TECHNICAL CONSULTANT'S REPORT ON WAPA LEAC
VIPSC DOCKET 289
RATES FOR OCTOBER 1, 2013

DATE: DECEMBER 17, 2013

TO: ALL COMMISSIONERS & PSC EXECUTIVE DIRECTOR

CC: BOYD SPREHN, TANISHA BAILEY-ROKA AND TISEAN HENDRICKS

FROM: JAMSHED MADAN, LARRY GAWLIK AND ED MARGERISON

RE: JANUARY – MARCH 2014 LEAC FILING

I. EXECUTIVE SUMMARY

On November 15, 2013 the Virgin Islands Water and Power Authority ("WAPA") filed a request for implementation of a new Levelized Energy Adjustment Clause (LEAC) for electric rates to be effective January 1, 2014. WAPA is also requesting that no change in the Water Department LEAC ("WLEAC") be made for the upcoming three months.

WAPA filed the required Minimum Filing Requirements (MFRs) as well as information regarding the Rate Financing Mechanism (RFM), the electric line loss program and other financial reports required by the Public Services Commission (PSC). As the Minimum Filing Requirements have previously been a point of contention (and remain the subject of an open docket), and we note that WAPA has with the past several filings made substantial efforts and improvements in its filings. We also note that communications, while more formal, have improved, and the exchange of information is more frequent.

There remains work to be done, however. As will be explained in greater depth below WAPA did not file certain information that was required by prior PSC Orders issued in Docket #289 including the MFR order (No. 06/2012) governing LEAC petition requirements. No mention was made by WAPA in its petition that it had not complied with prior PSC Orders in its filing. WAPA requested that a more formal and time consuming process be instituted in lieu of the previous informal discovery protocol. When requested in formal requests for information by the Technical Consultants to produce the required information, WAPA surprisingly objected to the production of the information and directed the Technical Consultants to request the information in a later docket (MFR Docket #614). These actions are inappropriate. We are advised by counsel that if WAPA has an objection to a portion of an order from the PSC the appropriate course of action is for WAPA to file with the Commission a request for reconsideration.

While all of the schedules required to be filed with the LEAC petition pursuant to the RFM Stipulation and prior PSC Orders were filed with the LEAC petition, responses to our requests for information were again not answered or answered inadequately. Questions concerning the deferred maintenance program, anticipated efficiency improvements, the ability to accelerate programs with substantial benefits, and the magnitude of benefits that consumers should expect as a result of the significant revenues provided through the RFM, were left unanswered. The information responding to two of the three sets of discovery issued by the Technical consultants were provided late on Friday, December 13, 2013 – three business days before the scheduled PSC Meeting on December 19, 2013, though initial discovery was issued within seven (7) business days and the remaining discovery within two-three weeks of WAPA's filing (November 26, December 4 and December 6).

The Electric LEAC Rate as proposed by WAPA for January through March 2014 (Quarter 3 of FY 2014) is $0.407030 per kWh. This proposed LEAC factor represents a decrease of $0.009820 per kWh from the current LEAC factor of $0.416850. According to WAPA, if approved by the PSC this decrease will result in an overall reduction of $3.93 per month for a residential customer using 400 kWh per month or about a 2% decrease in current rates.

Table 1
Monthly Impact on Sample Consumption

Customer Class	Monthly kWh Usage	Monthly Impact on Sample Consumption Levels			
		Current Bill	Proposed Bill	Change	
Residential	400	$211.47	$207.54	($3.93)	-1.86%
Commercial	1,200	$679.08	$667.29	($11.78)	-1.74%
Large Power	25,000	$12,716.46	$12,470.97	($245.50)	-1.93%

For reasons to be explained below, WAPA is proposing to keep the WLEAC currently in place ($12.10/kGal) for the three-month period ending December 2013. Therefore there will be no changes in a "typical" water customer's bill.

Reporting and Compliance with Prior Commission Orders

In the prior LEAC proceeding setting the LEAC rate for the period October - December 2103, the PSC issued Order No. 5/2014 on October 15, 2013 which set the rate at $0.416850 per kWh. PSC Order 5/2014 also required WAPA to file its next LEAC petition on November 15, 2013, which WAPA did. The order further required WAPA to address several additional shortcomings in its previous filing(s), some related to the Minimum Filing Requirements ("MFRs") that are required to accompany each LEAC petition. Earlier in the year WAPA enlisted the assistance of an outside consultant to assist with the preparation of its LEAC petitions and to assist with the development of new format protocols for the filing of its LEAC petitions. This activity had as it goal to make the petition and supporting information internally consistent, more understandable, user friendly and importantly more transparent. As noted above, progress has been made on that front and the submission was more complete than in the past. The current LEAC petition filed on November 15, 2013 is the third petition filed using the new format protocols. Unlike the prior immediate prior LEAC petition filed in August, which involved several phone conferences between WAPA, its consultants and the PSC's Technical Consultants to discuss issues and matters related to that filing, there were few phone conferences prior to WAPA's submission of this filing except for detailed discussions of the RFM filing requirements. Prior to WAPA's formal filing we felt that progress was being made with regard to the format and protocol for the LEAC filing inclusive of compliance with the Commission's MFR for LEAC filings. We were certainly not aware of any objections to significant portions of the PSC's prior MFR or LEAC Orders or the fact that required information were not going to be provided concurrently with the petition, but rather only after being specifically requested to do so by the Technical Consultants pursuant to a formal request for information process.

Summarized below is a discussion of WAPA's compliance with various ordering paragraphs of previous Commission orders in Docket 289, including Orders 06/2012, 50/2013, and 05/2014. We have presented a brief discussion of the requirement and WAPA's compliance and identification of WAPA objections to providing some of the information.

- Ordering paragraph 5 of the PSC's July 24, 2013 Order No. 50/2013 required that "WAPA shall continue to provide, until changed by order of the PSC, all MFR requirements for future quarterly LEAC filings…" Further, ordering paragraph 5 of the PSC Order No. 05/2014 dated October 15, 2013 required WAPA to continue to provide, unless changed by Order of the PSC, all MFR requirements for future quarterly LEAC filings. While WAPA has the ability to streamline and/or simplify its LEAC schedules, task with which we concur, it must do so in compliance with Order No. 06/2012 adopted by the PSC on January 27, 2012 that sets forth the MFRs (Minimum Filing Requirements) for submission with its quarterly LEAC rate petition. This MFR order outlines the individual schedules and requirements of these schedules including those associated with Unit Dispatch, Efficiency, Oil Consumed, Price of Delivery, Inventory Pricing, Water Department Allocation and Electric Department Costs (STT - Schedule 2 and STX Schedule 3).

  The November 15, 2013 LEAC filing for the period January – March 2014 does not fully comply with Commission Orders 06/2012, 50/2013, and 05/2014 in that it does not contain the required information for the St. Croix plant. When we first recognized this deficiency following the filing of the November 15, 2013 petition we requested WAPA to provide this information for the St. Croix Richmond plant as it did provide for the St. Thomas plant in RFI 1-19. WAPA responded with "…*If the PSC's technical consultant is requesting that the RFM report be expanded to include reporting on the Richmond Plant, the Authority asks that this request for additional reported information be addressed within Docket 614"* and did not provide the information required by the prior PSC orders. Absent this information being provided by WAPA we were unable to review or analyze the St. Croix unit dispatches, oil consumption, and efficiencies and the resulting information for the St. Croix plant included in Attachment A to the current LEAC filing.

- Ordering paragraph 6 of PSC Order No. 05/2014 dated October 15, 2013 required WAPA to provide with its November 15, 2013 LEAC filing a narrative of underperformance or better than expected performance of its generating units comparing efficiency data forecast for the July – September 2013 period with its actual performance for the same period.

  WAPA did not provide the required narrative with its November 15, 2013 filed LEAC petition. WAPA was asked about this requirement and in response to RFI 2-1 it indicated that "*The improved performance experienced by both the St. Thomas and the St. Croix systems for Q1 FY2014…result from the higher availability and operation of the most efficient Authority resources in Q1 FY2014 as compared to Q3 FY2013.* In responding to the Technical Consultant's inquiry WAPA did not acknowledge in its response that this information was due with the filing of its petition. A discussion of some of the issues was provided while some was not on the basis that WAPA could not replicate some of the calculations in the enquiry. No response was provided indicating the impact of the better than expect performance comparing the actual to forecast for the Jul – Sep 2013 period, but instead a description of comparing the actual performance from two "different" periods was provided. The RFM surcharge provides WAPA with approximately $16 million annually to improve efficiency and reliability. WAPA, in our opinion, certainly owes it to its ratepayers to explain in a full and transparent way its efforts at improving efficiency and reliability.

- Ordering paragraph 7 of PSC Order No. 05/2014 dated October 15, 2013 required WAPA to provide with its November 15, 2013 LEAC filing information addressing the requirements of the June 29, 2012 RFM amended stipulation. Generally, WAPA has provided the information required of RFM Attachments 1, 2, and 3 and the quarterly RFM financial report.

- Ordering paragraph 8 of PSC Order No. 05/2014 dated October 15, 2013 required WAPA to provide with its November 15, 2013 LEAC filing a detailed report on the status of the

MAXIMO maintenance management planning system and whether it will meet the December 31, 2013 compliance date for full implementation. The ordering paragraph requires that if WAPA was unable to meet the December 31, 2013 date, it was to identify why it is not able to comply with the requirement for both islands and further to identify the resources required for implementation.

This information was not provided with the November 15, 2013 LEAC petition as required. In recognition of this deficiency on December 4, 2013 the Technical Consultant requested WAPA to provide this information in response to RFI 2-2. In WAPA's response on December 13, 2013 WAPA indicated that it had subsequently responded in a separate transmittal with this information on December 9, 2013 concerning the Authority's Board of Director's approval of the MAXIMO implementation contract on October 16, 2013; however, the response did not indicate why such compliance extended for years beyond the original date or when the PSC could expect to see meaningful information providing an overview and details from MAXIMO of WAPA's maintenance management planning activities and associated benchmarks.

- Ordering paragraph 9 of PSC Order No. 05/2014 dated October 15, 2013 required WAPA to advise the Commission on the status of its acquisition under the RFM program of the spare parts identified by WAPA in previous submittals. If all of the spare parts have not been acquired WAPA was required in the ordering paragraph to provide the plan and schedule by which it would acquire the remaining spare parts.

  WAPA provided with its LEAC/RFM submittal a list and date of order of those items that have been ordered to date. This is equivalent to about $1.2 million of the total of $2.3 million. While it did not provide a specific list of remaining spare parts to be ordered it did provide the estimated funds by month that it expects to expend on spare parts through April 2014.

- Ordering paragraph 10 of PSC Order No. 05/2014 dated October 15, 2013 required that WAPA provide with its November 15, 2013 LEAC petition an identification of those actions necessary for it to undertake for the purpose of getting its deferred maintenance and other components of the RFM back on track. In connection with this requirement the filed Schedule 3 to the RFM shows that several of the proposed projects have extremely short pay-back periods (months to a few weeks in one case).

  No narrative for this requirement was provided in WAPA's November 15, 2013 LEAC petition. WAPA did provide responses in discovery to RFI 2-4 that have raised several questions in our minds by saying that all maintenance is back "on track" after years of saying that it could not meet adequate maintenance schedules due to a lack of cash. No explanation for this turnaround was provided and it is remarkable if accurate. Given that this information was filed three business days before the PSC Meeting and not within the petition as required we have not had adequate time to review or analyze this response and will do so in the next LEAC proceeding. Adequate and timely maintenance are two of the major underpinnings required to bring plant efficiency up and fuel costs down. If maintenance activities having an extremely short pay-back period are unnecessarily delayed depriving consumers of improved efficiencies this matter should be fully transparent and discussed in the filed LEAC narrative allowing the Commission and consumers full knowledge of the cause of any delay.

- Ordering paragraph 11 of PSC Order No. 05/2014 dated October 15, 2013 required that WAPA provide with its November 15, 2013 LEAC petition for future PSC consideration clear and transparent benchmarks for its projected operations.

  No benchmarks were provided by WAPA and no narrative accompanied the LEAC petition addressing the requirement of PSC Order No. 05/2014. Instead upon responding to RFI Set 2-6 WAPA respectfully objected to the request that it provide generation efficiency benchmarks and requested that this issue be addressed in MFR Docket 614. Through its response to discovery WAPA now appears to be informing the PSC that it objects to providing the information. It should be understood that efficiencies have long been an issue since greater efficiencies would lower the intolerably high fuel costs that WAPA charges its ratepayers. WAPA continues to maintain a position that it should not provide transparent benchmarks to which it could be held accountable.

- Ordering paragraph 13 of PSC Order No. 05/2014 dated October 15, 2013 requires that the PSC's Technical Consultant and WAPA work collaboratively to identify and recommend “Key Performance Indicators” (KPI’s). To initiate this process the Technical Consultant requested that WAPA provide a list of the individual KPI’s – not the level of the KPI – which WAPA believes to be appropriate for the PSC consideration.

  No list of KPI’s was provided and WAPA objected to the requirement to produce data and the PSC’s Order. WAPA requested that the matter be transferred to a different docket dealing with the establishment of MFR’s. We believe that WAPA misunderstands the intent of this requirement and also the scope of the MFR proceeding. The MFR proceeding is to establish the filing and reporting requirements to accompany base rate petitions and potential modifications to the existing MFRs used for LEAC filings. The establishment of KPIs is to establish transparent performance criteria that WAPA would have benchmarks or goals to for its operations. WAPA objects implying that all of the costs associated with its performance at any level be passed through to consumers.

- Ordering paragraph 16 of PSC Order No. 05/2014 dated October 15, 2013 required that WAPA provide with its November 15, 2013 LEAC petition, until changed by further Order of the PSC, all of the required LEAC filings and documents and work papers and that the transmittal of all documents in electronic (WORD and EXCEL, etc.) be in executable format with all formulae.

  One area in which the current LEAC filing has taken a step backward is in the use of executable spreadsheets. LEAC "Attachment A" acts as a formatting vehicle for much of the information, and should be consistent throughout in the transfer of data. For example, the data as to the projected use of fuel on St. Thomas should automatically adjust depending on the hours of use entered for each generator and the projected efficiency of the specific generating unit, which in turn should automatically change cost of fuel. However, when the formulas are deleted and numbers are forced, we are obligated to spend substantial time trying to identify the inconsistency. In the current filing, the sum of projected number two oil use for the period Jan – Mar 2014 contained in cells W118 – Y118 of the RFM Report Sep-2013 final does not agree with the reported value for the same projected use of number two oil for the same period Jan – Mar 2014 as contained in Attachment A-6.2 Input Data – STT Quarterly cell F18. While the comment in the Attachment A spreadsheet indicates that it is taken from the RFM dispatch analysis, the two values differ. As a result, in many cases the spreadsheet does not contain the logic to support the derivation of the information in the schedule. As a result of using numbers which have been copied and pasted instead of integrated formulae inconsistencies can and do result.

Despite the deficiencies noted previously, the format of the WAPA transmittal that accompanies the request to change the quarterly LEAC rate continues to improve in content. We anticipate further improvements in the future to provide greater transparency and more detailed discussions on major issues especially those that provide performance benchmarks for efficiency and the potential to reduce fuel costs by completion of deferred maintenance activities and implementation of performance improvement projects.

Additional Issues in WAPA's Petition and Responses.

WAPA's petition and responses to requests for information identify several other issues in this proceeding. While some issues are brought up to be discussed in this proceeding WAPA does little more than make an affirmative statement that it does not agree with the PSC determination in prior proceedings and provides no analysis or support.

Inclusion of 2012 Series B Bond and "OPEB" Expenses in LEAC

In the prior proceeding WAPA requested that the debt service related to the $18 million 2012 Series B bond be included in the LEAC. WAPA's position in the prior proceeding was that debt service has been accrued but not recovered, beginning with the May 3, 2012 issuance of the long-term debt and, in WAPA's calculation, ending on October 1, 2013. In that period of time, WAPA claimed that it has experienced $4,929,773 of uncollected principal and interest payments, which it proposed to collect over 6 quarters through the LEAC.

WAPA's adjustment was rejected by the PSC. The Technical Consultants indicated that as of the August 1, 2012 implementation of interim base rates in PSC Order No. 28/2012, WAPA has been collecting the principal and interest on the May 2012 bond issue since all of the associated costs were included in the underlying costs that determined the interim rate. This adjustment was adopted by the PSC. The arguments have not changed. WAPA adds a new argument that since the number of kWh sold by WAPA has decreased since the interim rates were adopted, WAPA has not fully recovered that amounts for the debt service. In no case did the PSC indicate that this or any other cost collected in base rates would be reconciled based on actual experience subject through the LEAC. WAPA does not also indicate that the Other Post Employment Benefit ("OPEB") costs that were included in the determination of the interim rate was based on an old actuarial report that has since been updated with the new study producing significantly lower expense numbers that have been used in the development of permanent base rates. This WAPA position adds significantly to the LEAC rate requested in this proceeding and has been removed again in our calculation.

Fuel Costs and Plant Efficiency

In this proceeding, WAPA indicates as we have summarized above, that they have petitioned for a decrease in the LEAC from $0.416850 per kWh to $0.407030 per kWh a decrease of $0.09820 per kWh. WAPA indicates that lower oil prices are the major driver of the proposed decrease. WAPA does provide a more detailed line item analysis that indicates that the decrease of $0.09820 per kWh is made up as follows:

- Decrease in oil prices $0.0165 per kWh
- Decrease in plant efficiency ($0.0041) per kWh
- Other charges and credits ($0.0123) per kWh
- Reduction in deferred fuel amortization $0.0098 per kWh

The decrease in cost from oil prices was partially offset by a decrease in plant efficiency together with other charges and credits.

Since the time of WAPA's filing fuel oil prices have changed and have trended upward by an additional 4.3% for the upcoming LEAC period. As has been past PSC practice, we have adjusted projected fuel prices based on the most recent projections resulting from the industry forecast index used by WAPA taking into consideration Nov. 7, 8 & 11, 2013 futures. This has resulted in an upward adjustment to fuel prices and put upward pricing pressure on the LEAC rate.

The filing shows that WAPA anticipates for the LEAC period Jan – Mar 2014 that it will achieve an overall degradation in production efficiency of its power plants. Based on the November 15, 2013 filing WAPA expects that production efficiency will degrade by 0.6% for the upcoming LEAC period. We've made no changes to the production efficiency projected by WAPA for the January 1 – March 31, 2014 period. This degradation in efficiency adversely impacts the projected LEAC rate resulting in upward pressure on the LEAC rate.

In our quarterly LEAC reports we routinely provide the PSC an overview of the trend in power plant performance and operations that ultimately impact the cost charged to consumers. For the LEAC period ending September 30, 2013 we have compared the forecast efficiency levels used in the development of the July – September 2013 LEAC filing (Period 1 data as modified by WAPA in its June 19th update to its original submittal) to the actual efficiency levels achieved by WAPA for that same period. In the case of the St. Thomas plant we would note that for the period ending September 30 that WAPA outperformed its heat rate forecast. WAPA had forecast for the period ending September 30, 2013 that it would achieve a heat rate in terms of BTU/kWh of 14,492. This compares to the actual heat rate that it achieved for the LEAC period ending September 2013 of 13,462 BTU/kWh or an efficiency premium over its forecast of 7.1%. Meanwhile, in the case of the St. Croix plant we note for the period ending September 30 that WAPA underperformed its heat rate forecast. WAPA had forecast for the period ending September 30, 2013 that it would achieve a heat rate in terms of BTU/kWh of 12,918. This compares to the actual heat rate achieved of 13,870 BTU/kWh or underperforming its forecast by -7.4%.

<u>Compliance with requirements of the RFM Stipulation</u>

Over the past three LEAC periods the PSC's Technical Consultants and WAPA have been engaged in discussions concerning the compliance of WAPA quarterly RFM reports in an attempt to make them more fully complete, transparent and bring the reports into compliance with the RFM Stipulations. We acknowledge that WAPA during the past three LEAC periods has made progress in transitioning its RFM reports in a manner to provide more meaningful information and coming into closer compliance with the RFM Stipulations. However, while WAPA currently is providing the attachments required by the RFM Stipulation the information being provided is not complete or fully transparent and in some cases provides information that is evasive.

There is still not a shared understanding that the purpose of Attachment 3 is designed to insure investments are prioritized to implement improvements which result in the greatest benefit to consumers. This requires that efficiency be improved to the highest level possible from existing production facilities at the earliest date possible. In addition, another objective of Attachment 3 is to present dynamic benchmarks that will demonstrate to consumers that while they are providing an extraordinary funding mechanism the return on this funding mechanism more than pays for itself. This demonstration is not currently being provided in Attachment 3. Instead the calculations being provided greatly mask the impact because the benefits are being calculated by including the benefits from the emergency generator—a temporary resource that is not the subject of the extensive deferred maintenance work or application of performance improvement projects. The benefits must be benchmarked to show the impact of the improvement on the performance of the individual resource rehabilitated or undergoing performance improvements. Obviously, in order to accomplish the deferred maintenance activities and performance improvement projects it is necessary for the RFM to provide for the lease of a temporary emergency generator to provide adequate capacity to meet consumer demand while the various rehabilitation, maintenance, and improvement projects are being accomplished. However, the emergency generation is secondary to the real purpose of the RFM Stipulation which is to provide the funding to improve existing capacity so that it becomes dependable, and economic.

There are a few other matters associated with the RFM that we anticipate will be fully resolved, but that cause us concern and are worth noting:

- While we've reached agreement on the work scope for the IAC, RFP's have been issued and proposals accepted; however, an IAC has not yet been retained by WAPA.

- WAPA has been extremely slow to implement the build-up of an adequate spare parts inventory as was envisioned and contained in the RFM Stipulation.

- The maintenance management planning system (MAXIMO) that was to be fully implemented, based upon a revised and one-year delayed schedule, by December 31, 2013 will not be implemented by this date.

- As mentioned, the RFM Stipulation requires fully transparent analyses of the economic benefits to consumers. While we acknowledge that minimal information has been prepared there has been no information showing the economic benefits taking into consideration investments in individual performance improvements and the benefits from these investments presented in terms of the impact to consumers. The benefit analyses provided to date have masked the economics of improvements by the inclusion in the analysis of the temporary emergency unit. The analysis of each investment should be performed on a stand-alone basis.

The program was designed to deliver an annual benefit of $50 million in fuel savings within approximately a 2-year period. Any delay in the implementation is costly to consumers. This savings is to come from the WAPA units undergoing refurbishment, deferred maintenance and performance improvement projects, and not from the efficiency of the temporary emergency leased unit that is not the subject of the deferred maintenance or performance improvements.

II. ELECTRIC DEPARTMENT

WAPA filed its request for a new electric LEAC rate to be implemented effective January 1, 2014. WAPA indicates that the new rate it recommends will be a decrease in both the LEAC rate and overall bills. WAPA computes that the new electric department LEAC factor should be $0.407030 per kWh which represents a decrease of $0.009820 per kWh from the current LEAC factor of $0.416850 per kWh. According to WAPA, if approved by the PSC this decrease will result in an overall reduction of $3.93 per month for a residential customer using 400 kWh per month or about a 2% decrease in the total bill at current rates. It is important to note that the PSC decision in Docket 612 will result in differing percentage change.

The computation of WAPA's proposed rate and GCG's recommended rate is shown below:

Table 2
WAPA Proposed and GCG Recommended LEAC Rate-Electric
($000's)

	¤ **WAPA**	**GCG**
Current Cost of Fuel	$58,093,130	$60,504,099
Regulatory Costs (Docket 289)	88,000	88,000
Principal/Interest on the GO note	719,817	719,817
Amortization of 2012B Debt Service	1,452,387	-
UltraPure Water Charge	567,861	567,861
Plant Repair RO Construction	64,477	64,477
Rate Financing Mechanism	3,894,164	3,894,164
Current LEAC Costs	$64,879,837	$ 65,838,418
Amortization of Deferred Fuel Costs	4,035,038	4,035,038
Total LEAC Costs	$68,914,875	$69,873,456
Projected Sales (kWh)	169,311,458	169,311,458
LEAC Factor	**$ 0.407030**	**$ 0.412692**
Current LEAC Factor	0.416850	0.416850
Increase/Decrease ($/kWh)	(0.009820)	(0.004158)
Average Residential Usage	400	400
Increase/Decrease ($)	($3.93)	($1.66)

Cost of Fuel:

The overwhelming majority of the purchased and consumed fuel is Number 2 (diesel). While there is some use and purchase of Number 6 oil, most of the dollars related to the purchase and consumption of Number 2 oil. The total cost of fuel shown in the table below includes the delivered price of both fuel stocks net of a credit resulting from a charge for electricity for operating the Reverse Osmosis ("RO") plants. This charge will be borne by the water department customers. The following table summarizes the current cost of fuel to be borne by the electric rate payers.

Table 3
Current Cost of Fuel

		Cost
Delivered Cost of Number 2 Oil	$	61,850,451
Delivered Cost of Number 6 Oil		214,865
Total Delivered Cost of Fuel	$	62,065,316
Electricity Charge to Water		(1,991,000)
Net Current Cost of Fuel	$	60,074,316

For the forecast for diesel prices (home heating oil), WAPA uses the CME Group "Daily Bulletin," which can be accessed at ***http://www.cmegroup.com/tools-information/build-a-report.html.*** On page 61 of that report is a table of NYMEX heating oil futures. WAPA used a simple average of three daily[1] bulletins for future prices for the three-month period ending March 2014. WAPA then computes a simple average of the three months of contract prices ($130.67/bbl), as shown below.

Table 4
Delivered Cost per Barrel
Number 2 Oil

	January	February	March	Average
Average Futures Price $/gal	2.87203	2.8749	2.87443	2.87379
Delivery Charge $/gal	0.23738	0.23738	0.23738	0.23738
Total Contract Price $/gal	3.10941	3.11228	3.11181	3.11117
Total Contract Price $/bbl	130.60	130.72	130.70	**130.67**

In determining the total cost of fuel, WAPA assumes that the oil delivered in a given month is consumed. This belies the accounting fact that WAPA prices its production fuel costs at an average weighted inventory cost. With the pricing forecast essentially flat currently this may not be a material issue in this proceeding, but WAPA has agreed to provide fuel costs taking into account inventory costs in the LEAC in the next LEAC. We do not have information for

[1] November 7, 8 and 11.

inventory costs since September 2013. In the month of September the average weighted inventory cost for Number 2 oil was approximately $133 per barrel for both Islands.[2]

To arrive at the total cost of number 2 fuel, WAPA multiplies the average delivered price by the barrels of oil projected to be consumed. WAPA projects a thermal efficiency of 13,291 Btu/kWh for St Thomas and 13,502 Btu/kWh for St Croix. This forecast reflects an efficiency improvement of 1.3% and 2.7% for St Thomas and St Croix, respectively from the efficiencies that are expected for the period October 2013 through December 2013.

In order to promptly file the LEAC, WAPA had to rely on future pricing that is now over a month old. As GCG has always done, we used the most recent "Reports 61[3]," using the same algorithm employed by WAPA.

Table 4a (updated)
Delivered Cost per Barrel
Number 2 Oil

	January	February	March	Average
Average Futures Price $/gal	2.99737	3.00768	2.9949	2.99998
Delivery Charge $/gal	0.23738	0.23738	0.23738	0.23738
Total Contract Price $/gal	3.23475	3.24506	3.23228	3.23736
Total Contract Price $/bbl	135.86	136.29	135.76	**135.97**

For the delivery of Number 6 oil, WAPA has departed from the template it has used in past LEAC computations and instead uses the identical forecasting tool that it employs for Number 2 oil, averaging the futures for Number 6 oil from the same source. The following table shows the methodology employed by WAPA in estimating the delivered price for Number 6 oil:

Table 4b
Delivered Cost per Barrel
Number 6 Oil

	January	February	March	Average
Average Futures Price $/bbl	104.94	104.72	104.49	104.717
Delivery Charge $/bbl	9.97	9.97	9.97	9.97
Total Contract Price $/bbl	114.91	114.69	114.46	**114.69**

As indicated earlier, WAPA does not have a contract for delivery of Number 6 oil and will use the Number 6 inventory currently stored on St Thomas and will ship the supply to St Croix and take the appropriate actions to meet EPA standards on St Croix.

The latest information we have was WAPA was going to use the Number 6 oil it had in storage modified to meet EPA standards on St Croix. The only supply on hand of Number 6 oil as of

[2] MFR2
[3] December 12-14

September 30, 2013 was 29,366 barrels at an average weighted cost $84.17 per barrel.[4] WAPA is projecting the use of only 2,282 barrels for the LEAC period. In recommending our LEAC factor, we have used the inventory price of Number 6 oil and have provided a transportation allowance of $9.97 per barrel.

WAPA has credited the electric LEAC by $1.6 million for electricity charged to water. To determine the appropriate charge, WAPA estimates the total electricity required to produce water on both Islands. The "inputs" or required electricity is based upon the forecast for the three month period ending September 30, 2013. According to WAPA, the unit charge for this production requirement was a methodology that both WAPA and the technical consultants agreed upon and is computed as follows:

Table 5
Electricity Charged to Water

	Cents/kWh	**mWh**	**Charge**
Fuel Cost Component	29.85	4,448	$ 1,327,885
O&M Component	3.00	4,448	133,442
A&G Component	1.00	4,448	44,481
RFM Allowance	2.30	4,448	102,305
Total Energy Rate - Water Depart.	36.15	4,448	**$ 1,608,113**

The credit for electricity should be a component of the WLEAC costs (debit) in equal amount to the credit to the electric LEAC. Our initial analysis noted that there was a difference in the debit and credit and inquired of WAPA the reason therefor. WAPA responded that there was an error in the computation of the credit, both in terms of the MWh and the $/MWh and the total MWh. In our recommended factor we adjusted the credit to be consistent with the water department charge. We would suggest that on a going-forward basis the Fuel Cost component be determined based upon the most recent annual (unaudited) financial statement, i.e. each filing would incorporate the most recent June Fuel expense (annual).

Docket 289 Costs

WAPA requests inclusion of $88 thousand for regulatory costs to be charged to the electric department customers. When coupled with the $12 thousand similar request for the water department customers a total estimated quarterly cost of $100 thousand is being requested. This assumes a $400 thousand annual LEAC expense. The amount included in both departments does <u>not</u> appear to be based on actual payments, but rather the lower of the last two assessments of the PSC related to Docket 289.[5] While a $400 thousand annual allowance appears very high, there are many issues that have arisen in past three LEAC rate petitions that have made the work effort more complicated and more labor-intensive. Among these are the "RFM" and the maintenance

[4] See MFR2, September STT
[5] Response to Set 3-3

program and the complete revision to the LEAC rate filing protocol introduced by WAPA in May 2013.

WAPA allocates the total regulatory costs between the electric and water department. The allocation of the projected cost is 88% to electric and12% to water based upon the total revenues of WAPA. In other words, the percentages shown are the percent of total WAPA revenue for each department. While it could be argued that the proper allocation would be related to ELEAC and WLEAC revenues, we take no exception to the method proposed by WAPA. These allocations should be reviewed annually to be consistent with current revenue data and we do not expect variations to be significant.

General Obligation Note

The principal and interest payments for the GO note will cease for the water department effective December 31, 2013 and the P&I for the Electric department will be increased over the levels of the recent past. WAPA has removed the water department payments and has included about $240 thousand per month in the LEAC. (*see later discussion for the WLEAC*)

Regulatory Asset and PILOT

Both of these items were fixed amounts and have been approved by the PSC for inclusion in the LEAC computation. The balance of each of these has been fully amortized and should no longer be included in the LEAC computation.

Payments on the Series 2012B Bond

In May 2012, WAPA electric issued a series of Bonds. The "B" portion of which was borrowed to pay fuel bills owed to HOVENSA. WAPA began payment on the bonds in May 2012. WAPA is requesting that the principal and interest incurred from inception through December 1, 2013 (the implementation date of the proposed new based rates) be included in the LEAC computation. The total amount of payments through November 2013 is $5.8 million. WAPA is proposing to recover this amount over a period of 12 months and is requesting inclusion of $1.45 million in the next LEAC period and three subsequent LEAC periods.

This adjustment is identical in nature to the one proposed for the LEAC for the period October 1 through December 31, 2013. We opposed inclusion of this amount, based largely on the position that WAPA's interim rate increase already included principal and interest on this note and the PSC adopted this position. In this filing, WAPA is taking exception to this position and states:

> *Debt Service on the Series 2012B Bonds, which were used to fund deferred fuel balances, from the issuance of the bonds to the anticipated November 1, 2013 effective date of the new proposed base rates has been amortized over 12 months beginning with January 1, 2014. This debt service otherwise would not be recovered from customers. WAPA does not agree with the Technical Consultant's contention that the interim rate increase effective August 2012 was sufficient to allow recovery of this additional debt service. A key consideration has been that the actual additional*

revenue collected as a result of the interim rate has been negatively impacted by actual energy sales being lower than assumed at the time the rate increase was approved.

We again state our position that the inclusion of debt service related to the Series 2012B bond issue is double recovery and inappropriate. In the interim phase of the recent base rate case, we based our recommended revenue increase based upon the FY2013 budget, in which the interest payments related to this bond were included. While principal payments are not in the projected income statement upon which the PSC decision relied, the statement also included deprecation allowance (a non-cash expense) in an amount in excess of $23 million. The principal payments on this series bond are approximately $3 million. Consistent with the prior PSC Order we have removed these costs from the costs recovered through the proposed LEAC.

Should the PSC agree with our recommendation, WAPA would have to reduce the deferred fuel balance of $18 million by the principal payments incurred to date and continue to reduce the deferred fuel balance by future principal payments until the bond is paid in full.

UltraPure Water Charge

The LEAC has included a forecasted payment to the Water Department related to the cost for the production of UltraPure Water, which is consumed by the electric department. To compute the amount, it appears that WAPA uses the historic production of ultrapure water for the three month period ending June 2013 to estimate the requirement for the three month period ending March 2014. It multiplies that forecast by a charge of $11.60 per kGal per Seven Seas Contract. We have made no adjustment for this item.

Plant Repair RO Contract

In the contract with Seven Seas, it was requested that the water intake valves of the generating units be repaired or replaced. This charge should be the responsibility of electric consumers. The cost is on a per kGal basis and is directly charged to the Water Department and the transfer of payment responsibility is through a credit in the WLEAC (reducing the cost for the water customer) and increasing the costs for the electric customer. We have made no adjustment for this item.

Rate Financing Mechanism

Rate Financing Mechanism costs of $3.9 million are included in the cost of fuel for this quarter and have been discussed earlier in the report. Annually this is a $16 million recovery. These costs reflect the operating costs of the leased units and additional maintenance of existing units. In an earlier LEAC, an RFM charge per kWh was derived resulting in a charge of 2.3 cents per kWh rate that was adopted and Ordered by the PSC until such time that it is changed by the PSC. The amount included in the upcoming LEAC period is the product of sales and 2.3 cents. We have made no adjustment for this item.

Under-Recovery Amortization

WAPA estimates that there will be a total under-recovered deferred fuel expense balance as of December 31, 2013 of $16.1 million, net of the amounts financed through the GO note and the Series 2012B. WAPA is proposing to amortize this unrecovered balance over a period of twelve months and has included three payments of the deferred fuel balance in the proposed LEAC.

This issue of how to reconcile the deferred fuel balance shown in the LEAC and the deferred fuel balance on the financial books has been an ongoing issue in many LEAC proceedings. In the last PSC LEAC order, WAPA was required to reconcile the balance of deferred fuel. In this filing, WAPA has presented the components of deferred fuel amounts on its books and reconciled those to the LEAC as of June 30, 2013. There are three components of deferred fuel, two of which are financed with the GO note and the Series 2012B bonds. The following table shows these components separately:

Table 6
Deferred Fuel Reconciliation

	Balance as of June 30, 2013
Deferred Fuel Short Term	$ 26,561,677
Deferred Fuel Long Term	25,162,551
Total Deferred Fuel	$ 51,724,228
Less: Series 2012 Bond	(18,000,000)
Less: GO Balance	(7,161,875)
Net Deferred Fuel (LEAC Balance)	$ 26,562,353

Since June 30, 2013 the total deferred fuel balance has been decreasing. According to WAPA the TOTAL deferred fuel balance dropped another $5 million in September 2013 and another $5.3 million with its projection of the December 31, 2013 balance.

Together with deferred fuel the collection policy of WAPA regarding government accounts is also putting a strain on cash flow and sorely required maintenance.[6] An accounts receivable analysis (MFR5) is now routinely provided with each LEAC. It clearly shows the main cause of the cash problems is not only the government accounts, but non-government as well. In the information provided by WAPA, there is a total of $12.6 million of accounts receivable that is over 360 days old! Of the $45.1 million of Accounts Receivable as of September 30, 2013, less than $20 million is current or less than 60 days old. While the information was provided as required by the MFR process, WAPA failed to provide the annual revenue from each of these customer classifications in order to determine the average lag for each customer classification as required by the last PSC order. We recommend that the receivable lag analysis by customer class be made part of MFR5 by the PSC in all future proceedings.

[6] Although in this proceeding WAPA indicates that maintenance is back "on track."

The data provided by WAPA indicates that the total owed WAPA by the various governmental agencies has risen from $8 million at September 30, 2012 to $12.6 million as of September 30, 2013. When examining these amounts for trending of collections, it is understood that the LEAC changes (mostly upward) account for some of this increase but each customer class should be responsible for their share.

Sales, Losses and Uses

WAPA projects sales on the assumption that the required production for the "Historic" period will mirror the required production for the upcoming LEAC period. With improvements in efficiency and dispatch, this might be a conservative assumption. WAPA then applies a loss and uses assumptions to derive the sales projection. While WAPA states that it is using a twelve month rolling average for these items, it appears that with the exception of plant unaccountable use on St Croix, WAPA actually used the historic period percentages. The following table shows the assumptions used by WAPA to derive the sales figures for each Island:

Table 7
Loss & Use Assumptions

	STT	STX
Station Power	2.76%	6.97%
Plant Unaccountable	0.45%	1.78%
Line Losses	7.06%	5.67%

The percentages for Station Power and Plant Unaccountable were derived using gross production, while the line loss percentage was derived using net available for sale (net plant output).

WAPA is currently in the midst of an on-going program to reduce losses on its electric system. Revenues to fund a portion of this program are derived from a separate surcharge paid be the electric departments customers.

III. WATER DEPARTMENT

WAPA did not file for a change in its WLEAC for water customers. WAPA assumptions deriving the WLEAC conclude that water LEAC rates could have been slightly increased from the current $12.10 per kGal to $12.64 per kGal. However, WAPA declares that it will be satisfied with the current WLEAC and as result extended the amortization of deferred costs beyond the time period allowed by the PSC in recent WLEAC filings. The WLEAC is computed as follows:

Table 8
WAPA Proposed and GCG Recommended LEAC-Water
($000's)

	WAPA	GCG
	($000s)	($000s)
Cost of Fuel	-	-
Regulatory Expense (Docket 289 Costs)	12	12
GO Debt Service	-	-
Cost of Purchased Water	2,054	2,054
Electricity Charge for Purchased Water	1,991	1,991
Billed Electric for Water used for Internal Plant Use	(317)	(317)
Billed Electric for Electricity Used for Internal Plant Use	(251)	(251)
Billed Electric for STT Station #2	(64)	(64)
Total Cost Current Costs	$3,425	$3,425
Less Amount Recovered Through Base Rate	(804)	(804)
Current Costs Recoverable Through the WLEAC	$ 2,622	$2,622
Deferred WLEAC Costs	756	756
Total WLEAC Costs	$3,377	$3,377
Projected Sales (kGal)	279,134	279,134
Proposed WLEAC Factor	$12.10	$12.10
Current LEAC Factor	$12.10	$12.10
Increase WLEAC Factor	-	-
Average Residential Usage (kGal)	2,400	2,400
Increase in Average Bill	-	-
Current Average Residential Bill	$78.94	$78.94
Percent Increase	0%	0%

Cost of Fuel

WAPA has assumed that the IDE units will not be required as all production of water will be from the eight RO units.

Docket 289 Costs

A more detailed discussion regarding the regulatory costs was provided in the discussion of the Electric Department LEAC

GO Note

As discussed earlier in the electric department portion of this report, WAPA requested and the PSC approved a more rapid amortization of the General Obligation Note for the water department portion of that note. To keep the total payment constant, WAPA proposed to downwardly adjust the electric department's payments consistent with the more rapid amortization of the water department. This concept was recommended by WAPA as a way of reducing the interdepartmental obligation from the water department to the electric department. As of December 31, 2013, the water department GO obligation no longer will exist. Therefore, WAPA is requesting no further collection of the principal and interest on the GO note from the water department customers

WAPA Production Costs RO

One of the two major components of the WLEAC in this and future filings is the cost of producing water under the contract with Seven Seas. The other is the cost of electricity. WAPA has estimated a total cost of production of $2,054,000 for this item. To establish this forecast WAPA assumes the production of water equivalent to the first quarter of fiscal 2014 for each Island, i.e. the January 2014 forecast for production is identical to the July 2013 production; the February 2014 is equivalent to the August 2013, etc. This is probably an acceptable technique although the last unit was not on line on St Croix until later in period used as the basis for the forecast for St Croix.

WAPA then applies the contract rates per kGal for each contract both for first and second pass water for each Island and then sums the total to arrive at the monthly cost. The rates and charges for the contracts remain constant and are consistent with prior filings.

Electricity Charged Water

As described in the discussion of this cost component in the electric discussion, WAPA charges the water company for the kWh used in the production of water from the RO units. This is a credit (reduction) to the electric department cost of fuel and a debit (increase) to the WLEAC costs. The dollar amounts should be identical.

For the electric department LEAC, WAPA credited the cost of fuel by $1,608,000. As shown in the previous table, WAPA has debited the WLEAC by $1,991,000. We have accepted the water charge and have adjusted the electric LEAC to reflect this.

Amount Billed For Station 2

WAPA is proposing to further credit the water customer another $64 thousand for Amount Billed Electric Station #2. This is neither an electricity usage charge nor water production direct charge. WAPA informed us that during the installation process for the RO units, Seven Seas was required to repair and replace the water intake valves on the St Thomas power plant that is a cost to the electric department. WAPA estimated the cost of this additional service and has amortized the cost over a period of time to the electric department. This is truly an electric production costs and as such we have accepted this credit for the computation of the WLEAC and have include the costs in the adjusted electric LEAC factor. The credit here is identical to the charge in the electric LEAC.

Under-Recovery

WAPA projects a December 31, 2013 under-recovery balance of $1.84 million, which it is proposing to amortize over the next seven months. WAPA states in its transmittal letter that it is proposing this amortization period rather six months in order to keep the proposed factor the same as in the current period. We have accepted WAPA's proposal.

Sales and Losses

WAPA projects production volumes as described in the discussion on the electricity charges to water. Starting with the production assumption, WAPA projects the sales forecast by applying historic uses, unaccounted-for and line losses on order to reach the estimate of sales. It applies different percentages for these items for each Island based upon a rolling one year rolling average for these. The following table shows the percentages as applied:

Table 9
Losses and Uses

	STT	STX
Plant Use and Plant Losses	2.1%	5.5%
Adjustment (Inaccuracy)	0.6%	-0.8%
Line Loss and Unaccounted	18.4%	37.3%

WAPA has requested that a separate surcharge be established with the expressed purpose to identify the source of the line loss and reduce that amount of water produced to meet demand. This is an issue before the PSC in Docket #613 on which the parties have reached agreement.

IV. RECOMMENDATIONS AND PROPOSED ORDER

As a result of our investigation into this filing and for reasons presented herein, we recommend the PSC accept our analysis of the WAPA LEAC filing and approve the recommendations contained below:

1. A LEAC rate of $0.412692 per kWh should be set for the Electric Department based on the recommendations and computations made in this report.

2. The current WLEAC rate of $12.10 per KGal should continue as requested by WAPA for the Water Department.

3. WAPA shall file for revised LEAC rates by February 15, 2014. The PSC reaffirms its prior Orders including but not limited to Nos. 06/2012, 50/2013, and 05/2014 and the reporting requirements therein, including the requirement that executable worksheets be submitted.

4. WAPA should provide in its quarterly LEAC filing as part of Attachment-A a summary comparison for both the St. Thomas and St. Croix plants showing the forecast efficiency in terms of BTUs/kWh for the historic period compared to the actual efficiency achieved in terms of BTUs/kWh and should provide a full narrative describing the factors contributing to underperformance or better than expected performance during this historic period. WAPA and the Technical Consultant should implement a fuel oil inventory pricing model that has recently been agreed to by WAPA. The complete filing including all MFRs should be filed no later than the date contained in recommendation 3 above.

5. WAPA shall provide with its next LEAC petition a detailed report on the activities it has undertaken and is undertaking to retrofit the Unit 21 HRSG to bring the St. Thomas HRSG from its current capacity level of 9 mWh up to its full capacity potential allowing it to produce capacity approaching 20 mWh. This report should outline the when the retrofit was authorized, the schedule for rehabilitation, and the expected availability and HRSG capacity by month for the 18-month RFM forecast period. WAPA should identify each activity undertaken to accelerate the retrofit of the HRSG.

6. WAPA shall provide with its next LEAC petition a detailed report on its progress for full implementation at the generation level of MAXIMO indicating the expected completion date for implementation of MAXIMO, the schedule for providing information from MAXIMO to the Commission showing the status of deferred maintenance and schedule for undertaking deferred and major preventative maintenance activities and samples of the output reports that the Commission should expect to receive describing the status of WAPA

maintenance management planning activities and status of all maintenance activities exceeding 2000 hrs. beyond any currently overdue schedule for maintenance.

7. WAPA should identify in the next LEAC filing what actions are being undertaken to reduce deferred maintenance and provide the list of deferred maintenance as currently estimated by WAPA. Provide the full universe of maintenance projects for 2104; indicate which ones are funded through the RFM and which ones are funded through base rate revenues. Provide a detailed narrative of the WAPA process to make the determinations and plans to implement.