Marianas Consulting Group
Hagatna, Guam

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Public Utilities Commission
GUAM

January 15, 2024

Mr. Fred Horecky
Administrative Law Judge
Guam Public Utilities Commission
Suite 207, GCIC Building
Hagatna, Guam 96932

Re: Guam Power Authority Docket 24-08

Dear Mr. Horecky:

This report is in response to Guam Power Authority's (GPA's) petition for approval to adjust the existing Levelized Energy Adjustment Clause (LEAC) factors for the six-month period commencing February 1, 2024.

GPA is requesting that the current LEAC rate of $0.231144 per kWh for secondary distribution service be increased to $0.264327 for meters read on or after February 1, 2024 through July 31, 2024, a 14.36% increase in the LEAC factor. This change will result in an increase of $33.18 to residential customer billings using an average of 1,000 kWh per month, or an approximate 10% increase in the average total bill.

GPA has indicated in their filing that the basis for adjusting the existing LEAC factor is primarily due to the increase in the projected worldwide fuel prices from $102.51 per bbl for the six month period ending January 31, 2024, to $120.28 for the six months ended July 31, 2024. In addition, the original GPA filing included a recovery of approximately 50% of the projected fuel cost under-recovery as of January 31, 2024. GPA did not include costs associated with the Demand Side Management (DSM) rebate program for the period from February 1, 2024 through July 31, 2024, as funds previously collected have not been exhausted.

Proposed LEAC Factors

The following table presents a comparison of GPA and Marianas Consulting Group (MCG) proposed LEAC factors for the six months ending July 31, 2024 under a variety of scenarios. The scenarios involve MCG and GPA proposed LEAC factors based on no change in rates, based on a 50% recovery of the projected under-recovery as of January 31, 2024, based on a full recovery of the aforementioned under-recovery and MCG's proposed factors assuming a 75% recovery of the projected January 31, 2024 under-recovery. The analysis presents proposed LEAC factors for each scenario for both distribution and transmission level customers.

Mr. Fred Horecky
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Exhibit 1

Summary Of GPA versus MCG Rates
Proposed LEAC Rate ($000)
February through July 2024

	Feb 24-Jul 24									
	MCG	GPA		MCG	GPA		MCG	MCG	GPA	
	No change		Variance	50 % Recovery		Variance	75 % Recovery	Full Recovery		Variance
1 Average Price per Bbl-RFO &ULSFO 0.20%	$ 140.08	$ 138.54	$ 1.54	$ 140.08	$ 138.54	$ 1.54	$ 140.08	$ 140.08	$ 138.54	$ 1.54
2 Average Price per Bbl-Diesel	$ 111.86	$ 111.86	$ -	$ 111.86	$ 111.86	$ -	$ 111.86	$ 111.86	$ 111.86	$ -
3 Number 6 (HSFO/LSFO)	$ 63,891	$ 63,189	$ 702	$ 63,891	$ 63,189	$ 701	$ 63,891	$ 63,891	$ 63,189	$ 701
4 Number 2 (Diesel) [2]	$ 101,726	$ 101,726	$ -	$ 101,726	$ 101,726	$ -	$ 101,726	$ 101,726	$ 101,726	$ -
5 Renewable (Solar)	$ 11,020	$ 11,020	$ -	$ 11,020	$ 11,020	$ -	$ 11,020	$ 11,020	$ 11,020	$ -
6 TOTAL COST	$ 176,636	$ 175,935	$ 702	$ 176,636	$ 175,935	$ 701	$ 176,636	$ 176,636	$ 175,935	$ 701
7 Handling Costs	$ 8,865	$ 8,865	$ -	$ 8,865	$ 8,865	$ -	$ 8,865	$ 8,865	$ 8,865	$ -
8 Total Current Fuel Expense	$ 185,502	$ 184,801	$ 701	$ 185,502	$ 184,801	$ 701	$ 185,502	$ 185,502	$ 184,801	$ 701
9 Civilian Allocation	79%	79%		79%	79%		79%	79%	79%	
10 LEAC Current Fuel Expense	$ 146,922	$ 146,366	$ 556	$ 146,922	$ 146,366	$ 556	$ 146,922	$ 146,922	$ 146,366	$ 556
11 Estimated DSM for this period										
12 Deferred Fuel Expense at the beginning of the period	$ 33,313	$ 33,375	-$ 62	$ 33,313	$ 33,375	-$ 62	$ 33,313	$ 33,313	$ 33,375	-$ 62
13 Total LEAC Expense	$ 180,235	$ 179,742	$ 493	$ 180,235	$ 179,742	$ 494	$ 180,235	$ 180,235	$ 179,742	$ 494
14 Less: Trans. Level Costs	$ 7,496	$ 7,496	$ -	$ 8,633	$ 8,538	$ 95	$ 9,200	$ 9,768	$ 9,588	$ 180
15 Distribution Level Costs	$ 172,739	$ 172,245	$ 493	$ 171,602	$ 171,204	$ 399	$ 171,035	$ 170,467	$ 170,154	$ 313
16 Under recovery at the end of the period	-$ 41,914	-$ 41,421	-$ 493	-$ 20,957	-$ 21,598	$ 641	-$ 10,479	$ -	-$ 2,147	$ 2,147
17 Adjusted Distribution Level Costs	$ 130,825	$ 130,825	$ -	$ 150,645	$ 149,606	$ 1,040	$ 160,556	$ 170,467	$ 168,007	$ 2,460
18 Distribution Level Sales (mWh)	565,988	565,988	-	565,988	565,988	-	565,988	565,988	565,988	-
19 LEAC Factor Distribution	0.231144	0.231144	(0.00000)	0.266164	0.264327	0.00184	0.283674	0.301185	0.296838	0.00435
20 Current LEAC Factor Distribution	0.231144	0.231144	-	0.231144	0.231144	-	0.231144	0.231144	0.231144	-
21 Increase/(Decrease)	0.00000	0.00000	(0.00000)	0.03502	0.03318	0.00184	0.05253	0.07004	0.06569	0.00435
22 Monthly Increase/(Decrease) - 1000 kWh	$ 0.00	$ 0.00	$ -	$ 35.02	$ 33.18	$ 1.84	$ 52.53	$ 70.04	$ 65.69	$ 4.35
23 % Increase/(Decrease) in LEAC	0.0%	0.0%	-	15.2%	14.4%	0.0079	22.73%	30.3%	28.4%	0.0188
24 % Increase/(Decrease) in Total Bill	0.0%	0.0%	-	10.7%	10.1%	0.0056	15.98%	21.3%	20.0%	0.0132
25 Discount (3%) - Primary 13.8 KV	0.224219	0.224219	-	0.258193	0.255403	0.002790	0.275179	0.292165	0.286816	0.005349
26 Discount (4%) - 34.5 KV	0.223573	0.223573	-	0.257449	0.254572	0.002877	0.274386	0.291323	0.285882	0.005441
27 Discount (5%) - 115 KV	0.220821	0.220821	-	0.254280	0.251030	0.003250	0.271008	0.287737	0.281905	0.005832

Factors Impacting Fuel Costs

For the six month period ending July 31, 2024 (projection period), GPA utilized the Morgan Stanley (MS) Energy Noon call average price projections of energy prices for February through July 2024, determined in the two week period from October 31, 2023 through November 16, 2023. GPA projects the delivered price of oil or diesel using the MS futures reports and adding the contract premiums explicit in its fuel contracts with its current fuel suppliers (Hyundai Corporation, IP&E Guam and Mobil Oil Guam). Exhibit 2 shows the forecast price of Number 6 oil and Number 2 diesel for the forecast period:

Exhibit 2

Fuel Cost
Period February '24 thru July '24

	GPA			MGC		
Description	No. 6 Ultra LSFO	No. 2 Diesel	Total	No. 6 Ultra LSFO	No. 2 Diesel	Total
Total Costs	$63,189,317.00	$101,725,537.02	$164,914,854.02	$63,890,595.32	$101,725,537.02	$165,616,132.34
Number of Barrels	456,100.49	909,394.41	1,365,494.90	456,100.49	909,394.41	1,365,494.90
Average Unit Costs	$ 138.54	$ 111.86	$ 120.77	$ 140.08	$ 111.86	$ 121.29

We noted a small error in the forecast prices of Number 6 oil which has been corrected in our projection. Otherwise, the projections appear reasonable based on the MS projections utilized and the contracts with fuel providers in place for the projection period, but we recommend that updated MS projections be used in the final LEAC calculation.

Quantities of each type of fuel utilized for the projection period are based on approved budgets and include the following anticipated maintenance issues:

The Cabras 1 base load generator is scheduled to undergo maintenance in April 2024, resulting in a reduction of production from this unit and a corresponding increase in production from less efficient non-base load generators.

The Cabras 2 base load generator is scheduled to undergo maintenance in June 2024 resulting in decreased production from this generator and an increase in the non-base load units.

The Piti 9 ULSD base load generator is schedule for maintenance in February 2024 resulting in decreased base load generator production and higher non-base load production.

These maintenance outages result in less efficient production in the impacted months and in the case of the Cabras units, an increase in the ratio of diesel usage versus Number 6 oil usage.

Renewables

The cost of renewable energy purchased is forecasted at the contracted rates with NRG Solar and Korean Electric Power Corporation (KEPCO). The forecast for the six month period ending July 31, 2024, indicates a 7.6% increase in power produced by these generators from projected usage of 83,111 mWh for the six months ending January 31, 2024 to 89,485 mWh for the six months ending July 31, 2024. The projections also incorporate a slight increase in the contacted price per mWh purchased for the KEPCO solar contract.

Handling Costs

Handling costs includes handling costs and several other cost items that over the years have been approved by the PUC for inclusion in the cost of fuel to be recovered under the LEAC. Exhibit 3 presents the handling costs projected for the six months ending July 31, 2024 with comparative projected amounts for the six months ending January 31, 2024:

Exhibit 3

Fuel Handling Costs
February 2024 through July 2024 Compared to August 2023 through January 2024

	Projections		
Description	Feb '24 -Jul '24	Aug '23-Jan '24	Difference
Total Dock Fee-Tristar	$1,017,310	$ 655,236	$ 362,074
Storage Tank Rental-Tristar	3,112,215	2,532,932	579,283
Pipeline Fee	283,175	283,175	-
TOTAL Storage & Pipeline	4,412,700	3,471,344	941,356
Tank Farm Management Fee	440,171	358,896	81,275
Fuel Tank Farm Maintenance	-	-	-
Piti 8&9 Fuel Tank Inspection, Repair/Refurbishment & Conversion	-	-	-
Ship Demurrage Cost	106,015	30,526	75,489
Fuel Hedging	-	-	-
Urea Chemicals/DEF Diesel Exhaust Fluid/Cylinder Oil/Emulsifier	2,799,742	1,977,317	822,425
Subscription Delivery fee, Vacuum Rental, Hauling, Training	372,194	303,419	68,775
Sale of fuel to Matson	-	-	-
Petroleum Testing Services / Inspections	250,923	156,538	94,385
TOTAL	3,969,044	2,826,696	1,142,348
Labor charges	109,471	93,152	16,319
Interest Charges/LC Charges	374,158	124,720	249,438
TOTAL Handling Costs	$8,865,373	$6,515,912	$2,349,460

<u>Projected costs included in fuel handling costs for the six months ending July 2024, appear to be PUC approved for inclusion in the LEAC rates, based on cost description.</u>

Cost Under-Recovery January 31, 2024

GPA is projecting an under-recovery of LEAC costs of approximately $33.4 million as of January 31, 2024. Exhibit 4 presents a comparison of the projected under-recovery as of January 31, 2024, with the GPA filed projected recovery in their original LEAC filing for the period from August 2023 through January 2024. Note that the original request was for a rate of $0.248145 per kWh while the approved rate was $0.231144.

Exhibit 4

Analysis
Filed August 23 through January 24 Versus Actuals
Resulting in a $33M Under Recovery as of January 24

Fuel Cost -(due to Unit cost)	Actual August 23 thru January 24 (Actuals through Nov 23)			Forecast as filed August 23 thru January 24			Variance August 23 thru January 24		
	Barrels	Unit Cost	Amount	Barrels	Unit Cost	Amount	Actual Barrels	Difference in Unit Cost	Amount
Ultra Low	460,449.00	$ 137.83	$ 63,465,023.89	521,600.00	$ 130.54	$ 68,091,267.00	460,449.00	$ 7.29	$ 3,356,596.36
Diesel	969,250.00	$ 115.31	$ 111,764,920.14	913,465.00	$ 103.23	$ 94,298,444.00	969,250.00	$ 12.08	$11,707,701.92
Total	1,429,699.00	$ 122.56	$ 175,229,944.03	1,435,065.00	$ 113.16	$162,389,711.00	1,429,699.00	10.54	15,064,298.27
% allocated to Civilian									78.000%
Fuel Costs Variance applicable for Civilian due difference in Unit Costs									11,750,152.65

Fuel Cost -(due to barrels)	Barrels	Unit Cost	Amount	Barrels	Unit Cost	Amount	Difference in Barrels	Unit Cost	Amount
Ultra Low	460,449.00	$ 137.83	$ 63,465,023.89	521,600.00	$ 130.54	$ 68,091,267.00	- 61,151.00	$ 130.54	-$ 7,982,839.47
Diesel	969,250.00	$ 115.31	$ 111,764,920.14	913,465.00	$ 103.23	$ 94,298,444.00	55,785.00	$ 103.23	$ 5,758,774.23
Total	1,429,699.00	$ 122.56	$ 175,229,944.03	1,435,065.00	$ 113.16	$162,389,711.00	- 5,366.00		- 2,224,065.25
% allocated to Civilian									78.000%
Fuel Costs Variance applicable for Civilian attributed to difference in barrels									- 1,734,770.89

Sales (Mwh)		Actual			Forecast as filed				
Civilian 13.8	573,681.00	$ 0.23	$ 130,694,286.05	579,196.00	$ 0.248145	$143,724,384.00			$13,030,097.95
Transmission Customers	35,829.00	$ 0.23	$ 8,125,067.72	35,868.00	$ 0.249373	$ 8,944,511.00			$ 819,443.28
Total	609,510.00	$ 0.23	$ 138,819,353.77	615,064.00	$ 0.248216	$152,668,895.00			$13,849,541.23
Under Recovery Balance -8.01.23			$ 19,215,087.41			$ 7,757,981.00			$11,457,106.41
Fuel Handling Costs			$ 6,515,912.00			$ 9,102,840.00			-$ 2,586,928.00
% allocated to Civilian									78.000%
Fuel Handling Cost for Civilian									-$ 2,017,803.84
Demand Side Management			$ 500,000.00			$ 1,500,000.00			-$ 780,000.000
Renewables			$ 9,556,215.81			8,305,464.00			$ 975,586.41
Under recovery as of 01.31.24 -Actual vs. Filed									$33,499,811.97
LEAC August 23 thru January 24 with updated actuals thru November 23 as revised									$33,313,201.00
Variance									186,610.97

Per barrel fuel costs for both Number 6 oil and diesel (or projected for December 2023 and January 2024) were significantly higher than projected in the original filing. This is attributable to a large extent on tensions in the Middle East after the Hamas attacked on Israel on October 7, 2023. Fuel quantities anticipated to be utilized are somewhat lower than projected, resulting in an overall increase in the under-recovery attributable to civilian customers of approximately $10 million.

Sales shortfalls of $13.8 million resulting in under-recovery increases, were largely from the reduced approved LEAC rate.

The under-recovery balance as of August 1, 2023 (beginning of the LEAC period) was approximately $19.2 million versus an estimated August 1, 2023 under-recovery balance of $7.7 million, an increase in the under-recovery of $11.5 million. This variance largely occurred because GPA prepared their filing using estimated results for May through July 2023. GPA projected a cost recovery of approximately $10 million for these three months, while the actual results showed an under-recovery of approximately $2 million. GPA did not update their estimates or request for an emergency filing even though Typhoon Mawar resulted in minimal revenue for those three months.

In addition, we noted what appears to be an error in the filing amount for Renewables which resulted in the additional $975,000 in under-recoveries for the August 2023 through January 2024 period.

Recommendations

We have developed the following recommendations based on our review of GPA's request for new LEAC factors for the six-month period from February 1, 2024 through July 31, 2024:

1. Depending on the level of recovery of previously under-recovered costs, LEAC factors should be adjusted as shown below:

Delivery Classification	No recovery	50% recovery	75% recovery	Full recovery
Secondary	$0.231144	$0.266164	$0.283674	$0.301185
Primary – 13.8 KV	$0.224219	$0.258193	$0.275179	$0.292165
Primary – 34.5 KV	$0.223573	$0.257449	$0.274386	$0.291323
Transmission – 115 KV	$0.220821	$0.254280	$0.271008	$0.287737

2. We understand that Tariff Z for the LEAC allows GPA to file interim rate requests in the event that the under or over recovery has a cumulative balance of more than $2 million. The re-filing option was set into place to allow a current response to large changes in fuel costs over which GPA does not have control. The Commission may wish to revisit threshold for re-filing but in the event of a natural disaster such as a typhoon, a major generation equipment repair or failure, or a disruption or significant change in fuel supplies or prices, GPA should exercise this option before under-recoveries reach the level that they are anticipated to reach as of January 31, 2024.

3. GPA should file updates with the PUC on actual costs to date versus the cost estimates included in the petition for approval for each of the six months for the period from February through July 2024.

4. For estimating fuel costs, GPA used Morgan Stanley Energy Noon call average price projections prepared two and a half months prior to the effective date of the proposed LEAC rates. GPA should update the initial filing with more up-to-date information prior to the final filing.

Conclusion

We appreciate the opportunity to review this LEAC rate adjustment request. If there are questions on any part of this report or if Marianas Consulting Group can be of further service, please do not hesitate to contact Lee Vensel or Cora Montellano.

Respectfully submitted,

Lee H. Vensel

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Marianas Consulting Group