



# GUAM POWER AUTHORITY

ATURIDÁT ILEKTRESEDÁT GUÅHAN  
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June 3, 2023

**AMENDMENT NO.: VIII**

**TO**

**INVITATION FOR MULTI-STEP BID NO.: GPA-012-23**

**FOR**

**RENEWABLE ENERGY RESOURCE ACQUISITION PHASE IV**

Prospective Bidders are hereby notified of the following changes and responses to inquiries received from Bidder No. 5 dated January 10, 2023 and February 7, 2023, Bidder No.: 1 dated January 18, 2023, January 23, 2023 and February 2, 2023, Bidder No.: 13 dated February 6, 2023 and Bidder No.: 11 dated February 7, 2023:

**CHANGES:**

1. **REMOVE** Page 108a.1 of 263 and **REPLACE** with Page 108a.1a of 263 (see attached).

Under, **Volume II: Technical Qualification Proposal Requirements**, Section **2.3. Project Capacity & Production**, Item **2.3.1. Minimum and Maximum Project Capacity**, verbiage has changed:

**FROM:**

The minimum export capacity that a Bidder may offer is 5 MW, and the maximum export capacity shall be 80 MW for each project. This may be the combination of several generation units at one site.

**TO NOW READ:**

- \* The minimum export capacity that a Bidder may offer is 5 MW, and the maximum export capacity shall be 60 MW for each project. This may be the combination of several generation units at one site.

2. **REMOVE** Page 32 of 263 and **REPLACE** with Page 32a of 263 (see attached).

Under, **Volume I: Commercial Terms and Conditions**, Section **3. Required Forms and Supplemental Information**, Bullet 3, verbiage has changed:

**FROM:**

Audited financial information on BIDDER's firm and all subcontractors that will be used in the performance management of GPA's Fuel Bulk Storage Facility. BIDDERS must include their Dunn and Bradstreet Number or Other Major Credit Rating Agency rating.

**TO NOW READ:**

- \* Audited financial information on BIDDER's firm and all subcontractors that will be used in the performance management of this contract. BIDDERS must include their Dunn and Bradstreet Number or Other Major Credit Rating Agency rating.

3. **REMOVE** Page 72 of 263 and **REPLACE** with Page 72a of 263 (see attached).

Under, **Volume I: Commercial Terms and Conditions**, Section **4. Conditions of Contract**, Item **4.52.1. Submittal Procedures**, verbiage for h) is changed:

**FROM:**

GPA shall be allowed three (3) weeks to review and approve submittals without affecting the Contract completion date. Delays in delivery due to submittals that are disapproved during this review period are the responsibility of the Contractor.

**TO NOW READ:**

- \* GPA shall be allowed four (4) weeks to review and approve submittals without affecting the Contract completion date. However, GPA shall be allowed more than four (4) weeks to review bulk submittals. Delays in delivery due to submittals that are disapproved during this review period are the responsibility of the Contractor.

4. **REMOVE** Page 103a of 263 and **REPLACE** with Page 103b of 263 (see attached).

Under, **Volume II: Technical Qualification Proposal Requirements**, Item **CONTRACT TERM** verbiage is changed:

**FROM:**

The renewable energy resource shall provide energy for a term of 20 years, with the option to extend for two additional five-year terms, for a maximum term of thirty years.

**TO NOW READ:**

- \* **CONTRACT TERM:** The renewable energy resource shall provide energy for a term of 25 years, with the option to extend for one additional five-year term, for a maximum term of thirty years.

5. **REMOVE** Page 104 of 263 and **REPLACE** with Page 104a of 263 (see attached).

Under, Under, **Volume II: Technical Qualification Proposal Requirements**, Item **2.1 Product and Term**, verbiage is changed:

**FROM:**

GPA seeks to acquire energy from renewable resource projects based on an 'annual minimum quantity' of energy under the terms of the Renewable Energy Purchase Agreement (See Volume III). Projects in this acquisition phase are required to be operational and delivering renewable energy on or before 36 months from the contract award date. The term of the Renewable Energy Purchase

Agreement will be 20 years. Prior to the expiration of the twenty-year contract period, GPA may extend the contract for two (2) additional five-year terms.

**TO NOW READ:**

- \* GPA seeks to acquire energy from renewable resource projects based on an 'annual minimum quantity' of energy under the terms of the Renewable Energy Purchase Agreement (See Volume III). Projects in this acquisition phase are required to be operational and delivering renewable energy on or before 36 months from the contract award date. The term of the Renewable Energy Purchase Agreement will be 25 years. Prior to the expiration of the twenty-five-year contract period, GPA may extend the contract for one (1) additional five-year term.

6. **REMOVE** Page 112 of 263 and **REPLACE** with Page 112a of 263 (see attached).

Under, **Volume II: Technical Qualification Proposal Requirements**, Item **2.5.1. Fixed Pricing and Guaranteed Energy**, verbiage is changed:

**FROM:**

Bidders are required to submit fixed pricing for the guaranteed renewable energy delivered for the first contract year. Prices shall escalate at a fixed rate of 0.5% annually for the entire contract period. GPA will apply a 1% penalty factor to the prices of bids interconnecting to the 34.5 kV system. Energy degradation shall be limited to 0.7% annually.

**TO NOW READ:**

- \* Bidders are required to submit fixed pricing for the guaranteed renewable energy delivered for the first contract year. Prices shall escalate at a fixed rate of no more than 1.0% annually for the entire contract period. GPA will apply a 1% penalty factor to the prices of bids interconnecting to the 34.5 kV system. Energy degradation shall be limited to 0.7% annually.

7. **REMOVE** Page 113b of 263 and **REPLACE** with Page 113c of 263 (see attached).

Under, **Volume II: Technical Qualification Proposal Requirements**, Item **2.5.3. Energy Purchase Price Units**, verbiage is changed:

**FROM:**

The Bidder shall provide a fixed price bid in \$/MWH for the term of the proposed delivery of renewable energy for each ESS proposal options. The price bid shall include the capital and O&M components which shall be referred to should GPA exercise the capital buy-out option. All columns in the bid price worksheet must be filled.

**TO NOW READ:**

- \* The Bidder shall provide a fixed price bid in \$/MWH for the term of the proposed delivery of renewable energy for each ESS proposal options. The price bid shall include the capital and O&M components which shall be referred to should GPA exercise the capital buy-out option. All columns in the bid price worksheet must be filled. GPA will not accept bids with year-over-year (YOY) escalation rates greater than 1.0% per year.

8. **REMOVE** Page 117 of 263 and **REPLACE** with Page 117a of 263 (see attached).

Under, **Volume II: Technical Qualification Proposal Requirements**, Item **3.2.2. Project Management/Experience**, Number 2 verbiage is changed:

**FROM:**

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, and any evidence that the project participants have worked jointly on other projects for each of the project participants (including the Bidder, partners, and proposed contractors). *(NOTE: If a bidder is relying on the experience of a consultant or contractor to meet the Experience Threshold Requirement, the bidder should describe any contractual relationships between the bidder and the consultant or contractor.)*

**TO NOW READ:**

\*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, and any evidence that the project participants have worked jointly on other projects for each of the project participants (including the Bidder, partners, and proposed contractors). The Experience Threshold Requirement is a minimum Raw Score of 4 in the Project Team Experience Evaluation Factor in the Qualitative Evaluation Scoresheet. Scores are based on the ability to demonstrate success in projects completed within the last seven years of similar type, size and technology and to effectively work together to bring the project to commercial operation in a timely fashion. Bidders with experience in multiple projects similar in size or larger will receive higher scores. Bidders not meeting this minimum score requirement will be disqualified. *(NOTE: If a bidder is relying on the experience of a consultant or contractor to meet the Experience Threshold Requirement, the bidder should describe any contractual relationships between the bidder and the consultant or contractor.)*

9. **REMOVE** Page 251 of 263 and **REPLACE** with 251a of 263 (see attached).

Under **PART 1 – QUAL SUPPORT REFERENCE, EVALUATION FACTORS, E.2 Site Environmental Assessment (5)** is changed:

**FROM:**

(5)

**TO NOW READ:**

\* (10)

10. **REMOVE** Page 102b of 263 and **REPLACE** with 102c of 263 (see attached).

Under, **Volume II: Technical Qualification Proposal Requirements**, Item **1. Overview, ENERGY AND CAPACITY** paragraph is changed:

**FROM:**

- **ENERGY AND CAPACITY:** The renewable energy resource shall deliver an annual minimum energy (AC) as specified in the Bidder's Qualitative Proposal with a maximum export capacity of 60 MW (AC) at the interconnection point; this may be a combination of several generation units at one or more sites. However, the nameplate capacity that can be installed may be higher than 60 MW, subject to the maximum additional MW capacity that the GPA system can handle as determined by a System Integration Study. The System Integration Study will be completed within 120 days after evaluation of the Price Proposal(s) and initial notification of the most qualified Bidders. For proposals with an intermittent renewable energy resource coupled with an energy storage system, GPA will allow 60% of the resource to be DC-coupled to the energy storage system with the remaining 40% AC-coupled to the GPA grid. Therefore, 60% of the total project capacity will deliver firm, energy-shifted power from the energy storage system to the GPA grid. The energy storage system shall also provide ramp-rate control for the power delivered from 40% of the total project capacity such that the ramp-rates are kept within 1% per minute at the guaranteed success rate of 95% during the energy production period. However, before or after a GPA curtailment, this rate may be exceeded at the request of the GPA Power System Control Center operators. GPA will not pay for the energy delivered to the GPA grid that did not meet the guaranteed success rate.

**TO NOW READ:**

- \* ● **ENERGY AND CAPACITY:** The renewable energy resource shall deliver an annual minimum energy (AC) as specified in the Bidder's Qualitative Proposal with a maximum export capacity of 60 MW (AC) at the interconnection point; this may be a combination of several generation units at one or more sites. However, the nameplate capacity that can be installed may be lower than 60 MW at 115 kV, subject to the maximum additional MW capacity that the GPA system can handle as determined by a System Integration Study. The System Integration Study will be completed within 120 days after evaluation of the Price Proposal(s) and initial notification of the most qualified Bidders. For proposals with an intermittent renewable energy resource coupled with an energy storage system, GPA will allow 60% of the resource to be DC-coupled to the energy storage system with the remaining 40% AC-coupled to the GPA grid. Therefore, 60% of the total project capacity will deliver firm, energy-shifted power from the energy storage system to the GPA grid. The energy storage system shall also provide ramp-rate control for the power delivered from 40% of the total project capacity such that the ramp-rates are kept within 1% per minute at the guaranteed success rate of 95% during the energy production period. However, before or after a GPA curtailment, this rate may be exceeded at the request of the GPA Power System Control Center operators. GPA will not pay for the energy delivered to the GPA grid that did not meet the guaranteed success rate.

11. **REMOVE** page 254 of 263 and **REPLACE** with 254a of 263 (see attached).

Under PART 2 – Technical Data, Item 12. Renewable Energy Project Generation Profile has changed:

**FROM:**

**Provide the monthly estimated average net MWh per hour for every hour of the day.** GPA requests for operation profile to evaluate the project. Annual projections must equal the

Guaranteed net annual generation in 9.G above. **Data provided shall be the solar production net output (excludes ESS & other losses/meter output). GPA will use this data to determine total daily production to be dispatched over its peak period (6PM -10PM) based the ESS capacity entered in 9D above.**

**TO NOW READ:**

- \* **Provide the monthly estimated average net MWh per hour for every hour of the day.** GPA requests for operation profile to evaluate the project. Annual projections must equal the Guaranteed net annual generation in 9.F above. **Data provided shall be the solar production net output (excludes ESS & other losses/meter output). GPA will use this data to determine total daily production to be dispatched over its peak period (6PM -10PM) based the ESS capacity entered in 9D above.**

**Bidder No. 5 dated 01/10/2023:**

**QUESTION:**

5. (Volume I, Page 26, 2.10.3. Evaluation Criteria and Comparison of Priced Proposals)  
What is GPA's cost and where can Bidder find it?

**ANSWER:**

GPA will not accept proposals above \$0.179 per kWh.

**QUESTION:**

14. (Volume II, Page 107, 2.2.5. Limits on Renewable Energy Purchases)  
However, Vol II. 2.2.5 Limits on Renewable Energy Purchases stipulates "Due to the nature of the generation control system and related response characteristics of the generators on the GPA system, GPA may limit the amount of energy delivered from renewable resources to no more than 30MW (AC) at the interconnection point." Please confirm what kind of remedies will be granted in case GPA limits the amount of energy delivered from renewable resources to no more than 30MW(AC) at the interconnection point, as in Vol II.2.2.5?

**ANSWER:**

For design purposes, the amount of power delivered is limited by the ampacity of the transmission line from the substation to the point of interconnection. For interconnections at the 34.5 kV level, the limit may be 30 MW (AC) or lower depending on the line ampacity or other interconnected generation facilities, and shall be interconnected to separate transmission lines unless determined otherwise by the System Integration Study. The limit may be raised for interconnections at the 115 kV level if the transmission line has a higher ampacity. Bidders may choose the same interconnection point in their proposals which may result in procedures/scheduling which may affect total dispatching output.

For operational purposes, the renewable energy resource shall provide dispatchable active, or real, power at the point of interconnection. Dispatchable power is delivered on demand and at various MW output levels at the request of GPA's Power System Control Center. GPA will not pay the Contractor Curtailment fees for dispatching limited outputs based on the power system demand. GPA will only pay Curtailment fees due to failure or maintenance of the interconnection facilities occurring after the one-year warranty has expired. However, if the Contractor fails to meet the

Guaranteed Net Annual Generation (MWH/YR) due to limits based on the power system demand, GPA will pay the lost revenue up to the Guaranteed Net Annual Generation (MWH/YR) if substantiated by the Contractor.

**QUESTION:**

16. (Volume II, Page 102, 1. Overview – Energy and Capacity)

Regarding Energy and Capacity requirement, ' The renewable energy resource shall deliver an annual minimum energy (AC) as specified in the Bidder's Qualitative Proposal with a maximum export capacity of 80 MW (AC) at the interconnection point;" it is understood that the maximum export capacity of 80MW (AC) shall be measured at the interconnection point which is GPA's substation. Please confirm

**ANSWER:**

The export capacity (MW) will be measured at the designated GPA substation or a location otherwise determined by the System Integration Study. However, the maximum export capacity may be limited by the ampacity of the transmission line from the substation to the point of interconnection or other interconnected generation facilities. For interconnections at the 34.5 kV level, the limit may be 30 MW (AC) or lower depending on the line ampacity. The limit may be raised for interconnections at the 115 kV level if the transmission line has a higher ampacity, but no greater than 60 MW (AC). Please refer to the recent bid document amendment in which the maximum export capacity is lowered from 80 MW (AC) to 60 MW (AC).

Kindly refer to No. 1 of **CHANGES** above.

**QUESTION:**

17. (Volume II, Page 103, 1. Overview – Interconnection)

Please provide the expected completion schedule of the new 115kV Apra Substation.

**ANSWER:**

GPA currently does not have an expected completion schedule for the 115 kV Apra Substation proposed project. Bidder's shall include all costs for a 115 kV interconnection through the Apra Substation if required.

**QUESTION:**

37. (Volume III, Page 144, 4.2 Extension of Commercial Operation Date)

In case COD is delayed by GPA Delay, it is apparent that the Seller will suffer from financial costs and expenses. Bidder proposes to add follow wordings at the end of 4.2.(c).

'(iv) any tax equity investment and financing costs and expenses (including but not limited to principal, interest, fees, and any interest rate hedge termination payments) incurred by the Seller and/or its affiliates in connection with the development, construction, operation and maintenance of the Facility'

**ANSWER:**

GPA does not accept this suggested amendment to the bid document.

**QUESTION:**

52. Bidder understands that if COD is delayed due to GPA, Bidder is granted for schedule relief. However, IFB is silent on the possible losses due to such delay including but not limited to financial losses, losses

due to equipment degradations, preservation costs, standby costs, equipment warranties, etc. What kind of remedies can Bidder expect for GPA delay events?

**ANSWER:**

GPA cannot offer any remedies; however, GPA will work with the Contractor to minimize any schedule delays.

**Bidder No.: 1 dated 01/18/2023:**

**QUESTION:**

1. (Page N/A of 263)

Re: Wind Loading

Please provide the current Guam's wind loading design requirements that the EPC Contractor shall follow for its solar PV system design. Recent PV Mounting System technology allows almost half the footprint of land use, however, its Wind Load tolerance is at a maximum of 160mph. Is 160mph wind load design acceptable when a Bidder submits a manufacturer's certification letter withstanding 160mph?

**ANSWER:**

According to the 2021 International Building Code, the wind loading design requirement for a Risk Category III structure on Guam is 170 mph for allowable stress design and 220 mph for basic design wind speed. However, Bidders shall consult with their design engineers registered with the Guam PEALS for Guam's wind loading design requirements.

**QUESTION:**

2. (Page N/A of 263)

Re: Code

Question

We kindly ask GPA to provide us with the standards, codes and recommendations that shall be applied for design, construction, testing and commissioning of the solar PV and ESS project in Guam. Specifically, what is edition of International Building Code and International Fire Code?

**ANSWER:**

GPA follows the same industrial codes and standards used in the US for design, construction, testing and commissioning of solar PV and ESS such as IEEE, ANSI, NEMA, NEC, NESC, UL, IEC, International Building Code, International Fire Code and Guam Laws. The latest International Building Code and International Fire Code shall be used. Bidders shall consult with their design engineers regarding the solar PV and ESS design requirements.

**QUESTION:**

3. (Page N/A of 263)

Re: Interconnection Capacity



**Question**

Please provide the latest version of Long Range Transmission Planning Study, which includes IWPS Power Flow table.

**ANSWER:**

Please refer to the table below.

Guam Power Authority Base Case Power Flow															
Peak Load Case															
FROM	FNAME	FKV	TO	TNAME	TKV	CK	ST	P	Q	MVA	AMPS				
%RATE	RATE	UNIT	AF	AT	AREA										
24.7	2202 Har345B3	2008.2 Amp	1	1	1	34.50	2219	Har345B1	34.50	1	1	-29.3	-4.6	29.6	495.1
57.7	3300 Agrko13	41.0 Mva	1	1	1	12.02	6005	Aggreko	0.46	1	1	-22.6	-5.5	23.3	1093.2
46.6	2214 Yig345B1	50.0 Mva	1	1	1	34.50	3300	Agrko13	12.02	1	1	-22.6	-4.4	23.1	381.0
28.8	2210 And345B1	903.7 Amp	1	1	1	34.50	2214	Yig345B1	34.50	1	1	-15.6	0.4	15.7	259.9
23.2	2004 Apr345	903.7 Amp	1	1	1	34.50	2017	Ten jotap	34.50	1	1	-12.1	-2.9	12.4	210.1
29.8	2005 Oro345	485.3 Amp	1	1	1	34.50	2007	CSTapX20	34.50	1	1	-8.4	-1.2	8.5	144.8
17.9	2202 Har345B3	903.7 Amp	1	1	1	34.50	2203	Ded345B1	34.50	1	1	-7.5	-6.1	9.7	161.9
14.0	2202 Har345B3	903.7 Amp	1	1	1	34.50	2222	NFin345	34.50	1	1	-7.5	-1.0	7.6	126.6
13.6	2005 Oro345	903.7 Amp	1	1	1	34.50	2010	CSTapX21	34.50	1	1	-7.0	-1.9	7.2	123.0
21.8	2008 CldSt345	569.0 Amp	1	1	1	34.50	2010	CSTapX21	34.50	1	1	-6.5	-3.4	7.3	123.9
12.1	2105 Tum345B1	903.7 Amp	1	1	1	34.50	2202	Har345B3	34.50	1	1	-6.2	-2.1	6.5	109.4
12.0	2108 SV345B1	903.7 Amp	1	1	1	34.50	2202	Har345B3	34.50	1	1	-5.0	-4.1	6.5	108.5
7.8	2218 GiatTap	903.7 Amp	1	1	1	34.50	2219	Har345B1	34.50	1	1	-3.3	-2.7	4.2	70.7
10.2	2217 GIA345B1	702.9 Amp	1	1	1	34.50	2218	GiatTap	34.50	1	1	-3.2	-2.8	4.3	71.6
15.8	2214 Yig345B1	27.0 Mva	1	1	1	34.50	3212	Yigo T30	13.80	1	1	-3.1	2.9	4.3	70.6
4.5	2212 Pag345B1	903.7 Amp	1	1	1	34.50	2220	Mang345B	34.50	2	1	-2.4	-0.0	2.4	40.3
6.4	2102 Bar345	903.7 Amp	1	1	1	34.50	2216	GAA345B1	34.50	1	1	-2.2	-2.6	3.4	57.4
5.2	2108 SV345B1	903.7 Amp	1	1	1	34.50	2110	HafaTap	34.50	1	1	-2.0	2.0	2.8	47.2
5.3	2101 Aga345	903.7 Amp	1	1	1	34.50	2106	Ani345B1	34.50	1	1	-1.9	2.0	2.8	47.2
5.5	2208 NCS345	485.3 Amp	1	1	1	34.50	2222	NFin345	34.50	1	1	-1.4	-0.7	1.6	26.5
5.3	2209 Pott345	485.3 Amp	1	1	1	34.50	2210	And345B1	34.50	1	1	-1.4	-0.6	1.5	25.7
3.1	2003 Tal345	518.8 Amp	1	1	1	34.50	2004	Apr345	34.50	1	1	-0.9	0.1	0.9	15.7
7.0	2004 Apr345	903.7 Amp	1	1	1	34.50	2005	Oro345	34.50	1	1	-0.8	3.6	3.7	62.9
7.7	2003 Tal345	12.5 Mva	1	1	1	34.50	3003	TalofT80	13.80	1	1	-0.6	0.7	1.0	16.2
3.6	2216 GAA345B1	702.9 Amp	1	1	1	34.50	2217	GIA345B1	34.50	1	1	-0.5	-1.4	1.5	25.1
2.1	1101 Aga115	30.0 Mva	1	1	1	115.00	2111	AgESS345	34.50	1	1	-0.4	-0.5	0.6	3.0

2.1	2111 AgESS345 30.0 Mva	34.50	1	1	1	6007 AgESS440	0.44	1	1	-0.4	-0.5	0.6	10.2
1.0	2209 Pott345 485.3 Amp	34.50	1	1	1	2222 NFin345	34.50	1	1	-0.3	-0.1	0.3	4.7
0.5	2212 Pag345B1 903.7 Amp	34.50	1	1	1	2220 Mang345B	34.50	1	1	-0.2	-0.2	0.3	4.7
	210 Mache_CT	13.80				3210 MacheT90 0.0 418328.1Amp	13.80	1	1	-0.0	-0.0	0.0	0.6
0.0	2220 Mang345B 0.0 Amp	34.50	1	1	1	2221 MangESS	34.50	1	1	-0.0	-0.0	0.0	0.6
1.7	2003 Tal345 30.0 Mva	34.50	1	1	1	6008 TaESS440	0.44	1	1	-0.0	-0.5	0.5	8.5
0.0	14 OrteUnts 418328.1Amp	13.80	1	1	1	3005 OroteT11	13.80	1	1	-0.0	-0.0	0.0	0.0
0.0	2204 Mar345B1 5.0 Mva	34.50	1	1	1	3205 MarboT14	13.80	1	1	-0.0	-0.0	0.0	0.0
0.0	17 MEC 9 56.0 Mva	13.80	1	1	1	1005 Pit115B1	115.00	1	1	-0.0	-0.0	0.0	0.0
0.0	2018 Dandan 33.2 Mva	34.50	1	1	1	6006 Dandan_PV	0.48	1	1	0.0	-0.0	0.0	0.0
0.0	205 Marbo CT	13.80				2204 Mar345B1 0.0 20.0 Mva	34.50	1	1	0.0	0.0	0.0	0.0
0.0	12 Cabras_3 50.0 Mva	13.80	1	1	1	1001 Cab115EB	115.00	1	1	0.0	0.0	0.0	0.0
0.0	13 Cabras_4 50.0 Mva	13.80	1	1	1	1001 Cab115EB	115.00	1	1	0.0	0.0	0.0	0.0
0.0	2005 Oro345 12.5 Mva	34.50	1	1	1	3006 OroteT12	13.80	1	1	0.0	0.0	0.0	0.0
0.0	2005 Oro345 14.0 Mva	34.50	1	1	1	3005 OroteT11	13.80	1	1	0.0	0.0	0.0	0.0
0.0	2222 NFin345 19.5 Mva	34.50	1	1	1	3215 NFin T119	13.80	1	1	0.0	0.0	0.0	0.0
0.0	2003 Tal345 472.9 Amp	34.50	1	1	1	2018 Dandan	34.50	1	1	0.0	-0.0	0.0	0.2
2.3	1001 Cab115EB 908.7 Amp	115.00	1	1	1	1005 Pit115B1	115.00	1	1	0.0	4.4	4.4	21.1
0.2	2222 NFin345 19.5 Mva	34.50	1	1	1	3214 NFin T118	13.80	1	1	0.0	0.0	0.0	0.5
1.0	2103 RBa345B1 9.4 Mva	34.50	1	1	1	3105 RadBaT24	13.80	1	1	0.0	0.1	0.1	1.6
3.3	2001 Cab345 7.0 Mva	34.50	1	1	1	4001 CbrsStUp	4.16	1	1	0.2	0.2	0.2	3.9
2.2	2009 SRF345 14.0 Mva	34.50	1	1	1	3015 SRFT18	13.80	1	1	0.3	0.1	0.3	5.3
9.2	2208 NCS345 5.3 Mva	34.50	1	1	1	4201 NCS T47	4.16	1	1	0.4	0.3	0.5	8.0
4.4	2005 Oro345 14.0 Mva	34.50	1	1	1	3016 OroteT28	13.80	1	1	0.5	0.4	0.6	10.6
2.5	2011 Pul345 903.7 Amp	34.50	1	1	1	2102 Bar345	34.50	1	1	0.6	-1.2	1.3	22.8
3.8	2002 Pit345 20.0 Mva	34.50	1	1	1	3002 Piti T8	13.80	1	1	0.7	0.3	0.8	12.9
9.5	2103 RBa345B1 9.4 Mva	34.50	1	1	1	3104 RadBaT23	13.80	1	1	0.7	0.5	0.9	14.9
6.9	2011 Pul345 20.0 Mva	34.50	1	1	1	3009 PulantT95	13.80	1	1	1.0	1.0	1.4	23.4
3.9	2208 NCS345 485.3 Amp	34.50	1	1	1	2219 Har345B1	34.50	1	1	1.0	0.4	1.1	18.7
3.0	2003 Tal345 903.7 Amp	34.50	1	1	1	2011 Pul345	34.50	1	1	1.6	-0.3	1.6	26.8
6.7	2104 Tam345B1 702.9 Amp	34.50	1	1	1	2110 HafaTap	34.50	1	1	2.0	-2.0	2.8	47.4
34.8	2209 Pott345 5.2 Mva	34.50	1	1	1	3207 PotsT110	13.80	1	1	1.7	0.8	1.8	30.4
10.7	2101 Aga345 20.0 Mva	34.50	1	1	1	3101 Agana T9	13.80	1	1	2.0	0.8	2.1	36.1
4.9	2211 Mac345B1 903.7 Amp	34.50	1	1	1	2220 Mang345B	34.50	1	1	2.6	-0.0	2.6	44.3

2217 GIA345B1	34.50	4213 GIAT Trm	4.16	1	1	2.8	1.4	3.1	52.3
33.2 9.4 Mva	1 1	1							
2005 Oro345	34.50	2009 SRF345	34.50	1	1	3.0	2.0	3.6	61.3
10.8 569.0 Amp	1 1	1							
2005 Oro345	34.50	2009 SRF345	34.50	2	1	3.0	2.0	3.6	61.3
10.8 569.0 Amp	1 1	1							
2219 Har345B1	34.50	3202 Harmnt22	13.80	1	1	3.0	1.2	3.2	54.2
23.2 14.0 Mva	1 1	1							
2103 RBa345B1	34.50	2212 Pag345B1	34.50	1	1	3.5	-1.6	3.8	63.8
13.1 485.3 Amp	1 1	1							
2002 Pit345	34.50	3001 Piti T7	13.80	1	1	3.6	-0.2	3.6	61.0
34.6 10.5 Mva	1 1	1							
2210 And345B1	34.50	3209 AnderT16	13.80	1	1	3.9	0.0	3.9	65.1
9.8 40.0 Mva	1 1	1							
2101 Aga345	34.50	2103 RBa345B1	34.50	1	1	4.3	-1.0	4.4	73.5
15.1 485.3 Amp	1 1	1							
2014 Ten345	34.50	2017 Tenjotap	34.50	1	1	4.9	3.2	5.9	98.6
10.9 903.7 Amp	1 1	1							
11 TenjoDsl	13.80	2014 Ten345	34.50	1	1	4.9	3.3	6.0	246.6
		19.8 30.0 Mva	1 1	1					
2101 Aga345	34.50	2104 Tam345B1	34.50	1	1	5.6	-3.3	6.5	108.8
12.0 903.7 Amp	1 1	1							
2105 Tum345B1	34.50	3107 TumonT60	13.80	1	1	5.6	0.6	5.6	93.9
18.7 30.0 Mva	1 1	1							
2009 SRF345	34.50	3014 SRFT17	13.80	1	1	5.7	3.9	6.9	117.4
49.2 14.0 Mva	1 1	1							
2203 Ded345B1	34.50	2210 And345B1	34.50	1	1	5.9	1.3	6.0	99.7
14.9 702.9 Amp	1 1	1							
2012 Uma345	34.50	3011 UmatT120	13.80	1	1	6.0	-0.3	6.0	101.5
19.9 30.0 Mva	1 1	1							
2004 Apr345	34.50	3004 Apra T70	13.80	1	1	6.0	-0.4	6.0	101.2
47.9 12.5 Mva	1 1	1							
2004 Apr345	34.50	2012 Uma345	34.50	1	1	6.0	-0.2	6.0	101.6
11.2 903.7 Amp	1 1	1							
2005 Oro345	34.50	3012 OroteT13	13.80	1	1	6.4	1.6	6.6	112.5
47.2 14.0 Mva	1 1	1							
2008 CldSt345	34.50	3007 CldST25	13.80	1	1	6.5	3.4	7.3	123.9
52.0 14.0 Mva	1 1	1							
10 TalofDsl	13.80	3003 TalofT80	13.80	1	1	6.5	-0.4	6.5	267.9
		0.1 418328.1Amp	1 1	1					
9 ManenDsl	13.80	3009 PulanT95	13.80	1	1	6.6	-1.2	6.7	274.0
0.1 418328.1Amp	1 1	1							
2210 And345B1	34.50	3208 AnderT15	13.80	1	1	6.9	-0.6	7.0	115.5
17.4 40.0 Mva	1 1	1							
2108 SV345B1	34.50	3113 SanVT122	13.80	1	1	7.0	2.1	7.3	122.5
24.4 30.0 Mva	1 1	1							
2002 Pit345	34.50	2017 Tenjotap	34.50	1	1	7.2	-0.1	7.2	120.8
13.4 903.7 Amp	1 1	1							
2002 Pit345	34.50	2101 Aga345	34.50	1	1	8.0	-1.5	8.1	136.2
15.1 903.7 Amp	1 1	1							
2204 Mar345B1	34.50	2212 Pag345B1	34.50	1	1	8.0	3.3	8.6	143.3
29.7 485.3 Amp	1 1	1							
2203 Ded345B1	34.50	2204 Mar345B1	34.50	1	1	8.0	3.4	8.7	143.2
15.9 903.7 Amp	1 1	1							
1103 Tam115B1	115.00	1201 Har115B1	115.00	1	1	8.0	4.5	9.2	44.7
5.0 908.7 Amp	1 1	1							
2002 Pit345	34.50	2007 CSTapX20	34.50	1	1	8.5	1.4	8.6	144.8
29.8 485.3 Amp	1 1	1							
2104 Tam345B1	34.50	3106 TamunT50	13.80	1	1	8.6	1.5	8.8	146.8
39.1 22.4 Mva	1 1	1							
2210 And345B1	34.50	2222 NFin345	34.50	1	1	9.3	1.9	9.4	156.8
17.4 903.7 Amp	1 1	1							
2104 Tam345B1	34.50	2105 Tum345B1	34.50	1	1	9.7	-3.6	10.4	173.8
19.2 903.7 Amp	1 1	1							
2214 Yig345B1	34.50	2219 Har345B1	34.50	1	1	10.0	1.5	10.1	167.0
18.5 903.7 Amp	1 1	1							
2106 Ani345B1	34.50	3110 AnigT100	13.80	1	1	10.1	0.4	10.1	170.7
33.8 30.0 Mva	1 1	1							

2105 Tum345B1 37.8 28.0 Mva	34.50 1 1 1	3109 TumonT61	13.80 1 1	10.3	-1.9	10.5	175.7
2101 Aga345 20.1 903.7 Amp	34.50 1 1 1	2102 Bar345	34.50 1 1	10.7	1.2	10.8	181.5
2216 GAA345B1 43.8 25.0 Mva	34.50 1 1 1	3213 GAA T105	13.80 1 1	10.8	1.9	11.0	184.1
2219 Har345B1 39.6 30.0 Mva	34.50 1 1 1	3201 HarmnT21	13.80 1 1	11.3	3.6	11.9	198.4
2104 Tam345B1 43.1 28.0 Mva	34.50 1 1 1	3108 TamunT51	13.80 1 1	11.9	2.2	12.1	202.3
2002 Pit345 22.7 903.7 Amp	34.50 1 1 1	2106 Ani345B1	34.50 1 1	12.1	-1.4	12.2	205.0
2211 Mac345B1 24.0 903.7 Amp	34.50 1 1 1	2216 GAA345B1	34.50 1 1	12.6	2.8	12.9	215.9
1005 Pit115B1 13.4 100.0 Mva	115.00 1 1 1	2002 Pit345	34.50 1 1	12.8	4.1	13.4	64.6
2102 Bar345 61.3 22.4 Mva	34.50 1 1 1	3103 BarriT75	13.80 1 1	13.5	2.5	13.7	231.7
2002 Pit345 27.2 903.7 Amp	34.50 1 1 1	2010 CSTapX21	34.50 1 1	13.5	5.6	14.6	245.3
2212 Pag345B1 47.2 30.0 Mva	34.50 1 1 1	3211 PagaT115	13.80 1 1	14.0	2.0	14.1	237.5
2001 Cab345 14.7 1807.4 Amp	34.50 1 1 1	2002 Pit345	34.50 1 1	15.3	4.0	15.9	266.1
1001 Cab115EB 14.4 112.0 Mva	115.00 1 1 1	2001 Cab345	34.50 1 1	15.5	4.4	16.1	77.8
2203 Ded345B1 55.1 30.0 Mva	34.50 1 1 1	3204 DededT55	13.80 1 1	16.4	2.5	16.5	273.2
2211 Mac345B1 64.7 28.0 Mva	34.50 1 1 1	3210 MacheT90	13.80 1 1	17.8	3.5	18.1	303.7
2101 Aga345 62.1 30.0 Mva	34.50 1 1 1	3102 AganaT65	13.80 1 1	18.1	4.2	18.6	312.6
208 Ded CT#1	13.80	2203 Ded345B1 68.9 30.0 Mva	34.50 1 1	18.9	8.3	20.7	847.5
209 Ded CT#2	13.80	2203 Ded345B1 69.1 30.0 Mva	34.50 1 1	19.0	8.2	20.7	850.8
211 Yigo_CT	13.80	3212 Yigo T30 0.2 418328.1Amp	13.80 1 1	19.4	-3.3	19.7	807.0
1005 Pit115B1 15.4 908.7 Amp	115.00 1 1 1	1201 Har115B1	115.00 1 1	28.0	6.1	28.7	138.3
1101 Aga115 28.2 112.0 Mva	115.00 1 1 1	2101 Aga345	34.50 1 1	30.9	6.4	31.6	152.9
1001 Cab115EB 17.7 908.7 Amp	115.00 1 1 1	1101 Aga115	115.00 2 1	32.7	6.2	33.3	160.6
15 TEMES 43.8 59.0 Mva	13.80 1 1 1	2002 Pit345	34.50 1 1	25.6	-2.1	25.7	1083.8
1001 Cab115EB 17.7 908.7 Amp	115.00 1 1 1	1101 Aga115	115.00 1 1	32.7	6.2	33.3	160.6
2202 Har345B3 62.3 903.7 Amp	34.50 1 1 1	2211 Mac345B1	34.50 1 1	33.1	6.1	33.7	562.1
1101 Aga115 18.9 908.7 Amp	115.00 1 1 1	1103 Tam115B1	115.00 1 1	34.8	6.8	35.4	171.7
1201 Har115B1 33.8 112.0 Mva	115.00 1 1 1	2219 Har345B1	34.50 1 1	36.0	11.6	37.8	183.7
1 Cabras_1 51.2 80.0 Mva	13.80 1 1 1	1001 Cab115EB	115.00 1 1	37.8	15.9	41.0	1690.4
16 MEC 8 75.1 56.0 Mva	13.80 1 1 1	1005 Pit115B1	115.00 1 1	41.0	9.5	42.1	1760.1

**QUESTION:**

4. (Page N/A of 263)

Re: Consortium

Question

- 1) Is it acceptable for a company to be member of two different consortiums as long as the company is subcontractor?
- 2) Is it acceptable for a company to be member of two different consortiums if the company is of equal member?
- 3) Is it acceptable for a company to submit two separate proposals of the same content as a member of two different consortiums?

**ANSWER:**

- 1) Yes.
- 2) No.
- 3) No.

**QUESTION:**

5. (Page 12 of 263)

This bid shall be a **Two Step process**. Step One will establish a Qualified Bidders List (QBL) based on acceptable submitted non-price Bid information (or Technical Qualification Proposals). Step One is the period from IFB announcement through Notification of Qualified Bidders. Step Two will evaluate the Priced Proposals from the vendors identified on the QBL and which, if any, Qualified Bidder(s) will be awarded a contract(s). Step Two is the period after completion of the Technical Proposal Evaluation and notification of the QBL to the contract award date.

GPA will qualify the Bidders based on their Technical Qualification Proposals and the Qualitative Scoring Workbook. GPA will notify the Bidders selected for the QBL and will proceed with the second step of the bid process to open the sealed bid Priced Proposals of the qualified bidders. GPA will perform a comprehensive evaluation of each bid and select the Bidder(s) with the best bids based on the submitted purchase power price, minimum guarantees, and required technical data.

(Page 13 of 263)

Cut Off Date for Receipt of Proposals (**Technical and Price Proposals**) 04/14/2023 2:00 P.M.  
CHamoru Standard Time, (CHST)

Question

This is two (2) step bid. 1st round is technical evaluation to establish a Qualified Bidders List (QBL), which requires Bidders Technical Proposals only. 2nd round is price evaluation and GPA will evaluate QBLs Price Proposals only. Thus, please consider separated submission of Technical Proposals and Price Proposals. It will allow more time for QBLs to submit Price Proposals which are more accurate, complete, and current as of submission date.

**ANSWER:**

The Technical Qualification Proposal shall be submitted on or before the Cut-Off Date for Receipt of Technical Proposals (Unpriced). The Priced Proposal shall be submitted on or before the Cut-Off Date for Receipt of Priced Proposals. Please refer to the updated Bid Milestones table and section 2. Instructions to Bidders in the most recent amendment to this bid.

**QUESTION:**

6. (Page 20 of 263)

2.9.1.4. Supplementary Information

4. Audited financial information for the last five years on Bidder's firm and all subcontractors that will be used in this contract. If they have one, Bidders must include their Dunn and Bradstreet Number or Other Major Credit Rating Agency rating, or comparable, independent verification of their credit standing.

(Page 32 of 263)

3. Required Forms and Supplemental Information

Audited financial information on BIDDER's firm and all subcontractors that will be used in the performance management of **GPA's Fuel Bulk Storage Facility**. BIDDERS must include their Dunn and Bradstreet Number or Other Major Credit Rating Agency rating.

(Page 115 of 263)

7. Provide copies of the most recent audited financial statement for each Bidder, its parent or subsidiary company to be used in this contract. Also, list the current credit rating from Standard & Poor's and Moody's for the sponsor, affiliates, partners, and credit support provider. **Unaudited financials certified by the company's chief financial officer and any Dun & Bradstreet rating are acceptable.**

Question

1) For 2.9.1.4. Supplementary Information and 3. Required Forms and Supplemental Information, unaudited financials certified by the company's chief financial officer and any Dun & Bradstreet rating are acceptable?

2) A's Fuel Bulk Storage Facility looks typo.

**ANSWER:**

- 1) Yes, unaudited financials certified by the company's chief financial officer **and** any Dun & Bradstreet rating are acceptable.
- 2) The reference to GPA's Fuel Bulk Storage Facility is a typographical error. Please refer to the updated page 32 of 263 in the most recent amendment to this bid.

Kindly refer to No.2 of **CHANGES** above.

**QUESTION:**

7. (Page 20 of 263)

4. Audited financial information for the last five years on Bidder's firm and **all subcontractors** that will be used in this contract.

(Page 32 of 263)

Audited financial information on BIDDER's firm and **all subcontractors** that will be used in the performance management of GPA's Fuel Bulk Storage Facility.

(Page 115 of 263)

7. Provide copies of the most recent audited financial statement for each Bidder, **its parent or subsidiary company** to be used in this contract. Also, list the current credit rating from Standard & Poor's and Moody's for the sponsor, affiliates, partners, and credit support provider. Unaudited financials certified by the company's chief financial officer and any Dun & Bradstreet rating are acceptable.

(Page 198 of 263)

### 6.3 Audited Financial Information on Bidder and **Sub-Contractors**

(Page 248 of 263)

A1-g. Provide copies of the most recent audited financial statement or annual report for each Bidder, **including affiliates of the Bidder**.

Question

Above requirements look inconsistent. Please clarify if sub-contractors audited financial information is required.

#### **ANSWER:**

Audited financial information for the last five years of each sub-contractor shall be submitted. If unavailable, unaudited financials certified by the company's chief financial officer and any Dun & Bradstreet rating are acceptable.

#### **QUESTION:**

8. (Page 35 of 263)

#### 4.1.3. Change Order

A written instrument to CONTRACTOR signed by GPA authorizing an addition, deletion, or revision in the goods or special services, or an adjustment in the purchase order price or the delivery time, issued after the effective date of the Contract Agreement (Agreement).

(Page 45 of 263)

#### 4.14.1. Change Order

By a written order, at any time, and without notice to surety, the Procurement Officer may, subject to all appropriate adjustments, make changes within the general scope of this contract in any one or more of the following:

- a) Drawings, designs, or Specifications, if the supplies to be furnished are to be specially manufactured for the Territory in accordance therewith;
- b) Method of shipment or packing; or
- c) c) Place of delivery.

(Page 260 of 263)

36. CHANGE ORDER: Any order issued relative to awards made under this solicitation will be subject to and in accordance with the provisions of Section 6-101-03.1 of the Guam Procurement Regulations.

Question

It looks that the change order will be only issued during the construction period and before the commissioning date. How about Change Order after the COD?

**ANSWER:**

The term "Change Order" usually refers to an amendment to the scope of work of a construction contract. Amendments to the contract after COD may be issued if mutually agreed by both parties.

**QUESTION:**

9. (Page 50 of 263)

4.19. Tests and Inspections

The CONTRACTOR shall conduct, at its responsibility and expense, all tests and inspections called for by the Contract Documents. In the event that witness inspection by GPA is required under the Contract Documents, the costs and expense arising therefrom shall be borne by the CONTRACTOR, including inspector's fees, transportation, hotel, and general flying expenses. In the event that CONTRACTOR's inspection is required at the site, CONTRACTOR's transportation, hotel, and general living expenses shall be borne by The CONTRACTOR.

Question

- 1) Please provide list of items that requires GPA witness inspection.
- 2) Please clarify how many people from GPA can come to each inspection.

**ANSWER:**

- 1) GPA personnel will perform regular inspections on work for the substation and transmission. For off-island Factory Acceptance Testing (FAT), GPA requires testing for transformers, switchgears, breakers, and SCADA.
- 2) A minimum of 2 personnel from GPA may witness inspections.

**QUESTION:**

10. (Page 72 of 263)

4.52.1. Submittal Procedures



h) GPA shall be allowed **three (3) weeks** to review and approve submittals without affecting the Contract completion date. Delays in delivery due to submittals that are disapproved during this review period are the responsibility of the Contractor.

#### Question

1) Previously, GPA bid required two (2) weeks review and approval period. And it is known that GPA's normal review time is 10 working days. Is there any specific reason for three (3) weeks review and approval period?

2) If GPA's review and approval period exceed such period, will GPA allow timeline extension and/or additional cost reimbursement?

#### ANSWER:

1) A two-week review period was deemed insufficient for GPA in previous projects. After further consideration, GPA has decided to further increase the GPA review period to four weeks. Please refer to the updated page 72 of 263 in the most recent amendment to this bid.

Kindly refer to No. 3 of **CHANGES** above.

2) GPA will grant a completion date extension if GPA's review period exceeds four weeks if the Contractor substantiates that they are otherwise progressing as scheduled. However, GPA will not provide any cost reimbursement for this delay.

#### QUESTION:

11. (Page 102 of 263)

GPA intends to procure a total minimum annual energy of **300,000 MWh up to 530,000 MWh (approximately 180 MW to 320 MW)**, based on proposed sites, in this Phase IV acquisition that can meet the following established requirements:

#### Question

When we review GPA's intention of procurement: a total minimum annual energy of 300,000 MWh up to 530,000 MWh (approximately 180 MW to 320 MW), GPA assumes that minimum annual yield to be measured at POI (Point of Interconnection) is 1,656 ~1,667MWh/MW (530,000 MWh / 320MW = 1,656MWh or 300,000 MWh / 180MW = 1,667MWh) or 4.537 ~ 4.566 yield hours. Please confirm that this assumption considers PV generation only. When we consider loss factors of ESS Full Shifting such as ESS charging/discharging loss, aux power loss, significant variation of PV generation during the winter and summer season, curtailment of PV generation in case of full charge of ESS, etc., minimum annual yield will be much less than those numbers.

#### ANSWER:

The total minimum annual energy of 300,000 MWh up to 530,000 MWh refers to the energy received by GPA at the metered point of interconnection and does not refer to PV generation only. The energy received by GPA will be measured at the designated GPA substation or a location otherwise determined by the System Integration Study. A single renewable energy facility at one

site can deliver less than 300,000 MWh per year. GPA intends to procure a total minimum annual energy of 300,000 MWh from either one site or a combination of several sites. Bidders may submit proposals for one or more sites.

**QUESTION:**

12. (Page 102 of 263)

**DISPATCHABLE ACTIVE POWER CAPABILITY:** The active, or real, power of the renewable energy resource shall be dispatchable at the point of interconnection, between the hours of **6:00 PM to 6:00 AM**, as required by the GPA Power System Control Center operators or a SCADA control point. The available capacity may also be dispatched outside of these hours if deemed necessary by the GPA Power System Control Center operators. The delivered output to the GPA grid shall be firm, non-intermittent power with a ramp-up and ramp-down rate limited to 1% of rated power output per minute. However, this rate may be exceeded at the request of the GPA Power System Control Center operators. The total capacity and energy available for dispatching shall be provided to the GPA Power System Control Center through a SCADA point every second.

Question

1) Let's assume that a Bidder install 5 hours ESS capacity at BOL (Beginning of Life). On a cloudy day (i.e. less than 5 hours yield day), 100% PV generation will be stored to the 5 hours ESS, but the ESS will not be fully charged. On a sunny day (i.e. more than 5 hours yield day), as PV yield hours will be longer than 5 hours, the ESS will be fully charged but PV generation more than 5 hours yield may be curtailed, which will be loss to both Buyer and Seller. When the ESS is fully charged before the 6:00 PM, please allow Seller to deliver the Energy regardless of the request of the GPA Power System Control Center operators. To minimize GPA grid impact, the Energy shall be delivered within 1% ramp with 97% success rate. If this is still concern to GPA grid system, then GPA may limit 1% ramping delivery up to certain amount per a site, for example, 1MW to 3MW limit.

2) If allowed, minimum ESS installation capacity shall be determined by GPA. For example, 4 hours or 5 hours.

3) When we think about the purpose of SHIFTING functionality under the utility practice and GPA's bid intention, GPA will get best benefits when shifting PV generation to peak demand hours of 6PM to 12PM as Guam has day-time low demand and night-time peak demand. 12PM to 6AM looks GPA's grace time for Seller to deliver remaining energy, which is not delivered between 6PM and 12PM for some reason. Please clarify 6PM to 12PM is recommended dispatch time and 12PM to 6AM is grace dispatch time. Otherwise, Bidders may propose over 80MW dispatch from 6PM to 6AM regardless of demand and GPA shall purchase all Renewable Energy generated by the Facility under the PPA.

**ANSWER:**

1) For proposals with an intermittent renewable energy resource coupled with an energy storage system, GPA will allow 60% of the resource to be DC-coupled to the energy storage system with the remaining 40% AC-coupled to the GPA grid. Therefore, 60% of the total project capacity will deliver firm, energy-shifted power from the energy storage system to the GPA grid. The energy storage system shall also provide ramp-rate control for the power delivered from 40% of the total project capacity such that the ramp-rates are kept within 1% per minute

at the guaranteed success rate of 95% during the energy production period. However, before or after a GPA curtailment, this rate may be exceeded at the request of the GPA Power System Control Center operators. GPA will not pay for the energy delivered to the GPA grid that did not meet the guaranteed success rate.

- 2) Bidders shall design the ESS installation capacity to meet the bid requirements and their guaranteed net annual generation.
- 3) The active, or real, power of the renewable energy resource that is generated and stored between the hours of 6:00 AM to 6:00 PM shall be dispatched at the point of interconnection for 12 hours, between the hours of 6:00 PM to 6:00 AM, as required by the GPA Power System Control Center operators or a SCADA control point. Dispatchable power is delivered on demand and at various MW output levels at the request of GPA's Power System Control Center. GPA will not pay the Contractor Curtailment fees for dispatching limited outputs based on the power system demand. GPA will only pay Curtailment fees due to failure or maintenance of the interconnection facilities occurring after the one-year warranty has expired. However, if the Contractor fails to meet the Guaranteed Net Annual Generation (MWH/YR) because of GPA's inability to dispatch all of the energy produced by the Contractor due to limits based on the power system demand, GPA will pay the lost revenue up to the Guaranteed Net Annual Generation (MWH/YR) if substantiated by the Contractor.

**QUESTION:**

13. (Page 103 of 263)

**CONTRACT TERM:** The renewable energy resource shall provide energy for a term of 20 years, with the option to extend for two additional five-year terms, for a maximum term of thirty years.

Question

- 1) With regards to the initial term, 25-year is better option for bidder's financing, which enables bidders to provide competitive prices. Would you change "20-year initial term" to "25-year initial term" with the option to extend for multiple additional five-year terms?
- 2) For a maximum term of thirty years, would you remove or revise this condition? Currently, renewable developers consider "40-year project life" when they develop a renewable project.

**ANSWER:**

- 1) Yes, GPA will amend the contract term requirement to a term of 25 years with the option to extend for one additional five-year term.

Kindly refer to No. 4 and 5 of **CHANGES** above.

- 2) No.

**QUESTION:**

14. (Page 103 of 263)

**INTERCONNECTION:** The renewable energy resource shall deliver energy directly to the existing GPA 34.5 kV or 115 kV transmission systems, subject to the result of a System Integration Study to be

completed after Step 2 of the proposal evaluation. **Interconnection to the 115 kV transmission system near the Apra Substation or Harmon Substation is preferred.**

Question

GPA has 115kV switchyard at Agana substation, Harmon substation, Piti substation, and Tamuning substation. And last year, GPA secured GLUC approval of 115kV switchyard near Apra substation. Those substations may be affordable for 80MW interconnection via 115kV interconnection.

- 1) Please provide information of the minimum upgrades needed (such as new t-line, new breakers, existing breakers to be replaced and/or relocated, new bus tie, control and protection devices to be needed, new land purchase by a Seller) per each 115kV substation in case of 80MW interconnection.
- 2) Specifically, when a Bidder interconnect 80MW to Apra substation via new 115kV transmission line, any transmission system shall be upgraded from Apra substation to Piti substation?

**ANSWER:**

- 1) Agana Substation has no space and will require more land to put new 115 kV breakers and lines. Harmon Substation will require expanding the property and building a new substation building as well as new breakers for the 115 kV lines. Piti Substation is an indoor GIS switchgear so it cannot be modified. Tamuning Substation will require land to put new breakers.
- 2) The Apra to Piti 34.5 kV transmission line will need to be upgraded to a new 115 kV line.

**QUESTION:**

15. (Page 103 of 263)

ENERGY STORAGE SYSTEM (ESS): The renewable energy resource shall be equipped with an energy storage system (ESS) that meets GPA's requirements as described in Section 2.2.2 Acceptable ESS Technologies. The ESS must provide the following functions:

o ENERGY-SHIFTING: The primary purpose of the ESS shall be for energy-shifting, which is to deliver the energy produced at another time or period of the day.

o RAPID RESERVE: The additional function of the ESS is to provide rapid reserve **in response to under-frequency events**. The total energy exported for these events shall be included in the annual minimum energy requirement.

Question

With regards to the RAPID RESERVE, AGC (Automatic Grid Controller) is recommended to send signal to the Local Controller of DERs (Distributed Energy Resources). This case will be the best scenario to apply the RAPID RESERVE function. However, GPA does not have AGC yet, the Local Controller shall have ability to provide RAPID RESERVE with Frequency Watch Mode, which requires high-end system architecture (i.e. expensive). Once AGC is placed in GPA's grid system, Frequency Watch Mode will not be required. Should a Bidder propose the RAPID RESERVE functionality with AGC or without AGC?

**ANSWER:**

Bidders shall propose the Rapid Reserve function with AND without the Automated Grid Controller. Please refer to the updated page 107 of 263 in a recent amendment to this bid for the Control System Software requirements.

**QUESTION:**

16. (Page 106 of 263)

e. Control Functions

It is important for Bidders to describe and illustrate the control modes and methods of operation proposed. The flexibility of the ESS controls shall also be discussed and provide indication of the ease of control system changes such as **adding new control modes and methods of operation**.

Question

For the flexibility of the ESS controls, please clarify what kinds of new control modes and methods of operation are recommended for Bidders to propose.

**ANSWER:**

Bidders shall provide the grid services in the table below. Additionally, Bidders shall consult with their ESS provider for the recommended control modes and methods of operation to meet the requirements of this bid.

<b>Grid Service</b>	<b>Description</b>
Firm Power Dispatch	Provide Dispatchable Renewable Energy
Operating Reserve	Standby Generation Reserve
Fast Frequency Regulation	Rapid injection or absorption of power in response to changes in frequency to maintain system frequency within a tight bandwidth
Rapid Reserve	Respond to fast frequency decay due to trip of large generators on the GPA system by immediate injection of power to the grid to balance generation and demand and prevent underfrequency load shedding.
Shaping and Firming	Smoothing out intermittency of the renewable resource.
Black Start	Capability to Black Start other Generators over the Transmission System
Grid Forming	Capability to form and supply Microgrids post-natural disaster (i.e., typhoons) or system blackouts.
Energy Shifting	Long Duration Energy Storage System Function
Volt/Var Optimization	Steady state and dynamic management and optimization of Power System Voltages

**QUESTION:**

17. (Page 107 of 263)

2.2.2.1. ESS Technical Requirements

Bidder shall provide Bidder's **guaranteed success rate** according to the size of ESS in the Qualitative Scoring Workbook. The bidder shall also describe the method of calculating and monitoring the **success rate** in the technical proposal.

#### Question

- 1) Is this referring to success rate of 1% ramp control?
- 2) If yes, please provide GPA's minimum requirement for guaranteed success rate. And provide requirements for the method of calculating and monitoring the success rate as GPA has already secured this function from Renewable phase II.

#### ANSWER:

- 1) Yes.
- 2) For proposals with an intermittent renewable energy resource coupled with an energy storage system, GPA will allow 60% of the resource to be DC-coupled to the energy storage system with the remaining 40% AC-coupled to the GPA grid. Therefore, 60% of the total project capacity will deliver firm, energy-shifted power from the energy storage system to the GPA grid. The energy storage system shall also provide ramp-rate control for the power delivered from 40% of the total project capacity such that the ramp-rates are kept within 1% per minute at the guaranteed success rate of 95% during the energy production period. However, before or after a GPA curtailment, this rate may be exceeded at the request of the GPA Power System Control Center operators. GPA will not pay for the energy delivered to the GPA grid that did not meet the guaranteed success rate.

#### QUESTION:

18. (Page 107 of 263)

#### 2.2.5. Limits on Renewable Energy Purchases

Due to the nature of the generation control system and related response characteristics of the generators on the GPA system, GPA may limit the amount of energy delivered from renewable resources to no more than **30MW (AC)** at the interconnection point.

#### Question

- 1) For Renewable Phase II, Maximum Project Capacity was **30MW (AC)** and GPA might limit the amount of energy delivered from renewable resources to no more than **20MW (AC)** at the interconnection point. And for Renewable Phase IV, GPA may limit the amount of energy delivered from renewable resources to no more than **30MW (AC)** at the interconnection point even though Bidders propose Maximum Project Capacity, **80MW (AC)**. Is this correct?
- 2) Regarding the 30MW (AC) delivery limitation, when can a Bidder be notified? After the System Impact Study?
- 3) In case of the delivery limitation, will the Bidder be allowed to negotiate with GPA on changing the rate?

**ANSWER:**

- 1) The amount of power delivered is limited by the ampacity of the transmission line from the substation to the point of interconnection or other interconnected generation facilities. For interconnections at the 34.5 kV level, the limit may be 30 MW (AC) or lower depending on the line ampacity, and shall be interconnected to separate transmission lines unless determined otherwise by the System Integration Study. The limit may be raised for interconnections at the 115 kV level if the transmission line has a higher ampacity, but no greater than 60 MW (AC). Please refer to the recent bid document amendment in which the maximum export capacity is lowered from 80 MW (AC) to 60 MW (AC).
- 2) Bidders will be notified of their delivery limitation after the System Integration Study is completed.
- 3) No.

**QUESTION:**

19. (Page 107 of 263)

f. SCADA/EMS/SA/AGC Communications Protocol

The ESS shall have the capability to interface with GPA's SCADA, EMS, Substation Automation (SA) and AGC systems over the latest stable release of serial and IP based DNP 3-Secure Authentication communications protocol.

***GPA requires the project control system to report each inverter failure or cessation to the GPA SCADA system.*** The controller will report any alarm that can lead to a system or individual converter cessation or tripping to the GPA SCADA system. The controller will report all delivered power to GPA from the PV system, curtailed power from the PV system, ESS charging power, ESS power, (real and reactive) delivered to GPA, ESS state charge.

Question

One of the GPA renewable phase II projects commissioned at Mangilao last year. For Bidders tech proposal preparation, please provide Interface List between the controller at Mangilao and GPA SCADA system.

**ANSWER:**

At a minimum, Bidders shall provide information from relays, meters, breakers, RTUs, BESS, PMS and PCS. The complete list shall be coordinated during design and construction. The Contractor shall provide 10% spare points in addition to the final SCADA Interface List.

**QUESTION:**

20. (Page 108 of 263)

2.3.1. Minimum and Maximum Project Capacity

The minimum export capacity that a Bidder may offer is 5 MW, and the maximum export capacity shall be 80 MW for each project. This may be the combination of several generation units at one site.

Question

- 1) 5 MW minimum export capacity for a Bidder: May a single bid contain two (2) renewable project sites aggregating to 5 MW under one bid bond?
- 2) Maximum export capacity for a Bidder: The maximum export capacity shall be 80 MW for each project. If a Bidder would like to propose two (2) 80MW project sites aggregating to 160 MW, shall a Bidder provide two (2) bids under two (2) bid bonds?
- 3) 80 MW maximum export capacity for each project: 80 MW export capacity for each project requires 115kV interconnection?

**ANSWER:**

- 1) No, a single project site shall have a minimum export capacity of 5 MW.
- 2) Please refer to the recent bid document amendment in which the maximum export capacity is lowered from 80 MW (AC) to 60 MW (AC). A single project site shall have a maximum export capacity of 60 MW. Bidders may propose several project sites under separate bids with separate bid bonds.
- 3) Please refer to the recent bid document amendment in which the maximum export capacity is lowered from 80 MW (AC) to 60 MW (AC). A single project with a 60 MW export capacity will most likely require a 115 kV interconnection. The amount of power delivered is limited by the ampacity of the transmission line from the substation to the point of interconnection or other interconnected generation facilities.

**QUESTION:**

21. (Page 109 of 263)

Table 2 – GPA’s Estimated Transmission Costs, \$/mile

34.5 kV Overhead (Poles, Hardware, #927 Al Primary Lines) \$3.22 Million

34.5 kV Underground (Manholes, Conduits, and 1000kcmil Al Primary Lines) \$7.14 Million

115 kV Overhead (Poles, Hardware, #927 Al Primary Lines) \$7.82 Million

Question

- 1) For 34.5 kV Underground, is 750kcmil CU acceptable? If yes, shall Bidders provide 15% spare underground cable 750kcmil and associated modular T-splice cable connectors as GPA non-stock item materials?
- 2) 115 kV interconnection requires 34.5kV/115kV switchyard at project site and 115kV/34.5kV switchyard at GPA substation. Does \$7.82 Million 115kV Overhead cost include two (2) switchyard cost?
- 3) Please provide GPA recommended maximum cable rating (MW) per each case below:



- (a) 115 kV Overhead (Poles, Hardware, #927 Al Primary Lines)
- (b) 34.5 kV Underground (Manholes, Conduits, and 1000kcmil Al Primary Lines)
- (c) 34.5 kV Overhead (Poles, Hardware, #927 Al Primary Lines)
- (d) 13.8 kV Overhead (Poles, Hardware, #336 'Tulip' AAC)

4) If one Bidder propose one land for 80MW(AC) and the other Bidder propose neighboring land for 60MW(AC), then they may happen to use the same transmission line. In this case, is interconnection cost can be shared between two Bidders? If yes, what's the criteria for cost sharing? Interconnection capacity would be the best reasonable criteria, for example, 60MW(AC) Bidder's cost sharing is  $60MW / (80MW+60MW)$ .

5) Another Renewable Phase II project at Malojloj is not yet commissioned and interconnection construction from Malojloj via Talofoto to Apra is not yet started. If a Phase IV Bidder propose one land where is located in this route, shall a Bidder share the interconnection cost with Phase II project owner?

**ANSWER:**

- 1) GPA uses 2-1000 kcmil Al for UG lines. If 750 kcmil CU will be used, the Contractor will need to provide spare cable for the longest span of line and associated splices.
- 2) No, the \$7.82 Million only includes the 115 kV transmission line cost and does not include the switchyard costs.
- 3) (a) 180 MVA  
(b) 54 MVA  
(c) 54 MVA  
(d) 11.5 MVA
- 4) If the System Integration Study allows two projects to share a transmission line, GPA may consider negotiating an interconnection cost-sharing agreement between the two Bidders. The criteria for cost-sharing shall be determined during negotiations, however, GPA can only award on the base bid. If two Bidders can benefit from a shared interconnection, GPA may negotiate with each Bidder to reduce the total bid price for each party based on the interconnection savings.
- 5) Kindly refer to the response to question #4.

**QUESTION:**

22. (Page 112 of 263)

2.5.1. Fixed Pricing for Guaranteed Energy

Bidders are required to submit fixed pricing for the guaranteed renewable energy delivered for the first contract year. **Prices shall escalate at a fixed rate of 0.5% annually for the entire contract period.** GPA will apply a 1% penalty factor to the prices of bids interconnecting to the 34.5 kV system. **Energy degradation shall be limited to 0.7% annually.**

(Page 113 of 263)

2.5.3. Energy Purchase Price Units

The Bidder shall provide a fixed price bid in \$/MWH for the term of the proposed delivery of renewable energy for each ESS proposal options. The price bid shall include the capital and O&M components

which shall be referred to should GPA exercise the capital buy-out option. All columns in the bid price worksheet must be filled. GPA will not accept bids with year-over-year (YOY) escalation rates greater than 1.0% per year.

#### Question

1) Price escalation is limited to a fixed rate of 0.5% annually. This is 50% deduction compared to Renewable phase II, which is opposite to the market condition. Interest rate has been doubled since Covid-19 and inflation has been consistently growing and neither are expected to decline for a while. Please consider changing 0.5% to 1.0% at minimum or 1.5% reasonably. Otherwise, Bidders are inevitably to submit year one (1) price relatively high.

2) Energy degradation may not be avoided, however, depending on Bidders configuration of renewable technologies, it varies. One bidder may propose less than 0.7% and the other may propose more than 0.7%. 0.7% limitation of energy degradation may limit Bidders options to propose diverse configuration of renewable technologies. Thus, please consider removing this requirement.

#### ANSWER:

- 1) GPA will allow a maximum of 1.0% annual escalation. However, Bidders are encouraged to submit proposals with less than 1.0% annual escalation.
- 2) GPA will consider the energy degradation of each proposal during the evaluation of the bids.

Kindly refer to Nos. 6 and 7 of **CHANGES** above.

#### QUESTION:

23. (Page 112 of 263)

#### 2.5.2. Pricing for Energy Above Guaranteed Amount

All renewable energy available from the Bidder's project(s) above and beyond the guaranteed amount will be offered to GPA at a **15% discount of the lesser** of the two following prices: 1) the Bidder's guaranteed price applicable to the then current time period or 2) the effective Levelized Energy Adjustment Clause (LEAC) fuel recovery cost incurred by GPA's ratepayers. The LEAC fuel recovery cost is recalculated approximately every six months and is approved by the Guam Public Utilities Commission.

#### Question

"a 15% discount of" condition is newly added to the previous bid, Renewable phase II. This condition will reduce a Seller's revenue, and eventually it forces a Bidder to submit higher price proposal. Please consider removing this condition.

#### ANSWER:

The Bidder's total cost should already be included in the guaranteed minimum energy price. Any extra revenue beyond this should be shared with GPA through a discounted price.

**QUESTION:**

24. (Page 114 of 263)

3.1. Project Development

2. Level of site control by developer (full ownership, long-term lease, short-term lease, negotiating a site, **searching for a site**, or non-of-the above).

Question

1) When a Bidder submit Option Agreement or LOI (Letter of Intent) for Purchase or Lease, is this considered as “negotiating a site”?

2) Site Control is the basis of the development project. Thus, if a Bidder’s level of site control is “searching for a site”, then it means that construction and development risks associated with the completion of projects are very high. Just like Dispatchability requirement: Proposals not capable of energy shifting total daily solar generated energy shall be disqualified, it will be a reasonable protective measure for GPA to revise it as a mandatory requirement: Proposals not capable of site control shall be disqualified. For the evidence of Purchase or Lease, Bidders shall submit Agreement or Letter of Intent with Landowner.

**ANSWER:**

- 1) Yes.
- 2) Proposals must provide evidence of site control. Searching for a site will not be considered as evidence of site control.

**QUESTION:**

25. (Page 117 of 263)

2. 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, and any evidence that the project participants have worked jointly on other projects for each of the project participants (including the Bidder, partners, and proposed contractors). **(NOTE: If a bidder is relying on the experience of a consultant or contractor to meet the Experience Threshold Requirement, the bidder should describe any contractual relationships between the bidder and the consultant or contractor.)**

Question

What is the Experience Threshold Requirement for a Bidder? If a Bidder fails to meet the Experience Threshold Requirement, then a Bidder may not be qualified in technical evaluation?

**ANSWER:**

The Experience Threshold Requirement is a minimum Raw Score of 4 in the Project Team Experience Evaluation Factor in the Qualitative Evaluation Scoresheet. Scores are based on the ability to demonstrate success in projects completed within the last seven years of similar type, size and technology and to effectively work together to bring the project to commercial operation in

a timely fashion. Bidders with experience in multiple projects similar in size or larger will receive higher scores. Bidders not meeting this minimum score requirement will be disqualified.

Kindly refer to No. 8 of **CHANGES** above.

**QUESTION:**

26. (Page 117 of 263)

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

Question

We would like GPA to provide definition of “project sponsor”. The project sponsor is the firm that will be contractually liable for the project?

**ANSWER:**

Yes.

**QUESTION:**

27. (Page 118 of 263)

3.2.3. Project Schedule and Commercial Operation Date

Identify the elements on the critical path. The schedule should include, as a minimum, facility contracts, construction, siting, environmental permitting (anticipated submittal and approval), **fuel supply**, financing, engineering, procurement, **local permits** and any other requirements that could influence the project schedule, and the Commercial Operation Date. Bidders shall identify any status of permits, licenses and studies required. The project schedule should include dates for all construction and applicable reporting milestone events specified in the Purchase Power Agreement.

Question

1) Fuel supply looks typo

2) We believe that GPA is aware of that the permit process is one of the difficult and lengthy phases of a project. GLUC Permit may take at least 6 months, DPW Clearing and Grading Permit may take 2 to 3 months, DPW Building Permit may take 5 to 6 months, DPW Occupancy Permit may take 3 to 6 months. All may take longer depending on project circumstances such as permits from Parks & Recs, EPA, GFD, etc. And also, sometimes, zoning, permits, and government clearances are outside control. As GPA is one of the government agencies, the Contractor may need GPA’s assistance for permit process. Is GPA willing to support permit process for the Contractor?

**ANSWER:**

1) The fuel supply requirement may be applicable to proposals involving biofuel and clean hydrogen. Bidders shall disregard the reference to fuel supply if not applicable to their project.

- 2) GPA may be able to offer assistance with the permitting process within our means. However, GPA will not be liable for any delays if the assistance provided is unsuccessful. The Contractor shall still be responsible for the permitting process.

**QUESTION:**

28. (Page 121 of 263)

3.5. Credit Evaluation

GPA will evaluate the credit-worthiness of the Bidder. Bidders shall discuss the following that will be considered in this evaluation criteria scoring:

1. Debt and equity ratings
2. Performance assurance
3. Financial ratio analysis
4. Default risk
5. Credit concentration and liquidity effect
6. Enforceability of contractual credit terms
7. Bidder revisions to contract templates that may affect credit requirements

Question

Are Bidders required to provide such information on each participating company? Or are Bidders required to provide this information for the main bidder only?

**ANSWER:**

This requirement applies to each participating company of a consortium.

**QUESTION:**

29. (Page 133 of 263)

1.31 "Eligible Renewable Energy Resources" are applications of the following defined technologies that displace Conventional Energy Resources that could otherwise be used to provide electricity to GPA's customers: biogas electricity generator, biomass electricity generator, ***fuel cells that use only renewable fuels***, geothermal generator, hybrid wind and solar electric generator, landfill gas generator, solar electricity resources, wind generator and such other generally accepted Renewable Energy Resources.

Question

Please clarify renewable fuels and provide examples of renewable fuels, which fuel cells may use.

**ANSWER:**

Renewable fuels are produced from renewable resources. They are sustainable and contribute to reducing greenhouse gas emissions in the atmosphere. Some examples of renewable fuels include bioethanol, biodiesel, hydrogenated vegetable oil, biogas (i.e. biomethane), clean hydrogen, and biomass-based diesel. Clean hydrogen is hydrogen produced with a carbon intensity equal to or

less than two kilograms of carbon dioxide-equivalent produced at the site of production per kilogram of hydrogen produced.

**QUESTION:**

30. (Page 142 of 263)

4.1 Commercial Operation.

(e) Seller shall perform at its cost a capacity test in accordance with the protocol outlined in Appendix I to determine the capacity of the Facility ("Facility Test"). GPA shall receive the entire Renewable Energy from the Facility during such test as contemplated in Section 2.1. Renewable Energy deliveries during testing shall be measured at the Delivery Point.

Question

Could the Seller interconnect the facility prior to the scheduled COD and receive payment for the electricity supplied pursuant to the PPA? If yes, how much is the payment? PPA contract full payment or the current LEAC cost during the testing phase?

**ANSWER:**

Prior to the Commercial Operation Date (COD), Seller will only be paid for the Test Energy produced. The price of the Test Energy shall be the lower of the Contract Price or 34.5 kV or 115 kV LEAC rate, depending on the voltage level of the project, established at the time the Test Energy is generated.

**QUESTION:**

31. (Page 142 of 263)

4.2 Extension of Commercial Operation Date.

(a) Planned Extension.

(b) Unplanned Extension/Additional Planned Extension.

Question

Please confirm that the maximum number of days for extension of COD including planned extension (through the COD payment) and additional extension (through the payment of Daily Delay LD) is 270 days. 90 days plus 180 days

**ANSWER:**

Seller may extend the Commercial Operation Date beyond the Scheduled Commercial Operation Date by twelve (12) months under Planned and Unplanned Extension pursuant to the Agreement.

**QUESTION:**

32. (Page 153 of 263)

## 7.4 Metering and Other Facilities.

### Question

1) How many SEL-735 meters are required? Two (2) SEL-735 meters are needed for the PV generation and for the ESS? Or additional SEL-735 meter is needed for the combined output of PV and ESS?

2) Then, where is the location of SEL-735 revenue meter?

### ANSWER:

- 1) A total of four SEL-735 meters are required. One SEL-735 meter is required at the PV output AC-coupled to the GPA grid. Another SEL-735 meter is required at the PV output DC-coupled to the BESS. Another SEL-735 meter is required at the BESS output AC-coupled to the GPA grid. Another SEL-735 meter is required at the point of interconnection.
- 2) The SEL-735 revenue meter shall be at the point of interconnection.

### QUESTION:

33. (Page 161 of 263)

Pollution Liability, when applicable, with limits for \$5,000,000. GPA is to be an additional insured. Seller shall grant a waiver of Subrogation in favor of GPA.

### Question

We would like GPA to confirm if Pollution Liability is required. For the Phase II, no coverage is required for accidental pollution.

### ANSWER:

Pollution Liability is required prior to COD but may be discontinued after COD.

### QUESTION:

34. (Page 193 of 263)

E2. Site Environmental Assessment (10)

(Page 251 of 263)

E2. Site Environmental Assessment (5)

### Question

1) Back in Renewable Phase II bid, GPA removed the Evaluation Factors E2 (Site Environmental Assessment) and E3 (Plant/Resource Environmental Characteristics) from the Qualitative Scoring Workbook. For Phase IV bid, will GPA maintain the Evaluation Factors E2?

2) Points in Pages 193 and 251 have discrepancy.

**ANSWER:**

- 1) The E2 Site Environmental Assessment Evaluation Factor will remain for this bid.
- 2) Please refer to the amended page 251 with the correct points assigned (10) for the Site Environmental Assessment Evaluation Factor.

Kindly refer to No. 9 of **CHANGES** above.

**QUESTION:**

35. (Page 223 of 263)

APPENDIX K. Electrical System Drawings

Question

Below table is GPA Substation Data, which provided in Phase II renewable bid. Please update data in black columns and provide information in blue columns.

**ANSWER:**

Please refer to the table below.

ITEM	SUBSTATION	OPERATED BY	XFMR	CAPACITY (MVA)	Voltage (kV)	Interconnection Allowed? (Yes/No)	Available Space for Additional Breaker? (Yes/No)	Estimated Interconnection Capacity? (MWac)
1	AGANA SUBSTATION	NAVY	T-9	20	34.5/13.8	NO	NO	
2	AGANA SUBSTATION	GPA	T-65	30	34.5/13.8			
3	AGANA SUBSTATION	GPA	T-400	11 2	115/34.5/ 13.8			
4	ANDERSEN SUB	NAVY	T-15	40	34.5/13.8	NO	NO	
5	ANDERSEN SUB	NAVY	T-16	40	34.5/13.8			
6	ANIGUA SUBSTATION	GPA	T-100	30	34.5/13.8	NO	NO	



7	APRA SUBSTATION	Joint Use	T-70	12.5	34.5/13.8	NO FOR T-70; SPACE AVAILABLE FOR 115 KV TRANSFORMER THAT CONTRACTORS WILL NEED TO INSTALL	SPACE AVAILABLE FOR 115 KV TRANSFORMER AND BREAKER THAT CONTRACTOR WILL NEED TO PURCHASE AND INSTALL	
8	BARRIGADA SUBSTATION	GPA	T-75	22.4	34.5/13.8	NO	NO	
9	CABRAS PLANT	GPA	START UP	7	34.5/4.16	No		
10	CABRAS PLANT	GPA	MAIN #1	80	115/13.2			
11	CABRAS PLANT	GPA	AUX #1	7	13.8/4.16			
12	CABRAS PLANT	GPA	MAIN #2	80	115/13.2			
13	CABRAS PLANT	GPA	AUX #2	7	13.8/4.16			
14	CABRAS PLANT	GPA	T-300	112	115/34.5/13.2			
15	CABRAS PLANT	GPA	MAIN #3	50	115/13.8			
16	CABRAS PLANT	GPA	AUX #3	6.3	13.8/4.16			
17	CABRAS PLANT	GPA	MAIN #4	50	115/13.8			
18	CABRAS PLANT	GPA	AUX #4	6.3	13.8/4.16			
19	COLD STORAGE	NAVY	T-25	14	34.5/13.8	No		
20	COLD STORAGE	NAVY	GT-6		34.5			
21	DEDEDO CT#1	GPA	T-191	30	34.5/13.8	No		
22	DEDEDO CT#2	GPA	T-192	30	34.5/13.8			

23	DEDEDO SUBSTATION	GPA	T-55	30	34.5/13.8	NO FOR T-55; SPACE AVAILABLE FOR NEW T-54 TRANSFORMER THAT CONTRACT OR WILL NEED TO PURCHASE AND INSTALL	SPACE AVAILABLE FOR 34.5 KV TRANSFORMER; CONTRACT OR WILL NEED TO PURCHASE 13.8 KV SWITCHGEAR	
24	MEC PLANT	MEC	UNIT 8	56	115/13.8	No		
25	MEC PLANT	MEC	UNIT 9	56	115/13.8			
26	GAA SUBSTATION	GPA	T-105	30	34.5/13.8	NO	NO	
27	HARMON SUBSTATION	GPA	T-500	11 2	115/34.5/ 13.8	NO	NO	
28	HARMON SUBSTATION	GPA	T-501	11 2	115/34.5/ 13.8			
29	HARMON SUBSTATION	Joint Use	T-21	30	34.5/13.8			
30	HARMON SUBSTATION	NAV Y	T-22	14	34.5/13.8			
31	HARMON SUBSTATION	Out of Service	T-44		34.5/13.8			
32	MACHECHE SUBSTATION	GPA	T-90	28	34.5/13.8	NO	NO	
33	MARBO SUB	NAV Y	T-14	5	34.5/13.8	NO	NO	
34	MARBO SUB	NAV Y	MARBO CT	20	34.5/13.8	No		
35	NCS, FINEGAYAN	NAV Y	T-47	5.3	34.5/4.16	NO	NO	
36	OROTE PLANT	NAV Y	T-10	14	34.5/13.8	NO	NO	
37	OROTE PLANT	NAV Y	T-11	14	34.5/13.8			
38	OROTE PLANT	NAV Y	T-12	14	34.5/13.8			
39	OROTE PLANT	NAV Y	T-13	14	34.5/13.8			

40	OROTE PLANT	NAV Y	T-28	14	34.5/13.8			
41	PAGAT SUB	GPA	T-115	30	34.5/13.8	NO	NO	
42	PITI SUBSTATION	Joint Use	T-7	10.5	34.5/13.8	NO	NO	
43	PITI SUBSTATION	GPA	T-700	100	115/34.5/13.8			
44	PITI SUBSTATION	NAV Y	T-8	10.5	34.5/13.8			
45	POTTS JUNCTION	AIR FORCE	T-110	5.2	34.5/13.8	NO	NO	
46	PULANTAT SUBSTATION	GPA	T-95	30	34.5/13.8	NO FOR T-95; SPACE AVAILABL E FOR T-96 TRANSFORMER THAT CONTRACTOR WILL NEED TO PURCHASE AND INSTALL	SPACE AVAILABLE FOR 34.5 KV AND 13.8 KV SWITCHGEAR THAT CONTRACTORS WILL NEED TO REFURBISH AND ENERGIZE	
47	RADIO BARRIGADA	NAV Y	T-23	9.4	34.5/13.8	NO	NO	
48	RADIO BARRIGADA	NAV Y	T-24	9.4	34.5/13.8			
49	SAN VITORES SUBSTATION	GPA	T-122	30	34.5/13.8	NO	NO	
50	SRF SUBSTATION	NAV Y	T-17	14	34.5/13.8	NO	NO	
51	SRF SUBSTATION	NAV Y	T-18	14	34.5/13.8			
52	TALOFOFO SUBSTATION	GPA	T-80	12.5	34.5/13.8	NO	NO	
53	TAMUNING SUBSTATION	GPA	T-50	22.4	34.5/13.8	NO	NO	
54	TAMUNING SUBSTATION	GPA	T-51	28	34.5/13.8			
55	TAMUNING SUBSTATION	GPA	T-600	112	115/34.5/13.8			

56	TANGUISSON PLANT	PEGI	MAIN #1	33.6	34.4/13.8	Out of Service		
57	TANGUISSON PLANT	PEGI	AUX #1	3.1	13.8/2.4			
58	TANGUISSON PLANT	PEGI	MAIN #2	33.6	34.4/13.8			
59	TANGUISSON PLANT	PEGI	AUX #2	3.5	13.8/2.4			
60	TANGUISSON PLANT	PEGI	STATION PWR	2.5	34.5/2.4			
61	TEMES PLANT	TEMES	T-2	59	34.5/13.8	No		
62	TENJO POWER PLANT	GPA	T-35	30	34.5/13.8	No		
63	TENJO POWER PLANT	GPA	T-36	33.3	34.5/13.8			
64	TUMON SUBSTATION	GPA	T-60	30	34.5/13.8	NO	NO	
65	TUMON SUBSTATION	GPA	T-61	28	34.5/13.8			
66	UMATAC SUBSTATION	GPA	T-120	30	34.5/13.8	YES	CONTRACTORS WILL NEED TO INSTALL 13.8 KV SWITCHGEAR AND BREAKER	20
67	YIGO SUBSTATION	GPA	T-30	30	34.5/13.8	NO	NO	
68	MOBILE SUBSTATION 30 MVA	GPA	MOB-30	30	34.5/13.8	No		
69	MOBILE SUBSTATION 14 MVA	GPA	MOB-14	14	34.5/13.8	No		
70	DANDAN SUBSTATION	GPA				YES	Yes	25 MW shifted at night; 40 MW if UG transmission line is

								upgraded to 2-750 Cu
71	MANGILAO SUBSTATION	GPA				No		

**QUESTION:**

36. (Page 250 of 263)

C. POWER PRODUCT CHARACTERISTICS

C3. Product flexibility (3)

C3-c. Bid size (GPA may prefer contracts in an output range sufficient to allow GPA to contract with more than one project entity to diversify project risk).

Question

Does this EVALUATION FACTOR C3-c mean that a Bidder is recommended to propose flexible options for less capacity to its Bid size for GPA to diversify project risk?

**ANSWER:**

Bidders are encouraged to propose projects between 30 MW to 60 MW to diversify project risk. Bidders may submit multiple projects per bid.

**Bidder No.: 1 dated 01/23/2023:**

**QUESTION:**

1. (Page 11 of 263)

The Phase I solicitation resulted in two PPAs now under GPS Solar Dandan, LLC for a combined output of 25.65MW of solar PV. The GPS Solar facility is located in Dandan and was commissioned in October 2015.

Question

- 1) Regarding the existing 34.5kV Underground (500kcmil) from Dandan to Talofoto, there is an existing empty 6 inches spare conduit. Is it allowable for a Bidder to use it?
- 2) If yes, what is the maximum MVA POI Capacity when installing new 500kcmil conductor in this spare conduit?
- 3) If yes, what is the maximum MVA POI Capacity when installing new 750kcmil CU conductor in this spare conduit and replacing existing 500kcmil with 750kcmil CU?
- 4) If yes, what is the maximum MVA POI Capacity when installing new 750kcmil CU conductor in this spare conduit and NOT replacing existing 500kcmil?

**ANSWER:**

Proposals for this bid shall not include the use of the existing spare conduit from Dandan to Talofoto.

**Bidder No.: 1 dated 02/02/2023:**

**QUESTION:**

1. (Page 13 of 263)

System Integration Study	TBD	TBD
Contract Finalization	TBD	TBD
Contract Approval & Recommendation to Award	TBD	TBD
Public Utilities Commission Review	TBD	TBD
Contract Signing	TBD	
Contract Mobilization	TBD	TBD
<b>CONTRACTOR Operational Commencement</b>	TBD	

(Page 103 of 263)

COMMERCIAL OPERATION COMMENCEMENT: The renewable energy resource shall be available for commercial operation within thirty-six (36) months from the contract execution.

Question

Please provide GPA's estimated milestone schedule. We would like to recommend the below schedule to maximize BONUS DEPRECIATION. Please refer to the next question regarding BONUS DEPRECIATION.

System Integration Study: 6/1/2023 – 8/31/2023 (3 months)

Contract Finalization: 9/1/2023 – 10/15/2023 (1.5 months)

Contract Approval & Recommendation to Award: Oct. CCU Meeting

Public Utilities Commission Review: Nov. PUC Meeting

Contract Signing: Dec. 2023

Contract Mobilization: Dec. 2023

CONTRACTOR Operational Commencement: Dec. 2026 (36 months)

**ANSWER:**

GPA is unable to accept your proposed bid milestones schedule. Please refer to the updated Bid Milestones table in the most recent amendment to this bid.

**QUESTION:**

2. (Page N/A of 263)

Re: BONUS DEPRECIATION

Question

One of the benefits of the solar incentives and policies is BONUS DEPRECIATION. However, according to DOE (Department of Energy), it will phase out in 2027 as below:

***“A business with a solar PV system placed in service between January 1, 2018, and December 31, 2022, can elect to claim a 100% bonus depreciation. Starting in 2023, the percentage of capital equipment that can be expensed immediately drops 20% per year (e.g., 80% in 2023 and 60% in 2024) until the provision drops to 0% in 2027.”***

Therefore, maintaining a fixed Contract Signing date is critical for the project to maximize the benefits. Contract Signing in Dec. 2023 requires a COD (Commercial Operation Date) in Dec. 2026, which will still be eligible for 20% BONUS DEPRECIATION. However, if the contract signing date is delayed, then the COD will also delay to 2027 or later which will reduce the 20% bonus depreciation to 0%.

Will GPA compensate the Successful Bidders if the Contract Signing date is pushed back beyond Dec 2023?

**RESPONSE:**

No.

**Bidder No.: 13 dated 02/06/2023:**

**QUESTION:**

1. We, Bidder No.: 13, were recently registered as a prospective bidder for this bid on Feb. 01, 2023. Before then, could you share any other clarifications you already released to all bidders if any?

**ANSWER:**

Bidders can view and download all bid document amendments containing prior clarification questions with GPA's responses from the GPA Procurement webpage: <https://go.opengovguam.com/bids/available/gpa>.

**QUESTION:**

2. (Volume II Technical, Section 1, Renewable Resource Technology, Page 1)  
Does being grid-forming/black-start capable mean it is necessary to work in an off-grid environment?

**ANSWER:**

The Contractor's system may be required to assist GPA's network operations during power system restoration after a system-wide black out or in the aftermath from a natural disaster such as a typhoon, tropical storm, or other event to assist the whole grid or to form and serve power to a separate islanded microgrid within the GPA system.

It is GPA's intent that after a severe weather event such as those listed in the Table below or after a power system blackout, the Contractors system be able to:

- Grid form GPA's system to bring back the entire grid after a blackout; or,
- Form and supply power to an islanded microgrid until other portions of GPA's Grid are being restored.

This means that the Contractor's system must be able to form a microgrid, provide appropriate voltage and frequency to the microgrid loads at all times, and operate for several hours up to the limits of the initial BESS state of charge for up to safe limits duration of the BESS (a minimum of 4-hour). Contractor may meet the 12-hour dispatch requirement either through a long-duration BESS or through separate shorter duration BESS. In the latter case, each BESS would be operated sequentially to provide power for a longer period of time.

The nature of these requirements will depend on the interconnection point to the GPA Grid where the Contractor's system is installed. It will also depend upon the characteristics of the Contractor's system. Therefore, at least six months prior to system commissioning, GPA will address these with the completion of an operational plan and policy for black-start and grid-forming responsibilities specific for the Contractor's systems. Regardless of interconnection point, the Contractor's system shall comply with the intentional island clause (8.2) of IEEE Std 1547-2018. This clause mainly focusses on transitioning from and transitioning back to connected/paralleled operation with the Area EPS (i.e. GPA Grid).

**QUESTION:**

3. (Volume II Technical, Section 1, Dispatchable Active Power Capability, Page 1)  
Is there any penalty to the Seller failing to comply with the 1% ramp rate control?

**ANSWER:**

The energy storage system shall also provide ramp-rate control for the power delivered from 40% of the total project capacity such that the ramp-rates are kept within 1% per minute at the guaranteed success rate of 95% during the energy production period. However, before or after a GPA curtailment, this rate may be exceeded at the request of the GPA Power System Control Center operators. GPA will not pay for the energy delivered to the GPA grid that did not meet the guaranteed success rate.

**QUESTION:**

4. (Volume II Technical, Section 1, Overview, Dispatchable Active Power Capability, Page 1)  
We understand that daytime (6:00AM~6:00PM) output is mostly based on PV output and operated under the condition of "with a ramp-up and ramp-down rate limited to 1% of rated power output per



minute". However, we attention to the clause "between the hours of 6:00 PM to 6:00 AM". Could you inform us how much AC output is required at this time?

**ANSWER:**

For proposals with an intermittent renewable energy resource coupled with an energy storage system, GPA will allow 60% of the resource to be DC-coupled to the energy storage system with the remaining 40% AC-coupled to the GPA grid. Therefore, 60% of the total project capacity will deliver firm, energy-shifted power from the energy storage system to the GPA grid between the hours of 6:00 PM to 6:00 AM, or outside of these hours if deemed necessary by the GPA Power System Control Center operators.

**QUESTION:**

5. (Volume II Technical, Section 1, Overview, Interconnection, Page 2)

Grid-connected substation ("S/S") inquiries

Substations information required : Debedo S/S, Talofoto S/S, Apra S/S, Pulantat S/S

- 1) Number of banks and bays in each substation
- 2) Capacity that can be connected substation, if capacity by bank can be checked (if it is possible to connect more than 60 MWac considering the grid impact, transmission line capacity)
- 3) Substation Tied Voltage

**ANSWER:**

- 1) Dededo Substation: 6 banks, Talofoto Substation: 4 banks, Apra Substation: 5 banks, Pulantat Substation: 6 banks
- 2) Please refer to the table below.

ITEM	SUBSTATION	OPERATED BY	XFMR	CAPACITY (MVA)	Voltage (kV)	Interconnection Allowed? (Yes/No)	Available Space for Additional Breaker? (Yes/No)	Estimated Interconnection Capacity? (MWac)
1	AGANA SUBSTATION	NAVY	T-9	20	34.5/13.8	NO	NO	
2	AGANA SUBSTATION	GPA	T-65	30	34.5/13.8			
3	AGANA SUBSTATION	GPA	T-400	112	115/34.5/13.8			
4	ANDERSEN SUB	NAVY	T-15	40	34.5/13.8	NO	NO	
5	ANDERSEN SUB	NAVY	T-16	40	34.5/13.8			
6	ANIGUA SUBSTATION	GPA	T-100	30	34.5/13.8	NO	NO	

7	APRA SUBSTATION	Joint Use	T-70	12.5	34.5/13.8	NO FOR T-70; SPACE AVAILABLE FOR 115 KV TRANSFORMER THAT CONTRACTORS WILL NEED TO INSTALL	SPACE AVAILABLE FOR 115 KV TRANSFORMER AND BREAKER THAT CONTRACTOR WILL NEED TO PURCHASE AND INSTALL	
8	BARRIGADA SUBSTATION	GPA	T-75	22.4	34.5/13.8	NO	NO	
9	CABRAS PLANT	GPA	START UP	7	34.5/4.16	No		
10	CABRAS PLANT	GPA	MAIN #1	80	115/13.2			
11	CABRAS PLANT	GPA	AUX #1	7	13.8/4.16			
12	CABRAS PLANT	GPA	MAIN #2	80	115/13.2			
13	CABRAS PLANT	GPA	AUX #2	7	13.8/4.16			
14	CABRAS PLANT	GPA	T-300	112	115/34.5/13.2			
15	CABRAS PLANT	GPA	MAIN #3	50	115/13.8			
16	CABRAS PLANT	GPA	AUX #3	6.3	13.8/4.16			
17	CABRAS PLANT	GPA	MAIN #4	50	115/13.8			
18	CABRAS PLANT	GPA	AUX #4	6.3	13.8/4.16			
19	COLD STORAGE	NAVY	T-25	14	34.5/13.8	No		
20	COLD STORAGE	NAVY	GT-6		34.5			
21	DEDEDO CT#1	GPA	T-191	30	34.5/13.8	No		
22	DEDEDO CT#2	GPA	T-192	30	34.5/13.8			

23	DEDEDO SUBSTATION	GPA	T-55	30	34.5/13.8	NO FOR T-55; SPACE AVAILABLE FOR NEW T-54 TRANSFORMER THAT CONTRACT OR WILL NEED TO PURCHASE AND INSTALL	SPACE AVAILABLE FOR 34.5 KV TRANSFORMER; CONTRACT OR WILL NEED TO PURCHASE 13.8 KV SWITCHGEAR	
24	MEC PLANT	MEC	UNIT 8	56	115/13.8	No		
25	MEC PLANT	MEC	UNIT 9	56	115/13.8			
26	GAA SUBSTATION	GPA	T-105	30	34.5/13.8	NO	NO	
27	HARMON SUBSTATION	GPA	T-500	11 2	115/34.5/ 13.8	NO	NO	
28	HARMON SUBSTATION	GPA	T-501	11 2	115/34.5/ 13.8			
29	HARMON SUBSTATION	Joint Use	T-21	30	34.5/13.8			
30	HARMON SUBSTATION	NAV Y	T-22	14	34.5/13.8			
31	HARMON SUBSTATION	Out of Service	T-44		34.5/13.8			
32	MACHECHE SUBSTATION	GPA	T-90	28	34.5/13.8	NO	NO	
33	MARBO SUB	NAV Y	T-14	5	34.5/13.8	NO	NO	
34	MARBO SUB	NAV Y	MARBO CT	20	34.5/13.8	No		
35	NCS, FINEGAYAN	NAV Y	T-47	5.3	34.5/4.16	NO	NO	
36	OROTE PLANT	NAV Y	T-10	14	34.5/13.8	NO	NO	
37	OROTE PLANT	NAV Y	T-11	14	34.5/13.8			
38	OROTE PLANT	NAV Y	T-12	14	34.5/13.8			
39	OROTE PLANT	NAV Y	T-13	14	34.5/13.8			

40	OROTE PLANT	NAV Y	T-28	14	34.5/13.8			
41	PAGAT SUB	GPA	T-115	30	34.5/13.8	NO	NO	
42	PITI SUBSTATION	Joint Use	T-7	10.5	34.5/13.8	NO	NO	
43	PITI SUBSTATION	GPA	T-700	100	115/34.5/13.8			
44	PITI SUBSTATION	NAV Y	T-8	10.5	34.5/13.8			
45	POTTS JUNCTION	AIR FORCE	T-110	5.2	34.5/13.8	NO	NO	
46	PULANTAT SUBSTATION	GPA	T-95	30	34.5/13.8	NO FOR T-95; SPACE AVAILABL E FOR T-96 TRANSFORMER THAT CONTRACTOR WILL NEED TO PURCHASE AND INSTALL	SPACE AVAILABLE FOR 34.5 KV AND 13.8 KV SWITCHGEAR THAT CONTRACTORS WILL NEED TO REFURBISH AND ENERGIZE	
47	RADIO BARRIGADA	NAV Y	T-23	9.4	34.5/13.8	NO	NO	
48	RADIO BARRIGADA	NAV Y	T-24	9.4	34.5/13.8			
49	SAN VITORES SUBSTATION	GPA	T-122	30	34.5/13.8	NO	NO	
50	SRF SUBSTATION	NAV Y	T-17	14	34.5/13.8	NO	NO	
51	SRF SUBSTATION	NAV Y	T-18	14	34.5/13.8			
52	TALOFOFO SUBSTATION	GPA	T-80	12.5	34.5/13.8	NO	NO	
53	TAMUNING SUBSTATION	GPA	T-50	22.4	34.5/13.8	NO	NO	
54	TAMUNING SUBSTATION	GPA	T-51	28	34.5/13.8			
55	TAMUNING SUBSTATION	GPA	T-600	112	115/34.5/13.8			

56	TANGUISSON PLANT	PEGI	MAIN #1	33.6	34.4/13.8	Out of Service		
57	TANGUISSON PLANT	PEGI	AUX #1	3.1	13.8/2.4			
58	TANGUISSON PLANT	PEGI	MAIN #2	33.6	34.4/13.8			
59	TANGUISSON PLANT	PEGI	AUX #2	3.5	13.8/2.4			
60	TANGUISSON PLANT	PEGI	STATION PWR	2.5	34.5/2.4			
61	TEMES PLANT	TEMES	T-2	59	34.5/13.8	No		
62	TENJO POWER PLANT	GPA	T-35	30	34.5/13.8	No		
63	TENJO POWER PLANT	GPA	T-36	33.3	34.5/13.8			
64	TUMON SUBSTATION	GPA	T-60	30	34.5/13.8	NO	NO	
65	TUMON SUBSTATION	GPA	T-61	28	34.5/13.8			
66	UMATAC SUBSTATION	GPA	T-120	30	34.5/13.8	YES	CONTRACTORS WILL NEED TO INSTALL 13.8 KV SWITCHGEAR AND BREAKER	20
67	YIGO SUBSTATION	GPA	T-30	30	34.5/13.8	NO	NO	
68	MOBILE SUBSTATION 30 MVA	GPA	MOB-30	30	34.5/13.8	No		
69	MOBILE SUBSTATION 14 MVA	GPA	MOB-14	14	34.5/13.8	No		
70	DANDAN SUBSTATION	GPA				YES	Yes	25 MW shifted at night; 40 MW if UG transmission line is

								upgraded to 2-750 Cu
71	MANGILAO SUBSTATION	GPA				No		

3) 34.5 kV for Dededo Substation, Talofof Substation, Apra Substation and Pulantat Substation

**QUESTION:**

6. (Volume II Technical, Section 1, Energy Storage System (ESS), Page 2)  
Is it necessary to provide rapid reserve during operation for ramp rate control?

**ANSWER:**

Yes, but the ramp-rate control must resume immediately after the event that required the rapid reserve operation.

**QUESTION:**

7. (Volume II Technical, Section 2.2, 2.1, Ride-through and Synchronization Capabilities, Page 4-5)  
Can GPA provide voltage and frequency ride-through setting data in graphical form? Also, is it necessary to maintain operation for 2 seconds when the voltage is zero?

**ANSWER:**

Please refer to Table 1 – Voltage and Frequency Ride-through Settings on page 106 of the bid document. Yes, it is necessary to maintain operation for 2 seconds when the voltage is zero.

**QUESTION:**

8. (Volume I Commercial, Tax Exemption)  
Does this bid have a tax exemption in terms of import custom duty, import VAT, etc. for all offshore equipment and materials? If only some items are exempt from tax, please inform us which items are eligible for it.

**ANSWER:**

Bidders shall be responsible for researching the tax exemptions applicable to the equipment and materials they procure.

**Bidder No.: 11 dated 02/07/2023:**

**QUESTION:**

1. At page 11 of 263, “INVITATION FOR MULTI-STEP BID No. GPA-012-23” it says “In this Phase IV Renewable Energy Resource Acquisition, GPA intends to acquire firm, non-intermittent power from one, or more, renewable generation resources with a total minimum annual energy output of 300,000 MWH.”

And at page 102 of 263, INVITATION FOR BID GPA-012-23 RENEWABLE ENERGY RESOURCE ACQUISITION PHASE IV GUAM Volume II Technical Proposal Qualification requirements, section 1 Overview, it says "...GPA intends to procure a total minimum annual energy of 300,000 MWh up to 530,000 MWh (approximately 180 MW to 320 MW), based on proposed sites ...". Furthermore at "ENERGY AND CAPACITY: The renewable energy resource shall deliver an annual minimum energy (AC) as specified in the Bidder's Qualitative Proposal with a maximum export capacity of 80 MW (AC) at the interconnection point; this may be a combination of several generation units at one or more sites. However, the nameplate capacity that can be installed may be higher than 80 MW, subject to the maximum additional MW capacity that the GPA system can handle as determined by a System Integration Study. The System Integration Study will be completed within 120 days after evaluation of the Price Proposal(s) and initial notification of the most qualified Bidders"

- A. Will GPA start awarding contracts from the lowest price proposal x bidder's proposed capacity (or annual MWh ), then the second lowest price x capacity (or annual MWh ) and so on? For example, the lowest bid is given for 80 MWac, the second lowest price is given for 60 MWac etc. Will GPA add all proposed lowest priced capacities one by one and then stop awarding contract when 320MW capacity target is hit?
- B. Can GPA explain or clarify what exactly they mean by "...However, the nameplate capacity that can be installed may be higher than 80 MW, subject to the maximum additional MW capacity that the GPA system can handle as determined by a System Integration Study. The System Integration Study will be completed within 120 days after evaluation of the Price Proposal(s) and initial notification of the most qualified Bidders"
- C. Can GPA clarify limited 80 MWac export capacity at the interconnection point? What may happen if the bidder proposes a price for a higher capacity than 80 MWac at the interconnection point and then the System Integration Study later on (120 days after evaluation of the Price Proposal(s) and initial notification of the most qualified Bidders) says that GPA system cannot handle it? or asks for additional investment?

**ANSWER:**

- A. GPA will award the contract(s) to the Bidder(s) whose bid meets all of the requirements and yields the lowest net present value of the Annual Fixed Pricing (\$/MWh) for the guaranteed renewable energy delivered for all years. GPA, at its discretion, may award one or more contracts to meet the minimum annual energy of 300,000 MWh up to a maximum annual energy of 530,000 MWh. However, GPA reserves the right to choose other technologies for diversification. This selection may include a higher priced proposal. Selections of proposals within the same technology will be based on the lowest evaluated cost as described in the bid document.
- B. The statement in question should read: "However, the nameplate capacity that can be installed may be lower than 60 MW at 115 kV, subject to the maximum additional MW capacity that the GPA system can handle as determined by a System Integration Study." Please refer to the amendment to page 102 of 263 of the bid document correcting this error.
- C. The maximum export capacity may be limited by the ampacity of the transmission line from the substation to the point of interconnection or other interconnected generation facilities. For interconnections at the 34.5 kV level, the limit may be 30 MW (AC) or lower depending on the

line ampacity. The limit may be raised for interconnections at the 115 kV level if the transmission line has a higher ampacity, but no greater than 60 MW (AC). Please refer to the bid document amendment in which the maximum export capacity is lowered from 80 MW (AC) to 60 MW (AC). Bidders will not be allowed to negotiate with GPA to change the bid price for a bid with an export capacity greater than 60 MW (AC) at one project site. GPA will limit the export capacity to 60 MW (AC) regardless of the project's actual capacity.

Kindly refer to No. 10 of **CHANGES** above.

**QUESTION:**

2. At "INVITATION FOR MULTI-STEP BID No. GPA-012-23" it says "DISPATCHABLE ACTIVE POWER CAPABILITY: The active, or real, power of the renewable energy resource shall be dispatchable at the point of interconnection, between the hours of 6:00 PM to 6:00 AM, as required by the GPA Power System Control Center operators or a SCADA control point. The available capacity may also be dispatched outside of these hours if deemed necessary by the GPA Power System Control Center operators ..."

A. Can GPA clarify this item? It affects the ESS scale, the capacity.

**ANSWER:**

The active, or real, power of the renewable energy resource that is generated and stored between the hours of 6:00 AM to 6:00 PM shall be dispatched at the point of interconnection for 12 hours, between the hours of 6:00 PM to 6:00 AM, as required by the GPA Power System Control Center operators or a SCADA control point. Dispatchable power is delivered on demand and at various MW output levels at the request of GPA's Power System Control Center. GPA will not pay the Contractor Curtailment fees for dispatching limited outputs based on the power system demand. GPA will only pay Curtailment fees due to failure or maintenance of the interconnection facilities occurring after the one-year warranty has expired. However, if the Contractor fails to meet the Guaranteed Net Annual Generation (MWH/YR) because of GPA's inability to dispatch all of the energy produced by the Contractor due to limits based on the power system demand, GPA will pay the lost revenue up to the Guaranteed Net Annual Generation (MWH/YR) if substantiated by the Contractor. The required reactive power available depends on the size of the BESS provided. The requirement, independent of BESS capacity, is that the BESS's total apparent power (MVA) shall be sized to provide full rated active power at 80% power factor.

**QUESTION:**

3. At item 2.2.5. Limits on Renewable Energy Purchases "INVITATION FOR MULTI-STEP BID No. GPA-012-23" it says "Due to the nature of the generation control system and related response characteristics of the generators on the GPA system, GPA may limit the amount of energy delivered from renewable resources to no more than 30MW (AC) at the interconnection point."

A. How should the bidder structure it's forecast if the bidder offers more than a 30 MWac capacity at the interconnection point? Is there a forecast, scenario or some sort of expectations on GPA's limiting the amount of energy delivered?



**ANSWER:**

For design purposes, the amount of power delivered is limited by the ampacity of the transmission line from the substation to the point of interconnection. For interconnections at the 34.5 kV level, the limit may be 30 MW (AC) or lower depending on the line ampacity or other interconnected generation facilities, and shall be interconnected to separate transmission lines unless determined otherwise by the System Integration Study. The limit may be raised for interconnections at the 115 kV level if the transmission line has a higher ampacity. Bidders may choose the same interconnection point in their proposals which may result in procedures/scheduling which may affect total dispatching output.

For operational purposes, the renewable energy resource shall provide dispatchable active, or real, power at the point of interconnection. Dispatchable power is delivered on demand and at various MW output levels at the request of GPA's Power System Control Center. GPA will not pay the Contractor Curtailment fees for dispatching limited outputs based on the power system demand. GPA will only pay Curtailment fees due to failure or maintenance of the interconnection facilities occurring after the one-year warranty has expired. However, if the Contractor fails to meet the Guaranteed Net Annual Generation (MWH/YR) because of GPA's inability to dispatch all of the energy produced by the Contractor due to limits based on the power system demand, GPA will pay the lost revenue up to the Guaranteed Net Annual Generation (MWH/YR) if substantiated by the Contractor.

**QUESTION:**

- 4. At item 2.2.2.1. ESS Technical Requirements "INVITATION FOR MULTI-STEP BID No. GPA-012-23" it had mentioned about primary frequency and control requirements.
  - A. Is GPA looking for secondary frequency control as well?

**ANSWER:**

Primarily, the ESS must provide Energy-Shifting, Ramp-Rate and Rapid Reserve functions. Bidders shall also provide the grid services in the table below. Bidders shall consult with their ESS provider for the recommended control modes and methods of operation to meet the requirements of this bid.

<b>Grid Service</b>	<b>Description</b>
Firm Power Dispatch	Provide Dispatchable Renewable Energy
Operating Reserve	Standby Generation Reserve
Fast Frequency Regulation	Rapid injection or absorption of power in response to changes in frequency to maintain system frequency within a tight bandwidth
Rapid Reserve	Respond to fast frequency decay due to trip of large generators on the GPA system by immediate injection of power to the grid to balance generation and demand and prevent underfrequency load shedding.
Shaping and Firming	Smoothing out intermittency of the renewable resource.
Black Start	Capability to Black Start other Generators over the Transmission System
Grid Forming	Capability to form and supply Microgrids post-natural disaster (i.e., typhoons) or system blackouts.
Energy Shifting	Long Duration Energy Storage System Function
Volt/Var Optimization	Steady state and dynamic management and optimization of Power System Voltages

**QUESTION:**

5. On page 247 under 11.B Contract Net Capacity, it reads, "GPA will not be obligated to purchase additional energy beyond the proposed project capacity." This seems to contradict 4.5 Seller's and Buyer's Obligations on page 145, which states, "GPA shall purchase and receive...all Renewable Energy generated by the Facility...provided that for quantities of Renewable Energy in excess of 105% of the Estimated Annual Production, as shown in the third column of Appendix A... the price payable by GPA shall be the lower of the Contract Price and the LEAC Rate."
- A. Can GPA please confirm that it will purchase all renewable energy generated at the facility and that the purchase price will be the contract price for amounts up to 105% of the Estimated Annual Production and the lower of the contract price and the LEAC rate for amounts beyond 105% of the EAP?

**ANSWER:**

Due to GPA's potential inability to dispatch all of the energy produced by the Contractor because of limits based on the power system demand, GPA will not be obligated to purchase additional energy beyond the proposed project capacity. However, if GPA chooses to purchase the additional energy, please refer to Volume II, section 2.5.2. Pricing for Energy Above Guaranteed Amount for the correct pricing for renewable energy produced above the guaranteed amount. All renewable energy available from the Bidder's project(s) above and beyond the guaranteed amount will be offered to GPA at a 15% discount of the lesser of the two following prices: 1) the Bidder's guaranteed price applicable to the then current time period or 2) the effective Levelized Energy Adjustment Clause (LEAC) fuel recovery cost incurred by GPA's ratepayers.

The Draft Contract in Volume III will be updated during the Contract Finalization period to reflect the applicable revisions from the bid document amendments.

**QUESTION:**

6. On page 112 section 2.5.1 restricts price increases to "a fixed rate of 0.5% annually for the entire contract period," but section 2.5.3 Energy Purchase Price Units on page 113 reads, "GPA will not accept bids with year-over-year (YOY) escalation rates greater than 1.0% per year."
- A. Is the annual escalation rate fixed at 0.5% or can the Bidder propose any rate less than 1.0%?

**ANSWER:**

Please refer to the updated page 113 of 263 in a recent amendment to this bid. GPA will allow a maximum of 1.0% annual escalation. However, Bidders are encouraged to submit proposals with less than 1.0% annual escalation.

**QUESTION:**

7. The contract term is defined on page 103 and throughout the draft PPA as a period of 20 years or up to 30 years if two additional five-year period extensions are applied. However, section 12.8(b) Extension of Delivery Period on page 164 allows for extension "on a year-to-year basis up to five (5) years in the aggregate," and C4. Contract term on page 250 reads, "Discuss contract term...GPA prefers proposals that have a longer contractual term."

- A. Can GPA please clarify whether the contract term is fixed at 20 years and up to 30 years if two five-year period extensions are applied or if the Bidder should propose our own terms?

**ANSWER:**

Please refer to the updated page 103 of 263 in a recent amendment to this bid. The renewable energy resource shall provide energy for a term of 25 years, with the option to extend for one additional five-year term, for a maximum term of thirty years.

**Bidder No.: 5 dated 02/07/2023:**

**QUESTION:**

53. (Volume I, Page 29, 2.12. Award of Contracts)

(Volume I, Page 30, 2.13.2. Performance Bond Form, Amount, and Duration)

(Volume I, Page 156, 9.1. Development Security)

There are three applications on the submission of Development Security

- (a) Vol 1\_2.12 says that the successful bidder shall provide the Performance Bond within 14 days of the award,
- (b) Vol 1\_2.13.2 says that a Development Security Bond shall be in effect upon contract execution and until the COD of the project,
- (c) Vol3\_9.1 clause says that Seller shall post the Development security within ten (10) Business days from the date when a credit agreement is executed, but no later than the Financing Arrangement Deadline.

(Question) Which clause do we need to follow? Therefore, by when does the selected bidder need to submit?

**ANSWER:**

The Development Security shall be submitted within ten (10) Business Days from the date when a binding credit agreement is executed. Please refer to Volume III for Development Security requirements.

**QUESTION:**

54. (Volume I, Page 30, 2.13.1. Bid Bond Form and Amount)

According to Vol 1\_2.13.1, Bid bond will be returned when GPA receives the Performance bond, where performance bond means Development Security, and If so, when should Bid bond return date be considered?

Among the clauses below, which one do selected bidders need to follow?

- (a) Vol.1 2.12 (b) Vol.1 2.13.2 (c) Vol.3 9.1

**ANSWER:**

For those Bidders selected for award of contract, bid bonds will be refunded once GPA has received their performance bond (Development Security). Any Bidder who is selected for award of contract but who is unable to fulfill the obligations of its respective bid(s) will permanently forfeit its bond(s) to GPA. Please refer to the updated page 30 of 263 (Volume I, 2.12.) in a recent amendment to this bid. The Development Security shall be submitted within ten (10) Business Days from the date when a binding credit agreement is executed. The Development Security requirement in Volume I, 2.13.2 and Volume III, 9.1 are also applicable.

**QUESTION:**

55. (Volume I, Page 31, 2.13.2. Performance Bond Form, Amount, and Duration)

According to Vol.1 2.13.2, the amount of the Development security bond shall be 50% of the total projected payment for the 1st contract year based on the contractor's 1st Contract Year energy rate and the guaranteed energy production.

(Question) what does 'Guaranteed energy production' mean?

Does 'Guaranteed energy production' mean one of (a) 'Estimated Annual Production (MWh) (= Minimum Production)' of appendix A, (b) '90 % of Minimum Production (MWh)' of appendix A, (c) 'Guaranteed output' of article Vol.3\_4.8(Minimum Production)

**ANSWER:**

The guaranteed energy production refers to the Guaranteed Net Annual Generation (MWh/yr) in Part 2 – Technical Data, item 9.F, page 252 of 263 of the bid document which shall be submitted in the Bidder's proposal.

The guaranteed energy production also refers to the Guaranteed Annual Production indicated in Volume III, 2.1 Commercial Terms, page 139 of 263 of the bid document. However, the reference to the fourth column of Appendix A is a typographical error. The Guaranteed Annual Production is set forth in a fifth column of Appendix A which shall be the same as the Guaranteed Net Annual Generation (MWh/yr) in Part 2 – Technical Data, item 9.F submitted in the Bidder's proposal.

The Draft Contract in Volume III will be updated during the Contract Finalization period to reflect the applicable revisions from the bid document amendments.

**QUESTION:**

56. (Volume II, Page 103, 1. Overview - Interconnection)

Please confirm if GPA will provide detail technical information for existing GPA's Apra and Haman Substation, including but not limited to, numbers of 115kV bay, specifications, single line diagrams drawings, as previously requested in the question no. 18.

**ANSWER:**

Please refer to the as-built drawings for the Apra Substation Expansion Project and Harmon Substation added to Appendix K in a recent amendment to this bid.

**QUESTION:**

57. (Volume II, Page 103, 1. Overview)

(Question1) Please clarify whether GPA can exercise a Buy-out option without Seller's agreement or it should be exercised by mutual agreement.

(Question2) Please clarify whether buy-out percent should be determined one of four options such as 25%, 50%, 75%, 100% or can be any number between 0% and 100% by mutual consent.

**ANSWER:**

1. The decision to buy-out the capital portion of the contract will be at the sole discretion of GPA. However, GPA and the successful Bidder(s) shall negotiate the buy-out percent if the option is taken.

2. The buy-out percent may be any negotiated number between 0% and 100%. However, the Bidder must provide a year-by-year schedule of reduction in energy fees as a function of the contract year buy-out and 25%, 50%, 75%, and 100% of equity stake taken by GPA as a basis for negotiation.

**QUESTION:**

58. (Volume II, Page 104, 2.1. Product and Term)

According to Vol.2 2.1, GPA may extend the contract for two (2) additional five-year terms.

(Question1) Please clarify whether the GPA can exercise a right of contract extension without Seller's agreement or contract extension is determined by mutual agreement.

(Question2) Please clarify whether contract terms can be negotiated and revised in the case of contract extension.

**ANSWER:**

1. Please refer to the updated pages 103 and 104 of 262 in a recent amendment to this bid. The term of the Renewable Energy Purchase Agreement will be 25 years. Prior to the expiration of the twenty-five-year contract period, GPA may extend the contract for one (1) additional five-year term. The decision to extend the contract will be mutually determined by GPA and the contractor.
2. The contract terms of the extension will be negotiated and mutually determined by GPA and the contractor.

**QUESTION:**

59. (Volume II, Page 112, 2.5.2. Pricing for Energy Above Guaranteed Amount)

- (a) According to Vol.2 2.5.2, All renewable energy available from the Bidder's project(s) above and beyond the guaranteed amount will be offered to GPA at a 15% discount of the lesser of the two following prices: 1) the Bidder's guaranteed price applicable to the then current time period or 2) the effective Levelized Energy Adjustment Clause (LEAC) fuel recovery cost incurred by GPA's ratepayers.
- (b) According to Vol.3 4.5(Seller's and Buyer's Obligation), provided that for quantities of Renewable Energy in excess of 105% of the Estimated Annual Production, as shown in the third column of Appendix A, which are not make-up quantities for delivery deficiencies in prior Production Measurement Periods pursuant to Section 4.8, the price payable by GPA shall be the lower of the 1) Contract Price and the 2) LEAC Rate.

(Question) Please clarify the amount of (a) Guaranteed amount described in Vol.2 2.5.2 and (b) Estimated Annual Production described in Vol.3 4.5.

Does (①) Guaranteed amount described in Vol. 2 2.5.2 and (②) Estimated Annual Production described in Vol. 3 4.5. mean one of (a) 'Estimated Annual Production (MWh) (= Minimum Production)' of appendix A, (b) '90 % of Minimum Production (MWh)' of appendix A, (c) 'Guaranteed output' of article Vol.3\_4.8(Minimum Production)?

If both are different, which pricing instruction should be applied for excess quantity?

**ANSWER:**

For clarification on the correct pricing for renewable energy produced above the guaranteed amount, please refer to Volume II, section 2.5.2. Pricing for Energy Above Guaranteed Amount. All renewable energy available from the Bidder's project(s) above and beyond the guaranteed amount will be offered to GPA at a 15% discount of the lesser of the two following prices: 1) the Bidder's guaranteed price applicable to the then current time period or 2) the effective Levelized Energy Adjustment Clause (LEAC) fuel recovery cost incurred by GPA's ratepayers.

The guaranteed energy production refers to the Guaranteed Net Annual Generation (MWh/yr) in Part 2 – Technical Data, item 9.F, page 252 of 263 of the bid document which shall be submitted in the Bidder's proposal.

The guaranteed energy production also refers to the Guaranteed Annual Production indicated in Volume III, 2.1 Commercial Terms, page 139 of 263 of the bid document. However, the reference to the fourth column of Appendix A is a typographical error. The Guaranteed Annual Production is set forth in a fifth column of Appendix A which shall be the same as the Guaranteed Net Annual Generation (MWh/yr) in Part 2 – Technical Data, item 9.F submitted in the Bidder's proposal.

The Draft Contract in Volume III will be updated during the Contract Finalization period to reflect the applicable revisions from the bid document amendments.

**QUESTION:**

60. (Volume II, Page 107, 2.2.5. Limits on Renewable Energy Purchases)

- (a) According to Vol.2 2.2.5, GPA may limit the amount of energy delivered from renewable resources to no more than 30MW (AC) at the interconnection point. Due to the nature of the generation control system and related response characteristics of the generators on the GPA system,
- (b) According to Vol.3 4.17, GPA will be allowed to curtail the Seller's Output due to undesirable effects or low loads which may impact stable operations of the GPA electric grid system. GPA will not be required to pay for any curtailments during this period
- (c) According to Vol.3 Appendix H 1.2(e), During the one-year warranty term of the interconnection facilities transferred, any curtailment by GPA which results from such failure of or defect in the interconnection facilities transferred will not be eligible for reimbursement by GPA to Seller as Lost Revenue payments, or Dispatch Down Makeup Production in future Contract Years.

(Question) Do the generation limits referred to in a, b, and c all state the same limitation, or are they different? If different, what is the difference?

**ANSWER:**

For design purposes, the amount of power delivered is limited by the ampacity of the transmission line from the substation to the point of interconnection. For interconnections at the 34.5 kV level, the limit may be 30 MW (AC) or lower depending on the line ampacity or other interconnected generation facilities, and shall be interconnected to separate transmission lines unless determined otherwise by the System Integration Study. The limit may be raised for interconnections at the 115 kV level if the transmission line has a higher ampacity. Bidders may choose the same interconnection point in their proposals which may result in procedures/scheduling and may affect total dispatching output.

For operational purposes, the renewable energy resource shall provide dispatchable active, or real, power at the point of interconnection. Dispatchable power is delivered on demand and at various MW output levels at the request of GPA's Power System Control Center. GPA will not pay the Contractor Curtailment fees for dispatching limited outputs based on the power system demand. GPA will only pay Curtailment fees due to failure or maintenance of the interconnection facilities occurring after the one-year warranty has expired. However, if the Contractor fails to meet the Guaranteed Net Annual Generation (MWH/YR) because of GPA's inability to dispatch all of the energy produced by the Contractor due to limits based on the power system demand, GPA will pay the lost revenue up to the Guaranteed Net Annual Generation (MWH/YR) if substantiated by the Contractor.

If there are any defects in the interconnection facilities during the one-year warranty term, any curtailment of energy will not be reimbursed by GPA as Lost Revenue payments or be eligible for Dispatch Down Makeup Production in future Contract Years.

**QUESTION:**

61. (Volume III, Page 133, 1.34 Environmental Attributes)

Though it is described that GPA retains all environmental attributes with the winning Bidder's energy according to Vol.3 2.6(Renewable Energy Credits and Environmental Credits), Vol.3 1.32(Environmental Attributes) states that Environmental attributes do not include tax benefits. (Question) Accordingly, please clarify that seller takes the tax credit benefits related to ITC.

**ANSWER:**

The successful Bidder will retain all federal tax attributes, including but not limited to Production Tax Credits (PTC) or Investment Tax Credits (ITC) associated with the renewable energy project.

**QUESTION:**

62. (Volume III, Page 144, 4.4 Termination Damages)

According to Vol.3 4.4(Termination Damages), GPA shall be entitled to termination damages, payable solely from the Bid Security or the Development Security in case that Seller terminates this Agreement at any time for its convenience prior to the Commercial Operation Date.

On the other hand, according to the last paragraph of the same article, Vol.3 4.4, Seller shall owe GPA no Termination Damages and such termination shall be without penalty to Seller in the event that Seller terminates this Agreement for any reason prior to the posting date for the Development Security.

(Question) Please clarify whether Seller shall owe GPA no Termination Damages and such termination shall be without penalty to Seller in the event that Seller terminates this Agreement for any reason prior to the posting date for the Development Security as described in the last paragraph of article Vol.3 4.4.

**ANSWER:**

GPA shall be entitled to termination damages, payable solely from the Bid Security or the Development Security in case that Seller terminates this Agreement at any time for its convenience prior to the Commercial Operation Date. The last paragraph of section 4.4 of the Draft Contract in Volume III will be updated during the Contract Finalization period to reflect the applicable revisions from the bid document amendments.

**QUESTION:**

63. (Volume III, Page 139, 4.8 Minimum Production)

(Volume III, Page 145, 2.1 Commercial Terms)

- (a) Vol.3 4.8(Minimum Production) states that a minimum number of MWhs of Renewable Energy in each one (1) Contract Year period as set forth in the third column of Appendix A (such annual MWh production is the “Minimum Production”).
- (b) Vol.3 2.1(Commercial Terms) describes Guaranteed Annual Production (MWhs) as set forth in the fourth column of Appendix A
- (c) Vol.3 4.8(Minimum Production) defines Guaranteed Output as one hundred percent (100%) of the aggregate Minimum Production (which calculated amounts are set forth in Appendix A) during such period (any such time period a “Production Measurement Period and each such guaranteed amount of delivered Renewable Energy during any Production Measurement Period)

(question) What does each expression of amount described below mean among a, b, c. If not, what does it stand for?

- Vol.1 1. (Introduction)'s expression 'minimum annual energy output'
- Vol.1 2.13.2. (Performance Bond Form, Amount, and Duration)'s expression 'guaranteed energy production, Minimum Annual Energy'
- Vol.2 1. (Overview)'s expression, 'Minimum annual energy'
- Vol.2 2.5. (Limits on Renewable Energy Purchase's expression 'annual Minimum Energy Production guarantees'
- Vol.2 2.5.1. (Fixed Pricing for Guaranteed Energy)'s expression 'the guaranteed renewable energy'
- Vol.2 2.5.2. (Pricing for Energy Above Guaranteed Amount)'s expression 'guaranteed amount'
- Vol.2 2.3.2. (Annual Minimum Guaranteed Production Quantity)'s expression 'expected minimum'
- Vol.2 3.4. (Power Product Characteristics)'s expression 'Guaranteed Annual Minimum Energy Production'
- Vol.2 4.1.5. (Performance Guarantees)'s expression 'Annual Minimum Quantities'
- Vol.3 1.9. (Buyout Payment)'s expression 'Minimum Production'
- Vol.3 4.5. (Seller's and Buyer's Obligations)'s expression 'Estimated Annual Production', 'Guaranteed amount'
- Vol.3 4.8. (Minimum Production)'s expression 'minimum number of MWhs of Renewable Energy'
- Vol.3 1.2. (Dispatch Down/Curtailment)'s expression 'Minimum Production'
- Vol.4 3.2. (Qualitative Scoring) Table 2 - Qualitative Scoring's expression 'Guaranteed Annual MWH'
- Vol.4 4. (STEP 2 – PRICE PROPOSAL EVALUATION)'s expression 'guaranteed renewable energy', 'energy guarantees', 'contract energy'
- Vol.1 4.16. (Payment Milestones and Schedule)'s expression 'Guaranteed Minimum Annual Energy Production'
- Vol.2 2.3.2. (Annual Minimum Guaranteed Production Quantity)'s expression 'Annual Minimum Quantity', 'guaranteed Annual Minimum Quantity'
- Vol.3 Appendix H. 1.2. (Dispatch Down/ Curtailment)'s expression 'Guaranteed



Output'

**ANSWER:**

For the Guaranteed Annual Production defined in Volume III, 2.1 Commercial Terms, page 139 of 263 of the bid document, the reference to the fourth column of Appendix A is a typographical error. The Guaranteed Annual Production is set forth in a fifth column of Appendix A which shall be the same as the Guaranteed Net Annual Generation (MWh/yr) in Part 2 – Technical Data, item 9.F submitted in the Bidder's proposal.

The Draft Contract in Volume III will be updated during the Contract Finalization period to reflect the applicable revisions from the bid document amendments.

The Guaranteed Net Annual Generation (MWh/yr) is referenced in the following items and is from the Bidder's proposal (Part 2 – Technical Data, item 9.F):

- Vol.1 2.13.2. (Performance Bond Form, Amount, and Duration)'s expression 'guaranteed energy production', 'Minimum Annual Energy'
- Vol.2 2.2.5. (Limits on Renewable Energy Purchase's expression 'annual Minimum Energy Production guarantees'
- Vol.2 2.5.1. (Fixed Pricing for Guaranteed Energy)'s expression 'the guaranteed renewable energy'
- Vol.2 2.5.2. (Pricing for Energy Above Guaranteed Amount)'s expression 'guaranteed amount'
- Vol.2 3.4. (Power Product Characteristics)'s expression 'Guaranteed Annual Minimum Energy Production'
- Vol.2 4.1.5. (Performance Guarantees)'s expression 'Annual Minimum Quantities'
- Vol.4 3.2. (Qualitative Scoring) Table 2 - Qualitative Scoring's expression 'Guaranteed Annual MWH'
- Vol.4 4. (STEP 2 – PRICE PROPOSAL EVALUATION)'s expression 'guaranteed renewable energy', 'energy guarantees', 'contract energy'
- Vol.1 4.16. (Payment Milestones and Schedule)'s expression 'Guaranteed Minimum Annual Energy Production'
- Vol.2 2.3.2. (Annual Minimum Guaranteed Production Quantity)'s expression 'Annual Minimum Quantity', 'guaranteed Annual Minimum Quantity'
- Vol.3 Appendix H. 1.2. (Dispatch Down/ Curtailment)'s expression 'Guaranteed Output'

The Expected Minimum Annual Generation (MWh/yr) is referenced in the following items and is from the Bidder's proposal (Part 2 – Technical Data, item 9.G):

- Vol.1 1. (Introduction)'s expression 'minimum annual energy output'
- Vol.2 1. (Overview)'s expression, 'Minimum annual energy'
- Vol.2 2.3.2. (Annual Minimum Guaranteed Production Quantity)'s expression 'expected minimum'
- Vol.3 1.9. (Buyout Payment)'s expression 'Minimum Production'
- Vol.3 4.8. (Minimum Production)'s expression 'minimum number of MWhs of Renewable Energy'
- Vol.3 1.2. (Dispatch Down/Curtailment)'s expression 'Minimum Production'

There is another typographical error in the Part 2 – Technical Data tab of the MS GPA-012-23 RRA PhIV Qualitative Proposal 2022-11-01.xlsm file. Item 12, Renewable Energy Project Generation Profile, should indicate that the annual projections must equal the Guaranteed net annual generation in 9.F above (instead of 9.G).

Kindly refer to No.: 11 of **CHANGES** above.

**QUESTION:**

64. (Volume III, Page 149, 4.17 Allowable GPA Curtailment Interim Period)

Vol 3\_4.17 states that according to System Impact Study result, output can be limited if necessary. However, there is no standard on compensation, which negatively affects business performance, furthermore the extent of it cannot be quantitatively estimated.

Therefore, (Question) We kindly request GPA to set the upper limit of the output limit or the maximum output limit period.

**ANSWER:**

The maximum export capacity may be limited by the ampacity of the transmission line from the substation to the point of interconnection or other interconnected generation facilities. For interconnections at the 34.5 kV level, the limit may be 30 MW (AC) or lower depending on the line ampacity. The limit may be raised for interconnections at the 115 kV level if the transmission line has a higher ampacity, but no greater than 60 MW (AC). Please refer to the bid document amendment in which the maximum export capacity is lowered from 80 MW (AC) to 60 MW (AC). Bidders will not be allowed to negotiate with GPA to change the bid price for a bid with an export capacity greater than 60 MW (AC) at one project site. GPA will limit the export capacity to 60 MW (AC) regardless of the project's actual capacity.

**QUESTION:**

65. (Volume III, Page 161, 12.2 Insurance)

According to Vol.3 12.2, Seller shall furnish certificates of insurance and waiver of subrogation endorsements to GPA prior to commencement of construction.

(Question) Please clarify whether a limited part of construction can be undertaken prior to a contract effective date or actual commencement of construction.

**ANSWER:**

Contractor shall not commence work under this contract until he has obtained all insurance required and GPA has approved such insurance, nor shall the Contractor allow any Subcontractor to commence work on this subcontract until all similar insurance required of the Subcontractor has been so obtained and approved.

**QUESTION:**

66. (Volume III, Page 183, Appendix H Dispatch Down/Curtailment)

Vol.3 Appendix H. 1.2. (Dispatch Down/Curtailment) states that Guaranteed Output is described in the fifth column of Appendix A. However, it seems that Appendix A does not have fifth column. What does Appendix A's fifth column mean?

**ANSWER:**

The Guaranteed Annual Production shall be added as a fifth column of Appendix A which shall be the same as the Guaranteed Net Annual Generation (MWh/yr) in Part 2 – Technical Data, item 9.F submitted in the Bidder’s proposal.

**QUESTION:**

67. (Volume V, Page 257, PRICE OFFER WORKSHEET)

What does 'Guaranteed Net Annual Generation' mean which is asked to be filled out in a price offer worksheet of Vol.5(Required Forms/page 257)?

Does 'Guaranteed energy production' mean one of (a) 'Estimated Annual Production (MWh) (= Minimum Production)' of appendix A, (b) '90 % of Minimum Production (MWh)' of appendix A, (c) 'Guaranteed output' of article Vol.3\_4.8(Minimum Production)?

**ANSWER:**

The Guaranteed Net Annual Generation shall be the same as the Guaranteed Net Annual Generation (MWh/yr) in Part 2 – Technical Data, item 9.F submitted in the Bidder’s proposal. It shall also be the same as the Guaranteed Annual Production added as a fifth column of Volume III, Appendix A.

**QUESTION:**

68. Please provide the GPA's grid information below. We would like to have a grid impact study to offer the competitive tariff.

1. Power System Data (PSS/E Format)
  - Sequence file
  - Dynamic Data (PSS/E Dynamic Data, it should be initialized)
2. Reliability Standards
  - N-x contingency (What number of X is needed)
  - Overflow % of transmission line at the contingency
  - Typical CCT (Critical Clearing Time) with the transmission level
  - Secure voltage range (0.9 pu ~ 1.05pu)
  - ZIP Load Ratio

**ANSWER:**

At this time, GPA is unable to provide the power system data files. However, please refer to the table below for GPA’s peak load power flow results.

Guam Power Authority Base Case Power Flow													
Peak Load Case													
FROM	FNAME	FKV	TO	TNAME	TKV	CK	ST	P	Q	MVA	AMPS		
%RATE	RATE	UNIT	AF	AT	AREA								
2202	Har345B3	34.50	2219	Har345B1	34.50	1	1	-29.3	-4.6	29.6	495.1	24.7	2008.2 Amp
3300	Agrko13	12.02	6005	Aggreko	0.46	1	1	-22.6	-5.5	23.3	1093.2	57.7	41.0 Mva
2214	Yig345B1	34.50	3300	Agrko13	12.02	1	1	-22.6	-4.4	23.1	381.0	46.6	50.0 Mva
2210	And345B1	34.50	2214	Yig345B1	34.50	1	1	-15.6	0.4	15.7	259.9	28.8	903.7 Amp
2004	Apr345	34.50	2017	Tenjotap	34.50	1	1	-12.1	-2.9	12.4	210.1	23.2	903.7 Amp

2005 Oro345	34.50	2007 CSTapX20	34.50	1	1	-8.4	-1.2	8.5	144.8
29.8 485.3 Amp	1	1	1						
2202 Har345B3	34.50	2203 Ded345B1	34.50	1	1	-7.5	-6.1	9.7	161.9
17.9 903.7 Amp	1	1	1						
2202 Har345B3	34.50	2222 NFin345	34.50	1	1	-7.5	-1.0	7.6	126.6
14.0 903.7 Amp	1	1	1						
2005 Oro345	34.50	2010 CSTapX21	34.50	1	1	-7.0	-1.9	7.2	123.0
13.6 903.7 Amp	1	1	1						
2008 CldSt345	34.50	2010 CSTapX21	34.50	1	1	-6.5	-3.4	7.3	123.9
21.8 569.0 Amp	1	1	1						
2105 Tum345B1	34.50	2202 Har345B3	34.50	1	1	-6.2	-2.1	6.5	109.4
12.1 903.7 Amp	1	1	1						
2108 SV345B1	34.50	2202 Har345B3	34.50	1	1	-5.0	-4.1	6.5	108.5
12.0 903.7 Amp	1	1	1						
2218 GiatTap	34.50	2219 Har345B1	34.50	1	1	-3.3	-2.7	4.2	70.7
7.8 903.7 Amp	1	1	1						
2217 GIA345B1	34.50	2218 GiatTap	34.50	1	1	-3.2	-2.8	4.3	71.6
10.2 702.9 Amp	1	1	1						
2214 Yig345B1	34.50	3212 Yigo T30	13.80	1	1	-3.1	2.9	4.3	70.6
15.8 27.0 Mva	1	1	1						
2212 Pag345B1	34.50	2220 Mang345B	34.50	2	1	-2.4	-0.0	2.4	40.3
4.5 903.7 Amp	1	1	1						
2102 Bar345	34.50	2216 GAA345B1	34.50	1	1	-2.2	-2.6	3.4	57.4
6.4 903.7 Amp	1	1	1						
2108 SV345B1	34.50	2110 HafaTap	34.50	1	1	-2.0	2.0	2.8	47.2
5.2 903.7 Amp	1	1	1						
2101 Aga345	34.50	2106 Ani345B1	34.50	1	1	-1.9	2.0	2.8	47.2
5.3 903.7 Amp	1	1	1						
2208 NCS345	34.50	2222 NFin345	34.50	1	1	-1.4	-0.7	1.6	26.5
5.5 485.3 Amp	1	1	1						
2209 Pott345	34.50	2210 And345B1	34.50	1	1	-1.4	-0.6	1.5	25.7
5.3 485.3 Amp	1	1	1						
2003 Tal345	34.50	2004 Apr345	34.50	1	1	-0.9	0.1	0.9	15.7
3.1 518.8 Amp	1	1	1						
2004 Apr345	34.50	2005 Oro345	34.50	1	1	-0.8	3.6	3.7	62.9
7.0 903.7 Amp	1	1	1						
2003 Tal345	34.50	3003 TalofT80	13.80	1	1	-0.6	0.7	1.0	16.2
7.7 12.5 Mva	1	1	1						
2216 GAA345B1	34.50	2217 GIA345B1	34.50	1	1	-0.5	-1.4	1.5	25.1
3.6 702.9 Amp	1	1	1						
1101 Aga115	115.00	2111 AgESS345	34.50	1	1	-0.4	-0.5	0.6	3.0
2.1 30.0 Mva	1	1	1						
2111 AgESS345	34.50	6007 AgESS440	0.44	1	1	-0.4	-0.5	0.6	10.2
2.1 30.0 Mva	1	1	1						
2209 Pott345	34.50	2222 NFin345	34.50	1	1	-0.3	-0.1	0.3	4.7
1.0 485.3 Amp	1	1	1						
2212 Pag345B1	34.50	2220 Mang345B	34.50	1	1	-0.2	-0.2	0.3	4.7
0.5 903.7 Amp	1	1	1						
210 Mache_CT	13.80	3210 MacheT90	13.80	1	1	-0.0	-0.0	0.0	0.6
		0.0 418328.1Amp	1	1	1				
2220 Mang345B	34.50	2221 MangESS	34.50	1	1	-0.0	-0.0	0.0	0.6
0.0 0.0 Amp	1	1	1						
2003 Tal345	34.50	6008 TaESS440	0.44	1	1	-0.0	-0.5	0.5	8.5
1.7 30.0 Mva	1	1	1						
14 OrteUnts	13.80	3005 OroteT11	13.80	1	1	-0.0	-0.0	0.0	0.0
0.0 418328.1Amp	1	1	1						
2204 Mar345B1	34.50	3205 MarboT14	13.80	1	1	-0.0	-0.0	0.0	0.0
0.0 5.0 Mva	1	1	1						
17 MEC 9	13.80	1005 Pit115B1	115.00	1	1	-0.0	-0.0	0.0	0.0
0.0 56.0 Mva	1	1	1						
2018 Dandan	34.50	6006 Dandan_PV	0.48	1	1	0.0	-0.0	0.0	0.0
0.0 33.2 Mva	1	1	1						
205 Marbo CT	13.80	2204 Mar345B1	34.50	1	1	0.0	0.0	0.0	0.0
		0.0 20.0 Mva	1	1	1				
12 Cabras_3	13.80	1001 Cab115EB	115.00	1	1	0.0	0.0	0.0	0.0
0.0 50.0 Mva	1	1	1						
13 Cabras_4	13.80	1001 Cab115EB	115.00	1	1	0.0	0.0	0.0	0.0
0.0 50.0 Mva	1	1	1						

0.0	2005 Oro345 12.5 Mva	34.50	1	1	1	3006 OroteT12	13.80	1	1	0.0	0.0	0.0	0.0
0.0	2005 Oro345 14.0 Mva	34.50	1	1	1	3005 OroteT11	13.80	1	1	0.0	0.0	0.0	0.0
0.0	2222 NFin345 19.5 Mva	34.50	1	1	1	3215 NFin T119	13.80	1	1	0.0	0.0	0.0	0.0
0.0	2003 Tal345 472.9 Amp	34.50	1	1	1	2018 Dandan	34.50	1	1	0.0	-0.0	0.0	0.2
2.3	1001 Cab115EB 908.7 Amp	115.00	1	1	1	1005 Pit115B1	115.00	1	1	0.0	4.4	4.4	21.1
0.2	2222 NFin345 19.5 Mva	34.50	1	1	1	3214 NFin T118	13.80	1	1	0.0	0.0	0.0	0.5
1.0	2103 RBa345B1 9.4 Mva	34.50	1	1	1	3105 RadBaT24	13.80	1	1	0.0	0.1	0.1	1.6
3.3	2001 Cab345 7.0 Mva	34.50	1	1	1	4001 CbrsStUp	4.16	1	1	0.2	0.2	0.2	3.9
2.2	2009 SRF345 14.0 Mva	34.50	1	1	1	3015 SRFT18	13.80	1	1	0.3	0.1	0.3	5.3
9.2	2208 NCS345 5.3 Mva	34.50	1	1	1	4201 NCS T47	4.16	1	1	0.4	0.3	0.5	8.0
4.4	2005 Oro345 14.0 Mva	34.50	1	1	1	3016 OroteT28	13.80	1	1	0.5	0.4	0.6	10.6
2.5	2011 Pul345 903.7 Amp	34.50	1	1	1	2102 Bar345	34.50	1	1	0.6	-1.2	1.3	22.8
3.8	2002 Pit345 20.0 Mva	34.50	1	1	1	3002 Piti T8	13.80	1	1	0.7	0.3	0.8	12.9
9.5	2103 RBa345B1 9.4 Mva	34.50	1	1	1	3104 RadBaT23	13.80	1	1	0.7	0.5	0.9	14.9
6.9	2011 Pul345 20.0 Mva	34.50	1	1	1	3009 PulanT95	13.80	1	1	1.0	1.0	1.4	23.4
3.9	2208 NCS345 485.3 Amp	34.50	1	1	1	2219 Har345B1	34.50	1	1	1.0	0.4	1.1	18.7
3.0	2003 Tal345 903.7 Amp	34.50	1	1	1	2011 Pul345	34.50	1	1	1.6	-0.3	1.6	26.8
6.7	2104 Tam345B1 702.9 Amp	34.50	1	1	1	2110 HafaTap	34.50	1	1	2.0	-2.0	2.8	47.4
34.8	2209 Pott345 5.2 Mva	34.50	1	1	1	3207 PotsT110	13.80	1	1	1.7	0.8	1.8	30.4
10.7	2101 Aga345 20.0 Mva	34.50	1	1	1	3101 Agana T9	13.80	1	1	2.0	0.8	2.1	36.1
4.9	2211 Mac345B1 903.7 Amp	34.50	1	1	1	2220 Mang345B	34.50	1	1	2.6	-0.0	2.6	44.3
33.2	2217 GIA345B1 9.4 Mva	34.50	1	1	1	4213 GIAT Trm	4.16	1	1	2.8	1.4	3.1	52.3
10.8	2005 Oro345 569.0 Amp	34.50	1	1	1	2009 SRF345	34.50	1	1	3.0	2.0	3.6	61.3
10.8	2005 Oro345 569.0 Amp	34.50	1	1	1	2009 SRF345	34.50	2	1	3.0	2.0	3.6	61.3
23.2	2219 Har345B1 14.0 Mva	34.50	1	1	1	3202 Harmnt22	13.80	1	1	3.0	1.2	3.2	54.2
13.1	2103 RBa345B1 485.3 Amp	34.50	1	1	1	2212 Pag345B1	34.50	1	1	3.5	-1.6	3.8	63.8
34.6	2002 Pit345 10.5 Mva	34.50	1	1	1	3001 Piti T7	13.80	1	1	3.6	-0.2	3.6	61.0
9.8	2210 And345B1 40.0 Mva	34.50	1	1	1	3209 AnderT16	13.80	1	1	3.9	0.0	3.9	65.1
15.1	2101 Aga345 485.3 Amp	34.50	1	1	1	2103 RBa345B1	34.50	1	1	4.3	-1.0	4.4	73.5
10.9	2014 Ten345 903.7 Amp	34.50	1	1	1	2017 Tenjotap	34.50	1	1	4.9	3.2	5.9	98.6
	11 TenjoDsl	13.80				2014 Ten345 19.8 30.0 Mva	34.50	1	1	4.9	3.3	6.0	246.6
12.0	2101 Aga345 903.7 Amp	34.50	1	1	1	2104 Tam345B1	34.50	1	1	5.6	-3.3	6.5	108.8
18.7	2105 Tum345B1 30.0 Mva	34.50	1	1	1	3107 TumonT60	13.80	1	1	5.6	0.6	5.6	93.9
49.2	2009 SRF345 14.0 Mva	34.50	1	1	1	3014 SRFT17	13.80	1	1	5.7	3.9	6.9	117.4

2203 Ded345B1	34.50	2210 And345B1	34.50	1	1	5.9	1.3	6.0	99.7
14.9 702.9 Amp	1 1	1							
2012 Uma345	34.50	3011 UmatT120	13.80	1	1	6.0	-0.3	6.0	101.5
19.9 30.0 Mva	1 1	1							
2004 Apr345	34.50	3004 Apra T70	13.80	1	1	6.0	-0.4	6.0	101.2
47.9 12.5 Mva	1 1	1							
2004 Apr345	34.50	2012 Uma345	34.50	1	1	6.0	-0.2	6.0	101.6
11.2 903.7 Amp	1 1	1							
2005 Oro345	34.50	3012 OroteT13	13.80	1	1	6.4	1.6	6.6	112.5
47.2 14.0 Mva	1 1	1							
2008 CldSt345	34.50	3007 CldST25	13.80	1	1	6.5	3.4	7.3	123.9
52.0 14.0 Mva	1 1	1							
10 TalofDsl	13.80	3003 TalofT80	13.80	1	1	6.5	-0.4	6.5	267.9
		0.1 418328.1Amp	1	1	1				
9 ManenDsl	13.80	3009 PulanT95	13.80	1	1	6.6	-1.2	6.7	274.0
0.1 418328.1Amp	1 1	1							
2210 And345B1	34.50	3208 AnderT15	13.80	1	1	6.9	-0.6	7.0	115.5
17.4 40.0 Mva	1 1	1							
2108 SV345B1	34.50	3113 SanVT122	13.80	1	1	7.0	2.1	7.3	122.5
24.4 30.0 Mva	1 1	1							
2002 Pit345	34.50	2017 Tenjotap	34.50	1	1	7.2	-0.1	7.2	120.8
13.4 903.7 Amp	1 1	1							
2002 Pit345	34.50	2101 Aga345	34.50	1	1	8.0	-1.5	8.1	136.2
15.1 903.7 Amp	1 1	1							
2204 Mar345B1	34.50	2212 Pag345B1	34.50	1	1	8.0	3.3	8.6	143.3
29.7 485.3 Amp	1 1	1							
2203 Ded345B1	34.50	2204 Mar345B1	34.50	1	1	8.0	3.4	8.7	143.2
15.9 903.7 Amp	1 1	1							
1103 Tam115B1	115.00	1201 Har115B1	115.00	1	1	8.0	4.5	9.2	44.7
5.0 908.7 Amp	1 1	1							
2002 Pit345	34.50	2007 CSTapX20	34.50	1	1	8.5	1.4	8.6	144.8
29.8 485.3 Amp	1 1	1							
2104 Tam345B1	34.50	3106 TamunT50	13.80	1	1	8.6	1.5	8.8	146.8
39.1 22.4 Mva	1 1	1							
2210 And345B1	34.50	2222 NFin345	34.50	1	1	9.3	1.9	9.4	156.8
17.4 903.7 Amp	1 1	1							
2104 Tam345B1	34.50	2105 Tum345B1	34.50	1	1	9.7	-3.6	10.4	173.8
19.2 903.7 Amp	1 1	1							
2214 Yig345B1	34.50	2219 Har345B1	34.50	1	1	10.0	1.5	10.1	167.0
18.5 903.7 Amp	1 1	1							
2106 Ani345B1	34.50	3110 AnigT100	13.80	1	1	10.1	0.4	10.1	170.7
33.8 30.0 Mva	1 1	1							
2105 Tum345B1	34.50	3109 TumonT61	13.80	1	1	10.3	-1.9	10.5	175.7
37.8 28.0 Mva	1 1	1							
2101 Aga345	34.50	2102 Bar345	34.50	1	1	10.7	1.2	10.8	181.5
20.1 903.7 Amp	1 1	1							
2216 GAA345B1	34.50	3213 GAA T105	13.80	1	1	10.8	1.9	11.0	184.1
43.8 25.0 Mva	1 1	1							
2219 Har345B1	34.50	3201 HarmnT21	13.80	1	1	11.3	3.6	11.9	198.4
39.6 30.0 Mva	1 1	1							
2104 Tam345B1	34.50	3108 TamunT51	13.80	1	1	11.9	2.2	12.1	202.3
43.1 28.0 Mva	1 1	1							
2002 Pit345	34.50	2106 Ani345B1	34.50	1	1	12.1	-1.4	12.2	205.0
22.7 903.7 Amp	1 1	1							
2211 Mac345B1	34.50	2216 GAA345B1	34.50	1	1	12.6	2.8	12.9	215.9
24.0 903.7 Amp	1 1	1							
1005 Pit115B1	115.00	2002 Pit345	34.50	1	1	12.8	4.1	13.4	64.6
13.4 100.0 Mva	1 1	1							
2102 Bar345	34.50	3103 BarriT75	13.80	1	1	13.5	2.5	13.7	231.7
61.3 22.4 Mva	1 1	1							
2002 Pit345	34.50	2010 CSTapX21	34.50	1	1	13.5	5.6	14.6	245.3
27.2 903.7 Amp	1 1	1							
2212 Pag345B1	34.50	3211 PagaT115	13.80	1	1	14.0	2.0	14.1	237.5
47.2 30.0 Mva	1 1	1							
2001 Cab345	34.50	2002 Pit345	34.50	1	1	15.3	4.0	15.9	266.1
14.7 1807.4 Amp	1 1	1							
1001 Cab115EB	115.00	2001 Cab345	34.50	1	1	15.5	4.4	16.1	77.8
14.4 112.0 Mva	1 1	1							

2203 Ded345B1	34.50	3204 DededT55	13.80	1	1	16.4	2.5	16.5	273.2
55.1 30.0 Mva	1 1	1							
2211 Mac345B1	34.50	3210 MacheT90	13.80	1	1	17.8	3.5	18.1	303.7
64.7 28.0 Mva	1 1	1							
2101 Aga345	34.50	3102 AganaT65	13.80	1	1	18.1	4.2	18.6	312.6
62.1 30.0 Mva	1 1	1							
208 Ded CT#1	13.80	2203 Ded345B1	34.50	1	1	18.9	8.3	20.7	847.5
		68.9 30.0 Mva		1	1	1			
209 Ded CT#2	13.80	2203 Ded345B1	34.50	1	1	19.0	8.2	20.7	850.8
		69.1 30.0 Mva		1	1	1			
211 Yigo__CT	13.80	3212 Yigo T30	13.80	1	1	19.4	-3.3	19.7	807.0
		0.2 418328.1Amp		1	1	1			
1005 Pit115B1	115.00	1201 Har115B1	115.00	1	1	28.0	6.1	28.7	138.3
15.4 908.7 Amp	1 1	1							
1101 Aga115	115.00	2101 Aga345	34.50	1	1	30.9	6.4	31.6	152.9
28.2 112.0 Mva	1 1	1							
1001 Cab115EB	115.00	1101 Aga115	115.00	2	1	32.7	6.2	33.3	160.6
17.7 908.7 Amp	1 1	1							
15 TEMES	13.80	2002 Pit345	34.50	1	1	25.6	-2.1	25.7	1083.8
43.8 59.0 Mva	1 1	1							
1001 Cab115EB	115.00	1101 Aga115	115.00	1	1	32.7	6.2	33.3	160.6
17.7 908.7 Amp	1 1	1							
2202 Har345B3	34.50	2211 Mac345B1	34.50	1	1	33.1	6.1	33.7	562.1
62.3 903.7 Amp	1 1	1							
1101 Aga115	115.00	1103 Tam115B1	115.00	1	1	34.8	6.8	35.4	171.7
18.9 908.7 Amp	1 1	1							
1201 Har115B1	115.00	2219 Har345B1	34.50	1	1	36.0	11.6	37.8	183.7
33.8 112.0 Mva	1 1	1							
1 Cabras_1	13.80	1001 Cab115EB	115.00	1	1	37.8	15.9	41.0	1690.4
51.2 80.0 Mva	1 1	1							
16 MEC 8	13.80	1005 Pit115B1	115.00	1	1	41.0	9.5	42.1	1760.1
75.1 56.0 Mva	1 1	1							

**QUESTION:**

69. (Volume III, Page 135, 1.48 “Force Majeure”)

Vol. III 1.48 “...So long as the requirements of the preceding sentence are met, a “Force Majeure” event may include, but shall not be limited to, flood, drought, military ordinances or archaeological discoveries at the Project site, change in applicable law or interpretation or application thereof, failure or delay by any Governmental Authority in issuing any required permit, earthquake, storm, fire, lightning, epidemic, war, terrorism or riot....”

According to Vol.III 1.48, change in applicable law, along with war, terrorism and riot, which are typically categorized as political force majeure or events of government action or inaction, falls under a Force Majeure event.

Also according to Vol III. 4.2(c), the only compensation Bidder can receive is extension of Commercial Operation Date without any remedies.

Please confirm if it is GPA’s intention not to compensate Bidders in the event Seller suffers from financial difficulties which may arise from change in applicable law, for example due to uncertainties in the market, such as geopolitical instability and related trade protectionism.

**ANSWER:**

GPA does not intend to compensate the Contractor, nor seek compensation from the Contractor for losses incurred by both parties caused by Force Majeure.

**QUESTION:**

70. (Volume III, Page 135, 1.48 "Force Majeure")

Due to the nature of the Project and considering the current manufacturing capacity of Guam, Bidder is obliged to procure most of major equipment from the outside of Guam. Please confirm the Force Majeure events outside of Guam are eligible for "Force Majeure" events under the PPA.

**ANSWER:**

Events occurring outside of Guam are eligible for Force Majeure consideration. However, circumstances that may not be considered for Force Majeure regarding obtaining materials, obtaining labor & personnel, and sabotage or work strikes by workmen as indicated in Volume I, section 4.17, items (a) through (c).

All other Terms and Conditions in the bid package shall remain unchanged and in full force.



for JOHN M. BENAVENTE, P.E.  
General Manager





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**2.3. Project Capacity & Production**

**2.3.1. Minimum and Maximum Project Capacity**

- \* The minimum export capacity that a Bidder may offer is 5 MW, and the maximum export capacity shall be 60 MW for each project. This may be the combination of several generation units at one site.

**2.3.2. Annual Minimum Guaranteed Production Quantity**

The Bidder will provide a guarantee for an Annual Minimum Quantity, in MWh, to be delivered to GPA's system. Subsequent failure to provide this guaranteed Annual Minimum Quantity will subject the Bidder to penalties as described in Renewable Energy Purchase Agreement. The Bidder will also provide the expected minimum (also in MWh) to be delivered each year of the contract period, at a 95% confidence level.

**2.4. Delivery**

**2.4.1. Interconnection**

The Bidder will deliver renewable energy to a GPA-determined interconnection point on GPA's 115 kV or 34.5 kV transmission system. GPA will determine the exact location after completion of a detailed interconnection study. The GPA transmission system and primary delivery points are identified in the attached map (See Appendix K). GPA requests that the Bidders identify potential interconnection sites within their submittal.

GPA is recommending the following interconnection requirements. Note that final interconnection agreement will be based on System Integration Study recommendations.

1. An underground loop system in and out of a new substation at the renewable generation facility at transmission level (34.5kV and up) connecting to an existing GPA transmission line. The rerouted transmission line, its associated breakers, and control and protection devices, etc. may require upgrade.

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The Bidder shall provide a Performance Bond executed by a surety company licensed to do business on Guam.

**3. Required Forms and Supplemental Information**

GPA shall automatically disqualify any proposal submitted without the supplementary information and required forms listed below:

- Documents required as part of Qualitative Proposal Requirements;
- A copy of the BIDDER’s Articles of Incorporation or other applicable forms concerning business organization (i.e. partnership, sole proprietorship, etc.) and By-Laws;
- \* • Audited financial information on BIDDER’s firm and all subcontractors that will be used in the performance management of this contract. BIDDERS must include their Dunn and Bradstreet Number or Other Major Credit Rating Agency rating.
- Certificate of Good Standing to conduct business in jurisdiction of residence;
- Information regarding outstanding claims against the BIDDER, if any;
- Required affidavits (Ownership & Interest Disclosure; Non-Collusion; Declaration Regarding Compliance with DOL Wage Determination; No Gratuities or Kickbacks; Ethical Standards Affidavit; Restriction Against Sex Offenders)
- Proposal Checklist
- Bid Bond
- A current Guam Business License. Although it is not required in order to provide a Bid for this engagement, obtaining a Guam Business License is a pre-condition for entering into a contract with the Authority.

The following forms and MS EXCEL Workbooks must be completed:

- Appendix A: Bid Checklists
- Appendix B: Bid Bond Form and Instructions
- Appendix C: Ownership & Interest Disclosure Affidavit
- Appendix D: Non-collusion Affidavit
- Appendix E: Local Procurement Preference Application
- Appendix F: Performance Bond
- Appendix G: No Gratuities or Kickbacks

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**4.52. Submittals**

Specific items requiring submittals are specified in the Contract Documents or may be requested as needed by the Contracting Officer. Shop Drawings shall be submitted and approved before procurement, fabrication or delivery. Partial submittals are not acceptable.

**4.52.1. Submittal Procedures**

- a) Transmit each submittal with a transmittal letter.
- b) Sequentially number the transmittal forms. Resubmittals shall have original number with an alphabetic suffix.
- c) Identify Project, Contractor, Subcontractor, or Supplier; pertinent drawing sheet and detail number, and GPA specification number as appropriate.
- d) Schedule submittals to expedite the Project and deliver to GPA. Coordinate submission of related items.
- e) Identify variations from Contract Documents and GPA specifications which may be detrimental to successful performance of the completed Work.
- f) Revise and resubmit submittals as required. Identify all changes made since previous submittal.
- g) Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.
- \* h) GPA shall be allowed four (4) weeks to review and approve submittals without affecting the Contract completion date. However, GPA shall be allowed more than four (4) weeks to review bulk submittals. Delays in delivery due to submittals that are disapproved during this review period are the responsibility of the Contractor.
- i) Submittals returned to the Contractor as approved shall be considered authorization to proceed with the work. The approval of GPA shall in no way abrogate the requirements of GPA specifications. Review of drawings, methods of work, or information regarding materials or equipment the

**GUAM POWER AUTHORITY RENEWABLE ENERGY RESOURCE ACQUISITION – PHASE IV Page 103b of 263**  
**Volume II: Technical Qualification Proposal Requirements**

output point. The project shall perform at +/- 0.80 PF Dynamic Range up to and including the maximum MW output and shall not reduce reactive capability near the peak real power output.

- **INTERCONNECTION:** The renewable energy resource shall deliver energy directly to the existing GPA 34.5 kV or 115 kV transmission systems, subject to the result of a System Integration Study to be completed after Step 2 of the proposal evaluation. Interconnection to the 115 kV transmission system near the Apra Substation or Harmon Substation is preferred.
- **ENERGY STORAGE SYSTEM (ESS):** The renewable energy resource shall be equipped with an energy storage system (ESS) that meets GPA’s requirements as described in **Section 2.2.2 Acceptable ESS Technologies**. The ESS must provide the following primary functions:
  - o **ENERGY-SHIFTING:** The primary purpose of the ESS shall be for energy-shifting, which is to deliver the energy produced at another time or period of the day.
  - o **RAPID RESERVE:** The additional function of the ESS is to provide rapid reserve in response to under-frequency events. The total energy exported for these events shall be included in the annual minimum energy requirement.
  - o **RAMP-RATE CONTROL:** In this mode, the ESS will supply or absorb real power at the point of interconnection in an attempt to control the power output of the renewable energy resource which is AC-coupled to the GPA grid such that the ramp-rate is limited based on the ramp-rate setpoint. Sufficient SOC management control must be provided for optimal ramp-rate control. Manual and remote changes to the ESS ramp-rate setpoint shall also be allowed if needed.

Bidders shall also provide the other grid services in the table below:

Grid Service	Description
Firm Power Dispatch	Provide Dispatchable Renewable Energy
Operating Reserve	Standby Generation Reserve
Fast Frequency Regulation	Rapid injection or absorption of power in response to changes in frequency to maintain system frequency within a tight bandwidth
Rapid Reserve	Respond to fast frequency decay due to trip of large generators on the GPA system by immediate injection of power to the grid to balance generation and demand and prevent underfrequency load shedding.
Shaping and Firming	Smoothing out intermittency of the renewable resource.
Black Start	Capability to Black Start other Generators over the Transmission System
Grid Forming	Capability to form and supply Microgrids post-natural disaster (i.e., typhoons) or system blackouts.
Energy Shifting	Long Duration Energy Storage System Function
Volt/Var Optimization	Steady state and dynamic management and optimization of Power System Voltages

- **COMMERCIAL OPERATION HISTORY:** The technology proposed for the renewable resource shall have at least one (1)-year of commercial operations history in a utility environment.
- **COMMERCIAL OPERATION COMMENCEMENT:** The renewable energy resource shall be available for commercial operation within thirty-six (36) months from the contract execution.
- \* • **CONTRACT TERM:** The renewable energy resource shall provide energy for a term of 25 years, with the option to extend for one additional five-year terms, for a maximum term of thirty years.
- **BUY-OUT OPTION:** GPA intends to reserve the option to buy-out the capital portion of the contract. Bidders must provide a buy-out schedule for each contract year.
  - o GPA reserves the option to take a percent equity in stakes in the project at any time; such percent equity in stakes will be applied against the buy-out amount.
  - o GPA and the successful bidder(s) shall negotiate the buy-out percent if the option is taken.
  - o The bidder must provide a year-by-year schedule of reduction in energy fees as a function of the contract year buy-out and 25%, 50%, 75%, and 100% of equity stake taken by GPA.
- **DESCRIPTION**

The bids for renewable resources shall be developed based on the requirements described below and outlined in the Qualitative Scoring Workbook provided with the bid documents.

**\* 2.1. Product and Term**

GPA seeks to acquire energy from renewable resource projects based on an ‘annual minimum quantity’ of energy under the terms of the Renewable Energy Purchase Agreement (See Volume III). Projects in this acquisition phase are required to be operational and delivering renewable energy on or before 36 months from the contract award date. The term of the Renewable Energy Purchase Agreement will be 25 years. Prior to the expiration of the twenty-five-year contract period, GPA may extend the contract for one (1) additional five-year term.

**2.2. Technology**

**2.2.1. Acceptable Renewable Technologies**

Acceptable renewable technologies in this RFP include those technologies that meet the renewable resources definition by Energy Information Administration (EIA), a branch of the U.S. Department of Energy. EIA defines renewable energy as “Energy sources that are naturally replenishing but flow limited. They are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time. Renewable energy sources include: biomass, hydro, geothermal, solar, wind, ocean thermal, wave action and tidal action.” GPA will consider biofuel supply as alternate to energy delivery. GPA will evaluate biofuel proposals based on energy produce from biofuel supply using GPA’s existing oil-fired generation technology. Offerors should also note that there are certain restrictions regarding the use of municipal solid waste as a biomass fuel source on Guam. The GPA Renewable Acquisition website provides information on this and access to other local legislation (<http://guampowerauthority.com/special/renew1.php>).

Offerors should be prepared to answer carbon balance questions related to their projects. Offerors should be able to clearly illustrate, and provide supporting documentation, that their renewable energy production offsets more carbon emissions than they are producing including those emissions produced from the growing, harvesting, gathering, preparing, transporting, and combusting of renewable fuels.

**Under no circumstances will energy from non-renewable resources be acceptable for delivery under the proposed agreement.**

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1. Size and scope of the various types of renewable projects. This should also include any additional details that may be known about individual proposed projects, including the electrical model for the proposed interconnection, such as the distribution line description and impedances at the point of the interconnection.
  2. If applicable, solar irradiance data in 2-second intervals for each solar project – time synchronized if possible.
  3. Expected control characteristics of the projects – It will be critical that each project must be capable of being controlled in real time. Voltage control characteristics and frequency characteristics must be provided.
  4. The developer must supply PSLF modeling information, and EMT modeling information (such as in EMTP-RV or PSCAD format) to allow for further detailed study work for the project itself, and for use on an ongoing basis for GPA system studies for other purposes. Modeling data should also include relevant data for inverters and collector system/transformers between the inverter terminals and the Point of Interconnection.

## **2.5. Pricing**

### **\*2.5.1. Fixed Pricing for Guaranteed Energy**

Bidders are required to submit fixed pricing for the guaranteed renewable energy delivered for the first contract year. Prices shall escalate at a fixed rate of no more than 1.0% annually for the entire contract period. GPA will apply a 1% penalty factor to the prices of bids interconnecting to the 34.5 kV system. Energy degradation shall be limited to 0.7% annually.

### **2.5.2. Pricing for Energy Above Guaranteed Amount**

All renewable energy available from the Bidder's project(s) above and beyond the guaranteed amount will be offered to GPA at a 15% discount of the lesser of the two following prices: 1) the Bidder's guaranteed price applicable to the then current time period or 2) the effective Levelized Energy Adjustment Clause (LEAC) fuel recovery cost incurred by GPA's ratepayers. The LEAC fuel recovery cost is recalculated approximately every six months and is approved by the Guam Public Utilities Commission.

Data on the current LEAC fuel recovery costs can be found on GPA's website at:

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<http://www.guampowerauthority.com/leac>

Details about historical filings and LEAC fuel recovery charges can be found on the PUC’s website at:

<http://www.guampuc.com/dockets/power>

Details of the calculation of the LEAC can be found under GPA’s Rate Schedule “Z” at:

[https://admin.guampowerauthority.com/uploads/20151001\\_Base\\_Rate\\_Tariff\\_FY\\_2016\\_Full\\_Set\\_bfbc5c81f7.pdf](https://admin.guampowerauthority.com/uploads/20151001_Base_Rate_Tariff_FY_2016_Full_Set_bfbc5c81f7.pdf)

For the evaluation, GPA shall use the most recent LEAC Rate approved by the PUC. An amendment shall be forwarded to all prospective bidders for the final rate.

**\* 2.5.3. Energy Purchase Price Units**

The Bidder shall provide a fixed price bid in \$/MWH for the term of the proposed delivery of renewable energy for each ESS proposal options. The price bid shall include the capital and O&M components which shall be referred to should GPA exercise the capital buy-out option. All columns in the bid price worksheet must be filled. GPA will not accept bids with year-over-year (YOY) escalation rates greater than 1.0% per year.

**2.5.4. Bid Expiration**

All Bid terms, conditions, and pricing are binding for 8 months following the due date of the IFB.

**2.6. Renewable Energy Credits and Environmental Credits**

GPA retains all environmental attributes associated with the winning Bidder’s energy, including but not limited to renewable energy credits, greenhouse gas, green tags, or carbon credits, and any other emissions attributes, all as set forth in the form of Renewable Energy Purchase Agreement.

**2.7. End-of-Life Disposal and Recycling Plan**

Within the first 90 days after contract award, the Contractor shall provide an end-of-life disposal and recycling plan for GPA’s review.

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**3.2.2. Project Management/Experience**

Bidders are required to demonstrate project experience and management capability to successfully develop and operate the project proposed. GPA is interested in a project team which has demonstrated success in projects of similar type, size and technology and can demonstrate an ability to effectively work together to bring the project to commercial operation in a timely fashion. GPA requests the following information:

1. An organizational chart for the project that lists the project participants and identifies the management structure and responsibilities.
- \* 2. 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, and any evidence that the project participants have worked jointly on other projects for each of the project participants (including the Bidder, partners, and proposed contractors). The Experience Threshold Requirement is a minimum Raw Score of 4 in the Project Team Experience Evaluation Factor in the Qualitative Evaluation Scoresheet. Scores are based on the ability to demonstrate success in projects completed within the last seven years of similar type, size and technology and to effectively work together to bring the project to commercial operation in a timely fashion. Bidders with experience in multiple projects similar in size or larger will receive higher scores. Bidders not meeting this minimum score requirement will be disqualified. (NOTE: If a bidder is relying on the experience of a consultant or contractor to meet the Experience Threshold Requirement, the bidder should describe any contractual relationships between the bidder and the consultant or contractor.)
3. A management chart which lists the key personnel dedicated to this project and provides biographies of the key personnel.
4. Listing of all projects the project sponsor has successfully developed or that are currently under construction. The following information shall be included for each project:
  - a. Name of the project
  - b. Location of the project
  - c. Project type, size and technology
  - d. Commercial operation date
  - e. Capacity factor of the unit for the past three years
  - f. Availability factor of the unit for the past three years
  - g. References letters from clients showing successful completion of projects or ongoing contracts, including the names and current addresses and telephone numbers of individuals to contact for each reference.
5. With regard to the Seller's project team, identify and describe the entity responsible for the following:
  - a. Construction Period Lender
  - b. Operating Period Lender
  - c. Financial Advisor
  - d. Environmental Consultant
  - e. Owner's Engineer
  - f. Construction Contractor
  - g. Transmission Consultant
  - h. Legal Counsel



Invitation for Bid: GPA-XXX-23 Renewable Energy Resource Acquisition for the Guam Power Authority (Phase IV) PART 1 - QUAL SUPPORT REFERENCES		
Bidder's Name:	Bidder's No.: <<< BIDDER'S BID NO >>>	DATA MISSING
EVALUATION FACTORS	BID REFERENCE (Enter the chapter/section and page number where information is to be found within submitted materials)	ALERTS
The Bidder should identify environmental impacts associated with the proposed project and its plan to mitigate such impacts. Included in this section are technical environmental issues associated with air, water, solid waste, land use, noise, and other environmental issues. The following addresses specific environmental permitting considerations, <b>E1. Permits (5)</b> <b>E1-a.</b> Identify all permits, licenses, and environmental assessments and/or environmental impact statements required.		<<< Reference Required
<b>E1-b.</b> Provide a list of all Federal and GUAM permits, licenses, and environmental assessments and/or environmental impact statements required to construct and operate the project. Identify governmental agencies for issuing permits and licenses.		<<< Reference Required
<b>E1-c.</b> Identify the governmental agencies which will issue or approve the required permits, licenses, and environmental assessments and/or environmental impact statements. Prepare timeline to complete acquisition of permits, licenses, and environmental assessments and/or environmental impact statements.		<<< Reference Required
<b>E1-d.</b> Provide the anticipated timeline for seeking and receiving the required permits, licenses, and environmental assessments and/or environmental impact statements, using the execution date of the power purchase agreement as the starting point. Please include a narrative on the basis for the assumed timeline.		<<< Reference Required
* <b>E2. Site Environmental Assessment (10)</b> Discuss proposed actions to address environmental issues stated in the Navy Environmental Assessment including		
• Site development		<<< Reference Required
• Air quality		<<< Reference Required
• Water resources		<<< Reference Required
• Ecology		<<< Reference Required
• Land use		<<< Reference Required
• Cultural resources		<<< Reference Required
• Previous site use		<<< Reference Required
• Noise level		<<< Reference Required
• Aesthetic/visual		<<< Reference Required
<b>E2-b.</b> Identify a community support and a communications plan to gain support for or acceptance of the proposed project. Identify support for and/or acceptance of the proposed project by the affected communities and the general public.		
• Identify communities and other stakeholders that may be affected by the proposed project. How will they be affected?		<<< Reference Required
• How will affected communities and the general public be informed about the proposed project?		<<< Reference Required
• Will the affected communities and the general public be given an opportunity to provide the developer with feedback and comments on the proposed project? What will the developer do with the feedback and comments received?		<<< Reference Required

<<<<<<<<<< END >>>>>>>>>>

**GUAM POWER AUTHORITY RENEWABLE ENERGY RESOURCE ACQUISITION – PHASE IV**  
**Volume II: Technical Qualification Proposal Requirements**

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**1. OVERVIEW**

In this Invitation for Multi-Step Bid (“IFB”), GPA is seeking competitive bids for renewable energy resources to meet a portion of its overall resource needs. For selected Bidder(s), GPA will execute purchase power agreements for delivery of firm, non-intermittent power from one, or more, renewable generation resources to the 34.5 kV or 115 kV GPA transmission system. GPA intends to procure a total minimum annual energy of 300,000 MWh up to 530,000 MWh (approximately 180 MW to 320 MW), based on proposed sites, in this Phase IV acquisition that can meet the following established requirements:

- **RENEWABLE RESOURCE TECHNOLOGY:** The Bidder’s resource technology shall be grid-forming / black-start capable and meet the definition of “renewable resource” as described in Section 2.2.1 Acceptable Renewable Technologies.
- \* • **ENERGY AND CAPACITY:** The renewable energy resource shall deliver an annual minimum energy (AC) as specified in the Bidder’s Qualitative Proposal with a maximum export capacity of 60 MW (AC) at the interconnection point; this may be a combination of several generation units at one or more sites. However, the nameplate capacity that can be installed may be lower than 60 MW at 115 kV, subject to the maximum additional MW capacity that the GPA system can handle as determined by a System Integration Study. The System Integration Study will be completed within 120 days after evaluation of the Price Proposal(s) and initial notification of the most qualified Bidders. For proposals with an intermittent renewable energy resource coupled with an energy storage system, GPA will allow 60% of the resource to be DC-coupled to the energy storage system with the remaining 40% AC-coupled to the GPA grid. Therefore, 60% of the total project capacity will deliver firm, energy-shifted power from the energy storage system to the GPA grid. The energy storage system shall also provide ramp-rate control for the power delivered from 40% of the total project capacity such that the ramp-rates are kept within 1% per minute at the guaranteed success rate of 95% during the energy production period. However, before or after a GPA curtailment, this rate may be exceeded at the request of the GPA Power System Control Center operators. GPA will not pay for the energy delivered to the GPA grid that did not meet the guaranteed success rate.
- **DISPATCHABLE ACTIVE POWER CAPABILITY:** The active, or real, power of the renewable energy resource shall be dispatchable at the point of interconnection, between the hours of 6:00 PM to 6:00 AM, as required by the GPA Power System Control Center operators or a SCADA control point. The available capacity may also be dispatched outside of these hours if deemed necessary by the GPA Power System Control Center operators. The delivered output to the GPA grid shall be firm, non-intermittent power with a ramp-up and ramp-down rate limited to 1% of rated power output per minute. However, this rate may be exceeded at the request of the GPA Power System Control Center operators. The total capacity and energy available for dispatching shall be provided to the GPA Power System Control Center through a SCADA point every second.
- **DISPATCHABLE REACTIVE POWER CAPABILITY:** The renewable energy resource must provide a dispatchable reactive capability requirement up to 0.80 lag to lead at the point of interconnection as required by the GPA Power System Control Center operators and a SCADA / grid controller automated

Invitation for Bid: GPA-XXX-23  
Renewable Energy Resource Acquisition for the Guam Power Authority (Phase IV)  
PART 2 - TECHNICAL DATA

**BIDDER:** \_\_\_\_\_ **PROJECT NAME.:** <<<project name>>> **BIDDER'S BID NO >>>** \_\_\_\_\_

**10. Interconnection and Transmission Information**

**10.A** Interconnection Voltage: \_\_\_\_\_

**10.B** Interconnection Point / Substation: \_\_\_\_\_

**10.C** Interconnecting Transmission Line: \_\_\_\_\_

**10.D** Total Interconnection Cost: \_\_\_\_\_

**11. Power Purchase Agreement Information**

**11.A** Term, years: \_\_\_\_\_

**11.B** Contract Net Capacity, kW: \_\_\_\_\_

**12. Renewable Energy Project Generation Profile**

\* Provide the monthly estimated average net MWh per hour for every hour of the day. GPA requests for operation profile to evaluate the project. Annual projections must equal the Guaranteed net annual generation in 9.F above. Data provided shall be the solar production net output (excludes ESS & other losses/meter output). GPA will use this data to determine total daily production to be dispatched over its peak period (6PM -10PM) based the ESS capacity entered in 9D above.

Open Fold (Show All Years)

Close Fold (Hide After 1st Year)

CON YR	MON	YR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	DAYS	Monthly Total MWh
1	Jan	2022																									31	0
1	Feb	2022																									28	0
1	Mar	2022																									31	0
1	Apr	2022																									30	0
1	May	2022																									31	0
1	Jun	2022																									30	0
1	Jul	2022																									31	0
1	Aug	2022																									31	0
1	Sep	2022																									30	0
1	Oct	2022																									31	0
1	Nov	2022																									30	0
1	Dec	2022																									31	0

Annual Production (MWH)	Guarantee Match? (9.G)	Capacity Factor
21	YES	#DIV/0!
22	YES	#DIV/0!
23	YES	#DIV/0!
24	YES	#DIV/0!
25	YES	#DIV/0!
26	YES	#DIV/0!
27	YES	#DIV/0!
28	YES	#DIV/0!
29	YES	#DIV/0!
30	YES	#DIV/0!

Annual Production (MWH)	Guarantee Match? (9.G)	Capacity Factor
11	YES	#DIV/0!
12	YES	#DIV/0!
13	YES	#DIV/0!
14	YES	#DIV/0!
15	YES	#DIV/0!
16	YES	#DIV/0!
17	YES	#DIV/0!
18	YES	#DIV/0!
19	YES	#DIV/0!
20	YES	#DIV/0!

Annual Production (MWH)	Guarantee Match? (9.G)	Capacity Factor
1	YES	#DIV/0!
2	YES	#DIV/0!
3	YES	#DIV/0!
4	YES	#DIV/0!
5	YES	#DIV/0!
6	YES	#DIV/0!
7	YES	#DIV/0!
8	YES	#DIV/0!
9	YES	#DIV/0!
10	YES	#DIV/0!

**13. Renewable Energy Project Portfolio Credit Generation Profile**  
Provide the monthly estimated net portfolio credits per hour for every hour of the day.