

City of Detroit

OFFICE OF THE AUDITOR GENERAL



Audit of the Detroit Building Authority
Energy Efficiency and Conservation Block Grant
American Recovery and Reinvestment Act

October 2009 – August 2010



City of Detroit
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LOREN E. MONROE, CPA
AUDITOR GENERAL

MEMORANDUM

DATE: May16, 2011

TO: Honorable City Council

FROM: Loren E. Monroe, CPA *Loren E. Monroe*
Auditor General

RE: Audit of Detroit Building Authority
Energy Efficiency and Conservation Block Grant
American Recovery and Reinvestment Act

CC: Mayor Dave Bing
Norman L. White, Chief Financial Officer
C. Beth DunCombe, Detroit Building Authority, Director
Craig Rice, General Service Department, Director

Attached for your review is our report on the audit of Detroit Building Authority Energy Efficiency and Conservation Block Grant American Recovery and Reinvestment Act. This report contains our audit purpose, scope, objectives, methodology, and conclusions; background; audit findings and recommendations, and the Detroit Building Authority's response.

Responsibility for the installation and maintenance of a system of internal control that minimizes errors and provides reasonable safeguards rests entirely with the Detroit Building Authority. Responsibility for monitoring the implementation of recommendations is set forth in Section 4-205 of the City Charter which states in part:

Recommendations that are not put into effect by the department shall be reviewed by the Finance Director who shall advise the Auditor General and the City Council of the action being taken with respect to the recommendations.

We would like to thank the employees of the Detroit Building Authority and General Services Department for their cooperation and assistance extended to us during this audit.

Copies of all of the Office of the Auditor General reports can be found on website at <http://www.detroitmi.gov/CityCouncil/LegislativeAgencies/AuditorGeneral.aspx>

**Audit of Detroit Building Authority
Energy Efficiency and Conservation Block Grant
American Recovery and Reinvestment Act**

October 2009 – August 2010

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AUDIT PURPOSE, SCOPE, OBJECTIVES, METHODOLOGY, AND CONCLUSIONS

AUDIT PURPOSE

The audit of the Detroit Building Authority Energy Efficiency and Conservation Block Grant (EECBG) American Recovery and Reinvestment Act (Recovery Act) was performed in accordance with the Office of the Auditor General's (OAG) charter mandate to investigate the administration of any city agency and report findings and recommendations to the City Council and the Mayor.

AUDIT SCOPE

Our audit focused on the Detroit Building Authority's (DBA) control procedures for financial transactions related to Recovery Act funds for the EECBG program, and compliance with Recovery Act guidelines, other Federal regulations, and City policies and directives.

Our audit was conducted in accordance with Government Auditing Standards issued by the Comptroller General of the United States, except for the completion of an external peer review of the Office of the Auditor General within the last three years.

AUDIT OBJECTIVES

The overall audit objectives were:

- To determine whether internal controls over the use of the funds were sufficient.
- To determine whether DBA complied with Recovery Act guidelines, grant terms, and other Federal requirements.

AUDIT METHODOLOGY

To accomplish our objectives, our audit work included:

- A review of prior audit work-papers, City Charter, Municipal Manual, DRMS reports, the department's budget reports, the CAFR, Single Audit A-133, and organization charts and any federal or state requirements related to the Recovery Act funds.
- Reading the prior audit report(s).
- Gathering policies and procedures of core operations and other similar data.
- Conducting an audit-planning meeting to determine the scope and audit objectives, and to determine the financial transactions and/or areas to audit.
- Interviewing department personnel and other personnel involved in the EECBG Recovery Act.
- Testing a sample of transactions that we considered adequate to accomplish our objectives.

- Documenting and testing processes related to the program.
- Performing other audit procedures necessary to accomplish our objectives.

CONCLUSIONS

As a result of our audit we have concluded that:

- DBA did not establish appropriate internal controls over EECBG Recovery Act funds.
- DBA did not fully comply with Recovery Act guidelines, grant terms, and other Federal requirements.

BACKGROUND

The Energy Efficiency and Conservation Block Grant (EECBG) Program, funded for the first time by the American Recovery and Reinvestment Act of 2009 (Recovery Act), represents a Presidential priority to deploy the cheapest, cleanest, and most reliable energy technologies across the country. The Program, is intended to assist U.S. cities, counties, states, territories, and Indian tribes to develop, promote, implement, and manage energy efficiency and conservation projects and programs designed to:

- Reduce fossil fuel emissions;
- Reduce the total energy use of the eligible entities;
- Improve energy efficiency in the transportation, building, and other appropriate sectors; and
- Create and retain jobs.

EECBG funds can be used for energy efficiency and conservation programs and projects community wide, as well as renewable energy installations on government buildings. Activities eligible for use of funds include the following:

- Development of an energy efficiency and conservation strategy.
- Building energy audits and retrofits, including weatherization.
- Financial incentive programs for energy efficiency such as energy savings performance contracting on-bill financing, and revolving loan funds.
- Transportation programs to conserve energy and support renewable fuel infrastructure.
- Building code development, implementation, and inspections.
- Installation of distributed energy technologies including combined heat and power and district heating and cooling systems.
- Material conservation programs including source reduction, recycling, and recycled content procurement programs.
- Reduction and capture of greenhouse gas emissions generated by landfills or similar waste-related sources.
- Installation of energy efficient traffic signals and street lighting.
- Installation of renewable energy technologies on government buildings.
- Any other appropriate activity that meets the purposes of the program and is approved by the United States Department of Energy (DOE).

On October 12, 2009, DOE awarded an EECBG totaling \$8,862,400 to the City of Detroit's General Services Department (GSD). The award period is from October 12, 2009 to October 11, 2012. GSD entered into a Contract of Lease with the Detroit Building Authority (DBA) to manage the various City projects eligible for the EECBG

funds. DBA is responsible for evaluating City owned properties for an energy retrofit and entering into all necessary consultant, design, and construction contracts or agreements as necessary.

Although GSD and DBA identified approximately sixty City owned facilities that are eligible for the energy efficiency retrofits, as of October 2010, twenty-seven facilities had been tentatively selected. DBA divided these facilities into three building groups. Energy audits were completed for Building Group I prior to the start of our review. Energy audits were in process for Building Group II, as of October 2010. Energy audit for Building Group III had not begun during our audit period.

The following table was DBA's tentative list of facilities using EECBG funds as of October 4, 2010:

Building Group I	Building Group II	Building Group III
Anna Scripts Whitcomb Belle Isle Conservatory	Belle Isle Conservatory Service Yard	Kemeny Recreation Center
Huber Maintenance Facility	Fire Apparatus Building	Belle Isle Police Station
Butzel Family Center	6 th Police Precinct	Belle Isle Casino
Coleman A. Young Community Center	9 th Police Precinct	Southwestern Police District
Southfield Service Yard	10 th Police Precinct	Fire Station: Engine 05, Ladder 20
Russell/Ferry Service Yard	11 th Police Precinct	Fire Station: Engine 17, Ladder 07
Davison Service Yard	12 th Police Precinct	
Dossin Great Lakes Museum	Police Training Academy	
Chene Park Amphitheater	Lafayette Plaisance Park	
Balduck Park	Cultural Center Underground Parking Garage	
	36th District Court	

Total EECBG expenditures as of September 30, 2010 were \$1,036,066 or about 11.7% of total EECBG funding.

AUDIT FINDINGS AND RECOMMENDATIONS

1. Strengthen Review of Contractors' Charges

DBA awarded two professional service contracts during our audit period: one contract for energy services and one for twenty-nine energy efficient boilers. Our review of payments made by DBA to both contractors revealed the following:

- According to the energy services contract, the maximum pay rate for a conservation specialist is \$113.40 per hour. However, the contractor billed DBA \$121.50 per hour. The accumulation of overcharges for the five invoices paid by DBA totaled \$5,329.80.
- We noted instances where the boiler contractor increased the list price for the same BTU boiler when it was installed at a different location. For example, two boilers initially scheduled to be installed at Kemeny Recreation had a unit cost of \$10,465. The same boilers will be installed at the 10th Precinct for \$11,400 per unit. The unit cost of three boilers scheduled to be installed at Coleman A. Young Recreation is \$24,022. However, the same boilers will be installed at 36th District Court at a unit cost of \$30,732. The price increase for these boilers totals \$15,288. Due to the increases in price by the contractor, DBA has been billed an additional \$11,002 over the lump sum contract amount of \$489,984.

Essential to DBA's control environment is management's review and monitoring of contractual costs. Fluctuations in an items price should be investigated and discrepancies resolved.

Although the use of a lump sum contract should eliminate most risk associated with overcharges, without adequate controls over the invoice review process, DBA becomes vulnerable to overcharges, fraud, waste, and other abuses. Moreover, DBA's failure to properly review invoices could jeopardize the City's use of the Recovery Act funds.

A representative of DBA stated:

- Because the consultant's contract is a fixed price, the hourly rates for specific positions were ignored. The focus of DBA's review was on cross-footing, addition and subtraction for calculation error.
- The additional \$11,002 over the contract amount was due to adding and deleting several buildings from the project. The net effect was an increase in total BTU's for the project from 37.7 to 39.0.

DBA did not provide a cause for the increases in the list price for the same BTU boilers.

Recommendation:

We recommend that DBA thoroughly review invoices and costs associated with the EECBG project.

2. Fully Comply with American Recovery Act Guidelines and Other Federal Regulations

DBA did not fully comply with Recovery Act guidelines and other federal regulations. We noted the following instances of noncompliance:

- The contract to supply boilers was not publicly advertised. DBA authorized its energy service contractor to develop a list of potential bidders for the boiler contract. The contractor recommended four companies that qualified to submit bids. Although the company with the lowest acceptable bid was awarded the contract, the contract was never opened to the public for bidding.
- Recovery Act guidelines were not fully reviewed; as a result, DBA included in its boiler request for quotes (RFQ) two boilers to be installed at a recreation center's swimming pool. According to Recovery Act guidelines, funds cannot be used for swimming pools.

DBA awarded the boiler contract, which included extra pricing due to heat exchangers needed for swimming pools. Although the contractor's invoice paid by DBA, included the cost for the swimming pool boilers, subsequent to the purchase, DBA determined energy retrofits at the recreation center would not be cost effective, due to structural deficiencies of the center; therefore, the boilers were not installed.

- DBA does not have a written code of standards of conduct, which govern the performance of its employees who are engaged in the award and administration of any DBA contract.

Section 1554 of the Recovery Act requires contracts be awarded as fixed-price contracts, through the use of competitive procedures. The Department of Energy's Code of Federal Regulation Chapter II stipulates bids over \$100,000 be publicly solicited.

Section 1604 of the Recovery Act mandates that none of the funds appropriated or otherwise made available in the Recovery Act may be used for any casino or other gambling establishment, aquarium, zoo, golf course, or swimming pool.

Code of Federal Regulations Chapter II—Department of Energy states that grantees and sub grantees will maintain a written code of standards of conduct governing the performance of their employees engaged in the award and administration of contracts.

Violations of the provisions included in the Recovery Act and failure to adhere to other federal regulations could jeopardize the City's use of Recovery Act and other federal funds.

A representative of DBA stated:

- The suppliers of the boilers had to meet certain Recovery Act and project criteria; therefore the list of suppliers was limited.

- DBA did not fully review the Recovery Act stipulation regarding the use of funds for swimming pools.
- DBA considers the ethics language included in the City Charter, which governs all City Departments and Agencies, sufficiently addresses DBA's need for a written code of standards of conduct.

Recommendation

We recommend that DBA review and comply with the Recovery Act guidelines and in addition to the language in the City Charter, establish a written code of standards of conducts specifically addressing the performance of its employees engaged in the awarding and administering of contracts.



65 Cadillac Square • Suite 2800 • Detroit, MI 48226 • 313-224-7238 phone • 313-224-4998 fax

ATTACHMENT A

March 11, 2011

Loren E. Monroe, Auditor General
Office of the Auditor General
2 Woodward Avenue
Coleman A. Young Municipal Center, Room 208
Detroit, Michigan 48226

Dear Mr. Monroe:

The following presents the City of Detroit Building Authority's response to the findings and related recommendations in the October 2009- August 2010 Audit of the Detroit Building Authority, Energy Efficiency and Conservation Block Grant, American Recovery and Reinvestment Act as prepared by the Office of the Auditor General.

Prior to responding to the Office of Auditor General's Findings, the DBA would like to make the Mayor and the Detroit City Council aware that the United States Department of Energy ("DOE") made a site visit to Detroit in late September 2010 and reviewed the Detroit Building Authority's work with the Energy Efficiency and Conservation Block Grant. Attached as Exhibit A to this Response is the letter received from DOE in which it stated that "...it is evident that the professionalism of you and your staff is instrumental in implementing effective energy efficiency strategies in the City. There were no significant findings resulting from this program onsite review, and, therefore, an official response is not required."

In addition, DBA estimates that the EFCBG funds awarded to the City in October 2009 will be fully expended by October 2011, one year in advance of the requirement of all expenditures being made by October 2012. Finally, it is estimated that as a result of the retrofits made under this Grant, the city will save \$34 million in energy and other costs over the next ten years.

Finding 1: Strengthen Review of Contractors' Charges

- **According to the energy services contract, the maximum pay rate for a conservation specialist is \$113.40 per hour. However, the contractor billed DBA \$121.50 per hour. The accumulation of overcharges for the five invoices paid by DBA totaled \$5,329.80.**

DBA's Response

Generally, our consultant agreements are billed based on hourly rates and the DBA does examine these rates when reviewing invoices. The failure to review the discrepancy in the rate was an oversight by the DBA. The entire overcharged amount was recaptured from the consultant in the subsequent invoice.

- **We noted instances where the boiler contractor increased the list price for the same BTU boiler when it was installed at a different location. For example, two boilers initially scheduled to be installed at Kemeny Recreation had a unit cost of \$10,465. The same boilers will be installed at the 10th Precinct for \$11,400 per unit. The unit cost of three boilers scheduled to be installed at Coleman A. Young Recreation is \$24,022. However, the same boilers will be installed at 36th District Court at a unit cost of \$30,732. Due to the increases in price by the contractor, DBA has been billed an additional \$11,002 over the lump sum contract amount of \$489,984**

DBA's Response

As noted in the attached letter from BEI Associates, the Energy Services Consultant retained by the DBA for the Project (Exhibit B), the increase of \$11,001.98 to the contract resulted from several changes to the locations, number and sizes of boilers, together with the boiler specifications. The final order resulted in one additional boiler and 1.3 million additional BTU's for a total cost increase of \$11,001.98, but a cost savings of approximately \$4,500 per BTU for the additional 1.3 million.

Finding 2: Fully comply with Recovery Act Guidelines and Other Federal Requirements

- **The contract to supply boilers was not publicly advertised. DBA authorized its energy service contractor to develop a list of potential bidders for the boiler contract. The contractor recommended four companies that qualified to submit bids. Although the company with**

the lowest acceptable bid was awarded the contract, the contract was never opened to the public for bidding.

DBA's Response:

The Auditor General's Office is correct. However, the failure to advertise was not planned; it was an honest error. In fact the project file shows hand-written notes by the Project Manager that the advertisement, which had been prepared, was to go in the Michigan Chronicle, Detroit Legal News, CAM, Dodge and the DBA Website. A public advertisement is a DBA requirement. The list of five contractors given to the DBA by the Energy Services Consultant is a normal practice of the DBA. We request that the engineers, in this case, give us a number of vendors who can produce the product that is designed in order to be assured that the design does not create a single-source supplier. We use such list also to make sure that we have competitive bidding, notwithstanding the public advertisement. The Buy American requirement from ARRA was also a concern. The boilers had to be manufactured in the United States. In fact in this case, four of the suppliers who were solicited bid on the boilers, and the award went to the lowest bidder. See attached Exhibit C.

- **Recovery Act guidelines were not fully reviewed; as a result, DBA included in its boiler request for quotes (RFQ) two boilers to be installed at a recreation center's swimming pool. According to Recovery Act guidelines, funds cannot be used for swimming pools. DBA awarded the boiler contract, which included extra pricing due to heat exchangers needed for swimming pools. Although the contractor's invoice paid by DBA, included the cost for the swimming pool boilers, subsequent to the purchase, DBA determined energy retrofits at the recreation center would not be cost effective, due to structural deficiencies of the center; therefore, the boilers were not installed.**

DBA's Response

The Auditor general's Office is somewhat correct. The RFP did contain the two boilers for Kemeny Recreation Center. It is also true that there was a decision to not go forward with Kemeny for reasons other than the Recovery Act guidelines. We did, however, have the Grant Consultant research the Recovery Act guidelines and consult with grant experts in the City's Planning and Development Department to ascertain whether we could interpret the "swimming pool" prohibition language more favorably. This was being done at the same time that we had decided not to go forward with Kemeny. Because, the audit was being done as we were working on this Project, the Auditor General found working errors that never turned into actual errors.

- **DBA does not have a written code of standards of conduct, which govern the performance of its employees who are engaged in the award and administration of any DBA contract.**

DBA's Response

The Office of Auditor General is correct. All DBA staff members are city employees and appointees of the Mayor. At the time of appointment, each staff member must sign an Acknowledgement Form stating that they are in receipt and have read the Code of Ethics, Ethics Policy and Conflict of Interest policy, among other things, set by the Administration. In addition, as city employees the DBA staff is governed by the City Charter Code of Conduct. The DBA is not certain that it would be prudent for each agency and department to begin adopting separate policies. However, if it is determined that these written codes of conduct and ethics do not meet the Recovery Act requirements, the DBA will adopt what is reasonable deemed appropriate by the Office of the Auditor General.

Very truly yours,



C. Beth DunCombe
Director

Att/

**Department of Energy**

Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

Exhibit A

REC'D OCT 19 2010

October 14, 2010

Tyrone Clifton
Detroit Building Authority
65 Cadillac Square, Suite 2800
Detroit, MI 48226

Dear Mr. Clifton,

Enclosed is a copy of the U.S Department of Energy's Onsite Visit Report for the Energy Efficiency and Conservation Program ARRA Grant EE0000747.

The U.S. Department of Energy commends the City of Detroit for its work with the Energy Efficiency and Conservation Block Grant. From the report received it is evident that the professionalism of you and your staff is instrumental in implementing effective energy efficiency strategies in the City.

There were no significant findings resulting from this program onsite review, and, therefore, an official response is not required.

Thank you and your staff for the cooperation and assistance provided to the review team. We look forward to continuing the excellent working relationship we have enjoyed with your office.

If you have questions, please contact me at 720-356-1609, or Beau Terhaar at 720-356-1647.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Randall".

Jason Randall, Branch Chief
Energy Efficiency and Conservation Block Grant Program
Golden Field Office

Enclosure



City of Detroit Building Authority
65 Cadillac Square #2800
Detroit, MI 48226
Phone: 313.224.4996
Fax: 313.224.4997

Tyrone Clifton
City of Detroit Building Authority
65 Cadillac Square #2800
Detroit, MI 48226

Exhibit B

RE: Boiler extras

Mr. Clifton

Your original purchase of boilers for the EECBG project consisted of 29 units, which totaled 37.7 Million BTU's of heating capacity. After adding and deleting several buildings from the project, we needed an additional 1.3 MBTU's to complete the project. This would give us a total of 39 MBTU's of heating capacity.

Our original purchase price for the 37.7 MBTU was \$489,984.00 or \$12,996.92 per MBTU. If we purchased the additional 1.3 MBTU required, at that price, our additional purchase price would have been \$16,896.00.

Since the city has purchased such a large quantity, the vendor has discounted the additional product required to only \$8,463.08 per MBTU. As a result they will need an additional \$11,002.00 for the additional 1.3 MBTU requested. This is a savings of almost 35%.

Please rush a change order to R.L Deppman for this additional product before they come to their senses.

	Million BTU's	Cost per MBTU	Total
Original Buy	37.7	\$ 12,996.92	\$ 489,984.00
Extra Buy	1.3	\$ 8,462.00	\$ 11,002.00
Total	39	\$ 12,845.76	\$ 500,986.00

Thank you for your help,

Mike Cook
BEI Associates

Office of the Auditor General
 EOBG Recovery Act Audit
 October 12, 2009 - August 31, 2010
 Analysis of Changes in Boiler Order

ORIGINAL ORDER

	# of units	# of BTU's	Total BTU's	Total per Unit	Total
Conservator	11	1.6	17.6	\$18,841.28	\$207,254.08
Dossen	2	0.6	1.2	\$8,991.00	\$17,982.00
Edelman Young	4	1.2	4.8	\$18,876.25	\$75,505.00
Levision	2	1.2	2.4	\$17,870.50	\$35,741.00
Lussell Ferry	2	1.2	2.4	\$17,870.50	\$35,741.00
Cutfield	2	0.6	1.2	\$8,991.00	\$17,982.00
Mitxel	2	1.6	3.2	\$19,120.00	\$38,240.00
Samany	2	0.85	1.7	\$10,465.00	\$20,930.00
Samany Pool	2	1.6	3.2	\$20,304.50	\$40,609.00
	29	10.45	37.7		\$489,984.08

City District
 6th District
 24th Precinct
 City Precinct

A - Initial cost for .850,000 mil boiler \$10,465
 a - increased cost for .850,000 mil boiler \$11,400
 B Initial cost for 2 mil boiler \$24,022.34
 b - increased cost for 2 mil boiler \$30,731.50

REVISED ORDER PER DBA

	# of units	# of BTU's	Total BTU's	Total per Unit	Total
	12	1.6	19.2	\$18,791.17	\$225,494.04
	2	0.6	1.2	\$8,991.00	\$17,982.00
	3	2	6	\$24,022.34	\$72,067.02 B
	2	0.6	1.2	\$8,991.00	\$17,982.00
	2	1.2	2.4	\$17,870.50	\$35,741.00
	2	0.6	1.2	\$8,991.00	\$17,982.00
	2	2	4	\$30,731.50	\$61,463.00 b
	1	0.6	0.6	\$8,991.00	\$8,991.00
	2	0.75	1.5	\$10,242.00	\$20,484.00
	2	0.85	1.7	\$11,400.00	\$22,800.00 a
	30	10.8	39		\$500,986.06

Original Invoice amt paid by DBA \$(489,984.08)
 Proposed amount due to contractor \$ 11,001.98



Tyrone Clifton
Detroit Build Authority
65 Cadillac Square Ste. 2800
Detroit MI

Exhibit C

RE: Boiler purchase

Tyrone,

In pursuit of boiler manufacturers to bid the boiler pre-purchase on the above referenced project; our Project Manager David Oz contacted any and all boiler makers he could find to see who might qualify as a potential bidder. He queried them about their ability to build the size and type of boilers we need and whether or not they could meet the ARRA Buy American criteria for the project.

Because of these limiting factors he was only able to find 5 companies to bid the supply of boilers. One of these companies was later disqualified as their product was American made but we discovered that the final assembly took place in Canada. Another of the firms was found to be unsatisfactory because of unresolved problems on previous projects as reported to us by GSD Superintendent Harold Stephens.

Solicitation requests were sent to the local distributors of the four firms. All four attended the mandatory pre-bid meeting and submitted bids for the boiler purchase.

R.L. Deppmann supplier for Laars
D.J. Conely distributor for Cleaver Brooks
Quality Water and Air distributor for RBI (Disqualified due to Buy American and numerous exceptions made in Canada)
Performance Engineering distributor for RayPak

I have attached copies of the specifications and solicitation.

Sincerely,

Mike Cook
BEI Project Manager