

## **OFFICE OF THE CITY AUDITOR**

City and County of Honolulu  
State of Hawai'i

# **Audit of the Department of Environmental Services' H-POWER Contracts and Procurement Practices**





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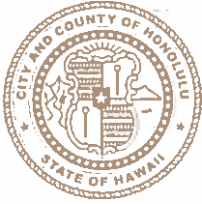
A Report to the  
Mayor  
and the  
City Council  
of Honolulu

Submitted by

**THE CITY AUDITOR**  
CITY AND COUNTY  
OF HONOLULU  
STATE OF HAWAII

Report No. 15-04  
December 2015





OFFICE OF THE CITY AUDITOR  
CITY AND COUNTY OF HONOLULU

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EDWIN S.W. YOUNG  
CITY AUDITOR

December 11, 2015

The Honorable Ernest Y. Martin, Chair  
and Members  
Honolulu City Council  
530 South King Street, Room 202  
Honolulu, Hawai'i 96813

Dear Chair Martin and Councilmembers:

A copy of our final report, *Audit of the Department of Environmental Services' H-POWER Contracts and Procurement Practices*, is attached. This audit was conducted pursuant to City Council Resolution 12-150, CD1, which requested the city auditor to perform an audit of the Department of Environmental Services' (ENV) contracts, including its procurement practices to ensure that it is operating efficiently, effectively and in compliance with all applicable laws and policies. This audit was included in the *Office of the City Auditor's Proposed Annual Work Plans* and performed in accordance with generally accepted government auditing standards from November 2013 to November 2015. The audit focuses on the H-POWER project.<sup>1</sup>

**Background:** The Department of Environmental Services plans, directs, operates and administers the city's solid waste and other environmental sustainability programs. In 2008, ENV issued a 25-year integrated solid waste management plan which reduced the need for landfill through the use of an H-POWER waste to energy facility that converted solid waste into electricity. In FY 2014, the H-POWER facility produced and sold 379,438 megawatt hours of electricity and generated \$65.6 million in electric revenues.

For the original H-POWER facility, ENV executed two contracts. In July 1985, ENV awarded Honolulu Resource Recovery Venture (HRRV) a 20-year contract (\$163,764,130) to operate the H-POWER facility. ENV awarded a second contract (\$149,975,660) in July 1985 to HRRV to design, construct, and test the H-POWER facility. Covanta acquired the operating contract from HRRV in 1993. In FY 2014-15, ENV paid Covanta a \$52.9 million service fee to operate and maintain the H-POWER facility.

The original contracts totaled \$313.7 million. After the contracts were awarded, ENV initiated three major capital projects and used 79 contract modifications (amendments, change orders, and task orders) to construct, improve, expand, and refurbish the H-POWER facility. The changes increased the overall project costs to \$993.3 million (including contractor, construction, and operating costs) as of FY 2013. Despite State of Hawai'i Procurement Code and city policies that restricted the use of sole source contracts, cost-plus, and time and materials contracts, ENV used *de facto* sole source, cost-plus, and time and materials contracts to construct, improve, expand, and refurbish the H-POWER facility, and to hire consultants.

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<sup>1</sup> The Beachwalk and Synagro projects will be the focus of other planned audits.

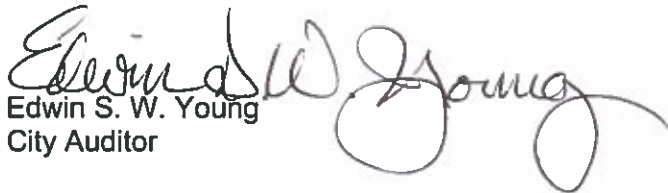
The Honorable Ernest Y. Martin, Chair  
and Members  
December 11, 2015  
Page 2 of 2

**Audit Results:** We found ENV needs to improve its procurement practices. ENV did not fully comply with sole source contract requirements, particularly for consultants. ENV used cost-plus and time and materials contracts although resources needed to administer the contracts were not assigned, approved contract terms that were not in the best interests of the city, and approved contract modifications without realizing the contractor's right to operate the H-POWER facility was extended from 20 years to 47 years.

ENV also needs to improve its contract administration practices. Our review of payments prior to FY 2013 indicated ENV approved many payments that were excessive, questionable, and not fully supported. Although a small sample of invoices indicate payments for invoices have improved since FY 2013, ENV can still improve its contract administration by assigning the resources needed to properly administer the complex H-POWER contracts. ENV disagreed with our findings and agreed with most of our recommendations.

We express our appreciation for the cooperation and assistance provided us by the managers and staffs of the Office of the Managing Director, the Department of Environmental Services, the Department of Budget and Fiscal Services, and the many others who assisted us during the audit. We are available to meet with you and your staff to discuss the review results and to provide additional information. If you have any questions regarding the audit report, please call the auditor-in-charge, Susan Hall, or me at 768-3134.

Sincerely,



Edwin S. W. Young  
City Auditor

c: Kirk Caldwell, Mayor  
Roy Amemiya, Jr., Managing Director  
Lori Kahikina, Director, Department of Environmental Services  
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Ross S. Tanimoto, P.E., 2nd Deputy Director, Department of Environmental Services  
Manuel Lanuevo, Chief of Refuse Division, Department of Environmental Services  
Susan Hall, Deputy City Auditor

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# Table of Contents

## Chapter 1 Introduction and Background

Introduction .....	1
Background.....	1
H-POWER (H <u>onolulu</u> P <u>rogram</u> o <u>f</u> W <u>aste</u> E <u>nergy</u> R <u>eco</u> v <u>ery</u> ) .....	4
Audit Objectives.....	5
Audit Scope and Methodology .....	6
Audit Results .....	8

## Chapter 2 ENV Contract Administration Can Be Improved

Background.....	11
H-POWER Contract Limited the City’s Access to Records, Curtailed Records Retention, and Limited the City’s Right to Audit.....	13
ENV Did Not Use the City’s <i>General Terms and Conditions</i> to Protect the City’s Interests .....	17
Contracts Contained an Unusual Requirement for the City to Issue General Obligation Bonds to Ensure the Contractor and Subcontractors Were Paid.....	18
ENV Used Cost-Plus and Time and Materials Contracts Although Resources Needed to Administer the Contracts Were Not Assigned.....	19
ENV and BFS Approved Contract Modifications That Extended Covanta’s Contract From 20 Years to 47 Years .....	21
ENV and BFS Claim the Covanta Contract Is a Good Contract and in the Best Interests of the City.....	22
Recommendations .....	23

## Chapter 3 Prior To FY 2013, ENV Allowed the Contractor to Invoice and Collect Payments That Were Excessive or Should Have Been Paid by the Contractor

Background.....	25
Deficiencies Found in H-Power Contracts .....	27
Recommendations .....	36

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## Chapter 4 ENV Procurement Practices Can Be Improved

Background.....	37
ENV Used Cost-Plus, Time and Materials, and <i>De Facto</i> Sole Source Contracts to Construct, Improve, Expand, and Refurbish the H-POWER Facility .....	40
ENV and BFS Claim the <i>De Facto</i> Sole Source, Cost-Plus, and Time and Materials Contracts Were Justified and in the Best Interests of the City .....	51
Recommendations .....	55

## Chapter 5 Conclusion and Recommendations

Recommendations .....	59
Management Response .....	61
Auditor Analysis of Management Comments .....	62

## Appendices

Appendix A	Glossary and Definitions.....	103
Appendix B	List of H-POWER Construction, Improvement, Expansion, and Refurbishment Projects.....	107
Appendix C	H-POWER Facility Chronology of Significant Events.....	109
Appendix D	List of H-POWER Contracts (Construction + Operating + Consultant Contracts)..	111
Appendix E	Chronology of H-POWER Projects and Contracts .....	113
Appendix F	Federal, State and City Requirements for Contracts.....	123
Appendix G	City Council Resolution 12-150, CD1 .....	127

## List of Exhibits

Exhibit 1.1	Organizational Chart – Department of Environmental Services .....	2
Exhibit 1.2	Organizational Chart – ENV Refuse Division .....	3
Exhibit 1.3	Photo of H-POWER Facility .....	4
Exhibit 2.1	Payments to Covanta (FY 2011- FY 2015) .....	12
Exhibit 2.2	City versus Contractor Contract Terms and Conditions .....	14
Exhibit 3.1	H-POWER Invoices Reviewed (FY 2003, from FY 2008 – FY 2013) .....	26
Exhibit 3.2	Invoice Testing Results for Contracts and Invoices.....	34
Exhibit 4.1	List of H-POWER Contracts (Construction + Operating + Consultant Contracts)....	42
Exhibit 4.2	Photo of H-POWER Baghouse Air Filter Building.....	43



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# Chapter 1

## Introduction and Background

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### Introduction

This audit was conducted pursuant to City Council Resolution 12-150 CD1, which requested the city auditor to perform an audit of the Department of Environmental Services (ENV) contracts, including its procurement practices to ensure that is operating efficiently, effectively and in compliance with all applicable laws and policies. More specifically, the resolution requested that the audit examine the Department of Environmental Services contracts; determine whether the amounts spent over the years for amendments, change orders, or task orders related to these projects were reasonable; and identify whether procurement activities may be performed more economically or efficiently.

This audit was included in the *Office of the City Auditor's Proposed Annual Work Plans* and performed in accordance with generally accepted government auditing standards from November 2013 to September 2015. This audit focused on the H-POWER project.<sup>1</sup>

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### Background

The Department of Environmental Services plans, directs, operates and administers the city's solid waste, as well as wastewater, storm water permit,<sup>2</sup> and environmental sustainability programs. According to ENV, Honolulu is a leader in environmental sustainability.

In 2008, ENV issued the city's 25-year integrated solid waste management plan which reduced the need for landfill disposals. The plan included an H-POWER waste to energy facility that converted solid waste into electricity that was sold to Hawaiian Electric Company, the island's primary electric utility. In FY 2014, ENV generated and sold 379,438 megawatt hours of electricity which generated \$65.6 million in electrical energy revenues.

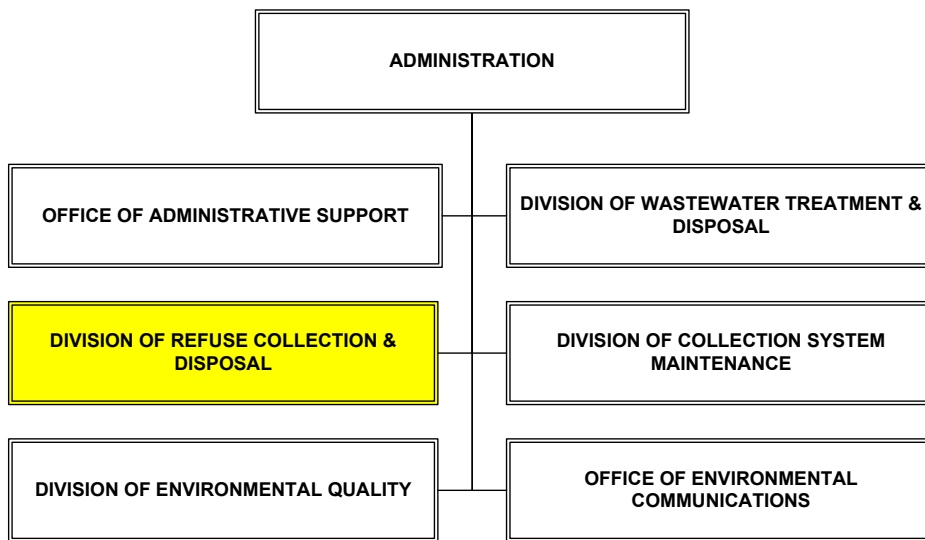
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<sup>1</sup> The Beachwalk and Synagro projects were not audited due to pending litigation.

<sup>2</sup> In January 2015, the City Council passed Resolution 15-10 that initiated a charter amendment to transfer the storm water duties and functions from ENV to the Department of Facility Maintenance. (Resolution 15-10)

In FY2014, ENV operating expenditures totaled \$247.5 million; revenues totaled \$565.2 million; and authorized staffing totaled 1,171 fulltime equivalents. The organizational chart for the Department of Environmental Services is shown below.

**Exhibit 1.1  
Organizational Chart – Department of Environmental Services**

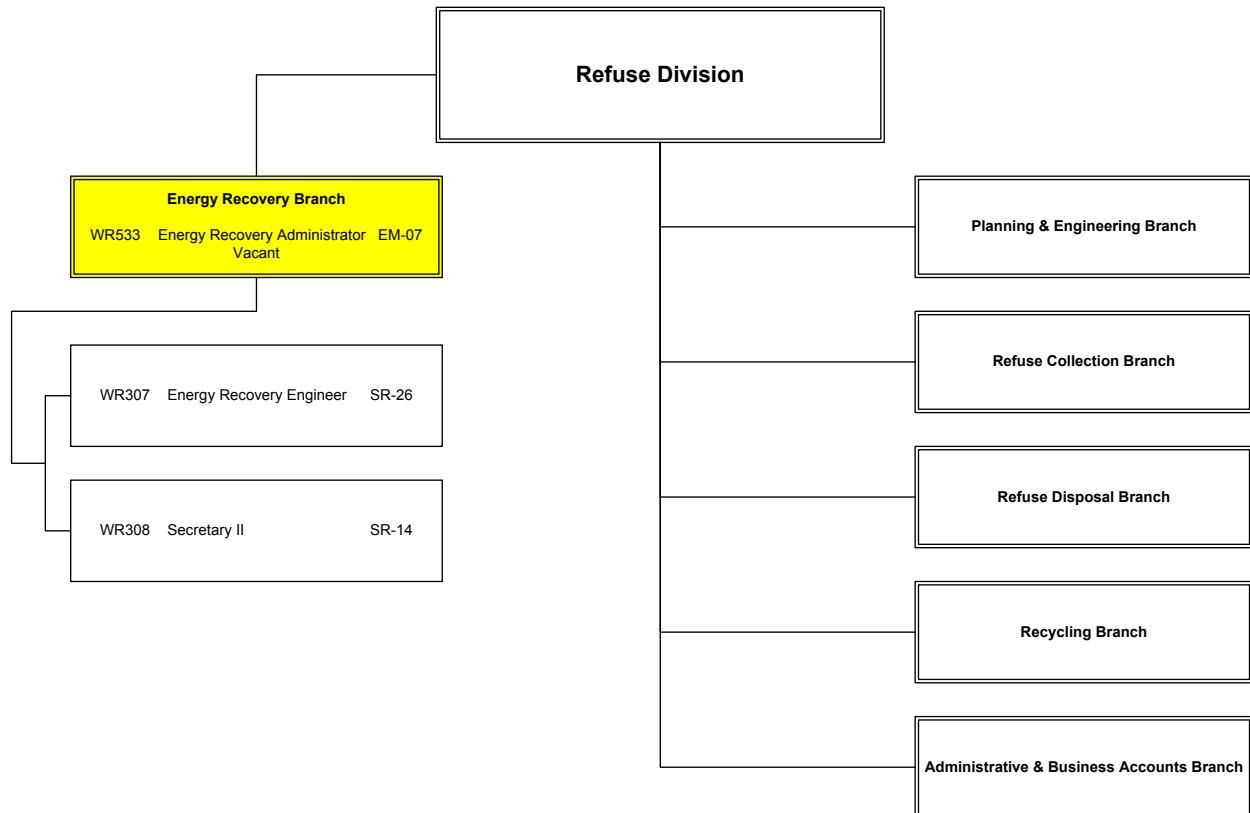


Source: Department of Environmental Services

The ENV Division of Refuse Collection and Disposal is responsible for administering, managing, and planning the city’s solid waste program, including the H-POWER waste-to-energy facility. In FY2014, division operating expenditures totaled \$148.2 million.

The ENV **refuse division** oversees the H-POWER facility, as well as the city landfill (known as the Waimanalo Gulch Sanitary Landfill). The refuse division is responsible for the engineering design, construction of upgrades, and maintenance and operation of the H-POWER plant. The refuse division has 6 branches including the Energy Recovery Branch. The organization of the refuse division is shown in Exhibit 1.2.

## Exhibit 1.2 Organizational Chart – ENV Refuse Division



Source: Department of Environmental Services

The **Energy Recovery Branch** in the refuse division has three authorized full-time FTEs (an Energy Recovery Administrator, an Energy Recovery Engineer and a secretary) which are responsible for the oversight of the H-POWER facility operations, maintenance and capital improvement activities. Of the 3 positions, the Energy Recovery Administrator position has been vacant since August 2012, and the Energy Recovery Engineer was on temporary assignment to the landfill. Only the secretary position is filled. The Energy Recovery Administrator responsibilities, including the administration of the H-POWER contracts, have been temporarily assigned to the Refuse Disposal Branch Chief.<sup>3</sup>

<sup>3</sup> During our audit, in October 2015, the refuse division started advertising to fill the vacant Energy Recovery Administrator position.

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## **H-POWER (Honolulu Program of Waste Energy Recovery)**

The H-POWER facility is a major component of the city's solid waste disposal system. The facility receives and processes **municipal solid waste (MSW)** from throughout the island of O'ahu.<sup>4</sup> The refuse is combusted (incinerated) to produce steam that is used to generate electricity which is sold to Hawaiian Electric Company (HECO). The City and County of Honolulu owns the H-POWER Waste-to-Energy Facility which began commercial operations in May 1990. The H-POWER facility is shown below.

### **Exhibit 1.3 Photo of H-POWER Facility**



Source: Department of Environmental Services

### ***Project History***

In 1975, the City Council adopted Resolution 271 which directed the city to pursue and develop an energy from municipal solid waste program. In 1982, the city issued requests for proposals to construct and operate the resource recovery facility. After delays and other problems, the city restarted the project and issued solicitations for competitive bids. In 1985, the city awarded Honolulu Resource Recovery Venture (HRRV) a contract to design and build the facility and a second contract to operate the facility.

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<sup>4</sup> ENV reported that H-POWER, as well as recycling, enabled the city to divert over 90 percent of MSW from the city's Waimanalo Gulch Sanitary Landfill.

In 1989, the city sold the facility and leased the land to a joint venture consisting of DFO Partners, Bank of America, and Ford Motor Credit Company. HRRV continued to operate the facility under the terms of the 1985 operating contract. In 1990, the waste to energy H-POWER facility commenced commercial operations with two boilers.

In 2003, the HRRV contracts were sold to Covanta and the company name was changed to Covanta Honolulu Resource Recovery Venture (Covanta). In 2008, the city re-purchased the H-POWER facility from DFO Partners. The city currently owns the facility and Covanta continues to operate the facility.

Prior to the re-purchase, the city awarded Covanta contracts to plan, design and expand the facility to include a third boiler. In 2008, the city's updated solid waste management plan identified additional construction projects to improve, expand, and refurbish the facility. These projects included the air pollution control system (APC) and the installation of Baghouse fiber glass air filters which were undertaken to comply with new federal air emission standards; expanding the facility to include a third boiler, and refurbishing the facility. On behalf of the city, ENV awarded the construction contracts to Covanta and hired two consultant firms, HDR Engineering, Inc. and Mele Associates, to monitor and oversee the projects. As of 2015, the city owns the facility and land, Covanta operates the facility on behalf of the city, and the city consultants continue to provide project oversight and monitoring for the city.

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## Audit Objectives

The overall audit objective was to perform an audit of the Department of Environmental Services (ENV) contracts, including its procurement practices, to ensure that is operating efficiently, effectively and in compliance with all applicable laws and policies.<sup>5</sup> More specifically, the audit (1) examined the contracts, including the procurement of the contracts, related to H-POWER; (2) determined whether the amounts spent over the years for any amendments, change orders, or task orders related to the project were reasonable; and (3) identified whether procurement activities may be performed more economically or efficiently.

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<sup>5</sup> Resolution 12-150 CD1 requested that the audit include the Beachwalk wastewater pump station projects, the H-POWER, and the Synagro projects. This audit report addresses only the H-POWER project.

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## **Audit Scope and Methodology**

The audit team assessed several issues. It assessed the efficacy of the procurement and contract guidance established by the Department of Environmental Services (ENV) and the Department of Budget and Fiscal Services (BFS) for capital projects and professional services to minimize the cost and risk to the city. The audit assessed the effectiveness of contract compliance and contract management over Covanta Honolulu Resource Recovery Venture to complete H-POWER projects at minimal cost and risk to the city. The review also assessed ENV's contract compliance and contract management over consultant contracts to complete H-POWER projects at minimal cost and risk to the city. For the audit, the audit team identified recommendations for improving BFS and ENV procurement practices to complete H-POWER projects at minimal cost and risk to the city.

For the audit, we received training in construction contract audits; reviewed applicable state and federal laws; and reviewed State of Hawai'i and city procurement requirements, policies, and procedures. In particular, we reviewed pertinent sections of the State of Hawai'i Public Procurement Code, Chapter 103D Hawai'i Revised Statutes (HRS) and procurement administrative rules; city charter, city ordinance, city financial and procurement policies and the city's general terms and conditions among others. We examined data and documents stored in the city's DocuShare system; the city's C2HERPS financial management and reporting system; and reviewed all H-POWER contracts, contract modifications, contract files, and reports.

We interviewed city staff, contractors, and consultants involved with the H-POWER contracts; state, local, and federal officials involved with contract procurement and contract administration; spoke to consultants involved in construction contract audits; and identified best practices developed for H-POWER type (waste to energy) contracts and public-private partnerships. We reviewed monthly progress reports to determine whether the activities and deliverables were clearly described, reasonable, and within the scope of the original contract and its modifications. We performed internet research across the United States and contacted the jurisdictions as needed. We further identified best practices for public procurement of capital projects and professional services, sub-consultant/sub-contractor agreements, contract modifications (including contract amendments, change orders and task orders), risk management for cost-plus and time and materials contracts, contract scope management, project management, and contract document management (records retention). Our review included resources such as the National Institute of Governmental

Purchasing (NIGP), Federal Acquisition Regulations (FAR), and federal Inspector General contracting and procurement guidance.

We obtained an understanding of the city's invoice payment process by reviewing applicable laws, policies and procedures. We also interviewed ENV management, budget and fiscal services (BFS) staff, H-POWER contractor (Covanta), and ENV consultants, including the HDR Engineering and Mele Associates consultants.

For the audit, we reviewed 100 percent of the invoices related to the H-POWER contracts and its modifications for FY 2003, and FY 2008 to FY 2013.<sup>6</sup> In total, we reviewed 269 H-POWER invoices totaling over \$383 million paid during FY2003 and FY2008 through FY 2013.<sup>7</sup> For each invoice, we evaluated whether these invoices were properly reviewed and approved, adequately documented to support construction and consulting activities, and consistent with the contract terms before payment authorization. We also evaluated whether the payment practices complied with city policies and procedures, and if industry best practices were in effect during the project period.

During the audit, we requested detailed records substantiating all contractor and consultant invoices; reviewed ENV copies of the invoices submitted to BFS for payment; and confirmed that BFS has on file, original invoices and on-line documentation for the ENV files reviewed. To ensure that the invoices ENV provided to us were complete, we requested payment reports from the city's financial reporting system (C2HERPS) and compared payment information to the invoices. We were unable to reconcile some of the invoice payments to C2HERPS. We traced invoice amounts to detailed records to determine whether itemized costs were properly supported.

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<sup>6</sup> Sampling was not involved because we tested 100 percent of the population of invoices.

<sup>7</sup> We did not audit invoices for the period FY 2004 to 2007. The \$383 million amount included invoices submitted by the ENV consultants (HDR Engineering, Inc. and Mele Associates) and invoices submitted by Covanta (the contractor operating the H-POWER facility) and its subcontractors. The H-POWER contracts totaled over \$993.3 million and excludes the \$14.7 million in contracts awarded to consultants.

The ENV consultants included HDR Engineering, Inc. and Mele Associates. These consultants maintained and provided us excel spreadsheets that tracked invoice payments to budgeted amounts. We traced the invoice amounts to the detailed records to determine whether the itemized costs were properly supported. The consultants provided documentation that consisted of monthly progress reports, sub-contractors/vendor's invoices, sub-contractor's timesheets, and travel receipts. We reviewed their monthly progress reports to determine whether the activities and deliverables were clearly described, reasonable, and within the scope of the contracts and the contract amendments.

The Office of the City Auditor issued an *Audit of the City's Synagro Contract* (Report No. 08-03) in August 2008. The audit found that the ENV bioconversion facility project at the waste water treatment plant experienced construction delays and costly change orders. Other results discussed non-compliance with the 1995 consent decree penalties, bio-solid reuse requirements, and sludge reuse.

Our review covered the periods of FY 2003 and FY 2008 to FY 2013. FY 2014 data were incorporated when available or as appropriate. The audit was performed in accordance with generally accepted government auditing standards from November 2013 to November 2015. Those standards require that we plan and perform the audit to obtain sufficient and appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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## Audit Results

After the original contracts were awarded, ENV used 79 contract modifications (amendments, change orders, and task orders) to construct, improve, expand, and refurbish the H-POWER facility. The contract modifications increased the overall project costs from the original \$313.7 million to over \$993.3 million<sup>8</sup> (including contractor, construction, and operating costs). ENV did not fully comply with State of Hawai'i Procurement Code and city policies related to sole source, cost-plus, and time and materials contracts. ENV contract and procurement practices can be improved.

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<sup>8</sup> Consultant contracts totaled \$14.7 million and are not included in the \$993.3 million total.



Currently, ENV contracts limit the city's access to records, allow contractors to curtail records retention, and limit the city's right to audit. ENV should protect the city's interests by requiring that all ENV contracts include the city's standard general terms and conditions. ENV relied on the contractor, consultants and external law firms to negotiate the contract terms and conditions. In our opinion, the ENV procurement practices contributed to non-compliance with state and city contracting policies for sole source, cost-plus, and time and materials contracts and reduced the city's ability to minimize costs, and detect fraud, waste, and abuse. ENV acceptance of contract terms that require the city to issue general obligation bonds to ensure the contractor and subcontractors were paid increased the city's vulnerability to losses and higher costs.

ENV needs to improve its contract administration practices. Although state and city policies require ENV to assign adequate resources to closely monitor cost-plus and time and materials contracts, ENV did not assign the required resources and relied on consultants to monitor and administer the H-POWER contracts. As a result, ENV and BFS approved contract modifications without realizing the contractor's right to operate the H-POWER facility was extended from 20 years to 47 years.

Our review of payments prior to FY 2013 indicated ENV approved payments that were excessive, questionable, and not fully supported. ENV claimed the deficiencies were personnel related. A small sample of invoices after FY 2013 indicates payments for invoices have improved. Nevertheless, ENV still needs to assign resources needed to properly administer the complex cost-plus and time and materials contracts and to prevent deficiencies from recurring.

Despite the shortcomings, ENV and BFS managers claim the contracts were justified; in the best interests of the city, and the existing contract is a good contract. We respectfully disagree.

ENV disagreed with the audit findings, but agreed to most of the audit recommendations. We stand by our findings.

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# Chapter 2

## ENV Contract Administration Can Be Improved

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ENV contract practices should protect city interests, minimize the potential for losses, and allow the city to detect fraud, waste and abuse. The existing H-POWER contracts limit the city's ability to detect and prevent fraud, waste, and abuse. For example, the contracts limit the city's access to records, curtail records retention, and limit the city's right to audit. The contracts also contain an unusual requirement for the city to issue general obligation bonds<sup>1</sup> to ensure Covanta and its subcontractors are paid; and allow Covanta to operate the H-POWER facility for 47 years under a cost-plus contract. As a result, the city is highly vulnerable if revenues are insufficient to cover operating costs and cannot minimize the project costs. The contract defects existed because ENV relied on the contractor, consultants and external law firms to negotiate the contract terms and conditions and did not require the use of the city's standard general terms and conditions in the contracts. Despite the shortcomings, ENV and BFS managers claim the Covanta contract is a good contract and is in the best interests of the city. We respectfully disagree.

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### Background

In Resolution 12-150, CD1, the City Council raised concerns regarding the numerous contract amendments with Covanta to operate the city's waste-to-energy facility (H-POWER) and ENV's failure to consider other companies to operate the facility. The resolution further cited ENV disregard of the Hawai'i Procurement Code by allowing Covanta to expand the H-POWER facility before seeking other interested bidders and other procurement related concerns.

In 1985, the H-POWER project consisted of two contracts – a contract for the construction of the facility and a contract to operate the facility. The city<sup>2</sup> awarded Honolulu Resource Recovery Venture (HRRV) the \$149,975,660 contract to design, construct, and test the H-POWER facility. The city also signed an operating contract with HRRV that allowed the contractor to operate and maintain the H-POWER facility for 20 years at a cost

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<sup>1</sup> The city's standard contract term is to state the contract is subject to the availability of funds.

<sup>2</sup> The Department of Environmental Services (ENV) was created in 1999.

of \$163,764,130. In 2003, Covanta purchased HRRV, acquired the operating contract from HRRV, and renamed the company Covanta Honolulu Resource Recovery Venture (Covanta).

Under the operating contract, Covanta was responsible for facility alterations and construction; and other tasks such as obtaining permits; complying with environmental requirements, testing, and monitoring; and submitting monthly reports. The city reimbursed Covanta for the operating costs under a cost-reimbursement plus service fee contract. In FY 2014-15, Covanta received \$52.9 million to operate the H-POWER facility. The following table lists the payments to Covanta over the last five years.

**Exhibit 2.1**  
**Payments to Covanta (FY 2011- FY 2015)**

	<b>Operations</b>	<b>Baghouse Air Filter<sup>a</sup></b>	<b>Third Boiler Expansion</b>	<b>Refurbishment</b>	<b>Sludge Project</b>	<b>Total</b>
<b>FY11</b>	\$ 35,157,485	\$ 10,786,873	\$ 122,848,845	\$ 2,213,301	\$ -	\$ 171,006,505
<b>FY12</b>	\$ 39,030,254	\$ 48,383.00	\$ 62,592,654	\$ 6,391,069	\$ -	\$ 108,062,360
<b>FY13</b>	\$ 49,835,703	\$ -	\$ 14,967,400	\$ 3,617,250	\$ -	\$ 68,420,353
<b>FY14</b>	\$ 54,011,342	\$ -	\$ 5,557,332	\$ 4,170,599	\$ 1,250,939	\$ 64,990,213
<b>FY15</b>	\$ 52,908,760	\$ 515,823 <sup>b</sup>	\$ 4,433,763	\$ 12,679,462	\$ 2,362,284	\$ 72,900,091
<b>TOTAL</b>	\$ 230,943,545	\$ 11,351,079	\$ 210,399,994	\$ 29,071,680	\$ 3,613,223	\$ 485,379,522

<sup>a</sup> Air Pollution Control (APC) System included the installation of Baghouse fiberglass air filters.

<sup>b</sup> Refurbishment funds were previously used to pay for some Baghouse demolition work. This payment refunds the Refurbishment account.

Source: Department of Environmental Services

The city developed standard *General Terms and Conditions* for construction and professional services contracts that implement State Procurement Code requirements and protect city interests. The standard terms and conditions included provisions for certification of funds, subcontracting, audit and inspection of records, change orders, prompt payment for contractors and sub-contractors, payment for reimbursable expenses, access and retention of records, and other subjects. The standard terms and conditions were developed to reduce the potential risks and liabilities to the city, and to reduce the potential for cost overruns and payment of questionable costs.

Hawai'i laws and rules state the contractor must maintain the books and records that relate to the cost or pricing data for three years from the date of the final payment under the contract, and the city may audit the cost or pricing data and audit the books and records of the contractor.<sup>3</sup>

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### **H-POWER Contract Limited the City's Access to Records, Curtailed Records Retention, and Limited the City's Right to Audit**

Instead of requiring the use of the city's standard *General Terms and Conditions*, ENV allowed the contractor and consultants to develop and write the H-POWER contracts. As a result, the contracts and the 79 approved contract modifications (29 contract amendments, 35 change orders, and 15 task orders) did not include terms and conditions that allowed the city unlimited access to the contractor records and data and the unlimited right to audit contractor pricing, cost, and other data as specified in the state procurement code.

*City versus contractor terminology:* Exhibit 2.2 compares some of the differences between the city *General Terms and Conditions* with those developed by Covanta and the consultants for their contracts.<sup>4</sup>

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<sup>3</sup> HRS 103D-317; HAR 3-122-175

<sup>4</sup> Although the Covanta contract allows the contractor to destroy the records after six years and before the project is completed, ENV and BFS managers stated the Covanta contract was compatible with the city general terms and conditions. We determined the construction and operating contracts were industry templates used by contractors to protect the contractor interests.

**Exhibit 2.2**  
**City versus Contractor Contract Terms and Conditions**

<i>Item</i>	<i>City Standard General Terms and Conditions</i>	<i>Covanta Contract Terms</i>	<i>Consultant Contract Terms</i>
<b>Right to Audit</b>	Contractor agrees to maintain and make available to the city records relating to its work; will permit city to audit data related to all matters covered by this contract. Contractor to maintain data and records in an accessible location and condition.	Contractor shall have the right to deny access to the city to the extent the records are protected by applicable law.  The city's authorized representative shall have access to review and copy all records in accordance with applicable law to verify costs incurred and payments made by the city for the purpose of verifying the contractor's compliance with the terms of the agreement. Access to records is at the city's cost and expense, during normal business hours, and upon reasonable notice. No time limits for contractor response to city request.	No right to audit clause found in the consultant contracts
<b>Records Retention</b>	Records are to be retained not less than 3 years after the final contract payment or until the final audit is resolved.	Contractor shall retain for inspection purposes all records and cost records for 6 years (i.e. contractor records may be destroyed before the project is completed).	None
<b>Reimbursable Expenses</b>	Payment requests for all reimbursable expenses shall be accompanied and supported by receipted invoices for all charges. City must approve all reimbursable expenses in writing. Payment for reimbursable items shall be made for allowable costs per the Hawaii Administrative Rules. Reimbursable amounts shall not exceed the amount stated in the contract. Any balances revert to the city.	Travel expenses not addressed in the contract. No limitations on reimbursing legal fees. <sup>a</sup>	Reimbursable expenses include hotel, lodging, airfare, car rental, per diem, and other travel expenses. Payment for actual costs.
<b>Invoice Certification Statement</b>	Invoices must list contract info, confirmation purchase order, item numbers, item description, quantities, unit price, and extended totals. Payment requests for reimbursable expenses shall be accompanied and supported by receipted invoices for all charges.	Contractor shall attach all documentations and info necessary to justify payments by the city. City to reimburse contractor within 30-45 days after receipt of properly formatted invoice.  Cost substantiation documentation shall be reasonably acceptable to the city (i.e. actual documents and detailed documentation not required.)  Fair market value price may be charged for services and materials (i.e. detailed supporting documents not required to verify actual costs).	Reimbursement made upon submitting the vendor's invoice. No further requirements.

<sup>a</sup> The city subsequently reimbursed the contractor \$585,000 for the legal costs the contractor paid to negotiate against the city. The city also reimbursed a Covanta sub-contractor for first and business class airfare and extended hotel costs not related to work.

Source: OCA analysis of city, contractor, and consultant contracts

As itemized in the table, we found contract deficiencies in access to contractor records; right to audit contractor records; records retention; substantiation for contractor costs; contractor certifications; contract funding and payments; and reimbursement of contractor costs. The deficiencies limited the city's ability to detect and prevent fraud, waste and abuse. For example, ENV approved payments totaling \$471,400 to a sub-contractor that was excessive and was not aware that the contractor-subcontractor had a conflict of interest. (See Chapter 4 for details.)

**Access to contractor records and right to audit are limited**

*Construction contracts:* The Covanta operating contract (Section 7.1.3) developed by the contractor limits the city's right to audit by stating *If the city does not respond within 10 business days, the contractor's application for payment shall be deemed approved by the city.* The contract further limits the city's reason to disapprove the contractor application for payment to five reasons.<sup>5</sup> The contract is structured to expedite payments to the contractor and requires the city to notify the contractor in writing of any errors and to audit the claims within tight deadlines. If the timelines are not met, the contractor claims are deemed approved by the city.

Under the operating contract, Covanta has the right to deny access to the city. The denials may be based on records protected by applicable law or limited to verifying the contractor's compliance with the terms of the agreement. More specifically, the city's authorized representative may review and copy the contractor records in accordance with applicable law to verify costs incurred, payments made by the city; and for the purpose of verifying the contractor's compliance with the terms of the agreement. No time limits are stated for the contractor to respond to the city requests, and the contractor is not required to provide the data in a given format or medium acceptable to the city. Access to the contractor records is at the city's cost and expense, during normal business hours, and upon reasonable notice.

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<sup>5</sup> The contract limits city disapproval for payment to five reasons: 1) work has not progressed; 2) quality of work is not in accordance with the technical requirements and specifications; 3) work is outside the scope of work; 4) contractor has failed to make uncontested payments to subcontractors and affiliates; or 5) contractor has breached the contract and was not cured within 30 days of a written notice from the city. In contrast, the city *General Terms and Conditions* list many reasons to disapprove payments such as default, delays, suspension, omission of goods and services, price adjustments, change orders, and stop work orders.

Under these provisions, the city is unlikely to detect questionable invoices and disapprove improper payments.

**Consultant contracts:** The consultant professional services contracts do not have the *right to audit* clauses. The contracts do not require the consultants to provide certified payroll documents that verify the labor costs under the time and materials contracts. The city therefore does not have a contractual right to access payroll records and cannot verify employees' wage rates and the amounts actually paid. In essence, the city is unable to detect questionable payroll claims.

**Contract allows premature destruction of project records**

**Construction contract:** Section 4.10 of the operating contract states the contractor will retain records for inspection purposes for 6 years. This allows the contractor to destroy its records before the 20 year contract term expires. In contrast, the city's general terms and conditions and the state procurement code require the contractor to retain records for up to 3 years after the final payment is made. This contract provision limits the city's ability to detect improper payments after six years.

**City is responsible for substantiating contractor costs**

**Construction contracts:** Under the operating contract, Covanta may substantiate its costs for reimbursement by providing "reasonably acceptable documentation" that justifies or supports "any reasonable cost" incurred by the contractor. For example, Covanta is not required to substantiate or certify its payment claims by submitting "actual" receipts, timesheets, employee pay rates, or the wages actually paid. The contractor has the right to establish and use a "fair market value price" for any service or material provided and is not required to provide documents that show the actual costs.

The city is responsible for verifying and substantiating the contractor's payment claims. If the city does not object within 45 days of receipt of the payment claim, the contract states it is deemed that the city has accepted the claim and must make payment.<sup>6</sup>

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<sup>6</sup> After 2012, the Refuse Division developed an informal policy that Covanta must submit draft invoices and ENV must agree to the draft invoices. The 45 days clock starts when the approved, final invoices are submitted for payment.



The operating contract and its amendments also require the city to make progress payments for work completed and pass through payments<sup>7</sup> incurred by the contractor within 30 days. The contract also requires the city to pay interest on payments made after the due date.

The provisions allow Covanta to submit claims for employee wages using market rates, and do not require the contractor to submit documents that show the actual wages paid. The time limits for substantiating the payment claims limit the city's ability to disallow or question payments. As a result, the city's ability to detect fraud, waste, and abuse is limited.

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### **ENV Did Not Use the City's General Terms and Conditions to Protect the City's Interests**

The city's *General Terms and Conditions*<sup>8</sup> are intended to protect the city interests and to minimize city liability and losses. By allowing Covanta to restrict the city's access to records; ability to audit, and allowing the destruction of records not consistent with state laws and city policies, ENV compromised the city's ability to detect fraud, waste and abuse.

ENV did not use the over 79 contract modification opportunities to release the city from the unfavorable contract terms. The ENV inactions increased the risks that the city would incur costs that belonged to the contractor or were not allowed under city policies; and increased the potential for project cost overruns. Chapter 3 itemizes the ENV approved payments that were for out of scope consultant work, billing rates that exceeded the contract hourly rates, excessive intern pay rates, and other unallowable or questionable costs.

### **Reimbursement of contractor costs is not limited**

The operating contract allows Covanta to receive reimbursements for any cost or expense it incurs, including contractor payroll; subcontractor costs; equipment, materials, and supplies purchased by the contractor; rental costs; travel costs; and legal fees. The contract is vague and broad, restrictions are not specified; and the contractor is not required to submit supporting documents that show the actual costs.

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<sup>7</sup> Pass through payments are costs incurred by subcontractors and forwarded to the prime contractor for reimbursement. The prime contractor may add its profit markup and submit the claim for reimbursement by the city.

<sup>8</sup> Although BFS updated the city procurement general terms and conditions throughout 1999 to 2015, we found ENV continued to use obsolete terms and conditions, including the right to audit clause, in its many H-POWER contracts.

As a result, the city was obligated to pay Covanta claims for \$585,000 in legal fees it accumulated during its contract negotiations with the city. The city also reimbursed Covanta and its sub-consultants over \$52,800 for first class and business class air travel and the cost of an extended hotel stay not related to work because the contracts did not place limits on what could be reimbursed.

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## **Contracts Contained an Unusual Requirement for the City to Issue General Obligation Bonds to Ensure the Contractor and Subcontractors Were Paid**

The city's *General Terms and Conditions* protect the city by stating city contracts are subject to the availability of funds. The State Procurement Code and city financial policies reaffirm this requirement.

The H-POWER contract funding and payment terms contain the unusual requirement that the city issue and make general obligation bond proceeds available for the project.<sup>9</sup> The contractor drafted the H-POWER contracts and determined the contract funding and payments terms. More specifically, the H-POWER operating contract (Section 3) and the amendments protect the contractor by requiring the city to make general obligation bonds available for the project and enough bond funds to cover the estimated costs of the contractor and its subcontractors. The contract clause provides the contractor assurance that city funds will be available to pay the contractor, and constitute a pledge for the city to use its full faith and credit to provide funding for a public-private project.

ENV managers took no action to remove this requirement from the H-POWER contracts although it was an unusual requirement and contradicted the usual city terms that specify the contract is subject to the availability of funds.

In 2015, H-POWER reported its first loss of \$543,500. In our opinion, if H-POWER revenues continue to be insufficient to cover operating and construction costs, the city may be obligated to cover the losses.

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<sup>9</sup> ENV and the city do not have formal guidance on prohibited terms and conditions and how to conduct contract negotiations.

## ENV Used Cost-Plus and Time and Materials Contracts Although Resources Needed to Administer the Contracts Were Not Assigned

State laws, city policies, and others provide warnings and requirements for cost-plus and time and materials contracts.<sup>10</sup> For example:

**State laws applicable to the city:** Subchapter 16 of the State Procurement Rules states cost-reimbursement and cost-plus percentage of cost<sup>11</sup> contracts are allowed when the contract is less costly than any other type of contract. Time and materials contracts shall be entered into only after the procurement officer determines agency personnel have been assigned to closely monitor the performance of the work, and must have a stated ceiling or estimate that shall not be exceeded without approval. The State Procurement Code states time and materials contracts should only be used when no other contract type is suitable. The time and material contract may also be used for projects with difficult to define scopes and where cost experience is not available.

**City Policy:** City financial policy for professional services contracts states cost-plus and time and material contracts require ENV to closely monitor the performance of the work. The cost-reimbursement contract is appropriate when the cost of a fixed-price contract cannot be estimated, and is suitable for research, development and study type contracts. The department head must justify in writing that a cost-reimbursement contract is less costly than any other type of contract.

<sup>10</sup> Federal Acquisition Regulations (FAR) state that cost-reimbursement type contracts (including cost-reimbursement, cost-plus, and time and materials contracts) require that government resources are available to manage the contract, and require appropriate surveillance during the performance to ensure efficient work processes and effective cost controls are used. The regulations also specify the contracts should contain clauses that detail allowable costs and payments. Industry best practices also advise that cost-plus and time and materials contracts require close monitoring by knowledgeable staff, careful contract administration, observation of the work performed, and continuous reviews of contractor and consultant invoices and claims for reimbursement, including timecards, payroll audits to confirm the hours worked, and employees' actual pay. Our review of other institutions, such as Kamehameha Schools, reaffirmed that cost-plus and time and materials contracts require close monitoring by knowledgeable staff.

<sup>11</sup> Under the cost-reimbursement, cost-plus service fee, and cost-plus percentage of cost contracts, labor and material costs are highly unknown. All allowable costs must be reimbursed, regardless of delivery, up to the level specified in the contract. Government assumes risks for the project and pays the contractor no fee, a fixed or variable service fee, or a percentage of costs for materials, labor and other allowed costs incurred by the contractor. The contractor is required to make a good faith effort to meet the government's needs within the estimated cost in the schedule. See Appendix F for more details.

For cost-plus and time and materials contracts, city policy states agency personnel need to be assigned to closely monitor the performance of the work. These types of contracts may be used when it is not practical to use any other type of contract for the services.

The cost-plus and time and materials contracts are designated high risk contracts because of potential cost overruns, and because the government is not guaranteed a completed project. Under these types of contracts, the State Procurement Code warns that the government bears the financial risk because the contractor and consultant are not required to complete a project on time or on budget even though the contractor is reimbursed for allowable costs.<sup>12</sup>

**ENV approved cost-plus and time and materials contracts:**

Despite the state and city requirements, ENV approved the H-POWER cost-plus and time and materials contracts without ensuring the proper resources were assigned and the proper safeguards were in place. ENV approved the contracts although the city already had experience and cost history on the H-POWER facility and operations. For example, in 2009, Amendment 12 used a cost-plus service fee operating contract although ENV had 14 years of history on the H-POWER facility. We did not find ENV justification that the changes and additional work were necessary for the completion of the project or within the scope of the construction contract as required by state law.

ENV used cost-plus and time and materials contracts although the city and ENV lacked formal guidance on administering cost-plus and time and materials contracts. We found no formal guidance, warnings, or requirements to prevent the high risk of cost overruns; and the H-POWER contracts did not specify project deliverables or deadlines. We did not find basic guidance for the review and approval of cost-plus and time and materials contract invoices. As a result, ENV did not provide the close monitoring and oversight needed for the H-POWER contracts.

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<sup>12</sup> See Appendix F for a comparison between fixed price and cost-plus/time and materials contracts.

ENV used cost-plus service fee and time and materials contracts and did not provide the required accounting and audit resources needed to properly monitor and administer the contracts; although the state procurement code and administrative rules required close monitoring of the time and materials contracts by knowledgeable staff.

Instead, ENV relied on its consultant, Mele Associates, to verify the cost-plus and time and materials charges for labor charges, materials, supplies, equipment purchases, payments to the subcontractors and vendors, overhead charges, general and administrative fees, taxes, and all other items. As a result, ENV could not ensure the project costs were minimized and the reimbursed costs were valid. (See Chapter 3 for details.)

Despite the contract shortcomings, ENV managers stated the time and materials contract was the optimal contract for the operation, and was in the best interest of the city.

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### **ENV and BFS Approved Contract Modifications That Extended Covanta's Contract From 20 Years to 47 Years**

Our research found the following localities had operating agreements with Covanta that ran 5 to 10 years. The operating agreements between Covanta and Fairfax, VA was for 5 years with options to renew for two 5 year terms. York County, PA had a 5 year operating agreement with Covanta. Montgomery County, MD also had a 5 year operating agreement. Pinellas County, FL had a 10 year operating agreement, and Indianapolis, IN had a 10 years operating agreement with Covanta. Industry publications indicated 15 years is normal.

In our opinion, operating contracts should be competed among multiple awardees to ensure fair opportunity and competition. The lack of competition, the 20 year term of the H-POWER operating contract, and the lack of completion over such a long period were particular concerns.

More specifically, the ENV did not solicit competitive bids or issue requests for proposals before allowing Covanta to extend the original operating contract from 20 years to 47 years. The long term contract was a *de facto* sole source, cost-plus service fee contract that gave Covanta the exclusive right to operate the facility from 1985 to 2032, and basically limited the city's ability to control and minimize H-POWER costs for 47 years.

The contract modifications ENV used to extend the operating contract expiration date are shown below.

- The original construction operating contract was signed on July 3, 1985. After the H-POWER facility was completed in 1990, ENV approved a change order which extended the operating contract expiration date to 2010.
- On December 17, 2009, ENV approved Amendment 12 which extended the expiration date to 20 years after the expansion project was accepted for commercial operations. The Amendment 12 contract did not provide a specific expiration date. However, acceptance of the expansion on August 4, 2012 inferred the operating contract was automatically extended to August 3, 2032.

Covanta reports show the contract expires in 2033 and confirm the contract extensions by ENV. We did not find any solicitations for bids before the operating contract was extended from 2012 to 2032. The last extension was not clearly disclosed in the contract modifications. We did not find any documented justification for the 20 year extension of the operating contract. As a result, ENV probably was not aware when it approved Amendment 12 that the contract change allowed Covanta the exclusive right to operate the facility for 47 years.

ENV and BFS managers stated extensive discussions and deliberations were held to justify the contract extension, but ENV did not document the justification for the contract extension. We found no documents that showed the extension was economical; represented the least cost; or was the best price for the city.

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## **ENV and BFS Claim the Covanta Contract Is a Good Contract and in the Best Interests of the City**

ENV and BFS managers report they are comfortable with the city-Covanta relationship and state the H-POWER contract is a good contract and in the best interests of the city. ENV managers state the refuse division chief has assumed responsibility for administering the contract and contract monitoring has improved with related personnel staffing. ENV managers stated the long term operating contract would serve as an incentive for the contractor to construct, operate, and maintain a quality facility.

Based on the unfavorable contract terms, the lack of staff in the energy recovery branch, ENV's failure to assign the resources

needed to administer the complex H-POWER contracts, and other factors, we believe contract administration problems will recur. For example, we found Covanta did not report and ENV did not detect a conflict of interest that involved a Covanta subcontractor, S-Tech. The subcontractor was owned by Covanta's former Vice-President who billed the city for 360 hours of work. Covanta did not report the conflict of interest and passed the claim for reimbursement to the city. ENV representatives stated they were not aware of the Covanta-S-Tech relationship and the conflict of interest, but paid the reimbursement although the costs were questionable and averaged 12 hours of work per day. (See Chapter 3.)

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## Recommendations

We recommend that the Managing Director direct ENV to:

1. Maximize the use of fixed price contracts. If ENV needs to use cost-reimbursement type contracts (including cost-plus service fee, and time and materials type contracts), ENV must assign the resources needed to properly administer the contract, scrutinize the contract scope, and minimize costs.
2. Not allow the contractor or consultant to write one-sided contracts that favor the contractor and increase the city risks for losses or increased costs. ENV should pay particularly close attention to contracts that are vague, do not cap or limit city liabilities, and do not provide an explicit expiration date.
3. Document justifications for approving long term, sole source, cost-plus, and time and materials contracts, operating contracts and similar contracts.
4. Require the city's current, standard *General Terms and Conditions* to be inserted in all ENV contracts and contract modifications.
5. Collaborate with BFS to develop formal guidance on contract negotiations, required terms and conditions, and prohibited items.
6. Develop formal guidance on good contract administration practices and require that proper resources and staff (including accounting, auditing, and administrative personnel with the expertise and skill sets needed) are assigned to administer cost-plus and time and materials contracts.

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# Chapter 3

## Prior To FY 2013, ENV Allowed the Contractor to Invoice and Collect Payments That Were Excessive or Should Have Been Paid by the Contractor

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Our review of payments prior to FY 2013 indicated the Department of Environmental Services (ENV) approved over \$751,700 in payments that were excessive, questionable, and not fully supported. More specifically, ENV approved payments for out-of-scope work, billing rates that exceeded the contract hourly rates, and first class and business class airfare for Covanta and its subcontractors. Other payments included payments for excessive hours billed by a subcontractor, unallowable travel costs, unreasonable intern pay rates, and legal fees that the contractor should have paid. Other deficiencies included the use of consultants to purchase items for ENV staff; inadequate documentation and support for paid invoices; and partially executed invoices. These deficiencies occurred because ENV relied on consultants to review and validate invoices and payment claims, and did not assign the staff and resources needed to properly oversee the complex contracts. ENV managers claim the deficiencies were personnel related. In our opinion, ENV is ultimately responsible for substantiating the validity, accuracy and reasonableness of all contract costs.

Although a small sample of invoices after FY 2013 indicate payments for invoices have improved, ENV still has not assigned the resources needed to properly administer the cost-plus and time and materials contracts. In our opinion, the deficiencies will recur unless ENV assigns adequate and proper resources to monitor and administer the complex H-POWER contracts.

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### Background

Good contract administration and management practices ensure only valid, reasonable, and accurate payments are made to city contractors and consultants.

ENV is responsible for retaining and reviewing construction and consultant invoices to ensure the services and work billed were consistent with their contracts, the work was performed, the bills were properly documented and properly approved, and that the billed amounts were substantiated and allowable under the contract terms. ENV must also retain copies of the invoices to prove to auditors and others that the contractor and

consultant billed for work that was performed in accordance with the contract, and that the invoices were properly approved and authorized for payment.

For the audit, we reviewed 100 percent of the invoices related to the H-POWER contract and its modifications for FY 2003, and from FY 2008 to FY 2013. Sampling was not involved because we tested 100 percent of the population. We reviewed 269 H-POWER invoices totaling over \$383 million paid during FY 2003 and from FY 2008 to FY 2013. The invoices reviewed are quantified in the table below:

**Exhibit 3.1  
H-POWER Invoices Reviewed (FY 2003, from FY 2008 – FY 2013)**

<i>Project Name</i>	<i>Contract/Contract Type (Name of Company/Firm)</i>	<i>Value of Invoices</i>	<i>Number of Invoices</i>
Material Condition Study	Professional Services – Consultant - HDR Engineering, Inc.	\$646,405	23
H-POWER Air Pollution Control System Improvements (Baghouse) Project	Construction (Covanta)	\$47,191,454	49
H-POWER Air Pollution Control Baghouse and Refurbishment Projects	Professional Services - Construction monitoring Consultant - Mele Associates	\$3,442,766	57
Third Boiler Expansion Project	Construction (Covanta)	\$309,690,609	55
Refurbishment Projects	Construction (Covanta)	\$14,708,427	38
Third Boiler Expansion and Refurbishment Projects	Professional Services - Construction monitoring Consultant - HDR Engineering, Inc.	\$7,381,992	47
<b>Total</b>		<b>\$383,061,653</b>	<b>269</b>

Source: OCA Analysis of H-POWER Invoices (FY 2003 and FY 2008 thru FY 2013)

***Method used to review invoices***

For each invoice, we evaluated whether the invoice was properly reviewed and approved, adequately documented to support construction and consulting activities, and consistent with the contract terms before payment authorization. We also evaluated whether the payment practices complied with city policies and procedures, and if industry best practices were in effect during the project period.

To ensure the invoices were complete, we requested payment reports from the City's financial reporting system (C2HERPS), and compared the payment information to the invoices. We requested detailed records substantiating all construction and consultant's invoices. ENV provided all the available original and scanned copies of the invoices submitted to the Department of Budget and Fiscal Services (BFS) for payment. BFS confirmed that the invoices were on file, on-line, or had the original invoices. We further traced the invoice amounts to the detailed records to determine whether the itemized costs were properly supported. We were unable to reconcile some of the invoice payments to C2HERPS.

The consultants, HDR Engineering, Inc. and Mele Associates, Inc., maintained and provided us Excel spreadsheets that tracked invoice payments and the budgeted amounts. We traced the invoice amounts to detailed records to determine whether the itemized costs were properly supported. The consultants provided documentation that consisted of monthly progress reports, sub-contractors/vendor's invoices, sub-contractor's timesheets, and travel receipts. We reviewed their monthly progress reports to determine whether the activities and deliverables were clearly described, reasonable, and within the scope of the contracts and the contract amendments.

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## **Deficiencies Found in H-Power Contracts**

Although the state procurement code and administrative rules required close monitoring of the cost-plus and time and materials contracts by knowledgeable staff, ENV did not assign the staff and resources needed to provide the required and proper oversight. Instead, ENV relied on its consultant, Mele Associates, to administer the cost-plus and time and materials contracts and placed overreliance on consultants to ensure the invoices and payments were substantiated, accurate, valid, and appropriate.

ENV reliance on consultants to verify the cost-plus and time and materials charges for labor charges, materials, supplies, equipment purchases, payments to the subcontractors and vendors, overhead charges, general and administrative fees, taxes, and other charges resulted in many deficiencies. According to ENV managers, the deficiencies were personnel related. In either case, ENV is ultimately responsible for substantiating the validity, accuracy and reasonableness of all contract costs. In our opinion, ENV contract administration practices can be improved by assigning staff and resources with the appropriate skills sets needed to prevent unauthorized payments; to prevent fraud,

waste, and abuse; and to ensure that project costs are minimized and reimbursed costs are valid.

Our audit of the H-POWER invoices processed prior to FY 2013 disclosed a series of deficiencies. These deficiencies included payments for out-of-scope work; billing rates that exceeded the contract hourly rates, and first class and business class airfare for Covanta and its subcontractors. We found payments for excessive hours billed by a subcontractor, unallowable travel costs, unreasonable intern pay rates, and legal fees that the contractor should have paid. Other deficiencies included the use of consultants to purchase items for ENV staff; inadequate documentation and support for invoices before payments were issued; and paid invoices that were only partially completed.

The deficiencies we found are discussed below.

***ENV approved payments for legal fees that benefited the contractor***

ENV authorized payments for legal fees totaling about \$585,000.<sup>1</sup> The legal fees were costs Covanta incurred in its negotiations to increase the revenues it received from the city. ENV approved the payments because the Covanta operating contract allows the contractor to be reimbursed for legal fees and did not have restrictions or limits on legal fees that the contractor could claim for reimbursement. In our opinion, these fees should have been paid by the contractor because they benefited Covanta, and should not have been approved for payment by ENV.

ENV relied upon the consultants to verify the validity and accuracy of invoices. To preclude a recurrence, the city needs to develop formal policies and procedures and amend the Covanta contract to preclude reimbursements of contractor legal fees incurred in their negotiations with the city. In our opinion, ENV is ultimately responsible for substantiating the validity, accuracy, and reasonableness of all contract costs.

***ENV approved excessive hours billed by a Covanta subcontractor***

Covanta subcontracted startup and commissioning services with S-Tech, Inc., Modesto, California, which is owned and operated by the former Vice President of Covanta. ENV authorized payment to Covanta for S-Tech services from June 2009 to November 2010 for

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<sup>1</sup> ENV paid an additional \$1.5 million in legal fees for city hired lawyers to negotiate with Covanta/HRRV on the city's behalf. Total legal fees for Covanta/HRRV and the city was at least \$2 million.

a total of \$471,415 (an average of \$78,569 per month). A year later, in September 2010, S-Tech billed Covanta at a fixed price of \$8,000 - \$10,000 on a bi-monthly basis (about \$4,000 - \$5,000 per month).

Progress billing (invoice) No. 33 indicated S-Tech billed 324 hours (at \$168 per hour) from September 28, 2009 through November 1, 2009 for a total of 35 days. In our opinion, the 324 hours billed were excessive. We calculated a total of 280 billable hours had the subcontractor worked 8 hours per day (including Saturdays and Sundays). ENV approved the payment even though there was no evidence (e.g. timesheets or any activity records) to demonstrate that the subcontractor actually provided 324 hours of services. ENV eventually approved payment for 423 hours because the contract did not limit the work hours or overtime for Covanta's subcontractors.

***ENV paid for billing rates that exceeded the contract hourly rates***

ENV approved payments for HDR Engineering, Inc. consultant hourly rates that were higher than the contracted hourly rates. The contract rate set for the Senior Project Manager was \$146.15 per hour. The consultant charged the city an hourly rate that ranged as high as \$207.26. The contract rate was \$175.50 for the Senior Mechanical Engineer. The consultant billed the city as much as \$282.56 per hour. Although the hourly rates billed for the HDR Senior Project Manager and Senior Mechanical Engineer did not match the rates agreed upon in the contract and the amendments, ENV approved the payments. As a result, we estimated, the city paid approximately \$37,500 in overstated labor costs.

***ENV approved consultant out-of-scope work***

Consultant work should be within the scope of the original contract. According to the State Procurement Office, if the dollar threshold of a contract modification increases the original contract price by 50 percent, the contract must be re-competed. When scope of work changes exceed 10 percent, but not more than 50 percent of the original level of work, professional services contracts should be competitively re-procured.

***HDR Engineering, Inc.*** The HDR consultant contract amount was originally \$50,000 and incrementally increased to \$650,000 through the use of contract amendments (see Appendix E: Table 6). ENV did not re-compete the consultant contract. ENV also approved payments for the HDR consultant and its staff for work not included in the contract scope of services and unrelated

to the material condition studies. Examples include payments for the consultant:

- To review various proposal documents from Covanta for the expansion facility;
- To develop a list of specifications requested, and begin preliminary work on a technical specification document for contracting purposes for the facility expansion;
- To complete a preliminary review of the existing power purchase agreement;
- To hold strategy and negotiation position discussions in preparation for the discussions with Covanta; and
- To participate in several days of vendor negotiations related to the service agreement.

*Mele Associates, Inc.* The Mele Associates, Inc. consultant contract amount was originally \$2 million and increased to \$3.6 million by issuing eight contract amendments (see Appendix E: Table 7). Despite the increases, ENV did not re-compete the contract. ENV also approved payments for out-of-scope work.

We reviewed 49 Covanta invoices (valued at \$47,191,454) related to the Air Pollution Control System and Improvements project and 57 Mele Associates professional services consultant invoices (valued at \$3,442,766) related to the H-POWER Baghouse project. We evaluated whether these invoices were properly approved, adequately documented to support construction and consulting activities, and consistent with the contract terms before payment authorization.

We found ENV approved payments to the Mele Associates consultant for work outside the scope of the Baghouse air filter project. The consultant's monthly progress reports included work activities that were unrelated to the Baghouse project and performed at ENV's request. In the 36 (74%) of the 49 monthly progress reports that were available, the consultants included descriptions such as *assisted in management of environmental projects for refuse department, commenced fiscal year-end budget forecasting, and validated financial files for third boiler expansion project and related contracts.*

The monthly progress reports indicated the Mele Associates consultant's efforts were directed toward preparations and

facilitating the third boiler expansion and refurbishment projects and exceeded the original contract scope of work related to the operations and maintenance of the H-POWER facility. In our opinion, the ENV payments to the consultant were for work that exceeded the original scope of the contract, and ENV should have solicited new bids for the consultants' work on the third boiler expansion and refurbishment projects.

***ENV authorized first class and business class airfares for Covanta and subcontractors***

According to the city's travel policies, reimbursement for air travel is to be based on the most economical and direct route that is in the best interest of the City; taking into consideration the employee's time and business travel plans.

ENV did not enforce the city policy. Instead, ENV authorized payments of \$51,378 to Covanta for the reimbursement of 20 roundtrip first and business class airfares. The airfares ranged from \$1,632 to as high as \$3,787 per round-trip ticket. We compared the Covanta charges against the cost of economy class fares. The average cost for three airlines was \$16,448 for economy-class tickets. The ENV approval of the Covanta sub-contractor's airfares was nearly \$35,000 more than the economy class authorized by city policy. ENV approved the charges because Covanta claimed its travel policy allowed its employees and sub-contractor to purchase first-class or business class airline tickets if the travel duration exceeded six hours.

***ENV approved unallowable travel costs***

ENV approved an overpayment of \$1,434 to Covanta for a subcontractor's extended travel stay. During our review of the travel reimbursements, we found an invoice that included lodging costs, meals, and a \$300 change ticket fee to accommodate a subcontractor's extended stay.

Covanta submitted a \$12,709 invoice to reimburse a subcontractor for his travel stay from October 28, 2010 through November 23, 2010. The receipts indicated the subcontractor stayed at the hotel from October 28<sup>th</sup> through November 20<sup>th</sup> with a three-night extended stay from Saturday, November 20<sup>th</sup> through Monday, November 22<sup>nd</sup>. Corresponding timesheets showed work activities from October 28<sup>th</sup> through November 20<sup>th</sup>, but no activities beyond November 20<sup>th</sup>. If the extended stay was not related to the Baghouse project, the city may have overpaid \$1,734 to the subcontractor for personal travel and a change ticket fee.

***ENV approved intern rates that were unreasonable***

ENV paid excessive wages for undergraduate student interns at H-POWER that totaled nearly \$92,500. The hourly intern rates ranged from \$40 to \$59 and, in our opinion, were excessive.

Our review of the project files and invoices showed that ENV requested its construction monitoring consultants to recruit and hire student engineering interns and approved the hourly wages of \$40 to \$59 for interns hired by the consultant. Although the intern hourly wage rates exceeded the city's engineer intern rate of \$16 per hour and was higher than a full-time ENV Civil Engineer I with a Bachelor's degree (\$19 to \$29 per hour), ENV staff stated the intern rates were reasonable because they sought a highly skilled intern. The project files did not contain a description of the work performed or explain why the interns were needed. Consultant progress reports noted the interns' presence on the work site, but provided no record of the work or their contributions to the contract deliverables. Ultimately, the city derived no benefit from these highly paid interns, as none of the student interns became city engineers.

***ENV used consultants to purchase items for ENV staff***

ENV requested its consultants to spend \$233,680 on computers, iPads, electronic equipment, office furniture, a \$15,866 diesel utility vehicle for its ENV H-POWER staff and a consultant, construction project management software, and other items that were outside the scope of the consultants' time and materials contracts. According to BFS, ENV had not registered the items in the city's property management and asset tracking system.

***ENV used project funds to pay expenses for another project***

ENV used \$681,290 of third boiler expansion project funds to pay expenses that were related to the Baghouse air filter project. ENV also used \$681,269 in Baghouse air filter project funds to pay expenses that were related to the third boiler expansion project. (See Chapter 4.) In response to our inquiry, the ENV deputy director stated the department could move money between amendments within the Covanta contract without BFS or city council approval, and only required departmental approval to transfer funding from task to task. We did not find any city policy to prevent the transfers.

***ENV used almost \$1 million in project funds to pay expenses for another project***

We identified four invoices totaling \$999,929 that covered costs related to another project. More specifically, refurbishment project funds were used to demolish a Baghouse building that should have been paid for by the Air Pollution Control System Improvements project. (See Chapter 4.) According to BFS staff and the ENV records, nearly \$1 million of Baghouse project funds



lapsed in 2008, so ENV authorized the use of the refurbishment project funds to cover the Baghouse demolition costs. ENV managers claim the original air pollution control system was replaced by newer technology in the Baghouse system, so the use of the refurbishment funds was appropriate.<sup>2</sup>

***Costs were inadequately supported***

The city should not issue payments unless contractor and consultant invoices are fully and properly supported and authorized approvals are received. Acceptable supporting documentation includes detailed records (e.g. timesheets, sub-contractor's invoice, and receipts) that substantiate the labor charges and other amounts billed.

Our review of the ENV records indicated ENV approved the payments although the costs were not adequately supported. ENV certified that funds were available to pay the invoices regardless of its completeness or validity. ENV did not maintain fully executed invoices and relied on the consultants and the contractor to ensure the payments were properly authorized, valid, accurate, and substantiated. As a result, ENV approved payments that contained questionable costs. We determined ENV's internal controls were inadequate to detect and prevent fraud, waste, and abuse.

***Invoices were not fully supported before payments were issued***

***Project Costs not fully supported:*** We found 67% of the invoices lacked the details needed to support the amounts billed. ENV did not ensure that the contractor included supporting documentation for its invoices before authorizing payments. Invoice documentation varied, ranging from task order worksheets, to a one-page spreadsheet summarizing the total labor hours charged for the billed period, to no information other than the invoice with the net billing amount for the period. As a result, we could not verify that the charges and services were valid or consistent with the contract terms.

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<sup>2</sup> On January 15, 2015, ENV and the City executed Amendment No. 14 to the H-POWER Operating Contract. This amendment was used to redistribute the Air Pollution Control Project's final disbursement of funds based on the actual billings for the 15 individual task orders. This amendment records the fact that \$1 million of the project's original \$48,000,000 CIP funding lapsed and was removed from the project's funding. The \$1 million was deducted from Task Order 6 "Construction" and the work transferred under Amendment 14, H-POWER Refurbishment Project payments.

*Executed invoices missing approval signatures:* ENV also did not maintain fully executed invoices. We found 67% of the invoices were incomplete and did not have signatures that demonstrated the work and services were performed, the work was consistent with the contracts, or that the payments were properly approved and authorized. Since there were missing signatures, it was nearly impossible to determine if the payments were appropriate.

The table below summarizes our audit results for the invoices.

**Exhibit 3.2  
Invoice Testing Results for Contracts and Invoices**

<i>Project Name</i>	<i>Contract Date</i>	<i>Invoices Tested</i>	<i>Value of Invoices</i>	<i>Project Costs Not Fully Supported (No. of Invoices)</i>	<i>Project Costs Not Fully Supported (Percent)</i>	<i>Total Amount Not Supported</i>	<i>Executed Invoices Missing Approval Signatures (No. of Invoices)</i>	<i>Executed Invoices Missing Approval Signatures (Percent)</i>
Material Condition Study (Consultant)	June 2007	23	\$646,405	23	100%	\$603,838	9	39.0%
H-POWER Air Pollution Control (APC) Baghouse Project (Task Orders)	February 2008	49	\$47,191,454	29	59.2%	\$22,155,526	32	65.3%
H-POWER Baghouse (APC) Project (Consultant)	August 2008	57	\$3,442,766	57	100%	\$3,014,506	43	75.4%
Third Boiler Expansion project (Construction)	December 2003	55	\$309,690,609	4	7.3%	\$16,199,532	41	74.5%
Third Boiler Expansion and Refurbishment projects (Consultant)	June 2009	47	\$7,381,992	47	100%	\$5,465,896	44	93.6%
Refurbishment projects (Construction)	December 2009	38	\$14,708,427	19	50%	\$5,142,188	12	32.0%
<b>Total</b>		<b>269</b>	<b>\$383,061,653</b>	<b>179</b>	<b>66.5%</b>	<b>\$52,581,486</b>	<b>181</b>	<b>67.3%</b>

Source: OCA test results for H-POWER related contracts and invoices.

In our opinion, the deficiencies occurred because the ENV did not assign adequate resources and staff with the expertise, experience, and knowledge needed to properly oversee, administer, and ensure the project costs were minimized. The ENV staff relied on consultants, as well as the contractor, to properly advise them and to provide the oversight needed.

***ENV still needs to improve contract administration practices***

As requested by ENV, we performed a follow-up audit of 55 BFS invoices and found the invoices were approved before payments were issued. The small sample of invoices indicates payments for invoices improved after FY 2013. However, we still have concerns regarding ENV's ability to properly administer the cost-plus and time and materials contracts without assigning adequate accounting, auditing, and administrative resources and staff with the knowledge and expertise needed to administer the complex H-POWER contracts.

ENV managers agreed that certain invoices and payments were suspect and personnel related. ENV managers stated the problems were corrected with new staffing.<sup>3</sup> ENV managers stated the department has enforced the city travel reimbursement travel policy, and invoices submitted after FY 2013 that contained questionable travel charges have not been paid. ENV provided a copy of the Covanta travel policy that was changed in March 2015, and acknowledged certain "draft" invoices did not contain all the required documentation, and stated that did not mean the final invoices were not in the proper format.

Despite the improvements, ENV still has not assigned the staff and resources needed to properly administer and oversee cost-plus and time and materials contracts.<sup>4</sup> The primary duties of the Refuse Division staff is to oversee the engineering design, construction of upgrades, and maintenance and operation of the H-POWER plant.<sup>5</sup> Although the Refuse Division manager has assumed the added responsibility of administering the Covanta contract, we believe proper contract administration requires more than a part-time administrator and requires a different skill set to ensure the contractor charges are valid and accurate. Without adequate resources and expertise, we believe deficiencies in contract administration will continue. For example, the contract

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<sup>3</sup> ENV attributed certain questionable actions to personnel related issues. ENV managers reported they took corrective action to ensure oversight and compliance and that similar irregularities would not occur again. In our opinion, ENV is ultimately responsible for the validity, accuracy and reasonableness of all contract costs.

<sup>4</sup> As discussed in Chapter 2, both state and city policies require that ENV assign staff and resources needed to closely monitor the cost-plus and time and materials contracts.

<sup>5</sup> See 2008 Integrated Solid Waste Management Plan Update, p. 12-15.

administrator position has been vacant since 2012 so fulltime administration of the contract is unlikely to occur; ENV policies and procedures are still not formalized; and three years elapsed before the contractor travel policies were revised to conform with city travel policies.

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## Recommendations

We recommend that the Managing Director should direct ENV to:

7. Assign adequate resources and knowledgeable staff (including contract accounting, auditing, and administrative staff) with the expertise needed to administer the complex and costly contracts; and provide the oversight needed to ensure the contractor costs are minimized when cost-plus and time and materials contracts are used and when public-private partnership contracts exist;
8. Expedite filling the administrator position (the Energy Recovery Administrator) as well as assign the resources and staff with the expertise, knowledge, and skill set needed to properly administer the H-POWER contracts and to ensure invoices and payments are accurate, valid, substantiated, and justified;
9. Improve contract administration and management practices by ensuring only valid, reasonable, and accurate payments are made to contractors and consultants;
10. Develop formal policies and procedures for administering cost-plus and time and materials, H-POWER, and other contracts.
11. Re-compete contractor and consultant professional services contracts as required by the state procurement code and city policies.
12. Provide written justifications for any contract modifications (including amendments, change orders, and task orders) as required by the state procurement code and city policies before extending any contract or expanding the scope-of-work in the contracts.

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# Chapter 4

## ENV Procurement Practices Can Be Improved

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Department of Environmental Services (ENV) procurement practices do not fully conform to state rules and city policies. After the original contracts were awarded in 1985, ENV used *de facto* sole source, cost-plus, and time and materials contracts and 79 contract amendments, change orders, and task orders to construct, improve, expand, and refurbish the H-POWER facility. ENV relied on the contractor, consultants, and external law firms to establish reasonable pricing and did not solicit or obtain open, competitive bids from other contractors. As a result, we could not determine if the contract amounts were reasonable or minimized project costs to the city. The contract modifications increased the original construction and operating costs of \$313.7 million to an overall total of \$993.3 million<sup>1</sup> (including contractor, construction, and operating costs). Although the contract awards did not fully conform to the state rules and city policies, ENV and BFS managers claim the sole source, cost-plus, and time and materials contracts were justified, in the best interests of the city, and the existing contract is a good contract. We respectfully disagree.

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### Background

In Resolution 12-150, CD1, the City Council stated that ENV admitted taking funds from approved projects to continue and/or fund projects after the City Council had removed requested appropriations from the executive capital budget. The resolution also raised concerns regarding the numerous contract amendments with Covanta Honolulu (Covanta) to operate the city's waste-to-energy facility (H-POWER) and ENV's failure to consider other companies to operate the facility. The resolution further cited ENV disregard of the Hawai'i Procurement Code by allowing Covanta to expand the H-POWER facility before seeking other interested bidders and other procurement related concerns.

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<sup>1</sup> Consultant contracts totaled \$14.7 million and are not included in the \$993.3 million total.

Significant events in the history of the H-POWER facility are listed below:

- November 1975, the City Council adopted Resolution 271 which directed the city to pursue and develop an energy from municipal solid waste program.
- August 1982, the city issued requests for proposals to construct and operate the resource recovery facility. After delays and other problems, the city restarted the project and issued solicitations for competitive bids.
- July 1985, the city awarded Honolulu Resource Recovery Venture (HRRV) a contract to design and build the facility and a second contract to operate the facility.<sup>2</sup>
- November 1989, the city sold the H-POWER Resource Recovery Facility to DFO Partners, Bank of America and Ford Motor Credit Company consortium for \$312.5 million (\$80 million in cash and \$232.5 million in city seller financing).
- May 1990, the waste to energy H-POWER facility commenced commercial operations with two boilers.
- May 1991, ENV issued a contract change order that changed the operating contract expiration date from 2005 to 2010.
- October 2003, the HRRV contracts were sold to Covanta and the company name was changed to Covanta Honolulu Resource Recovery Venture (Covanta).

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<sup>2</sup> The original operating contract was awarded under a two-step process that used a request for proposals (RFP) process to identify and select the H-Power contractor. Under the contract terms, the contractor was responsible for facility alterations, construction, operation, and maintenance of the H-Power facility. Contract modifications expanded, improved, and refurbished the H-Power facility as discussed in the ENV integrated solid waste management plan. The contract modifications were issued under the original operating contract without issuing a new RFP or soliciting competitive bids. For this report, we considered the contract modifications without soliciting competitive bids or issuing new RFPs as de facto sole source contracts.

- February 2008, ENV approved Amendment 4 which established a task order<sup>3</sup> process for modifying the H-POWER Air Pollution Control (APC) system to meet new federal air emission standards. The change converted the contract to an indefinite-delivery, indefinite-quantity (task order) contract.
- After the contract was awarded, ENV directed Covanta to undertake three major capital projects for H-POWER: Air Pollution Control Improvements (2008), Third boiler Expansion (2009) and H-POWER Refurbishment Projects (2009). A fourth project, sewage sludge removal, was initiated in 2013. The projects were included under the H-POWER operating contract (No. C01591) and are included in the \$993.3 million operating contract total.
- In October 2008, the city re-purchased the H-POWER facility from DFO Partnership for \$43.8 million and discharged the city's mortgage note.
- Prior to the re-purchase, the city awarded Covanta contracts to plan, design and expand the facility to include a third boiler.
- In 2008, the city's updated waste management plan identified additional projects to improve, expand, and refurbish the facility. These projects included the air pollution control system (APC) and the installation of Baghouse fiber glass air filters which was undertaken to comply with new federal air emission standards; expanding the facility to include a third boiler, and refurbishing the facility. On behalf of the city, ENV awarded *de facto* sole source, construction contracts to Covanta to construct, expand, improve, and refurbish the H-Power facility.

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<sup>3</sup> A **task order** is a contract for services that does not procure or specify a firm quantity of services other than a minimum or maximum quantity. Government must issue orders for the tasks to be performed by the contractor. Also known as indefinite-delivery, indefinite-quantity contracts. At the time of award, delivery and quantity requirements are not certain although a minimum quantity or price may be known at time of contract award.

**Time and materials contracts** are used when labor and material costs are highly unknown. Government assumes risks for the project and pays the contractor all allowable costs, regardless of delivery. Government benefits if the actual cost is lower than the expected cost. The government must ensure efficient performance, and contractor claims are accurate, valid, and justified.

- December 2009, ENV and Covanta entered into Amendment #12 of the H-POWER contract which converted the operating contract from a 20 year to a 47 year operating contract. The contract was a cost-plus service fee contract for Covanta to operate the H-POWER facility.
- ENV also hired two consultant firms, HDR Engineering, Inc. and Mele Associates, to monitor and oversee the projects.
- As of 2015, the city owns the facility and land, the contractor (Covanta) operates the facility on behalf of the city, and the city consultant (HDR Engineering, Inc.) continues to provide project oversight and monitoring for the city.

Our review of the contract history and documents show ENV relied on the contractor, consultants and external law firms to negotiate the contract terms and conditions, and to establish reasonable pricing for the H-POWER projects.<sup>4</sup> ENV managers stated they did not solicit or obtain open, competitive bids from other contractors. As a result, we could not determine if the contract amounts were reasonable or minimized project costs to the city.

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## **ENV Used Cost-Plus, Time and Materials, and *De Facto* Sole Source Contracts to Construct, Improve, Expand, and Refurbish the H-POWER Facility**

State of Hawai'i procurement laws and rules and city policies impose limitations on the use of sole source, cost-plus, time and materials contracts, and multi-term contracts. By statute, the state procurement laws and rules are applicable to the city. The state and city rules, detailed in Appendix F, are designed to minimize risk and maximize value for the taxpayer, ensure the contract type is less costly than other contract types, and essential to the agency to accomplish its work.

The rules state the contracts must serve the best interest of the governmental body by encouraging effective competition or promoting economies in procurement, and justifications must be documented in writing. Both state and city rules state the fact that a contractor has been performing the services all the time, or that the contractor has the expertise, or that the service is unique is not justification for a sole source contract.

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<sup>4</sup> The original contract was an industry template that included language, terms, and conditions that protected the contractor's interest.



After the request for proposals and competitive bids were solicited, the city awarded two H-POWER contracts to Covanta/HRRV, a construction contract to design and build the H-POWER facility and an operating contract to operate and maintain the facility.

After the original contracts were awarded in 1985, the city and ENV used *de facto* sole source, cost-plus, and time and materials contracts and 79 contract amendments, change orders, and task orders to construct, improve, expand, and refurbish the H-POWER facility.<sup>5</sup> The contract modifications increased the original construction and operating costs of \$313.7 million to an overall total of \$993.3 million (including contractor, construction, and operating costs).

ENV managers stated they did not solicit open or competitive bids and justified the use of these contracts and modifications by claiming that, under the operating contract, Covanta was responsible for alterations and construction to the facility and, therefore, new solicitations were not needed.

Exhibit 4.1 summarizes the contracts related to the three major<sup>6</sup> H-POWER projects that were initiated under the auspices of the H-POWER operating contract. A fourth sewage sludge disposal project was awarded under the auspices of the Covanta operating contract. The three consultant contracts related to monitoring the H-POWER construction projects are also listed.

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<sup>5</sup> The State Procurement Office recommended re-procuring contracts competitively rather than amending contracts. Contract modifications and task orders must be within the original contract scope of work. The lack of competition or open solicitations for bids for a long period, such as the 20 year term for an operating contract, was a particular concern. Shorter contracts of 5 years with options to extend, but not longer than 10 years are acceptable. As a rule of thumb, competitive bids should be re-solicited whenever the project scope of work changes or project costs exceed 50% of the original contract amount.

<sup>6</sup> The original construction contract was for the design, construction and testing of the H-POWER facility. After the facility was completed in 1990, ENV and Covanta initiated three major projects (air pollution control system improvements, the third boiler expansion, and the H-POWER refurbishment) under the Covanta operating contract and started a fourth project related to transferring sewage sludge to the H-POWER facility for disposal.

**Exhibit 4.1****List of H-POWER Contracts (Construction + Operating + Consultant Contracts)**

Contract Name	Contract No.	Contract Type	Contract Project	Contractor Name	Contract Date	Term	No. of Amendments	No. of Change Orders	No. of Task Orders	Original Amount	Contract Amount (as of 2013)
Contract to Design, Construct, and Test	Unknown	Construction	Design-build-test	HRRV	7/3/1985	3 years	na	na	na	\$149,975,660	\$149,975,660
Waste Processing and Disposal Services Contract	C01591	Construction	Operating contract	HRRV/Covanta	7/3/1985	20 years	14	35	15	\$163,764,130	\$843,394,475
Subtotal							14	35	15	\$313,739,790	\$993,370,135
<b>H-Power Construction Contracts Issued under the Covanta Operating Contract<sup>a</sup></b>											
Air Pollution Control System Improvements	C01591	Construction	APC System Improvements	Covanta	2/28/2008	Increments of Progress Deadline April 2011	na	14	15	\$38,000,000	\$47,001,000
Third Boiler Expansion Project	C01591	Construction	Third Boiler Expansion Project	Covanta	12/17/2009	1,034 calendar days	11	21	na	\$302,760,000	\$324,600,000
H-POWER Refurbishment	C01591	Construction	H-POWER Refurbishment	Covanta	5/28/2009	1/29/2013	1	na	na	\$48,000,000	\$30,998,000
Sewage Sludge Disposal	C01591	Construction	Sewage Sludge Disposal	Covanta	11/15/2013	8 months	1	na	na	\$9,000,000	\$9,000,000
Subtotal							13	35	15	\$397,760,000	\$411,599,000
<b>H-Power Consultant Contracts<sup>b</sup></b>											
Assess Material Condition of H-POWER Facility	C65817	Consultant/Professional Services	Consultant services	HDR Engineering	6/4/2007	365 days	4	na	na	\$50,000	\$650,000
Air Pollution Control system Improvements and Refurbishment <sup>c</sup>	SC-ENV-0900006	Consultant/Professional Services	Consultant services	Mele Associates	8/13/2008	1,180 calendar days	8	na	na	\$2,000,000	\$3,622,500
Third Boiler Expansion Project	SC-ENV-0900180	Consultant/Professional Services	Consultant services	HDR Engineering	6/30/2009	3,650 calendar days	3	na	na	\$7,000,000	\$10,475,000
Subtotal							15	0	0	\$9,050,000	\$14,747,500

<sup>a</sup> The following list of H-POWER construction contracts were issued under the operating contract and are included in the \$993,370,135 total.

<sup>b</sup> According to the State Procurement Office, construction monitoring consultant contracts for professional services should be fixed price contracts. The consultant contracts totaled \$14.7 million and are not included in the \$993.3 million total.

<sup>c</sup> Amendment 8 to the Mele contract.

Source: OCA analysis of all H-POWER contracts

**Exhibit 4.2**  
**Photo of H-POWER Baghouse Air Filter Building**



Source: Department of Environmental Services

***Air Pollution Control  
 System Improvements***

In 2007, ENV issued a notice to proceed for the construction contract. The contract was for Covanta to design and replace the H-POWER air pollution control system electrostatic precipitators (ESPs)<sup>7</sup> with Baghouse air filters in order to meet the new federal air emission standards. ENV executed contract amendments #4, 6, 7, 8, 10, and 14 and task orders #1-15 with Covanta for the Air Pollution Control System (APC) Improvements.

- Amendment No. 4 (dated February 28, 2008) provided for the design, permit, modification, purchase, installation, start up and commissioning of an APC system. It also established the use of task orders. The total not-to-exceed cost was set at \$38 million.

<sup>7</sup> The air pollution control system components included electrostatic precipitators (ESP), stack cooling tower, boiler and ancillary equipment, scrubber, processing equipment and conveyors, and buildings. The products of combustion include incinerator ash and flue gas. The H-POWER combustors are equipped with air pollution control systems that basically consist of an electrostatic precipitator (a static electricity device) for the removal of particulate matter from the flue gas by ionizing the particles and collecting them through electrostatic attraction onto filter plates. The system was previously upgraded with the addition of semi-dry scrubbers for the chemical neutralization of acid forming gases. Ancillary equipment such as the stack cooling tower, boiler, scrubber, processing equipment and conveyors are housed in a building.

- ENV issued 15 task orders that covered various tasks, purchases, and services.
- In 2008, Task Orders 1 through 6 covered the purchase of Baghouse filters (\$11.3 million); engineering (\$2.8 million); boiler modifications (\$390,000); the purchase of materials and handling equipment (\$1.7 million); the purchase of electrical equipment (\$659,000); and construction costs (\$25.2 million).
- In 2009, Task Orders 7 through 9 covered the purchase of a systems integrator (\$195,000); the purchase of spare parts (cost data not stated); and contract administration (\$800,000).
- In 2010, Task Orders 10 through 15 covered the plant startup (\$477,800); the purchase of insurance (\$320,490); construction of oil and diesel storage facilities and pipe related foundations and fabrication (\$523,950); ash handling fabrication (\$197,570); Baghouse fabrication (\$368,850); and contingency reserves (\$1.99 million).
- Amendment No. 14 (dated 1-15-15) redistributed the project's \$47,001,000 CIP funding to reflect the final disbursement of funds based on actual billings for the individual task orders (Amendment 4). This amendment notes that \$1 million lapsed from the original \$48,001,000 CIP funding.

ENV used Amendment 4 and the 15 task orders to increase the original scope of services and increase the APC project costs from \$38 million to over \$47 million without issuing solicitations for open or competitive bids.

We did not find documentation to justify the *de facto* sole source contracts. Although ENV and BFS managers state extensive discussions and deliberations were held, the justifications for the *de facto* sole source contracts were not documented as required by city policies and state rules. We also did not find justification that indicated the changes and additional work were necessary for the completion of the original project; or were within the scope of the original operating contract.

### **H-POWER Third Boiler Expansion Project**

ENV managers stated they did not solicit open or competitive bids for the contract modifications because the operating contract stated Covanta was responsible for alterations and construction to the facility and, therefore, new solicitations were not needed.

As a result, we could not determine if the contract amounts were reasonable or minimized project costs to the city.

On December 31, 2003, ENV issued a contract request to plan and design the H-POWER third boiler expansion. The construction contract amendments included:

- Amendment No. 3 (December 31, 2003) extended the terms of the operating contract to 20 years from the commercial date of the expanded operations;
- Amendment 9 (executed on January 13, 2009) continued the scope of the work, and revised the cost proposal for the H-POWER third boiler expansion; and
- Amendment 11 (executed on December 17, 2009) added \$282.7 million to the Covanta operating contract and authorized the contractor to design, build, and operate the H-POWER third boiler. The amendment expanded H-POWER by adding the third boiler, a mass burn combustion unit, an air pollution control train, and a turbine generator.

The contract modifications were awarded without complying with the contract requirements in the state rules and city policies. We did not find documentation to justify the *de facto* sole source contracts. ENV and BFS managers stated extensive discussions and deliberations were held, but the justifications for the contracts were not documented as required by city policies and state rules.

We did not find any solicitations for open and competitive bids. ENV managers stated they did not solicit open or competitive bids because new solicitations were not needed under the terms of the operating contract which states Covanta is responsible for facility alterations and construction. We did not find justification for the changes; or that the additional work was necessary for the completion of the original project; or was within the scope of the original operating contract. We therefore could not determine if the contract amounts were reasonable or minimized project costs to the city.

**H-POWER Third Boiler and Refurbishment Project**

In May 2009, ENV executed Amendment No. 12 to the operating contract (C01591). Amendment 12 was a cost-plus operating contract that increased the total H-POWER refurbishment project costs to \$30.9 million.<sup>8</sup>

The contract modifications were awarded without complying with the sole source, cost-plus, and time and materials contract requirements in the state rules and city policies. We did not find documentation to justify the *de facto* sole source contracts, justification for the cost-plus and time and materials contracts, or any solicitations for open and competitive bids. ENV and BFS managers state extensive discussions and deliberations were held, but the justifications for the contracts were not documented as required by city policies and state rules.

The third boiler expansion project was completed and accepted on August 4, 2012. Under the terms of Amendment 12, the Covanta exclusive right to operate the H-POWER facility was extended from 2012 to 2032. That is the 1985 operating contract for 20 years was automatically extended to 47 years (1985 to 2032).

We did not find documentation to justify the extension of the operating contract or any solicitations for open and competitive bids to extend the operating contract to 47 years. In our opinion, ENV managers were not aware the contract was extended to 47 years.

We did not find documentation to justify the *de facto* sole source contract modifications. We did not find justification that indicated the changes and additional work were necessary for the completion of the original project; or were within the scope of the original operating contract. As a consequence, we could not determine if the contract amounts were reasonable or minimized project costs to the city.

We also did not find justification for the 20 year extension of the operating contract and did not find any solicitations for new bids before the operating contract was extended from 2012 to 2032.

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<sup>8</sup> Amendment 12 also extended the management, operations and maintenance of the H-POWER facility; updated the terms and conditions of the Expansion Contract Agreement; and added changes and improvements to the operating contract. After each notice to proceed, ENV added more funding which totaled \$30.9 million for the contract.

## **Consultant Contracts**

State and city policies recommend fixed price contracts, competitive bids, and other requirements for professional services contracts. ENV did not fully comply with state rules and city policies, did not document justifications for any of its consultant and professional services contracts, and did not issue solicitations for open or competitive bids. ENV used sole source procurements, cost-plus, and time and materials contracts that prevented us from determining if the contract amounts were reasonable or minimized project costs to the city.

***HDR Engineering - Overall Material Condition***<sup>9</sup>: ENV selected HDR Engineering, Inc. to provide consultant services to examine and review the overall material condition of the city's H-POWER facility. The June 4, 2007 time and materials, professional services contract (No. CT-CNVC65817) was not to exceed \$50,000. The contract terms specified an examination of the overall plant condition, with emphasis on the condition of the facility's major components. The Project Payment Schedule established estimated billing rates, reimbursable expenses, and that sub-contracted services were to be reimbursed at cost.

ENV issued contract amendments in increments to increase the scope of services for HDR Engineering. These contract modifications avoided compliance with the city policy for professional services contracts. In our opinion, the ENV use of amendments, task orders, and change orders violated city financial policies and allowed ENV to start and continue projects without re-soliciting contract bids as required by the state procurement code and city policies. ENV and BFS managers stated the contract changes were in the best interests of the project and allowed the city to use the accumulated knowledge and continued expertise of the consultants involved with the H-POWER project.

More specifically, ENV used 4 amendments to expand the scope of services without complying with city or state policies for professional services contracts.<sup>10</sup>

<sup>9</sup> According to the State Procurement Office, construction monitoring consultant contracts for professional services should be fixed price contracts.

<sup>10</sup> City procurement policies for professional services for \$25,000 and more, ENV must submit a request to the BFS director and advertise for professional services. State of Hawaii Administrative Rules state that amendments to professional services contracts require prior approval of the head of the purchasing agency when the increase is at least \$25,000 and 10% or more of the initial contract price.

- On December 11, 2007, ENV executed Contract Amendment #1 which added \$25,000 to the original contract. The work scope was expanded to include a second facility visit during an outage period to examine inaccessible areas, including the fireside of a boiler and other previously inaccessible areas;
- On February 22, 2008, ENV executed Contract Amendment #2 which increased funding by \$50,000 to a total cost of \$125,000. The contract expanded the scope of services by adding a boiler study;
- On June 23, 2008, ENV executed Contract Amendment #3. This agreement provided additional funding of \$375,000 for HDR to conduct a Turbine Study, a Generator/Electrical Interconnect Study, and a Power Purchase and Agreement Study; and
- On December 11, 2008, ENV executed Contract Amendment #4. This amendment added \$150,000 and expanded the scope of services by adding a Capital Improvements Study.

ENV amended and extended the time and materials contracts without soliciting new bids and expanded the scope of services without complying with state procurement laws and city rules for professional service contracts. As a result, the original consultant professional services contract increased from \$50,000 to \$650,000 without issuing new solicitations or announcements for open bids.

ENV and BFS managers stated the contract changes were in the best interests of the project and allowed the city to use the accumulated knowledge and continued expertise of the consultants involved with the H-POWER project. We disagree that city and state rules should be violated for operational purposes.

***HDR Engineering, Inc. - Third Boiler Expansion:*** HDR Engineering was selected to provide construction monitoring services for the Third Boiler Expansion Project at a contract amount of \$7 million in June 2009. Three amendments to the professional services contract added \$3.5 million to the HDR contract and increased the contract amount from \$7 million to \$10.5 million without re-soliciting bids and without advertising



as required by city and state policies for professional services contracts.<sup>11</sup>

**Mele Associates:** In 2008, ENV signed a contract with Mele Associates, a consultant, to oversee the APC project. The professional services contract provided construction monitoring services for the APC project, and was a time and materials contract (SC-ENV-0900006-2) for \$2 million.<sup>12</sup>

- Amendments 1 and 3 updated the pay rate schedule;
- Amendments 2 and 4 through 7 added a total of \$1.2 million for the updated pay rate schedule and professional services; and
- Amendment 8 added \$412,500 for continued services and expanded the scope of the professional services to support the H-POWER refurbishment and sludge projects.

The amendments increased the contract amount from \$2 million to \$3.6 million<sup>13</sup> without advertising as required by city policy and violated the state procurement code and city rules for professional services contracts. The BFS procurement manager stated the consultant rates were compared against state wage guidelines, considered reasonable if the wages were within state guidelines, and approved.

ENV and BFS managers stated the contract changes were in the best interests of the project and allowed the city to use the accumulated knowledge and continued expertise of the consultants involved with the H-POWER project. We found no documents to justify or support the contract approvals and were therefore unable to determine if the contract amounts were reasonable or the violation of city and state rules were justified.

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<sup>11</sup> We followed up on ENV consultant procurement practices by reviewing a July 2015 consent decree among the city, the U.S. Department of Justice, and the U.S. Environmental Protection Agency related to installing a photovoltaic system at H-POWER. ENV issued Amendment 4 to the HDR Engineering contract and increased the multi-term contract amount \$175,000 from \$10.5 million to \$10.7 million without re-soliciting bids and without advertising as required by city and state policies for professional services contracts. The amendment also continued to authorize \$59 per hour for engineering and field student interns.

<sup>12</sup> According to the State Procurement Office, construction monitoring consultant contracts for professional services should be fixed price contracts.

<sup>13</sup> Of this amount, \$500,000 was dedicated for reimbursable expenses for the consultant.

According to ENV staff, the department relies on these consultants to substantiate and verify the accuracy and validity of the Covanta and the subcontractor invoices and claims. Based on our audit work, we determined the consultants served primarily as project engineers that reviewed construction activity such as project design, planning, scheduling, permitting, and monitoring of actual construction. The consultant substantiation of the invoices consisted of checking the accuracy of the mathematics and ensuring funds were available for the project and invoices. We found no documentation to justify the *de facto* sole source, time and materials professional services contracts or the need to extend the contracts as required by city and state rules.

Although the state procurement code and administrative rules required close monitoring of the time and materials contracts by knowledgeable staff, ENV did not provide the required oversight. As a result, ENV could not ensure the consultant time and materials claims were minimized and the reimbursed costs were valid.

### ***ENV Used Project Funds to Pay Expenses for Other Projects***

ENV used funds encumbered for other projects to start and complete different projects. The process was similar to the scenario described in City Council Resolution 12-150, CD1. In the resolution, ENV continued funding for a digester project by taking funds from previously approved projects and using the funds for a different project after the City Council removed the requested appropriation from the executive capital budget. ENV managers claim the use of the funds was appropriate and did not require budget and fiscal services department, managing director, or other approvals once the capital project and funding were approved. ENV did not provide documentation to support their claim.

- Our audit of the project invoices revealed that ENV used \$681,290 of third boiler expansion project funds to pay expenses that were related to the Baghouse air filter project. ENV also used \$681,269 in Baghouse air filter project funds to pay expenses that were related to the third boiler expansion project funds. In response to our inquiry, the ENV deputy director stated the department could move money between amendments within the Covanta contract without budget and fiscal services department or other approvals, and only required departmental approval to transfer funding from task to task.
- In another instance, we identified four invoices totaling \$999,929 in third boiler refurbishment project funds that

were used to demolish a Baghouse facility. The demolition should have been paid for by the Air Pollution Control (APC) System Improvements project. According to BFS staff and the ENV records, nearly \$1 million of APC Baghouse air filter project funds lapsed in 2008, so ENV authorized the use of third boiler refurbishment funds to cover the Baghouse air filter demolition costs.<sup>14</sup>

- In a third instance, ENV consultants purchased computers, iPads, electronic equipment, office furniture, and a diesel utility vehicle for its ENV H-POWER staff and a consultant. The \$233,680 in purchases included construction project management software, interns paid at \$40 to \$59 per hour, and other purchases that were outside the scope of the consultant time and materials contracts. These expenditures were made without following city procurement processes and policies and reimbursed to the consultant under its time and materials contract.

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### **ENV and BFS Claim the *De Facto* Sole Source, Cost-Plus, and Time and Materials Contracts Were Justified and in the Best Interests of the City**

ENV managers stated their contract management practices are sound, and the department acted at all times within the scope of the H-POWER contract. More specifically, the ENV managers stated the original H-POWER contract was competitively bid out; the contract terms and conditions were not drafted by the successful bidder; and the H-POWER contract terms allow modifications, and, therefore, competitive bids are not required.

Although the \$324.6 million third boiler expansion project comprised over 32% of the \$993.3 million project costs, ENV and BFS managers stated the *de facto* sole source, cost-plus, and time and materials contract modifications were appropriate and competitive bids were not required. ENV and BFS managers stated the contracts were reviewed for fair and reasonable pricing by the consultants and compared against Hawai'i State Department of Accounting and General Services (DAGS)

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<sup>14</sup>On January 15, 2015, ENV and the City executed Amendment No. 14 to the H-POWER Operating Contract which redistributed the Air Pollution Control Project's final disbursement of funds based on the actual billings for the 15 individual task orders. This amendment recorded that \$1 million of the project's original \$48,000,000 CIP funding lapsed and was removed from the project's funding. The \$1 million was deducted from Task Order 6 "Construction", and the work was transferred to Amendment 12, Refurbishment Project Payments.

guidelines. ENV managers stated Covanta provided justification for the costs, and ENV negotiated the contracts downward as appropriate.

Although the discussions and justifications were not documented, ENV managers stated the Corporation Counsel, Department of Budget and Fiscal Services, the ENV consultant, outside legal counsel, and Covanta reviewed the contracts, modifications, amendments, change orders, task orders, and other modifications for compliance with the terms and conditions of the H-POWER contract and all applicable laws. ENV managers stated the contracts were the optimal contracts for the operation, and were in the best interests of the city.

ENV managers also stated:

- The city realized a significant profit from the sale and buyback of the facility, and the annual profits from H-POWER justify the operations;
- The H-POWER construction and operating contracts anticipated Covanta would operate the facility; the life of the facility would extend longer than the initial 20 year term; and the contracts anticipated the same contractor would be responsible for the design, construction (including new construction of the third boiler), expansion, operation, and maintenance of the entire facility;
- Keeping the expansion and continued operation of H-POWER under a single operator was and is in the best interest of the city, and allowing a single vendor was an effective way to manage risks, and to provide a cost effective solution for constructing and operating the facility; and
- The contractor was in the best position to ensure the seamless integration of the entire system, and to ensure the entire system was compatible.

ENV managers stated:

- Extending the contract without competitive bidding is not a violation of the state procurement code and is in the best interests of the city because Covanta's responsibilities under the operating contract cover alterations and construction to the facility;

- The extension of the operating contract from 20 years to 47 years without competitive bids was justified and envisioned in the H-POWER contracts; and
- The extension over 20 years for construction and operation of the facility is typical industry practice; and the extension enables the city to keep bond payments and waste disposal tipping fees reasonable.

ENV and BFS managers further stated the consultant contracts were in the best interest of the city because they prevented delays and additional costs from demobilizing and mobilizing consultants. ENV managers stated the consultant contracts were approved by the Corporation Counsel and the Department of Budget and Fiscal Services, and it was unreasonable and utterly inefficient to require City Council approval for contract terms that require the issuance of general obligation bonds to ensure the contractor is paid.

### ***Analysis of management comments***

We respectfully disagree with the ENV and BFS management comments. The audit report details the deficiencies and improvements needed in ENV contract and procurement practices. Our further analysis indicated other unreported and questionable issues. For example, our analysis showed that:

- ENV managers stated Covanta assisted ENV by providing design and construction guidance for the project scope and costs; obtained bids; and reviewed the amendments, change orders, and task orders before these were finalized. In our opinion, the contractor participation in the contract process constituted a conflict of interest that compromised the integrity and validity of the contract process, as well as the contract amounts;
- According to ENV managers, the original operating contract was primarily a task order contract with time and materials elements, and Amendment 12, issued in December 2009, maintained the original format. In our opinion task order, cost-plus, and time and materials contracts are significantly different. Unlike task order contracts, cost-plus and time and materials contracts require the assignment of more resources to ensure the city is not overcharged and the contractor claims are valid;

- Our analysis of the 1989 installment sale and 2008 purchase agreements indicated the city sold the H-POWER facility to Ford Motor Credit Company for \$312.5 million (\$80 million cash payment plus \$231 million in seller financing) and repurchased the H-POWER facility from DFO Partnership in 2008 for \$43.9 million. The transaction probably involved the release of the city's seller financing (mortgage note). The net gross profit for the city was \$36.1 million (\$80 million less \$43.9 million). While the capital gain was considerable, the capital gains were not as significant as claimed by ENV managers; and
- The 25-year integrated solid waste management plan identified plans to construct, improve, expand, and refurbish the H-POWER facility. The plan discussed the air filter, refurbishment, third boiler, and other projects. ENV failure to solicit and obtain competitive bids for the pre-planned projects and for each pre-planned phase of the H-POWER project raises serious concerns regarding ENV procurement practices.

ENV management claimed the operating contracts anticipated that (1) Covanta would operate the facility for the life of the facility; (2) the same contractor should run the facility for 47 years on a cost-plus service fee contract; (3) the same contractor should design, construct, expand, operate, and maintain the facility; and (4) using the same contractor will ensure the seamless integration of the entire system and ensure the entire system was compatible. While the ENV comments may sound rational, in our opinion, the lack of open competition will prevent the city from maximizing taxpayer value and minimizing project costs. The ENV practices will also reduce the city's ability to detect and prevent fraud, waste, and abuse of city resources.

On other matters, our audit disproved the ENV claim that 20 years for operating H-POWER was typical industry practice. If H-POWER losses continue, we believe the city may be at risk for covering the losses and for covering increasing construction costs. We disagree that violating state and city rules for professional services contracts is in the best interest of the city. Competitive pricing, soliciting open bids, using fixed price contracts, and documenting justifications for sole source, cost-plus, and time and materials contracts are required and are still the best practices to ensure city resources are not wasted and construction costs are minimized. We disagree that City Council approval for contract terms that require the issuance of general obligation bonds to ensure the contractor is paid is not needed.

**City 2008 Plan identified future H-POWER projects and allowed ample time to comply with city and state procurement practices**

As noted earlier, the City and County of Honolulu *Integrated Solid Waste Management Plan* was updated in October 2008 by R.W. Beck. Section 8.4 *H-POWER* discussed the existing facility, the schedule of key renewal and replacement projects for H-POWER, and the need to increase waste to energy capacity. The updated 2008 plan stated H-POWER had two boilers that used combustion engineering technology; two process lines to handle up to 100 tons of municipal solid waste per hour; and air pollution control equipment such as dry scrubbers and electrostatic precipitators. The plan discussed the results of the facility assessment, the review of the operating data for the previous six years, and the city acquisition of H-POWER.

**Planned projects:** The 2008 plan identified several projects for the future. For example, the plan stated the city was working with a vendor to retrofit the air pollution control equipment (APC) to add Baghouse air filters. The updated plan discussed plans for construction, improvements, expansions, and refurbishment for the H-POWER facility. The plan identified the timing for H-POWER replacement items such as the steam turbine major overhaul (7 years), hot and cold air heater tubes (3-7 years), preventive maintenance, and other major projects. In Section 8.4.3.1 *WTE (Waste to Energy) Capacity*, the plan stated the city opted to increase H-POWER capacity by purchasing a mass burn combustion system that is capable of annually processing at least 300,000 tons of waste and discussed the three boiler facility and expansion for a fourth boiler to provide for more waste-to-energy capacity through 2030 and beyond.

The pre-planned projects allowed ENV adequate time and opportunity to plan the H-POWER phases so that ENV could issue requests for proposals, solicit competitive bids, or openly compete the projects so that the project costs could be minimized. The ENV decision to use sole source, cost-plus, and time and materials contracts did not, in our opinion, represent the best interests of the city.

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**Recommendations**

We recommend that the Managing Director should direct ENV to:

13. Maximize the use of competitive bids; solicit open competition whenever possible; and solicit competitive bids or proposals before renewing any options to extend long term contracts.
14. Follow State Procurement Office guidelines that recommend long term contracts should not exceed 5 years and should

contain options to renew the contract for specific periods of time.

15. Follow State Procurement Office guidelines for construction and professional services contracts and its contracting authority suspended if it continues to violate city contracting policies and state procurement code rules.



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# Chapter 5

## Conclusion and Recommendations

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The H-POWER facility is a public-private project undertaken in 1985 and is part of a 25 year integrated solid waste management plan developed for the city. As a leader in environmental sustainability, the city's plan and facility minimized the need for landfill disposal by converting solid waste into electricity that was sold to the Hawaiian Electric Company. The Department of Environmental Services (ENV) implemented the plan and is responsible for providing oversight of the H-POWER facility and ensuring the Covanta contractor operates and maintains the facility in accordance with the operating contract.

As of FY 2014, the overall H-POWER project costs were over \$993 million, including contractor, construction, and operating costs. The original 1985 contract cost estimates were \$149,975,660 for the design, construction, and test of the facility, and \$163,764,130 for the 20 year operating contract for a total of \$313.7 million. After awarding the initial contracts, ENV used over 79 contract amendments, change orders, and task orders to allow the operating contractor to expand the scope of the project and to construct, improve, expand, and refurbish the H-POWER facility.

We found ENV procurement and contract administration practices can be improved. Government contracts, particularly for public-private entities and new ventures, should be structured to minimize risk and maximize value for the taxpayer. Although State law requires contractors to provide the city access to its records and the city developed standard *General Terms and Conditions* to protect the city interests, ENV did not require the city's *General Terms and Conditions* to be included in the H-POWER contracts or any of the over 79 contract modifications. As a result, the H-POWER contracts limited the city's access to records, curtailed records retention<sup>1</sup>, and limited the city's right to audit. More importantly, the city's ability to detect and prevent fraud, waste and abuse were compromised.

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<sup>1</sup> The Covanta contract allows the contractor to destroy the records after six years and before the project is completed. The Hawai'i State procurement Code requires records to be retained for not less than three years after the final contract payment. The city's traditional contract term is to state the contract is subject to the availability of funds.

ENV relied on the contractor, consultants and external law firms to negotiate the contract terms and conditions and to establish reasonable pricing for the projects. In our opinion, ENV reliance on the third parties was misplaced; ENV contract administration was flawed; and the contract terms were not in the best interests of the city. In our opinion, ENV is ultimately responsible for the validity, accuracy and reasonableness of all contract costs.

The contract included the unusual condition that the city issue general obligation bonds to ensure the contractor and subcontractors were paid. ENV used cost-plus and time and materials contracts although resources needed to administer the contract were not assigned. Thirdly, ENV and BFS approved the contract modifications without realizing the contractor's exclusive right to operate the H-POWER facility was extended from 20 years to 47 years and without soliciting or issuing requests for competitive bids. By relying on consultants, external law firms, the contractor, and state wage guidelines to determine reasonable pricing, the city cannot ensure the taxpayers received maximum value at the lowest cost to the city.

Although the State of Hawai'i Procurement Code and city policies discourage the use of sole source contracts and impose requirements for cost-plus and time and materials contracts, ENV and BFS managers claim the *de facto* sole source, cost-plus, and time and materials contracts were justified and in the best interests of the city. ENV and BFS managers state the existing contract is a good contract.

Our 100 percent review of invoices prior to FY 2013 revealed ENV contract administration and procurement practices can be improved. More specifically, payments prior to FY 2013 indicated ENV approved payments that were excessive, questionable, and not fully supported. ENV approved payments for out-of-scope work, billing rates that exceeded the contract hourly rates, and first class and business class airfare for subcontractors. Other payments included payments for excessive hours billed by a subcontractor, unallowable travel costs, unreasonable intern pay rates, and legal fees that the contractor should have paid. The claims resulted in over \$751,700 in improper and questionable payments.

Although ENV relied on its contractors, consultants, and others to properly administer the H-POWER contracts, in our opinion, ENV is ultimately responsible for ensuring contract costs are valid, accurate, reasonable, and substantiated. ENV managers subsequently claimed the deficiencies were personnel related.

As requested by ENV, we conducted a follow-up sample of 55 invoices paid after FY 2013. Although the small sample of invoices indicate payments for invoices have improved, ENV still has not assigned the resources needed to administer the complex H-POWER contracts. More specifically, the contract administrator position has been vacant since 2012, ENV policies and procedures are still not formalized, and three years elapsed before the contractor travel policies were revised to conform with city travel policies. Absent changes in ENV contract administration and procurement practices, the city's ability to detect and prevent fraud, waste, and abuse from occurring are limited.

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## Recommendations

We recommend that the Managing Director should direct ENV to:

1. Maximize the use of fixed price contracts. If ENV needs to use cost-reimbursement type contracts (including cost-plus service fee, and time and materials type contracts), ENV must assign the resources needed to properly administer the contract, scrutinize the contract scope, and minimize costs;
2. Not allow the contractor or consultant to write one-sided contracts that favor the contractor and increase the city risks for losses or increased costs. ENV should pay particularly close attention to contracts that are vague, do not cap or limit city liabilities, and do not explicitly provide an explicit expiration date;
3. Document justifications for approving long term, sole source, cost-plus, and time and materials contracts, operating contracts and similar contracts;
4. Require the city's current standard *General Terms and Conditions* to be inserted in all ENV contracts and contract modifications;
5. Collaborate with BFS to develop formal guidance on contract negotiations, required terms and conditions, and prohibited items;
6. Develop formal guidance on good contract administration practices and require that proper resources and staff (including accounting, auditing, and administrative personnel with the expertise and skill sets needed) are assigned to administer cost-plus and time and materials contracts;

7. Assign adequate resources and knowledgeable staff (including contract accounting, auditing, and administrative staff) with the expertise needed to administer the complex and costly contracts; and provide the oversight needed to ensure the contractor costs are minimized when cost-plus and time and materials contracts are used and when public-private partnership contracts exist;
8. Expedite filling the H-POWER contract administration position (the Energy Recovery Administrator) as well as assign the resources and staff with the expertise, knowledge, and skill set needed to properly administer the H-POWER contracts and to ensure invoices and payments are accurate, valid, substantiated, and justified;
9. Improve contract administration and management practices by ensuring only valid, reasonable, and accurate payments are made to ENV contractors and consultants;
10. Develop formal policies and procedures for administering cost-plus and time and materials, H-POWER, and other contracts;
11. Re-compete contractor and consultant professional services contracts as required by the state procurement code and city policies;
12. Provide written justifications for any contract modifications (including amendments, change orders, and task orders) as required by the state procurement code and city policies before extending any contract or expanding the scope of work in the contracts;
13. Maximize the use of competitive bids; solicit open competition whenever possible; and solicit competitive bids or proposals before renewing any options to extend long term contracts;
14. Follow State Procurement Office guidelines that recommend long term contracts should not exceed 5 years and should contain options to renew the contract for specific periods of time; and
15. Follow State Procurement Office guidelines for construction and professional services contracts and its contracting authority suspended if it continues to violate city contracting policies and state procurement code rules.

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## Management Response

The Managing Director, on behalf of the Department of Environmental Services, disagreed with the audit findings. In its lengthy response, the city stated the contract amendments did not require competitive bidding because the H-POWER contract provisions did not require ENV to seek competitive bids, and anticipated the same contractor would operate the H-POWER facility for 20+ years and/or the life of the facility. ENV claimed the same contractor would construct the entire facility, design and construct future expansions such as the third boiler, and operate and maintain the H-POWER facility. ENV stated the contract amendments did not violate procurement rules and were in the best interests of the city. As support for its procurement practices, ENV provided a copy of the State Procurement Office letter that affirmed the scope of work and the use of the same contractor to design, construct, and operate the second Synagro digester at the Sand Island Wastewater Treatment plant.

The management response stated the extended contract terms of 20+ years are common for waste to energy (WTE) operating contracts. As support, ENV provided a list of 15 WTE facilities with contracts that extended from 8 to 41 years.

ENV stated H-POWER generated \$201 million in revenues that covered the operating costs and provided additional revenues for the city. ENV stated the sale and re-purchase of the facility for \$312.5 million provided over \$150 million in capital gains, \$425.6 million in mortgage payments, and \$57.6 million in lease payments between 1991 and 2008.

The management letter stated the H-POWER contract does not limit the city's access to records any more than the city's general terms and conditions; does not limit the city's right to audit the contract; and does not curtail records retention.

ENV stated nothing in the contract requires the city to issue general obligation bonds. ENV further stated the use of general obligation bonds gives the city flexibility for funding sources; is allowed under state statutes; and lowers the cost of capital through lower interest rates.

ENV provided new amounts for the contracts; agreed with 9 of the 15 recommendations; and disagreed with 6 recommendations because ENV stated its practices already complied with the recommendations. (See management response letter for details.)

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## Auditor Analysis of Management Comments

ENV has many dedicated and hardworking employees involved with the H-POWER contracts and facilities. We, however, continue to respectfully disagree with the management responses.

*Procurement practices:* The State Procurement Office letter indicated ENV prefers to use long-term contracts that grant contractors the sole responsibility to design, construct, modify, expand, and operate city facilities. We believe this preference encourages the use of de facto sole source contracts and reduces the city's ability to encourage competition and promote economies in procurement as required by state laws and city policies. We also continue to believe ENV needs to improve its procurement practices related to consultant contracts.

*Contract extensions:* The ENV list included additional WTE facilities. Our review of the information provided by ENV indicated most of the WTE entities already had two to four mass burn boilers (versus the one mass burn boiler for H-POWER) that facilitated long term operating contracts, and that the WTEs used options that encouraged competition and allowed the contracts to be re-competed so taxpayers received maximum value at the lowest cost. The list of WTE clients reaffirmed our contention, as well as the current state procurement office administrator's guidance, that H-POWER type contracts should be for shorter periods with options to renew and extend the contract. For example, a 20 year contract with an initial term of 5 years and three 5-year options to extend the contract provides the incentives and reassurances needed by the contractor. The use of options increases the city's flexibility and protects the city's interests should the contractor fail to properly perform, if the city's financial position or policies change, or new technologies render the facility obsolete. Blanket 47 year contracts reduce the city's ability to ensure taxpayers receive the benefits of competitive bids and are not exploited so that the contractor's shareholders receive maximum profits.

*H-POWER revenues:* The management responses uniquely mixes capital gains with annual income statements although both are usually reported separately. The \$201 million in net revenues claimed covers the period from 1991 to 2015 for an average of \$8 million per year and is unlikely to continue based on the operating data. Our analysis of the operating data indicates operating revenues increased only 5.5% while expenses increased 18% between 2008 and 2015. This resulted in a precipitous decline in net operating income from over \$18.8 million in 2008 to a loss of (\$543,500) in 2015. If the decline continues, the city may be required to cover the losses.

**Contract terms:** As long as the city's relationship with the contractor and consultants are cordial, access to the contract records, the right to audit, and records retention may not be a problem. However, our literal interpretation of the contract terms reaffirms our findings that the city's right to audit, access to records, and destruction of records could be limited should the contractor or the consultants' relations with the city deteriorate. Should the latter occur, the city's ability to prevent recurrences of the deficiencies discussed in Chapter 3 would be hampered.

Amendment 11 initially resolved many of our audit concerns regarding access to records, right to audit, and records retention. Unfortunately, Amendment 12 overrode the improvements in Amendment 11 and reaffirmed the terms of the original contract. As a result, our audit concerns resurfaced.

State law does not preclude the use of city general obligation bonds for solid waste processing, disposal, and electricity generation. However, Amendment 11, Section 3.8.1. states the city "shall" issue general obligation bonds for the H-POWER project. This requirement for a public-private joint venture is unique and increases the city's potential for financial losses if the contractor requires the city to issue general obligation bonds to offset H-POWER losses.

**Other comments:** The report data were extracted from the contract and contract modification documents provided to us. If the new ENV dollar amounts were supported by the contract documents, we adjusted the contract amounts. No changes were made if the ENV amounts were not supported by the contract documents. We also expanded Appendix E to provide more detailed histories for the H-POWER contracts; and edited the report for typographical errors and clarity.

We continue to stand by our overall finding that the complex H-POWER contracts require the assignment of adequate staff, resources, skills, and expertise to properly administer the contracts. In our opinion, the assignment of a part-time contract administrator is insufficient to prevent fraud, waste, and abuse. We wish the city and ENV well in their contract administration responsibilities and procurement practices.

**OFFICE OF THE MAYOR**  
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KIRK CALDWELL  
MAYOR

ROY K. AMEMIYA, JR.  
MANAGING DIRECTOR  
GEORGETTE T. DEEMER  
DEPUTY MANAGING DIRECTOR

December 1, 2015

Mr. Edwin S.W. Young, City Auditor  
Office of the City Auditor  
City and County of Honolulu  
1001 Kamokila Boulevard, Suite 216  
Kapolei, Hawaii 96707

Dear Mr. Young:

Attached is the City and County of Honolulu's management response to the "Audit of the Department of Environmental Services' H-POWER Contracts and Procurement Practices" ("Audit") dated November 2015. We appreciate you granting additional time to complete our response.

Although we appreciate the many hours your staff spent in conducting the Audit, we continue to have significant differences with Audit findings. Please feel free to contact me at 768-6634 if you have any questions or would like to discuss in more detail matters relating to this response.

Warm regards,

A handwritten signature in black ink that reads "Roy K. Amemiya, Jr." with a stylized flourish at the end.

Roy K. Amemiya, Jr.  
Managing Director

Attach.

cc: Lori M.K. Kahikina, Director  
Department of Environmental Services



OFFICE OF THE MAYOR  
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December 1, 2015

Mr. Edwin S.W. Young, City Auditor  
Office of the City Auditor  
City and County of Honolulu  
1001 Kamokila Boulevard, Suite 216  
Kapolei, Hawaii 96707

RE: Comments on Final Draft Audit of the Department of Environmental Services' H-POWER Contracts and Procurement Practices Dated November 2015: Management Response

Dear Mr. Young:

Thank you for the opportunity to respond to the Audit of the Department of Environmental Services' H-POWER Contracts and Procurement Practices Dated November 2015 ("Audit"). We appreciate the hard work you and your staff put into the Audit.

We also appreciate your recognition that the H-POWER facility is a leader in environmental sustainability as the City and County of Honolulu's ("City") solid waste management plan and facility has minimized the use for landfill disposal by converting solid waste into electricity sold to Hawaii Electric Company ("HECO"). We recognize the need for continued improvements in the management of this large-scale waste-to-energy ("WTE") operation. Nonetheless, after careful review and analysis of the Audit, the City provides the following general responses to explain our primary differences with certain Audit findings and also provides responses to the Audit recommendations.

Mr. Edwin S.W. Young, City Auditor  
December 1, 2015  
Page 2

**General Responses:**

1. **Contract Amendments Did Not Require Competitive Bidding:** In Chapter 4,<sup>1</sup> the Audit states the H-POWER Contract amendments, in particular Amendments 11 and 12, should have been competitively bid. The Department of Environmental Services (“ENV”) contends that Original H-POWER Contract enabled all of the amendments and the continued operation of the Facility by Covanta. The specific provisions within the H-POWER Contract evidences that the construction and operation of the Third Boiler did not require ENV to seek competitive bids. Moreover, keeping the expansion and continued operation under a single operator was and is in the best interest of the City:

- Article I of the Contract for Design, Construction, Testing of a Solid Waste Disposal and Resource Recovery Facility between the City and County of Honolulu and Honolulu Resource Recovery Venture (“Construction Contract”), “Definitions,” page I-4, defines the “Facility” as *“the solid waste processing and disposal and resource recovery and electric generating facilities, together with related and appurtenant structures and equipment to be constructed pursuant to the terms hereof on the Site.”* Therefore, by definition, any equipment, including an additional boiler, is considered part of the Facility.
- Article V of the Construction Contract, Section 5.1, “Design of Facility,” page V-1 provides in relevant part that *“[t]he design shall take into consideration the anticipation that the Facility may be operated to the extent practicable beyond the initial term of twenty (20) year operation period, subject to appropriate maintenance and/or replacement of parts. . .[and] the Contractor shall . . . shall perform all other architectural and engineering design work required for the Facility in its entirety. . . .”* This language indicates that the design of the Facility must anticipate the likelihood of future expansion that must be factored into the initial design, for the life of the facility or beyond the initial 20 year operating period.

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<sup>1</sup> Please note that the second to the last column, entitled “Original Amount,” in the charts on pages 43 and 71 of the Audit contains the following errors: (1) in the second row entitled “Waste Processing and Disposal Services Contract,” the value is \$247,812,780, not \$163,764,130 (see Exhibit II of the Original Contract (C01591)); (2) in the third row entitled “Air Pollution Control System Improvements,” the value is \$47,001,000 not \$38,000,000 (see page 4 of Amendment 10); (3) in the fifth row entitled “H-POWER Refurbishment,” the value is \$48,000,000 not \$4,000,000 (see page 155 of Amendment 12); and (4) in the seventh row entitled “Subtotal,” the value is \$406,761,000 not \$353,760,000 (based upon accurate values).

Mr. Edwin S.W. Young, City Auditor  
 December 1, 2015  
 Page 3

- Section 5.5 of the Construction Contract, "Design and Expansion Capacity," pages V-9, provides in relevant part that *"the Contractor shall insure that the Facility will be capable of expanding, exclusive of any raw waste storage and refuse derived fuel (RFD) storage areas, to a capacity for processing and disposing of Acceptable Waste of up to seven hundred forty-eight thousand eight hundred (748,000) Tons of Acceptable Waste per Year and up to an average of seventeen thousand two hundred eighty (17,280) Tons of Acceptable Waste per Week."*
- Article VI of the Construction Contract, Section 6.1, "Construction of Facility," page VI-1 provides in relevant part that *"[t]he Contractor shall procure and/or furnish all services, labor, equipment and materials necessary to construct the Facility in its entirety, all in accordance with this Contract. Such services, labor, equipment and material shall include but not be limited to the following . . . Organization, planning, management, direction, supervision and responsibility for all construction operations necessary to complete the Facility in its entirety, and the furnishing as necessary, for the performance of construction work, of all construction facilities. . . ."* The word "entirety" as used in this section and in Section 5.5 above, indicates that the Contract contemplated that construction of the Facility would extend beyond the initial term of the twenty (20) year operating period such that any new construction within the Facility would be covered by these sections and would be the responsibility of the Contractor.
- Article VIII of the Contract for Waste Processing and Disposal Services Between the City and County of Honolulu and Honolulu Resource Recovery Venture, Section 3.6, "Changes to Facility." provides *"[i]n the event there is a change to the Facility, the parties shall assume the following responsibilities: (a) . . . The Contractor shall have sole responsibility for any design and construction changes to the Facility which involve or affect process equipment or the guarantees or obligations of the Contractor and which the City and Contractor mutually deem necessary or desirable for any reason during the term of the Contractor. . . ."* This section specified that the design and construction of any future expansion of the Facility would be conducted by the Contractor.

Mr. Edwin S.W. Young, City Auditor  
December 1, 2015  
Page 4

Based upon the above referenced sections in the Expansion Construction Amendment (Amendment 11) and the Extended Operating Amendment (Amendment 12), the scope of work in these amendments encompasses the entire design, construction, and operation/maintenance of the Facility, including any future design and construction changes for which the awarded Contractor is responsible. The scope of work ensures that the selected offeror who designed, constructed, and operated/maintained the facility would be in the best position to ensure compatibility within the single system and able to offer an expedient and cost effective solution for any construction and operation/maintenance issues that may arise.<sup>2</sup>

The contract amendments, change orders, and task orders that accounted for the majority of the increase in the H-POWER Contract were for the construction and operation of the Third Boiler. As evidenced above, these modifications are allowable under the terms of the H-POWER Contract and therefore, would not require procurement through competitive bidding. Further, because the H-POWER Contract provisions embody the contention that the same vendor designing and constructing all of the boilers would be in the best position to ensure a seamless integration and compatibility within the same single system, would be most effective managing risks, and would provide the most cost effective solutions for construction and operational issues, the modifications made pursuant to the H-POWER Contract were indeed in the best interests of the City.

Accordingly, the H-POWER Contract amendments are not violative of procurement and such expansion and extension are in the best interests of the City for the reasons asserted above.<sup>3</sup>

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<sup>2</sup> The analysis in this section is mirrored after the opinion provided by the State Procurement Office ("SPO") regarding a similar City contract. See SPO letter dated September 14, 2012 to the Honorable Romy M. Cachola. Attached hereto Attachment "A."

<sup>3</sup> H-POWER's expansion costs are in the mix and compare reasonably with other plants. The typical way to compare waste to energy plant costs is to look at the cost per ton per day (\$/tpd). This provides a rough equalization between large and small plants. A comparison of large and small plants is attached hereto as Attachment "B." As noted, comparing costs for plants can be very difficult to get on the same basis and this approach is not perfect but provides a helpful overview of the comparison.

Mr. Edwin S.W. Young, City Auditor  
 December 1, 2015  
 Page 5

## 2. Extended Contract Term Is A Common Element of WTE

**Operating Contracts:** The Audit states that “[o]ur research found the following localities had operating agreements with Covanta that ran 5 to 10 years[,]” citing Fairfax, VA for 5 years with options to renew for two 5 years terms; York county, PA with a 5 year operating agreement; Montgomery County, MD with a 5 year operating agreement; Pinellas County, FL with a 10 year operating agreement; and Indianapolis, IN with a 10 year operating agreement. The Audit then concludes that “industry publications indicated 15 years [for an operating contract] is normal.” In researching the operating contracts of these facilities, ENV discovered the following:

### Fairfax County, VA:

The facility began operations in 1990. The term for the initial operating agreement ends in 2016 (25 years). Fairfax County negotiated an extension with a provision for two 5 year terms. The initial contract had provisions with an option for the County to acquire the facility when the 20-year term expired and the initial bonds were paid off. In 2011, Fairfax County had the option to buy the facility or agree to a new long-term lease. After the 5-year extensions are complete, the County will need to find a home for its waste. This could be considered a more risky position for the County because they do not have an ownership position in the facility and could be priced out of its use at the end of the term. The actual terms for the Fairfax County operating contract are **25 years** for the original contract, plus **2+ years** of construction, plus potentially **10 more years for a total of about 37 years**. This is without an expansion of the facility.

### York County, PA:

Covanta has had a contract with York County to process its waste at this facility for only 5 years because Covanta acquired the plant in 2009. The plant has been in operation since 1989 or roughly 26 years – 15 years operated by another company (Veolia).<sup>4</sup> The original operating contract was for **20 years**. An **extension of 5 years** was added to the contract. Covanta and the County may be in contract negotiations for an expansion and operating contract extension for at least another 20 years.

<sup>4</sup> Veolia got out of the WTE operating business, selling their interests largely to Covanta. Green Conversions was the operator for a short time for Pinellas County (acquiring that interest from Veolia) but the arrangement was terminated by the County and re-bid. Covanta won that second bid and now operates the plant. Green Conversions still exists but does not operate any plants. Energy Answers also has operated some plants but does not operate any facilities today. NAES (North American Energy Services operates the MidConn Facility which is a sister to the H-POWER RDF units. ENGEN operates the Bay County Facility in Florida. This is the only plant they operate.

Mr. Edwin S.W. Young, City Auditor

December 1, 2015

Page 6

Montgomery County, MD:

This facility began operations in 1995 and the original contract was set to expire in 2016 for roughly a **20-year term**. The Northeast Maryland Waste Disposal Authority negotiated a **5-year contract extension** (without expansion) with Covanta until 2021. This results in a **25-year term**.

Pinellas County, FL:

Pinellas County re-bid the operating contract and accepted the lowest bid from Veolia in 2007. Veolia had a **17-year contract**. However, Veolia got out of the business of operating WTE plants and sold their interest in Pinellas to Green Conversions Systems (GCS). The plant was in dire need of repair. When conditions continued to deteriorate and the production rate continued to drop - threatening the County's contract to sell 475,000 megawatts of electricity each year with Duke Energy - the County agreed in December to cover GCS' operating costs to help boost production and reduce the plant's emissions. In return, GCS agreed that its contract, which was set to run through 2024, would end Dec. 31, 2014, and the County would put the operation contract out to bid. For one reason or another, the County determined the contract GCS was operating under was no longer viable and re-bid the contract a second time. Covanta was the successful bidder for a **10n-year term**. There is no expansion with this extension.

Indianapolis, IN:

This facility began operations in 1988. An agreement provided for an **extension of 10 years** through 2028 for a total of **40 years of operation**. This contract does not include an expansion.

These WTE plants do not have operating contracts with durations of 5 to 10 years but instead have **extensions and options** for 5 or 10 year periods. Moreover, none of these operating contracts include **facility expansions**. All of the cited facilities, but for one that had operator difficulties, have operating contracts for 20 to 25 years **once operation of the plant began**. This length of time was required to account for the large investment needed to construct WTE facilities.

The following list of additional plants, the majority of which are operated by Covanta, further substantiates the common industry practice of 20 years or longer operating contracts:

- Hillsborough County, FL. Covanta announced the execution of contracts with Hillsborough County to construct, operate and maintain an estimated \$106 million expansion to the Hillsborough County Solid Waste Energy Recovery Facility. Covanta's subsidiary constructed the Facility and has been operating it since 1987. Construction of the expansion should begin in mid to late 2006 once necessary Federal, State and local permits are obtained by the County, with completion expected within 28 months.

Mr. Edwin S.W. Young, City Auditor

December 1, 2015

Page 7

Covanta's **original 20-year contract** with the County to operate and maintain the Facility has also been amended to include the expansion and to **extend the contract for another 20 years** during which Covanta will continue to meet operating and environmental performance standards. The Facility's three boiler units annually process over 372,000 tons of residential and commercial solid waste generated in the County. Waste is converted first to steam and then to electricity which is sold to Tampa Electric Company. With the expansion, a fourth boiler unit will be added to increase annual processing capability by approximately 190,000 tons of solid waste per year.

- Hempstead, NY. Hempstead reached the end of its long term waste disposal agreement in 2007. In 2005, it issued an RFP for long term disposal services. Hempstead entered into a new **25-year contract** with Covanta.
- Bristol, CN. Bristol Resource Recovery Facility Operating Committee, a consortium of fourteen Connecticut municipalities, reached the end of their long term disposal contract with Covanta in 2014. In 2008, they began a process to replace the existing agreement, which culminated with their entering into a **20-year long term agreement** with Covanta, commencing July, 2014, which provides bundled services including recycling, bulky waste disposal, e-waste recycling, and the management of organics/composting with the continued operation of the facility.
- Southeastern Massachusetts (SEMASS). The SEMASS facility, owned and operated by Covanta, has **long term agreements for waste delivery**. These agreements have been renewed by various municipalities for terms ranging from **five years to twenty years in duration**.
- Poughkeepsie, NY. On July 25, 2014, the Dutchess County Resource Recovery Agency ("DCCRA") reported that Wheelabrator Technologies Inc. has officially begun operations of DCCRA's waste-to-energy facility located in Poughkeepsie, New York. The new operations contract, which followed a competitive procurement process earlier this year, began on July 1, **2014 and runs through June 30, 2027, with two six-year extension options**. Covanta was the former operator from **1989-2014**.
- Alexandria and Arlington, VA. The City Council of Alexandria and Arlington County Board recently agreed to extend the Covanta WTE lease agreement **through 2038** for the disposal of municipal trash.

Mr. Edwin S.W. Young, City Auditor  
December 1, 2015  
Page 8

- Miami-Dade County, FL. Covanta contracted to operate facility in 2010 for 13 years to 2023 for a project that started operations in 1982 for a total of about **41 years**.
- Lee County, FL. Lee County has a contract through 2024 for a **10 year extension** to a 20 year contract for a total of **30 years**. This facility did have an expansion.
- Long Beach, CA. Covanta acquired an interest in the project which started in 1988 for a **30 year** contract. The contract was extended by 6 years without an expansion to about **36 years**.
- Lancaster, PA. Landcaster opened in 1991 and has a contract through 2017 without an expansion for about **26 years**.
- Pasco County, FL. Pasco started operation in 1991 and Covanta has a contract through 2024 or about **33 years**. The contract extension without an expansion was for **8 years**.
- Harrisburg, Pa. Harrisburg was acquired by Covanta and the term is linked to Lancaster
- Burnaby, BC. Burnaby opened in 1988 and is contracted through 2025 for a term of about **37 years** without an expansion.
- Kent County, MI. Kent County started operation in 1990. Covanta indicates the facility operations are contracted through 2023 without an expansion or **33 years**.
- MacArthur, WV. MacArthur started operations in 1990 and changed operators several time. Covanta acquired operation of the facility and extended the operating contract by **15 years** to 2030. The total term of the operating contract is **40 years** without an expansion.

As exemplified by just about all of the above-referenced WTE facilities, the operating contracts are rarely short term and extend for periods between 20-40 years, even though most of the facilities have not made expansions. Due to the high capital cost and desire to spread the debt repayment over years of operation, the contracts are generally 20-years or longer in duration. There are typically multiple contracts that are intertwined - construction agreements, operating contracts, and power purchase agreements – which make contracts or extensions of short duration even less desirable.

For the H-POWER Contract, the magnitude of the facility operations (i.e., processes up to 900,000 tons of waste annually), the large investment in the third boiler



Mr. Edwin S.W. Young, City Auditor  
 December 1, 2015  
 Page 9

expansion (over \$300 million), and the long history of effective and profitable management (over 25 years) all contribute to continuing the Covanta/City relationship.

3. **H-POWER Revenues:** Since 1991, H-POWER has generated a total of over \$201 million in revenues. H-POWER has not only covered the costs of operating but has generated additional revenues of over \$201M. See spreadsheet documenting H-POWER's revenues and expenditures from fiscal years 2008 through 2015 attached hereto as Attachment "C."

4. **Sale and Repurchase of H-POWER Facility:** The City made over \$150 million in capital gain when it sold the Facility in 1991 after constructing it for approximately \$150 million and selling it for \$312.5 million. The City then made a very advantageous repurchase in 2008 for only \$43.9 million. The \$312.5 million purchase resulted in the City receiving \$80 million as a down payment and \$425.6 million in mortgage payments (\$232.5 million balance with interest at 8.04% for 18 years). The City did release what was remaining on the mortgage for the last two years of the 20-year mortgage.

The City also collected over \$57.6 million in lease payments from 1991 through 2008. The land at the site of the Facility was not sold as part of the 1991 sale. The City retained ownership of the land and thus entered into the Ground Lease Agreement with the new owner of the H-POWER Facility in 1991 for a basic lease term of 20 years, beginning on May 1, 1990 (H-POWER commercial operation start date) and ending on April 30, 2010. The basic lease value was \$3,222,669 per year, and the City received this value for 18 years (when the City repurchased the Facility in 2008, lease was released).

5. **H-POWER Contract Does Not Limit the City's Access to Records:** The Audit states that the H-POWER Contract limits the City's access to records because the Contractor has the right to deny such access. ENV contends that although the language of the H-POWER may be different than the General Terms and Conditions ("GTC"), the H-POWER Contract does not in fact limit the City's access to records.

Section 4.10 of Amendment 11 and section 3.8.1 of Amendment 12 to the H-POWER Contract enable ENV to access all documents relevant to the H-POWER Contract. The Audit focuses on the Contractor's ability to deny access "to the extent Records are protected from disclosure by Applicable Law" as more restrictive in comparison to the records access clause in the GTC. The Audit also states that the Contractor can limit access to records that do not verify the contractor's compliance with the terms of the agreement.

Mr. Edwin S.W. Young, City Auditor  
December 1, 2015  
Page 10

The fact that the Contractor can deny access *as provided by law* does not limit access to the records any more than provided in the GTC. Contrary to the Audit's conclusion, the GTC does not provide unfettered access to records. In particular, it does not allow illegal access to records. No contract, including ones containing the GTC, can enable illegal conduct. Therefore, unlimited access only allows access in accordance with the law. Thus, both the H-POWER Contract and the GTC enable access to records "in accordance with the law."

The H-POWER Contract does not limit access to records relevant to the agreement inasmuch as every document relating to the H-POWER Contract can be interpreted as relevant to verifying the Contractor's compliance with the Contract. In other words, this phrase does not give the Contractor the ability to limit access to any record relating to the H-POWER Contract. Therefore, while the language in the H-POWER Contract is more specific than what is contained in the GTC, it is not more restrictive or unreasonable and thus allows the City open access to H-POWER records.

**6. H-POWER Contract Does Not limit the City's Right to Audit the Contract:** The Audit cites to section 7.1.3 of Amendment 12 of the H-POWER Contract to support its conclusion that the Contract limits the City's right to audit Covanta's conduct. This section describes "actions by the City's Authorized Representative relative to application for payments" and provides that a deadline to make payment limits the City's right to audit the Contract. The H-POWER Contract is not the only City contract to provide for a payment schedule different from the GTC. That is why the GTC are always attached to more specific contract provisions. The fact that the payment schedule is different does not "limit" the City's right to audit. It just changes the circumstances by which the City could deny payment and request additional justification from the Contractor. This same section outlines in detail the multiple bases upon which the City may do just that, so the City's ability to challenge a payment request is protected. (The Audit implies that the ability to challenge a payment request is the same as being able to conduct an audit.) Therefore, the City retains the right to audit the records throughout the payment process.

**7. H-POWER Contract Does Not Curtail Records Retention:** The Audit states that the records retention section of the operating contract enables the Contractor to destroy records before the 20 year contract term expires. Amendment 11 or the Expansion Construction Amendment provides the terms for the construction of the Third Boiler unit. Section 4.10 of Amendment 11

Mr. Edwin S.W. Young, City Auditor  
 December 1, 2015  
 Page 11

provides the records retention requirement for only the Third Boiler unit construction:

The Contractor shall retain for such inspection purposes all Records and Cost Records for six (6) years after receipt of final payment pursuant to Section 7.3. This Section 4.10 shall survive the termination or expiration of this Expansion Construction Amendment for such six (6) years period referenced above.

Amendment 12 or the Extension Agreement provides the terms for the continued operation of the H-POWER facility, including operation of the third boiler unit, for an additional 20 year period. Section 3.8.1 of Amendment 12 provides the records retention requirement for this extended operating contract:

The Contractor shall retain for such inspection purposes all Records and Cost Records for six (6) years. This Section shall survive the termination or expiration of this Extension Agreement for such six (6) year period referenced above.

Section 4.10 of Amendment 11 is not the records retention policy for the "operating contract." In actuality, Section 4.10 dictates the retention requirements for only the expansion construction, not the operating contract. While the Contractor may purportedly destroy the records relating to the expansion construction six years after the final payment for the completed construction (construction has not yet been completed as Covanta is still working on change orders), Covanta cannot destroy records relating to its ongoing operation of the facility until six years after termination of the operating contract. In other words, the H-POWER Contract does not allow Covanta to destroy records before the project is completed (whether "project" is defined to mean the expansion construction or the operating contract) and provides for a records retention period for the operation of the facility that is longer than that provided in the City's GTC and the State Procurement Code.

8. **General Obligation Bonds:** The Audit states that the H-POWER Contract contains an "unusual requirement for the city to issue general obligation ["GO"] bonds to ensure Covanta and its subcontractors are paid." Nothing in the H-POWER Contract requires the issuance of GO Bonds. Amendment 11 contains a condition precedent to a notice to proceed that the City have funding from GO bond proceeds or other appropriated moneys for payment of costs to be incurred for the expansion construction during the fiscal year. It gives the City flexibility as to funding sources. This condition precedent funding option protected the City from starting work without adequate funding for the then current fiscal year.

Mr. Edwin S.W. Young, City Auditor  
December 1, 2015  
Page 12

Section 13.4 of Amendment 11, entitled "Fiscal Authorization Limitation and Termination for Fiscal Non-Funding," further refutes the Audit's statement that the H-POWER Contract did not protect the City by making contracts subject to the availability of funds:

Except as specifically provided for under Hawaii law, the City, acting by and through its Contracting Officer, cannot, by law, expend or contract for the expenditure in any Fiscal Year of more than the amount authorized, appropriated, budgeted and made available for funding the Expansion.

Section 13.4 goes on to provide for termination of the Expansion Agreement for non-appropriation.<sup>5</sup>

Moreover, if the Audit is stating that the City is prohibited from issuing GO bonds to finance the Facility, such a statement is not accurate. Hawaii Revised Statutes section 46-19.1 specifically enables the City to issue GO bonds to finance facilities for solid waste processing and disposal and electrical generation:

**§46-19.1 Facilities for solid waste processing and disposal and electric generation; financing; sale.** (a) In addition to any other powers provided by law, any county may issue general obligation bonds to finance a facility for the processing and disposal of solid waste, or generation of electric energy, or both, pursuant to section [47-4], and provide for interest on the bonds which will accrue during the construction period. Any such facility shall be and constitute an undertaking as defined in section 49-1, and all revenues derived from the services and commodities furnished by the undertaking, including the disposal of solid waste and the sale of steam and electric energy and recovered materials, shall constitute revenues of the undertaking.

. . . .

(c) A county may lease any facility sold as authorized by this section or enter into an operating agreement or other arrangement with the purchaser or a lessee of the purchaser of the facility upon

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<sup>5</sup> While it is not a requirement for the H-POWER Contract, the City has employed the use of GO financing to lower the costs of the expansion of its waste disposal system capacity. Moreover, the City routinely employs the use of GO bonds to finance capital projects because GO debt has the lowest cost of capital (i.e., lowest interest rates). To put this in context, the City had \$2.6 billion in GO bond debt at the end of FY 2014.

Mr. Edwin S.W. Young, City Auditor  
December 1, 2015  
Page 13

such terms and conditions as the governing body shall approve by resolution. So long as a facility sold as authorized by this section is available to the county, notwithstanding that availability is conditioned on payment of reasonable fees for the services and commodities furnished thereby, the facility shall be deemed used for a public purpose and payment of the costs of construction shall constitute a purpose for which bonds may be issued as authorized by subsection (a).

Accordingly, there is no requirement in the Contract to issue GO Bonds. Despite the absence of this as a requirement, the ability to issue GO bonds to finance the Facility is still enabled by the Contract language and is specifically authorized by law.

**Specific Responses** (in the same order as Recommendations, on pages 61 – 62):

1. *Maximize the use of fixed price contracts. If ENV needs to use cost-reimbursement type contracts (including cost-plus service fee, and time and materials type contracts), ENV must assign the resources needed to properly administer the contract, scrutinize the contract scope, and minimize costs.*

ENV agrees that it should maximize the use of fixed price contracts and contends that it has done so with the H-POWER Contract. However, the H-POWER Contract is not solely a fixed price contract because the complex nature of this WTE contract warrants a hybrid approach - a primarily task order/fixed price contract with time and materials contract elements. Amendments 11 and 12 maintained this format. The Contract also provides for limited reimbursement of costs.

The work associated with the H-POWER projects is unique and advances differently as each component of the project progresses. Defining the scope of all H-POWER projects to best fit the needs for the City is not possible based upon the overall complexity of the operations. Certain questions arise that cannot be anticipated but must be addressed quickly. The time and materials methods enable the City to address all of these contingencies because the City may employ the services needed when required and adjust the work products, thereby minimizing work that becomes obsolete or outdated by the time it is provided. Essentially, the hybrid contract allows the City the flexibility to effectively address the many complexities in operating this large scale and long-running WTE facility.

Mr. Edwin S.W. Young, City Auditor  
December 1, 2015  
Page 14

2. *Not allow the contractor or consultant to write one-sided contracts that favor the contractor and increase the city risks for losses or increased costs. ENV should pay particularly close attention to contracts that are vague, do not cap or limit city liabilities, and do not explicitly provide an explicit expiration date.*<sup>6</sup>

ENV contends that it followed these recommendations in negotiating the expansion and extension amendments with Covanta. Covanta is the entity that is responsible for the complex daily operations of the H-POWER facility. It has the expertise in the field of WTE operations and is the primary WTE facility operator in the country. In fact, WTE operators have essentially been reduced to two companies – Covanta and Wheelabrator. It would be unreasonable and irresponsible for the City not to seek input from Covanta regarding H-POWER improvements, refurbishments, and overall operations because Covanta, not the City, has the subject-matter expertise. However, Covanta's involvement does not mean that it imposed its will on the City, resulting in a one-sided contract that favors Covanta.

The City hired engineering and legal support, with specific experience representing the public sector in waste to energy contracting, to assist the City in its negotiations with Covanta. The negotiations for the expansion and extension, which went on for over one year, required give and take to arrive at an agreement that both parties were willing to sign. The agreement had to have protected the interests of the City but still have enticed Covanta to do the job, thus reflecting a balancing of the risks and rewards between the parties.

The City and Covanta negotiated basic terms which were summarized in a term sheet. The City, with the assistance of its legal and engineering consultants, then drafted the expansion and extension amendments, incorporating many of the terms and concepts of the original operating agreement. Most of these terms were significantly updated to include lessons learned in other jurisdictions, and additional requirements were added that the operator had to comply with. The City, not Covanta, wrote the amendments. This minimized the opportunity for Covanta to insert changes into the document.

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<sup>6</sup> The Audit states that Amendment 12 did not provide for a specific expiration date. ENV disputes this statement. Amendment 12 provides that the extended term of the H-POWER Contract is 20 years after the Acceptance Date, which is defined in the Contract as contingent upon completion of the expansion construction. This contingency is reasonable because the 20-year extension involved operating the new boiler, so it would not make sense to begin the new operating requirements without the Third Boiler. The date could not be specifically identified in Amendment 12 because the construction completion date could not be predetermined (i.e., if there were any delays, the construction schedule could be altered). This is not an uncommon practice for WTE expansion contracts that involve construction and operation.

Mr. Edwin S.W. Young, City Auditor  
 December 1, 2015  
 Page 15

Most of the contract addresses obligations that Covanta must fulfill. For instance, Section 3, Waste Processing and Disposal Services, addresses activities that Covanta must complete. Sections titled "City Controls Waste Stream and Fees" (Section 3.1.3), "HHV Adjustment" (Section 3.1.5), "Operation and Maintenance of the Project" (Section 3.2), "Housekeeping, Maintenance of Buildings and Grounds and Customer Service" (Section 3.3) are examples of Covanta responsibilities under the contract. Section 3 is 68 pages long whereas Section 4, Obligations of the City, is only two pages long. The terms go to great lengths to protect the City's interests and were developed with the specialized support from the City's consultants.

All amendments, change orders, and task orders are written by the City and reviewed by COR, BFS, and the City's consultants (i.e. HDR, Mele Associates) and, in certain cases, outside legal counsel (Williams Mullen, Carlsmith Ball) for compliance with the terms and conditions of the H-POWER Contract and all applicable laws, and for fair and reasonable pricing and contract terms. All of these participants provided and continue to provide input regarding contract provisions and conditions intended to further the best interest of the City.

3. *Document justifications for approving long term, sole source, cost-plus, and time and materials contract, operating contracts and similar contracts.*

Agree. ENV contends that it does document its contracting practices but will endeavor to highlight such documentation in light of this recommendation.

4. *Require the city's standard 'General Terms and Conditions' to be inserted in all ENV contracts and contract modifications.*

Agree. The General Terms and Conditions were made part of the H-POWER Contract via Schedule 17 in Amendment 11 in 2009. Further, because these terms and conditions were never repealed, they remain applicable as part of the H-POWER Contract throughout the majority of the Audit's period of evaluation and are still currently in effect.

5. *Collaborate with BFS to develop formal guidance on contract negotiations, required terms and conditions, and prohibited items.*

Agree. ENV works with BFS in all contract negotiations and will work with BFS to memorialize this practice.

Mr. Edwin S.W. Young, City Auditor

December 1, 2015

Page 16

6. *Develop formal guidance on good contract administration practices and require that proper resources and staff (including accounting, auditing, and administrative personnel with the expertise and skill sets needed) are assigned to administer cost-plus and time and materials contracts.*

Agree. ENV will memorialize its good contract administration practices and will ensure that continues to assign the proper resources and staff to administer cost-plus and time and materials contracts.

7. *Assign adequate resources and knowledgeable staff (including contract accounting, auditing, and administrative staff) with the expertise needed to administer the complex and costly contracts; and provide the oversight needed to ensure the contractor costs are minimized when cost-plus and time and materials contracts are used and when public-private partnership contracts exist.*

Agree. ENV asserts that it has adequate resources and knowledgeable staff administering the H-POWER Contract and that it will continue this effort to ensure efficient contract administration.

8. *Expedite filling the H-POWER contract administration position (the Energy Recovery Administrator) as well as assign the resources and staff with the expertise, knowledge, and skill set needed to properly administer the H-POWER contracts and to ensure invoices and payments are accurate, valid, substantiated, and justified.*

Agreed. ENV is making it a priority to fill the Energy Recovery Administrator position and will continue to ensure that proper staff administers the H-POWER Contract.

9. *Improve contract administration and management practices by ensuring only valid, reasonable, and accurate payments are made to ENV contractors and consultants.*

Agree. ENV and BFS ensure that only valid contractual payments are made but there is always room for improvement, particularly for H-POWER's complex and costly contract.<sup>7</sup>

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<sup>7</sup> It appears that when the Audit could not find a fully executed invoice, that invoice would be deemed unsubstantiated. However, fully executed invoices are always available at BFS. It is not clear that the Audit reviewed the fully executed invoices at BFS. BFS asserts that it would not have made payments without approving fully substantiated invoices.



Mr. Edwin S.W. Young, City Auditor  
December 1, 2015  
Page 17

10. *Develop formal policies and procedures for administering cost-plus and time and materials, H-POWER, and other contracts.*

Agree. ENV will memorialize its policies and procedures for the administration of these various contracts.

11. *Re-compete contractor and consultant professional services contracts as required by the state procurement code and city policies.*

ENV contends that it has complied with the state procurement code and city policies regarding its contracting practices. Please see the above discussion regarding competitive bidding under item no. 1 in "General Responses."

12. *Provide written justifications for any contract modifications (including amendments, change orders, and task orders) as required by the state procurement code and city policies before extending any contract or expanding the scope of work in the contracts.*

ENV contends that it has complied with and continues to comply with all applicable procurement laws as well as city policies regarding contract modifications. However, in light of this recommendation, ENV will endeavor to emphasize such justifications.

13. *Maximize the use of competitive bids; solicit open competition whenever possible; and solicit competitive bids or proposals before renewing any options to extend long term contracts.*

ENV contends that it has complied with all applicable procurement requirements for competitive bidding. Please see above discussion regarding competitive bidding under item no. 1 in "General Responses."

14. *Follow State Procurement Office guidelines that recommend long term contracts should not exceed 5 years and should contain options to renew the contract for specific periods of time.*

ENV contends that for an expansion of the magnitude of the H-POWER Contract (valued at over \$300 million), an over 20 year extension of time for construction and successful operation is typical industry practice. The longer time interval is necessary to enable the City to keep both the bond payments and the tipping fee for waste disposal reasonable.

Mr. Edwin S.W. Young, City Auditor  
December 1, 2015  
Page 18

Operating contracts for WTE facilities would be particularly difficult if the term is limited to no more than five years. Under a short term contract, the operator would likely not be incentivized to maintain large scale, expensive equipment that have major repair cycles that are longer than five years. For example, a turbine generator (TG) that produces all the plant revenue costs tens of millions of dollars and normally requires a major overhaul cycle every seven years. Under a five year contract, the operator will not be incentivized to maintain the TG and the next operator may have major problems because of this. The boilers, the heart of the facility, have parts with long term repair cycles. Because a WTE facility is complex and expensive, making the operator responsible for the long term condition and having long term engineering oversight helps to manage this problem and minimize risks for the City. Accordingly, the majority of WTE facilities have operating contracts for longer operating periods, and H-POWER is no exception.

15. *Follow State Procurement Office guidelines for construction and professional services contracts and its contracting authority suspended if it continues to violate city contracting policies and state procurement code rules.*

ENV contends that it has complied with the State Procurement Office guidelines and understands that there will be consequences for violating contracting policies and rules.

Warm regards,



Roy K. Amemiya, Jr.  
Managing Director

Enclosures (3)

Cc: Lori M.K. Kahikina, Director  
Department of Environmental Services

**ATTACHMENT A**

NEIL ASBECROMBIE  
GOVERNOR



AARON S. FUJIOKA  
ADMINISTRATOR

**STATE OF HAWAII  
STATE PROCUREMENT OFFICE**

P.O. Box 119  
Honolulu, Hawaii 96810-0119  
Tel: (808) 587-4700 Fax: (808) 587-4703  
<http://hawaii.gov/spo>

SPO 13-026

September 14, 2012

The Honorable Romy M. Cachola  
Councilmember  
Honolulu City Council  
Honolulu Hawaii 96813-3065

Subject: Financing, Design, Engineering, Construction, Testing and Operation/Maintenance  
of an In-vessel Bioconversion Facility, City and County of Honolulu and  
Synagro-WWT, Inc.

Dear Councilmember Cachola:

In response to your letter dated May 14, 2012 regarding subject contract, the State Procurement Office (SPO) has completed its review.

The SPO requested from the City & County of Honolulu's Department of Budget & Fiscal Services (City), copies of the solicitation, including addenda's, SYNAGRO-WWT Inc's proposal; and other documents which substantiates the City's decision to not compete the building of a second digester.

Based on the documents provided by the City (approximately 2,000 pages) for IFB No. F-96960, the following findings and determinations are made.

**FINDINGS:**

IFB: F-96960 FOR IN-VESSEL BIOCONVERSION FACILITY PROJECT issued on October 29, 1999, contained the following APPENDICES:

- Appendix A: Pricing Proposal
- Appendix B: Construction Contract
- Appendix C: Operation and Maintenance

The Honorable Romy M. Cachola  
 September 14, 2012  
 Page 2

SPO 13-026

APPENDIX B:

Article I of the Construction Contract, Definitions, page I-2, "*Facility*" means the Sludge, Green Waste and Food Waste In-Vessel Bioconversion Facility, together with related and appurtenant structures and equipment, which is used to process these materials into Recovered Materials. Therefore, by definition, any equipment including an additional digester is considered as part of the Facility.

Article V of the Construction Contract, Section 5.1 DESIGN OF FACILITY, page V-1. "...The design shall take into consideration the requirement that the Facility may be operated beyond the initial term of the fifteen (15) year operating period, subject to appropriate maintenance and/or replacement of parts... (b.) perform all other architectural and engineering design work required for the Facility in its entirety..." This language indicates the design of the Facility must anticipate the likelihood of future expansion that must be factored into the initial design, for the life of the facility or beyond the initial 15 year operating period.

Section 5.5 DESIGN AND CAPACITY, page V-4. "In designing the Facility, the Contractor shall ensure that the Facility shall meet the Guaranteed Capacity requirement. In addition, the Contractor shall design the Facility so that adequate space is available to insure that the Facility will be capable of being expanded in the future to a capacity up to 30,000 dry TPY sludge."

Article VI, Section 6.1 CONSTRUCTION OF FACILITY, Page VI-1, "...The Contractor shall furnish and/or procure all services, labor, equipment, materials and appurtenances necessary to construct the Facility in its entirety, all in accordance with this contract... Organization, planning, management, direction, supervision, and responsibility for all construction operations necessary to complete the Facility in its entirety, and the furnishing, as necessary for the performance of construction work, of all construction facilities..." The work "entirety" used in this section and used in Section 5.1 above, indicate the construction of the Facility extends beyond the initial term of the fifteen (15) year operating period. Such that, any new construction within the Facility would be considered applicable to this section, in which the Contractor shall be responsible for.

The Honorable Romy M. Cachola  
September 14, 2012  
Page 3

SPO 13-026

#### APPENDIX C:

Section 3.6 CHANGES TO FACILITY, Page no. III-5. " *In the event that there is a change to the facility, the parties shall assume the following responsibilities: a. The Contractor shall have sole responsibilities for the design and construction of any changes to the Facility which involve or affect process equipment or the guarantees or obligations of the Contractor and which the City and Contractor mutually deem necessary or desirable for any reason during the term of the Contract...*" This section addressed the design and construction of any future expansion of the In-Vessel Bioconversion Facility would be conducted by the selected Contractor.

Other sections in the solicitation that support expansion of the facility are Section I of the Invitation For Bids (IFB), page 1-5, states, "... specified as "Excess Tonnage" may be made available during the 15-year operating contract. Based on the above, the IFB disclosed future expansions would be included as part of the scope of work.

It is also indicated in the Written Questions and Responses to IFB Issued: December 21, 1999. Question 24: *Can the plant be modified to produce a more valuable product after initial completion?*

Agency Response: *Yes, Provided that modifications are completed in conformance with the Contracts and any additional land requirements are the responsibility of the Contractor.*

#### **DETERMINATION:**

Based on the SPO review of documents provided, IFB No. F-96960 FOR IN-VESSEL BIOCONVERSION FACILITY PROJECT was conducted as a multi-step competitive sealed bidding pursuant to HRS section 103D-302 and HAR Section 3-122-22 in effect in 1999. Sections 5.1, 5.5, 6.1 and 3.6 of the IFB includes language that describes the scope of work as encompassing the entire design, construction, and operation/maintenance of the In-Vessel Bioconversion Facility including any future design and construction changes in which the awarded contractor is responsible. The scope of work ensures that the selected offeror who designed, constructed, operated and maintained the facility would be in the best position to insure compatibility within the single system and able to offer an expedient and cost effective solution for any construction and operation/maintenance issues that may arise.

The documents provided to the SPO shows modifications to the Facility after the initial completion of the facility is allowed provided it is done within the terms of the contract and is the responsibility of the selected Contractor. (APPENDIX B, Article V, Section 5.5) Therefore, from the start of the solicitation, it was made known to all offerors that the Contractor selected would be responsible for future modifications of the Facility.

The Honorable Romy M. Cachola  
 September 14, 2012  
 Page 4

SPO 13-026

The following will address questions contained in your May 14, 2012 letter:

1. *Was the City Administration permitted under the Procurement Code to amend the Operating Contract to provide for Synagro to do the Planning, Engineering and Permitting work for the second digester and related facilities at the Sand Island WWTP, without following the Procurement Code provisions on the procurement of professional services?*

As stated in the findings (APPENDIX B) the project's scope of work encompasses the entire design, construction, and operation/maintenance of the In-Vessel Bioconversion Facility including any future design and construction changes in which the awarded contractor is responsible. For this procurement, the procuring agency was not restricted to only utilize the professional service source selection method. For example, HRS section 103D-303 and HAR section 3-122 Subchapter 6, Competitive Sealed Proposals, effective 1997, allows for design build construction contracts conducted as a Request for Proposal (RFP). Another appropriate and allowable source selection method for construction is HRS section 103D-302 and HAR section 3-122 subchapter 5, Competitive Sealed Bidding, effective 1997 in which the City and County of Honolulu conducted a Multi-step sealed bidding to award this project. Pursuant to HAR section 3-122-22 (a), effective 1997, Multi-step process is designed to obtain the benefits of competitive sealed bidding by award of a contract to the lowest responsive, responsible bidder, and at the same time obtaining the benefits of the competitive sealed proposals procedure through the solicitation of un-priced technical offers and the conduct of discussions to evaluate and determine the acceptability of technical offers.

2. *Would it violate the Procurement Code if the City Administration were to allow Synagro to construct a second digester and related facilities at the Sand Island WWTP without going through the normal procurement process, consistent with the 10<sup>th</sup> WHEREAS Clause of Amendment No. 2 and Mayor's Message No. 10 (2012)?*

The second question asked is similar to the first question; therefore, the same response is given.

In response to the Mayor's January 26, 2012 written response #10. "A second Synagro digester would not have to go through the procurement process and, as the known and existing system, approval and permitting would be faster, making it arguably the most expediently emergency solution if the single digester fails", the SPO offers no comment on the information contained in the Mayor's Message No. 10 (2012), as we are not privy to the context or circumstances for his comments.

The Honorable Romy M. Cachola  
September 14, 2012  
Page 5

SPO 13-026

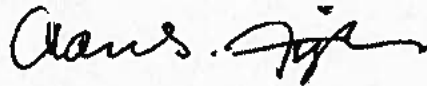
The SPO does not view amending the contract allowing Synagro to design and construct the second digester as a means to expedite the procurement process. The solicitation encompassed the thought process of having the same vendor design and construct both digesters such that the same company would be in the best position to insure a seamless integration and compatibility within the same single system, most effective in managing risks, and having cost effective solutions for construction and operation issues, as well as expediting the completion of the second digester.

3. *Is it proper for a party preparing a scope of work for a City construction project to be eligible to bid on or submit a proposal for the same construction project?*

Pursuant to HRS chapter 103D-405 and HAR section 3-122-13(e) state, *A contractor paid for services to develop or prepare specifications or work statements shall be precluded from submitting an offer or receiving a contract for that particular solicitation.* No documents were provided to the SPO to indicate that a third party had prepared the scope of services in the solicitation.

If your staff has any questions they may contact Ruth Yamaguchi at 586-0554 or you may call me at 587-4700.

Sincerely,



Aaron S. Fujioka



**ATTACHMENT B**



## H-POWER Facility Cost Comparison

### Summary

The capital cost for the Expansion Facility and projected tipping fee for the overall H-POWER Project were compared with other recent proposals and projects. The industry activity has been limited with the last new facility built in the mid-1990's and only one facility expansion completed and two other facilities in construction in the last few years. However, a number of projects are in various stages of development and information was used from these projects to compare to the \$302,760,000 firm fixed price proposal received for the H-POWER Project. This capital cost is \$336,400 per ton per day of processing capacity. The H-POWER expansion capital cost was adjusted to the midpoint of construction and was projected to cost \$349,263 per ton per day on this basis. The costs for other projects that were relatively similar in size and scope ranged from about \$275,000 per ton per day to about \$400,000 per ton per day of processing capacity after the capital costs were adjusted to the same time frame and for regional factors.

The projected tipping fee for the H-POWER Project was compared to available waste-to-energy facilities. The values ranged from about \$23 to \$88 per ton of waste processed. The tipping fee quoted for various facilities may not cover all the costs associated with the facility or may include allowances for other services such as recycling programs and thus can be difficult to compare. This range however compares favorably with the projected tipping fee of about \$40 for the H-POWER Project with the proposed Expansion.

This memo provides additional information regarding these cost comparisons. The capital cost comparison is presented first followed by the tipping comparison. A study of pricing history for selected commodities and construction labor costs is provided as an appendix.

### Capital Cost Comparison

A comparison was completed between the capital cost of the H-POWER Facility mass burn expansion and other recent projects and proposals for similar mass burn facilities in North America. A number of projects have been built or proposed and are in various stages of development. Costs were gathered from all the known projects and proposals that were available from the past several years.

Only three facility expansions were noted and no greenfield projects have been completed in North America since the mid-1990's. One of the expansions is for a 200 tpd unit size and is significantly smaller than the H-POWER Facility Expansion while the other two expansion projects were between 600 and 700 tpd. It was felt that the costs for actual construction are the most reliable data since these projects could account for any overages or adjustments to the quoted proposal. Responses to proposals with active quotes for other projects in development were considered the next most reliable indication of project costs since extensive effort is put into these estimates to make them as accurate and complete as possible. Vendors operate on a fine line of making sure all costs and a reasonable margin is included without pricing themselves out of the market. The final comparison completed was to cost estimates developed for the H-POWER expansion. These estimates are based upon the available data at that time from equipment quotes, proposals, and cost estimating guides such as Means.

There are some differences between all the available projects and proposals that influence cost comparisons. These differences include items such as site location, site conditions, permitting efforts, total project scope, contract terms, unit size, and number of units. To the extent possible the projects were placed on a comparable basis to the scope of the H-POWER Expansion and some differences were noted. The comparison was completed on a capital cost per ton of daily capacity to help bring the facilities to a common basis. Table 1 below summarizes the available data. Facility names, locations, and other identifying factors other than for H-POWER were removed for all projects and proposals because some are confidential.

These “raw” values were then corrected to bring them to a common timetable near the anticipated mid-term of the H-POWER construction schedule. This date was assumed to be October, 2010. An escalation of three percent (3%) for inflation was used to bring the values to the common date. The inflation rate and other adjustment factors used have significant judgment associated with them. Currently the inflation rate is lower than three percent. This trend may continue into the future, however if the economy becomes overheated the value could climb substantially. A one percent (1%) change in the inflation rate results in about a two percent (2%) change in the capital costs. Such a change would be well within the accuracy of this analysis.

As an approximation, it was assumed that half of the total cost was associated with materials and half was labor related. It was assumed that to make the costs comparable the materials needed to be shipped from the mainland to Hawaii and the cost associated with shipping would need to be added to normalize the costs to the H-POWER expansion cost. This factor is already included in the cost for the H-POWER Expansion and thus the H-POWER value was not escalated. 12.5% of the material cost was used as an estimate of the shipping cost.

**Table 1**  
**Raw Construction and Proposal Cost Comparison**

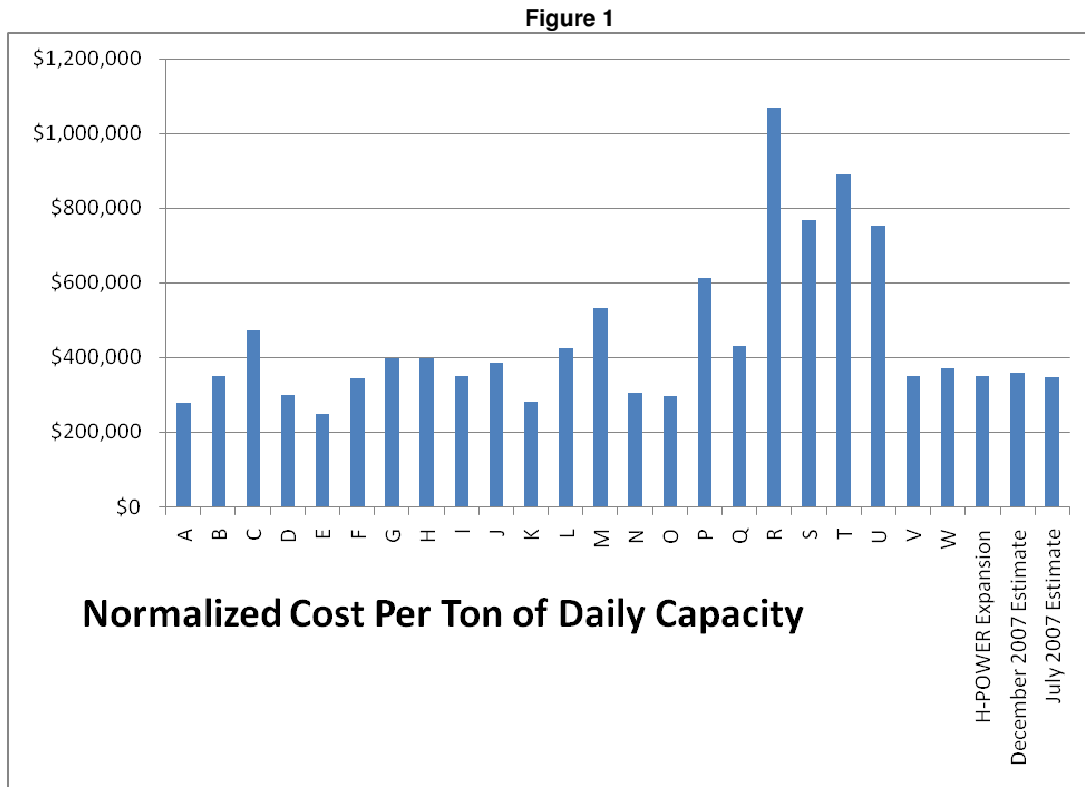
Facility/Proposal	Number of Units	Unit Size	Cost Per Ton of Daily Throughput Capacity	Notes
A	1	660	\$194,000	Does not include a pit, cranes, tipping floor, ash handling systems, stack, and certain other components; special conditions may have influenced costs
B	1	600	\$266,000	Does not include a pit, cranes, tipping floor and certain other components
C	1	200	\$400,000	Does not include a pit, tipping floor and certain other components but does include an auxiliary boiler and steam line modifications
D	2	750	\$227,686	
E	2	750	\$189,795	Quote modified to account for special contract terms
F	2	600	\$250,493	
G	1	640	\$289,127	
H	2	600	\$288,333	
I	2	450	\$248,727	
J	1	600	\$273,600	
K	2	750	\$198,982	
L	2	450	\$301,111	
M	1	600	\$376,667	
N	2	750	\$217,337	
O	2	750	\$210,667	
P	2	238	\$496,335	Extra architectural treatment, APC requirements, and expansion provisions
Q	3	447	\$349,754	Extra architectural treatment, APC requirements, and expansion provisions
R	1	475	\$869,029	Extra architectural treatment, APC requirements, and expansion provisions
S	1	475	\$623,634	Extra architectural treatment, APC requirements, and expansion provisions
T	1	475	\$723,085	Extra architectural treatment, APC

				requirements, front-end MRF, and expansion provisions
U	1	475	\$611,579	Extra architectural treatment, APC requirements, and expansion provisions
V	2	533	\$296,620	
W	2	556	\$314,681	
H-POWER Expansion	1	900	\$336,400	
December 2007 Estimate	1	750	\$328,355	
July 2008 Estimate	1	900	\$323,434	

The various plants and proposals were also for different parts of North America. Some of these areas, such as Florida have very low labor costs, lower than Honolulu's labor rate, while other areas such as Los Angeles have much higher labor rates than expected for Honolulu. Factors for the various locations throughout North America associated with the project or proposal were obtained from Means Estimating Guide for 2010. This value is an estimate because labor rates at a particular location will change over time. Normally these relative changes are small and certain regions tend to have higher or lower labor rates than other regions. It is not possible to anticipate what the values will be in the future and the current value was used as an approximation. The difference between the labor rate at the facility location and Honolulu's rate was used to adjust the capital costs to a common basis.

Unit size and number of units will also impact the cost structure. A spot check for several of the proposals was completed and it was determined that the adjustment was generally within about five percent of the estimate where it could be applied. Correction was not possible for all cases and thus it was not completed for analysis purposes.

Figure 1 and Table 2 below summarizes the adjusted or normalized data. As above, facility names, locations, and other identifying factors other than for H-POWER were removed for all projects and proposals because some are confidential however projects that have been developed and quotes which continue to be in development are indicated in the notes. The average for all proposals is about \$475,000 per ton per day. Proposals O through T were projects that constitute substantially increased scope. Removing these proposals from consideration, the average capital cost per ton per daily capacity decreases to \$355,000. Projects and proposals that are still active average about \$370,000 per ton of daily capacity with Proposal O included and \$336,000 without Project O.



The first three projects have been completed are in advanced stages of construction. The scope of work for these projects do not include any capital for construction of the refuse pit and tipping floor which is significant.

**Table 2  
Adjusted Construction and Proposal Cost Comparison**

Facility/Proposal	Number of Units	Unit Size	Adjusted Cost Per Ton of Daily Throughput Capacity	Notes
A	1	660	\$277,116	Developed. Does not include a pit, cranes, tipping floor, ash handling systems, stack, and certain other components; special conditions may have influenced costs
B	1	600	\$350,416	In development. Does not include a pit, cranes, tipping floor and certain other components
C	1	200	\$472,683	In development. Does not include a pit, tipping floor and certain other components but does include an auxiliary boiler and steam line modifications
D	2	750	\$297,117	
E	2	750	\$247,672	In development. Quote modified to account for special contract terms
F	2	600	\$344,515	
G	1	640	\$397,651	
H	2	600	\$396,559	
I	2	450	\$349,974	In development.
J	1	600	\$384,971	
K	2	750	\$279,979	
L	2	450	\$423,681	
M	1	600	\$529,993	
N	2	750	\$305,806	
O	2	750	\$296,421	
P	2	238	\$611,170	In development. Extra architectural treatment, APC requirements, and expansion provisions
Q	3	447	\$430,675	Extra architectural treatment, APC requirements, and expansion provisions
R	1	475	\$1,070,093	Extra architectural treatment, APC requirements, and expansion provisions
S	1	475	\$767,922	Extra architectural treatment, APC requirements, and expansion provisions

T	1	475	\$890,383	Extra architectural treatment, APC requirements, front-end MRF, and expansion provisions
U	1	475	\$753,078	Extra architectural treatment, APC requirements, and expansion provisions
V	2	533	\$349,828	Active Bid
W	2	556	\$371,129	Active Bid
H-POWER Expansion			\$349,263	
	1	900		
December 2007 Estimate	1	750	\$357,479	
July 2007 Estimate	1	900	\$346,017	

Each of the projects have a few other differences as well, however the adjusted capital cost compares fairly well with adjusted cost for the H-POWER expansion. Note that Project C has certain additional items of scope that were not practical to back out of the overall cost.

When looking at the proposals, a range of costs are also evident. Facilities E, I, O, V, and W are all still active proposals and may advance to contraction phases. These proposals vary from the H-POWER expansion in various ways including they are all new sites, may include more than one process train, and for Facility O have extensive architectural features, air pollution control equipment, and other features that differ from the H-POWER expansion scope making this proposal difficult to use for comparison purposes. The other active proposals however bracket the H-POWER expansion cost.

For the inactive proposals, generally the costs tend to be somewhat higher as might be expected. Projects P through T again differ significantly from the H-POWER expansion scope. The other proposals still are generally in the range of capital cost for the H-POWER expansion.

HDR also completed two cost estimates for the H-POWER Expansion. These were completed in December 2007 and in July 2008. Both estimates were completed based upon equipment quotes, past estimates and proposals available at the time, and Means construction cost estimating. The estimates are within five percent of the project cost.

### Tipping Fee Comparison

Tipping fee information was obtained from a number of other waste-to-energy facilities. This information was obtained from a number of projects that HDR has been involved with and from other facilities for which the data was readily available. A comprehensive analysis of the tipping fee components was not completed. Various approaches are sometimes taken by communities to pay for the facility and normally these costs are addressed in the tipping fee. In some cases however different tipping fees are charged for certain customer segments. For instance, a host fee may be paid to the community where the facility is actually located. This host fee in some cases may be a reduction in the tipping fee for that community or it may be paid by other means to the community. Tipping fees for out-of-county waste may be higher or lower than the base fee charged. The tipping fee for certain special wastes may also be higher or lower than the base fee. These special rates attempt to account for the destruction service rendered as well as any costs or savings resulting from handling the special waste. An example of such a material that would command a higher tipping fee is waste obtained from an international airport that must be destroyed to help prevent the transfer of foreign pests or plants to the area. Often the tipping fee charged will contain one or more fees to help finance other programs such as recycling or other services provided. Practices for different counties are likely to be unique and the inclusion or adjustment for these types of costs makes comparison of tipping fees difficult.

The tipping fee presented below is the base fee for the county and does not account for any adjustments for other programs or special rates. The fees for the facilities reviewed range from \$23 per ton of waste disposed to \$88 per ton as can be seen in Table 3 below. In some cases notes are added that may help explain how



the tipping has been sent or other key influences. The rates presented compare with the value of approximately \$40 for the projected tipping fee for the H-POWER Project.

**Table 3**  
**Tipping Fee Comparison**

<b>Facility</b>	<b>Tipping Fee</b>	<b>Comments</b>
Dutchess County	\$83	Some discounts offered
Islip	\$88	Some discounts offered
Warren County	\$38	Landfill competition
Bristol Connecticut	\$65.50	
Bridgeport, Connecticut	\$81	\$76 after minimum disposal quantity
Mid-Connecticut	\$69	
Southeastern Connecticut	\$60	
Wallingford	\$59	
Indianapolis	~\$23	Favorable steam sales agreement
LaCrosse	~\$62	
Lee County, FL	\$62.84/\$54/79	Unincorporated/Incorporated due to recycling charges
Spokane, WA	\$98	
Detroit	\$49.96	Escalated from 2007
Huntsville, AL	\$39.90	Landfill competition
Pinellas County, FL	\$37.50	Landfill competition favorable power agreement
Onondaga County, NY	\$80	Transfer Station Tip Fee
Harford	~\$62.76	De-escalated based on new facility

**APPENDIX**  
**COMMODITY PRICE ANALYSIS**

**ATTACHMENT C**

H-Power - Fund 255  
Revenues and Expenditures  
Fiscal Years 2008 through 2015

RSRC	Revenues	2015	2014	2013	2012	2011	2010	2009	2008	TOTAL
7006	Duplicate Copy-Any Record	171.50								171.50
7427	Investments	(2,585.63)	(7,437.25)	7,595.68	1,435.01	3,843.22	5,972.00	(300,822.00)	302,186.00	10,187.03
7428	Investments-Pool	39,709.55	72,256.52	74,771.64	58,753.67	78,485.67	40,761.83	818,222.54	959,420.21	2,142,381.63
7435	Other Sources							1,266,599.91	3,932,613.54	5,199,213.45
7899	Recoveries - Other		1,152,051.00							1,152,051.00
8001	Sund Refunds-Prior Expend	735,002.00	(16,209.47)		16,209.47	25,288.00		475.00		760,765.00
8011	Accum Vacation Deposits								3,788.05	3,788.05
8232	Tip Fees-Private Direct	29,869,428.35	30,976,445.80	26,125,709.74	25,310,766.72	23,322,638.12	25,653,133.61	26,109,762.85	19,992,504.94	207,360,390.13
8233	Electrical Energy Revenue	66,996,597.97	65,572,719.77	64,562,495.03	65,864,845.35	49,550,123.93	43,711,315.42	52,879,027.33	46,627,308.30	455,764,433.10
8236	Tip Fees-Other	14,658,760.07	14,423,225.32	13,863,497.37	12,384,213.41	12,513,718.33	12,753,389.09	14,096,352.07	17,190,546.98	111,903,702.64
8238	Principal								17,405,643.17	17,405,643.17
8329	S/H Disposl Chng H-Power	4,889.99	10,141.84	20,039.62	7,172.86	12,139.68	9,508.99	9,639.00	10,720.97	84,252.95
8330	Easement-AEL Barbers Pt	36,536.93	172,689.06					33,092.33		273,968.89
8481	Transfer Fr General Fd									
	Total Revenues	112,338,510.73	112,355,882.59	104,674,109.08	103,643,396.49	85,506,236.95	82,174,080.94	94,912,349.03	106,456,382.73	802,060,948.54

OBJ

1101 Total	Regular Pay	123,473.46	115,080.00	152,653.42	148,314.00	146,578.08	156,120.00	183,221.08	153,543.99	1,178,984.03
1102 Total	Non-Holiday Overtime Pay	460.10	365.47	556.69	0	0	0	73.32		1,455.58
1106 Total	Accumulated Vacation Pay (Lum	0	0	30,540.50	0	0	0	17,524.61	0	48,065.11
1109 Total	Temporary Assignment Pay	6,025.08	1,786.04	666.41	2,416.00	2,271.38	603.12	0	0	13,768.03
1401 Total	Retirement System Contribution	40,000.00	25,806.39	32,000.00	24,094.65	24,783.87	28,250.07	16,753.05	57,745.34	247,433.37
1501 Total	Service, Merit Or Employee Sugd	0	100.00	0	0	0	0	0	0	100.00
1601 Total	Fica Tax	8,172.14	18,000.00	16,000.00	6,831.29	8,709.91	10,431.16	3,121.00	29,000.00	100,265.50
1701 Total	Health Fund	114,000.00	56,000.00	29,000.00	29,625.77	17,000.00	66,000.00	5,790.40	0	317,416.17
2051 Total	Office Supplies	438.36	680.47	1,581.50	1,801.84	1,195.09	3,856.28	8,324.74	8,724.15	26,602.43
2201 Total	Cleaning and Toilet Supplies	224.33	277.82	335.62	340.37	173.09	79.31	122.94	80.99	1,634.47
2254 Total	Other Fuel/And Lubricants	0	0	0	0	0	21.00	0	0	21.00
2301 Total	Medical, Dental, Hospital & Institutio	0	0	0	0	0	0	60.99	0	60.99
2331 Total	Computer Supplies	0	0	0	0	0	0	4,539.12	0	4,539.12
2353 Total	Meals-Lunch	0	0	0	0	0	0	0	123.46	123.46
2356 Total	Other Food	0	0	0	3,281.84	122.16	63.77	0	0	3,467.77
2401 Total	Educational, Recreational & Scientifi	0	74.31	64.00	920.46	1,071.00	740.94	254.55	0	2,130.49
2508 Total	Safety Supplies	474.81	0	338.92	0	2,229.40	1,943.81	3,817.01	166.20	9,964.92
2509 Total	Welding Supplies	0	0	0	0	0	154.31	0	0	154.31
2510 Total	Fittings, Couplings, Gauges, Valves	0	0	0	0	0	16.64	0	0	16.64
2512 Total	Capscrews, Rivets, Washers, Cotlier	0	0	0	0	0	122.62	0	0	122.62
2517 Total	Supplies Not Classified	0	1,733.76	691.88	5,475.44	837.07	3,688.98	1,308.72	397.64	14,133.49
2525 Total	Individual Supplies On Inventory	0	0	0	0	0	0	0	708.99	708.99
2602 Total	Hardware	0	0	0	0	0	194.56	0	0	194.56
2603 Total	Lumber	0	0	0	0	0	0	196.61	0	196.61
2605 Total	Plumbing	0	0	0	0	0	6.06	1,173.24	0	1,179.30
2606 Total	Roofing	0	0	0	0	0	0	297.99	0	297.99
2607 Total	Other Building & Construction Materic	0	0	0	0	0	0	178.01	0	178.01
2751 Total	Parts & Accessories-Equipment	0	0	0	0	0	0	1,238.01	2,130.14	3,368.15
2752 Total	Parts & Accessories-Equipment (Alta	0	0	0	1,115.17	1,643.85	3,141.36	1,675.40	0	7,575.78

2755 Total	Parts & Accessories-Equipment (Oth	0																						237.27
2756 Total	Parts & Accessories-Equipment (	23.19																						6,008.86
2803 Total	Light Bulbs	0				1,657.29			0	2,182.20				664.87									1,062.55	0
2804 Total	Other Electrical Supplies & Materials	0				0			0	0				75.87									3.17	0
2902 Total	Tools, Implements & Utensils (Sr	0				0			0	0				0									34.18	0
3004 Total	Consultant Services	265,076.72				414,517.90			0	750,062.40				889,489.89									23.90	0
3009 Total	Other Contractual Services	0				28,255.03			0	55,176.13				13,438.32									579,751.80	0
3033 Total	Attorney Fees	10,967.34				0			0	0				372,459.57									12,500.00	0
3039 Total	Grounds Maintenance	0				0			0	40.46				25,021.96									411,358.02	0
3039 Total	Recycling Services	0				0			0	0				0									0	0
3049 Total	Other Services - Not Classified	61,995,583.91				76,063,659.73			0	54,085,833.31				52,265,572.64									37,577,364.38	0
3102 Total	Postage	27.98				28.11			0	26.40				601.37									47.18	0
3103 Total	Telephone	670.31				560.85			0	905.09				679.04									2,761.39	0
3211 Total	Other Communication Services	0				10,644.64			0	19,571.83				6,785.80									0	0
3212 Total	Travel Expense-Intrastate	8,444.43				0			0	184.20				8,887.95									0	0
3262 Total	Travel Expense-Out-of-State	0				0			0	8,887.95				0									50,703.90	0
3401 Total	Printing And Binding	0				0			0	0				1,239.39									28.13	0
3401 Total	Repairs & Maintenance-Equipment (	0				0			0	1,390.40				2,884.31									523.48	0
3403 Total	Repairs & Maintenance-Equipme	0				141.36			0	448.70				460.73									1,753.94	0
3405 Total	Repairs & Maintenance-Equipme	0				3,594.29			0	5,208.42				1,666.28									1,382.19	0
3507 Total	Other Repairs To Building & Oth	3,679.61				0			0	2,071.31				29.43									2,661.42	0
3630 Total	Rentals-Office Equipment	0				0			0	0				1,266,599.91									30,612,926.44	0
3640 Total	Rentals-Buildings	0				0			0	40.31				40.31									0	0
3655 Total	Rentals-Construction & Repair Equip	0				0			0	6,961.26				7,469.00									2,613.00	0
3751 Total	Fees For Memberships & Regist	10,306.61				10,529.00			0	49.00				1,726.00									0	0
3752 Total	Subscriptions	0				0			0	0				118.95									0	0
3781 Total	Interest-General Obligation Bond	17,345,512.27				17,676,764.52			0	22,572,150.45				10,610,344.28									1,198,470.00	0
3801 Total	Principal	9,945,000.00				5,485,000.00			0	5,240,000.00				5,555,000.00									23,730,000.00	0
3811 Total	3811 - Peard Charges (Default)	0				0			0	0				0									0	0
3821 Total	Auto Allowances-Other (Non-Tax	100.24				5.65			0	86.58				330.00									15.15	0
3822 Total	Parking Fees	0				0			0	21.50				0									20.00	0
3895 Total	Refuse Disposal Services	0				0			0	1,269,469.92				0									0	0
3986 Total	State Disposal Surcharge-H-Power	0				0			0	0				0									105,000.61	0
3990 Total	Other Fixed Charges	5,224,546.00				6,540,300.00			0	7,512,200.00				3,754,800.00									4,882,400.00	0
4142 Total	H-Power-Facilities	15,233,957.67				5,528,407.74			0	3,169,741.20				2,917,457.98									10,000,000.00	0
4401 Total	Construction & Repair Equipmen	2,514,805.36				0			0	0				0									0	0
Total Expenses		112,881,969.92				111,983,970.37			0	102,113,599.08				95,449,148.71									80,077,451.12	0
Net Income/(Loss)		(543,459.19)				371,912.22			0	2,560,510.00				32,221,651.23									14,834,897.91	0
<b>TOTAL NET INCOME/(LOSS) SINCE INCEPTION</b>						<b>\$ 201,026,612.11</b>				<b>14,828,292.50</b>				<b>10,833,684.25</b>									<b>83,301,736.70</b>	0

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# Appendix A

## Glossary and Definitions

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Air Pollution Control (APC) system	<p>The Air Pollution Control (APC) System consists of a carbon injection system, a scrubber, and high efficiency fabric filters located in bag houses. The scrubber and an activated carbon injection system removes acid gases and mercury. The current APC system has one bag house for each H-POWER boiler. The filters are fiberglass filter bags that collect particles suspended in the combustion exhaust gas. Air emission is monitored and recorded by equipment located in the exhaust (smoke) stacks.</p> <ul style="list-style-type: none"><li>• <b>Scrubber:</b> A scrubber is a device that uses a liquid to capture and remove air pollutants. Scrubbing liquid is sprayed into the exhaust gas stream and the droplets capture dust particles. The gas is passed through a series of filters that capture the air pollutant particles.</li><li>• <b>Baghouses:</b> Baghouses contain fiberglass filter bags with multiple sections to collect particles from the exhaust gas generated from burning municipal solid waste. The baghouses are designed to allow bag cleaning for one baghouse while the other is in continuous operation.</li><li>• <b>Electrostatic Precipitator:</b> The electrostatic precipitator consists of metal plates, which are electrically charged. Gas from the combustion of the municipal solid waste is passed through the metal plates and particles are attracted to the plates. A mechanical hammer causes the accumulated dust to fall from the metal plates to the bottom of the precipitator and collected in a hopper. The electrostatic precipitator was replaced by baghouse air filters.</li></ul>
Amendment	One type of formal contract modification. Must be in writing.
Baghouse	The building housing the fiberglass filter bags used to control air pollution in the H-POWER system.
C2HERPS	City and County of Honolulu Oracle based enterprise resource management and reporting system. The acronym is City and County of Honolulu Enterprise Resource Planning System.
Change orders	Change orders are written orders or alterations within the scope of the contract that direct the contractor to make changes authorized by the contract with or without the consent of the contractor. Contract changes within the scope of the contract may relate to specifications, delivery point, rate of delivery, period of performance, price, quantity, or other provisions of the contract.

Construction contract	Contract is used to build, alter, repair, improve, or demolish any public structure, building or other public property. Contract is used for routine operation, repair, or maintenance of existing structures, buildings, or real property.
Contract administrator	The person designated to manage the various facets of the contracts to ensure the contractor's total performance is in accordance with the contract and government obligations are fulfilled.
Contract modification	Any written alteration within the scope of the contract to specifications, delivery point, rate of delivery, period of performance, price, quantity, or other provisions in the contract executed between the government and the contractor. This includes contract amendments, change orders, and task orders.
Cost reimbursement + service fee	Labor and material costs are highly unknown. Government assumes risks for the project and pays contractor a fixed or variable service fee. All allowable costs must be reimbursed, regardless of delivery, up to the level specified in the contract. Contractor is required to make a good faith effort to meet the government's needs within the estimated cost in the schedule.
Cost-reimbursement contract	The contractor is required to deliver a "best effort" to provide the specified product or service. All allowable costs must be reimbursed, regardless of delivery, up to the level specified in the contract. Contract states estimated costs and dollar ceiling for the contract.
Cost-plus a percentage of costs contracts	Labor and material costs are highly unknown. Government assumes risks for the project and pays contractor a percentage of costs. The contractor is required to deliver a "best effort" to provide the specified product or service. All allowable costs must be reimbursed, regardless of delivery, up to the level specified in the contract.
Federal Acquisition Regulations (FAR)	FAR Part 16, Types of Contracts, details contract types, policies, and requirements for federal government contracts.
Fixed price contract	Contractor is required to deliver the completed product or service specified at the agreed price. There is a maximum limit on the amount of money the government must pay.
Hawai'i Administrative Rules	State of Hawai'i, Department of Accounting and General Services, Amendment and Compilation of Chapter 3-122 Hawai'i Administrative Rules, February 21, 2008. Hawai'i Administrative Rules are also found in Title 3, Department of Accounting and General Services; Subtitle 11, Procurement Policy Board; Chapter 122, Source Selection and Contract Formation and Chapter 125, Modifications and Terminations of Contracts.
Hawai'i Revised Statutes, Hawaii Public Procurement Code	State of Hawai'i Revised Statutes, Chapter 103D, Hawai'i Public Procurement Code. Procurement code prescribes requirements for procurement for professional services, sole source procurement, cost-reimbursement and cost-plus a percentage of cost contracts, and multi-term contracts. Code establishes government right to audit records, fiscal responsibility, contract clauses and their administration.



Indefinite delivery – indefinite quantity contracts	At the time of award, delivery and quantity requirements are not certain. Minimum quantity or price may be known at time of contract award.
Landfill	Honolulu’s only landfill for the disposal of municipal solid waste is named the Waimanalo Gulch Sanitary Landfill.
Municipal solid waste	Solid waste generated by residents and businesses in the city and collected for disposal. Solid waste is incinerated at the H-POWER waste to energy facility or hauled to the Waimanalo Gulch Sanitary Landfill for disposal.
Notice to proceed (NTP)	Document issued to the contractor designating the official commencement date of the performance under the contract.
Pass through payments	Subcontractor costs that are forwarded to the contractor for reimbursement. The contractor passes the subcontractor claims to the government for payments after adding direct and indirect costs, overhead, and/or profits as allowed under the contract provisions.
Professional Services	Contracts awarded to consultants.
Operating contract	Contract is used for routine operation, repair, or maintenance of existing structures, buildings, or real property. Also known as construction operating contract.
Out of scope work	Contracts specify a set scope of work. Any work not specified in the contracted scope of work is considered out of scope work.
Sole source contracts	Contract awarded a sole contractor because only one source is available from which to procure the service or is able to construct the facilities. The fact the service is unique is not justification for sole source. The fact a contractor has been performing the services all the time, or has the expertise, is not justification for sole source. Justification for sole source contract must establish the good, service, or construction has a unique feature, characteristic, or capability essential to the government to accomplish its work and is available from only one supplier or source.
Subcontractor	Any person or entity who enters into an agreement with the contractor to perform a portion of the work for the contractor.
Task orders	A contract for services that does not procure or specify a firm quantity of services other than a minimum or maximum quantity. Government must issue orders for the tasks to be performed by the contractor. Also known as indefinite-quantity and indefinite-delivery contracts.

Time and materials contracts

A cost reimbursement contract used when labor and material costs are highly unknown. Government assumes risks for the project and pays contractor all allowable costs, regardless of delivery. Government benefits if the actual cost is lower than the expected cost. Government loses if the work cannot be completed within the expected costs. Contractor is required to make a good faith effort to meet the government's needs within the estimated cost in the schedule.

Hourly labor rates can be defined at contract award, but labor hours required to complete the project cannot be defined. Per hour labor rate covers indirect costs and profit. Contract contains provisions for reimbursing contractor for direct material costs and indirect costs, and ceiling price.

Contracting officer must determine in writing that no other contract type is suitable. Labor rate must be negotiated and justified. Government must exercise appropriate surveillance to ensure efficient performance, and contractor claims are accurate, valid, and justified.

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# Appendix B

## List of H-POWER Construction, Improvement, Expansion, and Refurbishment Projects

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The City and County of Honolulu *Integrated Solid Waste Management Plan* was updated in October 2008 by R.W. Beck. Section 8.4 *H-POWER* discussed the existing facility, the schedule of key renewal and replacement projects for H-POWER, and the need to increase waste to energy capacity. The updated 2008 plan stated H-POWER had one mass burn boiler that used combustion engineering technology; two process lines to handle up to 100 tons of municipal solid waste per hour; and air pollution control equipment such as dry scrubbers and electrostatic precipitators. The plan discussed the results of the facility assessment, the review of the operating data for the previous six years, and the city acquisition of H-POWER.

***Planned projects:*** The 2008 plan identified several projects for the future. For example, the plan stated the city was working with a vendor to retrofit the air pollution control equipment (APC) to add Baghouse air filters. The updated plan discussed plans for construction, improvements, expansions, and refurbishment for the H-POWER facility. The plan identified the timing for H-POWER replacement items such as the steam turbine major overhaul (7 years), hot and cold air heater tubes (3-7 years), preventive maintenance, and other major projects. In Section 8.4.3.1 *WTE (Waste to Energy) Capacity*, the plan stated the city opted to increase H-POWER capacity by purchasing a mass burn combustion system that is capable of annually processing at least 300,000 tons of waste; discussed the three boiler facility; and expansion for a fourth boiler to provide for more waste-to-energy capacity through 2030 and beyond.

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# Appendix C

## H-POWER Facility Chronology of Significant Events

<i>DATE</i>	<i>PROJECT EVENT</i>
November 1975	Honolulu City Council adopted Resolution 271, directing the city Department of Public Works to pursue the recovery of energy and materials from solid wastes by selecting proposals from the private sector to construct and/or operate a resource recovery facility.
August 24, 1982	RFP issued for the financing, design, engineering, construction, shakedown, operation and maintenance of a solid waste processing and resource recovery facility.
July 3, 1985	Contract to design, construct and inspect a resource recovery facility (construction contract) is executed with Honolulu Resource Recovery Venture (HRRV).
July 3, 1985	Contract for waste processing and disposal services (operating contract) is executed with Honolulu Resource Recovery Venture (HRRV).
November 1989	City sells the Resource Recovery Facility to DFO Partners, Bank of America and Ford Motor Credit Company for \$312.5 million (\$80 million cash and city/seller mortgage note).
May 22, 1990	Commercial operations of the H-POWER ( <u>H</u> onolulu <u>P</u> rogram of <u>W</u> aste <u>E</u> nergy <u>R</u> ecovery) commence.
May 8, 1991	Change Order #1, Summary of Changes to Annual Service Fee for 1990-91. Contract term changed to 20 years (5/22/1990 to 5/21/2010). Annual service fee increased to \$12,389,651 for FY90-91 (Original base fee = \$10,789,651 + \$1,600,000 for scrubbers and service fee).
December 18, 1991	Change Order #2, Revisions to Pricing Proposal, City Compensation for Assuming Billing, Terms and Conditions. Service fee reduction of \$1000 per month for city assuming billings.
October 9, 2003	Letter notifies city of Name Change from Honolulu Resource Recovery Venture (HRRV) to Covanta Honolulu Resource Recovery Venture (CHRRV).
December 31, 2003	Amendment #3 (\$5,900,000) executed to pay for a portion of planning and design for facility expansion to a third boiler. Memorandum of Agreement extends contract 20-years from the expansion project's commercial operation date.
April 14, 2004	Resolution 04-97, CD1, urges city administration to continue to consider and investigate alternative or high technology methods of disposing the city's solid waste (4-14-2004).
February 28, 2008	Operating Contract Amendment #4 executed for the Air Pollution Control / Baghouse (Air Filter) Project.
October 30, 2008	City purchases H-POWER Resource Recovery Facility from DFO Partners, Bank of America and Ford Motor Credit Company for \$43.8 million. City/seller mortgage note released.
December 17, 2009	City and Covanta execute the amended and restated contract for waste processing and disposal services (Amendment #12 reverts to original operating contract). This is the new Covanta operating contract. Contract term is 20 years and commences on the acceptance date of the third-boiler expansion project.
December 21, 2009	Groundbreaking for third-boiler expansion project.
July 22, 2010	Notice to Proceed for the refurbishment projects.
November 11, 2010	APC construction completed.
August 4, 2012	Final Acceptance of Third-boiler. Per operating contract, Amendment 12, Covanta operating contract runs 20 years from final acceptance (2012 – 2032). Covanta exclusive right to operate H-POWER extended from 20 years to 47 years.

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# Appendix D

## List of H-POWER Contracts (Construction + Operating + Consultant Contracts)

Contract Name	Contract No.	Contract Type	Contract Project	Contractor Name	Contract Date	Term	No. of Amendments	No. of Change Orders	No. of Task Orders	Original Amount	Contract Amount (as of 2013)
Contract to Design, Construct, and Test	Unknown	Construction	Design-build-test	HRRV	7/3/1985	3 years	na	na	na	\$149,975,660	\$149,975,660
Waste Processing and Disposal Services Contract	C01591	Construction	Operating contract	HRRV/Covanta	7/3/1985	20 years	14	35	15	\$163,764,130	\$843,394,475
Subtotal							14	35	15	\$313,739,790	\$993,370,135
<b>H-Power Construction Contracts Issued under the Covanta Operating Contract<sup>a</sup></b>											
Air Pollution Control System Improvements	C01591	Construction	APC System Improvements	Covanta	2/28/2008	Increments of Progress Deadline April 2011	na	14	15	\$38,000,000	\$47,001,000
Third Boiler Expansion Project	C01591	Construction	Third Boiler Expansion Project	Covanta	12/17/2009	1,034 calendar days	11	21	na	\$302,760,000	\$324,600,000
H-POWER Refurbishment	C01591	Construction	H-POWER Refurbishment	Covanta	5/28/2009	1/29/2013	1	na	na	\$48,000,000	\$30,998,000
Sewage Sludge Disposal	C01591	Construction	Sewage Sludge Disposal	Covanta	11/15/2013	8 months	1	na	na	\$9,000,000	\$9,000,000
Subtotal							13	35	15	\$397,760,000	\$411,599,000
<b>H-Power Consultant Contracts<sup>b</sup></b>											
Assess Material Condition of H-POWER Facility	C65817	Consultant/Professional Services	Consultant services	HDR Engineering	6/4/2007	365 days	4	na	na	\$50,000	\$650,000
Air Pollution Control system Improvements and Refurbishment <sup>c</sup>	SC-ENV-0900006	Consultant/Professional Services	Consultant services	Mele Associates	8/13/2008	1,180 calendar days	8	na	na	\$2,000,000	\$3,622,500
Third Boiler Expansion Project	SC-ENV-0900180	Consultant/Professional Services	Consultant services	HDR Engineering	6/30/2009	3,650 calendar days	3	na	na	\$7,000,000	\$10,475,000
Subtotal							15	0	0	\$9,050,000	\$14,747,500

<sup>a</sup> The following list of H-POWER construction contracts were issued under the operating contract and are included in the \$993,370,135 total.

<sup>b</sup> According to the State Procurement Office, construction monitoring consultant contracts for professional services should be fixed price contracts. The consultant contracts totaled \$14.7 million and are not included in the \$993.3 million total.

<sup>c</sup> Amendment 8 to the Mele contract.

Source: OCA analysis of all H-POWER contracts

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# Appendix E

## Chronology of H-POWER Projects and Contracts

**Table 1: H-POWER Air Pollution Control Improvements Project - Covanta**

<i>Date</i>		<i>Description</i>	<i>Cost</i>
10/13/06	City Notification	City notifies Covanta intent to upgrade H-POWER facility to comply with Federal Clean Air Act standards.	--
02/15/08	Notice to Proceed (NTP)	Established NTP to Amendment No. 4, Task Order No. 1 to purchase two reverse air fabric filter Baghouses and Task Order No. 2 for engineering and design.	--
02/28/08	Amendment No. 4	Retrofit Air Pollution Control (APC) to meet future federal air emission guidelines effective 4/09. Modify APC system, including ESP, scrubbers, Baghouse fiberglass air filters, etc. Amendment No. 4 totaled \$38 million and is executed through a series of Task Orders for modification of the H-POWER APC system; includes requirement that future Task Orders associated with the modification of the H-POWER APC system be approved by contract amendment. Task order 1 = \$11,366,121 Task order 2 = \$3,000,000 for APC final plans.	
02/28/08	Task Order No. 1 - Baghouse	Replace existing ESPs with Baghouse technology to meet State and Federal Emission Guidelines and compliance deadline (May 2011) for Large Municipal Waste Combustors constructed on or before September 30, 1994.	\$11,366,121
02/28/08	Task Order No. 2 - Engineering	Perform engineering services necessary to provide a complete Air Pollution Control Upgrade Project in full compliance with all laws, rules and regulations including but not limited to foundation design, utilities, plant modifications, and final cut in plan for each unit. Work products include final plans and specifications, and permit applications sufficiently complete to obtain firm fixed price erection bids, bid and award, and to secure all permits necessary to construct and operate an APC System.	\$3,000,000
03/28/08	Independent Service Contract Request (Form M-4)	Request to incorporate Task Order No. 3 and No. 4 associated with the Air Pollution Control System Improvements Project	

**Table 1: H-POWER Air Pollution Control Improvements Project - Covanta (Continued)**

<b>Date</b>		<b>Description</b>	<b>Cost</b>
10/28/09	Task Order No. 2a - Engineering Scope Reduction	Reduction due to engineering work completed	(\$200,000)
10/10/08	Amendment No. 6	Authorized an additional \$2.9 million in Task Orders for the modification of the H-POWER APC System. Task order 3 = \$1,245,406 (2/20/08), boiler expansion. Task order 4 = \$1,688,967, ash handling.	--
10/10/08	Task Order No. 3 - Boiler Modifications	Provide detailed design (including arrangement, fabrication, and installation drawings) relative to reinforcement of H-POWER boilers as necessitated by the increased pressure drop through system.	--
10/28/09	Task Order No. 3a - Boiler Modifications	Changes in boiler modifications.	\$392,234
10/10/08	Task Order No. 4 - Ash Handling	Provide a Fly Ash Handling System, including all engineering services, equipment, and pre-startup services	\$1,668,524
10/10/08	Amendment No. 7	Added Task Order No. 5, Electrical Power Distribution, for the modification of the H-POWER APC System.	--
10/10/08	Task Order No. 5 - Electrical Equipment	Purchase of electrical equipment.	\$659,379
11/21/08	Amendment No. 5	<u>Not executed</u> . Used as a placeholder.	--
12/16/08	Amendment No. 8	Added Task Order No. 6, General Contractor Services for the modification of the H-POWER APC System. \$10 million CIP project. Payment on cost-reimbursement basis. Maximum = \$47,001,000.	
12/16/08	Task Order No. 6 - Construction	Provide supply and construction services for the complete installation of the APC system.	\$25,239,500
10/28/09	Task Order No. 7 - System Integrator Purchase	Provide a System Integrator System to monitor Baghouse performance	\$194,783
10/28/09	Task Order No. 8 - Spare parts purchase	Provide spare parts for the Baghouse equipment.	--

**Table 1: H-POWER Air Pollution Control Improvements Project - Covanta (Continued)**

<b>Date</b>		<b>Description</b>	<b>Cost</b>
10/28/09	Task Order No. 9 - Covanta Contract Administration	Provide Contract Administration and additional engineering as requirement to administer the Baghouse Project in a manner that delivers a quality project, on time, within budget, safely and as a team effort.	\$800,000
10/28/09	Task Order No. 10 - Plan Startup Assistance	Provide Plant Startup and Testing assistance to the Covanta Operations Team as required.	\$477,821
10/28/09	Task Order No. 11 - Insurance	Provide Baghouse Project insurance as required.	\$320,492
10/28/09	Task Order No. 12 - Construction	Provide all labor, supervision, equipment, material, tools, and construction equipment required to design and construct the oil storage facility, the diesel storage tank, the lime unloading facility, and the laydown area pipe loop foundations and pipe fabrication.	\$523,950
10/28/09	Task Order No. 13 - Ash Handling Fabrication Scope Changes	Design changes to provide additional contract escalation, expansion joints, and conveyor support steel. Scope changes include additional expansion joints, conveyor support steel, and material escalation.	\$197,570
10/28/09	Task Order No. 14 - Baghouse Fabrication Scope Changes	Provide additional duct supports and platforms for Baghouses to reduce load on existing equipment.	\$368,858
10/28/09	Amendment No. 10	Authorized additional Task Orders for the modification of the H-POWER APC System - replace electrostatic precipitator filter (ESP) with Baghouse fabric air filters.	--
10/28/09	Task Order No. 15 - Contingency Reserve	Provide a contingency reserve intended for minor changes as may occur during construction. Note: \$1,000,000 funding lapsed.	\$1,991,768
01/15/15	Amendment No. 14	Redistribution of the project's \$47,001,000 CIP funding to reflect final disbursement of funds based on actual billings for the individual task orders (Amendment 4) Note: \$1 million lapsed from the original \$48,001,000 CIP funding.	--
<b>Total</b>			<b>\$47,001,000</b>

Sources: H-POWER contract C-01591 and contract modifications include  
Amendment No. 4, Task Order No.1, 2  
Amendment No. 6, Task Order No. 3, 4  
Amendment No. 7, Task Order No. 5  
Amendment No. 8, Task Order No. 6  
Amendment No. 10, Task Order No. 2a, 3a, 7, 8, 9  
Amendment No. 14

**Table 2: H-POWER Third Boiler Expansion Project - Covanta**

<i>Date</i>	<i>Contract Item</i>	<i>Description</i>	<i>Cost</i>
12/31/03	Independent Service Contract Request (Form M-4)	Request to plan and design the H-POWER expansion with a boiler.	--
12/31/03	Amendment No. 3	Plan and design third boiler expansion. Contract term for operating contract extended 20 years from the commercial operation date of the expansion. Expansion construction estimated at \$55 million.	\$5,900,000
04/09/08	Notice, City Directed Change, Plant Expansion	City requested Covanta to prepare a Statement of Work and Cost proposal for expanding H-POWER through the addition of a third boiler.	--
04/16/08	Independent Service Contract Request (Form M-4)	Request to expand the solid waste disposal capacity at H-POWER.	
01/13/09	Amendment No. 9	Continued scope of work and cost proposal and revised cost proposal for the H-POWER third boiler expansion.	\$36,000,000
08/18/09	Notice to Proceed	Established the official commencement date to proceed construction monitoring services with HDR Engineering, Inc. for the Third Boiler Expansion Project.	--
12/17/09	Amendment No. 11	Executed Expansion Construction Amendment to the operating contract to design, build, and operate a third boiler. Amendment changed basic contract terms regarding audit, cost-substantiation, fees, mass burn combustion unit, air pollution control train, turbine generator, reasonable travel costs, reimbursement for fees incurred by contractor and subcontractors, \$1 million HECO connection, and \$2 million Covanta insurance premiums. Allows markup (5%) for subcontractor costs, employees, tools, equipment, overhead, and profit. Contractor to retain for inspection all records and cost records for 6 years after final payment. City has unlimited access to project. Total project cost estimate = \$832,696,775. <b>Amendment #11 terms, etc. overridden by Amendment #12.</b>	\$282,700,000
12/21/09		Groundbreaking for Third Boiler Expansion Project	--

**Table 2: H-POWER Third Boiler Expansion Project - Covanta (Continued)**

<b>Date</b>	<b>Contract Item</b>	<b>Description</b>	<b>Cost</b>
12/23/09	Solid Waste Management Permit issued	The State approved the city's permit modification application for a solid waste management permit to construct and operate a 900 ton per day mass burn, waterwall municipal waste combustor unit at H-POWER.	--
01/22/10	Construction Commencement Date	City established the construction commencement date for the Expansion Construction Agreement, Amendment No. 11.	--
10/08/10	Notice to Proceed	Established the official commencement date for the Expansion Construction Agreement (ECA) H-POWER Third Boiler.	--
08/04/12	Final Acceptance of the Expansion	Completed Acceptance Testing requirement of a fully functional ash residue handling system. New contract expiration date approximately 8/4/2032. Final acceptance of expansion 8/4/12. New contract expiration date 8/3/2032. Covanta right to operate facility extended from 20 years to 47 years (ENV approved this extension only 83 days after Covanta took over operations on 10/9/03).	--
<b>Total</b>			<b>\$324,600,000</b>

Source: OCA analysis of H-POWER contracts

**Table 3: H-POWER Refurbishment Projects - Covanta**

<b>Date</b>		<b>Description</b>	<b>Cost</b>
05/28/09	Amendment to Contract Request	Requested Amendment No. 12 to the Operating Contract, C01591 for continued operation and maintenance of H-POWER.	--
08/18/09	Independent Services Contract Request (Form M-4)	Request to amend existing agreement with new operating contract for the continued operation and maintenance of H-POWER.	--
12/17/09	Amendment No. 12	<p>City and Covanta executed Amendment 12, the Extension Agreement extended the management, operations and maintenance of the H-POWER facility. The refurbishment projects are incorporated as "Schedule 13" at the end of Amendment 12.</p> <p>Amendment 12 overrides Amendment 11. Access to records limited; contractor may deny access to data, records retained for 6 years. City may audit invoices, fees, etc. at any time at city cost and expense.</p> <p>This is the new Covanta operating contract. Contract term is 20 years from contract acceptance. Contract dated 12/17/2009. Expiration date not clear, probably 12/16/2029. Definitions state expiration date is 20 years from commercial operations date. Operations date is 08/4/12. Contract automatically extended to 08/4/2032.</p>	--
07/22/10	Notice to Proceed	Notice to Proceed pursuant to Section 9.2.2.3 of Amendment 12 and Schedule 13 with all boiler refurbishment work using recommended bidders without further quotation. The city waives the requirement for competitive bids on the remaining boiler waterwall work on the premise the original quotations coupled with the learning curve from initial work results in a clear advantage to the recommended bidders.	--
10/26/10	Notice to Proceed	Authorization to Covanta to proceed with refurbishment work for fiscal year 2011.	\$4,000,000
08/22/11	Notice to Proceed	Notice to Proceed with design and necessary burner modification associated with Covanta's proposal for burning Waste Water Treatment sludge pursuant to Section 3.22.2, Discretionary Services and Projects of the city's operating agreement, Amendment No. 12 of contract - C01591.	--

**Table 3: H-POWER Refurbishment Projects - Covanta (Continued)**

<i>Date</i>		<i>Description</i>	<i>Cost</i>
08/29/11	Notice to Proceed	Notice to Proceed with refurbishment projects.	\$8,000,000
01/25/13	Notice to Proceed	City issued Notice to Proceed (Amendment No. 12 and Schedule 13) for FY 2013 refurbishment projects.	--
01/29/13	Notice to Proceed	Authorization to Covanta to proceed with refurbishment work for fiscal year 2013.	\$18,998,000
1/15/2015	Amendment 14	Reconciliation, adjustments, and reallocation of funds for Amendment 4 task orders. Redistributes CP funding totaling \$47,001,000. Records \$1,000,000 lapsed and removed from project funds. Total contract amount not affected.	-
Total			\$30,998,000

Source: OCA analysis of H-POWER contracts

**Table 4: H-POWER Sewer Sludge for Disposal - Covanta**

<i>Date</i>		<i>Description</i>	<i>Cost</i>
11/15/13	Amendment 13	Design and construct infrastructure for the third boiler to accept sewage sludge for disposal. Total contract amount is \$841,696,775 as of 11/15/2013.	\$9,000,000
Total			\$9,000,000

Source: OCA analysis of H-POWER contracts

**Table 5: H-POWER Third Boiler Expansion Project - HDR Engineering, Inc.**

<b>Date</b>		<b>Description</b>	<b>Cost</b>
02/24/09	Independent Service Contract Request (Form M-4)	Request to provide consulting engineering services and pre-construction construction management services for the H-POWER Expansion Project.	--
06/30/09	Contract Award	Executed Agreement with HDR to provide engineering and construction management support services for the third boiler expansion. This is a multi-year contract.	\$7,000,000
08/18/09	Notice to Proceed	Established the official commencement date to proceed with professional services.	--
06/14/11	Amendment No. 1	Provided additional funding for continued services.	\$2,000,000
06/30/11	Amendment No. 2	Provided additional funding for continued services.	\$100,000
11/06/13	Amendment No. 3	Provided additional funding for continued services. Extended contract term to 10 years.	\$1,375,000
<b>Total</b>			<b>\$10,475,000</b>

Source: OCA analysis of H-POWER contracts



**Table 6: H-POWER Overall Material Condition - HDR Engineering, Inc.**

<i>Date</i>		<i>Description</i>	<i>Cost</i>
06/24/07	Review Overall Material Condition (H-POWER)	<b>Time and materials contract</b> for study of overall material condition of H-POWER facility. HDR consultant to study ESP, stack tower, boiler, ancillary equipment, scrubber, processing equipment, conveyor, buildings, etc.	\$50,000
12/11/07	Amendment 1	Second facility visit.	\$25,000
02/22/08	Amendment 2	Perform boiler study	\$50,000
06/23/08	Amendment 3	Turbine study; generator interconnect study; power purchase agreement/interconnect study; proper maintenance procedures, repairs, expansion, and replacement strategies. Perform APC study, CIP for ESP.	\$375,000
12/11/08	Amendment 4	Study CIP improvements/investment related to Covanta energy proposal; recommendation on improvements; validity; normal and routine maintenance per service agreement vs CIP.	\$150,000
<b>Total</b>			<b>\$650,000</b>

Source: OCA analysis of H-POWER contracts

**Table 7: H-POWER Air Pollution Control Improvements Project - Mele Associates**

<b>Date</b>		<b>Description</b>	<b>Cost</b>
02/21/08	Delegation of Authority Request	ENV requested BFS approval to perform contract negotiations for the Air Pollution Control System Improvements Project.	--
03/31/08	Contract Approval Request	ENV requested BFS approval to execute a <b>time and materials contract</b> for construction management services consulting contract for the Air Pollution Control System Improvements Project.	--
08/13/08	Contract Award	City executed a construction monitoring support services contract with Mele Associates for the Air Pollution Control System upgrades to the solid waste to energy facility. Time and materials contract for \$1.5 million + \$500,000 reimbursable. Consultant to monitor Covanta and contractor work. Scope of work = construction and project management.	\$2,000,000
08/16/08	Notice to Proceed	City established the official commencement date to proceed with professional services.	--
04/03/09	Amendment No. 1	Construction monitoring. Established a new exhibit. Agreed on rates of pay.	--
06/29/09	Amendment No. 2	Construction monitoring for APC project. Requested additional funding for administrative services and to implement E-Builder, project collaboration software system.	\$250,000
02/16/10	Amendment No. 3	Construction monitoring for APC project. Updated Agreed Rates of Pay Exhibit.	--
06/30/10	Amendment No. 4	Construction monitoring for APC project. Provided additional funding for continued services.	\$250,000
02/24/11	Amendment No. 5	Construction monitoring for APC project. Provided additional funding for continued services.	\$250,000
06/02/11	Amendment No. 6	Construction monitoring for APC project. Provided additional funding for continued services.	\$250,000
06/18/12	Amendment No. 7	Construction monitoring for APC project. Provided additional funding for continued services.	\$210,000
02/22/13	Amendment No. 8	Provided additional funding for continued services and expanded project scope to support refurbishment and sludge projects.	\$412,500
03/31/13	Completion Date	--	--
<b>Total</b>			<b>\$3,622,500</b>

Source: OCA analysis of H-POWER contracts

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# Appendix F

## Federal, State and City Requirements for Contracts

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Federal regulations, State of Hawai'i laws and rules, and city policies address the advantages of using fixed price contracts; point out the risks and requirements for the cost-reimbursement, time and materials and other cost plus contracts; and impose limitations on the use of sole source contracts. By statute, the state procurement laws and rules are applicable to the City and County of Honolulu and all other counties. These are structured to minimize risk and maximize value for the taxpayer.

**Federal Regulations:** The Federal Acquisition Regulations (FAR): Part 16 - Types of Contracts, and Part 16.104 – Factors for Selecting Contract Types state contracting officers should consider price competition, price analysis, cost analysis, and other factors in selecting and negotiating the contract type.

***Firm Fixed Price versus cost plus contracts:*** The federal acquisition regulations state firm-fixed-price contracts places the maximum risk and full responsibility for all costs upon the contractor. This type of contract provides maximum incentive for the contractor to control costs and to perform effectively with minimum administrative burden upon the contracting parties.

The federal acquisition regulations further state that cost-reimbursement type contracts (including cost-reimbursement, cost-plus, and time and materials contracts) require that government resources are available to manage the contract, and require appropriate surveillance during the performance to ensure efficient work processes and effective cost controls are used. The regulations also specify the contracts should contain clauses that detail allowable costs and payments.<sup>1</sup>

**State of Hawai'i Public Procurement Laws and Rules:** The State of Hawai'i Administrative Rules and the State of Hawai'i Revised Statutes, Chapter 103D, State Procurement Code reaffirm the federal acquisition regulations that **fixed price contracts** pose the least amount of risk to the government because the consultant and contractor agree to complete the project for an agreed upon amount and delivery date. The contractor and consultant have an incentive to complete the project on time and within budget, as a result these contracts require less monitoring. If the project costs more money or cannot be completed in the agreed upon time, the consultant or contractor is responsible for the overrun. The state laws and rules are applicable to the city.

***Cost plus and multi-term contracts:*** The State of Hawai'i Revised Statutes, Chapter 103D, Hawai'i Public Procurement Code, states cost-reimbursement and cost-plus a percentage of costs contracts may be used only when the chief procurement officer determines in writing that the contract is likely to be less costly than other contract types to obtain the services or construction required. Multi-term contracts must serve the best interest of the governmental body by encouraging effective competition or promoting economies in procurement.

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<sup>1</sup> The FAR defines task order contracts as indefinite-delivery and indefinite-quantity contracts for service that does not procure or specify a minimum or maximum quantity of services during the period of the contract.

Subchapter 16 of the State of Hawai'i Administrative Rules states cost-reimbursement and cost-plus percentage of cost contracts are allowed when the contract is less costly than any other type of contract. Time and materials contract shall be entered into only after the procurement officer determines agency personnel have been assigned to closely monitor the performance of the work, and must have a stated ceiling or estimate that shall not be exceeded without approval.

The **time and materials contracts** are designated High Risk contracts because of potential cost overruns, and because the government is not guaranteed a completed project. Under time and materials contracts, the State Procurement Code warns the government bears the financial risk because the contractor and consultant are not required to complete a project on time or in budget and is reimbursed for allowable costs.

**Change orders:** The State of Hawai'i Administrative Rules, Title 3, Department of Accounting and General Services, Subtitle 11, Chapter 125, Modifications and Terminations of Contracts, states change orders are written orders directing the contractor to make changes authorized by the contract with or without the consent of the contractor. Contract modifications are defined as written alterations within the scope of the contract to specifications, delivery point, rate of delivery, period of performance, price, quantity, or other provision of the contract.

**Sole source contracts:** State of Hawai'i Administrative Rules, Chapter 9, Sole Source Procurement (Article 3-122-81) states justification for a sole source purchase must establish the construction has a unique feature, characteristic, or capability essential to the agency to accomplish its work and is available from only one source. The contract period for a sole source shall not exceed one year. The fact the person or organization is or has been furnishing services does not, by itself, render the person or organization the only source for the type of service required. The State of Hawai'i Administrative Rules (Chapter 7 and 9) states amendments to a professional services contract require prior approval of the head of the purchasing agency when the increase is at least \$25,000 and 10% or more of the initial contract price.

State of Hawai'i Administrative Rules, Chapter 9, Sole Source Procurement (Article 3-122-149) states the objective of the multi-year contract is to encourage effective competition or promote economies in the procurement of service. A multi-term contract may be considered when it is in the best interest of the city to provide uninterrupted service over more than one fiscal period and where the contract will result in significantly more favorable contract terms and prices compared to a shorter term contract for the same services. The multi-term contract may be entered into for any period of time deemed to be in the best interest of the city provided the purchasing entity determines in writing the contract will serve the best interest of the city by encouraging effective competition or promote economies in procurement. The contract must state the terms and conditions for renewal or extension.

**City Policies:** City policies augment Hawai'i rules and laws by imposing requirements for construction and professional services contracts and change orders.

**Construction Contracts:** City financial policy for procurement of construction contracts states that prior to issuing a contract change order<sup>2</sup>, agencies shall request approvals from the Corporation Counsel, the Budget and Fiscal Services Director, and the Managing Director for any change orders exceeding \$100,000. The city policy states the changes and additional work shall be within the scope of the original contract and necessary for the completion of the project. Change orders in excess of \$100,000 must comply with the applicable provisions of the Hawai'i Administrative Rules (HAR Article 3-122-15) for providing cost, pricing data, and certification. Change orders under \$50,000 and not exceeding 10% of the original contract amount require only the signatures of the contractor, fiscal officer, and the officer-in-charge.

**Professional Services Contracts:** City financial policy for procurement of professional services contracts states a cost-reimbursement contract is appropriate when the cost of a fixed-price contract cannot be estimated, and is suitable for research, development and study type contracts. The department head must justify in writing that a cost-reimbursement contract is less costly than any other type of contract. The cost-reimbursement contract must state that payment shall be made for allowable costs in accordance with the Hawai'i Administrative Rules<sup>3</sup> For time and materials contracts, city policy states agency personnel need to be assigned to closely monitor the performance of the work and it is not practical to use any other type of contract for the services.

City policy reiterates Hawai'i statutes that the fact a contractor has been performing the services all the time, or that the contractor has the expertise, or that the service is unique are not justifications for sole source professional services contracts. City procurement policies for professional services for \$25,000 and above state ENV must submit a request to the BFS director and advertise for professional services.

City financial policy for professional services time and materials contracts require ENV to closely monitor the performance of the work and to state a ceiling or estimate that shall not be exceeded without prior approval. For contracts \$25,000 or more, the policy requires ENV to advertise the request for professional services at least 30 days before submittal. The city financial policy states "the fact that a contractor has been performing the services all the time, or that the contractor has the expertise, is not justification for sole source. The fact that the service is unique is not justification for sole source."

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<sup>2</sup> Per State of Hawai'i Revised Statutes and State of Hawai'i Administrative Rules, change orders are contract modifications and include contract change orders, amendments, and task orders.

<sup>3</sup> Title 3, Department of Accounting and General Services, Chapter 3-122, subchapter 15, Cost or Pricing Data and Chapter 3-123, Cost Principles.

**Contract Comparison:** The differences between fixed price and cost-plus contracts like time and materials contracts are shown below.

**Comparison between Fixed and Cost-Plus/Time and Materials Contract Types**

<b><i>Fixed Price Contract</i></b>	<b><i>Cost-Plus/Time and Materials Contracts</i></b>
<b>Government</b> pays a fixed price and is guaranteed an end item or service whether the actual total cost of the product or service falls under or exceeds the contract price.	<b>Government</b> pays fixed per hour labor rates that include wages, overhead, general and administrative costs, and profit; government may reimburse contractor for other direct costs, such as travel and materials costs.  Government is <u>not</u> guaranteed a completed end item or service within the ceiling price.
<b>Contractor</b> provides an acceptable deliverable at the time, place, and price specified in the contract.	<b>Contractor</b> makes a good faith effort to meet government's needs within the ceiling price.
<b>Contractor assumes risk of cost overrun</b>	<b>Government assumes the risk of cost overrun</b>
<b>Monitoring:</b> invoices and billings require routine verification.	<b>Monitoring:</b> requires close scrutiny of invoices, labor hours and rates, and reimbursement claims to substantiate and verify the accuracy and validity of the billings.

Source: US Government Accountability Office Report 09-579

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# Appendix G

## City Council Resolution 12-150, CD1

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CITY COUNCIL  
CITY AND COUNTY OF HONOLULU  
HONOLULU, HAWAII

No. 12-150, CD1

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### RESOLUTION

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URGING THE CITY AUDITOR TO CONDUCT AN AUDIT OF THE DEPARTMENT OF ENVIRONMENTAL SERVICES' WASTEWATER CONTRACTS AND PROCUREMENT PRACTICES.

WHEREAS, the Department of Environmental Services ("ENV") is in charge of operating the City's wastewater, storm water, and solid waste disposal services; and

WHEREAS, ENV is organized into five program areas: administration, environmental quality, collection system maintenance, wastewater treatment and disposal, and refuse collection and disposal; and

WHEREAS, during the fiscal year (FY) 2012 executive budget process, the Council thoroughly evaluated major projects proposed by ENV and other City departments in order to make sure that taxpayers' moneys were spent prudently; and

WHEREAS, in Mayor Peter Carlisle's proposed executive capital budget for FY 2012, he included an appropriation of \$26 million to plan, design, construct, and inspect a second bioconversion facility at Sand Island Wastewater Treatment Plant ("WWTP") to help sustain the current plant being operated by Synagro-WWT, Inc. ("Synagro"); and

WHEREAS, concerned about the cost of the project and wanting the Administration to explore other options for the beneficial reuse of sewage sludge, the Council deleted all of the funding for the second bioconversion facility at Sand Island from the executive capital budget for FY 2012; and

WHEREAS, the Council also adopted Resolution 11-182 to urge the Administration to investigate alternative technologies for the beneficial reuse of sewage sludge (other than the technology currently used by Synagro), because of reports that less harmful and more economical alternatives for the reuse of sewage sludge were available; and

WHEREAS, instead of looking at alternative technologies that would be less expensive for the City, on July 20, 2011, ENV proceeded to enter into "**Amendment No. 2 to the Contract for the Operation and Maintenance of an In-Vessel Bioconversion Facility for the City and County of Honolulu**" between Synagro and the City; and

WHEREAS, the Council believes this contract was entered into without regard to the Hawaii Procurement Code; and



**CITY COUNCIL**  
CITY AND COUNTY OF HONOLULU  
HONOLULU, HAWAII

No. 12-150, CD1

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## RESOLUTION

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WHEREAS, it was only after the City entered into this new agreement with Synagro for the design and construction of the additional digester at Sand Island WWTP that ENV notified the Council of its plans to proceed with the second digester project; and

WHEREAS, when Council asked ENV how it was able to continue to fund the second digester project after the Council removed the requested appropriation for the project from the executive capital budget, ENV admitted taking funds previously approved and designated by the Council for a different project; and

WHEREAS, over the years, similar concerns have also been raised with respect to ENV's numerous contract amendments with Covanta Honolulu ("Covanta") to operate the City's waste-to-energy facility ("H-POWER") and ENV's failure to consider other companies to operate this facility; and

WHEREAS, according to the City's *opala.org* website, Covanta acquired the operating contract for H-POWER in 1993; and

WHEREAS, ENV and Covanta are currently in the process of building a 900 ton-per-day expansion of the existing facility, which includes the addition of a third combustor unit or boiler; and

WHEREAS, ENV has continued to disregard the Hawaii Procurement Code by allowing Covanta to expand the H-POWER facility before seeking other interested bidders and continued to extend Covanta's contract to operate the H-POWER facility over the years; and

WHEREAS, to date, ENV has made over twelve amendments to Covanta's H-POWER operation contract; and

WHEREAS, some of the contract amendments included increases in the contract amounts; one amendment in 2009 provided Covanta with the ability to receive 15% of the net revenues that the City receives during a billing month from the sale of electric energy generated by H-POWER; and

WHEREAS, ENV has not provided the Council with a certificate or documentation showing the increase of over \$100,000,000 in the contract amount during the periods of June 30, 1997 to March 23, 2004 and March 23, 2004 to February 28, 2008; and





CITY COUNCIL  
CITY AND COUNTY OF HONOLULU  
HONOLULU, HAWAII

No. 12-150, CD1

RESOLUTION

WHEREAS, the Council finds that ENV has neither been forthright in its handling of these contract amendments with Covanta, nor in its provision of all the documents requested by the Council; and

WHEREAS, the Council believes ENV's actions with respect to the Synagro and H-POWER projects may be symptomatic of other problems within ENV; and

WHEREAS, given this string of recent issues, the Council finds that ENV's management of contracts including its procurement practices or failure to follow procurement procedures with respect to these wastewater contracts should be carefully examined by the City Auditor; now, therefore,

BE IT RESOLVED by the Council of the City and County of Honolulu that the City Auditor is requested to perform an audit of the Department of Environmental Services' contracts, including its procurement practices to ensure that it is operating efficiently, effectively, and in compliance with all applicable laws and policies; and

BE IT FURTHER RESOLVED by the Council of the City and County of Honolulu that it urges the City Auditor to:

- (1) Examine the contracts, including the procurement of these contracts, entered into by the Department of Environmental Services, including but not limited to, the Beachwalk wastewater pump station projects, H-POWER, and Synagro and the amounts spent over the years on these projects;
- (2) Determine whether the amounts spent over the years for any amendments, changes orders, or task orders, relating to these projects were reasonable; and
- (3) Identification of procurement activities which may be performed more economically or efficiently with respect to current and future projects so that appropriations may be reduced in the executive operating and capital budgets for the next fiscal year;

and

BE IT FURTHER RESOLVED that the City Auditor may further revise the scope of the review after notification to the Council; and



**CITY COUNCIL**  
CITY AND COUNTY OF HONOLULU  
HONOLULU, HAWAII

No. 12-150, CD1

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## RESOLUTION

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BE IT FINALLY RESOLVED that copies of this Resolution be transmitted to the Mayor, the Director of Budget and Fiscal Services, the Director of the Department of Environmental Services, and the City Auditor.

INTRODUCED BY:

Ann Kobayashi

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DATE OF INTRODUCTION:

June 19, 2012  
Honolulu, Hawaii

\_\_\_\_\_  
Councilmembers

CITY COUNCIL  
CITY AND COUNTY OF HONOLULU  
HONOLULU, HAWAII  
C E R T I F I C A T E

**RESOLUTION 12-150, CD1**

Introduced: 06/19/12 By: ANN KOBAYASHI

Committee: BUDGET

Title: RESOLUTION URGING THE CITY AUDITOR TO CONDUCT AN AUDIT OF THE DEPARTMENT OF ENVIRONMENTAL SERVICES' WASTEWATER CONTRACTS AND PROCUREMENT PRACTICES.

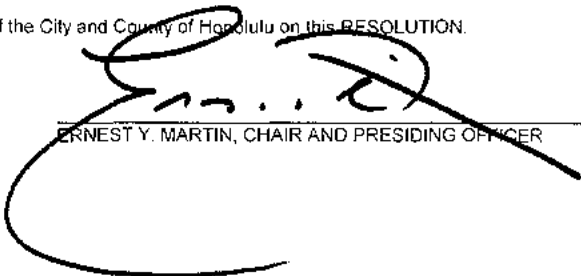
Links: [RES12-150](#)  
[RES12-150, CD1](#)  
[CR-207](#)

Voting Legend: Y= Aye, Y\* = Aye w/Reservations, N = No, A = Absent, ABN = Abstain

BUDGET	06/25/12	CR-207 – RESOLUTION REPORTED OUT OF COMMITTEE FOR ADOPTION AS AMENDED IN <u>CD1</u> FORM.			
COUNCIL	07/11/12	CR-207 AND RESOLUTION 12-150, CD1 WERE ADOPTED.			
ANDERSON	Y	BERG	Y	CACHOLA	Y
CHANG	Y	GABBARD	Y		
GARCIA	Y	HARIMOTO	Y	KOBAYASHI	Y
MARTIN	Y				

I hereby certify that the above is a true record of action by the Council of the City and County of Honolulu on this RESOLUTION.

  
BERNICE K. N. MAU, CITY CLERK

  
ERNEST Y. MARTIN, CHAIR AND PRESIDING OFFICER

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