Final Report

GPA Docket 12-03
Final Report to the Guam Public Utilities Commission Relative to the GPA's 2012 Bond Restructuring/Refunding Proposal

Submitted to

Guam Public Utilities Commission

September 18, 2012

Shaw® Shaw Consultants International, Inc.

150 ROYALL STREET • CANTON, MA 02021

617.589.2000 • FAX 617.589.1372

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Shaw® Shaw Consultants International, Inc.

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September 18, 2012

Mr. Fred Horecky
PUC Counsel
Horecky & Associates
643 Chalan San Antonio, Ste 102B
Tamuning, Guam 96913

GPA Docket No. 12-03 – 2012 Bond Restructuring/Refunding Proposal

Dear Mr. Horecky,

Shaw Consultants International, Inc. ("Shaw Consultants") is pleased to have had the opportunity to review the Guam Power Authority's ("GPA") proposal in GPA Docket No. 12-03 relative to its 2012 Bond Restructuring/Refunding proposal. Our team has diligently reviewed the information provided by GPA in response to two sets of information requests and appreciated the GPA staff willingness to participate in conference calls with our team to respond to questions to enhance our understanding of the information provided.

In presenting our findings and recommendations, Shaw Consultants has attempted to provide the Commission with as broad a perspective as possible and flexibility in terms of refinancing options, but understands that beyond the numbers, there are policy considerations affecting its decision-making process. For example, while Shaw does not recommend outright approval of the restructuring/refunding option proposed by GPA, we do recognize that under favorable market conditions this option is economically viable and may be preferred by the Commission over either a decision to not approve or to approve a different option. In addition, if the Commission decides to not approve the proposed refinancing option, there is an alternative option, which the Commission could approve, that will provide significant benefits to ratepayers, and which with a relatively minor additional borrowing could accomplish GPA's goal of buying-out the Lehman Brothers contract.

The Shaw Consultants' team stands ready to respond to questions from the Commissioners or GPA relative to our assessment and recommendations as presented in this report – at their convenience. Please let me, or any member of our team, know what further information or support is necessary.

Sincerely,

Kathleen A. Kelly

Kathleen A. Kelly
Vice President and Practice Leader
Shaw Consultants International, Inc.

CC: Ms. Lourdes Palomo
Guam Public Utilities Commission

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Table of Contents

Table of Exhibits

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Report to the Guam Public Utilities Commission Relative to GPA Docket 12-03, the GPA's 2012 Bond Restructuring/Refunding Proposal

1 EXECUTIVE SUMMARY

On June 12, 2012, the Guam Power Authority ("GPA") petitioned the Guam Public Utilities Commission ("GPUC" or "PUC")[1] for authorization to:

1) Issue senior lien refunding bonds in the amount of approximately $360M for the purposes of:
   a. Refinancing and restructuring its outstanding debt profile in order to achieve cash flow savings; and
   b. Refunding additional bonds to achieve present value savings.
2) Issue up to $20M in taxable subordinate bonds as a funding source for termination payments in connection with GPA's Forward Delivery agreements with Lehman Brothers and/or Bank of America.

In conjunction with the refinancing GPA is proposing to refund a portion of its recent $9.1M rate increase.

Shaw Consultants was asked by the GPUC to perform an independent review of GPA's application and provide its recommendations as to whether or not approval should be given to proceed with the bond issue.

Shaw Consultants' review process began with an initial presentation of GPA's operations at their office. Shaw Consultants was then provided with documentation that set out the basic details of the restructuring and refinancing plan, along with potential benefits that could be realized. The consulting team issued two formal data requests that included approximately 50 questions, along with interim data requests via email and interim phone calls.

1.1 Key Findings

Based on our extensive analysis of the refinancing proposal, we find that:

- Notwithstanding the fact that interest rates are near an all-time low, the net present value benefit expected to be achieved is marginal and there remains a risk of obtaining that benefit even after the settlement date due to components of the restructuring being dependent on interest rate variations through 2034;
- Net present value, which is the key decision variable for GPA does not necessarily reflect the benefit to the ratepayer, which may be lower;
- GPA can reduce its risk and achieve a higher net present value by applying the $13.7M proceeds from its termination of the Lehman Brothers FPA to immediately offset a portion of the restructured bonds rather than applying earned interest over the years. Morgan Stanley has not offered that scenario.
- Given that another financing option, Standalone Refunding, results in significantly lower total debt service payments and higher net present value savings than the proposed restructuring/refunding option, it should be considered a preferred option from the viewpoint of ratepayers
- With regard to the restructuring component of the proposed financing, which reduces near-term debt payments in exchange for longer-term debt payments, we believe that GPA should take the longer-term

[1] GPA letter to Fredrick Horecky dated June 12, 2012.

view, which is to unburden itself of as much debt as possible now in order to have greater flexibility and options in the future when additional capital expenses and bond issuances are expected;

- We believe that GPA's desire to use the restructuring to roll-back a portion of its recent rate increase is not realistic. GPA's bond ratings have dropped and it has recently filed an emergency petition to revise rates due to significant conservation resulting from the Authority's recent implementation of demand rates. GPA needs the money now;
- Shaw Consultants is of the opinion that the proposed refinancing should stand on its own merits without regard to GPA's other operational and financial circumstances, such as matching of IPP contract with expected life, or its ability to roll-back a portion of its recent rate increase.

Based on these findings and subject to an improvement in market conditions and/or other conditions indicated in our recommendations, Shaw Consultants is not recommending GPUC approval of the refinancing.

The body of this report contains our analysis and discussion of GPA's proposal along with the rationale for our findings and recommendation.

2 OVERVIEW OF GPA's PROPOSAL

On June 12, 2012, the GPA petitioned the Guam PUC[2] for authorization to:

1) Issue senior lien refunding bonds in the amount of approximately $360M for the purposes of:
   a. Refinancing and restructuring its outstanding debt profile in order to achieve cash flow savings; and
   b. Refunding additional bonds to achieve present value savings.
2) Issue up to $20M in taxable subordinate bonds as a funding source for termination payments in connection with GPA's Forward Delivery Agreements with Lehman Brothers and/or Bank of America.

GPA's impetus to do the refinancing at this time was the convergence of a number of factors that included the ability to:

- Take advantage of historically low interest rates to achieve a net present value savings of approximately $12.8M;
- Improve a mismatch between the 20-year amortization schedule for the Marianas Energy Corporation (MEC) contract that ends in 2018 and the 40-year estimated service life of that facility.
  - This has been an issue that GPA has been trying to address for many years;
- Provide a leveling of its debt profile, which currently has higher debt payments between now and 2018, followed by lower debt payments through 2040.

Figure 1 shows GPA's projected debt service profile without refinancing, which peaks in 2014 at $74.7M.

Figure 1: GPA Projected Debt Service Profile without Refinancing

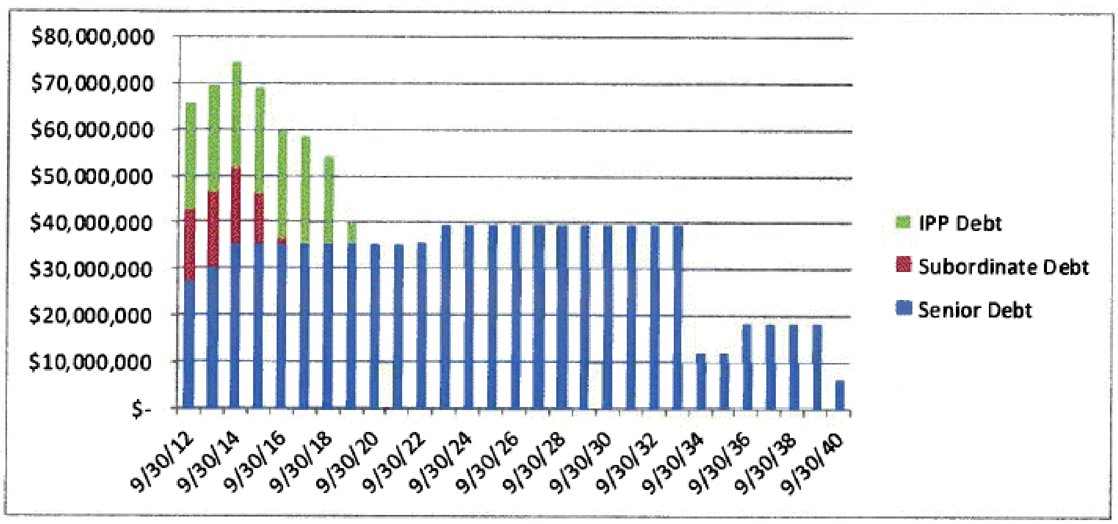
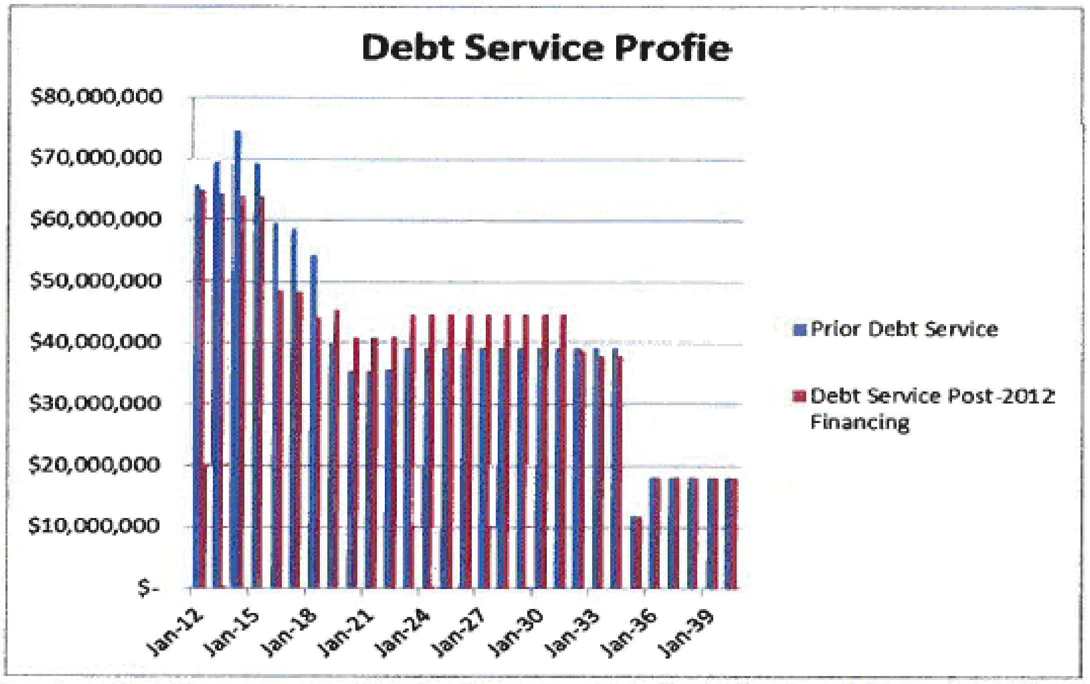


Figure 2 illustrates the leveling effect of debt service payments before and after the proposed refinancing, based on interest rates as of May 14, 2012[3].

[2] GPA letter to Fredrick Horecky dated June 12, 2012.
[3] GPA has also provided August 3rd July 3rd and September 5th updates from Morgan Stanley.

Figure 2: Comparison of Debt Service Payments before and after the Proposed Refinancing



Based on this debt service leveling, GPA would be able to realize lower debt service payments of approximately $8M per year through 2018, followed by increased debt service payments of approximately $5M per year from 2019 through 2031. It would also allow GPA to:

- Provide cash flow savings during the years 2012 through 2018
- Improve its credit rating by transferring its forward delivery agreements with Lehman Brothers and Bank of America to the refinancing bonds or terminating GPA's agreements with either.
- Petition the PUC to roll-back a significant portion of GPA's recent $9.1M rate increase in an amount equivalent to the savings achieved as a result of the proposed refinancing.

GPA provided three subsequent Morgan Stanley financing updates: July 3rd, August 3rd and September 5th. A summary of all three financing updates are shown in Table 1.

Table 1: Summary Results of Morgan Stanley Aggregate Financing Updates

		Morgan Stanley Update as of			
Line No.	Description	09/05/12	08/03/12	07/03/12	05/14/12
	(A)	(B)	(C)	(D)	(E)
1	Aggregate Financing	370,101,714	379,635,653	375,890,000	381,891,158
2	Avg. Coupon Value of Bonds Refunded	5.18%	5.18%	5.17%	5.18%
3	All-in TIC	4.91%	4.83%	5.05%	4.97%
4	PV Savings ($)	11,805,997	14,427,745	6,850,851	12,817,910
5	PV Savings (%)	3.32%	4.05%	2.58%	3.56%
6	Avg. Cash Flow Savings 2013-18	9,237,522	9,354,131	8,369,696	8,376,780
7	Avg. Cash Flow Savings 2019-31	(4,855,455)	(4,566,600)	(6,008,461)	(5,867,255)
8	Average Bond Interest Rate	4.79%	4.70%	4.89%	4.86%

3 BENEFITS OF RESTRUCTURING - ANALYSIS AND DISCUSSION

The following discussion is based on Shaw Consultants' analysis of GPA's restructuring/refinancing proposal.

3.1 Roll-back Rates

GPA is currently in somewhat of a financial crisis. With its high debt payments through 2018, its less than excellent bond ratings and its emergency petition to the PUC to revise its rate structure due to lost revenue from conservation since the implementation of demand rates, even by its own admission is not in a position to provide a roll-back of any significant portion of its recent $9.1M rate increase. However, to the extent that the Authority is able to reduce its debt service payments as a result of its refinancing, its rates should be adjusted downward (or not raised to the extent they may otherwise need to be) in proportion to the decrease in revenue requirements associated with the refinancing. This is referred to as the roll-back provision in the report.

3.2 Cash Flow

A significant concern of GPA is the matching of the 20-year contract of the Marianas Energy Corporation (MEC) contract with the estimated 40-year life of the facility and its associated claim that the MEC IPP contract is responsible for burdening GPA with high debt service payments through the end of its contract in 2018. It is GPA's view that the leveling effect on debt service due to restructuring is supportable in that it acts to align payments with the life of the facility.

Shaw Consultants believes, however, that taking a longer term vision is in the best interests of GPA's ratepayers and one important aspect of that is to reduce GPA's debt burden in the early years, as there will undoubtedly be increasing needs for borrowing in the future. Specifically, with respect to GPA's rationale for pushing current costs into the future:

- After 2018 the MEC facility will be older and require additional capital investment to keep it running, as well as the possible addition of costly pollution control equipment;
- GPA will need to enter into a management contract to run the facility which will increase expenses;
- Any offset in generating costs due to the use of LNG or new technologies such as small modular reactors are speculative at best and may be prohibited by U.S. regulations in response to the Fukushima nuclear disaster; and
- The more outstanding debt GPA has in the future, the less flexibility and fewer options it has with respect to, e.g., incorporation of new technologies and unknowns that are likely to come into play. Increased debt also tends to tie GPA to investment bankers and their fees.

GPA's high debt service payments through 2018 are not seen to be solely due to its IPP contract with MEC. Figure 1, above, shows that debt service payments on subordinate bonds are also a significant contributing factor.

3.2.1 Higher Offsetting Debt Service Payments in the Later Years

In order to lower debt service payments in the early years (2013 to 2018) it is necessary to restructure bonds in such a way that only interest payments are made during those years, while postponing principal payments to the years after 2018. This restructuring also results in debt service payments in later years (2019 to 2032) being higher than they would have been without the refinancing. Thus, there is a tradeoff between lower debt service payments in the first six years and higher debt service payments in the 14 years after 2018. GPA agrees that it would not go forward with the refinancing, if the NPV of the annual savings/losses were negative (the sum of the annual NPV savings is less than the sum of the NPV of annual debt service decreases (losses). Thus, ratepayer/customer preferences would only be an issue when the total debt service payments are lower and/or NPV savings are not sufficiently large to offset other considerations that could outweigh small savings. One such consideration would be the preference of paying more in the short run if it would avoid paying more over an extended period of time later. This depends on the relative size of the early and late payments and the relative number of years in each period. Using the August update results, the reductions in the early years are about double the increase in the later years, and the number of years that more is paid is somewhat greater than two times the number of years where less is paid (the first six years). Unless there are no increases in debt service payments, many and perhaps most customers would prefer to pay more in the short run rather than more for an extended period in the future. It appears that GPA has not given much credence to this consideration (foregoing the refinancing in order to unburden ratepayers of those costs earlier on).

Cash flow in the context of this refinancing refers to the level of debt service payments in any year, and the difference in annual debt service payments after the proposed refinancing, versus the corresponding annual debt service payments before the refinancing. For example, if the total debt service payments before the refinancing in 2015 would be $78M, and the total debt service payments after the refinancing in 2015 was estimated to be $70M, then the change in cash flow in 2015 after the refinancing would be $8M less (the Authority would save $8M that year in debt service payments). Debt service payments are one component of the Authority's total cost of providing service, or its total revenue requirement. Thus, using the same example, and all else being equal, the Authority's total revenue requirement would be $8M less in 2015 than it would have been if the refinancing had not taken place. From the perspective of the Authority's customers, and again all else being equal, rates should be designed to produce $8M less that year as a result of the refinancing. A central tenant of monopoly regulation is that over time, rates should be designed to generate sufficient revenues to cover the Authority's total cost of service.

As indicated above, a central purpose of this refinancing is to decrease cash flow in the early years (which has to be offset with increases in the later years). The August update by Morgan Stanley estimates that the proposed refinancing will result in total debt service payments being reduced by $9.35 from 2013 to 2018, and average increases of $4.57M from 2019 to 2032. The net result over the entire 20 year period is a reduction in total revenue requirement of $1.3M. These annual amounts and the total are largely dependent on the level of interest rates applicable to the refinanced bonds. The interest rate for the August update is an average rate of 4.70%. In two prior and one subsequent update, the interest rates are somewhat different, and as a direct result the projected debt service payments are significantly different (higher). These differences in debt service payments are summarized on Table 1.

3.3 Net Present Value Savings

GPA views the rate increase as a cash issue and the net present value savings as a decision-making issue[4]. It appears, however, that the Authority's major concern is the ability of the refinancing to lower debt service payments in the early years, and that as long as the NPV analysis shows any level of savings, albeit minimal, the refinancing may be justified. However, in regard to NPV savings, Shaw Consultants notes that although a net present value analysis is a widely used tool that is useful in comparing the economics of alternatives, is not necessarily the sole basis for decision making. This may be true in the case of utilities, where ratepayers are involved. Although there can be a positive net present value from the financing as shown in Table 1, there can be a lower effect on ratepayers. The reason is that when GPA designs its rates, and putting aside potential

[4] GPA response to Shaw Consultants data request Set 1, item 11

earnings on the cash flow, it needs to meet its actual debt payments rather than the discounted value of debt payments. Table 2 illustrates that regardless of the fact that there are positive NPV savings; ratepayers can see their rates increase[5] as a result of a total decrease in cash flow dollars over term of the financing.

In terms of defining a threshold above or below which refinancing should or should not occur, in the PUC's June 3, 2010 refinancing order, the Commission provided that there be at least a two percent difference in net present value savings to GPA and its ratepayers. However, a two percent difference in net present value savings to GPA does not necessarily result in a two percent savings to ratepayers. One reason is due to the fact that debt payment savings are measured with respect to itself, while bond debt payments are only one component of cost of service with the overall effect of variances due to the refinancing being diminished. Another reason is that what is relevant to ratepayers is their own opportunity cost of money, which in today's environment is arguably lower than GPA's discount rate[6].

Table 2: Estimate of Impact of Refinancing on GPA Residential Customers[7]

		Morgan Stanley Update as of			
		09/05/12	08/03/12	07/03/12	05/14/12
	(A)	(B)	(C)		(D)
1	Avg. Cash Flow Savings 2013-18	$ 9,237,522	$ 9,354,131	$ 8,369,696	$ 8,376,780
2	Avg. Cash Flow Savings 2019-31	$ (4,855,455)	$ (4,566,600)	$ (6,008,461)	$ (5,867,255)
3	Sum of Cash Flow Savings	$ (3,826,616)	$ 1,318,152	$ (23,534,751)	$ (14,088,914)
4	Approximate Ratepayer Impact				
5	Avg Savings per year (over 19 yrs)	$ (201,401)	$ 69,376	$ (1,238,671)	$ (741,522)
6	Total GPA GWh Sales @ 12/31/11	1,624	1,624	1,624	1,624
7	Avg. Savings ($/kWh)	$ (0.00012)	$ 0.00004	$ (0.00076)	$ (0.00046)
8	Residential kWh per year	494,393,414	494,393,414	494,393,414	494,393,414
9	Avg . Residential Savings / Year	$ (61,312)	$ 21,120	$ (377,088)	$ (225,741)
10	Avg. Residential Customers	41,333	41,333	41,333	41,333
11	Avg. Savings per Residential Customer per year	$ (1.48)	$ 0.51	$ (9.12)	$ (5.46)
12	Avg. Savings per Residential Customer per month	$ (0.12)	$ 0.04	$ (0.76)	$ (0.46)
13	Residential Non-Fuel Revenue Requirement	$ 40,463,975	$ 40,463,975	$ 40,463,975	$ 40,463,975
14	Percent Residential Savings (line 13/line 9) (positive is savings)	-0.152%	0.052%	-0.932%	-0.558%

[5] Financing that has either a beneficial or an adverse effect on ratepayers may not translate directly in an immediate rate decrease or increase, but acts to lower or increase GPA's revenue requirement with the effect of, e.g. deferring the next rate increase or offsetting any additional amounts needed.
[6] In response to Shaw Consultants' data request set 2, item 23(d), GPA agreed with the concept of using ratepayer's opportunity cost of capital, but did not have a basis to estimate what it would be.
[7] It is recognized that in actual cost of service methodology, bond debt is typically allocated to customer classes on net plant or rate base. However, for estimation purposes, savings from refinancing was apportioned on kWh sales to obtain an average savings over all classes.

In confirming GPA's net present value savings figures, Shaw Consultants came relatively close to the percent savings shown on line 5 of Table 1. We attribute the difference to the fact that the Excel spreadsheets provided by Morgan Stanley in a number of instances, do not exactly tie in with the figures reported in their periodic Acrobat file updates.

GPA indicated that in the proposed refinancing, it is not adhering to the two percent threshold from its 2010 refinancing[8]. We believe that without some reduction in total debt service payments it is not possible for ratepayers to realize significant benefits in the long run. Except for the market conditions on the August update, all of the other updates show significant increases in total debt service payments after the refinancing.

Table 1, line 4 summarizes the net present value savings for each update. Table 2, line 3 shows the net debt service for each update.

Referring to Table 1, it can observed that as interest rates decline, NPV savings increase significantly. For example, a 19 basis point drop (4.89% to 4.70%) in the average interest rate from the July update to the August update) results in NPV savings going from net savings of $6.85M to net savings of $14.43M. Thus, within the general range of interest rates in Table 1, for each one basis point (one-tenth of one percent - 0.10%) drop in interest rates, the NPV savings increase by about $0.4M [($14.43M -$6.85M)/19]. Based on results of the September update, a nine basis point increase (from the August update) resulted in a decrease of $2.6M in NPV. Thus, for each increase of one basis point in interest rate between these two updates, total NPV decreased by $0.3M. In summary, for each change of one basis point in interest rate between updates, NPV changed by about $0.35M. Thus, it is clear that total NPV savings are very sensitive to small interest rate changes.

From Table 2 and prior discussions, it appears that ratepayers would not benefit significantly with respect to lower debt service payments unless market conditions at the time of the closing are such that the average interest rate on the refinanced bonds is at or below approximately 4.74%. Total debt service payments increase significantly with increases in bond interest rates above that level.

[8] GPA response to Shaw Consultants 2nd data request, item No. 23(d).

4 RISKS - ANALYSIS AND DISCUSSION

The GPA has based its decision to proceed with this refinancing primarily on the potential benefit of lowering debt service payments in the short-run (2013 to 2018) through restructuring, while at the same time producing net present value savings primarily through refunding. However, those potential savings depend not only on what the market interest rates are at the time of the closing, but also on interest rates after closing.

4.1 Interest Rate Risk

In terms of risk, while the final interest rates will not be known until closing, there remains significant risk to GPA in achieving its stated NPV savings for years later, even if the interest rates at closing are exactly the same as in Morgan Stanley's September 5th update. This is due to the fact that in determining net present value savings in the restructuring component of the financing, Morgan Stanley credits interest earnings through 2034 on: (1) the contribution to GPA's debt service reserve fund; and (2) the $13.7M balance released from Lehman Brothers forward purchase agreements[9]. The after-closing risks associated with estimated interest earnings are sufficiently large as to have the potential to negate much of Morgan Stanley's estimated NPV savings, with the achieved NPV savings not known until looking back from 2034.

4.1.1 Uncertainty Prior to Closing

Based on market conditions on August 2, 2012, Morgan Stanley estimated that the Authority could lower its debt service payments between 2013 and 2018 by approximately $9.35M per year. Market conditions present at the time of the August update resulted in the most favorable total debt service payments and NPV. These savings would be offset by increases in debt service payments of about $4.57M per year from 2019 through 2032. These estimates were based on the assumption that the average interest rate on the new bonds would be 4.70%, and the effective Total Interest Cost (TIC) would be 4.83% if the closing was held on that day. The TIC is comprised of the average interest rate (for this case 4.70%) on the refinanced bonds plus all other costs on a percentage basis of the par value of the bonds; such as issuance costs, the impact of the FPA with Lehman Brothers, termination payment and the cost of using taxable subordinate bonds (in some of the prior updates). If interest rates are just 10 to 20 basis points higher or lower at the time of the closing the estimated savings would be significantly different. This is immediately apparent from two prior and one subsequent update prepared by Morgan Stanley. By comparing the estimated savings under various market conditions described in the four updates it is easy to see the effect of interest rates on those savings. Table 2, line 3 shows the total debt service payments from each update; the corresponding assumed interest rates for each update are in Table 1, line 8.

As can be seen from these tables, when interest rates are relatively low, total debt service payments are relatively low. For example, a 19 basis point drop (4.89% to 4.70%) in average interest rates (from market conditions present in the July update to the August update) results in total debt service payments going from an increase of $23.5M to a decrease (savings) of $1.3M. Thus, between these two updates, for each basis point drop in interest rates, the total debt service payments decreased by about $1.3M [($23.5M+$1.3M)/19]. Based on results of the September update, a nine basis point increase (from the August update) resulted in a $5.15M increase in total debt service payments. Between these two updates, for each basis point increase in interest rates, the total debt service payments increased by about $0.6M. In summary, for each change of one basis point in interest rate between updates, total debt service payments changed from a low of approximately $0.6M

[9] The crediting of future earned interest on GPA's Debt Reserve Fund and $13.7M released funds are shown in Excel spreadsheet: GPA Update for PUC 2012-09-05.xlxs, sheet: 2012 Debt Service, columns (E) – (I).

to a high of approximately $1.3M. Furthermore, if the average interest rate for this refinancing is at or above approximately 4.72% (within the bounds of recent economic conditions), then it is expected that total debt payments will be higher after the refinancing.

4.1.2 Expected Earnings

Table 3 shows Morgan Stanley's projected interest earnings from GPA's debt service reserve fund to be $7.6M through 2031 and from the proceeds of the release of funds from Lehman Brothers to be $8.8M through 2034, or $16.4M in total. In Morgan Stanley's spreadsheet, the earnings from these accounts each year are subtracted from the restructuring debt service requirement in order to calculate a net debt service. An estimate of the net present value of each account using Morgan Stanley's discount rate of 4.7859% in its September 5th update, NPV from the debt service earnings is approximately $3.6M and $4.5M from the $13.7M proceeds from the Lehman contract termination, for a total of $8.1M. This amount, which is wholly dependent on future interest rates, is a major component of the $11.8M present value savings in Table 1, column (B), line 4. If a more conservative estimate of the interest rates is used to estimate the earnings on both the debt service reserve fund and the Lehman Brothers proceeds, at say, one-half of the level used by Morgan Stanley, then the NPV of the refinancing would be reduced to approximately $7.8M ($11.8M - $4.0M).

Interest earned on these two accounts plays a large role in bringing the restructuring component of the financing down to a NPV savings of $0.911M in Morgan Stanley's September 5th update. However, interest rate predictions are highly speculative in terms of both magnitude and direction as they are a function of both, markets and government policy. Current risk-free rates are significantly below one percent and there is no assurance that the earnings relied on to calculate aggregate NPV savings will come to fruition. The interest income from the $13.7M released funds in the September 5th update appears to be in the mid 3% range[10].

[10] In calculating that the cost of terminating the Lehman Brothers contract can pay for itself in terms of interest earned on the proceeds, GPA used 0.8% for the first few years and scenarios of 4.0% and 4.5% for subsequent years.

Table 3: Projected Interest Earnings in Morgan Stanley's September 5th Update

	Interest Earnings	
Year	DSRF	$13.7M Release from Lehman
10/1/2012		
10/1/2013	$ 15,668	$ 63,807
10/1/2014	23,282	107,093
10/1/2015	39,076	196,101
10/1/2016	71,553	282,886
10/1/2017	103,219	367,640
10/1/2018	134,144	407,043
10/1/2019	148,521	445,199
10/1/2020	162,443	445,965
10/1/2021	162,723	465,404
10/1/2022	169,815	486,223
10/1/2023	177,412	495,748
10/1/2024	180,887	492,897
10/1/2025	179,847	486,670
10/1/2026	177,575	478,688
10/1/2027	174,662	468,829
10/1/2028	171,065	460,343
10/1/2029	167,969	453,869
10/1/2030	165,606	449,057
10/1/2031	5,178,176	445,480
10/1/2032		442,882
10/1/2033		441,448
10/1/2034		441,040
	--------------	--------------
Total	$ 7,603,640	$ 8,824,311
~NPV @ 4.7859% discount rate	$ 3,589,173	$ 4,523,764

4.2 Long View - Increasing Debt Service Profile for future Capital Expenditures

The analysis provided by GPA has not taken into account the potential for much higher debt requirements in the future. It is expected this will not be known before the closing, due to the fact that the Authority's capital improvement plans will not be available before October of this year. Key issues relative to this risk/cost are summarized below.

1. One of GPA's stated purposes of the refinancing was to match MEC plant costs with its expected life, but GPA responded that they will need to initiate a management contract for operation of those plants, which will at least offset some of these savings, and as well additional capital expenditures should be expected for an aging facility.
2. GPA is hoping to see the introduction of new fuels (LNG) and new generation technology that will result in lower generation cost. However, this is subject to considerable uncertainty.
3. What is GPA's real mission or vision – short-term or long-term cost reduction or containment? It appears that GPA is focusing on the short term with this refinancing.

4. There are expected to be other financial burdens in the future, which GPA has not quantified at this time. Additional debt (not yet estimated) will be needed for new capital projects and perhaps major retrofit projects to satisfy environmental regulations.

5 RATEPAYER IMPACTS

The primary concern of most all utility customers is the magnitude of their bill, which is directly related to GPA's total revenue requirement. Thus, most ratepayers would only favor a refinancing if GPA's total revenue requirement could be reduced as a result of the refinancing. Estimated ratepayer impacts are shown in Table 2.

There are four possible outcomes with respect to total revenue requirement and NPV under GPA's refinancing proposal. These are:

a. Total revenue requirement is less after refinancing, and NPV is positive (net savings)
b. Total revenue requirement is less after refinancing, but NPV is negative (net loss)
c. Total revenue requirement is higher after refinancing, and NPV is positive (net savings)
d. Total revenue requirement is higher after refinancing, and NPV is negative (net loss)

Outcome a. matches the results of the August update. However, total debt service payments are not significantly lower, and the estimated NPV could be about $10.4M if realized interest rates on earnings are about half of what Morgan Stanley estimated them to be.

In cases b. and d., since the NPV of both scenarios is negative, few, if any, ratepayers would approve of a refinancing with these results. Furthermore the Authority has stated that it would not pursue any refinancing if the net present value savings was not positive; nor would it presumably be allowed by the Commission's two percent threshold criteria that was specified for the Authority's 2010 financing.

Outcome c. matches the other three updates (May, July and September). The larger the increase in total revenue requirement and the lower the NPV savings, the less likely it is that ratepayers would favor such a refinancing. Of the three updates that match, the July outcome has the greatest increase in total revenue requirement (over $23M), and the lowest NPV savings (about $7M). It is unlikely that the relatively small savings would be of sufficient magnitude to persuade many ratepayers that they should prefer such a refinancing because they would be responsible for $23.5M more in rates over the term of the new bonds. That leaves updates for May and September as scenarios that ratepayers may prefer. The magnitude of the NPV savings is the critical factor. Again, if the assumed level of interest rates used to compute earnings are reduced by half, the NPV of these two scenarios would be between $7.8M and $8.8M.

6 OTHER CONSIDERATIONS

6.1 Standalone Refunding Case

In the August update Morgan Stanley included a refinancing option of a standalone Refunding. Their analysis for this option - Refunding for Savings - assumes that the GPA does not pursue a restructuring of the 2013 to 2018 maturities. Their cash flow analysis for this option showed a savings (lower total debt service payments) of $28.3M, and a NPV savings of $18.5M. While this option does not provide savings of approximately $9.3M per year in the period between 2013 and 2018 (comparing the Standalone option with the restructuring/refinancing option under the August update market conditions), it does provide annual average savings of $1.3M in those years as well as all subsequent years through 2034. Thus, in the later years (2019 to 2034), rather than increasing revenue requirements by $4.6M per year in each of the 14 later years (2019 to 2032), it lowers revenue requirements by $1.3M in each of those years. Additionally, it results in two more years of the same level of savings in 2033 and 2034. Under this option the Authority could and should reduce rates in 2013 (assuming rates do not have to be increased due to other cost factors) and there would be no need to increase rates later due to offsetting debt service increases necessitated by the restructuring/refunding option. There may be rate increases over this time frame driven by other factors. In comparison with the best restructuring/refunding option (market conditions present at the August update) the standalone option results in lower total debt service payments of $28M versus just $1.3M lower for the restructuring/refunding option.

Many ratepayers are likely to be indifferent to a restructuring/refunding option with market conditions like the August update, if that was the only option. However, the standalone option is available, and under those same conditions it is likely that most ratepayers would prefer it, and many would likely support it. (The relatively few customers that knew they were not going to be customers of the Authority for many years beyond 2018 would likely prefer the restructuring/refunding option.)

6.2 Application of Proceeds from Lehman Brothers Buy-Out

With regard to application of the proceeds from the Lehman Brothers buy-out, it appears that the prudent thing to do would be to use the $13.7M proceeds to immediately reduce future debt payments. In this way GPA would be guaranteed a 5.34%[11] return on its money, rather than gambling on the variability of interest rates over a 21 year period, which even Morgan Stanley projects to be lower than 5.34%. Morgan Stanley, however, has not run this scenario.

Shaw Consultants estimates the savings that could be achieved by immediately reducing the restructuring amount by using the $13.7M proceeds to pay off some of the restructuring bonds, to be an increase in net present value of nearly $4M.

[11] 5.34% is the All-in TIC for the restructuring component of financing in Morgan Stanley's September 5th update.

7 FINDINGS AND RECOMMENDATION

Shaw Consultants presents its findings and recommendations for consideration by the GPUC. In presenting our findings and recommendations, Shaw Consultants has attempted to provide the Commission with as broad a perspective as possible and flexibility in terms of refinancing options, but understands that beyond the numbers, there are policy considerations affecting its decision-making process. For example, while Shaw does not recommend outright approval of the restructuring/refunding option proposed by GPA, we do recognize that under favorable market conditions this option is economically viable and may be preferred by the Commission over either a decision to not approve or to approve a different option. In addition, if the Commission decides to not approve the proposed refinancing option, there is an alternative option, which the Commission could approve, that will provide significant benefits to ratepayers, and which with a relatively minor additional borrowing could accomplish GPA's goal of buying-out the Lehman Brothers contract.

7.1 Findings

Based on our independent review of GPA's financing proposal, Shaw Consultants offers the following findings:

- Notwithstanding the fact that interest rates are near an all-time low, the small basis point difference to be gained and factoring in issuance costs at around $4.5M, the net present value benefit derived on an average year basis is marginal in relation to GPA's total debt service cost.
- Net present value, which is the measure that GPA relies on, may not accurately reflect the benefit to the ratepayer, which may be lower in terms of an increase in rates when measured in absolute rather than net present value dollars.
- To the extent that net present value savings is sufficiently large and the sum of cash flows over the term of the financing is positive or near zero, absent any mitigating circumstances, the savings should be passed on to ratepayers either through a petition for an immediate rate decrease or by way of a corresponding reduction in GPA's next rate increase petition.
- The proposed restructuring/refunding is significantly beneficial to ratepayers only if total debt service payments are lower after the refinancing and the NPV analysis shows net savings; or if total debt service payments are modestly higher, but relatively small in relation to the expected present value savings.
- The result of the financing is not fully known at the time of closing, as a significant portion of projected net present value savings will still be dependent on actual interest rates through 2034.
- GPA can reduce its risk and achieve a higher net present value by applying the $13.7M proceeds from its termination of the Lehman Brothers FPA to immediately offset a portion the restructured bonds rather than applying earned interest over the years. Morgan Stanley has not offered that scenario.
- To be conservative in estimating the NPV savings/loss, the estimates of the earnings on fund increases should be adjusted downward by about 50%, which lowers the estimated NPV savings by about $4M.
- Although GPA is not proposing that the proposed financing must result in a net present value savings to GPA and its ratepayers of at least two percent, per the Commission Order in GPA's 2010 financing, the PUC should consider applying this criterion in GPA's current refinancing.
- Given that another financing option, Standalone Refunding, results in significantly lower total debt service payments and higher net present value savings than the proposed restructuring/refunding option, it should be considered a preferred option from the viewpoint of ratepayers.
- The refinancing should stand on its own merits without regard to considerations such as leveling of debt payments, matching IPP contracts with life of plant and the like.

- It is in the best interest of GPA's ratepayers to reduce costs over the longer-term rather than just to push current costs out into the future.

7.2 Recommendations

In light of the foregoing, Shaw Consultants makes the following recommendations:

- The Commission's threshold of two percent net present value benefit to GPA and its ratepayers that the Commission applied in GPA's 2010 financing should be applied in this financing as well.
- The Commission should only consider approving the restructuring/refunding refinancing option if the market conditions are close to or more favorable than they were on August 2nd, 2012.
- If those favorable conditions are not present at the time of closing the refinancing, or if the Commission prefers the standalone option because of its greater certainty of long term ratepayer benefits, the Commission should approve the standalone option, again assuming the market conditions are favorable for such a refinancing (i.e., lower total debt service payments and significant NPV savings). Under the standalone option, the Commission may also consider increasing the refunding amount to a level just sufficient to allow GPA to buy out the Lehman Brothers contract.
- If the Commission approves either the restructuring/refunding option or the standalone option, it should also make its approval conditional upon GPA satisfying the roll-back provision that it proposed or not raise rates to the extent it would otherwise need to be in its next rate application so that customers can directly benefit from this action, absent other factors causing costs to increase.
- If the restructuring/refunding option is approved, the $13.7M in Lehman Brothers release funds in the restructuring component of the proposed financing should be applied to effectively reduce GPA's restructuring amount at the outset rather than relying on earned interest on this amount over the term of the restructuring.