

BEFORE THE GUAM PUBLIC UTILITIES COMMISSION

IN THE MATTER OF:) GPA Docket 21-12
)
The Application of the Guam Power)
Authority for Approving the Contract) **ALJ REPORT**
with TEMES, Inc. for Yigo CT Repairs.)
_____)



INTRODUCTION

1. This matter comes before the Guam Public Utilities Commission [“PUC”] upon the Petition of the Guam Power Authority [“GPA”] for Approval of the Contract with TEMES, Inc. for the Yigo CT Repairs.¹
2. GPA has identified \$4,581,577.00 in 2010 and 2014 Open Bond Projects, and requests that the PUC approve the reallocation of such bond funds for the Yigo CT Repair.²
3. GPA also requests that Revenue Funded CIP funds in the amount of \$1,458,423, be used to pay for the Yigo CT repairs.³
4. The total estimated cost for the Yigo CT repairs is \$6M.⁴

BACKGROUND

5. On May 14, 2021, at 16:03, the Yigo Combustion Turbine [CT] tripped off-line. The unit tripped on high vibration on an attempt to re-start and was “tagged out.”⁵ The

¹ GPA Petition for Approval of the Contract with TEMES, Inc. for the Yigo CT Repairs, GPA Docket 21-12 filed May 21, 2021.

² Guam Consolidated Commission on Utilities Resolution No. 2021-15 Authorizing Management of the Guam Power Authority to Implement and Complete the Repairs Required to Place Yigo Combustion Turbine Power Plant in Service, adopted and approved on May 25, 2021, Exhibit A.

³ Id.

⁴ Id.

⁵ Yigo 20MW CT Summary, presented to Guam Consolidated Commission on Utilities for the CCU Regular Meeting on May 25, 2021, regarding Resolution No. 2021-15.

unit tripped due to “high vibration”; a subsequent borescope inspection revealed broken turbine blades near the turbine mid-frame.⁶ Photographs showed turbine damages, including metal shavings, cracks, and broken pieces of the turbine. The TRIP INCIDENT findings were that several HP Turbine blades were damaged, and that the Turbine hot end section was damaged. The turbine was determined to be inoperable.⁷

6. GPA’s recommendation is that the current turbine unit be exchanged with a fully refurbished LM2500 Gas Turbine. GPA has a contract with TEMES, Inc. for PMC services for the Yigo CT. TEMES also recommends that the CT Turbine engine be replaced.⁸
7. General Electric International, Inc. [“GE”] supplied an estimate for the cost of the Engine Exchange to TEMES on May 21, 2021 (see Exhibit 1 attached hereto).⁹ GE’s proposal includes provision of an overhauled LM2500 SAC gas turbine, which would be shipped to Guam. The damaged turbine would be shipped to GE. A new engine warranty is provided by GE for 18 months from delivery or 12 months from first use, whichever occurs first.¹⁰ In its Yigo CT Engine Exchange Cost Estimate, GPA has estimated that the total cost for this repair, will be \$5,827,500.00.¹¹
8. TEMES has apparently requested proposals from multiple suppliers, but only GE has provided a proposal to date. Due to the immediate need to restore the Yigo CT power generation, TEMES intends to proceed with the GE proposal. GE is the

⁶ GPA Petition at p.1.

⁷ Yigo 20MW CT Summary, Trip Incident.

⁸ GPA Petition at p. 1.

⁹ A true and correct copy of the proposal is attached hereto as Exhibit “1”.

¹⁰ Yigo 20MW CT Summary, Yigo CT Engine Exchange Cost Estimate.

¹¹ Yigo CT Engine Exchange Cost Estimate (See CCU GPA Work Session Packet, May 20, 2021).

original equipment manufacturer ["OEM"] for the LM2500 Engine. GM Benavente is confident that GE is a highly qualified supplier.¹²

9. GPA estimates that the project will be completed in approximately five weeks.¹³
This procurement is not subject to the government of Guam Procurement law, as the PMC TEMES, a private-not-governmental entity, is responsible for procuring the contractor.
10. On May 25, 2021, the Guam Consolidated Commission on Utilities authorized the GPA General Manager to implement and complete the repairs needed for the Yigo CT through the CT PMC contract with TEMES, Inc., to reallocate 2010 and 2014 Bond Funds for the repair of the Yigo CT, and to utilize revenue capital improvement project funds for the repairs.¹⁴
11. GPA's Petition in this docket was not filed until late on May 21, 2021. The ALJ was not aware of the late filing and its urgency until May 24. The late filing is because this event occurred on May 14, 2021. The matter was first considered by the CCU at the GPA work session on May 20, 2021. CCU did not approve the repairs until its Meeting on May 26, 2021. Due to the emergency nature of this situation, GPA requests that the PUC consider the matter at its meeting on May 27, 2021.

ANALYSIS

A. Cost and Operational Concerns regarding the Yigo CT

¹² Telephone conference between GPA Counsel Graham Botha, GM John Benavente, AGMO Melinda Mafnas and PUC ALJ Fred Horecky on May 25, 2021.

¹³ Yigo 20MW CT Summary, Trip Incident; the ALJ believes that such estimate of completion may be optimistic. In 2016, a similar turbine replacement for the Yigo CT was estimated to take three months. See PUC Order, GPA Docket 16-07, dated April 28, 2016.

¹⁴ CCU Resolution No. 2021-15, *supra*.

12. This project will cost nearly \$6M. This is also not the first time that GPA has been required to replace the turbine engine for the Yigo CT. On April 28, 2016, in GPA Docket 16-07, the PUC authorized GPA to replace the existing gas turbine where there was material loss, corrosion and other issues, with a renewed gas turbine of the same model and specifications. The estimated cost for the installation of the overhauled gas turbine engine at that time was \$2.3M.¹⁵
13. A question arises as to why the Yigo CT turbine needs to be replaced so often, and once again after only a five-year period. GM Benavente indicates that the operating conditions of the Yigo CT have not been “ordinary” since 2016. GPA had to run the machine almost daily as spinning reserve to absorb the intermittency that renewables placed on the system. He indicates that the Yigo CT turbine was never replaced between 1993 and 2016. However, the operation since 2016 has been strenuous on the machine and is a type of operation that is likely not experienced in many places except small island communities such as Guam. The Yigo CT has operated well over the last five years despite adverse operating conditions.¹⁶
14. A concern has also been raised that the Yigo CT may be affected by the fact that it operates in the vicinity of the Yigo Diesel Exhaust.¹⁷
15. The Yigo CT and the Macheche CT, are the most heavily utilized combustion turbines. See Run Hour figures for the Combustion Turbine Engines from January 2016 through April 2021, attached hereto as Exhibit “2”. GPA has relied extensively upon the Yigo CT for energy production.

¹⁵ PUC Order, GPA Docket 16-07, dated April 28, 2016.

¹⁶ GM Benavente’s Comments to Questions raised by ALJ Horecky, dated May 25, 2021.

¹⁷ Telephone conference between GPA Counsel Graham Botha, GM John Benavente, and AGMO Melinda Mafnas and PUC ALJ Fred Horecky on May 25, 2021.

16. To save money, could GPA utilize other combustion turbines or diesels than the Yigo CT, such as the Dededo CT 1 & 2, and the Yigo Diesels (Aggreko)? GPA AGMO Melinda Mafnas indicates that the full rated capacity of all of GPA's combustion turbines are already included in the determination of peak demand and available capacity. Without the 20MW provided by the Yigo CT, GPA may be hard pressed to ensure that there is an adequate reserve balance to meet peak demand.¹⁸ Reliance upon other units by GPA would not cure the reserve load deficiency caused by the loss of the Yigo CT.

B. The Justification for Repair of the Yigo CT

17. The repair cost of \$6M is considerable. Nevertheless, GPA takes the position that the Yigo CT is critically needed from now until the new powerplant is commissioned. The island is experiencing load growth not only from the military base buildup but also from increased home and other construction. The demand of this growth will not be met without the Yigo CT.¹⁹

18. The loss of Cabras 3 & 4 also has placed a substantial amount of additional running hours on the emergency CT and peaking units. Such additional usage will continue until the new baseload unit is commissioned. Therefore, all units are critically needed until the new power plant is commissioned.²⁰

19. The PUC has, on many occasions, referenced the fact that the explosion of Cabras Units 3 & 4 in 2015 resulted in the loss of 78MW of baseload capacity, "which places GPA in a difficult position of meeting system demand if there is an outage in one of the baseload or other large units. The outage of one of the Cabras Steam Units could

¹⁸ Telephone conference between GPA Counsel Graham Botha, GM John Benavente, AGMO Melinda Mafnas and PUC ALJ Fred Horecky on May 25, 2021.

¹⁹ GM Benavente's Comments to Questions raised by ALJ Horecky, dated May 25, 2021.

²⁰ Id.

result in insufficient generation reserve. GPA would have no reserve capacity and would be short approximately 40 to 60MW.”²¹

20. GPA submits that the Yigo CT Repair project “is urgent because the Yigo CT is needed to support the demands of the island wide power system.”²²

21. Cabras 1, which was carrying 47MW, went off-line on May 11, 2021, due to a reported MCC panel fire.²³ With the loss of Cabras 1 (55MW) and Yigo CT (20MW), GPA’s reserve margin has been further reduced by 75MW.²⁴ For the next 30 days, the power system will be particularly vulnerable at peak time (6pm to 10pm).²⁵

22. GPA indicates that demand has been going up recently, and at a projected demand of 258MW for May 2021, this represents the highest demand in over five years.²⁶ The GM has clarified that some of the demand is a result of charging for the new ESS battery systems.²⁷ The net generation for April 2021, at 140,000,000kWh, is at approximately the same level as net generation for April FY2019.²⁸

23. GPA calculations indicate that, due to the loss of Cabras 1 & Yigo CT, the additional loss of GPA’s largest unit (i.e., Cabras 2) would result in a **negative** reserve balance of minus 13MW. See Generation Status Due to Losses of Cabras 1 & Yigo CT, attached hereto as Exhibit “3”.²⁹

²¹ PUC Order, GPA Docket 15-05, dated October 29, 2015, at p. 3.

²² Issues for Decision (Resolution No. 2021-15), GPA Work Session, May 20, 2021.

²³ General Manager Report, GPA Work Session, May 20, 2021, at p. 102.

²⁴ Yigo 20MW CT Summary, May 25, 2021.

²⁵ Id.

²⁶ Generation Status in GM Report to CCU, GPA Work Session, May 20, 2021.

²⁷ Telephone conference between GPA Counsel Graham Botha, GM John Benavente, AGMO Melinda Mafnas and PUC ALJ Fred Horecky on May 25, 2021.

²⁸ Generation Status in GM Report to CCU, GPA Work Session, May 20, 2021.

²⁹ Yigo 20MW CT Summary, Generation Status Due to Loss of Cabras 1 and Yigo CT.

24. GPA concludes that repair of the Yigo CT is “essential to the island wide power system.”³⁰ Without the availability of the unit, there is the possibility of load shedding.

C. Funding for the Yigo CT Repair

25. The entire cost for the Yigo Repair project will be approximately \$6,000,000. See Exhibit “4” attached hereto (Exhibit A to CCU Resolution No. 2021-15).

26. GPA requests approval to reallocate \$3,697,143 in 2014 Open Bond Projects to the cost of the Yigo CT repairs. GPA Chief Financial Officer John Kim indicates that none of these funds are needed for further application to the bond projects. For several of the projects there has been no activity since 2014; on a few there has been no action since 2018.³¹

27. In addition, there is available interest earned in the amount of \$844,434 from 2010 Open Bond Projects. This amount accrued is derived from bank interest that was paid to GPA on its bond proceeds. CFO Kim also indicates that such amounts are not needed for bond projects and are available to apply to the Yigo CT repairs.³²

28. CFO Kim further states that there are available funds from Revenue Funded CIPs in the amount of \$1,458,423. He provided a listing of CIP revenue funds which can be reallocated to the Yigo CT repairs, which is attached hereto as Exhibit “5”.

³⁰ GPA Petition at p. 2.

³¹ Phone conference between GPA CFO and John Kim and PUC ALJ Fred Horecky on May 25, 2021.

³² Id.

29. CFO Kim has certified in a written letter to ALJ Horecky that the expenditure of these funds has been approved by the GPA General Manager and GPA Management.³³
30. In Resolution No. 2021-15 the CCU approved the reallocation of \$4,541,577 in 2010 and 2014 bond funds for the repair of the Yigo CT. The CCU also approved the use of \$1,458,423 in revenue capital improvement project funds for the Yigo CT repairs.
31. Given the urgent necessity to repair the Yigo CT, GPA's funding plan for the Yigo CT repairs in the amount of \$6M should be approved.

RECOMMENDATION

32. The Administrative Law Judge recommends that the PUC approve the GE repair proposal and the contract with TEMES for the Yigo CT repairs in an amount not to exceed \$6M.
33. The PUC should authorize GPA to reallocate the amount of \$4,541,577 in 2010 and 2014 bond funds for the repair of the Yigo CT, and to reallocate the additional amount of \$1,458,423 in revenue capital improvement project funds for the Yigo CT repairs.

³³ Letter from GPA CFO John Kim to PUC ALJ Fred Horecky, Bond Reallocation Request-YigonCombustion Turbine Project, dated May 25, 2021.

34. A Proposed Order is submitted herewith for the consideration of the Commissioners.

Dated this 26th day of May 2021.

Frederick J. Horecky
Chief Administrative Law Judge

General Electric International, Inc. - Branch - GQ

Equipment Proposal

for

**TAIWAN ELECTRICAL AND MECHANICAL
ENGINEERING SERVICES, INC.**

for

**LM2500 SAC (ESN 456-906) Engine Exchange
with Part Life Lease Engine**

Proposal Number: 157657

Dated: 21th May 2021

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Aeroderivative Gas Turbines

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21st May 2021

TEMES/ GPA CT PMC

Dededo Combustion Power Plant,
523 East Marine Corp. Drive Route 1,
Guam U.S.A., 96929

Fred Lee
CT Mechanical Manager

E-mail: ct_mechanical.mgr@temes.com.tw
Mobil: +1-671-4826995

Subject: LM2500 SAC (ESN 456-906) Part Life Lease Engine Exchange

Dear Fred,

General Electric International, Inc. - Branch - GQ (hereinafter referred to as ("GE" or "Seller") is pleased to provide Taiwan Electrical and Mechanical Engineering Services, Inc. (hereinafter referred to as "Buyer" or "TEMES") with this proposal number 1573159 for exchanging the LM2500 SAC Gas Turbine (ESN 456-906) currently in operation at Yigo Power Plant, Guam ("Site") with a serviceable part-life LM2500 GT, ("Part Life Engine Exchange"), subject to prior sale ("Proposal"). This Proposal is offered as an alternative to our proposal 1573159 which offered an overhauled LM2500 for exchange.

The following are some of the features of a part life LM2500 SAC Engine Exchange:

- 100% GE OEM hardware
- GE standard warranty 12 months from delivery or 6 months from first use, whichever occurs first.
- Elimination of Lease Engine Usage Fees
- Reduction of package downtime and engine replacement costs with only one removal and installation process required.

I look forward to reviewing the benefits of this opportunity with you. If you have any questions about this Proposal, please feel free to contact me.

Regards,

Scott Ellis
Sales Director
GE Power Services

Scope of Supply and Pricing – all prices in USD

Item	Qty	Description	Unit Price
1	1 ea	Overhauled LM2500 SAC Gas Turbine <ul style="list-style-type: none">SAC Fuel System excluded (existing Fuel Nozzles to be reused)This special price includes the <u>trade in</u> for GT (456-906)Includes all campaign and alert bulletins complied with at the time the Gas Turbine was assembled during overhaulNew Engine warranty 18 months from delivery or 12 months from first use, whichever occurs first	\$5,300,000
		Total Purchase Order Amount	\$5,300,000

Scope of Supply and Pricing Note:

- GE assets offered in this Proposal are subject to prior sale.
- Pricing is valid for 2021 delivery only. Delivery in the following years requires revised pricing.
- The prices are exclusive of any Taxes, Local Taxes, VAT, Withholding Taxes, Levies or Import Duties for the Seller's Part(s) or Materials.
- The amount on the purchase order must match this pricing table Total Purchase Order Amount.
- The GE supplied asset includes 100% GE OEM hardware.
- Pricing excludes Field Service, tooling, and consumables.
- The special purchase price provided above is contingent on Buyer accepting the Trade in Offer for Buyers Used Gas Turbine described below under "Terms of Trade in". If the Buyer issues a Purchase Order for the Total Purchase Order Amount above it will be regarded as the Buyer accepting the Trade in Offer for the Buyers Used Gas Turbine.

LM2500 SAC Engine Exchange Description

The LM2500 SAC Engine Exchange is a standard product offered by GE. The overhauled LM2500 SAC Engine Exchange workscope is in accordance with the original equipment manufacturers (OEM) Industrial Repair Manual (IRM) work instructions and/or OEM engineering shop procedures.

The overhauled LM2500 SAC Engine Exchange include;

- Fully refurbished Gas Turbine
- Includes all Campaign and Alert Service Bulletins complied with at the time of the overhaul.
- All new or refurbished blades, vanes and shrouds
- New Engine warranty 18 months from delivery or 12 months from first use, whichever occurs first.
- Excludes fuel system, for which the fuel system from 456-906 would be used (Seller does not have full knowledge of the configuration of 456-906 and assumes fuel systems are compatible – Buyer responsibility to validate)

Price Adjustment

Pricing listed above is for 2021 delivery only and any delivery beyond 2021 will require revised pricing.

Delivery and Transfer of Title

Delivery of the GE supplied LM2500 SAC Gas Turbine, any material or parts (herein also collectively referred to as "Parts") shall be supplied on the basis of DAP *Delivered at Place* (Incoterms 2010) to Site.

Delivery costs for supply of Seller's overhauled Gas Turbine and return of Buyer's Gas Turbine 456-906 to Seller's Service Centre incurred by Seller will be billed to TEMES on actual freight cost plus 15% basis.

TEMES shall be the importer on record for all Parts to be shipped under this Proposal and shall be responsible for all Import Duties and Taxes.

Title Transfer will be per the following applicable clause:

- Title to GE supplied Parts to be shipped from the U.S. shall pass to Buyer immediately after each item departs from the territorial land, seas and overlying airspace of the U.S. For this purpose, the parties acknowledge that the territorial seas of the U.S. extend to twelve nautical miles from the baseline of the country determined in accordance with the 1982 United Nations Convention of the Law of the Sea.
- Title to Parts to be shipped from within the country where the Part will be installed shall pass to Buyer when supplied to the first carrier for shipment from the manufacturer's factory or the storage facility utilized by Seller.
- Title to Parts shipped direct from a European Union ("EU") manufacturer or a EU storage facility outside the country where the Part will be installed shall pass to Buyer at the earlier of the port of export immediately after the Parts have been cleared for export or immediately after each item departs from the territorial land, seas and overlying airspace of the EU sending country.
- Title to Parts to be shipped from any other country shall pass to Buyer at the port of export immediately after the Parts have been cleared for export

Buyer will be responsible for any tax or import duties for the Parts or any other materials.

Standard Lead Times for the above quoted asset are 12 weeks, however GE would like to discuss with the Buyer in working together towards a mutually agreed delivery date. The engine on offer is available for immediate shipment from Seller's facility in Italy, subject to prior sale, and delivery timing is contingent on freight option selected into Guam.

Seller will take title to Buyer's Used Gas Turbine, upon receipt of the said asset in GE Service Center.

Buyer is responsible for any export taxes and duties to return the Buyer's Used Gas Turbine to the designated GE Service Center and will be the exporter of record.

Terms of Payment

GE is pleased to offer the following payment terms in accordance with the table below;

Item 1: LM2500 SAC Engine Exchange

Activity	Date Due
25% Payment	Invoiced upon purchase order acceptance and will be due via wire transfer to Seller's bank immediately upon the issuance of invoice.
75% Payment	Invoiced upon the GE supplied Overhauled LM2500 SAC Gas Turbine being ready for shipment and will be due via wire transfer to Seller's bank immediately upon the issuance of invoice.

Item 2: Shipping Fees

Activity	Date Due
100% Payment	Invoiced upon receipt of freight costs from the logistic company and will be due via wire transfer to Seller's bank immediately upon the issuance of invoice.

Terms of Trade in

Trade in offer for Buyer's Used Gas Turbine with serial number 456-906 ("Trade in Offer"):

- Trade in is offered on an as-is condition.
- If the Buyer's Used Gas Turbine is undergoing service in a service facility at the time of the of the title transfer to the Seller, the Buyer will be responsible to insure that the Buyers Used Gas Turbine is clear of any temporary importation bond at the time of title transfer.
- Buyer warrants to Seller and its successors and permitted assignees that the title to the Buyers Used Gas Turbine is free and clear of all liens and encumbrances on the date of transfer and Buyer will defend such title forever against all claims and demands.
- Buyer further warrants to Seller that Buyer is the beneficial owner of the aforesaid Buyers Used Gas Turbine and that Buyer has full right, power, and authority to execute this Bill of Sale.
- The Buyer's Used Gas Turbine will be returned to Seller in a completely assembled condition. All external hardware and components will be properly installed on the Buyer's Used Gas Turbine. The Seller reserves the right to adjust the Trade-In for the returned asset if is not in a fully assembled condition.
- If the Buyer accepts this Proposal as described above, the Buyer is obligated to return the Buyer's Used Gas Turbine to the Seller as soon as possible. Penalties described under the "Freight" clause below will apply if the Buyer delays the return.

Terms and Conditions of Sale

This Proposal is submitted pursuant to General Electric Power Services Standard Terms & Conditions (September 2019). In the event of any conflict in the terms and conditions between this Proposal and the General Electric Power Services Standard Terms & Conditions (September 2019), the terms and conditions of this Proposal shall govern.

Special Condition of Sale

COVID-19 VIRUS: The parties acknowledge that the COVID-19 epidemic and government actions in response to it have affected and will continue to affect Seller's ability to deliver goods and services around the world (the "COVID-19 Impact"). In the event that the COVID-19 Impact affects Seller's ability to deliver on time or at the bid price, Seller shall be entitled to an equitable adjustment in schedule and price as appropriate, subject to Seller's obligation to work in good faith with Buyer to mitigate the impact on schedule and/or cost.

Purchase Order Instructions

Upon the Buyer's decision to submit a purchase order, please address the Purchase order to:

General Electric International, Inc. – Branch - GQ

191 Rosa Parks Street,
Cincinnati, OH, 45202

Attn: Scott Ellis

Email: ScottW.Ellis@ge.com

The purchase order shall reference,

- This Proposal 1573159
- General Electric Power Services Standard Terms & Conditions (September 2019)

Freight

Seller will be responsible for freight per the Delivery and Transfer of Title paragraph above (i.e., DAP, "Delivered at Place" Incoterms 2010) for the Seller's supplied Parts. Buyer is responsible for all freight charges, any import/export taxes and duties import the Overhauled LM2500 SAC Gas Turbine to Site and also to return the Buyer's Used Gas Turbine to the designated GE Service Center and shall be the exporter of record.

If after 7 days from completion of the engine exchange, the removed Buyer's Used Gas Turbine has not shipped back to Seller from the Buyer's Site, a penalty of 0.5% of purchase price per day will be assessed until the asset is shipped. If the Buyer has elected not to install the GE supplied Overhauled LM2500 SAC Gas Turbine as originally planned, a penalty of 0.5% of the purchase price per day will be assessed beginning after 10 days domestically (30 days internationally) from the date it was received by the Buyer.

Buyer should contact Moises Espinoza-Goldman at +1 832 954 0547 if they have any questions or issues regarding shipment of the returning asset to Seller.

Storage and Transportation

Any transportation or movement of the Gas Turbine requires the use of an air-ride suspension truck and trailer per the Operations and Maintenance Manual. Improper transportation of the GE supplied Overhauled LM2500 SAC Gas Turbine may result in internal damage to critical parts. After risk has transferred per the applicable delivery terms per Incoterms 2010 under Freight, the Buyer will be responsible for all damages to the Gas Turbine as a result of improper transportation and will be required to pay for all repairs resulting from such damages.

If Buyer contracts with Seller to provide storage or preservation services, such agreements will be specified in the final proposal to Buyer. Buyer will maintain insurance on equipment, parts or components during such storage. If title of equipment to be stored has passed from Seller to Buyer, then Buyer will maintain all risks of loss.

Preservation and storage shall be maintained per GE specifications listed in the applicable operations and maintenance manual or equivalent internal GE engineering procedures. Storage and preservation services will be limited to equipment, parts or components specified in the final proposal to Buyer. In cases where such equipment, parts or components are not specified, the Seller will not assume responsibility for preservation services. The condition of such equipment, parts or components will be consistent with the duration of storage and the environmental conditions in which storage will take place. Unless otherwise specified in the Buyers contract, storage and preservation will be at Sellers discretion and will take place at Seller's GE Service Center or Seller's contracted facility. Unless otherwise specified, such storage may or may not occur indoors depending on the storage location, size of the equipment, and parts or components.

In cases where storage and preservation is not maintained per the above specifications, warranty consideration may be affected. Seller will determine if failure to perform storage and preservation is the cause of such warranty requests.

Gas Turbine Shipping Containers

The Gas Turbine shipping container used to transport the GE supplied Overhauled LM2500 SAC Gas Turbine to customer Site is the property of GE. No rental fee will be charged if the container is returned to Seller. The container must be returned to Seller and will be used to transport Buyer's Used Gas Turbine to the designated GE Service Center. If the container is not returned within 90 days after receiving the GE supplied Overhauled LM2500 SAC Gas Turbine at the Buyer's Site due to acts (or omissions) of the Buyer, the Seller will invoice the Buyer for the container at the published list price.

Factory Acceptance Test

An acceptable purchase order must be acknowledged prior to Buyer witnessing the Factory Acceptance Test (FAT) of a GE supplied Overhauled LM2500 SAC Gas Turbine. Seller shall inform the Buyer of the scheduled FAT date once an acceptable purchase order has been acknowledged. If the Buyer cannot witness the scheduled FAT, or if the GE supplied Overhauled LM2500 SAC Gas Turbine is available for delivery and has already been tested, any re-test requirement by the Buyer will be at the expense of the Buyer. If the Buyer requires a re-test, a date for the re-test will be scheduled as soon as a test facility is available. The Buyer must plan on being present for the FAT test a minimum of 5 business days to accommodate any changes in the test schedule.

Proposal Disclaimer

This quotation is based solely on the GE terms and conditions referenced herein, and also on the presumptions that (a) no U.S. Government (U.S.G.) funds are being utilized to pay for the goods/services being quoted, (b) there are no U.S.G. terms, conditions or other requirements contained in any resultant sales transaction, and (c) any parts being furnished are not to be used for flight Engine applications; if any of these presumptions are incorrect, this quotation may be withdrawn by Seller prior to receipt of Buyer's acceptance.

Validity

This Proposal is valid for thirty days (30) from the date of this Proposal, subject to prior sale of the offered equipment. The discount levels and trade in amount provided in this Proposal will no longer be valid after this date. The discount levels provided in this Proposal are contingent on the Buyer accepting the Trade in Offer provided for the Buyers Used Gas Turbine and committing to returning the Buyers Used Gas Turbine to the Seller. If the Buyer does not accept the Trade in Offer or does not return the Buyers Used Gas Turbine to the Seller, the Seller reserves the right to adjust the pricing accordingly.

Defined Terms

Capitalized terms used in this letter have the meaning given to them in the Service Agreement. In addition, the following terms shall have the meanings set forth below as used throughout this Proposal.

“GE supplied Overhauled LM2500 SAC Gas Turbine” or **“LM2500 SAC Engine Exchange”** means the fully refurbished LM2500 SAC Gas Turbine offered as an exchange in accordance with this Proposal.

“Parts” means the equipment, parts, materials, supplies, components and other goods, which Seller has identified in this Proposal.

“Proposal” means this proposal No. 1573159

“Purchase Order Amount” means the price total provided in the table under Scope of Supply and Pricing in this Proposal.

“Seller” means GE International Inc.

“Site” means the premises where the Buyer owned LM2500 SAC Gas Turbine bearing serial number 456-906 is located in Guam.

“Buyers Used Gas Turbine” means the Buyer owned LM2500 SAC Gas Turbine bearing serial number 456-906, currently operating at Site.

Submittal and Acceptance

This Proposal submitted by:

Signature: _____

Name: _____

Title: _____

For: _____

Date: _____

Upon acceptance, this Proposal shall constitute the entire agreement between the parties and any understanding, promise, representation, warranty or conditions not incorporated herein shall not be binding on either party:

This Proposal is accepted by:

Signature: _____

Name: _____

Title: _____

For: _____

Date: _____

	<i>DCT 1 / STARTS</i>		<i>DCT 2 / STARTS</i>		<i>MCT / STARTS</i>		<i>YCT / STARTS</i>	
2016/1								
2016/2								
2016/3								
2016/4								
2016/5								
2016/6								
2016/7							361.97	34
2016/8							354.75	26
2016/9							552.22	19
2016/10							281.27	32
2016/11					50.37	7	238.52	31
2016/12					145.40	16	309.70	31
<i>Sub. Total</i>	<i>0.00</i>		<i>0.00</i>		<i>195.77</i>	<i>23</i>	<i>2,098.42</i>	<i>173</i>
<i>Total</i>	<i>0.00</i>		<i>0.00</i>		<i>195.77</i>	<i>23</i>	<i>2,098.42</i>	<i>173</i>
2017/1								
2017/2								
2017/3			5.75		278.83		79.28	
2017/4	31.92				488.39		286.27	
2017/5	36.80		21.15		607.57	21	389.33	28
2017/6	20.90		40.02		573.30	22	203.18	15
2017/7	112.02		91.80		559.82	15	468.42	20
2017/8	181.60		127.10		674.67	7	364.27	18
2017/9	190.60		86.62		640.05	11	489.58	29
2017/10	24.88				436.55	20	204.37	10
2017/11	8.68		5.68		408.90	27	263.10	19
2017/12	2.40		10.45		266.35	23	260.32	21
<i>Sub. Total</i>	<i>609.80</i>		<i>388.57</i>		<i>4,934.42</i>	<i>146</i>	<i>3,008.12</i>	<i>160</i>
<i>Total</i>	<i>609.80</i>		<i>388.57</i>		<i>5,130.19</i>	<i>169</i>	<i>5,106.53</i>	<i>333</i>
2018/1					187.77	25	167.98	29
2018/2	20.42		17.52		246.92	30	207.62	31
2018/3	202.12		169.10		570.82	24	344.00	26
2018/4	152.70		102.20		460.42	14	393.15	18
2018/5	31.28		49.15		519.23	16	455.15	16
2018/6	73.00		109.57		401.15	15	470.13	16
2018/7	50.07		80.12		356.10	18	477.35	16
2018/8			24.67		7.73	4	293.05	16
2018/9	324.35		374.10		240.17	10	509.93	15
2018/10	186.83		244.03		528.17	18	554.13	15
2018/11	8.33		2.25		322.13	12	338.87	17
2018/12	13.03		26.18		345.62	19	391.93	25
<i>Sub. Total</i>	<i>1,062.13</i>		<i>1,198.88</i>		<i>4,186.22</i>	<i>205</i>	<i>4,603.30</i>	<i>240</i>
<i>Total</i>	<i>1,671.93</i>		<i>1,587.45</i>		<i>9,316.40</i>	<i>374</i>	<i>9,709.83</i>	<i>573</i>
2019/1	5.50	2	5.50	3	509.25	16	513.78	16
2019/2	25.65	6	32.70	7	412.62	15	379.88	17
2019/3	21.02	5	35.83	6	432.63	18	151.97	15
2019/4	34.35	6	27.38	5	160.72	17	241.57	28

	<i>DCT 1 / STARTS</i>		<i>DCT 2 / STARTS</i>		<i>MCT / STARTS</i>		<i>YCT / STARTS</i>	
2019/5	71.88	10	145.00	9	300.02	12	427.00	25
2019/6	20.58	7	83.68	11	512.15	20	523.67	21
2019/7	7.48	5	9.18	3	382.28	27	147.13	13
2019/8	1.70	3	8.00	6	383.75	27	378.42	25
2019/9	0.00		8.45	2	458.07	28	371.65	35
2019/10	11.90	4	24.87	6	428.32	30	213.45	14
2019/11	95.08	8	155.10	12	615.93	13	552.20	18
2019/12	0.45	1	18.30	5	402.45	21	406.63	20
<i>Sub. Total</i>	295.60	57	554.00	75	4,998.18	244	4,307.35	247
<i>Total</i>	1,967.53	57	2,141.45	75	14,314.59	618	14,017.18	820
2020/1	0.00		12.47	4	454.97	18	389.03	19
2020/2	0.00		0.83	2	274.68	23	261.40	21
2020/3	3.65	4	20.43	5	426.30	22	433.18	19
2020/4	1.55	3	1.53	3	291.02	22	234.68	17
2020/5	12.95	5	37.25	8	469.13	20	474.88	22
2020/6	0.23	1	0.18	1	317.08	28	285.93	27
2020/7	9.57	3	16.12	6	464.48	15	465.42	17
2020/8					209.37	18	275.78	22
2020/9	9.48	3	21.20	3	396.90	27	340.42	23
2020/10	5.12	2	3.55	1	216.23	22	233.00	24
2020/11	4.92	2	12.80	4	299.15	21	258.13	22
2020/12	20.80	5	28.77	5	441.37	21	360.58	17
<i>Sub. Total</i>	68.27	28	155.13	42	4,260.68	257	4,012.45	250.00
<i>Total</i>	2,035.80	85	2,296.58	117	18,575.27	875	18,029.63	1,070.00
2021/1	3.92	2	2.63	2	341.47	33	10.63	5
2021/2	55.82	8	75.98	9	414.62	25	328.77	17
2021/3	168.00	26	180.00	28	588.90	14	317.55	13
2021/4	191.00	24	249.00	28	634.50	17	536.50	18
2021/5							276.43	9
2021/6								
2021/7								
2021/8								
2021/9								
2021/10								
2021/11								
2021/12								
<i>Sub. Total</i>	418.73	60	507.62	67	1,979.48	89	1,469.88	62
<i>Total</i>	2,454.53	145	2,804.20	184	20,554.75	964	19,499.52	1,132

Generation Status Due to Loss of Cabras 1 and Yigo CT

3

Plant:	AGE	Rated Capacity	After Cabras 1 Forced Outage	YIGO CT Forced Outage
KEPCO UKUDU	New			
KEPCO CABRAS	New			
Cabras 1	47	55	0 - Fire Damage	0 - Fire Damage
Cabras 2	46	55	52	52
PITI 8&9	22	88	88	88
PITI 7	24	40	25	25
TENJO/TALOFOFO/MANENGON	29	40	32	32
DEDEDO CT	29	40	40	40
MACHECHE CT	29	20	20	20
YIGO CT	29	20	20	0 - Turbine Failure
YIGO DIESELS	6	40	31	31
Total:		398	308	288
CY 2021 Highest PEAK DEMAND Between 7:00pm to 8:00pm		249	249	249
RESERVE BALANCE		149	59	39
Scenario Largest Unit			52	52
RESERVE BALANCE			7	-13



Exhibit A

2014 Open Bond Projects		
Bond	Capital Improvement Project	Balance
2014	Diesel Plant MOMs	\$780,000
2014	Diesel Fuel Oil Tank Repairs	\$311,000
2014	Dededo Substation Capacitor Bank	\$165,000
2014	System Protection Imprvmt & Cap Bank Controllers	\$1,185,030
2014	SGIG (not covered by grant)	\$544,102
2014	Available Interest Earned	\$712,011
Available Funds:		\$3,697,143

2010 Open Bond Projects		
2010	Available Interest Earned	\$844,434
Available Funds:		\$844,434

Revenue Funded CIPs		
Available Funds:		\$1,458,423

Total Available Funds:		\$6,000,000
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Hi Fred,

Below are the reallocations of the budget to fund the YIGO Overhaul. We are moving some of the balances to Yigo project.

BUSINESS UNIT	CIP DESCRIPTION	FY2021 APPROVED BUDGET	BALANCE	PROPOSED TOF for Yigo CT Overhaul
Customer Service	One Customer Service Plan- GWA/GPA syndication	\$ 220,000	\$ 120,000	\$ 120,000
Customer Service	Document scanners, electronic signature pads and software	\$ 80,000	\$ 80,000	\$ 80,000
	Total Customer Service	\$ 300,000	\$ 200,000	\$ 200,000
Warehouse	Renovation of Dededo supply warehouse and receiving section	\$ 300,000	\$ 200,000	\$ 200,000
	Total Warehouse	\$ 300,000	\$ 200,000	\$ 200,000
Information Technology	GPA DR Co-Location Site	\$ 170,000	\$ 160,000	\$ 60,000
Information Technology	SCADA DR Environment (Software)	\$ 400,000	\$ 285,067	\$ 240,000
	Total IT	\$ 570,000	\$ 445,067	\$ 300,000
SPORD	FY19 C/O (PO #26728): MV90 Services (Integration, Configuration, Upgrade)	\$ 94,553	\$ 90,051	\$ 75,000
SPORD	SCADA - replicated server and services	\$ 95,000	\$ 95,000	\$ 75,000
SPORD	EPCM Contract	\$ 800,000	\$ 800,000	\$ 200,000
	Total SPORD	\$ 989,553	\$ 985,051	\$ 350,000
Facilities Management	Piti 7 Security Gate/Fence (Upgrade)	\$ 35,000	\$ 35,000	\$ 20,000
Facilities Management	20-Ton Package Unit (20 SEER)	\$ 40,000	\$ 40,000	\$ 40,000
Facilities Management	Plotter (wide-format) printer + Scanner (Engineering)	\$ 40,000	\$ 40,000	\$ 40,000
	TOTAL FACILITIES	\$ 115,000	\$ 115,000	\$ 100,000
Engineering Projects	Predictive Based Maintenance - Island wide	\$ 650,000	\$ 533,166	\$ 250,000
Line Extensions	Line Extensions - Various	<u>\$ 4,139,645</u>	<u>\$ 1,374,475</u>	<u>\$ 60,000</u>
	GRAND TOTAL TOF for Yigo CT Overhaul	\$ 4,789,645	\$ 1,907,641	\$ 310,000

Total

\$ 1,460,000