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THE FUTURE OF ENERGY INDEPENDENCE

Proposal Submitted to:

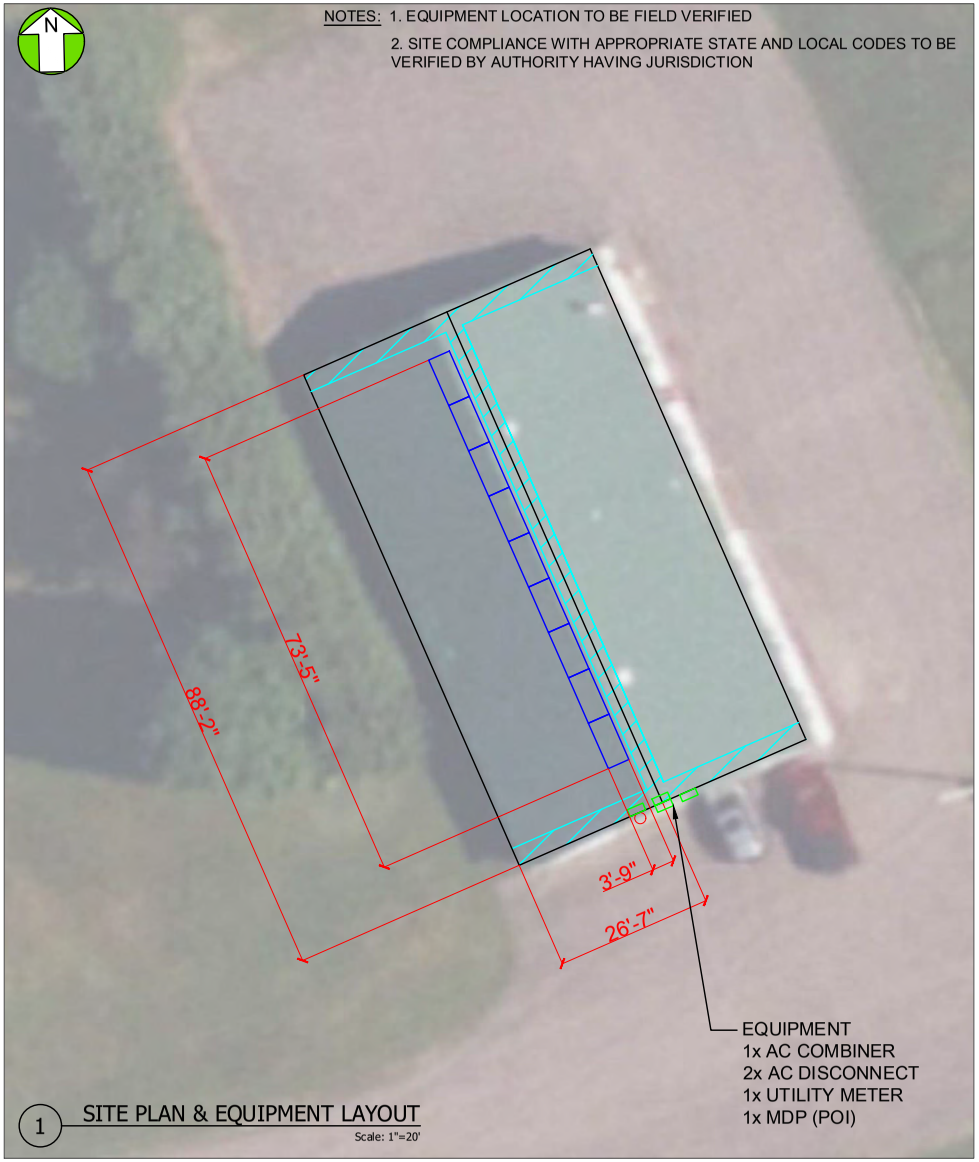
Town of New Lisbon
908 County Highway 16
Garratsville NY, 13342

Proposed System: (Net Metering)

5.58 kW Pitched Roof Mounted System

Proposal Submitted by:

Solar Liberty
6500 Sheridan Drive, Suite 120
Buffalo, NY 14221
Phone: 866.807.3639
Web: solarliberty.com



1 SITE PLAN & EQUIPMENT LAYOUT
Scale: 1"=20'

PV SYSTEM SUMMARY	
TOTAL STC DC SYSTEM SIZE	5.58 kW
SOLAR MODULE MODEL	Q.TRON XL-G2.3/BFG
SOLAR MODULE STC DC RATING	620 W
SOLAR MODULE INFO	96.9" x 44.6" x 1.38", 78 lbs
SOLAR MODULE COUNT	9
RACKING SYSTEM	PITCHED ROOF RACKING (RIBBED ROOF)
PITCH OF ARRAY	3:12
STRING SIZE	[5M x 1S], [4M x 1S]
INVERTER MODEL	IQ8P MICROINVERTERS
ARRAY AZIMUTH	246°
EAVE HEIGHT	10'
INTERCONNECTION VOLTAGE	240V/1Φ

2 PV SYSTEM OVERVIEW
Scale: N.T.S.

LEGEND

- SOLAR MODULE
- INV — INVERTER
- AC — AC COMBINER BOX
- UM — UTILITY METER
- MAIN — MAIN BREAKER PANEL
- DISC — AC DISCONNECT
- ELECTRICAL TRENCH
- VENTING AND PATHWAYS

3 AERIAL VIEW
Scale: N.T.S

General Notes

THE INSTALLATION OF PV SYSTEM SHALL BE IN ACCORDANCE WITH THE MOST RECENT NATIONAL ELECTRIC AND BUILDING CODES AND STANDARDS, AS AMENDED BY JURISDICTION

ELECTRICAL STAMP AREA

THIS INFORMATION IS CONFIDENTIAL AND PROPRIETARY TO SOLAR LIBERTY ENERGY SYSTEMS, INC. PLEASE DO NOT SHARE THIS WITH ANYONE UNLESS THERE IS A WRITTEN APPROVAL FROM SOLAR LIBERTY.

No.	Revision/Issue	Date
1	Revised Site Plan	11/04/24
0	Original Site Plan	10/30/24

SOLARLIBERTY
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6500 Sheridan Drive
Suite 120
Buffalo, NY 14221
866-80-RENEW

NABCEP CERTIFIED PV Installation Professional

Project Name and Address

Town of New Lisbon
908 Country Highway 16
Garrattsville, NY
13342

Drawn By	Checked By
MC	EV
Date	Date
10/30/2024	10/30/2024
Scale	Sheet
AS NOTED	PV-S1

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November 8, 2024

Ms. Nancy Martin-Mathewson
Town of New Lisbon
908 County Highway 16
Garratsville NY, 13342

Dear Ms. Martin-Mathewson:

Solar Liberty is pleased to submit our response to and would be honored to become the solar partner of choice on this exciting initiative. We confirm that all elements of the project are understood and Solar Liberty can meet and exceed all expectations. Our proposal is centered on providing a turnkey solar system for Town of New Lisbon.

The proposal covers our experience as a turnkey installer and includes services such as design/ engineering, financing, installation, procurement, all permitting, environmental assessments, and ongoing maintenance.

Solar Liberty is proud to have installed over 4,500 solar systems across New York State and to be the recipient of the “Outstanding Achievement Award” by NYSERDA, the Department of Energy and Solar Power World magazine. Solar Liberty has been in business since 2003. Over our years of operation, we have installed and distributed more than 325 MW’s of solar equipment to date.

We are confident that our proposal meets Town of New Lisbon’s highest standards, and that our experience and deployment plan clearly differentiates us from other solar energy developers.

Thank you for this opportunity to propose a project and we look forward to the possibility of bringing your project to fruition.

Very truly yours,
Solar Liberty Energy Systems, Inc.

Nathan T. Rizzo
Vice President

Solar Liberty

Since our inception in 2003, Solar Liberty has been continually expanding and reinvesting in New York State. Our sole focus is on solar energy, while utilizing proprietary equipment and processes. Solar Liberty's business model of in-house engineering, full-time solar crews, and strict attention to detail leverages innovation and solar industry expertise to design, install, operate and maintain PV systems, with lower costs and more value-added services than our competition.

Solar Liberty is a total turnkey solar energy developer, which means we handle all aspects of solar electric installations. We believe our approach sets us apart from other solar installation companies and enables us to provide a value added service to our customers that are second-to-none. The record number of New York State installations, coupled with the number of pleased repeat customers, is a testament to our attention to detail. We consistently execute a finely tuned systematic approach from the initial sale of a project and its in-house design, right through to the completed installation and ongoing maintenance.

Dedicated to being a leader in the solar energy sector, Solar Liberty draws on New York State resources and is committed to creating New York State jobs. The majority of our talented team of engineers and office personnel have graduated from New York State colleges and universities. Simultaneously, the installation teams represent the perfect example of transforming traditional blue-collar trades into modern green-collar professionals while producing a new skill set for the future.

- Buffalo based turnkey installer of grid-tied photovoltaic solar energy systems – schools, non-profit, commercial & residential.
- Co-founded in 2003 by brothers Adam & Nathan Rizzo.
- Locally owned and operated.
- Current installations completed or in progress on over 4,500 commercial and residential buildings/homes (inc. over 100 municipal projects) with 325 MW (1,000,000 Solar Modules) of solar power capacity.
- Installations include: 13 MW for Monroe County,
  12+ MW for SUNY at Buffalo, Solar (1.4MW) + Storage (485kW) for SUNY Fredonia, Solar + Strorage Microgrid for SUNY New Paltz

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Solar Liberty Recently Completed and In Progress Solar Projects

- Cummins Engine, Lakewood NY - 2 MW Roof Top Installation
- Rochester Institute of Technology - 2 MW Ground Mounted Installation
- Grocery Stores throughout Rochester Area
- 17 NYC Public Schools with NYPA
- 2 MW of Installations in Long Island for Life Storage Facilities
- Town of Wawarsing- 1.1MW Landfill Ground Mount Installation
- Brooklyn Diocese, Babylon NY - 10.6 MW Ground Mount Installation

Other Notable Project Customers

University at Buffalo
The State University of New York

New York Power Authority

United Way

New Paltz
STATE UNIVERSITY OF NEW YORK

Cummins

BOYS & GIRLS CLUB

animal humane society

ROMAN CATHOLIC DIOCESE OF BROOKLYN

LifeStorage

eliminating racism
empowering women
ywca

Diocese of Buffalo

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How a System Works

1 Sunlight shines on the modules.

2 The solar modules produce DC power.

3 The inverter converts the power from DC to AC power.

4 Non-demand/ Net Meter applications: Solar electricity is first used by your building. Excess electricity runs back through your meter and is grid-injected for compensation.

5 The utility owned meter “measures” electricity produced by the solar system. Any excess generation can be credited on a volumetric (kWh for kWh) or monetary (utilizing current VDER rates) basis.

Solar Incentives

- Purchase
  - Utilize the NYSERDA incentive
    - $0.250/watt up to 750 kW DC
    - $00/watt Brownfield Adder Available
  - Federal Tax Credit / Direct Pay (Nonprofit)- 30%
  - Potential Tax Credit/ Direct Pay Adders
    - 10% Low Income Community Adder
    - 10% Energy Community Adder
  - (For-Profit) MACRS/ Sec. 168 (k) Bonus Depreciation/ Tax Avoided (Federal (Bonus) and State (5 Yr. MACRS))
- Financing Available

Monitoring

- Available accessory to solar installation - allows you to protect your investment
- Monitoring provides a real-time view of power production
- View historical data for reports or annual comparisons
- Customized views on your website or public display

Operations and Maintenance

- Routine Maintenance
  - Solar Panels - Area precipitation (inc. snow) typically helps to keep modules clean
  - Inverter - Clean accumulated dust from the heat sink or fan screen
  - Wiring - Check wiring around the inverter
- Power production - Compare estimated power output (kWh) to the measured values on inverter
- Snow removal - Not recommended

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Warranties and Service

- No moving parts means a long life expectancy
- PV panels come with a 25 year power production warranty from the manufacturer
- Inverters include a 25 year warranty
- Solar Liberty has a standard comprehensive 5-year service and product warranty

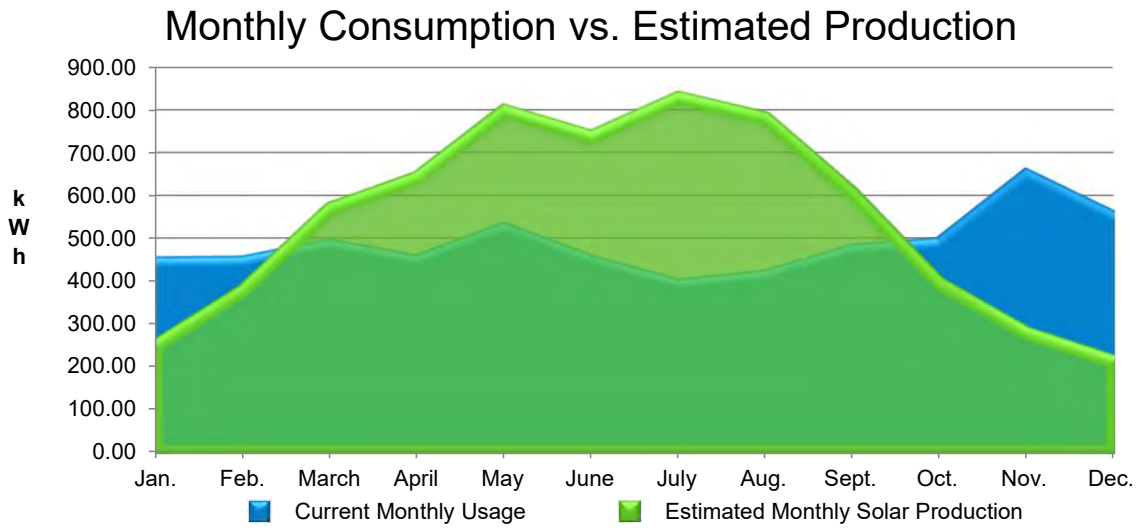
Donations and Foundation

- Solar Liberty has donated over 125 solar systems to non-profit organizations in Western New York
- Systems include: Buffalo Catholic Diocese (65 Systems), The Boys and Girls Club, Boy Scouts of America, People Inc., Hospice, the City Mission and many others
- Solar Liberty Foundation - Renewing hope worldwide through renewable energy resources - www.solarliberty.org

Local manufacturing - Worldwide Sales

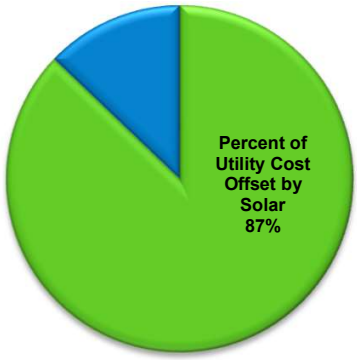
- Solar Liberty has been manufacturing solar mounting systems in NY State, since 2007, under the name DynoRaxx
- DynoRaxx sells solar mounting components worldwide and is specifically designed for the NY State Climate
- DynoRaxx is the only system designed specifically to provide a natural union with your building's roofing membrane and solar

Solar Liberty Proposal



Monthly Consumption vs. Estimated Production			
Month	Current Electrical Consumption (kWh)	Solar Production (kWh)	Consumption with Solar (kWh)
January	436	249	187
February	438	378	60
March	478	569	-91
April	440	641	-201
May	516	798	-282
June	440	737	-297
July	384	828	-444
August	405	780	-375
September	466	605	-139
October	481	395	86
November	641	279	362
December	543	213	330
Total	5,668	6,472	-804

Percentage of Electric Costs Offset by Solar System (Year 1)



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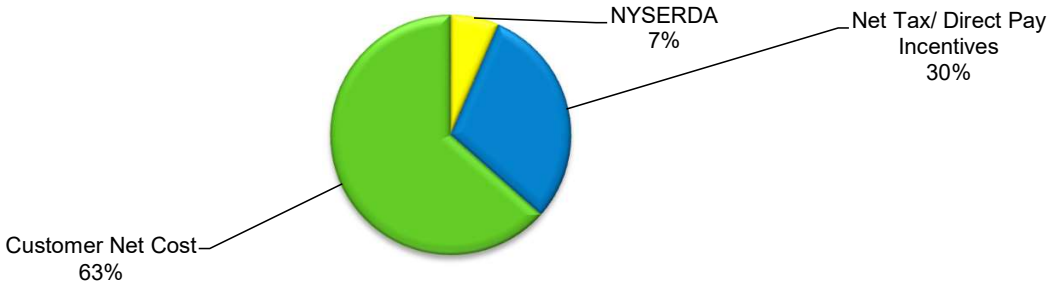
Percentage of Total Cost by Category



System Description and Financial Cost Detail	
PV Module: HANWHA Q Cell, Quantity: 9, Model:Q.TRON DUO XL-G11.3/BFG	Included
Module Wattage: 620	Included
Inverter: Enphase, Qty: 9, Model:IQ8P-3P-72-E-DOM-US	Included
Inverter 2: , Qty: , Model:	Included
Balance of System for a Pitched Roof Mounted System	Included
Permitting	Included
Labor	Included
Gross System Cost:	**$21,432.78**
Rebate Received By Customer	
Total NYSERDA NY-SUN incentive for $0.250 /W Under 750kW (Paid to Customer)	**($1,395.00)**
Due to Solar Liberty (Gross Cost - NYSERDA Incentive):	**$20,037.78**
Customer Tax Incentives and Estimated Consequence	
30% Federal Tax Credit or Direct Pay (Gross System Cost)	**($6,429.83)**
10% Low Income Community Adder (Gross System Cost (Based on Eligibility))	**$0.00**
10% Energy Community Adder (Gross System Cost)	**$0.00**
MACRS/ Sec. 168 (k) Bonus Depreciation (Tax Avoided)	**$0.00**
Estimated Tax Consequence on NYSERDA NY-SUN Incentive	**$0.00**
System Cost After All incentives	
Final System Cost:	**$13,607.95**

*Based on a behind-the-meter connection and Net Metering guidelines. Does not include CESIR study, Utility Upgrades, and Prevailing Wages.

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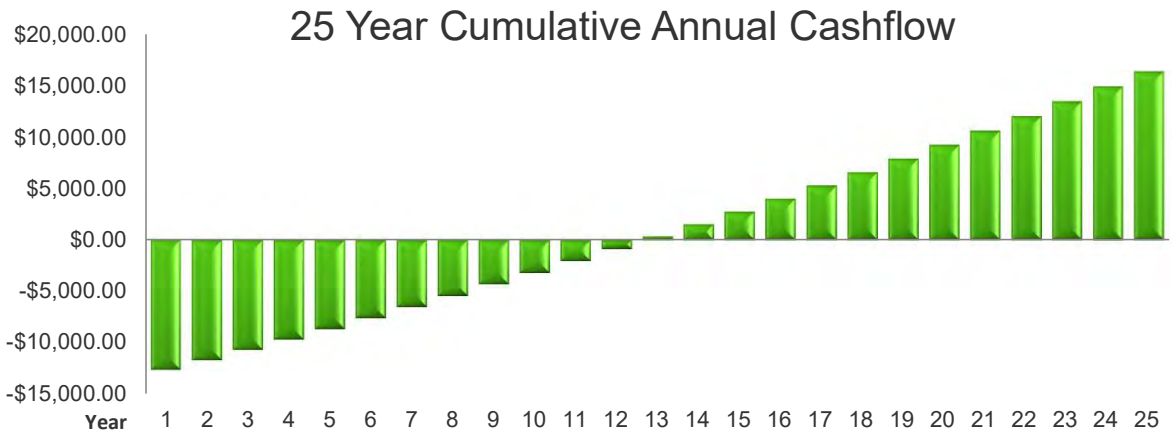
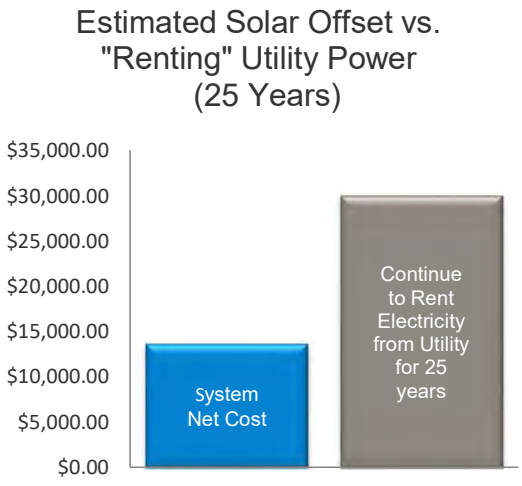


System Summary	
System Size	5.58 kW
Module Azimuth	246 Degrees
Module Tilt	14.04 Degrees
Output Due to Shading	100%
Estimated Annual Production	6,210 kWh
Current Utility Rate	$.1508 / kWh
Net Cost (After Incentives)	$13,607.95
Average Monthly Savings	$99.76
25 Year Utility Savings	$29,927.57
Payback Period	12 Years 9 Month(s)
Internal Rate of Return (IRR)	8.8%
Net Investment is Recouped	2.2 Times
Utility Company	NYSEG



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Cash Flow by Year

Year	Zero	One	Two	Three	Four	Five
Turnkey System Cost	($21,433)	$0	$0	$0	$0	$0
NYSERDA NY-SUN	$1,395	$0	$0	$0	$0	$0
Total FITC/ Direct Pay	$6,430	$0	$0	$0	$0	$0
MACRS Sec. 168 (k) Bonus Depreciation/ *Tax Avoided *(Fed (80% + Yr. 1) & State (Yr. 1) Values In Yr. 0)*	$0	$0	$0	$0	$0	$0
Est. Total Tax on NY-SUN	$0	$0	$0	$0	$0	$0
Annual Utility Savings	$0	$976	$976	$993	$1,011	$1,029
Total Annual Cash Flow	($13,608)	$976	$976	$993	$1,011	$1,029
Cumulative Cash Flow	($13,608)	($12,632)	($11,656)	($10,663)	($9,652)	($8,623)

Year	Six	Seven	Eight	Nine	Ten	Eleven
Annual Utility Savings	$1,048	$1,066	$1,086	$1,105	$1,125	$1,145
Total Annual Cash Flow	$1,048	$1,066	$1,086	$1,105	$1,125	$1,145
Cumulative Cash Flow	($7,576)	($6,509)	($5,424)	($4,319)	($3,194)	($2,049)

Cash Flow by Year (Continued)

Year	Twelve	Thirteen	Fourteen	Fifteen	Sixteen	Seventeen
Annual Utility Savings	$1,166	$1,187	$1,208	$1,230	$1,252	$1,274
Total Annual Cash Flow	$1,166	$1,187	$1,208	$1,230	$1,252	$1,274
Cumulative Cash Flow	($883)	$304	$1,512	$2,741	$3,993	$5,267

Year	Eighteen	Nineteen	Twenty	Twenty One	Twenty Two	Twenty Three
Annual Utility Savings	$1,297	$1,320	$1,344	$1,368	$1,393	$1,418
Total Annual Cash Flow	$1,297	$1,320	$1,344	$1,368	$1,393	$1,418
Cumulative Cash Flow	$6,564	$7,884	$9,228	$10,597	$11,989	$13,407

Year	Twenty Four	Twenty Five
Annual Utility Savings	$1,443	$1,469
Total Annual Cash Flow	$1,443	$1,469
Cumulative Cash Flow	$14,850	$16,320

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Environmental Benefits

Going solar not only benefits your pocket book but it generates significant environmental benefits in reducing your carbon footprint. Below is a comparison of CO_2 emissions that will be offset by your solar system to various forms of carbon sequestration or polluting activities.

Comparison of CO_2 Emissions

The proposed 5.58 kW system will reduce Green House Gas Emissions by 239,577 lbs. of CO_2 over 25 years. That is equivalent to:

Driving a car
271,752 Miles

2,794 Tree Seedlings Grown
for 10 Years

1.4 Tanker Trucks Filled
with Gasoline

388 Five Gallon
Buckets of Coal

Disclaimers and Assumptions

NYSERDA Commercial Incentive available through NY-SUN is $0.25 per watt. If rebate program is cancelled at anytime the project will be reevaluated for feasibilty. Project Proposal is valid for 30 days. Once project proposal is accepted, Photovoltaic Generating System Purchase and Sale Contract must be executed.

Operation and Inflation Rates

This estimate assumes the following system operation and inflation rates:

System Life:	25 Years (Warranty of Modules)
PV Degradation:	2% Year 1 and 0.2% Years 2-25
Current Electric Rate:	$0.151 per kWh
Utility Annual Inflation Rate:	Escalated 2% Annually

System Size Ratings and Performance

There are three methods used to size PV systems. They are STC, PTC and CEC. The Standard Test Condition (STC) rating or DC Nameplate is the rating under optimal operating conditions (laboratory). The lab testing is based upon 25 Degrees Celsius and 1000 Watts per Meter Squared. This rating is used by manufacturers to classify the power output of PV Modules. The PV-USA Test Condition (PTC) and California Commission (CEC) ratings were designed to test module performance under more realistic operating conditions.

The energy production for the first year is based on PV Watts Version 1 using the DC Nameplate. To calculate the system's energy production for years two through twenty-five, the expected degradation in system performance is included (See PV Degradation in above table).

Tax Credits

Our proposal shows a 30% Federal Tax Credit or Direct Pay for Nonprofits and assumes a combined Income Tax Rate of 0.00%. The tax rate can be modified upon request. We stress that we cannot provide tax or investment guidance.You should consult your tax preparer or investment adviser for these services.

Average Monthly Utility Savings

This figure is the average monthly electric savings the system will produce over the course of 25 years using a PV Degradation and Utility Annual Inflation Rate as listed under section Operation and Inflation Rates.

Internal Rate of Return (IRR)

The internal rate of return (IRR) is the discount rate at which the net present value of costs (negative cash flows) of the investment equals the net present value of the benefits (positive cash flows) of the investment.

Levelized Cost of Energy

The Levelized Cost of Energy is an estimation. It is based on the Net Cost ($13,607.95) of the system divided by the amount of power the system is estimated to produce over 25 years (155,243).

Environmental Analysis

The Environmental Analysis is determined by calculations found at http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results.

Q.TRON XL-G2 SERIES

610 - 635 Wp | 156 Cells
22.7 % Maximum Module Efficiency

MODEL Q.TRON XL-G2.3 / BFG

High performance Qcells N-type solar cells

Q.ANTUM NEO Technology with optimized module layout boosts module efficiency up to 22.7 %.

Bifacial energy yield gain of up to 21%

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

A reliable investment

Double glass module design enables extended lifetime with 12-year product warranty and improved 30-year performance warranty[1].

Enduring high performance

Long-term yield security with Anti LeTID and Anti PID Technology[2], 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 (3750 Pa)[3].

Innovative all-weather technology

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

[1] See data sheet on rear for further information.
[2] APT test conditions according to IEC/TS 62804-1:2015 method B (–1500 V, 168 h) including post treatment according to IEC 61215-1-1 Ed. 2.0 (CD)
[3] See Installation Manual for instructions

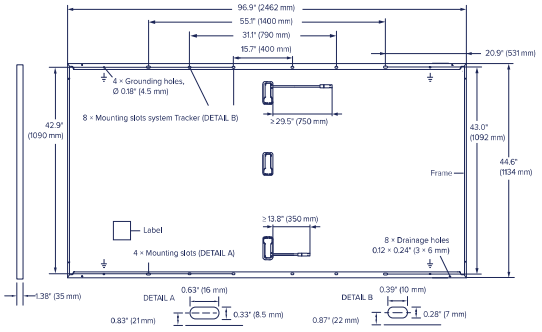
The ideal solution for:

Ground mounted solar panels

Q.TRON XL-G2 SERIES

Mechanical Specification

Format	96.9 in × 44.6 in × 1.38 in (including frame) (2462 mm × 1134 mm × 35 mm)
Weight	78.0 lbs (35.4 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 NEO 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 mm² Solar cable; (+) ≥ 29.5 in (750 mm), (−) ≥ 13.8 in (350 mm)
Connector	Stäubli MC4-Evo2, Stäubli MC4 ; IP68



Electrical Characteristics

POWER CLASS				610		615		620		625		630		635	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC[1] (POWER TOLERANCE +5 W / −0 W)					BSTC*		BSTC*		BSTC*		BSTC*		BSTC*		BSTC*
Minimum	Power at MPP[1]	P_{MPP}	[W]	610	675.4	615	681.0	620	686.5	625	692.0	630	697.6	635	703.1
	Short Circuit Current[1]	I_{SC}	[A]	13.65	15.13	13.71	15.19	13.76	15.25	13.82	15.31	13.88	15.38	13.93	15.44
	Open Circuit Voltage[1]	V_{OC}	[V]	56.11	56.34	56.39	56.62	56.67	56.90	56.95	57.18	57.23	57.46	57.51	57.74
	Current at MPP	I_{MPP}	[A]	12.95	14.34	13.00	14.40	13.05	14.46	13.10	14.51	13.15	14.57	13.21	14.62
	Voltage at MPP	V_{MPP}	[V]	47.10	47.09	47.30	47.29	47.50	47.49	47.70	47.69	47.89	47.88	48.09	48.08
	Efficiency[1]	η	[%]	≥ 21.8		≥ 22.0		≥ 22.2		≥ 22.4		≥ 22.6		≥ 22.7	

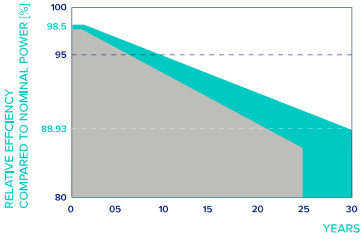
Bifaciality of P_{MPP} and I_{SC} 80 % ± 5 % • Bifaciality given for rear side irradiation on top of STC (front side) • According to IEC 60904-1-2

[1] Measurement tolerances P_{MPP} ± 3 %; I_{SC}, V_{OC} ± 5 % at STC: 1000 W/m²; *at BSTC: 1000 W/m² + φ × 135 W/m², φ = 80 %, 25 ± 2 °C, AM 1.5 according to IEC 60904-3

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT[2]w								
Minimum	Power at MPP	P_{MPP}	[W]	461.1	464.9	468.7	472.5	476.2	480.0
	Short Circuit Current	I_{SC}	[A]	11.00	11.05	11.09	11.14	11.18	11.23
	Open Circuit Voltage	V_{OC}	[V]	53.24	53.51	53.77	54.04	54.31	54.58
	Current at MPP	I_{MPP}	[A]	10.18	10.22	10.26	10.30	10.34	10.38
	Voltage at MPP	V_{MPP}	[V]	45.28	45.48	45.67	45.86	46.05	46.24

[2] 800 W/m², NMOT, spectrum AM 1.5

Qcells PERFORMANCE WARRANTY

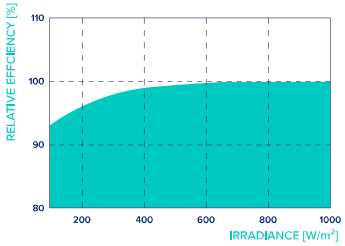


At least 98.5% of nominal power during first year. Thereafter max. 0.33 % degradation per year. At least 95.53% of nominal power up to 10 years. At least 88.93 % of nominal power up to 30 years.

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/m²).

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α	[%/K]	+0.04	Temperature Coefficient of V_{OC}	β	[%/K]	−0.24
Temperature Coefficient of P_{MPP}	γ	[%/K]	−0.30	Nominal Module Operating Temperature	NMOT	[°F]	109 ± 5.4 (43 ± 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[4]
Max. Push Load[3], Test / Design		[lbs / ft²]	113 (5400 Pa) / 75 (3600 Pa)	Permitted Module Temperature on Continuous Duty	−40 °F up to +185 °F (−40 °C up to +85 °C)
Max. Pull Load[3], Test / Design		[lbs / ft²]	78 (3750 Pa) / 52 (2500 Pa)		

[3] See Installation Manual for instructions

[4] New Type is similar to Type 3 but with metallic frame

Qualifications and Certificates

UL 61730-1 & UL 61730-2, CE-compliant,
Quality Controlled PV - TUV Rheinland,
IEC 61215:2016, IEC 61730:2016,
U.S. Patent No. 9,893,215(solar cells)

www.tuv.com
ID 1111220277

* 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.
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Operations and Maintenance: Option B (Basic Standard Roof Mount) - $1,214.40/yr

Solar Liberty provides a comprehensive Operations and Maintenance portfolio of services. The following section broadly describes the services offered under a typical Operations and Maintenance Program with Solar Liberty. The listing can be tailored to suit both the Customer's facility and the level of detail necessary to meet the Customer's needs.

General Provisions:

I. Standard working hours shall be defined as the hours 8 am through 5 pm Local Time, Monday through Friday, excluding holidays. Emergency hotline and response to be defined separately.

II. If not explicitly stated otherwise, all work described within this Scope of Work shall be performed during standard working hours.

III. Solar Liberty recommends the customer maintain the appropriate factory warranty for all major system components throughout the term of the contract. Repairs required on components without a valid, enforceable warranty will be completed under a time and material basis.

IV. If monitoring services are defined, the Customer shall provide full, remote site access to monitoring at Customers expense.

V. All scheduled and unscheduled work performed by Solar Liberty or its subcontractors will be recorded on relevant checklists and inspection sheets. (Example provided separately.)

1. Racking		
Item	Service Description	Frequency
1	Visually Inspect 10% of racking hardware.	1x per year
2	Verify Torque of 10% of bolted racking connections (if applicable).	1x per year
3	Visually inspect all racking footings for cracking, deformation, and degradation of ballast blocks (if applicable).	1x per year
4	Visually inspect panel support structure for impacts, excessive corrosion, paint wear, or any other damage.	1x per year

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2. Solar Modules, Connections, and Wire Management		
Item	Service Description	Frequency
1	Visually inspect modules for damage including, but not limited to, glass breakage, oxidation, moisture inside, yellowing or browning of sealant, discoloration or deformation of backsheet, and deformation of module junction box.	1x per year
2	Visually inspect wiring for drooping wires, frayed insulation, unnecessary strain. Perform any minor wire management correctives. If additional remediation is required, contractor will provide estimate to owner.	1x per year

3. Inverters		
Item	Service Description	Frequency
1	Visually inspect inverter wiring and connections.	1x per year
2	Visually inspect inverter interior for signs of water damage or moisture accumulation.	1x per year
3	Check inverter wiring connection tightness.	1x per year
4	Verify inverter displays no active errors or alarms.	1x per year
5	Verify inverter operating properly (including, but not limited to: unusual noises, LCD screen, LED indicators, and buttons).	1x per year
6	Verify AC and DC disconnect switches operating properly	1x per year
7	Inspect air filters and fans. Clean as necessary. If replacement is required contractor shall provide estimate to owner.	1x per year

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4. DC Combiner Box (or Inverter Wirebox)		
Item	Service Description	Frequency
1	Visual inspection of combiner or wire boxes for signs of water damage, moisture accumulation, rodent nests, etc.	1x per year
2	Visually inspect wiring and connections.	1x per year
3	Mechanically test all fuses and disconnects for functionality.	1x per year

5. Conduit and Junction Boxes		
Item	Service Description	Frequency
1	Visually inspect all accessible DC conduit, cable tray, expansion fittings, and weatherheads (if applicable), for signs of impact, rodent damage, water buildup, and any other damage.	1x per year
2	Visually inspect all accessible AC conduit, cable tray, expansion fittings, and weatherheads (if applicable), for signs of impact, rodent damage, water buildup, and any other damage.	1x per year
3	Visually inspect all accessible pull boxes or junction boxes for signs of impact, rodent damage, water buildup, and any other damage.	1x per year

6. Low Voltage AC Equipment		
Item	Service Description	Frequency
1	Visually inspect all AC Panel Boards for signs of water damage or moisture accumulation.	1x per year
2	Mechanically test all AC Panel Board breakers for operability.	1x per year

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3	Visually inspect Low Voltage Switchgear cabinets for signs of water damage or moisture accumulation.	1x per year
4	Mechanically test all Low Voltage Switchgear for operability.	1x per year
5	Visually inspect Grounding Transformer enclosure.	1x per year
6	Visually inspect all equipment pads for cracks or unacceptable settling.	1x per year

7. Medium Voltage AC Equipment		
Item	Service Description	Frequency
1	Visually inspect Transformer and equipment pad for signs of oil leaks, damage, and unusual corrosion.	1x per year
2	Verify Transformer oil level is within manufacturer spec.	1x per year
3	Visual inspection of exterior of customer metering cabinet and pad.	1x per year
4	Visual inspection of overhead medium voltage equipment.	As requested for additional fee.

8. Metering and Monitoring Equipment		
Item	Service Description	Frequency
1	Verify meters are operating, communicating reliably, and measuring coherent values compared to backup meters.	1x per year
2	Visually inspect monitoring equipment boxes for damage, signs of water or moisture.	1x per year

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