LIVINGSTON COUNTY REGIONAL PLANNING COMMISSION
LIVINGSTON COUNTY HISTORIC COURTHOUSE,
112 W. Madison St., Pontiac, Illinois 61764

APPLICANT FILING PROCEDURES FOR SPECIAL USES

1. Complete the original application and any required attachments. Attachments are considered a part of the application.

2. File the application in the office of the Livingston County Regional Planning Commission, accompanied with the required fee. The Commission shall assign a case number to the application.

3. All fees shall be payable to the General Fund of Livingston County. (The required fee is $175.00).

4. The Livingston County Regional Planning Commission will transmit one copy of the application with the assigned case number noted on same to the Livingston County Soil and Water Conservation, Route 1, Box 199, Pontiac, IL 61764.

5. The Livingston County Soil & Water Conservation District shall forward the NOTICE OF TRANSMITTAL, as provided, to the Zoning Administrator, Livingston County Historic Courthouse, 112 W. Madison St., Pontiac, IL 61764.

6. The Livingston County Regional Planning Commission shall advertise the notice of public hearing for each case to be held before the Board of Appeals.

7. The Livingston County Regional Planning Commission shall serve notice to the applicant and owners or occupants of property abutting the affected area not less than five (5) days prior to the hearing advising the location and nature of the subject matter contained in the application and the date, time and place of the hearing.

8. The applicant shall be billed by the Livingston County Regional Planning Commission for the cost of the required notice of public hearing. No final action shall be taken on any case until the cost of advertising the required notice of public hearing has been paid.

You may refer to the sheet that is part of the application package that refers to the example of fees that provides you with more information on the potential costs of proceeding with this property development.

----------DETACH HERE----------

NOTICE OF TRANSMITTAL

Forward to:

Zoning Administrator
Livingston County Historic Courthouse
112 W. Madison St.
Pontiac, Illinois 61764

A copy of the application and attachments for a (zoning map amendment, special use) Case No.
was transmitted to the Livingston County Soil and Water Conservation District on _____.

_____
Signature of Receiver

LIVINGSTON COUNTY REGIONAL PLANNING COMMISSION
LIVINGSTON COUNTY HISTORIC COURTHOUSE, 112 W. MADISON ST., PONTIAC, IL 61764

APPLICATION FOR SPECIAL USE – LIVINGSTON COUNTY ZONING ORDINANCE

Applicant

Name: Junegrass Solar, LLC
Address: P.O Box 310
Highland Park, IL 60035
Phone: (847)732-0968 msnittjer@trajectoryenergy.com legal@trajectoryenergy.com

Property Owner(s)

Name: James I Metz, William L. Metz, and Kathy L. Selmeyer
Address: C/O William Metz
10278 N 1800 Rd E
Fairbury, IL 61739
Phone: 815-848-3079

(attach list if necessary)

For Office Use Only

Filed Date — Case No. SU-
Fee $ 175.00
Receipt No.
Publication Cost
Receipt No.
Hearing Date
Decision Date — File Date
Approved — Denied

For Office Use Only

Legal description of property: PIN # 22-22-18-100-002; THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 18, OTHERWISE DESCRIBED AS THE NORTH 1/2 OF LOT 2 OF THE NORTHWEST 1/4 OF SECTION 18, TOWNSHIP 27 NORTH,RANGE 6 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LIVINGSTON COUNTY, ILLINOIS

Street address: Agricultural land along 1300 Road N in Avoca Township, Livingston County, Illinois.

Property interest of applicant: Lessee

Present Use: Agriculture Zoning District: Agriculture

A special use is requested to allow the property described above to be used as: Community solar project as described in the attached application.

Yes No **X** A previous special use has not been requested with respect to the described property.

Yes No **X** A previous special use was requested with respect to the described property. Such previous special use request was made on _____, _____ and _____
Date Year Granted or Denied

Attachment No. 1 – Submit a map drawn to scale (as required by the Zoning Administrator) of the area included in the application and the abutting area within 200 feet (additional area may be required by the Zoning Administrator) showing the zoning classification; dimensions and use of all buildings and/or structures (existing and proposed); driveways; parking areas; right-of-way lines for streets and roads; easements; provision for surface drainage; proposals for sewage disposal systems; distance of building(s) and/or structure(s) from front, side and rear property lines; and distance of building(s) and/or structure(s) from center of public access road(s). **See attached exhibits.**

Additional Attachments – Submit additional attachments as required by the Zoning Administrator.

I (we) certify that all of the information presented above is true to the best of my (our) knowledge and belief.

Jonathan Connor — 5.8.2023

Applicant(s) Signature — Date

Additional Attachment

STATEMENT OF APPLICANT – OWNER STATUS

APPLICANT **Junegrass Solar, LLC**

OWNERS - **Trajectory Energy Partners –**

Jonathan Carson
Managing Partner
355 Lincolnwood Road
Highland Park, IL 60035

Joshua Bushinsky
Manager
2016 Klingle Rd NW
Washington, DC 20010

David Lipowicz
Manager
643 8th St NE
Washington, DC 20002

Megan Strand
Manager
6718 Melody Lane
Bethesda, MD 20817

James Svenstrup
Manager
1049 N Paulina ST, 1B
Chicago, IL 60622

LIST OF NAMES AND ADDRESSES REQUIRED ABOVE

Form 14

APPLICATION EXPLANATION

Project Name: **Junegrass Solar, LLC**

Requested Zoning: **Special use permit for 2MW community solar project.**

Explanation and description of request or project: **See attached application.**

STANDARDS FOR SPECIAL USE

Members of the Board of Appeals must find the proposed Special Use complies with these required standards; however, the criteria for determining the acceptability of a Special Use shall not be limited to the following standards: **See Attached Application.**

1. Is consistent in all respects with the Livingston County Comprehensive Plan and the Livingston County Zoning Ordinance;

2. Will not be detrimental to or endanger the public health, safety, morals, comfort or general welfare;

3. Is located in a zoning district where such use is permitted;

4. Complies with the requirements set forth in the zoning district where it is to be located and all requirements specified in Section 24.0, SPECIAL USES, REQUIREMENTS AND PROCEDURES, of the Livingston County Zoning Ordinance, except in each instance as such regulations may be modified by the Board of Appeals;

5. Will not be injurious to the use and enjoyment of other property in the immediate vicinity for the uses already permitted, or substantially reduce the value of neighboring property;

6. Will not impede orderly growth, development and improvement of surrounding properties for those uses permitted in the zoning district;

7. Is provided or will be provided with adequate utilities, access roads, drainage and necessary facilities;

8. Is provided with ingress and egress so designed as to minimize traffic congestion in the public streets.

NOTE:

The Board may, at its discretion, qualify any approval for a Special Use subject to certain conditions being imposed upon and agreed to by the applicant prior to requesting the Zoning Administrator issue an Improvement Location Permit.

Trajectory Energy Partners

JUNEGRASS SOLAR, LLC

2MWac Community Solar Project

Special Use Permit Application - Livingston County, IL

Submitted: May 8, 2023

EXECUTIVE SUMMARY

Junegrass Solar, LLC (the "Applicant") proposes to develop a 2MWac community solar project on approximately 19 +/- acres of vacant agricultural property along 1300 Road N in Avoca Township, Livingston County, Illinois. The Junegrass Solar, LLC community solar project (the "Solar Project") will be located on parcel 22-22-18-100-002 (the "Project Parcel") owned by James I. Metz, William L. Metz, and Kathy L. Selmeyer (the "Landowners"). The Project Parcel is currently located in the Livingston County Agricultural District. The Solar Project is described in more detail on the Site Plan set forth in the attached Exhibit A.

The figures and information contained in this application are based on the best available information from desktop and field analyses performed to date, and may be subject to change (within the bounds of applicable laws and permit conditions) based on the final siting of the solar arrays and associated facilities and the ultimate procurement of the Solar Project's equipment.

ABOUT TRAJECTORY ENERGY PARTNERS

Junegrass Solar, LLC is a limited liability company indirectly owned by Trajectory Energy Partners, LLC ("Trajectory"). Trajectory brings together communities, organizations, and landowners to develop clean energy projects with strong local support. Trajectory team members have built their careers in clean energy and community engagement. They are focused on building quality clean energy projects that are integrated into the local landscape and welcomed in the community.

CONTENTS

I. SUMMARY OF APPLICATION

Applicant is submitting this application for a Special Use Permit pursuant to the requirements set forth under Article VIII-B- Solar Farms of the Livingston County, IL Code of Ordinances (the "Zoning Ordinance") and, as applicable, pursuant to Illinois P.A. 102- 1123 (the "Illinois Siting Bill"), effective January 27, 2023.

II. SOLAR PROJECT DESCRIPTION

The Solar Project will be located on approximately 19 +/- acres on an approximately 43-acre parcel zoned in the Agricultural District, in Avoca Township, Livingston County, Illinois. See Exhibit A: Site Plan.

The Solar Project will consist of equipment to generate electricity from solar energy, including rows of photovoltaic cell panels mounted on posts driven into the ground. Applicant plans to install the panels in an east-west configuration on a mounting system that will rotate the panels to track the sun throughout the day. The components of the Solar Project will comply with the current edition of the National Electric Code and be UL listed or meet a comparable safety standard. The panels will be designed with an anti-reflective coating to minimize glare from the Solar Project. A chain link fence will enclose all the panels and electrical equipment on site, which will be accessed via a locked gate.

Under Illinois Public Act 102-0662, commonly known as the Climate and Equitable Jobs Act ("CEJA"), the state of Illinois committed funds and ordered the Illinois Power Agency to establish incentives for the creation of community solar projects. The Solar Project is intended to be a community solar project under CEJA, which allows residential and commercial customers to subscribe to the Solar Project. The Solar Project will support CEJA's goals of increasing the adoption and availability of renewable energy to Illinois residents and businesses.

The Solar Project will provide economic and environmental benefits to the community. Livingston County residents and businesses will have an opportunity to subscribe to the Solar Project. These subscribers will support clean energy in their community while benefiting from electricity bill savings. In addition, the Solar Project will create new tax revenues for Livingston County, provide steady income to the Landowner, and generate economic activity through local construction, materials, and services.

The Solar Project will be designed to integrate into the local landscape and maintained in accordance with the Preliminary Weed/Grass Control Plan attached as Exhibit B. Where possible, Applicant will prioritize pollinator-friendly landscaping, vegetation maintenance that limits runoff, and other management practices that are in keeping with the community, adjacent uses, and the local ecosystem.

The Solar Project is intended to operate for a period of at least 30 years, and will be constructed with solar panels with long-term warranties and very low expected rates of replacement. In the event the Solar Project is required to be removed in the future, a proposed decommissioning plan that complies with the requirements in the Zoning Ordinance is described in detail herein. In accordance with the Illinois Siting Bill, Applicant has applied for and will submit an executed AIMA prior to the public hearing.

III. SOLAR PROJECT CONSTRUCTION AND OPERATION

The active construction period for the Solar Project is estimated to be between nine and twelve months. Construction will require trucks no larger than a typical 18-wheeler to deliver materials to the site, and onsite equipment will be used to drive pilings into the ground and install the panels, supports, and tracking equipment. Except in rare instances, solar installations do not require the use of cranes. Concrete pads will be poured to support electrical equipment.

Once installed and commissioned, the Solar Project requires only periodic maintenance. The Solar Project's performance will be continuously monitored, and engineers and maintenance technicians will visit the Solar Project a few times a year for inspections, routine maintenance, and any required repairs.

IV. APPLICANT INFORMATION

Junegrass Solar, LLC
c/o Trajectory Energy Partners, LLC
Attn: Jon Carson
P.O. Box 310
Highland Park, IL 60035
(312) 882-3713
legal@trajectoryenergy.com

On behalf of Landowner contact:
William Metz
10278 N 1800 Rd E
Fairbury, IL 61739
815-848-3079

V. SPECIAL USE PERMIT APPLICATION REQUIREMENTS

Zoning Ordinance Special Use Application Requirements (Sec. 56-647)

Section 56-647)(1) Site Plan – Existing Conditions

- Section 56-647)(1)(a): Property lines and adjacent landowners.

  See Exhibit C & Table of Adjacent Landowners below.

Table of Adjacent Landowners

PIN	NAME	SITE ADDRESS	MAILING ADDRESS	CURRENT USE
22-22-18-100-002	James I. Metz	n/a	10277 N 1800 E Rd Fairbury, IL 61739	Agriculture
22-22-07-300-005	Frederick A. Smith	n/a	215 E Washington St Apt 309 Pontiac, IL 61764	Agriculture
22-22-07-300-013	BDH Farms, LLC	n/a	38427 E 2300 N Rd Cropsey, IL 61731	Agriculture
22-22-18-100-003	James I. Metz	n/a	10277 N 1800 E Rd Fairbury, IL 61739	Agriculture
22-22-18-300-001	Tom Zabel	n/a	PO Box 417 Morocco, IL 47963	Agriculture
21-21-13-200-010	Frederick A. Smith	12819 N 1800 E Rd Pontiac, IL 61764	215 E Washington St Apt 309 Pontiac, IL 61764	Agriculture
21-21-13-200-009	Frederick A. Smith	n/a	215 E Washington St Apt 309 Pontiac, IL 61764	Agriculture
21-21-12-400-008	John L. Gallup	13079 N 1800 E Rd Pontiac, IL 61764	13079 N 1800 E Rd Pontiac, IL 61764	Agriculture

- Section 56-647 (1)(b): Existing road conditions.

  See Exhibit D.

- Section 56-647)(1)(c): Location and size of abandoned wells or sewage treatment systems.

  None currently known. Applicant will undertake a full drainage tile and well survey during formal site diligence.

- Section 56-647(1)(d): Existing buildings and impervious surfaces.

  The proposed project site contains no existing buildings or impervious surfaces.

- Section 56-647 (1)(e): Contour map.

  See Exhibit E.

- Section 56-647(1)(f): Existing vegetation.

  The proposed Project Parcel is covered by cultivated crops (approx. 91%); the entire area of for the proposed Solar Project is cropland/agricultural.

- Section 56-647)(1)(g): Waterways, watercourses, lakes and public water wetlands.

  See Exhibits F and G.

- Section 56-647(1)(h): Delineated wetland boundaries.

  See Exhibit F.

- Sections 56-647(1)(i), (j), (l): FEMA FIRM Map, floodways & surface water drainage.

  See Exhibits F and G.

- Section 56-647)(1) (k): Livingston County Soil Survey mapped soils.

  See Exhibit H.

- Sections 56-647(1)(m): Location of any subsurface drainage tiles.

  None currently known. Applicant will undertake a full drainage tile and well survey during formal site diligence.

Section* 56-647*(2) Site Plan – Proposed Conditions

- Sections 56-647(2)(a)- (d)

  See Exhibit A.

- Section 56-647 (2)(e)

  There are not currently any structures on land adjacent to the Solar Project.

- Section 56-647(2)(f):

  See Exhibit B.

Section* 56-647*(3) – Manufacturer's specifications.

See Exhibit I.

Section* 56-647*(4) – Number of panels.

While the total number of panels may change as the design specifications are further confirmed with additional engineering and construction-phase analysis, the optimized number of panels for the Solar Project according to the Preliminary Site Plan attached as Exhibit A is currently projected to be a maximum of 5,512 panels.

Section* 56-647*(5) – Method of connection.

As shown in Exhibit A, the Solar Project will interconnect with the ComEd grid via underground cables that connect to a ComEd distribution line, unless otherwise required by ComEd or applicable government entity.

***Section* 56-647*(6) – Evidence of interconnection*.**

See Exhibit J.

Section* 56-647(*7) – Decommission plan.

This preliminary decommissioning plan provides the general scope of decommissioning work for a typical Photovoltaic ("PV") Facility located in Livingston County, Illinois as described herein and subject to the decommissioning plan requirements of the Zoning Ordinance and Illinois Siting Bill. This decommissioning plan assumes the Facility consists of an approximately 2 MWac solar electric array covering an assumed area of approximately 19 +/- acres of agricultural land. Physical attachments to the site include ground-mounted, fixed solar PV arrays supported by galvanized piles, concrete pads for transformers and switch gear, perimeter fencing & access gate, and a gravel road at the entrance. This plan outlines the activities necessary after termination of the Facility operation to remove all above-ground structures, debris, foundations, and underground cable as well as restoration of soil and vegetation.

A. Decommissioning Security

In accordance with the Livingston County Zoning Ordinance and the terms of the Agricultural Impact Mitigation Agreement, decommissioning security financing shall be provided to the county in order to assure the proper decommissioning of the site. Appropriate financial assurance as determined by the County will be provided.

B. Decommissioning Plan Update

An update to this decommissioning plan as required by the Ordinance will be submitted to the county every three years.

C. Facility Description

As it relates to decommissioning, the approximately 2 MWac solar electricity generation facility consists of the following anticipated structures and site features:

- Total site development area of approximately 19 +/- acres;
- Total solar panel area with associated electrical equipment and racking;
- Small concrete pads with transformer, mounted inverter boxes, and switchgear;
- Gravel access road and turnaround;
- Perimeter security fence & access gate;
- Above-ground electrical wire conduit;
- Under-ground electrical wire conduits; and
- Interconnection poles.

D. Decommissioning Activities

The completion of the following major steps are required to decommission the facility:

1. Removal of modules, racking, and piles;
2. Removal of cabling, trays, and electrical equipment;
3. Removal of concrete pads, foundations, and debris;
4. Removal of the gravel access road (if required by the landowner);
5. Site stabilization by placing soil and reseeding; and
6. Removal and Disposal or Recycling of materials.

The procedures for decommissioning of the project will involve restoring soils and vegetation to agricultural productivity.

E. Dismantlement and Demolition

Decommissioning shall include removal of all solar electric systems, buildings, ballasts, cabling, electrical components, roads, foundations, pilings, and any other associated facilities. This will include removal of all items identified in the decommissioning activities above.

A significant amount of the components of the PV system at the Facility will include recyclable or re-saleable components, including copper, aluminum, galvanized steel, and panels. Due to their resale monetary value, these components will be dismantled and disassembled rather than being demolished and disposed of.

Following coordination with the local utility company regarding timing and required procedures for disconnecting the Facility from the utility, all electrical connections to the system will be disconnected and all connections will be tested locally to confirm that no electric current is running through them before proceeding. All electrical connections to the panels will be cut at the panel and then removed from their framework by cutting or dismantling the connections to the supports.

Then panels, inverters, transformers, meters, fans, any lighting fixtures, and other electrical structures will be removed. Disposal of these materials at a landfill will be governed by state and local laws, including the Code of Illinois Regulations governing waste disposal at local area landfills, which may be amended from time to time. Any materials deemed to be hazardous at the time of disposal will be handled and disposed according to applicable laws and regulations. The PV mounting system framework will be dismantled and recycled. The galvanized support piles will be completely removed and recycled. All remaining structures including fence, gates, foundations, and underground cables will be demolished and removed from the site for recycling or disposal.

Removal of the access road will be determined in consultation with the landowner. If it is deemed that the retention of the access road is not desired, the contractor will remove the access road and associated gravel to a minimum of 42" as required by the Agricultural Impact Mitigation Agreement ("AIMA") and restore this area with soils and seeding. Any on-site concrete associated with the Facility will be broken and removed in its entirety. Clean concrete will be crushed and disposed of or recycled off-site. Final stabilization thresholds on the entire site shall be met prior to approval of site decommissioning. Underground conduits and raceways are to be removed.

Above ground lines and poles that are not owned by the utility will be removed, along with associated equipment (isolation switches, fuses, metering) and holes will be filled with clean topsoil. Temporary sanitary facilities will be provided on-site for the workers conducting the decommissioning of the Facility.

Erosion and sediment control measures are required during the decommissioning process. These measures include construction access, silt fence, concrete washout stations, and land stabilization. The owner/operator will restore the project location to a vegetated condition consistent with pre-construction conditions.

F. Schedule

Per the Ordinance, decommissioning of solar panels must occur in the event they are not in use for 12 consecutive months. The operating company and/or the landowner have six months to complete the decommissioning plan or the county will take the necessary decommissioning steps. Decommissioning activities are estimated to take approximately one (1) month but may change depending on weather and soil moisture conditions and is intended to occur outside of the winter season.

G. Solar Decommissioning Estimate

The cost of decommissioning activities is provided below. Fence materials, racking piles, PV panels, tracker equipment, wiring, combiner boxes, inverters, transformers, medium voltage equipment, and utility poles can be salvaged and recycled. This plan estimates the approximate net decommissioning costs & salvage value for a 2 MWac facility as follows:

Estimated Decommissioning Cost:	$233,000
Net Salvage Value:	$174,000

Decommissioning cost estimates were derived from publicly-available data including the Livingston County Prevailing Wage rates posted on 12/1/2022, FEMA Schedule of Equipment Rates, 2019, and http://scrapmonster.com as well as industry-standard salvage values and previous similar project experience.

VII. SOLAR ZONING ORDINANCE REQUIREMENTS

Zoning Ordinance Design Standards Applicable to Solar Farms (Section 56-646)

Applicant will comply with the specific requirements for solar farms outlined in Section 56-646 of the Zoning Ordinance. In particular, for the requirements in the Zoning Ordinance that are applicable to Applicant's Solar Project, Applicant states as follows:

***Section* 56-646*(a) – Foundations*.**

The manufacturer's engineer or another qualified engineer shall certify that the foundation and design of the solar panels is within accepted professional standards, given local soil and climate conditions.

***Section* 56-646(b*) – Other standards and codes*.**

The Solar Project will maintain compliance with local, state and federal regulatory standards, and the National Electric Code as amended.

***Section* 56-646(c*) – Power and communication lines*.**

Unless otherwise required by a utility or government entity, the Solar Project's power and communication lines shall be buried underground.

***Section* 56-646(d*) – Minimum Lot Size*.**

The Project Parcel is greater than the 20-acre minimum lot size stated in the Zoning Ordinance.

***Section* 56-646(e*) – Height*.**

With the exception of electric transmission lines and utility poles, the Solar Project's systems, equipment and structures will not exceed 20 feet in height when ground-mounted in compliance with the Illinois Siting Bill height requirement.

Section* 56-646(f*) – Setbacks.

As depicted in Exhibit A, the Solar Project shall comply with all required setbacks as described in the Illinois Siting Bill.

Section 56-646 (g)— Screening and fencing

- Fencing: The Solar Project will be secured with a National Electric Code compliant chain link fence that will be a minimum height of seven feet. Knox boxes and keys will be provided at locked entrances for emergency personnel access.
- Screening: Screening will be provided as required by the County.

***Section 56-646 (h) – Lighting*.**

Lighting is not currently planned for the Solar Project, however, any lighting provided at the site will be shielded and downcast such that the light does not spill onto the adjacent parcel.

***Section 56-646 (I) – Noise*.**

Noise levels measured at the property line adjacent to any existing residence or residential district will not exceed 50 decibels.

Section 56-646 (j) – Installation and design.

The Solar Project will be designed with anti-glare panels, and will be located in a manner that prevents glare toward any inhabited buildings on adjacent properties or street rights-of-way.

Section 56-646 (k) – Inspections.

Applicant shall have the facility inspected annually for the first three years following the issuance of the permit by an approved independent party to verify continued compliance with the zoning regulations. Thereafter Applicant will arrange inspections every three years, unless otherwise determined by the Livingston County Zoning Administrator, or his designee.

Section 56-646 (l) – Signage.

An appropriate warning sign shall be provided at the entrance to the facility and along the perimeter to the solar farm project. The sign at the entrance to the facility shall include a 24-hour emergency contact number.

VII. SPECIAL USE PERMIT STANDARDS

Pursuant to the Zoning Ordinance, Applicant requests a Special Use Permit for a ground mounted solar energy system on the Project Parcel, which is currently located in the Livingston County Agricultural District. As confirmed by the explanations below, the proposed use complies with the standards for evaluating the special use stated in the Livingston County Special Use Permit application.

(1) ls consistent in all respects with the Livingston County Comprehensive Plan and the Livingston County Zoning Ordinance;

The development, installation, and operation of the Solar Project is consistent with the goals and policies of the comprehensive plan. The Solar Project is a low-profile installation that will have no negative impact on neighboring properties, will maintain the rural character of the land, and will preserve the quality of the land for future agricultural use.

(2) Will not be detrimental to or endanger the public health, safety, morals, comfort or general welfare.

The proposed use of the Project Parcel as a solar farm will not be detrimental to or endanger public health, safety, morals, comfort, or general welfare. The Solar Project will operate to convert sunlight to electrical power with occasional ongoing maintenance. The clean energy generated by the Solar Project will avoid pollution associated with other forms of power generation. The Solar Project will comply with state and local laws, and be designed and installed using current best practices, including the current National Electric Code and the use of UL (or equivalent) equipment. The Solar Project will be surrounded by a UL compliant fence and a locked gate with emergency personnel access provided via a knox box.

(3) Is located in a zoning district where such use is permitted;

The Solar Project is consistent with the uses contemplated in the current Zoning Ordinance and pursuant to the Illinois Siting Bill.

(4) Complies with the requirements set forth in the zoning district where it is to be located and all requirements specified in Section 24.0, SPECIAL USES, REQUIREMENTS AND PROCEDURES, of the Livingston County Zoning Ordinance, except in each instance as such regulations may be modified by the Board of Appeals;

The Solar Project will conform to the Zoning Ordinance, all applicable laws and regulations, and the Special Use Permit. Applicant will continue to work with regulatory authorities to ensure compliance with relevant regulatory and permitting requirements.

(5) Will not be injurious to the use and enjoyment of other property in the immediate vicinity for the uses already permitted, or substantially reduce the value of neighboring property;

The Solar Project will not affect the existing use and enjoyment of property in the vicinity for those uses permitted by the Zoning Ordinance. The Solar Project will be designed to enclose the solar panels and associated electrical equipment with fencing, to comply with applicable state and local laws and ordinances designed to maintain the use and enjoyment of adjacent property, and to maintain property values.

(6) Will not impede orderly growth, development and improvement of surrounding properties for those uses permitted in the zoning district;

The Solar Project will not impede growth, development and improvement of surrounding properties for the uses contemplated in the current Zoning Ordinance.

(7) Is provided or will be provided with adequate utilities, access roads, drainage and necessary facilities;

The Solar Project will include adequate provisions for buffers, landscaping, fencing, lighting, building materials, and open space, as required, and other improvements such as utilities, equipment, access roads, drainage and other necessary facilities as described on the Site Plan attached as Exhibit A. The Solar Project will have no permanent buildings or employees on site, and therefore does not require water, waste, or sewage facilities.

In addition, the Solar Project will conform to applicable regulations pursuant to this Special Use Permit application, including implementation of a weed/grass control plan (See Exhibit B) which describes the measures that will be taken to ensure adequate maintenance/landscaping.

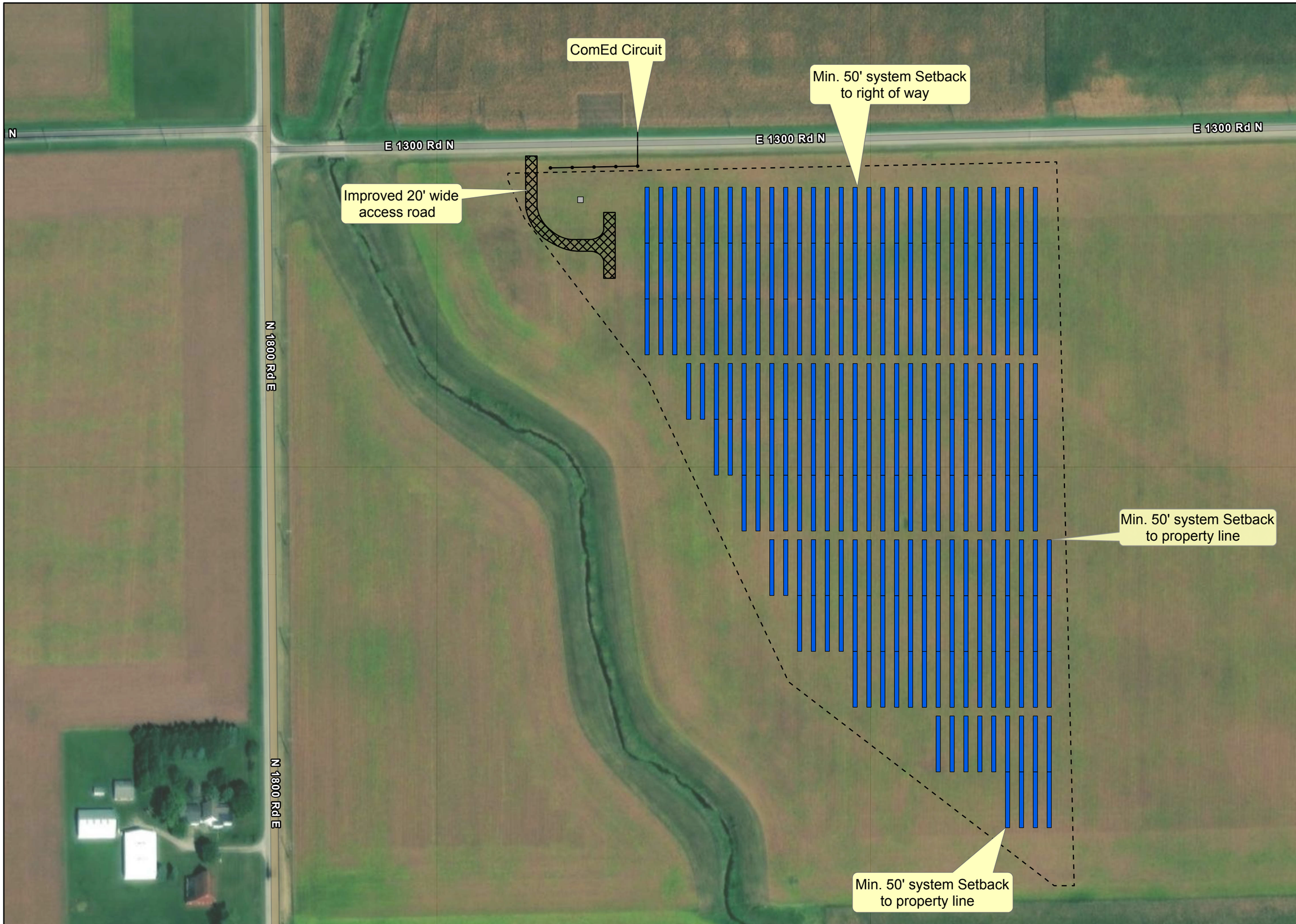
(8) Is provided with ingress and egress so designed as to minimize traffic congestion in the public streets.

The Solar Project will have minimal impact on public street congestion. During the construction phase, standard construction vehicles will come on and off site to deliver material and construction equipment. Once installed and commissioned, the Solar Project only requires periodic maintenance. The Solar Project's performance will be continuously monitored, and traffic will consist of engineers and maintenance technicians visiting the Solar Project typically only a few times a year for any inspections, routine maintenance, and any required repairs.

Exhibit A

Site Plan – Proposed Conditions

[Attached]



Trajectory Energy Partners

Project Name:
Junegrass Solar, LLC

Facility Location:
40.81435°N, 88.58123°W

Project County:
Livingston County

Legend

- Access road
- POI equipment
- Fence
- Transformer
- Solar array

Drawing Designation:
General Site Overview

Revision:	Date:
A-1	5/8/2023

N

Feet

0 100 200

Exhibit B

Preliminary Weed/Grass Maintenance Plan

[Attached]

JUNEGRASS SOLAR: PRELIMINARY PROJECT SITE WEED AND GRASS MANAGEMENT PLAN

1.0 INTRODUCTION

In accordance with the Livingston County Zoning Ordinance, as well as any guidance that may be issued by the Illinois Department of Natural Resources, Junegrass Solar, LLC ("Junegrass Solar") shall manage all vegetation within the project area and outside the immediate fenced area during the operations of the facility.

Junegrass Solar will maintain native and/or typical pasture grasses on the site during its lifespan unless otherwise approved by Livingston County. Such species are purposefully used so that vegetation will not encroach upon structures which could limit access or effective generation of power. Such plants and grasses shall be mowed/cut and otherwise maintained as needed throughout the year to ensure the site is operated in a clean and neat condition at all times. All vegetation, including beneath solar panels, within and beyond the fenced area shall be maintained by trimming, cutting, and other forms of vegetation maintenance.

Noxious and exotic weeds shall be minimized in order to control these species in general.

2.0 NOXIOUS AND EXOTIC WEEDS

The State of Illinois identifies nine species of plants in its Designated Noxious Weeds list. These include:

- common ragweed (Ambrosia artemisiifolia)
- giant ragweed (Ambrosia trifida)
- marijuana (Cannabis sativa)
- musk thistle (Carduus nutans)
- Canada thistle (Cirsium arvense)
- kudzu-vine (Pueraria lobate)
- perennial sowthistle (Sonchus arvensis)
- Johnson grass (Sorghum halepense)
- sorghum-almum (Sorghum x almum)

Additionally, Illinois maintains a Designated Exotic Weeds list. This includes:

- Japanese honeysuckle (Lonicera japonica)
- multiflora rose (Rosa multiflora)
- purple loosestrife (Lythrum salicaria)
- common buckthorn (Rhamnus cathartica)
- glossy buckthorn (Rhamnus frangula)
- saw-toothed buckthorn (Rhamnus arguta)
- dahurian buckthorn (Rhamnus davurica)
- Japanese buckthorn (Rhamnus japonica)

- Chinese buckthorn (Rhamnus utilis)
- kudzu-vine (Pueraria lobata)
- exotic bush honeysuckles (Lonicera maackii, Lonicera tatarica, Lonicera morrowii, and Lonicera fragrantissima)
- exotic olives (Elaeagnus umbellata, Elaeagnus pungens, Elaeagnus angustifolia)
- salt cedar (all members of the Tamarix genus)
- poison hemlock (Conium maculatum)
- giant hogweed (Heracleum mantegazzianum)
- Oriental bittersweet (Celastrus orbiculatus)
- lesser celandine (Ficaria vema)
- teasel (all members of the Dipsacus genus)
- Japanese, giant, and Bohemian knotweed (Fallopia japonica, syn. Polygonum cuspidatum; Fallopia sachalinensis; and Fallopia x bohemica, resp.)

Junegrass Solar will manage the project site to control or minimize the spread of the above listed noxious and exotic species. Control and minimization of weeds will not require eradication. The intent is for the facility to establish effective site vegetation for erosion and sediment control and minimize weed and exotic species issues.

3.0 WEED PREVENTION

It is important to reduce or eliminate any new weed species from being introduced into or spreading from the project disturbance areas.

General measures to prevent the spread of weeds include the following:

- Clean equipment (e.g., air compressors [high pressure] or washing station or offsite cleaning with certification) prior to personnel, vehicles, and equipment entering site (each time a vehicle enters the site).
- Ensure that all equipment and materials brought onto the site are weed-seed free.
- Limit disturbance areas during construction to the minimum required to perform work.
- Limit ingress and egress to defined routes.
- Vegetate temporarily disturbed areas with appropriate native species as soon as possible after construction is complete to prevent weed establishment
- Use certified weed-free products for erosion control.
- Employ manual, mechanical, and chemical control methods as appropriate to target species.

4.0 WEED CONTROL

Weed control activities could include mechanical, manual, and chemical control methods. Mechanical control activities, such as chaining, disking, grubbing, and mowing using tractors or other heavy equipment will be a part of the vegetation management program where applicable.

Manual means of vegetation management would be limited to the use of hand-operated powertools and hand tools to cut, clear, or prune herbaceous and woody species. Hand-operated tools such as hoes, shovels, and hand saws could be used under the program, as well as hand-pulling of plants. Manual means will only be used where necessary.

Chemical control will involve the use of approved herbicides to control weed populations when other methods are not successful in managing the spread of these listed species. All weed control using herbicides and adjuvants would be conducted by a state certified herbicide applicator and will conform to the manufacturer's label recommendations.

Exhibit C

Adjacent Landowner Map

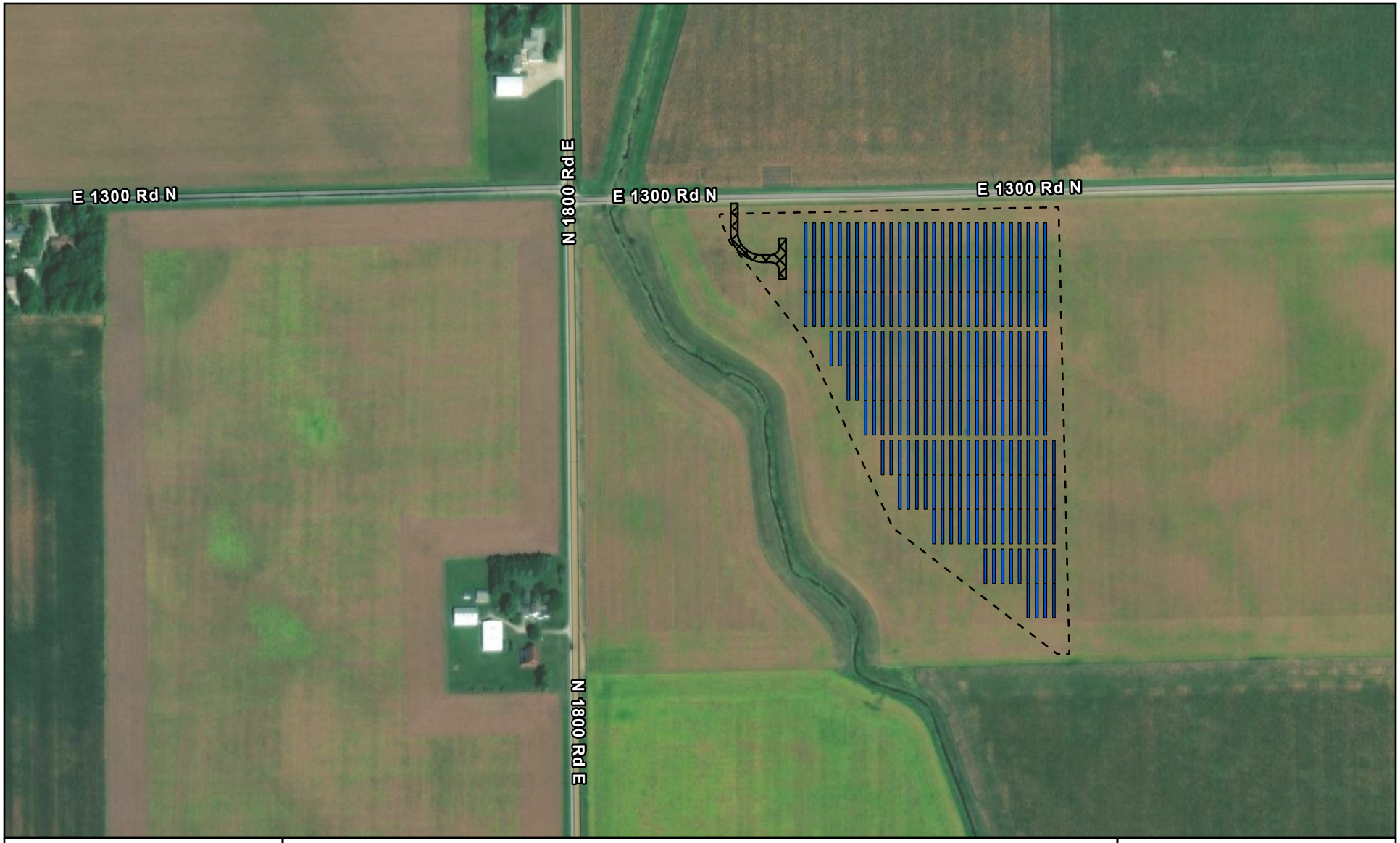
[Attached]


Rd E
N 1850 Rd E
Frederick A Smith
PIN: 22-22-07-300-005
BDH Farms, LLC
PIN: 22-22-07-300-013
John L Gallup
PIN: 21-21-12-400-008
N 1800 Rd E
E 1300 Rd N
E 1300 Rd N
E 1300 Rd N
E 1300 Rd N
Frederick A Smith
PIN: 21-21-13-200-009
James Metz
PIN: 22-22-18-100-003
Frederick A Smith
PIN: 21-21-13-200-010
N 1800 Rd E
Tom Zabel
PIN: 22-22-18-300-001
N 1800

Exhibit D

Existing Road Conditions

[Attached]



Trajectory Energy Partners

Junegrass Solar

Roads and Easements

E 1300 Rd N: Approximately 20' Wide
N 1800 Rd E: Approximately 20' Wide

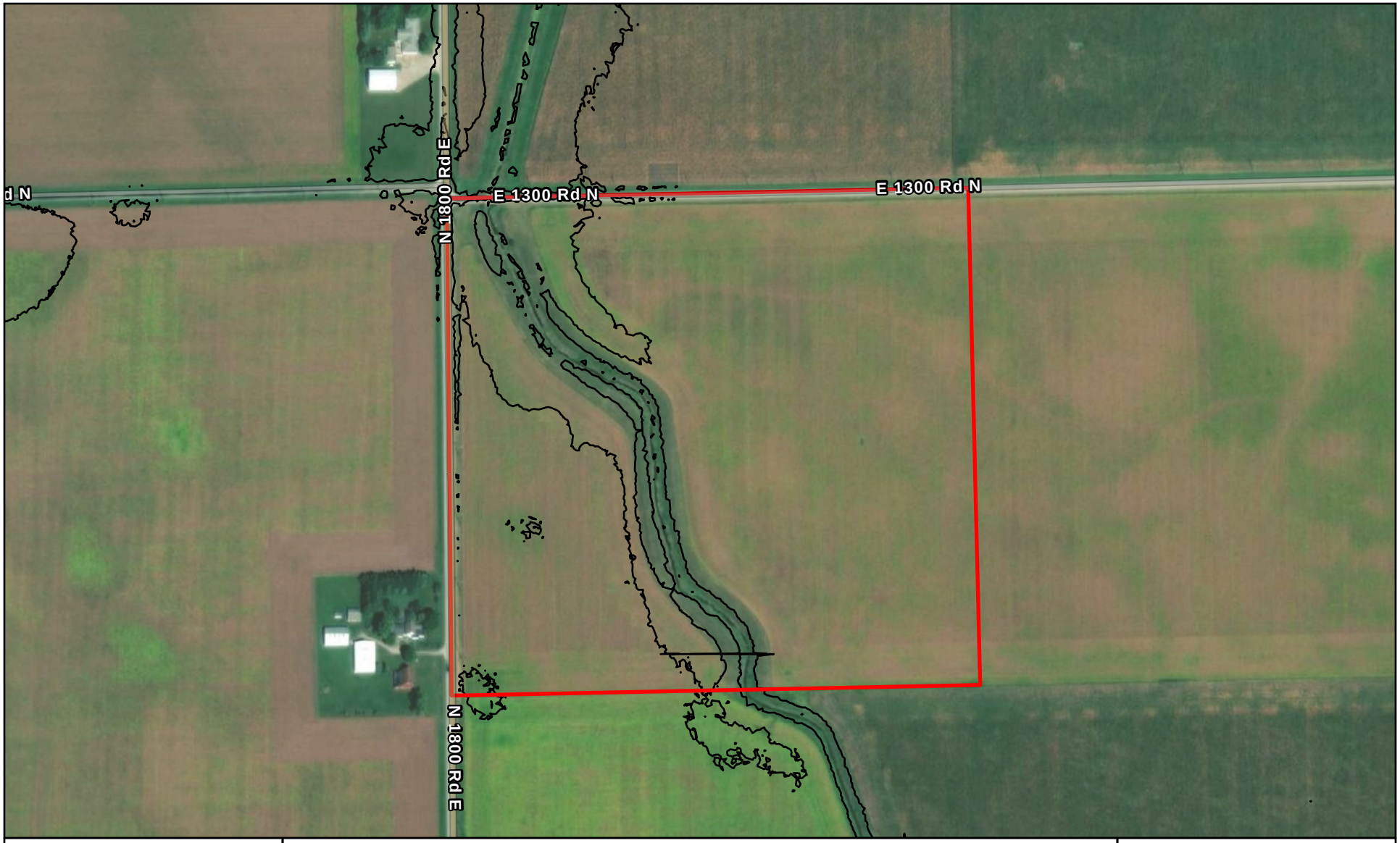
Date: 5/8/2023

N

Exhibit E

Topographical Map

[Attached]



Trajectory Energy Partners

Junegrass Solar

Topography Map - 2' Intervals

5/8/2023

N

0 0.05 0.1 MI

0 0.1 02 M

approximate

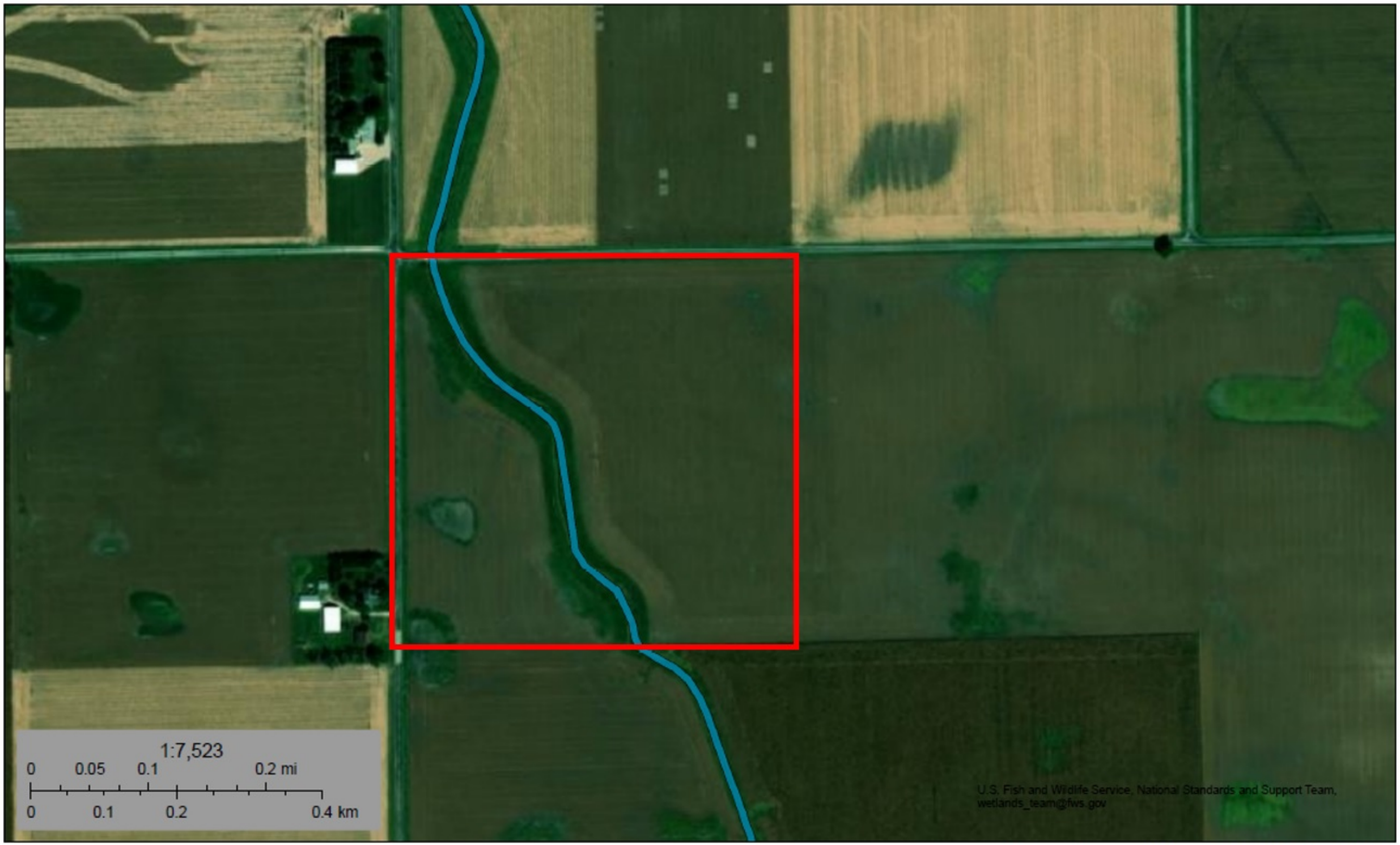
Exhibit F

NWI Map

[Attached]

U.S. Fish and Wildlife Service

National Wetlands Inventory



January 12, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Exhibit G

FEMA FIRM Map

[Attached]

National Flood Hazard Layer FIRMette

FEMA

88°35'11"W 40°49'5"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

88°34'34"W 40°48'38"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/12/2023 at 5:13 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Exhibit H

Livingston County Soils Map

[Attached]

Soil Map—Livingston County, Illinois

Map Scale: 1:3,240 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 45 90 180 270

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Livingston County, Illinois
Survey Area Data: Version 17, Aug 31, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 26, 2019—Jul 25, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
102A	La Hogue loam, 0 to 2 percent slopes	10.6	24.6%
125A	Selma loam, 0 to 2 percent slopes	5.1	11.7%
150B	Onarga fine sandy loam, 2 to 5 percent slopes	2.4	5.6%
300A	Westland clay loam, 0 to 2 percent slopes	23.8	55.0%
609A	Crane loam, 0 to 2 percent slopes	1.4	3.2%
Totals for Area of Interest		**43.3**	**100.0%**

Exhibit I

Representative Equipment Specifications

[Attached]

CanadianSolar

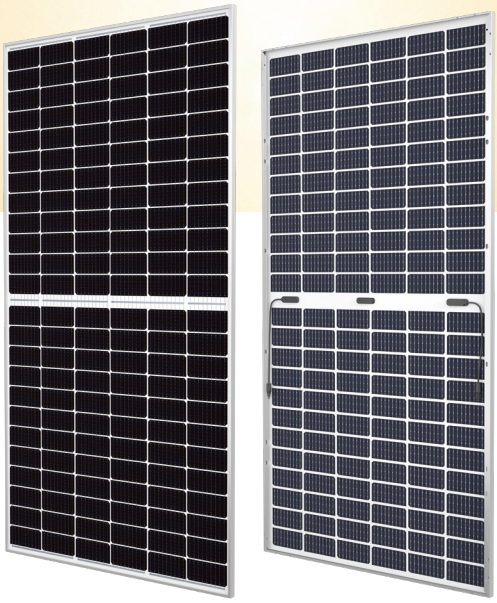
BiHiKu

HIGH POWER BIFACIAL MONO PERC MODULE

430 W ~ 455 W

UP TO 30% MORE POWER FROM THE BACK SIDE

CS3W-430|435|440|445|450|455MB-AG



FRONT BACK

MORE POWER

EXTRA POWER — Up to 30% more power from the back side

24 % higher front side power than conventional modules

41°C — Low NMOT: 41 ± 3 °C
Low temperature coefficient (Pmax): -0.35 % / °C

Better shading tolerance

MORE RELIABLE

Lower internal current, lower hot spot temperature

Minimizes micro-crack impacts

Heavy snow load up to 5400 Pa, wind load up to 3600 Pa *

12 Years — **Enhanced Product Warranty on Materials and Workmanship***

30 Years — **Linear Power Performance Warranty***

1st year power degradation no more than 2%
Subsequent annual power degradation no more than 0.45%

*According to the applicable Canadian Solar Limited Warranty Statement.

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2015 / Quality management system
ISO 14001:2015 / Standards for environmental management system
OHSAS 18001:2007 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730 / CE / MCS / INMETRO
FSEC (US Florida) / UL 61730 / IEC 61701 / IEC 62716 / IEC 60068-2-68
Take-e-way

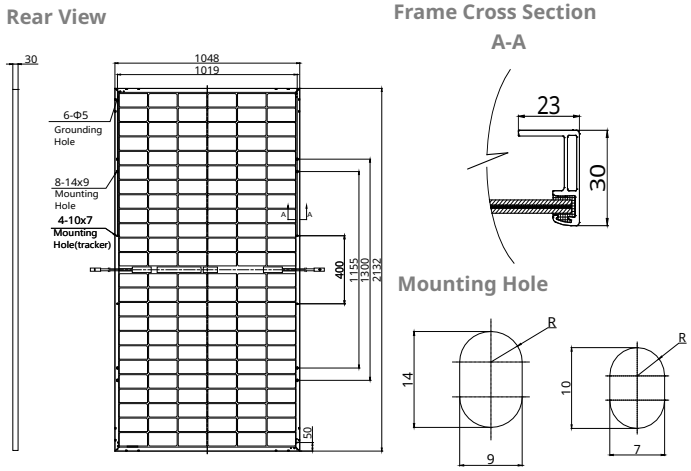
* As there are different certification requirements in different markets, please contact your local Canadian Solar sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

CANADIAN SOLAR (USA), INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. Canadian Solar was recognized as the No. 1 module supplier for quality and performance/price ratio in the IHS Module Customer Insight Survey, and is a leading PV project developer and manufacturer of solar modules, with over 46 GW deployed around the world since 2001.

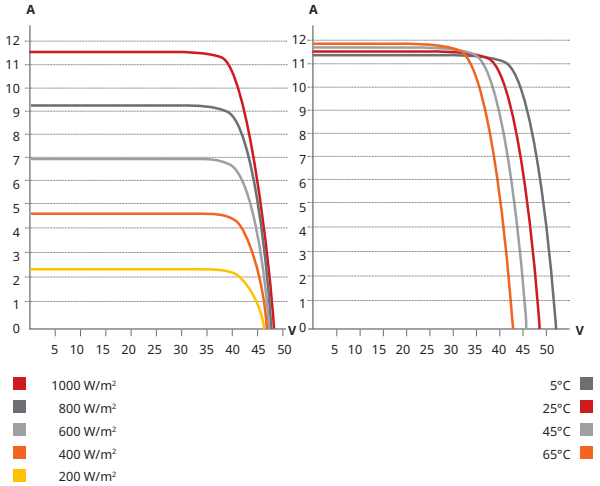
* For detailed information, please refer to Installation Manual.

CANADIAN SOLAR (USA), INC.
3000 Oak Road, Suite 400, Walnut Creek, CA 94597, USA | www.csisolar.com/na | sales.us@csisolar.com

ENGINEERING DRAWING (mm)



CS3W-435MB-AG / I-V CURVES



ELECTRICAL DATA | STC*

		Nominal Max. Power (Pmax)	Opt. Operating Voltage (Vmp)	Opt. Operating Current (Imp)	Open Circuit Voltage (Voc)	Short Circuit Current (Isc)	Module Efficiency
CS3W-430MB-AG		430 W	40.3 V	10.68 A	48.3 V	11.37 A	19.2%
Bifacial Gain**	5%	452 W	40.3 V	11.21 A	48.3 V	11.94 A	20.2%
	10%	473 W	40.3 V	11.75 A	48.3 V	12.51 A	21.2%
	20%	516 W	40.3 V	12.82 A	48.3 V	13.64 A	23.1%
	30%	559 W	40.3 V	13.88 A	48.3 V	14.78 A	25.0%
CS3W-435MB-AG		435 W	40.5 V	10.75 A	48.5 V	11.42 A	19.5%
Bifacial Gain**	5%	457 W	40.5 V	11.29 A	48.5 V	11.99 A	20.5%
	10%	479 W	40.5 V	11.83 A	48.5 V	12.56 A	21.4%
	20%	522 W	40.5 V	12.90 A	48.5 V	13.70 A	23.4%
	30%	566 W	40.5 V	13.98 A	48.5 V	14.85 A	25.3%
CS3W-440MB-AG		440 W	40.7 V	10.82 A	48.7 V	11.48 A	19.7%
Bifacial Gain**	5%	462 W	40.7 V	11.36 A	48.7 V	12.05 A	20.7%
	10%	484 W	40.7 V	11.90 A	48.7 V	12.63 A	21.7%
	20%	528 W	40.7 V	12.98 A	48.7 V	13.78 A	23.6%
	30%	572 W	40.7 V	14.07 A	48.7 V	14.92 A	25.6%
CS3W-445MB-AG		445 W	40.9 V	10.89 A	48.9 V	11.54 A	19.9%
Bifacial Gain**	5%	467 W	40.9 V	11.43 A	48.9 V	12.12 A	20.9%
	10%	490 W	40.9 V	11.98 A	48.9 V	12.69 A	21.9%
	20%	534 W	40.9 V	13.07 A	48.9 V	13.85 A	23.9%
	30%	579 W	40.9 V	14.16 A	48.9 V	15.00 A	25.9%
CS3W-450MB-AG		450 W	41.1 V	10.96 A	49.1 V	11.60 A	20.1%
Bifacial Gain**	5%	473 W	41.1 V	11.51 A	49.1 V	12.18 A	21.2%
	10%	495 W	41.1 V	12.06 A	49.1 V	12.76 A	22.2%
	20%	540 W	41.1 V	13.15 A	49.1 V	13.92 A	24.2%
	30%	585 W	41.1 V	14.25 A	49.1 V	15.08 A	26.2%
CS3W-455MB-AG		455 W	41.3 V	11.02 A	49.3 V	11.66 A	20.4%
Bifacial Gain**	5%	478 W	41.3 V	11.57 A	49.3 V	12.24 A	21.4%
	10%	501 W	41.3 V	12.12 A	49.3 V	12.83 A	22.4%
	20%	546 W	41.3 V	13.22 A	49.3 V	13.99 A	24.4%
	30%	592 W	41.3 V	14.33 A	49.3 V	15.16 A	26.5%

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.
** Bifacial Gain: The additional gain from the back side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

ELECTRICAL DATA | NMOT*

	Nominal Max. Power (Pmax)	Opt. Operating Voltage (Vmp)	Opt. Operating Current (Imp)	Open Circuit Voltage (Voc)	Short Circuit Current (Isc)
CS3W-430MB-AG	322 W	37.7 V	8.54 A	45.6 V	9.17 A
CS3W-435MB-AG	326 W	37.9 V	8.59 A	45.8 V	9.21 A
CS3W-440MB-AG	329 W	38.1 V	8.65 A	46 V	9.26 A
CS3W-445MB-AG	333 W	38.3 V	8.71 A	46.1 V	9.31 A
CS3W-450MB-AG	337 W	38.5 V	8.76 A	46.3 V	9.35 A
CS3W-455MB-AG	341 W	38.7 V	8.82 A	46.5 V	9.40 A

* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

MECHANICAL DATA

Specification	Data
Cell Type	Mono-crystalline
Cell Arrangement	144 [2 X (12 X 6)]
Dimensions	2132 × 1048 × 30 mm (83.9 × 41.3 × 1.2 in)
Weight	28.4 kg (62.6 lbs)
Front / Back Glass	2.0 mm heat strengthened glass
Frame	Anodized aluminium alloy
J-Box	IP68, 3 diodes
Cable	4.0 mm² (IEC), 12 AWG (UL)
Cable Length (Including Connector)	400 mm (15.7 in) (+) / 280 mm (11.0 in) (-) or customized length*
Connector	T4 series or MC4
Per Pallet	33 pieces
Per Container (40' HQ)	660 pieces or 561 pieces (only for US)

* For detailed information, please contact your local Canadian Solar sales and technical representatives.

ELECTRICAL DATA

Operating Temperature	-40°C ~ +85°C
Max. System Voltage	1500 V (IEC/UL) or 1000 V (IEC/UL)
Module Fire Performance	TYPE 29 (UL 61730) or CLASS C (IEC61730)
Max. Series Fuse Rating	25 A
Application Classification	Class A
Power Tolerance	0 ~ + 10 W
Power Bifaciality*	70 %

* Power Bifaciality = $Pmax_{rear}$ / $Pmax_{front}$, both $Pmax_{rear}$ and $Pmax_{front}$ are tested under STC, Bifaciality Tolerance: ± 5 %

TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.35 % / °C
Temperature Coefficient (Voc)	-0.27 % / °C
Temperature Coefficient (Isc)	0.05 % / °C
Nominal Module Operating Temperature	41 ± 3°C

PARTNER SECTION

* The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. Canadian Solar Inc. reserves the right to make necessary adjustment to the information described herein at any time without further notice.
Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills and please carefully read the safety and installation instructions before using our PV modules.

SUNNY CENTRAL
2200 / 2475 / 2500-EV / 2750-EV / 3000-EV

SC-2200-10 / SC-2475-10 / SC-2500-EV-10 / SC-2750-EV-10 / SC-3000-EV-10

Optional now with DC Coupled Storage Systems for 1500V devices

Full power up to 35 °C

Efficient

- Up to 4 inverters can be transported in one standard shipping container
- Overdimensioning up to 225% is possible
- Full power at ambient temperatures of up to 35 °C

Robust

- Intelligent air cooling system OptiCool for efficient cooling
- Suitable for outdoor use in all climatic ambient conditions worldwide

Flexible

- Conforms to all known grid requirements worldwide
- Q on demand
- Available as a single device or turnkey solution, including medium-voltage block

Easy to Use

- Improved DC connection area
- Connection area for customer equipment
- Integrated voltage support for internal and external loads

SUNNY CENTRAL 2200 / 2475 / 2500-EV / 2750-EV / 3000-EV

The new Sunny Central: more power per cubic meter

With an output of up to 3000 kVA and system voltages of 1100 V DC or 1500 V DC, the SMA central inverter allows for more efficient system design and a reduction in specific costs for PV power plants. A separate voltage supply and additional space are available for the installation of customer equipment. True 1500 V technology and the intelligent cooling system OptiCool ensure smooth operation even in extreme ambient temperature as well as a long service life of 25 years.

SUNNY CENTRAL 1000 V

Technical Data	Sunny Central 2200	Sunny Central 2475
Input (DC)		
MPP voltage range V_{DC} (at 25 °C / at 35 °C / at 50 °C)	570 to 950 V / 800 V / 800 V	638 V to 950 V / 800 V / 800 V
Min. input voltage $V_{DC, min}$ / Start voltage $V_{DC, Start}$	545 V / 645 V	614 V / 714 V
Max. input voltage $V_{DC, max}$	1100 V	1100 V
Max. input current $I_{DC, max}$ (at 35°C / at 50°C)	3960 A / 3600 A	3960 A / 3600 A
Max. short-circuit current $I_{DC, sc}$	6400 A	6400 A
Number of DC inputs	24 double pole fused (32 single pole fused)	
Max. number of DC cables per DC input (for each polarity)	2 x 800 kcmil, 2 x 400 mm²	
Integrated zone monitoring	○	
Available DC fuse sizes (per input)	200 A, 250 A, 315 A, 350 A, 400 A, 450 A, 500 A	
Output (AC)		
Nominal AC power at cos φ =1 (at 35°C / at 50°C)	2200 kVA / 2000 kVA	2475 kVA / 2250 kVA
Nominal AC power at cos φ =0.8 (at 35°C / at 50°C)	1760 kW / 1600 kW	1980 kW / 1800 kW
Nominal AC current $I_{AC, nom}$ = Max. output current $I_{AC, max}$	3300 A	3300 A
Max. total harmonic distortion	< 3% at nominal power	< 3% at nominal power
Nominal AC voltage / nominal AC voltage range[1) 8)]	385 V / 308 V to 462 V	434 V / 347 V to 521 V
AC power frequency / range	50 Hz / 47 Hz to 53 Hz 60 Hz / 57 Hz to 63 Hz	
Min. short-circuit ratio at the AC terminals[9)]	> 2	
Power factor at rated power / displacement power factor adjustable[8) 10)]	● 1 / 0.8 overexcited to 0.8 underexcited ○ 1 / 0.0 overexcited to 0.0 underexcited	
Efficiency		
Max. efficiency[2)] / European efficiency[2)] / CEC efficiency[3)]	98.6% / 98.4% / 98.0%	98.6% / 98.4% / 98.0%
Protective Devices		
Input-side disconnection point	DC load break switch	
Output-side disconnection point	AC circuit breaker	
DC overvoltage protection	Surge arrester, type I	
AC overvoltage protection (optional)	Surge arrester, class I	
Lightning protection (according to IEC 62305-1)	Lightning Protection Level III	
Ground-fault monitoring / remote ground-fault monitoring	○ / ○	
Insulation monitoring	○	
Degree of protection: electronics / air duct / connection area (as per IEC 60529)	IP65 / IP34 / IP34	
General Data		
Dimensions (W / H / D)	2780 / 2318 / 1588 mm (109.4 / 91.3 / 62.5 inch)	
Weight	< 3400 kg / < 7496 lb	
Self-consumption (max.[4)] / partial load[5)] / average[6)])	< 8100 W / < 1800 W / < 2000 W	
Self-consumption (standby)	< 300 W	
Internal auxiliary power supply	Integrated 8.4 kVA transformer	
Operating temperature range[8)]	−25°C to 60°C / −13°F to 140°F	
Noise emission[7)]	64.7 dB(A)	
Temperature range (standby)	−40°C to 60°C / −40°F to 140°F	
Temperature range (storage)	−40°C to 70°C / −40°F to 158°F	
Max. permissible value for relative humidity (condensing / non-condensing)	95% to 100% (2 month/year) / 0% to 95%	
Maximum operating altitude above MSL[8)] 1000 m / 2000 m[11)] / 3000 m[11)] / 4000 m[11)]	● / ○ / ○ / ○	
Fresh air consumption	6500 m³/h	
Features		
DC connection	Terminal lug on each input (without fuse)	
AC connection	With busbar system (three busbars, one per line conductor)	
Communication	Ethernet, Modbus Master, Modbus Slave	
Communication with SMA string monitor (transmission medium)	Modbus TCP / Ethernet (FO MM, Cat-5)	
Enclosure / roof color	RAL 9016 / RAL 7004	
Supply transformer for external loads	○ (2.5 kVA)	
Standards and directives complied with	CE, IEC / EN 62109-1, IEC / EN 62109-2, BDEW-MSRL, IEEE1547, UL 840 Cat. IV, Arrêté du 23/04/08	
EMC standards	IEC / EN 61000-6-2, FCC Part 15 Class A, Cispr 11, DIN EN55011:2017	
Quality standards and directives complied with	VDI/VDE 2862 page 2, DIN EN ISO 9001	
● Standard features ○ Optional		
Type designation	SC-2200-10	SC-2475-10

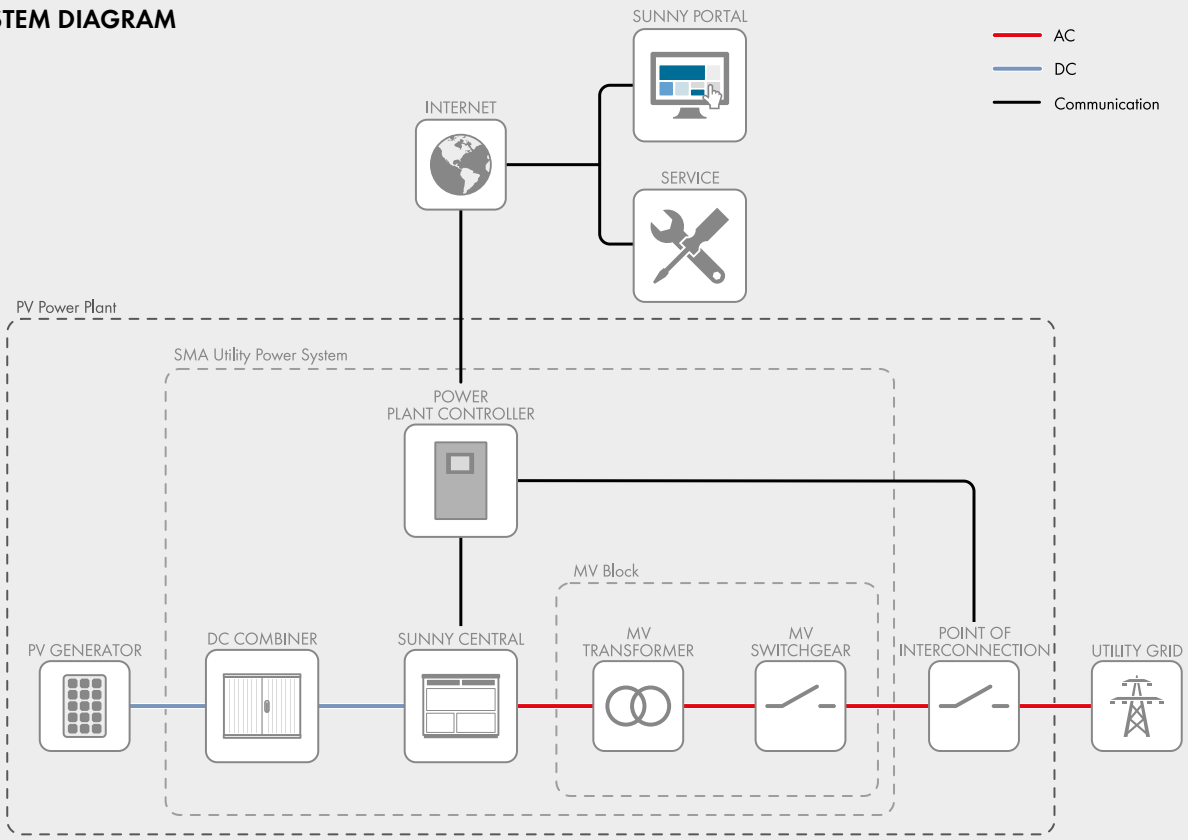
1) At nominal AC voltage, nominal AC power decreases in the same proportion
2) Efficiency measured without internal power supply
3) Efficiency measured with internal power supply
4) Self-consumption at rated operation
5) Self-consumption at < 75% Pn at 25°C
6) Self-consumption averaged out from 5% to 100% Pn at 25°C
7) Sound pressure level at a distance of 10 m
8) Values apply only to inverters. Permissible values for SMA MV solutions from SMA can be found in the corresponding data sheets.
9) A short-circuit ratio of < 2 requires a special approval from SMA
10) Depending on the DC voltage
11) Earlier temperature-dependent de-rating and reduction of DC open-circuit voltage

SUNNY CENTRAL 1500 V

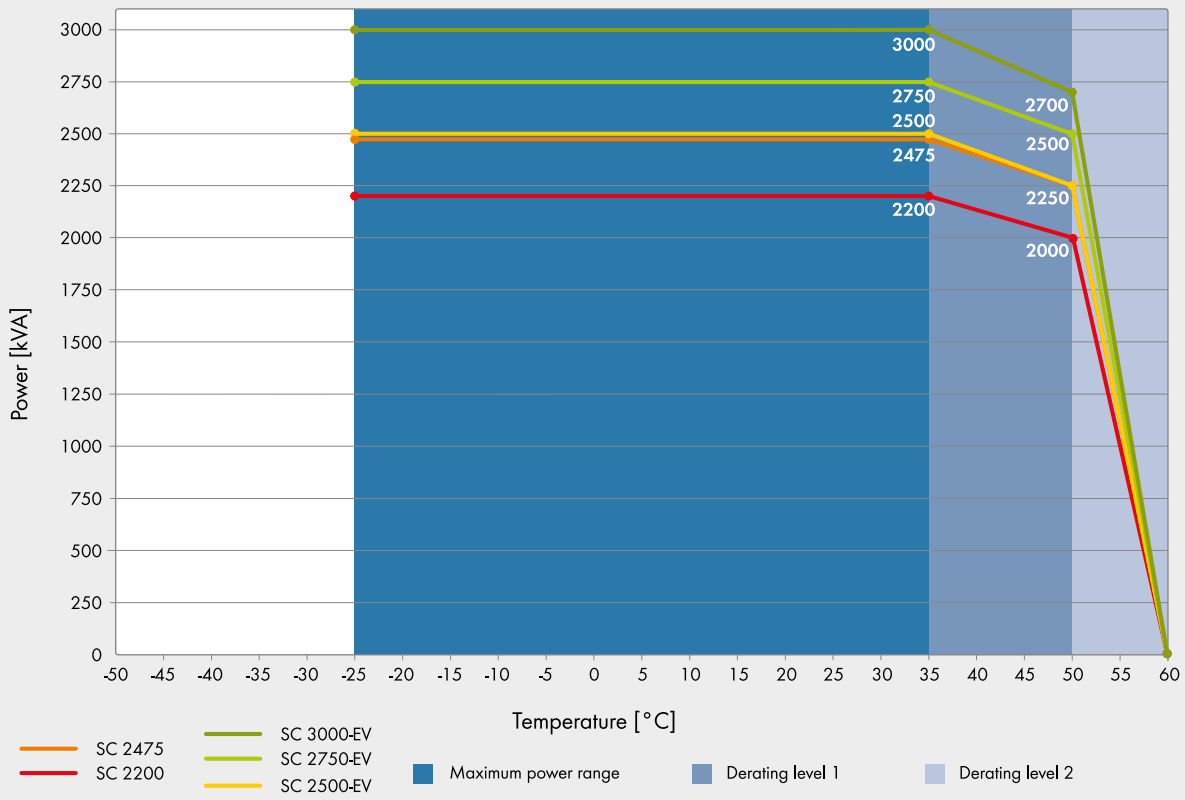
Technical Data	Sunny Central 2500-EV	Sunny Central 2750-EV	Sunny Central 3000-EV
Input (DC)			
MPP voltage range V_{DC} (at 25°C / at 35°C / at 50°C)	850 V to 1425 V / 1200 V / 1200 V	875 V to 1425 V / 1200 V / 1200 V	956 V to 1425 V / 1200 V / 1200 V
Min. input voltage $V_{DC, min}$ / Start voltage $V_{DC, Start}$	778 V / 928 V	849 V / 999 V	927 V / 1077 V
Max. input voltage $V_{DC, max}$	1500 V	1500 V	1500 V
Max. input current $I_{DC, max}$ (at 35°C / at 50°C)	3200 A / 2956 A	3200 A / 2956 A	3200 A / 2970 A
Max. short-circuit current rating	6400 A	6400 A	6400 A
Number of DC inputs	24 double pole fused (32 single pole fused) for PV		
Number of DC inputs with optional DC coupled storage	18 double pole fused (36 single pole fused) for PV and 6 double pole fused for batteries		
Max. number of DC cables per DC input (for each polarity)	2 x 800 kcmil, 2 x 400 mm²		
Integrated zone monitoring	○		
Available DC fuse sizes (per input)	200 A, 250 A, 315 A, 350 A, 400 A, 450 A, 500 A		
Output (AC)			
Nominal AC power at cos φ =1 (at 35°C / at 50°C)	2500 kVA / 2250 kVA	2750 kVA / 2500 kVA	3000 kVA / 2700 kVA
Nominal AC power at cos φ =0.8 (at 35°C / at 50°C)	2000 kW / 1800 kW	2200 kW / 2000 kW	2400 kW / 2160 kW
Nominal AC current $I_{AC, nom}$ = Max. output current $I_{AC, max}$	2624 A	2646 A	2646 A
Max. total harmonic distortion	< 3% at nominal power	< 3% at nominal power	< 3% at nominal power
Nominal AC voltage / nominal AC voltage range[1) 8)]	550 V / 440 V to 660 V	600 V / 480 V to 720 V	655 V / 524 V to 721 V[9)]
AC power frequency	50 Hz / 47 Hz to 53 Hz 60 Hz / 57 Hz to 63 Hz		
Min. short-circuit ratio at the AC terminals[10)]	> 2		
Power factor at rated power / displacement power factor adjustable[8) 11)]	● 1 / 0.8 overexcited to 0.8 underexcited ○ 1 / 0.0 overexcited to 0.0 underexcited		
Efficiency			
Max. efficiency[2)] / European efficiency[2)] / CEC efficiency[3)]	98.6% / 98.3% / 98.0%	98.7% / 98.5% / 98.5%	98.8% / 98.6% / 98.5%
Protective Devices			
Input-side disconnection point	DC load-break switch		
Output-side disconnection point	AC circuit breaker		
DC overvoltage protection	Surge arrester, type I & II		
AC overvoltage protection (optional)	Surge arrester, class I & II		
Lightning protection (according to IEC 62305-1)	Lightning Protection Level III		
Ground-fault monitoring / remote ground-fault monitoring	○ / ○		
Insulation monitoring	○		
Degree of protection: electronics / air duct / connection area (as per IEC 60529)	IP65 / IP34 / IP34		
General Data			
Dimensions (W / H / D)	2780 / 2318 / 1588 mm (109.4 / 91.3 / 62.5 inch)		
Weight	< 3400 kg / < 7496 lb		
Self-consumption (max.[4)] / partial load[5)] / average[6)])	< 8100 W / < 1800 W / < 2000 W		
Self-consumption (standby)	< 370 W		
Internal auxiliary power supply	Integrated 8.4 kVA transformer		
Operating temperature range[8)]	−25 to 60°C / −13 to 140°F		
Noise emission[7)]	67.8 dB(A)		
Temperature range (standby)	−40 to 60°C / −40 to 140°F		
Temperature range (storage)	−40 to 70°C / −40 to 158°F		
Max. permissible value for relative humidity (condensing / non-condensing)	95% to 100% (2 month / year) / 0 % to 95%		
Maximum operating altitude above MSL[8)] 1000 m / 2000 m[12)] / 3000 m[12)]	● / ○ / –	● / ○ / –	● / ○ / –
Fresh air consumption	6500 m³/h		
Features			
DC connection	Terminal lug on each input (without fuse)		
AC connection	With busbar system (three busbars, one per line conductor)		
Communication	Ethernet, Modbus Master, Modbus Slave		
Communication with SMA string monitor (transmission medium)	Modbus TCP / Ethernet (FO MM, Cat-5)		
Enclosure / roof color	RAL 9016 / RAL 7004		
Supply transformer for external loads	○ (2.5 kVA)		
Standards and directives complied with	CE, IEC / EN 62109-1, IEC / EN 62109-2, BDEW-MSRL, IEEE1547, Arrêté du 23/04/08		
EMC standards	EN55011:2017, IEC/EN 61000-6-2, FCC Part 15 Class A		
Quality standards and directives complied with	VDI/VDE 2862 page 2, DIN EN ISO 9001		
● Standard features ○ Optional – not available			
Type designation	SC-2500-EV-10	SC-2750-EV-10	SC-3000-EV-10

1) At nominal AC voltage, nominal AC power decreases in the same proportion
2) Efficiency measured without internal power supply
3) Efficiency measured with internal power supply
4) Self-consumption at rated operation
5) Self-consumption at < 75% Pn at 25°C
6) Self-consumption averaged out from 5% to 100% Pn at 35°C
7) Sound pressure level at a distance of 10 m
8) Values apply only to inverters. Permissible values for SMA MV solutions from SMA can be found in the corresponding data sheets.
9) AC voltage range can be extended to 753V for 50Hz grids only (option „Aux power supply: external" must be selected, option "housekeeping" not combinable).
10) A short-circuit ratio of < 2 requires a special approval from SMA
11) Depending on the DC voltage
12) Available as a special version, earlier temperature-dependent de-rating and reduction of DC open-circuit voltage

SYSTEM DIAGRAM



TEMPERATURE BEHAVIOR (at cos φ =1 and installation altitudes of up to 1,000 m*)



*) For the temperature behavior for installations at above 1,000 m see the Technical Information document.

NEXTracker
A Flex Company

NX Horizon

Smart Solar Tracking System

Serving as the backbone on over 20 gigawatts of solar power plants around the world, the NX Horizon™ smart solar tracker system combines best-in-class hardware and software to help EPCs and asset owners maximize performance and minimize operational costs.

Self-Powered System with Smart Performance Monitoring

NX Horizon's reliable self-powered motor and control system, balanced mechanical design and independent row architecture provide project design flexibility, while lowering operation and maintenance (O&M) costs. NX Horizon works in concert with the NX Data Hub platform, a utility-grade software that uses bidirectional communications to each and every tracker row in the power plant for continuous, real-time monitoring. In addition, NEXTracker's Digital O&M™ services provide real-time analytics and predictive maintenance to help manage operations and minimize O&M costs over the lifetime of the systems.

Flexible and Resilient by Design

With its self-aligning module rails and vibration-proof fasteners, NX Horizon can be easily and rapidly installed. The self-powered, decentralized architecture allows each row to be commissioned in advance of site power,and is designed to withstand high winds and other adverse weather conditions. On a recent 838 megawatt project in Villanueva, Mexico, these design features allowed for the project to go online nine months ahead of schedule.

TrueCapture and Bifacial Enabled

Incorporating the most promising innovations in utility scale solar, NX Horizon with TrueCapture™ smart control system can add additional energy production by up to six per cent. Further unlocking the advantages of independent-row architecture and the data collected from thousands of sensors across its built-in wireless network, the software continuously optimizes the tracking algorithm of each row in response to site terrain and changing weather conditions. NX Horizon can also be paired with bifacial PV module technology, which can provide even more energy harvest and performance. With bifacial technology, NX Horizon outperforms conventional tracking systems with over 1% more annual energy.

4 YEARS IN A ROW
Global Market Share Leader (2015-18)

25+ GW
Delivered on 5 Continents

BEST-IN-CLASS
Software Ecosystem and Global Services

UP TO 6%
Using TrueCapture Smart Control System

Quality and Reliability from Day One

Quality and reliability are designed and tested into every NX Horizon component and system across our supply chain and manufacturing operations. NEXTracker is the leader in dynamic wind analysis and safety stowing, delivering major benefits in uptime and long-term durability. NX Horizon is certified to UL 2703 and UL 3703 standards, underscoring NEXTracker's commitment to safety, reliability and quality.

GENERAL AND MECHANICAL

Tracking type	Horizontal single-axis, independent row
String voltage	1,500 V_{DC} or 1,000 V_{DC}
Typical row size	78 - 90 modules, depending on module string length
Drive type	Non-backdriving, high accuracy slew gear
Motor type	24V brushless DC motor
Array height	Rotation axis elevation 1.3 to 1.8 m / 4'3" to 5'10"
Ground coverage ratio (GCR)	Configurable. Typical range 28-50%
Modules supported	Mounting options available for virtually all utility-scale crystalline modules, First Solar Series 6 and First Solar Series 4.
Bifacial features	High-rise mounting rails, bearing + driveline gaps and round torque tube

Tracking range of motion	Options for ±60° or ±50°
Operating temperature range	Self powered: -30°C to 55°C (-22°F to 131°F) AC powered: -40°C to 55°C (-40°F to 131°F)
Module configuration	1 in portrait. 3 x 1,500V or 4 x 1,000V strings per standard tracker. Partial length trackers available.
Module attachment	Self-grounding, electric tool-actuated fasteners
Materials	Galvanized steel
Allowable wind speed	Configurable up to 200 kph (125 mph) 3-second gust.
Wind protection	Intelligent wind stowing with symmetric dampers for maximum array stability in all wind conditions.
Foundations	Standard W6 section foundation posts

ELECTRONICS AND CONTROLS

Solar tracking method	Astronomical algorithm with backtracking. TrueCapture™ upgrades available for terrain adaptive backtracking and diffuse tracking mode.
Control electronics	NX tracker controller with inbuilt inclinometer and backup battery.
Communications	Zigbee wireless communications to all tracker rows and weather stations via network control units (NCUs).
Nighttime stow	Yes
Power supply	Self powered: NX provided 30 or 60W Smart Panel AC powered: Customer-provided 120-240 V_{AC} circuit

INSTALLATION, OPERATIONS AND SERVICE

PE stamped structural calculations and drawings	Included
Onsite training and system commissioning	Included
Installation requirements	Simple assembly using swaged fasteners and bolted connections. No field cutting, drilling or welding.
Monitoring	NX Data Hub™ centralized data aggregation and monitoring
Module cleaning compatibility	Compatible with NX qualified cleaning systems.
Warranty	10-year structural, 5-year drive and control components
Codes and standards	UL 3703, UL 2703, IEC 62817

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Exhibit J

Interconnection Queue Information

[Attached]

Status Changes | Payments | Messages | Application Fields | Files | Utility Fields | Forms | DER Aggregation | Scheduled Notifications

Application Summary

Current Status: In Completeness Review

Created by Digital Solar Toolkit

PROJECT
Junegrass Solar, LLC

LOCATION
Farmland South of E 1300 N Rd , Pontiac, Illinois 61739

ACCOUNT NUMBER
-

TYPE
Level 4

ENERGY SOURCE
Solar

PROJECT ID
23-05805

STATUS
In Completeness Review

DUE DATE
5/16/23

OWNER
-

SPOC
Ernesto Deloera

TOTAL EXPORT CAPACITY (KW)
-

TOTAL INSTALLED SYSTEM CAPACITY
2000.00

TOTAL SYSTEM GENERATION DC (KW)
3100.00

TOTAL STORAGE CAPACITY (KW)
0

Application Milestones

- Submitted — 13 days ago
- In Completeness Review — 6 days ago
- In Scoping Review
- Approved
- Withdraw
- Interconnection Completed

Status Changes

Current Status: In Completeness Review

EFFECTIVE CHANGE DATE	EFFECTIVE CHANGE TIME	STATUS	CREATED DATE	CREATED TIME
Tuesday, May 2, 2023	7:38:36 AM	In Completeness Review	Tuesday, May 2, 2023	7:38:36 AM
Tuesday, May 2, 2023	7:38:26 AM	Payment Received	Tuesday, May 2, 2023	7:38:26 AM
Tuesday, April 25, 2023	4:53:07 PM	Submitted	Tuesday, April 25, 2023	4:53:07 PM
Tuesday, April 18, 2023	4:11:11 PM	Saved	Tuesday, April 18, 2023	4:11:11 PM