
info@portagecountybiz.com • Portagecountybiz.com



To Whom It May Concern,

RENEW Wisconsin is proud to recommend Northwind Solar, a worker-owned cooperative that exemplifies the values we champion in Wisconsin's clean energy economy: accountability, integrity, and community-rooted leadership.

All RENEW members commit to a Code of Conduct focused on responsible business practices, and Northwind sets the standard. Whether delivering high-quality work, honoring commitments, or supporting their customers, they've earned the lasting respect of peers and partners across the industry.

Northwind's cooperative business model reflects Wisconsin values of shared responsibility, pride in craftsmanship, and long-term investment in local communities. As an employee-owned company, their commitment to doing right by customers, partners, and vendors is embedded in how they operate. It creates a culture of trust and follow-through that sets them apart.

We're especially grateful for Northwind's leadership in the broader clean energy movement. Their team has served on RENEW's Board of Directors, offering boots-on-the-ground insight that makes our advocacy, programs, and policy work more effective.

Small, high-road companies like Northwind Solar are essential to Wisconsin's clean energy future. They build local jobs, strengthen supply chains, and show what's possible when businesses put people and principles first. We're proud to support them and confident in their continued impact across the state.

A handwritten signature in black ink that reads "Jodi Jean Amble". The signature is fluid and cursive, with the first letters of each name being capitalized and prominent.

Jodi Jean Amble  
Interim Executive Director  
RENEW Wisconsin

**From:** [Van Meel, Michael](#)  
**To:** [Stobbe, Samantha](#)  
**Subject:** Fw: SunPeak RFP Submittal - Green Lake County Justice Center - Bid 3  
**Date:** Friday, June 12, 2026 1:01:55 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)

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**From:** Alex Thomas <athomas@sunpeakpower.com>  
**Sent:** Friday, June 12, 2026 10:49 AM  
**To:** Van Meel, Michael <mvanmeel@greenlakecountywi.gov>  
**Subject:** SunPeak RFP Submittal - Green Lake County Justice Center

[CAUTION: EXTERNAL SENDER This email originated from outside Green Lake County. Do not click links or open attachments unless you recognize the sender and know the content is safe.]

Mike,

Please see our proposal and attachments in this shared folder: [📁 Justice Center RFP Submission 2026.06.12](#)

I included a SharePoint folder here since the documents ended up being quite large in aggregate. Please let me know if you have any issues viewing any of this information, and I'm available for a quick call if needed.

Otherwise, we appreciate the opportunity to bid on this project, and we are excited to find an opportunity to find a solution for your team.

Thank you,



**Alex Thomas**  
*Project Development Manager*

📍 [1026 Ann Street, Madison, WI 53713](#)

📞 [\(608\) 733-6802](#) • [\(844\) NO-CARBON](#)

▶ [Watch Our Video](#)



# Green Lake County Justice Center

## Onsite Solar Photovoltaic System Installation



*Proposal for:*

**Green Lake County Justice Center**  
**Onsite Solar Photovoltaic Systems**

*Submitted on:*  
June 12, 2026

*Contact:*  
Alex Thomas  
Project Development Manager  
athomas@sunpeakpower.com  
(608) 733-6802

SunPeak, LLC  
1026 Ann Street  
Madison, Wisconsin 53713  
www.sunpeakpower.com

Michael Van Meel  
Maintenance Director  
571 County Road A  
Green Lake, WI 54941

Dear Michael,

Thank you for the opportunity to respond to your request for proposals for the Green Lake County Justice Center solar project.

We have reviewed the request for proposal documents and have completed the significant due diligence and analysis deemed necessary to submit this proposal. The statements contained in this proposal are true and correct to the best of my knowledge.

We look forward to continuing the conversation with you on this project. We welcome your questions and hope to partner with you to make your projects successful and fruitful endeavors.

Best regards,

**Alex Thomas**  
Project Development Manager  
SunPeak, LLC  
1026 Ann Street  
Madison, Wisconsin 53713  
(608) 733-8602  
athomas@sunpeakpower.com

# Table of Contents

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<b>Section 1: Executive Summary .....</b>	<b>1</b>
<b>Section 2: Price Proposal.....</b>	<b>4</b>
<b>Section 3: Technical Solution.....</b>	<b>7</b>
<b>Section 4: Company, Team, &amp; Experience .....</b>	<b>10</b>
<b>Section 5: Inclusions, Exclusions &amp; Assumptions .....</b>	<b>14</b>

**Attachments:**

**Attachment A – Production Report**

**Attachment B – Cash Flow Pro Forma**

**Attachment C – Material Datasheets & Documentation**

**Attachment D – Team Biographies**

**Attachment E– Organizational Chart**

**Attachment F – EMR Letter**

**Attachment G – Master Certificate of Insurance**

**Attachment H – Bondability Letter**

# Section 1: Executive Summary

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## Project Request Overview

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The Green Lake County Justice Center (hereby referred to as “the County”) is soliciting bids for turnkey ground-mount solar photovoltaic (PV) installation at the county-owned building located at 571 County Road A, Green Lake, WI 54941. All bids shall be structured in the form of a cash purchase arrangement, whereby the systems will be owned by the County upon commissioning and energization. Overall, the arrays should be designed to provide the maximum possible financial value for the County.

## Bid Summary

---

The system has been sized with the primary goal of maximizing available site space to correspondingly maximize the system’s energy impact, while also being optimized for yield, unit price, and efficiency of the available incentives.

Overall, Table 1 gives an overview of the key metrics associated with this proposal for the sites that were analyzed. The lifetime of the system is estimated to be over a 30-year period.

Site	System Size (kWdc)	System Size (kWac)	System Production (kWh/year)	System Price	Net Lifetime Investment
Green Lake County Justice Center	610.16	500	771,898	\$1,674,800	\$979,880

*\*Net investment does not include energy savings.*

Table 1: Proposal Summary

# Company Overview

SunPeak is a leading, full-service solar PV provider focusing exclusively on the design, installation, and ongoing operations and maintenance of commercial-scale solar systems.

Our team works with businesses, schools, utilities, non-profit organizations, and municipalities to help them achieve their cost savings and sustainability goals. In particular, we have successfully completed projects of similar size and scope – including portfolio projects – for many schools and municipalities around Illinois, including Adlai E. Stevenson High School (851 kWdc), Cook County (754 kWdc), Edwardsville CUSD (~4 MWdc), and Lake County (1.1 MWdc).

We look forward to offering high quality, configurable system monitoring to the school to educate the students of the County on the benefits and technology behind solar. Some members of SunPeak’s staff are former educators in the Illinois public school system, and we are well equipped to provide educational opportunities at the request of the County.



Student athletes “flipping the switch” on a SunPeak PV system.

SunPeak utilizes an ISO 9001-certified quality management system and process, which directs our skilled in-house team of engineers and installers to provide a turnkey experience for customers. Our systems have been approved by some of the most stringent property insurance companies in the nation, including FM Global. Our talented group of solar professionals, as well as its construction arm of union-based, prevailing wage labor, is set up to guarantee a high quality, safe, and efficient solar installation on every project that is completed.

# Project Schedule

Table 2 shows the preliminary schedule for the project’s execution. All dates are shown with regards to the completion of the corresponding milestones. This is an example of estimated times for the project, and a detailed project schedule will be provided after contract signature. This project schedule is subject to change based on the results of the Energy Innovation Grant Program.

Site	Contract Execution	Preliminary Engineering	Final Engineering	Construction Completion	Closeout
Green Lake County Justice Center	06/29/26	07/27/2026	08/17/2026	2/25/2027	04/1/2026

Table 2: Project Schedule

# Coordination Approach

---

SunPeak will coordinate with the County at various steps in the process:

## **1. Coordination with Energy Innovation Grant Program**

- a. SunPeak will utilize information included in the proposal to work with the County to submit the application before the deadline of June 30, 2026.
- b. Once the County is approved for this program, the County will provide a Notice to Proceed for SunPeak to complete steps in Preliminary Engineering phase. If desired, SunPeak can complete these steps before this upon approval from the County.

## **2. Preliminary Engineering**

- a. SunPeak will complete a detailed site visit and civil survey of the land area.
- b. SunPeak will develop an interconnection-level drawing set to submit to Alliant Energy.
  - i. There will be some Owner coordination required on the drawing review and application materials.

## **3. Final Detailed Engineering**

- a. Once Alliant Energy has approved the interconnection application, SunPeak will complete a permit-level set of drawings for submission on all required permits.
  - i. There will be some Owner coordination required on the drawing review
- b. Once the permits are obtained, SunPeak will develop a construction-level drawing set that will be used by the SunPeak Construction team.
  - i. There will be some Owner coordination required on the drawing review

## **4. Preconstruction**

- a. If materials have not already been ordered at this phase of the project – dependent on selected Safe Harbor Strategy listed in Section 2 – then materials will be ordered for the project. Any long lead time items will be ordered ahead of this to meet anticipated schedule.
- b. SunPeak will complete a pre-construction walkthrough and coordination before materials are delivered on-site and construction commences. This will determine any open items, and all logistics are covered for smooth installation.

## **5. Construction**

- a. SunPeak will complete construction and will provide updates to the County throughout the process. All documentation including safety reports, personnel information, badging, and any other required information will be provided to ensure safety and compliance with all County procedures.

## **6. Commissioning**

- a. Once construction has commenced, SunPeak will complete system testing and commissioning following both internal practices and coordination with Alliant Energy. This will include an anticipated 1-2-hour shutdown of the facility for a loss of phase test. If additional tests are required, SunPeak will notify the County immediately.

## **7. Operation**

- a. Once the system has received Permission to Operate (PTO) from Alliant Energy, SunPeak will complete a training session for the County and will provide all handover documents including system information and a general plan for ongoing maintenance. Any remaining incentives will be coordinated at this time as well including the Focus on Energy rebate and coordination on the Direct Pay equivalent of the Federal Investment Tax Credit.

# Section 2: Price Proposal

## Cash Purchase

Under a cash purchase arrangement, SunPeak would fully design, procure materials for, and install the systems. Upon energization, the County shall own the systems and gain access to immediate energy bill savings.

Table 3 shows the price for each site’s system, as well as the unit price and simple cost of energy (SCOE) for the systems, each designed to offer the greatest possible net value to the County. Unit price and SCOE are important metrics to consider when assessing the efficacy of a system or comparing two different systems. A lower unit price means a more cost-efficient system.

Site	Variable System Cost (\$/W)	Total System Cost	30 Year Levelized Cost
Green Lake County Justice Center	\$2.75	\$1,674,800	\$0.046/kWh

Table 3: Project Price Summary

## Incentive Overview

SunPeak will support the County in securing incentives for the proposed systems. This includes the federal Investment Tax Credit (ITC), Focus on Energy Rebate, and coordination with the Energy Innovation Grant Program. Table 4 shows a summary of these incentives as well as the County’s expected net savings resulting from these incentives.

	Green Lake County Justice Center
<b>System Price</b>	<b>\$1,674,800</b>
Federal Tax Credit	(\$669,920)
Focus on Energy Rebate	(\$25,000)
<b>Net Lifetime Investment</b>	<b>\$979,880</b>

Table 4: Incentive Overview

Net Investment at Year 1 accounts for all first-year incentives. Net Lifetime Investment accounts for all contract fees, rebates, and incentives over the system’s lifetime besides the Energy Innovation Grant which will be determined after the application. Once that amount is determined, SunPeak will incorporate that information into the incentive overview and cash pro forma.

The incentive calculations included in our financing structure carry the following assumptions:

- Federal ITC assumes a value of 40% of the project price. This includes the Base (30%) and Domestic Content (10%) tax credit. This is a direct payment of 40.0% of the system's price.
- The Focus on Energy Rebate is based on a \$600 per kW, up to \$2,400 and \$50 per kW thereafter, up to \$25,000. Given the proposed system size of 610.16kWdc, this project should achieve the maximum \$25,000 rebate.
  - This rebate amount will be reserved after permits are in hand and before construction commences, and the rebate will be applied after the system is operational and has achieved PTO.
- The Energy Innovation Grant will be coordinated by the County with support from SunPeak throughout to include system details. The 2026 cycle has a due date of June 30, 2026 for applications, and SunPeak will work with the County to meet that date.
- Overall tax strategy assumes a "construction start" July 4, 2026, to safe harbor the tax credit. SunPeak has listed two options to meet this goal.
  - **Option 1:** SunPeak will invoice at least 10% of the project cost and transfer the title to applicable equipment to the County.
    - For the refundability of this deposit, SunPeak would refund any funds that have not been spent on the project that have been released via a Notice to Proceed (NTP) from the County. Items may include engineering, interconnection application fees, or civil surveying.
  - **Option 2:** SunPeak enters into an agreement to build the project for a Project-Specific, LLC, which is originally owned by SunPeak. SunPeak completes EPC services for Project-Specific, LLC, including all materials, permits, construction, etc. Then, SunPeak sells Project-Specific LLC to the County.
    - For this option, SunPeak is currently working with multi-national tax advisors to sign off on this plan. In this case, there would be no deposit that would need to be refunded back to the County and the total cost of this purchase would align with the total purchase listed in this proposal.

# Energy Bill & Net Savings

The County would save a notable amount on their energy bills, both on a yearly and lifetime basis. Table 5 shows the overall energy cost savings to the County. **Overall, we predict that the County will have energy cost savings of approximately \$2,031,792 over the 30-year lifetime of their PV systems.**

Site	Year 1 Energy Savings (\$)	Lifetime Energy Savings (\$)
Green Lake County Justice Center	\$47,379	\$2,031,792

Table 5: Energy Cost Savings

The figures in Table 5 were developed using 12 months of electric bills from Alliant Energy that were provided in the RFP documents. To refine this further, SunPeak would recommend obtaining interval data from Alliant Energy to refine assumptions. This will provide a granular analysis of exactly how solar will offset and the bill will work under the CP-1 TOD rate schedule as it includes Parallel Generation from the proposed solar array.

The figures in Table 5 also assume a first year and lifetime system degradation consistent with the module manufacturer’s warranty degradation (1.00% in the first year, and 0.40% linear in every year thereafter) and an overall utility bill inflation of 2.00% per year.

# Cash Flow Pro Forma

A 30-year cash flow pro forma showing energy bill savings, incentives, and any other system-related expenses has been provided in Attachment B. A list of assumptions used in this pro forma and other financial analyses can be found in Section 5.

## Section 3: Technical Solution

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### General Design Methodology

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SunPeak has designed and sized each array to offer the greatest net value to the County. This means striking a balance between overall production, base unit price, yield, and efficiency of available incentive programs. Practically, this generally means maximizing DC capacity of the system within the given space, adjusting AC capacity to maximize incentives, and avoiding any high-shade areas in the placement of subarrays.

### SunPeak Performance Promise

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As the main driver of the financial benefit of going solar, it is of the utmost importance that your system performs in accordance with our projections. Because we stand behind the quality and workmanship of our systems, SunPeak offers its clients the SunPeak Performance Promise (SPP) as a standard part of our projects.

The SPP offers our clients a performance guarantee covering 90% of the system's as-built P90 kWh production figure for the first 10 years of the system's life on a rolling 5-year basis. If production falls below 90% of the as-built forecast, SunPeak will compensate the County for the production deficiency. Production deficiencies shall be compensated to the County at a value equal to the production deficiencies multiplied by the kWh utility supply rate that is in place at the time of EPC contracting.

To ensure system production meets standards for both the SPP and incentive requirements via the Illinois Shines Program, SunPeak highly recommends opting into our Operations and Maintenance (O&M) program.

Below is a summary of estimated annual O&M rates for the first five years of the system lifespan.

Estimated Yearly O&M Pricing
\$7,251

Table 6: Annual Operation and Maintenance Fees

### Size & Material Summary

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SunPeak's philosophy on system materials is centered on providing the best long-term value, which includes both an efficient upfront installation as well as reduced O&M costs over the life of the system. This approach prioritizes the "performance to cost ratio," which factors in system efficiency and material, labor, and soft cost considerations. Our team ensures quality by visiting manufacturing facilities, meeting with manufacturers and distribution teams, and doing internal QA/QC of all proposed products.

Table 7 shows the materials that we are planning to use for your project, as well as the total system size and production figures for each site. Datasheets for the major materials shown in Table 7 are included in Attachment C as well as documentation on Foreign Entity of Concern (FEOC), Build America Buy America (BABA) and Domestic Content. While we are proposing modules that are bifacial, production figures do not include bifacial gains due to the low albedo of the proposed surfaces and the extreme variability in bifacial modeling.

	<b>System Size (kWdc)</b>	<b>System Size (kWac)</b>	<b>Module</b>	<b>Inverter</b>	<b>Racking</b>
Green Lake County Justice Center	610.16	500	Silfab, 580W, SIL-580 XM+ (12-year Product Warranty, 30-year Power Output Warranty)	SMA, 62.5kW, CORE 1 62.5-US (12-year Warranty)	OMCO, Choice, 20° (20-year Warranty)

Table 7: Array Design Summary

## System Monitoring

AlsoEnergy's suite of products was proposed for this project. AlsoEnergy is the industry leader in clean energy asset monitoring, and their products are the standard (and only allowable) product for many C&I-scale developers around the nation. They provide a wide suite of products for site monitoring, system control, and utility compliance. In addition, many different public-facing online dashboard configurations are available to showcase the County's commitment to environmentalism and clean energy (Figure 1)

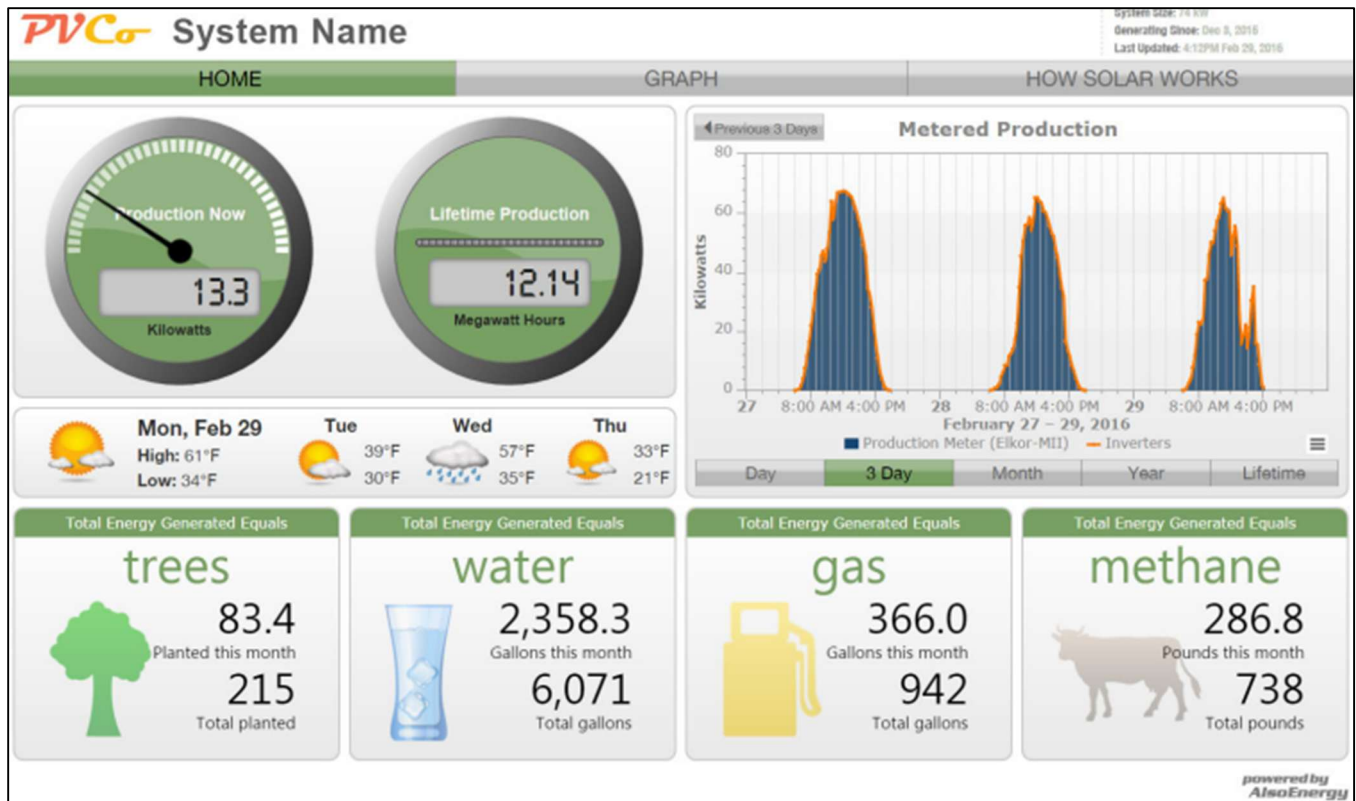


Figure 1: Sample AlsoEnergy Dashboard

AlsoEnergy's public-facing dashboard is highly configurable for any particular situation; final configuration of the dashboard will be subject to the County's approval. SunPeak has included cost for a screen to display this information at the Justice Center, and the dashboard can also be posted online via a County website. SunPeak is assuming a hardwired connection over a cell modem or wireless option for the purposes of transmitting this data. All monitoring will include integration with the County's Building Automation and Control Networks (BACNet) onsite.

## Section 4: Company, Team, & Experience

### Proposer Profile


SunPeak, a limited liability corporation, is a turnkey solar EPC provider with 12 years of commercial project experience and in-house expertise. SunPeak's team has developed and installed hundreds of solar PV systems nationwide, including some of the largest and most complex commercial solar projects across the country.


Our team works with businesses, schools, utilities, non-profit organizations, and municipalities to help them achieve their cost savings and sustainability goals. In particular, we have successfully completed projects of similar size and scope – including portfolio projects – for many schools and municipalities around Illinois, including Adlai E. Stevenson High School (851 kWdc), Cook County (754 kWdc), Edwardsville CUSD (~4 MWdc), and Lake County (1.1 MWdc).


In our experience, working with municipalities and educational institutions is unique. Such clients typically have a defined approvals process, site outage restrictions, and work time restrictions that all must be fully considered to guarantee a successful project. For example, if an outage is required, it will need to take place after hours to avoid disruption to the schools' operations. Our cash purchase arrangement, schedule, and overall system design have accounted for these constraints to the best of our ability.


### Project Experience


We are proud to have successfully executed many technically difficult projects over our years in business. Aside from projects already mentioned in this proposal, other notable clients include SC Johnson, Reyes Holdings, Ashley Furniture, Medtronic, Tyson Foods, Alliant Energy and Kohler Company.

Customer	
Project Name	Adlai E. Stevenson High School
Location	Lincolnshire, Illinois
Project Size	851 kWdc Rooftop PV System
Description	Following a major building expansion project, Adlai E. Stevenson Public High School partnered with SunPeak to design and install a roof-mounted solar PV system to further bolster its sustainability initiatives and lower the school's energy costs. The project helped Stevenson become the first verified net-zero energy building in the state of Illinois and is projected to save the school \$3.4M in energy costs.

Customer	
Project Name	SC Johnson Waxdale Plant
Location	Mount Pleasant, Wisconsin
Project Size	1,827 kWdc Rooftop and 929 kWdc Ground PV System
Description	In order to maximize the sustainability and cost savings benefits of solar, SunPeak helped SC Johnson utilize available roof and ground space for solar. Three separate solar installations were installed to generate nearly 20% of the facility's annual energy needs from solar electricity. Over the 30-year life of the system, these solar arrays will provide more than \$6.9 million in energy cost savings.

Customer	
Project Name	Reyes Coca Cola Bottling – West Dundee
Location	West Dundee, Illinois
Project Size	740 kWdc Rooftop PV System
Description	Reyes Holdings partnered with SunPeak to embark on its first solar project, a rooftop installation for its new bottling plant in the Chicagoland area. SunPeak worked with Reyes Holdings to design a system that supplies more than 60% of the facility's annual energy needs from solar electricity. This project was in line with the company's Corporate Social Responsibility strategy to reduce greenhouse gas emissions and bolster its environmental sustainability.

Customer	
Project Name	Lake County ROC
Location	Libertyville, Illinois
Project Size	~1.1 MWdc Ground Mount PV System
Description	Lake County's Regional Operations Center (ROC) was designed as a Net Zero energy building, meaning it will consume no more energy than it generates from renewable sources. To support this goal, Lake County partnered with SunPeak to install a high-capacity ground-mounted solar PV system that works in tandem with geothermal energy to power the facility.

Customer	
Project Name	Ashley Furniture ( <i>Multiple US Projects</i> )
Location	Romeoville, Illinois
Project Size	726 kWdc Rooftop PV System
Description	Ashley Furniture Industries, the world's largest furniture manufacturer, is a multi-site, nationwide customer with SunPeak. SunPeak built many systems for Ashley all across the nation, including this project on a warehouse in Romeoville, IL. The Ashley Furniture portfolio of projects also included a 7.9 MWdc rooftop system in Pennsylvania, the fourth largest rooftop system ever constructed in the US.

## References

Contact Name	Dan Shepard
Email	shepard@thelensg.com
Phone Number	847-395-3313
Organization	Thelen Sand & Gravel
Project Size	~2.0 MWdc Ground Mount PV System
Work Performed	Full turnkey services

Contact Name	John Beffel
Email	jcbeffel@scj.com
Phone Number	262-260-3540
Organization	SC Johnson
Project Size	~1,827 kWdc Rooftop and ~929 kWdc Ground PV System
Work Performed	Full turnkey services

Contact Name	Jonathan Joy
Email	jjoy@lakecountyil.gov
Phone Number	847-337-2457
Organization	Lake County Government (IL)
Project Size	1,132kWdc Ground Mount PV System
Work Performed	Full turnkey services

## Litigation

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No proposer, team member, or corporate officer at SunPeak has been party to any lawsuit involving the performance of any equipment SunPeak has installed.

## Project Team

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Your turnkey project will be completed by SunPeak's experienced, in-house team of solar professionals. Your project's team includes professional engineers, NABCEP-certified professionals, OSHA-certified installation teams, and registered master electricians, who combined have designed and built many megawatts of commercial-scale solar around the nation. Bios for key team members that you can expect to interact with as well as an overall organizational chart are included in Attachment D and Attachment E, respectively. Tyler Potter will be the SunPeak project manager for your project.

SunPeak plans to execute your projects entirely using our in-house team with no major subcontractors involved. That said, subject to crew availability at the time of construction, trusted labor partners may be subcontracted for part of the scope of work.

## Safety Excellence

---

Protecting workers, partners, and the public is SunPeak's highest priority and has earned our company an A Rating in ISNetworld. Our established safety record stems from a commitment to key safety procedures including fall protection, ladder safety, skylight safety, Lock Out Tag Out (LOTO) measures, and ongoing safety training.

SunPeak fosters a company culture where employees are continuously engaged in safety protocols while being empowered to recognize and prevent job site hazards. A comprehensive site safety plan is created for each project and is reviewed and updated daily as site or weather conditions change. These efforts result in a responsible, accountable team that provides a strong commitment and proactive approach to site safety.

To support our safety record, an EMR letter for the past 3 years has been provided in Attachment F.

## Section 5: Inclusions, Exclusions & Assumptions

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The items listed in this section shall apply to all sites, except for when mention to a (or multiple) specific site(s) has been made.

### General Inclusions

- All electrical engineering, structural engineering, procurement, interconnection applications, permitting, construction, commissioning, and incentives management of turnkey solar arrays under a cash purchase arrangement. SunPeak will not commence work this work until a NTP from the County.
- A solar monitoring platform readable in online and physical formats.
- Allowance for (1) off-hours outage for final interconnection into the building's electrical system. Estimated time is roughly 1-hour for loss of phase testing with Alliant.
- Costs for payment and performance bond(s).

### Exclusions

- Unknown costs imposed by the local utility are not included, including supplemental review costs or utility grid upgrades. If applicable, these costs will be revealed after an interconnection application is submitted with the utility.

### Assumptions

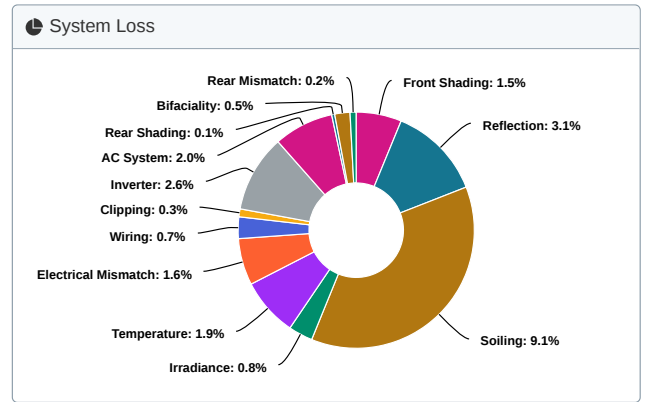
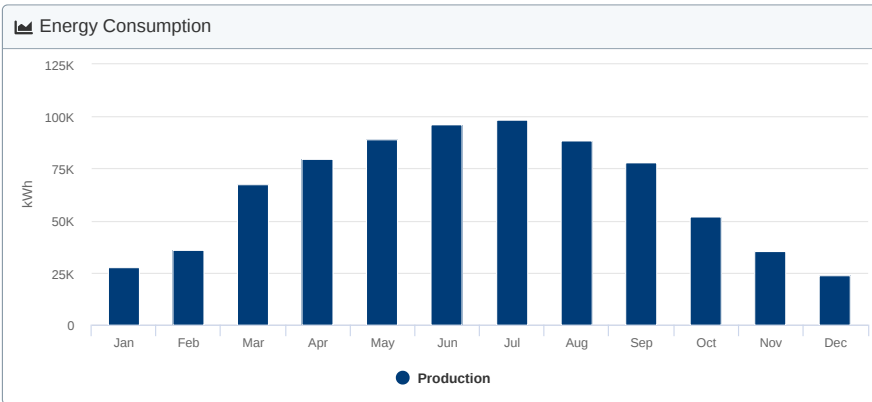
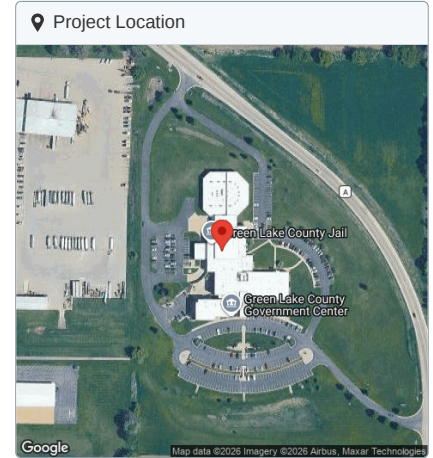
- Layout, overall capacity, production figures, and pricing are preliminary and contingent a detailed site assessment, civil survey, review of building drawings, and full electric bill information.
- When calculating savings figures, the following assumptions were made:
  - A system degradation of 1% in the first year and 0.4% each year thereafter.
  - System Lifetime of 30 years
  - Utility rate inflation of 2% per year.
- Production figures do not include bifacial gain.
- All labor will be paid at or above prevailing wage as a requirement for the Energy Innovation Grant Program.

# Active - RFP Design Green Lake County - Government Center 571 Co Rd A, Green Lake, WI 54941



Project Details	
Address	571 Co Rd A, Green Lake, WI 54941
Owner	Alex Thomas
Last Modified	Alex Thomas 4 minutes ago
Location	(43.849490700000004, -88.9386779) (GMT -6)
Profile	5. OMCO Large Ground Mount w/CPS

System Metrics	
Design	Active - RFP Design
Module DC Nameplate	610.16 kW
Inverter AC Nameplate	500.00 kW Load Ratio: 1.22
Annual Production	771.9 MWh
Performance Ratio	80.5%
kWh/kWp	1,265.1
Weather Dataset	TMY, 10km Grid (43.85,-88.95), NREL (prospector)
Simulator Version	08b1e05caa-717ef3797e-8946a7bbfd-be68b67bd2




Annual Production				
	Description	Output	% Delta	
Front Irradiance (kWh/m <sup>2</sup> )	Annual Global Horizontal Irradiance	1,376.2	-	
	POA Irradiance	1,571.2	14.2%	
	Shaded Irradiance	1,547.3	-1.5%	
	Irradiance After Reflection	1,498.8	-3.1%	
	Irradiance After Soiling	1,362.9	-9.1%	
	<b>Total Front Collector Irradiance</b>	<b>1,362.9</b>	<b>0.0%</b>	
Rear Irradiance (kWh/m <sup>2</sup> ) <i>Supported only for fixed tilt racking</i>	Surface Irradiance in Collector Plane	Global Incident Irradiance on Surface	638.9	-
		Surface Reflected Irradiance after Albedo	127.8	-80.0%
		Conversion from Surface Area to Collector Area	256.1	-
		<b>Surface Irradiance in Collector Plane</b>	<b>29.0</b>	<b>-88.7%</b>
	Unshaded Irradiance on Rear Side	Surface Irradiance in Collector Plane	29.0	-
		Sky Diffuse	8.1	-
		Beam Effective	0.1	-
		<b>Total Unshaded Irradiance on Rear Side</b>	<b>37.2</b>	<b>-</b>
	Shaded Irradiance on Rear Side	35.4	-5.0%	
	Total Rear Collector Irradiance	35.4	-	
	<b>Effective Rear Collector Irradiance</b>	<b>28.3</b>	<b>-20.0%</b>	
	<b>Total Collector Irradiance</b>	<b>1,391.2</b>	<b>-</b>	
	Energy (kWh)	Nameplate	852,988.9	-
Output at Irradiance Levels		846,056.9	-0.8%	
Output at Cell Temperature Derate		829,574.8	-1.9%	
Output after Electrical Mismatch		816,627.6	-1.6%	
Output after Rear Mismatch		814,971.1	-0.2%	
Optimal DC Output		810,704.8	-0.5%	
Constrained DC Output		808,574.3	-0.3%	
Inverter Output		787,639.7	-2.6%	
AC System Output		771,886.9	-2.0%	
<b>Energy to Grid</b>		<b>771,886.9</b>	<b>0.0%</b>	
Temperature Metrics				
Avg. Operating Ambient Temp		10.6°C		
Avg. Operating Cell Temp		19.6°C		
Simulation Metrics				
Operating Hours		4,693		


Condition Set												
Description	Condition Set 1											
Weather Dataset	TMY, 10km Grid (43.85,-88.95), NREL(prospector) ( <a href="#">download</a> )											
Solar Angle Location	Project Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Diffusion Model											
Temperature Model Parameters	Rack Type			U <sub>const</sub>				U <sub>wind</sub>				
	Fixed Tilt			23.00				0.00				
	Flush Mount			20.00				0.00				
	East-West			23.00				0.00				
	Carport			29.00				0.00				
Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D
	27.4	25.2	13	10.2	3.8	2.8	2.8	2.8	2.8	9.4	15.9	33.9
Albedo	J	F	M	A	M	J	J	A	S	O	N	D
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Rear Mismatch Loss	10%					Rear Shading Factor			5%			
Module Transparency	0%											
Irradiation Variance	3.0%											
Cell Temperature Spread	2.0°C											
Module Binning Range	0.0% to 1.0%											
AC System Derate	2.00%											
Component Characterizations	Type	Component						Characterization				Bifacial
	Module	SIL-580 XM+ (Silfab Solar)						Spec Sheet Characterization, PAN				True
	Inverter	Sunny Tripower_Core1 62-US-41 (SMA)						Default Characterization				N/A

 Design BOM

Component	Type	Specs
Sunny Tripower_Core1 62-US-41 (SMA)	Inverters	8 (500.00 kW)
Silfab Solar, SIL-580 XM+, (580W)	Modules	1,052 (610.16 kW)
10 AWG (Copper)	Strings	64 (22,851.0 ft)

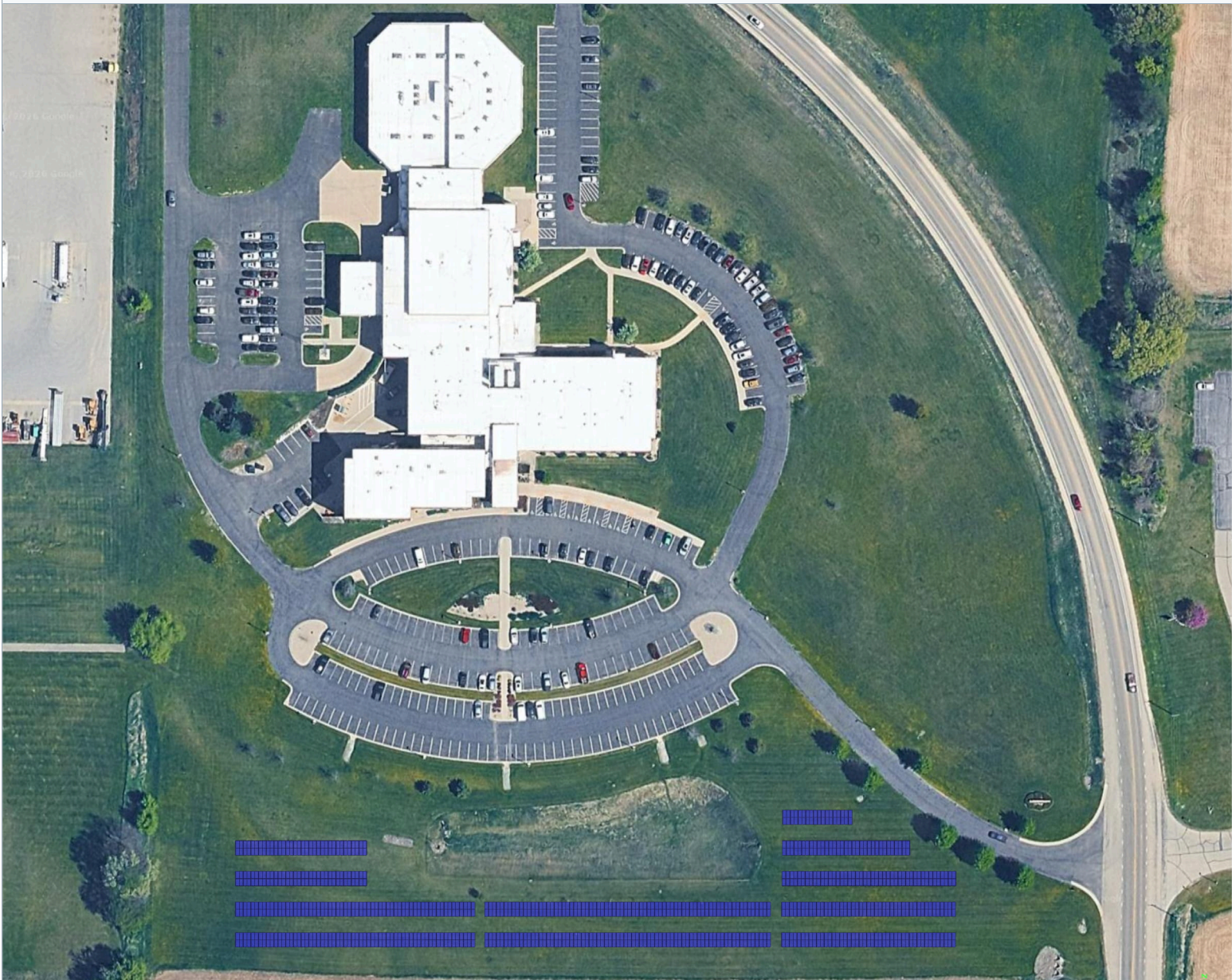
 Monthly Shading

Month	GHI (kWh/m <sup>2</sup> )	POA (kWh/m <sup>2</sup> )	Shaded (kWh/m <sup>2</sup> )	Nameplate (kWh)	Grid (kWh)
January	46.2	67.4	64.6	28,153.1	27,485.1
February	63.7	83.3	81.9	36,868.5	35,946.0
March	114.3	135.7	134.1	70,478.8	67,338.3
April	145.9	161.3	159.6	86,998.0	79,612.8
May	167.2	172.8	171.0	100,197.9	88,948.7
June	184.0	186.8	184.7	109,615.2	95,968.6
July	187.8	192.5	190.5	112,847.0	98,667.2
August	160.8	173.2	171.5	101,321.6	88,633.7
September	128.7	151.0	149.6	87,904.6	77,740.3
October	81.9	103.9	102.6	56,052.5	51,928.7
November	53.7	76.7	74.6	37,682.3	35,563.6
December	42.3	66.5	62.7	24,869.5	24,053.8

 Design Wiring Zone

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	4 - 17	Along Racking

Design Render



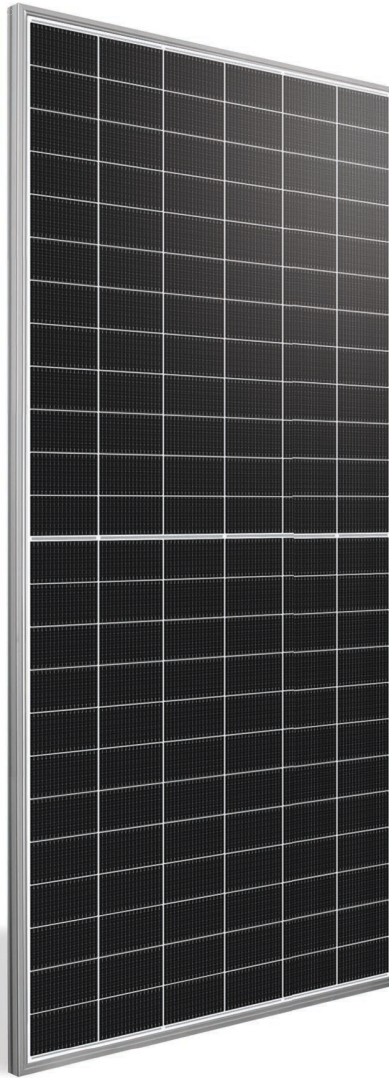
Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Portrait (Vertical)	Module: 20°	Module: 180°	16.0 ft	2x1	526	1,052	610.16 kW

# SILFAB COMMERCIAL NTC



SIL-580 XM+  
BIFACIAL



## • NEXT-GENERATION N-TYPE CELL TECHNOLOGY

Manufactured exclusively in the USA.

- Improved Shade Tolerance
- Improved Low-Light Performance
- Increased Performance in High Temperatures
- Efficient Bifacial Energy Yield
- Enhanced Durability
- Reduced Degradation Rate
- 25-Year Product Warranty/  
30-Year Performance Warranty



[SILFABSOLAR.COM](http://SILFABSOLAR.COM)



ELECTRICAL SPECIFICATIONS		580		
Test Conditions		STC	BSTC	NOCT
Module Power (Pmax)	Wp	580	632.8	428.2
Maximum power voltage (Vpmax)	V	44.27	44.27	40.73
Maximum power current (Ipmax)	A	13.10	14.29	10.51
Open circuit voltage (Voc)	V	52.27	52.32	48.08
Short circuit current (Isc)	A	13.85	15.11	11.12
Module efficiency	%	22.4%		
Maximum system voltage (VDC)	V		1500	
Series fuse rating	A		30	
Power Tolerance	Wp		0 to +10	
Bifaciality Factor	%		80 ± 10	

Performance conditions: Measurement tolerance ≤ 3% • Standard Test Conditions (STC): 1000 W/m<sup>2</sup>, AM 1.5, Temperature 25 °C • Nominal Operating Cell Temperature (NOCT): 800 W/m<sup>2</sup>, AM 1.5 • Bifacial Standard Test Conditions (BSTC): 1000 W/m<sup>2</sup> + φ × 135 W/m<sup>2</sup>, φ = 80 %, AM 1.5 • Electrical characteristics may vary by ±5%.

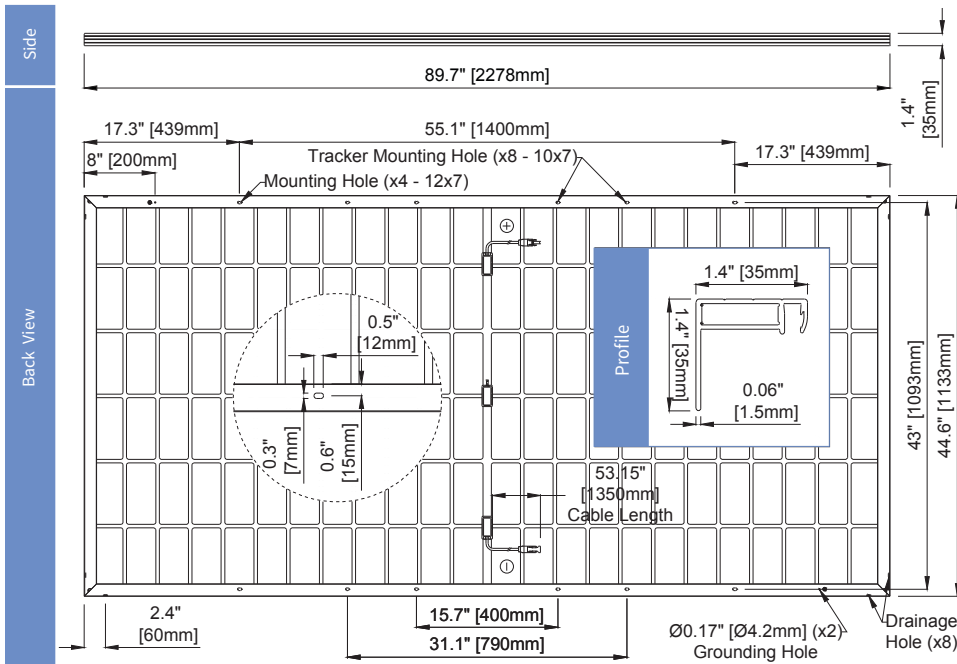
MECHANICAL PROPERTIES / COMPONENTS	METRIC	IMPERIAL
Module weight	28.5 kg ± 0.2 kg	62.8 lbs ± 0.4 lbs
Dimensions (H x L x D)	2278 mm x 1133 mm x 35 mm	89.7 in x 44.6 in x 1.4 in
Maximum surface load (wind/snow)*	2400 Pa rear load / 5400 Pa front load	50.1 lb/ft <sup>2</sup> rear load / 112.8 lb/ft <sup>2</sup> front load
Hail impact resistance	ø 25 mm at 83 km/h	ø 1 in at 51.6 mph
Cells	144 Half cells - N-Type Silicon solar cell 182 mm x 91 mm	144 Half cells - N-Type Silicon solar cell 7.16 in x 3.58 in
Glass	3.2 mm high transmittance, tempered, anti-reflective coating	0.126 in high transmittance, tempered, anti-reflective coating
Cables and connectors (refer to installation manual)	1350 mm, ø 5.7 mm, EVO2 from Staubli	53.1 in, ø 0.22 in (12 AWG), EVO2 from Staubli
Backsheet	High durability, superior hydrolysis and UV resistance, multi-layer dielectric film, transparent PV backsheet	
Frame	Anodized Aluminum (Silver)	
Junction Box	UL 3730 Certified, IEC 62790 Certified, IP68 rated, 3 diodes	

TEMPERATURE RATINGS		WARRANTIES	
Temperature Coefficient Isc	0.04 %/°C	Module product workmanship warranty	25 years**
Temperature Coefficient Voc	-0.24 %/°C	Linear power performance guarantee	30 years
Temperature Coefficient Pmax	-0.29 %/°C		≥ 98% end 1st yr ≥ 94.7% end 12th yr ≥ 90.8% end 25th yr ≥ 89.3% end 30th yr
NOCT (± 2°C)	45 °C		
Operating temperature	-40/+85 °C		

CERTIFICATIONS		SHIPPING SPECS	
Product	UL 61215, UL 61730, CSA C22.2#61730, IEC 61215, IEC 61730, IEC 61701 (Salt Mist Corrosion), IEC 62716 (Ammonia Corrosion), CEC Listed, UL Fire Rating: Type 1	Modules Per Pallet:	29
Factory	ISO9001:2015	California (Pallets per load)	21
		Others (Pallets per load)	22

\* ⚠ Warning. Read the Safety and Installation Manual for mounting specifications and before handling, installing and operating modules.

\*\* 12 year extendable to 25 years subject to registration and conditions outlined under "Warranty" at [silfabsolar.com](http://silfabsolar.com).  
PAN files generated from 3rd party performance data are available for download at: [silfabsolar.com/downloads](http://silfabsolar.com/downloads).



## SILFAB SOLAR INC.

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February 20<sup>th</sup>, 2026

## **Silfab Solar FEOC Compliance Attestation**

This letter confirms that Silfab Solar Inc. is not a Foreign Entity of Concern, (FEOC), Prohibited Foreign Entity (PFE), nor a Specified Foreign Entity (SFE). The information below reflects the legal opinion Silfab has secured from Norton Rose regarding the company's FEOC/PFE/SFE compliance.

### Operations:

Silfab Solar Inc. ("Silfab") is an Ontario (Canada) corporation that is headquartered in Mississauga, Canada. Silfab's Employer Identification Number (EIN) is 39-1907741.

It operates in the US through a wholly owned US holding corporation called Silfab Inc. Silfab Inc. has two US factories. One is in Burlington, Washington and makes solar modules. The other factory is in Fort Mill, South Carolina and makes both solar modules and solar cells. The Fort Mill factory makes solar cells that Silfab will use in its own modules.

The two factories are owned by Silfab corporate subsidiaries. Silfab Solar WA Inc. owns the factory in Washington. Silfab Solar Cells SC Inc. and Silfab Solar PV SC Inc. split ownership of the factory in South Carolina. One owns the cell production capacity and the other owns the module production capacity. All of the US companies join in a consolidated federal income tax return that is filed by Silfab Inc. as the US parent.

### Ownership:

Silfab ownership is FEOC/PFE/SFE compliant, as reviewed and confirmed by external legal counsel Norton Rose. Neither Silfab Solar Inc. nor any of its subsidiaries has any corporate debt to, any FEOC/PFE/SFE. Nor does any FEOC/PFE/SFE has direct authority to appoint a board member or officer of any Silfab company.

### Material Assistance/Effective Control:

Silfab does not rely on any intellectual property rights from FEOC/PFE/SFE to make its solar cells or modules, and it has no contracts, agreements or other arrangements that grant such entities any of the rights that Congress indicated in section 7701(a)(51)(D)(ii) would be signs of effective control over key aspects of production of its cells or modules.

A handwritten signature in black ink, appearing to read "Paolo Maccario".

Paolo Maccario  
CEO

## **SILFAB SOLAR INC.**

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## SILFAB MODULES QUALIFY FOR BUILD AMERICA BUY AMERICA ACT (BABA) 2025-2026

Silfab Solar Inc.'s premium-quality, high-efficiency PV modules manufactured in Washington State and South Carolina qualify as American-made products that meet the requirements of BABA. This makes it possible for our customers that require BABA products in their solar projects to utilize Silfab PV modules.

The **Build America, Buy America Act**, enacted as part of the **Infrastructure Investment and Jobs Act** on November 15, 2021, established a domestic content procurement preference for all Federal financial assistance infrastructure projects after May 14, 2022.

In January 2025 a partial waiver was issued by the Environmental Protection Agency, Department of Energy, Department of Housing, and Department of Agriculture which adjusted the BABA requirements for 2025. The waiver allows for PV modules assembled in the US that don't meet the 55% content requirement to qualify for BABA throughout the calendar year. Any products purchased as BABA compliant during that time are required to be installed by June 2026. Solar modules assembled outside of the US do not comply.

For BABA compliant products beyond the 2025 waiver, Silfab will have fully BABA compliant products as they will include Silfab's US-made solar cells starting in 2025. The inclusion of the US-made solar cell allows them to surpass the 55% BABA content threshold.

Beyond the solar cell, other ingredients in a PV module are required to assemble it into a complete product. Silfab Solar has worked with manufacturers in the US to procure additional American-made components and will continue to integrate increased amounts of domestic content materials into our solar cells and modules. Silfab requires the receipt of documentation from suppliers that validates their manufactured products meet the BABA definition of a US-made component.

---

<https://www.epa.gov/system/files/documents/2025-01/epa-solar-waiver-oggrf-ccia.pdf>

<https://www.usda.gov/sites/default/files/documents/final-nonavailability-waiver-domestically-assembled-solar-modules.pdf>

<https://www.energy.gov/management/approved-baba-waiver-2025-08>

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## Silfab Domestic Content Elective Safe Harbor Letter

RE: Silfab Identification of U.S. Components for Domestic Content Safe Harbor

Reference is made to certain PV Modules (“Modules”) manufactured by Silfab Solar Inc. (“Silfab”). This Letter uses certain capitalized terms that are defined in Internal Revenue Service (“IRS”) Notices 2023-38, 2024-41 and 2025-08.

Silfab provides the following statements as of November 10, 2025.

1. U.S. Components. Annex I hereto provides a table setting forth, for the Modules indicated thereon, the “Manufactured Product Components” (as such term is used in section 3 of IRS Notice 2023-38) listed in Table 1 of section 5.05 of IRS Notice 2025-08 that are incorporated into Modules, and whether such Manufactured Product Components are U.S. Components. None of the Modules provided in Annex 1 have been or will be manufactured in facilities located outside the United States.
2. Changes to Annex I. Silfab shall use commercially reasonable efforts to provide notification within ten (10) business days of becoming aware of the failure of a Manufactured Product Component identified as a U.S. Component in Annex I to so qualify.
3. Additional Updates. Upon reasonable written request (which request may be made no more than quarterly), including in connection with the financing of an Applicable Project, Silfab shall provide written confirmation that the schedule in Annex I remains the current version of such schedule.
4. Books and Records. Silfab shall maintain, until December 31 of the calendar year that is eight (8) years after the calendar year in which the applicable Modules listed in Annex I are shipped by Silfab, such records as are reasonably needed to substantiate the data provided in Annex I, as Annex I may be updated or supplemented. Upon written request, and at requestor’s sole cost and expense, Silfab shall provide such information to the IRS or, subject to a separate non-disclosure agreement reasonably satisfactory to Silfab, to the tax counsel (including in-house tax counsel or in-house tax professionals) or third-party accountant of requestor or its affiliate or of requestor’s or its affiliate’s (A) tax equity investor, (B) purchaser or other transferee of federal income tax credits, or (C) related tax insurer, as applicable, in each case as necessary to claim the domestic content bonus tax credits, including any information required for purposes of the Domestic Content Certification Statements (as described in section 5.01 of IRS Notice 2023- 38 and section 4.08 of IRS Notice 2024-41), in connection with any investment by a tax equity investor or tax credit purchaser, or as required to respond to an audit, examination, investigation, controversy or proceeding by the IRS, or in connection with a case before

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the United States Tax Court or other court of valid jurisdiction regarding the qualification of the applicable Modules listed in Annex I.

5. No Representation or Warranty; No Legal Conclusion. The information provided in Annex I, and any other information or document provided by Silfab with respect to domestic content bonus tax credits will not be interpreted as a representation or a legal conclusion that any project, owner or any other person or entity will qualify for domestic content bonus tax credits or any other bonus credit amount, tax credit, or increase in any tax credit rate, or any other tax benefit. The rules and regulations applicable to tax and bonus credits are complex and often change, and results may be different based on particular facts and circumstances. The information in such Annexes is general in nature and may not apply to specific circumstances. Silfab cannot assure any particular result. Product owners should seek appropriate professional advice as to how potential tax benefits apply to owner's situation. This Letter is not intended to be, and may not be, relied upon by any parties for any purpose other than that the Modules listed on Annex I hereto meet Domestic Content requirements and that reliance avails only to buyers, owners, and/or their affiliates, of Silfab products.

IN WITNESS WHEREOF, Silfab has caused this Letter to be duly executed and delivered as of the date first above written.

Silfab Solar Inc.

A handwritten signature in black ink, appearing to read "Paolo Maccario".

By:

Name: Paolo Maccario

Title: President and CEO

Silfab Solar Inc.

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Annex I  
 IRS Notice 2025-08 Confirmation of U.S. Components

**Applicable Project Components**

'X' – denotes the applicable Manufactured Product Components (MPCs) used in the production of the module. For the absence of doubt, the MPCs listed in Annex I, correspond directly to the identical MPCs listed in table 1 (New Elective Safe Harbor) of Notice 2025-08, and based on the intended use of said table, can be used to determine the percentage of domestic content contribution from each listed product.

SKUs	SIL430QD -DCA	SIL440QD -DCA	SIL440QD -DCA2	SIL440QD -DCA3	SIL440QD -DCA4	SIL440QD -DCA5	SIL440QD -DCB4	SIL520QM -DCA	SIL530XM -DCA2	SIL520XM -DCB	SIL530XM -DCB	SIL570XM+ -DCB	SIL580XM+ -DCB	SIL580XM+ -DCA	SIL580XM+ -DCA2	SIL630XL -DCB
Cells							X			X	X	X	X			X
Frame/Backrail	X	X		X	X			X		X	X	X	X	X		X
Front Glass																
Encapsulant			X	X			X		X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>		X <sup>2</sup>	X <sup>2</sup>
Backsheet/Backglass	X	X	X	X				X	X	X	X	X	X	X	X	X
Junction Box				X		X				X	X	X	X			X
Edge Seals																
Pottants																
Bus Ribbons				X	X											
Bypass Diodes																
Production																

Silfab Solar Inc.



# SUNNY TRIPOWER CORE1 33-US / 50-US / 62-US

STP33-US-41 / STP50-US-41 / STP62-US-41

**UP TO 60% FASTER  
INSTALLATION FOR  
COMMERCIAL PV SYSTEMS**



### Fully integrated

- Innovative design requires no additional racking for rooftop installation
- Integrated DC and AC disconnects and overvoltage protection
- 12 direct string inputs for reduced labor and material costs

### Increased power, flexibility

- Multiple power ratings for small to large scale commercial PV installations
- Six MPP trackers for flexible stringing and maximum power production
- OptiTrac™ Global Peak shade tolerant MPP tracking

### Enhanced safety, reliability

- Integrated SunSpec PLC signal for module-level rapid shutdown compliance to 2017 NEC
- Next-gen DC AFCI arc-fault protection certified to new Standard UL 1699B





### Smart monitoring, control, service

- Advanced smart inverter grid support capabilities
- Increased ROI with SMA ennexOS cross sector energy management platform
- SMA Smart Connected proactive O&M solution reduces time spent diagnosing and servicing in the field

## SUNNY TRIPOWER CORE1 33-US / 50-US / 62-US

It stands on its own

The Sunny Tripower CORE1 is the world's first free-standing PV inverter for commercial rooftops, carports, ground mount and repowering legacy solar projects. Now with expanded features and new power classes, the CORE1 is the most versatile, cost-effective commercial solution available. From distribution to construction to operation, the Sunny Tripower CORE1 enables logistical, material, labor and service cost reductions. Integrated SunSpec PLC for rapid shutdown and enhanced DC AFCI arc-fault protection ensure compliance to the latest safety codes and standards. With Sunny Tripower CORE1 and SMA's ennexOS cross sector energy management platform, system integrators can deliver comprehensive commercial energy solutions for increased ROI.

Technical data*	Sunny Tripower CORE1 33-US	Sunny Tripower CORE1 50-US	Sunny Tripower CORE1 62-US
<b>Input (DC)</b>			
Maximum array power	50000 Wp STC	75000 Wp STC	93750 Wp STC
Maximum system voltage	1000 V		
Rated MPP voltage range	330 V... 800 V	500 V... 800 V	550 V... 800 V
MPPT operating voltage range	150 V... 1000 V		
Minimum DC voltage / start voltage	150 V / 188 V		
MPP trackers / strings per MPP input	6/2		
Maximum operating input current / per MPP tracker	120 A / 20 A		
Maximum short circuit current per MPPT / per string input	30 A / 30 A		
<b>Output (AC)</b>			
AC nominal power	33300 W	50000 W	62500 W
Maximum apparent power	33300 VA	53000 VA	66000 VA
Output phases / line connections	3 / 3-(N)-PE		
Nominal AC voltage	480 V / 277 V WYE		
AC voltage range	244 V... 305 V		
Maximum output current	40 A	64 A	79.5 A
Rated grid frequency	60 Hz		
Grid frequency / range	50 Hz, 60 Hz / -6 Hz... +6Hz		
Power factor at rated power / adjustable displacement	1 / 0.0 leading... 0.0 lagging		
Harmonics THD	<3%		
<b>Efficiency</b>			
CEC efficiency (preliminary)	97.5%	98%	98%
<b>Protection and safety features</b>			
Load rated DC disconnect	●		
Load rated AC disconnect	●		
Ground fault monitoring: Riso / Differential current	● / ●		
DC AFCI arc-fault protection	●		
SunSpec PLC signal for rapid shutdown	●		
DC reverse polarity protection	●		
AC short circuit protection	●		
DC surge protection: Type 2 / Type 1+2	○ / ○		
AC surge protection: Type 2 / Type 1+2	○ / ○		
Protection class / overvoltage category (as per UL 840)	I / IV		
<b>General data</b>			
Device dimensions (W/H/D)	621 mm / 733 mm / 569 mm (24.4 in x 28.8 in x 22.4 in)		
Device weight	84 kg (185 lbs)		
Operating temperature range	-25 °C... +60 °C (-13 °F... +140 °F)		
Storage temperature range	-40 °C... +70 °C (-40 °F... +158 °F)		
Audible noise emissions (full power @ 1m and 25 °C)	65 dB(A)		
Internal consumption at night	5 W		
Topology	Transformerless		
Cooling Concept	OptiCool (forced convection, variable speed fans)		
Enclosure protection rating	Type 4X, 3SX (as per UL 50E)		
Maximum permissible relative humidity (non-condensing)	100%		
<b>Additional information</b>			
Mounting	Free-standing with included mounting feet		
DC connection	Amphenol UTX PV connectors		
AC connection	Screw terminals - 4 AWG to 4/0 AWG CU/AL		
LED indicators (Status / Fault / Communication)	●		
Network interfaces: Ethernet / WLAN / RS485	● (2 ports) / ● / ○		
Data protocols: SMA Modbus / SunSpec Modbus / Webconnect	● / ● / ●		
Multifunction relay	●		
OptiTrac Global Peak (shade-tolerant MPP tracking)	●		
Integrated Plant Control / Q on Demand 24/7	● / ●		
Off-Grid capable / SMA Fuel Save Controller compatible	● / ●		
SMA Smart Connected (proactive monitoring and service support)	●		
<b>Certifications</b> (pending as of June 2018)			
Certifications and approvals	UL 1741, UL 1699B, UL 1998, IEEE 1547, CAN/CSA-C22.2 No. 62109		
FCC compliance	FCC Part 15 Class A		
Grid interconnection standards	UL 1741 SA - CA Rule 21, HECO Rule 14H		
Advanced grid support capabilities	L/HVRT, L/HVRT, Volt-VAr, Volt-Watt, Frequency-Watt, Ramp Rate Control, Fixed Power Factor		
<b>Warranty</b>			
Standard	10 years		
Optional extensions	15 / 20 years		
○ Optional features   ● Standard features   - Not available	* Preliminary data as of June 2018		
Type designation	STP33-US-41	STP50-US-41	STP62-US-41
<b>Accessories</b>			
 SMA Data Manager M EDMM-US-10	 SMA Sensor Module MD.SEN-US-40	 Universal Mounting System UMS_KIT-10	 AC Surge Protection Module Kit AC_SPD_KIT1-10, AC_SPD_KIT2_T1T2 DC Surge Protection Module Kit DC_SPD_KIT4-10, DC_SPD_KIT5_T1T2

STP CORE1-US182821 SMA and Sunny Tripower are registered trademarks of SMA Solar Technology AG. Printed on FSC-certified paper. All products and services described as well as technical data are subject to change, even for reasons of country-specific deviations, at any time without notice. SMA assumes no liability for errors or omissions. For current information, see www.SMA-Solar.com.



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December 5, 2025

**FEOC Statement of Information\***

SMA Solar Technology America LLC (SMA) - String Inverters

This statement provides information regarding SMA's ownership structure as it relates to Foreign Entity of Concern (FEOC) requirements under the Inflation Reduction Act (IRA) and the subsequent One Big Beautiful Bill Act (OBBBA).

For specifics on how these statements affect individual projects or your ability to seek certain tax credits, we strongly recommend you confer with your own legal counsel. Because final regulations related to "effective control" has not yet been issued by the U.S. Department of the Treasury and/or the U.S. Department of Energy, SMA cannot confirm FEOC compliance at this time. No organization can state with certainty that its products or supply chains meet FEOC requirements until formal federal regulations are published. To provide support in the interim, we can confirm the following facts regarding SMA and the products listed below:

*Information listed herewith is true and correct as of the date of this statement and will be superseded by a new statement as more information becomes available.*

- SMA is a German corporation.
- SMA is indirectly wholly owned by SMA AG and is not a FEOC under The United States National Defense Authorization Act of 2021.
- SMA is not categorized as a Chinese Military Company under The United States National Defense Authorization Act of 2021.
- SMA is not on the UFLPA list of entities.
- SMA is not under the control of China, Russia, North Korea, or Iran.
- SMA is not under the control of a citizen/national of China, Russia, North Korea or Iran.
- SMA is not based in, nor have its principal place of business in, China, Russia, North Korea or Iran.

*\* This statement is based on information available as of the date listed and does not constitute legal advice.*

- A “Specified Foreign Entity” or “SFE” does not own or control 25% or more of the shares of SMA. For purposes of this FEOC Statement, an SFE is the government, or an entity, citizen, or national, of China, Russia, North Korea or Iran.
- An SFE does not own 15% or more of SMA’s debt.
- An SFE does not have the power to appoint officers or directors of SMA.
- Multiple SFE’s do not collectively own 40% or more of the shares of SMA.

SMA remains committed to upholding the highest standards of product design, quality and security, among all products including those listed below. As the regulatory landscape continues to evolve, we encourage all partners and customers to consult with their own financial advisors and legal counsel to determine how future FEOC-related guidance under the OBBBA may apply to their specific projects and compliance requirements.

**SMA String Inverters**

Product Line	Included Part Numbers	FEOC-Sourced Component %
SMA Sunny Boy Smart Energy	SBSE3.8-US-50 SBSE4.8-US-50 SBSE5.8-US-50 SBSE7.7-US-50 SBSE9.6-US-50 SBSE11.5-US-50	<13%
SMA Sunny Tripower X-US	03-13-800-2-50 03-20-1000-2-50 03-25-1000-2-50 03-30-1000-2-50	<13%
SMA Sunny Tripower CORE1-US	03-33-1000-2-41 03-50-1000-2-41 03-62-1000-2-41	<4%
SMA Sunny Highpower PEAK3	3-125-1500-2-21	<14%

*\* This statement is based on information available as of the date listed and does not constitute legal advice.*

	3-150-1500-2-21 3-165-1500-2-21 3-172-1500-2-21 3-FLE-1500-2-21	
SMA Sunny Highpower Storage PEAK3	SHPS-125-1500-2-30 SHPS-150-1500-2-30 SHPS-172-1500-2-30 SHPS-180-1500-2-30	<14%
Sunny Island X	SI27-US208-20 SI60-US480-20	<14%

DocuSigned by:  
  
F702D9A52DF6401...  
 Charles Smith  
 Managing Director, Home & Business Division  
 SMA America

*\* This statement is based on information available as of the date listed and does not constitute legal advice.*

# FACTORY-DIRECT FIXED-TILT MOUNTING SYSTEM

## About

OMCO Solar®, a Maclean-Fogg Company, is your one-source partner, combining quality fixed-tilt solutions, 100% domestic content, competitive pricing, expert support, and industry-leading responsiveness. As the supplier and manufacturer, we ensure logistics savings, fast lead times, and customization to meet site-specific and customer requirements. Our nationwide manufacturing footprint and direct product interaction delivers unmatched value for all modules and solar project complexities.

## Why Choose Us?

- ✓ Factory Direct
- ✓ Short Lead Times
- ✓ Low Freight Costs
- ✓ Reduced Field Labor
- ✓ Cost Efficient
- ✓ Quality Assurance
- ✓ Enhanced Flexibility
- ✓ 180MPH Wind Capacity

## Pre-Assembled Tilt Brackets



### ADVANCED DELIVERY PREP

Optimizes packaging and shipping



### REDUCED LABOR

Requires significantly less field labor



### DECREASED INSTALL TIME

Reduces construction schedules



### STREAMLINED ASSEMBLY

Eliminates loose hardware

## Integrated Grounding



### CONVENIENT SOLUTION

Eliminates third party grounding devices



### ENHANCED EFFICIENCY

Accelerates assembly

FEATURES	TECHNICAL SPECIFICATIONS
Manufacturing	Made by OMCO Solar in our 5 US manufacturing plants nationwide and shipped directly to project sites.
Pre-Assembly	Each rack consists of pre-assembled components, which reduces the bill of material items, allowing rapid site staging and installation.
Materials	Galvanized steel, per ASTM A653 – latest edition
Hardware	Zinc-coated to 15 microns per UL 2703. The hardware arrives pre-sorted for easy identification. Additional plating options are available for corrosive environments.
Module Compatibility	OMCO Solar racks are optimized for all commercially available framed solar modules.
In-Field Flexibility	Built-in adjustability features account for post misalignment and terrain elevation changes with no additional components. Proprietary custom slot configurations come standard on every fixed-tilt mounting system.
Table Configuration	2-in-portrait is standard. Other configurations are evaluated per site-specific requirements.
Terrain Articulation	Accommodates up to 20% grade change
Foundation Options	Driven C posts - OMCO produced, lower cost, faster lead time Driven I or W posts - OMCO sourced
Tilt Angle	Accommodates from 5° - 45°
Wire Management	Integrated wire management
Bonding/Grounding	UL 2703 compliant
Post Tolerances	East-West ..... ± 0.75" North-South ..... ± 0.75" East-West tilt ..... ± 1° North-South tilt ..... ± 1°
Load Capacities	Wind: Up to 180 MPH Snow: Up to 90 PSF
Certifications	ISO 9001:2015 standard, UL 2703 Ed. 1, CPP wind tunnel-tested, NEC compliant
Warranty	20-year limited warranty



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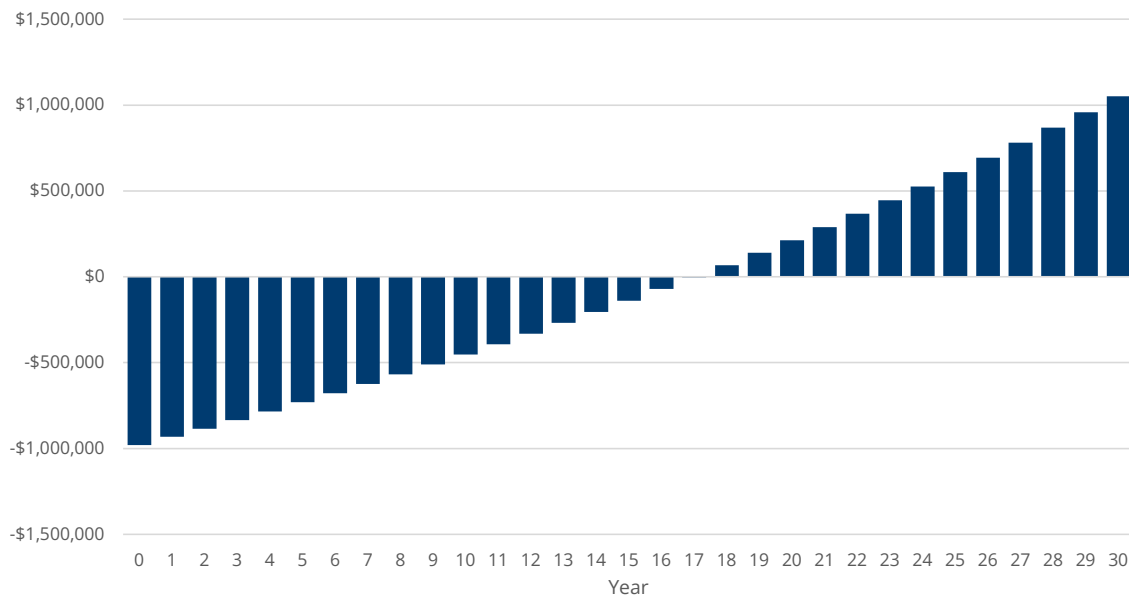
**Pro Forma: Customer Owned & Self Financed**

Green Lake County  
Justice Center



Energy Savings & Additional Incentives				Installation	Net Cash Flow	
Year	Pre-Solar Utility Cost (\$)	Avoided Utility Cost (\$)	Rebates & Credits (\$)	System Price (\$)	Annual Cash Flow (\$)	Cumulative Cash Flow (\$)
0			694,920	(1,674,800)	(979,880)	(979,880)
1	166,272	47,379			47,379	(932,501)
2	171,094	48,507			48,507	(883,994)
3	176,056	49,660			49,660	(834,334)
4	181,162	50,840			50,840	(783,494)
5	186,415	52,046			52,046	(731,449)
6	191,821	53,279			53,279	(678,170)
7	197,384	54,540			54,540	(623,630)
8	203,108	55,829			55,829	(567,800)
9	208,999	57,148			57,148	(510,653)
10	215,059	58,495			58,495	(452,157)
11	221,296	59,873			59,873	(392,284)
12	227,714	61,282			61,282	(331,002)
13	234,317	62,722			62,722	(268,280)
14	241,113	64,194			64,194	(204,087)
15	248,105	65,698			65,698	(138,388)
16	255,300	67,236			67,236	(71,152)
17	262,704	68,808			68,808	(2,344)
18	270,322	70,414			70,414	68,070
19	278,161	72,056			72,056	140,126
20	286,228	73,734			73,734	213,860
21	294,529	75,448			75,448	289,308
22	303,070	77,200			77,200	366,509
23	311,859	78,990			78,990	445,499
24	320,903	80,819			80,819	526,317
25	330,209	82,687			82,687	609,005
26	339,785	84,596			84,596	693,601
27	349,639	86,547			86,547	780,148
28	359,779	88,539			88,539	868,686
29	370,212	90,573			90,573	959,260
30	380,948	92,652			92,652	1,051,912
<b>Total</b>	<b>7,783,566</b>	<b>2,031,792</b>	<b>694,920</b>	<b>(1,674,800)</b>	<b>1,051,912</b>	<b>-</b>

**Cumulative Cash Flow Chart**





# SunPeak Organization Chart

Executive Management	
<i>President</i>	<i>Exec Vice President Emeritus</i>
Chad Sorenson	Karl H. Huber
<i>Vice President</i>	
John Schwarzmeier	

<i>Director of Project Development</i>
Michael Turney

Accounting	Marketing	Sales	Project Development	Design & Engineering	Project Management	Construction	Operations & Maintenance
<i>Accounting Manager</i>	<i>Marketing Manager</i>	<i>Independent Sales Consultants</i>	<i>Project Development Manager</i>	<i>Project Engineer</i>	<i>Project Manager</i>	<i>Construction Manager</i>	<i>Operations &amp; Maintenance Manager</i>
Zach Engel	Krista Laubmeier	Dave Wilms	Hartman Hoel	Cody Hornyak	Tyler Potter	Casey Knaup	James Tyrrell
<i>Payroll Specialist</i>		Jason Jentsch	Alex Thomas		<i>Project Coordinator</i>	<i>Construction Foreman</i>	
Brissa Rosales			Tom Duncan		Lisa Paasch	Juan Tapia	
					<i>Administrative Assistant</i>	<i>Construction Foreman</i>	
					Cindy Norman	Steve Fortiz	
					<i>Project Execution Administration</i>	<i>Construction Foreman</i>	
					Christine Lannon	John Pieper	
						<i>Construction Foreman</i>	
						Brett Hollewell	
						<i>Field Operation Assistant</i>	
						Kyle Walters	

**\*\* NOTE: Organization Chart does not include field crew.**

# Project Team

---

Your turnkey project will be completed by SunPeak's experienced, in-house team of solar professionals. Your project's team includes professional engineers, NABCEP-certified professionals, OSHA-certified installation teams, and registered master electricians, who combined have designed and built many megawatts of commercial-scale solar around the nation.

## Tyler Potter, PMP, Project Manager



Tyler serves as a Project Manager at SunPeak, providing a vital communication link between field and office teams while overseeing all aspects of solar construction project management. His responsibilities include managing documentation, scheduling, budgeting, and procurement; coordinating subcontractors and materials; and ensuring projects are completed safely, on time, and within budget. A graduate of the University of Wisconsin-Platteville with a degree in Sustainability and Renewable Energy Systems (Design and Analysis focus), Tyler is a certified Project Management Professional (PMP) and NABCEP Photovoltaic Associate (PVA). Prior to joining SunPeak, he held project management roles with H&H Energy Services and Energy Performance Lighting. Driven by a commitment to environmental sustainability, Tyler approaches each project with precision and care to deliver high-quality, lasting results.

## Alex Thomas, Project Development Manager



Alex works within SunPeak's project development team, where his time is largely focused on energy modeling and the creation of preliminary project proposals for prospective customers. Alex is skilled with multiple software applications and assists project developers with initial system layout designs and energy analysis.

Alex graduated from Edgewood College with a Bachelor's degree in English and a minor in Science Communication before going on to earn his Renewable Energy certification from Madison College. During his time at Madison College, he focused his coursework and extracurricular activities on solar photovoltaic applications and research.

## Casey Knaup, Construction Management Group Leader



Casey provides leadership to SunPeak’s construction teams, ensuring safe, efficient, and high-quality work on every project. He oversees on-site operations, including material delivery, direct labor management, safety compliance, and communication with project management to track progress and resolve in-field challenges. Casey holds an Associate in Applied Science degree as a Renewable Energy Specialist from Mid-State Technical College and is a registered electrician. He is also a certified Construction Health and Safety Technician (Board of Certified Safety Professionals) and an OSHA Construction Safety and Health Professional (192-hour certification).

## Cody Hornyak, Project Engineer



Cody is a Professional Engineer and key member of SunPeak’s engineering team, specializing in the design and documentation of solar PV systems. He develops conceptual layouts, construction drawings, and project renderings using computer-aided design (CAD) software, ensuring technical accuracy and consistency across all engineering deliverables. Cody also maintains SunPeak’s internal drafting templates and engineering standards, supporting the project management and construction teams with mechanical layout and design expertise. He holds a Bachelor of Science in Mechanical Engineering from Iowa State University and brings prior experience as a field and design engineer in the utility-scale solar sector.



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

5/30/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> The Horton Group 10320 Orland Parkway Orland Park IL 60467	<b>CONTACT NAME:</b> Certificates Team <b>PHONE (A/C No. Ext):</b> 708-845-3917 <b>E-MAIL ADDRESS:</b> certificates@thehortongroup.com		<b>FAX (A/C, No):</b>
	<b>INSURER(S) AFFORDING COVERAGE</b>		
<b>INSURED</b> SunPeak, LLC 1026 Ann Street Madison WI 53713	SUNPEAK-01	INSURER A : Berkley National Insurance Co.	NAIC # 38911
		INSURER B : Columbia Casualty Insurance Company	31127
		INSURER C : Continental Casualty Company Canada Branch	
		INSURER D : Valley Forge Insurance Company	20508
		INSURER E : The Continental Insurance Company	35289
		INSURER F : National Fire Insurance Company of Hartford	20478

**COVERAGES**

CERTIFICATE NUMBER: 38006394

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
C	<input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> XCU Included <input checked="" type="checkbox"/> Contractual Liab GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:	Y	Y	7014947802	6/11/2025	6/11/2026	EACH OCCURRENCE \$2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$100,000 MED EXP (Any one person) \$15,000 PERSONAL & ADV INJURY \$2,000,000 GENERAL AGGREGATE \$4,000,000 PRODUCTS - COMP/OP AGG \$4,000,000 \$
D	<input checked="" type="checkbox"/> <b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY	Y	Y	7014947797	6/11/2025	6/11/2026	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
E	<input checked="" type="checkbox"/> <b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 10,000	Y	Y	7014947783	6/11/2025	6/11/2026	EACH OCCURRENCE \$5,000,000 AGGREGATE \$5,000,000 \$
F	<input checked="" type="checkbox"/> <b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y	N/A	7014947752	6/11/2025	6/11/2026	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE - EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000
A	Leased/Rented Equipment	Y	Y	MNP 1035553 55	6/11/2025	6/11/2026	Limit Occurrence/Aggregate Limit/Deductible \$250,000 \$5M/\$5M (mold inc) \$5M / \$25,000
B	Professional/Pollution Liability	Y	Y	7015107209	6/11/2025	6/11/2026	
A	Installation Floater	N	N	MNP 1035553 55	6/11/2025	6/11/2026	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Excluded Officer(s): Karl Heinz Huber

Additional insured on a primary and non-contributory basis with respects to general liability (Umbrella follows form) and pollution liability only when required by written contract. Additional insured with respect to auto liability only if required by written contract. Waiver of subrogation in favor of the additional insureds will apply to General Liability, Automobile Liability and Worker's Compensation only when required by written contract. Per project aggregate applies to general liability only if required by written contract.

**CERTIFICATE HOLDER****CANCELLATION**

Master Certificate

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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January 29th, 2026

SunPeak, LLC

1026 Ann Street

Madison, WI 53713

RE: Experience Modification Rating


To Whom It May Concern:

Please accept this letter as verification that the Worker 's Compensation Experience Modifier (EMR) for the above captioned insured is as follows:

06/11/2025	1.04
06/11/2024	0.93
06/11/2023	0.99

One isolated claim in 2022 has driven up the EMR above a 1.0. Without this claim the 2025 EMR would be 0.81.

Sincerely,

  
**Kevin Tully**

Assistant Client Manager / HRAS

**The Horton Group**

10320 Orland Parkway / Orland Park, IL 60467

Phone: 708.845.3646 / Fax: 708.845.4646

[www.thehortongroup.com/](http://www.thehortongroup.com/) [Kevin.Tully@thehortongroup.com](mailto:Kevin.Tully@thehortongroup.com)

September 19, 2025

Skyward Specialty Insurance Group  
Surety Division  
800 Gessner Road, Suite 600  
Houston, TX 77024  
(847) 702-8255

RE: SunPeak, LLC Bond Capacity

To Whom It May Concern,

We are pleased to confirm our relationship with SunPeak, LLC.

Skyward Specialty Insurance Group (Skyward Surety), through its underwriting subsidiary, Great Midwest Insurance Company is willing to consider individual surety bonds up to \$5,000,000 and \$15,000,000 in the aggregate. These limits, however, are not indicative of the maximum amount of surety bond credit we may be willing to extend on a given project.

The decision to support any bond request is subject to normal and customary underwriting including, but not limited to: review and approval of relevant contract documents, bond forms, and project financing. This bondability letter is intended as general assurance of bonding and is not a bid bond. Skyward and its subsidiaries accept no liability to you or any third-parties based on the contents of this letter.

Great Midwest Insurance Company is rate A/X by A.M. Best and is listed on the United States Treasury's listing of approved sureties with an underwriting limit of \$71,057,000.

Please don't hesitate to contact us with any questions.

Sincerely,

***Mark Statter***

Mark Statter  
Regional Vice President  
Great Midwest Insurance Company



**From:** [Van Meel, Michael](#)  
**To:** [Stobbe, Samantha](#)  
**Subject:** Fw: RFB 05-2026 Solar Proposal- Verde Solutions - Bid 6  
**Date:** Friday, June 12, 2026 1:03:12 PM  
**Attachments:** [Green Lake County Justice Center Solar Project.pdf](#)

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**From:** Mariella Treleven <[mtreleven@verdesolutions.com](mailto:mtreleven@verdesolutions.com)>  
**Sent:** Friday, June 12, 2026 11:56 AM  
**To:** Van Meel, Michael <[mvanmeel@greenlakecountywi.gov](mailto:mvanmeel@greenlakecountywi.gov)>; Ryan Flynn <[rflynn@verdesolutions.com](mailto:rflynn@verdesolutions.com)>  
**Cc:** Ryan Saxe <[rsaxe@verdesolutions.com](mailto:rsaxe@verdesolutions.com)>  
**Subject:** RFB 05-2026 Solar Proposal- Verde Solutions

[CAUTION: EXTERNAL SENDER This email originated from outside Green Lake County. Do not click links or open attachments unless you recognize the sender and know the content is safe.]

Hi Mike,

Verde Solutions is pleased to submit our bid for the Green Lake Justice Center solar project.

Please let us know if you have any questions or concerns before the upcoming board meeting.

I have included [@Ryan Flynn](#) and [@Ryan Saxe](#) on this email, as they will be your main points of contact going forward.

Thank you!  
Mariella

--



[262-384-1508](tel:262-384-1508)



[mtreleven@verdesolutions.com](mailto:mtreleven@verdesolutions.com)



2211 N. Elston Ave. Suite 208 Chicago, IL 60614

## Green Lake County Justice Center Solar Project



Presented By:



Submitted: June 12, 2026

June 2026

Mike Van Meel, Maintenance Director Green Lake County 571 County Road A Green Lake, WI 54941

RE: Request for Bid (RFB) 05 – 2026 — Green Lake County Justice Center Solar Project

Dear Mr. Van Meel and Members of the Green Lake County Board,

Verde Solutions is pleased to submit this proposal for the design, engineering, permitting, procurement, installation, and commissioning of a turnkey ground-mount solar PV system at the Green Lake County Justice Center. We have reviewed RFB 05 – 2026 in full, completed an on-site visit, and prepared a complete-system design and firm budgetary pricing that reflect the specific electrical, civil, and grant-compliance realities of this site.

Green Lake County has already established itself as a regional leader in public-sector sustainability — geothermal HVAC, LEED Silver certification, and environmentally responsible construction. A solar array at the Justice Center is a natural and visible next step, and it is exactly the kind of project Verde Solutions delivers for counties, municipalities, and public agencies every year.

A few points we want to put front and center:

- Municipal and public-sector focus. Verde has designed, engineered, financed, and built ground-mount solar for municipal wastewater plants, village campuses, county and township facilities, and public colleges. Our most directly comparable projects — the Village of Minooka Wastewater Treatment Plant (777 kW DC ground-mount, ~70% offset) and the City of Newcomerstown, OH municipal plant (854 kW DC ground-mount) — mirror the scope, scale, and ownership structure of this project.
- More than 13 years and 2,600+ projects. Verde was founded in 2012 and exceeds the County's 10-year PV-installation experience threshold, with NABCEP-certified professionals and licensed electricians on every project through our in-house construction arm, Fresh Coast Solar.
- A complete system at \$1,515,197 turnkey (\$3.04/Wp). Our price includes design, engineering, permitting, equipment, prevailing-wage installation, commissioning, the public monitoring display, and the County's \$1,000,000 bonding and insurance — with full incentive support built in.
- Maximized incentives. The design qualifies for the 30% federal ITC plus the 10% Domestic Content bonus (40% total via Direct Pay) and the Wisconsin Focus on Energy incentive, bringing the County's net investment to approximately \$884,118 before any OEI EIGP Round 6 grant.
- A design tuned to Alliant's compensation structure. The system is sized to offset roughly 48% of the Justice Center's annual usage so that virtually all generation is consumed on-site at full retail value, rather than exported to Alliant at the lower avoided-cost rate — maximizing the lifetime value of the County's investment.



*Go Green Get Ahead*

We welcome the opportunity to refine any element of this proposal with County staff.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Christopher Gersch".

Christopher Gersch Founder and CEO, Verde Solutions, LLC 2211 N. Elston Avenue, Suite 208, Chicago, IL 60614 312-281-6512 · [cgersch@verdesolutions.com](mailto:cgersch@verdesolutions.com)

**Table of Contents**

<b>Executive Summary.....</b>	<b>5</b>
<b>Proposer Profile.....</b>	<b>7</b>
<b>Project Experience.....</b>	<b>10</b>
<b>Technical Solution.....</b>	<b>16</b>
<b>Cost Proposal.....</b>	<b>23</b>
<b>Payment Schedule.....</b>	<b>24</b>
<b>Financial Analysis.....</b>	<b>25</b>
<b>Incentive &amp; Grant Support.....</b>	<b>27</b>
<b>OEI EIGP Round 6 — Grant Requirements &amp; Verde Support.....</b>	<b>28</b>
<b>Project Timeline &amp; Coordination.....</b>	<b>30</b>
<b>References.....</b>	<b>33</b>
<b>Narrative Summary.....</b>	<b>34</b>
<b>Pricing Assumptions &amp; Exclusions.....</b>	<b>36</b>
<b>Compliance, Insurance &amp; Bonding.....</b>	<b>37</b>

## Executive Summary

### Project Understanding

Green Lake County has issued Request for Bid (RFB) 05-2026 for the turnkey installation of a ground-mount solar PV system at the Green Lake County Justice Center. Under this structure, the system is designed, engineered, procured, installed, and commissioned by the Proposer and is owned by the County upon completion as a cash purchase. Proposals are reviewed by the Green Lake County Board and staff, with the selected vendor notified following the June 16, 2026 County Board meeting.

Verde Solutions understands the County’s goals to be: a meaningful, predictable reduction in the Justice Center’s electricity cost; the lowest responsible long-term project value through full capture of available incentives; FEOC-compliant equipment that preserves IRA Elective Pay eligibility; a public-facing, real-time monitoring and education display integrated with the County’s existing Delta Controls platform; and reliable, long-term performance backed by strong warranties. Verde’s proposal is structured to deliver each of these, building on the County’s existing sustainability leadership — geothermal HVAC and LEED Silver certification.

### Proposed System and Pricing Snapshot

Verde Solutions has prepared a preliminary engineered design using HelioScope. The recommended system totals 498.4 kW DC / 400 kW AC across 852 modules, producing an estimated 703,154 kWh in Year 1 — offsetting approximately 48% of the Justice Center’s validated 1,476,849 kWh annual usage. The system is intentionally sized to keep virtually all generation behind the meter at full retail value (about \$0.081/kWh) rather than exported to Alliant Energy at its lower avoided-cost rate, maximizing the County’s lifetime savings.

Item	Value
System size	498.4 kW DC / 400 kW AC
Modules	852 × Heliene 156HC M10 SL Bifacial, 585 W (U.S.-made)
Inverters	4 × SolarEdge SE100KUS
Configuration	Fixed-tilt ground mount, 30° tilt, due south
Year 1 production	703,154 kWh (~48% offset)
<b>Total turnkey cost</b>	<b>\$1,515,197 (\$3.04/Wp)</b>
<b>Net investment after incentives</b>	<b>\$884,118</b>

**Table 1:** Proposed System and Pricing Snapshot

Pricing reflects prevailing-wage labor — required for the OEI EIGP Round 6 grant the County intends to pursue — and includes the County’s \$1,000,000 bonding and insurance. The total turnkey cost, incentive detail, levelized cost per kWh, and the full 30-year cash flow are provided in the Cost Proposal and Financial Analysis sections.

### **Verde’s Role and Delivery Structure**

Verde Solutions is the Proposer, developer, and EPC contractor for this project — responsible for design and engineering, permitting, Alliant Energy interconnection, procurement, prevailing-wage construction, and commissioning. The system is a fixed-tilt, ground-mount array using Tier-1, U.S.-manufactured Heliene bifacial modules and SolarEdge inverters, sized to maximize on-site consumption. As a cash purchase, the completed system is owned by the County upon commissioning — there is no third-party owner or ongoing payment obligation. Verde applies for and manages the County’s incentives — the 30% federal ITC through §6417 Direct Pay plus the Domestic Content bonus, Wisconsin Focus on Energy, and the OEI EIGP Round 6 grant — and prepares the FEOC documentation required for IRA Elective Pay eligibility. All construction is self-performed by Verde’s in-house division, Fresh Coast Solar.

### **Relevant Public-Sector Experience**

Verde Solutions is a Chicago-based clean-energy developer founded in 2012, with more than 2,600 completed projects across 48 states. Verde has delivered solar PV for counties, municipalities, public agencies, and schools — including a 777 kW DC ground-mount array for the Village of Minooka Wastewater Treatment Plant (offsetting roughly 70% of plant load), a multi-site municipal program for the Village of South Holland, and a 1.9 MW ground-mount and rooftop portfolio for the College of Lake County. Verde exceeds the County’s 10-year PV-installation experience threshold, fields NABCEP-certified professionals, and self-performs all construction through its in-house division, Fresh Coast Solar. Additional project profiles appear in the Project Experience section.

## Proposer Profile

### Company Overview

Field	Detail
Legal Name	Verde Solutions, LLC
Organization Type	Privately held Limited Liability Company (LLC)
State of Organization	Illinois (Illinois SOS File Number 0389220-4; organized March 1, 2012)
Years in Business	13+ years (founded 2012)
Headquarters	2211 N. Elston Avenue, Suite 208, Chicago, IL 60614
Phone	(312) 281-6512
Website	verdesolutions.com
Founder / CEO	Christopher Gersch (authorized signer for this proposal)
Construction Affiliate	Fresh Coast Solar (in-house, self-performed construction division)
Parent	Altimus Capital (family includes Verde Solutions, Fresh Coast Solar, Navigate Power, and RxSun)

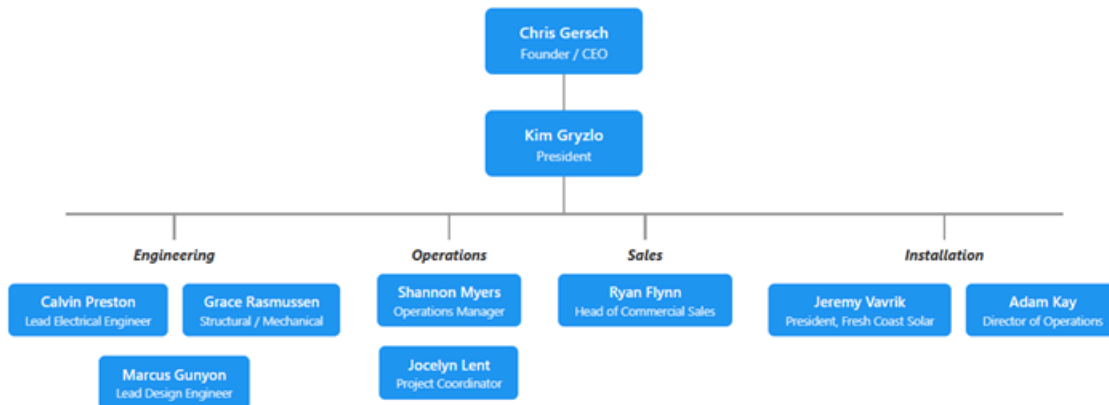
**Table 3:** Verde Solutions — Company Overview

Verde Solutions, LLC is a privately held Illinois Limited Liability Company, founded in 2012 by Christopher Gersch and headquartered in Chicago, Illinois — a U.S.-based company with U.S. headquarters and significant U.S. business activity. The company specializes in the design, financing, and implementation of renewable-energy projects for municipalities, counties, schools, and non-profits nationwide. With more than 2,600 completed projects across 48 states, Verde has built a reputation for high-quality execution, transparent pricing, and long-term client partnerships. Verde’s integrated services include solar PV, battery storage, EV charging, LED lighting, HVAC, and building controls. Verde has appeared on the Inc. 5000 list multiple times since 2017 and was ranked among Solar Power World’s top commercial solar contractors in 2024.

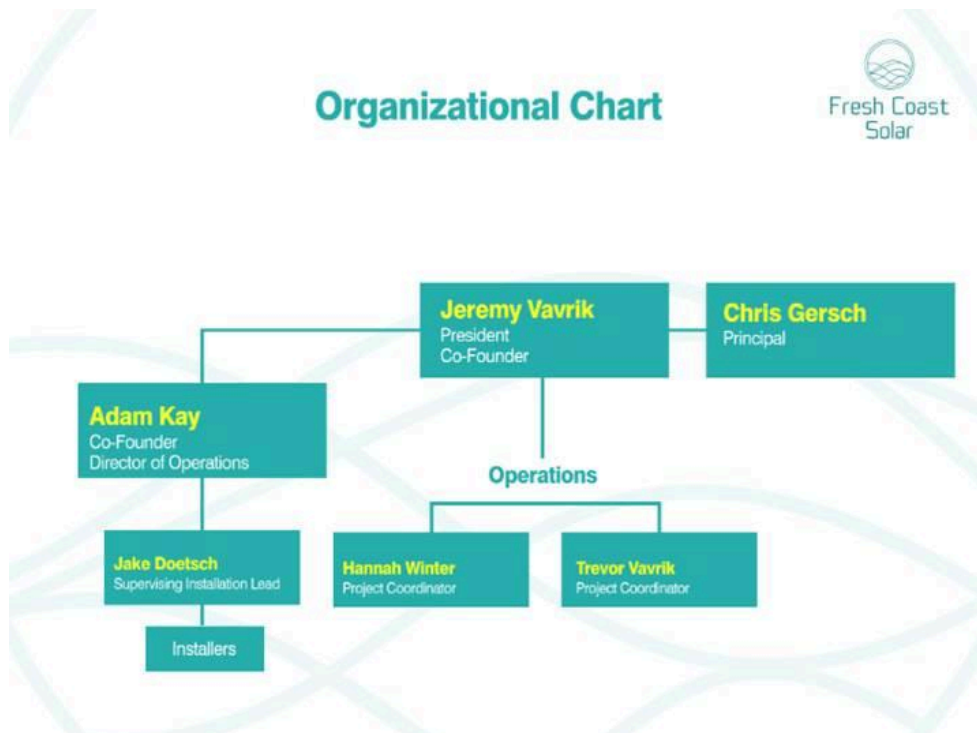
### Organizational Structure

Verde Solutions is part of the Altimus Capital family of companies, which provides the financial, strategic, and operational resources to deliver large-scale public-sector energy projects. The family includes Verde Solutions (project development, engineering, and incentive management), Fresh Coast Solar (in-house construction and installation), Navigate Power (energy procurement and advisory), and RxSun. This integrated structure allows Verde to coordinate development, engineering, procurement, construction,

and long-term support under one team. Shannon Myers, Operations Manager, serves as the County's single point of contact from contract through commissioning. The organizational charts below detail Verde Solutions, its construction division Fresh Coast Solar, and the Altimus Capital family of companies.



**Figure 1:** Verde Solutions organizational chart.



**Figure 2:** Fresh Coast Solar organizational chart.



**Figure 3:** Altimus Capital — family of companies.

### **Self-Performed Construction Capability**

All construction is performed in-house through Fresh Coast Solar, Verde’s dedicated construction division. Fresh Coast employs licensed electricians, OSHA 30-certified supervisors, NABCEP-certified professionals, and experienced installation crews. This self-performed model gives the County single-point accountability, direct quality control, consistent safety standards, and reliable scheduling — with no general-contractor markup and no subcontracted installation crew. Fresh Coast maintains certified payroll reporting (Davis-Bacon Form WH-347) and prevailing-wage compliance on public-sector and federally funded projects.

### **Public-Sector Experience**

Verde has substantial experience delivering solar PV for counties, municipalities, public agencies, and schools — including ground-mount, municipally-owned systems directly comparable to the Justice Center (the Village of Minooka Wastewater Treatment Plant), multi-site municipal programs (Village of South Holland), and large public-sector portfolios (College of Lake County). Verde exceeds the County’s 10-year PV-installation experience threshold and fields NABCEP-certified professionals.



*Go Green Get Ahead*

## **Project Experience**

Verde Solutions has delivered solar projects for municipalities, counties, public agencies, schools, and commercial clients across 48 states. The projects below — our most directly comparable to the Green Lake County Justice Center — demonstrate our experience with municipally-owned, ground-mount, and incentive-funded systems.

## Village of Minooka Wastewater Treatment Plant — Minooka, IL



**Figure 2:** Village of Minooka WWTP ground-mount array.

**Client / Organization:** Village of Minooka — Minooka, IL

**Location:** Minooka, IL

**System Size:** 777 kW-DC (2,100 modules)

**Project Type:** Ground-mount solar PV

**Energized:** 2023

**Work Performed:** Utility coordination, system design and engineering, financing, permitting, procurement, construction, and commissioning.

Verde Solutions designed, engineered, financed, and constructed a 777 kW-DC ground-mount solar array serving the Village of Minooka's wastewater treatment plant, offsetting approximately 70% of the facility's annual electricity consumption. As with the Green Lake County Justice Center, this was a single-facility, ground-mounted system delivered as a complete turnkey package — from civil and foundation work through electrical interconnection and commissioning — and self-performed by Verde's in-house construction division, Fresh Coast Solar. Verde managed the full development cycle for a municipal public-works client, coordinating utility interconnection and incentive capture while working within a public budgeting and approval process. Of all of Verde's completed work, Minooka is the closest analog to the Justice Center project: a municipally-owned, ground-mount system of comparable scale built to materially offset the load of a single essential public facility.

## Village of South Holland — South Holland, IL



**Figure 3:** Village of South Holland municipal solar installation.

**Client / Organization:** Village of South Holland — South Holland, IL

**Location:** South Holland, IL

**System Size:** Over 1 MW combined across five municipal facilities

**Project Type:** Municipal solar PV — multi-site portfolio

**Energized:** 2024

**Work Performed:** Utility coordination, system design and engineering, permitting, procurement, installation, commissioning, and incentive/rebate application support.

Verde Solutions delivered a multi-site municipal solar program for the Village of South Holland totaling over 1 MW across five separate Village facilities, including the Police Department, Village Hall and Fire Department, two Public Works sites, and the Community Center. The project required Verde to design and permit five distinct systems in parallel, manage simultaneous utility interconnection applications, and capture the available state and utility incentives across the portfolio — all while coordinating with Village staff and aligning the work with the municipality's operations. That experience translates directly to Green Lake County: it demonstrates Verde's ability to serve as a single, accountable partner to a public body, to navigate a government client's review and approval process, and to administer the incentive programs (here, the 30% ITC via Direct Pay, Wisconsin Focus on Energy, and the OEI EIGP grant) that underpin the Justice Center project's economics.

## College of Lake County — Grayslake, IL



**Figure 4:** College of Lake County ground-mount and rooftop array.

**Client / Organization:** College of Lake County — Grayslake, IL

**Location:** Grayslake, IL

**System Size:** 1,901.5 kW-DC (4,997 modules)

**Project Type:** Ground-mount and rooftop solar PV

**Energized:** April 2021

**Work Performed:** Utility coordination, system design and engineering, permitting, procurement, installation, commissioning, incentive support, and 20-year operations and maintenance.

Verde Solutions implemented one of Illinois' largest higher-education solar initiatives for the College of Lake County — 4,997 Tier-1 modules totaling 1,901.5 kW-DC across a two-acre ground-mount array and 13 building rooftops. The project showcases Verde's capacity to engineer and construct large-scale ground-mount solar for a public institution and to support it over the long term through a 20-year operations and maintenance commitment. The ground-mount engineering, the scale of the array, and the long-horizon performance and O&M responsibility are all directly relevant to the County-owned Justice Center system, where Verde likewise offers ongoing monitoring and maintenance and stands behind modeled production for the life of the equipment.

## Schaumburg Township — Hoffman Estates, IL



**Figure 5:** Schaumburg Township solar array

**Client / Organization:** Schaumburg Township — Hoffman Estates, IL

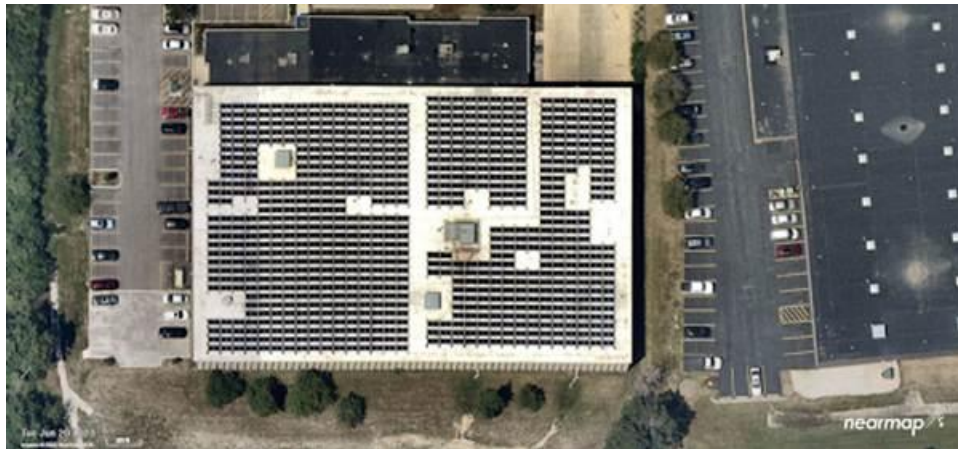
**Location:** Hoffman Estates, IL

**Project Type:** Rooftop solar PV

**Work Performed:** System design and engineering, permitting, procurement, installation, and commissioning.

Verde Solutions delivered a roof-mounted solar array for Schaumburg Township at 1 Illinois Avenue in support of the Township's long-term sustainability and energy-cost-reduction goals. The engagement reflects Verde's ongoing work with township and other local-government clients whose decisions run through an elected board and a public procurement process — the same governance environment as Green Lake County. It demonstrates Verde's ability to translate a public body's sustainability objectives into a completed, code-compliant installation that reduces the public client's operating costs.

## K.R. Komarek — Wood Dale, IL



**Figure 6:** K.R. Komarek rooftop bifacial array.

**Client / Organization:** K.R. Komarek, Inc. — Wood Dale, IL

**Location:** Wood Dale, IL

**System Size:** 408 kW-DC (850 bifacial modules)

**Project Type:** Rooftop solar PV (bifacial)

**Energized:** 2022

**Work Performed:** System design and engineering, permitting, procurement, installation, and commissioning.

Verde Solutions designed and constructed a 408 kW-DC rooftop system using 850 bifacial modules at K.R. Komarek's new manufacturing facility. While a commercial project, it is included here because it demonstrates Verde's hands-on experience engineering and installing bifacial module technology — the same class of module (Heliene 156HC bifacial) proposed for the Justice Center — and its turnkey EPC execution from design through commissioning. It illustrates that the equipment and construction methods proposed for Green Lake County are proven in Verde's completed work.

## Technical Solution

Verde Solutions is committed to delivering a high-performance, turnkey ground-mount solar PV system tailored to Green Lake County’s energy-cost-reduction and sustainability goals at the Justice Center. Our approach incorporates a site-specific HeliScope design developed from an on-site visit, durable cold-climate equipment, full Alliant Energy interconnection management, and a public-facing monitoring solution integrated with the County’s Delta Controls platform.

## System Technical Summary

The proposed system is a single fixed-tilt, ground-mount array located on open County land adjacent to the Justice Center, oriented due south for maximum annual yield and sized to offset roughly half of the building’s electricity use while keeping nearly all generation behind the meter.

Parameter	Value
DC nameplate	498.4 kW DC
AC nameplate	400 kW AC
DC/AC ratio	1.25
Modules	852 × Heliene 156HC M10 SL Bifacial, 585 W
Inverters	4 × SolarEdge SE100KUS (100 kW AC each)
Racking / mounting	Fixed-tilt ground mount, driven-pile foundation, 30° tilt
Orientation / layout	Portrait, 2-high (2×1); 426 tables; due south (~180°); 21.4 ft inter-row spacing
Stringing	24 strings, 18–37 modules per string, 10 AWG copper
Estimated Year 1 production	703,154 kWh (~48% of annual load)

**Table 3:** System Technical Summary

## Equipment Specifications

**Modules:** Heliene 156HC M10 SL Bifacial, 585 W — 156 half-cut M10 monocrystalline PERC bifacial modules (852 units), 20.9% efficiency,  $-0.34\%/^{\circ}\text{C}$  temperature coefficient for strong cold-climate performance, and 1500 Vdc maximum system voltage. UL 61215, UL 61730, and CSA C22.2 No. 61730 certified. Heliene is a Tier-1 manufacturer with U.S. and Canadian production facilities, supporting IRS Domestic Content and FEOC compliance.

**Inverters:** Four SolarEdge SE100KUS (SE-TRI-US001BNS4) Domestic Content three-phase inverters (100 kW AC each; 400 kW AC combined) at 480 V, paired with 852 SolarEdge C651U DC power optimizers

providing module-level MPPT, monitoring, and rapid shutdown per NEC 690.12. Each inverter provides arc-fault and DC-side protection and revenue-grade monitoring, and is UL 1741 / IEEE 1547-2018 compliant with utility-grade anti-islanding. The SolarEdge SE100KUS is a U.S.-manufactured Domestic Content inverter, supporting the project's ARRA Buy American and IRS Domestic Content compliance.

**Racking:** Fixed-tilt, driven-pile ground-mount system in galvanized steel, at a fixed 30° tilt in portrait 2-high configuration. Steel piles are driven below the Wisconsin frost depth (~4–5 ft) to resist frost heave. The racking is engineered by a licensed Wisconsin Professional Engineer with stamped structural calculations meeting ASCE 7-22 wind and snow loads for Green Lake County.

**Balance of System:** NEC-compliant DC and AC wiring (copper), DC and AC combiners as required, an exterior AC disconnect, and a utility-grade Alliant production meter.

**Critter guard (RFB-required):** A perimeter critter guard is required by the RFB. Because the required type and extent were not specified, critter guard is **not included in the base turnkey price**; Verde will furnish it as a priced add-alternate once the County confirms the desired specification (see Pricing Assumptions & Exclusions).

## **Preliminary Site Layout**

The preliminary layout was developed in HelioScope from the on-site visit and satellite imagery, siting a single fixed-tilt field segment on open County land south of the Justice Center campus. The array is oriented due south (~180° azimuth) at a 30° tilt, in a portrait 2-high configuration across 426 tables with 21.4 ft inter-row spacing to manage winter row-to-row shading. The layout is positioned to avoid the campus geothermal loop field, existing buried utilities, and stormwater features, and to keep cable runs to the existing electrical service as short as practical.



**Figure 9:** HelioScope design render — proposed ground-mount array south of the Justice Center campus.

The final layout will be refined during detailed issued-for-construction design following award, incorporating the geothermal as-built, a geotechnical review of soil conditions, and confirmation of the usable acreage and setbacks.

### **Foundations and Site Civil**

The system uses a driven-pile foundation — galvanized steel piles driven directly into the soil below the Wisconsin frost line (~4–5 ft) — which is the most cost-effective and lowest-disturbance foundation for suitable soils. Verde will confirm the foundation design with a geotechnical investigation following award; rocky ground may require pre-drilling and soft or wet soils may require longer piles or ballasted foundations. Verde protects all grounds during construction, manages spoils and restoration, and will address any Wisconsin erosion-control or stormwater permitting triggered by the disturbed area.

## **Cabling, Wiring, and Electrical Design**

The array is configured across 24 strings (18–37 modules per string), with DC home runs in 10 AWG copper routed through code-compliant conduit to the four SolarEdge inverters per NEC Article 690. The inverters output three-phase 480 V AC, aggregating through AC combiner(s) and an exterior AC disconnect before tie-in to the facility's existing main switchboard. The PV output is back-fed into the existing 3000 A, 480Y/277 V, 3-phase 4-wire switchboard through a dedicated solar backfeed breaker.

## **Engineering and Structural Analysis**

The racking and foundations will be designed by a licensed Professional Engineer, with stamped structural calculations confirming compliance with ASCE 7-22 wind and snow loads for Green Lake County. Verde will provide a complete issued-for-construction package — stamped structural and foundation drawings, electrical single-line and three-line diagrams, rooftop/site layouts, equipment specifications, and system-output calculations — sealed by licensed Professional Engineers.

## **Interconnection and Compliance**

Verde Solutions manages the complete Alliant Energy (Wisconsin Power & Light) interconnection process — application preparation and submittal, fees and any study costs, coordination with Alliant engineering, witness testing, and Permission to Operate. The smart inverters are configured to Alliant's technical criteria (UL 1741, IEEE 1547-2018). Because Wisconsin Power & Light's retail net-metering tariff applies only to systems 20 kW and under, a project of this size interconnects under Alliant's parallel-generation framework; the design's ~46% offset keeps virtually all generation consumed on-site at full retail value, with any net export credited at Alliant's avoided-cost rate. The AC tie-in is configured for anti-islanding so the system de-energizes during a utility outage and never conflicts with the existing 500 kVA Kohler generator and automatic transfer switch.

All designs adhere to NEC Article 690 (Solar PV Systems), Article 705 (Interconnected Sources), 690.12 (Rapid Shutdown), and 690.11 (Arc-Fault Detection); UL 1741 and IEEE 1547-2018; ASCE 7-22; and all applicable Wisconsin state and local codes. Final backfeed sizing and confirmation of spare capacity at the existing switchboard (the 120% rule) will be verified against the County's electrical records during detailed design (see Coordination & Clarification Items).

## **Monitoring, Public Display, and Delta Controls Integration**

The RFB requires a public, real-time display of energy production and environmental benefits, coordinated with the County's existing Delta Controls platform. Verde's monitoring scope is included in the turnkey price:

- **Cloud monitoring / DAS:** A cloud-based monitoring platform with revenue-grade metering and inverter- and system-level data, providing real-time and historical production, performance-ratio tracking against modeled output, and automated fault detection and alerting.
- **Access:** 24/7 web-portal and smartphone access for County designees, with monthly production reports available on request.
- **Public-facing display:** A complimentary flat-screen display installed in a County-approved location (e.g., lobby or entry) showing live production (kW, kWh) and environmental equivalents (CO<sub>2</sub> avoided, trees, homes powered).
- **Delta Controls integration:** Verde coordinates with the County’s Delta Controls administrator to deliver production data into the existing building-automation platform (BACnet/API method to be confirmed with the County’s integrator) and to operate the display during County-preferred hours.

The exact Delta Controls integration method and point of access were identified during the site visit as items to confirm with the County’s controls administrator; integration beyond the standard data handoff is noted as a clarification item.

## Energy Production Projections

Energy production was modeled in HelioScope (Folsom Labs) using TMY weather data from Meteonorm 8 (10 km grid) for the site (43.8495°N, –88.9387°W), the Perez transposition model, the Sandia cell-temperature model, and site-specific shading. Conservative seasonal soiling is applied (higher winter soiling for snow cover), with an average annual soiling loss of approximately 5%. The system is estimated to produce **703,154 kWh in Year 1**, offsetting approximately 48% of the Justice Center’s validated 1,476,849 kWh annual consumption. At the County’s avoided utility cost of \$0.081/kWh, estimated Year-1 savings are approximately \$56,651, an average 35.1% reduction in the facility’s electric bill. Because annual production is well below annual consumption, the Justice Center remains a net consumer of grid electricity year-round, with minimal export.

## Estimated Monthly Production (Year 1)

Month	Energy to Grid (kWh)
January	34,846
February	46,007
March	63,434
April	68,456
May	75,505
June	79,034

July	80,639
August	74,873
September	65,182
October	53,890
November	34,781
December	26,507
Annual Total	703,154

**Table 4:** Estimated Monthly Energy Production (Year 1)

### **System Production Summary**

- Annual production: 703,154 kWh
- Performance ratio: 85.2%
- Specific yield: 1,410.8 kWh/kWp
- Average facility consumption: ~123,071 kWh/month
- Average system production: ~58,596 kWh/month
- Estimated annual offset: ~48% of Justice Center electricity consumption

### **Domestic Content and FEOC Compliance**

All major equipment is specified to support IRS Domestic Content standards under the Inflation Reduction Act and Foreign Entities of Concern (FEOC) sourcing requirements for IRA Elective Pay eligibility. The Heliene modules and the SolarEdge SE100KUS Domestic Content inverters are both U.S.-manufactured, supporting ARRA Buy American compliance, and carry the project's material-assistance cost ratio under IRS Notice 2026-15. Verde Solutions will furnish Domestic Content and FEOC compliance documentation for each tracked manufactured product — manufacturer certifications together with Verde's company attestation — at procurement, to support the County's Direct Pay ITC filing.

### **Commissioning and Site Impact**

Verde includes a comprehensive commissioning process in the project scope and price, performed by Verde's in-house engineering team and licensed electricians: DC string testing (Voc/Isc per string), ground-continuity and insulation-resistance testing, inverter start-up and configuration, AC power-quality verification at the point of interconnection, rapid-shutdown functionality testing, and monitoring-system validation. A written commissioning report documenting all test results and as-built conditions is provided to the County.

The Justice Center is a secure, occupied County facility. Verde’s approach minimizes disruption: a pre-construction meeting with County staff and security to establish access routes and schedules; a ground-mount array on open land away from building operations; protection of all grounds, drives, and surfaces during construction; and electrical isolation of the array from the facility until final interconnection. The only planned outage occurs during final tie-in to the switchboard, scheduled during a low-demand window and completed in a single coordinated period (typically 4–8 hours) with the County and Alliant. Pile-driving and equipment access will be routed clear of the geothermal loop field and secure areas.

### Safety and Quality Control

Verde prioritizes safety on every project. All field personnel maintain current OSHA certifications (OSHA 30 for supervisors, OSHA 10 for site personnel), CPR/AED/First Aid, and task-appropriate training, with a Site Safety Officer assigned to the project, daily pre-task briefings, and Job Hazard Analyses. Verde’s OSHA EMR history: 2023 = 0.89, 2022 = 0.92, 2021 = 0.94. Quality control follows IEC 62446 standards for grid-connected PV systems, with documented commissioning tests and inspections verifying that the installed system matches the proposed specifications.

### Warranties Summary

Component	Warranty
Solar Modules (Heliene)	15-year product / 25-year linear performance (≈86% of nameplate at year 25)
Inverters (SolarEdge)	20-year extended warranty (included)
Racking System	25-year limited
Workmanship	5 years from Substantial Completion (Verde Solar EPC Agreement, Article 9.1)

**Table 5:** System Product, Performance, and Workmanship Warranties

All manufacturer warranties are transferred to Green Lake County at commissioning, and Verde provides a workmanship warranty covering installation quality consistent with RFB Section 5. This technical solution is designed to deliver the County a reliable, high-performance ground-mount solar PV system that maximizes on-site value, is backed by a comprehensive monitoring platform and optional long-term O&M.

## Cost Proposal

Verde proposes a single, fixed, turnkey lump sum covering all design, engineering, permitting, procurement, prevailing-wage installation, commissioning, monitoring display, incentive support, and the County's \$1,000,000 bonding and insurance. No allowances or owner-supplied materials are assumed.

## Investment Overview

Item	Amount
<b>Total turnkey installation cost</b>	<b>\$1,515,197</b> (\$3.04/Wp)
Wisconsin Focus on Energy 2026 (Non-Residential)	-\$25,000
Federal ITC — 40% (30% base + 10% Domestic Content), via Direct Pay	-\$606,079
<b>Net investment after incentives</b>	<b>\$884,118</b>

The federal ITC is realized by the County through the §6417 Elective (Direct) Pay provision as a direct cash payment. The OEI EIGP Round 6 grant (up to \$250,000 for a standalone solar PV system) would further reduce the County's net cost if awarded; it is not included in the figures above.

**Equipment selected to protect grant and ITC eligibility.** This pricing reflects U.S.-manufactured, ARRA Buy American- and Domestic Content-compliant equipment - including the SolarEdge SE100KUS Domestic Content inverters - selected specifically to preserve the County's eligibility for the OEI EIGP Round 6 grant and the full 40% Direct Pay ITC. Lower-cost equipment that does not meet these federal sourcing requirements is available and would reduce the turnkey price, but would place both the grant and the Domestic Content bonus at risk; Verde has prioritized protecting the County's total incentive value.

## Schedule of Values (Milestone Basis)

Milestone	%	Value
Contract Execution & NTP — design, engineering, interconnection application	20%	\$303,039
Permit Approval — equipment procurement and mobilization	40%	\$606,079
Substantial Completion — installation complete; pre-commissioning	30%	\$454,559
Final Completion & PTO — interconnection, final inspection, handoff	10%	\$151,520
<b>Total</b>	<b>100%</b>	<b>\$1,515,197</b>

A detailed line-item Schedule of Values (engineering, equipment, civil, electrical, commissioning) is available at contract execution.

## Payment Schedule

Verde proposes the milestone-based payment schedule below for the County's cash purchase, matching the Schedule of Values.

Milestone	%	Payment
Contract Execution & NTP	20%	\$303,039
Permit Approval	40%	\$606,079
Substantial Completion	30%	\$454,559
Final Completion & PTO	10%	\$151,520

## Down-Payment Refund Policy (Grant-Contingent Cancellation)

The RFB asks for Verde's policy if Green Lake County fails to qualify for available grants and elects to postpone or cancel the project. Verde proposes the following:

- If the County postpones or cancels before Verde issues equipment purchase orders, the down payment is refundable less only documented, out-of-pocket soft costs actually incurred (engineering hours, interconnection application fees, permit fees).
- If the County postpones, Verde will hold the executed design and pricing for a defined period [term to confirm — e.g., 12 months] so the project can resume without re-engineering cost.
- Verde will not procure long-lead equipment until the County confirms grant qualification or otherwise authorizes procurement in writing, limiting the County's financial exposure during the grant-application period.

## Financial Analysis

The analysis below reflects the validated annual load, firm prevailing-wage pricing, and the assumptions stated. The County is tax-exempt (0% effective federal tax rate); the ITC is monetized through Direct Pay.

Metric	Value
Year 1 energy savings	\$56,651
First-year bill reduction	35.1%
Internal Rate of Return (IRR)	8.7%
Simple payback	12.1 years
30-year cumulative cash flow	\$2,540,372
30-year production	~19,565,263 kWh
Levelized cost of energy (gross)	~\$0.077/kWh
Levelized cost of energy (net of incentives)	~\$0.045/kWh



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### 30 year Cash Flow Analysis

Cash Flow Analysis							
Years	Cash			PV Generation (kWh)	Federal Taxes	Total Cash Flow	Cumulative Cash Flow
	Project Costs	Electric Bill Savings	Focus on Energy		Federal Tax Credit		
Upfront	-\$1,515,197	-	-	-	-	-\$1,515,197	-\$1,515,197
1	-	\$56,651	\$25,000	703,154	\$606,079	\$687,730	-\$827,467
2	-	\$59,186	-	699,638	-	\$59,186	-\$768,281
3	-	\$61,833	-	696,123	-	\$61,833	-\$706,448
4	-	\$64,597	-	692,607	-	\$64,597	-\$641,852
5	-	\$67,482	-	689,091	-	\$67,482	-\$574,370
6	-	\$70,495	-	685,575	-	\$70,495	-\$503,875
7	-	\$73,640	-	682,059	-	\$73,640	-\$430,235
8	-	\$76,923	-	678,544	-	\$76,923	-\$353,311
9	-	\$80,351	-	675,028	-	\$80,351	-\$272,960
10	-	\$83,929	-	671,512	-	\$83,929	-\$189,031
11	-	\$87,664	-	667,996	-	\$87,664	-\$101,367
12	-	\$91,563	-	664,481	-	\$91,563	-\$9,804
13	-	\$95,632	-	660,965	-	\$95,632	\$85,829
14	-	\$99,880	-	657,449	-	\$99,880	\$185,709
15	-	\$104,313	-	653,933	-	\$104,313	\$290,022
16	-	\$108,940	-	650,418	-	\$108,940	\$398,962
17	-	\$113,769	-	646,902	-	\$113,769	\$512,731
18	-	\$118,808	-	643,386	-	\$118,808	\$631,538
19	-	\$124,067	-	639,870	-	\$124,067	\$755,605
20	-	\$129,554	-	636,354	-	\$129,554	\$885,159
21	-	\$135,280	-	632,839	-	\$135,280	\$1,020,439
22	-	\$141,255	-	629,323	-	\$141,255	\$1,161,695
23	-	\$147,489	-	625,807	-	\$147,489	\$1,309,184
24	-	\$153,994	-	622,291	-	\$153,994	\$1,463,178
25	-	\$160,780	-	618,776	-	\$160,780	\$1,623,958
26	-	\$167,860	-	615,260	-	\$167,860	\$1,791,817
27	-	\$175,246	-	611,744	-	\$175,246	\$1,967,063
28	-	\$182,950	-	608,228	-	\$182,950	\$2,150,013
29	-	\$190,987	-	604,713	-	\$190,987	\$2,341,001
30	-	\$199,371	-	601,197	-	\$199,371	\$2,540,372
Totals:	-\$1,515,197	\$3,424,490	\$25,000	19,565,263	\$606,079	\$2,540,372	-

Inputs & Assumptions	
Project Price	\$1,515,197
Avoided Utility Cost	\$0.081 /kWh
Annual Energy Consumption (kWh)	1,476,849 kWh
Energy Consumption Inflation Rate	0.0%
Year 1 Energy Savings	\$56,651
kW-DC	498.4 kW-DC
Projected Annual Energy Production	703,154 kWh
Utility Inflation Rate	5.0%
Solar Degradation Rate	0.50%
Investment Tax Credit (ITC)	40% of system value
Effective Federal Tax Rate	0.0%
Average Soiling Losses	5% of annual production

## Incentive & Grant Support

Green Lake County is a tax-exempt public entity and is positioned to capture significant incentive value. Verde provides hands-on support across each program.

Program	Verde Role
30% Federal ITC — Elective (Direct) Pay, IRC §6417	Provide itemized cost documentation, equipment invoices, commissioning records, and a reference package to support the County’s IRS Direct Pay filing
+10% Domestic Content ITC bonus (included in the 40% above)	Provide domestic-content documentation for the U.S.-made Heliene modules, SolarEdge inverters, and steel/iron racking supporting the bonus credit
OEI Energy Innovation Grant Program (EIGP) Round 6	Confirm equipment eligibility, support the County’s grant application, and provide all required technical documentation. The project is bid with prevailing-wage labor to satisfy grant requirements
Wisconsin Focus on Energy	Identify applicable incentives and support the application (–\$25,000 included above)
U.S. Treasury guidance	Help the County interpret applicable Treasury guidance and identify opportunities to maximize incentive value

## FEOC Compliance

The RFB requires equipment that complies with Foreign Entities of Concern (FEOC) / Prohibited Foreign Entity (PFE) requirements for IRA Elective Pay eligibility, with company and third-party verification. Verde’s equipment selection meets these requirements:

- U.S.-made modules. The Heliene modules are U.S.-manufactured (domestic content and non-PFE) and represent the largest share of the project’s manufactured-product cost, supporting the project’s material-assistance cost ratio under IRS Notice 2026-15.
- Third-party verification via the Certification Safe Harbor. Verde delivers sworn manufacturer certifications documenting each tracked component’s non-PFE cost, together with Verde’s company attestation, retained for six years to support the County’s Direct Pay filing.

Incentive figures in this proposal are estimates based on current law and the proposed design. Verde Solutions is not a tax, legal, or accounting advisor; the County should confirm the final eligibility and treatment of the ITC, Direct Pay, and grant funding with its own tax and legal professionals.

## OEI EIGP Round 6 — Grant Requirements & Verde Support

Green Lake County intends to apply for the Wisconsin Office of Energy Innovation (OEI) Energy Innovation Grant Program (EIGP) Round 6 (Docket 9709-FG-2026) to offset a portion of the project cost. Green Lake County is an eligible applicant — counties qualify under the program’s MUSH-market category. Verde has designed and priced this project to comply with the program’s federal (ARRA) requirements and will support the County, as its Contractor/Consultant, through both the application and post-award compliance. The grant application is due June 30, 2026 at 1:30 PM CT through the PSC Grants System; awards are expected Fall 2026, with a Calendar Year 2027 project performance period.

### Grant Funding

Item	Detail
Eligible activity	Activity 1 — Renewable Energy and Energy Storage
Maximum grant — standalone solar PV	\$250,000
Maximum grant — solar PV + energy storage	\$500,000 (an optional battery system would raise the ceiling and add resiliency)
Funding mechanism	Reimbursement basis — no up-front grant payments; costs reimbursed with documentation
Performance period	~12 months (Calendar Year 2027); pre-award costs are not reimbursable
Match (cost share)	Not required but scored; must be non-federal. Focus on Energy counts as match; the federal ITC does not

The grant is additive to the incentives shown in the Cost Proposal and is not included in the net-investment figures.

### Federal (ARRA) Compliance — Verde Scope

The EIGP is funded through the U.S. Department of Energy under the American Recovery and Reinvestment Act (ARRA) and carries the federal requirements below. Verde has accounted for each in the design and price.

Requirement	Verde Commitment
<b>Davis-Bacon prevailing wage</b>	All laborers and mechanics paid at or above the federal Davis-Bacon wage determination for Green Lake County; weekly certified payroll (Form WH-347) submitted. Already included in the turnkey price

<b>ARRA Buy American</b>	Verde sources iron, steel, and manufactured goods to meet the ARRA Buy American requirement; the Heliene modules and SolarEdge inverters are U.S.-manufactured and the racking steel is domestic
<b>NEPA</b>	The ground-mount array involves ground disturbance; Verde prepares the Environmental Questionnaire (EQ-1), Scope of Work, and Layout of Project for DOE review and completes the OEI Environmental Screening Tool at onboarding
<b>Historic preservation (SHPO)</b>	Verde supports the State Historic Preservation Office review under the Wisconsin programmatic agreement
<b>Reporting</b>	Verde provides documentation to support the County’s quarterly, annual, and final ARRA reporting (wage rates, equipment sourcing, environmental, historic preservation)

### **Application Support — Verde Deliverables**

To strengthen the County’s merit score, Verde will provide the technical inputs the evaluation criteria call for:

- System size (kW) and estimated annual and lifetime production and savings (kWh) — supporting the Cost Savings & Payback and Energy Savings & Environmental Impact criteria.
- Greenhouse-gas and environmental-impact figures via the EPA equivalencies methodology.
- Payback methodology and economic-impact narrative (local jobs, cost savings, stimulus).
- Equipment eligibility and Buy American sourcing documentation.
- Technical attachments (system design and production report) to support the application uploads.

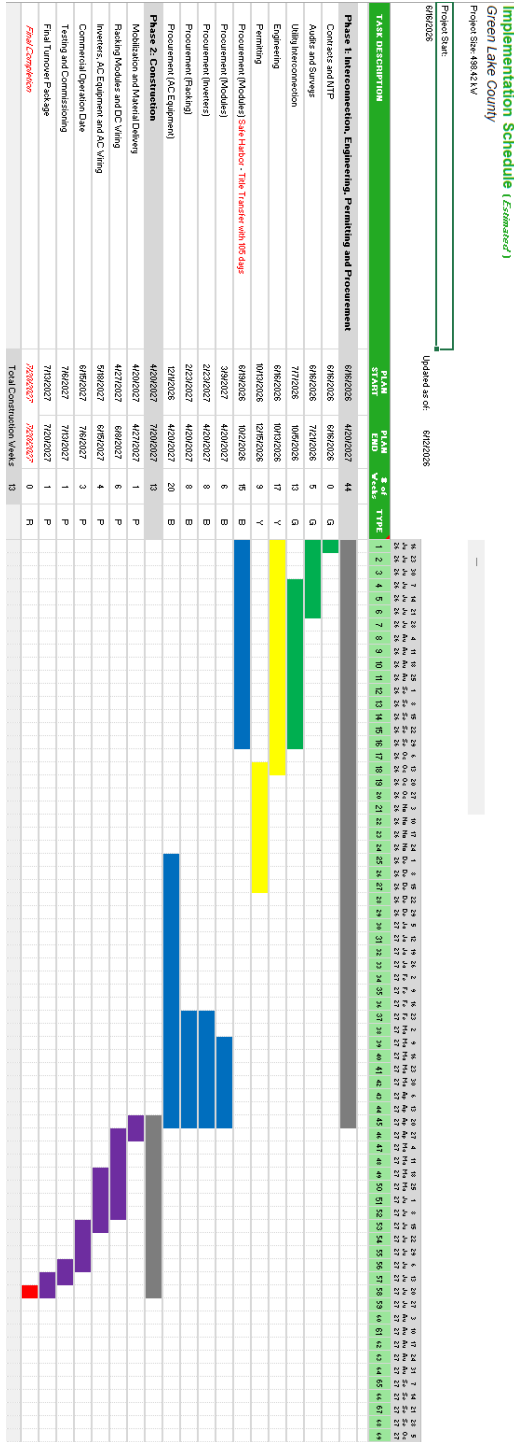
## Project Timeline & Coordination

Following contract award after the June 16, 2026 County Board meeting, Verde has prepared a detailed implementation schedule running from Notice to Proceed (June 16, 2026) through Final Completion (July 20, 2027). Engineering, Alliant interconnection, permitting, and equipment procurement proceed through mid-2026 into spring 2027, with construction and commissioning concentrated in the April–July 2027 weather window. The system reaches Commercial Operation by mid-June 2027 — well ahead of the December 31, 2027 placed-in-service deadline for the Direct Pay ITC. The schedule reflects the safe-harbor path, with module procurement and title transfer beginning June 19, 2026 to establish the 5% safe harbor.

Phase	Activities	Timeframe
Contract Execution & NTP	Notice to proceed	June 16, 2026
Engineering & Design	Audits and surveys, final engineering, stamped plan set	June – Oct 2026
Safe-Harbor Procurement	Module procurement and title transfer (5% safe harbor)	June – Oct 2026
Utility Interconnection	Alliant (WPL) application through approval	July – Oct 2026
Permitting	AHJ building and electrical permits	Oct – Dec 2026
Equipment Procurement	AC equipment, inverters, racking, and modules	Dec 2026 – Apr 2027
Construction	Mobilization, foundations, racking, modules, DC/AC wiring	Apr – June 2027
Commissioning & PTO	Testing, Alliant witness/PTO, monitoring + Delta Controls go-live	June – July 2027
Commercial Operation & Final Completion	System operational; final turnover package	June 15 – July 20, 2027

Engineering, utility interconnection, and permitting run concurrently through 2026 to protect the schedule. Construction is scheduled for the spring–summer 2027 window to avoid Wisconsin winter ground conditions, and the procurement sequence is coordinated with the EIGP Round 6 grant-award timing. If the County elects not to safe-harbor, module procurement shifts to early 2027; the system still reaches commercial operation well before the December 31, 2027 ITC deadline.

## Project Implementation Gantt Chart



## **Securing the Direct Pay ITC — Two Paths**

The federal Investment Tax Credit (modeled here at 40% with the Domestic Content bonus, claimed through the §6417 Direct Pay provision) can be secured along either of two paths. Verde will support whichever the County prefers.

**Safe Harbor (begin construction in 2026).** By incurring at least 5% of qualifying project costs before **July 4, 2026**, the County establishes that construction has commenced, locking in ITC eligibility under the continuity safe harbor and removing the requirement to be operational by the end of 2027. To use this path, the County would execute the contract and make the project down payment **by Thursday, June 18, 2026** — immediately following the June 16 County Board award — which gives Verde sufficient time to procure equipment and transfer title to the County (representing at least 5% of project cost) before the July 4 deadline.

**Option 2 — Placed in Service by December 31, 2027.** If the project is not safe-harbored, the system must be installed and placed in service (operational) by **December 31, 2027** to maintain the Direct Pay ITC. Verde's design, procurement, and construction schedule is structured to energize the system ahead of this deadline, sequencing construction and the Alliant interconnection in coordination with the County and the EIGP Round 6 grant award.

Either path preserves the full ITC value reflected in this proposal; the choice depends on the County's preferred timing and procurement authorization.

## References

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**Chicagoland Skydiving Center**

Douglas Smith  
President/CEO  
815-561-3663  
dsmith@skydivecsc.com

**O'Keefe Properties**

John O'Keefe  
Owner  
847-330-0800  
okmcbilling@gmail.com

## **Narrative Summary**

This narrative summarizes Verde's proposal and answers the RFB's proposer questions. Our quote reflects a complete, turnkey system as described above — \$1,515,197 (\$3.04/Wp), built with prevailing-wage labor to satisfy the EIGP grant, and sized to offset approximately 48% of the Justice Center's annual load so nearly all output is consumed on-site at retail value.

### **1. How does Verde ensure consistent, effective communication throughout the project?**

A single Operations Manager — Shannon Myers — serves as the County's main point of contact from contract through commissioning, supported by a dedicated Project Coordinator. Verde provides a clear project schedule at kickoff, regular progress updates at defined milestones, and direct access to the engineering and Fresh Coast Solar construction teams. Because development, engineering, and construction are all in-house, the County is never handed off between disconnected firms.

### **2. What is the typical timeline for a project of this scope, and what do we anticipate here?**

Verde typically delivers projects of this size in 6–9 months from notice to proceed to commissioning (see Project Timeline). For Green Lake County, we anticipate aligning procurement and construction with EIGP Round 6 grant timing and the County's Q2 2027 construction target, with engineering and interconnection beginning shortly after award and grant confirmation.

### **3. Does Verde provide ongoing O&M services? What is included and for how long?**

Yes. Verde offers ongoing operations and maintenance, which can include production monitoring and reporting, preventive maintenance, inverter and module inspection, vegetation management, and corrective repairs. O&M scope and term can be tailored to the County's preference and priced as an option.

### **4. How does Verde handle change orders or unexpected conditions?**

Verde's thorough up-front site assessment minimizes surprises. When an unexpected condition arises (for example, subsurface obstructions or the geothermal loop field affecting foundation locations), Verde documents the condition, presents the County with options and transparent pricing in a written change order, and proceeds only on written County authorization. We do not perform out-of-scope work or incur additional cost without approval.

## **5. Down-payment refund policy (grant-contingent cancellation)**

The RFB asks for Verde's policy if Green Lake County fails to qualify for available grants and elects to postpone or cancel the project. Because the County may pursue either ITC path described under Securing the Direct Pay ITC, this policy addresses both.

**If the County does not safe-harbor (Option 2 — placed-in-service path):** Verde will not procure long-lead equipment until the County confirms grant qualification or otherwise authorizes procurement in writing. If the County postpones or cancels before Verde issues equipment purchase orders, the down payment is fully refundable less only documented, out-of-pocket soft costs actually incurred (engineering, interconnection application fees, and permit fees). Verde will hold the executed design and pricing for an agreed upon period of time so the project can resume without re-engineering cost.

**If the County elects to safe-harbor (Option 1 — begin-construction path):** Establishing the 5% safe harbor requires Verde to procure equipment and transfer title before the July 4, 2026 deadline, ahead of the Fall 2026 grant decision. If the County subsequently postpones or cancels, the County will receive a full refund of all amounts paid, less a retention equal to 6% of the total project cost — 5% attributable to the safe-harbor equipment procurement and 1% for overhead and time invested (approximately \$90,912 on the \$1,515,197 project).

## Pricing Assumptions & Exclusions

Item	Detail
Price basis	\$1,515,197 turnkey (\$3.04/Wp DC); valid 15 days from the 6/11/2026 preliminary proposal; firm pricing confirmed after final design validation
Included	Design, engineering, permitting, equipment, prevailing-wage installation, commissioning, public monitoring display, incentive support, and \$1,000,000 bonding & insurance
Labor	Prevailing wage — included in the price to satisfy the OEI EIGP Round 6 grant requirements
<b>Excludes — fencing</b>	Site fencing is not included in the price
<b>Excludes — critter guard</b>	RFB-required critter guard is not priced pending County confirmation of type/extent; furnished as a priced add-alternate
Excludes — other	Unforeseen civil/geotech work (rock excavation, dewatering, imported fill), utility-driven switchboard upgrades, hazardous-material handling, and Delta Controls third-party integration fees beyond the standard data handoff
EIGP Round 6 grant	Not quantified in the figures above; if awarded, further reduces the County's net cost

## Compliance, Insurance & Bonding

Requirement	Verde Response
Codes & regulations	Verde adheres to all applicable local, state, and national codes (NEC, ICC, AHJ, Wisconsin requirements)
Alliant interconnection	Verde facilitates the full Alliant Energy interconnection process, application through PTO
Prevailing wage	The project is bid with prevailing-wage labor and certified payroll, consistent with the OEI EIGP Round 6 grant requirements
Building & grounds protection	Verde protects all building surfaces and grounds during installation per a site protection plan
Insurance & bonding (\$1,000,000)	<b>Included in the turnkey price.</b> Verde provides evidence of insurance and bonding meeting the County's \$1,000,000 requirement upon award; coordinated with County Risk Management
Workmanship warranty	5-year workmanship warranty (above)
Litigation	Verde, its team, and officers have not been party to any lawsuit involving the performance of installed equipment
Wisconsin licensure	Verde will hold or obtain all contractor/electrical licensure required to perform the work in Wisconsin

**From:** [Van Meel, Michael](#)  
**To:** [Stobbe, Samantha](#)  
**Subject:** Fw: Green Lake County Justice Center Solar Project - Bid 5  
**Date:** Friday, June 12, 2026 1:02:48 PM  
**Attachments:** [FINAL Green Lake County Proposal.pdf](#)

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**From:** Andrew Fulton (Ziegler ES) <Andrew.Fulton@ziegleres.com>  
**Sent:** Friday, June 12, 2026 11:01 AM  
**To:** Van Meel, Michael <mvanmeel@greenlakecountywi.gov>  
**Subject:** Green Lake County Justice Center Solar Project

[CAUTION: EXTERNAL SENDER This email originated from outside Green Lake County. Do not click links or open attachments unless you recognize the sender and know the content is safe.]  
Mike,

Attached is Ziegler Energy Solutions proposal for the Green Lake County Justice Center Solar Project. Please confirm that you have received this.

Thank you and best regards,

**Andrew Fulton**  
Sales Engineer | Ziegler Energy Solutions  
357 SE 15<sup>th</sup> St | Des Moines, IA 50317  
515.957.3987 Office  
515.201.5834 Cell  
800.352.0647 Main Office  
[www.ziegleres.com](http://www.ziegleres.com)

**ZIEGLER**  
ENERGY SOLUTIONS



**PRIMARY DEALER**  
Sales | Installation | Service

**KEMPOWER**



**CERTIFIED PARTNER**  
Sales | Installation | Service

# RFP RESPONSE:

## Ground Mount Solar Array

### Green Lake Justice Center

571 County Road A

Green Lake, WI 54941

### Submitted By:

**Andrew Fulton**

*Sales Engineer*

515-201-5834

[Andrew.Fulton@ziegleres.com](mailto:Andrew.Fulton@ziegleres.com)

Ziegler Energy Solutions



## City of Green Lake

*Home to the deepest natural inland lake in Wisconsin!*



Solar PV



Battery Storage



Microgrids



EV Chargers

# Ziegler Background / History

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For over 110 years, both small and large commercial businesses, communities, and entire municipalities have relied on Ziegler for dependable energy, grid backup, and sustainable, continuous power. Ziegler is currently developing renewable energy solutions that can lower operating costs by replacing conventional fuels, resulting in reduced electricity expenses for businesses and communities while meeting sustainability goals.

Ziegler has been in business since 1914 and has been involved in power generation since the 1930s. Over the past five years, we have installed over 500 MW of power generation systems operating in a variety of applications and fuels, including diesel, natural gas, digester gas, landfill gas, and solar. We are proud to be recognized as the leader in large utility-grade systems.

Ziegler Energy Solutions is a Ziegler Company. Ziegler is one of the largest Caterpillar dealers in North America. Ziegler Energy Solutions offers development, design, procurement and construction of turnkey hybrid energy systems.



**ZIEGLER**  
C O M P A N I E S



## Company Facts:

**1914**

**Caterpillar dealer**

**2,400**

**Employees**

**31**

**Locations**

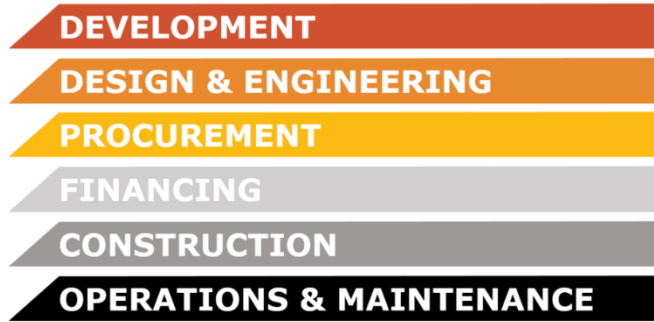
## Markets:

Construction | Agriculture | Mining | Paving | Forestry | Power Generation | Industrial Engines

# Working with Us – Ziegler Advantages

## Built by Ziegler

Ziegler Energy Solutions is your turnkey developer. We handle all aspects of the your project including site analysis, procurement of all materials, construction and the long term O&M of the asset. Our engineers will design a system that works with your existing infrastructure and accomplishes your goals whether they be financial or power. Our divisions work together to provide our customers with the same experience they've come to expect from Ziegler.



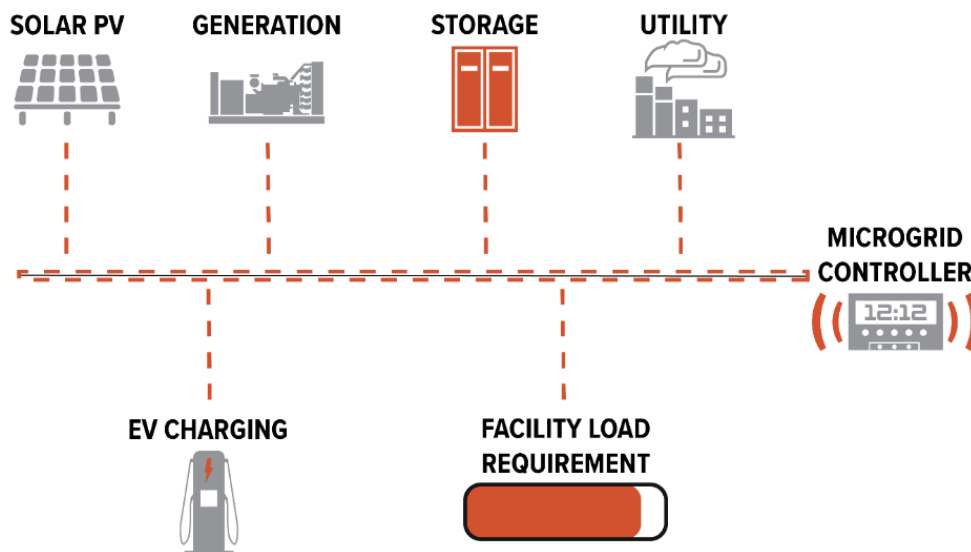
## U.S. Made – Buy American Compliant

At Ziegler Energy Solutions, we prioritize quality by using top-tier hardware and software for all our projects. We take pride in sourcing products that are Buy American compliant whenever possible. Many of our solar and storage projects utilize exclusively qualifying products, enabling us to pass on additional incentives and discounts to our customers. This commitment to quality and compliance sets Ziegler Energy Solutions apart from the competition.



## Integrating Multiple Generation Systems

Ziegler Energy Solutions is leading the charge of the energy transition, integrating renewable power with smart energy storage and conventional diesel- or gas-fueled power generation. Controlling your energy has never been easier. With a wealth of experience collaborating with utilities on intricate distributed generation projects, we can develop customized solar arrays, ranging from 50kW to 100MW. These solutions can fit right into your current setup so that you can integrate them with your conventional diesel and gas generator sets for a powerful and efficient energy mix.



## Narrative Summary

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Ziegler Energy Solutions is pleased to present a comprehensive renewable energy initiative designed to advance Green Lake County's long-term sustainability goals. The proposal centers on a 525 kW AC ground-mounted solar array, engineered with fully FEOC-compliant equipment to ensure alignment with all federal sourcing requirements. Drawing on the County's historical consumption patterns, the system is modeled to offset roughly 60% of annual electrical usage, reducing reliance on the grid and lowering operational costs for decades to come.

To support a clean, reliable, and future-proof interconnection, the project incorporates an exterior current-transformer (CT) cabinet, which will serve as the dedicated tie-in point for the new solar infrastructure. The interconnection itself is expected to require 4–6 hours, during which the facility will seamlessly transition to its existing backup generator to maintain continuous operation. As part of the installation, Ziegler will also complete underground boring beneath the parking lot to route electrical wiring discreetly and safely, preserving site aesthetics and minimizing surface disruption.

Throughout the project, Ziegler Energy Solutions places a strong emphasis on clear, consistent communication. From early design review through final commissioning, the County will receive structured updates via email and focused Microsoft Teams meetings, ensuring transparency, alignment, and a smooth project experience. These touchpoints are designed to keep stakeholders informed and confident at every stage, supported by Ziegler's commitment to proactive coordination and responsive service.

The anticipated project timeline spans 12 months, shaped by engineering requirements, utility coordination, and equipment lead times. Because Green Lake County is pursuing an EIGP grant, Ziegler proposes—pending County approval—to complete or nearly complete engineered drawings prior to the grant award. This strategic preparation positions the County to begin construction promptly upon approval, with installation targeted for spring 2027.

To ensure long-term system reliability, Ziegler offers a comprehensive five-year Operations & Maintenance (O&M) service plan, included as part of this proposal. The plan provides annual inspections, testing, and performance evaluations tailored to the system's design, helping safeguard production levels and extend equipment life.

Ziegler's discovery and proposal process is intentionally structured to minimize the potential for change orders. None are anticipated at this time. Should unforeseen conditions arise, Ziegler will work collaboratively with Green Lake County to evaluate alternatives and determine the most effective path forward, ensuring clarity, transparency, and well-informed decision-making.

# Schematic Design Layout

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## System Design & Performance

Module DC Nameplate	654.84 kW
Inverter AC Nameplate	525 kW
DC/AC Ratio	1.25
Annual Production	924,981 kWh/Year <i>See PVWatts Below</i>

## Product Warranty

Heliene 535W 144HCM10	15 Year Workmanship Warranty 25 Year Performance Guarantee – Linear Module
Solectria XGI1500-175/175-480	10 Year Warranty
Omco Fixed Tilt Racking with C Channel Posts	20 Year Warranty

# Technical Specifications

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<b>Major Equipment Manufacturers</b>	Heliene Modules (qty: 1224), Solectria Inverters 175kW (qty:3), OMCO C-Channel
<b>Description of Technology</b>	Specification sheets included below
<b>Electrical interconnection and metering/net-metering</b>	Project Managers will initiate interconnection agreement with Alliant Energy
<b>DC and AC capacity rating</b>	654.84kW DC 525kW AC 1.25 DC/AC ratio
<b>Expected annual energy production in kWh</b>	924,981 kWh
<b>Communications, control &amp; instrumentation</b>	eGauge Pro, EG4130 Monitoring System
<b>Project Management plan</b>	Project oversight & management by Ziegler through dedicated manager
<b>Start-up &amp; testing</b>	Project manager will be present for site commissioning
<b>Design life loading (wind, seismic, etc.)</b>	Wind loading up to 180mph (see specification sheet below)
<b>Description of frequency &amp; duration of scheduled maintenance</b>	Maintenance recommendations and specifications to be provided with final system.
<b>Data acquisition system</b>	eGauge Pro, Site-specific actual kWh production, Site-specific instantaneous maximum kWh production
<b>Proposed safety and interconnection standards</b>	Recognized by UL & NEC

# Energy Production

## RESULTS

 [Print Results](#)

# 924,981 kWh/Year\*

System output may range from 866,060 to 980,850 kWh per year near this location.  
Click [HERE](#) for more information.

Month	Solar Radiation ( kWh / m <sup>2</sup> / day )	AC Energy ( kWh )
January	2.49	45,101
February	4.43	68,502
March	5.84	93,804
April	5.38	85,048
May	6.02	96,833
June	6.47	98,779
July	6.55	101,796
August	6.13	96,507
September	5.39	84,551
October	3.90	65,957
November	2.92	49,157
December	2.15	38,947
<b>Annual</b>	<b>4.81</b>	<b>924,982</b>

## Pricing & Incentives

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<b>System Pricing &amp; Incentives</b>	
<b>Full Turnkey Price:</b>	<b>\$1,299,653.00</b>
<i>ITC Direct Pay (30%)</i>	<i>- \$389,896.00</i>
<i>OEI EIGP Grant</i>	<i>-\$250,000</i>
<b>Total Incentives</b>	<b>- \$639,896.00</b>
<b>Grand Lakes Justice Center Total Outlay</b>	<b>\$659,757.00</b>

### Proposed Payment Terms:

- 10% - Downpayment
- 40% - Procurement
- 40% - Construction Begins
- 10% - Commission

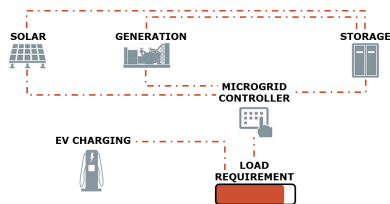
## Operations & Maintenance – Pricing included in bid proposal

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- Visual Inspection: PV Modules, Wire and Connections, Mounting System
- Electrical Testing: Voltage/Current Measurements, Insulation Resistance Testing, IV Curve Tracing, System Grounding
- Inverter & Electrical Components Maintenance: Inverter Inspection & Testing, Fuse & Breaker Checks
- Performance Analysis: Compare Actual Vs Expected Output
- Documentation & Reporting: Maintenance Log, Performance & Warranty Compliance
- Recommended Repairs & Upgrades

## Prepared For

Green Lake Justice Center  
920-229-5119  
mvanmeel@greenlakecountywi.gov



*"I would definitely recommend Ziegler and the equipment they sell and service. Once I found out Ziegler installed solar, I was in. Reliability is everything so that's why I choose Ziegler."*

**- Hagen Farms**

*"We were looking for a way to reduce our expenses. Ziegler came to me with an in-depth analysis of everything that needed to go on. Four months in we were already receiving credit balances on our electricity."*

**- Protech Automotive**

*"The concept of solar at a wastewater treatment plant makes complete sense. Our peak demand matches the solar production. Our solar array generates 70% of our energy. Ziegler took care of everything, making it seamless on our end."*

**- Iowa Great Lakes Sanitary**

## Design #1

## Prepared By

Andrew Fulton  
515-201-5834  
Andrew.Fulton@zieglercat.com



# Table of Contents

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- 1 Project Summary ----- 3
- 2 Project Details ----- 4
  - 2.1 Test Meter #1 ----- 4
    - 2.1.1 PV System Details ----- 4
    - 2.1.2 Rebates and Incentives ----- 5
    - 2.1.3 Utility Rates ----- 6
    - 2.1.4 Current Electric Bill ----- 6
    - 2.1.5 New Electric Bill ----- 7
- 3 Cash Flow Analysis ----- 8
  - 3.1 Cash Purchase ----- 8
- 4 Detailed Cash Flow Analysis ----- 9
  - 4.1 Cash Purchase ----- 9

# 1 Project Summary

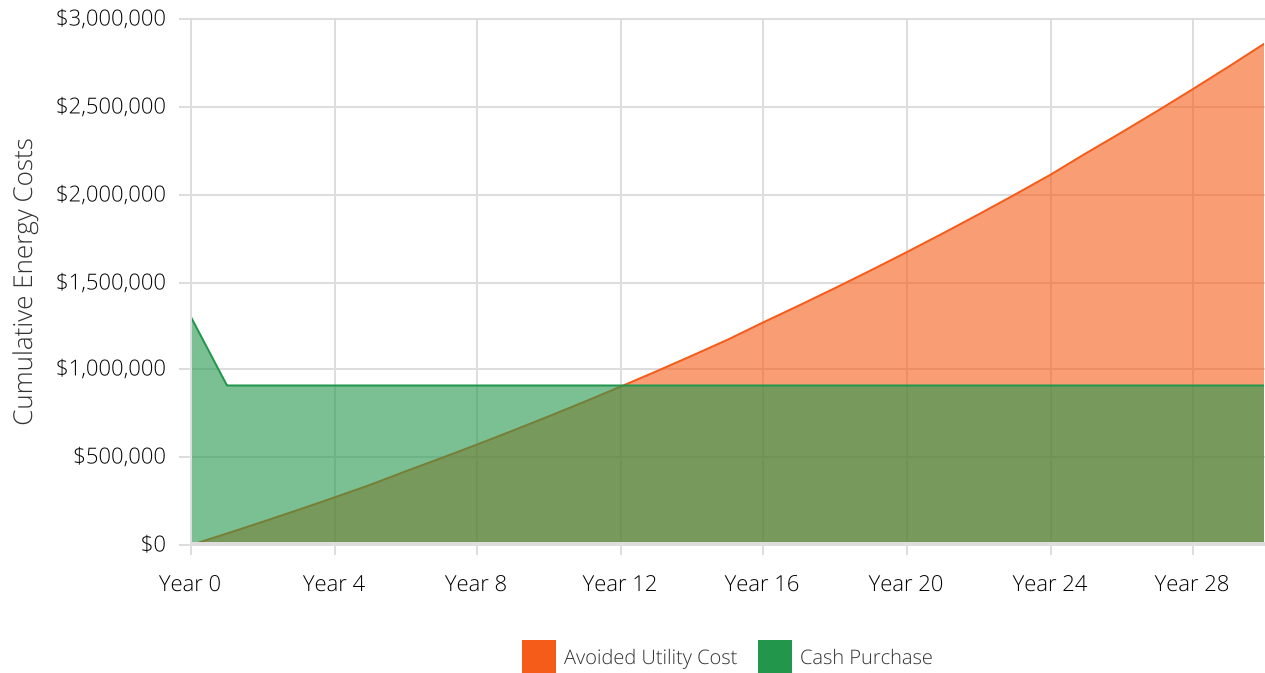
Payment Options	Cash Purchase
Upfront Payment	\$1,299,653
Total Incentives	\$389,896
Cost After Incentives	\$909,757
IRR - Term	8.0%
LCOE PV Generation	\$0.037 /kWh
Payback Period	12.1 Years
Electric Bill Savings - Term	\$2,861,780

## Combined Solar PV Rating

Power Rating: 654,840 W-DC

Power Rating: 263,576 W-AC-CEC

**Cumulative Energy Costs By Payment Option**



# 2.1.1 PV System Details

## General Information

Facility: Test Meter #1  
 Address: 571 Co Rd A Green Lake WI 54941

## Solar PV System Rating

Power Rating: 654,840 W-DC  
 Power Rating: 263,576 W-AC-CEC

## Solar PV Equipment Description

Solar Panels: (1224) Heliene 144HC M10 535W  
 Inverters: (3) Solectria Solar XGI 1500 175-480

## Energy Consumption Mix

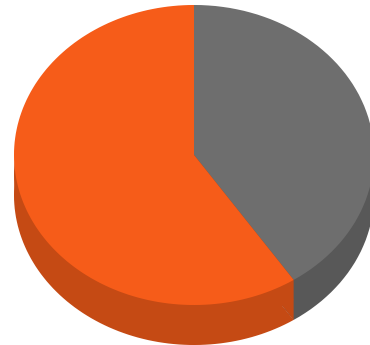
Annual Energy Use: 1,478,348 kWh

## Solar PV Equipment Typical Lifespan

Solar Panels: Greater than 30 Years  
 Inverters: 15 Years

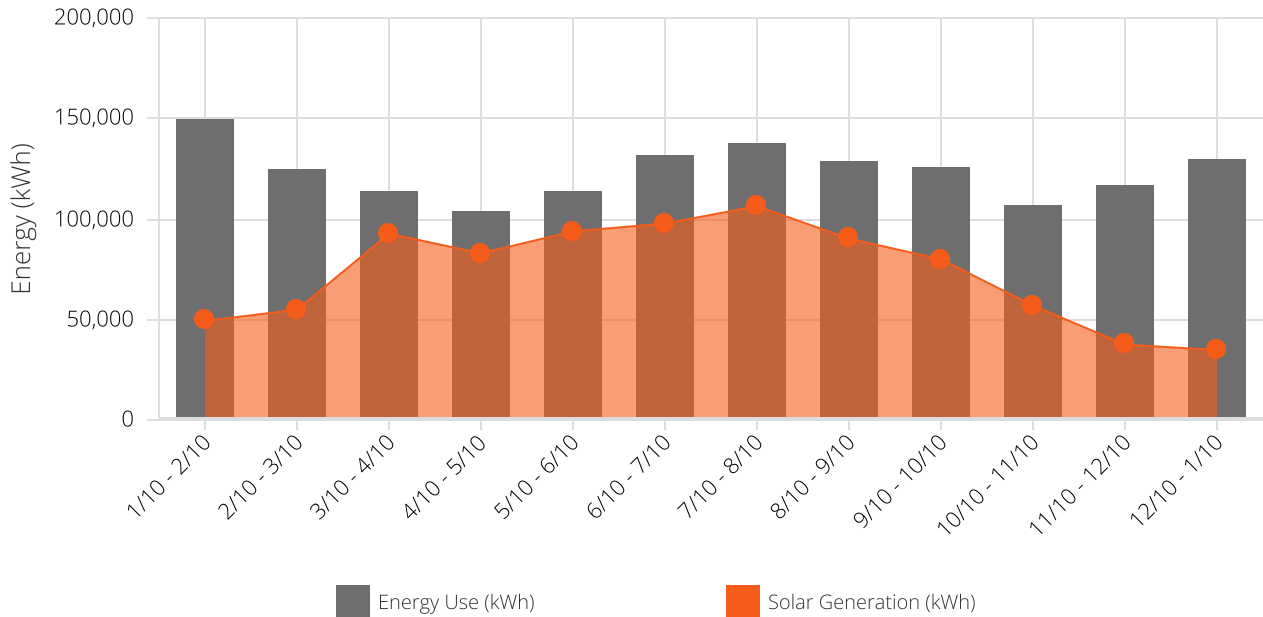
## Solar PV System Cost and Incentives

Solar PV System Cost	\$1,299,653
Federal Tax Credit	-\$389,896
<b>Net Solar PV System Cost</b>	<b>\$909,757</b>



Utility	601,162 kWh (40.66%)
Solar PV	877,186 kWh (59.34%)

## Monthly Energy Use vs Solar Generation



## 2.1.2 Rebates and Incentives

This section summarizes all incentives available for this project. The actual rebate and incentive amounts for this project are shown in each example.

### **Investment Tax Credit (ITC) - 30%**

A federal Investment Tax Credit (ITC) for Photovoltaic (PV) projects at a rate of 30% of the total PV system cost. Unlike tax deductions, this tax credit can be used to directly offset your tax liability dollar for dollar. The PV ITC allows a carryback period of 3 years, and the carryforward period of 22 years, in cases where the tax credit exceeds a customer's tax liability in the 'placed-in-service' year.

For PV projects greater than 1 MW AC in size, prevailing wage and apprenticeship requirements take effect in order to qualify for the full 30% "increased rate", rather than a "base rate" which would only qualify for a 6% ITC. Projects with an output of less than 1 megawatt qualify for the "increased rate" irrespective of if prevailing wage or apprenticeship requirements are met.

Total Incentive Value: \$389,896

## 2.1.3 Utility Rates

The table below shows the rates associated with your current utility rate schedule (CG-2 TOD). Your estimated electric bills after solar are shown on the following page.

Customer Charges				Energy Charges				Demand Charges			
Season	Charge Type	Rate Type	CG-2 TOD	Season	Charge Type	Rate Type	CG-2 TOD	Season	Charge Type	Rate Type	CG-2 TOD
S	Flat Rate	per day	\$2.32	S	High Rate	Import	\$0.11934	S	Flat Rate	Import	\$3.10
W	Flat Rate	per day	\$2.32	S	Regular Rate	Import	\$0.05714	W	Flat Rate	Import	\$3.10
T1	Flat Rate	per day	\$2.32	S	Low Rate	Import	\$0.04394	T1	Flat Rate	Import	\$3.10
T2	Flat Rate	per day	\$2.32	W	High Rate	Import	\$0.11934	T2	Flat Rate	Import	\$3.10
S	Flat Rate: Charges Vary With Units per billing period \$1.00			W	Regular Rate	Import	\$0.05714	S	On Peak Demand	Import	\$16.80
W	Flat Rate: Charges Vary With Units per billing period \$1.00			W	Low Rate	Import	\$0.04394	W	On Peak Demand	Import	\$16.80
T1	Flat Rate: Charges Vary With Units per billing period \$1.00			T1	Regular Rate	Import	\$0.05714	T1	On Peak Demand	Import	\$16.80
T2	Flat Rate: Charges Vary With Units per billing period \$1.00			T1	Low Rate	Import	\$0.04394	T2	On Peak Demand	Import	\$16.80
				T2	Regular Rate	Import	\$0.05714				
				T2	Low Rate	Import	\$0.04394				

## 2.1.4 Current Electric Bill

The table below shows your annual electricity costs based on the most current utility rates and your previous 12 months of electrical usage.

**Rate Schedule:** WPL - CG-2 TOD

Time Periods	Energy Use (kWh)				Max Demand (kW)		Charges				
	Bill Ranges & Seasons	Total	High Rate	Regular Rate	Low Rate	NC / Max	On Peak Demand	Other	NBC	Energy	Demand
1/10/2026 - 2/10/2026 W	149,663	14,114	63,336	72,213	396	342	\$72	\$0	\$8,476	\$6,983	\$15,531
2/10/2025 - 3/10/2025 W / T1	124,703	10,734	63,355	50,614	399	351	\$65	\$0	\$7,125	\$6,615	\$13,805
3/10/2025 - 4/10/2025 T1	113,363	-	64,638	48,725	303	240	\$72	\$0	\$5,834	\$5,269	\$11,175
4/10/2025 - 5/10/2025 T1	103,476	-	60,792	42,684	255	249	\$70	\$0	\$5,349	\$5,420	\$10,839
5/10/2025 - 6/10/2025 T1 / S	113,147	9,087	53,751	50,310	273	273	\$72	\$0	\$6,366	\$5,752	\$12,190
6/10/2025 - 7/10/2025 S	131,252	35,882	40,792	54,578	318	318	\$70	\$0	\$9,011	\$6,579	\$15,660
7/10/2025 - 8/10/2025 S	137,592	36,941	42,095	58,556	306	306	\$72	\$0	\$9,387	\$6,378	\$15,836
8/10/2025 - 9/10/2025 S / T2	128,095	24,605	49,231	54,259	306	306	\$72	\$0	\$8,134	\$6,217	\$14,422
9/10/2025 - 10/10/2025 T2	124,964	-	73,389	51,575	294	291	\$70	\$0	\$6,460	\$6,126	\$12,655
10/10/2025 - 11/10/2025 T2	106,187	-	57,025	49,163	249	249	\$72	\$0	\$5,419	\$5,420	\$10,911
11/10/2025 - 12/10/2025 T2 / W	116,512	4,233	61,919	50,360	333	279	\$70	\$0	\$6,256	\$5,536	\$11,862
12/10/2025 - 1/10/2026 W	129,394	12,894	59,225	57,275	342	294	\$72	\$0	\$7,440	\$6,176	\$13,688
<b>Total</b>	<b>1,478,348</b>	<b>148,490</b>	<b>689,548</b>	<b>640,312</b>	<b>-</b>	<b>-</b>	<b>\$846</b>	<b>-</b>	<b>\$85,257</b>	<b>\$72,470</b>	<b>\$158,573</b>

# 2.1.5 New Electric Bill

Rate Schedule: WPL - CG-2 TOD

Time Periods	Energy Use (kWh)				Max Demand (kW)		Charges				
	Bill Ranges & Seasons	Total	High Rate	Regular Rate	Low Rate	NC / Max	On Peak Demand	Other	NBC	Energy	Demand
1/10/2026 - 2/10/2026 W	100,371	13,995	31,658	54,718	396	284	\$72	\$0	\$6,017	\$5,999	\$12,087
2/10/2025 - 3/10/2025 W / T1	69,846	10,434	26,156	33,255	376	270	\$65	\$0	\$4,354	\$5,240	\$9,659
3/10/2025 - 4/10/2025 T1	20,652	-	-5,506	26,157	303	162	\$72	\$0	\$1,337	\$3,949	\$5,358
4/10/2025 - 5/10/2025 T1	20,580	-	1,703	18,877	255	160	\$70	\$0	\$1,313	\$3,916	\$5,299
5/10/2025 - 6/10/2025 T1 / S	19,293	-2,526	2,190	19,629	249	185	\$72	\$0	\$1,279	\$4,133	\$5,484
6/10/2025 - 7/10/2025 S	33,497	-17,385	22,114	28,768	296	231	\$70	\$0	\$1,663	\$5,108	\$6,841
7/10/2025 - 8/10/2025 S	31,212	-19,275	21,522	28,964	291	214	\$72	\$0	\$1,515	\$4,823	\$6,410
8/10/2025 - 9/10/2025 S / T2	37,868	-6,565	13,358	31,075	288	217	\$72	\$0	\$2,200	\$4,605	\$6,876
9/10/2025 - 10/10/2025 T2	45,009	-	15,749	29,260	258	238	\$70	\$0	\$2,501	\$5,226	\$7,797
10/10/2025 - 11/10/2025 T2	49,250	-	19,218	30,032	237	190	\$72	\$0	\$2,653	\$4,420	\$7,145
11/10/2025 - 12/10/2025 T2 / W	79,001	4,233	32,926	41,842	333	232	\$70	\$0	\$4,333	\$4,631	\$9,033
12/10/2025 - 1/10/2026 W	94,582	12,893	33,706	47,983	342	241	\$72	\$0	\$5,608	\$5,276	\$10,956
Total	601,161	-4,196	214,794	390,560	-	-	\$846	-	\$34,774	\$57,326	\$92,945

Annual Electricity Savings: \$65,628

## 3.1 Cash Purchase

### Assumptions and Key Financial Metrics

IRR - Term	8.0%	Net Present Value	\$851,793	Payback Period	12.1 Years
ROI	150.2%	PV Degradation Rate	0.50%	Discount Rate	3.0%
Energy Cost Escalation Rate	3.0%	Federal Income Tax Rate	0.0%	State Income Tax Rate	0.0%
Total Project Costs	\$1,299,653				

Years	Project Costs	Electric Bill Savings	Federal Tax Effect	Total Cash Flow	Cumulative Cash Flow
Upfront	<b>-\$1,299,653</b>	-	-	<b>-\$1,299,653</b>	<b>-\$1,299,653</b>
1	-	\$65,628	\$389,896	\$455,524	<b>-\$844,129</b>
2	-	\$67,259	-	\$67,259	<b>-\$776,871</b>
3	-	\$68,928	-	\$68,928	<b>-\$707,942</b>
4	-	\$70,638	-	\$70,638	<b>-\$637,305</b>
5	-	\$72,387	-	\$72,387	<b>-\$564,917</b>
6	-	\$74,179	-	\$74,179	<b>-\$490,739</b>
7	-	\$76,012	-	\$76,012	<b>-\$414,727</b>
8	-	\$77,889	-	\$77,889	<b>-\$336,838</b>
9	-	\$79,810	-	\$79,810	<b>-\$257,028</b>
10	-	\$81,776	-	\$81,776	<b>-\$175,252</b>
11	-	\$83,788	-	\$83,788	<b>-\$91,464</b>
12	-	\$85,848	-	\$85,848	<b>-\$5,616</b>
13	-	\$87,955	-	\$87,955	\$82,340
14	-	\$90,112	-	\$90,112	\$172,452
15	-	\$92,319	-	\$92,319	\$264,771
16	-	\$94,578	-	\$94,578	\$359,348
17	-	\$96,888	-	\$96,888	\$456,237
18	-	\$99,253	-	\$99,253	\$555,489
19	-	\$101,671	-	\$101,671	\$657,161
20	-	\$104,146	-	\$104,146	\$761,307
21	-	\$106,678	-	\$106,678	\$867,985
22	-	\$109,268	-	\$109,268	\$977,253
23	-	\$111,917	-	\$111,917	\$1,089,170
24	-	\$114,627	-	\$114,627	\$1,203,797
25	-	\$117,399	-	\$117,399	\$1,321,196
26	-	\$120,234	-	\$120,234	\$1,441,430
27	-	\$123,133	-	\$123,133	\$1,564,563
28	-	\$126,098	-	\$126,098	\$1,690,661
29	-	\$129,130	-	\$129,130	\$1,819,791
30	-	\$132,231	-	\$132,231	\$1,952,023
Totals:	<b>-\$1,299,653</b>	\$2,861,780	\$389,896	\$1,952,023	-

## 4.1 Cash Purchase

### Assumptions and Key Financial Metrics

IRR - Term	8.0%	Net Present Value	\$851,793	Payback Period	12.1 Years
ROI	150.2%	PV Degradation Rate	0.50%	Discount Rate	3.0%
Energy Cost Escalation Rate	3.0%	Federal Income Tax Rate	0.0%	State Income Tax Rate	0.0%
Total Project Costs	\$1,299,653				

Years	Upfront	1	2	3	4	5	6	7	8	9	10	11
<b>Cash</b>												
Project Costs	-\$1,299,653	-	-	-	-	-	-	-	-	-	-	-
Electric Bill Savings	-	\$65,628	\$67,259	\$68,928	\$70,638	\$72,387	\$74,179	\$76,012	\$77,889	\$79,810	\$81,776	\$83,788
<b>Cash Total</b>	<b>-\$1,299,653</b>	<b>\$65,628</b>	<b>\$67,259</b>	<b>\$68,928</b>	<b>\$70,638</b>	<b>\$72,387</b>	<b>\$74,179</b>	<b>\$76,012</b>	<b>\$77,889</b>	<b>\$79,810</b>	<b>\$81,776</b>	<b>\$83,788</b>
<b>Federal Taxes</b>												
Federal Tax Credit	-	\$389,896	-	-	-	-	-	-	-	-	-	-
<b>Change in Federal Tax Liability</b>	<b>-</b>	<b>\$389,896</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total Cash Flow</b>	<b>-\$1,299,653</b>	<b>\$455,524</b>	<b>\$67,259</b>	<b>\$68,928</b>	<b>\$70,638</b>	<b>\$72,387</b>	<b>\$74,179</b>	<b>\$76,012</b>	<b>\$77,889</b>	<b>\$79,810</b>	<b>\$81,776</b>	<b>\$83,788</b>
<b>Cumulative Cash Flow</b>	<b>-\$1,299,653</b>	<b>-\$844,129</b>	<b>-\$776,871</b>	<b>-\$707,942</b>	<b>-\$637,305</b>	<b>-\$564,917</b>	<b>-\$490,739</b>	<b>-\$414,727</b>	<b>-\$336,838</b>	<b>-\$257,028</b>	<b>-\$175,252</b>	<b>-\$91,464</b>

## 4.1 Cash Purchase

### Assumptions and Key Financial Metrics

IRR - Term	8.0%	Net Present Value	\$851,793	Payback Period	12.1 Years
ROI	150.2%	PV Degradation Rate	0.50%	Discount Rate	3.0%
Energy Cost Escalation Rate	3.0%	Federal Income Tax Rate	0.0%	State Income Tax Rate	0.0%
Total Project Costs	\$1,299,653				

Years	12	13	14	15	16	17	18	19	20	21	22	23
<b>Cash</b>												
Project Costs	-	-	-	-	-	-	-	-	-	-	-	-
Electric Bill Savings	\$85,848	\$87,955	\$90,112	\$92,319	\$94,578	\$96,888	\$99,253	\$101,671	\$104,146	\$106,678	\$109,268	\$111,917
<b>Cash Total</b>	\$85,848	\$87,955	\$90,112	\$92,319	\$94,578	\$96,888	\$99,253	\$101,671	\$104,146	\$106,678	\$109,268	\$111,917
<b>Federal Taxes</b>												
Federal Tax Credit	-	-	-	-	-	-	-	-	-	-	-	-
<b>Change in Federal Tax Liability</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Cash Flow</b>	\$85,848	\$87,955	\$90,112	\$92,319	\$94,578	\$96,888	\$99,253	\$101,671	\$104,146	\$106,678	\$109,268	\$111,917
<b>Cumulative Cash Flow</b>	-\$5,616	\$82,340	\$172,452	\$264,771	\$359,348	\$456,237	\$555,489	\$657,161	\$761,307	\$867,985	\$977,253	\$1,089,170

## 4.1 Cash Purchase

### Assumptions and Key Financial Metrics

IRR - Term	8.0%	Net Present Value	\$851,793	Payback Period	12.1 Years
ROI	150.2%	PV Degradation Rate	0.50%	Discount Rate	3.0%
Energy Cost Escalation Rate	3.0%	Federal Income Tax Rate	0.0%	State Income Tax Rate	0.0%
Total Project Costs	\$1,299,653				

Years	24	25	26	27	28	29	30	Totals
<b>Cash</b>								
Project Costs	-	-	-	-	-	-	-	-\$1,299,653
Electric Bill Savings	\$114,627	\$117,399	\$120,234	\$123,133	\$126,098	\$129,130	\$132,231	\$2,861,780
<b>Cash Total</b>	\$114,627	\$117,399	\$120,234	\$123,133	\$126,098	\$129,130	\$132,231	\$1,562,127
<b>Federal Taxes</b>								
Federal Tax Credit	-	-	-	-	-	-	-	\$389,896
<b>Change in Federal Tax Liability</b>	-	-	-	-	-	-	-	\$389,896
<b>Total Cash Flow</b>	\$114,627	\$117,399	\$120,234	\$123,133	\$126,098	\$129,130	\$132,231	\$1,952,023
<b>Cumulative Cash Flow</b>	\$1,203,797	\$1,321,196	\$1,441,430	\$1,564,563	\$1,690,661	\$1,819,791	\$1,952,023	-

# Contact Person & Project Team

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## Design & Development Team: **Ziegler Energy Solutions**

MN Contractor General Contractor #IR776829

- **Andrew Fulton** – Sales Engineer (Main Contact)
  - 2 Yrs Ziegler CAT: Advanced Electrical Sales
  - 3 Yrs Ziegler Energy Solutions: Sales Engineer
- **Troy Monson** – *General Manager*
  - 4 Yrs Ziegler Energy Solutions: *General Manager*
  - 4 Yrs Ziegler CAT: *Sales Engineer*
  - 11 yrs Stewart and Stevenson: *Sr Project Manager*
  - 7 Yrs Stewart and Stevenson: *Division Operations Manager*
- **Reda Shenouda** – *Sr. Electrical Engineer, P.E. E.E.*
  - 31 yrs Ziegler CAT: *Sr. Electrical Engineer*
- **Casey Stufflebeem** – *Electrical Engineer, (B.S.E.E.)*
  - 3 Yrs Ziegler Energy: *Electrical Engineer*
  - 7 Yrs Dexter Laundry: *Electrical Engineer*
  - 2 Yrs Vizient: *Robotics/Automation Programmer*
- **Heath Nelson** – *Sr. Project Manager*
  - 1 Years Ziegler Energy Solutions: *Project Manager*
  - 8 Years Hunt Electric: *Journeyman Electrician, Generator Technician*
  - 16 Years Mayer Electric: *Journeyman Electrician, Generator Technician*
  - 4 Years Electrical Apprentice
- **Payton Scandridge** – *Project Manager*
  - 3 Yr Ziegler Energy: *Project Manager*
  - 3 Yrs Solar Connections: *Project Manager*
  - 2 Yrs NRI Electronics: *Process Control Technician*

Ziegler's Energy Response Team is your frontline technical force—fast, dependable, and factory-certified to keep your advanced energy infrastructure operating at peak performance. With rapid deployment and highly trained professionals, we deliver maximum uptime, minimize costly disruptions, and safeguard the future of your energy assets.

### RAPID RESPONSE

Always ready. Always on.

### TECHNICAL MASTERY

Factory-level support, locally delivered.

### RELIABILITY & TRUST

Maximizing uptime.

## Monitoring

Ziegler Energy Solutions provides **24/365 monitoring** of your system. Depending on your hardware needs, we'll ensure quality software is in place to back it up. This enables our team to:

- Perform remote diagnostics
- Schedule annual service
- Ensure optimal performance
- Maximize customer uptime



## Operations & Maintenance (O&M)

O&M is essential for keeping energy assets running smoothly. Detecting and fixing issues quickly is key for optimal performance, and a sound O&M plan protects your investment. Ziegler Energy Solutions offers both reactive and proactive services, including:

- Emergency response and dispatch
- Corrective maintenance and system repairs
- Scheduled preventative maintenance and system testing
- Spare parts inventory management
- Warranty service coordination/administration
- Annual maintenance reporting

## Service & Support

When your energy systems need attention, Ziegler's Energy Response Team delivers **fast, expert service** to keep you running. From emergency repairs to scheduled maintenance, we provide:

- Rapid on-site response for critical issues
- Factory-trained technicians for solar PV, battery storage, EV chargers, UPS, and microgrid systems
- Diagnostic testing and performance optimization
- Warranty service coordination
- Comprehensive service reporting for transparency and compliance



Whether it's a planned service or an unexpected outage, our team ensures your systems are restored quickly and operate at peak efficiency.

## Future Planning

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Your facility is currently served under a demand-based rate schedule through Alliant Energy (Wisconsin Power & Light). Under this structure, the County's monthly electric bill is determined by two primary components:

- Energy consumption — the total kilowatt-hours (kWh) used throughout the month.
- Demand charges — based on the single highest 15- or 30-minute interval of power draw during the billing cycle, measured in kilowatts (kW).

Because demand charges are assessed as a dollar amount per kW of peak usage, they often represent 30% to 50% or more of a commercial customer's total monthly bill. This means even brief spikes in power usage can significantly increase overall operating costs.

Given this structure, the County has a strong opportunity to explore technologies that can reduce peak demand and offset total monthly electricity expenses.

To help the County reduce its overall monthly electric expenses, it is advantageous to evaluate technologies that can directly offset both energy and demand-related charges. One of the most effective strategies for achieving this is the implementation of a Battery Energy Storage System (BESS). A BESS can lower peak demand by discharging stored energy during high-load periods, thereby reducing the County's exposure to elevated demand charges.

Ziegler Energy Solutions has established a strategic partnership with ELM Microgrid, a Dallas-based manufacturer specializing in advanced battery energy storage technologies. This partnership provides access to reliable, commercially proven systems well-suited for municipal applications.

In addition to operational savings, a BESS installation offers significant financial incentives. Battery systems currently qualify for the 30% Investment Tax Credit (ITC) through direct pay, enabling tax-exempt entities such as the County to receive the credit as a cash reimbursement. This mechanism substantially reduces the net cost of the project.

Furthermore, because the County is already preparing an application for the Energy Innovation Grant Program (EIGP), incorporating a battery system strengthens the proposal and makes the project eligible for an additional \$250,000 in grant funding. This added support would further offset the total system cost and improve the overall financial return.

# Experience & References

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## International Falls School District

Location: International Falls, MN | Date: 2025

Ziegler Energy Solutions was chosen to develop a new 411 kW DC solar array by the International Falls School District through the **Solar for Schools** program. Project features 100% US-made hardware (panels, racking & inverters). Ziegler will be responsible for all aspects of project including design, engineering, permitting, and procurement etc. including construction and commissioning.



### Reference:

**Beth Shermoen**  
*Superintendent , International Falls School District*  
(218)-283-2571



## Pine Point School District

Location: Ponsford, MN | Date: 2024

Contractor: Ziegler Energy Solutions

Ziegler Energy Solutions was chosen to develop a new 440 kW DC solar array and 2.7 MW battery storage system by the Pine Point School District through the **Solar for Schools** program. Project features 100% US-made PV hardware (panels, racking & inverters) and an ELM BESS. Ziegler will be responsible for all aspects of project including design, engineering, permitting, and procurement etc. including construction and commissioning.



### Reference:

**Chris Schulz**

*Pine Point Superintendent*

218-573-4102



## Hutchinson Municipal Utilities

Location: Hutchinson, MN | Date: 2021

Ziegler Energy Solutions was the chosen contractor for a new 766 kW DC solar array by the Hutchinson Public Utility. Project featured Caterpillar 445W monocrystalline panels. Ziegler was responsible for all aspects of project including design, engineering, permitting, and procurement etc. including construction and commissioning.



### Reference:

**Dave Hunstad**

*HUC Distribution Manager*

320-234-0508



**HUTCHINSON**

## Iowa Great Lakes Sanitary District

Location: Milford, IA | Date: 2020

Ziegler Energy Solutions was awarded turnkey construction services on a new 507 kW ground mount solar array at the Iowa Great Lakes Sanitary District. All power generated by this array is utilized by the adjacent wastewater treatment plant. The critical component technical scope was furnished by Ziegler Power Systems also with responsibilities for construction and balance of system procurement. Ziegler Energy Solutions has been retained to provide annual operations and maintenance duties.



### Reference:

**Steve Anderson**

*District Superintendent*

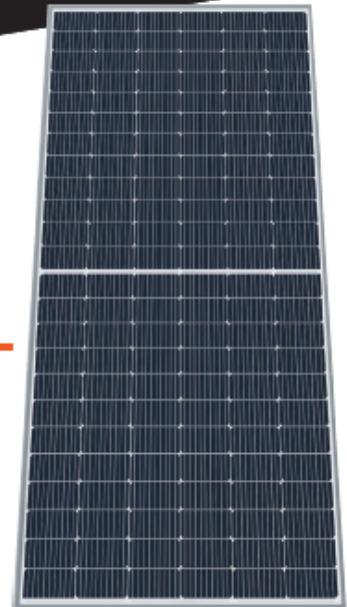
712-338-2626





# 144HC M10 Bifacial Module

144 Half-Cut Monocrystalline 520W – 540W



## 21%

Utilizes the latest M10 size super high efficiency Monocrystalline PERC cells. Half cut design further reduces cell to module (CTM) losses.

## Stability & Looks

Rugged, double webbed frame design withstands wind, snow, and other mechanical stresses. Framed Glass-Backsheet aesthetic is ideal for high visibility installation.

## Anti-Reflective

Premium solar glass with anti reflective coating delivers more energy throughout the day

## High Reliability

Proven resistance to PID and reliable in high temperature and humidity environments.



Manufactured Using International Quality System Standards: ISO9001

Half-Cut Design with Split Junction Box Technology

Bifacial Technology Enabling Additional Energy Harvest from Rear Side

1500V System Voltage Rating

### World-class Quality

- Heliene's fully automated manufacturing facilities with state-of-the-art robotics and computer aided inspection systems ensure the highest level of product quality and consistency
- All manufacturing locations are compliant with international quality standards and are ISO 9001 certified
- Heliene modules have received Top Performer rankings in several categories from PV Evolution Labs (PV EL) independent quality evaluations

### Local Sales, Service, and Support

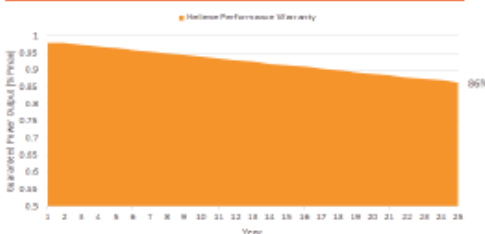
- With sales offices across the U.S. and Canada, Heliene prides itself on unsurpassed customer support for our clients. Heliene has become the brand of choice for many of the leading residential installers, developers and Independent Power Producers due to our innovative technology, product customization capability and just in time last-mile logistics support
- Local sales and customer support means answered phone calls and immediate answers to your technical and logistics questions. We understand your project schedules often change with little warning and endeavor to work with you to solve your project management challenges

### Bankable Reputation

- Established in 2010, Heliene is recognized as highly bankable Tier 1 manufacturer of solar modules and has been approved for use by the U.S. Department of Defense, U.S. Army Corps of Engineers and from numerous top tier utility scale project debt providers
- By investing heavily in research and development, Heliene has been able to stay on the cutting edge of advances in module technology and manufacturing efficiency

## No Compromise Guarantee

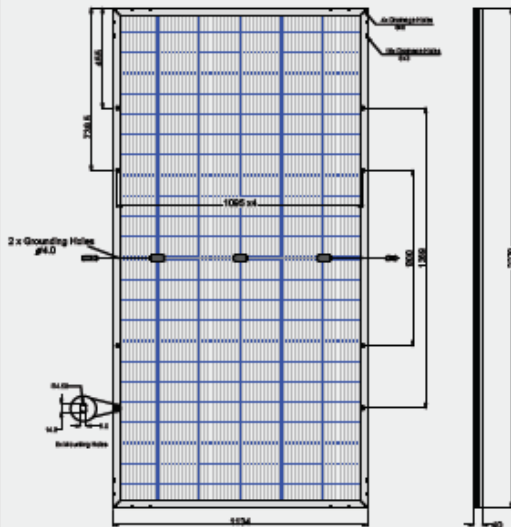
15 Year Workmanship Warranty  
25 Year Linear Performance Guarantee



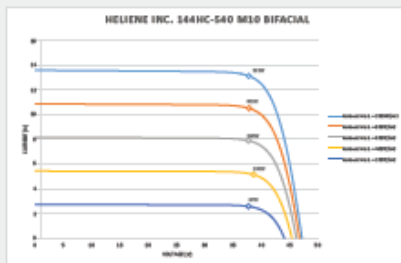
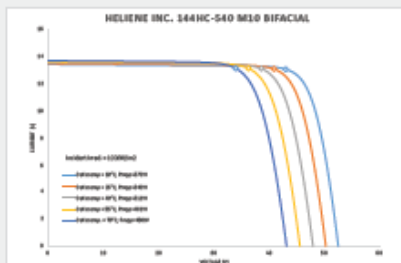
www.heliene.com



## Dimensions for 144HC M10 Bifacial Series Modules



## I-V Curves for 144HC M10 Bifacial Series Modules



## Certifications &amp; Listing



## Electrical Data (STC)

Parameter	Symbol	540	535	530	525	520
Peak Rated Power	$P_{mpo}$ (W)	540	535	530	525	520
Maximum Power Voltage	$V_{mpo}$ (V)	42.32	42.13	41.94	41.75	41.56
Maximum Power Current	$I_{mpo}$ (A)	12.77	12.70	12.64	12.58	12.52
Open Circuit Voltage	$V_{oc}$ (V)	50.22	49.97	49.72	49.23	48.73
Short Circuit Current	$I_{sc}$ (A)	13.50	13.44	13.37	13.32	13.28
Module Efficiency*	Eff (%)	20.9	20.7	20.5	20.3	20.1
Maximum Series Fuse Rating	MF (A)	30	30	30	30	30
Power Output Tolerance		[-0/+3%]				
Bifaciality Factor		70%				

STC - Standard Test Conditions: Irradiation 1000 W/m<sup>2</sup> - Air mass AM 1.5 - Cell temperature 25 °C

## Electrical Data (NMOT)

Parameter	Symbol	400	395	390	385	380
Maximum Power	$P_{mpo}$ (W)	400	395	390	385	380
Maximum Power Voltage	$V_{mpo}$ (V)	39.19	38.58	38.58	37.97	37.96
Maximum Power Current	$I_{mpo}$ (A)	10.21	10.24	10.11	10.14	10.01
Open Circuit Voltage	$V_{oc}$ (V)	47.13	46.89	46.66	46.20	45.73
Short Circuit Current	$I_{sc}$ (A)	10.87	10.82	10.77	10.72	10.70

NMOT - Nominal Module Operating Temperature:  
Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind speed 1m/s

## Mechanical Data

Solar Cells	144 Half Cut, M10, 182mm, PERC Cells
Module Construction	Framed Glass-Backsheet
Dimensions (L x W x D)	2279 x 1134 x 40 mm (89.72 x 44.65 x 1.6 inch)
Weight	29.2 kg (64.3 lbs)
Frame	Double Webbed 15-Micron Anodized Aluminum Alloy
Glass	3.2mm Low-Iron Content, High-Transmission, PV Solar Glass with Anti Reflective Coating
Junction Box	IP-68 rated with 3 bypass diodes
Output Cables	0.3-meter Symmetrical Cables
Connectors	Multi-Contact/ Stäubli MC4

## Certifications

UL Certification: UL61215, UL61730

## Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	+45°C (±2°C)
Temperature Coefficient of $P_{max}$	-0.36%/°C
Temperature Coefficient of $V_{oc}$	-0.28%/°C
Temperature Coefficient of $I_{sc}$	0.034%/°C

## Maximum Ratings

Operational Temperature	-40°C to +85°C
Max System Voltage	1500V
Mech. Load Test (Front)	113 psf / 5400Pa
Mech. Load Test (Back)	50 psf / 2400Pa
Fire Type	Type 1

## Warranty

15 Year Manufacturer's Workmanship Warranty  
25 Year Linear Power Guarantee

## Packaging Configuration

Modules per box: 27 pieces  
Modules per 53' trailer: 702 piecesHSPE-144HC\_M10\_Bifacial-Rev.09.pdf  
May 25th, 2022

The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the ongoing innovation and product enhancements. Helene Inc. reserves the right to make necessary adjustment to the information described herein at any time without prior notice. PV modules should be handled and installed only by qualified people. Please carefully read safety and installation instructions available for download from Helene website before using Helene PV modules. For warranty details, please refer to Product Warranty Document, also available for download from Helene website.

**YASKAWA**  
SOLECTRIA SOLAR

# AMERICAN-MADE SOLAR INVERTERS

1500V UTILITY-SCALE APPLICATIONS



Yaskawa Solectria Solar is a wholly-owned subsidiary of Yaskawa America, Inc. and the largest inverter manufacturer based in the USA, with headquarters in Lawrence, MA, and world-class production facilities in Buffalo Grove, IL and Oak Creek, WI.

### MADE IN THE U.S.A WITH GLOBAL COMPONENTS

Designed and engineered in Lawrence, MA, assembled and tested in Buffalo Grove, IL and Oak Creek, WI

### YASKAWA QUALITY

Global technology leader with 100+ years experience and winner of the coveted Deming Prize for total quality management

### XGI POWER RACKS

Factory Integrated assembly with 4 - 8 XGI 1500 Inverters and an AC Combiner, making a 1 - 2 MW build-block for large utility-scale projects

### QUICK AND EASY SETUP

Reduce commissioning time with the ability to reach all in-network inverters from a single location using a wireless device

### LOWERING COST FOR SYSTEM OWNERS

Simplified design resulting in the lowest cost of labor, installation, and O&M

### STORAGE SYSTEMS

500kW DC-coupled and AC-coupled storage systems and factory integrated with bi-directional XGI Inverters

### EXTENDED COVERAGE

Industry standard 5-year warranty, extendable up to 20 years

Solectria is backed by Yaskawa, a global leader in motor drives and robotics with over 100 years of power electronics and inverter experience, and continues to build the highest quality solar inverters and provide new innovations for the marketplace.

**100+ YEARS**  
MANUFACTURING EXCELLENCE

**MADE IN THE USA**

Proud Member of

**CALIFORNIA SOLAR + STORAGE ASSOCIATION**  
smart local energy

**SEIA** Solar Energy Industries Association

**NABCEP**  
NABCEP Standard Practice Certified

**OSSIA**  
OSSIA 2017 - 2018 MEMBER



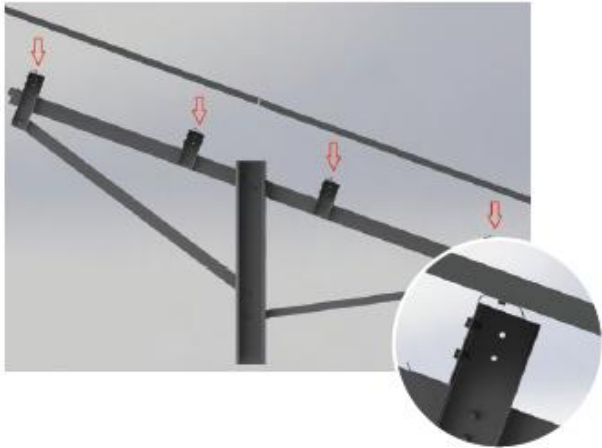
**FIXED TILT MOUNTING SYSTEM**

**PRE-ASSEMBLED TILT BRACKETS**

- Optimizes packaging and shipping
- Requires significantly less field labor
- Reduces construction schedules
- Eliminates loose hardware

**INTEGRATED GROUNDING**

- Eliminates third party grounding devices
- Accelerates assembly



HIGHEST DOMESTIC CONTENT - MADE BY OMCO SOLAR  
IN OUR 6 US MANUFACTURING PLANTS



- ⊗ Short Lead Times
- ⊗ Low Freight Costs
- ⊗ Enhanced Flexibility

- ⊗ Reduced Field Labor
- ⊗ Cost Efficient
- ⊗ Quality Assurance



# OMCO Choice™

## Fixed Tilt Mounting System

## Technical Specifications

Manufacturing	Made by OMCO Solar in our 6 US manufacturing plants nationwide and shipped directly to project sites.
Pre-Assembly	Each rack consists of pre-assembled components, which reduces the bill of material items, allowing rapid site staging and installation.
Materials	Galvanized steel, per ASTM A653 – latest edition
Hardware	Zinc-coated to 15 microns per UL 2703. The hardware arrives pre-sorted for easy identification. Additional plating options are available for corrosive environments.
Module Compatibility	OMCO Solar racks are optimized for all commercially available framed solar modules.
In-Field Flexibility	Built-in adjustability features account for post misalignment and terrain elevation changes with no additional components. Proprietary custom slot configurations come standard on every fixed-tilt mounting system.
Table Configuration	2-in-portrait is standard. Other configurations are evaluated per site-specific requirements.
Terrain Articulation	Accommodates up to 20% grade change
Foundation Options	Driven C posts - OMCO produced, lower cost, faster lead time Driven I or W posts - OMCO sourced
Tilt Angle	Accommodates from 5° - 45°
Wire Management	Integrated wire management
Bonding/Grounding	UL 2703 compliant
Post Tolerances	East-West ± 0.75" North-South ± 0.75" East-West tilt ± 1" North-South tilt ± 1"
Load Capacities	Wind – up to 180 MPH   Snow – up to 90 PSF
Certifications	ISO 9001:2015 standard, UL 2703 Ed. 1, CPP wind tunnel-tested, NEC compliant
Warranty	20-year limited warranty



[omcosolar.com](https://omcosolar.com)

Arizona | Ohio | Indiana | Alabama  
602-352-2700 | [info@omcosolar.com](mailto:info@omcosolar.com)



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**OMCO SOLAR**

Rev | 11/23



ZIEGLER INC

1500 ZIEGLER DR NW

ALTOONA, IA 50009-7200

Dear Troy Monson and William M. Hoeft,

On July 4, 2025, the legislation commonly known as the One Big Beautiful Bill Act (“OBBBA”) became law. OBBBA expanded pre-existing foreign entity of concern restrictions to apply to tax credits under sections 45Y, 48E and 45X of the Internal Revenue Code of 1986, as amended (the “Code”). More specifically, OBBBA disallows a credit under sections 45Y, 48E and 45X of the Code if the taxpayer claiming such credit is a Specified Foreign Entity or a Foreign-Influenced Entity (together, a “Prohibited Foreign Entity”) or if the property eligible for such credit has received material assistance from a Prohibited Foreign Entity. Terms not defined herein have the meaning set forth in Exhibit A.

Heliene USA Inc., a Minnesota corporation (“Heliene” or “we”) values your business and recognizes that Heliene’s products are a valuable component of your tax credit planning and commercial needs. As a part of our commitment to remaining a key component of business strategy, we certify under penalties of perjury that, to our knowledge:

1. Heliene is treated as a corporation for U.S. federal income tax purposes.
2. Heliene is not a Prohibited Foreign Entity.
  - a. Heliene is not a Specified Foreign Entity.
    - i. Heliene is not a foreign entity of concern described in subparagraph (A), (B), (D), or (E) of section 9901(8) of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116-283; 15 U.S.C. 4651).
    - ii. Heliene is not an entity identified as a Chinese military company operating in the United States in accordance with section 1260H of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116-283; 10 U.S.C. 113 note).
    - iii. Heliene is not an entity included on a list required by clause (i), (ii), (iv), or (v) of section 2(d)(2)(B) of Public Law 117-78 (135 Stat. 1527).
    - iv. Heliene is not an entity specified under section 154(b) of the National Defense Authorization Act for Fiscal Year 2024 (Public Law 118-31; 10 U.S.C. note prec. 4651).
    - v. Heliene is not a foreign-controlled entity, within the meaning of section 7701(a)(51)(C) of the Code.
  - b. Heliene is not a Foreign-Influenced Entity.



- i. *Ownership Representations.*
    1. No Specified Foreign Entity has the direct authority to appoint a covered officer of Heliene.
    2. No Specified Foreign Entity owns 25 percent or more of Heliene.
    3. One or more Specified Foreign Entities do not own in the aggregate 40 percent or more of Heliene.
    4. Less than 15 percent of the debt of Heliene has been issued, in the aggregate, to one or more Specified Foreign Entities.
  - ii. *Payment Representations.* Heliene has not, in a previous taxable year, made a payment to a Specified Foreign Entity pursuant to a contract, agreement, or other arrangement, including any licensing agreement for the provision of intellectual property (or any other contract, agreement or other arrangement entered into with a contractual counterparty related to such licensing agreement), other than in the case of a bona fide purchase or sale of intellectual property (not including any purchase or sale of intellectual property where the agreement provides that ownership of the intellectual property reverts to the contractual counterparty after a period of time), which entitles such Specified Foreign Entity (or an entity related to such Specified Foreign Entity) to exercise Effective Control over Heliene.
3. Heliene will require all suppliers of direct costs from January 1, 2026 onwards to provide a certification substantially similar to Exhibit B, on which it is permitted to rely until the Secretary of the Department of Treasury issues additional guidance in accordance with section 7701(a)(52)(D)(iii)(II)(bb) of the Code and section 4.03 of IRS Notice 2026-15.
  4. Heliene's EIN is 30-0986332.
  5. Heliene shall retain this Certificate for a period of not less than 6 years and shall provide this Certificate to the Secretary of Treasury upon request.
  6. The table below accurately describes whether each item, or constituent element of such item, purchased pursuant to the agreement between Ziegler Inc and Heliene dated as of May 22, 2026, in either case as identified in the following table (the "Manufactured Products"), is "PFE Produced" or "PFE Sourced" (within the meaning of IRS Notice 2026-15).



<b>Applicable Project Component Identified on IRS Notice 2025-08</b>	<b>Manufactured Product Component Identified on IRS Notice 2025-08</b>	<b>PFE-Produced?</b>
PV Module	Cells	No
	Frame/Backrail	No
	Front Glass	No
	Encapsulant	No
	Backsheet/Backglass	No
	Junction Box	No
	Edge Seals	No
	Pottants	Yes
	Bus Ribbons	No
	Bypass Diodes	Yes
	Production	No

Heliene will continue to regularly monitor changes to federal law and regulations, including updates regarding Prohibited Foreign Entity guidance, and adjust our procurement practices as needed to ensure ongoing compliance with the above certifications, and shall provide any updates required to ensure the above certifications remain true and correct to its knowledge.

If you have any further questions, please do not hesitate to contact us.

Best regards,

Signed by:  
  
45B2D2F4DC2144B...  
Neil Reiersen



## Exhibit A

### Defined Terms

“Effective Control” means for any period prior to the date that further guidance is issued by the Secretary, 1 or more agreements or arrangements similar to those described below which provide 1 or more contractual counterparties of a taxpayer with unrestricted contractual rights over key aspects of the production of eligible components, energy generation in a qualified facility, or energy storage which are not included in the measures of control through authority, ownership, or debt held which are described in the ownership limitations provide in the definition of Foreign Influenced Entity:<sup>1</sup>

- a) for all purposes other than agreements described in (b) of this definition, the unrestricted contractual right of a contractual counterparty to:<sup>2</sup>
  - (i) determine the quantity or timing of production of an eligible component produced by the taxpayer,
  - (ii) determine the amount or timing of activities related to the production of electricity undertaken at a qualified facility of the taxpayer or the storage of electrical energy in energy storage technology of the taxpayer,
  - (iii) determine which entity may purchase or use the output of a production unit of the taxpayer that produces eligible components,
  - (iv) determine which entity may purchase or use the output of a qualified facility of the taxpayer,
  - (v) restrict access to data critical to production or storage of energy undertaken at a qualified facility of the taxpayer, or to the site of production or any part of a qualified facility or energy storage technology of the taxpayer, to the personnel or agents of such contractual counterparty, or
  - (vi) on an exclusive basis, maintain, repair, or operate any plant or equipment which is necessary to the production by the taxpayer of eligible components or electricity.
- b) with respect to a licensing agreement for the provision of intellectual property (or any other contract, agreement or other arrangement entered into with a contractual counterparty related to such licensing agreement) with respect to a qualified facility, energy storage technology, or the production of an eligible component, other than a bona fide purchase or sale of intellectual property within the meaning of Section 7701(a)(51)(D)(ii)(III)(bb)(BB) of the Code:<sup>3</sup>
  - (i) a contractual right retained by the contractual counterparty to specify or otherwise direct 1 or more sources of components, subcomponents, or applicable critical minerals utilized in a qualified facility, energy storage technology, or in the production of an eligible component;

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<sup>1</sup> Section 7701(a)(51)(D)(ii)(I) of the Code.

<sup>2</sup> Section 7701(a)(51)(D)(ii)(II) of the Code.

<sup>3</sup> Section 7701(a)(51)(D)(ii)(III) of the Code.



- (ii) a contractual right retained by the contractual counterparty to direct the operation of any qualified facility, any energy storage technology, or any production unit that produces an eligible component;
- (iii) a contractual right retained by the contractual counterparty to limit the taxpayer's utilization of intellectual property related to the operation of a qualified facility or energy storage technology, or in the production of an eligible component;
- (iv) a contractual right retained by the contractual counterparty to receive royalties under the licensing agreement or any similar agreement (or payments under any related agreement) beyond the 10th year of the agreement (including modifications or extensions thereof);
- (v) a contractual right retained by the contractual counterparty to direct or otherwise require the taxpayer to enter into an agreement for the provision of services for a duration longer than 2 years (including any modifications or extensions thereof);
- (vi) such contract, agreement, or other arrangement does not provide the licensee with all the technical data, information, and know-how necessary to enable the licensee to produce the eligible component or components subject to the contract, agreement, or other arrangement without further involvement from the contractual counterparty or a Specified Foreign Entity; or
- (vii) such contract, agreement, or other arrangement was entered into (or modified) on or after the date of enactment of Section 7701(a)(51) of the Code.

“Existing Contract Election” means<sup>4</sup> an election, (in such form and manner as the Secretary of the Treasury shall designate), in the case of any manufactured product, eligible component, or constituent element, material, or subcomponent of an eligible component which is

- a) acquired by the taxpayer, or manufactured or assembled by or for the taxpayer, pursuant to a binding written contract which was entered into prior to June 16, 2025, and
- b) either
  - (i) placed into service before January 1, 2030 (or, in the case of an applicable facility, as defined in section 45Y(d)(4)(B) of the Code, before January 1, 2028) in a facility the construction of which began before August 1, 2025, or
  - (ii) in the case of a constituent element, material, or subcomponent, used in a product sold before January 1, 2030,

the cost to the taxpayer with respect to such product, component, element, material, or subcomponent shall not be included for purposes of determining the material assistance cost ratio under section 7701(a)(52) of the Code.

“Foreign-Influenced Entity” means<sup>5</sup> an entity—

- a) with respect to which, during the taxable year
  - (i) a specified foreign entity has the direct authority to appoint a covered officer of such

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<sup>4</sup> Section 7701(a)(52)(D)(iv) of the Code.

<sup>5</sup> Section 7701(a)(51)(D)(i) of the Code.



- entity,
- (ii) a single specified foreign entity owns at least 25 percent of such entity,
  - (iii) one or more specified foreign entities own in the aggregate at least 40 percent of such entity, or
  - (iv) at least 15 percent of the debt of such entity has been issued, in the aggregate, to 1 or more specified foreign entities, or
- b) which, during the previous taxable year, made a payment to a specified foreign entity pursuant to a contract, agreement, or other arrangement which entitles such specified foreign entity (or an entity related to such specified foreign entity) to exercise Effective Control over—
- (i) any qualified facility or energy storage technology of the taxpayer (or any person related to the taxpayer), or
  - (ii) with respect to any eligible component produced by the taxpayer (or any person related to the taxpayer)
    - 1. the extraction, processing, or recycling of any applicable critical mineral, or
    - 2. the production of an eligible component which is not an applicable critical mineral.

“Prohibited Foreign Entity” means a Specified Foreign Entity or a Foreign-Influenced Entity.

“Specified Foreign Entity” means<sup>6</sup>

- a) a foreign entity of concern described in subparagraph (A), (B), (D), or (E) of section 9901(8) of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116-283; 15 U.S.C. 4651),
- b) an entity identified as a Chinese military company operating in the United States in accordance with section 1260H of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116-283; 10 U.S.C. 113 note),
- c) an entity included on a list required by clause (i), (ii), (iv), or (v) of section 2(d)(2)(B) of Public Law 117-78 (135 Stat. 1527),
- d) an entity specified under section 154(b) of the National Defense Authorization Act for Fiscal Year 2024 (Public Law 118-31; 10 U.S.C. note prec. 4651), or
- e) a foreign-controlled entity, within the meaning of section 7701(a)(51)(C) of the Code

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<sup>6</sup> Section 7701(a)(51)(B) of the Code.

**SOLECTRIA® PowerRacks ACHIEVE 100% DOMESTIC CONTENT  
& BUILD AMERICA, BUY AMERICA ACT COMPLIANCE**

29 October 2024

The Build America, Buy America (BABA) Act, part of the Infrastructure Investment and Jobs Act of 2021, mandates the use of American-made products and materials for federally funded infrastructure projects. To comply with BABA, manufactured products must exceed 55% domestic content and be manufactured in the United States.

Founded in 2005, Yaskawa Solectria Solar (Solectria) is a leading U.S. manufacturer of photovoltaic (PV) inverters. Headquartered in Massachusetts with production facilities in Illinois, we specialize in high-quality, American-made solar solutions. Our flagship products include the SOLECTRIA® XGI 1500 utility-scale modular inverters and the factory-assembled SOLECTRIA® PowerRacks. Each PowerRack comprises a structural rack, four to eight XGI 1500 inverters and an AC combiner, fully integrated and wired to provide a 1–2 MW building block for large-scale PV projects.

We are pleased to confirm that the SOLECTRIA® PowerRacks fully comply with the Build America, Buy America Act requirements for domestic content. Made in Massachusetts, the SOLECTRIA® PowerRacks consist of 100% U.S.-origin components, and have 100% domestic content.

Thank you for your interest in our American-made solar products.

Sincerely,



Dennis A. Fitzgerald  
VP Customer Interaction Center  
dennis\_fitzgerald@yaskawa.com  
(847) 887-7500



## SMIRNOW LAW

### MEMORANDUM

To: Gary Schuster  
Clint Cassese  
Kevin Hopp

Date: February 19, 2026

Re: Due Diligence Review of OMCO Holdings, Inc. Regarding Foreign Entity of Concern Status

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#### I. Introduction

You have requested that Smirnow Law provide an opinion on whether OMCO Holdings, Inc., including OMCO Solar LLC (“OMCO”) should be treated as a “Prohibited Foreign Entity” (“PFE”) within the meaning of the statutory language contained in Section 7701(a)(51) enacted under the One Big Beautiful Bill of 2025 (“OB BB”), H.R. 1, 119th Cong. (2025–2026), Pub. L. 119-21 and signed July 4, 2025.<sup>1</sup>

The analysis in this memorandum is based solely upon: (i) facts, assumptions, statements, and representations set forth herein (which are based on communications with, and documentation provided by, OMCO); (ii) OMCO’s Supplier’s Certification and Due Diligence Checklist Supporting Certification Regarding Absence of Material Assistance from Prohibited Foreign Entities;<sup>2</sup> (iii) statutory language contained in Section 7701(a)(51) that was enacted under the OB BB; (iv) Guidance to Apply Interim Safe Harbors for Purposes of Determining a Taxpayer’s Material Assistance from a Prohibited Foreign Entity; Other Prohibited Foreign Entity Guidance, Notice 2026-15, Internal Revenue Service, U.S. Department of the Treasury (collectively “Treasury”) (“Notice 2026-15”); and (v) assumption that OMCO has disclosed to us all of the facts for which they have knowledge that are relevant to the subject of this memorandum.

Based upon our review, we conclude that OMCO should not be treated, as of the date hereof, as a PFE under Section 7701(a)(51).<sup>3</sup> This opinion is based upon: (i) the factual representations provided by OMCO; (ii) our review of OMCO’s corporate and governance

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<sup>1</sup> A FEOC Screening Checklist is set forth as Appendix I.

<sup>2</sup> See Appendix II.

<sup>3</sup> This memorandum is provided solely for the benefit of OMCO. This memorandum may not be used or relied upon by third parties. Any such third parties should seek independent legal counsel.

documents;<sup>4</sup> and (iii) the applicable statutory provisions of Pub. L. 119-21, § 70917(c), as incorporated into Internal Revenue Code (“IRC”) § 48E, together with any Treasury or IRS implementation guidance in effect as of this date.<sup>5</sup> We also conducted independent research regarding OMCO’s corporate structure.

## II. Legal Framework

The OBBB expanded foreign entity of concern (“FEOC”) restrictions to various clean energy tax credits and created a new FEOC category for any PFE under Section 7701(a)(51). A project or company could be ineligible to claim a clean energy tax credit if such project or company is a PFE, sources key components from a PFE, licenses critical technology from a PFE, or is engaged in significant financial arrangements with a PFE.

Under the OBBB, a PFE includes both a Specified Foreign Entity (“SFE”) and a Foreign Influenced Entity (“FIE”).<sup>6</sup> An SFE is any entity that is owned, controlled, or organized under the laws of, or whose principal operations are located within, a foreign country of concern (as that term is defined for purposes of the OBBB, including a foreign controlled entity (“FCE”).<sup>7</sup>

An FCE means: (i) any level of government in any “covered nation;” (ii) an agency or instrumentality of any other government described in clause (i); (iii) a citizen or national of any covered nation, provided such person is not a citizen, national or lawful permanent resident of the United States; (iv) an entity or qualified business unit incorporated or organized under the laws of, or having its principal place of business, in any covered nation; or (v) an entity (including any subsidiary thereof) that is more than 50% owned, by vote or value (in the case of a corporation), by an entity described in any of the foregoing clauses (i) through (iv).<sup>8</sup>

In contrast, an FIE is any entity over which a foreign country of concern or an entity controlled by such a country exercises effective control, including through ownership, board representation, contractual rights, debt relationships, or other arrangements.<sup>9</sup> An entity will be treated as an FIE if any of the following criteria is satisfied during the taxable year: (i) an SFE has the direct authority to appoint an entity’s executive-level officer, member of the board of directors, or any other individual having powers or responsibility similar to the foregoing officers or members; (ii) an SFE owns at least 25% of such entity; (iii) one or more SFEs together own at

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<sup>4</sup> These documents include: OMCO Holdings, Inc. Share Ownership Summary; OMCO Holdings, Inc. Code of Regulation (Bylaws); and OMCO Holdings, Inc. Form of Incumbency Certificate.

<sup>5</sup> See Notice 2026-15.

<sup>6</sup> For U.S. federal tax purposes, whether an organization is treated as an entity is a matter of U.S. federal tax law and does not depend on whether the organization is recognized as an entity under local law.

<sup>7</sup> Section 7701(a)(51).

<sup>8</sup> *Id.*

<sup>9</sup> *Id.*

least 40% of such entity; or (iv) more than 15% of the entity's debt has been issued, in the aggregate, to one or more SFEs.

An entity will also be treated as an FIE if such entity (i) made a payment to an SFE during the prior taxable year, pursuant to a contract, agreement, or other arrangement which entitles such SFE, or entity related to the SFE, to exercise effective control, or (ii) has a licensing agreement that grants a PFE the ability to control output or direct the operation of an Inflation Reduction Act ("IRA") qualified facility.<sup>10</sup>

### III. Analysis

OMCO has represented, and we have confirmed based on these representations, that the company does not meet any of the requirements in clauses (i) through (iii) of the SFE criteria to be treated as an SFE. OMCO has also stated that the company does not meet any of the FCE criteria to be treated as an FCE. In particular, with respect to clause (iv) of the FCE criteria, OMCO should not be treated as having its principal place of business in a covered nation. Based on the above, OMCO should not be treated as an SFE or an FCE.

Furthermore, OMCO should not satisfy the criteria regarding FIEs because no SFE has the direct authority to appoint an entity's executive-level officer, member of the board of directors, or any other individual having powers or responsibility similar to the foregoing officers or members. No single SFE owns at least 25% of OMCO and no multiple SFEs together own at least 40% of such entity. And no more than 15% of the entity's debt has been issued, in the aggregate, to one or more SFEs.

In addition, OMCO has not made payment to an SFE during the prior taxable year, pursuant to a contract, agreement, or other arrangement which entitles such SFE, or entity related to the SFE, to exercise effective control over production operations. And OMCO does not have a licensing agreement that grants a PFE the ability to control output or direct the operation of an IRA-qualified facility. Accordingly, based on OMCO's Due Diligence Checklist Response and our understanding of the facts and related assumptions, OMCO should not satisfy any of the FIE criteria.

### IV. Conclusion

Based on our review of OMCO's factual representations, corporate documentation, and the statutory requirements of the OBBB, it is our opinion that OMCO should not be treated, as of the date hereof, as a PFE under Section 7701(a)(51).

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<sup>10</sup> Id.

## APPENDIX I

### Smirnow Law FEOC Screening Checklist

#### OMCO Holdings, Inc.

#### 1. PURPOSE AND SCOPE

This Checklist documents the FEOC screening performed for the parties identified above. The FEOC screening includes review of the parties' questionnaire responses, supporting documentation, and limited public-source checks (as applicable). Legal review is a required step within the standard FEOC screening process.

Scope of review (check one or more):

- Contracting entity only
- Contracting entity + parent(s)
- Contracting entity + parent(s) + relevant subsidiaries/affiliates (as applicable)

#### 2. INFORMATION REVIEWED

##### 2.1 FEOC Questionnaire

- FEOC questionnaire received
- Questionnaire signed by authorized representative
- Questionnaire dated: 2/18/2026
- Responses complete (no missing required fields)
- "Unknown / N/A" answers reviewed and explained (if applicable)

Notes:

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##### 2.2 Company-Provided Supporting Documents (Reviewed)

(Select all that apply.)

- Ownership structure chart / organizational chart
- Cap table excerpt and/or shareholder register excerpt
- Governing documents (articles/bylaws) or equivalent
- Directors / officers list
- Parent / ultimate beneficial ownership (UBO) disclosure (if applicable)
- Summary of investor/control rights (if applicable)
- Other: OMCO Holdings, Inc. Share Ownership Summary; OMCO Holdings, Inc. Code of Regulation (Bylaws); and OMCO Holdings, Inc. Form of Incumbency Certificate

Notes:

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##### 2.3 Limited Public-Source Review (As Applicable)

- Corporate registry / basic entity verification (where available)

- Public filings review (if publicly listed company)
- Sanctions / restricted party screening (entity)
- Adverse media screening (entity)
- Other: Independent review of publicly available information.

Notes:

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### 3. SCREENING STEPS PERFORMED (INCLUDING LEGAL REVIEW)

The following steps were completed as part of FEOC screening:

- Completeness check of the questionnaire package (signature, date, required fields)
- Internal consistency / reasonableness review (ownership, jurisdiction, governance, control rights)
- Corroboration of key assertions against company-provided documents (as available)
- Screening for potential FEOC indicators based on the information reviewed
- Limited public-source checks completed (as applicable)
- Legal review of the materials and screening conclusion (required step)

Summary of work performed: See opinion memorandum above.

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### 4. RESULTS AND FINDINGS

Based on review of the materials listed above, the reviewer assessed potential FEOC indicators relating to ownership, control rights, governance, upstream ownership/affiliation, and jurisdictional considerations, within the scope of available information.

Findings summary: Based on our review of OMCO'S factual representations, corporate documentation, and the statutory requirements of the OBBB, it is our opinion that OMCO should not be treated, as of the date hereof, as a PFE under Section 7701(a)(51).

### 5. ATTACHMENTS

- Completed FEOC questionnaire
- Supporting corporate documents (list): on file.
- Public-source screening notes/results (if applicable)
  - Other: \_\_\_\_\_

## APPENDIX II

### **Supplier's Certification and Due Diligence Checklist Supporting Certification Regarding Absence of Material Assistance from Prohibited Foreign Entities**

This Foreign Entity of Concern ("FEOC") Certification is furnished by OMCO Holdings, LLC, including OMCO Solar LLC ("Supplier") to Purchaser pursuant to section 7701(a)(52)(D)(iii)(IV) of the Internal Revenue Code ("Code") for the Manufactured Products ("MPs") and/or Manufactured Product Components ("MPCs") (collectively, "Products") listed in Annex I and supplied by Supplier.<sup>11</sup> Supplier acknowledges that Purchaser intends to incorporate the Products listed in Annex I into solar qualified facilities or energy storage technologies ("Projects") being developed by Purchaser, its affiliates, or related party and that Purchaser intends to qualify the Projects for the credit available under section 48E of the Code. Accordingly, Purchaser is required to comply with the prohibited foreign entity ("PFE") requirements under Code section 7701(a)(51) and the material assistance from a PFE requirements under Code section 7701(a)(52). Supplier provides the following in this Certification:

1. Supplier's Employer Identification Number is 26-4527741.
2. Supplier acknowledges the requirements of Section 7701(a)(52)(D)(iii)(IV)(cc) of the Code, agrees to retain this Certification for a period of not less than 6 years, and agrees to provide this Certification to the United States Department of the Treasury, the United States Internal Revenue Service, or any other federal governmental agency, authority, department, or instrumentality upon request.
3. Supplier is not a PFE as defined in Section 7701(a)(51) of the Code.
4. Supplier has identified the manufacturer of each Product included in this Certification in Annex I.
5. The Manufactured Products and/or Manufactured Product Components identified in Annex I were not mined, produced, or manufactured by a PFE.
6. Supplier does not know (or have reason to know) that any prior supplier in the chain of production of such Manufactured Product(s) or Manufactured Product Component(s) is a PFE.
7. Seller acknowledges that this Certification may be relied on by Purchaser, Purchaser's financing parties, transferees of credits available with respect to the Project, and their respective agents to determine whether the construction,

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<sup>11</sup> For this purpose, because Purchaser intends to use the safe harbor method, only the Products listed in the applicable table of IRS Notice 2025-08, are relevant.

reconstruction, or erection of the Project includes any material assistance from a PFE for purposes of Sections 48E(b)(6).

Supplier is making this Certification with respect to the Products included in Annex I as of the date the Certification is signed and represents that it was accurate on that date and any prior date in the year the Certification is signed and that it is, or will be, accurate on the date the Products included in Annex I are produced or manufactured. If any of the information provided in this Certification changes following the date of Certification, Supplier agrees to promptly provide Purchaser with an updated certification upon becoming aware of such changes.

Under penalties of perjury, the undersigned hereby declares that (i) they have the authority to legally bind the Supplier, and (ii) they have examined this Certification and, to the best of their knowledge and belief, the statements contained in this Certification are true and complete. Furthermore, attached to this Certification is a Checklist (see Annex II) that reflects the questions and criteria reviewed to assess the ownership structure and other relevant factors under the applicable rules of section 7701(a)(51) of the Code with respect to the definition of PFE. With respect to Products listed below in Annex I that were not manufactured or produced by Supplier, Supplier has ensured that the checklist is applied to evaluate the PFE status of the producer or manufacture of such Products.

**OMCO Holdings, Inc.**

**Authorized Signatory:** 

**Printed Name:** KEVIN D. HOPP

**Date:** 2/19/20

**Annex I**

**Non-PFE Manufactured Product Components**

The following Tracker Manufactured Product Components were not produced or manufactured by a Prohibited Foreign Entity (“PFE”):

<b>Manufactured Product Component</b>	<b>Manufacturer</b>
Torque Tube	OMCO Solar
Structural Fasteners	OMCO Solar
Drive System	Kinematics
Dampers	Stabilus
Controller	P4Q
Rails	OMCO Solar

**Annex II**

**Due Diligence Checklist in Support of  
Supplier's FEOC Compliance Certification**

This Checklist is provided in support of the Supplier's FEOC Compliance Certification ("Certification") to ensure that Supplier correctly applied the definition of Prohibited Foreign Entity ("PFE") pursuant to section 7701(a)(51) of the Code for purposes of determining whether the Manufactured Products ("MPs") and/or Manufactured Product Components ("MPCs") (collectively, "Products") identified in the Certification were produced or manufactured by a PFE.

**A. Specified Foreign Entities**

Check "Yes" to the following statements in section A. if they are or will be true at any time during the year in which the Certification is signed with respect to the Manufacturer of any of the Products included in the Certification or at the time when any of the Products included in the Certification are produced or manufactured. If not, check "No."

1. Manufacturer is a foreign entity designated as [a terrorist organization under 8 U.S. 1189](#).

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

2. Manufacturer is included on the [list of Specially Designated Nationals and Blocked Persons \("SDN List"\) maintained by the Office of Foreign Assets Control of the Department of the Treasury](#).

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

3. Manufacturer is alleged by the Attorney General to have been involved in activities for which a conviction was obtained under any of the following:

- a) Chapter 37 of title 18 (the "Espionage Act"),
- b) Section 951 or 1030 of title 18,
- c) Chapter 90 of title 18 (the "Economic Espionage Act of 1996"),
- d) The Arms Export Control Act (22 U.S.C. 2751 et seq.),
- e) Section 224, 225, 226, 227, or 236 of the Atomic Energy Act of 1954 (42 U.S.C. 2274, 2275, 2276, 2277, or 2284), or
- f) The Export Control Reform Act of 2018 (50 U.S.C. 4801 et seq.), or
- g) The International Emergency Economic Powers Act (50 U.S.C. 1701 et seq.).

Yes	<input type="checkbox"/>
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No	<input checked="" type="checkbox"/>
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4. Manufacturer is determined by the Secretary of Commerce, in consultation with the Secretary of Defense and the Direction of National Intelligence, to be engaged in unauthorized conduct that is detrimental to the national security or foreign policy of the United States (“U.S.”).

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

5. Manufacturer is a [Chinese military company operating in the U.S. under section 1260H of the William M. \(Mac\) Thornberry National Defense Authorization Act for Fiscal Year 2021](#).

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

6. Manufacturer is included on the [Uyghur Forced Labor Prevention Act entity list](#) pursuant to section 2(d)(2)(B)(i), (ii), (iv) or (v) of P.L. 117-78:

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

7. Manufacturer is a successor to one of the following entities: (i) Contemporary Amperex Technology Company, Limited (also known as “CATL”); (ii) BYD Company, Limited; (iii) Envision Energy, Limited; (iv) EVE Energy Company, Limited; (v) Gotion High tech Company, Limited; and (vi) Hithium Energy Storage Technology company, Limited.

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

8. A Foreign-Controlled Entity:

- a. Manufacturer is the government (including any level of government below the national level) or an agency or instrumentality of a government of any of the following countries: (i) People’s Republic of China, (ii) Russia, (iii) North Korea, or (iv) Iran (“Covered Nations”).

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

- b. Manufacturer is a citizen or national of any of the Covered Nations, and is not a national or lawful permanent resident of the U.S.

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

- c. Manufacturer is incorporated or organized under the laws of, or has its principal place of business in, a Covered Nation.

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

- d. Manufacturer (including any subsidiaries of Manufacturer) is controlled (ownership of 50% or more of the stock, profits interests or capital interests, or beneficial interests) directly or indirectly by any entity or person that would check “Yes” to any of the statements listed in a, b, c, and d of section B.8. In determining the indirect ownership, the attribution rules under IRC section 318(a)(2) should be applied.

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

*Note: If you checked “Yes” to any of the statements included in section A. of this Checklist, you are not required to continue answering questions included in section B.*

## **B. Foreign- Influenced Entities**

Check “Yes” to the following statements in section B. if they are or will be true at any time during the year in which the Certification is signed with respect to the Manufacturer of any of the Products included in Annex I of the Certification or at the time when any of the Products included in Annex I of the Certification are produced or manufactured. If not, check “No.”

1. An entity or person, who would check “Yes” to any of the questions listed in section B. of this Checklist (“specified foreign entity”) has the direct authority to appoint a covered officer of Manufacturer. Covered officer refers to: (i) member of the board of directors, board of supervisors, or equivalent governing body, (ii) executive-level officer, such as the president, CEO, COO, CFO, general counsel, or senior vice president, or (iii) an individual with powers or responsibilities similar to those listed in (i) and (ii).

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

2. One specified foreign entity owns, directly or indirectly, at least 25% of Manufacturer’s outstanding shares or interests, or multiple specified foreign entities own directly or indirectly in the aggregate at least 40% of Manufacturer’s outstanding shares or interests.

In determining the indirect ownership, the attribution rules under IRC section 318(a)(2) should be applied.

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

3. At least 15% of Manufacturer's total debt has been issued, in the aggregate, to one or more specified foreign entities.

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

4. During the previous taxable year, Manufacturer made a payment to a specified foreign entity pursuant to a contract, agreement, or other arrangement, which entitles such specified foreign entity to exercise effective control within the meaning of section 7701(a)(51)(D)(II).

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

5. Has any specified foreign entity entered into a management, operating, or service agreement giving it the right to approve budgets, production levels, or major operational decisions?

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

6. Has any foreign entity (directly or indirectly) the right to nominate or veto board members or observers?"

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

7. Does any specified foreign entity host, control, or have access to Manufacturer's production data, EMS/SCADA systems, or encryption keys?

Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>

8. Has Manufacturer entered into any license with a foreign entity that directs sourcing of inputs, restricts independent operation, or requires payments tied to output?

Yes	<input type="checkbox"/>
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No	<input checked="" type="checkbox"/>
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This Checklist was completed in conjunction with Supplier's Certification regarding PFEs. All answers included in this Checklist are true for the year the Certification was signed and at the time of production or manufacture of the Products supplied to Buyer that are identified in the Certification.

Authorized Signatory: 

Printed Name: KEVIN D. HOPP

Title: PRESIDENT, OMCO SOLAR

Date: 2/19/26

# GREEN LAKE COUNTY

## Notice of Budgetary Adjustment

Date: June 12, 2026  
 Department: Maintenance  
 Amount: \$112,000.00  
 Budget Year Amended: 2026

Recording information
Batch no: _____
Date: _____

Source of Increase / Decrease and affect on Program:  
 (If needed attached separate brief explanation.)

\$2,000 is for Advertising the BID Project to receive BIDS, \$110,000 is for the upfront Money down to start the Solar Panel Project. This is the maximum amount anticipated to cover the federal tax credit of 30% safe harbor requirements.

**Are Green Lake County contingency funded needed to fund this budget adjustment? YES NO**

If Yes, complete sections 1, 2, and 3. If No, complete sections 1 and 2 and inform oversight committee.

### Section #1

#### Revenue Budget Lines Amended:

Account #	Account Name	Current Budget	Budget Adjustment	Final Budget
		\$ -		\$ -
				\$ -
				\$ -
				\$ -
Total Adjustment			\$ -	

#### Expenditure Budget Lines Amended:

Account #	Account Name	Current Budget	Budget Adjustment	Final Budget
26-400-00-57000-000-000	Capital outlay - Building Project	\$ -	\$ 110,000.00	
26-400-00-57000-000-000	Capital outlay - Building Project	\$ 110,000.00	\$ 2,000.00	\$ 112,000.00
26-400-00-34200-000-000	Reserved General Fund	\$ 5,222,295.00	\$ (110,000.00)	
26-400-00-34200-000-000	Reserved General Fund	\$ 5,112,295.00	\$ (2,000.00)	\$ 5,110,295.00
				\$ -
				\$ -
Total Adjustment			\$ -	

### Section #2

Department Head Approval: <u>Michael Van Meel</u>	Date: <u>6/12/26</u>
Finance Director Approval: <u>Kayla Jonke</u>	Date: <u>6/12/2026</u>
County Manager Approval: <u>Jason Jerome</u>	Date: <u>06/15/2026</u>
Inform your Governing Committee	Date: _____

### Section #3

Governing Committee Approval: \_\_\_\_\_ Date: \_\_\_\_\_

*Following this approval please forward to the County Clerk's Office.*

Finance Committee Approval: \_\_\_\_\_ Date: \_\_\_\_\_

County Board Approval: \_\_\_\_\_ Date: \_\_\_\_\_

# Notice of Budgetary Adjustment

## **Purpose**

To comply with State Statute 65.90 (5)

## **Recommended Practice**

Actual spending should not exceed the authorized budget spend for any account in your budget. If you anticipate spending more than the budgeted amount, you need to locate funding and revise the budgets so that you will not exceed budgeted spending. Use this form if you do not have enough funds within your department's budget. If you need to use a portion of the county's contingency dollars to fund your need, make certain that you have the necessary discussions with the County Administrator, Finance Director and your oversight committee prior to approval by the Finance Committee and the County Board.

This form may also be used to process a budgetary adjustment after your department receives a grant award. If the grant and related expenditures do not require any Contingency Funds, then you need to inform your governing committee, but you do not need to evidence their approval and the budgetary adjustment does not need to go to the Finance Committee or County Board.

## **Procedure**

To initiate the Budgetary Adjustment process, the department head shall complete and sign this document. Gain the approval of the Finance Director and County Administrator as evidenced by their signatures. Then notice the review, discussion & action of this completed and signed form on the next monthly meeting agenda of their committee of jurisdiction.

If the Budgetary Adjustment will use Contingency Funds, then you need the approval of your governance committee, Finance Committee and the County Board. After approval by your governing committee the signed copy of this form along with a copy of the meeting minutes shall be forwarded to the County Clerk to be noticed on the Finance Committee agenda for review, discussion & action. Upon Finance Committee approval the signed Budgetary Adjustment form shall be forwarded to the County Clerk to be notice on the County Board agenda for review, discussion and action.

A department representative must be available at each meeting to address any questions or concerns that may arise during review and discussion.

Per WI Stats 65.90(5)(a) the Budgetary Adjustment must be authorized by a vote of two-thirds of the entire membership of the County Board.