Fawn Meadow Solar

Fawn Meadow Lane
Woodbury, CT

PREPARED FOR

Greenskies Development Company, LLC
127 Washington Avenue
North Haven, CT, 06473
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PREPARED BY

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July 2024

Table of Contents

List of Tables

List of Figures

1

Introduction

The purpose of this acoustical study is to evaluate the potential noise impacts associated with the operation of the proposed Greenskies Development Company, LLC Fawn Meadow Solar Project (the Project) located along Fawn Meadow Lane in Woodbury, Connecticut. This acoustical assessment evaluated the potential sound levels generated by the mechanical equipment, including the inverters, transformers, and single-axis tracking panel systems, that will be part of the Project. The sound levels were compared to the Connecticut Department of Energy and Environmental Protection's (CT DEEP) noise control regulations (Regulations of Connecticut State Agencies (RCSA), Title 22a, Section 22a-69-1 to 22a-69-7).

Project Description

The proposed Project consists of the development of a 4.625-Megawatt (MW) alternating current (AC) ground-mounted solar photovoltaic (PV) facility located on an approximately 37-acre parcel at Fawn Meadow Lane in Woodbury, Connecticut (M/B/L 029-018D). This parcel is referred to herein as the Project Site.

Fundamentals of Noise

Noise is defined as unwanted or excessive sound. Sound becomes unwanted when it interferes with normal activities such as sleep, communication, work, or recreation. How people perceive sound depends on several measurable physical characteristics, which include the following:

- **Intensity** – Sound intensity is often equated to loudness.
- **Frequency** – Sounds are comprised of acoustic energy distributed over a variety of frequencies. Acoustic frequencies, commonly referred to as tone or pitch, are typically measured in Hertz. Pure tones have all their energy concentrated in a narrow frequency range.

Sound levels are most often measured on a logarithmic scale of decibels (dB). The decibel scale compresses the audible acoustic pressure levels which can vary from the threshold of hearing (zero dB) to the threshold of pain (120 dB). Because sound levels are measured in dB, the addition of two sound levels is not linear. Adding two equal sound levels creates a 3 dB increase in the overall level. Research indicates the following general relationships between changes in sound level and human perception:

- A 3 dB increase is a doubling of acoustic energy and is the threshold of perceptibility to the average person.
- A 10 dB increase is a tenfold increase in acoustic energy but is perceived as a doubling in loudness to the average person.

The human ear does not perceive sound levels from each frequency as equally loud. To compensate for this phenomenon in perception, a frequency filter known as A weighted [dB(A)] is used to evaluate environmental noise levels. **Table 1** presents a list of common outdoor and indoor sound levels.

Table 1. Common Outdoor and Indoor Sound Levels

Outdoor Sound Levels	Sound Pressure (μPa)*		Sound Level dB(A)**	Indoor Sound Levels
	6,324,555	-	110	Rock Band at 5 m
Jet Over Flight at 300 m		-	105	
	2,000,000	-	100	Inside New York Subway Train
Gas Lawn Mower at 1 m		-	95	
	632,456	-	90	Food Blender at 1 m
Diesel Truck at 15 m		-	85	
Noisy Urban Area—Daytime	200,000	-	80	Garbage Disposal at 1 m
		-	75	Shouting at 1 m
Gas Lawn Mower at 30 m	63,246	-	70	Vacuum Cleaner at 3 m
Suburban Commercial Area		-	65	Normal Speech at 1 m
	20,000	-	60	
Quiet Urban Area—Daytime		-	55	Quiet Conversation at 1 m
	6,325	-	50	Dishwasher Next Room
Quiet Urban Area—Nighttime		-	45	
	2,000	-	40	Empty Theater or Library
Quiet Suburb—Nighttime		-	35	
	632	-	30	Quiet Bedroom at Night
Quiet Rural Area—Nighttime		-	25	Empty Concert Hall
Rustling Leaves	200	-	20	
		-	15	Broadcast and Recording Studios
	63	-	10	
		-	5	
Reference Pressure Level	20	-	0	Threshold of Hearing

Source: Highway Noise Fundamentals. Federal Highway Administration, September 1980.

* mPA – MicroPascals, which describe pressure. The pressure level is what sound level monitors measure.

** dB(A) – A weighted decibels, which describe sound pressure logarithmically with respect to 20 mPa (the reference pressure level).

A variety of sound level indicators can be used for environmental noise analysis. These indicators describe the variations in intensity and sequential pattern of the sound levels. The indicators used in this analysis are defined as follows:

- Leq is the equivalent continuous A-weighted sound level, which is the value or level of a steady, non-fluctuating sound with the same acoustic energy as the actual time-varying sound levels over a given time period.

- L10 is the A-weighted sound level, which is exceeded for 10 percent of the time over a given time period.
- L90 is the A-weighted sound level, which is exceeded for 90 percent of the time over a given time period. The L90 is generally considered to be the background sound level.

Noise Impact Criteria

The CT DEEP has developed noise impact criteria that establish sound level thresholds deemed to prevent adverse impacts for new developments. The acoustic analysis for the Project used these criteria to evaluate whether the Project will generate sound levels that result in adverse impacts.

The CT DEEP's noise control regulations identify the limits of sound that can be emitted from specific premises and what activities are exempt. The noise control regulations (Title 22a, §§ 22a-69-1 to 22a 69-7) are contained in the RCSA. The proposed Project is considered a Class C (Industrial) emitter by the CT DEEP. Nearby residences are Class A (Residential) Receptors. The land use in Class A noise zone is characterized as generally residential where human beings sleep, or areas where serenity and tranquility are essential to the intended use of the land. The nearby homeowner's association owns land directly adjacent to the Project. This land does not have residences on it but has been conservatively assessed as a Class A (Residential) Receptor for this Project.

The CT DEEP policy states that a source (emitter) located in the various zones shall not emit noise exceeding the levels stated in **Table 2** at the adjacent noise zones.

Table 2. Noise Zone Standards (dB(A))

	Receptor Noise Zone			
Emitter Zone	**Class A (Daytime)**	**Class A (Nighttime)**	**Class B**	**Class C**
Class A (Residential)	55	45	55	62
Class B (Commercial)	55	45	62	62
Class C (Industrial)	61	51	66	70

Source: Control of Noise (Title 22a, Section 22a-69-1 to 22a-69-7.4), RCSA, Revised 2015-3-6.

The noise control regulations (Title 22a, §§ 22a-69-3.6) takes into consideration projects that are to be located in areas with high existing background noise. For such areas, the noise emitted by the project sources are considered to cause excessive noise if they emit levels 5 dB(A) above the background noise. It was conservatively assumed that existing sounds levels in this area would not be above the CT DEEP criteria; as such, the sound levels in **Table 2** would be applicable to this Project.

2

Acoustical Assessment

Methodology

This acoustical assessment evaluated the sound levels from the Project's proposed mechanical equipment. The Project's noise sources consist of thirty-seven electrical inverters used to convert the solar energy to usable electricity, two transformers, and one hundred thirty-eight small actuator motors that move the single-axis panel tracking system to follow the sun. Equipment locations are presented in **Figure 1**.

The Project-generated sound levels were calculated using manufacturer's sound data and the principles of acoustical propagation of sound over distance and were calculated for each sensitive receptor location. The sources of operational noise associated with the proposed project include:

- Thirty-seven (37) Solectria three-phase string inverters XGI 1500-125/125-UL;
- Two (2) 2500 kVA transformers; and
- One hundred thirty-eight (138) tracking system motors.

The sound power level data for these pieces of equipment are provided in **Table 3**. The sound power level for the inverters was based on the manufacturer's specifications. The reference sound levels for the transformers are based on an empirical approach obtained from the literature that relates the kVA-rating of an air-cooled transformer to its sound power level.[1] Reference sound level data for the tracking system motors were obtained from the manufacturer's testing of the equipment.[2] See Attachment for manufacturer's specifications.

[1] Barron, Randall F., "Industrial Noise Control and Acoustics," Marcel Dekker, Inc., Table 5-7, pp. 177-178, 2003.

[2] NEXTracker Horizon Single Axis Tracker. May 7, 2020.

Table 3. Modeled Sound Power Levels

	Sound Power Levels (dB) by Octave Band Center Frequency (Hz)								Overall	
Equipment	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**dB(A)**	**dB**
SPX inverter[1]	--	--	--	--	--	--	--	--	81	84
2500 kVA transformer[2]	84	88	82	78	78	72	67	61	82	90
Tracking motor[3]	--	--	--	--	--	--	--	--	74	78

1 Yaskawa Solectria Solar, 4/26/2023.
2 Barron, 2003.
3 NEXTrack Horizon Single Axis Tracker Motor, 5/7/2020.

The A-weighted sound pressure levels due to the operation of the Project were predicted at the receptor locations using the acoustic modeling software CadnaA[3] (Computer Aided Noise Abatement) by Datakustik. CadnaA is an internationally accepted sound prediction program that implements the International Standards Organization (ISO) 9613-2 sound propagation standard. The noise prediction model accounts for the sound emissions of equipment, the ground cover, terrain, and the geometry of the project area. The assessment assumed all equipment operating simultaneously during the daytime period. Sound propagation was assumed to occur over acoustically "soft" ground (G=1.0). The ground at the equipment pad – the location at which the inverters and transformers would be installed – was assumed to be acoustically "hard" ground (G=0.0). Receptors were modeled at a height of 1.5 m (5-feet) above the ground. The noise prediction model did not account for excess attenuation provided by trees, or by any on-site or off-site structures, lending some conservatism to the results. The results were compared to the CT DEEP noise impact criteria for determining compliance.

Receptor Locations

A total of twelve receptor locations were identified in the vicinity of the Project Site (see **Figure 1**). The receptor locations were selected based on their proximity to the Project Site and their land use. These receptor locations represent the property lines of the Project and the most sensitive land uses around the Project.

[3] DataKustik GmbH, 2024. Computer Aided Noise Abatement Model.

Figure 1: Noise Receptor and Equipment Locations
Fawn Meadow Solar
Woodbury, Connecticut
July 8, 2024

Source: NearMap, and VHB 2024.

Future Conditions

VHB evaluated the potential sound level impacts associated with the Project's proposed mechanical equipment at the nearby sensitive receptor locations. This analysis evaluated the potential sound level impacts from the 37 inverters, two transformers, and 138 tracking system motors operating simultaneously.

The potential sound level associated with the proposed equipment were determined by comparing the predicted Project generated sound levels to the CT DEEP's noise standards. The results of the acoustical analysis demonstrated that the operation of the proposed equipment will comply with CT DEEP's noise standards at the sensitive receptor locations. The sound levels attributed to the proposed equipment ranges from approximately 27.7 dB(A) at Receptor R01, 232 Church Hill Road, to 46.9 dB(A) at Receptor PL1, the southern property line. These sound levels are below CT DEEP's daytime criteria of 61 dB(A) and the nighttime criteria of 51 dB(A). Due to the nature of the Project, the solar equipment will not be operating during the nighttime period and therefore would not make noise during the nighttime. However, the nighttime criteria comparison has been included for information purposes to demonstrate compliance. **Table 4** summarizes the sound levels due to the operation of the inverters, transformers, and tracking motors at the receptor locations.

Table 4. Daytime Sound Levels at Receptor Locations, dB(A) – Due to Inverters and Transformers and Tracking Motors

Receptor Locations	CT DEEP Noise Standard* (Daytime/Nighttime)	Project Generated Sound Levels
PL1 – south property line	61/51	46.9
PL2 – west property line	61/51	38.2
PL3 – north property line	61/51	31.1
PL4 – east property line	61/51	37.3
R01– 232 Church Hill Road	61/51	27.7
R02– 235 Church Hill Road	61/51	28.2
R03– 231 Church Hill Road	61/51	29.2
R04– 223 Church Hill Road	61/51	29.5
R05– 213 Church Hill Road	61/51	28.6
R06 – 205 Church Hill Road	61/51	29.6
R07 – 16 Orchard Avenue	61/51	30.9
R08 – 35 Fawn Meadow Lane	61/51	30.7

* Noise standard for Class C emitter and Class A receptor, unless otherwise noted.

Figure 2 presents sound level contours (i.e., lines of equal sound level that are analogous to topographic contours that are lines of equal ground elevation) for the operation of the inverters, transformers, and tracking motors. The sound level contours in **Figure 2** excludes contributions from off-site sources of sound.

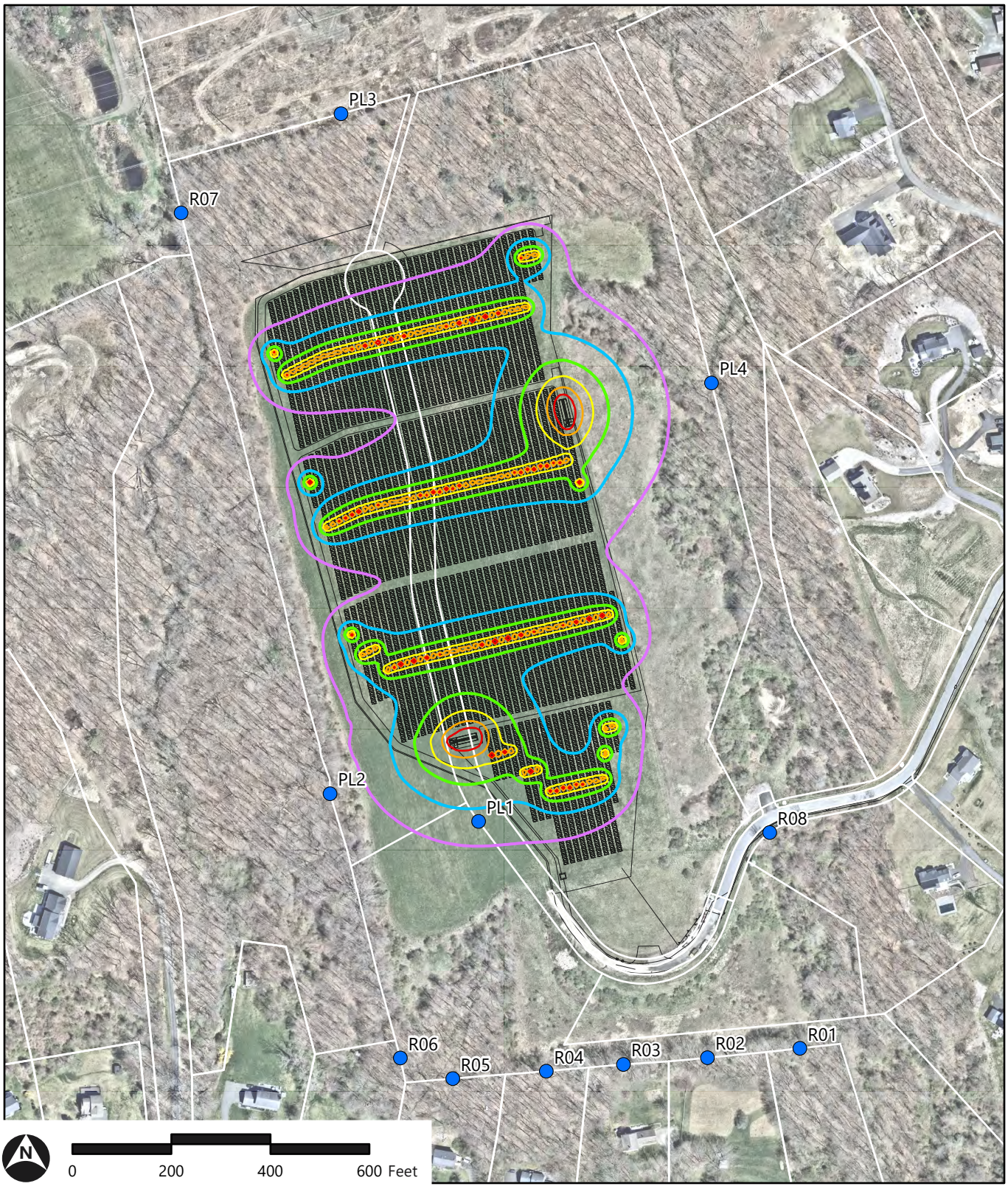


Figure 2: Modeled Sound Level Contours with Transformers, Inverters, and Tracking Motors
Fawn Meadow Solar
Woodbury, Connecticut
July 8, 2024

Source: NearMap, and VHB 2024.

3

Findings

Conclusion of Acoustical Assessment

In this acoustical analysis, VHB evaluated the sound levels associated with the Project's mechanical equipment which includes 37 inverters, two transformers, and 138 tracking system motors. This analysis conservatively assumed that the properties abutting the Project Site currently experience sound levels below CT DEEP's noise standards and the high background noise areas guidance (Sec 22a-69-3.6) do not apply to the Project.

Due to the low noise equipment and sufficient distance between the proposed equipment and the nearby property boundaries, the sound levels associated with the Project's mechanical equipment are expected to comply with CT DEEP's noise standards and have no adverse noise impacts at nearby sensitive receptor locations. Noise mitigation is not necessary for the Project.

Construction Activities

Construction activities, including the intermittent use of heavy machinery, may result in temporary increases in nearby sound levels at the proposed Project. The Project is expected to generate typical sound levels from construction activities, including truck movements, heavy equipment operations, and general construction activities. Heavy machinery, such as front-end loaders, graders, bull dozers, and backhoes, would be used intermittently throughout the proposed Project's construction.

Section 22a-69-1.8(g) of the CT DEEP's noise control regulation states that noise associated with construction activities are exempt from the regulation. However, even though construction noise is exempt from the regulation, construction activities such as site excavation/grading and installation of the solar panel systems would typically be limited to normal daytime working hours. Construction activities beyond normal daytime work hours would be minimized to the extent practicable.

If noise concerns arise during construction at Fawn Meadow Lane, Greenskies Development Company, LLC will evaluate and implement appropriate noise abatement measures to reduce or minimize noise from the construction activities. The Project plans to coordinate closely with the

Town of Woodbury during construction. Construction vehicles and equipment would be required to maintain their original engine noise control equipment. Specific mitigation measures may include, but not limited to, the following:

- Implement appropriate traffic management techniques during the construction period to minimize roadway traffic noise impact;
- Implement procedures for proper operation and maintenance, and prohibition of excessive idling of construction equipment engines;
- Adjust construction activity timing to reduce impact of noise at certain times of day.

ATTACHMENT A

HELIENE

144HC M10 Bifacial Module

144 Half-Cut Monocrystalline 520W – 540W

21%

Utilizes the latest M10 size super high efficiency Monocrystalline PERC cells. Half cut design further reduces cell to module (CTM) losses.

Stability & Looks

Rugged, double webbed frame design withstands wind, snow, and other mechanical stresses. Framed Glass–Backsheet aesthetic is ideal for high visibility installation.

Anti-Reflective

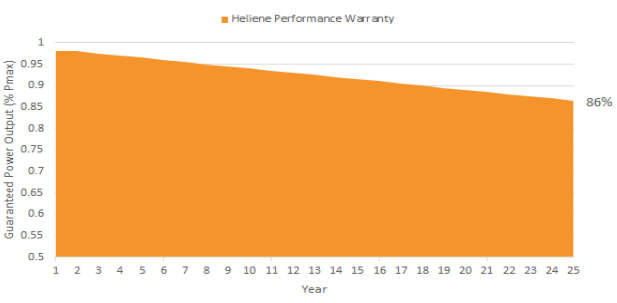
Premium solar glass with anti reflective coating delivers more energy throughout the day

High Reliability

Proven resistance to PID and reliable in high temperature and humidity environments.

No Compromise Guarantee

15 Year Workmanship Warranty
25 Year Linear Performance Guarantee



Manufactured Using International Quality System Standards: ISO9001

Half-Cut Design with Split Junction Box Technology

Bifacial Technology Enabling Additional Energy Harvest from Rear Side

1500V System Voltage Rating

World-class Quality

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

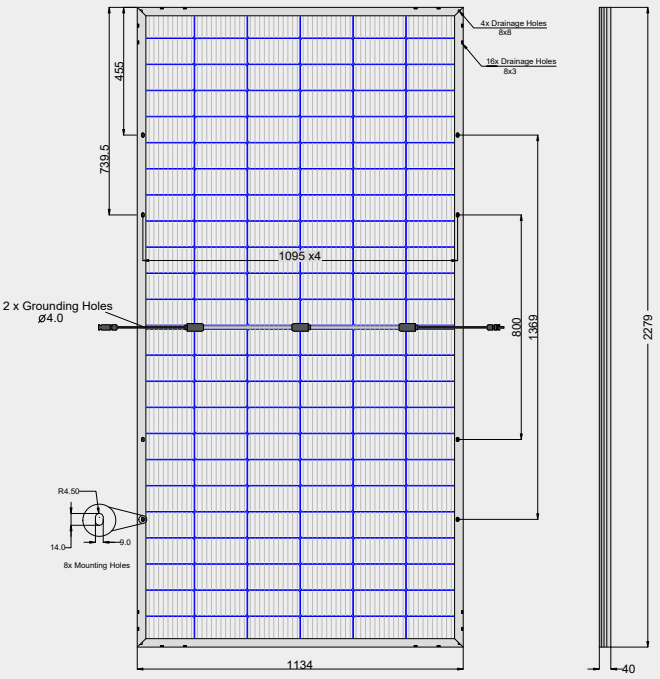
Bankable Reputation

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

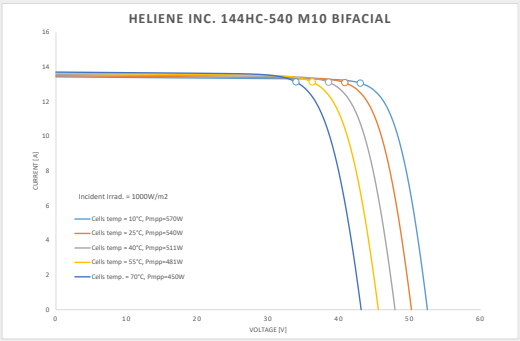
Local Sales, Service, and Support

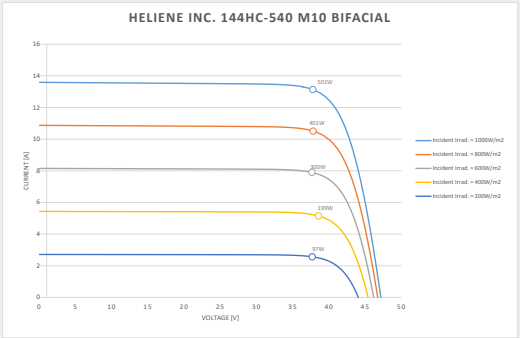
- With sales offices across the U.S. and Canada, Heliene prides itself on unsurpassed customer support for our clients. Heliene has become the brand of choice for many of the leading residential installers, developers and Independent Power Producers due to our innovative technology, product customization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

Dimensions for 144HC M10 Bifacial Series Modules



I-V Curves for 144HC M10 Bifacial Series Modules





Certifications & Listing

Electrical Data (STC)

Peak Rated Power	P_{mpp} (W)	540	535	530	525	520
Maximum Power Voltage	V_{mpp} (V)	42.32	42.13	41.94	41.75	41.56
Maximum Power Current	I_{mpp} (A)	12.77	12.70	12.64	12.58	12.52
Open Circuit Voltage	V_{oc} (V)	50.22	49.97	49.72	49.23	48.73
Short Circuit Current	Isc (A)	13.50	13.44	13.37	13.32	13.28
Module Efficiency *	Eff (%)	20.9	20.7	20.5	20.3	20.1
Maximum Series Fuse Rating	MF (A)	30	30	30	30	30
Power Output Tolerance			[- 0/+3%]			
Bifaciality Factor			70%			

STC - Standard Test Conditions: Irradiation 1000 W/m2 - Air mass AM 1.5 - Cell temperature 25 °C

Electrical Data (NMOT)

Maximum Power	P_{mpp} (W)	400	395	390	385	380
Maximum Power Voltage	V_{mpp} (V)	39.19	38.58	38.58	37.97	37.96
Maximum Power Current	I_{mpp} (A)	10.21	10.24	10.11	10.14	10.01
Open Circuit Voltage	V_{oc} (V)	47.13	46.89	46.66	46.20	45.73
Short Circuit Current	Isc (A)	10.87	10.82	10.77	10.72	10.70

NMOT - Nominal Module Operating Temperature:
Irradiance at 800W/m2, Ambient Temperature 20ºC, Wind speed 1m/s

Mechanical Data

Solar Cells	144 Half Cut, M10, 182mm, PERC Cells
Module Construction	Framed Glass–Backsheet
Dimensions (L x W x D)	2279 x 1134 x 40 mm (89.72 x 44.65 x 1.6 inch)
Weight	29.2 kg (64.3 lbs)
Frame	Double Webbed 15-Micron Anodized Aluminum Alloy
Glass	3.2mm Low-Iron Content, High-Transmission, PV Solar Glass with Anti Reflective Coating
Junction Box	IP-68 rated with 3 bypass diodes
Output Cables	0.3-meter Symmetrical Cables
Connectors	Multi-Contact/ Stäubli MC4

Certifications

UL Certification	UL61215, UL61730

Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	+45°C (±2°C)
Temperature Coefficient of P_{max}	-0.36%/°C
Temperature Coefficient of V_{oc}	-0.28%/°C
Temperature Coefficient of I_{sc}	0.034%/°C

Maximum Ratings

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

Warranty

15 Year Manufacturer's Workmanship Warranty
25 Year Linear Power Guarantee

Packaging Configuration

Modules per box:	27 pieces
Modules per 53' trailer:	702 pieces

SOLECTRIA® XGI 1500-166 SERIES

PREMIUM 3-PHASE TRANSFORMERLESS UTILITY-SCALE INVERTERS

FEATURES

- Made in the USA with global components
- Buy American Act (BAA) compliant
- Four models:
  - 125kW/125kVA,
  - 125kW/150kVA,
  - 150kW/166kVA,
  - 166kW/166kVA
- Additional models available certified to UL1699b, Photovoltaic DC Arc-Fault Circuit Protection
- 99.0% peak efficiency
- Flexible solution for distributed and centralized system architecture
- Advanced grid-support functionality Rule 21/UL1741SB
- Robust, dependable, & built to last
- Lowest O&M and installation costs
- Access all inverters on site via WiFi from one location
- Remote diagnostics and firmware upgrades
- SunSpec Modbus Certified
- Tested compatible with the TESLA PowerPack Microgrid System app for system visibility

OPTIONS

- String combiners for distributed and centralized systems
- Web-based monitoring
- Extended warranty

Yaskawa Solectria Solar's XGI 1500 utility-scale string inverters are designed for high reliability and built of the highest quality components that were selected, tested and proven to last beyond their warranty.

XGI 1500 inverters provide advanced grid-support functionality and meet the latest IEEE 1547 and UL1741SB standards for safety. They are the most powerful 1500 VDC string inverters in the PV market and have been engineered for both distributed and centralized system architecture.

Designed and engineered in Lawrence, MA, XGI inverters are assembled and tested at Yaskawa America's facilities in Buffalo Grove, IL. They are Made in the USA with global components and are compliant with the Buy American Act.

YASKAWA
SOLECTRIA SOLAR

Yaskawa Solectria Solar 1-978-683-9700 | Email: sales@solectria.com | solectria.com
Document No. FL.XGI1500.01 | 04/26/2023 |

SPECIFICATIONS

SOLECTRIA XGI 1500 Model		XGI 1500-125/125-UL XGI 1500-125/125-UL-A	XGI 1500-125/150-UL XGI 1500-125/150-UL-A	XGI 1500-150/166-UL XGI 1500-150/166-UL-A	XGI 1500-166/166-UL XGI 1500-166/166-UL-A
DC Input	Absolute Max Input Voltage	1500 VDC	1500 VDC	1500 VDC	1500 VDC
	Max Power Input Voltage Range (MPPT)	860-1250 VDC	860-1250 VDC	860-1250 VDC	860-1250 VDC
	Operating Voltage Range (MPPT)	860-1450 VDC	860-1450 VDC	860-1450 VDC	860-1450 VDC
	Number of MPP Trackers	1 MPPT	1 MPPT	1 MPPT	1 MPPT
	Max Operating Input Current	148.3 A	148.3 A	178.0 A	197.7 A
	Max Operating PV Power	128 kW	128 kW	153 kW	170 kW
	Max DC/AC Ratio | Max Rated PV Power	2.6 | 332 kW	2.6 | 332 kW	2.2 | 332 kW	2.0 | 332 kW
	Max Rated PV Short-Circuit Current (∑Isc x 1.25)	500 A	500 A	500 A	500 A
AC Output	Nominal Output Voltage	600 VAC, 3-Ph	600 VAC, 3-Ph	600 VAC, 3-Ph	600 VAC, 3-Ph
	AC Voltage Range	-12% to +10%	-12% to +10%	-12% to +10%	-12% to +10%
	Continuous Real Output Power	125 kW	125 kW	150 kW	166 kW
	Continuous Apparent Output Power	125 kVA	150 kVA	166 kVA	166 kVA
	Max Output Current	120 A	144 A	160 A	160 A
	Nominal Output Frequency	60 Hz	60 Hz	60 Hz	60 Hz
	Power Factor (Unity default)	+/- 0.80 Adjustable	+/- 0.80 Adjustable	+/- 0.80 Adjustable	+/- 0.80 Adjustable
	Total Harmonic Distortion (THD) @ Rated Load	<3%	<3%	<3%	<3%
	Grid Connection Type	3-Ph + N/GND	3-Ph + N/GND	3-Ph + N/GND	3-Ph + N/GND
	Fault Current Contribution (1 cycle RMS)	144 A	173 A	192 A	192 A
Efficiency	Peak Efficiency	98.9%	98.9%	99.0%	99.0%
	CEC Average Efficiency	98.5%	98.5%	98.5%	98.5%
	Tare Loss	2.75 W	2.75 W	2.75 W	2.75 W
Temperature	Ambient Temp Range	-40°F to 140°F (-40C to 60C)		-40°F to 140°F (-40C to 60C)	
	De-Rating Temperature	122°F (50C)		113°F (45C)	
	Storage Temperature Range	-40°F to 167°F (-40C to 75C)		-40°F to 167°F (-40C to 75C)	
	Relative Humidity (non-condensing)	0 - 95%		0 - 95%	
	Operating Altitude	Full Power up to 9,840 ft (3.0 km); De-Rate to 70% of Full Power at 13,123 ft (4.0 km)			
Communications	Advanced Graphical User Interface	WiFi			
	Communication Interface	Ethernet			
	Third-Party Monitoring Protocol	SunSpec Modbus TCP/IP			
	Web-Based Monitoring	Optional			
	Firmware Updates	Remote and Local			
Testing & Certifications	Safety Listings & Certifications	UL1741SB, IEEE 1547, UL 1998 (All models) UL 1699b Photovoltaic Arc-Fault Circuit Protection Certified (-A models)			
	Advanced Grid Support Functionality	Rule 21, UL 1741SB			
	Testing Agency	ETL			
	FCC Compliance	FCC Part 15 (Subpart B, Class A)			
Warranty	Standard and Options	5 Years Standard; Option for 10 Years			
Enclosure	Acoustic Noise Rating	73 dBA @ 1 m ; 67dBA @ 3 m			
	DC Disconnect	Integrated 2-Pole 250 A DC Disconnect			
	Mounting Angle	Vertical only			
	Dimensions	Height: 29.5 in. (750 mm) | Width: 39.4 in. (1000 mm) | Depth: 15.1 in. (380 mm)			
	Weight	270 lbs (122 kg)			
	Enclosure Rating and Finish	Type 4X, Polyester Powder-Coated Aluminum			

IT'S PERSONAL

YASKAWA SOLECTRIA SOLAR

Yaskawa Solectria Solar 1-978-683-9700 | Email: sales@solectria.com | solectria.com
Document No. FL.XGI1500.01 | 04/26/2023 |

Nextracker, Inc.
6200 Paseo Padre Parkway
Fremont, CA 94555
U.S.A

May 7th, 2020
Regarding: Tracker Noise Levels
Attention: To Whom it May Concern,

The below information is in regard to NEXTracker's Horizon Single Axis Tracker motor noise levels. Each of the Horizon tracker rows are independently powered by a 24V 1.5A brushless DV motor. The motors are essentially inaudible relative to the background noise.

The motor noise will be ~40db @ 10ft, or ~20db @ 100ft when the motor is running. The motor runs for 5-10 seconds every 1-2 minutes.

	Test condition	Motor speed	Distance	Noise level
Test 1	No load	5.2RPM	0.3 meter	59.7dB
Test 2	No load	5.2RPM	1 meter	55.5dB
Test 3	Full load (120Nm)	4.2RPM	0.3 meter	74.5dB
Test 4	Full load (120Nm)	4.2RPM	1 meter	69.6dB

Kind Regards,

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