



GOOD ENERGY
SOLUTIONS, INC.®

SOLAR PROPOSAL

USD 413 CHANUTE PUBLIC SCHOOLS

Chanute, Kansas

RFP No. USD413-SOLAR-2026-01

Authorized Officer (print): Malcolm Proudfit Title: CEO
Authorized Officer (signature): *Malcolm Proudfit* Date: 05/26/2026

1. Executive Summary

Good Energy Solutions proposes the following project designed around the key goals of the school district. This proposal has a strong preference for Domestic Content eligibility and an emphasis on maximizing the 25-year NPV. Each system was designed to maximize on-site consumption while saving the district the most money across the entire project lifespan.

BASE BID – Executive Summary Table (*Domestic Content Eligible*)

Item	HS-A (Weld)	HS-B (West)	HS-C (East)	Elementary	Middle	Combined
Annual Usage (kWh)	177,520	912,300	362,600	942,300	693,440	3,088,160
Annual Energy Cost (less demand)	\$20,802.80	\$104,363.38	\$42,603.20	\$109,838.68	\$80,707.71	\$358,315.77
System Size DC (kW)	67	315	128	315	255	1,080
System Size AC (kW)	50	240	100	230	195	815
Year-1 Production (kWh)	102,000	478,000	176,000	422,000	360,000	1,538,000
Solar Yield (kWh/kWp)	1,522	1,517	1,375	1,340	1,412	
Solar Offset (%)	57%	52%	49%	45%	52%	51%
Year-1 Bill Savings (\$)	\$8,475	\$45,350	\$17,575	\$42,800	\$34,575	\$148,775
Total Project Pricing (TIC) (\$)	\$127,000	\$591,000	\$228,000	\$560,000	\$454,000	\$1,960,000
ITC Amount (30%) (\$)	\$38,100	\$177,300	\$68,400	\$168,000	\$136,200	\$588,000
Domestic Content Amount (10%) (\$)	\$12,700	\$59,100	\$22,800	\$56,000	\$45,400	\$196,000
Net Project Price after 30% ITC (\$)						
Net Project Price after 40% ITC (\$)	\$76,200	\$354,600	\$136,800	\$336,000	\$272,400	\$1,176,000
Simple Payback (years)	6.5	6.5	6.6	6.8	6.5	6.6
Net LCOE (25yr) (\$/kWh)	\$0.0317	\$0.0315	\$0.0330	\$0.0338	\$0.0321	\$0.0325

An alternate executive summary table for the project without domestic content eligibility is included in section 5 “Alternates & Allowances.”

2. Technical Proposal

Design Summary:

HS-A (West)

- 67 kW DC / 50 kW AC
- Annual Production: 102,000 (kWh) - Estimated On-Site / Export: (61% / 39%)
- Specific Yield: 1,522 (kWh/kWp) *see note on next page for export evaluation
- Energy Offset: 57%
- (x116) Silfab Solar – SIL-580XM+ Modules
- (x2) SMA America – Tripower-X-25kW Inverters
- APA Ground Mount – Ground Screw Foundations

HS-B (West)

- 315 kW DC / 240 kW AC
- Annual Production: 478,000 (kWh) - Estimated On-Site / Export: (76% / 24%)
- Specific Yield: 1,517 (kWh/kWp) *see note on next page for export evaluation
- Energy Offset: 52%
- (x544) Silfab Solar – SIL-580XM+ Modules
- (x8) SMA America – Tripower-X-30kW Inverters
- APA Ground Mount – Ground Screw Foundations

HS-C (East)

- 128 kW DC / 100 kW AC
- Annual Production: 176,000 (kWh) - Estimated On-Site / Export: (80% / 20%)
- Specific Yield: 1,375 (kWh/kWp) *see note on next page for export evaluation
- Energy Offset: 49%
- (x222) Silfab Solar – SIL-580XM+ Modules
- (x4) SMA America – Tripower-X-25kW Inverters
- Ironridge Aire – Flush Mount Racking (S-5! Standing Seam Clamps – NO Penetrations)

Elementary School

- 315 kW DC / 230 kW AC
- Annual Production: 422,000 (kWh) - Estimated On-Site / Export: (82% / 18%)
- Specific Yield: 1,340 (kWh/kWp) *see note on next page for export evaluation
- Energy Offset: 45%
- (x543) Silfab Solar – SIL-580XM+ Modules
- (x6) SMA America – Tripower-X-30kW, (x2) Tripower-X-25kW Inverters
- Ironridge Aire – Flush Mount Racking (S-5! Standing Seam Clamps – NO Penetrations)
- Unirac EcoFoot – Ballasted Racking (Weight & Wind Deflectors, NO Penetrations)

Middle School

- 255 kW DC / 195 kW AC
- Annual Production: 360,000 (kWh) - Estimated On-Site / Export: (76% / 24%)
- Specific Yield: 1,412 (kWh/kWp) *see note on next page for export evaluation
- Energy Offset: 52%
- (x440) Silfab Solar – SIL-580XM+ Modules
- (x4) SMA America – Tripower-X-30kW, (x3) Tripower-X-25kW Inverters
- Ironridge Aire Tilt – 10DEG Tilt Leg Racking (S-5! Standing Seam Clamps – NO Penetrations)
- Unirac EcoFoot – Ballasted Racking (Weight & Wind Deflectors, NO Penetrations)

The estimated on-site consumption and exported energy is modeled using load profiles within Energy Toolbase simulation tool. These values are based off the load profile “Primary School” and use peak demand values to simulate this. Most exported energy will occur on weekends/ holidays, times when building utilization is low. Weekends account for approximately 25% of each year, so achieving below 20% export may be difficult. If required by the utility, additional Power Control System (PCS) can be installed to limit export power. If the district would like more detailed calculations of energy export, 8760 hourly interval data can be used to further assess this.

Equipment Summary:

Data sheets for Modules & Inverters are included in Appendix D.

Silfab Solar Modules

- Silfab has over 40 years in the business of manufacturing solar modules and was originally founded in Toronto and has expanded in the US since the 2000s. They are a top-tier provider with original roots in North America. Their modules use an N-Type cell which have improved performance, higher lifetime yields, & reduced degradation compared to PERC cells.
- Warranties: Product (25-Year) Performance (30-Year)
- Country of Manufacture & Final Assembly: U.S.A (Washington & South Carolina)

SMA America Inverters

- A subsidiary of SMA Solar Technology AG, headquartered in Germany. SMA has been in business since 1981 producing renewable energy equipment including inverters, batteries, and more across residential, commercial, and utility scale applications. They are known to be one of the most reliable products on the market today.
- Warranties: Product (15-Year) *5-year extension included
- Country of Manufacture & Final Assembly: Germany / U.S. (Tennessee)

Ironridge Racking

- Founded in the 1990’s in the US, Ironridge is known for its high-quality racking components that prove reliable over a 25+ year lifetime.
- Warranties: Product (25-Year)
- Country of Manufacture & Final Assembly: California & Multiple U.S Locations

Unirac Racking

- Producing solar racking for over 25 years with a foundation in the U.S. Their racking is notable for providing superior flexibility in design and layout for flat roof systems.
- Warranties: Product (25-Year)
- Country of Manufacture & Final Assembly: U.S (New Mexico)

Production Model Reports: (Attached in Appendix)

Production modeling for each system was completed using Helioscope; the standard in commercial design and performance simulation. We completed several different “condition sets” which are comprised of varying weather data sets from NREL, Meteonorm, and local weather stations in the area. Each condition set simulation results in a varying yield value, by simulating multiple scenarios we ensure that our estimated production values are conservative. We also compare this with actual production data from system’s we have previously installed.

Single-line Diagrams:

Good Energy Solutions will provide preliminary SLD for each site if awarded, these can be generated prior to contract execution.

Roof & Structural:

The roof top mounted systems will be installed according to applicable ASCE/SEI, IBC, IFC codes & ANSI standards. Each specific type of racking system will be designed with the specific manufacturer design tool and their engineered specifications.

All arrays mounted on standing seam metal roof will be installed using standing seam clamps, which clamp to the seam, and do not create any penetrations. All arrays mounted on TPO, or flat roof sections will be installed using ballast tray racking, with concrete blocks for weight, and wind deflectors on the North side of each row. This style of racking does not create any penetrations. Good Energy will perform detailed site visit analysis for each roof mounted site to include structural support and conditions of any section the solar panels will be installed on. This data will be included in the fully engineered and stamped project plan set submitted for customer review prior to construction start.

Civil & Geotechnical:

For the arrays that will be ground mounted at the high school we will use a steel racking structure with ground auger style ground screw foundations. This system will also use the manufacturer's design and engineering specifications that shall be calculated based on the local ASHRAE data and requirements. All equipment shall be installed by the manufacturer's installation manual and specifications to ensure proper load limits per engineered design.

Perimeter fencing will be installed as specified in Addendum #1. Dig Tickets will be submitted for all areas of work, including screw driving, trenching, or horizontal drilling.

Interconnection:

Good Energy Solutions will handle all processes for applications and potential interconnection studies. We will be in contact with City of Chanute Utilities very early in the process to verify if any pre-interconnection studies are required. The completed applications will be filed with the city a minimum of 90-days prior to construction start. The project design and interconnection phase is handled very early in the project to ensure all approvals are gained prior to on-site construction. Any fees for pre-interconnection studies and applications are included in our TIC. We anticipate being able to fulfill all of this and complete the project well ahead of the required PTO date of August 1, 2027.

FEOC & Domestic Content Compliance:

Good Energy Solutions attests that the proposed projects will meet all necessary requirements to fulfill the material assistance rules set forth by the IRS. We will ensure all the district has all necessary documentation to substantiate project compliance for FEOC and the Domestic Content bonus credit adder.

Using IRS Notice 2026-015, additional guidance was provided to allow for safe harbor calculation of material assistance cost ratio for applicable qualifying facilities under section 48E. IRS guidance allows for calculation of MACR using the “domestic-content” assigned cost percentages in the safe-harbor tables previously provided in IRS Notice 2025-08, under sections 5.05, 5.06, & 5.07. For a “qualified facility”, solar installation, the MACR limitation is based upon the year in which the project begins construction; the limits are 40% in 2026, and 45% in 2027. This means that the total % of materials used in the project that are NOT supplied by a PFE or SFE must exceed the threshold. A taxpayer may rely on supplier certifications to substantiate whether items are PFE sourced or produced.

Good Energy attests that we will supply the District with manufacturer reliance letters for documented calculation of FEOC project compliance. The proposed project will use proper components that exceed the minimum threshold of 40%.

For project qualification of “Domestic Content” bonus credit IRS guidelines stipulate project manufactured products & components (MPC), must exceed the following thresholds; 50% in 2026, 55% in 2027. Using the safe harbor guidance in Notice 2025-08, we can calculate the total project cost percentage using the assigned MPC percentages within tables under sections 5.05 & 5.06.

Good Energy attests that we will supply the District with manufacturer reliance letters for documented calculation of Domestic Content project compliance. The proposed project will use proper components that exceed the minimum threshold of 50%. All manufacturer reliance letters/ certifications will be supplied to the district post project award, but prior to contract execution.

Begin Construction Strategy:

Good Energy Solutions has closely followed legislative changes and guidelines for required steps to achieve project “beginning of construction” prior to the “safe-harbor” deadline on July 4th, 2026. For projects that do not exceed 1MW AC in net output, the 5% rule shall apply.

Customer shall make a down payment for 10% of the combined project total installed cost (TIC). Using this down payment Good Energy Solutions will procure inverters, racking, or other components that exceed 5% of project cost. Documentation will be provided to the District to demonstrate the “Begin Construction” status before the deadline on July 4th, 2026.

Commissioning & PAT Summary:

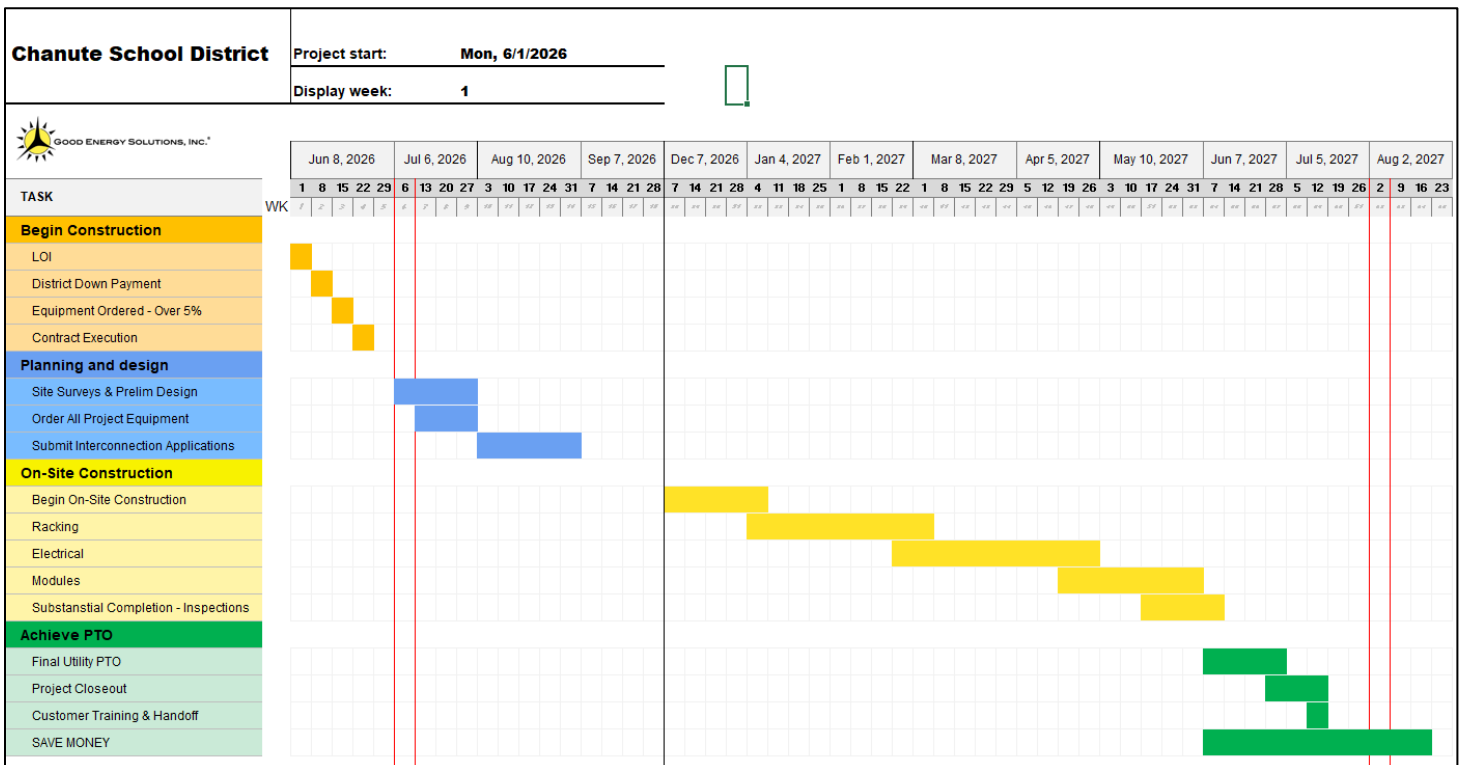
Good Energy Solutions will complete project commissioning with standard industry practices and procedures. This includes onsite QA/QC checklists performed by project supervisors and executives. Documented photos including all wiring methods and termination points verified to comply with installation manuals and procedures. All proper mechanical and electrical checks will be completed prior to final commissioning of each system. These checks will include the PAT (performance acceptance test). Performance Acceptance Test shall be completed with multiple checks at different times of day including I-V curve tracing and string VOC/VMP to be within 5% of modeled designs.

O&M Plan Summary:

Good Energy Solutions will complete proper O&M work above and beyond industry standards. Typical O&M shall include preventative site inspections and minor repairs. This will include visual inspection of all major components: solar panels, DC wiring, inverters, clamps & hardware, AC wiring, and mechanical gear. These inspections will include both exterior and interior checks of wiring and any potential signs of corrosion, weathering, or mechanical integrity issues. Additional checks for thermal hot spots will also be conducted using IR imaging to document normal temperature readings. Further verification of system performance will be conducted to ensure all voltage, amperage, and resistance values are within normal tolerances. All O&M services will be thoroughly documented along with performance indicators. Our O&M services will also include basic site checks to include the condition of roof top or ground mount areas; any evidence of pests, debris, excess soiling, drainage issues, or excess wear will be documented. Good Energy Solutions will not clean roof surfaces or mow vegetation as part of regular O&M. However, our team is dedicated to quickly remedy any potential issues that may arise from site conditions. A detailed O&M checklist will be provided to the district if awarded the project.

Construction Schedule:

The schedule below is a preliminary overview of the project to achieve the contracted milestones. Updated and further detailed schedules shall be provided if awarded the project. This schedule shows interconnection & construction processes for all 5 systems included in one. Ideally, each individual site, High School, Middle School, & Elementary School will each be submitted for interconnection as soon as ready. Additionally, on-site construction for each location will depend on equipment delivery and permit/utility approval timelines. Once an individual site reaches substantial completion, inspections and commissioning will immediately occur, allowing that site to begin producing power while other locations are completed.



3. Pricing Proposal

Project Pricing Summary Table: (Domestic Content)

Item	HS-A (Weld)	HS-B (West)	HS-C (East)	Elementary	Middle	Combined
DC kW	67	315	128	315	255	1,080
AC kW	50	240	100	230	195	815
Year-1 Production (kWh)	102,000	478,000	176,000	422,000	360,000	1,538,000
Modeled Offset (%)	58%	52%	48%	45%	52%	51%
Year-1 Savings (\$)	\$8,475	\$45,350	\$17,575	\$42,800	\$34,575	\$148,775
TIC Lump Sum (\$)	\$127,000	\$591,000	\$228,000	\$560,000	\$454,000	\$1,960,000
ITC (30%) (\$)	\$38,100	\$177,300	\$68,400	\$168,000	\$136,200	\$588,000
Domestic Content Bonus (10%, if applicable) (\$)	\$12,700	\$59,100	\$22,800	\$56,000	\$45,400	\$196,000
Net Cost after 30% ITC (\$)						
Net Cost after 40% DC (\$)	\$76,200	\$354,600	\$136,800	\$336,000	\$272,400	\$1,176,000
\$/W-DC	\$1.90	\$1.88	\$1.78	\$1.78	\$1.78	\$1.81
\$/W-AC	\$2.54	\$2.46	\$2.28	\$2.43	\$2.33	\$2.41
Simple Payback (years)	6.5	6.5	6.6	6.8	6.5	6.6
25-Year NPV (\$)	\$66,290	\$400,147	\$157,724	\$376,438	\$303,083	\$1,303,682
25-Year IRR (%)	11.00%	12.58%	12.72%	12.53%	12.49%	
Net LCOE (25yr) (\$/kWh)	\$0.0317	\$0.0315	\$0.0330	\$0.0338	\$0.0321	\$0.0325
10-Year O&M Option (\$)	\$5,863	\$27,568	\$11,202	\$27,568	\$22,317	\$94,518

Notes:

- Year #1 Savings only include energy charges and exclude all demand charges per RFP instructions.
- Net cost after 30% ITC is not calculated because the project will qualify for domestic content.
- LCOE is calculated as (Net Cost / 25-year cumulative production), it does not include any O&M costs or discount rate.
- NPV is calculated using the standard 5.0% discount rate instructed per the RFP.

4. Qualifications

Good Energy Solutions was founded in 2007 by Kevin Good and his wife Shana; to this day we are still a local family-owned company and continue to operate on the same principles we began with; being a leader of technical expertise and serving customers with integrity. With over 19 years of experience, we continue to expand our capabilities across electrical & energy services for residential, commercial, and industrial sectors.

Serving Kansas & Missouri we are a comprehensive provider of solar projects, handling all aspects of design, sales, construction, and service in house. We have a solid reputation in the region as a company who does it right and is committed to caring for our customers. Our goal is to exceed expectations and ensure customers love the product; the many 5-star reviews across Google and Solar Reviews further prove this.

Good Energy Solutions is also a member of the Amicus Cooperative, which further reinforces our commitment to longevity and ethical business practices in the solar industry.

With in-house NABCEP certifications, licensed electricians, and technical expertise, Good Energy Solutions is here to make your project a success.

Licenses & Certifications:

- Contractors License: #BCL-000001-2025, City of Lawrence KS, (Exp. 12/31/2026)
- FEIN: 261639702
- Kevin Good (President & Owner)
 - o NABCEP PV-051112-72 (exp. 05/11/2027)
- Chris Crabtree (PV & BESS Designer)
 - o NABCEP PV-102216-015403 (exp. 12/22/2026)
 - o NABCEP ESIP-01325-000124 (exp. 05/12/2028)
- Jeff Dunn (VP of Operations)
 - o NABCEP PVSI-061625-013783 (exp. 06/14/2028)
 - o Master Electrical License

**Good Energy Solutions will obtain any necessary contractor / electrical licenses from the local AHJ prior to permitting and construction start.

Over 160 Commercial Solar Projects Completed to Date

ACORD certificate and bank capacity reference letter are attached in Appendix D.

If additional insurance coverage is required Good Energy Solutions can increase coverage to the necessary limits.

Project References:

- Crestwood, Inc. *(completed in 2025)*
- 1.5 MW DC / 1 MW AC
- Roof Mount Ballasted Racking
- TIC of \$2,146,000
- Mike Junk
 - o 785-826-5993
 - o Mjunk7050@gmail.com



- Schwartz Wilke Farms, LLC *(completed in 2025)*
- 610 kW DC / 500 kW AC
- Ground Mount Array
- TIC of \$1,295,000
- Brad DeVos
 - o 507-794-8940
 - o bdevos@schwartzfarms.net



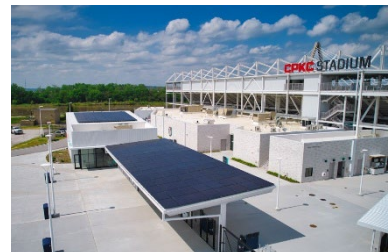
- Ionos Data Center *(completed in 2023)*
- 480 kW DC / 400 kW AC
- Roof Mounted Array
- Installation Only Cost \$160,000
- Stephen Berry
 - o 610-909-5791
 - o Stephen.berry1@ionos.com



- Good Energy Solutions was brought in to install the project and fix electrical issues a previous contractor had caused.

Other Notable Projects:

- Hutchinson Solar Farm *(completed in 2018)*
- 1.27 MW DC / 1 MW AC
- Ground Mounted
- Everyg – West Plains Solar Farm *(completed in 2021)*
- 10.8 MW DC
- Ground Mounted Tracker
- KC Current: CPKC Stadium *(completed in 2024)*
- 60 kW DC
- Canopy Mounted Awning



Project Team:

Project Executive – Jeff Dunn (Overall executive for the project)

Project Executive – Jake Jungmann (Coordinate between all parties)

Project Manager – Billy Cabrales

Designer – Chris Crabtree

Kansas P.E – Matt Boyce

Construction Superintendent – (Multiple) **One or Two will be designated for this project*

O&M Manager – Devin Stacy

Good Energy Solutions will not use subcontractors for any major scopes on this project. Only subcontractor work will be for perimeter fencing and/or horizontal underground drilling.

Good Energy Solutions maintains a clean OSHA Safety Record and has no past or current citations, litigation, or judgements filed against it.

5. Alternates & Allowances

5.1 Good Energy Solutions proposes linear pricing on the project if the district wishes to decrease or increase system sizes. Linear project pricing will be on the same \$/W-DC metric so long as the total project size does not reduce more than 10% or increase more than 20%. Any adjustments to project size will ensure that financial metrics do not change or are improved upon.

5.2 Good Energy Solutions proposes an alternate system monitoring program, “Energy Toolbase” solar monitoring. The base bid includes standard RGM metering which shall report kWh energy production. The Energy Toolbase monitoring program provides more detailed calculations and verification of savings by using utility rate tariffs and complex billing structures. A screenshot example is shown in the attached documents. This would enable the school district to verify real dollar savings for the project. This proposed alternate adds a cost of \$7,000 per system, for a total of \$35,000; which includes pre-paid subscription for 10 years.

5.3 Any additional fees for interconnection studies are included in the base price.

5.4 No significant upgrades for electrical service or transformers are included; if upgrades are deemed necessary this will be quoted within a change order beyond this bid price.

ALTERNATE – Executive Summary Table (non-Domestic Content) *FEOC Complaint

Item	HS-A (Weld)	HS-B (West)	HS-C (East)	Elementary	Middle	Combined
Annual Usage (kWh)	177,520	912,300	362,600	942,300	693,440	3,088,160
Annual Energy Cost (less demand)	\$20,802.80	\$104,363.38	\$42,603.20	\$109,838.68	\$80,707.71	\$358,315.77
System Size DC (kW)	67	315	128	315	255	1,080
System Size AC (kW)	50	240	100	230	195	815
Year-1 Production (kWh)	102,000	478,000	176,000	422,000	360,000	1,538,000
Solar Yield (kWh/kWp)	1,522	1,517	1,375	1,340	1,412	
Solar Offset (%)	57%	52%	49%	45%	52%	51%
Year-1 Bill Savings (\$)	\$8,475	\$45,350	\$17,575	\$42,800	\$34,575	\$148,775
Total Project Pricing (TIC) (\$)	\$119,000	\$558,000	\$215,000	\$530,000	\$428,000	\$1,850,000
ITC Amount (30%) (\$)	\$35,700	\$167,400	\$64,500	\$159,000	\$128,400	\$555,000
Domestic Content Amount (10%) (\$)						
Net Project Price after 30% ITC (\$)	\$83,300	\$390,600	\$150,500	\$371,000	\$299,600	\$1,295,000
Net Project Price after 40% ITC (\$)						
Simple Payback (years)	7.1	7.1	7.3	7.5	7.1	7.2
Net LCOE (25yr) (\$/kWh)	\$0.0347	\$0.0347	\$0.0363	\$0.0373	\$0.0353	\$0.0357

Appendix A. – Site Data (Supplied in RFP)

This information was supplied in the original RFP & Addendums.

Appendix B. – Pricing Forms

B.1.1 Pricing Summary – Base Bid – Domestic Content

Item	HS-A (Weld)	HS-B (West)	HS-C (East)	Elementary	Middle	Combined
DC kW	67	315	128	315	255	1,080
AC kW	50	240	100	230	195	815
Year-1 Production (kWh)	102,000	478,000	176,000	422,000	360,000	1,538,000
Modeled Offset (%)	58%	52%	48%	45%	52%	51%
Year-1 Savings (\$)	\$8,475	\$45,350	\$17,575	\$42,800	\$34,575	\$148,775
TIC Lump Sum (\$)	\$127,000	\$591,000	\$228,000	\$560,000	\$454,000	\$1,960,000
ITC (30%) (\$)	\$38,100	\$177,300	\$68,400	\$168,000	\$136,200	\$588,000
Domestic Content Bonus (10%, if applicable) (\$)	\$12,700	\$59,100	\$22,800	\$56,000	\$45,400	\$196,000
Net Cost after 30% ITC (\$)						
Net Cost after 40% DC (\$)	\$76,200	\$354,600	\$136,800	\$336,000	\$272,400	\$1,176,000
\$/W-DC	\$1.90	\$1.88	\$1.78	\$1.78	\$1.78	\$1.81
\$/W-AC	\$2.54	\$2.46	\$2.28	\$2.43	\$2.33	\$2.41
Simple Payback (years)	6.5	6.5	6.6	6.8	6.5	6.6
25-Year NPV (\$)	\$66,290	\$400,147	\$157,724	\$376,438	\$303,083	\$1,303,682
25-Year IRR (%)	11.00%	12.58%	12.72%	12.53%	12.49%	
Net LCOE (25yr) (\$/kWh)	\$0.0317	\$0.0315	\$0.0330	\$0.0338	\$0.0321	\$0.0325
10-Year O&M Option (\$)	\$5,863	\$27,568	\$11,202	\$27,568	\$22,317	\$94,518

B.2 10-Year O&M Option

Item	Amount (\$)
10-Year O&M (Years 1 to 10), all sites, fixed-fee with annual escalation no greater than 2.5%	\$9,500.00 / yr
Years 2 to 10 Incremental Cost (above the Year-1 base included in the TIC)	2.5% Escalator
Description of Services Included: (Included)	

****NOTICE** Good Energy Solutions production guarantee will be contingent upon us providing O&M preventative checks annually. Any year in which O&M is not provided by us, the production guarantee will be reduced by 5%.**

B.3 Production Guarantee Levels

Site	Yr-1 Guaranteed kWh	Annual Degradation %	Yr-10 Guaranteed kWh
HS-A (Weld)	96,000	0.5	91,765
HS-B (West)	454,000	0.5	414,736
HS-C (East)	167,000	0.5	159,633
Elementary	400,000	0.5	382,355
Middle School	342,000	0.5	326,914

B.1.2 ALTERNATE Pricing Summary – Standard 30% ITC

Item	HS-A (Weld)	HS-B (West)	HS-C (East)	Elementary	Middle	Combined
DC kW	67	315	128	315	255	1,080
AC kW	50	240	100	230	195	815
Year-1 Production (kWh)	102,000	478,000	176,000	422,000	360,000	1,538,000
Modeled Offset (%)	58%	52%	48%	45%	52%	51%
Year-1 Savings (\$)	\$8,475	\$45,350	\$17,575	\$42,800	\$34,575	\$148,775
TIC Lump Sum (\$)	\$119,000	\$558,000	\$215,000	\$530,000	\$428,000	\$1,850,000
ITC (30%) (\$)	\$35,700	\$167,400	\$64,500	\$159,000	\$128,400	\$555,000
Domestic Content Bonus (10%, if applicable) (\$)						
Net Cost after 30% ITC (\$)	\$83,300	\$390,600	\$150,500	\$371,000	\$299,600	\$1,295,000
Net Cost after 40% DC (\$)						
\$/W-DC	\$1.78	\$1.77	\$1.68	\$1.68	\$1.68	\$1.71
\$/W-AC	\$2.38	\$2.33	\$2.15	\$2.30	\$2.19	\$2.27
Simple Payback (years)	7.1	7.1	7.3	7.5	7.1	7.2
25-Year NPV (\$)	\$59,909	\$367,433	\$145,296	\$344,533	\$278,416	\$1,195,587
25-Year IRR (%)	10.30%	11.68%	11.84%	11.61%	11.62%	
Net LCOE (25yr) (\$/kWh)	\$0.0347	\$0.0347	\$0.0363	\$0.0373	\$0.0353	\$0.0357
10-Year O&M Option (\$)	\$5,863	\$27,568	\$11,202	\$27,568	\$22,317	\$94,518

Appendix C. – Required Certifications

C.1 Non-Collusion

Proposer affirms that this proposal was arrived at independently, without collusion, and that no contents have been disclosed to any other Proposer prior to opening.

C.2 Debarment

Proposer certifies that neither the firm nor any of its principals are debarred, suspended, or excluded by any federal, state, or local department or agency. The District will independently verify SAM.gov status.

C.3 Tax Compliance

Proposer certifies it is in good standing with the Kansas Department of Revenue and the IRS.

C.4 Drug-Free Workplace

Proposer certifies it maintains a drug-free workplace per applicable Kansas and federal law.

C.5 Kansas Acts Against Discrimination

Proposer agrees to comply with K.S.A. 44-1001 et seq.

C.6 Conflict of Interest

Proposer discloses any actual or apparent conflict of interest with the District, or affirms that none exists.

C.7 Insurance and Bonding

Proposer affirms that, if awarded, it will provide the insurance and bonds specified in Section 8.

C.8 Standardized Financial Assumptions

Proposer affirms that all production models, savings calculations, payback analyses, LCOE calculations, and pro formas use the standardized assumptions in Section 5 without exception, and that demand-charge savings are not included in the savings model.

C.9 FEOC and BoC

Proposer certifies compliance with the FEOC requirements in Section 4.4 and will achieve and document Begin Construction safe harbor on or before July 4, 2026 per Section 4.5.

C.10 Schedule

Proposer affirms it will achieve Permission to Operate at all three in-scope sites no later than August 1, 2027.

C.11 Addenda Acknowledgment

Addendum #1 Date: 05/18/2026 Initials: MP

Addendum #2 Date: 05/22/2026 Initials: MP

Addendum #3 Date: _____ Initials: _____

C.12 Authorized Signature

Firm: Good Energy Solutions

Printed Name and Title: Malcolm Proudfit CEO

Date: 05/26/2026

Appendix D. – Attached Documentation

Additional documentation requested is attached following this page.

Preliminary Array Layouts

(HS-A-Weld)



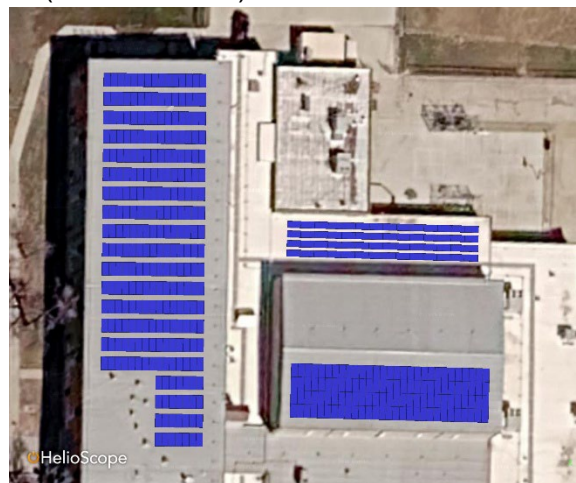
(HS-B-West)



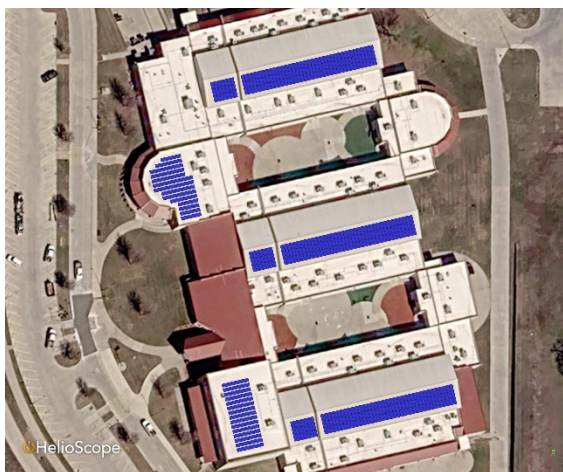
(HS-C-East)



(Middle School)



(Elementary School)





05/22/2026

Matt Koester
Superintendent
Chanute Public Schools USD 413
321 E Main St
Chanute, KS 66720

RE: Good Energy Solutions – Bank Capacity Letter

To Whom It May Concern:

We understand that Good Energy Solutions Inc. is in the process of preparing a response to your request for proposals for your upcoming project. In support of Good Energy Solutions and our banking relationship with them we are writing this letter of reference.

Good Energy Solutions has banked with Landmark National Bank since 2023. To date they have handled all obligations as agreed and have been excellent customers of the Bank.

Currently the Company has a \$1,200,000 revolving line of credit with the Bank. The Company has been in compliance with all covenants and borrowing base requirements and management is prompt and attentive to any requests from the Bank. The Company also has one small term loan and a smaller equipment line of credit. The Company has never missed or been late on a payment and all accounts are in good standing.

If there are any questions, please do not hesitate to contact me at 785-228-8646.

Sincerely,

Rachel Meyer

Landmark National Bank

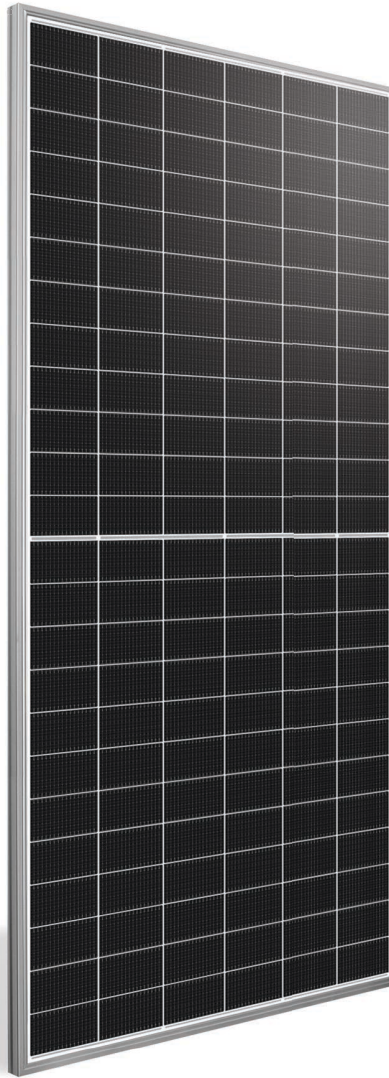
Home Office:
701 Poyntz / PO Box 308
Manhattan, KS 66505
800.318.8997

BankLandmark.com

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



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/m², AM 1.5, Temperature 25 °C • Nominal Operating Cell Temperature (NOCT): 800 W/m², AM 1.5 • Bifacial Standard Test Conditions (BSTC): 1000 W/m² + φ × 135 W/m², φ = 80 %, AM 1.5 • Electrical characteristics may vary by ±5%.

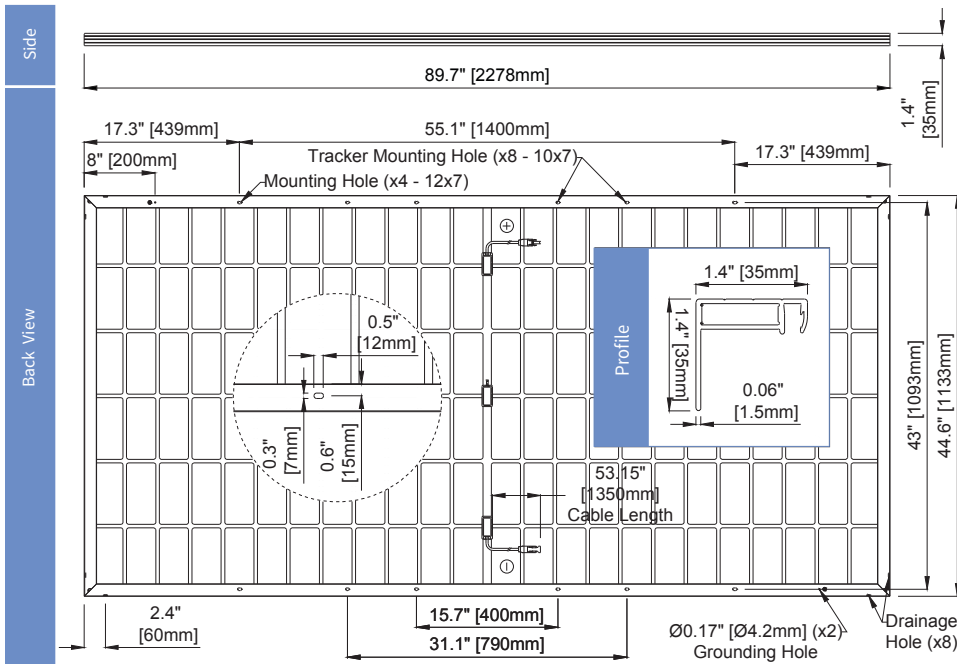
MECHANICAL PROPERTIES / COMPONENTS	METRIC	IMPERIAL
Module weight	28.5 kg ± 0.2 kg	62.8 lbs ± 0.4 lbs
Dimensions (H x L x D)	2278 mm x 1133 mm x 35 mm	89.7 in x 44.6 in x 1.4 in
Maximum surface load (wind/snow)*	2400 Pa rear load / 5400 Pa front load	50.1 lb/ft ² rear load / 112.8 lb/ft ² front load
Hail 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.
PAN files generated from 3rd party performance data are available for download at: silfabsolar.com/downloads.



SILFAB SOLAR INC.

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Burlington WA 98233 USA
T +1 360.569.4733
info@silfabsolar.com
SILFABSOLAR.COM

7149 Logistics Lane
Fort Mill SC 29715 USA
T +1 839.400.4338

240 Courtneypark Drive East
Mississauga ON L5T 2Y3 Canada
T +1 905.255.2501
F +1 905.696.0267

Sales & Customer Support
T +1.833.998.6642

Silfab - SIL-580-XM+-BIFACIAL 20250527
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/ STP 20-US-50 / STP 25-US-50 / STP 30-US-50

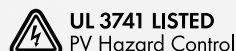


Sunny Tripower X-US

20 / 25 / 30

Integrated intelligence for
future-proof system design.

powered by
ennexOS



Integrated System Manager

- Monitoring and control for up to 5 inverters (max. 150 kVA)
- Remote access with Sunny Portal powered by ennexOS
- SMA Dynamic Power Control

Enhanced safety

- Integrated SunSpec PLC signal for module-level shutdown
- Advanced DC AFCI arc-fault protection
- Optional DC type 2 and type 1+2 surge protection

Maximum yields

- Three MPP trackers for flexible array design
- Achieve an optimized design using SMA Sunny Design with NEC 690.8(A)(1)(a)(2) when calculating maximum current on systems over 100kW
- SMA ShadeFix string level optimization
- Integrated I-V curve diagnostics

Smart monitoring, control and service

- SMA Smart Connected proactive monitoring and service solution
- SMA ennexOS cross-sector energy management platform
- Centerpiece of the proven SMA Energy System Business

Sunny Tripower X is the new innovative inverter solution for commercial PV systems.

Providing three MPP trackers with SMA ShadeFix string optimization technology for optimal PV array design flexibility and maximum energy yields. SMA's proven integrated rapid shutdown support and reliable DC AFCI arc-fault protection ensure enhanced system safety. And now with the new integrated System Manager, powered by SMA's ennexOS cross-sector energy management platform, Sunny Tripower X becomes the centerpiece of the SMA Energy System Business for comprehensive commercial energy systems now and in the future.

Technical data	Sunny Tripower X 20-US	Sunny Tripower X 25-US	Sunny Tripower X 30-US
Input (DC)			
Maximum array power	30000 Wp	37500 Wp	45000 Wp
Maximum system voltage	1000 V		
Rated MPP voltage range	350 V ... 800 V	430 V ... 800 V	515 V ... 800 V
MPPT operating voltage range	150 V ... 1000 V		
Minimum DC voltage / start voltage	150 V / 188 V		
Maximum usable operating input current / Maximum short circuit current per MPPT	24 A / 37.5 A		
MPP trackers / strings per MPP input	3 / 2		
Output (AC)			
Nominal output power	20000 W	25000 W	30000 W
Maximum apparent power	20000 VA	25000 VA	30000 VA
Output phases / line connection	3 / 3-(N)-PE		
Nominal AC voltage	480 V / 277 V		
AC voltage range	244 V ... 305 V		
Maximum output current	24 A	30 A	36 A
Rated grid frequency / range	60 Hz / -6 Hz ... +6 Hz		
Power factor at rated power / adjustable displacement	1 / 0.8 leading ... 0.8 lagging		
Harmonics (THD)	< 3 %		
Efficiency			
CEC efficiency	97.5 %	98 %	98 %
Protection and safety features			
Load rated DC disconnect	●		
Load rated AC disconnect	○		
Ground fault monitoring / grid monitoring	● / ●		
DC reverse polarity protection / AC short-circuit protection	● / ●		
All-pole sensitive residual-current monitoring unit	●		
DC AFCI arc-fault protection	●		
SunSpec PLC signal for rapid shutdown	●		
DC surge protection: Type 2 / Type 1+2	○ / ○		
Protection class / overvoltage category (as per UL 840)	I / III		
General data			
Device dimensions (W/H/D)	728 mm / 762 mm / 266 mm (28.7 in / 30 in / 10.5 in)		
Device weight	35kg (77 lbs)		
Operating temperature range	-25°C to +60°C (-13°F to +140°F)		
Audible noise emission (full power @ 1m and 25°C)	59 dB(A)		
Topology / cooling concept	Transformerless / OptiCool (forced convection, variable speed fans)		
Enclosure protection rating	Type 4X (as per UL 50E)		
Corrosion classification	C5		
Maximum permissible relative humidity (non-condensing)	100 %		
Additional information			
Mounting	Vertical rack / wall mount to 15° from horizontal		
DC connection / AC connection	Amphenol H4 Plus / spring-cage terminal		
LED indicators (status / fault / communication)	●		
Network interfaces: Ethernet / WLAN	● (2 ports) / ●		
Data protocols: SMA Modbus / SunSpec Modbus / Speedwire	● / ● / ●		
Multi-function relay / Extension module slot / Digital inputs	● / ● / ● (6 inputs)		
ShadeFix technology for string level optimization	●		
I-V curve diagnostic function	●		
Integrated Plant Control / Q on Demand 24/7	● / ●		
SMA Smart Connected (proactive monitoring and service support)	●		
Standard warranty	10 years		
Optional warranty extensions (total warranty coverage cannot exceed 20 years)	+5 years, +10 years		
Certificates and approvals			
Certificates and approvals	UL 62109-1, UL 1699B Ed. 1, CAN/CSA 22.2 No. 62109-1:16 / 62109-2:16, PV Rapid Shutdown System Equipment in accordance with UL1741:2021, UL 3741		
FCC compliance	FCC Part 15 Class A		
Grid interconnection standards	UL 1741 SB, IEEE 1547:2018, compliance to SRDs: CA Rule 21, HECO Rule 14H, ISO-NE		
Integrated System Manager			
Maximum number of supported inverters / energy meters	5 / 1		
Maximum system power PV inverters (nominal AC power)	150 kVA		
Centralized commissioning of all devices in the system	●		
Remote parameterization of SMA devices	● (via Sunny Portal powered by ennexOS)		
SMA Dynamic Power Control (e.g. zero export / Volt-VAR)	●		
Type designation	STP 20-US-50	STP 25-US-50	STP 30-US-50

● Standard features ○ Optional – Not available Data in nominal conditions Last revision: 04/2025

Accessories



SMA Data Manager M
EDMM-US-20



DC terminal cover
DC-TERM-COVER



SMA Sensor Module
MD.SEN-US-40



DC Surge Protection Kits
T2: DC_SPD_KIT6-10
T1+2: DC_SPD_KIT7_11T2

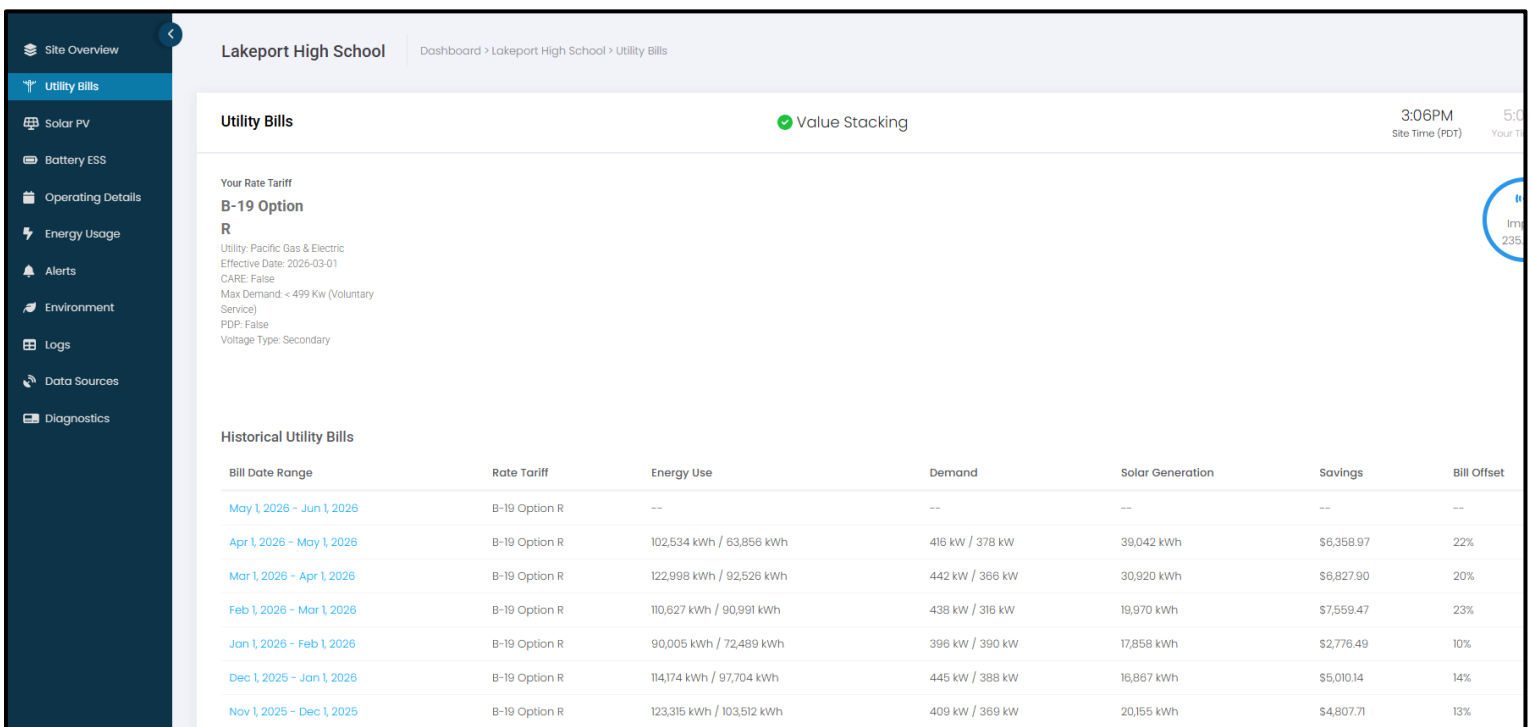
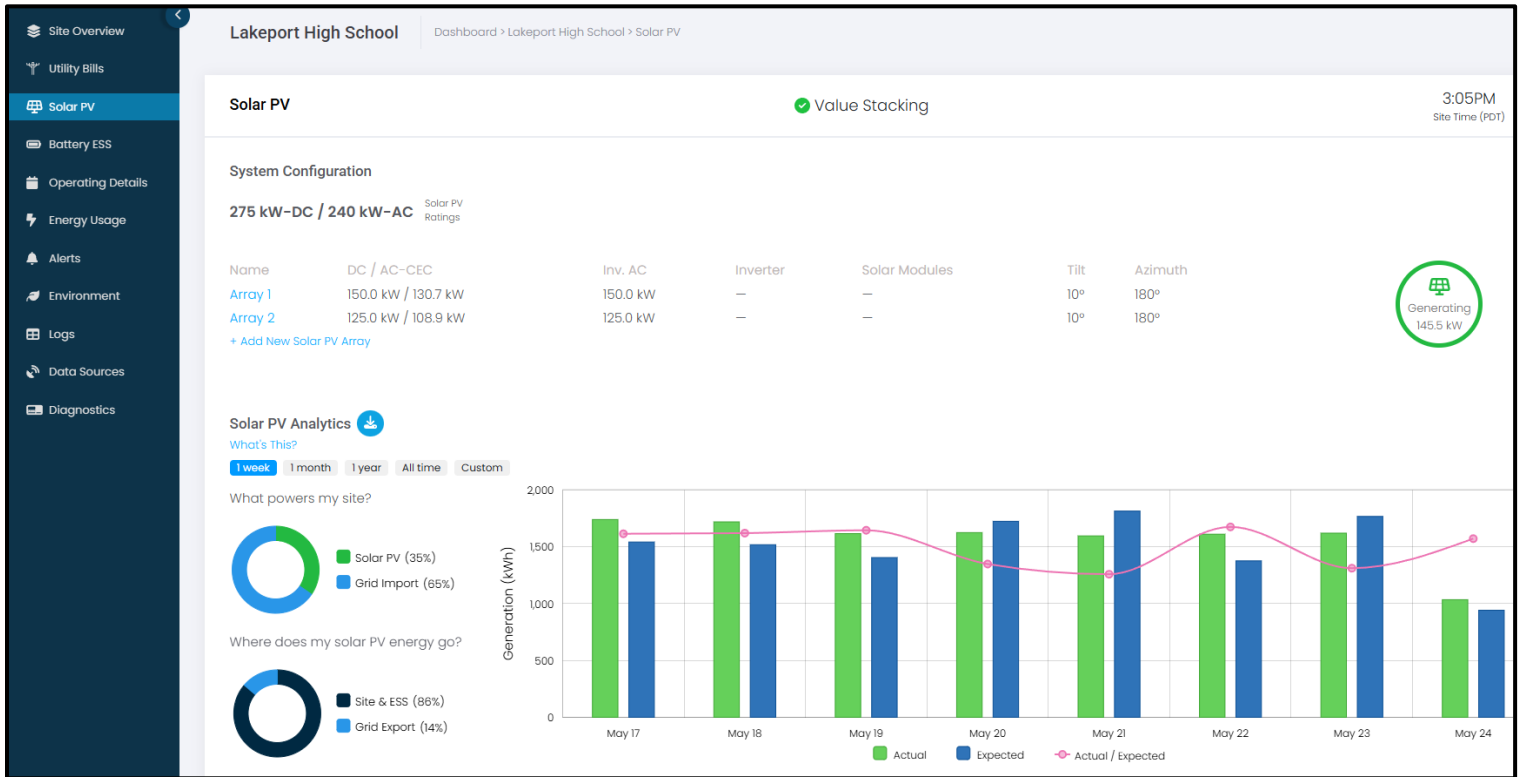


Roof Mount Kit
210462-00.01



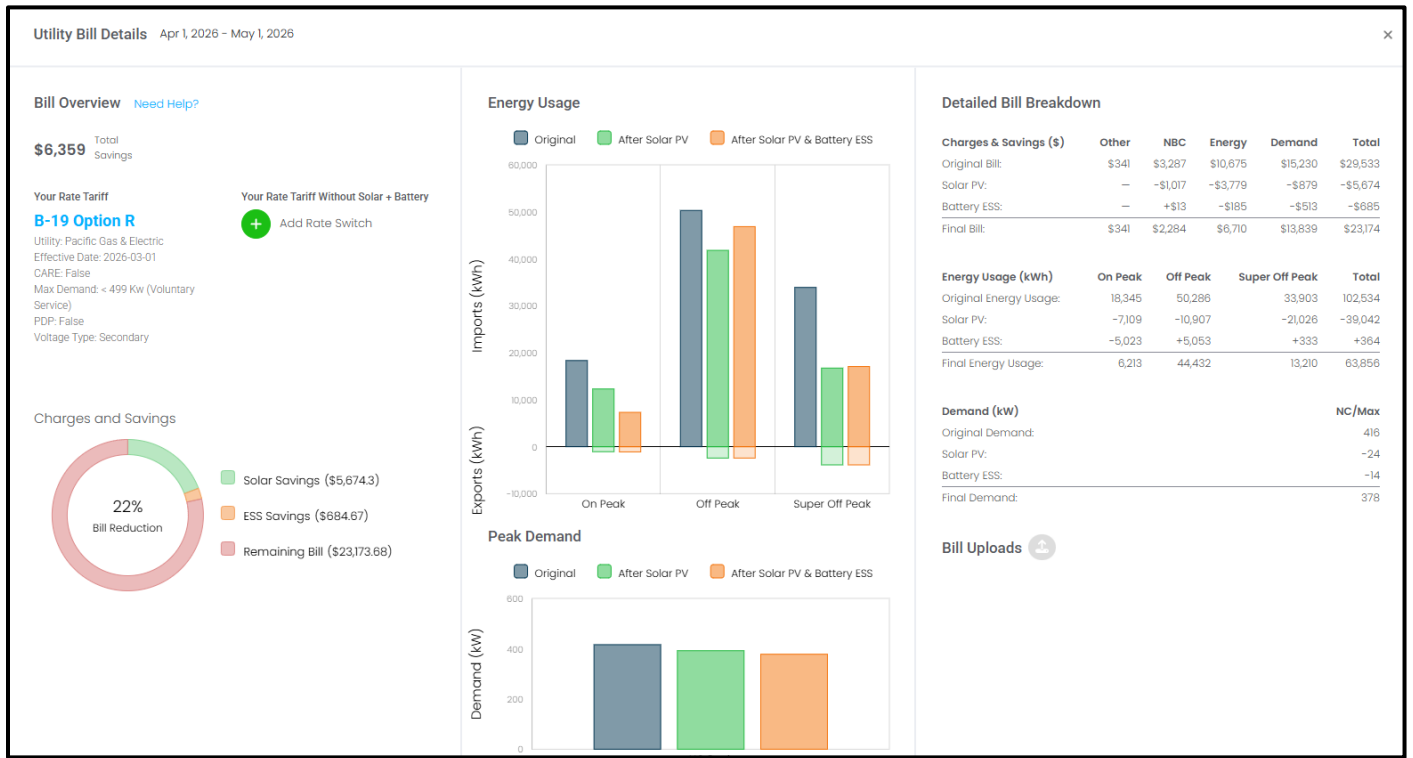
AC Disconnect Kit
210841-00.01

Energy Toolbase monitoring offers end users enhanced insights into system performance and real-time savings. The monitoring system utilizes the same platform that front end performance is modeled within. The program uses advanced utility tariff structures and system production to precisely calculate your savings. This gives you the data needed to verify savings and cross-check the accuracy of utility bills.

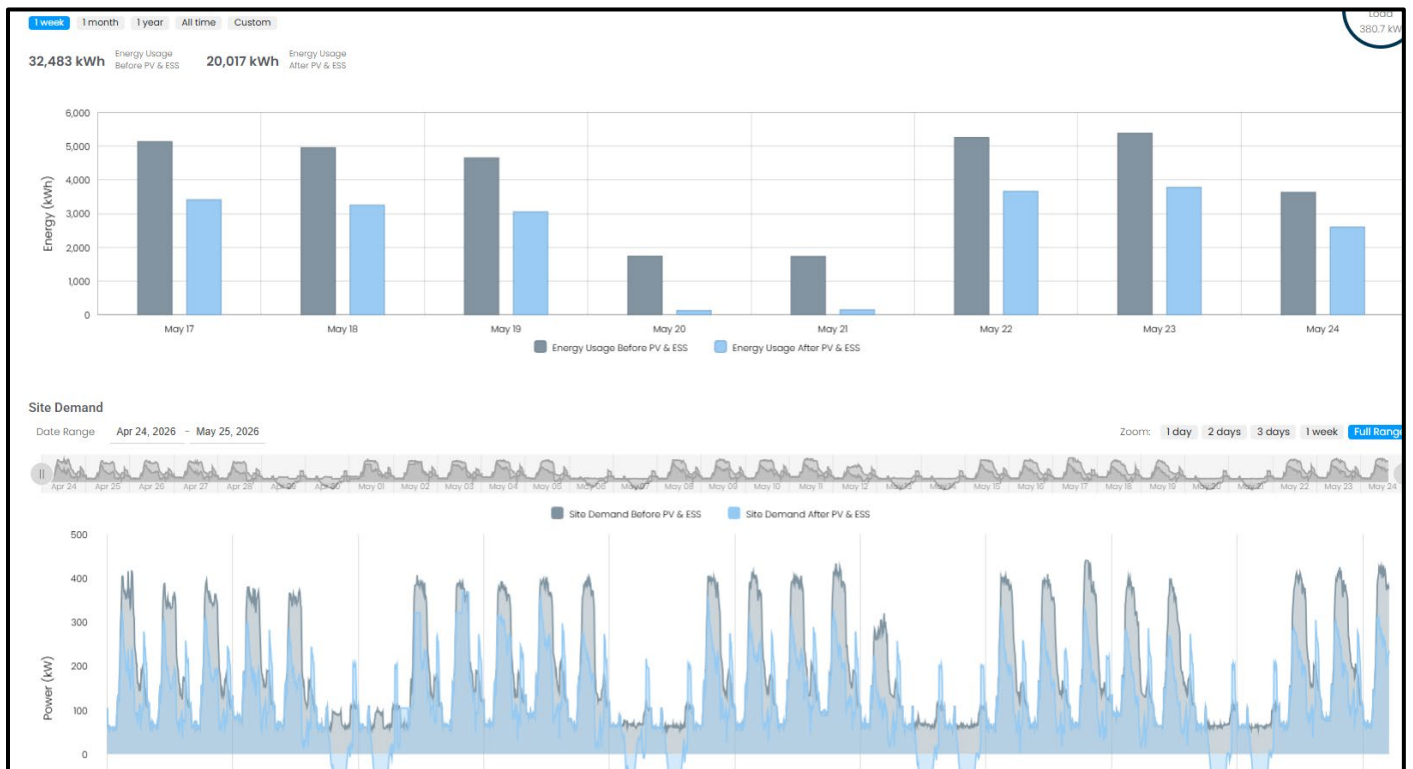


Detailed Billing Information:

ETB generates its own version of your utility bills and shows you exactly what you would have paid in each billing cycle along with the savings from the solar system. Without this, it is difficult to calculate exact savings because your utility bills won't show you "what you would have paid."



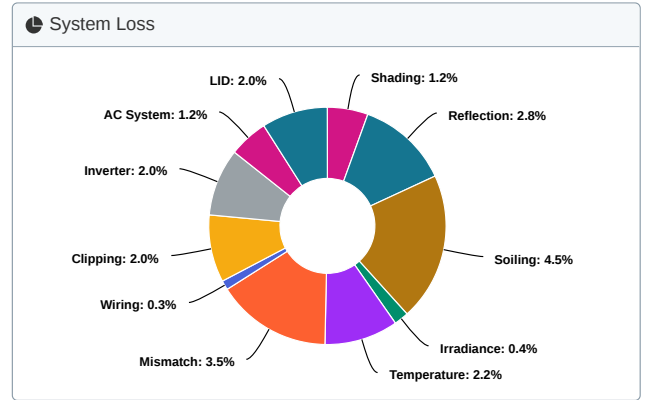
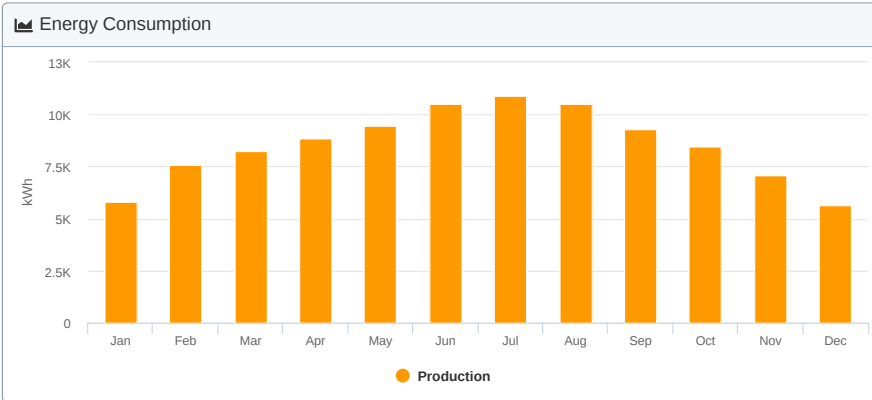
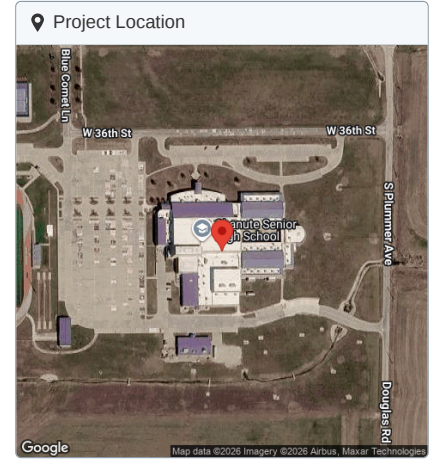
With Revenue Grade Metering, you gain insights into your exact energy usage and peak demand profiles. This enables more accurate decision making for future reductions to energy costs.



HS-A (Weld) - v.2 Chanute High School - 3 Meters 1702 W 36th St, Chanute, KS, USA

Project Details	
Address	1702 W 36th St, Chanute, KS, USA
Customer Name	Chanute Public Schools
Owner	Jake Jungmann
Last Modified	Jake Jungmann 21 hours ago
Location	(37.64360428751161, -95.47297699353182) (GMT -6)
Profile	Default Commercial

System Metrics	
Design	HS-A (Weld) - v.2
Module DC Nameplate	67.28 kW
Inverter AC Nameplate	50.00 kW Load Ratio: 1.35
Annual Production	102.3 MWh
Performance Ratio	79.8%
kWh/kWp	1,521.2
Weather Dataset	TMY, 10km Grid (37.65,-95.45), NREL (prospector)
Simulator Version	ff5dc4153b-e3ffac920c-b39194b54d-a986662dde



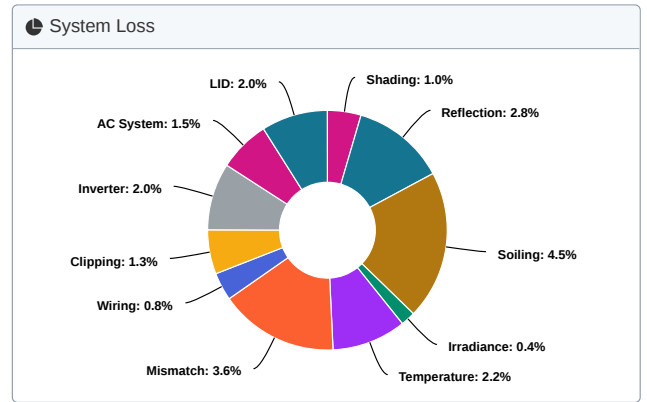
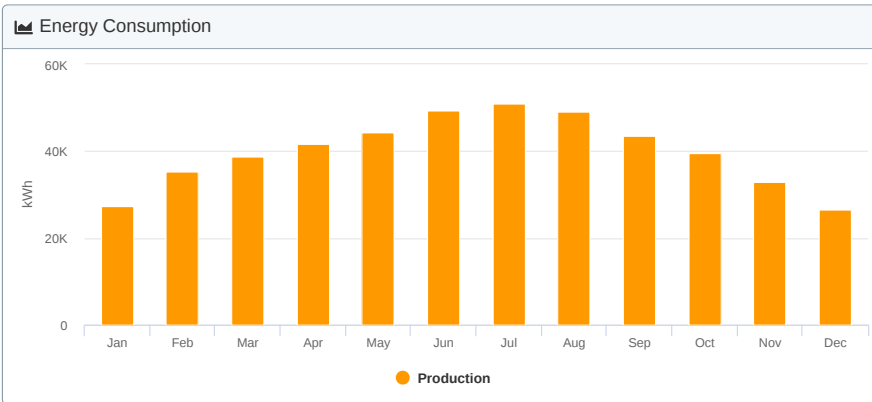
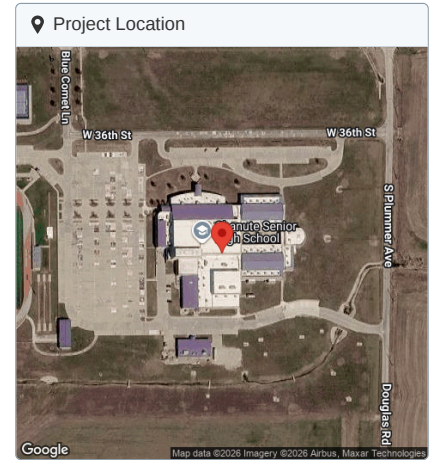
Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,653.0	-
	POA Irradiance	1,906.3	15.3%
	Shaded Irradiance	1,882.9	-1.2%
	Irradiance After Reflection	1,830.2	-2.8%
	Irradiance After Soiling	1,748.0	-4.5%
	Total Collector Irradiance	1,748.0	-0.0%
Energy (kWh)	Nameplate	117,586.2	-
	Output at Irradiance Levels	117,063.6	-0.4%
	Output at Cell Temperature Derate	114,450.5	-2.2%
	Output after Electrical Mismatch	110,454.7	-3.5%
	Optimal DC Output	110,139.9	-0.3%
	Constrained DC Output	107,890.6	-2.0%
	Inverter Output	105,687.8	-2.0%
	AC System Output	104,432.3	-1.2%
	Output after Light-induced Degradation	102,343.6	-2.0%
	Energy to Grid	102,343.6	0.0%
Temperature Metrics			
	Avg. Operating Ambient Temp		16.3°C
	Avg. Operating Cell Temp		24.9°C
Simulation Metrics			
	Operating Hours		4,672

Condition Set													
Description		Condition Set 2											
Weather Dataset		TMY, 10km Grid (37.65,-95.45), NREL(prospector) (download)											
Solar Angle Location		Project Lat/Lng											
Transposition Model		Perez Model											
Temperature Model		Sandia Model											
Temperature Model Parameters		Rack Type	a	b	Temperature Delta								
		Fixed Tilt	-3.56	-0.08	3.0°C								
		Flush Mount	-2.81	-0.05	0.0°C								
		East-West	-3.56	-0.08	3.0°C								
		Carport	-3.56	-0.08	3.0°C								
Soiling (%)		J	F	M	A	M	J	J	A	S	O	N	D
		6	6	4	4	4	4	4	4	4	4	6	6
Irradiation Variance		5.0%											
Cell Temperature Spread		4.0°C											
Module Binning Range		-2.5% to 2.5%											
AC System Derate		1.00%											
LID Derate		2.00%											
Component Characterizations		Type	Component							Characterization			
		Module	SIL-580 XM+ (Silfab Solar)							Spec Sheet Characterization, PAN			
		Inverter	Sunny Tripower X 25-US (SMA)							Spec Sheet			

HS-B (West) - v.3 Chanute High School - 3 Meters 1702 W 36th St, Chanute, KS, USA

Project Details	
Address	1702 W 36th St, Chanute, KS, USA
Customer Name	Chanute Public Schools
Owner	Jake Jungmann
Last Modified	Jake Jungmann 21 hours ago
Location	(37.64360428751161, -95.47297699353182) (GMT -6)
Profile	Default Commercial

System Metrics	
Design	HS-B (West) - v.3
Module DC Nameplate	315.52 kW
Inverter AC Nameplate	240.00 kW Load Ratio: 1.31
Annual Production	479.5 MWh
Performance Ratio	79.7%
kWh/kWp	1,519.6
Weather Dataset	TMY, 10km Grid (37.65,-95.45), NREL (prospector)
Simulator Version	69c96af567-24f743cd9d-2624bbd800-f350b6c37c



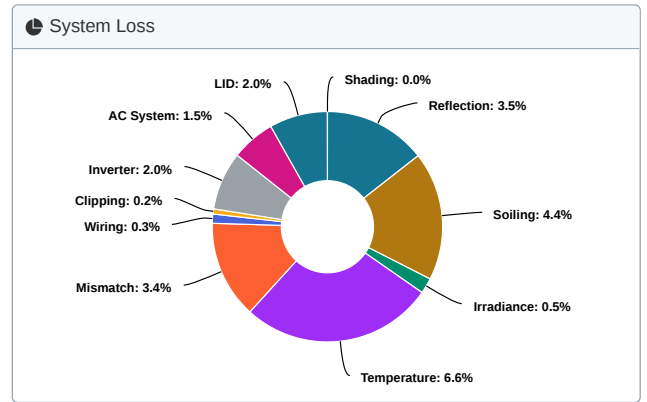
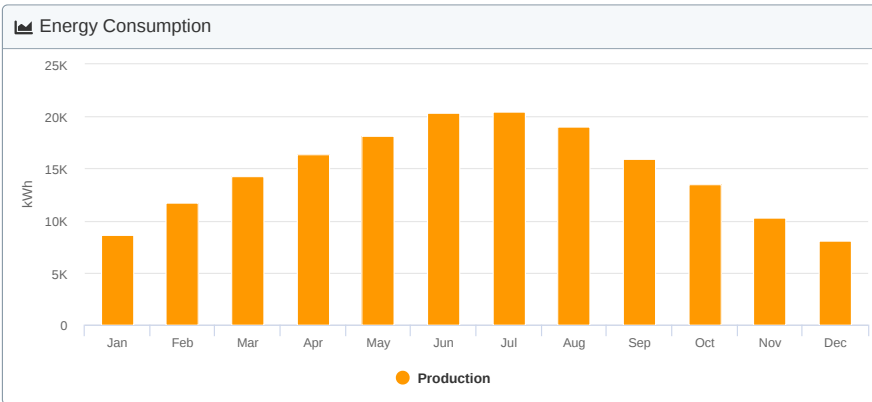
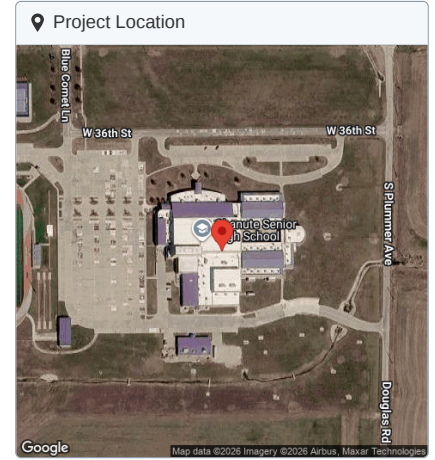
Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,653.0	-
	POA Irradiance	1,906.3	15.3%
	Shaded Irradiance	1,887.0	-1.0%
	Irradiance After Reflection	1,833.7	-2.8%
	Irradiance After Soiling	1,751.3	-4.5%
	Total Collector Irradiance	1,751.3	-0.0%
Energy (kWh)	Nameplate	552,498.3	-
	Output at Irradiance Levels	550,056.6	-0.4%
	Output at Cell Temperature Derate	537,764.7	-2.2%
	Output after Electrical Mismatch	518,456.7	-3.6%
	Optimal DC Output	514,078.1	-0.8%
	Constrained DC Output	507,226.9	-1.3%
	Inverter Output	496,946.1	-2.0%
	AC System Output	489,248.9	-1.5%
	Output after Light-induced Degradation	479,463.9	-2.0%
	Energy to Grid	479,463.9	0.0%
Temperature Metrics			
	Avg. Operating Ambient Temp		16.3°C
	Avg. Operating Cell Temp		24.9°C
Simulation Metrics			
	Operating Hours		4,672

Condition Set													
Description		Condition Set 2											
Weather Dataset		TMY, 10km Grid (37.65,-95.45), NREL(prospector) (download)											
Solar Angle Location		Project Lat/Lng											
Transposition Model		Perez Model											
Temperature Model		Sandia Model											
Temperature Model Parameters		Rack Type	a	b	Temperature Delta								
		Fixed Tilt	-3.56	-0.08	3.0°C								
		Flush Mount	-2.81	-0.05	0.0°C								
		East-West	-3.56	-0.08	3.0°C								
		Carport	-3.56	-0.08	3.0°C								
Soiling (%)		J	F	M	A	M	J	J	A	S	O	N	D
		6	6	4	4	4	4	4	4	4	4	6	6
Irradiation Variance		5.0%											
Cell Temperature Spread		4.0°C											
Module Binning Range		-2.5% to 2.5%											
AC System Derate		1.00%											
LID Derate		2.00%											
Component Characterizations		Type	Component							Characterization			
		Module	SIL-580 XM+ (Silfab Solar)							Spec Sheet Characterization, PAN			
		Inverter	Sunny Tripower X 25-US (SMA)							Spec Sheet			
		Inverter	Sunny Tripower X 30-US (SMA)							Spec Sheet			

HS-C (East) - v.3 Chanute High School - 3 Meters 1702 W 36th St, Chanute, KS, USA

Project Details	
Address	1702 W 36th St, Chanute, KS, USA
Customer Name	Chanute Public Schools
Owner	Jake Jungmann
Last Modified	Jake Jungmann 21 hours ago
Location	(37.64360428751161, -95.47297699353182) (GMT -6)
Profile	Default Commercial

System Metrics	
Design	HS-C (East) - v.3
Module DC Nameplate	128.76 kW
Inverter AC Nameplate	100.00 kW Load Ratio: 1.29
Annual Production	176.8 MWh
Performance Ratio	77.9%
kWh/kWp	1,372.8
Weather Dataset	TMY, 10km Grid (37.65,-95.45), NREL (prospector)
Simulator Version	69c96af567-24f743cd9d-2624bbd800-f350b6c37c



Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,653.0	-
	POA Irradiance	1,762.7	6.6%
	Shaded Irradiance	1,762.6	-0.0%
	Irradiance After Reflection	1,700.4	-3.5%
	Irradiance After Soiling	1,625.3	-4.4%
	Total Collector Irradiance	1,625.3	-0.0%
Energy (kWh)	Nameplate	209,239.0	-
	Output at Irradiance Levels	208,121.3	-0.5%
	Output at Cell Temperature Derate	194,318.2	-6.6%
	Output after Electrical Mismatch	187,798.3	-3.4%
	Optimal DC Output	187,202.0	-0.3%
	Constrained DC Output	186,874.6	-0.2%
	Inverter Output	183,134.6	-2.0%
	AC System Output	180,374.4	-1.5%
	Output after Light-induced Degradation	176,766.9	-2.0%
	Energy to Grid	176,766.9	0.0%
Temperature Metrics			
	Avg. Operating Ambient Temp		16.3°C
	Avg. Operating Cell Temp		33.1°C
Simulation Metrics			
	Operating Hours		4,672

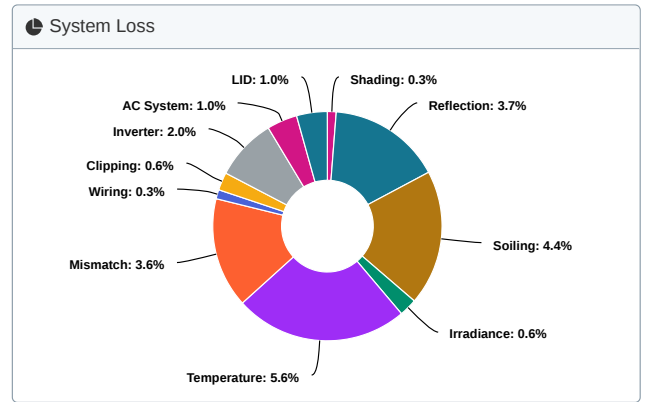
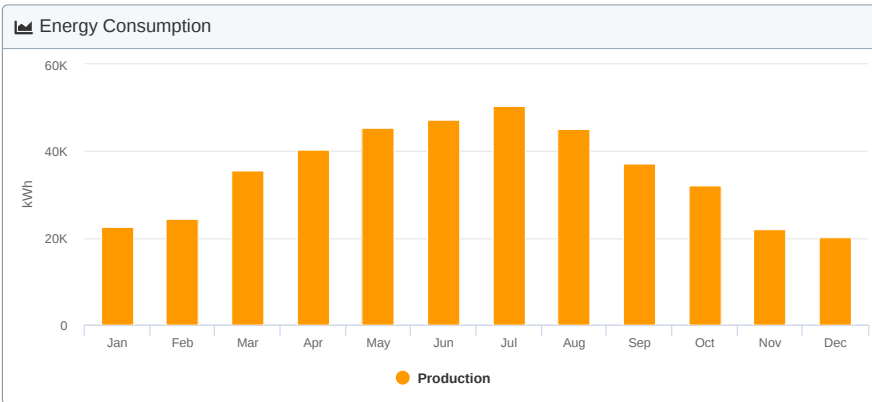
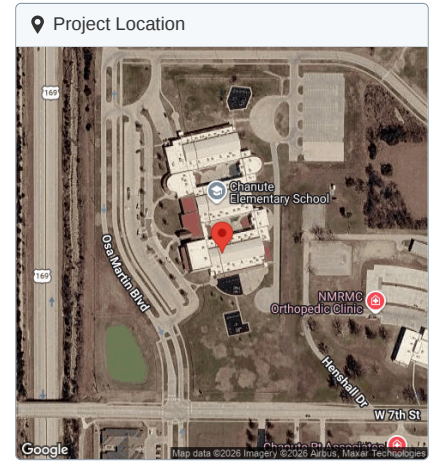
Condition Set												
Description	Condition Set 2											
Weather Dataset	TMY, 10km Grid (37.65,-95.45), NREL(prospector) (download)											
Solar Angle Location	Project Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Sandia Model											
Temperature Model Parameters	Rack Type	a	b	Temperature Delta								
	Fixed Tilt	-3.56	-0.08	3.0°C								
	Flush Mount	-2.81	-0.05	0.0°C								
	East-West	-3.56	-0.08	3.0°C								
	Carport	-3.56	-0.08	3.0°C								
Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D
	6	6	4	4	4	4	4	4	4	4	6	6
Irradiation Variance	5.0%											
Cell Temperature Spread	4.0°C											
Module Binning Range	-2.5% to 2.5%											
AC System Derate	1.00%											
LID Derate	2.00%											
Component Characterizations	Type	Component							Characterization			
	Module	SIL-580 XM+ (Silfab Solar)							Spec Sheet Characterization, PAN			
	Inverter	Sunny Tripower X 25-US (SMA)							Spec Sheet			

Elementary - v.3

Chanute Elementary School 1802 W 7th St,
Chanute, KS, USA

Project Details	
Address	1802 W 7th St, Chanute, KS, USA
Customer Name	Chanute Public Schools
Owner	Jake Jungmann
Last Modified	Jake Jungmann 2 days ago
Location	(37.676346385485395, -95.47730449259032) (GMT -6)
Profile	Default Commercial

System Metrics	
Design	Elementary - v.3
Module DC Nameplate	314.94 kW
Inverter AC Nameplate	230.00 kW Load Ratio: 1.37
Annual Production	422.8 MWh
Performance Ratio	79.1%
kWh/kWp	1,342.4
Weather Dataset	TMY, 10km Grid, Meteornorm 7 (meteonorm)
Simulator Version	f8bae32726-63e408f022-e97ab67d29-58d9e68b26



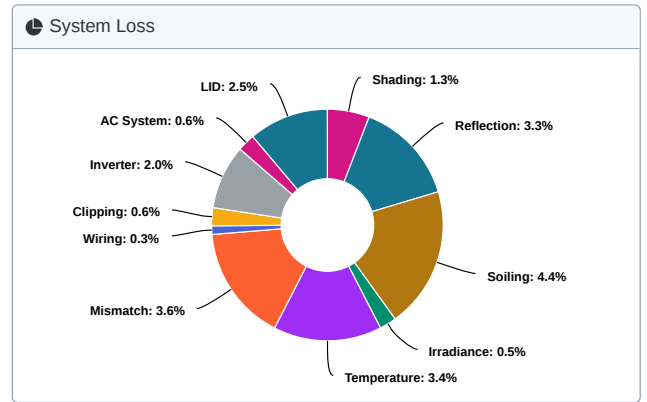
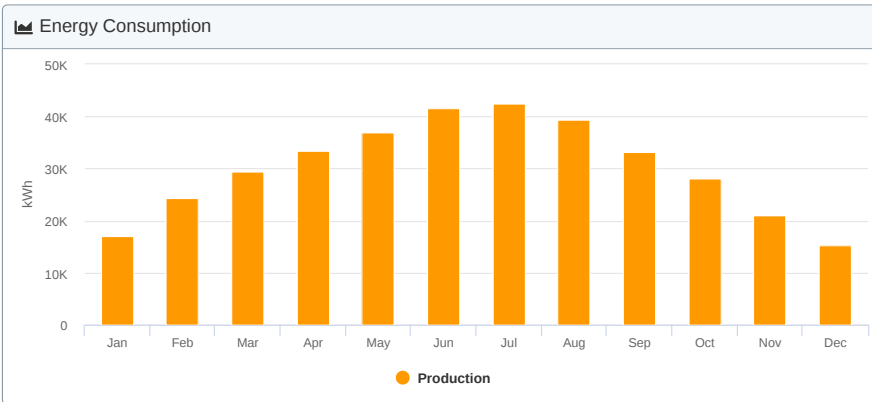
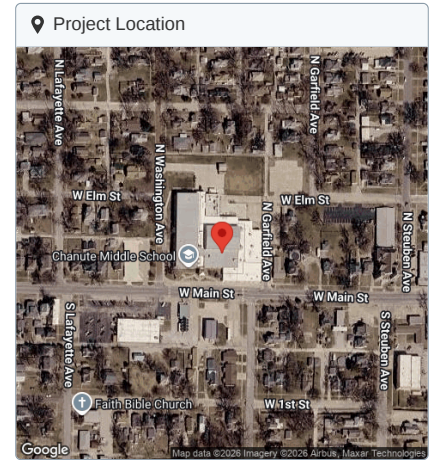
Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,595.7	-
	Adjusted Global Horizontal Irradiance	1,595.7	0.0%
	POA Irradiance	1,698.1	6.4%
	Shaded Irradiance	1,693.3	-0.3%
	Irradiance After Reflection	1,630.9	-3.7%
	Irradiance After Soiling	1,559.1	-4.4%
	Total Collector Irradiance	1,559.1	-0.0%
Energy (kWh)	Nameplate	490,972.3	-
	Output at Irradiance Levels	488,110.3	-0.6%
	Output at Cell Temperature Derate	460,567.1	-5.6%
	Output after Electrical Mismatch	444,055.7	-3.6%
	Optimal DC Output	442,729.2	-0.3%
	Constrained DC Output	440,153.7	-0.6%
	Inverter Output	431,309.5	-2.0%
	AC System Output	427,051.9	-1.0%
	Output after Light-induced Degradation	422,781.4	-1.0%
	Energy to Grid	422,781.4	0.0%
Temperature Metrics			
Avg. Operating Ambient Temp		16.8°C	
Avg. Operating Cell Temp		31.4°C	
Simulation Metrics			
Operating Hours		4,618	

Condition Set													
Description		Condition Set 2											
Weather Dataset		TMY, 10km Grid, Meteornorm 7(meteonorm)											
Solar Angle Location		Project Lat/Lng											
Transposition Model		Perez Model											
Temperature Model		Sandia Model											
Temperature Model Parameters		Rack Type	a	b	Temperature Delta								
		Fixed Tilt	-3.56	-0.08	3.0°C								
		Flush Mount	-2.81	-0.05	0.0°C								
		East-West	-3.56	-0.08	3.0°C								
		Carport	-3.56	-0.08	3.0°C								
Soiling (%)		J	F	M	A	M	J	J	A	S	O	N	D
		6	6	4	4	4	4	4	4	4	4	6	6
Irradiation Variance		5.0%											
Cell Temperature Spread		4.0°C											
Module Binning Range		-2.5% to 2.5%											
AC System Derate		1.00%											
LID Derate		1.00%											
Component Characterizations		Type	Component							Characterization			
		Module	SIL-580 XM+ (Silfab Solar)							Spec Sheet Characterization, PAN			
		Inverter	Sunny Tripower X 25-US (SMA)							Spec Sheet			
		Inverter	Sunny Tripower X 30-US (SMA)							Spec Sheet			

Design 3 Chanute Middle School 400 W Main St, Chanute, KS, USA

Project Details	
Address	400 W Main St, Chanute, KS, USA
Customer Name	Chanute Public Schools
Owner	Jake Jungmann
Last Modified	Jake Jungmann 2 days ago
Location	(37.68217567564052, -95.45916926812286) (GMT -6)
Profile	Default Commercial

System Metrics	
Design	Design 3
Module DC Nameplate	255.20 kW
Inverter AC Nameplate	195.00 kW Load Ratio: 1.31
Annual Production	361.8 MWh
Performance Ratio	79.6%
kWh/kWp	1,417.8
Weather Dataset	TMY, 10km Grid (37.65,-95.45), NREL (prospector)
Simulator Version	f8bae32726-63e408f022-e97ab67d29-58d9e68b26



Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,653.0	-
	POA Irradiance	1,780.5	7.7%
	Shaded Irradiance	1,757.1	-1.3%
	Irradiance After Reflection	1,699.9	-3.3%
	Irradiance After Soiling	1,624.9	-4.4%
	Total Collector Irradiance	1,624.9	0.0%
Energy (kWh)	Nameplate	414,629.6	-
	Output at Irradiance Levels	412,434.1	-0.5%
	Output at Cell Temperature Derate	398,453.7	-3.4%
	Output after Electrical Mismatch	384,026.9	-3.6%
	Optimal DC Output	382,996.5	-0.3%
	Constrained DC Output	380,835.8	-0.6%
	Inverter Output	373,176.9	-2.0%
	AC System Output	371,110.9	-0.6%
	Output after Light-induced Degradation	361,833.2	-2.5%
	Energy to Grid	361,833.2	0.0%
Temperature Metrics			
	Avg. Operating Ambient Temp		16.3°C
	Avg. Operating Cell Temp		26.6°C
Simulation Metrics			
	Operating Hours		4,672

Condition Set												
Description	Condition Set 2											
Weather Dataset	TMY, 10km Grid (37.65,-95.45), NREL(prospector) (download)											
Solar Angle Location	Project Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Sandia Model											
Temperature Model Parameters	Rack Type	a	b	Temperature Delta								
	Fixed Tilt	-3.56	-0.08	3.0°C								
	Flush Mount	-2.81	-0.05	0.0°C								
	East-West	-3.56	-0.08	3.0°C								
	Carport	-3.56	-0.08	3.0°C								
Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D
	6	6	4	4	4	4	4	4	4	4	6	6
Irradiation Variance	5.0%											
Cell Temperature Spread	4.0°C											
Module Binning Range	-2.5% to 2.5%											
AC System Derate	1.00%											
LID Derate	2.50%											
Component Characterizations	Type	Component									Characterization	
	Module	SIL-580 XM+ (Silfab Solar)									Spec Sheet Characterization, PAN	
	Inverter	Sunny Tripower X 25-US (SMA)									Spec Sheet	
	Inverter	Sunny Tripower X 30-US (SMA)									Spec Sheet	






Good Energy Solutions - RFP Submission - Chanute Schools

Final Audit Report

2026-05-26

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