

Sam M. McCall, Ph.D., CPA, CGFM, CIA, CGAP City Auditor

HIGHLIGHTS

Highlights of City Auditor Report #1201, a report to the City Commission and City management

WHY THIS AUDIT WAS CONDUCTED

City Commission Policy 224 "Financing the Government" establishes an operating reserve for the City's electric utility. The policy establishes four primary purposes, or components, of the reserve including:

- Working Capital
- Emergency Events
- Fuel Risk Management
- Rate Stabilization

As of the time of our audit, that policy provided for a targeted reserve level of \$122 to \$185.9 million.

The overall purpose of this audit was to ascertain the reasonableness of the reserves maintained for City electric utility operations. To address that overall purpose we established four specific audit objectives:

- Determine whether current City policy provides for establishment of reasonable and adequate reserves for electric utility operations.
- Determine whether the City maintains adequate and appropriate reserves for electric utility operations.
- Determine if sources and uses of reserve funds for the electric utility were proper, reasonable, and in accordance with established policy.
- Determine whether the City properly accounted for reserve funds maintained for the electric utility.

WHAT WE RECOMMENDED

A few issues were identified for which we recommended improvements and enhancements to City policy and accounting processes. The more significant of those recommendations was to revise current policies to establish additional dedicated sources for funding the electric utility reserves. An additional recommendation was made to identify an appropriate funding source for certain margin calls paid on hedged financial deals executed in connection with natural gas purchases (used in generation of electricity).

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October 28, 2011

AUDIT OF ELECTRIC UTILITY RESERVES

Taking into consideration prior activity and events and applicable industry guidance, we found current City policy provides for establishment of reasonable and appropriate reserves for electric utility operations.

WHAT WE CONCLUDED

City Commission Policy 224 "Financing the Government" provides for a preferred (targeted) reserve level that is comparable to reserve levels suggested by industry guidance, specifically reserve levels suggested by the American Public Power Association.

Available reserves were determined to consist of both "operating reserve funds" and "undesignated electric utility repair, replacement, and improvement (RRI) funds." In recent years, available reserves have been within (or at some points very near) the lower end of the targeted reserve levels established by City policy and levels suggested by industry guidance. Planned uses in FY 2012 will, however, place reserves below those levels.

Increases in reserve levels over the last decade are attributable to investment earnings and transfers of operating surpluses from electric utility operations, as provided by City policy. Those increases over the last decade totaled approximately \$43.4 million. Uses of reserves over the last decade have been authorized and in accordance with policy provisions. Those uses included:

- Temporary provision of working capital to allow the electric utility to timely pay expenses and obligations.
- Repair and other costs related to emergency events.
- Temporary funding of margin calls on hedged deals executed in connection with the acquisition of natural gas used in the generation of electricity.
- Direct and indirect rate stabilization such that City utility rates did not have to be increased.

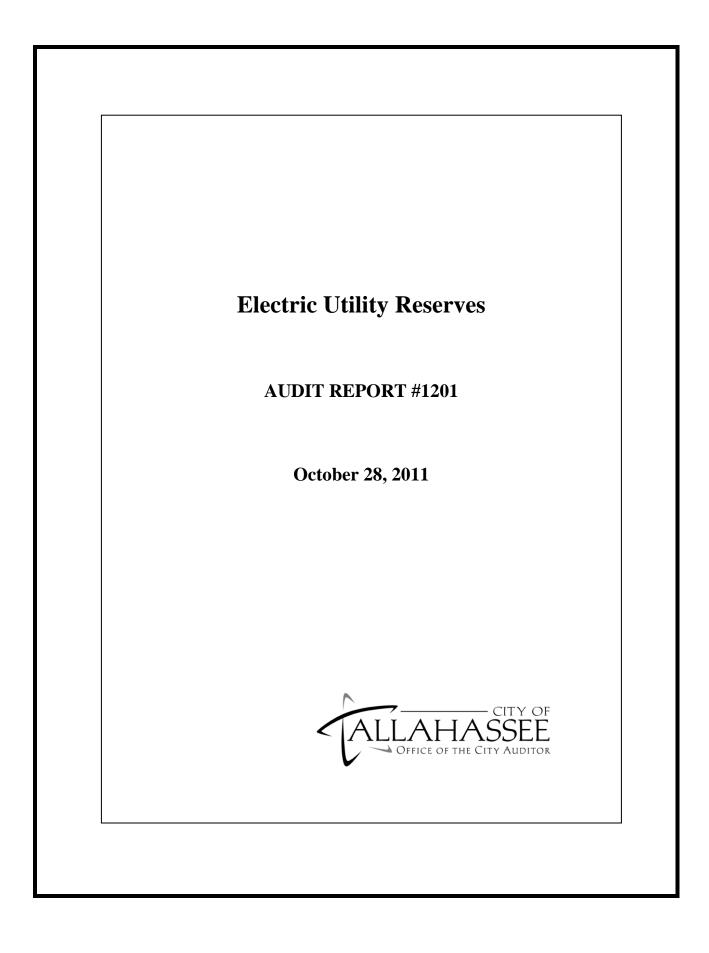
While some of those uses were temporary (e.g., loans that were subsequently repaid to the operating reserves) others were permanent in nature. Those permanent uses over the last decade totaled approximately \$10.1 million.

Processes and methods used by applicable City departments to account for reserve funds and related activity, including margin calls, have generally been proper and reasonable. Improvements were recommended in this area in regard to:

- Timely recording of transfers of reserve funds for the temporary funding of margin calls.
- Appropriate reconciliations to ensure City funds (including operating reserve funds) paid into the City's margin account maintained on the New York Mercantile Exchange (in connection with hedged deals) are properly received, used, accounted for, and reported by the City's contracted agent.

We would like to thank staff in the Electric Utility, Utility Business and Customer Services, Energy Services, and Accounting Services for their assistance during this audit.

___Office of the City Auditor



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Electric Utility Reserves



Sam M. McCall, Ph.D., CPA, CGFM, CIA, CGAP City Auditor

Report #1201 October 28, 2011

Executive Summary

City policy provides for establishment of reasonable and appropriate reserves for the electric utility.

City reserve levels for the electric utility are within the lower end of targeted levels established by City policy and suggested by industry guidance.

Sources and uses of electric utility reserves over the last decade have been authorized and in accordance with policy provisions.

The overall purpose of this audit was to determine and report on the reasonableness of reserves maintained for electric utility operations.

OVERVIEW: Taking into consideration prior activity and events and applicable industry guidance, we found current City policy provides for establishment of reasonable and appropriate reserves for electric utility operations. In recent years, available reserves have been within (or at some points very near) the lower end of the targeted reserve levels established by City policy and levels suggested by industry guidance. Planned uses of reserves in the FY 2012 will, however, place reserves below those levels. Increases in reserve levels over the last decade are attributable to investment earnings and transfers of operating surpluses from electric utility operations, as provided by City policy. Uses of electric reserves over the last decade have been authorized and in accordance with policy provisions. Those uses included (1) temporary provision of working capital to allow the electric utility to timely pay expenses and obligations, (2) repair and other costs related to emergency events, (3) temporary funding of margin calls on hedged deals executed in connection with the acquisition of natural gas used in the generation of electricity, and (4) direct and indirect rate stabilization. Available reserve funds include "operating reserve funds" and "undesignated electric utility repair, replacement, and improvement (RRI) funds". Accounting for electric utility reserve funds and related activity has generally been appropriate and correct.

Objectives and Scope. The overall purpose of this audit was to ascertain the reasonableness of the reserves maintained for City electric utility operations. Our four specific audit objectives included: (1) determine whether current City policy provides for establishment of reasonable and appropriate reserves for electric utility operations; (2) determine whether the City maintains adequate and appropriate reserves for electric utility operations; (3) determine if sources and uses of reserve funds for the electric utility were proper, reasonable, and in accordance with established policy; and (4) determine whether the City properly

Four specific audit objectives were identified and addressed.

Two City policies directly govern and impact electric utility reserves.

City Commission Policy 224 establishes four primary purposes, or components, for the operating reserves.

City Commission Policy
224 also authorizes as
reserves any uncommitted
funds set aside for repair,
replacement, and
improvement of electric
utility infrastructure and
equipment.

City policies set aside \$30 million of operating reserves for the temporary funding of margin calls on hedged deals executed in connection with natural gas purchases.

accounted for reserve funds maintained for the electric utility. Activity and events over the last 10.5 years was reviewed.

Background. Electric utility reserves are impacted by two City policies. First, City Commission Policy 224 "Financing the Government" establishes an "operating reserve" for the utility with the primary purpose of providing security, liquidity, and flexibility. The policy establishes target (preferred) funding levels for the operating reserve. Additionally, the policy establishes four primary purposes, or components, for the reserve. The four purposes (components) include providing funds for: (1) working capital (liquidity), (2) emergency events, (3) fuel risk management, and (4) rate stabilization. The fuel risk management component involves the temporary provision ("loaning") of funds to the City's Energy Services department to pay margin calls on hedged financial deals executed in connection with the City's acquisition of natural gas, which is the primary fuel source used by the City's electric power plants in the generation of electricity. In addition to authorizing an operating reserve, City Commission Policy 224 authorizes a different reserve available to the electric utility. Specifically, undesignated (uncommitted) funds within the electric utility fund established for repair, replacement, and improvement (RRI) of electric utility infrastructure and equipment are available as reserves to the electric utility.

The second policy impacting electric utility reserves is the City's "Energy Risk Management Policy and Procedures." That policy provides that \$30 million of the City's electric utility operating reserve is designated ("set aside") to temporarily fund margin calls on hedged financial deals, executed in connection with the City's acquisition of natural gas (also addressed above), that mature in subsequent fiscal years. The reserve funds used for this purpose are eventually returned to the operating reserve. Upon return, those funds are available to pay additional margin calls on other hedged financial deals. This is a complex and involved process which is described through examples and additional detail in the body of this report.

As part of our audit, we identified two sources of industry guidance that pertained to establishment of cash reserves for municipal electric utility operations. Those two sources were (1) a "best practices" document

We identified and considered industry guidance from two sources in our evaluation of reserves for the City's electric utility.

We found City policies pertaining to reserves for electric utility operations were reasonable and appropriate.

Alternative reserve levels were identified that should be considered by City management in subsequent revisions to current policy requirements. entitled Appropriate Levels of Working Capital Enterprise Funds issued by the Government Finance Officers Association (GFOA) and (2) guidance provided by the education arm of the American Public Power Association (APPA). That guidance was considered in our audit determination as to whether City policy provides for establishment of reasonable and appropriate reserves for electric utility operations and whether the City maintains adequate and appropriate reserves for electric utility operations.

Adequacy of City Policies. Our review and analyses showed, overall, current City policies provide for the establishment of reasonable and appropriate reserves for City electric utility operations. That conclusion was made taking into consideration applicable industry guidance and prior activity and events. The impact of City policy on the City's credit rating for its electric utility was also considered.

In some instances, applicable industry guidance provides for alternative reserve levels that are higher (more conservative) or lower than amounts established by current City policy. However, that same guidance provides alternatives that support the target reserve levels established by City policy. Because of the inherently subjective nature of establishing appropriate reserve levels for an electric utility, we do not recommend revisions to current policy. However, we do recommend City management consider the different alternatives when making subsequent revisions to current policy reserve requirements.

The following table reflects the results of our audit review and analyses.

	Comparison of Reserve Levels Per City Policy to Reserve Levels Suggested By APPA Guidance			
	Reserve Components Per City Policy	Suggested Reserve Levels Per City Policy	Suggested Reserve Levels Per APPA Guidance (NOTE A)	
1	Working Capital	\$56.2 million to \$84.3 million	\$78 million to \$110.4 million	
2	Emergency Events	\$20 million to \$40 million	\$10.3 million to \$15.5 million	
3	Fuel Risk Management (NOTE B)	\$30 million	\$30 million	
4	Rate Stabilization (NOTE B)	\$15.8 to \$31.6 million	\$15.8 to \$31.6 million	
	TOTAL	\$122 million to \$185.9 million	\$134.1 million to \$187.5 million	

NOTE A: These preferred levels were determined by applying APPA Guidance to FY 2011 budgeted activity and/or to FY 2010 actual activity.

NOTE B: APPA guidance does not address these components but acknowledges reserves may be established to address purposes in addition to ensuring adequate working capital and funding for emergencies. Accordingly, the amounts represented for these two components are based on City Commission Policy 224, which were determined on audit to be reasonable.

Available reserves include both operating reserves and uncommitted electric utility RRI funds.

Available reserves were within the lower end of the ranges provided by City policy and suggested by industry guidance.

<u>City Reserve Levels.</u> Available reserves were determined to be comprised of both (1) designated "operating reserves" and (2) some of the electric utility funds set aside for repair, replacement, and improvement (RRI) projects (e.g., funds set aside but not designated for specific projects). As reflected in the following tables, our review and analyses showed those available reserves have <u>not</u> been in excess of amounts established by current City policy and suggested by industry guidance.

Comparison of Available Reserves to Target Reserve Levels (Based on Current Policy Provisions Effective September 2010)				
	<u>9-30-2008</u>	<u>9-30-2009</u>	<u>9-30-2010</u>	<u>3-31-2011</u>
Target Reserve Level per Policy 224 (NOTE A)	\$122.2 million to \$191 million	\$141.7 million to \$215.3 million	\$121.3 million to \$184.7 million	\$122 million to \$185.9 million
Available Operating & RRI Reserves				
(Including amounts receivable for outstanding margin calls)	\$132.6 million	\$135.7 million	\$157.1 million	\$151.2 million
Available Operating and RRI Reserves				
(Excluding amounts receivable for outstanding margin calls)	\$123.6 million	\$114.1 million	\$126.7 million	\$134.9 million
Available reserves within target range established by current City policy?	YES	NO (NOTE A)	YES	YES

NOTE A: The target reserve levels varied between years based on fluctuations in budgeted costs, with the largest fluctuation attributable to increases or decreases in fuel costs. The large increase in those fuel costs in FY 2009 was the primary reason the "available reserves" were below the target reserve level for that year.

Comparison of Available Reserves to Reserve Levels Based on APPA Guidance			
	<u>9-30-2010</u>	<u>3-31-2011</u>	
Suggested Reserve Level for FY 2011 per APPA Guidance	\$134.1 million to \$187.5 million	\$134.1 million to \$187.5 million	
Available Operating and RRI Reserves			
(Including amounts receivable for outstanding margin calls)	\$157.1 million	\$151.2 million	
Available Operating and RRI Reserves			
(Excluding amounts receivable for outstanding margin calls)	\$126.7 million	\$134.9 million	
Available reserves within preferred range based on APPA guidance?	"YES" if include amounts receivable for outstanding margin calls; "NO" if only include available cash	YES	

Recently approved uses of operating reserves in amounts up to \$17.4 million for FY 2012 may decrease available reserves.

Investment earnings and transfers of year-end operating surpluses have increased reserves by \$43.4 million over the last decade.

Electric utility RRI funds have been and continue to be used for purposes for which the operating reserve was established.

Uses of reserve funds have been appropriate and authorized.

Permanent uses of operating reserves over the last decade totaled \$10.1 million.

We also determined City reserves for the electric utility have increased in the last decade, such that available reserves in recent years were within (or at one point near) the <u>lower</u> end of the ranges provided by that policy and guidance (see tables above). As of March 31, 2011, available "cash" reserves totaled \$134.9 million. Increases in reserve levels over the last decade resulted from earnings on invested reserve funds and transfers of year-end operating surpluses resulting from electric utility operations. (NOTE: Approved use of up to \$17.4 million of operating reserves in FY 2012 for direct rate stabilization purposes may result in a decrease in reserve levels, such that available reserves may again be below the target levels established by City policy and suggested by APPA guidance.)

Sources and Uses of Reserves. As noted above, the two sources established to fund electric utility "operating reserves" (does not include Electric Utility RRI funds) are investment earnings and year-end operating surpluses from electric utility operations. Over the last 10.5 years those two sources have added \$43.4 million to operating reserves. Uses of operating reserves have evolved over the last 10.5 years. Some of the uses authorized by current City policy were formerly addressed, at least in part, by the Electric Utility RRI Fund. Those RRI funds continue to be used, along with operating reserves, for the reasons for which the reserve policy was established. Our review showed all uses of reserves over the last 10.5 years were appropriate and authorized. "Permanent" uses of operating reserves (not including RRI funds) over the last 10.5 years totaled approximately \$10.1 million. (Permanent uses represent uses other than temporary "loans" where the funds are eventually returned to reserves, such as temporary loans for working capital or temporary funding of margin calls on hedged financial deals for the acquisition of natural gas.) Additions to and permanent uses of operating reserves (excluding RRI funds) over the last 10.5 years have resulted in a net increase in reserve levels of \$33.3 million. (NOTE: In September 2011 the City Commission approved use of operating reserve funds in amounts up to \$17.4 million for direct rate stabilization in FY 2012. If that use occurs, the net increase will be reduced accordingly.)

Overall, the City has properly accounted for electric utility reserves and related activity.

A few issues were identified for which audit recommendations were made.

Replenishment of reserves is important to ensure continued financial viability.

Accounting for Reserves. Our review showed the City's methods and processes used in accounting for reserve funds and related activity, including margin calls, were proper and reasonable. However certain issues were identified that warrant corrective actions. Those issues (along with other issues) are addressed below.

<u>Issues</u>. A few issues were identified by this audit for which recommendations are made, as discussed below.

- To provide for accurate and timely disclosure of the status of available reserves, process enhancements should be made to provide for timely recording of transfers from the reserves to the Energy Services department for the temporary funding of margin calls.
- Policy revisions are needed to identify and provide an appropriate and authorized funding source for certain margin calls on hedged financial deals executed in connection with natural gas purchases.
- Enhancements are needed to reconciliations performed to ensure City funds (including operating reserve funds) paid into the City's margin account maintained on the New York Mercantile Exchange (in connection with hedged deals) are properly received, used, accounted for, and reported by the City's contracted agent.
- Certain policy enhancements should be considered to clarify the dynamic nature of target funding levels for electric utility operating reserves and to provide for additional funding sources for those reserves.

Final Perspective. Cash reserves should be perceived as funds, not restricted as to use by an external entity, available to maintain "normal operations" in special circumstances so as to preclude having to raise rates, incur additional debt, or default on legal obligations. When reserves are used (*either operating reserves or available RRI funds*), it is important they be replenished in a reasonable and timely manner. Replenishment (1) ensures the ability to continue maintenance of normal operations upon subsequent circumstances (e.g., new emergencies, additional working capital shortages, etc.) and (2), in the event available RRI funds are used for reserve purposes, helps ensure funds are available for future capital projects. If reserves are not replenished, it may be

necessary to raise rates or incur additional debt, or even default on legal obligations upon subsequent events. Timely replenishment of reserves is also important to help ensure preferred (positive) credit ratings by bond rating agencies, which in turn is important to keep the cost of debt affordable upon the issuance of bonds for financing major capital improvements.

We would like to thank staff in the Electric Utility, Utility Business and Customer Services, Energy Services, and Accounting Services for their assistance during this audit. This page intentionally left blank.

Electric Utility Reserves



Sam M. McCall, Ph.D, CPA, CGFM, CIA, CGAP City Auditor

Report #1201 October 28, 2011

Objectives

The overall purpose of this audit was to ascertain the reasonableness of reserves maintained for City electric utility operations.

Four specific audit objectives were identified and addressed.

The overall objective of this audit was to ascertain the reasonableness of the reserves maintained for City electric utility operations. Our specific objectives included:

- Determine whether current City policy provides for establishment of reasonable and appropriate reserves for electric utility operations. (Specific Objective No.1)
- Determine whether the City maintains adequate and appropriate reserves for electric utility operations. (Specific Objective No.2)
- Determine if the sources and uses of reserve funds for the electric utility were proper, reasonable, and in accordance with established policy. (Specific Objective No.3)
- Determine whether reserve funds maintained for the electric utility and related activity were properly accounted for by the City. (Specific Objective No.4)

Scope

Applicable City policies and industry guidance were reviewed and considered, as well as activity impacting electric utility reserves over the last 10.5 years.

In this audit we reviewed and evaluated provisions of City Commission Policy 224 "Financing the Government" that addressed operating and other reserves for the City electric utility. We reviewed the City's Energy Risk Management Policy and Procedures as they relate to use of electric utility operating reserves as a source for the temporary funding of margin calls on hedged financial deals, executed in relation to the acquisition of natural gas to be used in generation of electricity at City power plants. We also identified and considered available industry guidance on establishment and maintenance of reserves for municipal electric utility operations. Furthermore, activity pertaining to the sources and uses of electric utility operating reserves, as well as reserve levels, over the last 10.5 years was reviewed and analyzed.

Methodology

Our procedures included interviewing knowledgeable staff and analyzing applicable industry guidance and various City records and reports.

Various audit procedures were conducted to meet the stated audit objectives. Those procedures included conducting interviews of knowledgeable personnel and inspecting and analyzing various guidance, records, and reports. Specific procedures included:

- Identifying and evaluating City policies and procedures that address or impact reserves maintained for the electric utility.
- Identifying and reviewing industry guidance on establishing and maintaining reserves for municipal electric utilities.
- Identifying reserves available for electric utility operations.
- Comparing City reserve levels to levels prescribed by City policies.
- Comparing City reserve policies and reserve levels to policies and reserve levels suggested by industry guidance.
- Identifying and evaluating the manner in which City electric utility reserves are accounted for within the City's financial records and systems.
- Identifying sources of reserve funds and determining if those sources were appropriate and in accordance with established policies.
- Identifying uses of reserve funds and determining if those uses were authorized, appropriate, and in accordance with established policies.

We conducted this audit in accordance with the International Standards for the Professional Practice of Internal Auditing and Generally Accepted Government Auditing Standards. Those standards require we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Overview

In accordance with sound and prudent business practices, the City maintains reserves for its electric utility operations. The primary purpose of those reserves is to ensure sufficient funds (cash) are available to

The City maintains reserves for its electric utility operations.

City Commission Policy

224 "Financing the

Government" addresses the City's electric utility

reserves.

electricity to City utility customers in the event of cash shortages and/or emergencies. (Note: City utility customers include some Leon County residents as well as City residents.) The City also maintains reserve funds for ancillary purposes, including rate stabilization and as a source for the temporary funding of margin calls (required cash outlays) on hedged financial deals, which are executed in connection with the acquisition of natural gas to be used in the generation of electricity. Each of the purposes of the City reserve funds are described in further detail in subsequent paragraphs within this report.

maintain continuity of operations; i.e., generation and provision of

City Commission Policy 224 "Financing the Government"

Operating Reserve. The primary City policy addressing the electric

utility operating reserve is City Commission Policy 224 "Financing the Government." Among other areas pertaining to City finances, that policy addresses the establishment of an electric operating reserve to provide financial security, liquidity, and flexibility. The policy provides the operating reserve is critical to protect the City from a financial perspective and to protect electric utility customers from a competitive rate perspective (e.g., provide funds in the event of temporary cash shortages such that customer billing rates do not have to be increased in order to raise sufficient cash to pay expenses). The policy establishes target (preferred) funding levels for the operating reserve. Additionally, the policy establishes four primary purposes of the reserve. Target funding levels are specified for each of those purposes, or "components." The overall target funding levels for the operating reserve is the sum of the target levels established for each of the four components. (NOTE: Although separate components, each with its own specified target funding levels, are established by the policy, the operating reserve is considered a single fund. Therefore, reserve funds are available to be used for any authorized purpose, regardless of the individual components and

The City's electric operating reserve is comprised of four components, each with its own target funding level.

The four purposes (components) of the operating reserve and their respective target funding levels are shown in the following table.

specified target levels for those components.)

	Table 1 – Electric Operating Reserve Components and Target Levels			
	Component	Target Funding Level		
1	Working Capital (Liquidity)	Ensure sufficient working capital is on hand to maintain continuity of operations (i.e., pay expenses and obligations pertaining to operation of the electric utility). For example, the operating reserve should maintain cash to pay required expenses and obligations in the event cash is temporarily not available in the electric utility operating fund. This could be due to events resulting in the temporary inability to bill and/or collect revenues for electric consumption by City utility customers; for example, due to temporary shutdowns in the billing, postal, or banking systems.	Cash necessary to fund required outlays (expenses and obligations) for 60 to 90 days. Based on the approved FY 2011 budget, that amount equates to a range of \$56.2 million to \$84.3 million. (Note 2)	
2	Emergency Reserve	Provide funds to pay repairs and related costs in the event of damages to the City's electric system infrastructure (power plants, substations, and transmission and distribution assets) resulting from hurricanes, tornadoes, accidents, terrorist attacks, or similar catastrophic events. In such circumstances reserve funds could be used to pay for emergency repairs to equipment/infrastructure, temporary rental of auxiliary generation equipment, purchase of power generated by other utilities and available to the City through the transmission grid to which the City is connected, etc.	A minimum of \$20 million and an optimal level of \$40 million (or a range of \$20 million to \$40 million).	
3	Fuel Risk Management	This component was established as part of the City's Energy Risk Management Policy and Procedures, discussed on pages 14 through 20 of this report. This component provides a source to fund margin calls on hedged financial deals that mature in future (subsequent) fiscal years. Those hedged financial deals are executed in connection with the acquisition of natural gas for generation of electricity at City power plants.	Established at \$30 million.	
4	Rate Stabilization	Provide stable rates in the event of fluctuations in revenue requirements. For example, if revenues charged and collected based on existing rates are not sufficient to cover fuel and/or operating costs, but the City Commission determines it not appropriate to increase customer rates, the City Commission could authorize use of reserve funds to fund the difference (i.e., portion of costs not recovered through revenues generated by current customer billing rates). Similarly, instead of raising rates to pay for additional debt incurred through issuance of bonds to finance a new generation unit, the City Commission could authorize use of operating reserves to "cash finance" that new unit (i.e., pay cash for the new unit), such that billing rates would not have to be increased to pay additional debt costs.	A minimum of \$15.8 million and an optimal level of \$31.6 million (or a range of \$15.8 million to \$31.6 million). (Note 2)	
		\$122 million to \$185.9 million		

NOTE 1: Each of these purposes is discussed and explained further on pages 22 through 39 of this report.

NOTE 2: For these components, the target fund levels were determined by applying policy criteria and underlying reasoning to the electric utility's <u>approved</u> operating budget for FY 2011. Current policy target funding levels are based on application of those policy criteria and reasoning to the <u>proposed</u> operating budget for FY 2011, which was slightly less than the approved budgeted amounts.

Sources authorized to fund the operating reserve include (1) year-end operating surpluses of the electric utility and (2) earnings on invested reserve funds.

In addition to the operating reserve, City Commission Policy 224 provides that undesignated RRI funds are available as a reserve for the electric utility.

City Commission Policy 224 "Financing the Government" also authorizes two sources for funding the electric utility operating reserve. First, any year-end operating surpluses from electric utility operations are to be transferred to the operating reserve fund. Secondly, earnings on invested reserve funds are to be retained in the reserve and reinvested. As described later in this report, those two sources have increased reserve balances in the last decade.

RRI Reserve. In addition to authorizing the establishment of an electric operating reserve for the purposes identified in Table 1 above, City Commission Policy 224 "Financing the Government" authorizes a different reserve for the electric utility's capital improvement program. Specifically, the undesignated balance of funds in the electric utility repair, replacement, and improvement (RRI) fund serves as a contingency (reserve). RRI funds are established for each of the City's utilities. Those funds are used to fund capital improvements, projects, and needs that are not funded using bond proceeds. From one perspective, the RRI funds allow the different utilities to "cash fund" certain projects and equipment instead of incurring additional debt (e.g., issuing bonds) to pay Typically, bond proceeds are used for larger capital for those items. projects involving major infrastructure additions or improvements, while RRI funds are used for major maintenance and repair of utility infrastructure and for relatively smaller infrastructure additions or transformers improvements, such as replacing and transmission/distribution poles. RRI funds are also often used to fund technology and system additions and improvements. As capital needs are identified, specific projects are established and RRI funds are authorized and committed, or "designated," to fund those projects. Pursuant to City Commission Policy 224, any remaining RRI funds (undesignated cash funds) are considered a reserve available to the applicable utility. (NOTE: Although considered a reserve for the electric utility, the undesignated RRI funds are considered by management and staff in planning future capital projects {e.g., over a 10 year span}. Accordingly, if available RRI funds are used for reserve purposes {e.g., provide working capital in a cash shortage or for rate stabilization purposes} there could be subsequent direct impact on future capital projects. For example, if available RRI funds were used for an authorized reserve

purpose and those funds had been considered as a source for future capital projects {even if not yet "designated" for those projects}, management may determine it appropriate to delay those planned projects, incur additional debt {issue new bonds} or raise rates to fund those projects, or a combination thereof.)

City Commission Policy 224 has been updated several times; our audit only considered current policy provisions. <u>Policy Revisions</u>. City Commission Policy 224 has been updated (revised) several times, most recently September 2010. Many of the policy revisions involved changes in the intended purposes and uses of the electric operating reserve. For purposes of this audit, we only considered the policy that has been in effect as of September 2010, as policy provisions prior to that time addressed purposes (of the operating reserve) that were either combined under the current policy or are no longer applicable.

City Energy Risk Management Policy and Procedures

This policy and report section pertains to the third component in Table 1 above, the use of the electric operating reserve for "fuel risk management."

The City's Energy Risk Management Policy and Procedures authorize hedging practices for the acquisition of natural gas used in the generation of electricity; electric operating reserves play a role in those practices. Hedging Practices. A separate City policy that impacts the City's electric operating reserve is the "Energy Risk Management Policy and Procedures." Among other things, that policy authorizes hedging practices for the purpose of ensuring price stability and protection against market volatility for fuels (e.g., natural gas) acquired and used to generate electricity for sale to City utility customers. From the City's perspective, "hedging" can be defined as a risk management strategy used to offset or limit the probability of paying higher prices for natural gas due to fluctuations in the market prices of natural gas. Hedging involves techniques whereby an investor or entity (e.g., the City) takes equal but opposite positions in two different markets. From the City's perspective, those two markets are the (1) cash or "spot" market for which the City can acquire natural gas on a daily basis at the market price of natural gas on the date of purchase and the (2) "futures" market, which allows the City to acquire natural gas for a set price in advance of the date the acquired quantity of natural gas will be delivered. Due to the obvious

complexities, this is demonstrated through the following simplified example of actual hedging practices used by the City.

Hedging practices involve complex financial transactions.

EXAMPLE - Hedged Natural Gas Purchase

The City projects that it will need to acquire 10,000 MMBTUs (quantity of natural gas measured in "British Thermal Units") on a specific date in the next fiscal year. Because of historical and/or projected fluctuations in the market prices of natural gas, City staff does not know what price will have to be paid if the City waits to acquire the 10,000 MMBTUs on that specific date in the next fiscal year (i.e., the City does not know what the "spot" market price will be on that future date). City staff determines a hedged deal can be executed through the futures market that will ensure the City pays \$5 per MMBTU for that quantity of natural gas on that future date. City staff determines (believes) \$5 per MMBTU will be a fair and appropriate price. Accordingly, the hedged deal is executed.

The other party in the hedged deal is the "counterparty." The terms of the hedged deal provide the following:

- The City will acquire the designated quantity of natural gas on the specific future date from a natural gas supplier, and pay that supplier the market price (spot market) on that date.
- If the market price paid by the City for that natural gas is higher than the hedged price (\$5 per MMBTU in this example), the counterparty will pay the City the difference.
- If the market price paid by the City for that natural gas is lower than the hedged price (\$5 per MMBTU in this example), the City will pay the counterparty the difference.

Those terms ensure the City's net cost paid for the purchased quantity of natural gas is \$5 per MMBTU, as demonstrated by the following scenarios.

- Scenario 1: On that specific date in the next fiscal year, the market price is \$6 per MMBTU. Accordingly, the City acquires the 10,000 MMBTUs on the spot market and pays the supplier \$60,000. Because the spot market price on that date was higher than the hedged price, the counterparty pays the City the difference, which is \$10,000 (or \$1 per MMBTU). The effect is the City paid a net of \$50,000 for the natural gas.
- <u>Scenario 2</u>: On that specific date in the next fiscal year, the market price is \$4 per MMBTU. Accordingly, the City acquires the 10,000 MMBTUs on the spot market and pays the supplier \$40,000. Because the spot market price on that date was less than the hedged price, the City pays the counterparty the difference, which is \$10,000 (or \$1 per MMBTU). The effect is the City paid a net of \$50,000 for the natural gas.

Hedging allows the City to set a specific price for future natural gas purchases; thereby eliminating the risk that higher prices will be paid for those future purchases in the event market prices for natural gas increase.

Hedging is a commonly used and accepted practice in the utility industry.

In conclusion, the hedging practice allowed the City to ensure that \$5 per MMBTU would be paid for 10,000 MMBTUs of natural gas on that specific date in a subsequent fiscal year. In the event of significant increases in the market price of natural gas, this practice allowed the City to save significant fuel costs that otherwise would have been incurred and passed on to City utility customers as part of their utility bills (scenario 1 above). While there also are risks the hedging practice will result in the City paying more for natural gas than it otherwise would have paid (see scenario 2 above), it nonetheless allowed the City to ensure a stable price that was determined acceptable even if that event occurred.

For the reasons stated in and demonstrated by the preceding example, hedging is a commonly used and accepted practice in the utility industry.

NYMEX Margin Calls. The City executes a significant portion of its hedged financial deals for the acquisition of natural gas (used in generation of electricity) through the New York Mercantile Exchange, or NYMEX. The NYMEX is considered the world's largest exchange through which physical commodities (e.g., natural gas) are bought and sold through futures contracts. Because the City is not a member of NYMEX, a contracted agent is used by the City to execute futures contracts (hedged deals) for natural gas through that exchange. That contracted agent is MF Global (formerly known as MAN Financial), a major global financial derivatives broker. When MF Global executes a hedged deal on behalf of the City for acquisition of natural gas at a future date through the NYMEX, the NYMEX matches the City with applicable counterparties (see example above). Neither the City nor its counterparties deal directly with each other. Instead, they both deal through the NYMEX. (NOTE: The City also has established contracts through which hedged deals for the acquisition of natural gas are executed directly with counterparties. The NYMEX is not involved in those deals. Because those contracts do not require use of operating reserves, they are not addressed further in this audit.)

City's hedged deals are executed through the NYMEX, a commodities exchange.

A significant portion of the

As noted in the above example (see scenario 2), the risk exists in hedged deals that the City will pay the counterparty funds in the event the market price on the date the hedged deal matures (i.e., future date at which the natural gas is actually acquired from a supplier) is less than the hedged price. Because of that risk, the NYMEX requires contracting parties (e.g., the City) to maintain certain levels of cash in designated NYMEX

For NYMEX deals, the City is required to maintain cash, or "margin," in a separate account.

accounts as assurance the parties will have sufficient funds to honor the deal in the event that risk is realized (i.e., market price is less than hedged price and the party has to pay the counterparty the difference as a result). That cash is known in industry terms as "margin," and the account at the NYMEX into which it is maintained is the margin account. The amount of margin the City must place and maintain in the NYMEX margin account depends on market price fluctuations occurring between the date a hedged deal is executed and the specific future date at which the deal matures (i.e., date when the natural gas will be purchased on the market). Because of the obvious complexities, this is best demonstrated through the following simplified example.

EXAMPLE - Margin Calls on Natural Gas Purchases Hedged through the NYMEX

The City projects that it will need to acquire 10,000 MMBTUs of natural gas on a specific date two years from the current date. Based on market conditions and projections, City staff determines it is prudent to secure that purchase at \$5 per MMBTU through a hedged deal (futures contract) executed through the NYMEX. Accordingly, that futures contract for 10,000 MMBTUs at \$5 per MMBTU is executed. The contract (deal) matures on the specific date two years from the date the deal was executed.

During the first year after the futures contract was executed, the projected market price for the maturity date decreases as the overall demand for natural gas decreases and/or additional quantities of natural gas are determined to be available (economic law of supply and demand). Accordingly, at the end of that first year, the projected market price at the maturity date is now \$4 per MMBTU. Based on that knowledge as of the end of that first year, it is projected that the City will have to pay counterparties (through the NYMEX) \$10,000 (\$5) less \$4 per MMBTU times 10,000 MMBTUs) on the date the hedged deal matures. (See scenario 2 in initial example on pages 15 and 16.) Because of that circumstance, the NYMEX will require the City to place additional cash in the NYMEX margin account to cover that projected payment. To accomplish this, the NYMEX sends a "margin call" to the City and the City responds by sending \$10,000 to the NYMEX margin account. This protects the NYMEX from the possibility of the City not having sufficient cash to pay that \$10,000 if the projected price of \$4 per MMBTU is realized on the deal's maturity date.

During the middle of the second year, the projected market price again decreases such that the projected price on the deal's maturity date is now \$3 per MMBTU. Accordingly, the NYMEX sends a second margin call for an additional \$10,000 (additional \$1 difference per MMBTU times 10,000 MMBTUs). At this point, the City has placed a total of \$20,000 into the NYMEX margin account.

The margin account is required by NYMEX as insurance the City will have sufficient cash to meet its hedged obligations in the event market prices decrease.

Margin calls represent requests for additional cash for deposit into the City's NYMEX margin account when market prices decrease before a hedged deal matures.

As hedged deals mature, funds maintained in the margin account may be used to settle the deals or returned to the City.

Margin calls pertaining to hedged deals that mature in the current fiscal year are paid from funds appropriated to pay current year fuel costs.

Scenario A: At the end of the second year, the futures contract matures and the actual market price paid by the City is \$3 per MMBTU. Accordingly, the City buys the 10,000 MMBTUs of natural gas from a supplier and pays the supplier \$30,000. Because of the hedged deal through the NYMEX, the City must also provide \$20,000 to the NYMEX to pay the applicable counterparties (i.e., \$5 hedged price less \$3 realized price times the 10,000 MMBTUs). Because the City already placed \$20,000 in the NYMEX margin account for this scenario, those funds will be used by the NYMEX to pay the respective counterparties.

Scenario B: At the end of the second year, the futures contract matures and the actual market price paid by the City is \$4 per MMBTU. Accordingly, the City buys the 10,000 MMBTUs of natural gas from a supplier and pays the supplier \$40,000. Because of the hedged deal through the NYMEX, the City must also provide \$10,000 to the NYMEX to pay the applicable counterparties (i.e., \$5 hedged price less \$4 realized price times the 10,000 MMBTUs). As described above, the City had already placed \$20,000 in the NYMEX margin account on the projection the realized price would be \$3 per MMBTU. Accordingly, the NYMEX uses \$10,000 of those funds previously placed in the NYMEX account to pay the respective counterparties, and returns the remaining \$10,000 to the City.

This example provides a simplified description and explanation of the process. The actual process and activity is more complex, as margin calls may occur daily and multiple hedged deals with varied maturity dates are often outstanding at any single point in time.

Funding Margin Calls. The previous paragraphs within this report describe and explain circumstances in which the City must place cash, or margin, in a NYMEX account. As described, in some circumstances that cash is used in settlement of amounts owed by the City when hedged deals mature and in other circumstances the cash is returned to the City. Regardless, a determination must be made as to the appropriate sources to use to fund the required placement of cash in the NYMEX margin account (i.e., pursuant to "margin calls").

For hedged deals that mature in the current fiscal year, the City pays related margin calls from monies appropriated (budgeted) to pay current year fuel costs. We determined that to be an appropriate and logical source, as the hedged deals are executed in connection with, and directly for, fuel purchases that will be made in the current fiscal year.

Margin calls pertaining to hedged deals that mature in a subsequent fiscal year are "temporarily" funded from the \$30 million setaside in the City's electric operating reserve fund.

The electric operating reserves are reimbursed from funds appropriated to pay fuel costs in the year that the hedged deals mature; those reimbursements occur at the beginning of the applicable fiscal years.

Funds reimbursed to the operating reserve under this process become available to temporarily fund subsequent margin calls.

However, in regard to financial deals that mature in a subsequent fiscal year, the monies appropriated to pay current year fuel costs do not represent a logical or appropriate funding source to pay the related margin calls. That is because monies budgeted and intended for current year fuel costs should not be used to pay costs/obligations associated with a subsequent fiscal year. Accordingly, the City's "Energy Risk Management Policy and Procedures" authorized the use of electric operating reserves to "temporarily" fund those margin calls. Specifically, \$30 million of the operating reserve is authorized to pay margin calls on hedged deals that mature in a subsequent fiscal year. The funding of the margin calls from that \$30 million set-aside is temporary in nature, as once the applicable "future year" deals become "current year" deals, the funds appropriated (budgeted) to pay fuel costs in that "current year" can be used to reimburse the operating reserve for margin calls paid for the applicable hedged deals in previous years. Again, this is best demonstrated and explained in a simplified example.

EXAMPLE - Use of the Electric Operating Reserve to Temporarily Fund Margin Calls

The City executes a hedged deal (futures contract) through the NYMEX on a specific date in year 1 for the purchase of natural gas. That deal matures (and the applicable gas will be purchased) on the same date two years later (i.e., the same date in year 3). Because of subsequent projected decreases in market prices, the NYMEX makes a margin call of \$10,000 during year 2 (i.e., year after the deal was executed and the year before the deal matures). Because that margin call was made prior to year 3 (i.e., the year in which the deal will mature), the City pays that margin call in year 2 from the electric operating reserve. No other activity (changes in projected market prices or margin calls) occurs during year 2.

At the beginning of the year 3 (which is the year the hedged deal will mature), the funds budgeted in year 3 to pay current year fuel costs (for year 3) will transfer \$10,000 to the electric operating reserve. The transfer reimburses the electric operating reserve and changes the funding source of the previous \$10,000 margin payment to year 3's fuel costs budget.

The \$10,000 returned to the electric operating reserve is now available to fund (pay) new margin calls on other hedged deals that mature in subsequent fiscal years.

In essence, the \$30 million set-aside serves as a type of "revolving fund" available to temporarily fund margin calls on hedged deals maturing in

future years. Funds that are used to make margin calls are eventually returned and become available for subsequent margin calls.

Industry Guidance

We identified two sources of industry guidance that addressed establishment of cash reserves for the City's electric utility. The two sources are identified in the following paragraphs.

GFOA. The Government Finance Officers Association (GFOA) is a well-recognized organization whose primary mission includes identifying and developing financial policies and best practices for governmental entities. In February 2011, the GFOA issued a "best practices" document entitled Appropriate Levels of Working Capital in Enterprise Funds. As the City's electric utility operates as an enterprise fund, this guidance is considered applicable to the maintenance of the electric utility operating reserve. (NOTE: An enterprise fund is a government activity that operates in a manner similar to a private commercial enterprise. Specifically, it is defined as a government activity/function that provides services to the public for a fee(s) intended to make the activity/function self-supporting. The City's electric utility operates to generate sufficient revenues, primarily from customer billings, to pay related expenses and obligations. Accordingly, it is properly classified by the City and operates as an enterprise fund.) This guidance was used in addressing our audit objectives pertaining to the adequacy and reasonableness of current City policy (Specific objective No.1).

GFOA and APPA guidance was considered in determining the adequacy of City policy and reserve levels.

Two sources of industry

guidance pertaining to establishment of electric

utility operating reserves

are the GFOA and APPA.

APPA. The American Public Power Association (APPA) is a nonprofit service organization that advocates public policy interests on behalf of the nation's more than 2,000 community-owned electric utilities. The education arm of APPA provides courses and training in various areas pertaining to the public power industry. Recent trainings included a webinar for development of cash reserves policies for a public power utility. Audit staff attended this webinar for purposes of obtaining materials and guidance relating to the City's electric utility cash reserve policies. Those APPA materials and guidance were also used in addressing our audit objectives pertaining to the adequacy and reasonableness of current City policy (*Specific objective No.1*).

Accounting

The City uses various funds to account for different activities and operations within the City. In regard to the electric utility, we identified the following funds that are applicable to the scope of our audit.

Several City electric utility funds were applicable to the scope of this audit.

- Electric Operating Fund (Fund 400) This fund accounts for revenues from customer billings and other sources, payments of expenses and other obligations, and other miscellaneous activity (e.g., transfers) pertaining to operation of the electric utility. It is the primary fund used to account for the City's electric utility.
- <u>Electric Operating Reserve Fund (Fund 407)</u> This fund is used to account for the operating reserve. Associated sources (increases) and uses (transfers to other funds) are accounted for in this fund. (See Table 1 in this report.)
- <u>Electric Utility RRI Fund (Fund 401)</u> This fund is used to account for the funds set aside and used to fund certain capital improvements, projects, and needs (i.e., those that are not funded using bond proceeds).

Each of these funds were considered and analyzed in connection with our audit.

Overall Summary

Overall, we found City policies adequate and available reserves within the lower end of levels provided by policy and industry guidance; sources and uses of reserves were found to be authorized and appropriate.

We found the City's current policies provide for establishment of appropriate and adequate target reserve levels for the City's electric utility. We determined the reserves currently available are within the lower end of reserve levels provided by City policy and suggested by applicable industry guidance. We identified and determined sources and uses of reserve funds were appropriate and in accordance with established policy. We also found City processes and methods to account for reserves and related activity were generally adequate. A few issues were identified that indicate enhancements are warranted. Recommendations were made for those enhancements.

City Policies

(Specific Objective No. 1)

Industry guidance and past activity and events were considered in our evaluation of current City policy.

Our audit evaluation considered each of the separate reserve components.

Working capital reserves are established to ensure sufficient cash is available to pay expenses and obligations. Our first specific audit objective was to determine whether current City policy provides for establishment of reasonable and appropriate reserves for City electric utility operations. To make that determination we evaluated the reasonableness and logic of the current policy. Applicable industry guidance was identified, reviewed, and considered in connection with that evaluation. Past activity and events were also considered as part of our evaluation. Because City policy and industry guidance breakdown the overall reserve into components, our audit evaluation was similarly by component.

Working Capital (Liquidity)

The purpose of a working capital reserve is to ensure sufficient funds are available to pay expenses and obligations as they are incurred and/or due for payment. Working capital reserves are needed in situations where:

- Revenues are temporarily not collectible (e.g., due to temporary shutdowns in the billing, postal, or banking systems).
- Expenses and obligations are temporarily higher than planned (budgeted) or anticipated (e.g., temporary increase in fuel costs).

In essence, a working capital reserve ensures liquidity, or adequate cash to meet current expenses and obligations.

Application of GFOA Guidance. As described in Table 1 on page 12 of this report, City policy establishes a target reserve level for working capital in amounts sufficient to pay required cash outlays for 60 to 90 days. Based on the approved operating budget for fiscal year (FY) 2011, the targeted reserve is therefore \$56.2 to \$84.3 million (expected cash outlays for 60 to 90 days). As explained in the following, we found that policy provision to be generally in accordance with industry guidance established by the GFOA's *Appropriate Levels of Working Capital in Enterprise Funds*.

GFOA guidance provides for a working capital reserve ranging from 45 to 90 days of annual cash outlays, with adjustments based on applicable circumstances. GFOA guidance states that an enterprise operation, such as the City's electric utility, should start with a baseline of 90 days of annual operating expenses (cash outlays) as its working capital reserve and adjust that amount based on applicable circumstances and characteristics. The GFOA guidance provides that the minimum for a working capital reserve is 45 days of annual operating expenses. Our review showed various factors applicable to the City's electric utility that warrant a reserve closer to 90 days of annual expenditures (compared to the 45-day minimum). Those factors include:

- Required annual transfer from electric utility revenues to the General Fund.
- Necessity of funding a <u>portion</u> of future capital needs from electric utility revenues (opposed to funding those needs from debt, or bond proceeds).
- Requirement to fund payment on existing debt (outstanding bonds) from electric utility revenues.
- Volatility in revenues and cash balances due to seasonal fluctuations in demand for electric services (i.e., revenues are less and cash balances lower in months when less electricity are used, such as the fall and spring).
- Possibility of significant deviations from normal seasonal fluctuations in demand (e.g., extremely hot or cold months such that more fuel or power has to be purchased to meet demand, but the fuel rate adjustment to recover the resulting additional costs is not made until several months later).
- Fluctuations in fuel prices and limited ability to control fuel costs due
 to reliance on a single fossil fuel to generate electricity (i.e., natural
 gas). (NOTE: Although the City uses hedging practices to ensure
 stable fuel prices, a portion of the City's natural gas is purchased on
 the open market.)

Several factors applicable to the City's electric utility warrant a relatively higher working capital reserve.

GFOA guidance substantiates the target funding level established in City policy for working capital needs.

Using APPA guidance we classified the City's electric utility working capital needs into four categories.

Pertinent factors
addressed by APPA
guidance were identified
and considered in
evaluating amounts needed
for the working capital
reserve.

 Difficulty in raising rates (for charging customers) due to economic impact on City utility customers.

 Possibility of temporary events that prevent issuance of payment of customer utility bills (e.g., the City's billing software system or the commercial banking system is temporarily not available or shutdown).

Based on the GFOA guidance and the factors described above, we found the working capital reserve target level of 60 to 90 days of annual expenses and obligations to be prudent and reasonable.

Application of APPA Guidance. We also considered and applied APPA guidance in determining whether the City's policy provided for reasonable and appropriate reserves. Using that guidance, we classified the City electric utility's working capital needs into four categories:

- Operating and maintenance expenditures (cash outlays).
- Power supply (fuel) expenditures.
- Debt service expenditures.
- Capital improvement expenditures.

For each of those four categories, we identified operating factors from the APPA guidance that should be considered when determining amounts needed for working capital cash reserves. The more significant factors we determined pertinent to the City's electric utility included:

• Timing of expenditures – If expenses (expenditures/cash outlays) are not incurred evenly throughout the year, APPA guidance suggests a larger reserve may be appropriate to ensure adequate cash is available to pay expenses during the periods (months) with the higher costs. (We found the City electric utility does have significant monthly fluctuations in its annual expenditures; for example, fuels costs are typically higher in summer and winter; maintenance costs are significantly higher in certain months due to timing of contractually required payments; and required debt service payments are typically made only in certain months.)

Pertinent factors included timing of expenses, periods between incurring expenses and collecting related revenues, capital improvement programs, debt service requirements, and age of the City's electric utility infrastructure

- Period between payment of an expense and collection of the corresponding revenues The normal expense-collection cycle is for expenses to be incurred and paid throughout the month (30-day period), with utility bills generated and mailed to customers at the end of the month, and the related customer payments collected sometime in the subsequent month. APPA guidance indicates the typical lag between paying an expense and collecting the related revenue is 45 days for a public power utility. (City staff estimated the normal lag between expenses and related revenue collections for the City electric utility was likely 50 days.)
- Future capital improvement program To the extent that capital improvements are funded in part from an electric utility's operations (opposed to debt financing), a cash reserve should be adequate to ensure funds for that purpose are available. A relatively larger capital program with more improvements planned and/or needed necessitates a larger cash reserve. (The City does fund part of the electric utility's capital improvements from electric fund operations through annual transfers to the Electric RRI Fund. The RRI Fund is discussed on pages 15 and 16 of this report.)
- Annual debt service payments To the extent that an electric utility funds it debt service payments from operating revenues, a cash reserve should be maintained that ensures adequate funds are available to make those required payments. Outstanding debt requiring significant debt service payments requires a relatively larger cash reserve. (Debt service payments for the City's electric utility, comprised of interest and principal payments on outstanding bonds and other debt, are funded by and paid from electric utility operating revenues.)
- Age of infrastructure assets An older infrastructure generally requires a larger capital improvement program, more debt, and/or higher maintenance expenses. Accordingly, this factor directly impacts several of the preceding factors. (This review is based on the premise that the City's electric utility adequately and properly plans

for necessary capital improvements and replacements to ensure an updated infrastructure is maintained.)

We calculated what cash reserve levels for working capital needs should be based on the APPA guidance; several alternatives were considered.

Using the APPA guidance, we independently calculated what the cash reserve levels should be for the City's electric utility to ensure adequate working capital is available to pay expenses and obligations. Because of the subjective nature of this exercise, several calculations were made using different options. Each option was based on slightly different assumptions considering the operating factors described above. For example, one option considered no significant fluctuations in expenditures during the year, while other options used activity from the most recent year (FY 2010) to project likely fluctuations in monthly expenditures. The results of our review and analysis are shown in Table 2 that follows.

Table 2 Working Capital Target Levels Based on APPA Guidance					
	Working Capital Category		Option 1	Option 2	Option 3
1	Oper	ating & Maintenance	\$19,457,308	\$18,308,776	\$11,017,782
2	Powe	er Supply (fuel costs)	\$39,822,128	\$35,839,916	\$17,912,944
3	Debt	Service (NOTES 1 and 2)	\$24,892,342	\$24,892,342	\$22,861,598
4	Capit	al Improvements (NOTE 3)	\$26,220,054	\$26,220,054	\$26,220,054
	TOTAL		\$110,391,832	\$105,261,088	\$78,012,378
<u>Opt</u>	Option 1: Adjustments made based on historical fluctuations in expenses during the year; used 50-day lag between incurrence of expense and collection of related revenues (as suggested by City staff). Option 2: Adjustments made based on historical fluctuations in expenses during the year; used industry standard 45-day lag between incurrence of expense and collection of related revenues. Option 3: Represents amounts calculated using formula in APPA guidance to provide minimum working capital reserve level; no adjustments made for fluctuations in expenses during the year.				year; used industry revenues.
	Note 1 Amount not impacted by time lag; based solely on timing of required debt service payments. Many legal covenants pertaining to bonds issued by the City for the funding of major electric utility infrastructure projects require the City to maintain a separate reserve sufficient to make annual debt service payments. The reserves for "working capital debt service" as shown in this table based on APPA guidance are "in addition" to those separate legally mandated reserves. The APPA guidance provides the legally mandated reserves should not be considered part of the working capital reserve, as those legally prescribed funds are not considered available for use at the discretion of City management.				major electric utility ke annual debt service ed on APPA guidance e provides the legally
Note	Note 3 Amount not impacted based on time lag; also audit did not change amounts between options as (1) APF guidance did not provide options that yielded significantly different results and (2) amounts represented a an average of 6 different alternatives employed using auditor judgment.				

Working capital reserve levels calculated using APPA guidance were higher than levels suggested by GFOA guidance and City policy.

Whether City policy should be revised to provide a higher working capital reserve based on APPA guidance is a determination that should be considered and made by City management. These calculations and determinations using APPA guidance imply the City should maintain a cash operating reserve for working capital in an amount between \$78 million and \$110.4 million. These amounts are higher than the amounts suggested by the GFOA guidance and established by current City policy. Specifically, the APPA suggested reserve levels for working capital for the City electric utility are approximately \$20 million to \$25 million higher than GFOA suggested levels and current policy target levels. The higher amounts suggested by APPA guidelines are primarily attributable to adjustments for timing and fluctuations of expenditures during the typical year. APPA guidance provides options for such adjustments as a means to ensure sufficient working capital is available to pay the expenses and obligations during those months (with higher costs).

In summary, the APPA guidance suggests a higher (more conservative) working capital reserve that takes into consideration fluctuation and timing differences of expenses and obligations. Whether the City's policy should be revised to provide higher target reserve levels for working capital based on these fluctuations and timing differences is a determination that should be made by applicable City management.

Prior Activity and Events. We evaluated applicable City records to identify instances where the City's electric utility operating reserve has been used to meet working capital needs (i.e., provide cash to pay expenses and obligations) of that utility. Activity over the last 10.5 years was reviewed. We found no instances where operating reserve funds were "directly" transferred from the operating reserve fund (City Fund 407) to the electric utility operating fund (City Fund 400) for the sole purpose of providing cash to allow timely payment of the electric utility's expenses and obligations. However, our analysis did show reserve funds have been used in an "indirect" manner several times to assist the electric utility in timely payment of expenses and obligations. Specifically, cash accounted for in the electric operating reserve fund (Fund 407), the electric operating fund (Fund 400), and many other City funds are pooled and deposited/maintained in a single bank or investment account. That pooled cash is available to pay expenses and obligations of each of the

Our analysis showed electric utility reserves have historically been used to ensure adequate cash is available to pay expenses and obligations of the electric utility.

Those uses have been done in an "indirect" manner.

participating funds. When an individual fund uses a portion of the pooled cash to pay an expense/obligation, the use is charged (recorded) to that fund in the City's accounting system. In the event a participating fund's share of the pooled cash is temporarily not sufficient to pay expenses/obligations of that fund, it may temporarily use shares of the pooled cash "owned" by other participating City funds. In essence, one City fund borrows the cash owned by other City funds. This activity is tracked within the City's accounting system (PeopleSoft Financials). Specifically, funds that have borrowed from the pooled cash reflect deficit cash positions and funds that loaned the funds continue to reflect positive cash positions. The City's automated interest earnings allocation process ensures the funds with deficit cash positions pay appropriate amounts of interest to the funds with positive cash position for the temporary use of those funds' cash.

Our review showed the electric operating fund (Fund 400) maintained deficit cash positions several times while the operating reserve fund (Fund 407) maintained positive cash positions. In one instance the deficit cash position in Fund 400 was intentional, as the City Commission approved City management's recommendation to spread recovery of abnormally high fuel costs incurred during Hurricane Katrina in 2006 (excess fuel costs of \$15.4 million) over a three-year period, as opposed to increasing billing rates to recover such costs over the subsequent sixmonth period. (NOTE: The normal process is to adjust the fuel rate component charged to customers to recover fuel costs incurred during one six-month period in the next six-month period. In this instance the City adjusted rates such that the \$15.4 million of excess costs would be recovered over a three-year period instead of the normal six-month period. The effect was billing rates were temporarily not high enough to provide sufficient cash in the operating fund to pay all expenses and As a result, the electric operating fund {Fund 400} obligations. temporarily operated in a deficit cash position.) As explained in the previous paragraph, the deficit cash positions in the electric operating fund (Fund 400) were covered by cash "owned" by other City funds, including the electric operating reserve (Fund 407). Because cash of the various participating City funds is pooled, an accurate determination of exactly how much reserve funds were used specifically for the operating

fund is not readily determinable. Notwithstanding, the reserve fund did contribute to the provision of cash needed by the operating fund during that three-year period.

Credit Ratings. The importance of establishing reasonable and appropriate policy requirements and for maintaining adequate working capital reserves is also important to the City's credit ratings. Each of the national bond rating firms (Fitch, Moody's, and Standard and Poor's) includes liquidity as a significant factor in establishing a public utility's credit rating. Liquidity is measured by available working capital, which can be defined as liquid assets (primarily cash and cash equivalents) less current expenses and obligations. As explained within this report section, one of the primary purposes served by the City's operating reserve is ensuring adequate cash is available to pay the utility's expenses and obligations. Accordingly, the establishment of a reasonable and appropriate policy and maintenance of adequate cash reserves is significant to the City's bond ratings.

Reviews of the City's current and prior credit ratings by one of the bond rating companies show the City has historically maintained a positive ("very good") rating. Specific evaluation criteria used by the rating companies are not made available to the public. Notwithstanding, the City's electric utility operating reserve policy (and related reserve levels) have been significant in ensuring continued positive credit ratings for the City's electric utility. Positive credit ratings, in turn, help lower the cost of debt when the City issues bonds to finance major infrastructure projects (e.g., new power plants, generation units, substations).

Conclusion. We found the City policy provisions and related target levels for the working capital component were reasonable, appropriate, and in accordance with industry standards. While APPA guidance suggests that consideration be given to a somewhat higher (more conservative) target reserve level, we found the target levels established by City policy are within the low range of reserve levels suggested by that APPA guidance. We also found that the operating reserve fund has historically been used (in an indirect manner) to provide working capital to the electric utility to allow the timely payment of the utility's expenses and obligations, thereby justifying the need for the reserve. Additionally,

Policy provisions
established to ensure
adequate working capital
has helped the City
maintain positive credit
ratings.

City policy provisions and related target levels for working capital were reasonable, appropriate, and overall in accordance with industry standards.

the policy and maintained operating reserve have contributed to positive credit ratings for the City's electric utility, thereby reducing the cost of debt incurred to fund major electric utility infrastructure improvements and additions.

Emergency Reserve (Events)

The purpose of an emergency reserve is to ensure sufficient cash is available to address major repairs and related costs upon occasion of unanticipated catastrophic events, such as hurricanes, tornadoes, terrorist attacks, and major accidents. Related costs include, for example, rental of auxiliary generation units or purchase of electricity (at market prices) generated by other utilities and available to the City through the power grid to which the City is connected. As shown in Table 1 on page 12, City policy provides for a targeted minimum emergency reserve of \$20 million, with an optimal level of \$40 million.

Industry Guidance. GFOA guidance does not address maintaining operating reserves to fund major repairs and related costs as a result of catastrophic events. However, the APPA guidance does provide a separate operating reserve component for such events. Factors identified by the APPA guidance impacting the reserve levels that should be maintained for a major emergency event include the following:

- Replacement costs This represents the costs incurred to replace damaged or destroyed electric utility infrastructure due to a major catastrophic event. APPA guidance provides the replacement costs can be estimated based on (1) the infrastructure's booked value (value of utility infrastructure assets recorded in the accounting system) and (2) age of the infrastructure.
- Insurance Insurance coverage for damages resulting from certain catastrophic events may lower the amounts needed in cash reserves maintained to address such events. However, if collection of insurance proceeds is not timely and/or is delayed due to claim settlement issues, sufficient reserves should be available to fund the necessary repairs and related events immediately after the event. (The City's generation units, power plants, and substations are

Emergency reserves are established to ensure sufficient cash is available to address major repairs and related costs as the result of catastrophic events.

APPA guidance addresses reserves for emergency events.

Pertinent factors included replacements costs and insurance.

insured for catastrophic events but the City's transmission and distribution infrastructure is not insured as costs are prohibitive. The City's insurance covers actual losses (repairs) but does not cover related costs as defined above. Also, recent history has shown insurance proceeds are not always collected in time to pay for repairs and expenses necessary to keep the utility fully operational immediately after the applicable event. Insurance proceeds were sometimes collected several months after the applicable event.)

Using the formula provided by APPA guidance we calculated a suggested reserve level for emergency events somewhat less than the target levels established in current City policy.

Using the formula and factors provided by the APPA guidance, we independently calculated a targeted emergency reserve level for the City's electric utility. That calculated amount ranged from \$10.3 million to \$15.5 million. The lower end of that range is based on the assumption that the City's infrastructure is relatively "new" as determined based on the amount of accumulated depreciation recorded for the electric utility infrastructure in the City's accounting system. (NOTE: The APPA guidance considers anything less than 50% depreciated as relatively "new.") The high end of the range represents an adjusted amount based on the premise that the age of the City's electric utility infrastructure is near the threshold between "new" and "middle-aged" (i.e., in the middle of its useful life).

In summary, APPA guidance suggests a reserve level for emergency events that is less than the \$20 million minimum target level established by City policy.

Prior Activity and Events. The City electric utility experienced a significant emergency event in 2004, approximately seven years ago. That event was a major accident involving one of the generation units at the City's Purdom power plant. Costs incurred by the electric utility for that event totaled approximately \$15.8 million. (Those costs were funded by a combination of insurance proceeds {\$7.8 million}, the Electric RRI Fund {\$6 million}, and the operating reserve fund {\$1.8 million}. The operating reserve fund also provided working capital to "front" those costs prior to recovery of the insurance proceeds. This event and related funding is also addressed later in this report under the section addressing "Specific objective No. 3.") That event substantiates the higher targeted

Based on a prior significant event (accident), the target funding level established by City policy for emergency events is considered reasonable.

reserve level suggested by APPA guidance as described in the previous paragraph.

Conclusion. The prior emergency event and APPA guidance suggest a minimum targeted reserve level for emergency events (major unanticipated catastrophic events) of \$15 million to \$16 million. This is not considered significantly less than the \$20 million minimum target level provided by City policy. Neither prior events nor APPA guidance suggests a maximum targeted reserve level of \$40 million. Accordingly, City policy provides for a targeted reserve range that is somewhat higher than the range suggested by prior events and industry guidance. However, because of the judgmental and subjective nature involved in determining appropriate reserve levels and the inability to precisely predict actual losses and related costs resulting from an unforeseen catastrophic event (e.g., a single hurricane resulting in significant damage to both of the City's primary power plants) or multiple events, we consider the more conservative \$20 million to \$40 million preferred reserve level, as established in City policy, to be reasonable and appropriate.

Fuel Risk Management

As described in the background section of this report, \$30 million of the City's operating reserve are designated to temporarily fund NYMEX margin calls on hedged deals, executed for natural gas acquisitions that mature in subsequent (future) fiscal years. This \$30 million set aside was established in both City Commission Policy 224 "Financing the Government" and the City's "Energy Risk Management Policy and Procedures." A detailed explanation and description of the manner and circumstances in which the \$30 million set aside is/will be used is provided on pages 14 through 20 of this report.

<u>Industry Guidance</u>. Neither the GFOA nor APPA guidance addresses establishment or use of an operating reserve to fund margin calls on hedged deals for the acquisition of fuels used in the generation of electricity. However, use of hedging instruments and practices for fuel acquisition is a prudent and accepted industry practice.

City policies set aside \$30 million of the electric utility's operating reserve to temporarily fund margin calls on certain hedged deals executed for the acquisition of natural gas.

The \$30 million set-aside has been used to temporarily fund margin calls over the last 4.5 years totaling \$90.4 million.

Based on current energy risk management policy and practices the \$30 million set-aside is justified and reasonable.

Rate stabilization reserves are maintained to provide a source to keep customer billing rates stable in the event revenues generated from such rates are not sufficient to pay expenses and obligations of the electric utility.

Prior Activity and Events. As explained on pages 14 through 20, the \$30 million set aside serves as a type of "revolving fund," in that reserve funds used to make margin calls are eventually returned (refunded from the current year's budgeted fuel costs) and again become available to fund new margin calls. In our review of activity within the electric operating reserve, we determined that over the last 4.5 years the \$30 million set aside has been used to pay margin calls (on hedged deals maturing in future years) totaling \$90.4 million. That represents an average annual use of \$20.1 million. The highest use occurred in FY 2008, when the designated reserve funds were used to temporarily fund margin calls totaling \$48 million. This usage shows the designation of \$30 million of the operating reserve is an appropriate and justified amount.

Conclusion. The designation of \$30 million of electric utility operating reserves for temporarily funding margin calls, on hedged financial deals for natural gas acquisitions maturing in future fiscal years, is appropriate and justified based on current energy risk management policy and activity in recent years. However, because these funds are frequently used for the designated purpose, they are often outstanding and not available to address other needs for which the operating reserve was established (working capital, emergency events, and rate stabilization). Accordingly, the \$30 million set aside should be considered an amount "in addition to" and not part of the remaining operating reserve funds.

Rate Stabilization

In the event management and/or policy makers (City Commission) determine it is not appropriate to increase billing rates when revenues are not adequate to generate sufficient cash to pay expenses and obligations, reserves can be used to provide funds to cover the cash insufficiencies (shortages). This is known as "rate stabilization." Use of reserve funds for that purpose allows for billing rates to remain stable, such that customers are not financially stressed by increased rates. Rate stabilization can be done in a "direct" manner, in which reserve funds are transferred directly to the electric utility for use in paying expenses and obligations. Rate stabilization can also be done in an "indirect" manner.

For example, instead of raising billing rates to pay for additional debt incurred to finance a new generation unit, reserve funds could be used to pay for that new unit (i.e., "cash finance") so that billing rates would not have to be increased to pay the debt. The City's current reserve policy provides for a minimum target funding level for rate stabilization in the amount of \$15.5 million. The policy also provides for an optimal funding level for rate stabilization in the amount of \$31 million.

Rate stabilization reserves are available for use when management and policy makers determine it is not prudent to increase billing rates. (NOTE: The uses of reserve funds for the reasons described for the working capital and emergency event categories also can be interpreted to represent a form of rate stabilization. This is because, without use of reserve funds, rates theoretically would also have to be increased to provide sufficient cash in the event of working capital shortages or to provide funds needed to pay for repairs and related costs in the event of a catastrophe. This fourth category of reserves (Rate Stabilization) is differentiated from the other two categories (Working Capital and Emergency Events) from the perspective it pertains to cash shortages arising from use of rates that are inadequate to generate sufficient cash to meet operating expenses and outlays over an extended period. That use is in contrast to use of reserves for (1) temporary working capital shortages due to fluctuations in revenues and/or expenses and (2) paying for repairs and related costs resulting from a major emergency event.)

Industry Guidance. While no specific industry guidance was identified that addressed establishing appropriate reserves for rate stabilization purposes, the available APPA guidance did acknowledge that rate stabilization may be an intended purpose for a reserve fund in addition to ensuring adequate working capital and funds for emergency events. As stated above, current City policy establishes a target level ranging from \$15.5 million to \$31 million for this category.

Suggested funding levels established in City policy for rate stabilization were based on logical and reasonable assumptions.

In response to our inquiry on how these amounts were established, applicable City staff indicated the \$15.5 million represented 5% of projected annual revenues from sales of electricity to City utility customers based on current billing rates, and the \$31 million represented 10% of those projected amounts based on those rates.

We found the policy target levels to be accurately determined using management's assumptions.

Staff further explained the 5% minimum threshold was based on the premise that City utility customers could likely absorb a rate increase (i.e., needed to cover an operating shortage/deficit) that raises their typical utility bill in an amount less than 5% without incurring significant financial stress. Rate increases that raise utility bills more than 5% were perceived as resulting in significant financial stress for typical City utility customers. Accordingly, staff's perception is that consideration should be given (and reserve funds available) to fund operating shortages/deficits of more than 5% from the electric operating reserve fund. Conversely, staff perception is that an operating deficit of more than 10% would be too significant to attempt stabilizing solely with reserve funds. In such a circumstance, an increase in rates would likely be required and appropriate, regardless of the level of financial stress on City utility customers.

Based on FY 2011 budgeted revenues from sales of electricity to City utility customers, our review showed the 5% minimum threshold explained above would result in a minimum reserve fund level of \$15.8 million, which approximates the \$15.5 million reflected in the current reserve policy. Similarly, applying the 10% threshold to those FY 2011 budgeted revenues results in a maximum of \$31.6 million, which also approximates the \$31 million reflected in the current reserve policy.

Prior Activity and Events. To ascertain the reasonableness of the established reserve target levels, we also reviewed the historical use of reserve funds for rate stabilization purposes. We found the following:

- Electric operating reserve funds were last used for <u>direct rate</u> <u>stabilization</u> in November 2000, approximately 10.5 years ago. In that instance, the City Commission authorized use of reserve funds in the amount of \$4.4 million to offset an operating deficit (current rates did not generate revenues adequate to pay expenses/obligations) attributable to (1) higher than anticipated fuel costs and (2) delays in the installation and startup of a new and more efficient generating unit at the Purdom generating facility.
- For the current year (FY 2011), \$10.5 million of electric operating reserve funds have been budgeted and planned for direct rate

Operating reserves have been used several times in the last 10.5 years for rate stabilization; plans are to again use those reserves for rate stabilization in FY 2012.

stabilization. Although no reserve funds have been used (transferred) to date (as of mid-summer 2011), those funds will be transferred to the electric utility operating fund in the event they are necessary to enable payment of all current year operating expenses. (From another perspective, the reserve funds are planned to allow for a balanced budget for electric utility operations in FY 2011; if those funds were not budgeted, the electric utility likely would have had to increase its base rates at the beginning of FY 2011 to ensure a balanced budget.)

- In September 2011, as part of the FY 2012 budget, the City Commission approved use of up to \$17.4 million of electric operating reserve funds for <u>direct rate stabilization</u> for that year. This action was taken to preclude increasing customer billing rates in FY 2012 to address a projected operating deficit, which is based on anticipated expenses and revenues. The anticipated revenues, in turn, were based on projected consumption and current billing rates.
- As approved by the City Commission, operating reserve funds have also been used during the last 10.5 years to fund different utility assistance programs that helped eligible individuals/families/entities pay their utility bills and/or reduce their bills through demand side management (DSM) practices. While not considered direct rate stabilization, by virtue of enhancing customers' ability to pay their utility bills (through direct assistance or indirectly by making their bills more affordable), those programs represent a form of indirect rate stabilization, as they helped ensure related revenues were collected to pay operating expenses and obligations. Operating reserve funds used for those programs over the last 10.5 years totaled approximately \$1.1 million. Those uses are described in further detail on pages 50 and 51 of this report.
- In April 2011, the City Commission approved use of \$2.7 million in reserve funds to cover accumulated uncollected receivables due the electric utility from external entities for various events and services. This also represented a type of <u>indirect rate stabilization</u> for similar reasons to the previous item. Specifically, if that amount had not been provided by the reserve fund, an increase in rates may have been

Operating reserves have been used for both "direct" and "indirect" rate stabilization.

an appropriate alternative to recover the cost of those events and services.

In addition to operating reserves, RRI reserves have historically been used for rate stabilization.

We also noted that the electric utility's repair, replacement, and improvement (RRI) fund (Fund 401) has and is being used for rate stabilization purposes. As described on page 21 of this report, that fund is separate from the electric utility operating reserve fund (Fund 407). Our review showed available Electric Utility RRI funds were used for direct rate stabilization in FYs 2003, 2004, and 2005 (\$6.8 million, \$8.4 million, and \$12.3 million, respectively) and are again being used in FY 2011 for indirect rate stabilization. For FY 2011, the rate stabilization is being achieved by reduction of the normal budgeted transfer from the electric utility operating fund (Fund 400) to the electric utility RRI fund (Fund 401) by \$10.1 million (i.e., the initially planned transfer out of the operating fund of \$17.2 million). This use of the electric utility RRI funds for purposes similar to the objectives for the electric utility operating reserve fund is also addressed on pages 52 through 54.

Conclusion. Prior annual uses of operating reserve funds (Fund 407) for direct rate stabilization over the last 10.5 years and projected uses during the upcoming year range from \$4.4 million to \$17.4 million. Other operating reserve fund amounts have been used over that period for programs benefiting utility customers and for recovery of uncollected receivables. Those other uses could be considered forms of indirect rate stabilization as they helped ensure adequate revenues and cash are available to pay operating expenses and obligations, such that rate increases are not necessary. We found a separate electric utility fund, the electric RRI fund (Fund 401), has also been used for direct and indirect rate stabilization purposes over the last 10.5 years.

Prior and planned uses of reserve funds for rate stabilization justify the targeted reserve levels for that purpose as established in City policy.

For FY 2011, the \$10.5 million budgeted from the operating reserve fund for direct rate stabilization, plus the \$10.1 million budgeted from the RRI fund as a form of indirect rate stabilization, totals \$20.6 million. For FY 2012, an additional \$17.4 million has been authorized from the operating reserve fund for direct rate stabilization. Those amounts (\$20.6 million for FY 2011 and \$17.4 million for FY 2012) fall within the \$15.5 million

to \$31 million target range established by the reserve policy for rate stabilization. We did not identify anything to imply that the City's reasoning for the established minimum and optimal reserve levels are not reasonable or appropriate. Based on these audit determinations, the policy's reserve level amounts for rate stabilization purposes are deemed appropriate, logical, and reasonable.

Overall Conclusion – City Policy (Specific Audit Objective No. 1)

The review and analyses reflected above show, overall, current City policy provides for the establishment of reasonable and appropriate reserves for the City's electric utility. That conclusion was made taking into consideration applicable industry guidance and prior activity and events. The impact of City policy on the City's credit rating was also considered.

Overall, our independent analyses show current City policy provides for operating reserve levels that are reasonable and appropriate.

In some instances, applicable industry guidance provides for alternative reserve levels for certain components that are higher or lower than amounts established by current City policy. However, that same guidance provides alternatives that support the reserve levels established by City policy. Because of the inherently subjective nature of establishing reserves for an electric utility, we do not recommend the City revise current policy. However, we do recommend City management consider the different alternatives when making subsequent revisions to current reserve policy provisions.

The following table compares reserve levels suggested by APPA guidance to reserve levels established in current City policy. When considered in total, the reserve levels are similar.

Table 3 Comparison of Reserve Levels Per City Policy to Reserve Levels Suggested By APPA Guidance					
	Reserve Components Per City Policy	Suggested Reserve Levels Per City Policy (NOTE A)	Suggested Reserve Levels Per APPA Guidance (NOTE B)		
1	Working Capital	\$56.2 million to \$84.3 million	\$78 million to \$110.4 million		
2	Emergency Events	\$20 million to \$40 million	\$10.3 million to \$15.5 million		
3	Fuel Risk Management (NOTE C)	\$30 million	\$30 million		
4	Rate Stabilization (NOTE C)	\$15.8 to \$31.6 million	\$15.8 to \$31.6 million		
	TOTAL	\$122 million to \$185.9 million	\$134.1 million to \$187.5 million		

NOTE A: See Table 1 on page 12.

NOTE B: These preferred levels were determined by applying APPA Guidance to FY 2011 budgeted activity and/or to FY 2010 actual activity.

NOTE C: APPA guidance does not address these components but acknowledges reserves may be established to address purposes in addition to ensuring adequate working capital and funding for emergencies. Accordingly, the amounts represented for these two components are based on City Commission Policy 224, which were determined on audit to be reasonable.

City Reserve Levels

(Specific Objective No. 2)

We identified and compared available reserves to reserve levels established in current City policy and reserve levels suggested by APPA guidance.

Our second specific audit objective was to determine whether the City has maintained adequate and appropriate reserves for electric utility operations. To make that determination, we identified available reserves at selected points in time and compared those reserve amounts to preferred reserve levels established by applicable provisions of City Commission Policy 224 "Financing the Government." Although the current policy provisions did not go into effect until September 2010, our audit determinations and comparisons were done for FY 2008 through FY 2011 (as of March 31, 2011), as if those current policy provisions were in place during that entire period. This was done to provide a historical perspective of City electric utility reserve levels in relation to current policy provisions. In addition, we compared the identified reserves to reserve levels suggested by APPA guidance.

Available Reserves

As described and explained in the background section of this report on pages 11 through 14, reserves available to the City electric utility include both (1) the electric operating reserve (Fund 407) and (2) the <u>undesignated</u> balance of the electric utility RRI fund (Fund 401).

In our identification of available reserves we considered both operating reserves maintained in Fund 407 and applicable funds in the Electric RRI Fund (Fund 401).

Accordingly, applicable amounts from both sources (funds) were considered in our identification of available reserves.

Furthermore, we analyzed the <u>designated</u> balances in the Electric RRI Fund and found other amounts that could be interpreted as "available" reserves. For example, our analysis identified the following three projects for which RRI funds had been designated but for which no activity had occurred for several years.

Table 4 Electric RRI Funds Designated for Capital Projects with No Recent Activity						
Project #	Project Description	Year Established	Funds Designated:			
			<u>9-30-2008</u>	9-30-2009	9-30-2010	<u>3-31-2011</u>
#02031	Property Acquisition	2002	\$1,999,747	\$1,999,747	\$1,999,747	\$1,999,747
#06122	GIS Electric Field Inventory	2005	\$326,000	\$326,000	\$326,000	\$926,000
#07168	Pilot for Alternative Energy Source	2006	\$4,000,100	\$4,100,100	\$5,400,000	\$5,400,000
TOTAL			\$6,325,747	\$6,425,747	\$7,725,747	\$8,325,747

Electric Utility RRI funds designated for several projects were also considered available to the electric utility as reserves. In response to our inquiry as to the availability of those RRI fund balances designated for those three projects, electric utility management indicated they had recently initiated a more global review of outstanding capital projects established for the electric utility. Management indicated the initial efforts had already identified approximately \$19 million in capital projects that could be deobligated (i.e., changed from designated to undesignated status). Management also indicted those efforts were continuing with the expectation that additional designated amounts may be identified for deobligation. Accordingly, for purposes of our analysis, we conservatively considered \$19 million of currently designated RRI funds as available reserves for the period covered by our analysis (FY 2008 through FY 2011). (NOTE: The three projects identified above in Table 4 were not part of the projects comprising the \$19 million. Discussions with electric utility management indicated that, notwithstanding the lack of recent activity, those three projects remain viable projects for which future activity is anticipated and thus deobligation was not currently planned.)

Our determinations of available reserves are shown in the Tables 5 and 6 that follow. Differences between the two tables are explained therein.

Table 5 Reserves Available to the Electric Utility Including Funds Outstanding for Margin Calls						
<u>9-30-2008</u>						
Operating Reserve Fund (Fund 407)	Operating Reserve Fund (Fund 407)					
(NOTE 1)	\$93,645,878	\$95,110,659	\$103,679,474	\$104,014,169		
Undesignated RRI Funds (Fund 401)	\$19,993,164	\$21,600,076	\$34,461,983	\$28,166,433		
Designated RRI Funds Considered \$19,000,000 \$19,000,000 \$19,000,000 \$19,000,000 \$19,000,000						
TOTAL \$132,639,042 \$135,710,735 \$157,141,457 \$151,180,602						

NOTE 1: These balances <u>include</u> the portions of the \$30 million, designated for margin calls on hedged financial deals maturing in future year, that were outstanding as of the respective dates (i.e., used for margin calls but not reimbursed from appropriated fuel costs as of the respective dates). Although technically not available to the Electric Utility on the respective dates, the reserve fund (fund 407) was/will eventually be reimbursed those outstanding balances from funds appropriated to pay fuel costs.

NOTE 2: For purposes of our analyses, we assumed that the \$19 million addressed in the previous report paragraph was available for deobligation for each of the presented dates.

We calculated available reserves as of selected points in time under two alternatives.

As described by *NOTE 1*, the available reserve balances in Table 4 above include amounts to be reimbursed to the reserve fund for margin calls temporarily funded from the \$30 million set aside for that purpose. Those amounts will eventually be reimbursed from funds appropriated to pay fuel costs. (See pages 14 through 20 for a detailed description of this process.) Accordingly, while those outstanding margin calls constitute part of the reserve fund balance, they represent a type of "receivable" and not available "cash." Accordingly, we prepared the following table to show a determination of reserve fund balances comprised only of available cash as of the respective dates.

Table 6 Reserves Available to the Electric Utility Excluding Funds Outstanding for Margin Calls (i.e., Cash Only)					
<u>9-30-2008</u>					
Operating Reserve Fund (Fund 407)	Operating Reserve Fund (Fund 407)				
(NOTE 1)	\$84,605,438	\$73,518,284	\$73,194,852	\$87,745,616	
Undesignated RRI Funds (Fund 401)	\$19,993,164	\$21,600,076	\$34,461,983	\$28,166,433	
Designated RRI Funds Considered Available (NOTE 2)	\$19,000,000	\$19,000,000	\$19,000,000	\$19,000,000	
TOTAL \$123,598,602 \$114,118,360 \$126,656,835 \$134,912,049					

NOTE 1: These balances <u>exclude</u> the portions of the \$30 million, designated for margin calls on hedged financial deals maturing in future year, that were outstanding as of the respective dates (i.e., used for margin calls but not reimbursed from appropriated fuel costs as of the respective dates). While those outstanding amounts represent a portion of the reserve fund balance, they are a type of "receivable" and not considered "available cash" as of the respective dates.

NOTE 2: For purposes of our analyses, we assumed that the \$19 million addressed in the previous report paragraph was available for deobligation for each of the presented dates.

The amounts of available reserves as shown in these two tables are compared to target reserve levels established by current City policy in the following report section.

Comparison Available Reserves to Policy Target Reserve Levels

Available reserves as calculated by this audit were compared to target reserve levels established by current City policy.

The amounts determined as reserves available to the City's electric utility as shown in Tables 5 and 6 above were compared to target (preferred) reserve levels established by current provisions of City Commission Policy 224 "Financing the Government." Although those current policy provisions were not effective until September 2010, comparisons were made for FY 2008 through FY 2011 (as of March 31, 2011) as if the current policy provisions were effective for each of those years. This was done to provide a historical perspective. Our comparisons are shown in Table 7 below.

Table 7 Comparison of Available Reserves to Target Reserve Levels (Based on Current Policy Provisions Effective September 2010)						
	9-30-2008	<u>9-30-2009</u>	<u>9-30-2010</u>	<u>3-31-2011</u>		
Target Reserve Level per Policy 224 (NOTE A)	\$122.2 million to \$191 million	\$141.7 million to \$215.3 million	\$121.3 million to \$184.7 million	\$122 million to \$185.9 million		
Available Operating and RRI Reserves (Including amounts receivable for outstanding margin calls)						
(NOTE B)	\$132.6 million	\$135.7 million	\$157.1 million	\$151.2 million		
Available Operating and RRI Reserves (Excluding amounts receivable for outstanding margin calls) (NOTE C)	\$123.6 million	\$114.1 million	\$126.7 million	\$134.9 million		
Available reserves within target range established by current City policy?	YES	NO (NOTE A)	YES	YES		

NOTE A: The target reserve levels varied between years based on fluctuations in budgeted costs, with the largest fluctuation attributable to increases or decreases in fuel costs. The large increase in those fuel costs in FY 2009 was the primary reason the "available reserves" were below the target reserve level for that year.

NOTE B: Amounts are from Table 5

NOTE C: Amounts are from Table 6

Available reserves have been above or near the lower end of target ranges established in current City policy.

The information presented in the preceding table indicates available reserves have been above or at least near the minimum thresholds that would have been applicable under current provisions of City Policy 224 "Financing the Government." (As explained in NOTE A within the preceding table, available reserves were not within targeted reserve levels in FY 2009 because of anticipated higher fuel costs at the beginning of that year.)

Comparison Available Reserves to Reserve Levels Suggested by APPA Guidance

Available reserves as calculated by this audit were also compared to reserve levels suggested by APPA guidance.

In addition to the previous comparisons, we compared available reserves as of September 30, 2010, and March 31, 2011, to reserve levels suggested by APPA guidance. For purposes of this comparison, the APPA guidance was applied to FY 2011 budgeted activity (approved budget) for determining the levels suggested by that guidance.

Table 8 that follows shows our determination of suggested reserve levels for FY 2011 using the APPA guidance.

Table 8 Reserve Levels Suggested for FY 2011 Based on APPA Guidance				
Reserve Components Per City Policy Suggested Reserve Levels Per APPA Guidar (NOTE A)				
1	Working Capital	\$78 million to \$110.4 million		
2	Emergency Events	\$10.3 million to \$15.5 million		
3	Fuel Risk Management (NOTE B)	\$30 million		
4	Rate Stabilization (NOTE B)	\$15.8 to \$31.6 million		
	TOTAL	\$134.1 million to \$187.5 million		

NOTE A: These preferred levels were determined by applying APPA Guidance to FY 2011 budgeted activity and/or to FY 2010 actual activity.

NOTE B: APPA guidance does not address these components but acknowledges reserves may be established to address purposes in addition to ensuring adequate working capital and funding for emergencies. Accordingly, the amounts represented for these two components are based on City Commission Policy 224, which were determined on audit to be reasonable.

Table 9 that follows compares the suggested reserve levels based on the APPA guidance to reserves determined available for the two dates.

	Guidance			
<u>9-30-2010</u>	<u>3-31-2011</u>			
\$134.1 million to \$187.5 million	\$134.1 million to \$187.5 million			
\$157.1 million	\$151.2 million			
\$126.7 million	\$134.9 million			
Available reserves within preferred range based on APPA guidance? "YES" if include amounts receivable for outstanding margin calls; "NO" if only include available cash YES				
	\$134.1 million to \$187.5 million \$157.1 million \$126.7 million "YES" if include amounts receivable for outstanding margin calls; "NO" if			

Reserves levels are within or near the lower end of target ranges suggested by APPA guidance.

The information in Table 9 indicates for FY 2011 the City has maintained reserves for electric utility operations which are within or very near the reserve levels suggested by applicable industry guidance.

Overall Conclusion – City Reserve Levels (Specific Audit Objective No. 2)

Overall conclusions from our analyses are (1) excess reserves have not been maintained and (2) reserve levels are within or near target levels suggested by City policy and APPA guidance. The information presented above (Tables 4 through 9) shows City reserves maintained for the electric utility have <u>not</u> been in excess of amounts established by current City Commission Policy 224 "Financing the Government" and APPA guidance. The information also shows that if available RRI funds are considered part of reserves, City reserves have been and are within (or at some points very near) the lower end of the ranges provided by that policy and guidance. (Note: Approved use of up to \$17.4 million of those reserves in FY 2012 for rate stabilization purposes may result in a significant decrease in available reserve levels, such that available reserves may be slightly below the levels established by City policy and suggested by APPA guidance.)

Sources and Uses of Reserves (Specific Objective No. 3)

Our third specific audit objective was to determine if the sources and uses of reserves maintained for the electric utility were proper, reasonable, and in accordance with established policy. To accomplish this audit objective, we identified and reviewed reserve activity over the last 10.5 years (October 2000 through April 2011).

Sources of Operating Reserves

City Commission Policy 224 "Financing the Government" establishes two primary funding sources for the City's electric utility operating reserves. Those two sources are:

The electric operating reserve is funded from investment earnings and operating surpluses of the

transfer of year-end

electric utility.

- Earnings on invested reserve funds Reserve funds are invested by the Treasurer-Clerk's Office along with other City funds temporarily not needed to pay applicable City expenses and obligations. According to current policy, earnings on invested reserve funds are considered part of the reserves. Accordingly, such investment earnings are to be retained in the fund (Electric Operating Reserve Fund {Fund 407}) and reinvested if not used for authorized purposes. (NOTE: Notwithstanding this policy provision, for FY 2012, the electric utility budgeted transfer of FY 2012 investment earnings on operating reserve balances directly to the Electric Operating Fund {Fund 400} to help address the anticipated revenue shortfall in that year. Revisions to City Commission Policy 224 providing for direct transfer of interest earnings, on operating reserves, to Fund 400 have been proposed.)
- <u>Year-end operating surpluses</u> According to current policy, year-end operating surpluses (uncommitted fund balance remaining after payment of applicable expenses and obligations) in the Electric Operating Fund (Fund 400) are to be transferred to the Electric Operating Reserve Fund (Fund 407). When such surpluses occur, the transfers are typically made in December or January of the following fiscal year.

Our review shows a total of \$43.4 million was deposited/transferred into the Electric Operating Reserve Fund (Fund 407) over the last 10.5 years (FY 2001 through the mid-point of FY 2011). Of that total, \$27.4 million represented earnings on invested reserve funds and \$16 million represented electric utility operating surpluses. A schedule of those additions by fiscal year is presented in Table 10 below.

Table 10 Sources of Reserve Funds Last 10.5 Years					
Fiscal Year	<u>Total</u>				
2001	\$3,463,085	\$1,152,700	\$4,615,785		
2002	\$3,293,724	\$2,738,100	\$6,031,824		
2003	\$3,173,243	None (Note 1)	\$3,173,243		
2004	\$2,075,389	None (Note 2)	\$2,075,389		
2005 \$2,058,505		None (Note 2)	\$2,058,505		
2006	\$2,234,365	None (Note 3)	\$2,234,365		
2007	\$3,594,367	\$4,258,259	\$7,852,626		
2008	\$3,332,493	\$872,874	\$4,205,367		
2009	\$1,405,122	\$59,659	\$1,464,781		
2010	\$2,446,505	\$6,946,909 (Note 4)	\$9,393,414		
2011	2011				
(As of 3-31-2011)	\$334,695	Not Applicable (Note 5)	\$334,695		
TOTALS \$27,411,493 \$16,028,501 \$43,439,5					

NOTE 1: Based on City Commission approval, the \$1.3 million surplus for this year was transferred to the Emergency Assistance Program to provide utility bill discounts to qualifying low-income customers.

NOTE 2: There were no operating surpluses these years, there were deficits which were funded by the Electric Utility RRI Fund.

NOTE 3: The operating surplus of \$5 million for this year was transferred to the Electric RRI Fund instead of to the Electric Utility Operating Reserve Fund.

NOTE 4: The initial transfer of \$8.3 million was subsequently adjusted due to a \$1.35 million recording error that had erroneously overstated the Electric Utility's operating surplus for this year.

NOTE 5: This is not applicable as an operating surplus or deficit cannot be determined until after the fiscal year ends.

Investment earnings and transfers of year-end operating surpluses over the last decade have increased the reserves by approximately \$43 million.

The table shows that investment earnings have occurred in each year and operating surpluses have occurred in 8 of the 10 complete years (FY 2011 is not over and thus operating surpluses for that year are unknown at this point). The operating surpluses for those 8 years totaled \$22.3 million. However, as approved by the City Commission, surpluses totaling \$6.3 million for two of those eight years were transferred to other programs/funds instead of to the operating reserve fund. Accordingly, operating surpluses transferred to the operating reserve fund during the ten-year period totaled only \$16 million.

Uses of Operating Reserves

Our review of activity over the last 10.5 years showed various uses of the Electric Operating Reserve Fund (Fund 407). Some uses were temporary in nature while others were permanent. Those uses included:

The Electric Utility
Operating Reserve Fund
has contributed working
capital (cash) to allow the
electric utility to timely pay
expenses and obligations.

Working Capital – As described on pages 27 through 29, operating reserves have been used to provide cash for working capital needs (i.e., pay expenses and obligations) of the City's electric utility in an "indirect" manner. Specifically, instead of actual transfers of operating reserves (Fund 407) to the electric utility's operating fund (Fund 400), the reserve fund's cash balances, along with cash balances of other City funds, have been (and are) used by the electric utility when sufficient cash is temporarily not available in the operating fund (Fund 400). Those temporary uses (loans) are tracked in the City's accounting system. However, because the operating reserve fund's cash balances are pooled with available cash of other City funds, a specific determination of how much and when operating reserve funds were used by the electric utility cannot be efficiently and readily ascertained. Notwithstanding, the operating reserve fund is a significant contributor in ensuring sufficient cash is available for electric utility operations.

Operating reserves were used in a major emergency event.

Emergency Events – As also addressed on page 31 and 32 of this report, \$1.8 million of operating reserve funds was used in FY 2004 to pay a portion of the rental costs for auxiliary power generation units used to generate electricity while repairs were made to a Purdom generating unit, which had been damaged in a major accident.

Operating reserves set aside for temporarily funding certain margin calls have frequently been used for that purpose.

<u>Fuel Risk Management</u> – As reported on pages 14 through 20, a
portion of the reserve fund was designated (set aside) to temporarily
fund margin calls on hedged financial deals maturing in future fiscal
years. Those deals relate to the acquisition of natural gas, the

primary fuel used by City power plants to generate electricity. As previously explained, those deals are executed for the purpose of stabilizing fuel costs and helping customers avoid significant fluctuations in their utility bills. We found, that **over the last 4.5 years (entire 10.5 year period was not analyzed for this use), the designated funds (\$30 million set aside) have been used to temporarily fund margin calls totaling \$90.4 million.** As explained in the following note, those uses were temporary in nature and do not result in depletion of reserve funds.

(NOTE: These funds are returned to the reserve funds as the applicable "future year" deals convert to "current year" deals at the beginning of the fiscal year in which the deals mature. Accordingly, upon their return the funds are again available to temporarily fund additional margin calls. As explained in the example on page 19, the reserve funds are replenished from the funds appropriated [budgeted] annually for fuel purchases.)

- <u>Direct Rate Stabilization</u> As also described on pages 35 and 36, operating reserve funds have been and are planned (budgeted) to be used to avoid raising customer billing rates in the following instances:
 - stabilization due to an operating deficit in the electric utility that occurred when current billing rates were not adequate to generate sufficient revenues to cover related fuel costs, also termed an "under-recovery of fuel costs." The under-recovery was attributed to higher than expected fuel costs and the need for the City to acquire more expensive "purchased power" when the installation and startup of a new, more efficient generating unit (Unit 8) at the Purdom power plant was delayed. (Purchased power represents the City's acquisition of electricity from another provider {utility} that is available to the City through the transmission

In November 2000, \$4.4 million was used for direct

Operating reserves have been used for direct rate stabilization; additional use is planned for the current and subsequent fiscal year.

grid to which the City is connected.)

In the current and previous two years (FYs 2009, 2010, and 2011), the City has budgeted (authorized) use of reserve funds for direct rate stabilization purposes because of projected operating deficits. However, as deficits did not occur in FYs 2009 and 2010, no reserve funds were used for direct rate stabilization in those years. Until the current fiscal year (FY 2011) ends in September 2011, a determination will not be made by the City as to how much, if any, of the reserve funds budgeted for direct rate stabilization in that year will be transferred and used for that purpose. Amounts budgeted for the three years are as follows:

	<u>YEAR</u>	<u>AMOUNT</u>	<u>STATUS</u>
>	FY 2009	\$5,687,510	Not Used
>	FY 2010	\$3,122,342	Not Used
\triangleright	FY 2011	\$10,544,067	See Note 1

(Note 1: Use to be determined at fiscal year-end.)

- As part of the FY 2012 budget, the City Commission approved use of operating reserve funds in amounts up to \$17.4 million for direct rate stabilization.
- Other Uses As approved by the City Commission, operating reserve funds have been used over the last 10.5 years for other purposes. For the most part, those other uses can be interpreted as forms of <u>indirect</u> rate stabilization, as described on pages 36 and 37. Those other uses involved reserve funds totaling \$3,871,404 and included the following:
 - In March 2006, the City Commission approved use of reserve funds in the amount of \$249,000 to pay for a Pilot Thermostat Program, where 1,000 programmable thermostats were acquired for use by City utility customers as a means to control their heating and cooling costs. This program represented one of the City's "Demand Side Management" (DSM) initiatives.

Operating reserves have also been used for other authorized purposes; those other purposes could be interpreted as forms of "indirect" rate stabilization.

In September 2006, the City Commission approved a one-time use of reserve funds in the amount of \$50,000 to provide additional funds for the Project Share Program, a utility assistance program for eligible citizens administered by the Capital Area Community Action Agency and traditionally funded through citizen contributions. The City funds were used to match those citizen contributions for one year and to help fund the agency's administrative costs.

- In May 2010, the City Commission authorized use of reserve funds in the amount of \$824,600 to further the City's ongoing DSM program that provided rebates to City utility customers replacing their appliances (e.g., clothes washers, refrigerators, freezers, air conditioners) with more energy efficient appliances.
- In April 2011, the City Commission authorized use of reserve funds in the amount of \$2,747,804 to cover a projected deficit resulting from (1) accumulated underrecoveries of amounts due the electric utility from external entities and (2) services rendered to external parties but not yet billed. The amounts due from external entities resulted from various events and services, including provision of temporary electric services, relocation of services based on customer requests, lawsuit settlements, vehicle accidents causing damages to City utility infrastructure, etc.

In summary, operating reserves have been used for each of the four components addressed by the current reserve fund policy. Permanent uses over the last 10.5 years totaled approximately \$10 million; an additional \$17.4 million has been authorized for use in FY 2012.

In summary, over the last 10.5 years electric utility operating reserves have been used for multiple purposes. Those uses involved each of the four components addressed by the current reserve fund policy. Some of those uses represented permanent outlays (totaling approximately \$10.1 million) for specific programs and purposes while other uses were temporary in nature, in that the "loaned" funds were returned to the reserve fund after the applicable purpose or need was met (e.g., funding margin calls for hedged fuel purchases or temporarily providing cash for

working capital needs). Other future needs have been identified and planned for the upcoming fiscal year (FY 2012).

Sources and Uses of "Other" Reserves

As previously described on page 13, the primary purpose of the Electric Utility RRI Fund (Fund 401) is to finance the costs of certain capital improvement projects for the electric utility. However, any RRI funds not designated (committed) to specific projects are considered reserves available to the electric utility.

The ultimate source of electric utility RRI funds are revenues generated from the sale of electricity to City utility customers.

<u>Sources</u> - The Electric Utility RRI Fund (Fund 401) is funded by budgeted (appropriated) transfers from the Electric Utility Operating Fund (Fund 400). Accordingly, the ultimate source of those RRI funds is revenues generated from the sale of electricity to City utility customers. Specifically, revenues from the sale of electricity are deposited and tracked in the Electric Utility Operating Fund (Fund 400). While most of those revenues are used to pay fuel and operating costs, a portion is transferred to the RRI Fund.

Significant amounts of available electric RRI funds have been used over the last decade for direct rate stabilization.

<u>Uses</u> - We reviewed recent activity of the Electric Utility RRI Fund to identify instances where that fund was used for purposes for which the reserve policy was established. Our review disclosed the following uses:

• In FYs 2003, 2004, and 2005, Electric RRI funds were budgeted to cover projected operating deficits in the electric utility. The City used Electric RRI funds in the amounts of \$6.8 million, \$8.4 million, and \$12.3 million, respectively, in those years for that intended purpose. The RRI funds were used as opposed to recovering those amounts from City utility customers through rate adjustments. (Direct Rate Stabilization)

Electric RRI funds were a significant source used to fund repairs and related costs resulting from a significant accident in 2004.

• In FY 2004, Electric RRI funds were used to pay a significant portion of costs resulting from a major accident involving one of the generating units at the Purdom power plant. As previously described on pages 31 and 32, total costs incurred by the electric utility for that event totaled approximately \$15.8 million. Of that total,

approximately \$6 million was paid directly from the Electric RRI fund, with approximately \$5.2 million for temporary rental of auxiliary generation units and approximately \$750,000 towards the repair of the damaged unit. (**Emergency Event**)

Electric RRI funds were used in FYs 2005 and 2008 to fund other repairs performed under "emergency" authorizations.

In FYs 2005 and 2008, Electric RRI funds were authorized to pay portions of costs resulting from emergency events that were "lesser" in scope and severity compared to the previous item. Specifically, in FY 2005 Electric RRI funds in the amount of \$295,000 were authorized under an emergency appropriation to help pay for repair to a steam turbine generator at the Purdom power plant. Similarly, in FY 2008 Electric RRI funds in the amount of \$250,000 were authorized to help pay for reassembly of a Purdom steam turbine generator that had to be disassembled and repaired due to damage to that unit (separate event from the 2005 event). That funding was also approved as part of an emergency authorization. (Emergency Events)

In summary, we identified various uses of electric utility RRI funds over the last decade that likely could have instead been funded by the operating reserve fund; those identified uses totaled approximately \$34 million.

The use of Electric RRI funds for direct rate stabilization purposes as described in the first item above could have been funded by the Electric Operating Reserve Fund (Fund 407) under either current policy provisions (effective September 2010) or policy provisions in effect during the applicable years (FYs 2003, 2004, and 2005). However, a determination was made to instead fund those instances from Electric RRI funds (Fund 401). Reasons for using Electric RRI funds instead of electric operating reserves (Fund 407) in those instances were not documented. Inquiry of current management indicated use of RRI funds in those prior years was likely attributable to (1) accumulated RRI funds being available in excess of current project needs and (2) the conscious decisions to not deplete the operating reserve fund (Fund 407).

In regard to the emergency events as described in the second and third items above, current policy provisions (effective September 2010) would have authorized use of operating reserves (Fund 407) to fund the repairs and related costs; however, policy provisions in effect as of those dates did <u>not</u> specifically provide for use of operating reserves (Fund 407) for

those purposes (but also did not preclude use of operating reserves for those purposes). We considered use of Electric RRI funds (Fund 401) in those instances reasonable and appropriate.

In summary, the undesignated balance of the Electric Utility RRI Fund, while primarily intended as a funding source for future capital improvement projects, has been used in recent years for the some of the purposes for which the Electric Operating Reserve Fund, as modified in September 2010, was established. Those uses, as identified by audit, totaled approximately \$34 million.

Overall Conclusion – Sources and Uses of Reserves (Specific Audit Objective No. 3)

Sources and uses of the operating reserve have resulted in a net \$33.3 million increase in reserve levels over the last 10.5 years; however, additional uses in amounts up to \$17.4 million have been authorized for FY 2012.

Uses of the Electric Utility Operating Reserve Fund have been for appropriate and authorized purposes. Those authorized uses have evolved over the last 10.5 years. Some of the authorized uses were formerly addressed, at least in part, by the Electric Utility RRI Fund (e.g., emergency events and rate stabilization). The Electric Utility RRI Fund continues to maintain balances that, in an emergency, can still be used for the same purposes for which the Electric Operating Reserve Fund was established. The two primary sources to fund the Electric Operating Reserve Fund were investment earnings and transfers of electric utility operating surpluses. Those sources were established by the approved policy. Over the last 10.5 years, the Reserve Fund has grown significantly, as investment earnings and transferred operating surpluses (totaling \$43.4 million) have significantly exceeded actual "permanent" uses totaling \$10.1 million as of midsummer 2011. (Permanent uses represent uses other than temporary "loans" where the funds are eventually returned to the Reserve Fund). That represents a net increase in the operating reserves of \$33.3 million in the last 10.5 years. (NOTE: In September 2011 the City Commission approved use of operating reserve funds in amounts up to \$17.4 million for direct rate stabilization in FY 2012. If that use occurs, the net increase will be reduced accordingly.)

Accounting for Reserves

(Specific Objective No. 4)

The City's accounting system was adequate to clearly and properly track and account for reserves and related activity.

Accounting for margin calls is inherently more complex than accounting for most other activities.

Our fourth specific audit objective was to determine if reserve funds and related activity were properly accounted for by the City. To make that determination, we identified and reviewed various account codes and methods used in tracking and reporting sources and uses of reserve funds, as well as other activity relating to those sources and uses.

Overview

As stated in the background section of this report, several unique funds were established for City electric reserves and related electric utility operations. Our review showed those funds and the City's accounting system were adequate to clearly track and account for reserve activity. As addressed in the previous section of this report, the City's accounting system and processes adequately identified and tracked the sources and uses of reserve funds over the last decade.

Margin Calls

The most complex accounting pertaining to the City's electric reserves involves margin calls. As explained through the examples in the background section of this report on pages 14 through 20 (as well as various other places within this report), use of reserve funds to fund margin calls is "temporary," as the reserve funds used to pay margin calls are eventually returned to the operating reserve fund (Fund 407) as applicable hedged deals, for the acquisition of natural gas, convert from "future year" deals to "current year" deals. For an individual hedged deal, that conversion occurs at the beginning of the fiscal year in which the deal matures. Reimbursements to the operating reserve fund, for the temporary use of reserves for payment of margin calls, are made from funds budgeted (appropriated) to pay fuel costs.

Under current methods and processes, all margin calls are initially paid from and charged (in the City's accounting system) to the City's Energy Services department. That department is responsible for the acquisition of natural gas on behalf of the City's electric utility (and natural gas

utility). If a margin call pertains to a hedged deal that matures in the current fiscal year, no additional entries are necessary until the hedged deal matures and the gas is purchased and used by the City's electric utility. When that occurs, the electric utility fund is charged for the value of the gas.

However, if a margin call pertains to a hedged deal that matures in a subsequent (future) fiscal year, additional entries are recorded in the City's accounting system to transfer reserve funds (Fund 407) to the Energy Services department. That transfer, in essence, provides funds needed by that department to pay the margin call. At the beginning of the fiscal year in which the applicable hedged deal matures, the Energy Services department transfers funds back to the Electric Operating Reserve Fund (Fund 407) as reimbursement of the borrowed funds. The amount of reimbursement is the value of all outstanding margin calls made to date for that deal. The reimbursement is made from the Energy Services department's funds appropriated (budgeted) to pay fuel costs for that year (i.e., year in which the hedged deal matures).

Overall Conclusion – Accounting for Reserves (Specific Audit Objective No. 4)

While accounting for reserve activity was overall proper and adequate, certain issues were identified.

Our review of the City's accounting for reserve funds and related activity, including margin calls as explained in the previous paragraphs, showed the methods and processes were proper and reasonable. However, certain issues were identified that warrant corrective action. Those issues (along with other issues) are addressed in the following section of this report.

Issues and Recommendations

While addressing each of the four specific audit objectives as described in the above report sections, we identified certain issues that warrant actions to facilitate improvements and enhancements to overall management of electric utility reserves. Those issues and our recommendations are described below.

Entries transferring operating reserves to the Energy Service department for applicable margin calls were not always timely recorded.

ISSUE #1 – Accounting Services staff did not always record timely entries transferring reserve funds to the Energy Services department for margin calls paid for hedged financial deals (for the acquisition of natural gas) that matured in subsequent fiscal years. As explained above, accounting for margin calls is a relatively complex process. Because funds are not appropriated in a given year to pay fuel costs of a subsequent year, \$30 million of the City Electric Operating Reserve Fund was designated (set aside) as a source to temporarily fund such margin calls on hedged deals maturing in subsequent fiscal years. That \$30 million set aside was established under both City Commission Policy 224 "Financing the Government" and City Energy Risk Management Policy and Procedures. Those "borrowed" funds are returned to the operating reserve fund in the year the applicable hedged deals mature.

We found that in FY 2009, no accounting entries were recorded to transfer reserve funds to the Energy Services department for numerous margin calls paid that year on hedged deals maturing in subsequent fiscal years. The only entry recorded was a year-end adjusting entry to bring the accounts (in both the Electric Operating Reserve Fund and the Energy Services department) into balance based on all activity that occurred throughout the year. Similarly, we found no entries transferring reserve funds to the Energy Services department were recorded for the first six months of FY 2011, although margin calls were made and paid during that period for hedged deals maturing in subsequent fiscal years.

The lack of timely recording of applicable entries reduced usefulness of the City's accounting system as a means to track and determine the status of the electric utility's operating reserves.

In the above situations, sufficient City cash was available to allow payment of the margin calls. However, the City's accounting system did not show those payments as funded from the Electric Operating Reserve Fund. As a result of accounting entries not being timely made, the City's records incorrectly overstated the amount of the \$30 million in reserve funds available to pay additional margin calls. This, in effect, limited the usefulness of the City's accounting system as a means to track and accurately report the status of operating reserve funds, and to determine if use of those reserve funds were within policy limitations (i.e., no more than \$30 million used for temporarily funding applicable margin calls).

To ensure usefulness of the City's accounting system in tracking and reflecting the status of the Electric Operating Reserve Fund, we recommend process enhancements that ensure the timely recording of transfers from the reserves to the Energy Services department. Preferably, those transfer entries should be recorded simultaneously with the recording of the margin call payments. In our discussions on this issue, management in Accounting Services indicated corrective actions were being initiated.

In May 2007 revisions were made to the City's Energy Risk Management Policy and Procedures with the intention of enabling additional hedged deals.

ISSUE #2 – Revised policy provisions do not provide a funding source for certain hedged deals, executed for the acquisition of natural gas, maturing in subsequent fiscal years. As previously noted above and in other sections of this report, applicable City policies set aside \$30 million of the Electric Operating Reserve Fund to temporarily fund margin calls on hedged deals maturing in subsequent fiscal years. Prior to May 2007, those policies provided the \$30 million set-aside was authorized to temporarily fund margin calls on any hedged deal that matured in a fiscal year subsequent to the fiscal year in which the margin call was made. Accordingly, based on a September 30 fiscal year-end, a margin call on any hedged deal maturing after September 30 of a given year would be temporarily funded from reserves (\$30 million set-aside).

In May 2007, applicable provisions of the City Energy Risk Management Policy and Procedures were revised. Those revisions provide that the \$30 million set-aside is authorized to temporarily fund margin calls only on hedged deals that mature more than one year (12 months) after the date of the respective margin call. Accordingly, margin calls on hedged deals that mature in the next fiscal year but are less than 12 months from maturing are no longer authorized to be temporarily funded from operating reserves (i.e., the \$30 million set-aside). For example, a margin call made in July 2010 on a hedged deal maturing in November 2010 (five months later and in the subsequent fiscal year since after September 30, 2010) are no longer authorized to be funded from the \$30 million set-aside.

The stated intention of this policy revision was to allow for the execution of additional hedged financial deals. Specifically, not using the \$30

revisions, there no longer is an authorized or appropriate source for funding certain margin calls.

Because of the May 2007

million set-aside for any deals maturing in less than 12 months from the date of a margin call, in essence, "saves" and makes a portion of the \$30 million available for additional deals that otherwise may not have been executed. Specifically, hedged deals are generally only executed when applicable City staff (within the Energy Services department) subjectively determine adequate reserve funds are available to temporarily fund any potential margin calls. Accordingly, at times that a significant portion of the \$30 million set-aside is "in use" (i.e., has been used to pay margin calls for which reimbursement has not yet occurred), relatively fewer new deals will be executed as less reserve funds are available to pay potential margin calls on such new deals.

While that intention was logical, it results in the lack of an authorized funding source for margin calls on hedged deals that mature in less than 12 months but in the subsequent fiscal year. Using the above example, there would be no authorized funding source for a margin call made in July 2010 on a hedged deal maturing in November 2010. The reason no funds are available and authorized to pay that margin call is:

Appropriate policy revisions should be made to provide an appropriate and authorized funding source for all margin calls.

- The operating reserve \$30 million set-aside is no longer authorized to temporarily fund that payment.
- It is not reasonable or appropriate to fund margin call payments for a deal maturing in FY 2011 from amounts appropriated (budgeted) for FY 2010 fuel costs.

Because of the lack of an authorized funding source, Accounting Services has continued to charge the operating reserve's \$30 million set-aside for such margin calls. That accounting treatment may be understandable under the circumstances. However, it reflects an unauthorized and incorrect use of electric utility reserve funds based on current policy provisions. Accordingly, we recommend City Energy Risk Management Policy and Procedures be revised to identify and provide an appropriate funding source for all margin calls.

ISSUE #3 - Enhancements are needed in reconciliations performed to ensure City funds paid to the City's NYMEX margin account are properly received, used, accounted for, and reported by the City's contracted

Accounting Services reconciles City records showing funds maintained in the City's NYMEX margin account to monthly statements provided by the City's contracted agent. agent. As described in the background section of this report on pages 16 through 18, the City contracted with an agent (MF Global) to execute hedged financial deals for the acquisition of natural gas through the New York Mercantile Exchange (NYMEX). As also described in that background section and various other places within this report, the City routinely submits cash through that agent for margin calls on those hedged financial deals. Margin calls are made when the market price of natural gas decline relative to the hedged price, such that the likelihood increases the City will have to pay applicable NYMEX counterparties upon the maturity of the applicable hedged deals. (See example on pages 17 and 18.)

That cash, or "margin," is deposited in a NYMEX account maintained on behalf of the City. The cash is retained in that account until either the hedged deal matures or other events occur such that the funds are returned to the City (e.g., market prices for natural gas increase relative to hedged prices, such that the likelihood decreases the City will have to pay applicable NYMEX counterparties upon maturity of existing hedged deals).

In addition to sending cash for routine margin calls, the City generally has to send cash for deposit in that account upon the initial execution of hedged deals. Those amounts are termed "initial margin." Additional cash is sometimes deposited into that account when the contracted agent sells certain City-owned financial instruments (e.g., put options or previously purchased call options) on behalf of the City. Conversely, City funds in that account are sometimes used to purchase such instruments (e.g., call options) on behalf of the City. (NOTE: Put and call options are types of financial instruments that are sometimes used by the City in connection with hedging of natural gas purchases.) In summary, the City's NYMEX account balance is impacted by various events in addition to margin calls.

MF Global sends the City monthly statements reflecting activity and balances in the City's NYMEX account. In accordance with sound internal control practices, Accounting Services staff reconciles activity and balances in the City's general ledger (PeopleSoft Financials System)

Reconciliations were not always adequate as certain types of activity reflected on the agent's monthly statements were not validated by City staff.

to those monthly statements. Those reconciliations are intended to ensure City funds are properly tracked, used, and reported by the contracted agent and NYMEX. Our review showed the current reconciliation process should be enhanced to increase those desired assurances.

Specifically, in those months where there are purchases or sales of put and/or call options, staff performing the reconciliations did not verify the accuracy and reasonableness of the monthly activity reported on the agent's monthly statement (consisting of margin calls paid by the City and purchases and/or sales of put and call options), and did not reconcile that activity to the activity recorded in the City's general ledger. Instead, staff simply attributed differences between activity recorded in the City's general ledger and market values of the City's account reported on the agent's monthly statement as a "market value adjustment." No validation of that calculated "market value adjustment" was performed. As a result, the reconciliations were inadequate and based on incomplete validations.

The reconciliation process should be enhanced to ensure all activity is validated and adequately reconciled to City records.

To ensure City funds are properly received, used, accounted for, and reported by the City's contracted agent, we recommend the City's reconciliation process be enhanced to adequately and properly identify and validate activity reflected in the agent's monthly statements to activity recorded in the City's general ledger.

ISSUE #4 – Certain policy enhancements should be considered. As noted previously we found, overall, City Commission Policy 224 "Financing the Government" provides for establishment of reasonable and appropriate reserves for the City's electric utility. We also identified a few areas where improvements or enhancements to that policy should be considered. Specifically:

Policy clarifications are needed to explain the dynamic nature of targeted reserve levels and to address the importance of periodically updating those target levels as circumstances change.

Clarifications should be made within the policy that the established target funding levels for the four components are "dynamic" amounts that will fluctuate as events occur and circumstances change. For example, significant changes in budgeted and actual expenses/obligations (operational and maintenance costs, fuel costs, debt service requirements, etc.) have a direct and immediate impact on amounts determined necessary for appropriate working capital reserve levels. Similarly, any significant changes in hedging

practices would likely impact target reserve levels for fuel risk management (i.e., currently the \$30 million set-aside used for funding margin calls). Accordingly, to preclude an incorrect interpretation that established target reserve levels are "static" in nature and, in turn, reduce the risk of management decisions based on outdated target levels, policy revisions/clarifications should be considered that clearly explain the dynamic nature of the target funding levels and also provide for periodic (e.g., annual) updates to those targeted levels.

Consideration should be given to revising the existing policy to provide additional sources for funding the operating reserve.

Current policy provides only two sources for funding the electric operating reserves: (1) earnings on invested reserve funds and (2) annual operating surpluses when they occur. As noted on pages 46 and 47, those two combined sources have increased operating reserve levels by \$43.4 million over the last decade. As also noted on page 46, for FY 2012 earnings on invested reserve funds are budgeted to be transferred directly to the electric utility operating fund (Fund 400) instead of remaining in the operating reserve fund (Fund 407). If that practice continues into future years, the only dedicated funding source for reserves will be annual operating surpluses when they occur. Accordingly, consideration should be given to establishing policy provisions that provide additional funding sources if needed under certain circumstances. Possible sources and circumstances include;

Appropriate policy provisions could facilitate replenishment of the reserve if depleted below targeted levels and also help continue the City's favorable credit ratings.

Temporary billing rate increases and/or debt (bond) issuances to restore reserve levels in the event of major catastrophic events that necessitate use of available reserves (e.g., to make significant repairs to damaged electric utility infrastructure) in amounts that lower reserve levels significantly below minimum target policy levels. (NOTE: If this provision is adopted, it should specifically address the period over which the restoration should occur; for example, three to five years.)

 Insurance proceeds received from insurers for applicable events that necessitated use of operating reserves before the insurance proceeds were received.

We acknowledge that such "other" funding sources could be identified and used to restore reserve levels for events such as those described above without enacting policy provisions as recommended. However, specific policy provisions approved and in effect <u>prior</u> to occurrence of events and circumstances may facilitate restoration of reserve levels in an objective manner, thereby reducing the likelihood that the restoration is questioned by City utility customers and external entities. Additionally, a policy providing a mechanism for restoration of reserves to appropriate levels should help ensure bond rating agencies continue their favorable credit ratings for the City's electric utility.

The policy document on the City's websites should be updated for the revisions approved by the City Commission in September 2010.

In addition to the recommended policy enhancements, we noted the formal policy document made available to City staff and the public (e.g., through the City's internal and external websites) has not been updated for the significant policy revisions approved by the City Commission in September 2010. Accordingly, to preclude misinterpretation and misunderstanding by staff and the public as to electric utility operating reserves, City management should take action to have the formal policy document updated and placed on the City websites.

Conclusion

Overall Conclusion. We found current City policies governing and addressing reserves for the City's electric utility to be appropriate and reasonable. That determination was made after consideration of applicable industry guidance and prior City activity and events. Alternative reserve levels were also provided by APPA guidance that should be considered by City management.

Overall, we found City policies adequate and available reserves near the lower end of levels provided by policy and industry guidance; sources and uses of reserves were found to be authorized and appropriate.

A few issues were identified for which audit recommendations were made.

Replenishment of reserves is important to ensure continued financial viability.

We also found reserves maintained for the City's electric utility have not exceeded amounts provided by City policy and suggested by industry guidance. Reserve levels in recent years have been within or near the lower end of ranges provided by City policy and industry guidance.

We identified and determined the various sources and uses of reserve funds over the last 10.5 years were authorized and in accordance with established policy. Additions to operating reserves over that period totaled \$43.4 million while "permanent" uses of those reserves amounted to \$10.1 million, resulting in a net \$33.3 million increase in reserve levels in that 10.5 year period. Recent authorizations by the City Commission may result in additional permanent uses of reserves in amounts up to \$17.4 million. We also determined that Electric Utility RRI funds have been and continue to be used for reasons for which the reserve policy was established.

Methods and processes used by the City to account for reserves and related activity were found to be proper and reasonable. Certain issues were identified that warrant enhancements to the accounting for reserves and to City policy. Recommendations were made to address those issues.

Final Perspective. Cash reserves should be perceived as funds, not restricted as to use by an external entity, available to maintain "normal operations" in special circumstances so as to preclude having to raise rates, incur additional debt, or default on legal obligations. reserves are used (either operating reserves or available RRI funds), it is important they be replenished in a reasonable and timely manner. Replenishment (1) ensures the ability to continue maintenance of normal operations upon subsequent circumstances (e.g., new emergencies, additional working capital shortages, etc.) and (2), in the event available RRI funds are used for reserve purposes, helps ensure funds are available for future capital projects. If reserves are not replenished, it may be necessary to raise rates or incur additional debt, or even default on legal obligations upon subsequent events. Timely replenishment of reserves is also important to help ensure preferred (positive) credit ratings by bond rating agencies, which in turn is important to keep the cost of debt affordable upon the issuance of bonds for financing major capital improvements.

We would like to thank staff in the Electric Utility, Utility Business and Customer Services, Energy Services, and Accounting Services for their assistance during this audit.

Appointed Official's Response

City Manager:

I am very pleased that the results of your audit have confirmed that the Electric Utility reserve funds are reasonable and prudent. Having sufficient liquidity and emergency reserves is critically important for the long term financial viability of the Electric Utility and the City. The results of your audit reflect the strength of the City's team responsible for the management and operations of the utilities. I would like to thank the City Auditor and his staff for their detailed review of this complex issue as well as the various City staff that were involved in providing information and assistance with the audit.

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	Appendix A – Action Plan						
	Action Steps Responsible Employee Target Date						
A.	Objective:	Ensure timely and appropriate accounting of	g of operating reserve activity				
1.	transfers of Reserves to th	nting journal entries will be recorded to reflect funds from the Electric Utility Operating e Energy Services department for margin calls ancial deals maturing in future fiscal years.	Rick Feldman	Complete * 9/20/2011			
2.	will be enhant validate activity	n processes for the City's NYMEX account aced to adequately and properly identify and ity reflected in the City's contracted agent's ements to activity reflected in the City's	Rick Feldman	3/31/2012			
В.	Objective:	Ensure proper funding of margin calls on h	edged financial deals				
1.	be revised to	Risk Management Policy and Procedures will identify an appropriate funding source for all on hedged financial deals maturing in cal years.	David Byrne	4/30/2012			
c.	Objective:	Ensure an appropriate and adequate policy					
1.	the Governme	evisions to Commission Policy 224 "Financing ent," that accomplish the following, will be City Commission approval.	Beckye Simpson	3/31/2012			
		fy and provide "additional" specific funding es for the Electric Operating Reserve Fund.					
	dynan period	y that targeted reserve funding levels are nic in nature and should be updated lically (e.g., annually) based on current ts and circumstances.					

Beckye Simpson

3/31/2012

The version of City Commission Policy 224 "Financing the

Government" on the City's internal and external websites

will be updated for approved changes to that policy.

^{*}Per department, action plan step has been completed as of indicated date. Completion will be verified during the audit follow-up process.