381 New Road
Brandon, Vermont 05733
(802) 247-1200

7-30-2021

Solar PV Proposal for Town of Cornwall

Green Earth Energy (GEE) a division of McKernon Group located in Brandon would like to propose a solar PV system to off-set the electric consumption for the Cornwall Town Office and the Cornwall Garage. Our proposal includes a roof mounted PV system on the standing seam roof of the Town Office and a ground solar array on the town's land near Bingham Memorial Elementary School. The combined production from the two arrays would produce an estimated 30,000 kWh annually meeting the current requirements of the town's consumption.

Each solar system would have the ability to increase the number of panels in the system to meet the future increase in demand of power. The system at the Town Office could add panels on the east facing roof of Town Office Building. The ground system near the school could also add solar panels to increase production. The racking system can be expanded by adding additional posts and rails to increase the overall length for additional panels. The inverter system on both arrays will have the ability to add solar production capacity without an upgrade to the inverters proposed. We would also take the consideration of future expansion of the solar system when submitting the net-metering permit to the PUC. This would allow the systems to be expanded without amending the certificate of public good (CPG).

GEE has a long history of helping commercial and residential customers permit, design, install and maintain solar PV systems. The founder of McKernon Group (Jack McKernon) started the renewable energy division over 13 years ago. In this time GEE has built 5 - 500-watt solar systems (4 ground systems and 1 on a flat roof) along with many roof and ground systems for commercial businesses throughout Vermont. Each project gets the full dedication of our experienced crew. A few of our commercial customers includes VT Sun, Champlain Precision, Rouse Tire, Housing Trust of Rutland County, VT Army National Guard in Northfield and Sunrise Orchards. We have also installed an average of 20 residential systems annually including many installations in the Town of Cornwall throughout the years.

Gee GREEN EARTH energy (SM)

381 New Road
Brandon, Vermont 05733
(802) 247-1200

Project Description:

Town Office Roof Solar Project:

- 42 – Q-Cell Q.PEAK DUO BLK ML-G9+ 380 watt panels
- SolarEdge Inverter System including a 10 kW and 5 kW inverter
- 42 - SolarEdge Optimizers (providing module level voltage shutdown and monitoring for each panel)
- IronRidge Roof rail system with non-penetrating standing seam clips
- Conduit and wire from solar panels to inverter system at ground level
- Work with GMP to design the interconnection at GMP's meter for net-metering of solar generating
- Complete Installation of Roof Solar Array and Interconnect the Inverters to GMP's meter

Ground Solar System Project:

- 20 – Longi LR4-72HBD 445 watt Bifacial panels
- SolarEdge Inverter System including a 10 kW
- 20 - SolarEdge Optimizers (providing module level voltage shutdown and monitoring for each panel)
- UNIRAC Ground Fixed Racking System with driven post
- Conduit and wire from solar array to the new GMP meter for net-metering of solar generation
- Work with GMP to design the interconnection at GMP's meter for net-metering of solar generating
- Complete Installation of Ground Solar Array, Trenching and Interconnect the Inverters to GMP's meter

Contact Information:

Jim Crawford
802 683-0921
jim@mckernongroup.com

381 New Road
Brandon, Vermont 05733
(802) 247-1200

Cornwall Town Solar PV Electric System Proposal
24.86 kW DC Solar PV System

Green Earth Energy will install and commission a complete solar electric system on the standing seam roof of the Town Office and a Ground Mounted system near the Bingham Memorial School. The solar electric system will connect to the electrical grid for use as a net-metered system to off-set the Town Clerk Office and Town Garage consumption.

Equipment and Production Solar on Town Clerk Office Roof:

Modules	42 - Q-Cell 380 watt modules
System Size	15.96 kW DC
Annual Solar Production	18,992 Kwh *
Saving from Annual Solar Electric Produced	**$3,114.75 ** **

Equipment and Production Solar for Ground System near Bingham Memorial School:

Modules	20 - Longi 445 watt Bifacial modules
System Size	8.9 kW DC
Annual Solar Production	11,036 Kwh *
Saving from Annual Solar Electric Produced	**$1,809.91****

*Estimates of solar production are based on *National Renewable Energy Laboratory PV Watts™ Calculator* for your solar installation.

**Estimates of solar generation is based on estimated production from *National Renewable Energy Laboratory PV Watts™ Calculator* and the current GMP solar rate per kWh.

Solar Investment:

System Investment:	**$66,000.00**

Green Mountain Power will apply a one-time charge to Town Office electric bill of $110.00 for the new solar meter. There is no one-time meter charge for solar array at school.

381 New Road
Brandon, Vermont 05733
(802) 247-1200

Warranty:

The workmanship of the installation will be covered for 60 months from the date of commissioning. All equipment will be covered by the manufacturers' warranty noted below:

Solar Modules – Q-Cell - 25 year performance warranty
Longi - 30 year performance warranty

Inverter – SolarEdge Inverters –25 years warranty
(manufactures 12-year warranty plus a 13-year warranty extension included in the system pricing)

Solar Systems Assumptions:

Roof solar array on the Town Office is a grid tied solar electric system. The power generated from this system will satisfy the needs of the building first and all excess power generated will flow backwards through the net meter for an on-bill credit for future consumption. The ground mounted solar array at the school will be a generation only meter. The power generated at this meter can be applied to the Town Garage Meter. GMP's current blended solar rate is $0.164 per kWh.

Scope of Work:

- Secure all necessary permits for the two systems
- Structural Engineering of Town Office Roof (if necessary)
- Order all equipment
- Prepare the site and install solar arrays
- Install, wire and program the inverter system
- Interconnect systems to GMP net-meters
- 5 year warranty on workmanship

Cornwall Town Solar System
62 - panels / 42 on roof & 20 on ground
24.86 kW Solar Electric Cash Flow Analysis

7/30/2021

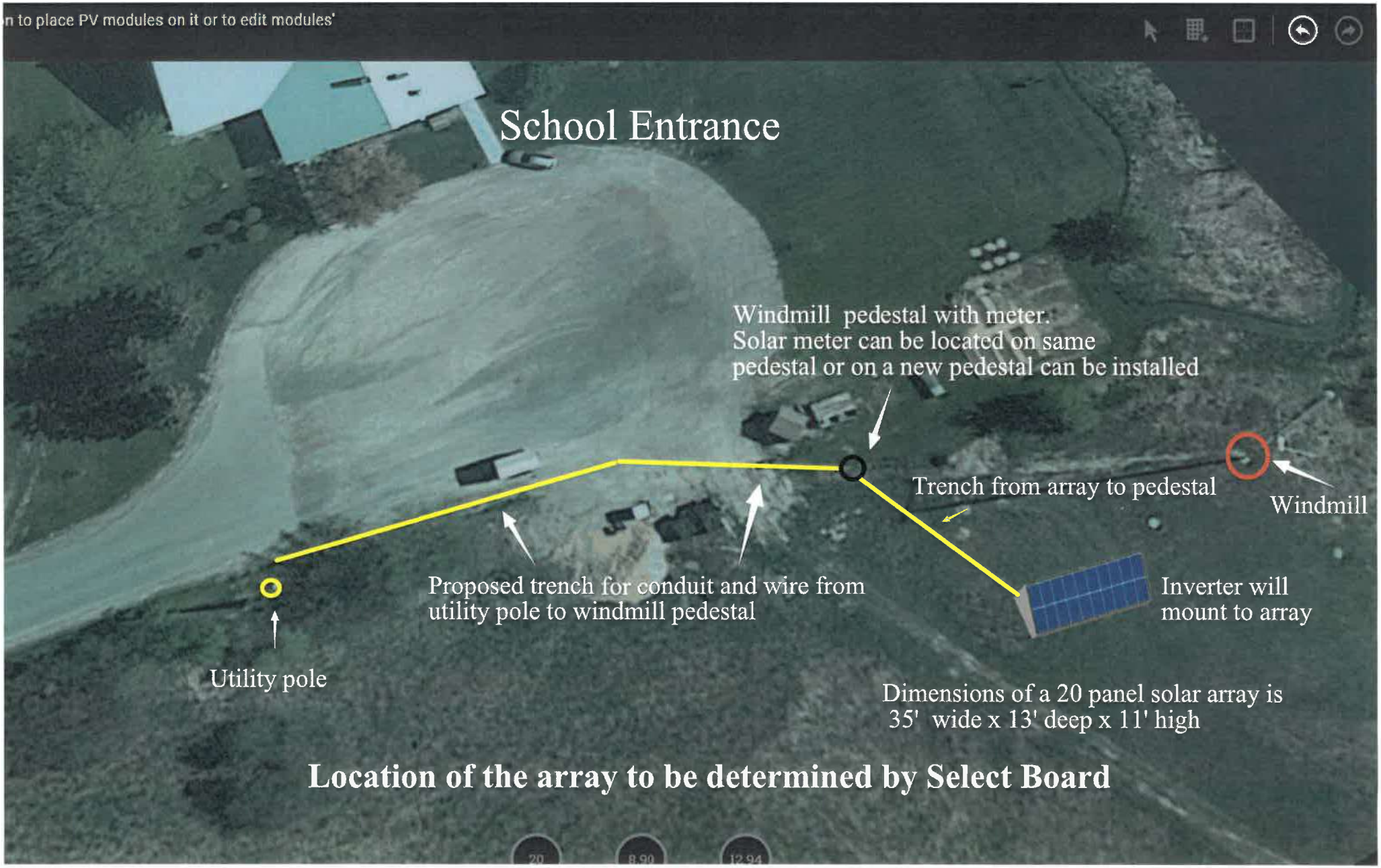
*2% Electricity Cost Escalation every other year
** 2% O&M Escalation Rate

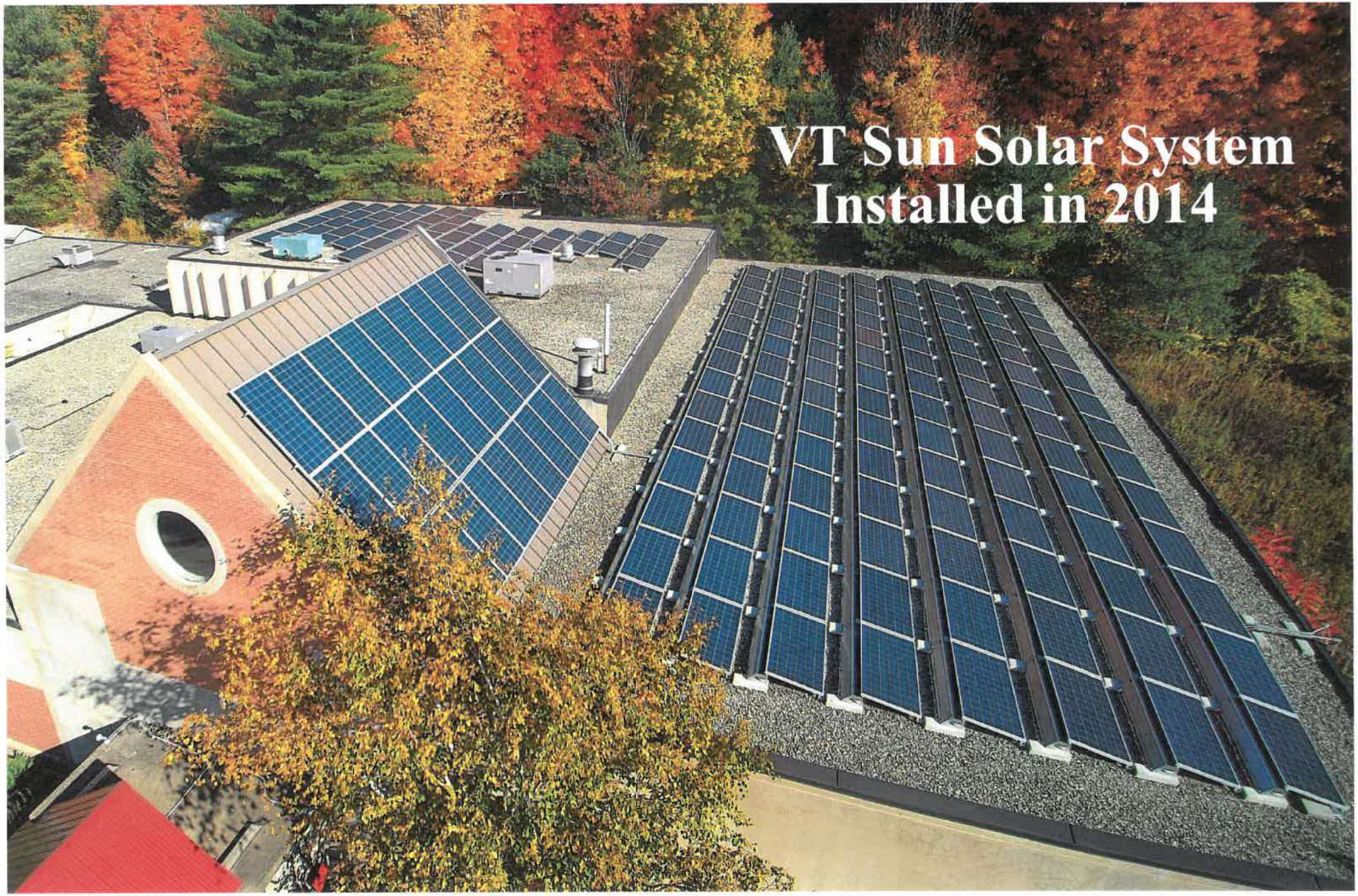
Year	Value per kWh of generated electricity*	Annual Power Generated with solar panel degradation	Annual value of generated electricity	O&M Cost**	Interest on investment for first 3 years @1.9% w/ loan amount on annual cash flow balance	Cash flow	Annual Saving after Interest and O&M Expense	NPV of Saving at 2% Discount Rate
0						($66,000.00)		$ (66,000.00)
1	$0.164	30,028	$4,924.66	$0.00	$1,254.00	($62,329.34)	$3,670.66	$3,598.68
2	$0.164	29,788	$4,885.26	$0.00	$1,136.60	($58,580.68)	$3,748.66	$3,603.10
3	$0.167	29,550	$4,943.10	$0.00	$1,022.18	($54,659.76)	$3,920.92	$3,694.77
4	$0.167	29,313	$4,903.56	$0.00		($49,756.20)	$4,903.56	$4,530.13
5	$0.171	29,079	$4,961.62	$0.00		($44,794.59)	$4,961.62	$4,493.89
6	$0.171	28,846	$4,921.92	$100.00		($39,972.67)	$4,821.92	$4,281.73
7	$0.174	28,616	$4,980.20	$102.00		($35,094.47)	$4,878.20	$4,246.76
8	$0.174	28,387	$4,940.36	$104.04		($30,154.11)	$4,836.32	$4,127.75
9	$0.178	28,160	$4,998.85	$106.12		($25,155.26)	$4,892.73	$4,094.02
10	$0.178	27,934	$4,958.86	$108.24		($20,196.40)	$4,850.62	$3,979.19
11	$0.181	27,711	$5,017.57	$110.41		($15,178.83)	$4,907.16	$3,946.65
12	$0.181	27,489	$4,977.43	$112.62		($10,201.40)	$4,864.82	$3,835.87
13	$0.185	27,269	$5,036.36	$114.87		($5,165.03)	$4,921.50	$3,804.48
14	$0.185	27,051	$4,996.07	$117.17		($168.96)	$4,878.91	$3,697.60
15	$0.188	26,835	$5,055.23	$119.51		$4,886.27	$4,935.72	$3,667.31
16	$0.188	26,620	$5,014.79	$121.90		$9,901.05	$4,892.89	$3,564.20
17	$0.192	26,407	$5,074.16	$124.34		$14,975.21	$4,949.82	$3,534.98
18	$0.192	26,196	$5,033.57	$126.82		$20,008.78	$4,906.74	$3,435.50
19	$0.196	25,986	$5,093.16	$129.36		$25,101.94	$4,963.80	$3,407.31
20	$0.196	25,778	$5,052.42	$131.95		$30,154.36	$4,920.47	$3,311.34
21	$0.200	25,572	$5,112.24	$134.59		$35,266.60	$4,977.65	$3,284.13
22	$0.200	25,367	$5,071.34	$137.28		$40,337.94	$4,934.06	$3,191.54
23	$0.204	25,165	$5,131.39	$140.02		$45,469.33	$4,991.36	$3,165.30
24	$0.204	24,963	$5,090.34	$142.82		$50,559.66	$4,947.51	$3,075.97
25	$0.208	24,764	$5,150.60	$145.68		$55,710.27	$5,004.92	$3,050.66
26	$0.208	24,565	$5,109.40	$148.59		$60,819.67	$4,960.81	$2,964.47
27	$0.212	24,369	$5,169.90	$151.57		$65,989.56	$5,018.33	$2,940.05
28	$0.212	24,174	$5,128.54	$154.60		$71,118.10	$4,973.94	$2,856.90
29	$0.216	23,981	$5,189.26	$157.69		$76,307.36	$5,031.57	$2,833.34
30	$0.216	23,789	$5,147.74	$160.84		$81,455.10	$4,986.90	$2,753.12

Complete System Investment	**$66,000.00**	Internal Rate of Return for the Solar Project	**3.7%**

There is no expense allocated to O&M in the first 5 years. Any maintenance or repairs required during this time will be covered under the 60 month workmanship warranty. O&M for the system after year 5 will be based on time and materials. Solar panels, optimizers and inverter equipment are covered by a 25-year manufacturer's warranty. The estimated O&M cost is for labor to replace equipment if needed. Inverter system has remote monitoring capability, that will require WiFi interconnection. This will allow system's performance to be monitored and any issues to be detected remotely. The WiFi service is not included in the O&M.


Click a roof section to place PV modules on it or to edit modules' properties.
Redo
ENTIRE
48'
18'
Additional panels can be installed on the east facing roof for future expansion of solar array. Inverter will have additional capacity to add panels.
42
PV MODULES
15.96
DC POWER (kWp)
23.45
ANNUAL EST ENERGY


n to place PV modules on it or to edit modules'
School Entrance
Windmill pedestal with meter.
Solar meter can be located on same
pedestal or on a new pedestal can be installed
Trench from array to pedestal
Windmill
Proposed trench for conduit and wire from
utility pole to windmill pedestal
Inverter will
mount to array
Utility pole
Dimensions of a 20 panel solar array is
35' wide x 13' deep x 11' high
Location of the array to be determined by Select Board


VT Sun Solar System
Installed in 2014

INVERTERS

Single Phase Inverter with HD-Wave Technology

for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US

Optimized installation with HD-Wave technology

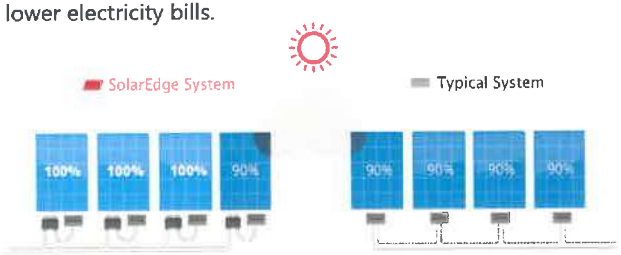
- Specifically designed to work with power optimizers
- Record-breaking 99% weighted efficiency
- Quick and easy inverter commissioning directly from a smartphone using the SolarEdge SetApp
- Fixed voltage inverter for longer strings
- Integrated arc fault protection and rapid shutdown for NEC 2014, NEC 2017 and NEC 2020 per article 690.11 and 690.12
- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Small, lightweight, and easy to install both outdoors or indoors
- Built-in module-level monitoring
- Optional: Faster installations with built-in consumption metering (1% accuracy) and production revenue grade metering (0.5% accuracy, ANSI C12.20)

solaredge

Power Your Home with SolarEdge

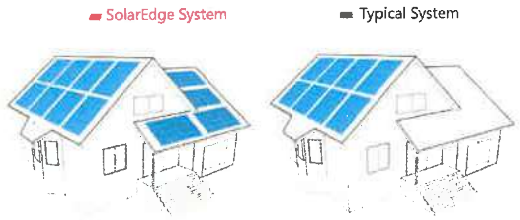
More Energy

Install SolarEdge to maximize production from each solar module by eliminating power losses that can be caused by soiling, shading, or snow.
More power = more revenue for faster system payback and lower electricity bills.



More Aesthetic Rooftops

SolarEdge enables optimal rooftop utilization, resulting in more modules on the roof for more energy, more savings, and more aesthetic rooftops.



Full System Monitoring

Monitor your real-time system performance from the palm of your hand. Accessible for free, anytime, anywhere, from your computer or mobile device.

Advanced Safety

SolarEdge provides peace of mind with built-in safety features compliant with the most advanced safety standards, for maximum protection of people and property.

Long-Term Warranties

SolarEdge products are built for lasting performance. Protect your investment with warranties amongst the longest in the industry: 25 years for power optimizers, 12 years for inverters (extendable to 20 or 25 years for an additional cost).

Power Optimizer

DC Inverter

Monitoring Platform

Future-Proofed Solutions

Put a down payment on your future with SolarEdge. Enjoy easy upgrades to battery storage, EV charging, and other cutting-edge smart energy capabilities.

About SolarEdge

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

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SolarEdgePV
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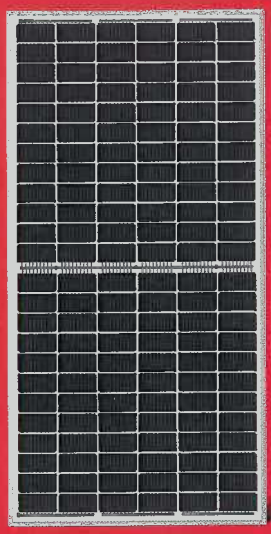
solaredge.com

Making Solar Systems Smarter

LR4-72HBD
425~455M

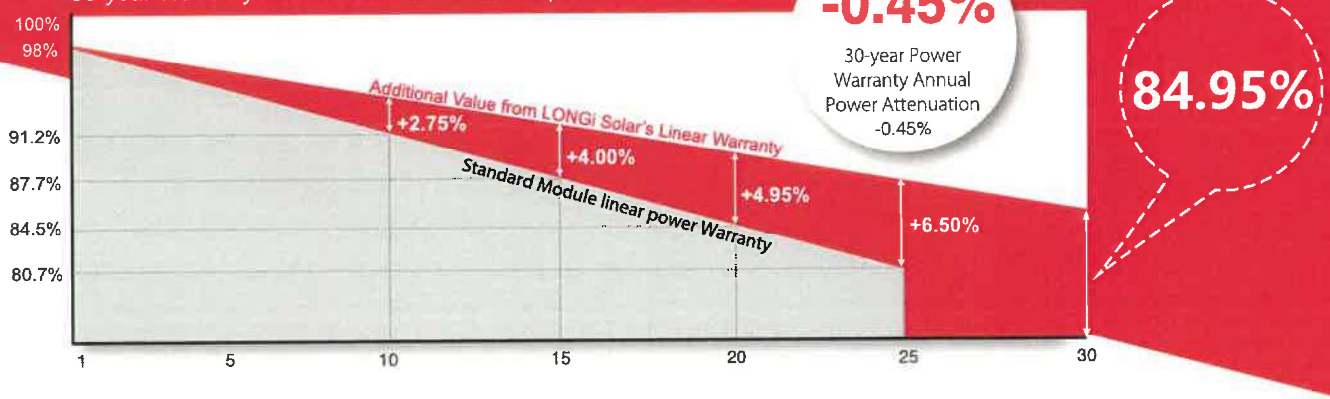
Hi-MO 4
NEW

High Efficiency
Low LID Bifacial PERC with
Half-cut Technology



*Both 6BB & 9BB are available

12-year Warranty for Materials and Processing;
30-year Warranty for Extra Linear Power Output



Complete System and Product Certifications

IEC 61215, IEC 61730, UL 61730

ISO 9001:2008: ISO Quality Management System

ISO 14001: 2004: ISO Environment Management System

TS62941: Guideline for module design qualification and type approval

OHSAS 18001: 2007 Occupational Health and Safety

* Specifications subject to technical changes and tests. LONGi Solar reserves the right of interpretation.

Front side performance equivalent to conventional low LID mono PERC:
- High module conversion efficiency (up to 20.9%)
- Better energy yield with excellent low irradiance performance and temperature coefficient
- First year power degradation <2%

Bifacial technology enables additional energy harvesting from rear side (up to 25%)

Glass/glass lamination ensures 30 year product lifetime, with annual power degradation < 0.45%, 1500V compatible to reduce BOS cost

Solid PID resistance ensured by solar cell process optimization and careful module BOM selection

Reduced resistive loss with lower operating current

Higher energy yield with lower operating temperature

Reduced hot spot risk with optimized electrical design and lower operating current

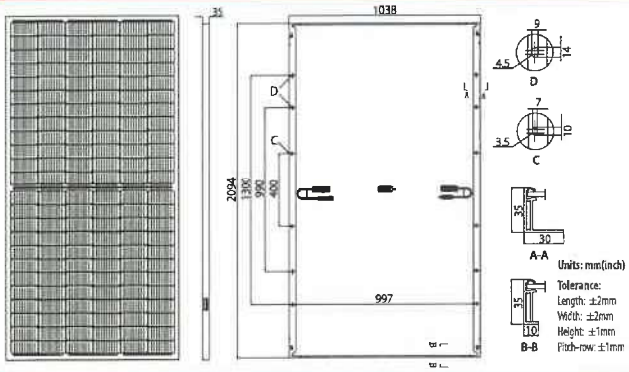
LONGi

Room 801, Tower 3, Lujiazui Financial Plaza, No.826 Century Avenue, Pudong Shanghai, 200120, China
Tel: +86-21-80162606 E-mail: module@longi-silicon.com Facebook: www.facebook.com/LONGi Solar

20200401V11

LR4-72HBD 425~455M

Design (mm)



Mechanical Parameters

Cell Orientation: 144 (6×24)
Junction Box: IP68, three diodes
Output Cable: 4mm², 300mm in length, length can be customized
Glass: Dual glass
2.0mm coated tempered glass
Frame: Anodized aluminum alloy frame
Weight: 27.5kg
Dimension: 2094×1038×35mm
Packaging: 30pcs per pallet
150pcs per 20'GP
660pcs per 40'HC

Operating Parameters

Operational Temperature: -40℃ ~ +85℃
Power Output Tolerance: 0 ~ +5 W
Voc and Isc Tolerance: ±3%
Maximum System Voltage: DC1500V (IEC/UL)
Maximum Series Fuse Rating: 25A
Nominal Operating Cell Temperature: 45±2℃
Safety Class: Class II
Fire Rating: UL type 3
Bifaciality: Glazing 70±5%

Electrical Characteristics

Test uncertainty for Pmax: ±3%

Model Number	LR4-72HBD-425M		LR4-72HBD-430M		LR4-72HBD-435M		LR4-72HBD-440M		LR4-72HBD-445M		LR4-72HBD-450M		LR4-72HBD-455M	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	425	317.4	430	321.1	435	324.9	440	328.6	445	332.3	450	336.1	455	339.8
Open Circuit Voltage (Voc/V)	48.7	45.6	48.9	45.8	49.1	45.9	49.2	46.0	49.4	46.2	49.6	46.4	49.8	46.6
Short Circuit Current (Isc/A)	11.22	9.06	11.30	9.13	11.36	9.18	11.45	9.25	11.52	9.30	11.58	9.36	11.65	9.41
Voltage at Maximum Power (Vmp/V)	40.4	37.7	40.6	37.9	40.8	38.0	41.0	38.2	41.2	38.4	41.4	38.6	41.6	38.8
Current at Maximum Power (Imp/A)	10.52	8.42	10.60	8.49	10.66	8.54	10.73	8.60	10.80	8.65	10.87	8.70	10.93	8.76
Module Efficiency(%)	19.6		19.8		20.0		20.2		20.5		20.7		20.9	

STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25℃, Spectra at AM1.5

NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m², Ambient Temperature 20℃, Spectra at AM1.5, Wind at 1m/S

Electrical characteristics with different rear side power gain (reference to 445W front)

Pmax /W	Voc/V	Isc /A	Vmp/V	Imp /A	Pmax gain
467	49.4	12.09	41.2	11.34	5%
490	49.4	12.67	41.2	11.88	10%
512	49.5	13.24	41.3	12.42	15%
534	49.5	13.82	41.3	12.96	20%
556	49.5	14.40	41.3	13.50	25%

Temperature Ratings (STC)

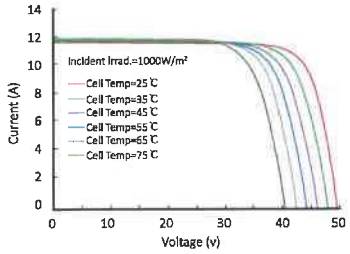
Temperature Coefficient of Isc	+0.050%/℃
Temperature Coefficient of Voc	-0.284%/℃
Temperature Coefficient of Pmax	-0.350%/℃

Mechanical Loading

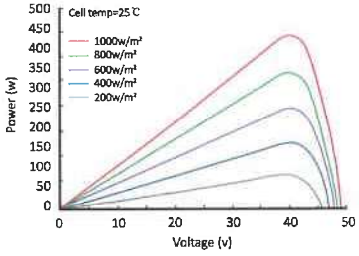
Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

I-V Curve

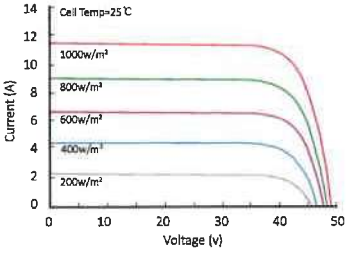
Current-Voltage Curve (LR4-72HBD-440M)



Power-Voltage Curve (LR4-72HBD-440M)



Current-Voltage Curve (LR4-72HBD-440M)



Room 801, Tower 3, Lujiazui Financial Plaza, No.826 Century Avenue, Pudong Shanghai, 200120, China
Tel: +86-21-80162606 E-mail: module@longi-silicon.com Facebook: www.facebook.com/LONGi Solar

20200401V11

powered by Q.ANTUM DUO Z

Q.PEAK DUO BLK ML-G9+
365-385

ENDURING HIGH PERFORMANCE

EUPD RESEARCH TOP BRAND PV MODULES EUROPE 2020

25 YR Warranty Product & Performance

Q CELLS Yield Security

BREAKING THE 20% EFFICIENCY BARRIER
Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 20.6%.

INNOVATIVE ALL-WEATHER TECHNOLOGY
Optimal yields, whatever the weather with excellent low-light and temperature behavior.

ENDURING HIGH PERFORMANCE
Long-term yield security with Anti LID Technology, Anti PID Technology[1], Hot-Spot Protect and Traceable Quality Tra.Q™.

EXTREME WEATHER RATING
High-tech aluminum alloy frame, certified for high snow (6000 Pa) and wind loads (4000 Pa).

A RELIABLE INVESTMENT
Inclusive 25-year product warranty and 25-year linear performance warranty[2].

STATE OF THE ART MODULE TECHNOLOGY
Q.ANTUM DUO combines cutting edge cell separation and innovative 12-busbar design with Q.ANTUM Technology.

[1] APT test conditions according to IEC/TS 62804-1:2015, method B (–1500 V, 168 h)
[2] See data sheet on rear for further information.

THE IDEAL SOLUTION FOR:

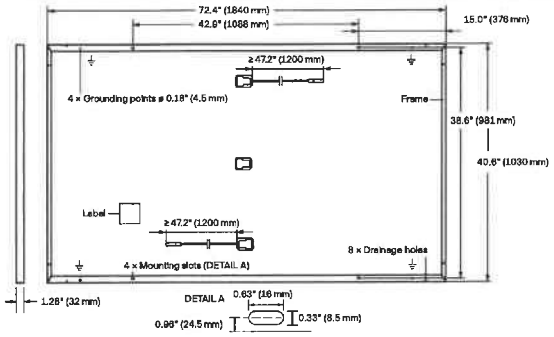
Rooftop arrays on residential buildings

Engineered in Germany

Q CELLS

MECHANICAL SPECIFICATION

Format	72.4 in × 40.6 in × 1.26 in (including frame) (1840 mm × 1030 mm × 32 mm)
Weight	43.0 lbs (19.5 kg)
Front Cover	0.11 in (2.8 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodized aluminum
Cell	6 × 22 monocrystalline Q.ANTUM solar half cells
Junction Box	2.09-3.98 in × 1.26-2.36 in × 0.59-0.71 in (53-101 mm × 32-60 mm × 15-18 mm), IP67, with bypass diodes
Cable	4 mm² Solar cable; (+) ≥47.2 in (1200 mm), (−) ≥47.2 in (1200 mm)
Connector	Stäubli MC4; IP68

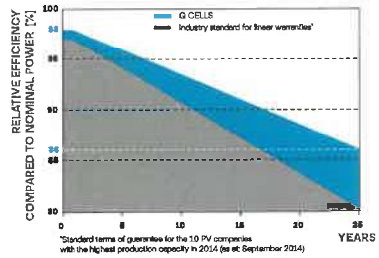


ELECTRICAL CHARACTERISTICS

POWER CLASS				365	370	375	380	385
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC[1] (POWER TOLERANCE +5 W / −0 W)								
Minimum	Power at MPP[1]	P_{MPP}	[W]	365	370	375	380	385
	Short Circuit Current[1]	I_{SC}	[A]	10.40	10.44	10.47	10.50	10.53
	Open Circuit Voltage[1]	V_{OC}	[V]	44.93	44.97	45.01	45.04	45.08
	Current at MPP	I_{MPP}	[A]	9.87	9.92	9.98	10.04	10.10
	Voltage at MPP	V_{MPP}	[V]	36.99	37.28	37.57	37.85	38.13
	Efficiency[1]	η	[%]	≥19.3	≥19.5	≥19.8	≥20.1	≥20.3
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT[2]								
Minimum	Power at MPP	P_{MPP}	[W]	273.3	277.1	280.8	284.6	288.3
	Short Circuit Current	I_{SC}	[A]	8.38	8.41	8.43	8.46	8.48
	Open Circuit Voltage	V_{OC}	[V]	42.37	42.41	42.44	42.48	42.51
	Current at MPP	I_{MPP}	[A]	7.76	7.81	7.86	7.91	7.96
	Voltage at MPP	V_{MPP}	[V]	35.23	35.48	35.72	35.96	36.20

[1]Measurement tolerances P_{MPP} ±3%; I_{SC}; V_{OC} ±5% at STC: 1000 W/m², 25±2 °C, AM 1.5 according to IEC 60904-3 • [2]800 W/m², NMOT, spectrum AM 1.5

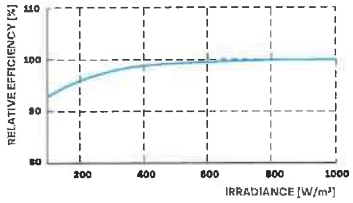
Q CELLS PERFORMANCE WARRANTY



At least 98 % of nominal power during first year. Thereafter max. 0.5 % degradation per year. At least 93.5 % of nominal power up to 10 years. At least 86 % of nominal power up to 25 years.

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

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²)

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α	[%/K]	+0.04	Temperature Coefficient of V_{OC}	β	[%/K]	−0.27
Temperature Coefficient of P_{MPP}	γ	[%/K]	−0.35	Nominal Module Operating Temperature	NMOT	[°F]	109±5.4 (43±3 °C)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V_{SYS}	[V]	1000 (IEC) / 1000 (UL)	PV module classification	Class II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating based on ANSI / UL 61730	TYPE 2
Max. Design Load, Push / Pull[3]	[lbs / ft²]	84 (4000 Pa) / 55 (2660 Pa)	Permitted Module Temperature on Continuous Duty	−40 °F up to +185 °F (−40 °C up to +85 °C)
Max. Test Load, Push / Pull[3]	[lbs / ft²]	125 (6000 Pa) / 84 (4000 Pa)		

[3] See Installation Manual

QUALIFICATIONS AND CERTIFICATES

UL 61730, CE-compliant,
IEC 61215:2016,
IEC 61730:2016,
U.S. Patent No. 9,893,215
(solar cells)

C Certified US UL 61730

CE

TÜVRheinland CERTIFIED www.tuv.com ID 1111220277

PACKAGING AND TRANSPORT INFORMATION

Horizontal packaging	74.4 in 1890 mm	42.5 in 1080 mm	47.6 in 1208 mm	1458 lbs 661 kg	28 pallets	24 pallets	32 modules

Note: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

Hanwha Q CELLS America Inc.
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GROUND FIXED TILT

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GROUND FIXED TILT (GFT) is an engineered system of standard, lightweight ground mount components that are in stock and ready to ship from North America's largest ground mount distribution network. UNIRAC's unmatched commercial project support makes construction easy, from permitting through installation, including region-specific engineering. GFT's refined solution, including a new shared rail design, delivers enhanced system and labor optimization. Plus, enjoy peace of mind with **SOLAR**MOUNT Mounting Technology and UNIRAC's industry-leading 25-year warranty.

IN STOCK & READY TO SHIP

THE BEST SOLUTION IS AVAILABLE

COMMERCIAL PARTNERSHIP

EXPERIENCE THAT MAKES A DIFFERENCE

INSTALLATION EXPERIENCE

REFINED WITH YOU IN MIND

MAKE GROUND MOUNT SIMPLE

FOR QUESTIONS OR CUSTOMER SERVICE VISIT UNIRAC.COM OR CALL (505) 248-2702

GROUND FIXED TILT

UNIRAC

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THE BEST SOLUTION IS AVAILABLE

Single post configurations with 20° and 30° tilt options. Standardized components and kitted hardware bring ease of stockability and repeatability, from 2KW to multi-MW. North America's largest Ground Mount Distributor network ensures the fastest lead times and empowers you to finish your projects on schedule.

COMMERCIAL PARTNERSHIP

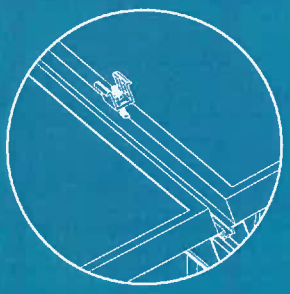
EXPERIENCE THAT MAKES A DIFFERENCE

Permit ready, pre-engineered regional designs save you valuable time. Standard construction drawings with general structural notes, table and component cross sections, foundation options and structural details speed permit submittal and construction. Industry leading commercial customer service supports you across your project, from design and logistics thru installation.

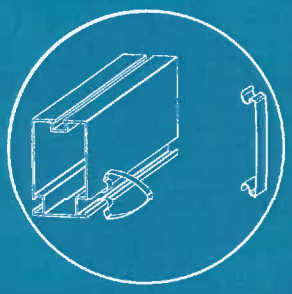
INSTALLATION EXPERIENCE

REFINED WITH YOU IN MIND

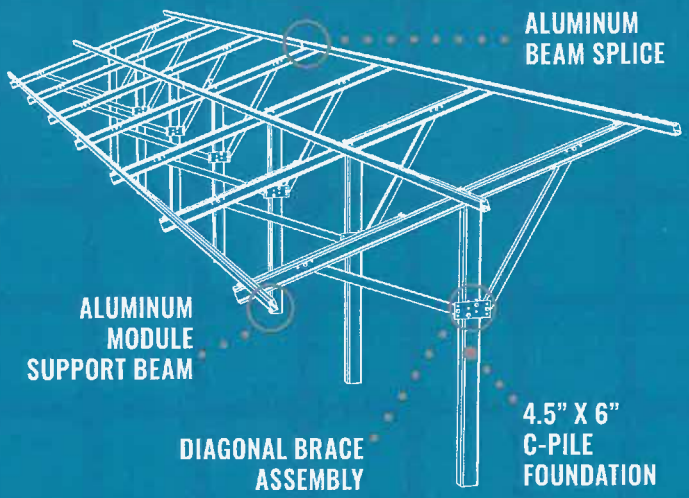
Kitted hardware, integrated bonding, and pre-assembled parts streamline construction, from pre-mobilization to installation. Straightforward connections ensure maximum strength and require no specialized labor or training. Lightweight components allow for one or two-person assembly. System flexibility enables you to mount 60 & 72 cell modules and choose from multiple foundation and rail options to optimize your projects.



TOP MOUNTING
MODULE CLAMPS
W/ INTEGRATED BONDING



SNAP-ON
WIRE MANAGEMENT



UL2703 ELECTRICAL BONDING & GROUNDING

UNMATCHED | CERTIFIED | ENGINEERING | BANKABLE | DESIGN | PERMIT

ON-TIME DELIVERY

No waiting. Our goal is simple: Consistently deliver solutions and services correctly, efficiently and dependably to exceed your expectations. Our world-class operations provide a 99% on-time delivery to help you meet your commitment dates.

CERTIFIED QUALITY PROVIDER

UNIRAC is the only PV mounting vendor with ISO certifications for 9001:2008, 14001:2004 and OHSAS 18001:2007, which means we deliver the highest standards for fit, form, and function. These certifications demonstrate our excellence and our commitment to first class business

BANKABLE WARRANTY

UNIRAC has the financial strength to back our products and reduce your risk. Have peace of mind knowing you are receiving products of exceptional quality. GFT is covered by a 25-year manufacturing warranty on all parts.