



Executive Summary Facilities Committee Meeting

DATE: February 15, 2022

TOPIC: WindFree Wind and Solar Energy Design Co Solar Panel Installation Purchase Agreement

PREPARED BY: David Russo

Recommended for:

- Action
- Discussion
- Information

Purpose/Background:

Last year, the District was awarded a grant of up to \$6,400 from the Illinois Clean Energy Community Foundation and up to \$5,000 from the Cook County Solar School program toward the purchase and installation of a single 1kW photovoltaic (PV) solar panel system.

After consulting with several possible vendors, WindFree Wind and Solar Energy Design Co submitted the enclosed proposal that the Administration is recommending.

WindFree will install a 1.44 kW awning-mounted solar PV system on the south façade (second level) of Lincoln Hall. The proposal is turn-key, including labor, materials, permitting, warranties, interconnection, monitoring, and any additional paperwork required to make the panels operational. The proposal calls for four (4) Q Cell 360-watt panels, which are manufactured and sold by Q Cells. According to their website, the panels are engineered in Germany and assembled in Dalton, Georgia. The company is also headquartered in Germany.

The proposal was vetted by the District's Architect and was found to be acceptable from a design and structural perspective.

District Legal Counsel reviewed the Purchase Agreement and authored several changes related to insurance and governing law and venue. The vendor agreed to all changes.

Fiscal Impact:

The turn-key quote is \$9,430.00.

Recommendation:

It is the Administrative recommendation that the Facilities Committee concurs to recommend to the Board of Education to approve this Purchase Agreement from WindFree Wind and Solar Energy Design Co in the amount of \$9,430.00 for the installation of a 1.44 kW awning-mounted solar PV system at Lincoln Hall Middle School.



WINDFREE SOLAR

PURCHASE AGREEMENT

Project: Nominal 1.44 kW Solar PV System Lincoln Hall Middle School

Customer

Lincoln Hall Middle School
Attn: David Russo
6855 N. Crawford Ave.
Lincolnwood, IL 60712
(847) 675-8240
drusso@sd74.org

General Description of work and equipment

Windfree will install 1.44 kW of (4) Q CELL 360 watt Solar Panels manufactured for Windfree, with Enphase micro inverters, and web-based communication system. The panels will be installed by Windfree and will meet all local building codes and manufacturer specifications.

Windfree will furnish and install an awning or pole mounted solar system to support the solar panels; subject to Customer approval. Windfree will work closely with Customer on interconnection, permitting as required, delivery of material, installation, incentive applications, and monitoring.

Windfree will furnish and install all certified photovoltaic panels and fastener assembly labor, electrical labor for all electrical work, inverters, combiner boxes, disconnects, circuit breakers, and all material necessary to connect the photovoltaic system with the existing property's electric circuit panels. All warranty and guarantee paperwork will be submitted to Customer at the project's completion and final payment. All equipment shall be installed on the exterior of the building unless otherwise agreed to in writing or upon decision of Windfree at time of installation. Customer provided internet service required for online monitoring.

Windfree will provide Customer with an electrical wiring diagram and will furnish any documents needed in order to install this project and to obtain all required permits.

General Conditions

Customer will be responsible for providing access to the property and its utilities to Windfree in order to facilitate the proper execution of the project and the related work.
All work will be performed in accordance with the applicable local building and electrical codes of the authority having jurisdiction and manufacturers' specifications.

Cost

1.44 kW Cash price Turn-Key Solar Installation

\$9,430

10% Deposit Due Upon Acceptance of Purchase Agreement
50% Due Upon Material Ordering
30% Due Upon completion of mounting all the Solar Panels
10% Due Upon Final Completion

- **If this project is financed, the financing payment schedule will be applied to this project.**

The final Purchase Agreement price is subject to technical site survey. If upon completion of the technical survey, additional work is identified, final pricing changes will be presented to Customer in the form of a Change Order, in a timely manner prior to commencement of the actual contracted work to be performed. Permit fees are included up to \$250 for residential and \$1000 for commercial projects. Any additional fees for permit is the responsibility of the customer. If Customer cancels contract due to structural engineering issues, utility requirements, or unforeseen circumstances discovered during the technical site survey, there is a non-refundable \$500 fee.

Change orders

All Change Orders, including the Final Purchase Agreement Price submitted after the technical survey shall be in writing and signed by both Windfree and Customer. Such change orders shall be incorporated in and become a part of the purchase agreement. If the electric capacity in kilowatts (DC) for the Project is increased or decreased between signing of this Agreement and the completion of installation, the Contract Price for the Project shall be increased or decreased accordingly at the same \$/watt dc rate used in calculating the original Contract Price.

Timeline

Windfree will complete defined work in a reasonably timely manner from the time of execution of this purchase agreement, technical survey, and any final amendments to pricing. Estimated project completion is 8 weeks from final pricing amendments. The completion timeline is an estimate. Windfree will notify customer of any alterations to estimated project timeline within a reasonable amount of time of learning of such alterations.

Approximate Construction Start Date: Within 30 days permit issuance

Approximate Construction Completion Date: 5 days after start of construction

Work Quality

All work shall be completed in a quality manner and in compliance with all building and electrical codes, all other applicable laws, and all applicable utility requirements, including appropriate utility interconnection obligations.

Site Condition and access

Customer is responsible and shall be held liable for reporting any site conditions that are known or should be known that may impact the integrity of the work to be performed, the safety of workers, and the ongoing integrity of the solar energy system and its components. Windfree will make reasonable efforts to identify conditions that may impact the work to be performed and the ongoing performance of the system. However, Windfree is not responsible and holds no liability for any unknown and unreported property conditions that could not be identified through the reasonable efforts of Windfree. Windfree agrees to report to the Customer any adverse site conditions that Windfree encounters during the project in a reasonable and timely manner.

Customer grants access to Windfree and its employees, contractors, and agents for the purposes of surveying, installing, constructing, repairing, and servicing the solar energy system and its related components. Windfree agrees to install system and perform specified work in a professional manner, agrees to remove all debris created by the installation, and to leave premises in clean condition.

Warranty and Monitoring

All significant equipment and materials shall be provided with original manufacturers' warranties where and as applicable, upon project completion.

Windfree will monitor the system daily digitally by means of web-based monitoring and with a minimum of two visits within the first five-years with the purpose of testing and assessing the proper working of the system. Windfree sales consultant will train the customer to monitor the data production and online reporting.

All work to be performed by Windfree under this Agreement shall be warranted for 15 years. Excluded from the warranty are any situations beyond Windfree's control including but not limited to acts of nature, work and repairs performed by parties other than Windfree and any acts or work performed by the Customer not in keeping with normal maintenance of the premises and systems. This limited workmanship warranty covers the integrity of installation and workmanship performed by Windfree and its employees. Significant equipment and materials warranties are covered separately, where applicable, and are subject to separate warranties by the manufacturer not included in this limited workmanship warranty. Windfree is not responsible for any obstructions or weather conditions that may affect performance of the solar system.

NOTICE

This warranty is in lieu of any other warranty express or implied. Any implied warranties including but not limited to, the implied warranty of merchantability, fitness for a particular purpose, habitability, and any UCC warranties are hereby waived.

This warranty shall be null and void and Windfree shall not be liable for any damages or expenses, if the Customer does not grant Windfree access to the premises and the opportunity of Windfree to inspect, correct, or replace alleged defective items, before Customer incurs expenses or has work done by a replacement contractor.

Proof of Insurance and Licenses

To the extent required by the law all work shall be performed by individuals duly licensed and authorized by law to perform said work. Windfree hereby discloses that it is a member of the Illinois Solar Energy Association (ISEA). Windfree shall maintain general liability insurance coverage at all times during the performance of the above work. Coverage amounts shall be no less than: (i) commercial general liability coverage of \$1,000,000 per occurrence and \$2,000,000 in the aggregate; (ii) auto liability of \$1,000,000 combined single limit; and (iii) workers compensation in the statutory amount. Windfree is a certified PV installer in the State of Illinois. Windfree will furnish proof of insurance prior to beginning work and other applicable licenses and certifications at the request of Customer.

Marketing

Customer agrees that for a period of three years following the completion of the work, Windfree has the option to use the customer's solar energy system as a reference. Customer agrees to allow a sign to be placed on property during installation and for a period of up to one month upon completion of installation for the purposes of marketing, unless agreed to or not permitted by association or other governing entity.

Exclusions

Excluded in the contract price, unless otherwise agreed to in writing:

- Unforeseen groundwork (including, but not limited to, excavation/circumvention of underground obstacles),
- Upgrades or repairs to customer or utility electrical infrastructure (including, but not limited to service upgrades, panel upgrades, repairs and rewiring of existing panels, service side connections, installation of sub-panels, and complex conduit runs and attachment of solar system with electrical panel)
- Drywall Repair
- Payment bonds
- Performance bonds
- Tree trimming or landscaping
- Correction of pre-existing code violations,
- Repairs or reinforcements of roof structures if required,
- Trenching if required beyond 25', landscape restorations,

- Removal and reinstallation of system due to future work (including, but not limited to, upgrades and repairs to building structure, repairs and replacement of roof, or any other circumstance where removal and reinstallation of system is required)

Payments

Payments shall be made in accordance with the Local Government Prompt Payment Act (50 ILCS 505/1 *et seq.*). If payments are not received in accordance with the Act, Windfree has the right to suspend work until payments are received. Late payments beyond the period specified in the Act, without express and written agreement from Windfree, shall be considered a breach of this purchase agreement.

Contractor Status

Windfree is an independent contractor and is not an employee of Customer. Windfree shall furnish all equipment, tools, and supplies to accomplish assigned work, except as agreed to in writing by both Customer and Windfree. Windfree maintains control over the manner in which tasks are to be performed.

Acknowledgments

Customer acknowledges and understands that the ITC (Investment Tax Credit) a 26% Federal tax credit is a tax credit. Customer is advised to consult with a tax accountant to clarify the extent to which the ITC benefit can be realized. Individual benefits may vary.

Customer acknowledges that all preliminary calculations provided by Windfree are good faith reasonable estimates and may vary for a number of unforeseen reasons. Final estimates may vary upon completion of the technical survey and such changes will be reported to Customer in a reasonable and timely manner.

Customer acknowledges that local, state, and federal rebate calculations are good faith reasonable estimates and are subject to possible change due to situations and circumstances beyond Windfree’s control. Such situations and circumstances include, but are not limited to, changes in local, state, and federal law, changes in eligibility requirements, funding availability, and other unforeseen changes outside of Windfree’s control. Customer agrees to the full purchase agreement price irrespective of said good faith reasonable financial rebate and incentive estimates.

Customer acknowledges that Windfree is not responsible for delays due to circumstances outside of Windfree’s control. These circumstances include but are not limited to, weather and other Acts of God, Force Majeure, delays in city, village, and county building, permit, zoning, and planning departments, regulatory agencies, utility companies, and all other entities that are not under the direct control of Windfree and its affiliates.

Customer acknowledges that this purchase agreement constitutes the entire agreement between the Parties and supersedes all prior written or oral agreements. This agreement may not be altered, modified, or supplemented without a written agreement signed by both parties and all other subsequent agreements must be made in writing and signed by all affected parties in order to be valid. Only authorized employees and agents of Windfree may execute change orders and amendments to this purchase agreement. Windfree reserves the right to cancel this purchase agreement if not accepted by Customer within 30 days of the Presentment date above.

Agreement: Please sign below

Customer Signature Date

Print name

Windfree Wind & Solar Energy Company



Doug Snower
312.943.1500 (Office)

Windfree is proud to be able to provide our new customer with clean electric power. —Thank You!

General Terms and Conditions (For SRECs)

1. CHANGES, PERMITS, REBATES, INCENTIVES

Any changes to the System will be documented in a written amendment to this Agreement signed by both Customer and WINDFREE. Customer authorizes WINDFREE to make corrections to the utility and incentive paperwork to conform to this Agreement or any amendments to this Agreement we both sign. Customer acknowledges that the System equipment and materials furnished and installed by WINDFREE are subject to cost increases. WINDFREE shall not be responsible for delays in work due to the actions of any permitting and regulatory agencies or their employees. Customer will pay to Provider or taxing party as applicable for any taxes or assessments required by federal, state or local governments or related regulatory agencies or utilities. Depending on the state and utility district in which Customer resides, Customer may be eligible for various state and local rebates and incentives. The rebate and incentive calculations WINDFREE provides to Customer are estimates. These estimates are based on certain assumptions that may not be applicable based on the circumstances specific to the Project. However, actual rebates and incentives are variable as eligibility requirements, funding availability and rates may change. In an effort to assist Customer in capturing its rebate, WINDFREE will use good faith reasonable efforts to help Customer secure applicable rebates and incentives, but WINDFREE shall have no financial obligation to Customer regarding actual rebate and incentive amounts received. Upon approval of SRECs, approved owner will transfer SRECs to approved vendor. Owner will transfer of system ownership to new owner upon selling the property.

2. SCHEDULE OF PROGRESS PAYMENTS

The schedule of progress payments must specifically describe each phase of work, including the type and amount of work or services scheduled to be supplied in each phase, along with the amount of each proposed progress payment. Customer may, at its discretion, issue payment to Contractor via joint check with any of Contractor's subcontractors or suppliers. **Note about Extra Work and Change Orders.** Extra Work and Change Orders become part of the contract once the order is prepared in writing and signed by the parties prior to commencement of any work covered by the new change order. The order must describe (i) the scope of the extra work or change; (ii)

the cost to be added or subtracted from the contract and (iii) the effect the order will have on the schedule of progress payments or the completion date. Notwithstanding this provision, WINDFREE's failure to comply with the requirements of this paragraph does not preclude the recovery of compensation for work performed based on legal or equitable remedies designed to prevent unjust enrichment.

3. PROPERTY CONDITIONS

Customer will be responsible for the ongoing structural integrity of the location where the System is installed, including structural or electrical modifications necessary to prepare the Property for the System. Customer agrees that WINDFREE is not responsible for any known or unknown Property conditions.

4. EXISTING CONDITIONS

WINDFREE is not responsible and bears no liability for the performance of existing electrical equipment at the Property, including but not limited to the main electrical service panel, any major electrical devices, or any other fuses or similar devices.

5. PROPERTY ACCESS

Customer grants to WINDFREE and its employees, agents and contractors the right to reasonably access all of the Property as necessary for the purposes of (i) installing, constructing, operating, repairing, removing and replacing the System or making any additions to the System; (ii) installing, using and maintaining electric lines and inverters and meters, necessary to interconnect the System to Customer's electric system at the Property and/or to the utility's electric distribution system; or (iii) taking any other action reasonably necessary in connection with the construction, installation, operation, maintenance, removal or repair of the System.

6. TITLE AND RISK OF LOSS

Title to the Project shall transfer to Customer when WINDFREE completes installation of the Project and receives final payment. After delivery of the System equipment and materials to the Property, other than damage directly resulting from WINDFREE's actions, Customer bears the risk of loss to the System for all causes occurring after the end of the Warranty Period. WINDFREE retains all WINDFREE owned intellectual property rights on any of the equipment installed in the System including, but not limited to, patents, copyrights and trademarks.

7. TERMINATION AND DEFAULT

WINDFREE may terminate this Agreement, upon thirty (30) days written notice, for any material breach, for any failure of Customer to pay WINDFREE any amount due, for any

bankruptcy or financial distress of Customer, or for any hindrance to WINDFREE in the performance process. Customer may terminate this Agreement upon thirty (30) days written notice for any material breach, for any failure of WINDFREE to perform, for any bankruptcy or financial distress of WINDFREE, or for any hindrance to Customer in WINDFREE's performance.

8. REMEDIES UPON CUSTOMER'S BREACH

Without limiting any of WINDFREE's other rights and remedies, upon any breach by Customer, including any failure of Customer to pay WINDFREE any amount due, WINDFREE shall have the right to: (i) pursue a stop work order at the Property; (ii) prevent any more work from being done at the Property until the breach is cured and a bond is posted by the Customer for any amounts payable under this Agreement; (iii) recover all amounts due under this Agreement for services provided through the date of termination including interest (prime + 2% or such amount as allowed by law); (iv) remove any Project materials or equipment from the Property; (v) submit to credit reporting agencies (credit bureaus) negative credit reports that would be reflected on your credit record; and vi) any other legal remedies including but not limited to mechanics' liens or similar remedies.

9. MECHANICS' LIEN RELEASES & PREVAILING WAGE ACT

Upon satisfactory final payment for the work performed, WINDFREE shall furnish to Customer a full and unconditional release from any claim or mechanics' lien pursuant to applicable law for that portion of the work for which payment has been made, including releases from any subcontractors or material providers. WINDFREE acknowledges that this is a contract for a public improvement pursuant to Section 23 of the Illinois Mechanics Lien Act (770 ILCS 60/23).

- In addition, WINDFREE acknowledges that this is a contract for public works pursuant to the Prevailing Wage Act (820 ILCS 130/0.01 *et seq.*). WINDFREE shall comply with all requirements of the Prevailing Wage Act, including but not limited to the filing of certified payrolls with the Illinois Department of Labor's online portal, and the

10. WINDFREE'S INSURANCE

Commercial General Liability Insurance (CGL). WINDFREE carries commercial general liability insurance with coverage amounts that meet or exceed those required by law.

11. INDEMNIFICATION

Both parties shall indemnify, defend and hold harmless the other and its employees, officers,

directors, agents and assigns from any and all third party claims, actions, costs, expenses (including reasonable attorneys' fees and expenses), damages, liabilities, penalties, losses, obligations, demands and liens of any kind arising out of or relating to its failure to perform its obligations under this Agreement. Neither party shall be required to indemnify the other for its own negligence, willful misconduct or fraud.

12. GOVERNING LAW AND VENUE

The laws of the state of Illinois shall govern this Agreement without giving effect to conflict of laws principles. The parties agree that the Circuit Court of Cook County, Illinois, shall be the venue for the resolution of any disputes arising from this Agreement, and WINDFREE hereby submits to the jurisdiction of that Court.

13. SEVERABILITY

If any portion of this Agreement is determined to be unenforceable or invalid, the remaining provisions shall be enforced in accordance with their terms or shall be interpreted or re-written so as to make them enforceable. Provisions that should reasonably be considered to survive termination of this Agreement shall survive. WINDFREE may assign or subcontract any of its rights or obligations under this Agreement to any successor, partner or purchaser.

14. WAIVER

Any delay or failure of a party to enforce any of the provisions of this Agreement, including but not limited to any remedies listed in this Agreement, or to require performance by the other party of any of the provisions of this Agreement, shall not be construed to (i) be a waiver of such provisions or a party's right to enforce those provisions; or (ii) affect the validity of this Agreement.

15. LIMITATION OF LIABILITY.

a. No Consequential Damages. EACH PARTY'S LIABILITY TO THE OTHER UNDER THIS AGREEMENT SHALL BE LIMITED TO DIRECT ACTUAL DAMAGES ONLY. BOTH PARTYS AGREE THAT IN NO EVENT SHALL EITHER PARTY BE LIABLE TO THE OTHER FOR CONSEQUENTIAL, INCIDENTAL, PUNITIVE, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES.

b. Actual Damages. Neither party's liability to the other will exceed \$2,000,000 including without limitation, damages to the Property during the performance of the Project or resulting from the completion of the Project.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
02/07/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Neis Insurance Agency, Inc. 45 North Virginia St. Crystal Lake, IL 60014 Tom Neis, RHU	815-455-6960	CONTACT NAME: Tom Neis, RHU PHONE (A/C, No, Ext): 815-455-6960 FAX (A/C, No): 815-455-9357 E-MAIL ADDRESS: Certs@NeisInsurance.com
	INSURER(S) AFFORDING COVERAGE	
		NAIC #
INSURER A: Cincinnati Specialty		13037
INSURER B: The Cincinnati Companies		10677
INSURER C:		
INSURER D:		
INSURER E:		
INSURER F:		

INSURED
 Windfree Wind + Solar Energy Design Co DBA
 Windfree Solar
 P.O. Box 113
 Deerfield, IL 60015

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR			CSU0077724	12/07/2021	12/07/2022	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
	GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC						
	OTHER:						
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY			EBA0486431	05/01/2021	05/01/2022	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE						EACH OCCURRENCE \$ AGGREGATE \$ \$
	<input type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y <input type="checkbox"/> N If yes, describe under DESCRIPTION OF OPERATIONS below			N/A			PER STATUTE <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER WINDFREE WINDFREE WIND + SOLAR ENERGY DESIGN CO DBA WINDFREE SOLAR ** SAMPLE CERTIFICATE ** PO BOX 113 DEERFIELD, IL 60015	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE Tom Neis, RHU
--	--

powered by

Q.ANTUM DUO Z

DRAFT

Q.PEAK DUO BLK-G10+ / AC 360-365

Q.ANTUM DUO SOLAR MODULE
WITH INTEGRATED MICROINVERTER



Q.ANTUM TECHNOLOGY: LOW LEVELIZED COST OF ELECTRICITY

Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of 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 Technology¹, Hot-Spot Protect, Traceable Quality Tra.Q™.



EXTREME WEATHER RATING

High-tech aluminum alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).



A RELIABLE INVESTMENT

Inclusive 25-year product warranty and 25-year linear performance warranty².



STATE OF THE ART MODULE TECHNOLOGY

Q.ANTUM DUO Z Technology and the integrated high-powered Enphase IQ 7+ Microinverter achieving maximum system efficiency.



RELIABLE ENERGY MONITORING

Seamless management with the intelligent Enphase Enlighten™ monitoring system.



RAPID SHUTDOWN COMPLIANT

Built-in rapid shutdown with no additional components required.

THE IDEAL SOLUTION FOR:



Rooftop arrays on residential buildings

¹ APT test conditions according to IEC/TS 62804-1:2015, method A (-1500V, 96h)

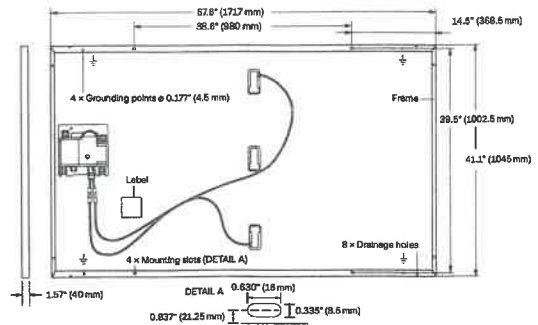
² See data sheet on rear for further information

Engineered in Germany



MECHANICAL SPECIFICATIONS

Format	67.6 in × 41.1 in × 1.57 in (including frame) (1717 mm × 1045 mm × 40 mm)
Weight	46.3 lbs (21.0 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodized aluminum
Cell	6 × 20 monocrystalline Q.ANTUM solar half cells
Junction Box	2.09-3.98 × 1.26-2.36 × 0.59-0.71 in (53-101 × 32-60 × 15-18 mm), Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥ 45.3 in (1150 mm), (-) ≥ 33.5 in (850 mm)
Connector	Stäubli MC4; IP68



AC OUTPUT ELECTRICAL CHARACTERISTICS

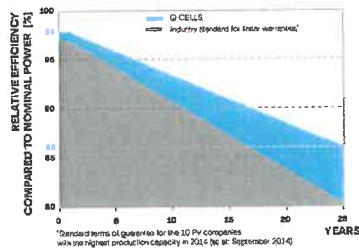
IQ7PLUS-72-ACM-US OR IQ7PLUS-72-E-ACM-US				
Peak Output Power	[VA]	295	AC Short Circuit Fault Current over 3 Cycles	5.8 Arms
Max. Continuous Output Power	[VA]	290	Max. Units per 20 A (L-L) Branch Circuit	13
Nominal (L-L) Voltage / Range	[V]	240/211-264	Overvoltage Class AC Port	III
Max. Continuous Output Current	[A]	1.21	AC Port Backfeed Current	18 mA
Nominal Frequency	[Hz]	60	Power Factor Setting	1
Extended Frequency Range	[Hz]	47 - 68	Power Factor (adjustable)	0.85 leading ... 0.85 lagging

DC ELECTRICAL CHARACTERISTICS

POWER CLASS	360		365				
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5 W / -0 W)							
Min. Power at MPP ¹	P _{MPP} [W]	360	365	Min. Current at MPP	I _{MPP} [A]	10.49	10.56
Min. Short Circuit Current ¹	I _{SC} [A]	11.04	11.07	Min. Voltage at MPP	V _{MPP} [V]	34.31	34.58
Min. Open Circuit Voltage ²	V _{OC} [V]	41.18	41.21	Min. Efficiency ¹	η [%]	≥ 20.1	≥ 20.3

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

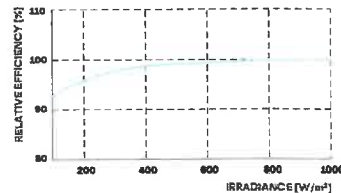
Q CELLS PERFORMANCE WARRANTY



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]	-0.34	Nominal Module Operating Temperature	NMOT [°F]	109 ± 5.4 (43 ± 3 °C)

PROPERTIES FOR DC SYSTEM DESIGN

Maximum System Voltage V _{sys}	[V]	1000	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 / ft ²]	75 (3600 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 / ft ²]	113 (5400 Pa) / 84 (4000 Pa)		

³ See Installation Manual

QUALIFICATIONS AND CERTIFICATES

Solar module: UL 61730,
U.S. Patent No. 8,893,215 (solar cells);
Enphase micro inverter: UL 1741-SA, UL 62109-1,
UL 1741/IEEE1547, FCC Part 15 Class B,
ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01,
Rapid Shutdown Compliant per NEC-2014
& 2017 & C22.1-2015



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.

400 Spectrum Center Drive, Suite 1400, Irvine, CA 92618, USA | TEL +1 949 748 59 96 | EMAIL Inquiry@us.q-cells.com | WEB www.q-cells.us

Lincoln Hall Solar Panel Discussion



