

**BEFORE THE
VIRGIN ISLANDS PUBLIC SERVICES COMMISSION
Docket No. 612
PREPARED REBUTTAL TESTIMONY OF CRAIG R. SHEPARD
ON BEHALF OF
THE VIRGIN ISLANDS WATER AND POWER AUTHORITY
REGARDING THE PETITION FOR PERMANENT RATE RELIEF
FOR THE ELECTRIC SYSTEM
July 31, 2013**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 **A.** Craig R. Shepard, 1000 Legion Place, Suite 1100, Orlando, Florida 32801.

3 **Q. WHAT IS YOUR OCCUPATION?**

4 **A.** I am presently employed as a Principal Analyst by SAIC, formerly R. W. Beck, Inc.

5 On August 1, 2009, Science Applications International Corporation (SAIC) acquired
6 R.W. Beck Group, Inc.

7 **Q. ARE YOU THE SAME PERSON THAT FILED A PREPARED DIRECT
8 TESTIMONY IN THIS PROCEEDING ON NOVEMBER 15, 2012?**

9 **A.** Yes, I am.

10 **Q. WHAT IS THE PURPOSE OF THIS REBUTTAL TESTIMONY IN THIS
11 PROCEEDING?**

12 **A.** In this proceeding, my testimony, together with that of other witnesses testifying on
13 behalf of the Authority, is offered in rebuttal to the testimony of Mr. Bruce Oliver and the
14 Public Service Commission's (PSCs) Technical Consultants Jamshed Madan, Larry
15 Gawlik, and Michael Dirmeier dated July 3, 2013.

16 **Q. HAVE YOU READ THE WRITTEN TESTIMONY OF MR. OLIVER?**

1 A. Yes.

2 **Q. IS THERE ANY PART OF IT WITH WHICH YOU DISAGREE?**

3 A. Yes.

4 **Q. PLEASE IDENTIFY THE MAJOR AREAS WITH WHICH YOU DISAGREE.**

5 A. The majority of Mr. Oliver's testimony deals with cost of services issues such as rate
6 design and base rate revenues by customer class, as opposed to overall system revenue
7 requirements. My testimony sets forth the estimated revenue requirements for the total
8 system, calculates the deficiency and proposes rates that have been designed based on an
9 overall percent increase applied to the customer charge, demand charge and energy
10 charge for each rate class. Therefore, rate design and base rate revenues by customer
11 class are not the focus of this proceeding.

12 **Q. DO YOU AGREE WITH MR. OLIVER THAT THE BASE RATE REVENUES**
13 **SHOWN IN YOUR TESTIMONY ARE ERRONEOUSLY CALCULATED?**

14 A. No. On page 7 of Mr. Oliver's testimony, he states that "the Authority has erroneously
15 calculated its base rate revenue for the test year (FY 2011)." On the contrary, the
16 Authority has used the audited base rate revenues for FY 2011, as shown in the audited
17 financial statements for that year.

18 **Q. ARE THERE AREAS IN MR. OLIVER'S TESTIMONY IN WHICH YOU**
19 **AGREE?**

20 A. Yes. On pages 26 through 31 of Mr. Oliver's testimony, he discusses the rationale for
21 revenue decoupling and describes various structures and scopes of such mechanisms. In
22 summary, revenue decoupling is a mechanism employed by utilities to recover costs via
23 billing determinants that do not vary with energy use (e.g. kWh) in an effort to reduce

1 revenue erosion. Mr. Oliver proposes that the Authority investigate appropriate
2 decoupling actions. The Authority is concerned with revenue erosion and agrees with
3 Mr. Oliver's recommendation on this topic. The Authority will develop a proposal for
4 investigating appropriate revenue decoupling mechanism or mechanisms, however, due
5 to time constraints, this proposal is not included in this rate proceeding.

6 On pages 40 through 43 of Mr. Oliver's testimony, he describes the structure and
7 conditions of the Authority's Curtailable Large Power Service, Rate Schedule CLP. As
8 Mr. Oliver states, the Authority is not seeking any structural changes to this rate
9 schedule. The Authority agrees to continue its review of the customers in this rate
10 schedule and the applicability of curtailing their service to benefit the system. The
11 Authority is investigating the degree to which the current Curtailable Service Program is
12 subscribed and will provide that information to the PSC's Technical Consultants when
13 available. In subsequent discussions with Mr. Oliver, the Authority agrees to remove the
14 word "pilot" from title of this program.

15 On pages 43 through 48 of Mr. Oliver's testimony, he describes the area of
16 Miscellaneous Service Revenue, including Service Disconnections / Reconnections,
17 Service Relocations, Returned Checks, Customer-Requested Meter Reads, Service
18 Application Fees and Assessments for Special Bill Collection Activities. The Authority
19 has not proposed any changes to the existing Miscellaneous Service Charges in this
20 proceeding. Mr. Oliver suggests that the rates for these miscellaneous service charges
21 were established in 1991 and should be increased at a minimum of 35 percent to reflect
22 changes in inflation. Mr. Oliver states that this rate increase would represent a revenue
23 increase of \$473,372 (based on FY 2011 data), which should then be the amount of

1 which the total revenue requirement for the new base rates be reduced. The Authority
2 recognizes that the charges for these services have not been adjusted for inflation and will
3 review these charges in on-going system cost of service review. The results of the cost of
4 service review will not be incorporated in this rate proceeding. The Authority agrees to
5 increase the rates for its Miscellaneous Service Charges, as identified in Exhibit No. CS-
6 3, in the amount recommended by Mr. Oliver, with the exception of the Returned Check
7 Fee, which represents the rate which is charged by the Authority's bank, and not based on
8 its cost of service. The total adjustment proposed for the system revenue requirement for
9 Miscellaneous Service Charges for this rate proceeding is approximately \$470,000.

10 On pages 48 through 52 of Mr. Oliver's testimony, he discusses the need for the
11 Authority to establish a Light Emitting Diode (LED) rate for public street lighting and
12 private outdoor lighting (Rate schedules PLS and POL). Mr. Oliver suggests that these
13 rates should be less than the equivalent non-LED lighting rates due to the lower energy
14 usage, lower maintenance costs and longer expected service life of LED lights compared
15 to non-LED lights. The Authority has not proposed a LED lighting rate for the PLS and
16 POL rate schedules for this rate proceeding, as it has indicated that as of the end of 2012,
17 very few LED lights have been installed in the Virgin Islands. The Authority agrees that
18 increased LED lighting in the Virgin Island would likely benefit the system, however, the
19 current level of LED lighting does not warrant its own rate schedule at this time. The
20 Authority will continue to review the status of LED lighting in the Virgin Islands and will
21 include the development of a LED lighting rate schedule it is cost of service study. The
22 Authority, at its discretion, may choose to implement a LED lighting rate schedule in the
23 future.

1 **Q. HAS THE AUTHORITY COMMENCED A COST OF SERVICE STUDY FOR**
2 **ITS ELECTRIC RATES?**

3 **A.** Yes, the cost of service study has been initiated and is expected to be complete this year
4 utilizing readily available load research data. In addition, as improved load research data
5 becomes available, the cost of service study will be updated and provide information for
6 the next rate case proceeding, expected to be filed in approximately three years. This is
7 consistent with Mr. Oliver's testimony as he describes a process of "gradual
8 improvement". The Authority has agreed to obtain input from the PSC's Technical
9 Consultants during the next three years regarding the load research and cost of service
10 study. It should be noted that detailed load research is not usually performed for electric
11 systems on the U. S. mainland that are the size of the Authority, since the cost associated
12 with such studies are generally believed to outweigh the benefits.

13 **Q. HAVE YOU READ THE TESTIMONY OF THE TECHNICAL CONSULTANTS**
14 **JAMSHED MADAN, LARRY GAWLIK AND MICHAEL DIRMEIER?**

15 **A.** Yes.

16 **Q. PLEASE EXPLAIN WHETHER YOU AGREE OR DISAGREE WITH THEIR**
17 **ADJUSTMENTS TO THE REVENUE REQUIREMENTS.**

18 **A.** Page 42 of the Technical Consultants' testimony summarizes their proposed adjustments
19 to the revenue requirements. The following discussion addresses each of their proposed
20 adjustments.

21 **Q. DO YOU AGREE WITH CLASSIFYING OPEB, SELF-INSURANCE AND PILOT**
22 **AS "ABOVE THE LINE" EXPENSES?**

1 **A.** Yes. Classifying these expenses as above the line expenses does not affect the level of
2 revenue requirements, but it does affect the calculation of the debt service coverage
3 ratios. Since the revenue requirements should be based not only on the debt service
4 coverage ratios, I would not object to moving these expenses above the line, contingent
5 on the approval of the Authority’s Auditors and Bond Counsel.

6 **Q. DO YOU BELIEVE THAT THE REVENUE REQUIREMENTS SHOULD BE**
7 **BASED ONLY ON THE DEBT SERVICE COVERAGE RATIOS?**

8 **A.** No. As stated by the Technical Consultants on page 22 of their testimony, the debt
9 service coverage ratios are appropriate “as a starting point.” However, in the
10 development of their recommended increase on page 42, it appears that the only
11 consideration was to set subordinate debt coverage at 1.50 times and combined
12 senior/subordinate coverage at 1.25 times. In my filed testimony, Exhibit No. CS-1, the
13 revenue requirements considered not only the debt service coverage ratios, but also
14 sufficient funds available for capital improvements. The amount proposed by the
15 Authority to be available for capital improvements was approximately \$4.3 million. This
16 amount is lower than the amount identified to be needed for capital improvements, but
17 was purposely set lower by the Authority to avoid potential “rate shock” to the
18 Authority’s customers.

19 **Q. DO YOU THEREFORE DISAGREE WITH THE TECHNICAL CONSULTANTS’**
20 **ADJUSTMENTS TO THE REVENUE REQUIREMENTS BASED ON DEBT**
21 **SERVICE COVERAGE RATIOS?**

1 A. Yes, I disagree with those adjustments. I believe the revenue requirements as described
2 in my original testimony and as adjusted herein are correct and properly reflect the
3 revenue needs of the Authority.

4 Q. **DOES THE AUTHORITY HAVE A DETAILED CAPITAL IMPROVEMENT**
5 **PLAN FOR THE NEXT FIVE YEARS SHOWING THE INDIVIDUAL CAPITAL**
6 **PROJECTS?**

7 A. Yes. Attached as Exhibit No. CS-4 is the Authority's Capital Improvement Plan for the
8 fiscal years 2013 through 2017. A summary of this plan was provided in this proceeding
9 as a response to a request for information.

10 Q. **WERE THE PROJECTS SHOWN IN THE CAPITAL PLAN PRIORITIZED AND**
11 **RATIONED ACCORDING TO MOST URGENT NEED?**

12 A. Yes. In October 2012, the Authority's management met in the SAIC offices in Orlando
13 and prioritized and rationed the capital plan.

14 Q. **WAS A PORTION OF THE FUNDING OF THE CAPITAL PLAN ASSUMED TO**
15 **COME FROM PAYMENTS FROM THE WATER SYTEM TO THE ELECTRIC**
16 **SYSTEM ASSOCIATED WITH THE PAYBACK OF THE LOAN TO THE**
17 **WATER SYSTEM?**

18 A. Yes. Approximately \$2 million per year was included in the "Funding to be Identified"
19 as coming from the Water System's payback of the loan from the Electric System to the
20 Water System.

21 Q. **ARE THE TECHNICAL CONSULTANTS CONSISTENT IN THEIR APPROACH**
22 **TO THE LOAN FROM THE ELECTRIC SYSTEM TO THE WATER SYSTEM**
23 **IN THE WATER RATE CASE AND THE ELECTRIC RATE CASE?**

1 **A.** No. In the Water Rate Case the repayment of the loan to the Electric System is proposed
2 to be disallowed by the Technical Consultants, while in the Electric Rate Case, the
3 Technical Consultants recognize the repayment of the same loan as a means to offset
4 operating expenses of the Electric System.

5 **Q.** **IN YOUR EXPERIENCE, ARE SUCH INTRA-COMPANY LOANS COMMON IN**
6 **GOVERNMENTALLY OWNED UTILITY SYSTEMS?**

7 **A.** Yes. It is common practice among the governmentally owned utility systems with which
8 I am familiar.

9 **Q.** **IF THE WATER SYSTEM DOES NOT HAVE SUFFICIENT REVENUES TO**
10 **MAKE PAYMENTS TO THE ELECTRIC SYSTEM, WILL CERTAIN**
11 **ELECTRIC CAPITAL PROJECTS HAVE TO BE DEFERRED OR CANCELED?**

12 **A.** Yes.

13 **Q.** **IF THE WATER SYSTEM DOES MAKE REPAYMENTS TO THE ELECTRIC**
14 **SYSTEM, SHOULD THE ELECTRIC OPERATING REVENUE**
15 **REQUIREMENTS BE REDUCED BY THAT AMOUNT?**

16 **A.** No. Those payments would go toward funding the Electric Capital Improvement Plan,
17 not to offset electric operating revenue requirements.

18 **Q.** **DO YOU AGREE WITH THE ELIMINATION OF THE DEBT SERVICE COSTS**
19 **FOR THE RUS LOAN AND FUTURE BONDS?**

20 **A.** No. The Technical Consultants have recommended the disallowance of \$3,230,428
21 associated with the debt service on the RUS loan and future bonds. (It is not clear to the
22 Authority the source of this value.) The amounts shown on Exhibit No. CS-1 are
23 \$1,006,000 for the RUS Loan and \$1,578,343 for future bonds, for a total of \$2,584,343.

1 Although the dates of the RUS loan and future bonds have not yet been set, the Authority
2 is moving forward with expenditures associated with the projects funded by those loans
3 and plans to use its Line of Credit to fund those projects. The Line of Credit has a higher
4 cost of borrowing than either the RUS loan or future bonds, therefore the costs of
5 borrowing for these projects will be at least \$2,584,343 annually, and such amount (or the
6 Technical Consultant's amount of \$3,230,428) should not be eliminated.

7 **Q. WHAT IS THE PURPOSE OF THE RUS LOAN AND THE FUTURE BONDS?**

8 **A.** The RUS loan and the future bonds will provide funding for a portion of the capital
9 projects, as set forth in Exhibit No. CS-4.

10 **Q. IS BOND FINANCING A REGULAR, RECURRING BASE RATE COST OF**
11 **MOST UTILITIES?**

12 **A.** Yes. The issuance of bonds to fund long term capital projects is a typical utility practice
13 and the costs of debt service on those bonds is appropriate to be included as an element of
14 the base rates.

15 **Q. DO YOU AGREE WITH THE RECOMMENDATION OF THE TECHNICAL**
16 **CONSULTANTS TO DEFER THE COSTS OF THE RUS LOAN AND FUTURE**
17 **BONDS AND RECOVER THOSE COSTS AT A LATER DATE THROUGH A**
18 **SURCHARGE?**

19 **A.** No. That would be inefficient, incur more regulatory costs and would defeat the purpose
20 of a comprehensive base rate proceeding.

21 **Q. DO YOU AGREE WITH THE REDUCTION OF DEBT COSTS TO FY 2013**
22 **LEVELS?**

1 **A.** No. The Technical Consultants have recommended a reduction of \$1,105,794 associated
2 with existing debt service costs. The amounts shown on Exhibit No. CS-1 show the debt
3 service amounts in Fiscal Year (FY) 2014 by issue based on the actual debt service
4 schedules contained in the Authority's Official Statements for the 2003, 2007, 2010 and
5 2012 bond issues. The proposed rates will be in effect starting in FY 2014, therefore the
6 appropriate debt service amounts are those for FY 2014.

7 **Q. DO YOU AGREE THAT THE OPEB ACCRUAL SHOULD BE REDUCED BY**
8 **\$2,488,166?**

9 **A.** No. Subsequent to the 2011 Audit and the filing of the rate testimony, actuarial studies
10 have been performed and there are now updated estimates of the OPEB requirement.
11 Attached as Exhibit No. CS-5 is the most recent study. As shown on this exhibit, the
12 projected requirement for fiscal years 2014, 2015 and 2016 are \$4,912,906, \$4,967,241
13 and \$5,392,944, respectively, or an average of \$5,091,030. The Electric Department's
14 share is estimated at approximately 86%, after adjusting for the transfer of water
15 production personnel to the Electric Department. The Electric Department's share of the
16 OPEB requirement is therefore estimated at \$4,378,286 annually over the three year
17 period. The 2011 amount shown on Exhibit No. CS-1 was \$6,087,443. Therefore, the
18 OPEB requirement should be reduced by the difference between \$6,087,443 and
19 \$4,378,286, or \$1,709,157. It is recommended that the OPEB requirement be recovered
20 through a surcharge, as suggested by the Technical Consultants, to be reviewed and
21 adjusted annually.

22 **Q. UNDER WHAT CIRCUMSTANCES DO YOU CONSIDER IT APPROPRIATE**
23 **TO RECOVER COSTS BY MEANS OF A SURCHARGE?**

1 **A.** Based on my experience and knowledge of industry standards, the use of a surcharge may
2 be appropriate to recover costs if it is for a limited purpose or a limited time and is used
3 for the purpose of supplementing base rate revenues.

4 **Q. DO YOU AGREE WITH THE ADJUSTMENT TO REVENUES OF \$464,721?**

5 **A.** No. The Technical Consultants agree that the audited FY 2011 base rate revenues should
6 be adjusted for lower kWh sales. The Technical Consultants recommend an adjustment
7 in the revenue requirement to reflect this reduction in kWh sales. However, they have
8 only adjusted the energy charges by 95.78% based on lower kWh sales. The Authority's
9 base rate revenues consist of energy charges, customer charges, demand charges and
10 lighting fixture charges. In addition to lower energy sales in 2012 compared to 2011,
11 there were also fewer customers, less system demand and approximately the same
12 number of lighting fixtures. The total number of customers declined from 54,905 to
13 54,653 (a ratio of 99.54%), the annual peak demand on St. Thomas declined from 83.0
14 MW to 79.8 MW (96.14%), and the annual peak demand on St. Croix declined from 53.4
15 MW to 50.6 MW (94.75%). The attached Exhibit No. CS-6 shows the revised base rate
16 revenues of \$70,445,000, which includes the adjustment of customer charge revenues and
17 demand charge revenues. Therefore, to maintain the revenue requirement for the
18 Authority, the base rate revenues, as shown on Exhibit No. CS-1, should be adjusted by
19 \$320,000 to reflect the revised base rate revenues of \$70,445,000.

20 **Q. DO YOU AGREE WITH THE ELIMINATION OF THE IDE PERSONNEL COST**
21 **OF \$2,298,127?**

22 **A.** No. The Authority plans to transfer the personnel that are currently in the Water
23 Production (IDE) department to the Electric Department. The Authority is currently

1 evaluating which positions those personnel will fill in the Electric Department based on
2 their skills and expertise. It is possible that the number the water production employees
3 would be reduced through normal attrition. The normal attrition in the past several years
4 is approximately 43 employees per year, out of a total number of 607 employees, or
5 about 7% annually. Applying this rate to the revised personnel cost of \$2,154,573 results
6 in a possible reduction in personnel costs of \$150,816. The Technical Consultants
7 indicate that the water production personnel should be reduced by attrition in their
8 testimony, but in their exhibits to their testimony, they propose to eliminate the entire
9 amount in one year. The Authority believes the adjustments to the revenue requirement
10 for these personnel should be a reduction of \$150,816, which represents the normal
11 attrition rate for the Authority, as identified in Exhibit No. CS-7.

12 **Q. DO YOU AGREE WITH THE RECOMMENDATION TO USE THE LOAD**
13 **RESEARCH RESERVE TO OFFSET PART OF THE COST OF OTHER**
14 **STUDIES?**

15 **A.** No. The amount reserved for the Load Research should be retained and used for the load
16 research activities developed in coordination with the Authority and the PSC's Technical
17 Consultants, as identified previously in this rebuttal testimony

18 **Q. DO YOU AGREE WITH THE ELIMINATION OF CARRYING COSTS ON**
19 **DEFERRED FUEL BALANCES AND ACCOUNTS RECEIVABLE?**

20 **A.** No. As the Technical Consultants state on page 67, "We agree that carrying these
21 balances imposes a cost on WAPA and more importantly on consumers from the deferral
22 of maintenance activities..." Since these carrying costs are real and legitimate costs to

1 the Authority, they should be included in the revenue requirements, since there is no
2 other way to recover those costs.

3 **Q. HAVE YOU PREPARED A REVISED REVENUE REQUIREMENTS**
4 **SUMMARY?**

5 **A.** Yes. Exhibit No. CS-7 shows the revised revenue requirements summary. The revised
6 rate increase the Authority is seeking is approximately \$15,700,000 annually.

7 **Q. DOES THAT CONCLUDE YOUR PREPARED REBUTTAL TESTIMONY?**

8 **A.** Yes, it does.

**VIRGIN ISLANDS WATER AND POWER AUTHORITY
ELECTRIC SYSTEM**

EXISTING AND PROPOSED MISCELLANEOUS SERVICE CHARGES

Fee	Existing	Proposed
1 Administrative Processing Disconnection at Meter	\$30.00	\$40.00
2 Administrative Processing Disconnection at Meter	\$55.00	\$75.00
3 Reconnection at Meter	\$55.00	\$75.00
4 Reconnection at Pole	\$111.00	\$150.00
5 Reconnection fees after normal working hours, holidays, weekends	DOUBLED	DOUBLED
6 Service Initiation Fee - Single Phase	\$30.00	\$40.00
7 Service Initiation Fee - Three Phase	\$83.00	\$112.00
8 Security Deposit - Minimum	\$111.00	\$150.00

VIRGIN ISLANDS WATER AND POWER AUTHORITY
Electric System

Summary of Proposed 5-Year Capital Plan
Fiscal Years 2013-2017

Ln. No.	Description (a)	Fiscal Year Ending June 30					Total (g)
		2013 (b)	2014 (c)	2015 (d)	2016 (e)	2017 (f)	
<u>Estimated Capital Expenditures and Uses</u>							
PRODUCTION							
<u>Island of St. Thomas</u>							
1	Units Replacement and Upgrades	\$ 8,409,000	\$ 7,043,200	\$ 3,846,464	\$ 1,689,783	\$ 5,933,189	\$ 26,921,636
2	Fuel Tank Upgrade	436,732	209,068	121,450	123,876	126,354	1,017,480
3	Other Improvements	3,109,562	2,076,810	2,255,084	2,254,383	2,245,708	11,941,547
4	Total St. Thomas	11,955,294	9,329,078	6,222,998	4,068,042	8,305,251	39,880,663
<u>Island of St. Croix</u>							
5	Units Replacement and Upgrades	\$ 4,820,000	\$ 6,210,000	\$ 2,500,000	\$ 2,650,000	\$ 2,000,000	\$ 18,180,000
6	Fuel Tank Upgrade	210,000	0	120,000	0	0	330,000
7	Unit 24 (WHRB)	500,000	500,000	500,000	0	0	1,500,000
8	Other Improvements	5,260,000	3,415,000	5,235,000	7,555,000	1,700,000	23,165,000
9	Total St. Croix	10,790,000	10,125,000	8,355,000	10,205,000	3,700,000	43,175,000
10	TOTAL PRODUCTION	\$ 22,745,294	\$ 19,454,078	\$ 14,577,998	\$ 14,273,042	\$ 12,005,251	\$ 83,055,663
TRANSMISSION AND DISTRIBUTION							
<u>Island of St. Thomas</u>							
11	T&D	1,032,750	1,133,050	1,022,000	1,042,300	1,014,000	5,244,100
12	Design and Construction	8,217,209	1,700,000	100,000	100,000	2,100,000	12,217,209
<u>Island of St. John</u>							
13	T&D	573,750	556,750	556,000	571,000	616,000	2,873,500
<u>Island of St. Croix</u>							
14	T&D	1,303,750	1,078,050	1,148,000	907,300	1,110,000	5,547,100
15	Design and Construction	10,998,098	9,306,917	100,000	100,000	100,000	20,605,015
16	Sub-Station	917,234	78,000	20,000	-	10,000	1,025,234
17	System Planning	6,717,607	6,203,000	100,000	100,000	350,000	13,470,607
18	TOTAL TRANSMISSION AND DISTRIBUTION	\$ 29,760,397	\$ 20,055,767	\$ 3,046,000	\$ 2,820,600	\$ 5,300,000	\$ 60,982,765
19	CORPORATE SERVICES	\$ 2,440,500	\$ 2,465,000	\$ 2,382,000	\$ 12,110,000	\$ 11,960,000	\$ 31,357,500
20	TOTAL CAPITAL EXPENDITURES	\$ 54,946,191	\$ 41,974,845	\$ 20,005,998	\$ 29,203,642	\$ 29,265,251	\$ 175,395,927
<u>Expected Funding Sources</u>							
21	Beginning Balance	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
22	Line of Credit	0	0	0	0	0	0
23	Grants	4,902,209	400,000	0	4,000,000	0	9,302,209
24	Proceeds of Series 2010 Bonds	3,778,910	6,136,478	0	0	0	9,915,388
25	Proceeds of RUS Loan	0	5,000,000	6,000,000	0	0	11,000,000
26	Proceeds of Future Bonds	9,300,000	9,000,000	1,500,000	14,600,000	18,600,000	53,000,000
27	Investment Earnings on Construction Funds	0	0	0	0	0	0
28	Payment from Water System	0	0	0	0	0	0
29	Generation Surcharge	6,200,000	5,550,000	0	0	0	11,750,000
30	Customer Contribution	0	0	0	0	0	0
31	Self Insurance Funds	0	0	0	0	0	0
32	Hazard Mitigation Funds	3,175,809	0	0	0	0	3,175,809
33	Line Loss Funding	2,213,618	300,000	0	0	0	2,513,618
34	Working Capital/Rev. and Sources to be Identified*	25,375,646	15,588,367	12,505,998	10,603,642	10,665,251	74,738,904
35	TOTAL EXPECTED FUNDING SOURCES	\$ 54,946,191	\$ 41,974,845	\$ 20,005,998	\$ 29,203,642	\$ 29,265,251	\$ 175,395,927

* Sources to be identified may include payments from the Water System, payment of Government Accounts Receivables, Line of Credit and other Sources.

VIRGIN ISLANDS WATER AND POWER AUTHORITY
Electric System

Summary of Five Year Capital Plan

Power Production Division - Islands of St. Thomas and St. John

Ln. No.	Project (a)	Fiscal Year Ending June 30					Total (g)
		2013 (b)	2014 (c)	2015 (d)	2016 (e)	2017 (f)	
<i>St. Thomas & St. John Power Production</i>							
<i>Unit Replacement and Upgrade Sub-Total</i>							
1	Unit 14 Combustion Inspection	350,000	-	350,000	-	-	700,000
2	Unit 14 Hot Gas Path Inspection	-	-	-	-	580,000	580,000
3	Unit 15 Combustion Inspection	-	-	-	190,000	-	190,000
4	Unit 15 Combustion Inspection	-	350,000	-	-	-	350,000
5	Unit 15 Mark V Replacement	-	350,000	-	-	-	350,000
6	Unit 15 Hot Gas Path Inspection	-	-	-	580,000	-	580,000
7	Unit 15 Major Inspection	-	-	-	-	2,000,000	2,000,000
8	Unit 18 Hot Gas Path Inspection	-	580,000	-	-	-	580,000
9	Unit 18 Mark V Controls Upgrade	350,000	-	-	-	-	350,000
10	Unit 18 Exciter Replacement	250,000	-	-	-	-	250,000
11	Unit 18 Major Inspection	-	-	2,000,000	-	-	2,000,000
12	Unit 22 Major Overhaul	4,600,000	-	-	-	-	4,600,000
13	Unit 22 Combustion Inspection	-	-	180,000	-	180,000	360,000
14	Unit 23 Major Maintenance	500,000	-	-	-	-	500,000
15	Unit 23 Hot Gas Path Inspection	-	750,000	-	750,000	-	1,500,000
16	Unit 23 Major Inspection	-	-	-	-	3,000,000	3,000,000
17	Unit #11 Turbine Inspection	1,109,000	-	-	-	-	1,109,000
18	Unit #11 Turbine Routine Maintenance	150,000	163,200	166,464	169,783	173,189	822,636
19	Unit #13 Boiler	1,100,000	1,000,000	-	-	-	2,100,000
20	Wasteheat Boiler #21	-	3,850,000	1,150,000	-	-	5,000,000
21	<i>Unit Replacement and Upgrade Sub-Total</i>	8,409,000	7,043,200	3,846,464	1,689,783	5,933,189	26,921,636
22	<i>Fuel Tank Upgrade Sub-Totals</i>	436,732	209,068	121,450	123,876	126,354	1,017,480
<i>Other Improvements and Misc Sub-Totals</i>							
23	Unit 14 Other	152,000	142,000	142,000	142,000	142,000	720,000
24	Unit 15 Other	142,000	142,000	142,000	142,000	142,000	710,000
25	Unit 18 Other	142,000	142,000	142,000	142,000	142,000	710,000
26	Unit 22 Other	142,000	147,000	142,000	147,000	142,000	720,000
27	Unit 23 Other	142,000	142,000	142,000	142,000	142,000	710,000
28	Unit 7J Other	95,000	55,000	55,000	55,000	55,000	315,000
29	Sea Water Intake Upgrade	200,000	-	-	-	-	200,000
30	Outfall Cooling Pond	10,404	10,612	10,824	11,041	11,262	54,143
31	Coalescert	5,000	5,000	5,000	5,000	5,000	25,000
32	Fire Protection	453,138	453,138	453,138	453,138	453,138	2,265,690
33	Equipment	239,000	15,000	10,000	15,000	10,000	289,000
34	EPA Compliance - C.E.M.S.	52,020	153,060	54,122	155,204	156,308	570,714
35	Metering Equipment	100,000	-	-	-	-	100,000
36	Emergency Systems (Generator)	65,000	50,000	250,000	-	-	365,000
37	Lab Testing Equipment	10,000	10,000	10,000	10,000	10,000	50,000
38	Fuel Centrifuge	-	-	140,000	-	-	140,000
39	Employee Parking Lot Paving	-	55,000	-	-	-	55,000
40	Office Furniture	-	-	8,000	5,000	5,000	18,000
41	Air Conditioning	20,000	20,000	20,000	20,000	20,000	100,000
42	Enviro Capital	50,000	40,000	59,000	40,000	40,000	229,000
43	Infrastructure - Mechanic Shop Rof Repair	120,000	-	-	-	-	120,000
44	Miscellaneous	970,000	495,000	470,000	770,000	770,000	3,475,000
45	<i>Other Improvements and Misc Sub-Totals</i>	3,109,562	2,076,810	2,255,084	2,254,383	2,245,708	11,941,547
Total St. Thomas and St. John							
46	Power Production	\$ 11,955,294	\$ 9,329,078	\$ 6,222,998	\$ 4,068,042	\$ 8,305,251	\$ 39,880,663

VIRGIN ISLANDS WATER AND POWER AUTHORITY
Electric System

Summary of Five Year Capital Plan
Power Production Division - Island of St. Croix

Ln. No.	Project (a)	Fiscal Year Ending June 30					Total (g)
		2013 (b)	2014 (c)	2015 (d)	2016 (e)	2017 (f)	
<i>St. Croix Power Production</i>							
<i>Performance Improvement Projects</i>							
1	Unit 10 STG Major Overhaul	-	1,000,000	1,000,000	-	-	\$ 2,000,000
2	Unit 11 STG Purchase Cond. Tubes	-	-	-	500,000	-	500,000
3	Unit 16 GT Major Overhaul	1,500,000	500,000	-	-	-	2,000,000
4	Unit 17 GT Major Overhaul	-	2,000,000	-	-	-	2,000,000
5	Unit 19 GT Major Overhaul	-	-	-	2,000,000	-	2,000,000
6	Unit 20 GT Major Overhaul	2,000,000	-	-	-	-	2,000,000
7	Unit 16 New Nox Skid Fab	-	35,000	-	-	-	35,000
8	Unit 16 Off Base Cooling	-	300,000	-	-	-	300,000
9	Unit 17 Off Base Cooling	300,000	-	-	-	-	300,000
10	Unit 17 Purchase New Exhaust Plenum	-	75,000	-	-	-	75,000
11	Unit 20 GT EX2100 Excitation System	-	300,000	-	-	-	300,000
12	Unit #21 HRSR Inspection / Repairs	-	500,000	-	-	-	500,000
13	Unit #24 HRSR Inspection / Repairs	500,000	-	-	-	-	500,000
14	Plant Air Compressors Remote/System	20,000	-	-	-	-	20,000
15	Gas Turbine Off Line Wash System	-	-	-	150,000	-	150,000
16	Unit #11 STG Major Overhaul	500,000	-	-	-	2,000,000	2,500,000
17	Units 16 & 20 Steam Injection Systems	-	1,500,000	1,500,000	-	-	3,000,000
18	Total Performance Improvement Projects	4,820,000	6,210,000	2,500,000	2,650,000	2,000,000	18,180,000
19	Fuel Tank Upgrade Sub-Totals	210,000	-	120,000	-	-	330,000
20	Unit 24 / Parts	500,000	500,000	500,000	-	-	1,500,000
21	Unit 16 GT MCC Upgrade	175,000	-	-	-	-	175,000
22	Unit 16 Mark VI Upgrade	-	350,000	-	-	-	350,000
23	Unit 17 Mark VI Upgrade	-	-	350,000	-	-	350,000
24	Unit 19 Mark VI Upgrade	-	-	-	350,000	-	350,000
25	Unit 20 Mark VI Upgrade	-	-	-	-	350,000	350,000
26	Units 10 & 11 Turbine Controls Upgrade	800,000	-	-	-	-	800,000
27	Units 10 & 11 MCC Load Center Upgrade	-	100,000	-	-	-	100,000
28	Unit #11 Boiler Inspection / Repairs	-	500,000	-	-	-	500,000
29	Unit #10 Upgrade Exciter	-	-	-	400,000	-	400,000
30	Fuel Centrifuge	-	-	-	150,000	-	150,000
31	Plant Fire Protection System	440,000	440,000	440,000	-	-	1,320,000
32	Maintenance Dept. Dump Truck & Manlift	125,000	-	-	-	-	125,000
33	Maintenance Tools and Equipment	60,000	60,000	60,000	-	-	180,000
34	Plant Valves Upgrade & Air Conditioning	110,000	-	-	-	-	110,000
35	Control Room Upgrade & Workstation	150,000	-	-	-	-	150,000
36	Operations & Maintenance Furniture	45,000	30,000	30,000	-	-	105,000
37	E.P.A. Compliance Issues	500,000	-	-	-	-	500,000
38	Nitrogen Test Equipment	100,000	-	-	-	-	100,000
39	Bailey System Upgrade	-	-	170,000	-	-	170,000
40	Pipe Hangers	30,000	-	-	-	-	30,000
41	Water Intake Structure Upgrades	200,000	-	-	-	-	200,000
42	Purchase 50 Ton Crane	300,000	-	-	-	-	300,000
43	Purchase M.O.V.'s Steam System	100,000	-	-	-	-	100,000
44	Generator to Bus Transformers	-	-	750,000	1,250,000	1,000,000	3,000,000
45	Plant Metering Equipment	-	-	200,000	-	-	200,000
46	Recondition Warehouse Devcon	75,000	-	-	-	-	75,000
47	Quality Control Lab Test Equipment	10,000	10,000	10,000	-	-	30,000
48	New .25 Fuel Tank	-	-	1,400,000	-	-	1,400,000
49	Automatic Generator Controls (AGC)	70,000	-	-	-	-	70,000
50	New Chemical Shed & Drum Rack	120,000	-	-	-	-	120,000

VIRGIN ISLANDS WATER AND POWER AUTHORITY
Electric System

Summary of Five Year Capital Plan

Power Production Division - Island of St. Croix

Ln. No.	Project (a)	Fiscal Year Ending June 30					Total (g)
		2013 (b)	2014 (c)	2015 (d)	2016 (e)	2017 (f)	
51	Boat Ramp & Parking Lot Paving	200,000	-	-	55,000	-	255,000
52	Station Service Breakers Upgrade	150,000	475,000	475,000	-	-	1,100,000
53	Security Fence Enhancement		200,000	-	-	-	200,000
54	EPA Richmond Lots	250,000	250,000	-	-	-	500,000
55	Drainage to the Back of R.O. c/pond	350,000	-	-	-	-	350,000
56	Columns Repairs in Basement	500,000	-	-	-	-	500,000
57	Richmond Drainage	-	-	-	4,000,000	-	4,000,000
58	Isolation Transformer	-	1,000,000	1,000,000	1,000,000	-	3,000,000
59	New Electrical Duct Bank	-	-	350,000	350,000	350,000	1,050,000
60	Dock Fuel Oil Piping Replacement	400,000	-	-	-	-	400,000
61	Other Improvements and Misc Sub-Totals	5,260,000	3,415,000	5,235,000	7,555,000	1,700,000	23,165,000
62	Total St. Croix Power Production	\$ 10,790,000	\$ 10,125,000	\$ 8,355,000	\$ 10,205,000	\$ 3,700,000	\$ 43,175,000

VIRGIN ISLANDS WATER AND POWER AUTHORITY
Electric System

Summary of Five Year Capital Plan

Electric Distribution Division and Design and Construction - Islands of St. Thomas and St. John

Ln. No.	Project (a)	Fiscal Year Ending June 30					Total (g)
		2013 (b)	2014 (c)	2015 (d)	2016 (e)	2017 (f)	
<i>Island of St. Thomas Distribution</i>							
1	New Construction	\$ 100,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 180,000	\$ 820,000
2	Service Lines	180,000	180,000	180,000	180,000	180,000	900,000
3	Transformer (Aerial)	125,000	125,000	125,000	125,000	125,000	625,000
4	Bucket/Digger Trucks-STT	250,000	300,000	250,000	300,000	250,000	1,350,000
5	Transformers (Pad Mount)	100,000	100,000	100,000	100,000	100,000	500,000
6	Distribution Switches and Reclosers	90,750	90,750	-	-	-	181,500
7	Highway Street Lights	50,000	25,000	50,000	25,000	50,000	200,000
8	Public Street Lights	75,000	50,000	75,000	50,000	75,000	325,000
9	Underground Cables	-	30,000	-	30,000	-	60,000
10	Private Area Lighting	4,000	-	4,000	-	4,000	12,000
11	Traffic Safety Equipment	-	2,300	-	2,300	-	4,600
12	Radio Equipment (MS)	8,000	-	8,000	-	-	16,000
13	Metering Equipment (MS)	50,000	50,000	50,000	50,000	50,000	250,000
14	Total St. Thomas Distribution	\$ 1,032,750	\$ 1,133,050	\$ 1,022,000	\$ 1,042,300	\$ 1,014,000	\$ 5,244,100
<i>Island of St. Thomas Design & Construction</i>							
15	Harley Substation	100,000	-	-	-	-	100,000
16	FHWA/DPW Market Square	1,102,954	-	-	-	-	1,102,954
17	Main Street Underground (Primary Lines)	2,900,000	-	-	-	-	2,900,000
18	Main Street Enhancement (Secondary Lines)	400,000	-	-	-	-	400,000
19	New Underground Service to Customers	100,000	100,000	100,000	100,000	100,000	500,000
20	7E Feeder Upgrade	200,000	-	-	-	-	200,000
21	8E Feeder Installation	450,000	-	-	-	-	450,000
22	FDR 11 Upgrade	500,000	200,000	-	-	-	700,000
23	FDR 8C to Donoe	200,000	-	-	-	-	200,000
24	FHWA/DPW Frenchman's Bay Underground	700,000	400,000	-	-	-	1,100,000
25	T&D Dispatch Center	1,000,000	1,000,000	-	-	-	2,000,000
26	CAHS XFMR Replacement Project	160,554	-	-	-	-	160,554
27	Medical Arts Complex Replacement Proj	219,350	-	-	-	-	219,350
28	Main Street Line Removal	50,000	-	-	-	-	50,000
29	Pump Station XFMR Replacement Proj	119,351	-	-	-	-	119,351
30	Tools & Equipment	10,000	-	-	-	-	10,000
31	Radio Equipment for Vehicles	5,000	-	-	-	-	5,000
32	New Line Department Facility STJ	-	-	-	-	2,000,000	2,000,000
33	Total St. Thomas Design & Construction	\$ 8,217,209	\$ 1,700,000	\$ 100,000	\$ 100,000	\$ 2,100,000	\$ 12,217,209
<i>Island of St. John Distribution</i>							
34	New Construction	105,000	105,000	105,000	105,000	105,000	\$ 525,000
35	Service Lines	105,000	105,000	105,000	105,000	105,000	525,000
36	Distribution Transformers	75,000	75,000	75,000	75,000	75,000	375,000
37	Distribution Switches and Reclosers	90,750	90,750	-	-	-	181,500
38	Public Street Lights	25,000	25,000	25,000	25,000	25,000	125,000
39	Private Area Lighting	6,000	6,000	6,000	6,000	6,000	30,000
40	Radio Equipment	6,000	-	-	5,000	-	11,000
41	Ice Machine	5,000	-	-	-	-	5,000
42	Security Door Lock	6,000	-	-	-	-	6,000
43	Compressor Truck	100,000	-	-	-	-	100,000
44	Utility Trucks	50,000	150,000	240,000	250,000	300,000	990,000
45	Total St. John Distribution	\$ 573,750	\$ 556,750	\$ 556,000	\$ 571,000	\$ 616,000	\$ 2,873,500

VIRGIN ISLANDS WATER AND POWER AUTHORITY
Electric System

Summary of Five Year Capital Plan
Electrical Distribution Division and Design and Construction - Island of St. Croix
Substations and System Planning

Ln. No.	Project (a)	Fiscal Year Ending June 30					Total (g)
		2013 (b)	2014 (c)	2015 (d)	2016 (e)	2017 (f)	
<u>Island of St. Croix Distribution</u>							
1	New Construction	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 500,000
2	Service Lines	180,000	180,000	180,000	180,000	180,000	900,000
3	Transformers (Aerial)	150,000	150,000	150,000	150,000	150,000	750,000
4	Transformers (Pad-Mount)	100,000	100,000	100,000	100,000	100,000	500,000
5	Distribution Switches and Reclosers	90,750	90,750	-	-	-	181,500
6	Public Street Lights	75,000	50,000	75,000	50,000	75,000	325,000
7	Private Area Light	30,000	30,000	30,000	-	-	90,000
8	Bucket/Digger Trucks-STX	250,000	250,000	300,000	250,000	300,000	1,350,000
9	High Voltage Splicing/Testing Van	-	50,000	-	-	-	50,000
10	Pad Mount Primary Meters	50,000	-	50,000	-	50,000	150,000
11	Highway Lights	50,000	50,000	50,000	50,000	50,000	250,000
12	Traffic Safety Equipment	-	2,300	-	2,300	-	4,600
13	Radio Equipment-Two Way	8,000	-	8,000	-	-	16,000
14	Underground Cables- 15KV & 25KV 1/0 Cu	30,000	-	30,000	-	30,000	90,000
15	Underground Switches for Manholes	50,000	-	50,000	-	50,000	150,000
16	Transformer Storage Building	100,000	-	-	-	-	100,000
17	Metering Equipment	30,000	25,000	25,000	25,000	25,000	130,000
18	40 Ft. Container	10,000	-	-	-	-	10,000
19	Total St. Croix Distribution	\$ 1,303,750	\$ 1,078,050	\$ 1,148,000	\$ 907,300	\$ 1,110,000	\$ 5,547,100
<u>Island of St. Croix Design & Construction</u>							
20	Christiansted Town Underground Project Phase II	3,175,809	-	-	-	-	\$ 3,175,809
21	69KV Transmission Line Installation	300,000	-	-	-	-	300,000
22	Substation Land (Midland Substation)	500,000	-	-	-	-	500,000
23	Fiber Optic Cable (From Richmond to Midland)	200,000	-	-	-	-	200,000
24	Analy-Line Retirement of old Cable	50,468	-	-	-	-	50,468
25	FDR 6 & 10 Double Circuit Relocation	200,000	200,000	-	-	-	400,000
26	Hannah's Rest Line Upgrade	-	400,177	-	-	-	400,177
27	New Underground Service to Customers	100,000	100,000	100,000	100,000	100,000	500,000
28	Mid Island Substation	3,778,910	6,136,478	-	-	-	9,915,388
29	FDR 2 UG Express Cable Installation	350,000	-	-	-	-	350,000
30	St. Georges Line Upgrade	-	470,262	-	-	-	470,262
31	Fredenburg Line Upgrade	342,911	-	-	-	-	342,911
32	T&D Dispatch Center	2,000,000	2,000,000	-	-	-	4,000,000
33	Total St. Croix Design & Construction	\$ 10,998,098	\$ 9,306,917	\$ 100,000	\$ 100,000	\$ 100,000	\$ 20,605,015
34	Sub-Stations	\$ 917,234	\$ 78,000	\$ 20,000	\$ -	\$ 10,000	\$ 1,025,234
<u>System Planning</u>							
35	GPS / GIS	500,000	100,000	-	-	-	\$ 600,000
36	Scada/Distribution Automation	100,000	100,000	100,000	100,000	100,000	500,000
37	Crew Manager Equipment	100,000	-	-	-	-	100,000
38	Transformer Purchase (New DOE Specs)	627,403	-	-	-	-	627,403
39	Transformer Purchase (New DOE Specs)	136,989	-	-	-	-	136,989
40	Transformer Replacement Program	236,215	-	-	-	-	236,215
41	AMI/AMR Projects	5,000,000	6,000,000	-	-	-	11,000,000
42	Comm. Equipment (Wireless Back Up Fiber)	-	-	-	-	250,000	250,000
43	Printer	5,000	-	-	-	-	5,000
44	SMS Server for STX (Independent Server STX)	10,000	-	-	-	-	10,000
45	Handheld Radios & Projector	2,000	3,000	-	-	-	5,000
46	Total System Planning	\$ 6,717,607	\$ 6,203,000	\$ 100,000	\$ 100,000	\$ 350,000	\$ 13,470,607

VIRGIN ISLANDS WATER AND POWER AUTHORITY
Electric System

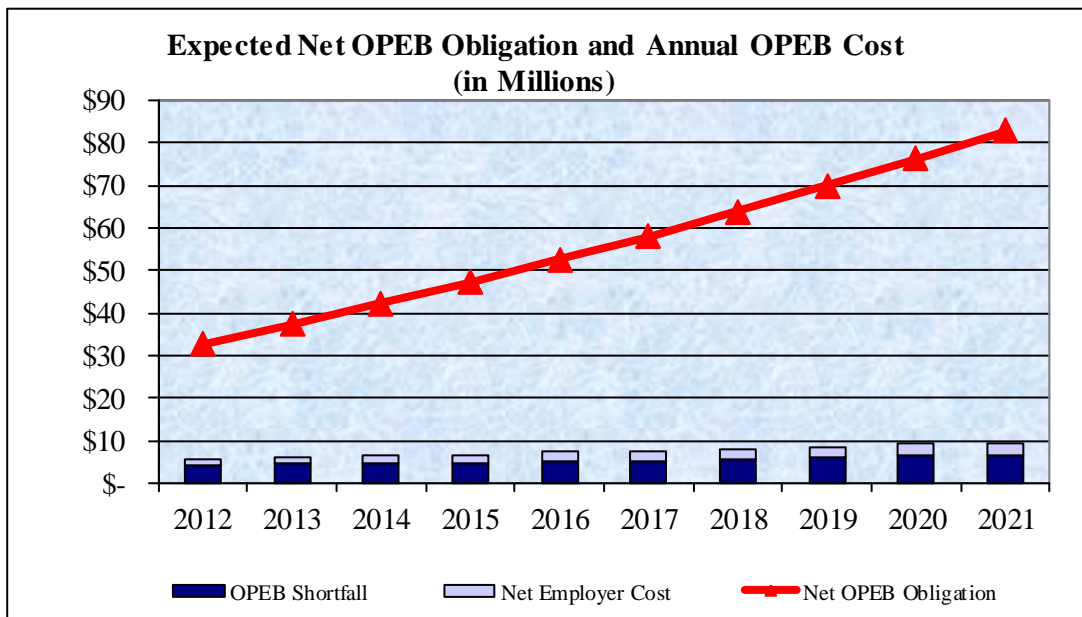
Summary of Five Year Capital Plan
Corporate Service Division

Ln. No.	Project (a)	Fiscal Year Ending June 30					Total (g)
		2013 (b)	2014 (c)	2015 (d)	2016 (e)	2017 (f)	
Corporate Service Division							
1	Admin Building St. Thomas	-	-	-	10,000,000	10,000,000	\$ 20,000,000
2	Intranet Improvement	144,000	150,000	150,000	150,000	150,000	744,000
3	Microsoft Licensing	250,000	250,000	150,000	150,000	150,000	950,000
4	Other Software Purchase	100,000	50,000	50,000	50,000	50,000	300,000
5	Fiber Installation	100,000	100,000	100,000	100,000	100,000	500,000
6	Network Wiring Upgrade	75,000	75,000	75,000	75,000	75,000	375,000
7	AT&T Co Location	110,000	-	-	-	-	110,000
8	Disaster Recovery Site	-	-	100,000	100,000	50,000	250,000
9	S2 Control	-	50,000	50,000	50,000	50,000	200,000
10	Security Cameras (G)	-	150,000	50,000	50,000	50,000	300,000
11	Document Management	55,000	10,000	10,000	10,000	10,000	95,000
12	PC Lumpsum	85,000	95,000	95,000	100,000	100,000	475,000
13	Video Cameras	15,000	20,000	-	10,000	5,000	50,000
14	Video Conference Upgrade	15,000	75,000	10,000	10,000	10,000	120,000
15	Repeater/Radios	17,000	40,000	30,000	20,000	5,000	112,000
16	Phone System Upgrade	131,500	10,000	5,000	5,000	5,000	156,500
17	Wireless Phone	20,000	5,000	2,000	-	-	27,000
18	Microwave	30,000	20,000	20,000	20,000	-	90,000
19	Naviline Upgrade	-	-	40,000	-	-	40,000
20	Air Conditions	40,000	40,000	50,000	50,000	50,000	230,000
21	Furniture	35,000	35,000	35,000	35,000	35,000	175,000
22	Duct Replacement	75,000	10,000	10,000	10,000	10,000	115,000
23	Vehicle (Jeeps/Trucks)	160,000	300,000	300,000	300,000	300,000	1,360,000
24	Building Improvements	75,000	50,000	50,000	75,000	50,000	300,000
25	Fuel Station	175,000	20,000	10,000	10,000	-	215,000
26	Garage Building (STX)	-	200,000	300,000	-	-	500,000
27	Warehouse Places	105,000	75,000	75,000	75,000	-	330,000
28	Truck Hoist (STX)	65,000	65,000	-	-	-	130,000
29	Security Cameras (G)	-	15,000	15,000	5,000	5,000	40,000
30	Other	563,000	555,000	600,000	650,000	700,000	3,068,000
31	Total Corporate Services	\$ 2,440,500	\$ 2,465,000	\$ 2,382,000	\$ 12,110,000	\$ 11,960,000	\$ 31,357,500

TEN-YEAR PROJECTION OF UNFUNDED NET OPEB OBLIGATION

All results presented in this Report assume no advance-funding of your OPEB Plan. It is assumed that the current operation of the Plan will continue without change. The graphics and tables below illustrate, based on simulated open group projection, how the Net OPEB Obligation and the Annual OPEB Cost are expected to grow over the next 10 years assuming no advance-funding (i.e., no change in operation). The Net OPEB Obligation will be presented as a liability in the Statement of Net Assets.

Fiscal Year Ending 6/30	Total Annual OPEB Cost at Fiscal Year End	Current Net Employer Subsidy	Annual Net OPEB Shortfall	Net OPEB Obligation at Fiscal Year End
2012	\$ 5,794,613	\$ 1,280,324	\$ 4,514,289	\$ 32,781,778
2013	6,012,071	1,418,684	4,593,387	37,375,165
2014	6,505,285	1,592,379	4,912,906	42,288,071
2015	6,738,675	1,771,434	4,967,241	47,255,312
2016	7,334,712	1,941,768	5,392,944	52,648,256
2017	7,586,147	2,145,750	5,440,397	58,088,653
2018	8,242,881	2,361,377	5,881,504	63,970,157
2019	8,512,304	2,568,916	5,943,388	69,913,545
2020	9,236,084	2,787,242	6,448,842	76,362,387
2021	9,521,984	3,015,222	6,506,762	82,869,149



**VIRGIN ISLANDS WATER AND POWER AUTHORITY
COMBINED TOTAL ELECTRIC SYSTEM**

Exhibit No. ____ (CS-6)

PROJECTED BILLING UNITS AND BASE RATE REVENUES

Fiscal Year Ending June 30, 2011

		July 2009 Rate [1]	Ratio	Customers	Billing Units	Base Rate Revenues (\$000) [2]	Adjusted to Test Year Revenues (\$000) [2]	
							Ratio	
Residential								
1	Customers - Single Phase	\$5.54	99.9%	44,948	539,376	\$2,988	99.54%	\$2,974
2	Customers - Three Phase	\$11.81	0.1%	45	540	6	99.54%	6
3	Energy	\$0.0838255	100.0%	44,993	266,721	22,358	95.78%	21,415
						<u>25,353</u>		<u>24,395</u>
Commercial								
4	Customers - Single Phase	\$7.21	93.0%	7,597	91,166	657	99.54%	654
5	Customers - Three Phase	\$14.41	7.0%	572	6,862	99	99.54%	98
6	Energy	\$0.1182590	100.0%	8,169	135,224	15,991	95.78%	15,317
						<u>16,748</u>		<u>16,069</u>
Large Power								
7	Customers	\$55.43		1,033	12,396	687	99.54%	684
8	Demand	\$2.22			1,360,400	3,020	95.78%	2,893
9	Energy - First Block	\$0.1181330			27,012	3,191	95.78%	3,056
10	Energy - Second Block	\$0.1026100			50,648	5,197	95.78%	4,978
11	Energy - Third Block	\$0.0622360			118,178	7,355	95.78%	7,045
12	Energy - Fourth Block	\$0.0559270			141,814	7,931	95.78%	7,597
13	Large Power Energy				337,652	<u>27,381</u>		<u>26,252</u>
Public Street and Private Outdoor Lighting								
14	Mercury Vapor 175W	\$11.47			35,304	405	100.00%	405
15	Mercury Vapor 400W	\$20.07			3,432	69	100.00%	69
16	Sodium Vapor 100W	\$11.34			36,000	408	100.00%	408
17	Sodium Vapor 150W	\$11.44			86,400	988	100.00%	988
18	Sodium Vapor 200W	\$19.77			18,000	356	100.00%	356
19	Sodium Vapor 250W	\$19.87			75,600	1,502	100.00%	1,502
20	Energy				16,198	<u>3,729</u>		<u>3,729</u>
21	TOTAL COMBINED ELECTRIC SYSTEM				<u>755,795</u>	<u>\$73,210</u>		<u>\$70,445</u>
22	Exhibit CS-1 Adjusted Test Year Revenues							<u>\$70,125</u>
23	Difference							<u>\$320</u>

(1) Rate Effective July 1, 2009.

(2) Excludes revenues from the LEAC.

VIRGIN ISLANDS WATER AND POWER AUTHORITY
Electric System
2012 Electric Rate Case

Adjusted Historical Revenue Requirements

Ln. No.	Description (a)	Fiscal Year Ended June 30, 2011 ^[1] (b)	Adjustment (c)	Adjustment (d)	Adjustment (e)	Adjustment (f)	Adjusted Test Year	
							WITHOUT Rate Increase (g)	WITH Rate Increase (h)
OPERATING REVENUES								
Sales of Electricity								
1	Base Rate Revenues	\$73,212,876	(\$2,767,876) A	\$0	\$0	\$0	\$70,445,000	\$70,445,000
2	LEAC Revenues	201,665,152	(8,505,843) B	59,114,725 J	0	16,650,000 O	268,924,034	268,924,034
Surcharges:								
3	Line Loss Surcharge	1,819,407	(76,739) C	0	0	0	1,742,668	1,742,668
4	Interim Rate Increase Effective Aug. 1, 2012	0	0	0	8,600,000 M	0	8,600,000	8,600,000
5	Assumed Rate Increase Effective Nov. 1, 2013	0	0	0	0	0	0	15,700,000
6	Payment in Lieu of Taxes	500,827	0	0	0	0	500,827	500,827
7	<i>Subtotal Operating Revenues</i>	<u>277,198,262</u>	<u>(11,350,458)</u>	<u>59,114,725</u>	<u>8,600,000</u>	<u>16,650,000</u>	<u>350,212,529</u>	<u>365,912,529</u>
8	Other Operating Revenue	3,271,311	0	1,539,513 K	0	150,816 R	4,961,640	4,961,640
9	<i>Total Operating Revenues</i>	<u>280,469,573</u>	<u>(11,350,458)</u>	<u>60,654,238</u>	<u>8,600,000</u>	<u>16,800,816</u>	<u>355,174,169</u>	<u>370,874,169</u>
OPERATING EXPENSES								
Production Expenses								
10	Fuel	199,488,026	(8,414,016) D	59,114,725 J	0	0	250,188,735	250,188,735
11	Other	19,567,332	0	0	0	16,650,000 O	36,217,332	36,217,332
12	Total Production Expenses	<u>219,055,358</u>	<u>(8,414,016)</u>	<u>59,114,725</u>	<u>0</u>	<u>16,650,000</u>	<u>286,406,067</u>	<u>286,406,067</u>
13	Distribution Expenses	10,728,556	0	0	0	0	10,728,556	10,728,556
14	Customer Service	5,855,295	0	0	0	0	5,855,295	5,855,295
15	Administrative & General Expenses	23,152,405	760,343 E	1,276,285 L	212,787 N	331,700 P	25,733,520	25,733,520
16	<i>Total Operating Expenses</i>	<u>258,791,614</u>	<u>(7,653,673)</u>	<u>60,391,010</u>	<u>212,787</u>	<u>16,981,700</u>	<u>328,723,439</u>	<u>328,723,439</u>
17	Net Operating Revenues	21,677,959	(3,696,785)	263,227	8,387,213	(180,884)	26,450,730	42,150,730
18	Other Income and Deductions	1,166,274	0	0	0	0	1,166,274	1,166,274
19	Other Deductions	0	0	0	0	0	0	0
20	<i>Total Available For Debt Service</i>	<u>22,844,233</u>	<u>(3,696,785)</u>	<u>263,227</u>	<u>8,387,213</u>	<u>(180,884)</u>	<u>27,617,004</u>	<u>43,317,004</u>
Debt Service								
Senior Bonds								
21	Series 1998 Bonds	899,145	(899,145) F	0	0	0	0	0
22	Series 2003 Bonds	5,000,125	0	0	0	0	5,000,125	5,000,125
23	Series 2010A Bonds	6,150,338	2,662 F	0	0	0	6,153,000	6,153,000
24	Series 2010B Bonds	446,250	0	0	0	0	446,250	446,250
25	Series 2010C Bonds	1,641,045	883,955 F	0	0	0	2,525,000	2,525,000
26	Series 2012A Bonds	0	695,600 F	0	0	0	695,600	695,600
27	Future Bonds	0	1,578,343 F	0	0	0	1,578,343	1,578,343
28	Rural Utilities Service Loan	0	1,006,000 F	0	0	0	1,006,000	1,006,000
29	<i>Subtotal Senior Bonds</i>	<u>14,136,903</u>	<u>3,267,415</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>17,404,318</u>	<u>17,404,318</u>
Subordinated Bonds								
30	Series 2007A Subordinated Bonds	2,879,250	0	0	0	0	2,879,250	2,879,250
31	Series 2012B Subordinated Bonds	0	3,842,781 F	0	0	0	3,842,781	3,842,781
32	Series 2012C Subordinated Bonds	0	1,846,592 F	0	0	0	1,846,592	1,846,592
33	<i>Subtotal Subordinated Bonds</i>	<u>2,879,250</u>	<u>5,689,373</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>8,568,623</u>	<u>8,568,623</u>
34	<i>Total Senior and Subordinated Bonds</i>	<u>17,016,153</u>	<u>8,956,788</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>25,972,941</u>	<u>25,972,941</u>
Third Lien Subordinated Debt								
35	Line of Credit (L.O.C.)	573,818	271,182 F	0	0	0	845,000	845,000
36	General Obligation Notes	8,174,011	(4,704,011) F	0	0	0	3,470,000	3,470,000
37	Carrying Costs on Deferred Fuel Balances	0	2,271,859 G	0	0	0	2,271,859	2,271,859
38	Carrying Costs on Govt. Accounts Receivable	0	241,741 H	0	0	0	241,741	241,741
39	<i>Total Debt Service</i>	<u>25,763,982</u>	<u>7,037,559</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>32,801,541</u>	<u>32,801,541</u>
40	OPEB Accrued Liability	6,087,443	0	0	0	(1,709,157) Q	4,378,286	4,378,286
41	Self Insurance Fund	0	1,310,200 I	0	0	0	1,310,200	1,310,200
42	Payment in Lieu of Taxes	500,000	0	0	0	0	500,000	500,000
43	Amount Available for Capital Improvements and Working Capital	<u>(\$9,507,192)</u>	<u>(\$12,044,544)</u>	<u>\$263,227</u>	<u>\$8,387,213</u>	<u>\$1,528,273</u>	<u>(\$11,373,022)</u>	<u>\$4,326,978</u>
DEBT SERVICE COVERAGE								
44	Senior Bonds	<u>1.61</u>					<u>1.58</u>	<u>2.48</u>
45	Total Senior Bonds and Subordinated Bonds	<u>1.34</u>					<u>1.06</u>	<u>1.66</u>
46	Total Debt Service	<u>0.88</u>					<u>0.91</u>	<u>1.43</u>

[1] Fiscal Year ended June 30, 2011 audited data presented on an equivalent cash bases as set forth in the Authority's Bond Resolution. The amounts shown exclude investment income on construction funds, and exclude amortization and depreciation expense.

VIRGIN ISLANDS WATER AND POWER AUTHORITY
Electric System

Adjustments to Revenue Requirements

Adjustment	Description	Amount (\$)
Adjustment A	- Decreased Base Rate Revenues due to Decreased Energy Sales	(\$2,767,876)
Adjustment B	- Decreased LEAC Revenues due to Decreased Energy Sales	(\$8,505,843)
Adjustment C	- Decreased Line Loss Surcharge Revenues due to Decreased Energy Sales	(\$76,739)
Adjustment D	- Decreased Fuel Expense due to Decreased Energy Sales	(\$8,414,016)
Adjustment E	- Increased Personnel Costs	\$760,343
Adjustment F	- Recognize New Debt Service Amounts Due to Future Bonds and Differences in P&I for Existing Bonds	\$4,523,959
Adjustment G	- Increased Debt due to Carrying Costs on Deferred Fuel	\$2,271,859
Adjustment H	- Increased Debt due to Carrying Costs on Government Accounts Receivables	\$241,741
Adjustment I	- Increased Self Insurance Fund to Reflect an \$8,000,000 Required Balance	\$1,310,200
Adjustment J	- Increased LEAC Revenues due to Increased Fuel Costs	\$59,114,725
Adjustment K	- Increased Revenues due to Change in Allocation to the Water System	\$1,539,513
Adjustment L	- Increased Operating Expenses Adjusted for Inflation	\$1,276,285
Adjustment M	- Additional Revenues due to Interim Rate Increase	\$8,600,000
Adjustment N	- Recognize Regulatory Costs Associated with Periodic Rate Reviews	\$212,787
Adjustment O	- Recognize Generation Surcharge Amounts	\$16,650,000
Adjustment P	- Recognize Costs Associated with the Proposed Cost of Service, Depreciation and Generation Planning Studies	\$331,700
Adjustment Q	- Recognize Revised OPEB Estimate	(\$1,709,157)
Adjustment R	- Recognize Attrition in Water Production Employees	\$150,816

VIRGIN ISLANDS WATER AND POWER AUTHORITY
Electric System

Adjustment to Recognize Change in
Allocation to the Water System
ADJUSTMENT K

Line No.	Description	Annualized Adjustments - FY2013 Dollars		
		Projected Increases (Decreases) to Net Revenues		
		Increases (a)	Decreases (b)	Total (c)
<u>Projected Changes Related to Water Base Rates</u>				
<u>Personnel Cost Allocation</u>				
1	Increase in Personnel Costs (Direct Production)	[1] \$0	(\$1,915,122)	(\$1,915,122)
2	Increase in Other Post Employment Benefits (OPEB)	[2] 0	(239,391)	(239,391)
3	Total Personnel Cost Allocation	0	(2,154,513)	(2,154,513)
<u>Indirect Cost Allocation Cost Allocation</u>				
4	Increase in Production O&M Allocation	[3] 0	(2,029,634)	(2,029,634)
5	Increase in Capital Allocation	[3] 0	(177,717)	(177,717)
6	Elimination of Water Allocation	[4] 1,519,371	0	1,519,371
7	Elimination of Electric Allocation	[5] 0	(1,078,982)	(1,078,982)
8	Direct Bill Water Utility for Electric Service (Distribution)	[5] 960,000	0	960,000
9	Due from Electric - Intake No. 2	[5] 0	(299,279)	(299,279)
10	Total Indirect Cost Allocation	2,479,371	(3,585,612)	(1,106,241)
11	Total Projected Changes Related to Water Base Rates	\$2,479,371	(\$5,740,125)	(\$3,260,754)
<u>Projected Changes Related to LEAC / PWA</u>				
<u>Direct Charges for Service</u>				
12	Direct Bill Water Utility for Electric Service (Production)	[5] 7,858,054	0	7,858,054
13	Direct Bill Electric Utility for Water Service	[4] 0	(3,057,788)	(3,057,788)
14	Total Direct Charges for Services	\$7,858,054	(\$3,057,788)	\$4,800,267
15	Total Adjustments	\$10,337,425	(\$8,797,912)	\$1,539,513

Footnotes:

- [1] Direct allocation of production-related personnel expenses must be recovered from the Electric System or eliminated.
 [2] Amount estimated based upon the percent of total personnel costs allocable to production or 25% of total OPEB.
 [3] Indirect cost allocations eliminated completely.
 [4] The water allocation is eliminated and direct water charges to the Electric System are proposed as follows:

Total Annual Water Purchased (kgal)	273,750
Projected (Average) Bulk Water Costs	\$11.17
Total Projected Revenues from Electric System	<u>\$3,057,788</u>

- [5] The electric allocation is eliminated and direct electric charges are proposed as follows:

Billed to Water Utility

Projected Revenues from Water Utility

Total Annual Energy Needs (kWh)	3,000,000
Current Rate per kWh	\$0.320
Total Projected Revenues from Water Utility	<u>\$960,000</u>

Billed to Water System by Electric System

Projected Revenues from Water System

Estimated kWh (Production) - 1st Pass	23,872,044
Estimated kWh (Production) - 2nd Pass	684,375
Total Projected kWh Seven Seas	<u>24,556,419</u>
Current Rate per kWh	\$0.320
Total Projected Revenues from Water System	<u>\$7,858,054</u>