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NHPLC 29JUN'16PM12:00

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NH Public Utilities Commission**REC Aggregator Portal**

New Users [CLICK HERE](#) to setup your account for this form. Creating an account enables you to partially complete the form and return later to finish it or to make changes after the form is submitted. Be sure to create your account **BEFORE** entering information into the form, or the information will be lost.

Existing Users [CLICK HERE](#)**Basic Information**

Aggregator Batch Number

Aggregator name

Facility Owner Name

Facility Address

Facility Town/City

Facility State

Facility Zip

Mailing Zip

Primary Contact

Karen Tenneson

Facility Information

Class

II

Utility

Liberty

Other Utility Name

To obtain a GIS ID contact:

James Webb

408 517 2174

jwebb@apx.com

GIS ID (include "NON")

NON85261

Date of Initial Operation

06/09/2016

Facility Operator Name, if applicable

Panel Make #1

LG

Panel Model

LG315

Panel Quantity

20

Panel Rated Output

315

Other panel make

Other panel model

More Panel types?

- No
- Yes

Panel Make #2

Panel Model

Panel Quantity

Panel Rated Output

More Panel types?

- No
- Yes

Panel Make #3

Panel Model

Panel Quantity

Panel Rated Output

System capacity based on panels

Inverter Make

Other inverter make

Inverter Quantity

1

Add'l Inverter Quantity

NA

Additional Inverter Make

None

Rated Output - Primary Inverter

6000

Rated Output - Additional Inverter

System capacity based on single inverter make

6000

System capacity based on two inverter types

System capacity in kW as stated on the interconnection agreement

6.0

Revenue Grade Meter Make

Revenue Grade GIS Approved Meter

GE

Other revenue-grade GIS-approved meter

Was this facility installed directly by the customer (no electrician involved)?

- Yes
- No

Electrician Name & Number

E.E. Houghton 0241C

Other Electrician Name & Number

Installation Company

Solar Dave LLC

Other Installation Company Name

Other Inst. Company Address

Other Inst. Company City

Other Inst. Company State

Other Inst. Company Zip

Equipment Vendor Company Name

Independent Monitor Name & Company

Paul Button - Energy Audits Unlimited

Other Monitor Name and Company

Is the installer also the equipment supplier?

- Yes
 No

Equipment Vendor

Please attach your completed interconnection agreement including Exhibit B.

http://fs30.formsite.com/jan1947/files/f-5-99-7075236_fHOou2bF_Roehl_COC.pdf

The project described in this application will meet the metering requirements of PUC 2506 including:

Electricity generation in megawatt hours shall be reported to the GIS quarterly with a statement that the submission is accurate by the owner of the source, the independent monitor or a designated representative.

A revenue quality meter (meeting ANSI C-12.1-2008 for installations up to and including 10 kW, or ANSI C12.16 or better for installations greater than 10kW up to 1 mW) is used to measure the electricity generated.

The facility owner has certified to the independent monitor that the meter operates according to manufacturing standards.

The meter shall be maintained according to the manufacturer's recommendations.

The project is installed and operating in conformance with applicable building codes.

A copy of the facility's interconnection agreement is attached.

Please attach additional document here

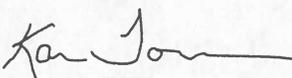
http://fs30.formsite.com/jan1947/files/f-5-168-7075236_A9pAiXBB_Nancy_Roehl_contract_part_3_-_si

Please attach additional document here

http://fs30.formsite.com/jan1947/files/f-5-173-7075236_bNDBZucx_Roehl_SPIA.pdf

Aggregator statement of accuracy

Sign your name using a mouse or, if you are using a touch-screen device, a stylus or other pointer.



Print Name

Karen Tonnesen

Date Signed

06/23/2016

Exhibit B - Certificate of Completion for Simplified Process Interconnections

Installation Information:			Check if owner-installed	
Customer or Company Name (print): <u>Nancy Roehl</u>		Contact Person, if Company:		
Mailing Address: <u>40 Ramsay Hill Rd</u>				
City: <u>Walpole</u>	State: <u>NH</u>	Zip Code: <u>03608</u>	E-Mail Address	
Telephone (Daytime): <u>603-756-3472</u>	(Evening):	Facsimile Number:		
Address of Facility (if different from above):				
City:	State:	Zip Code:		
Generation Vendor: <u>Solar Dave LLC</u>	Contact Person: <u>David Wirth</u>			

I hereby certify that the system hardware is in compliance with Puc 900.

Vendor Signature: *D. Wirth* Date: 6/9/2016

Electrical Contractor's Name (if appropriate): <u>E.E. Houghton</u>		License number: <u>02416</u>		
Mailing Address: <u>PO Box 357</u>				
City: <u>Walpole</u>	State: <u>NH</u>	Zip Code: <u>03608</u>	E-Mail Address <u>info@eehoughton.com</u>	
Telephone (Daytime): <u>603 756 3372</u>	(Evening): <u>603 756 3372</u>	Facsimile Number: <u>603 756 4498</u>		

Date of approval to install Facility granted by the Company: 2/25/2016 Installation Date: 6/9/2016
Application ID number: 2015-187

Inspection:

The system has been installed and inspected in compliance with the local Building/Electrical Code of

Walpole / Cheshire
(City/County)

Signed (Local Electrical Wiring Inspector, or attach signed electrical inspection): *[Signature]*

Name (printed): Steve Graver Date: 6/9/16

Dated: July 03, 2012
Effective: July 03, 2012

Issued by: /s/ Victor D. Del Vecchio
Victor D. Del Vecchio
Title: President

New Hampshire PUC REC Certification Application Owner Statements

The information provided on this application for New Hampshire Renewable Energy Certificate eligibility is accurate to the best of my knowledge and I authorize Knollwood Energy to act on my behalf in filing said application.

The project described in this application will meet the metering requirements of PUC 2506 including:

Electricity generation in megawatt hours shall be reported to the GIS quarterly with a statement that the submission is accurate by the owner of the source, the independent monitor, or a designated representative.

A revenue quality meter is used to measure the electricity generated.

The facility owner has certified to the independent monitor that the meter operates according to manufacturing standards.

The meter shall be maintained according to the manufacturer's recommendations.

The project is installed and operating in conformance with applicable building codes.

A copy of the facility's interconnection agreement is attached.

Nancy Roehl

Printed Name of signature owner

Nancy Roehl
Nancy Roehl (Jun 17, 2016)

Signature of system owner

Simplified Process Interconnection Application and Service Agreement

Contact Information:

Date Prepared: 10/29/2015

Legal Name and Address of Interconnecting Customer (or, Company name, if appropriate):
Customer or Company Name (print): Nancy Roehl Contact Person, if Company: _____
Mailing Address: 40 Ramsay Hill Rd
City: Walpole State: NH Zip Code: 03608 E-Mail: pd@roehl-consulting.com
Telephone (Daytime): 603-756-3472 (Evening): _____ Facsimile Number: _____

Alternative Contact Information (e.g., system installation contractor or coordinating company, if appropriate):

Name: David Wixby
Mailing Address: 44 Spotted Rd
City: Westmoreland State: NH Zip Code: 03467 E-Mail: solardave4@gmail.com
Telephone (Daytime): 603-313-3671 (Evening): _____ Facsimile Number: _____

Electrical Contractor Contact Information (if appropriate):

Name: Cheshire County Electric Telephone: 313-7572
Mailing Address: P.O. Box 141
City: Winchester State: NH Zip Code: 03470

Facility Information:

Address of Facility: 40 Ramsay Hill Rd
City: Walpole State: NH Zip Code: 03608
Electric Supply Co: Liberty Acct #: 44607669-44304826 Meter #: E-72073824
Gen/Inverter Manu: SMA Model Name and #: 3B6000TL Quantity: 1
Nameplate Rating: 6 (kW) _____ (kVA) 240 (AC Volts) Single _____ or Three _____
Phase _____
System Design Capacity: 6 (kW) _____ (kVA) Battery Backup: Yes: _____ No:
Net Metering: If Renewably Fueled, will the account be Net Metered? Yes: No: _____
Prime Mover: Photovoltaic Recip'g Engine Fuel Cell Turbine Other: _____
Energy Source: Solar Wind Hydro Diesel Nat Gas Fuel Oil Other: _____
UL 1741.1 (IEEE 1547.1) Listed? Yes: No: _____ External Manual Disconnect: Yes: No: _____
Estimated Install Date: 12/31/2015 ? Estimated In-Service Date: 12/4/2015 ?

Interconnecting Customer Signature

I hereby certify that, to the best of my knowledge, all of the information provided in this application is true and I agree to the Terms and Conditions on the following page:

Customer Signature: Nancy Roehl Title: Owner Date: 10/29/2015
Please attach any documentation provided by the inverter manufacturer describing the inverter's UL 1741 listing.

Approval to Install Facility (For Company use only): Installation of the Facility is approved contingent upon the terms and conditions of this Agreement, and agreement to any system modifications, if required.

Are system modifications required? Yes: _____ No: To be Determined _____

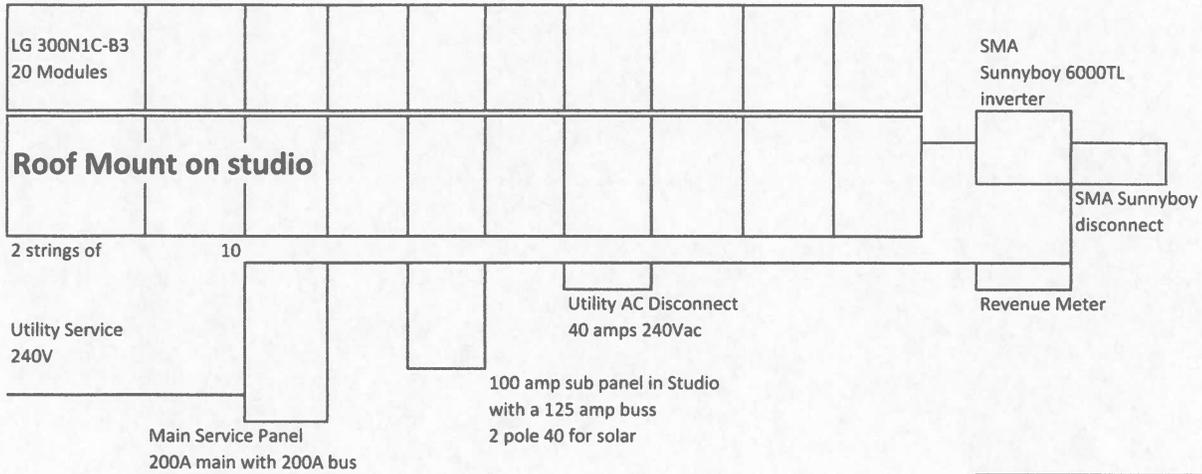
Company Signature: Joel A Rivera Title: Engineering Date: 2/25/16

Company waives inspection/Witness Test? Yes: No: _____

Application Number 2015-187

Dated: May 4, 2015
Effective: July 15, 2014

Issued by /s/ Richard Lehr
Richard Lehr
Title: President



Notes

- 1 PV system grounding shall be installed per the requirements of section 690.41 through 690.47 of the NEC.
- 2 This system shall comply with the anti-islanding protective IEEE function numbers applying to the inverter system

Owner	
Nancy Roehl 40 Ramsey Road Walpole, NH 03608	
Installer:	
Solar Dave LLC David Wirth 603-256-6844	

Solar Module Information

Module: LG 300N1C-B3	
Rated Output (P _{mpp}): 300 STC	300 STC
Open Circuit Voltage (V _{oc}): 39.8V	39.8 V
Short Circuit Current (I _{sc}): 9.98A	9.98 A
Maximum Power Voltage (V _{mpp}): 32V	32 V
Maximum Power Current (I _{mpp}): 9.4A	9.4 A

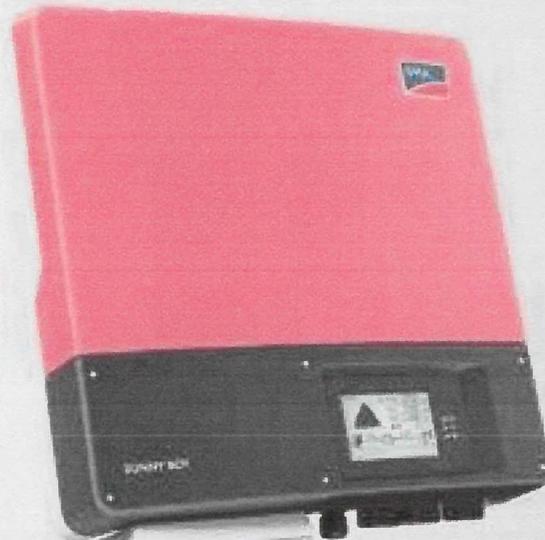
Inverter Information

SMA SB 6000TL-US-22
Max DC Power: 6300W
Max DC Voltage: 600V
MPP Voltage Range: 125*500V
AC Nominal Power: 6000W
Nominal AC Voltage: 240V
Max Output Current: 30A

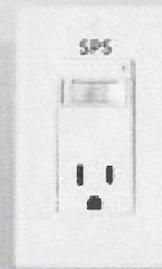
SUNNY BOY 3000TL-US / 3800TL-US / 4000TL-US /
5000TL-US / 6000TL-US / 7000TL-US / 7700TL-US



SB 3000TL-US-22 / 3800TL-US-22 / 4000TL-US-22 / 5000TL-US-22 /
6000TL-US-22 / 7000TL-US-22 / 7700TL-US-22



**THE WORLD'S ONLY
SECURE POWER SUPPLY**



OUTLET NOT INCLUDED

Certified

- UL 1741 and 1699B compliant
- Integrated AFCI meets the requirements of NEC 2011 690.11

Innovative

- Secure Power Supply provides daytime power during grid outages

Powerful

- 97.6% maximum efficiency
- Wide input voltage range
- Shade management with OptiTrac Global Peak MPP tracking

Flexible

- Two MPP trackers provide numerous design options
- Extended operating temperature range

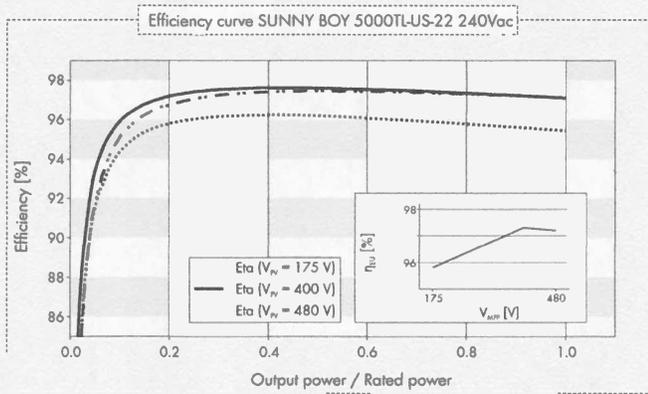
SUNNY BOY 3000TL-US / 3800TL-US / 4000TL-US / 5000TL-US / 6000TL-US / 7000TL-US / 7700TL-US

Setting new heights in residential inverter performance

The Sunny Boy 3000TL-US/3800TL-US/4000TL-US/5000TL-US/6000TL-US/7000TL-US/7700TL-US represents the next step in performance for UL certified inverters. Its transformerless design means high efficiency and reduced weight. Maximum power production is derived from wide input voltage and operating temperature ranges. Multiple MPP trackers and OptiTrac™ Global Peak mitigate the effect of shade and allow for installation at challenging sites. The unique Secure Power Supply feature provides daytime power in the event of a grid outage. High performance, flexible design and innovative features make the Sunny Boy TL-US series the first choice among solar professionals.



Technical data	Sunny Boy 3000TL-US		Sunny Boy 3800TL-US		Sunny Boy 4000TL-US	
	208 V AC	240 V AC	208 V AC	240 V AC	208 V AC	240 V AC
Input (DC)						
Max. usable DC power (@ cos φ = 1)	3200 W		4200 W		4200 W	
Max. DC voltage	600 V		600 V		600 V	
Rated MPPT voltage range	175 - 480 V		175 - 480 V		175 - 480 V	
MPPT operating voltage range	125 - 500 V		125 - 500 V		125 - 500 V	
Min. DC voltage / start voltage	125 V / 150 V		125 V / 150 V		125 V / 150 V	
Max. operating input current / per MPP tracker	18 A / 15 A		24 A / 15 A		24 A / 15 A	
Number of MPP trackers / strings per MPP tracker			2 / 2			
Output (AC)						
AC nominal power	3000 W		3330 W 3840 W		4000 W	
Max. AC apparent power	3000 VA		3330 VA 3840 VA		4000 VA	
Nominal AC voltage / adjustable	208 V / ●	240 V / ●	208 V / ●	240 V / ●	208 V / ●	240 V / ●
AC voltage range	183 - 229 V 211 - 264 V		183 - 229 V 211 - 264 V		183 - 229 V 211 - 264 V	
AC grid frequency; range	60 Hz / 59.3 - 60.5 Hz		60 Hz / 59.3 - 60.5 Hz		60 Hz / 59.3 - 60.5 Hz	
Max. output current	15 A		16 A		20 A	
Power factor (cos φ)	1		1		1	
Output phases / line connections	1 / 2		1 / 2		1 / 2	
Harmonics	< 4%		< 4%		< 4%	
Efficiency						
Max. efficiency	97.2%	97.6%	97.2%	97.5%	97.2%	97.5%
CEC efficiency	96.5%	96.5%	96.5%	97.0%	96.5%	97.0%
Protection devices						
DC disconnection device			●			
DC reverse-polarity protection			●			
Ground fault monitoring / Grid monitoring			● / ●			
AC short circuit protection			●			
All-pole sensitive residual current monitoring unit			●			
Arc fault circuit interrupter (AFCI) compliant to UL 1699B			●			
Protection class / overvoltage category			I / IV			
General data						
Dimensions (W / H / D) in mm (in)			490 / 519 / 185 (19.3 / 20.5 / 7.3)			
DC Disconnect dimensions (W / H / D) in mm (in)			187 / 297 / 190 (7.4 / 11.7 / 7.5)			
Packing dimensions (W / H / D) in mm (in)			617 / 597 / 266 (24.3 / 23.5 / 10.5)			
DC Disconnect packing dimensions (W / H / D) in mm (in)			370 / 240 / 280 (14.6 / 9.4 / 11.0)			
Weight / DC Disconnect weight			24 kg (53 lb) / 3.5 kg (8 lb)			
Packing weight / DC Disconnect packing weight			27 kg (60 lb) / 3.5 kg (8 lb)			
Operating temperature range			-40 °C ... +60 °C (-40 °F ... +140 °F)			
Noise emission (typical)	≤ 25 dB(A)		< 25 dB(A)		< 25 dB(A)	
Internal consumption at night	< 1 W		< 1 W		< 1 W	
Topology	Transformerless		Transformerless		Transformerless	
Cooling	Convection		Convection		Convection	
Electronics protection rating	NEMA 3R		NEMA 3R		NEMA 3R	
Features						
Secure Power Supply	●		●		●	
Display: graphic	●		●		●	
Interfaces: RS485 / Speedwire/Webconnect	o/o		o/o		o/o	
Warranty: 10 / 15 / 20 years	●/o/o		●/o/o		●/o/o	
Certificates and permits (more available on request)	UL 1741, UL 1998, UL 1699B, IEEE1547, FCC Part 15 (Class A & B), CAN/CSA C22.2 107.1-1					
NOTE: US inverters ship with gray lids						
Type designation	SB 3000TL-US-22		SB 3800TL-US-22		SB 4000TL-US-22	



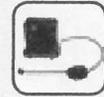
Accessories



Speedwire/Webconnect interface
SWDM-US-10



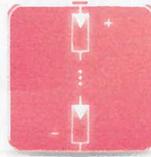
RS485 interface
DM-485CB-US-10



Fan kit for SB 3000/3800/
4000/5000TL-US-22
FANKIT02-10

● Standard feature ○ Optional feature – Not available
Data at nominal conditions

Sunny Boy 5000TL-US		Sunny Boy 6000TL-US		Sunny Boy 7000TL-US		Sunny Boy 7700TL-US	
208 V AC	240 V AC	208 V AC	240 V AC	208 V AC	240 V AC	208 V AC	240 V AC
5300 W	6300 W	7300 W	8000 W				
600 V	600 V	600 V	600 V				
175 - 480 V	210 - 480 V	245 - 480 V	270 - 480 V				
125 - 500 V	125 - 500 V	125 - 500 V	125 - 500 V				
125 V / 150 V	125 V / 150 V	125 V / 150 V	125 V / 150 V				
30 A / 15 A	30 A / 15 A	30 A / 18 A	30 A / 18 A				
2 / 2							
4550 W	5000 W	5200 W	6000 W	6000 W	7000 W	6650 W	7680 W
4550 VA	5000 VA	5200 VA	6000 VA	6000 VA	7000 VA	6650 VA	7680 VA
208 V / ●	240 V / ●	208 V / ●	240 V / ●	208 V / ●	240 V / ●	208 V / ●	240 V / ●
183 - 229 V	211 - 264 V	183 - 229 V	211 - 264 V	183 - 229 V	211 - 264 V	183 - 229 V	211 - 264 V
60 Hz / 59.3 - 60.5 Hz		60 Hz / 59.3 - 60.5 Hz		60 Hz / 59.3 - 60.5 Hz		60 Hz / 59.3 - 60.5 Hz	
22 A		25 A		29.2 A		32 A	
1		1		1		1	
1 / 2		1 / 2		1 / 2		1 / 2	
< 4%		< 4%		< 4%		< 4%	
97.2%	97.6%	97.0%	97.4%	96.8%	96.8%	96.8%	97.3%
96.5%	97.0%	96.5%	97.0%	96.5%	96.5%	96.5%	96.5%
● ● ● / ● ● ● ● I / IV							
490 / 519 / 185 (19.3 / 20.5 / 7.3) 187 / 297 / 190 (7.4 / 11.7 / 7.5) 617 / 597 / 266 (24.3 / 23.5 / 10.5) 370 / 240 / 280 (14.6 / 9.4 / 11.0) 24 kg (53 lb) / 3.5 kg (8 lb) 27 kg (60 lb) / 3.5 kg (8 lb) -40 °C ... +60 °C (-40 °F ... +140 °F)							
< 29 dB(A)	< 29 dB(A)	< 29 dB(A)	< 29 dB(A)	< 29 dB(A)	< 29 dB(A)	< 29 dB(A)	< 29 dB(A)
< 1 W	< 1 W	< 1 W	< 1 W	< 1 W	< 1 W	< 1 W	< 1 W
Transformerless	Transformerless	Transformerless	Transformerless	Transformerless	Transformerless	Transformerless	Transformerless
Convection	Fan	Fan	Fan	Fan	Fan	Fan	Fan
NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R
●	●	●	●	●	●	●	●
○/○	○/○	○/○	○/○	○/○	○/○	○/○	○/○
●/○/○	●/○/○	●/○/○	●/○/○	●/○/○	●/○/○	●/○/○	●/○/○
UL 1741, UL 1998, UL 1699B, IEEE1547, FCC Part 15 (Class A & B), CAN/CSA C22.2 107.1-1							
SB 5000TL-US-22	SB 6000TL-US-22	SB 7000TL-US-22	SB 7700TL-US-22				



More efficient



Shade management



Easier



Secure Power Supply



Broad temperature range



Flexible communications

A NEW GENERATION OF INNOVATION

THE SUNNY BOY TL-US RESIDENTIAL SERIES HAS YET AGAIN REDEFINED THE CATEGORY.

Transformerless design

The Sunny Boy 3000TL-US / 3800TL-US / 4000TL-US / 5000TL-US / 6000TL-US / 7000TL-US / 7700TL-US are transformerless inverters, which means owners and installers benefit from high efficiency and lower weight. A wide input voltage range also means the inverters will produce high amounts of power under a number of conditions.

Additionally, transformerless inverters have been shown to be among the safest string inverters on the market. An industry first, the TL-US series has been tested to UL 1741 and UL 1699B and is in compliance with the arc fault requirements of NEC 2011.

Increased energy production

OptiTrac™ Global Peak, SMA's shade-tolerant MPP tracking algorithm, quickly adjusts to changes in solar irradiation, which mitigates the effects of shade and results in higher total power output. And, with two MPP trackers, the TL-US series can ably handle complex roofs with multiple orientations or string lengths.

An extended operating temperature range of -40 °F to +140 °F ensures power is produced

in all types of climates and for longer periods of time than with most traditional string inverters.

Secure Power Supply

One of many unique features of the TL-US residential series is its innovative Secure Power Supply. With most grid-tied inverters, when the grid goes down, so does the solar-powered home. SMA's solution provides daytime energy to a dedicated power outlet during prolonged grid outages, providing homeowners with access to power as long as the sun shines.

Simple installation

As a transformerless inverter, the TL-US residential series is lighter in weight than its transformer-based counterparts, making it easier to lift and transport. A new wall mounting plate features anti-theft security and makes hanging the inverter quick and easy. A simplified DC wiring concept allows the DC disconnect to be used as a wire raceway, saving labor and materials.

The 3800TL-US and 7700TL-US models allow installers to maximize system size and energy production for customers with 100 A and 200 A service panels.

Leading monitoring and control solutions

The new TL-US residential line features more than high performance and a large graphic display. The monitoring and control options provide users with an outstanding degree of flexibility. Multiple communication options allow for a highly controllable inverter and one that can be monitored on Sunny Portal from anywhere on the planet via an Internet connection. Whether communicating through RS485, or SMA's new plug-and-play WebConnect, installers can find an optimal solution to their monitoring needs.

Wide Power Class Range

Whether you're looking for a model to maximize a 100 A service panel or trying to meet the needs of a larger residential PV system, the Sunny Boy TL-US with Secure Power Supply has you covered. Its wide range of power classes—from 3 to 7.7 kW—offers customers the right size for virtually any residential application. The TL-US series is not only the smartest inverter on the planet, it's also the most flexible.

Toll Free +1 888 4 SMA USA
www.SMA-America.com

SMA America, LLC

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