

CASE NO. 2020-00219
AEUG MADISON SOLAR, LLC
RESPONSES TO WELLS ENGINEERING'S SECOND REQUEST FOR INFORMATION

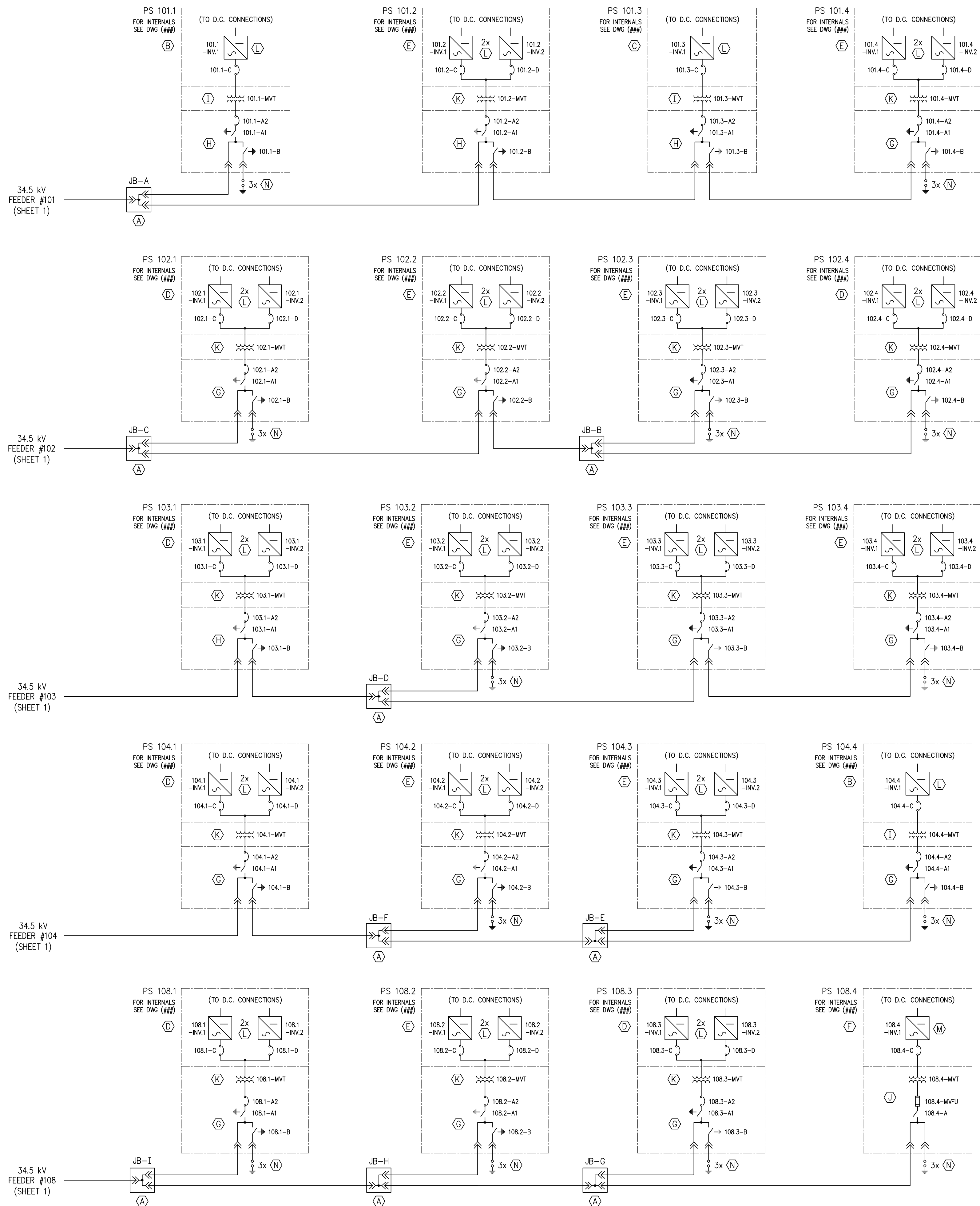
Question #1

Electrical One-Line Diagram

Applicant to submit the missing Sheet 2 of the 'Single line diagram.'

RESPONSE: Please refer to the attached document.

WITNESS: Jaime Saez Ramirez



LEGEND	
INV	INVERTER
JB	JUNCTION BOX
MVFU	MEDIUM VOLTAGE FUSE
MVT	MEDIUM VOLTAGE TRANSFORMER

PLANT A.C. EQUIPMENT				
ITEM	DESCRIPTION	MANUFACTURER	MODEL	QTY.
A	CABLE JUNCTION BOX (SECTIONALIZING CABINET), 3 POSITION, 600 A, 34.5 kV NOMINAL, 200 kV BIL	(T.B.D.)	(T.B.D.)	9
B	INVERTER POWER STATION SKID WITH CONTROL/COMMUNICATIONS PACKAGE AND JANITZA POWER METER	INGETEAM	FSK 3600TL	2
C	INVERTER POWER STATION SKID WITH CONTROL/COMMUNICATIONS PACKAGE	INGETEAM	FSK 3600TL	1
D	INVERTER POWER STATION SKID WITH CONTROL/COMMUNICATIONS PACKAGE AND JANITZA POWER METER	INGETEAM	FSK 7200TL	6
E	INVERTER POWER STATION SKID WITH CONTROL/COMMUNICATIONS PACKAGE	INGETEAM	FSK 7200TL	10
F	INVERTER POWER STATION SKID WITH CONTROL/COMMUNICATIONS PACKAGE	SUNGROW	SG3150U-MV	1
G	SWITCHGEAR, METAL-ENCLOSED, OUTDOOR, 3 BAYS, 600 A, 20 kAIC, 38 kV NOMINAL, 150 kV BIL	ORMAZABAL	CGM.3	15
H	SWITCHGEAR, METAL-ENCLOSED, OUTDOOR, 3 BAYS, 600 A, 25 kAIC, 38 kV NOMINAL, 150 kV BIL	ORMAZABAL	CGM.3	4
I	TRANSFORMER, OIL-FILLED, OUTDOOR, 3φ, VECTOR=Dy11, 3145 kVA, 34500-615 V, 200 kV BIL	ELTAS	(T.B.D.)	3
J	TRANSFORMER, OIL-FILLED, OUTDOOR, 3φ, VECTOR=Dy1 or Dy11, 3150 kVA, 34500-630 V, 200 kV BIL, WITH INTEGRAL FUSES AND SWITCH	(T.B.D.)	(T.B.D.)	1
K	TRANSFORMER, OIL-FILLED, OUTDOOR, 3φ, VECTOR=Dy11, 6290 kVA, 34500-615 V, 200 kV BIL	ELTAS	(T.B.D.)	16
L	INVERTER, METAL-ENCLOSED, OUTDOOR, 3274 kVA, 1500 VDC, 630 VAC	INGETEAM	3600TL C630	35
M	INVERTER, METAL-ENCLOSED, OUTDOOR, 3150 kVA, 1500 VDC, 630 VAC	SUNGROW	SG3150U-MV	1
N	ARRESTER, DISTRIBUTION CLASS, ELBOW TYPE, 24.4 kV MCOV, 40 kA WITHSTAND	(T.B.D.)	(T.B.D.)	42*

* PLUS 15 ARRESTERS FOR GROUNDING TRANSFORMERS ON SHEET 1

A 03-MAR-21 TL PRELIM DESIGN
 B
 C

**MADISON SOLAR
 SINGLE LINE DIAGRAM**

XXXX

XXXX-DWG-HVS-101-000003

**PRELIMINARY DESIGN
 NOT FOR CONSTRUCTION**

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Question #2

Overall Project Layout

On the layout diagram the power lines, indicated with the symbol ++++++ POWER LINES, are not identified, please indicate the transmission lines & internal power lines, and submit a revised plot plan as necessary. This is required for assessing the radial clearances from the neighboring property structures.

RESPONSE: The power lines referenced in this question are existing lines, and not part of the scope of the project. We have provided an updated version of the layout (Attachment A).

WITNESS: Jaime Saez Ramirez

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Question #3

Overall Project Layout

On the layout diagram please locate the Plant and Utility substations.

RESPONSE: Please refer to the updated layout (Attachment A). The Utility substation is marked as POI Substation (POI = Point of Interconnection)

WITNESS: Jaime Saez Ramirez

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Question #4

Overall Project Layout

Please provide the information on the utilities like Water, Sewer, etc, to be provided to the O&M building, Warehouse, Project offices and Power Stations. This is required for assessing the capability of the proposed utilities.

RESPONSE: Power Stations will not require utility connections. The Operations and Project Offices connection to local utilities will follow the protocol for a new commercial building in the service territory. It is anticipated that the Operations and Project Offices will be served by the local Retail Electric Service Provider. Connections to water and sewer depend on the availability of local services and their distances from the Operations and Project Offices. Serving the site with on-site water and on-site septic system is still being considered.

WITNESS: Jaime Saez Ramirez

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Question #5

Overall Project Layout

Please locate and indicate the railroad on the layout, specifically for blocks A8, B3 & A16.

RESPONSE: Please refer to the updated layout (Attachment A), the railroad is now shown. The railroad is not affected by the Project.

WITNESS: Jaime Saez Ramirez

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Question #6

Overall Project Layout

Please locate and indicate the public roads/streets like KY 388, Lost Fork Road, Bill Eades Road, etc, on the plot plan.

RESPONSE: Please refer to the updated layout (Attachment A), the roads are now named.

WITNESS: Jaime Saez Ramirez

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Question #7

Site Survey

Applicant to provide a site survey diagram/report, available if any.

This will be used to identify and locate the project legal boundary, with the help of reference points, monuments, etc.

RESPONSE: Legal descriptions of the project parcels were included in the original application (Appendix B of the Site Assessment Report). These descriptions, in conjunction with a field survey, will be used to confirm the legal boundary of the project. In addition, a map of the parcels is presented on page 4 of the Property Value Impact Report (Appendix A of the Site Assessment Report.) An as-built survey will be completed at the end of project construction.

WITNESS: Kyle Gerking

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Question #8

Access control

Applicant to provide information on the proposed physical and cyber access control applicable to site as per BES and CIP requirements defined by NERC, FERC & DHS.

RESPONSE: AEUG Madison Solar, LLC will be under the purview Acciona Energy USA Global LLC's (AEUG) Internal Compliance Program, which includes the North America Electric Reliability Corporation's Critical Infrastructure Protection suite of Reliability Standards. All Bulk Electrical System Cyber Systems and applicable Cyber Assets located at AEUG Madison Solar, LLC will be secured and protected using various control methods to prevent unauthorized access from both a physical and cyber perspective. Only authorized personnel will be allowed to access AEUG Madison Solar, LLC's Bulk Electrical System Cyber Systems and applicable Cyber Assets, both from a physical and electronic means. Only required inbound and outbound cyber traffic will be allowed to access the operations technology network. Control methods used to protect AEUG Madison Solar, LLC's Bulk Electrical System Cyber Systems and applicable Cyber Assets will vary based on application and can include, but are not limited to, fences, doors, secured cabinets, physical locks, firewalls, managed network switches, virtual private networks, virtual local area networks, and demilitarized zones.

WITNESS: Jaime Saez Ramirez

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Question #9

Good environmental history

Applicant to provide information on applicant's history of good environmental compliance as per KRS 278.710 (1) (i).

RESPONSE: Neither AEUG Madison Solar, which is the Applicant and sole owner of the Project, nor Acciona Energy USA Global LLC, which is the parent and sole owner of AEUG Madison Solar has violated any federal or state environmental laws or have been issued a notice of violation. Both AEUG Madison Solar and Acciona Energy USA Global LLC work closely with state and federal environmental regulatory divisions to obtain all required permits and authorizations to perform regulated activities. Consultations with state and federal agencies regarding this project have begun.

WITNESS: Mary Connor

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Question #10

Full time staff

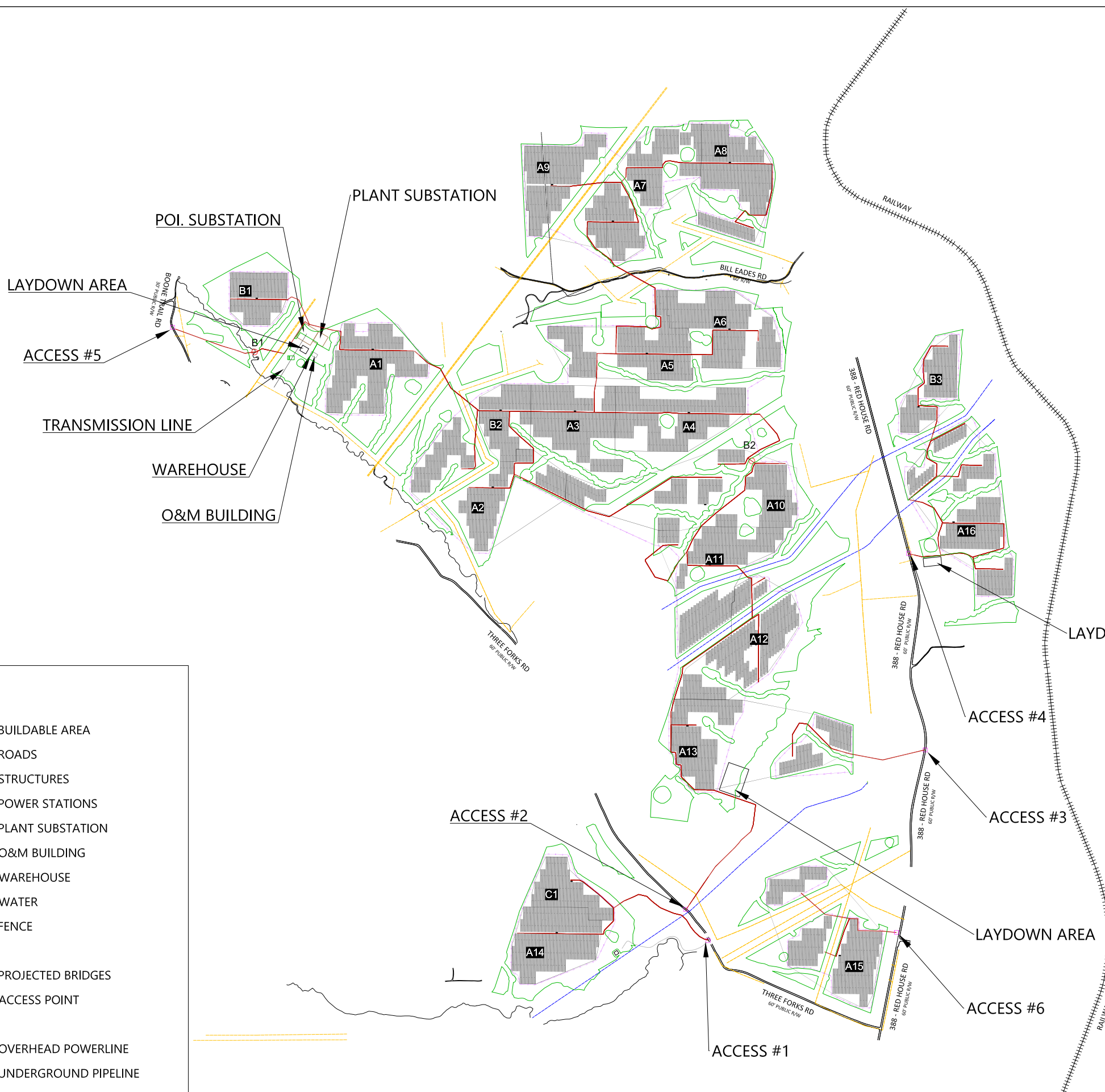
Applicant to provide an approximate number of full-time employees working at site after construction is complete and the facility operational.

RESPONSE: Five full-time Technicians will be employed at the project site after construction.

This will include one Lead Technician and four PV Technicians.

WITNESS: Dave Gladem

Attachment A - Updated Layout



Project data:		PV plant summary:	
Project name:	Madison Solar	Structure type:	HSAT single row
Country:	EEUU	Module technology:	MonoPERC / Bifacial
COD Date:	Q4 2022	Inverter technology:	Central
Site information:		1/GCR:	2,50
Zone/Datum:		Tilt:	+ 55
Latitude/UTM-X:	37,818	Nº Block A:	16
Longitude/UTM-Y:	-84,285	Nº Block B:	3
Altitude (m.a.s.l.):	250	Nº Block C:	1
Area (ha):			
Structure		Total structures:	2555,5
Manufacturer:	Not defined	Total modules:	275994
Nº modules/structure:	108/54/27	Total strings:	10222
Module position:	1P	Pmax connection point (kW):	100000,0
Structure elevation:	2	P inverter nominal (kVA):	117739,0
PV module size:		Total peak power (kW):	125577,3
JAM72D20-455/MB	2,148 x 1,06	Ratio Pp/Pn POI:	1,256
		Ratio Pp/Pinv cos (φ)=1:	1,067

Power block type	Block A	Block B	Block C
PV module:	JAM72D20-455/MB	JAM72D20-455/MB	JAM72D20-455/MB
Inverter:	Ingecon Sun 3600TL C630	Ingecon Sun 3600TL C630	SG3150U-MV
Nº Modules/string:	27	27	27
Nº Inverters:	2	1	1
Nº Strings/inverter:	284	284	282
Nº Strings:	568	284	282
Nº modules:	15336	7668	7614
Peak power (kWp):	6977,9	3488,9	3464,4
Nominal power (kVA):	6548,0	3274,0	3149,0
Design power (kW):	5752,0	2876,0	2897,0
Ratio Pp/Pn cos φ=1:	1,066	1,066	1,100
Structure number:	142,00	71,00	70,50

LEGEND

- BUILDABLE AREA
- ROADS
- STRUCTURES
- POWER STATIONS
- PLANT SUBSTATION
- O&M BUILDING
- WAREHOUSE
- WATER
- FENCE
- PROJECTED BRIDGES
- ACCESS POINT
- OVERHEAD POWERLINE
- UNDERGROUND PIPELINE

REV.	BASED ON LAYOUT	DATE	PURPOSE	DESCRIPTION
1.11	C02172_P_AE_EN_CST_ERR_990000001	1.0	02/03/2021	FOR INFORMATION
1.10	C02172_P_AE_EN_CST_ERR_990000001	1.0	19/02/2021	FOR INFORMATION
1.9	C02172_P_AE_EN_CST_ERR_990000001	1.0	09/02/2021	FOR INFORMATION
1.8	C02172_P_AE_EN_CST_ERR_990000001	1.0	15/01/2021	FOR INFORMATION



DATUM	PROJECT	DESIGNED	DRAWN	CHECKED	VERIFIED	APPROVED			
NSRS11.KY-SF	MADISON SOLAR	N/A	P.G.B	N/A	N/A	N/A			
PROJECTION	TITLE	SCALE	ACCIONA CODE	EXTERNAL CODE	DRAW.NUMBER	REVISION	SHEET	DATE	PAPER
	GENERAL LAYOUT	0 1000 2000 Feet	C02245_P_AE_EN_LYT_CWS_980000001	N/A	N/A	1.11	01 OF 01	02/03/2021	A3