NOVEMBER 19, 2021 **INR-07-VITOL-19**

THE UNITED STATES VIRGIN ISLANDS

OFFICE OF THE VIRGIN ISLANDS INSPECTOR GENERAL


OVIIG PHOTO


VI CONSORTIUM PHOTO

INSPECTION OF THE WAPA-VITOL FUEL CONTRACTING PROCESS AND TRANSACTIONS

ILLEGAL OR WASTEFUL ACTIVITIES SHOULD BE REPORTED TO THE OFFICE OF THE VIRGIN ISLANDS INSPECTOR GENERAL BY:

Calling:

(340) 774-3388

Sending Written Documents to:

Office of the Virgin Islands Inspector General
2315 Kronprindsens Gade # 75
St. Thomas, Virgin Islands 00802

Web Site:

www.viig.org

E-Mail:

taskforce@viig.org

GOVERNMENT OF THE UNITED STATES VIRGIN ISLANDS
OFFICE OF THE V. I. INSPECTOR GENERAL
2315 Kronprindsens Gade #75, Charlotte Amalie, St. Thomas, V. I. 00802-6468
No 1. Commercial Building, Lagoon Street Complex, Frederiksted, St. Croix, V. I. 00840

STEVEN VAN BEVERHOUDT
V. I. INSPECTOR GENERAL

Tel: (340) 774-3388 STT
(340) 778-9012 STX
Fax: (340) 774-6431 STT
(340) 719-8051 STX

EXECUTIVE SUMMARY

The following summarizes the major findings from the Inspection of the WAPA-Vitol Fuel Contracting Process and Transactions (INR-07-VITOL-19).

Finding 1: Project Planning (pages 7 to 12)

- WAPA's Board and management did not fully exercise due diligence in undertaking the LPG Conversion Project (Project).
- WAPA's Board and management focused primarily on the process of the Project's construction and less on its cost.
- WAPA's Board did not ensure that it mitigated WAPA's financial risk when they approved the Project without detailed engineering plans.
- WAPA's Board allowed a design and construct as-you-go project.
- WAPA's Board did not ensure that a cost-benefit analysis was done to assess if and when the Project's cost started to negatively affect its benefits.

Finding 2: Project Cost (pages 13-21)

- Although WAPA's Board approved the $160 million Project cost, WAPA's management did not timely notify the Board as the Project's costs went from $87 million to $150 million.
- WAPA's management approved the building of a $2.2 million truck rack system without prior Board approval.
- Other contractual obligations and untimely infrastructure cost payment contributed to the total Project cost increase.

Finding 3: WAPA's Procurement Guidelines (pages 23-31)

- WAPA's procedures and guidelines were not always adhered to regarding Vitol's BOOT agreement with WAPA.
- WAPA's involvement in the contract negotiations lacked transparency.
- WAPA officials created an apparent conflict of interest when a law firm used by WAPA also performed services for Vitol.

Finding 4: Conversion of Power-Generating Units (pages 33-39)

- WAPA converted five of eight power-generating units they initially planned to convert to use LPG.
- Of the five units converted, WAPA dismantled one unit and removed another from service, replacing them with rented units.
- WAPA did not ensure that some of the rented power units burned LPG as stipulated in the rental agreements
- WAPA officials had differing opinions on whether the dismantled unit should have been replaced or repaired.

GOVERNMENT OF THE UNITED STATES VIRGIN ISLANDS
OFFICE OF THE V. I. INSPECTOR GENERAL
2315 Kronprindsens Gade #75, Charlotte Amalie, St. Thomas, V. I. 00802-6468
No 1. Commercial Building, Lagoon Street Complex, Frederiksted, St. Croix, V. I. 00840

STEVEN VAN BEVERHOUDT
V. I. INSPECTOR GENERAL

Tel: (340) 774-3388 STT
(340) 778-9012 STX
Fax: (340) 774-6431 STT
(340) 719-8051 STX

November 19, 2021

Kyle Fleming, Chairman
Governing Board
Virgin Islands Water and Power Authority
9720 Estate Thomas
St. Thomas, Virgin Islands 00802

Dear Chairman Fleming:

This report contains the result of our inspection of the Virgin Islands Water and Power Authority's (WAPA) contract with Vitol Virgin Islands Corporation (Vitol) for the Liquefied Petroleum Gas (LPG) Conversion Project. The objectives of the inspection were to determine if: (i) the WAPA Board and management exercised due diligence in undertaking the project; (ii) the Board approved the increased project cost; (iii) WAPA officials verified the increased project cost; (iv) WAPA officials followed WAPA's contract procurement and administration policies; and, (v) WAPA converted the power generation units they needed to burn LPG.

We found that WAPA's Board and management, in choosing to expedite the Project to mitigate the high cost of energy in the Virgin Islands, prioritized time over the Project's cost. Specifically, they agreed to forgo detailed engineering plans, which would have delayed the Project by two years. Instead, they allowed Vitol to perform a FEED Study, design the storage terminals, procure equipment, and construct the Project facilities simultaneously. Knowing that such a project implementation method came with an inherent increase in cost, WAPA officials had no added controls to mitigate the Project's cost and monitor its cost for necessity, reasonableness, and affordability. Also, untimely payments for the infrastructure fees, and a truck rack system unknown to the Board contributed to increased infrastructure cost.

WAPA's management did not follow WAPA's established procedures for contracts and change orders. In addition, WAPA's contract negotiations lacked transparency. Furthermore, WAPA officials created an apparent conflict of interest when they engaged the professional services of a firm that also worked for Vitol during a similar time period. Finally, WAPA did not achieve its goal to convert the number of power-generating units it needed to burn LPG and did not ensure that its rented units could burn LPG as stipulated in rental agreements.

As a result, the Project's total cost has exceeded $200 million, including the Board's construction cost limit of $160 million, $10,228,191 in other professional services rendered to bring the project to substantial completion, $31,613,305 in operation and maintenance fees, $138,500 in accounting fees, and $2.2 million for a truck rack system. Not included in this cost are added fees that may have resulted from late payments that led to a third contract amendment.

Additionally, $92 million in change orders were not approved, and over $2 million was paid for professional services without the Board's approval. Further, WAPA was left with three of five converted units to burn LPG; WAPA invested $10 million to convert two units that were removed from service; and, WAPA incurred over $43 million in rental cost for units that could not burn LPG.

We made several recommendations to address the conditions and causes cited in the report. Our recommendations addressed the following areas: (i) Project planning, management oversight, and reporting; (ii) Project cost monitoring, and Board inaction; (iii) WAPA's procurement policies and guidelines; and, (iv) the conversion of power-generating units.

An exit conference was held on October 15, 2021. There was general agreement with the findings and recommendations made in the report.

A response to the recommendations, dated November 12, 2021, was submitted, and is included as Appendix I beginning on page 41 of this report. Some of the recommendations were adequately addressed and are considered resolved. Other recommendations are considered unresolved, and the additional information needed to resolve them is included as Appendix II beginning on page 45.

If you require additional information, please call me at (340) 774-3388 or Leslie Smith at (340) 715-6563.

Sincerely,

Steven van Beverhoudt

Steven van Beverhoudt, CFE, CGFM
Virgin Islands Inspector General

Leslie A. Smith

Leslie A. Smith, CPA, CIA, CFE, CISA, CGFM
Director of Internal Audit & Revenue Assurance, WAPA

TABLE OF CONTENTS

Page

INTRODUCTION

Background 1
Objective, Scope, and Methodology 2
Prior Audit Coverage 3

RESULTS

Conclusions 5

Finding 1: Project Planning 7
- Background 7
- Engineering Plans 8
- Board Members' Expectations 9
  - The Infrastructure Cost 9
  - Board Members' Perspectives 9
- Justifications for Project Cost Increase 9
- Effect of Project Cost on Electric LEAC Rate 11
- Project Completion 12
- Recommendations 12
- WAPA's Response 12
- V. I. Inspector General's Comments 12

Finding 2: Project Cost 13
- Background 13
- Project Cost Increase 13
  - First Contract Amendment 15
  - Second Contract Amendment 15
  - Payment Obligations 15
  - Third Contract Amendment 17
  - Truck Rack System 17
- Total Project Cost 18
  - Other Project Costs 19
- Cost Monitoring 20
- Accounting Firm's Infrastructure Cost Review 20
- Recommendations 21
- WAPA's Response 21
- V. I. Inspector General's Comments 21

Finding 3: WAPA's Procurement Guidelines 23
- Background 23
- Contract Preparation 24
- Contract Negotiations 24

TABLE OF CONTENTS

Page

Contract Terms 24
Legal Sufficiency 26
Contract Processing 26
Key Documents 26
Insurance 26
Building License 27
Contract Exhibits 27
Contract's Execution 27
Unsigned Change Orders 27
Professional Services Contracts 28
Apparent Conflict of Interest 29
Recommendations 30
WAPA's Response 30
V. I. Inspector General's Comments 30

Finding 4: Conversion of Power-Generating Units 33
Background 33
Power Plant Site Visits 34
The Richmond Power Plant 34
Power Generating Unit 16 34
Power Generating Unit 17 34
Power Generating Unit 19 35
Randolph Harley Power Plant 35
Power Generating Unit 18 35
Additional Costs for Rented APR Energy Units 36
Power Generating Unit 23 37
Summary 38
Recommendation 39
WAPA's Response 39
V. I. Inspector General's Comments 39

APPENDICES

Appendix I WAPA's Response 41
Appendix II Additional Information Needed to Close Recommendations 45
Appendix III Official Report Distribution 47

INTRODUCTION

BACKGROUND

The Virgin Islands Water and Power Authority (WAPA) was paying over $100 for a barrel of fuel oil when in 2008, the cost of oil began to escalate. To alleviate the increasing cost of energy and address Environmental Protection Agency concerns, in 2010 and 2011, WAPA conducted studies on the feasibility of using Liquefied Natural Gas (LNG) at its power plants. Based on the feasibility studies, WAPA's senior management and its Governing Board (Board) concluded that, while using small scale LNG at the power plants was likely technically and economically feasible, it may have taken several years to secure LNG supplies and to develop, obtain permits, finance, and build the transportation and receiving infrastructure.

The Board consulted with technical experts and WAPA's management staff and agreed on several technologies to reduce energy cost. After that, in September 2012, the Board developed and adopted an Energy Production Action Plan (Plan) to communicate to WAPA's customers what was being done to mitigate high energy cost. The Plan listed the challenges WAPA faced in developing projects to reduce the cost of energy in the Virgin Islands. The Plan also listed technologies available to solve the energy problem and indicated that LNG and Liquefied Petroleum Gas (LPG) were viable options for WAPA.

As a result, they concluded that although LNG could be transported in small vessels to the Randolph Harley Power Plant on St. Thomas, small-scale LNG vessels were not feasible for the Richmond Power Plant on St. Croix because of the shallowness of the Christiansted Harbor, and proximity to recreational boating areas. However, LPG could be transported by smaller refrigerated or pressurized LPG ships to both facilities, and it was less expensive to build that facility than a similar LNG facility. Also, they determined that the permitting and building process were quicker for the LPG facility. Therefore, WAPA chose to initiate the LPG Conversion Project (Project) to urgently secure an alternative, reliable, and less expensive source of fuel; lower the cost of electricity and water; diversify WAPA's power generation options; and reduce the amount of carbon dioxide and other pollutants emitted when burning fuel oil.

In October 2012, WAPA advertised a Request for Qualification (RFQ) and Expression of Interest for the Project. Then, in March 2013, WAPA issued a Request for Proposal (RFP) to three responders from a pool of five. In April 2013, the proposal Evaluation Committee recommended that WAPA initiate clarification discussions and negotiations with two of the three responders. WAPA selected Vitol, and on July 25, 2013, WAPA entered into an $87 million BOOT (build, own, operate, transfer) agreement with Vitol Virgin Islands Corporation for the Project. Vitol would: (1) build, own, operate, maintain, and transfer the LPG facilities to WAPA, (2) supply LPG to WAPA, and (3) manage the conversion of seven combustion turbine units.

Vitol procured the Front-End Engineering Design (FEED) Study[1] and built WAPA's LPG infrastructure. Given that Vitol is part of a group of companies that engage in energy and commodity trading, they used three of their affiliated companies for various aspects of the project, namely VTTI (Vitol Tank Terminals International B.V.) and its subsidiaries, VTSS (VTTI Terminal Support Services B.V.), and IPOS (Island Project and Operating Services).

Vitol and its Affiliated Companies		
Company Name	**Contractor Affiliation**	**Task Performed**
Vitol Virgin Islands Corporation	Main Contractor	Fulfilled the BOOT Agreemen66644t
VTTI (Vitol Tank Terminals International B.V.)	Affiliate of Vitol	Provided engineering, procurement, and construction contractors for the infrastructure services
VTSS (VTTI Terminal Support Services B.V.)	A subsidiary of VTTI	Provided project management services
IPOS (Island Project and Operating Services)	A subsidiary of VTTI	Operate and maintain the storage terminals

Vitol is one of the world's largest international LPG traders. It has the world's largest fleet of pressurized vessels and moves over five million tons of LPG per year. VTTI, with extensive experience in building oil and gas terminals, built the storage terminals. VTSS, a company that acts as principals or agents in buying or selling financial contracts provided project management services. Finally, IPOS, specializing in tank and pipeline services, operate and maintain the storage terminals on a 24-hour basis.

In addition, Vitol and WAPA entered into an agreement with General Electric International, Inc. (GE) for the conversion of seven of WAPA's existing power generating units to safely burn vaporized LPG and diesel fuel consistent with industry standards. GE agreed to perform the engineering, design, planning, construction, and procure parts, supplies, and labor services to convert the seven units.

Along with the above-stated companies, WAPA and/or Vitol engaged other consultants and companies to perform, among other things, legal, engineering, procurement, and construction services needed for the Project.

OBJECTIVE, SCOPE, AND METHODOLOGY

The inspection was initiated based on the Virgin Islands Public Services Commission's (PSC) request that we review Vitol's justification for expanding the scope of work and almost doubling

---

1 A FEED Study is the initial stage of detailed project planning, and includes various studies to figure out technical issues, and estimate investment cost.

the Project's cost. We collaborated with WAPA's Internal Audit Division in performing the inspection. The objectives of the inspection were to determine if: (i) the WAPA Board and management exercised due diligence in undertaking the project; (ii) the Board approved the increased project cost; (iii) WAPA officials verified the increased project cost; (iv) WAPA officials followed WAPA's contract procurement and administration policies; and, (v) WAPA converted the power generation units they needed to burn LPG.

We performed our work from October 2019 to December 2020 in accordance with the "Quality Standards for Inspections" issued by the Council of the Inspectors General on Integrity and Efficiency. To accomplish our objectives, we reviewed contracts, project budgets, change orders, Board meeting transcripts, invoices, purchase orders, reports, correspondences, Government records, and other relative documents. We interviewed Board members, executive directors, WAPA's project management team members, project coordinators, and staff of WAPA's Accounting, Budget & Cash, Contracts, Legal, Pricing & Rates, and Purchasing offices. In addition, we performed site visits of the power plants where we viewed the Project's facilities, the power generating units, and IPOS' propane storage facilities.

PRIOR AUDITS AND INSPECTIONS

The Office of the Virgin Islands Inspector General has not performed any prior audits or inspections of WAPA. However, we are aware that WAPA contracted an accounting firm to examine the infrastructure costs Vitol incurred for August 2013 to December 2016, and the operations and maintenance costs for February 2017 to June 2019.

This page intentionally left blank.

RESULTS

CONCLUSIONS

We found that WAPA's Board and management, in choosing to expedite the Project to mitigate the high cost of energy in the Virgin Islands, prioritized time over the Project's cost. Specifically, they agreed to forgo detailed engineering plans, which would have delayed the Project by two years. Instead, they allowed Vitol to perform a FEED Study, design the storage terminals, procure equipment, and construct the Project facilities simultaneously. Knowing that such a project implementation method came with an inherent increase in cost, WAPA officials had no added controls to mitigate the Project's cost and monitor its cost for necessity, reasonableness, and affordability. Also, untimely payments for the infrastructure fees, and a truck rack system unknown to the Board contributed to increased infrastructure cost.

WAPA's management did not follow WAPA's established procedures for contracts and change orders. In addition, WAPA's contract negotiations lacked transparency. Furthermore, WAPA officials created an apparent conflict of interest when they engaged the professional services of a firm that also worked for Vitol during a similar time period. Finally, WAPA did not achieve its goal to convert the number of power-generating units it needed to burn LPG, and did not ensure that its rented units could burn LPG as stipulated in rental agreements.

As a result, the Project's total cost has exceeded $200 million, including the Board's construction cost limit of $160 million, $10,228,191 in other professional services rendered to bring the project to substantial completion, $31,613,305 in operation and maintenance fees, $138,500 in accounting fees, and $2.2 million for a truck rack system. Not included in this cost are added fees that may have resulted from late payments that led to a third contract amendment.

Additionally, $92 million in change orders were not approved, and over $2 million was paid for professional services without the Board's approval. Further, WAPA was left with three of five converted units to burn LPG; WAPA invested $10 million to convert two units that were removed from service; and, WAPA incurred over $43 million in rental cost for units that could not burn LPG.

We made several recommendations to address the conditions and causes cited in the report. Our recommendations addressed the following areas: (i) Project planning, management oversight, and reporting; (ii) Project cost monitoring, and Board inaction; (iii) WAPA's procurement policies and guidelines; and, (iv) the conversion of power-generating units.

This page intentionally left blank.

FINDING 1: PROJECT PLANNING

We found that WAPA's Board and management did not fully exercise due diligence in undertaking the Project. Specifically, after WAPA officials researched the viable options available to address the energy crisis and procured the contractor for the Project, WAPA's Board and management focused primarily on the progress of the Project's construction and less on its cost. In addition, the Board did not ensure that it mitigated WAPA's financial risk when they approved the Project without detailed engineering plans. Instead, they allowed a design and construct as-you-go project. Also, they did not ensure that a cost-benefit analysis was done to routinely assess if and when the Project's cost started to negatively affect its benefits.

These conditions occurred because WAPA's Board and management decided that time and the high fuel costs were the predominant factors in solving the energy crisis problem, hoping to complete the project in two years, by February 28, 2015. The Board and management pursued the Project in a manner to suggest that the savings to WAPA and its customers would justify its cost, when projected cost had not been fully established. The Board relinquished the control of the Project to Vitol and WAPA's Project management team without putting added controls in place to ensure that WAPA's financial interest was protected.

As a result, WAPA's $160 million project cost far exceeded the expectations of its Board members.

Background

WAPA needed a solution to expensive fuel oil, and to provide its ratepayers with needed relief from the high cost of electricity. Therefore, WAPA officials expected that the conversion to LPG would allow WAPA to reduce its fuel costs, lessen its dependency on fuel oil, diversify its power generating options, and comply with Federal and local fuel emissions and control standards.

According to WAPA officials, the conversion to LPG would benefit both WAPA and its ratepayers. Specifically, the use of LPG would yield WAPA fuel cost savings of approximately 30 percent or $90 million annually, and the 30 percent savings would be passed on to WAPA's ratepayers in the Levelized Energy Adjustment Clause (LEAC) rate[2]. Also, WAPA would have lower emissions of pollutants from the power plants. Further, after WAPA paid all fees to Vitol, WAPA would own the Project's facilities, which would have a shelf-life of at least 25 years.

WAPA contracted with Vitol to perform the infrastructure and conversion construction services. The July 2013 BOOT agreement required Vitol to design and build the infrastructure necessary to deliver LPG at WAPA's power plants. Specifically, Vitol was responsible for engineering[3] designs of the tank terminals, procuring the storage tanks, and constructing the project facilities

---

2 The Virgin Islands Public Services Commission authorized the LEAC factor in 1989 to allow WAPA to recover fuel costs used to produce electricity and water for WAPA customers.

3 Engineering is the use of scientific principles to design and build machines and structures.

and associated systems. Vitol would engage civil, electrical, and mechanical and instrumentation engineers for the work. Also, Vitol was responsible for procuring other equipment and materials, modifying the turbine control rooms and existing docking facilities owned by WAPA, and commissioning[4] the Project. Vitol would award engineering, procurement, and construction (EPC)[5] contracts for the work.

The infrastructure would allow Vitol to transfer, store, vaporize, and measure the LPG delivered to each fuel header system[6] at WAPA's Randolph Harley Power Plant on St. Thomas and Richmond Power Plant on St. Croix. Vitol would pay all up-front capital costs for the infrastructure and conversion construction services performed. After Vitol substantially completed the Project, WAPA would begin paying Vitol a monthly fixed fee (infrastructure recovery fee) to recover the cost incurred to perform the infrastructure and conversion construction services. WAPA also would begin paying Vitol a monthly fee to operate and maintain the Project's facilities and infrastructure systems.

Furthermore, Section 5.01(c) of the BOOT agreement stipulated that the parties shall agree on any necessary increase or decrease of the infrastructure recovery fee resulting from the completion of the FEED Study, including any revised expenses to convert and commission the power units.

Engineering Plans

When WAPA's Board approved the Project to move forward without detailed engineering plans, it increased the uncertainty of the Project's cost. Typically, a FEED Study is performed before the start of engineering, procurement, and construction. A FEED Study is engineering that facilitates more detailed project design, establishes a project's technical requirements, and provides estimates of a project's investment cost. Detailed engineering plans include all the studies to be performed before project construction starts. These plans provide for equipment procurement and detail the engineering needed to construct a project's facilities. To expedite the Project, WAPA officials approved for Vitol to simultaneously perform the FEED Study and related technical studies, complete the detailed engineering design, procure equipment and materials, and construct the project facilities.

WAPA officials' reasons for not having the FEED Study and engineering plans done before the Project started was that it would have taken at least two years to produce detailed engineering plans. They maintained that WAPA did not have the luxury of time to complete the FEED Study and engineering plans for a fixed-priced construction contract. Also, one Board member stated

---

4 Commissioning is the integrated application of engineering techniques and procedures to check, inspect and test every operational component of a project.

5 EPC contracting is the most common form used to undertake construction works by the private sector on large-scale and complex infrastructure projects.

6 A fuel header system is designed to provide fuel to multiple generators, where there are severe regulatory restrictions to the volume of fuel that can be stored in the generator room. The header is an 8" to 12" diameter pipe which runs the length of the room to serve all generators.

that they were aware that it was an obvious risk WAPA took when they agreed that Vitol would do the FEED Study and construction at the same time. As a result, to save time, the Board allowed Vitol to conduct the FEED Study along with the detailed planning. Consequently, Vitol implemented a design and construct-as-you-go project plan that came with inherent cost increases.

Board Members' Expectations

We found that the Board did not pursue the Project in a manner that protected WAPA's financial interest. Based on the Board minutes and interviews of Board members, they expected the Project's cost to increase after Vitol completed the FEED Study. However, they did not have a collective expectation or projection for the anticipated increase in cost. As a result, as the cost exceeded $150 million, some Board members expressed that they faced their worst-case scenario.

The Infrastructure Cost. According to Vitol's BOOT agreement, the language contained therein stated that the infrastructure cost was not to exceed $87 million. As the Project's cost approached $150 million, the cost became the subject of discussion at the November 20, 2014, WAPA Board meeting. Board members and WAPA officials discussed an anticipated cost increase for the LPG infrastructure. Specifically, one member stated that "We intentionally went into this because we understood the impact and the continuing impact of the high cost of electricity in the territory. We chose a contract method that would get the reduction and the price to the ratepayers as fast as possible. Inherent in that process was that the cost of the infrastructure could not be capped and binding. If we had gone the other route where we said let us have a full-blown design down to every nut and bolt and every test and every permit, how long would it had [sic] been before we could start working, and how long would it had [sic] been before the ratepayers start to see the benefits that we're going to see from propane?" The Executive Director's response was, "It would have been two years longer." Another Board member stated that "Well, it is not to exceed. We usually say not to exceed with this or that with the flexibility."

The Executive Director further stated, "The Virgin Islands is the first to do it, and everybody knew that we would have a FEED process that would bring some change and some new complexities to the Project. Had we gone the route of not doing the FEED Study simultaneously with procuring the storage tanks, and the other work that began here, it would take another two years before ratepayers would see the relief."

Board Members' Perspectives. Some Board members informed us of their expectations regarding the Project's cost. Specifically, they stated that the starting cost of $87 million was 'wholly inadequate' for the two facilities, increases were expected, and an increase of 20 to 25 percent to construct the facilities was expected. Also, another Board member expressed disappointment in the Board and a former Executive Director for allowing the cost to get so high.

Justifications for Project Cost Increase

The FEED Study and related technical studies resulted in additional project costs. For example, in May 2014, after Vitol performed some of the studies, Vitol reported to WAPA that the

Project's cost would increase from $87 million to $130 million. Vitol's justifications for the estimated $43 million increase are detailed in the following table.

Vitol's Justifications for Estimated $43 million Cost Increase	
Cost Increase (millions)	**Description**
11.0	For large volumes of concrete to build support slabs for the storage tanks, paralleled with concrete's increase cost and the inability to obtain large volumes of concrete locally.
6.6	To blast rocks at the location of the storage tanks on St. Thomas, and to demolish existing facilities on St. Croix's project site that required more work to comply with the Department of Planning and Natural Resources' requirements.
6.0	For the Very Large Gas Carrier (VLGC) mooring system required by the United States Coast Guard and Environmental agencies.
5.1	For minor design changes to the storage tanks, and shipping and installing the storage tanks.
4.8	For WAPA-approved changes to General Electric's services.
3.0	For piling and soil improvement at the St. Croix project site.
3.0	For jetty piling and dredging of Krum Bay in St. Thomas.
2.0	For additional engineering man-hours spent on design revisions during the FEED studies, and additional construction time due to unforeseen events.
1.3	For additional boilers, metering equipment and higher-pressure LPG pumps.

In September 2014, Vitol reported that $150 million was now the estimated Project cost after finalizing the FEED Study and technical studies in August 2014. Vitol reported that they had to re-design and expand the Project's overall scope. The justifications for the $150 million increased cost, as stated on the November 2014 request for Board's approval, are shown in the following table.

Number	Justifications for $150 million Project Cost
1	Adverse weather conditions in the early work phases delayed the excavation on St. Croix.
2	Undocumented soil conditions and underground obstacles on St. Croix.
3	Removal of a volume of rocks on St. Thomas using explosives.
4	More extensive work was needed to design, procure, and install resources to upgrade the existing fire protection controls and systems for the safe use of propane.
5	The permitting, contracting, demolishing, and disposing of structures with lead-based paint were complex.
6	Materials and equipment had to be sourced globally.
7	There were additional regulatory requirements to assure the safety and security of the marine aspect of the project, including necessary re-designs.

Also, the following table shows how the cost increased from $130 to $150 million by category of the expense.

$20 Million Increase after FEED Study

DESCRIPTION	VITOL's $130M BUDGET CHANGES	VITOL's $150M BUDGET CHANGES	OVER/(UNDER) BUDGET
Demolition & Earthworks	$ 7,268,200	$ 9,270,000	$2,001,800
Piping & Mechanical	1,981,800	9,900,000	7,918,200
Equipment	7,259,280	6,141,000	(1,118,280)
Tank Fabrication	26,930,800	24,206,213	(2,724,587)
Electrical & Instrumentation	4,784,400	12,784,400	8,000,000
Jetty Marine	1,036,800	410,400	(626,400)
Jetty Piling	2,000,000	3,700,000	1,700,000
Dredging Krum Bay	1,000,000	600,000	(400,000)
Pre-Startup O&M	0	500,000	500,000
PMC Fee*	0	1,250,000	1,250,000
Owners PMC**	5,050,000	7,050,000	2,000,000
Contingency***	1,250,000	1,500,000	250,000
GENERAL ELECTRIC	23,830,247	24,799,568	969,321
TOTAL	**$82,391,527**	**$102,111,581**	**$19,720,054**

*VTSS Project Management Consultancy
** Vitol's Project Management Consultancy
*** Built-in Fee for Storage Terminals

Effect of Project Cost on Electric LEAC Rate

Because WAPA agreed that it would absorb any change in the Project's cost into the infrastructure recovery fee, WAPA filed a petition with the PSC on November 22, 2014, requesting an increase in the Electric LEAC factors for January 1, 2015, to June 30, 2015. WAPA also asked that the LPG $150 million infrastructure recovery cost be included in the LEAC rate increase. The PSC did not approve the request because WAPA had not explained how they arrived at the level of increase in the infrastructure recovery fee payments. WAPA submitted its justification to the PSC on January 30, 2015, and wrote: "These costs will result in the fuel conversion to LPG that will save consumers many times the amounts of the costs. If the entire infrastructure fee is not passed through in the LEAC, the utility will under-recover and that may adversely affect ratepayers and possibly WAPA's electric system bond rating. A negative impact on the Authority's bond rating potentially may also adversely affect its power purchase agreements which require that WAPA's bond be investment-grade rated, failing which the agreements may be terminated if WAPA does not or cannot post adequate rate relief that provides it with sufficient revenue, it may lose the ability to enjoy the benefits of regulatory accounting, thereby resulting in the expensing of deferred fuel cost. This would be a catastrophic event for the Authority." After being denied on January 16, 2015, WAPA filed subsequent petitions in April 2015 and October 2016 for the same adjustment to the LEAC rate. The PSC also denied those requests.

Project Completion

Vitol was required to provide WAPA with written notices of substantial and final completion of the constructed and converted facilities. WAPA would in turn issue a certificate confirming that Vitol met the conditions for substantial and final completion. We noted that Vitol notified WAPA that they achieved substantial completion of the Richmond Power Plant in November 2016, and the Randolph Harley Power Plant in January 2017, which WAPA confirmed. Vitol, to date, has not notified WAPA that they had achieved final completion of the constructed and converted facilities.

Recommendations

We recommend that the WAPA Board:

1. Consider hiring an independent professional to educate, guide, and report findings directly to the Board as necessary and appropriate.

2. Ensure that its designated project management teams possess all the requirements necessary to engage adequately with contractors.

3. Ensure that a cost-benefit analysis is done or routinely assessed when taking on design and build as you go projects.

WAPA's Response

The response indicated agreement with all three recommendations. The response indicated that the Chief Operating Officer for the affected system currently retains outside consultants, as needed, to present to the Board clarity and answer questions on complex or novel matters. Also, the Executive Director and respective Chief Operating Officer currently ensures that projects are appropriately staffed, and they are responsible to ensure that cost-benefit analyses are assessed on build as you go projects.

V.I. Inspector General's Comments

We will consider these recommendations as resolved and implemented.

FINDING 2: PROJECT COST

We found that although WAPA's Board ultimately approved the $160 million Project cost, WAPA's management: (i) did not timely notify its Board as the Project's cost went from $87 million to $150 million; and, (ii) approved the building of a $2.2 million truck rack system, unknown to its Board. In addition, other contractual obligations and untimely infrastructure cost payments contributed to the total Project cost increase.

These conditions occurred because the WAPA Board: (i) placed unfettered reliance on its management; (ii) did not ensure that management routinely apprised the Board of the increased Project cost; and, (iii) did not ensure that, as the Project progressed, the Project's cost was monitored for necessity, reasonableness, and affordability.

As a result, Board members expressed frustration as the cost exceeded $150 million and settled at $160 million. Consequently, the Project's original contract has seen three amendments as of September 2020, and the total Project cost has exceeded $200 million.

Background

WAPA agreed that Vitol would conduct the FEED Study when they entered into the contract for the Project. A FEED Study is typically done before a project of this nature, and provides management with a more detailed analysis of the work to be done and its expected cost. However, WAPA had Vitol do the FEED Study simultaneously, creating a design and construct-as-you-go Project. In addition, the Board agreed that any necessary changes to the Project's budget and any revised changes to GE's expenses would control the monthly infrastructure recovery fee.

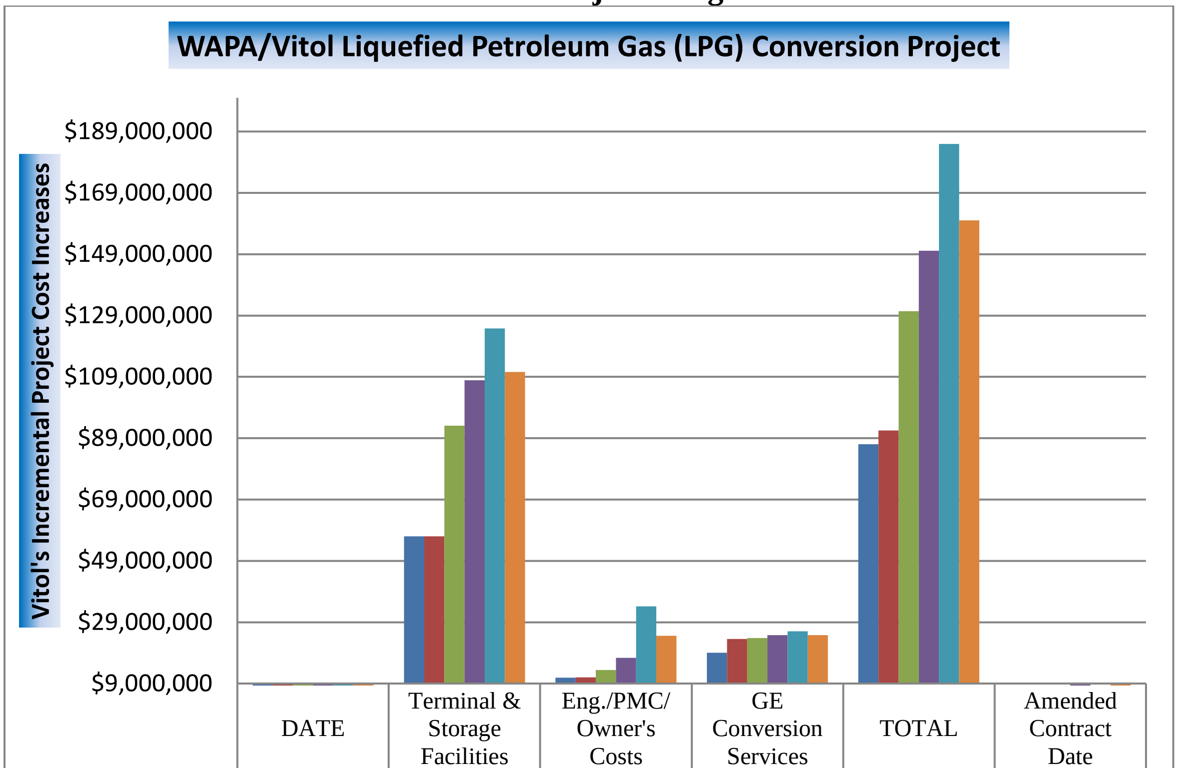
Project Cost Increase

WAPA's management was aware of the Project's cost increases. Still, management did not timely notify its Board as the cost increased to $150 million, at which time the first contract amendment was executed. When Vitol submitted the fourth revised budget for $184 million, a second contract amendment resulted after WAPA's Interim Executive Director negotiated a settlement at $160 million.

Specifically, WAPA's management was presented with the three revised budgets, after which the first contract amendment was executed. However, we noted that after the Executive Director notified the Chairman of the Board of the first revised budget of $91,532,100 in a monthly report dated January 19, 2014, we saw no evidence that the Board was notified of additional revised Project's cost until the cost increased to $150 million.

After WAPA and Vitol entered into the $87 million BOOT agreement and Vitol performed the FEED Study, Vitol presented four revised budgets to WAPA's management. The following chart details Vitol's four revised budgets and their effect on the Project's cost, increasing from $87 million to $160 million.

LPG Conversion Project Budgets



	DATE	Terminal & Storage Facilities	Eng./PMC/ Owner's Costs	GE Conversion Services	TOTAL	Amended Contract Date
Original Budget	Jul-13	$57,048,000	$10,952,000	$19,000,000	$87,000,000	
Revision 1	Nov-13	$57,048,000	$10,984,100	$23,500,000	$91,532,100	
Revision 2	May-14	$93,128,800	$13,411,000	$23,830,247	$130,370,047	
Revision 3	Aug-14	$107,879,533	$17,411,000	$24,799,568	$150,090,101	20-Nov-14
Revision 4	Jul-16	$124,776,778	$34,140,100	$26,050,108	$184,966,986	
Final Costs	Jul-16	$110,603,124	$24,597,308	$24,799,568	$160,000,000	20-Oct-16

Specifically, Vitol's November 2013 first revised budget increased the Project cost to $91,532,100, an increase of $4,532,100 over the initial contract.

In 2014, Vitol submitted the second revised budget for $130,370,047. In a May 27, 2014, letter addressed to the Executive Director, Vitol indicated that additions to the scope of work resulted after completing most of the engineering studies. The increase was $38,837,947 over the first revised budget. Vitol proposed a seven-year contract term at a 10 percent interest rate and further proposed discussing an alternative amortization schedule to help mitigate the additional costs on WAPA. Vitol requested the Executive Director's concurrence with the budget adjustment. However, we saw no evidence that WAPA's management discussed the changes to the scope of work, contract's term, and the added $38,837,947 increase with the Board. Furthermore, in August 2014, Vitol submitted a third revised budget that increased the Project's cost to $150,090,101. This increase added another $19,720,054 over the second revised budget. On September 9, 2014, Vitol wrote to the Executive Director, informing him that Vitol had to re-design and expand the Project's scope to accommodate geotechnical, regulatory, environmental, and contractual conditions after completing the engineering studies. Vitol also requested the

Executive Director's support of the $150 million before Vitol could commit to increasing the contract's term and reducing the interest rate, which would reduce the infrastructure recovery fee amount. This third revised budget led to the first contract amendment.

First Contract Amendment. On November 20, 2014, the Executive Director met with the Board to discuss the $150 million project cost, and stated that Vitol's Board approved the $150 million on the condition that WAPA's Board would do the same. The seven members present at the meeting approved amending Vitol's contract to $150,090,101 after Board members asked: (i) who did the preliminary estimate; (ii) if WAPA was involved step-by-step as additional costs were developed, if they agreed to it, and if it was a last moment surprise; and, (iii) if someone was monitoring to determine if the cost was reasonable or actual costs. The Executive Director responded, "It was Vitol and VTTI that did the preliminary estimate…" WAPA was involved the entire way as additional costs were developed, and affirmed that someone was monitoring to determine if the cost was reasonable or actual costs. As a result of these answers, the Board members accepted the justifications WAPA's management gave for the cost increase, and all seven members present approved amending Vitol's contract to $150,090,101. The Board's approval led to the first amended contract and was executed on the same day. The contract's term was now ten years at an eight percent interest rate, and WAPA had the option to repay Vitol in seven years.

Second Contract Amendment. In July 2016, Vitol submitted a fourth revised budget for $184,966,986. The Interim Executive Director negotiated with Vitol for $160 million. This lead to the second contract amendment on October 20, 2016, increasing the Project's cost by $9,909,899.

At a WAPA Board meeting held on November 16, 2016, WAPA's management and the Board members discussed the negotiated $160 million amount. A Board member asked if any potential additional costs could be capped at $160 million since Vitol had not achieved final completion at that time, and if Vitol was paying for all additional costs. The Interim Executive Director responded in the affirmative.

Concerning an ongoing examination of the infrastructure cost, the Board member stated that the Board would review the Accounting Firm's examination results to determine if the $160 million should be reduced. However, the Board member agreed that $160 million was the "resting place" for Vitol's contract. Another Board member asked if the Board could wait until the examination was completed before deciding on the final Project's cost. The Interim Executive Director responded that St. Croix was already online, WAPA would have to start paying for propane at some point, and WAPA could not pay for anything if the Board did not approve the amendment. Therefore, all seven members agreed to cap the Project's cost at $160 million and separate the contract from a single project to two separate projects, one per island. The contract term remained ten years, at eight percent interest rate, and WAPA could repay Vitol in seven years.

Payment Obligations. The monthly infrastructure recovery fee started after the Project's substantial completion. WAPA began paying $1.4 million for the Randolph Harley Power Plant on St. Thomas, and $1.2 million for the Richmond Power Plant on St. Croix with the second contract amendment. WAPA had trouble meeting its payment obligations, resulting in at least three letter agreements and the third contract amendment.

The infrastructure recovery fee is built into the fuel cost when Vitol bills WAPA for the supply of LPG. After Vitol substantially completed the Project in November 2016 for St. Croix and January 2017 for St. Thomas, WAPA did not pay Vitol for 2017 LPG deliveries and infrastructure fees when due. Therefore, in May 2017, Vitol suspended its delivery of LPG to WAPA. Consequently, WAPA entered into a June 28, 2017, letter agreement with Vitol to pay down its debt and implemented an aggressive prepayment and repayment schedule totaling $80,982,015.19 for LPG deliveries and infrastructure fees.

Again, when WAPA did not pay infrastructure fees for 2018, and a portion of 2019 when due, Vitol, on July 9, 2019, delivered a notice of default to WAPA. According to the letter agreement dated July 19, 2019, WAPA was required to make a $20 million lump-sum payment on its overdue debt on or before July 23, 2019.

WAPA requested forbearance for March 2020 to May 2020. Therefore, with the March 31, 2020, letter agreement, Vitol deferred $600,000 of the $2.6 million monthly infrastructure payments for March 2020 to May 2020, and WAPA agreed to pay: (i) $2 million monthly for March to May 2020; (ii) $2.5 million monthly for arrears payments beginning in June 2020; (ii) the $2.6 million monthly infrastructure recovery fees beginning in June 2020; and, (iii) $300,000 monthly from June to November 2020 as repayment of the $1.8 million deferred amount. The following table details the non-payment issues WAPA faces with the infrastructure recovery fees.

Non-Payment of Infrastructure Recovery Fees		
No Payments Made	**Vitol Action**	**WAPA's Action**
2017	Suspended its delivery of LPG to WAPA in May 2017	June 28, 2017, letter agreement to pay down its debt of $80,982,015.19
2018, and a portion of 2019	Vitol delivered a notice of default on July 9, 2019	July 19, 2019, letter agreement, WAPA was required to make a $20 million lump-sum payment on its overdue debt on or before July 23, 2019
2020 forbearance	Vitol deferred $600,000 of $2.6 million for March to May 2020	March 31, 2020, letter agreement

WAPA again requested forbearance for June 2020 to August 2020. By September 2020, WAPA had accrued at least $73 million in infrastructure fees. Specifically, from February 2017 through September 2020, WAPA paid infrastructure recovery fees of $19.5 million for the Richmond Power Plant and $24.4 million for the Randolph Harley Power Plant. Infrastructure fee payments should have been $55.2 million and $61.6 million by September 2020, respectively. Untimely payment obligations resulted in a third contract amendment that included a truck rack system built with WAPA's management approval but was unknown to the Board.

Third Contract Amendment. In September 2020, WAPA and Vitol executed the third amendment to the July 2013 BOOT agreement. Due to WAPA's delinquent infrastructure cost recovery payments, the Board approved 15 amendments to the agreement. The 15 amendments included: (i) Vitol suspending the monthly infrastructure recovery fee from March to August 2020 because of COVID-19; (ii) WAPA commencing the $2.5 million monthly arrearage payments at the end of September 2020 instead of June 2020, and continuing the payments until the end of December 2020; (iii) WAPA prepaying all LPG deliveries; (iv) increasing the cost of propane by five cents per gallon over Mont Belvieu Index[7] for Vitol to recoup its loss in selling less propane to WAPA monthly than what was envisioned in the original contract; (v) interest at 5% above LIBOR[8] or other applicable benchmark would accrue on all amounts that became overdue as of January 1, 2021; (vi) incorporating a truck rack system at the power plant as part of the Project's infrastructure; and (vii) recalculating the monthly infrastructure recovery fee to include overdue infrastructure costs, unpaid interest charges, and the truck rack system's cost.

Truck Rack System. We performed a site visit of the Randolph Harley Power Plant in February 2020 and found that a $2.2 million truck rack system was part of the Project's infrastructure. A former Executive Director stated that he approved Vitol's decision to install the system in 2019, without informing the Board. Board members stated that they did not know the system was substantially completed when they authorized the third amendment and restatement[9] of Vitol's contract. According to the former Executive Director, Vitol installed the system at the power plant to sell propane to local wholesalers. Furthermore, Vitol retains all the revenues from such sales until WAPA repays all fees and takes over the terminals' operations and maintenance.

Truck Rack at the Randolph Harley Power Plant

The former Executive Director stated Vitol insisted that the system's cost be included in the infrastructure cost for Vitol to continue the forbearance of WAPA's monthly infrastructure recovery fee payments. He believed Vitol left no room for negotiation. Therefore, Vitol presented the Board with what appears to be an ultimatum to accept the system or the forbearance would stop. As a result, at the September 20, 2020, regular Board meeting, six out of nine members voted to incorporate the system as part of the Project's infrastructure cost. The Board did so to prevent Vitol from putting WAPA in default of its payment obligations and suspending the supply of LPG.

---

7 Mont Belvieu Index lists average daily propane prices. Mount Belvieu is a city in Texas.

8 The London Inter-bank Offered Rate (LIBOR) is an interest-rate average calculated from estimates submitted by the leading banks in London.

9 The contract was restated to consolidate previous amendments and a series of side letters into one document.

In January 2021, Vitol was expected to recalculate the infrastructure recovery fee to include overdue infrastructure costs, unpaid interest charges, and the system's cost. As a result, the previous $2.6 million monthly in infrastructure recovery fees increased to a minimum of $3.7 million for the remaining six years of the contract's term.

Total Project Cost

In addition to the $160 million WAPA incurred for infrastructure cost, WAPA paid $31.6 million for operations and maintenance fees, and incurred additional costs for the Project. The following table details the total Project's costs, including all costs incurred to bring the Project to substantial completion. If late payments persist, the overall Project cost will continue to rise for WAPA and its customers.

Total Project Cost

Contractor/ Vendor	Service	Contract/ Purchase Order	Change Order	Total Cost	Comments
Infrastructure Costs					
Vitol	Terminal & Storage Facilities	$54,259,100	$56,344,024	$110,603,124	Change orders not signed
Vitol	Engineering & Owner's Costs*	8,490,900	1,327,493	9,818,393	Change orders not signed
Vitol/General Electric	Conversion of Units	19,000,000	5,799,568	24,799,568	Change orders not signed
Vitol	Project Management	5,250,000	9,528,915	14,778,915	Change orders not signed
Total Infrastructure Cost		**$87,000,000**	**$73,000,000**	**$160,000,000**	
Vitol	**O&M Fees****	**$0**	**$0**	**$31,613,305.17**	Fees based on an annual budget
Other Costs					
Vitol	Truck Rack System	$2,200,000	$0	$2,200,000	
Accounting Firm	Infrastructure Cost Review	0	0	138,500	
Law Firm	Legal Consultation	0	0	2,114,776.28	Services provided without a contract
LPG Energy Advisors Firm	Advisory Services	55,000	0	54,800	
LPG Energy Advisors Firm	Engineering Consultation	200,000	0	86,384.01	
Design Engineering Firm	2011 Feasibility Study	50,000	0	92,793.88	
Engineering Firm	Assessment/Fire Protection System Upgrades	4,762,340	3,051,077.09	7,813,417.09	
Engineering Firm	Third-party Engineering Evaluation	11,452	0	11,452	
System Control & Engineering Firm	Advisory Services	49,840	0	38,339.80	
Power & Engineering Firm	Cable Installation Unit 16	10,550	0	15,000	
Pipe Supply Company	Materials to Install Fuel Tank	1,228.04	0	1,228.04	
Total Other Costs				**$12,566,691.10**	
TOTAL PROJECTCOST				**$204,179,996.27**	

***Vitol's costs for permits, legal services, insurance, technical studies, and other services**
****Paid as of September 2020**

Other Project Costs. Some of WAPA's added Project costs included WAPA paying: (i) $138,500 to the Accounting Firm to examine infrastructure costs and operations and maintenance costs; (ii) $2.1 million to a Law Firm for legal consulting services; (iii) $141,000 to an LPG Energy Advisors Firm for advisory services and engineering consultation; (iv) $93,000 to a Design Engineering Firm to evaluate whether eight combustion turbine units could fire natural gas; and, (v) $7.8 million to an Engineering Firm for upgrading WAPA’s fire protection systems at the power plants.

Cost Monitoring

Although an Executive Director indicated to the Board that the Project's cost was being monitored for reasonable or actual cost, interviews with WAPA’s Project management team showed that they were not monitoring Project’s costs. We found that WAPA management knew about Vitol’s revised budgets; however, they did not evaluate the cost associated with the proposed increases.

WAPA's in-house management team included the Executive Director, a financial advisor, project managers, and the General Counsel. We found that no team member had assumed the responsibility for monitoring the Project’s costs from interviews conducted. For example, the Chief Financial Officer who served as the financial advisor for the Project stated that he had no role in the Project after the contract was signed. The Chief Operating Officer who served as the head project manager stated that his responsibilities involved the environmental aspect of the Project to include permitting and evaluation, coordinating and interfacing any issues that WAPA had about the Project, and reporting those issues to Vitol. Also, the Director of Project Management, who served as the project coordinator, stated that he supervised WAPA’s engineers and inspectors charged with monitoring the progress of the work. He, in turn, reported to the Executive Director and the head project manager. Finally, the then-General Counsel stated that her involvement in the Project was assisting WAPA’s external law firm with the request for proposal process, participating in contract negotiations, and drafting Vitol’s contract.

Therefore, while WAPA’s Board was given the impression that the Project's cost was being tracked for at a minimum, reasonableness, they were not. The Project's cost was not assessed until the Project was substantially completed when WAPA contracted with an accounting firm to evaluate the cost.

Accounting Firm’s Infrastructure Cost Review

Vitol agreed to reduce the infrastructure recovery fee if WAPA’s contracted audit done by the Accounting Firm found that such costs were below $160 million. After the Project's substantial completion, WAPA contracted with the Accounting Firm on December 19, 2016, to examine the infrastructure costs of the Project. The firm issued its final report in October 2019 and was paid $138,500. The firm examined $180,237,049 in Vitol’s reported costs for August 1, 2013, to December 31, 2016. The firm reported to the Board that $13,371,424 of those costs was unsupported. Therefore, $166,865,625 in Vitol's reported cost was supported. The supported cost is more than the $160 million settled amount.

Recommendations

We recommend that the WAPA Board:

1. Ensure that all project costs are periodically monitored for significant changes, and those changes are timely reported to the Board.

2. Ensure that management monitor WAPA's ability to make prompt payments on the infrastructure note and assess the long-term effect that delinquent payments would have on the Project's cost and WAPA's ability to provide net savings to its customers.

WAPA's Response

The response indicated agreement with both recommendations. WAPA indicated that the Project Manager, reporting to the respective Chief Operating Officer, is charged with ensuring that work remains on track and within budget.

Regarding recommendation two, WAPA indicated that the Chief Financial Officer monitors cash flow on a daily basis. However, the desire to pay bills in a timely fashion is assessed along with the ability to in fact pay, the priority of payment when juxtaposed against other vendors, and the impact of non-payment.

V.I. Inspector General's Comments

Regarding recommendation one, WAPA did not specifically address project cost monitoring and reporting to the Board. We will consider recommendation one unresolved and not implemented. We will consider recommendation two resolved and implemented.

This page intentionally left blank.

FINDING 3: WAPA PROCUREMENT GUIDELINES

WAPA established procedures and guidelines for all contract procurement and change orders to protect its best interest and promote the highest degree of fairness and integrity. However, our inspection revealed that: (i) these procedures were not always adhered to regarding Vitol's BOOT agreement with WAPA; (ii) WAPA's involvement in the contract negotiation lacked transparency; and, (iii) WAPA officials created an apparent conflict of interest when a law firm used by WAPA also performed services for Vitol.

These conditions occurred because: (i) after WAPA agreed to the terms of the BOOT agreement, they dismissed their procurement and processing guidelines that govern contracts and change orders; (ii) WAPA's legal counsel held that not all contracts are boilerplate; therefore, all contracts do not have to go through the same process; (iii) WAPA did not ensure favorable "standard contract terms" found in WAPA's written contracts were included in the BOOT contract; (iv) other contract terms WAPA agreed to placed WAPA in a tenable or precarious position if they did not agree to changes Vitol deemed necessary; and, (v) WAPA did not vet its external legal consultant for possible conflict of interest.

As a result: (i) contracts were not properly executed, resulting in an incomplete contract; (ii) change orders were not properly approved; (iii) WAPA paid over $2 million for professional services without the Board's approval; and, (iv) $92 million in change orders went unsigned and, where applicable, were not presented to the Board for approval.

Background

WAPA's Contracts Administration Guidelines (Guidelines) require contracts for construction projects costing more than $100,000. The Guidelines require Board approval of proposals or bids over $200,000. Changes to the scope of work, cost of the work, or the contract's term require Board approval for contracts over $200,000. The Executive Director can approve changes for contracts of $200,000 or less.

Board approval of a contract award is documented on the Summary Request for Governing Board Action form (Board approval summary). After the Board approves a contract award, under normal circumstances, the end-user submits the Board approval summary, the contract documents[10], and a completed Contract Preparation Form to the Contracts Office. The Contracts Office assigns a contract number for tracking and submits all the documents to the General Counsel for contract preparation. Once the General Counsel prepares the final contract, the Contracts Office is responsible for ensuring that: (i) the General Counsel sign the contract for legal sufficiency; (ii) the contract is also signed by the Contractor and WAPA's Executive Director; (iii) copies are distributed to the General Counsel, Accounting Office, and end-user or project coordinator; (v) a blank Notice to Proceed is given to the end-user or project coordinator for execution; and, (vi) its office maintains a copy of the completed contract, and all documents about the contract in a file for monitoring a project, and preparing monthly status reports.

---

10 The legally enforceable documents, plans, specifications, etc. that become part of the contract when the agreement is signed.

Although WAPA did not prepare Vitol's contract, in our opinion, WAPA should have followed all other relevant contract processing guidelines. WAPA's Contract Office plays a significant role in ensuring that all contracts are complete and appropriately executed. These guidelines are in place to protect WAPA from financial loss and limit the potential for litigation.

Contract Preparation

WAPA's Legal Department did not prepare the LPG Project contract because of its technical nature. Instead, WAPA asked the bidders to submit a sample agreement with their April 2013 proposals. A law firm drafted the sample agreement Vitol submitted with its proposal. The sample agreement became the basis for negotiations between WAPA and Vitol.

Contract Negotiations

We found that WAPA's involvement in negotiating the contract terms lacked transparency. We requested transcripts and reports on discussions WAPA officials held during negotiations with Vitol. Instead of transcripts, WAPA provided the Executive Summary of Principle Terms or Term Sheet to support what WAPA and Vitol negotiated. Also, we were given the July 25, 2013, Board meetings' transcripts as records of what WAPA's management discussed with the Board about the contract. WAPA officials informed us that negotiations were mostly face-to-face, through emails, in-person meetings, and telephone calls. Meetings were also held locally, in New York, Washington, D.C., and Houston, Texas. WAPA officials informed us that WAPA's management personnel, some Board members, Vitol officials, industry experts, and legal and technical consultants were involved in the negotiations.

As a result of the lack of documented support surrounding formal talks and negotiations with Vitol, we could not determine what contract terms were negotiated. Specifically, if WAPA officials negotiated for some of WAPA standard contracts terms found to be stronger than those included in the BOOT agreement.

Contract Terms. Although WAPA and Vitol had to negotiate the contract terms, the RFP WAPA issued included the following eight general contract conditions the bidding companies were to incorporate in their sample agreements. The following table details these conditions.

No.	Description
1	Comply with all applicable local tax obligations
2	Provide for liquidated damages
3	obtain and maintain insurance coverage
4	Comply with environmental laws, rules, regulations, and guidelines regarding permits for the discharge or spill of LPG, oil, petroleum products, or other contaminants prohibited
5	Maintain, by both parties, certain information confidential
6	Obtain Virgin Islands business licenses
7	Notify the V.I. Department of Labor of the Contractor's intent to fill a vacant position
8	Not communicate directly with WAPA Board members, employees, and evaluation committee members about the RFP

We found that the first five conditions were incorporated in Vitol's final agreement. However, we noted that the conditions to obtain Virgin Islands business licenses and notify the Department of Labor of vacant positions were left out of the contract.

We compared some of the contract articles found in the BOOT agreement to some of WAPA's general contract clauses generally included in WAPA's contracts. We found that some of WAPA's general contract terms that provide WAPA with stronger protections were weakened in the BOOT agreement. For example, contract clauses on audits, change orders, and contract termination placed WAPA in an unfavorable position. The following table details the contrast between WAPA's standard terms and what was included in Vitol's BOOT agreement.

Contract Term	WAPA General Contracts	VITOL BOOT Agreement
Audit Clause	'Right to Audit' clause afforded WAPA access to Vitol's accounting records and supporting documents throughout the contract's term, and for at least five years after WAPA made the final payment, or longer. WAPA shall recoup the cost of the audit if the audit detects overcharges greater than 5% of the total contract billings.	Gives WAPA access to Vitol's accounting records and supporting documents throughout the contract's term with reasonable advance notice, and for only three years following the contract term's expiration.
Change Orders	WAPA's 'Changes' clause included the phrase that changes to the work's general scope would not be put into effect until WAPA's Contracting Officer orders that change in writing, and contract modifications will be set forth on change orders.	The contract stipulated that Vitol was under no obligation to agree to any change order or comply with any changes to Vitol's work specifications WAPA ordered. Also, Vitol could submit a change order for any unanticipated conditions, which approval WAPA could not unreasonably withhold, condition, or delay.
Contract Termination	WAPA's 'Termination for Convenience' clause included the phrase that WAPA may at any time terminate the contract for WAPA's convenience, and without cause.	The contract stipulated that termination of the contract was dependent on several factors to which both WAPA and Vitol had to agree.

WAPA's General Counsel's reasoning for why more of WAPA's general contract terms were not included in Vitol's contract was that: (i) WAPA does not necessarily use the general contract terms for highly-commercial contracts; (ii) negotiated contracts do not have to look like the template because it is not the 'holy grail'; (iii) the Project was a game-changer and unchartered waters for WAPA; (iv) Vitol's contract was unique and specialized; (v) the high-dollar, highly-technical contracts are written specifically for that project; and, (vi) such agreements are drawn from scratch based on negotiations."

It is our position that when WAPA officials entered into negotiations with Vitol, they were responsible for negotiating in WAPA's best interest. Therefore, if WAPA's general contract terms were more vital or provided WAPA more protection, then it was incumbent on WAPA's officials to ensure that those terms were given serious consideration in the negotiation process.

However, since WAPA officials did not provide documentation of their negotiations, we could not determine if they negotiated for WAPA's stronger terms. Also, we found other deficiencies with the contracting process, including contracts and change orders not signed for legal sufficiency, and key documents not provided or obtained after the fact.

Legal Sufficiency

We found that WAPA's General Counsel did not sign the BOOT agreement for legal sufficiency. The General Counsel stated that the contract was reviewed for legal sufficiency but not signed because she did not participate in the contract-signing ceremony held at Government House. The General Counsel added that "sometimes things slip through."

Contract Processing

We found that WAPA officials moved Vitol's $87 million contract through the process of final execution without involving the Contracts Office. In an interview, the then-Contract Administration Manager stated that "the Contracts Office was left out of the process after the Board approved awarding the contract to Vitol."

When asked, the General Counsel stated that "some WAPA contracts are procured outside the guidelines, and technical and legal negotiations were occurring daily while the contract was being processed."

Key Documents

WAPA expedited the contracting process and agreed to execute the contract without certain key documents required per WAPA's contracting Guidelines. The documents not obtained before the contract was executed were the performance bond, insurance certificates, and business license. In some instances, WAPA set new deadlines or staggered deadlines. However, we found that Vitol did not meet some of those extended deadlines or never provided the documents.

In addition to WAPA's Guidelines requiring the Contracts Office to receive key documents before WAPA executes a contract, the Guidelines also state that "only Contract Administration or General Counsel can forward the contract to the Executive Director to ensure that WAPA received from the contractor all necessary documents such as permits, performance bond, insurance certificates, and business licenses before WAPA executes the contract."

Insurance. WAPA's Guidelines require the bidder or contractor to submit proof of insurance coverage upon execution of the contract. However, WAPA required Vitol to obtain insurance at different stages of the work. The construction started in February 2014 for St. Croix and March 2014 for St. Thomas. WAPA allowed Vitol to obtain workers' compensation, commercial general liability, and automobile liability insurance before beginning construction at the Project's sites. We found that Vitol never obtained workers' compensation insurance. Also, WAPA allowed Vitol to obtain builders' risk insurance during the performance of the work. Vitol performed the work from 2014 to 2017. However, Vitol obtained the insurance for this work in January 2017, thereby fulfilling the work from February 2014 to January 2017 without evidence of builders' risk insurance.

Business License. We could not determine if WAPA gave Vitol a deadline to obtain its business license. However, we noted that Vitol received its first business license in November 2013, four months after the contract was executed.

Contract Exhibits. In addition to the above-stated documents, WAPA officials agreed to postpone receiving seven Exhibits before the contract's execution. Those seven Exhibits were the: (1) Ground Lease, (2) Scope of Work for GE Services & Specifications for Fuel Gases, (3) Vaporizer Performance Standards & Operating Procedures, (4) Meter Obligations, (5) Projected Project Budget, (6) Work Schedule, and (7) Environmental Cooperation & Indemnification Agreement. When asked about the Exhibits, the General Counsel stated that WAPA needed to get the Project started, and Vitol needed to 'get in line' to procure long lead-time items, like the LPG storage tanks. Therefore, WAPA did not finalize seven of the 17 Exhibits that detailed several technical and commercial issues before the contract's execution.

Although WAPA provided us with five of the seven missing Exhibits, we could not verify when WAPA received them. However, in December 2013, the Executive Director reported to WAPA's Board that the missing Exhibits were practically completed. We found that WAPA never received the Vaporizer Performance Standards & Operating Procedures, and the Meter Obligations.

Also, neither Vitol nor WAPA signed the Ground Lease based on documents provided by WAPA's General Counsel. We did note that in the October 2013 monthly report to the Board, the Executive Director stated that the only issue remaining for the Ground Lease was language assuring that Vitol would be held liable for any environmental damages caused during the term of the lease. However, since the Ground Lease was not executed, the legality of who will be held responsible for damages remains in question.

Contract's Execution

WAPA's contracting Guidelines state that "the Executive Director shall sign a contract after all other signatures are affixed [to the contract]." However, we found that the contract lacked the signatures of the General Counsel, WAPA's Project Manager, and a witness. Instead, the Executive Director and Vitol signed the contract simultaneously during a contract-signing ceremony at Government House on July 25, 2013, the same day the Board authorized the Executive Director to enter into the agreement.

Unsigned Change Orders

As work progressed on the Project, Vitol submitted change orders to meet the unplanned, unexpected, and unanticipated challenges. We requested copies of all the change orders to determine if they were adequately approved, deemed legally sufficient, and their costs accounted for.

We were provided with 44 change orders that accounted for $92 of the $98 million in project cost increases. We were not provided with change orders to account for $6 million dollars. However, we found that none of WAPA's Project management team or WAPA's legal counsel signed off on the 44 change orders. Instead of signatures, we saw members of WAPA's management teams' names typewritten on the change orders. Those names included the then-Executive Director or then-Interim Executive Director, Project Manager or Project Coordinator.

Also, we did not find that the General Counsel signed any of the change orders for legal sufficiency. The General Counsel stated that a WAPA representative should have initialed or signed the change orders. However, although she said that she reviewed the change orders, she was not sure of the reason for not signing them.

When we inquired with the Head Project Manager and the Project Coordinator about the change orders, the Head Project Manager indicated that he was not involved with the change orders and was not responsible for approving them. It was his position that the Project Coordinator and Project Monitors were responsible for the daily activities. Therefore, change orders were the responsibility of the people in the field to review. However, the Project Coordinator stated that although WAPA was responsible for reviewing and approving the change orders, several decisions about change orders were made outside his purview.

We found that of the 44 change orders provided, 17 totaling $39,843,137 had no supporting documentation. The other 18 change orders totaling $31,360,766 lacked adequate documentation to verify the Project's cost. There was no indication of how those costs were derived, such as vendor quotes, other verifiable pricing or invoices. Therefore, we could not determine if the costs were defined and documented using written vendor quotes or other acceptable pricing methods. As a result, we could not verify a total of $71,203,903 in change order cost. The following table details the number of change orders provided and reviewed.

Description	No. of Change Orders	Total
No supporting documentation	17	$39,843,137
Propose summary cost sheet	18	$31,360,766
Adequate Support	9	$20,379,179
Total	**44**	**$91,583,082**

Professional Services Contracts

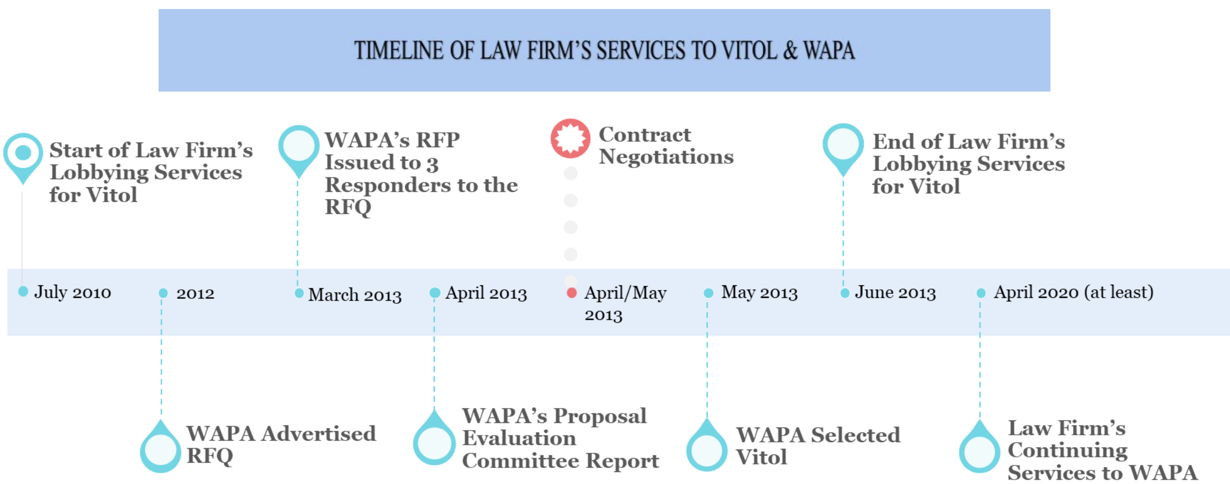
We found that WAPA engaged companies for services without contracts and executed one contract after services were provided. For example, without a contract in place, WAPA paid a law firm $2,114,776 for the law firm's professional services on WAPA's LPG conversion. We received 31 invoices totaling $1,700,526 and found the then-General Counsel approved 24 of the invoices for payment. WAPA did not provide 32 additional invoices listed, totaling $414,250. Therefore, we could not verify who approved those invoices.
Also, WAPA paid an LPG Energy Advisors Firm $73,924 in November 2013 for services provided from February to July 2013. WAPA then executed a contract on September 30, 2013. WAPA engaged the LPG Energy Advisors Firm in February 2013 for engineering consulting services related to WAPA's proposed switch to LPG.

Apparent Conflict of Interest

We found that WAPA officials did not vet its external Law Firm for a conflict of interest. The Law Firm that has provided professional services to WAPA for over 20 years was a lobbyist for Vitol from July 1, 2010, to June 28, 2013. While providing lobbying services for Vitol, the Law Firm was involved in the Project's request for proposals process, the Evaluation Committee's review of proposals, and represented WAPA during contract negotiations.

Specifically, in April 2013, the Law Firm reviewed respondents' proposals, participated in the Committee's meetings, and assisted the Committee in preparing its summary and recommendations report. The Committee issued the report that same month and recommended that WAPA pursue further negotiations with Vitol and one other company, and the Law Firm was copied on the Committee's report.

Also, from May 7 to 9, 2013, the Law Firm met with Vitol and one other company about clarifying and refining some elements of their proposals. Subsequently, on May 10, 2013, WAPA notified Vitol of their decision to finalize a commercial agreement with them for the Project. The Law Firm prepared Vitol's Letter of Intent for the Project, and from May to July 2013, was also involved in discussions regarding the finalization of the Project's Term Sheet[11] between WAPA and Vitol. The following timeline details the overlapping periods of services to WAPA and Vitol.



We found that the Law Firm's overlapping services to WAPA and Vitol created a conflict of interest that started from at least April 2013 to July 2013. After the Law Firm terminated its lobbying services for Vitol in July 2013, the Law Firm continued to work on the Project for WAPA until at least April 2020. When asked, the General Counsel stated that "vetting was left up to WAPA's attorney." We believe that even an appearance of a conflict of interest undermines any contract award's fairness and integrity.

---

11 A term sheet is a nonbinding agreement that shows the basic terms and conditions of an investment, and serves as a template and basis for more detailed, legally binding documents.

Recommendations

We recommend that the WAPA Board ensure that:

1. All contract negotiations are documented and maintained, at a minimum, as required by industry standards.

2. Management follows all established procurement procedures and guidelines and documents non-compliance when deviating from such policies.

3. Management processes all contract-related documents and change orders through the Contracts Office to ensure that contract files are complete, and all necessary documents received to minimize any potential liability that may revert to WAPA.

4. Management follows guidelines when executing contracts for all professional services costing more than $50,000.

5. All professional services contracts are vetted for the potential of a conflict of interest issues.

WAPA's Response

The response did not indicate agreement with recommendation one. WAPA indicated that retention of negotiation documents is not required under industry standards, and the final contract embodies all relevant terms and understandings agreed to by the parties. The response further indicated that prior negotiations are extrinsic, and under the Parol Evidence Rule, parties to a written contract may not present "extrinsic" evidence of terms in a contract that contradict, modify, or vary the terms of a written agreement when that written agreement is considered complete and finalized.

The response indicated agreement with recommendations two through five. Specifically, all responses to Finding three fall under the purview of the General Counsel, and no member of the present legal staff was with WAPA during the times indicated. However, management currently follows all established procurement procedures and guidelines, all agreements are filed with Contract Services and given a contract number, and conflict checks must be undertaken and a currently performed.

V.I. Inspector General's Comments

Regarding recommendation one, WAPA maintained records of discussion of the terms for the three contract amendments pertaining to the Project's cost increases. The Parol Evidence Rule was not applied in those instances. Therefore, we consider this recommendation unresolved and not implemented.

Regarding recommendation three, the response did not indicate agreement with processing change orders with Contract Services. Therefore, we consider this recommendation partially unresolved and partially not implemented.

Regarding recommendations two, four, and five, we consider these recommendations resolved and implemented.

This page intentionally left blank.

FINDING 4: CONVERSION OF POWER-GENERATING UNITS

We found that: (i) WAPA converted five of eight power-generating units they initially planned to convert to use LPG; (ii) of the five units converted, WAPA dismantled one unit and removed another from service, replacing them with rented units; (iii) WAPA did not ensure that some rented power units burned LPG as stipulated in the rental agreements; and, (iv) WAPA officials had differing opinions on whether the dismantled unit should have been replaced or repaired.

These conditions occurred because: (i) of the seven units contracted, one was not overhauled and therefore, not eligible for conversion; (ii) another unit experienced mechanical issues during conversion and was abandoned and is now used for spare parts; (iii) one sustained damages after conversion and was deemed unusable; (iv) one failed after conversion; and, (iv) WAPA officials decided to replace the damaged unit with rented units without doing a cost-benefit analysis to repair versus replace the unit.

As a result: (i) WAPA was left with three out of five converted units to burn LPG; (ii) WAPA incurred $43,570,000 in rental costs and increased fuel costs when some rented power generating units could not burn LPG; and, (iii) WAPA's ability to recoup its estimated investment of $10 million to convert two units was negatively impacted when one unit was dismantled, and another unit failed.

Background

WAPA's April 2013 Request for Proposal for the Project required the physical conversion of eight gas turbine units to burn vaporized LPG, natural gas, and diesel. These eight units were owned, operated, and maintained by WAPA. However, under the July 2013 BOOT agreement, Vitol would manage the repowering of seven units because Unit 22 was not included in Vitol's negotiated agreement for conversion.

Section 2.02 of the BOOT agreement required Vitol to negotiate a repowering agreement with GE, the original equipment manufacturer. GE would convert power generating Units 15, 18, and 23 at the Randolph Harley Power Plant on St. Thomas, and Units 16, 17, 19, and 20 at the Richmond Power Plant on St. Croix to burn vaporized LPG and diesel safely. After converting the units, GE would ensure that all systems were completed and safe to energize, which is called 'commissioning the units.' WAPA would be named as the third party on the agreement.

On November 20, 2013, Vitol, WAPA, and GE entered into a sale of products and performance of services agreement. GE agreed to perform the planning, designing, engineering, and construction services, and procure all parts, supplies, and labor services to convert and commission the seven units. GE, however, converted five of seven units between October 2014 and June 2016 for $24,799,568, averaging $5 million per unit. GE did not convert two units because Unit 23 was not overhauled for conversion, and Unit 19 developed mechanical issues during conversion.

Power Plant Site Visits

We conducted a site visit at both power plants. We visited the Richmond Plant and the Randolph Harley Plant in January and February 2020, respectively. Specifically, at the Richmond Plant in January of 2020, we found that WAPA was using Unit 20. However, WAPA was not using Units 16, 17, and 19. At the Randolph Harley Plant in February 2020, we found that WAPA was using Unit 15. However, Unit 18 was not in service, and Unit 23 was being used as a backup generator because it was not overhauled for conversion.

The Richmond Power Plant. Although WAPA planned on converting four power units at the Richmond Plant, they abandoned the conversion of Unit 19 when the unit developed mechanical issues during the conversion process. Therefore, WAPA converted Units 16, 17, and 20. The Interim Executive Director reported on July 13, 2016, at a Legislative Committee hearing that Unit 16 was converted in October 2014, Unit 17 in June 2016, and Unit 20 in January 2016. On February 9, 2017, we found that GE issued a certificate of final mechanical completion and commissioning on LPG and diesel for the three units. At our site visit to the Richmond Plant, we asked WAPA officials about power Units 16, 17, and 19. The following discussions address each unit.

Power Generating Unit 16. The Director of Project Management (Director) stated WAPA removed Unit 16 from service after it was converted because it suffered a catastrophic failure when a foreign substance entered the combustion section. Furthermore, the Director said that after the two category five hurricanes in September 2017, WAPA did not approve funding to repair the unit.

The former Chief Operating Officer of Electric recounted that when Unit 16 was removed from service or decommissioned, it was replaced with 18 smaller leased-Aggreko units that use less fuel to produce the same amount of energy. Also, the Aggreko units have a better heat rate than Unit 16. We found that from January 2019 to April 2021, WAPA paid Aggreko $17,095,953.90 in rental fees.

We found that since Unit 16 was commissioned in February 2017, and officials stated that the unit failed before the September 2017 hurricanes, the power unit was compromised within seven months from its commissioned date. WAPA had invested an estimated $5 million to convert the Unit.

Power Generating Unit 17. In March 2020, we asked the former Chief Operating Officer of Electric about Unit 17. He stated that Unit 17 was unavailable temporarily but would be back online shortly. We found that although an Engineering Firm's November 2016 Integrated Resource Plan[12] (IRP) recommended that WAPA retire Unit 17 in December 2019, as of May 2020, the Director informed us that Unit 17 was recently overhauled and back online.

12 Integrated resource planning is a formal process undertaken by a utility to determine future resource requirements necessary for meeting forecasted annual peak and energy demand, with an adequate reserve to provide for system reliability and integrity.

Power Generating Unit 19. After it was disclosed that Unit 19 developed mechanical issues during its conversion and WAPA decided to abandon the conversion, we asked the Director to explain the circumstances surrounding WAPA's decision. The Director stated after Unit 19 developed mechanical issues during the conversion process, it was discovered that the combustion system's safety mechanism made it hard to start quickly using LPG. He stated that the unit would have to go through a purging sequence that required it to be locked down for a certain amount of time. Since the Unit could not restart on propane, it was left on diesel and used in the event of an outage. At that time, WAPA decided to obtain smaller, more efficient units to compensate for not converting Unit 19. At our interview in March 2020, the Head Project Manager stated that Unit 19 was now used for spare parts.

Randolph Harley Power Plant. Although WAPA's initial plans included converting Units 15, 18, 22, and 23 at the Randolph Harley Plant, WAPA omitted Unit 22 in its conversion plans because the Director and another WAPA official cited many legal issues with the unit before the Project. Ultimately, WAPA decommissioned Unit 22, and it is no longer at the power plant. WAPA officials could not give the date of its decommissioning and removal. Also, although Unit 23 was included in GE's agreement for conversion, WAPA did not overhaul the unit, which is a prerequisite to converting the unit. Therefore, only Units 15 and 18 were converted. The Interim Executive Director confirmed to Legislators at the 31st Legislature Committee on Energy & Environmental Protection hearing on July 13, 2016, that Unit 15 was converted in June 2015, and Unit 18 in November 2015. On January 9, 2017, we found that GE issued a certificate of final mechanical completion and commissioning on LPG and diesel for the two units. As a result of our site visit to the Randolph Harley Power Plant in February 2020, we interviewed WAPA officials about units 18 and 23.

Power Generating Unit 18. We were informed that Unit 18 was dismantled. When we inquired of the reason for dismantling Unit 18, some WAPA officials provided differing opinions on why Unit 18 was dismantled and replaced instead of repaired.

For example, the Director, who served as the Project's Coordinator, stated Unit 18 was dismantled after conversion for LPG use because it developed issues after the 2017 hurricanes. The Director also stated that water in the engine created problems when starting the unit. Therefore, the Production Department decided to replace Unit 18 with rented Unit 27.

Repaired Diesel Engine on St. Thomas

A former WAPA Project Manager stated that issues with its diesel engine began after the 2017 hurricanes. He believed WAPA could have repaired the unit with a repaired diesel engine on St. Thomas or a diesel engine on St. Croix. The former Manager believed WAPA did not repair Unit 18 since the APR Energy Unit 27 was already built.

WAPA's Data Acquisitions & Controls Coordinator stated that: (i) Unit 18 developed a gasket problem after the 2017 hurricanes, but the engine could have been repaired with a new gasket; and, (ii) it was reported that parts were already purchased to repair Unit 18 before the authorization to replace it with APR Energy Unit 27. The Coordinator believed since the APR Energy unit was already prepared for shipment to St. Thomas, WAPA management chose to dismantle Unit 18, but he did not know why WAPA dismantled the unit.

WAPA's former Chief Operating Officer of Electric stated: (i) even if WAPA did not dismantle Unit 18, the APR Energy units would still be rented because WAPA needed more power generating capacity to operate the St. Thomas power plant fully; (ii) Unit 18 was less efficient than the rented APR Energy units; and, (iii) all units can be repaired, but it made no sense to put money into repairing Unit 18 because it was slated to be removed from service based on WAPA's September 2016 Near-Term Generation Action Plan, and the November 2016 IRP.

Our review of the November 2016 IRP disclosed that the Engineering Firm recommended WAPA retire Unit 18 in December 2020. We noted that the recommendation allowed Unit 18 to remain in existence for another four years. However, WAPA dismantled Unit 18 before the recommended retirement date and at least two years before our site visit in February 2020. We were unable to verify when WAPA dismantled Unit 18.

Furthermore, our review of WAPA's September 2016 Near-Term Plan and March 2017 amended Near-Term Plan revealed that WAPA wanted to enhance the Randolph Harley Power Plant generating capacity. Therefore, WAPA would rent the APR Energy units, install three Wartsila units, and solicit RFPs for long-term generation options to meet the power plant's peak demands. Both WAPA's September 2016 Near-Term Plan and March 2017 amended Near-Term Plan cited that the November 2016 IRP concluded that those options were consistent and aligned with the long-term recommendations of the IRP.

In an interview with WAPA's former Chief Operating Officer of Electric, he stated it costs about $1 million to repair and about $3 million to overhaul a unit. Considering that WAPA invested $5 million to convert Unit 18 and WAPA officials' statements that the unit could have been repaired, coupled with the IRP recommending retirement of the unit in four years, we did not find that WAPA officials considered the cost-benefit to repair Unit 18 versus management's decision to accelerate its replacement. Without a cost-benefit to repair versus replace, we do not know if a repair could have improved Unit 18's performance or extend its useful life beyond the December 2020 recommended retirement date or if the decision was in WAPA's best financial interest at that time.

Additional Costs for Rented APR Energy Units. When WAPA's management decided to replace Unit 18, they incurred $24,570,000 to rent two units from APR Energy. However, these units could not burn LPG as stipulated in the rental agreements. The former Chief Operating Officer of Electric stated that the vaporizers could not transform LPG into a gaseous form or vapor. The former manager stated the APR Energy units came propane-fitted, but the vaporizers' pipes that delivered propane to the units were too small, the connection part never worked, and APR Energy would have to build an entirely new system. Therefore, APR Energy agreed to reduce WAPA's $14.3 million in overdue payments as of May 2019 to $9.3 million to compensate WAPA for its use of diesel fuel. Although the units could not burn LPG, WAPA extended the rental agreements from May 1, 2019, to December 31, 2020, an additional 20 months, at $9.5 million for each unit.

Power Generating Unit 23. At the September 15, 2020, Legislative Committee on Rules and Judiciary hearing, the former Executive Director testified that all aspects of this Near-Term Generation Action Plan have been completed except for the conversion of Unit 23. He added that although all the parts were available, the unit had not been decommissioned for the conversion to occur. We were informed that WAPA never converted Unit 23 to have it commissioned to use LPG. In an interview with the Director of Project Management, we were told that the Board did not approve overhauling Unit 23, and WAPA would have to convert Unit 23 on its own because GE will no longer convert Unit 23 since it has been sitting on their books for too long. In another interview, the Head Project Manager stated WAPA still has the parts to convert Unit 23. The former Chief Operating Officer of Electric said that WAPA now uses Unit 23, which burns diesel, as a standby generator when there is a problem at the plant. However, some of WAPA's officials have differing opinions on whether WAPA should have converted Unit 23 and have it commissioned.

The former Chief Operating Officer of Electric stated WAPA was going to remove Unit 23 from service since the Engineering Firm recommended purchasing and installing the three Wartsila units in the November 2016 IRP. Our review of the IRP disclosed that the Engineering Firm did recommend WAPA purchase and install the three Wartsila units beginning in October 2018 and retire Unit 23 in June 2019. However, as of February 2020, WAPA was still using Unit 23 as a standby generator.

WAPA's Data Acquisitions & Controls Coordinator stated: (i) WAPA bought Unit 23 in December 2004, and by 2008, it was not working since the sodium in the water damaged the unit's blades; (ii) WAPA should have considered reliability because the smaller Wartsila generators go off-line with every fluctuation; and, (iii) Unit 23 is WAPA's largest generating unit, which covered the power plant's baseload, and remained stable even after a fluctuation. The Coordinator added that he recommended to a Board member that WAPA repair and convert Unit 23 to use propane because: (i) it is a big machine with twice the capacity of the three Wartsila units; (ii) it would cost less to operate Unit 23 than the Wartsila units since parts can be purchased from the United States; and, (iii) Unit 23 could run the entire power plant.

Summary

The following table details the status of WAPA's power generating units.

WAPA-Owned Power Generating Units

Unit/Island	WAPA's RFP	Vitol/GE Contract	Converted	Conversion Date	Fuel Type	Status
15 - St. Thomas	Yes	Yes	Yes	June 2015	LPG/Diesel	In Use
18 - St. Thomas	Yes	Yes	Yes	November 2015	LPG/Diesel	Dismantled and replaced with APR Energy and Wartsila units
22 - St. Thomas	Yes	No	No	Not converted	Diesel	No Longer at WAPA
23 - St. Thomas	Yes	Yes	No	Not converted	Diesel	Used as stand-by generator
16 - St. Croix	Yes	Yes	Yes	October 2014	LPG/Diesel	Decommissioned and replaced with Aggreko units
17 - St. Croix	Yes	Yes	Yes	June 2016	LPG/Diesel	In Use
19 - St. Croix	Yes	Yes	No	Not converted	Diesel	Used for spare parts and replaced with Aggreko units
20 - St. Croix	Yes	Yes	Yes	January 2016	LPG/Diesel	In Use

We found that WAPA converted five units, costing over $24 million. Unfortunately, one unit sustained damages and one failed after WAPA invested about $10 million to convert them. After the one unit sustained damages, we did not find that WAPA performed a cost-benefit analysis to determine whether to repair or replace it.

WAPA's initial investment to convert the units came with an expectation of a return on their investment. However, two converted units being removed from service impacted WAPA's ability to recoup its initial investment. Therefore, we question WAPA management's decision to not perform a repair versus replacement cost-benefit analysis on the damaged unit. Either decision impacted WAPA's ability to control its cost and provide cost savings to its customers. Furthermore, WAPA accepted increased cost to use diesel fuel when two leased units failed to deliver their promise to burn LPG.

Recommendation

We recommend that the WAPA Board:

1. Ensure that a cost-benefit analysis is completed and documented when management is faced with repair vs. replacement decision.

WAPA's Response

The response indicated agreement with the recommendation. Specifically, in order to select a course of action, repair vs. replace, a cost analysis is performed by the Project Manager in conjunction with the respective Chief Operating Officer.

V.I. Inspector General's Comments

While it is important that a repair vs. replace cost analysis is performed, the response did not indicate documentation of the analysis. Therefore, we consider this recommendation partially unresolved and partially not implemented.

This page intentionally left blank.

APPENDIX I

WAPA'S RESPONSE

VIRGIN ISLANDS
WATER
AND POWER
AUTHORITY

P.O. BOX 1450,
ST. THOMAS, USVI 00804-1450
TELEPHONE: (340) 774-3552 Ext. 2002
FAX: (340) 774-3422

Office of the Executive Director

November 12, 2021

Steven van Beverhoudt, CFE, CGFM
Virgin Islands Inspector General
2315 Kronprindsens Gade #75
St. Thomas, VI 00802-6468

Dear Inspector van Beverhoudt:

I, along with members of the Virgin Islands Water and Power Authority (WAPA or the Authority) management team, have reviewed the draft report concerning the contract with Vitol Virgin Islands Corporation (Vitol). With the benefit of hindsight, we applaud some of the initiative shown with the project but recognize that other actions undertaken in the past would not be employed today. As to the lessons learned, we list below the recommendations detailed within the report and note in blue the measures with which there is agreement, those already implemented and those the Authority would suggest be handled in an alternate fashion.

FINDING 1: PROJECT PLANNING

We recommend that the WAPA Board:

1. Considers hiring an independent professional to educate, guide, and report findings directly to the Board as necessary and appropriate.

   The Authority, specifically the Chief Operating Officer for the affected system, currently retains outside consultants as needed depending upon the nature of the project. The said consultants often present before the Board to offer clarity and answer questions, particularly on complex or novel matters.

APPENDIX I

WAPA'S RESPONSE

2. Ensures that its designated project management teams possess all the requirements necessary to engage adequately with contractors.

   Piggybacking a bit on the response shared for number 1 above, the Executive Director, in conjunction with the respective COO, ensures that projects are appropriately staffed.

3. Ensures that a cost-benefit analysis is done or routinely assessed when taking on design and build as you go projects.

   Such action is required on all projects funded through federal partners and are routinely employed on locally sourced projects as well. The CEO in conjunction with the respective COO is responsible to ensure that a cost benefit analyses are assessed on build as you go projects.

FINDING 2: PROJECT COST

We recommend that the WAPA Board:

1. Ensures that all project costs are periodically monitored for significant changes, and those are timely reported to the Board.

   The Project Manager, reporting to the respective COO, is charged with ensuring that the work remains on track and within budget.

2. Ensures that management monitor WAPA's ability to make prompt payments on the infrastructure note and assess the long-term effect that delinquent payments would have on the Project's cost and WAPA's ability to provide net savings to its customers.

   The Chief Financial Officer monitors cash flow on a daily basis. However, the overall desire to pay all bills in a timely fashion is assessed along with the ability to in fact pay, the priority of payment when juxtaposed against other vendors and the impact of non-payment.

FINDING 3: WAPA PROCUREMENT GUIDELINES

We recommend that the WAPA Board ensures that:

1. All contract negotiations are documented and maintained, at a minimum, as required by industry standards.

WAPA'S RESPONSE

WAPA Response: Vitol Inspection Report

All responses under this Finding fall under the purview of the General Counsel. Retention of negotiation documents is not required under industry standards. A final contract embodies all relevant terms and understandings agreed to by the parties. Prior negotiations are extrinsic and cannot be considered (the Parol Evidence Rule). Under the Parol Evidence Rule, parties to a written contract may not present "extrinsic" evidence of terms in a contract that contradict, modify, or vary the terms of a written agreement, when that written agreement is considered complete and finalized. Or in other words, outside evidence cannot be used where there is a written contract. That said, more complex agreements with numerous drafts and discussions are usually tracked in the attorney notes/confidential work product.

2. Management follows all established procurement procedures and guidelines and documents non-compliance when deviating from such policies.
   No member of the present legal staff was with the Authority during the times indicated herein. That said, the delineated recommendations reflect standards presently in place. Departments follow the Contract Guidelines and, if any deviation is required, obtain a waiver therefrom.

3. Management processes all contract-related documents and change orders through the Contracts Office to ensure that contract files are complete and all necessary documents received to minimize any potential liability that may revert to WAPA.
   The Contract Guidelines provide that all agreements, even those drafted by outside counsel, are given a Contract number and are filed with Contract Services. A conflicts check must also be undertaken.

4. Management follows guidelines when executing contracts for all professional services costing more than $50,000.
   Contract Guidelines are followed for all agreements.

5. All professional services contracts are vetted for the potential of a conflict of interest issues.
   Conflict checks are currently performed.

FINDING 4: CONVERSION OF POWER-GENERATING UNITS

We recommend that the WAPA Board:

1. Ensures that a cost-benefit analysis is completed and documented when management is faced with repair vs. replacement decision.

WAPA'S RESPONSE

In order to select a course of action, repair vs. replace, a cost analysis is performed by the Project Manager in conjunction with the respective COO.

Sincerely,

Noel Hodge
Interim Executive Director/CEO

cc: Hon. Albert Bryan Jr.
Governor

Leslie A. Smith, CPA, CIA, CFE, CGFM
Director, VIWAPA Internal Audit & Revenue Assurance

APPENDIX II

ADDITIONAL INFORMATION NEEDED TO CLOSE RECOMMENDATIONS

Recommendation Number and Status	Additional Information Needed
Finding 1:	
1. Resolved.	No further action needed.
2. Resolved.	No further action needed.
3. Resolved.	No further action needed.
Finding 2:	
1. Unresolved.	Provide evidence that a policy has been established to monitor changes to projects.
2. Resolved.	No further action needed.
Finding 3:	
1. Unresolved.	Provide evidence that procedures have been established to ensure that contract negotiations are documented and maintained.
2. Resolved.	No further action needed.
3. Unresolved.	Provide evidence that procedures have been established to ensure that all contract documents are processed through the Contracts Office.
4. Resolved.	No further action needed.
5. Resolved.	No further action needed.
Finding 4:	
1. Unresolved.	Provide evidence that procedures have been established to ensure cost benefit analysis will be used when appropriate.

This page intentionally left blank.

APPENDIX III

OFFICIAL REPORT DISTRIBUTION

<u>Government of the Virgin Islands</u>

Virgin Islands Water and Power Authority	2
Virgin Islands Public Services Commission	1
Office of the Governor	2
Office of the Lieutenant Governor	1
Office of Management and Budget	1
Virgin Islands Department of Justice	1
34th Legislature	15
Office of the Legislative Post Auditor	1
Virgin Islands Delegate to Congress	1

<u>Government of the United States</u>

United States Department of Justice, Office of the United States Attorney	1
United States Department of Justice, Federal Bureau of Investigation	1

This page intentionally left blank.

This page intentionally left blank.

This page intentionally left blank.

OFFICE OF THE VIRGIN ISLANDS INSPECTOR GENERAL
1982
GOVERNMENT OF THE U.S. VIRGIN ISLANDS