

BEFORE THE GUAM PUBLIC UTILITIES COMMISSION

IN THE MATTER OF:)	GPA DOCKET 13-01
)	
GUAM POWER AUTHORITY'S PETITION FOR APPROVAL OF CABRAS 3 ROTOR REPAIR)	PUC COUNSEL REPORT
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INTRODUCTION

1. This matter comes before the Guam Public Utilities Commission ["PUC"] upon the Petition of Guam Power Authority ["GPA"] for Approval of Cabras 3 Rotor Repair.¹

BACKGROUND

2. During an inspection on November 8, 2012, GPA and its Performance Management Contractor (PMC), Korea East West Power ["EWP"] discovered that there were cracks at the drive end of the rotor shaft on Cabras Unit 3 Rotor (which were discovered while the unit was offline).²
3. The root cause of the cracks is presently unknown. A third party forensic specialist will conduct an investigation to determine the root cause of the cracks and provide a report of his findings.³
4. At present, GPA's plan is to issue two contracts through its PMC, EWP, with Alstom Spain, the original manufacturer of the shaft, and Doosan, the General Manufacturer. Alstom Spain will be responsible for, *inter alia*, supply of the rotor shaft and rotor disk assembly, balance and testing of the generator. Doosan will be responsible for engine inspection and assessment and other repairs.⁴
5. GPA's Program Management Office, R.W. Armstrong will contract work with Lloyd's Register ODS for investigation of the failure and the conduct of a third party root cause analysis.⁵
6. The approximate cost for replacement of the rotor shaft and the root cause analysis

¹ GPA Petition for Approval of Cabras #3 Rotor Repair, filed January 11, 2013.

² Id. at p. 1.

³ Id. at p. 1.

⁴ Id. at pgs. 1-2.

⁵ Letter from General Manager of GPA, Joaquin Flores, dated January 11, 2013, attached to the Petition herein.

is estimated to be \$4.5M.⁶ However, further analysis could possibly lead to a conclusion that the rotor disc must also be replaced. Such replacement would result in an additional cost of \$1.5M, or a total cost of \$6M.⁷

7. The Cabras 3 40MW slow speed generator is one of GPA's most efficient units. GPA seeks to return the unit to service as expeditiously as possible.⁸
8. At the very least, it is expected that Cabras 3 will be out of service for no less than 235 days, and, depending upon what is found once the unit is fully inspected, could be out of service for as long as 575 days.⁹
9. At present GPA has no knowledge as to what caused the cracks in the rotor shaft.¹⁰ At this time GPA is also unable to determine "if this is an insurable event."¹¹
10. On January 22, 2013, the Guam Consolidated Commission on Utilities ["CCU"] approved GPA's repair plan for the Cabras 3 rotor shaft, granted GPA's request to petition the PUC for approval of the plan, and authorized the GPA General Manger to contract for up to \$6M for work necessary to return Cabras Unit 3 to service.¹²

DISCUSSION

11. While it is fortunate that GPA discovered the damage to the rotor shaft before the occurrence of any catastrophic event, the event is certainly an unfortunate one for both the Authority and its ratepayers.
12. As GCG pointed out in its Report on LEAC, not only will GPA, and ultimately ratepayers, bear the cost of repair for Cabras Unit 3, there will be an additional cost for fuel oil to the ratepayers that will result from the unavailability of the unit and the use of less efficient units. It is projected that the outage of the unit will have a direct cost, inclusive of extra fuel oil and the cost of repairs to consumers, of

⁶ Id. at p. 2; Exhibit C thereto, a Preliminary Cost Estimate and Breakdown.

⁷ Id.

⁸ Letter from General Manager of GPA, Joaquin Flores, dated January 11, 2013, attached to the Petition Herein, at p. 1.

⁹ GCG Report, GPA Docket 12-13, Request for LEAC Factors effective February 1, 2013, filed January 23, 2013, at p. 5.

¹⁰ Conference between PUC Legal Counsel and GPA Officials, including Joaquin Flores, Melinda Camacho, and Sal Managa.

¹¹ Letter from General Manager of GPA, Joaquin Flores, dated January 11, 2013, attached to the Petition herein, at p. 1.

¹² CCU Resolution No. 2013-05.

somewhere between \$13 and \$23 Million depending on the length of Cabras 3 unavailability.¹³

13. It must be a top priority of generation operations personnel to minimize the impact of the Cabras 3 outage and to return the unit to serviceability at the earliest date possible.¹⁴
14. It appears that GPA has no option other than to undertake the Cabras 3 repairs on as expedited a basis as possible. The lack of availability of Unit 3 has a significant impact on the system dispatching as the 40 Mw slow-speed generator is one of GPA's most efficient units. The expeditious return of the unit to service is of utmost importance.¹⁵
15. Under the "accelerated" schedule presently contemplated, Cabras 3 will not be returned to service until August of 2013.¹⁶ If replacement of the rotor disc is necessary, the return of Cabras 3 could be further delayed until August of 2014.¹⁷
16. Given the nature of the present situation, there does not appear to be any option other than to authorize GPA to proceed with its repair plans in as expeditious a manner as possible.
17. Issues remain as to the amount of funding authorization with which GPA should be provided and the source of such funding. GPA is unable to determine at the present time whether all or any portion of the loss caused by the Cabras 3 outage will be covered by insurance.
18. GPA's Petition states: "If this is ultimately determined to be not an insurable event, then GPA would request approval to pay for the repairs from the Working Capital fund." At present, the only possible sources from which GPA could pay for the Cabras 3 repairs are Revenue Funds, the Working Capital Fund, or the Self Insurance Fund.
19. If this is not an insurable event, then the repairs could be paid from the Working Capital Fund as an O & M Expense. However, use of such source could result in a surcharge to ratepayers. There is not presently sufficient information before the Commission to determine whether the Self Insurance Fund could properly be

¹³ GCG Report, GPA Docket 12-13, Request for LEAC Factors effective February 1, 2013, filed January 23, 2013, at p. 5.

¹⁴ Id.

¹⁵ Letter from GPA GM Joaquin Flores to PUC dated January 11, 2013.

¹⁶ Exhibit B to Letter of GPA GM Joaquin Flores dated January 11, 2013.

¹⁷ Id.

utilized. GPA's position statements on the Self-Insurance Fund suggest that it could be used for emergencies or extraordinary events other than natural catastrophes such as typhoons.

RECOMMENDATION

20. For the time being, GPA should be authorized to proceed with the dismantling of the generator, and manufacturing/installation of the new rotor shaft.
21. GPA should be authorized to expend up to the amount of \$4.5M. GPA indicates that such amount will be minimally sufficient for the time being to cover the cost of Alstom's and Doosan's work indicated in Exhibit C to its Petition, as well as the third party root cause analysis (Lloyd's Register ODS). Should a need be determined to install a new rotor disc, GPA can further petition the PUC for the necessary additional funds.
22. Counsel notes that GPA is not required to pay Alstom all funds up front. A payment schedule is provided, with 10% down-payment upon the issuance of the PO; 20% after finalizing the generator dismantling and inspection; 40% with delivery of the shaft at power plant; and 30% after commissioning of the unit.¹⁸
23. Based upon the emergency nature of the situation, Counsel recommends that the PUC approve GPA's Petition and authorize it to proceed as outlined above with the contracts for the Repair of the Cabras 3 rotor shaft.
24. GPA should file its third party (Lloyds) root cause investigation report with the PUC as soon as available.
25. GPA should notify PUC as soon as it determines whether the Cabras 3 repair is an insurable event or not.
26. GPA should provide PUC with the OEM analysis of the condition of Cabras 3 once the unit is dismantled.
27. Within 60 days of the PUC Order herein, GPA should provide the PUC with its final rehabilitation plan, cost, and schedule for bringing Cabras 3 back to service.
28. GPA should provide PUC periodic updates with any significant new information concerning the status of the Cabras 3 repair.

¹⁸ Alstom Proposal 12RD110 - Rev.00, dated January 2013.

29. Within fifteen days of the PUC Order herein, GPA shall provide a report to PUC as to whether the repairs are intended to be funded by Revenue Funds, Working Capital Funds, or Self Insurance Funds. Said Report shall include a position on whether Self Insurance Funds can properly be utilized for this purpose. Prior to expenditure of funds for the repair(s), GPA shall advise the Administrative Law Judge of the source of the funds. The ALJ may approve the source for such funds, subject to review by the PUC. The ALJ will report on any action taken hereunder to the PUC.

30. A proposed Order is submitted herewith for the consideration of the Commissioners.

Dated this 26th day of January, 2013.

Frederick J. Horecky
PUC Legal Counsel