R. MARSIL JOHNSON
RICHARD L. JOHNSON
BLAIR STERLING JOHNSON & MARTINEZ
A PROFESSIONAL CORPORATION
238 ARCHBISHOP FLORES ST STE 1008
HAGÅTÑA GU 96910-5205
TELEPHONE: (671) 477-7857

Attorneys for Party in Interest ENGIE Solar

DATE: 3.13.2020
TIME: 2:50
19.010/20.001

IN THE OFFICE OF PUBLIC ACCOUNTABILITY
PROCUREMENT APPEAL

In the Appeal of **GlidePath Marianas Operations, Inc.** **Appellant.**	**Docket No. OPA-PA-19-010** **OPA-PA-20-001** **ENGIE SOLAR'S** **EXHIBIT LIST**

ENGIE SOLAR ("ENGIE"), hereby submits its Exhibit List for the hearing in this matter.

1. Excerpts of ENGIE Technical Proposal at PR page 2,086 and 2,323 of 12,444, marked as Exhibit "a".

2. Excerpts of AES Distributed Energy Technical Proposal at Procurement Record ("PR") page 1,422 and 1,574 of 12,444), marked as Exhibit "b".

3. Excerpts of KEPCO/HEC Consortium Technical Proposal at PR page 2,603, 3,300, and 3867-3870 of 12,444, marked as Exhibit "c".

4. Excerpt of X-ELIO Technical Proposal at PR page 4956, 5141, 5,148, and 5,178-5182 of 1244, marked as Exhibit "d".

5. Excerpts of GlidePath Marians Operations, Inc. Technical Proposal at PR page 4,477 and 4,855 of 12,444, marked as Exhibit "e".

6. Excerpts of Amendment XVII at PR 5,823 and 5,826 of 1244, marked as Exhibit "f".

7. Excerpt of Amendment XIII at PR 6591 of 1244, marked as Exhibit "g".

8. Excerpt of ENGIE Technical Proposal, specifically sections A3-b, A3-c, and A3-d at PR pages 2109-2121 of 12,444, marked as Exhibit "h".

9. Excerpt of GlidePath Marians Operations, Inc. Technical Proposal, specifically sections A3-b, A3-c, and A3-d at PR pages 4512-4517 of 12,444, marked as Exhibit "i".

10. Supplement & Update to Volume II – Technical Qualification Proposal Requirements Description of Operation / Key Characteristics & Technical Requirements December 2018 at PR page 6714 to 6716, marked as Exhibit "j".

11. ENGIE Slides, marked as Exhibit "k".

12. GPA's Denial of GlidePath Procurement Protest 1 at PR page 68-70 of 12,444, marked as Exhibit "l".

13. GPA's Denial of GlidePath Procurement Protest 2 at Supplemental Procurement Record page 4-6 of 65, marked as Exhibit "m".

14. GlidePath Marians Operations, Inc. Notice of Appeal, dated November 13, 2019, at PR page 18-27 of 12,444, marked as Exhibit "n".

15. ENGIE Poster A, marked as Exhibit "o".

16. ENGIE Poster B, marked as Exhibit "p".

17. ENGIE Poster C, marked as Exhibit "q".

ENGIE reserves the right to introduce and use any exhibit identified in the exhibit lists submitted by the GlidePath Marians Operations, Inc. or Guam Power Authority as well as any exhibit that becomes necessary and relevant for the purposes of refreshing recollection, impeachment, rebuttal, or for any other purposes during the hearing in this matter.

ENGIE also reserves the right to amend this exhibit list prior to the hearing.

DATED this 13th day of March, 2020.

BLAIR STERLING JOHNSON & MARTINEZ
A PROFESSIONAL CORPORATION

BY: ______________________
R. MARSIL JOHNSON
Attorneys for Party in Interest ENGIE Solar

ATTACHMENTS

U68\16947-01
G:\PLD\RMJ\243-EXHIBIT LIST RE ENGIE SOLAR.DOCX

Exhibit "a"

TECHNICAL QUALIFICATION PROPOSAL

The solar photovoltaic ("**PV**") and Battery Energy Storage systems ("**BESS**") proposed by ENGIE for South Finegayan site (the "**Facility**") is comprised of the following:

- 26.47MWp PV peak power installed;
- 30MW AC export capacity;
- 146MWh BESS installed capacity @ BOL.

The proposed size is the result of an optimization analysis carried out by ENGIE to maximize savings for GPA and to provide grid support and resiliency functions described in the Invitation for Bid – Volume II: Technical Qualification Requirements.

The solution designed and proposed by ENGIE for the project is based on a proven technology with over one year of operational history in the utility-scale environment:

- Dynapower, our preferred inverter and DC-DC converter supplier, has commissioned over 52MW of Power Conversion Systems ("**PCS**") globally between 2011 and 2015; more recently, Dynapower has worked with SMA and Tesla; for BESS and solar PV applications;
- Samsung SDI, our selected lithium-ion battery supplier, operate on the battery energy storage market since 2010 with over 10GWh of battery storage installed in more than 30 countries.

The proposed Commercial Operation Date ("**COD**") for the Facility is July 2022. Throughout the Power Purchase Agreement ("**PPA**") term, ENGIE will also be responsible for the Operation and Maintenance ("**O&M**") of the Facility, inclusive of 24/7 remote monitoring, scheduled maintenance (scheduled jointly with GPA) and extraordinary maintenance.

1.1 Key design criteria

The proposed Facility is designed to provide completely dispatchable renewable energy. It is composed of:

- A 26.47 MWp PV plant
- A 36 MVA/146 MWh BESS

The PV plant generates renewable solar energy during daytime.
The BESS is designed to **time-shift 100% of the daily PV production** for use during the evening hours of the day, i.e. over the period of time starting from 5pm to midnight.

Moreover, if and when required by GPA, the BESS is also capable of providing the following functionalities:

ENGIE

TECHNICAL QUALIFICATION PROPOSAL

The solar photovoltaic ("**PV**") and Battery Energy Storage systems ("**BESS**") proposed by ENGIE for Naval Base site (the "**Facility**") is comprised of the following:

- 27.64MWp PV peak power installed;
- 30MW AC export capacity;
- 146MWh BESS installed capacity @ BOL.

The proposed size is the result of an optimization analysis carried out by ENGIE to maximize savings for GPA and to provide grid support and resiliency functions described in the Invitation for Bid – Volume II: Technical Qualification Requirements.

The solution designed and proposed by ENGIE for the project is based on a proven technology with over one year of operational history in the utility-scale environment:

- Dynapower, our preferred inverter and DC-DC converter supplier, has commissioned over 52MW of Power Conversion Systems ("**PCS**") globally between 2011 and 2015; more recently, Dynapower has worked with SMA and Tesla for BESS and solar PV applications;
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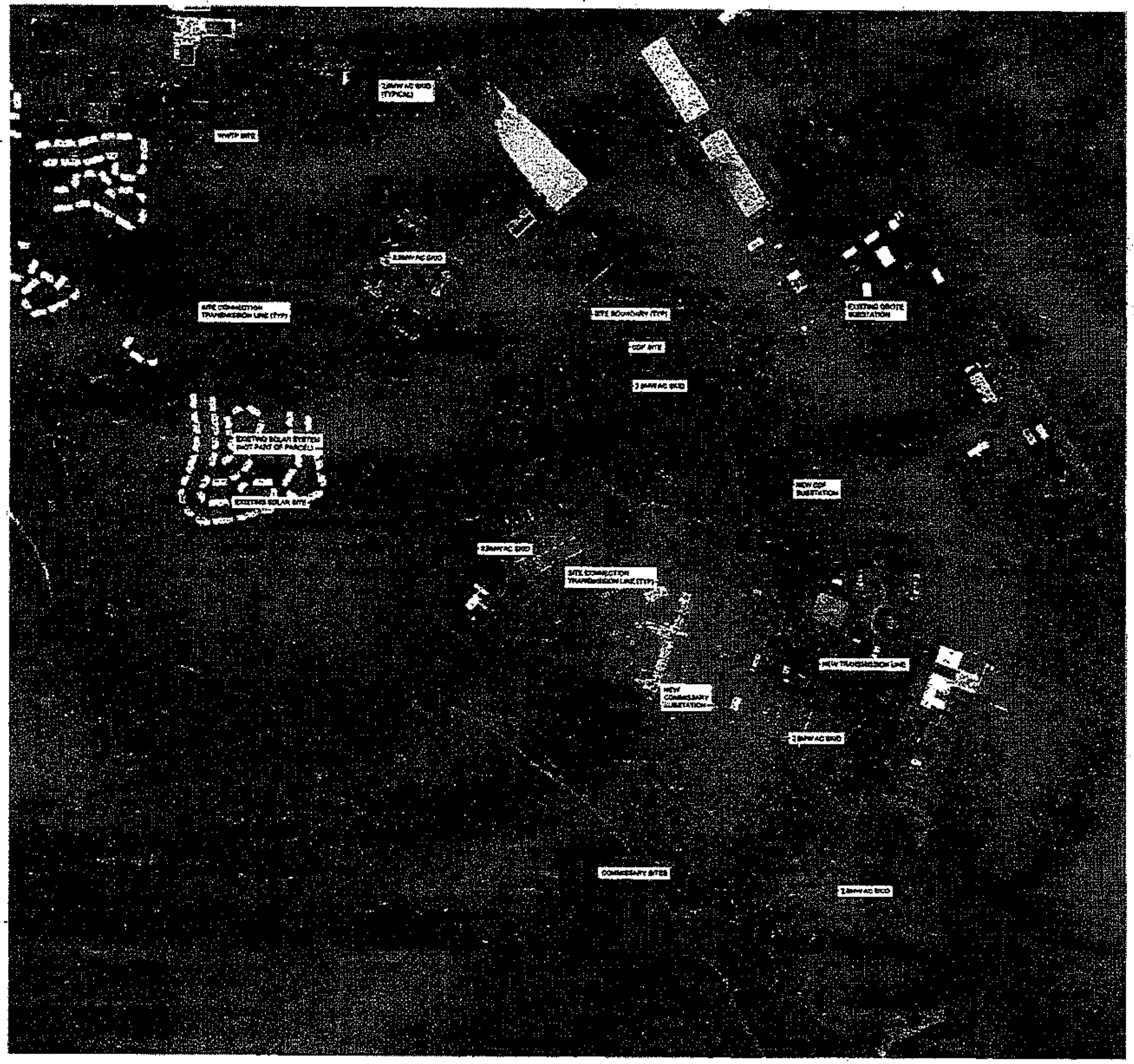
The BESS is designed to **time-shift 100% of the daily PV production** for use during the evening hours of the day, i.e. over the period of time starting from 5pm to midnight.

Moreover, if and when required by GPA, the BESS is also capable of providing the following functionalities:

Exhibit "b"



N

DESIGN SPECIFICATIONS		
DC SYSTEM VOLTAGE	1500V	
ARRAY CAPACITY	[illegible] MW DC	
	[illegible] MW AC (AT POI)	
DC/AC RATIO	[illegible]	
MODULE	FIRST SOLAR SERIES 6 THIN FILM	
MODULE WATTAGE	[illegible]	
MODULE QUANTITY	[illegible]	
STRINGS	[illegible] STRINGS OF [illegible] MODULES	
INVERTERS (QTY)	[illegible] INVERTERS WITH INTEGRAL BESS DC/DC CONVERSION	
BATTERY STORAGE	[illegible] BATTERY CONTAINERS	
RACKING SYSTEM	[illegible]	
AZIMUTH	[illegible]	
PANEL TILT ANGLE	[illegible]	
ROW TO ROW SPACING	[illegible]	
AISLE WIDTH	[illegible]	
PROJECT AREA	NWTP SITE	[illegible]
	CDF SITE	[illegible]
	EX. SOLAR SITE	[illegible]
	COMMISSARY	[illegible]
	TOTAL	[illegible]

Distributed Energy

AES Distributed Energy
4875 Pearl East Circle
Suite 200
Boulder, CO 80301 USA

SYSTEM DESCRIPTION
COMBINED PV + BESS
RENEWABLE PEAKER

REVISIONS

NAVAL BASE - GUAM

PROJECT NUMBER
[illegible]

PHASE DRAFT

MILESTONE
30% SUBMITTAL

ELECTRICAL DESIGNER
A. KANER

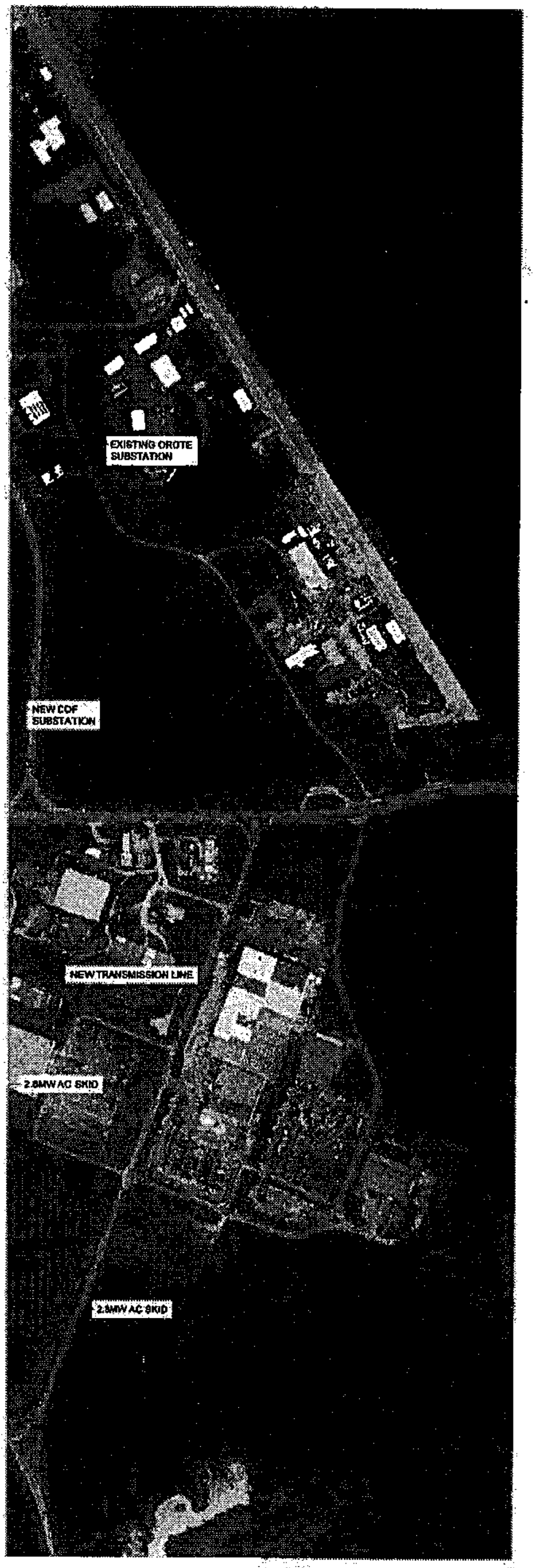
STRUCTURAL DESIGNER

DATE [illegible]

SCALE [illegible]

TITLE
OVERALL
SITE PLAN

DRAWING
E101



N

300 0 300 600
SCALE IN FEET

DESIGN SPECIFICATIONS		
DC SYSTEM VOLTAGE	1500V	
ARRAY CAPACITY	19.65 MW DC	
	20.00 MW AC (AT POI)	
DC/AC RATIO	0.98	
MODULE	FIRST SOLAR SERIES 6 THIN FILM	
MODULE WATTAGE	455Wp	
MODULE QUANTITY	43,200	
STRINGS	7200 STRINGS OF 6 MODULES	
INVERTERS (QTY)	(8) 2.8MW INVERTERS WITH INTEGRAL BESS DC/DC CONVERSION	
BATTERY STORAGE	(32) 625kW BATTERY CONTAINERS	
RACKING SYSTEM	FIXED EAST-WEST DUAL TILT	
AZIMUTH	0°	
PANEL TILT ANGLE	10°	
ROW TO ROW SPACING	39' - 3/8"	
AISLE WIDTH	12'-0"	
PROJECT AREA	WWTP SITE	15.87
	CDF SITE	18.87
	EX. SOLAR SITE	20.02
	COMMISSARY	23.98
	TOTAL	78.74

1. MODULES ARE POSITIONED FOUR DEEP IN PORTRAIT ORIENTATION. TWO UP AND TWO DOWN.
2. PV MODULE LAYOUT AND INVERTER LOCATIONS ARE SHOWN IN THEIR APPROXIMATE LOCATION(S).

AES
Distributed Energy

AES Distributed Energy
4875 Pearl East Circle
Suite 200
Boulder, CO 80301 USA

HDR

SYSTEM DESCRIPTION
COMBINED PV + BESS RENEWABLE PEAKER

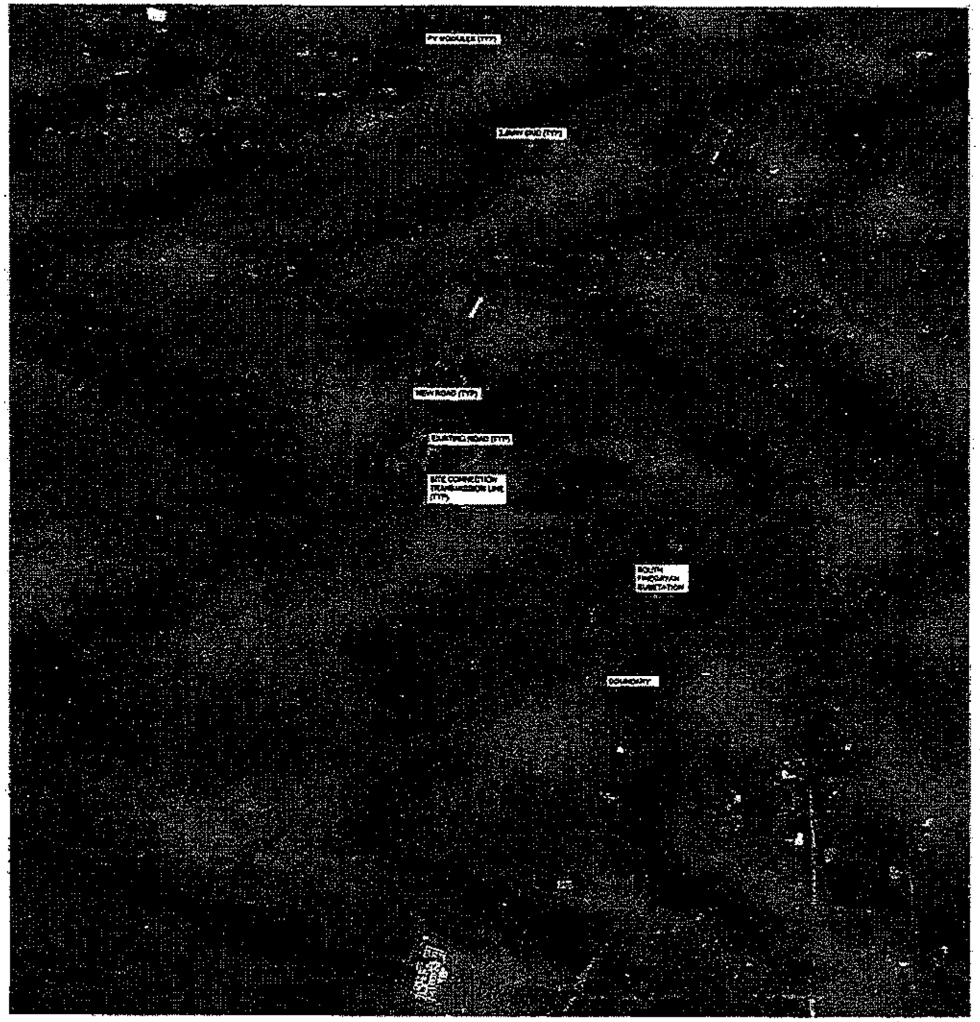
REVISIONS

REV	BY	DATE	DESCRIPTION
A	TL	5/22/2019	REVISED PER CLIENT

PE STAMP

NAVAL BASE - GUAM

PROJECT NUMBER 10134361
PHASE DRAFT
MILESTONE 30% SUBMITTAL
ELECTRICAL DESIGNER A. KANER
STRUCTURAL DESIGNER
DATE 09/21/18
SCALE 1" = 300'-0"
TITLE OVERALL SITE PLAN
DRAWING E101



N

DESIGN SPECIFICATIONS	
DC SYSTEM VOLTAGE	[illegible]
ARRAY CAPACITY	[illegible] MW DC
	[illegible] MW AC (AT POI)
DC/AC RATIO	[illegible]
MODULE	FIRST SOLAR SERIES 6 THIN FILM
MODULE WATTAGE	[illegible]
MODULE QUANTITY	[illegible]
STRINGS	[illegible] STRINGS OF [illegible] MODULES
INVERTERS (QTY)	[illegible] INVERTERS WITH INTEGRAL BESS DC/DC CONVERSION
BATTERY STORAGE	[illegible] BATTERY CONTAINERS
RACKING SYSTEM	FIXED EAST-WEST DUAL TILT
AZIMUTH	0°
PANEL TILT ANGLE	10°
ROW TO ROW SPACING	[illegible]
AISLE WIDTH	[illegible]
PROJECT AREA	[illegible] ACRES

1. MODULES ARE POSITIONED FOUR DEEP IN PORTRAIT ORIENTATION: TWO UP AND TWO DOWN.
2. PV MODULE LAYOUT AND INVERTER LOCATIONS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS.

AES Distributed Energy
AES Distributed Energy
4875 Pearl East Circle
Suite 200
Boulder, CO 80301 USA

HDR

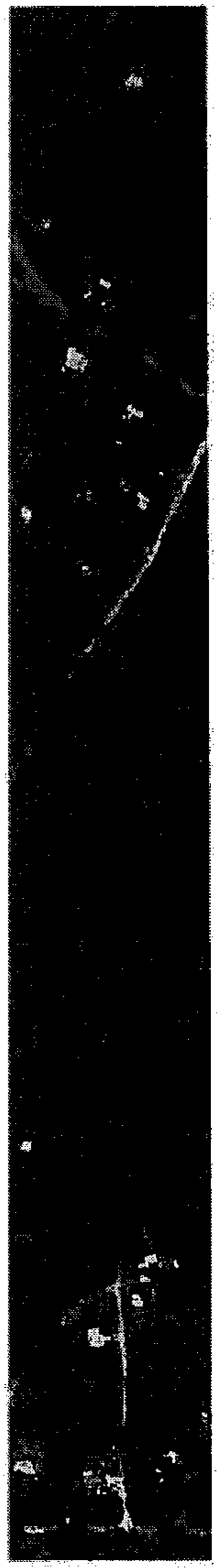
SYSTEM DESCRIPTION
COMBINED PV + BESS
RENEWABLE PEAKER

REV	BY	DATE	REVISIONS DESCRIPTION
A	TL	[illegible]	ISSUED FOR REVIEW

PE STAMP

SOUTH FINEGAYAN SITE - GUAM

PROJECT NUMBER XXXXXXXX
PHASE DRAFT
MILESTONE 30% SUBMITTAL
ELECTRICAL DESIGNER A. KAISER
STRUCTURAL DESIGNER
DATE [illegible] SCALE [illegible]
TITLE OVERALL SITE PLAN
DRAWING E102



N

200 0 200 400
SCALE IN FEET

DESIGN SPECIFICATIONS	
DC SYSTEM VOLTAGE	1500V
ARRAY CAPACITY	23.58 MW DC
	25 MW AC (AT POI)
DC/AC RATIO	0.94
MODULE	FIRST SOLAR SERIES 6 THIN FILM
MODULE WATTAGE	455Wp
MODULE QUANTITY	51,840
STRINGS	8,640 STRINGS OF 6 MODULES
INVERTERS (QTY)	(10) 2.8MW INVERTERS WITH INTEGRAL BESS DC/DC CONVERSION
BATTERY STORAGE	(40) 625kW BATTERY CONTAINERS
RACKING SYSTEM	FIXED EAST-WEST DUAL TILT
AZIMUTH	0°
PANEL TILT ANGLE	10°
ROW TO ROW SPACING	39' - 3/8"
AISLE WIDTH	12'-0"
PROJECT AREA	78.74 ACRES

1. MODULES ARE POSITIONED FOUR DEEP IN PORTRAIT ORIENTATION, TWO UP AND TWO DOWN.
2. PV MODULE LAYOUT AND INVERTER LOCATIONS ARE SHOWN IN THEIR APPROXIMATE LOCATION(S).

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Distributed Energy

AES Distributed Energy
4875 Pearl East Circle
Suite 200
Boulder, CO 80301 USA

HDR

SYSTEM DESCRIPTION
COMBINED PV + BESS
RENEWABLE PEAKER

REVISIONS

REV	BY	DATE	DESCRIPTION
A	TL	5/22/2019	REVISED PER CLIENT

PE STAMP

SOUTH FINEGAYAN SITE - GUAM

PROJECT NUMBER XXXXXXXX
PHASE DRAFT
MILESTONE 30% SUBMITTAL
ELECTRICAL DESIGNER A. KANER
STRUCTURAL DESIGNER
DATE 07/03/18
SCALE 1" = 300'-0"
TITLE
OVERALL SITE PLAN
DRAWING
E102

Exhibit "c"

A5-a-2. Type of generation technology

Proposed Technology

The project will utilize solar PV modules, which are currently the most widely used and most proven reliable renewable energy technology. PV modules produce energy through the photovoltaic effect, where light particles stimulate the movement of electrons in a positive-negative (p-n) junction. The movement of electrons itself produce a current of electricity which is collected through busbars - connection lines imprinted on the solar cells. The technology only requires sunshine to produce energy, and the photovoltaic effect itself does not produce any kind of noise or residual debris. Also, in order to meet the IFB requirements for ramp rate control, the PV Power plant will be installed with an ESS solution together.

A5-a-3. Major equipment considered or expected to be used

Power Plant Summary

The PV power plant is designed with a nameplate capacity of 21.0MWdc. For the total power plant 8 Inverters are used with a total configuration of 53,872 modules. At each 2500 kVA inverters and 2750 kVA inverters are 12 input combiner box connections, where each combiner box input consists of 24~28 strings and where string consists of 30 modules with a Q-PEAK 390 Wp nameplate capacity. The modules will be supplied by Hanwha Q CELLS, and the inverters by SMA (or equivalent).

A5-a-3. Major equipment considered or expected to be used

Power Plant Summary

The PV power plant is designed with a nameplate capacity of 21.06MWdc. For the total power plant 7 Inverters are used with a total configuration of 54,012 modules. At each 2750 kVA inverter is 12 input combiner box connections, where each combiner box input consists of 24~28 strings and where string consists of 30 modules with a Q-PEAK 390 Wp nameplate capacity. The modules will be supplied by Hanwha Q CELLS, and the inverters by SMA (or equivalent)

Grid-Connected System: Simulation parameters

Project :	**Finegayan**			
Geographical Site	**Guam-Finegayan**		Country	**Guam**
Situation	Latitude	13.53° N	Longitude	144.82° E
Time defined as	Legal Time	Time zone UT+9.6	Altitude	104 m
	Albedo	0.20		
Meteo data:	**Guam-Finegayan**	SolarGIS - Synthetic		

Simulation variant :	**390Wp 20190524**			
	Simulation date	24/05/19 10h34		

Simulation parameters	System type	**Unlimited sheds**		
Collector Plane Orientation	Tilt	5°	Azimuth	0°
Sheds configuration	Nb. of sheds	20	Unlimited sheds	
	Sheds spacing	5.00 m	Collector width	4.05 m
Shading limit angle	Limit profile angle	20.1°	Ground cov. Ratio (GCR)	81.0 %
Shadings electrical effect	Cell size	15.6 cm	Strings in width	2
Models used	Transposition	Perez	Diffuse	Perez, Meteonorm
Horizon	Free Horizon			
Near Shadings	Mutual shadings of sheds	Electrical effect		
User's needs :	Unlimited load (grid)			
Power factor	Cos(phi)	0.950 leading	Phi	18.2°

PV Arrays Characteristics (2 kinds of array defined)

PV module Si-mono	Model	**Q.PEAK DUO L-G5.2 390**		
Custom parameters definition	Manufacturer	Hanwha Q Cells		
Sub-array "Sub-array #1"				
Number of PV modules	In series	28 modules	In parallel	570 strings
Total number of PV modules	Nb. modules	15960	Unit Nom. Power	390 Wp
Array global power	Nominal (STC)	**6224 kWp**	At operating cond.	5649 kWp (50°C)
Array operating characteristics (50°C)	U mpp	1026 V	I mpp	5505 A
Sub-array "Sub-array #2"				
Number of PV modules	In series	28 modules	In parallel	1359 strings
Total number of PV modules	Nb. modules	38052	Unit Nom. Power	390 Wp
Array global power	Nominal (STC)	**14840 kWp**	At operating cond.	13469 kWp (50°C)
Array operating characteristics (50°C)	U mpp	1026 V	I mpp	13126 A
Total Arrays global power	Nominal (STC)	**21065 kWp**	Total	54012 modules
	Module area	**108834 m²**	Cell area	95044 m²

Sub-array "Sub-array #1" : Inverter	Model	**Sunny Central 2750-EV_Vers.B1_35°C**		
Custom parameters definition	Manufacturer	SMA		
Characteristics	Operating Voltage	849-1425 V	Unit Nom. Power	2750 kWac
Inverter pack	Nb. of inverters	2 units	Total Power	5500 kWac
			Pnom ratio	1.13

Grid-Connected System: Simulation parameters

Sub-array "Sub-array #2" : Inverter — Model: **Sunny Central 2750-EV_Vers.B1_35°C**
Custom parameters definition — Manufacturer: SMA
Characteristics — Operating Voltage: 849-1425 V — Unit Nom. Power: 2750 kWac
Inverter pack — Nb. of inverters: 5 units — Total Power: 13750 kWac
Pnom ratio: 1.08

Total — Nb. of inverters: 7 — Total Power: 19250 kWac

PV Array loss factors

Array Soiling Losses — Loss Fraction: 1.0 %
Thermal Loss factor — Uc (const): 29.0 W/m²K — Uv (wind): 0.0 W/m²K / m/s
Wiring Ohmic Loss — Array#1: 3.1 mOhm — Loss Fraction: 1.5 % at STC
Array#2: 1.3 mOhm — Loss Fraction: 1.5 % at STC
Global — Loss Fraction: 1.5 % at STC
LID - Light Induced Degradation — Loss Fraction: 2.0 %
Module Quality Loss — Loss Fraction: -0.3 %
Module Mismatch Losses — Loss Fraction: 1.0 % at MPP
Strings Mismatch loss — Loss Fraction: 0.10 %
Incidence effect (IAM): User defined profile

0°	20°	30°	40°	50°	60°	70°	80°	90°
1.000	1.000	1.000	1.000	1.000	1.000	0.950	0.750	0.000

System loss factors

AC loss, transfo to injection — Grid Voltage: 35 kV
Wires: 3x240.0 mm² — 7362 m — Loss Fraction: 1.0 % at STC
External transformer — Iron loss (24H connexion): 20639 W — Loss Fraction: 0.1 % at STC
Resistive/Inductive losses: 576.7 mOhm — Loss Fraction: 1.0 % at STC
Unavailability of the system — 3.6 days, 3 periods — Time fraction: 1.0 %

Auxiliaries loss — Constant during operation: 16.00 kW — ... from Power thresh.: 16.0 kW

PVSYST V6.79	WSP USA Inc. (United States)	24/05/19	Page 3/4
	1600 Broadway #1100		

Grid-Connected System: Main results

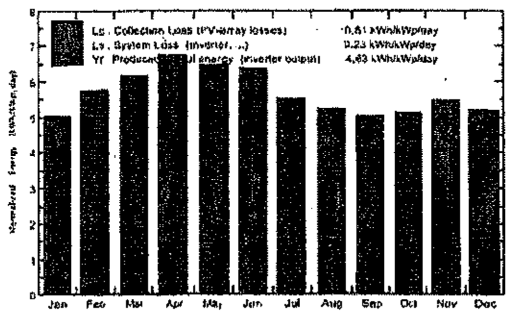
Project : **Finegayan**

Simulation variant : **390Wp 20190524**

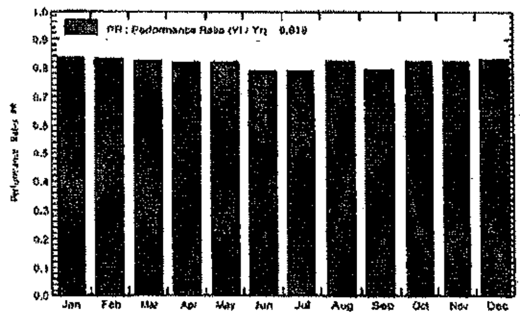
Main system parameters	System type	**Unlimited sheds**		
PV Field Orientation	Sheds disposition, tilt	5°	azimuth	0°
PV modules	Model	Q.PEAK DUO L-G5.2 390	Pnom	390 Wp
PV Array	Nb. of modules	54012	Pnom total	**21065 kWp**
Inverter		Sunny Central 2750-EV_Vers.B1_35°C	Pnom	2750 kW ac
Inverter		Sunny Central 2750-EV_Vers.B1_35°C	Pnom	2750 kW ac
Inverter pack	Nb. of units	7.0	Pnom total	**19250 kW ac**
User's needs	Unlimited load (grid)		Cos(Phi)	0.950 leading

Main simulation results				
System Production	**Produced Energy**	**35634 MWh/year**	Specific prod.	1692 kWh/kWp/year
	Apparent energy	37513 MVAh	Perf. Ratio PR	81.78 %

Normalized productions (per installed kWp): Nominal power 21065 kWp



Performance Ratio PR



390Wp 20190524

Balances and main results

	GlobHor kWh/m²	DiffHor kWh/m²	T_Amb °C	GlobInc kWh/m²	GlobEff kWh/m²	EArray MWh	E_Grid MWh	PR
January	149.5	62.30	27.00	156.1	152.3	2848	2744	0.835
February	156.0	62.20	26.60	161.8	157.9	2934	2826	0.829
March	187.2	75.00	26.70	190.8	185.8	3440	3312	0.824
April	202.5	70.60	27.30	202.4	197.1	3635	3500	0.821
May	203.1	68.80	27.80	199.7	194.7	3588	3455	0.821
June	196.2	63.60	28.10	191.3	186.5	3450	3186	0.790
July	174.5	67.60	28.10	170.9	166.3	3084	2843	0.790
August	162.8	69.10	28.10	161.6	157.0	2917	2811	0.826
September	149.1	66.00	28.10	150.6	146.4	2717	2525	0.796
October	164.1	61.10	28.00	158.8	154.7	2868	2762	0.826
November	166.0	55.50	27.90	164.0	160.0	2965	2856	0.827
December	151.6	58.90	27.50	160.5	156.8	2921	2814	0.832
Year	2041.6	780.60	27.61	2068.5	2015.5	37367	35634	0.818

Legends:

GlobHor	Horizontal global irradiation	GlobEff	Effective Global, corr. for IAM and shadings
DiffHor	Horizontal diffuse irradiation	EArray	Effective energy at the output of the array
T_Amb	Ambient Temperature	E_Grid	Energy injected into grid
GlobInc	Global incident in coll. plane	PR	Performance Ratio

PVSYST V6.79	WSP USA Inc. (United States)	24/05/19	Page 4/4
	1600 Broadway #1100		

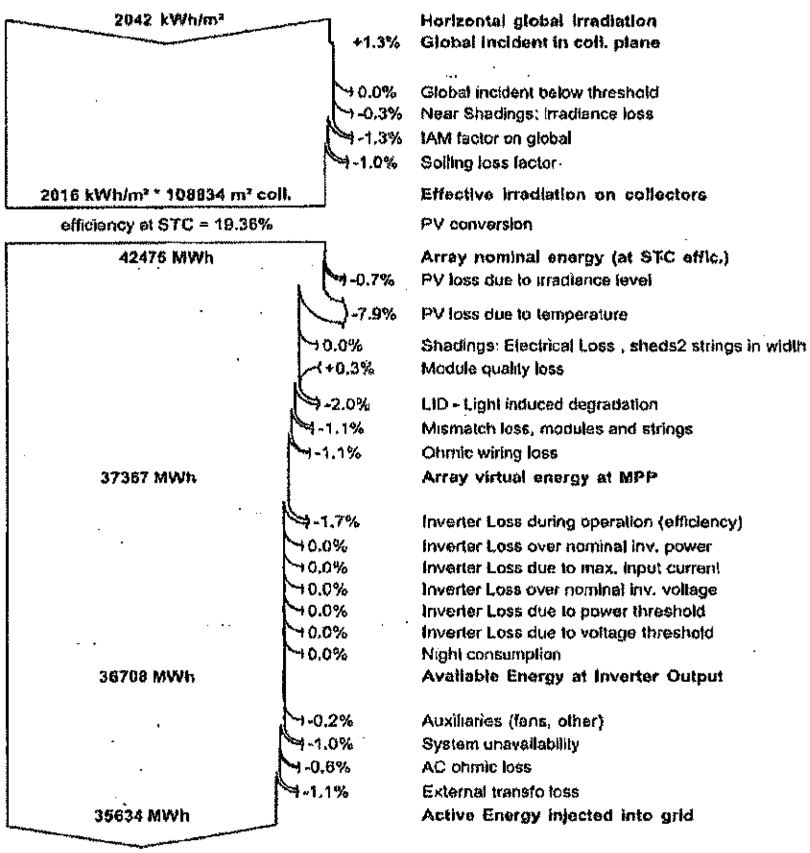
Grid-Connected System: Loss diagram

Project : **Finegayan**

Simulation variant : **390Wp 20190524**

Main system parameters	System type	**Unlimited sheds**		
PV Field Orientation	Sheds disposition, tilt	5°	azimuth	0°
PV modules	Model	Q.PEAK DUO L-G5.2 390	Pnom	390 Wp
PV Array	Nb. of modules	54012	Pnom total	**21065 kWp**
Inverter		Sunny Central 2750-EV_Vers.B1_35°C	Pnom	2750 kW ac
Inverter		Sunny Central 2750-EV_Vers.B1_35°C	Pnom	2750 kW ac
Inverter pack	Nb. of units	7.0	Pnom total	**19250 kW ac**
User's needs	Unlimited load (grid)		Cos(Phi)	0.950 leading

Loss diagram over the whole year



11724 MVAR — Reactive energy to the grid: Cos(Phi) = 0.950

37513 MVA — **Apparent energy to the grid**

Exhibit "d"

X-ELIO	PVSYST V6.79	X-Elio Energy S.L. (Spain)	31/05/19 13h35	Page 1/5

Grid-Connected System: Simulation parameters

Project :	**USA Guam TMY2 P50 y0**			
Geographical Site		**GUAM**	Country	**Guam**
Situation	Latitude	13.55° N	Longitude	144.83° E
Time defined as	Legal Time	Time zone UT+10	Altitude	110 m
	Albedo	0.20		
Meteo data:	**GUAM**	NREL NSRD : TMY2 - TMY . . .		

Simulation variant :	**Finegayan Guam North FS**	
	Simulation date	31/05/19 10h28

Simulation parameters	System type	**Ground system (tables) on a hill**		
Collector Plane Orientation	Tilt	13°	Azimuth	4°
Sheds configuration	Nb. of sheds	2096	Identical arrays	
	Sheds spacing	5.94 m	Collector width	4.04 m
Shading limit angle	Limit profile angle	24.6°	Ground cov. Ratio (GCR)	68.1 %
Models used	Transposition	Perez	Diffuse	Imported
Horizon	Free Horizon			
Near Shadings	Linear shadings			
User's needs :	Unlimited load (grid)			
Grid power limitation	Active Power	17.5 MW	Pnom ratio	1.170

PV Array Characteristics					
PV module	CdTe	Model	**FS-6445A Dec2017**		
Original PVsyst database		Manufacturer	First Solar		
Number of PV modules		In series	6 modules	In parallel	7670 strings
Total number of PV modules		Nb. modules	46020	Unit Nom. Power	445 Wp
Array global power		Nominal (STC)	**20479 kWp**	At operating cond.	20298 kWp (30°C)
Array operating characteristics (50°C)		U mpp	1124 V	I mpp	18059 A
Total area		Module area	**113904 m²**	Cell area	104362 m²
Inverter		Model	**Solargate PV4K8A60**		
Custom parameters definition		Manufacturer	Nidec ASI		
Characteristics		Operating Voltage	900-1400 V	Unit Nom. Power	4800 kWac
Inverter pack		Nb. of inverters	4 units	Total Power	19200 kWac
				Pnom ratio	1.07

PV Array loss factors				
Array Soiling Losses			Loss Fraction	2.0 %
Thermal Loss factor	Uc (const)	29.0 W/m²K	Uv (wind)	0.0 W/m²K / m/s
Wiring Ohmic Loss	Global array res.	0.95 mOhm	Loss Fraction	1.5 % at STC
Module Quality Loss			Loss Fraction	-1.3 %
Module Mismatch Losses			Loss Fraction	1.0 % at MPP
Strings Mismatch loss			Loss Fraction	0.50 %

X-ELIO

TECHNICAL DESCRIPTION

GUAM POWER AUTHORITY GPA

Photovoltaic installation connected to the grid in GUAM

Naval Base Guam Sites

PV Plant : 20 MWac / 24.975 MWdc
BESS: 14 MWac / 80 MWh

Situation

(GUAM)
13°25'5.90"N – 144°39'21"E

1.4.4 Support Structures

Structures are responsible for supporting the solar modules and providing them with the appropriate inclination. They will be installed on the ground on suitable foundations.

The structure's main features are:

- Ease of assembly due to the simplicity of its elements and joints
- All structural elements are hot-dip galvanized and powder coated.
- Excellent adaptability of the system to the topography of the terrain (slopes up to 15%)
- Anchoring ground through strong foundation.
- The angle is 13°.

For this project, will be installed:

- 261 2V6 structures
- 2208 2V12 structures

X-ELIO	PVSYST V6.79	X-Elio Energy S.L. (Spain)	31/05/19 13h36	Page 1/5

Grid-Connected System: Simulation parameters

Project :	**USA Guam TMY2 P50 y0**			
Geographical Site	**GUAM**		Country	**Guam**
Situation	Latitude	13.55° N	Longitude	144.83° E
Time defined as	Legal Time	Time zone UT+10	Altitude	110 m
	Albedo	0.20		
Meteo data:	**GUAM**	NREL NSRD : TMY2 - TMY		

Simulation variant :	**Naval Base Guam Sites**	
	Simulation date	31/05/19 10h32

Simulation parameters	System type	**Ground system (tables) on a hill**		
Collector Plane Orientation	Tilt	13°	Azimuth	3°
Sheds configuration	Nb. of sheds	2469	Identical arrays	
	Sheds spacing	5.94 m	Collector width	4.04 m
Shading limit angle	Limit profile angle	24.6°	Ground cov. Ratio (GCR)	68.1 %
Models used	Transposition	Perez	Diffuse	Imported
Horizon	Free Horizon			
Near Shadings	Linear shadings			
User's needs :	Unlimited load (grid)			
Grid power limitation	Active Power	20.0 MW	Pnom ratio	1.249

PV Array Characteristics

PV module	CdTe	Model	**FS-6445A Dec2017**		
Original PVsyst database		Manufacturer	First Solar		
Number of PV modules		In series	6 modules	In parallel	9354 strings
Total number of PV modules		Nb. modules	56124	Unit Nom. Power	445 Wp
Array global power		Nominal (STC)	**24975 kWp**	At operating cond.	24755 kWp (30°C)
Array operating characteristics (50°C)		U mpp	1124 V	I mpp	22024 A
Total area		Module area	**138912 m²**	Cell area	127276 m²
Inverter		Model	**Solargate PV4K8A60**		
Custom parameters definition		Manufacturer	Nidec ASI		
Characteristics		Operating Voltage	900-1400 V	Unit Nom. Power	4800 kWac
Inverter pack		Nb. of inverters	5 units	Total Power	24000 kWac
				Pnom ratio	1.04

PV Array loss factors

Array Soiling Losses			Loss Fraction	1.5 %
Thermal Loss factor	Uc (const)	29.0 W/m²K	Uv (wind)	0.0 W/m²K / m/s
Wiring Ohmic Loss	Global array res.	0.78 mOhm	Loss Fraction	1.5 % at STC
Module Quality Loss			Loss Fraction	-1.3 %
Module Mismatch Losses			Loss Fraction	1.0 % at MPP
Strings Mismatch loss			Loss Fraction	0.50 %

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Grid-Connected System: Simulation parameters

Incidence effect (IAM): User defined profile

0°	30°	55°	60°	65°	70°	75°	80°	90°
1.000	1.000	0.990	0.980	0.960	0.920	0.860	0.720	0.000

System loss factors

AC loss, transfo to injection	Grid Voltage	35 kV		
	Wires: 3x500.0 mm²	12891 m	Loss Fraction	1.0 % at STC
External transformer	Iron loss (24H connexion)	61952 W	Loss Fraction	0.3 % at STC
	Resistive/Inductive losses	480.3 mOhm	Loss Fraction	1.0 % at STC

Auxiliaries loss Proportionnal to Power 6.0 W/kW ... from Power thresh. 0.0 kW

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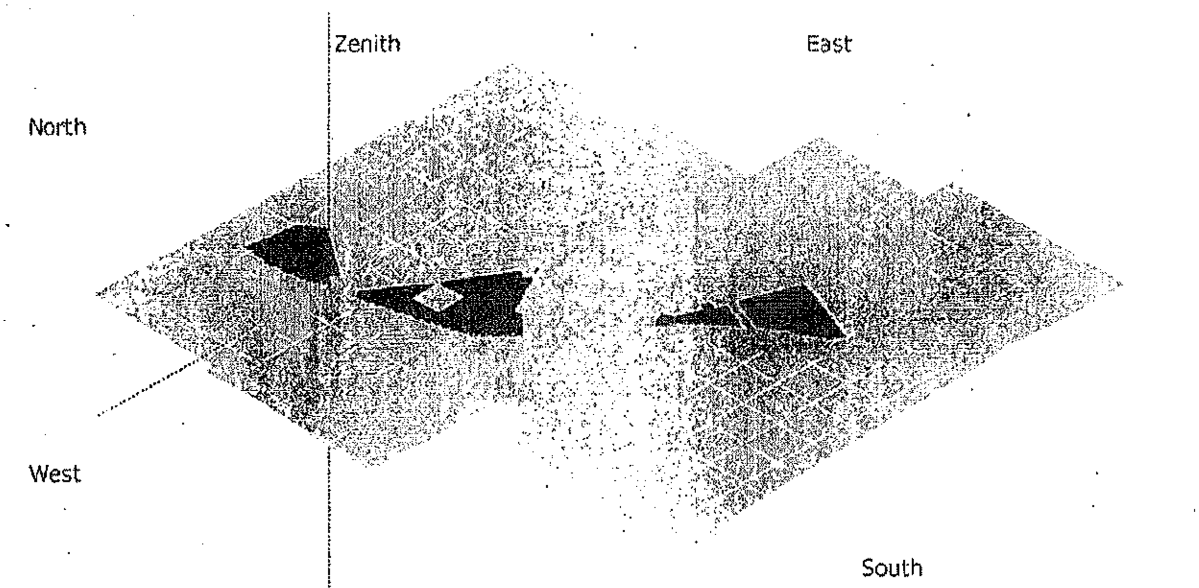
Grid-Connected System: Near shading definition

Project : **USA Guam TMY2 P50 y0**

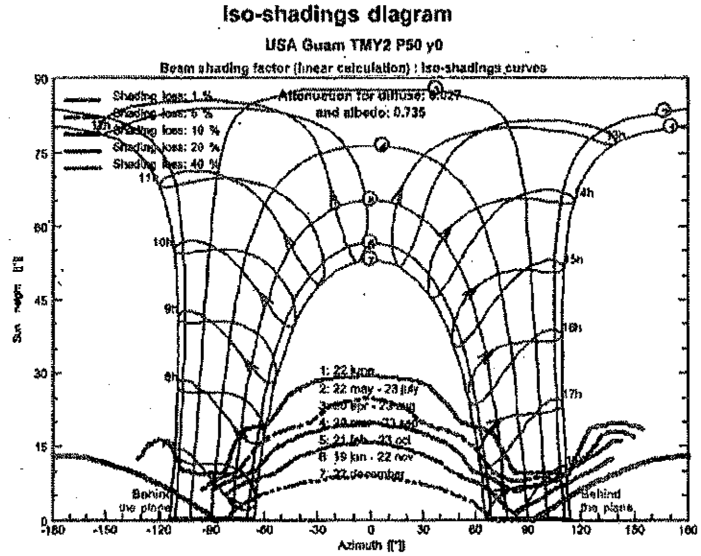
Simulation variant : **Naval Base Guam Sites**

Main system parameters	System type	**Ground system (tables) on a hill**		
Near Shadings	Linear shadings			
PV Field Orientation	tilt	13°	azimuth	3°
PV modules	Model	FS-6445A Dec2017	Pnom	445 Wp
PV Array	Nb. of modules	56124	Pnom total	**24975 kWp**
Inverter	Model	Solargate PV4K8A60	Pnom	4800 kW ac
Inverter pack	Nb. of units	5.0	Pnom total	**24000 kW ac**
User's needs	Unlimited load (grid)			

Perspective of the PV-field and surrounding shading scene



Iso-shadings diagram



X-ELIO	PVSYST V6.79	X-Elio Energy S.L. (Spain)	31/05/19 13h36	Page 4/5

Grid-Connected System: Main results

Project : **USA Guam TMY2 P50 y0**

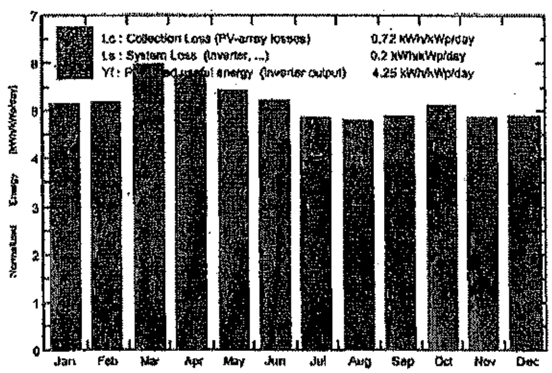
Simulation variant : **Naval Base Guam Sites**

Main system parameters	System type	**Ground system (tables) on a hill**		
Near Shadings	Linear shadings			
PV Field Orientation	tilt	13°	azimuth	3°
PV modules	Model	FS-6445A Dec2017	Pnom	445 Wp
PV Array	Nb. of modules	56124	Pnom total	**24975 kWp**
Inverter	Model	Solargate PV4K8A60	Pnom	4800 kW ac
Inverter pack	Nb. of units	5.0	Pnom total	**24000 kW ac**
User's needs	Unlimited load (grid)			

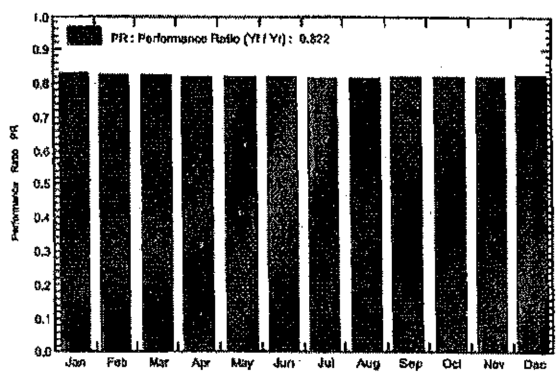
Main simulation results

System Production	**Produced Energy**	**38777 MWh/year**	Specific prod.	1553 kWh/kWp/year
	Performance Ratio PR	82.22 %		

Normalized productions (per installed kWp): Nominal power 24975 kWp



Performance Ratio PR



Naval Base Guam Sites
Balances and main results

	GlobHor kWh/m²	DiffHor kWh/m²	T_Amb °C	GlobInc kWh/m²	GlobEff kWh/m²	EArray MWh	E_Grid MWh	PR
January	142.0	62.14	24.80	159.6	152.0	3456	3308	0.830
February	134.8	65.83	25.36	145.5	138.3	3136	2998	0.825
March	178.1	74.52	25.63	184.7	176.3	3975	3805	0.825
April	174.3	81.41	25.98	172.0	163.5	3698	3536	0.823
May	180.0	78.99	26.83	168.5	159.5	3601	3444	0.818
June	167.9	82.57	26.64	156.5	148.4	3354	3206	0.820
July	160.6	80.77	26.37	150.9	143.1	3228	3081	0.817
August	152.4	75.87	25.88	148.2	140.7	3170	3025	0.817
September	145.4	86.10	26.18	146.8	138.9	3142	3002	0.819
October	149.5	81.03	26.27	158.2	150.2	3397	3251	0.823
November	131.2	65.62	25.88	145.5	138.0	3127	2988	0.823
December	133.9	64.41	25.63	151.8	144.3	3278	3133	0.826
Year	1850.1	898.87	25.95	1888.3	1793.3	40562	38777	0.822

Legends:			
GlobHor	Horizontal global irradiation	GlobEff	Effective Global, corr. for IAM and shadings
DiffHor	Horizontal diffuse irradiation	EArray	Effective energy at the output of the array
T_Amb	Ambient Temperature	E_Grid	Energy injected into grid
GlobInc	Global incident in coll. plane	PR	Performance Ratio

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Grid-Connected System: Loss diagram

Project : **USA Guam TMY2 P50 y0**

Simulation variant : **Naval Base Guam Sites**

Main system parameters	System type	**Ground system (tables) on a hill**		
Near Shadings	Linear shadings			
PV Field Orientation	tilt	13°	azimuth	3°
PV modules	Model	FS-6445A Dec2017	Pnom	445 Wp
PV Array	Nb. of modules	56124	Pnom total	**24975 kWp**
Inverter	Model	Solargate PV4K8A60	Pnom	4800 kW ac
Inverter pack	Nb. of units	5.0	Pnom total	**24000 kW ac**
User's needs	Unlimited load (grid)			

Loss diagram over the whole year

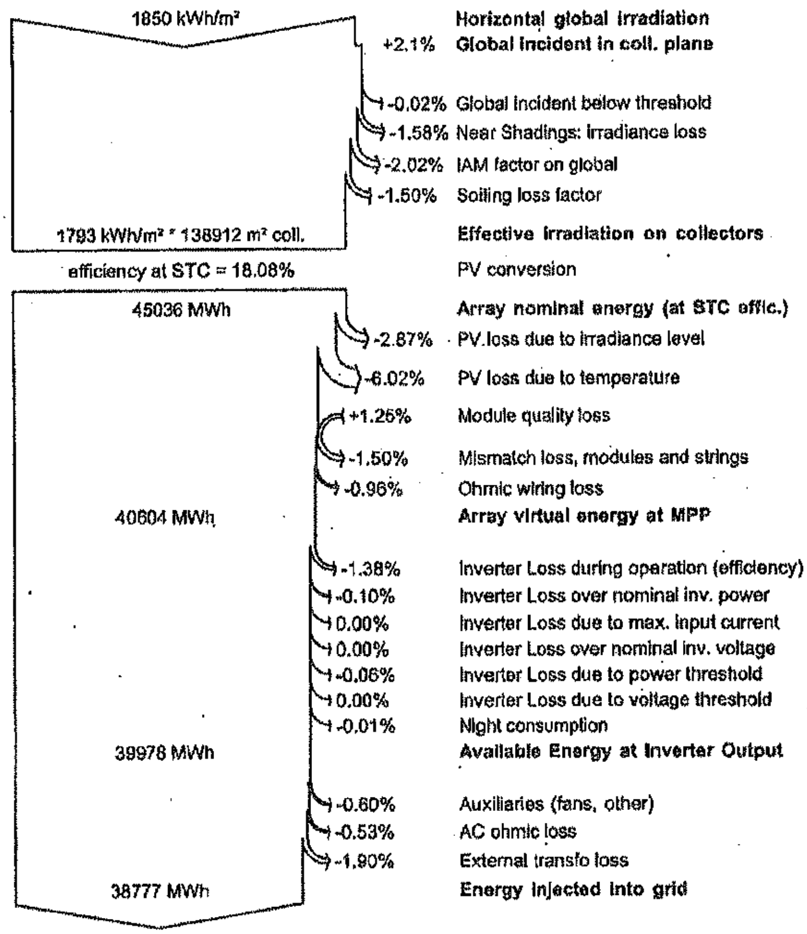

Exhibit “e”

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Grid-Connected System: Simulation parameters

Project : **S Finegayan**

Geographical Site **USN Royal Palms Housing** Country **Guam**

Situation Latitude 13.55° N Longitude 144.83° E
Time defined as Legal Time Time zone UT+10 Altitude 109 m
Albedo 0.20

Meteo data: **USN Royal Palms Housing** SolarGIS - Synthetic

Simulation variant : **GPA Compliant Bid**
Simulation date 31/05/19 14h28

Simulation parameters System type **Sheds on ground**

Collector Plane Orientation Tilt 5° Azimuth 0°

Sheds configuration Nb. of sheds 228 Identical arrays
Sheds spacing 6.60 m Collector width 4.05 m
Shading limit angle Limit profile angle 7.8° Ground cov. Ratio (GCR) 61.4 %

Models used Transposition Perez Diffuse Perez, Meteonorm

Horizon Free Horizon

Near Shadings According to strings Electrical effect 100 %

User's needs : Unlimited load (grid)

Grid power limitation Active Power 30.0 MW Pnom ratio 0.686

PV Array Characteristics

PV module Si-mono Model **REC 400TP2S 72M**
Custom parameters definition Manufacturer REC
Number of PV modules In series 30 modules In parallel 1716 strings
Total number of PV modules Nb. modules 51480 Unit Nom. Power 400 Wp
Array global power Nominal (STC) **20592 kWp** At operating cond. 18718 kWp (50°C)
Array operating characteristics (50°C) U mpp 1110 V I mpp 16858 A
Total area Module area **103321 m²** Cell area 90588 m²

Inverter Model **Sunny Central 2750-EV**
Custom parameters definition Manufacturer SMA
Characteristics Operating Voltage 875-1425 V Unit Nom. Power 2750 kWac

Inverter pack Nb. of inverters 12 units Total Power 33000 kWac
Pnom ratio 0.62

PV Array loss factors

Array Soiling Losses Loss Fraction 2.0 %
Thermal Loss factor Uc (const) 29.0 W/m²K Uv (wind) 0.0 W/m²K / m/s
Wiring Ohmic Loss Global array res. 1.1 mOhm Loss Fraction 1.5 % at STC
LID - Light Induced Degradation Loss Fraction 2.1 %
Module Quality Loss Loss Fraction -0.3 %
Module Mismatch Losses Loss Fraction 1.0 % at MPP
Strings Mismatch loss Loss Fraction 0.50 %
Incidence effect (IAM): Fresnel AR coating, n(glass)=1.526, n(AR)=1.290

0°	30°	50°	60°	70°	75°	80°	85°	90°
1.000	0.999	0.987	0.962	0.892	0.816	0.681	0.440	0.000

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PRELIMINARY ASSESSMENT FOR BID PURPOSES ONLY

Grid-Connected System: Simulation parameters

Project : **Naval Base Guam**

Geographical Site	**South Tipalao - DoD Naval Housing**		Country	**Guam**
Situation	Latitude	13.42° N	Longitude	144.66° E
Time defined as	Legal Time	Time zone UT+10	Altitude	14 m
	Albedo	0.20		
Meteo data:	**South Tipalao - DoD Naval Housing**	SolarGIS - Synthetic		

Simulation variant : **GPA Compliant Bid NBG**

Simulation date 31/05/19 10h06

Simulation parameters	System type	**Sheds on ground**		
Collector Plane Orientation	Tilt	5°	Azimuth	0°
Sheds configuration	Nb. of sheds	413	Identical arrays	
	Sheds spacing	6.60 m	Collector width	4.05 m
Shading limit angle	Limit profile angle	7.8°	Ground cov. Ratio (GCR)	61.4 %
Models used	Transposition	Perez	Diffuse	Perez, Meteonorm
Horizon	Free Horizon			
Near Shadings	According to strings		Electrical effect	100 %
User's needs :	Unlimited load (grid)			
Grid power limitation	Active Power	30.0 MW	Pnom ratio	0.686

PV Array Characteristics

PV module Si-mono	Model	**REC 400TP2S 72M**		
Custom parameters definition	Manufacturer	REC		
Number of PV modules	In series	30 modules	In parallel	1716 strings
Total number of PV modules	Nb. modules	51480	Unit Nom. Power	400 Wp
Array global power	Nominal (STC)	**20592 kWp**	At operating cond.	18718 kWp (50°C)
Array operating characteristics (50°C)	U mpp	1110 V	I mpp	16858 A
Total area	Module area	**103321 m²**	Cell area	90588 m²
Inverter	Model	**Sunny Central 2750-EV**		
Custom parameters definition	Manufacturer	SMA		
Characteristics	Operating Voltage	875-1425 V	Unit Nom. Power	2750 kWac
Inverter pack	Nb. of inverters	12 units	Total Power	33000 kWac
			Pnom ratio	0.62

PV Array loss factors

Array Soiling Losses			Loss Fraction	2.0 %
Thermal Loss factor	Uc (const)	29.0 W/m²K	Uv (wind)	0.0 W/m²K / m/s
Wiring Ohmic Loss	Global array res.	1.1 mOhm	Loss Fraction	1.5 % at STC
LID - Light Induced Degradation			Loss Fraction	2.1 %
Module Quality Loss			Loss Fraction	-0.3 %
Module Mismatch Losses			Loss Fraction	1.0 % at MPP
Strings Mismatch loss			Loss Fraction	0.50 %

Exhibit “f”

ANSWER:

Bidders must meet the voltage and frequency ride through requirements.

QUESTION:

29. Document Reference: Amendment XIII – P27/948
The 30MW output limit is understood as per Point of Interconnection. The ESS should be dispatchable up to the awarded ESS capacity at each site. It is the aggregated ESS capacity at a site that can be up to 30 MWac. Is that the correct way to rephrase this requirement?

ANSWER:

The maximum output of the ESS shall be 30MW AC.

QUESTION:

30. Document Reference: Amendment XIII – P27/948: "nominal operation is 20MWac"
Is this the nominal operating power per site? Is GPA seeking to procure 20 MWac minimum ESS capacity per site? If the 20 MWac capacity is not reached on one site, will GPA forego to deploy ESS at that site?

ANSWER:

GPA is seeking the most cost effective project. GPA has estimated prior to energy storage requirements that these NBG and the South Finegayan sites could be developed for 20MW ac of solar PV capacity. GPA would need to understand any reason for underdevelopment of site. Bidders must identify properties not used to address any modifications on the sublease in regards to removal of sites.

QUESTION:

31. Document Reference: Amendment XIII – P11/948: "GPA is seeking distribution of energy produced by the PV systems at the Naval Base Guam and the South Finegayan sites to be within its peak demand period from 6PM to 10PM".

(a) Does this mean that ESS power rating times 4 hours must be greater or equal to the daily production? (b) Will a sizing with a discharge time of the daily production longer than 4 hours be disqualified? (c) Shall all the energy be consumed before the next production period?

ANSWER:

(a) GPA peak period is within 6PM – 10PM. This period represents high costing production periods as GPA typically dispatches its peaking units which are less efficient and are diesel fueled. Bidders shall provide delivery of power at the maximum allowed discharge of the proposed ESS over the period of time starting from 5PM to midnight to accommodate the discharge of a 30MW ac project. Note that GPA has restricted interconnection capacity to 30MW ac. ESS discharge to grid shall be limited to 30MW ac maximum output.
(b) No. Please see above response in regards to evaluating bids.
(c) Yes.

QUESTION:

32. Document Reference: Amendment XIII – P160/948: "The MW rating of the ESS shall be equal to or greater than the 145% of the MW rating of the PV charging system, up to a maximum capacity of 40 MW. For instance, for a PV installation of 27 MW, the ESS shall be rated at a minimum of 40 MW. For a PV capacity of 10 MW, the ESS rating shall be a minimum of 14.5 MW."

Can we therefore assume the maximum PV charging system rating that can be installed is 27 MW?

ANSWER:

This section of the amendment is to illustrate that the charging and discharging times of the ESS are different and design of the ESS should include consideration that the ESS would only have 4-6 hours to discharge at a maximum interconnection output of 30MW ac.

PEC Question: If GPA utilizes energy that is delivered but not scheduled, will GPA be purchasing this energy? Also, will this be credited in Volume II, section 2.3.2's Annual Minimum Guaranteed Production Quantity?

ANSWER:

Yes. Energy delivered as requested by GPA will be purchased and credited towards annual guarantee.

QUESTION:

2. Title: 2. Description of Operation & Key Characteristics, Page/Sheet No.: 160/948
   Instruction of GPA Amd XIII: The MW rating of the ESS shall be equal to or greater than the145% of the MW rating of the PV charging system, up to a maximum capacity of 40 MW. For instance, for a PV installation of 27 MW, the ESS shall be rated at a minimum of 40 MW. For a PV capacity of 10MW, the ESS rating shall be a minimum of 14.5 MW.

   PEC Question: What is the reasoning that the MW rating of the ESS is equal to or greater than the 145% of the MW rating of the PV charging system? Is it for Daytime grid support? Or is it for Night time discharge? Or is there another reason?

   The wording "MW" rating, is that in relation to PV AC (Inverter) or PV DC (Module)?

ANSWER:

GPA anticipates all production to be delivered within a 4-6 hour window. This would require an ESS discharge rate higher than its charge rate from the PV.

Rating is AC reference.

QUESTION:

3. Title: 2. Description of Operation & Key Characteristics, Page/Sheet No.: 160/948
   Instruction of GPA Amd XIII: GPA will schedule energy via it AGC system on a block load basis. It is anticipated the ESS loads will be changed every 15 minutes by the AGC system to its new discharge point.

   PEC Question: How often does GPA expect scheduling for AGC or grid support to be planned? And if utilized then how will the bidder be compensated?

ANSWER:

This is in regards to delivery from ESS. GPA may increase or decrease output depending on load. This is part of dispatching the ESS. Bidders shall be compensated for energy received.

QUESTION:

4. Title: 3. Technical Requirements for ESS and Inverters, Page 162/948
   Instruction of GPA Amd XIII: The Bidders and their associated equipment providers must demonstrate the detailed performance and capability of their equipment under the extreme electrical conditions expected on Guam. This includes providing the technical limitations for the operation of the equipment for specific system conditions, as well as a description and demonstration of the various operating modes for the equipment.

   PEC Question: 1) When will these documents need to be submitted to GPA? During the technical bid submission or after the successful bidder has been selected? 2) Can GPA provide an example of extreme electrical conditions?

ANSWER:

1) Bidders should demonstrate the proposed projects ability to address system issues in their technical proposals.
2) Response shall be forthcoming.

QUESTION:

5. Title: 3.1 Voltage and Frequency Ride-through Requirement for Inverters, Page/Sheet No.: 162/948

Exhibit "g"

ANSWER:
Only the property identified in the lease or this bid document can be used for PV production and interconnection. Bidders may otherwise use other properties for construction staging or storage at their own discretion and expense.

Question #2.12: §2.2.5 – Please clarify the first paragraph of this section that appears to be in conflict with Section 4.5 of the PPA. If a project is, based on meteorological conditions, capable of generating it's full nameplate capacity does GPA intend to curtail the project below its nameplate capacity? If so, please describe the method GPA will use to determine payment for the energy that the project would have produced if it was not curtailed by GPA including GPA method for making the Seller whole on any lost Production Tax Credits or other applicable incentives.

ANSWER:
Section 2.2.5 of Volume II is a physical restraint of capacity output from the PV-ESS system to the GPA system. Section 4.5 of the PPA refers to Appendix H should GPA initiate a dispatch down or curtailment on PV-ESS due to GPA grid issues. GPA does intend to pay for any curtailment which shall be documented and measured. Curtailment reimbursement due shall be at the rate of the current contract price as defined in Appendix H - SCHEDULING AND COORDINATION PROCEDURES of the PPA starting on PDF page 136 of 501 of the original bid documents.

Question #2.13: §2.3.1 – Please confirm the nameplate capacities referred to in the IFB are measured in megawatts (MW) AC and not DC. For example, a solar plant with a nameplate capacity of 30 MW as measured on the AC side of the inverters would be an eligible project even if it had more than 30 MW of generation capacity on the DC side of the inverters.

ANSWER:
Yes, capacities are in megawatts AC.

Question #2.14: §2.3.2 – GPA has provided meteorological data (a described in Volume I, Section I) however GPA has not made the sites where these data were collected available for development. Will the GPA allow for any adjustments to the Guaranteed Output and/or the Estimated Annual Renewable Energy Amount provided such adjustment is based on an Independent Engineer's analysis of data gathered by the Seller on the actual site?

ANSWER:
Yes, GPA will allow for any adjustments to the Guaranteed Output and/or the Estimated Annual Renewable Energy Amount provided such adjustment is based on an Independent Engineer's analysis of data gathered by the Seller on the actual site and the bid price does not change.

Question #2.15: §2.3.2 – Please confirm that the Annual Minimum Quantity is intended to be net of losses from the ESS? In other words, the number of annual MWh actually delivered to the GPA system after the energy has been stored and subsequently dispatched from the ESS and not the number of MWh generated by the PV system prior to storage in the ESS.

ANSWER:
All reference to production guarantees are at the delivery point which is net of the losses from PV to ESS.

Question #2.16: §2.4.1 – The requirement in the sixth paragraph (below the "Transmission Cost Per Mile" table) should not be required if the Annual Minimum Quantity is based on the number of MWh actually delivered to GPA. Metering the PV system separately from the ESS, especially if a DC connection is required, adds unnecessary costs.

ANSWER:
GPA has reconsidered this and no measurement of PV production prior to the ESS is required. Bidders shall only provide methodology of measurement energy delivered at the interconnection point. However, GPA and the selected bidder(s) may need to evaluate and validate methods for measurement of PV production capability for any curtailment reimbursements.

Exhibit “h”

The EPC project will be managed by a senior EPC Project Manager with strong experience managing construction of ground-mounted solar PV projects. The EPC Project Manager is responsible for delivering the project safely, on time, on budget and in line with specifications and performance requirements. He reports to the SPV and is supported by a steering committee of senior managers. An experienced on-site construction manager will be resident in Guam for the duration of the construction and local contractors will be engaged for the main construction activities. Civil works, Electrical installation and Mechanical installation supervisors from ENGIE will be in Guam for the duration of their respective activities to train and to supervise local contractors. The project team will include highly-skilled engineers from the required engineering disciplines, as well as experienced procurement managers. The project team will be supported by HSE, quality control, legal, logistics and planning expertise.

A3-b. Statements that list the specific experience of the firm in developing, financing, owning, and operating generating facilities, other projects of similar type, size and technology.

As of February 2019, ENGIE manages 24.4 GW of mature renewable (RES) capacities.

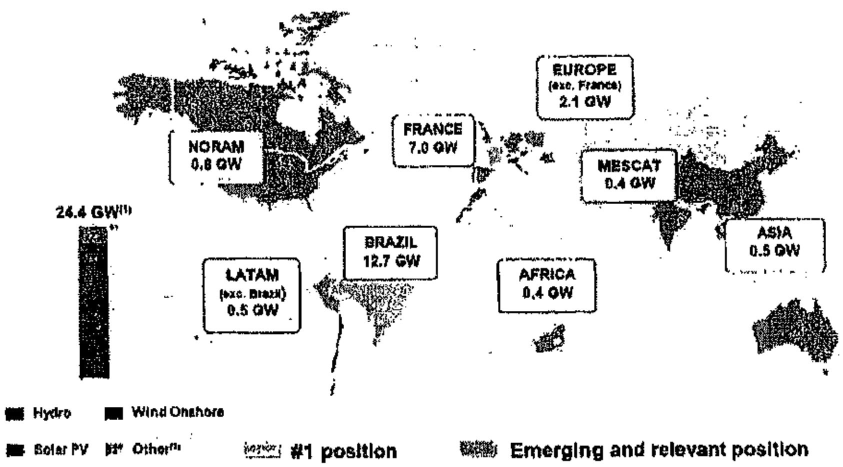


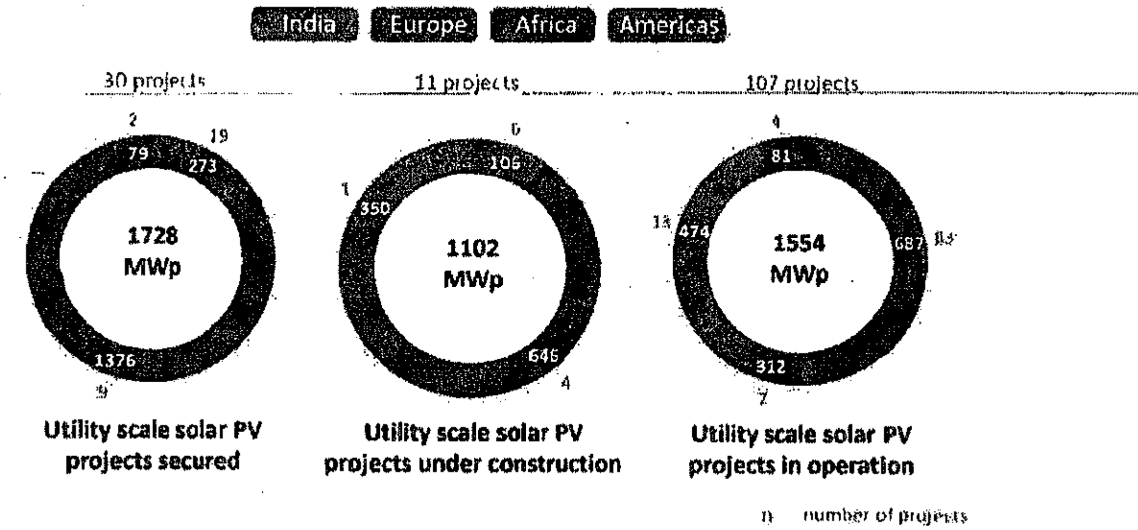
Figure A.3.b.1 ENGIE RES installed capacities at 100% as end of 2018 in GW

(1) RES capacities excl. 0.4GW client solutions RES and 3.4 GW hydro pump storage capacities

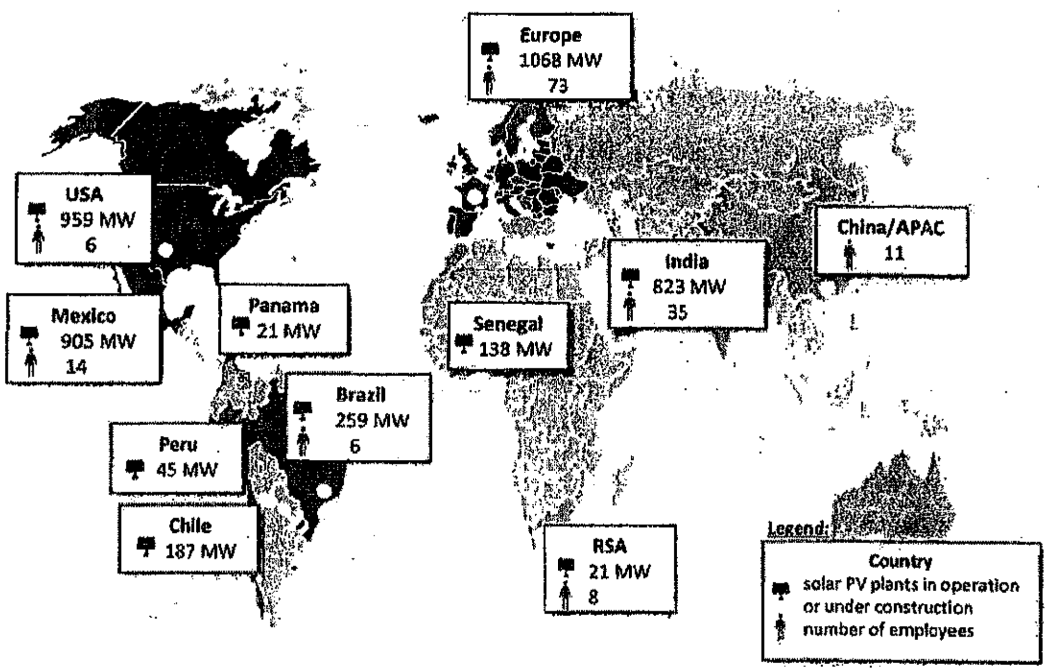
ENGIE and its affiliates have operated in North America for over 40 years, with its North American headquarters located in Houston, TX. ENGIE managed installed power generation capacity of over 13 GW in North America (with over 108.5 GW worldwide), supplying electricity to 12 deregulated states. ENGIE's North American operations also include providing energy procurement, utility, and operations and maintenance services to 150 higher education and healthcare facilities.

ENGIE

PV projects developed by ENGIE Solar are outlined below.

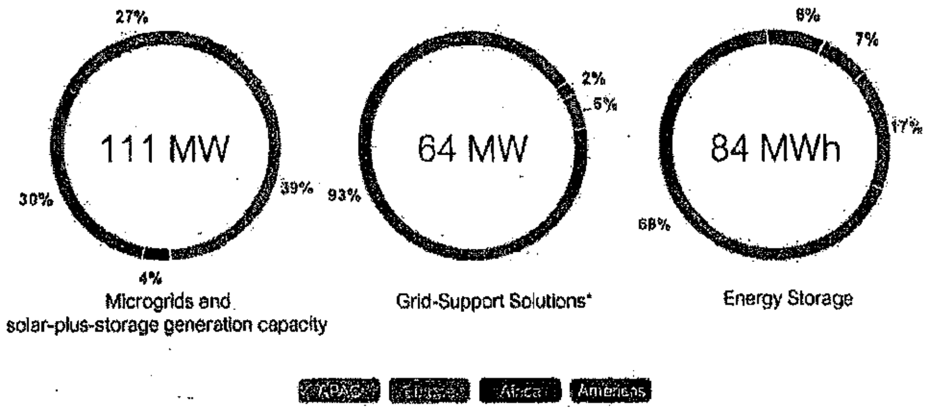


Utility Scale Solar PV map:



ENGIE EPS is ENGIE Group's technological division focused on battery energy storage and microgrids. ENGIE EPS is a world leader in off-grid microgrids by number of projects, for a total installed capacity of 175 MW delivered in over 23 countries.

175MW OF INSTALLED CAPACITY



A detailed list of ENGIE Solar and ENGIE EPS reference projects can be found in the Client References section of the supplementary information (VI.6)

A3-c. A management chart which lists the key personnel dedicated to this project and provides biographies of the key personnel.

Below is a list of key project personnel that will be involved in the Project, as per the Organizational Chart provided above.

Table : Key personnel members

MARK AKEHURST **Role in ENGIE:** Deputy CEO. – ENGIE Solar **Role in the project:** Project Steering Committee	Over 25 years' experience in the energy sector, including over 10 years' experience in renewable and innovative energy solutions with more than 15 years managing business development and M&A activities internationally. As deputy-CEO of ENGIE Solar, Mark is in charge of the strategy, business development and competitiveness of ENGIE's utility-scale solar PV business globally, in addition to conducting the management of ENGIE Solar alongside the CEO. Prior to this position, Mark has held many senior managerial positions in the energy business and has been on the Boards of several energy and energy-related companies
STEFANO TERRANOVA **Role in ENGIE:** General Manager – ENGIE EPS **Role in the project:** Steering Committee and SPV project financing	Senior energy Executive with vast transaction experience spanning across many geographies, Stefano has built, shaped and motivated successful and inclusive teams of investment professionals. Over 18 years' experience in the energy finance industry, including investment and financial advisory in worldwide geographies such as South Asia, Middle East and Africa. Specialties: general management, planning & execution; team build-up, leadership & management; valuation, investments; debt & equity structuring, project-financing; negotiating commercial & financing terms; acquisitions & divestments, financial modelling, financial analysis.

ENGIE

JEAN LUC MOREL **Role in ENGIE:** Engineering Department Head – ENGIE Solar **Role in the project:** Steering Committee and PV Engineering Manager	15 years of experience in different global Engineering companies (JACOBS, FOSTER WHEELER) mainly in the Oil & Gaz / Petrochemical sector, evolving in various positions in the field of the Electrical Engineering up to occupying the position of Electrical Department Head at Foster Wheeler France (7 years). 5 years of experience as the Engineering Department head of Solairedirect, managing the technical resources of the Company (Electrical, SCADA, Civil Work, Performance Engineers) in charge of providing the full technical support during the Bus-Dev., the Development, the Design and the Construction phases of the PV plants worldwide.
DANIELE ROSATI **Role in ENGIE:** Chief Technology Officer – ENGIE EPS **Role in the project:** BESS Engineering oversight	Over 12 years of experience in BESS design and engineering activities and technical choices for BESS design and testing, software specification design and testing, mechanical design and testing. Microgrid sizing, design and integration with existing grid assets. Author of over 15 scientific publications. Co-inventor of a national patent for the wind power plant control system. PhD in Electrical engineering, Cum Laude (Polytechnic University of Milan, Italy) Bachelor and Master of Science degrees in Electrical Engineering, Cum Laude (Milan Polytechnic University).
PRAKASH MORANKAR **Role in ENGIE:** VP-Operations – ENGIE Solar **Role in the project:** EPC Project Manager	30 years of experience in EPC/PMC of various projects, functioning in the areas of Project & Engineering Management, Commercial (Project Services) Management, Business Development, Operations Management, HSSE Management, Design & Detailed Engineering, Testing and QC, Construction & Commissioning of various projects for Solar Power, Wind Power, Chemical, Petrochemical, Oil & Gas industry. B.E. (Electrical Engineering with specialization in Electronics) from Walchand College of Engineering, Sangli, Maharashtra.
VINCENZO MAUGERI **Role in ENGIE:** Head of Project Management – ENGIE EPS **Role in the project:** PM BESS	Master of Science in Electrical Engineering / Executive MBA - Politechnico di Milano 10-year experience in the Power & Energy sector: ElectroPower Systems, Turbomach, CESI Since 2018, in charge of several energy battery storage system projects, including Litoral BESS 20 MW/ 1212MWh for ENGIE EPS
CESAR MUGERIN **Role in ENGIE:** PV Performance Engineer **Role in the project:** PV plant design and yield estimation	Senior Consulting Engineer in Hybrid Power Microgrids 15 years experience in the Energy Industry 2 years Field engineer CCPP 3 years hybrid power microgrid projects and performance optimization Master's Degree Electromechanical Technology – (Ecole Nationale Supérieure des Mines de Paris) Master's degree European Master in Renewable Energy – (Universitat Kassel)
REDHA HAMMACHE **Role in ENGIE:** Electrical Engineer - ENGIE Solar **Role in the project:** PV plant electrical design	Master Degree of Electrical Engineering, Le Havre University Work experience 13 Years: 8 years in Photovoltaic Industry at Engie Solar 3 years in Nuclear Power Plant (R&D) 2 years in Steel Manufacturing Industry In charge of the electrical design of the PV plant and all other related tasks to electrical engineering for Engie Solar.
DARIO GIGLIOTTI **Role in ENGIE:** Electrical Engineer - ENGIE EPS **Role in the project:** BESS design	Leading engineer during bidding phase for one of the largest BESS projects in Europe (20MW BESS coupled with Litoral Power Plant, Spain commissioned in 2018); Project Engineer for BESS project in the context of ENGIE Storage Park in Belgium, commissioned in 2018; Leading engineer during bidding phase for ENGIE microgrids and solar plus storage projects in APAC; 4 years of experience in grid connected BESSs and Microgrids. Master Degree in Energy and Nuclear energy, Politecnico di Torino (Italy)

CLAUDIO ROSATI **Role in ENGIE:** Head of software development office – ENGIE EPS **Role in the project:** Software/SCADA design	Electrical engineer and researcher, 7 years of experience in hybrid power plant and battery energy storage design and control systems. Hybrid power plants and Microgrid controller, research and development. Studies on Hybrid power plants: challenges, technologies, sizing, design and operating modes. Development of microgrid controller: technologies, hardware design, control functions and development of control software. Modeling and simulation of power systems and electronic converters. Bachelor's degree – Electrical engineering (Polytechnic University of Milan, Italy)
DAVID MONASTERIO **Role in ENGIE:** Managing Director for the Procurement of Main Equipment - ENGIE Solar **Role in the project:** Procurement	As MD of Solairedirect Global Operations (SDGO), David ensures the timely delivery of the PV plant's main components, such as modules, inverters, mechanical structures, SCADA, as well as the plant's detailed design. Prior to joining Solairedirect Global Operations, David was Director of Customer Finance for the Europe and Australia regions for the SunPower Corporation. Additionally, David has held Operations roles for the previous 10 years with International Outsourcing Services, where he was in charge of facilities in Europe, the United States and Mexico. David holds an MBA from the Kelley School of business in Operations and Finance, as well as a BS from the University of North Carolina Chapel Hill. MBA-Operations/Finance, Kelley School of Business 9 Years of experience in the PV industry
AMOL VAIDYA **Role in ENGIE:** Project Manager - ENGIE Solar **Role in the project:** Project Manager (Solar PV)	PMP certified professional experienced in complete business value chain of wind & solar power industry and building management system EPC projects. Expertise in technical and techno-commercial areas of projects. Work experience across culturally and linguistically diverse countries. B.E. (Instrumentation and Control) College of Engineering Pune 12-year experience in Solar Energy.

ENGIE reserves the right to substitute the above-listed key personnel with others of equivalent education and level of experience. or higher experience.

A3-d. Listing of all projects the project sponsor has successfully developed or that are currently under construction.

Table A3.d.1 provides a list of ENGIE Solar projects in operation and table A3.d.2 provides references for storage projects and solar + storage projects. The solar technology used is solar PV and for the solar plants, capacity factors are provided. To exclude weather variability, ENGIE Solar is using the performance ratio (PR) to assess the performance of its solar PV plants. The technical availability for solar PV plants is also provided.

Client references are provided in Appendix (Supplementary Information – 6.6 Client References).

All client references, including performance indicators for ENGIE's solar plants and storage plants in operation are confidential and are not to be disclosed.

ENGIE

Table A3.d.1 : ENGIE Solar successfully developed project list and performance information

Project	Country	Installed Power (MWp)	Commercial Operation Date	Capacity factor %	Performance Ratio %	Technical Availability %
Floresta	Brazil	101.49	22/08/2019	11.32		
AO CRE 3 - Chatellerault	France	8.3	30/08/2018	13.42	87.37	99.95
La Batie	France	11.99	27/06/2018	17.44	80.70	99.33
Intipampa	Peru	44.5	16/04/2018	31.48	78.97	99.27
Uttar Pradesh	India	101.25	10/4/2018	17.49	78.81	97.43
Pocri	Panama	20.95	12/1/2018	19.33	78.01	99.57
AO CRE 3 - Tavernes	France	7.9	13/12/2017	17.60	84.26	98.30
Réauville	France	4.99	8/12/2017	17.03	82.84	97.58
Monségur 1 & 2	France	21.69	24/11/2017	14.85	83.64	97.81
Salaunes 1 to 8	France	73.18	Aug. to Oct. 2017	14.59	86.82	99.69
Tenergy - Ten Merina	Senegal Republic	29.5	24/10/2017	20.43		
Lacourt St-Pierre	France	11.99	5/10/2017	14.87	84.17	99.65
Senergy - Santhiou Mekhe	Senegal Republic	29	22/08/2017	19.60	76.34	99.89
Bhadla I - Plot 8 (schedule for Bhadla 1 and 2)	India	95	20/07/2017	20.26	79.21	99.36
Bhadla II - Plot 10	India	95	20/07/2017	20.07	78.88	99.81
Greoux 1 to 7	France	89.09	July to Sept. 2017	17.71	83.37	99.42
Montjay	France	7.23	21/04/2017	18.03	86.16	99.27
Solaire Holman	United States	64.45	19/04/2017	25.91	82.04	88.05
Blond	France	7.63	14/04/2017	13.96	82.58	99.55
Jonquieres	France	4.83	23/03/2017	17.21	0.00	99.52
Sorbiers	France	5.9	21/02/2017	18.03	86.65	98.52
SSEPL - TELANGANA A	India	24	30/12/2016	17.59	78.20	99.81
Sadirac	France	4.7	9/12/2016	14.51	0.00	99.51
USUPL - TELANGANA B	India	24	14/11/2016	19.22	78.62	95.51
Fontenay Le Comte	France	8.57	2/11/2016	13.77	83.28	98.06
Montbéton	France	8.05	4/10/2016	15.32	0.00	99.01
Begaar	France	4.3	28/09/2016	14.43	0.00	99.63
Codelannes	France	2.82	22/09/2016	15.31	0.00	99.44
Tarissou	France	2.82	22/09/2016	14.85	0.00	99.68
Saint Germain d'Esteuil-Peyrissan	France	10.26	9/9/2016	14.62	0.00	99.43
Ligugé	France	6.39	9/8/2016	13.98	0.00	98.60
Los Loros	Chile	53.88	1/8/2016	24.43	75.92	95.60
NSUPL - TELANGANA C	India	12	27/06/2016	18.93	79.40	99.03
SUPL - Punjab IIB	India	25	8/4/2016	18.06	75.63	99.68

SPPL - Punjab IIA	India	25	18/02/2016	18.93	74.41	99.56
Adera	United States	26.5	16/12/2015	19.29		
Fontienne	France	10.44	2/7/2015	18.05	88.51	99.74
Caillavet	France	1.57	4/6/2015	14.66	76.97	99.75
NSPPL - NSM 2A	India	23	27/05/2015	20.32	77.72	99.44
Tiper 1	France	10.84	18/05/2015	13.68	85.41	98.08
SSPPL - NSM 2B	India	12.6	20/04/2015	17.85	78.96	99.28
Ollières 1 & 2 (Les Tourettes, Le Suie Blanc)	France	23.41	19/03/2015	17.83	86.51	99.88
SDPIPL - Punjab 1	India	21	16/03/2015	18.63	80.15	99.36
Arsac 1 to 8	France	83.48	Jan. to Mar. 2015	14.45		
Aurora	South Africa	10.57	26/12/2014	20.50	80.01	98.85
Tiper 3	France	8.7	17/12/2014	13.73	83.95	99.98
Arpajon	France	8.28	9/12/2014	15.32	85.68	99.82
Sénezergues	France	4.96	26/11/2014	15.33	81.56	98.46
Vredendal	South Africa	10.61	31/07/2014	21.43	79.03	99.89
Iovi 1 to 3	France	17.79	17/07/2014	17.49	85.90	99.55
Pintesèque	France	10.58	20/06/2014	14.14	83.54	99.55
Sisteron	France	4.53	24/02/2014	18.15	83.42	99.51
Béconnais	France	11.1	20/02/2014	14.29	85.86	99.86
Lucet	France	11.99	12/2/2014	14.32	84.97	99.60
Soleol III (Beaumort)	France	12	5/12/2013	17.85	82.65	98.48
Saint Antonin du Var	France	7.72	28/11/2013	17.33	84.07	99.57
Chateausolar III	France	8.74	27/11/2013	17.98	84.43	99.72
SDG Andacollo (Dayton)	Chile	1.26	8/8/2013	22.60		
Chalmoux	France	9.99	1/8/2013	13.53	88.27	98.81
La Verdière	France	6.32	27/06/2013	17.76	83.36	99.39
Brignoles	France	4.6	26/06/2013	17.05	84.85	99.93
Istres	France	7.94	18/06/2013	17.52	84.39	99.33
Cuges-les-Pins	France	7.29	17/04/2013	17.41	85.23	96.19
Charleval	France	6.16	26/03/2013	17.29	85.06	98.12
LEPL - Rajasthan	India	9.98	13/03/2013	19.81	72.39	96.02
PSEPL - Pokaran (NSM1)	India	5.6	25/02/2013	18.66	74.01	99.49
Nohic	France	4.49	25/10/2012	13.93	80.91	99.68
Caissargues	France	1.16	6/4/2012	15.71	80.27	99.23
Couteuges	France	10	20/03/2012	13.71	83.46	98.26
Figanières	France	12	22/12/2011	16.87	83.83	98.35
Poggio di Nazza	France	4.5	21/12/2011	16.02	81.86	99.28
Jussac	France	12	1/12/2011	14.22	83.10	98.17
Venzolasca (Citrinche)	France	4.5	8/11/2011	16.63	81.93	97.98
Sartène	France	4	25/10/2011	16.21	83.21	98.25

Rhodia (St Fons)	France	2	29/08/2011	13.16	83.49	94.48
Varages 1 & 2v (Les Pallieres, L'Audiberte)	France	9	2/8/2011	16.18	82.66	99.12
Esparron 2 (Tourdoure)	France	6	22/06/2011	17.36	79.05	98.85
Saint Hilaire du Rosier	France	6	6/6/2011	13.87	87.45	98.45
Esparron 1 (Lagas)	France	10	19/04/2011	17.36	77.89	98.32
Les Mées 2 (Haute Montagne)	France	12	15/02/2011	17.37	87.29	98.98
Les Mées 1 (La Moulsse)	France	12	26/07/2010	17.37	89.85	99.07
Vinon sur Verdon (Boutre)	France	4.4	19/02/2009	17.41	88.06	99.24

Table A3.d.1 : ENGIE EPS project list and performance information

COD	Characteristics of the project
Ongoing (Q1 2020)	**Sol de Insurgentes - 31.2 MWp solar plus storage in Mexico.** In the framework of 20-Year PPA, ENGIE Eps, in partnership with ENGIE Solar and ENGIE Mexico, will develop a 31.2 MWp coupled to a 7.2 MW/3.38 MWh battery energy system in Comondú, Baja California Sur, Mexico. In accordance with the Transmission System Operator requirements, the energy management systems, thanks to the fast response of battery energy system, will control the PV ramp rate in case of clouding as priority function and will offer frequency regulation service ("FR") as second priority. *Off-taker*: Commission Federal of Electricity (CFE)
Ongoing (Phase I - Q3 2019)	**21.1 MW microgrid in Comoros Islands - Phase I** The Comorian government announced the installation of two microgrids at Mohéli and Anjouan, the two volcanic islands next to Grande Comore, off the coast of Tanzania. The microgrids will be developed by ENGIE Eps in two steps under 25-Year PPA, *Phase I and Phase II*, and will be composed of solar plants coupled with a series of storage systems distributed throughout the island, which will supply clean energy for the 400,000 inhabitants. The microgrids includes: • PV, 6.95 MWp (*Phase I*: 3.1 MWp); • Battery Energy Storage, 10.8 MW/9.5 MWh (*Phase I*: 2.7 MW/2.85 MWh); • Diesel generators, 20.1 MW (*Phase I*: 16.5 MW); • Energy Management System. *Off-taker*: Entreprise Electricité et Eau des Comores (EEDC), MA-MWE in Comorian and Electricité de Anjouan (EDA) – Local Utilities
Ongoing (Q3 2019)	**15 MW microgrid in Lifou (New Caledonia)** The battery energy storage system developed by ENGIE Eps will enable a 80% renewable generation mix on the island by 2019, via a mix of wind, solar and biofuel generation. The microgrid includes:

COD	Characteristics of the project
	• PV, 3,400 MWp; • Wind, 825 kW; • Battery Energy Storage, 5.4MW/5.1 MWh; • Diesel Generation: 5.5 MW; • Energy Management System. *Client*: EEC ENGIE (local utility)

COD	Characteristics of the project
2018	**20 MW battery energy storage for frequency regulation in Spain** In the framework of 10-Year built and operate contract, ENGIE Eps realized a 20 MW / 12 MWh battery energy storage system coupled to an existing 1.2 GW coal-fired power plant in Carboneras. The installation of the storage allows the plant to be more flexible and responsive to load fluctuations in the current electricity system caused by renewable penetration. The system is currently used as an asset for the ancillary services market with a target energy throughput of 18 GWh. *Client*: ENDESA GENERACION SA
2018	**Capacity firming to 3.3 MWp photovoltaic plant in Italy** ENGIE Eps realized a 500kW/822kWh battery energy storage system connected to the existing 3.3 MWp photovoltaic plant in Altomonte, in southern Italy. The project mainly aims at reducing grid unbalancing penalties, by smoothing the intermittent renewable energy generation in a framework of capacity firming. The plant is also managed as a unique project to test the deployment of battery energy storage system in the Italian ancillary services market: primary and secondary frequency regulation, and voltage compensation. *Client*: EDISON SpA (EDF)
2017	**5.9 MW microgrid in Somalia** The 5.9 MW microgrid developed for NECSOM by ENGIE Eps involves the engineering, supply and installation of a renewable and storage turnkey solution that allows the reduction of diesel consumption by more than 2,000 litres per day and reduces the electricity bills by 17%. The microgrid includes, • PV, 1 MWp; • Wind generators, 750 kW; • Battery Energy Storage, 1 MW/1.9 MWh; • Diesel generators, 3.20 MW; • Energy Management System. A further upgrading of the Microgrid by ENGIE Eps is currently in progress which includes additional 2,000 kW and 616 kWh of installed capacity. The works will be completed on Q3 2019. *Client*: NECSOM (local utility)

COD	Characteristics of the project
2017	**12 MW microgrid powering a mining site in Coober Pedy (Australia)** The battery energy storage realized by ENGIE Eps for Toshiba, sired to the Coober Pedy Renewable Hybrid Power Project, provides the mining site and its below-ground residences, with approximately 70% renewable energy over the 20-year life of the project and includes: The microgrid includes: • PV, 3 MWp; • Wind, 2 MW; • Battery Energy Storage, 1MW/1MWh; • Diesel generators, 6,000kW; • Energy Management System. *Final user*: Energy Developments Limited (private company)
2017	**3 MW microgrid in Flinders Island, Tasmania** ENGIE Eps, in partnership with Toshiba, realised a battery storage system sired to Flinders Island's microgrid for Hydro Tasmania. The Flinders Island Hybrid Energy Hub project aimed to increase the use of renewable energy to reduce the use of fossil fuels that thus far have been the only electrical energy source on the island. This project, which combines the use of renewables and storage, will provide up to 65% of the island's annual energy needs, significantly reducing CO2 emissions and diesel consumption by over 60%. The microgrid includes: • PV, 500kWp; • Battery Energy Storage, 500kW/290kWh; • Diesel generators, 2,000 kW; • Energy Management System. *Final user*: Hydro Tasmania (private company)
2016	**10 MW microgrid powering resorts in the Maldives** The two microgrids with a total power of 10 MW, provide energy daily to two resorts on two separate islands of the Maldives, which combined host about 2,300 people. The microgrid includes: • PV, 1,760 kWp; • Battery Energy Storage, 500 kW/564 kWh; • Diesel generators, 8 MW; • Energy Management System. *Client*: T&D Water and Energy Green Solutions (private company)

COD	Characteristics of the project
2017	**Bhadla I & II, Rajasthan, India – 190MWp** 190 MWp in solar energy projects located at two sites (95 MW each) in the village of Bhadla. The very competitive bidding among 22 Indian and International contractors illustrates the sharp drop in solar energy prices and achievement of grid parity in India. *Client:* NTPC Limited – India's Largest Utility.
2017	**Mirzapur, Uttar Pradesh, India – 101 MWp** In the most populous region of India, French President Emmanuel Macron, Prime Indian Minister Modi and ENGIE CEO Isabelle Kocher inaugurated in mid-March 2018 the biggest solar park in this region (101 MWp). ENGIE Solar was awarded in May 2016 and signed a 25-year power purchase agreement with Solar Energy Corporation of India (SECI). ENGIE Solar relies upon its experienced local team based in Pune (Maharashtra) and reflects the Indian government's objective to develop 100 GW of solar power capacity by 2022. *Client:* Solar Energy Corporation of India Limited (SECI)
Ongoing	**Trompezon, Aguascalientes, Mexico – 158MWp** The plant will produce 343 GWh of power per year contracted under a 15-year PPA. This PV plant increases the renewable energy supply in Mexico and meet the growing power demand in the Commission Federal of Electricity (CFE). The solar farm will be commissioned in May 2019. *Client:* Commission Federal of Electricity (CFE)
2016	**Los Loros, Atacama, Chile – 54 MWp** The Los Loros plant (54 MWp) is in the province of Copiapó, in the Atacama region. The plant produces 115 GWh of power per year that is entirely sold to the wholesale market. This ENGIE Solar PV plant increases the renewable energy supply in Chile and meet the growing power demand in the Sistema Interconectado Central (SIC) and connected to the grid via a 6.78 km 110 kV transmission line.
2015	**Arsac, Nouvelle-Aquitaine, France – 84 MWp** Arsac is the most significant solar park ever developed and built by ENGIE Solar in France and is composed of 8 sub-parks with total installed power of 84 MWp. It currently generates enough electricity to supply 86,500 inhabitants. This clean power will avoid the generation of approximately 50,000 tons of CO2 per annum. *Client:* EDF Obligation d'Achat

ENGIE

COD	Characteristics of the project
Ongoing	**Mexico – 772 MWp** In Mexico, ENGIE Solar played a pivotal role in securing five projects for a total of 772 MWp through the clean energy auctions in 2016 and 2017. The highly competitive auctions organized by the energy regulator CENACE resulted in record-breaking low tariffs for CFE, the main off-taker. The six solar projects will add to ENGIE's substantial presence in Mexico: our six natural gas distribution companies that serve more than 450,000 customers; three natural gas transport companies which operate over 1,300 km of pipelines; our power generation business which includes two cogeneration power plants (375MW) and two wind farms (150MW). *Client:* Commission Federal of Electricity (CFE)
Ongoing	**Kadapa, Andhra Pradesh, India – 350 MWp** The Kadapa plant will sell the energy produced through a Power Purchase Agreement (PPA) with M/s Solaire pro Urja Private Limited and National Thermal Power Corporation (NTPC) Limited. The power generated from the project will be fed at 220 kV voltage level on 220/400 kV Grid Substation (GSS) located inside the solar park at the distance of approximately 250 meters from the project location. *Client:* National Thermal Power Corporation (NTPC)
2015	**Adera, California, USA – 26,5MWp** ENGIE Solar collaborated with sPower, a prominent American renewable energy provider, to develop and build a solar photovoltaic project in the US. The first joint initiative was the purchase of the Adera project, a 26.5 MW solar park located in Madera County in California. In addition, Adera Solar LLC has signed a 20-year-power purchase agreement (PPA) with Southern California Edison (SCE). Adera is the first solar park to be built by ENGIE Solar in the USA and the plant has been in operation since December 2015. *Client:* Southern California Edison (SCE)

Selected client references are provided below:

Project name & location	Customer	Reference person	Contact details
Terna Storage Lab – grid connected BESS, Italy	Terna - Italian Transmission System Operator	Luca Marchisio, Head of Business Development	Viale Egidio Galbani 70 Rome, Italy
Terna Storage Lab – grid connected BESS, Italy	General Electric	Gianpaolo G. Giuliani	Via Melchiorre Gioia 26 Milan, Italy
Garowe off-grid microgrid – Somalia	National Energy Corporation of Somalia	Abdifatah Abdi	Garowe Puntland, Somalia
Resort microgrids - Maldives	T&D Water Technologies & Development	A. Talamali	Via Enrico Fermi 6 Padua, Italy

Exhibit "i"

security, operational capability, strategic flexibility and resource availability. These projects support the warfighter abroad by reinforcing the DON's foundation at home and GlidePath is dedicated to assisting REPO in executing its mission on Guam and throughout the DON system.

A3-b. Experience

The foundation of the Project team is GlidePath's own executives, management, and staff. GlidePath developed some of the first and largest utility-scale energy storage projects in the United States with its Jake, Elwood, and McHenry projects, each a 20 MW lithium-ion battery system in the Chicago area, in 2015. GlidePath also has significant operating experience with the over 300MW of wind, solar, and energy storage it current operates across the US. GlidePath has also successfully financed complex projects and remains in good standing with each lender. GlidePath is also dedicated to Guam as evidenced though its purchase of the Dandan project in 2019 and subsequent investment in additional maintenance in an effort to recover from years of neglected maintenance by the previous owner.

GlidePath has identified several contractors that will bring significant specialized technical knowledge and/or Guam local experience to the Project team. **Attachment A11** includes a Statement of Qualifications for each major participant identified in Section A3-1 above.

Department of Defence Experience

Kevin Johnson is the President of GlidePath Federal Solutions where he is focused on providing government agencies with distributed power systems to increase resiliency, reliability, and mission assurance. Kevin is also the Co-Founder, Board Advisor, and formerly the Chief Commercial Officer for CleanCapital where he led the acquisition of $40MM of operating solar projects. Prior to GlidePath and CleanCapital, Kevin served as the Managing Director of Federal & Microgrid Business Development for Canadian Solar (USA), Inc., a global leader in solar photovoltaic manufacturing and project development. In this role, Kevin created and led a cross functional business division which achieved over $70MM in sales to the Department of Defence. Prior to Canadian Solar, Kevin was the Senior Manager of Mergers & Acquisitions for Acciona Energy North America. In this capacity, Kevin led the sale of over $50MM of solar and wind assets throughout the United States. Prior to entering the private sector, Kevin served as a Captain in the United States Army. Kevin deployed to Iraq in 2004 with the 1st Battalion, 33rd Field Artillery Regiment in support of Operation Iraqi Freedom II. He earned his Bachelor of Science degree in Systems Engineering from the United States Military Academy at West Point and an MBA from Cornell University, where he was a Roy H. Park Leadership Fellow. Kevin is also a Truman National Security Fellow at the Truman National Security Project and Emerging Leader at the Chicago Council on Global Affairs. He is also member of the non-profit Board of Directors for the American Resilience Project and Clean Energy Leadership Institute. In 2013, Kevin was the recipient of the White House Champions of Change award for his leadership in the renewable energy industry.

Federal Project Experience

Prior to GlidePath, Kevin Johnson established the federal business division for Canadian Solar (USA), Inc. In this capacity, Kevin accomplished the followed milestones with the Department of Defence market segment in under 18 months:

Fort Detrick, Maryland (18.6MW)

- Kevin led negotiations with AMERESCO and key officials within the Army, DoD, and White House for the supply of 18.6 MW TAA compliant modules for the U.S Army's landmark solar project
- Managed Federal Acquisition Regulation (FAR) compliance with internal / external counsel as well as customer's counsel and Federal counsel.
- Contract value: $14M

Fort Benning, Georgia (41.4MW)

- As a result of its selection for the Fort Detrick project, Canadian Solar was awarded the 41.4 MW module supply contract for Fort Benning on May 1st, 2015.
- Kevin Johnson led negotiations with AMEC Foster Wheeler and key officials within the Army, DoD, and White House Counsel
- Managed Federal Acquisition Regulation (FAR) compliance with internal / external counsel as well as customer's counsel and Federal counsel.
- Contract value: $28M

Naval Base Kings Bay, Georgia (41.4MW)

- In parallel with Fort Benning, awarded the 41.4 MW module supply contract for Naval Base Kings Bay
- Kevin Johnson led negotiations with AMEC Foster Wheeler and key officials within the DoD, and White House.
- Managed Federal Acquisition Regulation (FAR) compliance with internal / external counsel as well as customer's counsel and Federal counsel.
- Contract value: $28M

Fort Hood, Texas (15MW)

- Kevin led the sales for and solar module delivery for the 15MW Fort Hood solar project, which was the first hybrid solar + wind project completed by the U.S. Army

Houston Veterans Affairs, Texas (5.04MW)

- Managed Federal Acquisition Regulation (FAR) compliance with customer and counsel
- Contract value: $3.3M

Guam Importance to Department of Defence

GlidePath recognizes the strategic military importance of Guam to the national security interests of the United States and allies in the pacific theatre of operations. The Dandan acquisition is extremely important for GlidePath's strategy and future DoD development opportunities. Guam's geostrategic importance has increased exponentially over the past 24 months as US-North Korea relations continue to be uncertain and re-basing efforts from Japan to Guam continue to progress. Moreover, given that Guam is 3,800 miles closer to East Asia than Hawaii, the next closest U.S. territory, GlidePath appreciates Guam's importance to the "tyranny of distance" in the USPACOM area of responsibility.

GLIDEPATH

Looking forward, GlidePath appreciates that the U.S. military has been increasing troops in Guam since 2000 in an effort to broaden geographic distribution and increase operational resilience and political sustainability. Concerns addressed by the military presence in Guam include responding to natural disasters and counterterrorism in the South Pacific. With manning rates currently at approximately 12,000, an additional 5,000 marines and 1,300 dependents moving from Okinawa (Japan) to Guam over will increase the importance of Guam to the U.S. National Security Interest.

A3-c. Key Personnel

Attachment A12 contains a chart that identifies the GlidePath personnel responsible for executing the Project as well as the management and executive team that will oversee the team's efforts. **Attachment 12** also includes detailed Résumés for key GlidePath personnel. Information about each GlidePath team member is provided below.

Dan Foley, CEO & Founder - Dan is Founder and CEO of GlidePath Power. Dan has over 25 years of energy sector experience, particularly in developing, building, owning, and operating traditional and renewable energy projects throughout North America. Prior to founding GlidePath Power, Dan served as COO for Lincoln Renewable Energy and CEO of ACCIONA Energy North America. His efforts have led to the construction of 1GW in power projects. Dan earned a Bachelor of Science degree from the University of Notre Dame, a Master of Engineering degree from the State University of New York-Buffalo, and a Master of Business Administration degree from the University of Chicago.

Chris McKissack, Chief Operating Officer - Chris joined GlidePath Power with 15 years of energy experience. Prior to GlidePath, Chris held advancing roles in engineering, project management, transmission, and power marketing at Lincoln Renewable Energy and was instrumental in bringing 500MW of wind and 40MW of solar to construction. Prior to this, Chris was responsible for engineering, construction, and testing critical transmission & distribution equipment at GE Energy and ComEd, an Exelon Company. Chris earned a Bachelor of Science in Electrical Engineering Degree from the University of Notre Dame and a Master of Business Administration degree from the University of Chicago. He is also a Project Management Professional (PMP).

Peter Rood, Chief Development Officer - Peter has nearly fifteen years of energy sector experience, primarily in development of renewable energy and energy storage projects throughout North America, Micronesia, and Australia. Peter's career has included all aspects of energy project development, construction management, project finance, and M&A. Prior to joining GlidePath, Peter was VP of Project Development (North) for RES Americas. In this role Peter had direct P&L responsibility and a wind, solar, and battery development portfolio across the northern half of the US. Prior to RES, Peter worked at technology start-up General Compression and the Canadian storage developer NRStor focused on energy storage development in the US, Canada, the UK, and Australia. Peter served as a Director of Development at Acciona Energy and was a developer at Gamesa Energy. Peter holds a PMP project management certification and has earned a BS in Natural Resource Management from the University of Arizona in Tucson.

Melissa White, Chief Financial Officer - Melissa White has over ten years of Financial Management and Energy sector experience. Prior to joining GlidePath, she held roles in financial reporting, audit and financial systems transformation as a Controller at ExxonMobil. In addition, she brings expertise in wholesale energy, capacity, and renewable attributes markets, having previously managed market bidding strategies and the origination and negotiation of voluntary and compliance RECs and carbon offsets for 600MW of wind assets at Acciona Energy. Melissa earned a Bachelor of Arts in Finance degree from the University of Notre Dame and a Master of Business Administration from Northwestern University's Kellogg School of Management.

Kevin Johnson, President, GlidePath Federal Solutions - Kevin brings ten years of energy sector expertise, primarily focused on business development for government and microgrids, as well as mergers and acquisitions. His previous roles include Co-Founder, Board Advisor, and Chief Commercial Officer for CleanCapital; Managing Director of Federal & Microgrid Business Development for Canadian Solar (USA), Inc.; and Senior Manager of Mergers & Acquisitions for Acciona Energy. Prior to entering the private sector, Kevin served as a Captain in the United States Army. He earned his BS in Systems Engineering from the United States Military Academy at West Point and an MBA from Cornell University. Kevin's awards include: Roy H. Park Leadership Fellow, Truman National Security Fellow at the Truman National Security Project, Emerging Leader at the Chicago Council on Global Affairs, and White House Champions of Change, as well as membership on the non-profit Board of Directors for the American Resilience Project and Clean Energy Leadership Institute.

David Braun, President, GlidePath Asset Management - David has over 27 years of experience in the energy and utility industries, including 20 years in the deregulated electricity and natural gas markets across the United States. He brings to Glidepath his expertise in operations, energy markets and energy risk management. Prior to joining Glidepath he held executive and management positions in operations, sales, and marketing at Hospital Energy, GDF SUEZ (now Engie), Direct Energy, The NewPower Company, Exelon Energy, and Commonwealth Edison. David holds a Master in Business Administration from the University of Chicago and a Bachelor of Science degree in mechanical engineering from Northwestern University in Evanston, Ill.

Erin Hazen, Director of Development – Erin has worked in the renewable energy sector since 2007, with broad experience in wind turbine manufacturing; development and execution of complex wind, solar, and biomass energy projects; and CHP plant operations. Erin was a leader of the North American startup of Acciona Windpower wind turbine manufacturing operation and was responsible for supply chain management, logistics, and new supplier development. At Acciona Energy, Erin was a senior project development manager for wind and solar projects throughout the US, with expertise in local, state, and federal permitting processes to bring projects from greenfield through construction on schedule. Erin later joined the University of Iowa to lead their Zero Coal initiative, helping to convert a coal-fired CHP plant to biomass and alternative fuels. She managed a major expansion of the University's miscanthus energy crop, harvest and supply chain cost reduction, development of biomass fuel densification options, and development of new alternative renewable fuels. At GlidePath, Erin is responsible for development of wind, solar, biomass energy, and energy storage projects in the US and Micronesia. Erin earned a Bachelor of Arts degree cum laude from Gettysburg College in Pennsylvania.

Lucas Michelini, Director of Finance - Lucas has over ten years of experience in M&A and project finance for utility scale renewable energy projects. Prior to joining GlidePath, he was Associate Director of Structured Finance at Acciona Energy, where he supported over $1B of executed buy-side, sell-side, tax equity and debt transactions in addition to conducting due diligence and evaluating project economics of over 7.5 GW of renewable energy projects in the US and Canada. Prior to his work on the energy sector, Lucas worked on the muni bond industry by supporting management of a portfolio of tax-exempt bonds and related securitizations backed by affordable housing projects. Lucas holds a Bachelor of Arts in Economics and Sociology from Northwestern University.

Sean Baur, Engineering Manager - Sean Baur has over five years of experience in the electric power industry. Prior to joining GlidePath, he worked as a contracting engineer, providing protection & control and electrical engineering services to several large utility clients in the Midwest. He earned a Bachelor of Science in Electrical Engineering from the University of Norte Dame, and is a licensed Professional Engineer in the state of Illinois.

Gary Braun, Senior Director, Operations & Maintenance - Gary has over 27 years of experience in the energy sector. Prior to joining GlidePath, Gary held various positions at Acciona Energy North America in numerous departments. His roles included reviewing power flow studies and negotiating Interconnect Agreements while in Power Marketing, budgeting for and overseeing operations of nine wind farms in the US and Canada while the Manager Operation and Maintenance, implementing a NERC compliance program, and directing the 24×7 remote monitoring and operation of greater than 2000 MW of wind projects while the Director System Operations Center. Prior to that Gary worked at ComEd mainly in the transmission planning and transmission operations arenas.

Lon Lindsey, Manager Guam Operations – Lon Lindsey joined GlidePath in 2019 to manage operations of the GPS Dandan Solar generating facility. Lon directs facility operations and maintenance at the site and manages contractor selection and performance. A Guam resident, Lon brings more than 15 years of experience of operations and site management, vegetation management, and coordination of contractors and construction projects. For nine years he served in a leadership role at Admiral Nimitz Golf Course, most recently as Superintendent/Operations Manager; he has extensive experience with on-base protocol, regulations, and working with Department of Navy EIC, OICC, and Command to ensure compliance.

Tonia Loughren, Asset Manager - Ms. Loughren has twenty-three years of experience in the deregulated natural gas markets in the Midwest region. She brings to Glidepath expertise in energy operations management. Prior to joining Glidepath she held management positions in gas supply and scheduling, contract and billing operations, and account management. She earned a Bachelor of Science in Marketing at Eastern Illinois University.

A3-d. Project Experience

Table A-3 includes projects that GlidePath has developed, owns, and/or is currently constructing. GlidePath has included a reference for the buyer of the energy generated by each project except for projects that sell energy or services directly into wholesale markets as merchant projects since there is not a specific "customer" for these transactions. GlidePath is happy to provide other professional references for these projects upon request by GPA. GlidePath requests that GPA provide advanced to notice to GlidePath before contacting any of the individuals listed below so that GlidePath may arrange for an introduction and complete any required security or other approvals necessary to all the party to discuss the project with GPA.

GlidePath considers production and availability data to be highly proprietary and confidential and, in many cases, is subject to project specific non-disclosure obligations. GlidePath is happy to discuss detailed project performance upon request from GPA and, if required, execution of appropriate non-disclosure agreements.

Table A-3: Project Experience

#	Project Name	Location	Project Type	MW	COD	Reference
1	Jake	West Chicago, IL	Battery Storage	19.8	08/2015	Not Applicable, this is a Merchant Project
2	Elwood	Joliet, IL	Battery Storage	19.8	08/2015	Not Applicable, this is a Merchant Project

GLIDEPATH

#	Project Name	Location	Project Type	MW	COD	Reference
3	McHenry	McHenry, IL	Battery Storage	19.8	12/2015	Not Applicable, this is a Merchant Project
3	Marengo	Marengo, IL	Battery Storage	20	12/2018	Not Applicable, this is a Merchant Project
3	Dandan	Inarajan, Guam	Solar PV	25.65	10/2015	Guam Power Authority Jennifer G. Sablan Manager, SPORD (671) 648-3103 jsablan@gpagwa.com
4	Meyersdale	Somerset County, PA	Wind + Battery Storage	48	2003/ 2015	Not Applicable, this is a Merchant Project
5	Cabazon	Riverside County, CA	Wind	39	1999	City of Riverside
6	Diablo	Alameda County, CA	Wind	20.5	2004	Pacific Gas and Electric
7	Mill Run	Fayette County, PA	Wind	15	2001	Exelon Arpan Patel (630) 306-6292 Arpan.patel@exeloncorp.com
8	Mountaineer	Tucker & Preston Counties, WV	Wind	66	2002	Exelon Arpan Patel (630) 306-6292 Arpan.patel@exeloncorp.com
9	Somerset	Somerset County, PA	Wind	9	2001	Exelon Arpan Patel (630) 306-6292 Arpan.patel@exeloncorp.com
10	Waymart	Wayne County, PA	Wind	64.5	2003	Exelon Arpan Patel (630) 306-6292 Arpan.patel@exeloncorp.com
11	Prospect	Brazoria County, TX	Battery	10	2019	Not Applicable, this is a Merchant Project

A3-e. Key Advisors

The Bidder will utilize several service providers to assist GlidePath in executing the Project. The **Table A-4** below provides the names of these providers to the extent they have been identified.

GLIDEPATH

Exhibit “j”

INVITATION FOR MULTI-STEP
BID NO.: GPA-007-18
RENEWABLE ENERGY RESOURCE
PHASE III

SUPPLEMENT & UPDATE TO VOLUME II – TECHNICAL QUALIFICATION PROPOSAL REQUIREMENTS

DESCRIPTION OF OPERATION / KEY CHARACTERISTICS
&
TECHNICAL REQUIREMENTS

DECEMBER 2018

1. Introduction

This document is an update to the "Invitation For Multi-Step Bid" ("Bid Document"), NO.: GPA-007-18, Renewable Energy Resource, Phase III. This provides additional description of operation and sets forth additional and clarified technical requirements. Bids received will be judged based on adherence to criteria and performance requirements noted in this amendment. To the degree a conflict may arise between this amendment and the Bid Document, the language in this amendment shall prevail.

The term "Point of Interconnection" (POI) is used to mean the point where a Phase III Renewable Energy Resource will interconnect with the GPA 34.5 kV system.

2. Description of Operation & Key Characteristics

Guam Power Authority (GPA) seeks to procure energy produced by photovoltaic (PV) generation on the locations provided for in the Bid Document. This PV generation shall not be connected to the AC side of the GPA system but be utilized to charge an Energy Storage System (ESS) that shall in turn be operated synchronously with the GPA grid during normal operation. GPA will not accept PV generation connected directly to the GPA 34.5 kV system. All PV generated energy shall be scheduled by GPA for delivery to the GPA system through the ESS.

The bidder should target to maximize the amount of energy that can be delivered to the GPA system given the locations where PV can be developed in the Bid Document, and in other parameters set herein. Delivery of energy from the ESS to the GPA system would normally take place during hours of the day when the PV is not generating any power. I.e., the ESS shall be capable of load shifting all of the expected energy produced by the PV generation to hours where there is less or no PV generation. It is estimated that up to 40 MW of ESS output into the GPA system can be scheduled by GPA into the GPA system. The MW output of PV used to charge the ESS should be maximized to the amount of capacity available on each site and any energy restrictions of the ESS.

<u>The capacity / discharge rate (MW) output and otherwise design of the ESS should be such that:</u>

- The majority of energy from the ESS is likely to be discharged during the GPA peak load period of 6 PM – 10 PM. During other non-charging hours, the PV may be scheduled to the maximum discharge rate allowed by the GPA system load and coordinated with the energy availability within the ESS.
- GPA may schedule energy at any time throughout the 24-hour day, if needed, and may be scheduled for delivery concurrent with the PV charging of the ESS.
- GPA may schedule the energy delivery up to the maximum capacity of the ESS during any period of the day.
- GPA will schedule energy via its AGC system on a block load basis. It is anticipated the ESS loads will be changed every 15 minutes by the AGC system to its new discharge point.
- The MW rating of the ESS shall be equal to or greater than the 145% of the MW rating of the PV charging system, up to a maximum capacity of 40 MW. For instance, for a PV installation of 27 MW, the ESS shall be rated at a minimum of 40 MW. For a PV capacity of 10 MW, the ESS rating shall be a minimum of 14.5 MW.
- The storage rating of the ESS shall be 105% of the "expected" (see Volume II, section 2.3.2 for expected energy production) daily energy production of the PV charging capability.

The bidder shall clearly state the effective energy storage capability available to the GPA system, and state the MW output capacity, and lay out all data as specified in the Qualitative Scoring Workbook, Part 2, in the Bid Document to include output at the ESS terminals and the Point of Interconnection (POI) where energy is delivered to the GPA system, in addition to data for PV production as noted in the Bid Document's Qualitative Scoring Workbook Part 2.

The ESS need not be capable of charging by drawing power from the AC side of the GPA system. If the capability is there, this shall only be utilized upon prior mutual agreement between the Seller / Bidder and GPA.

Clarification on curtailed energy:

GPA does not guarantee that it will schedule energy from the ESS to GPA during PV production hours. GPA may, depending on loads and other resources, schedule such deliveries if available and economical. Prior to the start of a new day's PV generation cycle, GPA will guarantee to have taken energy from the ESS equivalent to what could have been stored in the ESS the day prior based on the lower of: 1) The maximum effective storage (MWh) in the ESS, and 2) The actual maximum amount of energy that could have been stored in the ESS based on the previous days PV energy production. Any PV produced energy that is not scheduled for delivery because the daily PV production total exceeds the daily stored energy capability of the ESS shall not be considered curtailed energy.

3. Technical Requirements for ESS and Inverters

The system conditions present on the GPA system are unique and the inverter-based solar (if not injecting power via an ESS) and ESS projects must demonstrate that the proposed equipment can operate reliably during system conditions not normally seen in large interconnected grid systems. There are two dominant characteristics of the GPA system that contribute to the unique operating environment. First, the frequency and voltage excursions experienced during transient events are more severe than would be expected in a larger system. Second, the system short circuit MVAs at the renewable project locations are extremely low when compared to large interconnected systems. The inverters for the proposed Phase III ESS projects must operate reliably and continually in this low short circuit MVA environment.

Short Circuit MVA figures stated in the Bid Document in Volume II, Section 2.4.3 are not reflective of the expected future GPA system. The nature of this will change significantly in the future and should not be viewed as a guaranteed amount.

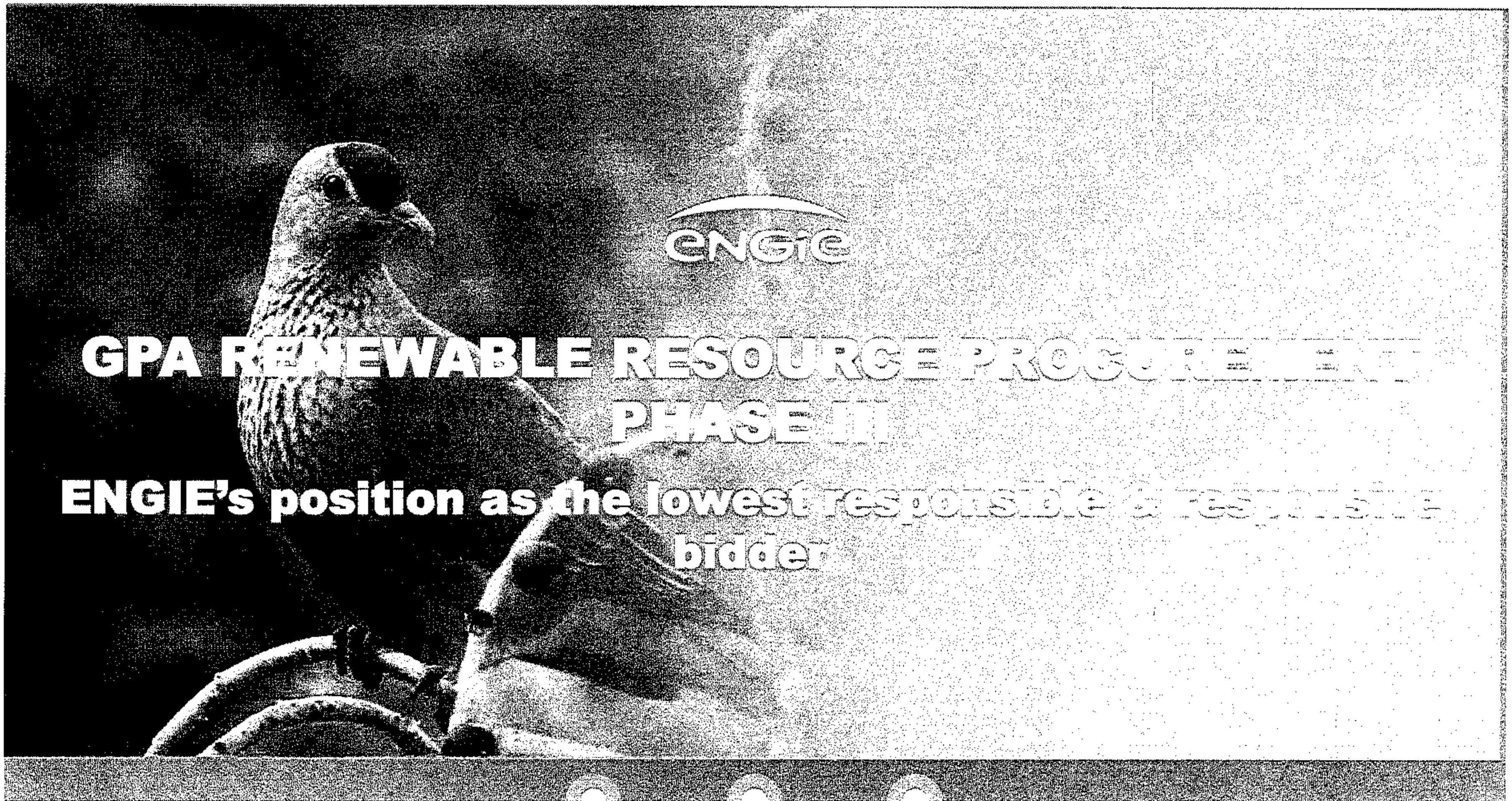
Error! Reference source not found. below shows updated expected minimum Short Circuit MVA (SC-MVA) numbers at the same sites as in the Bid Document. These numbers reflect the conditions for loss of the largest synchronous generator online.

Substation Name	Nom.kV	SC-MVA Ph.II System	SC-MVA Future Flex Gen
Orote	34.5	135	160
Harmon B1	34.5	175	199

Table 1: Expected Minimum Short Circuit MVA values (not guaranteed)

Note that the values in Table 1 are not guaranteed SC-MVA values. The scenario labeled "SC-MVA Ph. II System" reflects an expected typical dispatch scenario with today's thermal synchronous generation and planned Phase II PV generation additions. The "SC-MVA Future Flex Gen" scenario reflects an expected

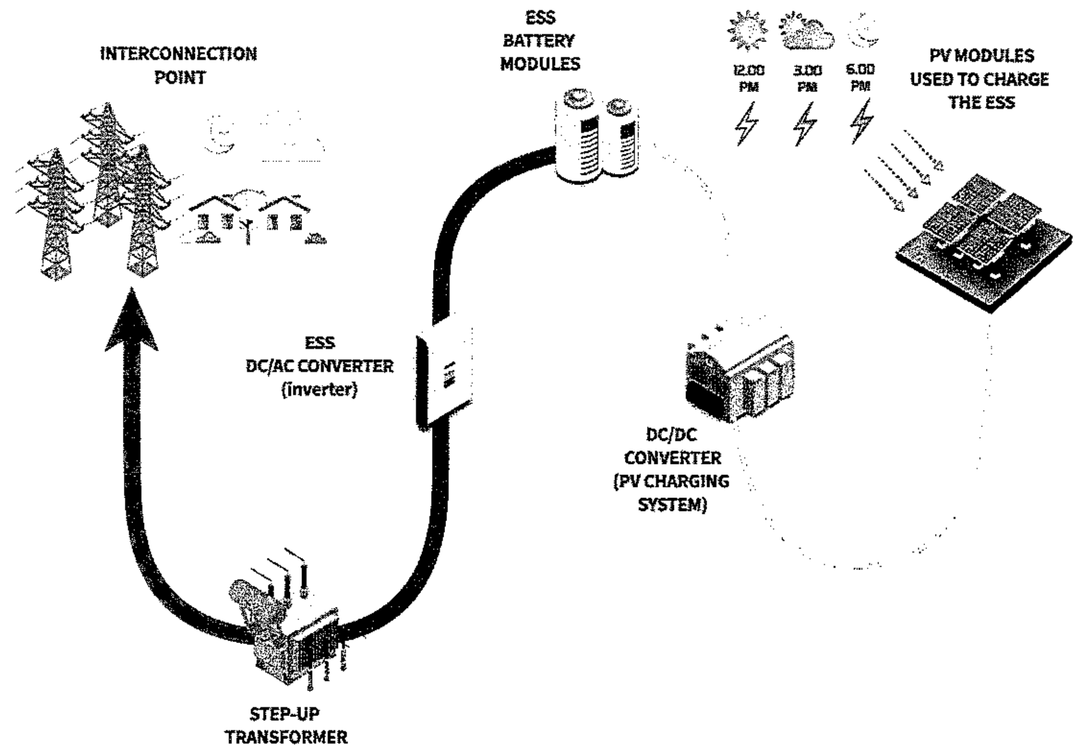
Exhibit “k”


GPA RENEWABLE RESOURCE PROCUREMENT
PHASE III
ENGIE's position as the lowest responsible & responsive bidder

HOW DOES GPA'S SOLAR & BATTERY SYSTEM WORK?

DISCHARGING PHASE (nighttime operation)

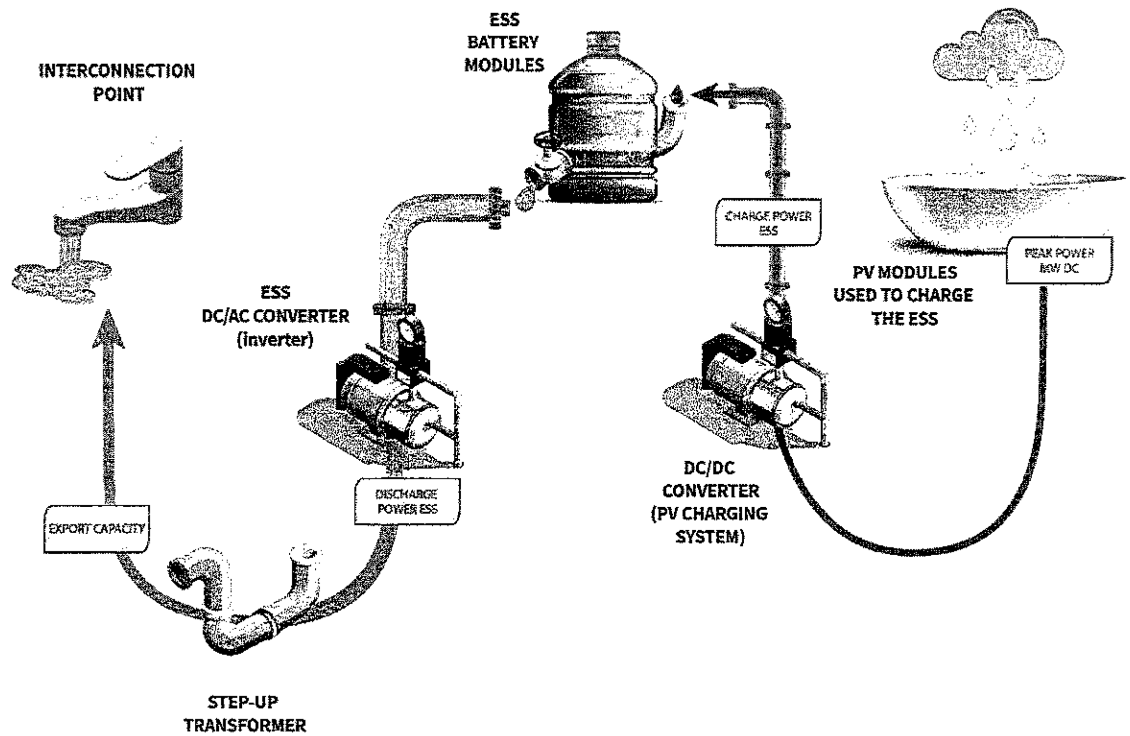
CHARGING PHASE (daytime operation)



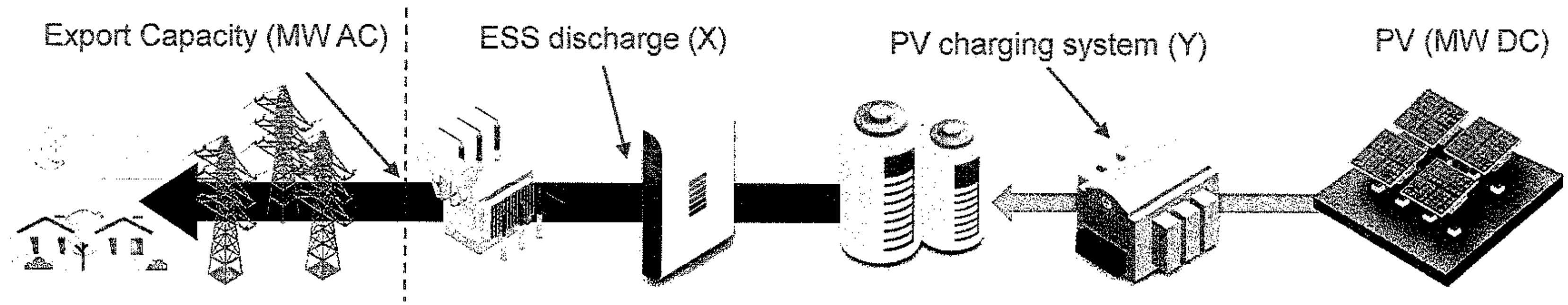
HOW DOES GPA'S SOLAR & BATTERY SYSTEM WORK?

DISCHARGING PHASE (nighttime operation) **CHARGING PHASE** (daytime operation)

[illegible]



THE IFB SETS OUT 3 CLEAR SYSTEM SIZE REQUIREMENTS



"The Bidder's renewable resource project shall have a **maximum export capacity 30 MW (AC) at the interconnection point**; this may be the combination of several generation units at one site."

IFB, main document, Page 52

Requirement #2

"The **MW rating of the ESS shall be equal to or greater than the 145% of the MW rating of the PV charging system, up to a maximum capacity of 40 MW**. For instance, for a PV installation of 27 MW, the ESS shall be rated at a minimum of 40 MW. For a PV capacity of 10MW, the ESS rating shall be a minimum of 14.5 MW"

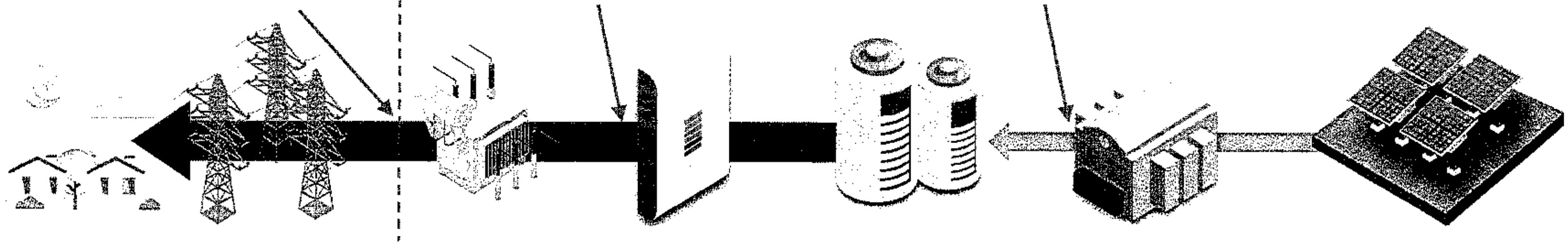
IFB, AMENDMENT XIII, Page 160

Requirement #3

"The **MW output of PV used to charge the ESS should be maximized to the amount of capacity available on each site** and any energy restrictions of the ESS"

IFB, AMENDMENT XIII, Page 160

GPA CONFIRMS 3 CLEAR SYSTEM SIZE REQUIREMENTS



Requirement #2

Requirement #3

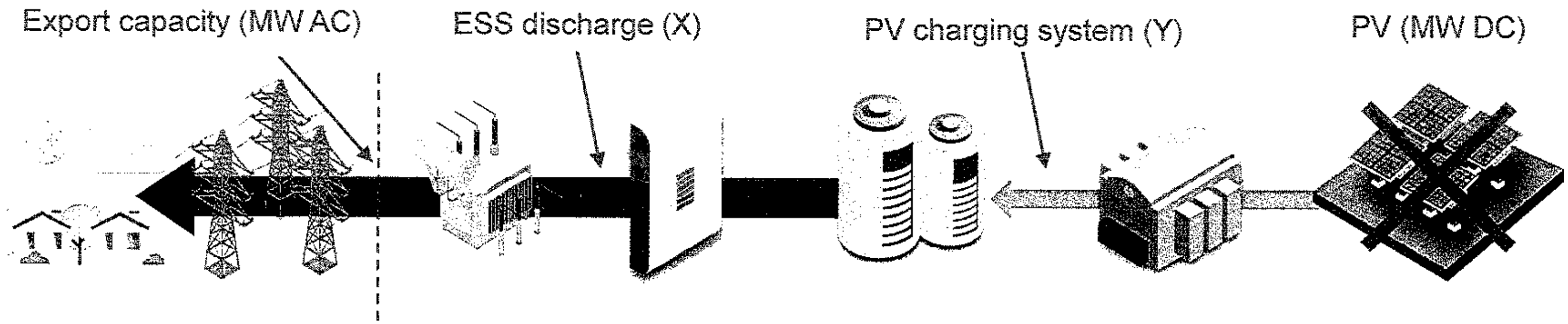
GPA confirms rationale for **asymmetrical** charge and discharge

GPA denies any limitation of the PV MW DC capacity

"PEC Question: What is the reasoning that the MW rating of the ESS is equal to or greater than the 145% of the MW rating of the PV charging system? Is it for Daytime grid support? Or is it for Nighttime discharge? Or is there another reason?
(...)
ANSWER:
GPA anticipates all production to be delivered within a 4-6 hour window. This would require an **ESS discharge rate higher than its charge rate from the PV.**"
IFB, AMENDMENT XVII, Page 16

"PEC Question: (...)
The wording **"MW" rating**, is that in relation to **PV AC (Inverter) or PV DC (Module)**?
ANSWER:
(...)
Rating is AC reference."
IFB, AMENDMENT XVII, Page 16

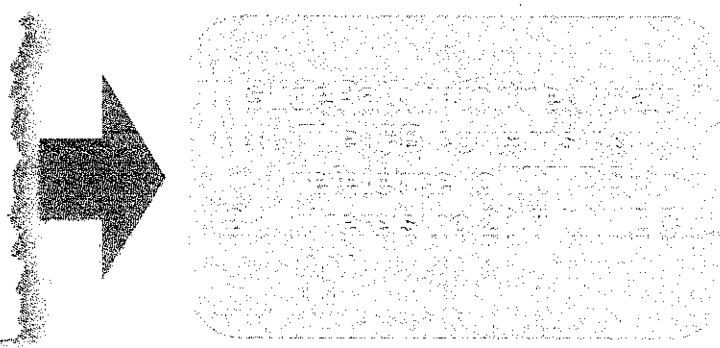
GLIDEPATH RECEIVED UNEQUIVOCAL CONFIRMATION FROM GPA OF NO MW DC LIMITS



GlidePath Question: Question #2.13: §2.3.1 – Please confirm the **nameplate capacities referred to in the IFB are measured in megawatts (MW) AC and not DC.** For example, a solar plant with a nameplate capacity of 30 MW as measured on the AC side of the inverters would be an eligible project even if it had **more than 30 MW of generation capacity on the DC side of the inverters.**

GPA ANSWER: Yes, capacities are in **megawatts AC.**

IFB, AMENDMENT XIII, Page 36



GLIDEPATH ONLY BIDDER TO ASSERT 20.7 MW DC RESTRICTION

BIDDER	South Finegayan PV (MW DC)	Naval Base PV (MW DC)
KEPCO / Hanwha	21.06	21
AES	23.58	19.65
X-Elio	24.975	20.5
ENGIE	26.47	27.64
GlidePath	20.6	20.6

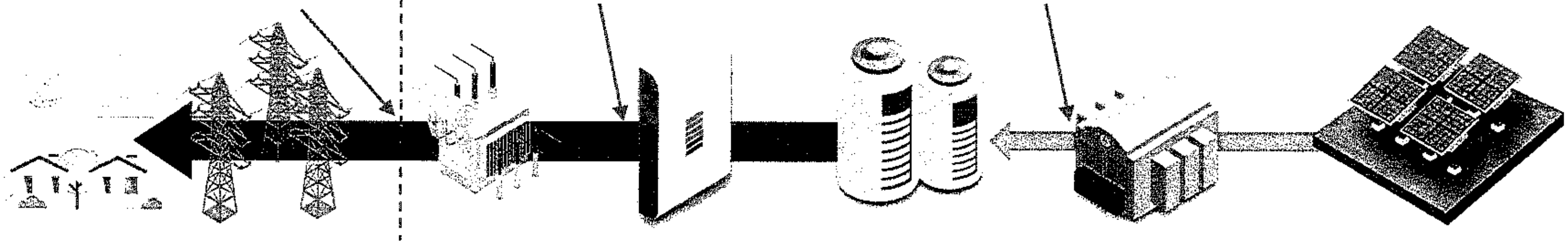
Only GlidePath limited PV MW DC capacities to 20.7 for both sites

GLIDEPATH ONLY BIDDER TO MISINTERPRET IFB

	South Finegayan			Naval Base		
BIDDER	ESS rating [MW]	PV [MW DC]	GlidePath ratio*	ESS rating [MW]	PV [MW DC]	GlidePath ratio*
KEPCO / HANWHA	30	21.06	142%	30	21	143%
AES	25	23.58	106%	20	19.65	101%
X-ELIO	14	24.975	56%	12	20.5	59%
ENGIE	30	26.47	113%	30	27.64	109%
GLIDEPATH	30	20.6	145%	30	20.6	145%

* Would need to be ≥145% in GlidePath's erroneous interpretation

ENGIE'S TECHNICAL PROPOSAL COMPLIED WITH THE IFB



Export capacity = 30MW AC

ESS MW rating = 30 MW = X
Y = 20.7 MW
(DC/DC converter for ESS charging **limited at 20.7MW**)

X / Y = 145%

PV capacity maximized

26.47 MW DC PV at South Finegayan

27.64 MW DC PV at Naval Base Guam

ENGIE

ENGIE'S PROPOSAL MAXIMIZES GUAM RATEPAYER SAVINGS

SECOND LOWEST BIDDER 30% HIGHER THAN ENGIE

BIDDER	GUARANTEED GENERATION (1st year, GWh)	PRICE OFFER ($/MWh)
ENGIE	S. Finegayan: 42.2 Naval Base: 42.8	S. Finegayan: $108.9 Naval Base: $110.9
AES	36.2 30.7	$152.6 $161.9
X-ELIO	24.8 29.0	$176.0 $170.0
GLIDEPATH	31.1 30.5	$191.5 $196.0
GLIDEPATH (alternative offer)	*31.1* *30.5*	*$176.0* *$176.0*
KEPCO / Hanwha	34.2 33.3	$288.0 $292.0

ENGIE's design

ENGIE

engie.com

Exhibit "1"

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Tel: (671) 648-3225; Fax: 648-3290

DENIAL OF PROCUREMENT PROTEST

October 28, 2019

VIA E-mail: prood@glidepath.net

Mr. Peter K. Rood
Chief Development Officer
GlidePath Marianas Operations, Inc.
709 Dandan Road
Inarajan, Guam 96915

RE: Guam Power Authority's Response to GlidePath Marianas Operations, Inc.'s Protest dated September 30, 2019, for GPA-IFB-007-18, Renewable Energy Resources Phase III

Dear Mr. Rood:

I have reviewed your protest letter dated September 30, 2019, protesting the Guam Power Authority's (GPA) proposed award to ENGIE Solar ("ENGIE"). Your Protest is hereby denied for the following reasons:

1. You indicated in your letter that you believe that "ENGIE's projects have included more solar generation capacity than allowed by the technical requirement of the IFB. Based on the significantly higher Guaranteed Net Annual Generation ("GNAG") included the ENGIE Priced Proposals when compared to the proposal submitted by GlidePath and all the other bidders, GlidePath's technical experts are concerned that ENGIE may not have followed all of GPA's technical requirements." The ENGIE proposal meets the GPA bid requirement that "the MW rating of the ESS shall be equal to or great than the 145% of the MW rating of the PV charging system." GlidePath claims that GPA's technical requirements limit solar system

capacity to 20.7MW_{DC}. GPA's bid did not limit the capacity of the PV installation, but does restrict the delivery of energy at the interconnection point which is 30MW_{ac}. Volume II – Technical Qualification Proposal Requirement, Section 1 Overview (pg 52 of 501) states: "1. The bidder's renewable resource project shall have a **maximum export capacity 30MW_{ac}**; this may be the combination of several generation units at one site." Section 2.3.1. Minimum and Maximum Project Capacity (pg 56 of 501) states: "there is no minimum nameplate project capacity that a Bidder may offer, **however the maximum export capacity shall be 30MW.**"

GlidePath itself sought clarification on this issue on February 11, 2019, which was addressed in Amendment XVII (pg. 2 of 17) in which GlidePath asks "what is the maximum procurement under this bid, could GPA select two 30MW_{ac} projects at each site for a total procurement of 60MW_{ac}? The GPA response was "Yes."

GlidePath states that the GPA limit on the ESS size to 30MW at each project site together with the 145% requirement effectively caps the size of the PV system to 20.7MW_{ac}. The IFB states that the intent of the 145% requirement is to require the ESS charge and discharge be asymmetrical, with ESS discharge power required to be 30MW_{ac} at the point of connection and ESS charge power not to exceed 20.7MW. This requirement limits the maximum AC PV charging power on each site to 1/1.45 of the maximum AC export capacity. The "MW rating of the PV charging system" in ENGIE's proposal, is equal to the power rating of the DC/DC converters, and is capped at 20.7MW (i.e. 1/1.45 of 30MW AC), in full compliance with the IFB requirements. Clarifications were provided in Amendment XVII for both GlidePath and ENGIE regarding the increased delivery period. GlidePath also claims that "except for the ENGIE proposals, all bidders are, in fact, within a similar Guaranteed Net Annual Energy ("GNAG") range." For the Naval Base location, the percentage difference between ENGIE and KEPCO is 28.5%, and between KEPCO and X-Elio is 34%. For South Finegayan, the difference between ENGIE and AES is 16.5%, which is close to the gap between GlidePath and AES. There clearly appears be significant variation between the GNAG values among the bidders. In addition, there is no direct correlation between the GNAG and tariff, i.e. a higher GNAG does not necessarily correspond to a lower tariff: X-Elio offered a 25% lower GNAG than AES, but at virtually the same tariff ($170 vs. $169).

Therefore, your protest is denied on these grounds. GPA reviewed the bid packages and provided a notice of intent to award to the lowest responsible and responsive bidder. A responsive bidder is a person who has submitted a bid which conforms in all material respects to the Invitation for Bids. 5 GCA §5201(g) and 2 GAR, Div. 4, Chap. 3, §3109(n)(2).

2. GPA has determined that ENGIE should be awarded the bid for Renewable Energy Resources Phase III, as they were deemed to be the lowest, responsive and responsible bidder. The ENGIE bid was responsive to the IFB and complied with the specifications set forth in the IFB. Therefore, GPA hereby finds that there is no merit to the GlidePath Marianas Operations, Inc.'s claim that their bid was the lowest responsive bid, and the GlidePath Marianas Operations, Inc.'s bid was properly rejected due to high price.

GlidePath Marianas Operations, Inc. is hereby ON NOTICE that this is the Guam Power Authority's final decision concerning GlidePath Marianas Operations, Inc.'s September 30, 2019, protest for the above described IFB. You are hereby advised that GlidePath Marianas Operations, Inc. has the right to seek judicial review.

Sincerely,

JOHN M. BENAVENTE, P.E.
General Manager

Exhibit "m"

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA. GUAM U.S.A. 96932-2977

Tel: (671) 648-3225; Fax: 648-3290

DENIAL OF PROCUREMENT PROTEST

January 7, 2020

VIA E-mail: prood@glidepath.net

Mr. Peter K. Rood
Chief Development Officer
GlidePath Marianas Operations, Inc.
709 Dandan Road
Inarajan, Guam 96915

RE: Guam Power Authority's Response to GlidePath Marianas Operations, Inc.'s Protest dated November 13, 2019, for GPA-IFB-007-18, Renewable Energy Resources Phase III

Dear Mr. Rood:

I have reviewed your protest letter dated November 13, 2019, protesting the Guam Power Authority's (GPA) proposed award to ENGIE Solar ("ENGIE"). Your Protest is hereby denied for the following reasons:

1. You indicated in your letter that you believe that "to the extent that GPA has waived the 20.7MW cap that GlidePath and other offerors found in the IFB, GlidePath respectfully submits this second protest regarding the IFB." The ENGIE proposal meets the GPA bid requirement that "the MW rating of the ESS shall be equal to or great than the 145% of the MW rating of the PV charging system." GlidePath claims that GPA's technical requirements limit solar system capacity to 20.7MW $_{DC}$. GPA's bid did not limit the capacity of the PV installation, but does restrict the delivery of energy at the interconnection point which is 30MW $_{AC}$. Volume II- Technical Qualification Proposal Requirement, Section 1 Overview (pg 52 of 501) states: "1.

The bidder's renewable resource project shall have a **maximum export capacity 30MW$_{ac}$**; this may be the combination of several generation units at one site." Section 2.3.1. Minimum and Maximum Project Capacity (pg 56 of 501) states: "there is no minimum nameplate project capacity that a Bidder may offer, **however the maximum export capacity shall be 30MW.**"

GlidePath itself sought clarification on this issue on February 11, 2019, which was addressed in Amendment XVII (pg. 2 of 17) in which GlidePath asks "what is the maximum procurement under this bid, could GPA select two 30MW$_{ac}$ projects at each site for a total procurement of 60MW$_{ac}$? The GPA response was "Yes."

GlidePath states that the GPA limit on the ESS size to 30MW at each project site together with the 145% requirement effectively caps the size of the PV system to 20.7MW$_{ac}$. The IFB states that the intent of the 145% requirement is to require the ESS charge and discharge be asymmetrical, with ESS discharge power required to be 30MW$_{ac}$ at the point of connection and ESS charge power not to exceed 20.7MW. This requirement limits the maximum AC PV charging power on each site to 1/1.45 of the maximum AC export capacity. The "MW rating of the PV charging system" in ENGIE's proposal, is equal to the power rating of the DC/DC converters, and is capped at 20.7MW (i.e. 1/1.45 of 30MW AC), in full compliance with the IFB requirements.

Therefore, your protest is denied on these grounds. GPA reviewed the bid packages and provided a notice of intent to award to the lowest responsible and **responsive** bidder. A responsive bidder is a person who has submitted a bid which conforms in all material respects to the Invitation for Bids. 5 GCA §5201(g) and 2 GAR, Div. 4, Chap. 3, §3109(n)(2).

2. GPA has determined that ENGIE should be awarded the bid for Renewable Energy Resources Phase III, as they were deemed to be the lowest, responsive and responsible bidder.

The ENGIE bid was responsive to the IFB and complied with the specifications set forth in the IFB. Therefore, GPA hereby finds that there is no merit to the GlidePath Marianas Operations, Inc.'s claim that their bid was the lowest **responsive** bid, and the GlidePath Marianas Operations, Inc.'s bid was properly rejected due to high price.

GlidePath Marianas Operations, Inc. is hereby ON NOTICE that this is the Guam Power Authority's final decision concerning GlidePath Marianas Operations, Inc.'s November 13, 2019, protest for the above described IFB. You are hereby advised that GlidePath Marianas Operations, Inc. has the right to seek judicial review.

Sincerely,

JOHN M. BENAVENTE, P.E.
General Manager

Exhibit “n”

JOSHUA D. WALSH
JOSEPH C. RAZZANO
CIVILLE & TANG PLLC
330 HERNAN CORTEZ AVENUE STE. 200
HAGATNA, GUAM 96910
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RECEIVED
OFFICE OF PUBLIC ACCOUNTABILITY
PROCUREMENT APPEALS
DATE: 11-13-19
TIME: 5:55 AM PM BY: JM
FILE NO OPA-PA: 19-010

PROCUREMENT APPEAL OF DENIAL OF PROCUREMENT PROTEST

IN THE OFFICE OF PUBLIC ACCOUNTABILITY

PART I.

In the Appeal of GlidePath Marianas Operations Inc., Appellant.	**DOCKET NO. OPA-PA-** 19-010 **NOTICE OF APPEAL**

ORIGINAL

PART II: APPELLANT INFORMATION

Appellant's Name	GlidePath Marianas Operations Inc.
Appellant's Mailing Address	132 N. York St., Suite 3L Elmhurst, IL 60126
Appellant's Business Address	706 Dandan Road , Inarajan, Guam 96915
Appellant Representative's Direct Email Address	prood@glidepath.net

Appellant is represented by legal counsel in this appeal. For purposes of this appeal, please direct correspondence to GlidePath Marianas Operations Inc.'s counsels, Joshua D. Walsh and Joseph C. Razzano of Civille & Tang, PLLC.

Counsel's Mailing Address	330 Hernan Cortez Avenue Suite 200, Hagatna, Guam 96910
Counsel's Telephone	671-472-8868
Counsel's Facsimile	671/477-2511
Counsel's Direct Email Address	jdwalsh@civilletang.com

PART III: APPEAL INFORMATION

A. Purchasing Agency: Guam Power Authority.

B. Solicitation Number: GPA-IFB-007-18, Renewable Energy Resources Phase III.

C. The Decision being appealed was provided to the Appellant on Thursday, October 31, 2019. The Decision was made by the Head of the Purchasing Agency, Mr. John M. Benavente, P.E.

D. Appeal is made from a Decision on Protest of an Award. The Denial of Procurement Protest issued by the Agency has also revealed flaws in the method and procedures of selection for award.

E. The names of competing offerors known to Appellant are as follow:

1. AES Distributed Energy, Inc.;
2. Korea Electric Power Corporation and Hanwha Energy Corporation (consortium);
3. X-Elio Energy North America Development Holdco, LLC; and

4. ENGIE Solar.

PART IV: STATEMENT OF GROUNDS FOR APPEAL

A. THE GROUNDS FOR APPEAL

1. Relevant Procedural and Factual History

The Guam Power Authority ("GPA") is pressing forward with Phase III of its Renewable Energy Resource project. The procurement for Phase III saw GPA implement a Multi-Step Bid in an ongoing effort to comply with Public Law 29-62, which requires GPA to establish renewable energy portfolio standard goals and add additional renewable capacity. Phase III also involved a land use partnership between GPA and United States Navy, where Navy property would be leased to the Government of Guam for use in the Phase III power operation. Phase III would be built on two different sites – Navy Base Guam and South Finegayan—and bidders were invited to respond to operate solar power production at either or both of the locations.

GlidePath Marianas Operations Inc. ("GlidePath" or "Appellant"), a Guam based company that qualifies for the local procurement preference proscribed in 5 GCA §5008, submitted a bid to provide solar production at both sites. GlidePath is well experienced on Guam, is buttressed by an extensive corporate support system that is well versed in solar production, is staffed by solar industry professionals who understand competitive procurement, and currently operates the Dandan solar project, which was awarded a contract under Phase I by GPA. GlidePath submitted its bid on June 3, 2019, and was informed on August 14, 2019, that it had passed technical review and was eligible for consideration in Step 2 of the Procurement where the offerors would submit their prices.

Prices were submitted to GPA pursuant to a price submission worksheet that included explaining the cost of power to GPA's rate payers in the form of the cost of a megawatt of power per hour (MWh). Price submissions were opened at a public venue on September 10, 2019, and ENGIE Solar ("ENGIE") had bid a price of $110.90/MWh for the Navy Base Guam location and $108.90/MWh for the South Finegayan location. As allowed by the IFB, GlidePath submitted several pricing plans for GPA's consideration, and its bid price was $149.60/MWh for both sites, as adjusted for the local procurement preference. Other offerors had submitted bids more expensive than the bid price offered by GlidePath. ENGIE had also offered a Guaranteed Net Annual Generation ("GNAG")—a number that reflects the amount of gross electricity generation a generator produces minus the electricity used to operate the power plant —that was significantly higher than any other offer, a feat that was technically impossible given the specific IFB requirements set down by GPA.[1]

Given the significant price and GNAG disparity between ENGIE and all other bidders, GlidePath submitted requests under the Guam Sunshine Act on August 22, 2019, and again on September 12, 2019, to GPA requesting, among other documents, copies of the technical proposals submitted by the other bidders so that GlidePath's engineers could review the technical details of their proposed projects. GlidePath was concerned that, given the complexity of the technical requirements and numerous amendments to the IFB, that other bidders may not have complied with the various requirements put forth by GPA in its IFB. Specifically, GlidePath was concerned about the sizing of various project components, compliance with unique requirements in the Navy lease, and detailed electrical requirements and wanted to confirm that all bidders, especially ENGIE, had properly included these requirements. GPA never substantively responded to the information requests, and withheld ENGIE's technical proposal from disclosure.

[1] As designed by the IFB, the GNAG changes from year to year during the life of the contract.

On October 4, 2019, GlidePath was notified by GPA that it was not selected for award, and instead GPA's procurement team had recommended award for both of the projects included in the IFB to ENGIE.[2] ENGIE was selected for award because it presented GPA with a price that was at least 35% lower than the next offeror. While GPA continues to withhold ENGIE's technical proposal from public scrutiny, ENGIE moved ahead and released information confirming that its bid was not compliant with the requirements of the IFB. On October 7, 2019 ENGIE issued a press release indicating that "[the] systems proposed by ENGIE integrate more than 50 MWp of solar PV with approx. 300 MWh of battery energy storage...."[3] The inclusion of more than 20.7 MWp[4] of solar generation capacity at either of the project sites is not allowed by the IFB. ENGIE's press release made it clear that ENGIE's proposed projects do not meet the technical requirements in the IFB. The ENGIE proposals should have been deemed non-compliant by GPA and should not have been awarded contracts as part of the IFB. On October 9, 2019, GlidePath submitted its Bid Protest to GPA. GPA denied the protest via correspondence received by GlidePath on October 30, 2019.[5] This appeal followed.

2. GPA is ignoring the fact that ENGIE's Proposals Do Not Comply with the IFB's Technical Requirements

ENGIE has confirmed that its Phase III solution is built upon a system that integrates "more than 50 MWp of solar PV with approx. 300 MWh of battery energy storage..."[6] The inclusion of more than 20.7 MWp of solar generation capacity at either of the project sites is prohibited by the IFB, and rendered ENGIE's proposal technically unresponsive to the IFB.

[2] The Notice to GlidePath that it was not selected for Award is attached to this appeal as **Attachment A.**
[3] The ENGIE press release is submitted as **Attachment B.**
[4] MWp stands for Mega-Watt peak, a measure used in the solar industry to describe what the peak maximum power generation capabilities of the system are.
[5] The Denial of Procurement Protest is submitted with this appeal as **Attachment C.**
[6] The ENGIE press release is submitted as **Attachment B.**

GPA was very clear in the nature and production output of the solar systems it was seeking to procure. Offerors were provided with a specific formula within which to shape the solar systems that would be offered. These systems had to comply with specific requirements about the maximum mega-watt peak of the system (the "MWp") as well as the minimum Energy Storage System capacity of the system (the "ESS").[7] Numerous requests for information were sent by various offerors to GPA over the course of the procurement, and GPA, in response to those inquiries, issued numerous amendments to the procurement that helped confirm the outer formula contours to be applied to the systems that would be offered.

On January 25, 2019, GPA issued Amendment XIII; an amendment called the "Supplement and Update to Volume II Technical Qualification Requirements."[8] The amendment required that the **ESS shall be equal to or greater than the 145%** of the MW rating of the PV charging system. [9] This 145% requirement was coupled to GPA's other requirement that the **ESS be no larger than 30MW** at each project site.[10] Therefore, it was relatively simple to determine that **GPA wanted an ESS system that was both no larger than 30MW, but was also at least 145% greater than the mega-watt rating of the PV charging system.** This meant that the system to be procured would be limited to a peak mega-watt capacity of 20.7 MWp, since 145% of a 20.7 MWp system would be no larger than the 30MW ESS maximum demanded by GPA in its IFB.

[7] The ESS operates like a battery that allows for solar power to be collected at peak solar energy production times, stored, then returned to the power system for use at times when the power is needed at night or when the day is darker.

[8] *See,* Attachment B to Amendment No.: XIII to Invitation for Multi-Step Bid No.: GPA-007-18 for Renewable Energy Resource Phase III issued on January 25, 2019, submitted as **Attachment D** to this appeal.

[9] *See,* Technical Requirements Supplement, Section 2, bullet point 5, which is submitted as **Attachment E** to this appeal. (emphasis added)

[10] *See,* IFB Volume I, Section 1, Bullet 6 (page 9 of 501); IFB Volume II, Section 1 Item 1; Section 2.2.5, Section 2.3.1, submitted as **Attachments F, G, H** to this appeal.

ENGIE's confession that it offered a system to GPA—a system that GPA accepted—of 50 MWp means that it is impossible for ENGIE's proposal to be mathematically compliant with the IFB. ENGIE either ignored the 145% requirement, or ignored the 30 MW maximum ESS size requirement. This means that ENGIE did not have to limit its bid to the technology that supports a 20.7 MWp system, and as such, was not faced with the same price restrictions that other bidders, including GlidePath, were meant to confront.

GPA's acceptance of ENGIE's decision to ignore the 145%/30 MW requirements of the IFB gave ENGIE an unfair price advantage, since ENGIE was no longer bound by the 20.7MWp system maximum that the 145%/30MW requirement commanded. ENGIE's completely different 50MWP system allowed it to submit pricing numbers to GPA—numbers based upon the Guaranteed Net Annual Generation ("GNAG") production quantities nearly 20% higher than the other offers— that were significantly lower than any other bidder.

3. GPA's acceptance of the ENGIE bid as responsive significantly prejudices the people of Guam, by allowing what is effectively a sole source procurement for projects worth nearly $200,000,000.[11]

GPA, by allowing ENGIE to submit a project for consideration that did not hold to the 20.7 MWp system parameters set by the IFB that all other offerors held to, did not compare equivalent projects and, therefore, their selection of ENGIE as the lowest bidder was in error because their proposal was materially different than the other bidders. This failure lays squarely at the feet of GPA, since the acceptance of ENGIE's project means that GPA either (1) accepted a non-conforming proposal from ENGIE, or (2) issued system standards that were sufficiently unclear so as to cause every other offeror—offerors that include some of the biggest and most experienced players in the world of solar power production—to be led astray. This has resulted

[11] The IFB commits GPA and its rate payers to purchasing nearly $200,000,000 worth of power from the awardee of this IFB over the 20-year lifetime of the contract.

in a competitive bid process that wasn't competitive at all, *i.e.*, the ENGIE projects have substantially more capacity than 20.7 MW per project that limited other offerors' proposals. This meant that ENGIE's proposal, as accepted by GPA, increased the projects' solar power production and allowed for the fixed project costs— the costs the form the basis of an offeror's price submission to GPA—to be distributed across more MWhs resulting in a lower net cost per month.

Most frustrating about GPA's failures in this procurement is the fact that GlidePath noted in its Technical Proposal and elsewhere in its interactions with GPA that a lower cost to the people of Guam may be possible if the limits on solar capacity were eased. Rather than violate the technical requirements of the IFB, GlidePath, like the other offerors, designed its project in compliance with the terms of the IFB. ENGIE was an outlier in submitting a non-compliant project that included more than 20.7 MWp of solar charging capacity, and GPA is rewarding that entity with a contract Award despite the fact that GPA has, simply put, based its price analysis on a comparison between apples and oranges.

B. Ruling Requested

GlidePath respectfully requests that the Office of Public Accountability Order the following:

(1) That GPA disqualify ENGIE from eligibility for Award under this IFB, as ENGIE's proposal did not materially comply with the technical requirements of the IFB established by GPA; and

(2) That GPA award both project sites detailed in GPA-IFB-007-18, relative to Renewable Energy Resources Phase III, to GlidePath as the next lowest price responsive bidder to the IFB

In the alternative, the Office of Public Accountability should order GPA to:

(1) Declare affirmatively to all offerors that there is no cap of 20.7 MWp of solar charging capacity required by GPA for the Renewable Energy Resources Phase III ; and

(2) Receive and review new technical and price proposals from all existing offerors in GPA-IFB-007-18 that desire to move forward with competition for award, and then award the Phase III project to the lowest responsive bidder from amongst those offerors.

C. SUPPORTING EXHIBITS, EVIDENCE OR DOCUMENTS

Submitted with this appeal are the following supporting exhibits, evidence, and documents:

(1) The Notice of Award is attached to this appeal as **Attachment A.**

(2) The ENGIE press release is submitted as **Attachment B.**

(3) The Denial of Protest is submitted with this appeal as **Attachment C.** __

(4) Attachment B to Amendment No.: XIII to Invitation for Multi-Step Bid No.: GPA-007-18 for Renewable Energy Resource Phase III issued on January 25, 2019, is submitted as **Attachment D** to this appeal.

(5) Technical Requirements Supplement, Section 2, bullet point 5, is submitted as **Attachment E** to this appeal.

(6) IFB Volume I, Section 1, Bullet 6 (page 9 of 501) is submitted as **Attachment F** to this appeal.

(7) IFB Volume II, Section 1, Item 1 is submitted as **Attachment G** to this appeal.

(8) Section 2.2.5 and Section 2.3.1 are submitted as **Attachment H** to this appeal.

As was noted in Section II(A)(1), *Supra*, GlidePath submitted to GPA requests under the Guam Sunshine Act on August 22, 2019, and again on September 12, 2019, that went largely ignored. GlidePath also anticipates providing further documentation, including independent expert engineering reports, to substantiate its claims when GPA submits the full contracting procurement record to the OPA, and allows GlidePath and its experts to finally review the procurement record in full.

Also, submitted with this appeal pursuant to 2 GAR §12104 (5), is a copy of the prior decision by GPA denying Appellant's protest and compelling this appeal. That is attached as **Attachment C** to this appeal.

PART V: DECLARATION RE COURT ACTION

Pursuant to 5 GCA Chapter 5, unless the court requests, expects, or otherwise expresses interest in a decision by the Public Auditor, the Office of Public Accountability will not take action on any appeal where action concerning the protest or appeal has commenced in any court.

The undersigned party does hereby confirm that to the best of his knowledge, no case or action concerning the subject of this Appeal has been commenced in court. All parties are required to and the undersigned party agrees to notify the Office of Public Accountability within 24 hours if court action commences regarding this Appeal or the underlying procurement action.

Respectfully Submitted this 13th day of November, 2019.

CIVILLE & TANG, PLLC

By: ______________________
JOSHUA D. WALSH
JOSEPH C. RAZZANO
Attorneys for Appellant
GlidePath Marianas Operations Inc.

Exhibit “o”

CHARGING PHASE (daytime operation)

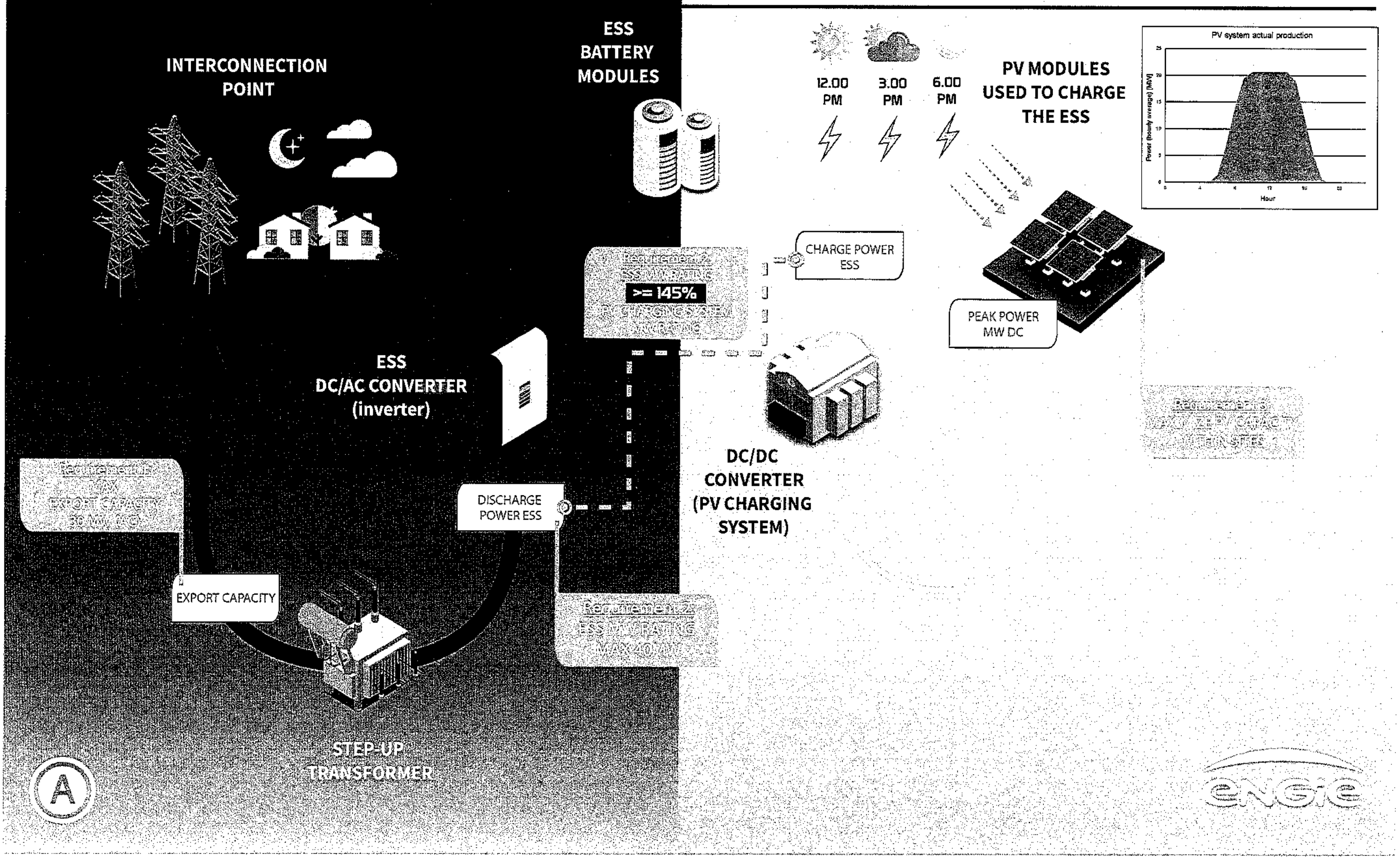

Exhibit “p”

CHARGING PHASE (daytime operation)

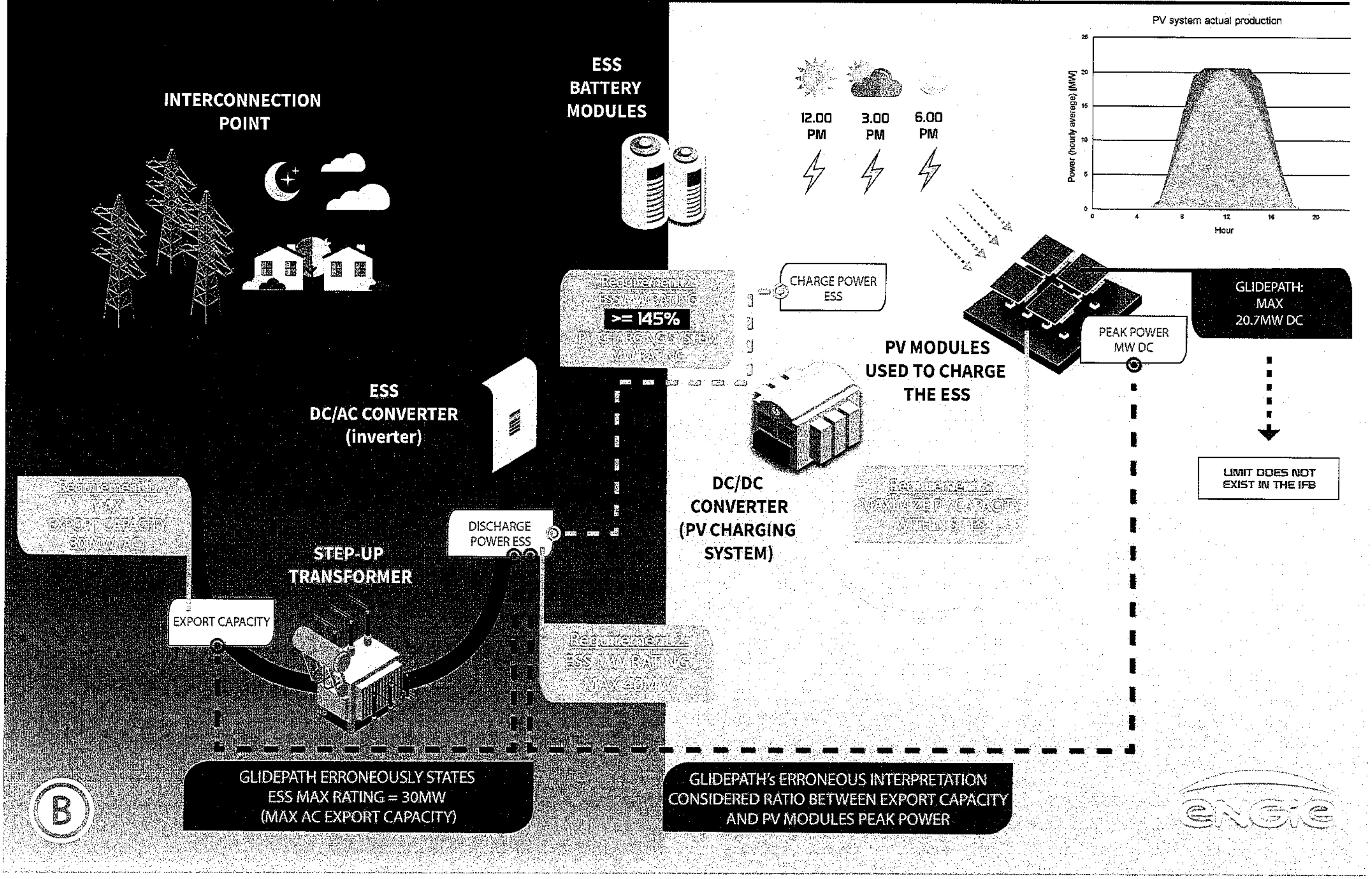

Exhibit “q”

CHARGING PHASE (daytime operation)