



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

## HIGHLIGHTS

Highlights of City Auditor Report #0602, a report to the City Commission and City management.

### WHY THIS AUDIT WAS DONE

Electric Utility revenues are significant to City operations. The primary focus of our audit addressed the proper determination of consumption for billing purposes and the proper determination of revenues based on that consumption. We also reviewed activities pertaining to non-consumption revenues including initiation and reconnection services, meter tampering, meter re-reads, and meter testing. The process for establishing rates to recover the City's costs of energy was reviewed. Meter testing and meter inventory management were also addressed in this audit. Efficiencies and management oversight of these activities were considered.

As of August 15, 2005, the City was servicing 105,626 residential and commercial customers involving 112,869 service points. Consumption revenues during fiscal year 2004 totaled almost \$245 million. Related non-consumption revenues totaled approximately \$3 million. City departments impacting electric operations in addition to the Electric Utility include Utility Business and Customer Services and Energy Services.

### WHAT WE RECOMMEND

System programming should be rectified to identify unbilled consumption for all service point types. Procedures should be enhanced to ensure State sales taxes are not applied to exempt customers. Electric Control Center management should provide for periodic managerial review of records used in the determination of the energy cost recovery charge.

Management should increase use of the PeopleSoft CIS to manage and monitor meters. Periodic reconciliations should be done as a means to account for all electric meters.

To view the full report, go to:  
<http://www.talgov.com/auditing/index.cfm>  
and select *Auditing Reports*, then *Reports Issued FY 2006*, then *Report #0602*.

For more information, contact us by e-mail at [auditors@talgov.com](mailto:auditors@talgov.com) or by telephone at 850/891-8397.

Audit Conducted by T. Bert Fletcher, CPA

November 17, 2005

## AUDIT OF CITY ELECTRIC REVENUES

### *Opportunities to Enhance Revenue Operations*

### WHAT WE FOUND

Overall, electric consumption was properly determined and billed to customers. Fees for related services were generally properly assessed. The process for determining the energy cost recovery rate was appropriate and logical. Controls and processes were in place regarding meter testing and inventory management. However, issues were identified that indicate the need to better manage operations, activities, and records impacting consumption and related revenues.

**Unbilled Consumption.** Our independent tests identified a commercial customer that was not billed for consumption that totaled \$24,149 to date. Upon further review, it was determined that the existing system software programming developed to identify unbilled consumption excluded certain customer types (i.e., demand customers). Utility Accounting identified another instance of unbilled consumption, totaling \$29,420 to date, when interim measures were taken to rectify the error.

**Billing Errors.** We found three instances where customers were incorrectly charged State sales taxes in amounts approximating \$150,000. We identified 38 instances where customers were incorrectly billed because of misclassifications in rate structures or service point and customer type. Two of those instances resulted in billing errors totaling \$3,027. Procedures disclosed 75 service points were misclassified in PeopleSoft CIS as to inside or outside the City limits, thereby resulting in the incorrect application of taxes and surcharges.

**Energy Cost Recovery Charge (ECRC).** Our review of records maintained by Electric Control Center staff disclosed an error that resulted in a \$1.2 million understatement in fuel oil costs. Had this error not been detected, future ECRC rate determinations likely would have resulted in the City not recovering fuel costs in that amount.

**Non-Consumption Fees.** In our test of 240 activities relating to new service points, initial connection and reconnection of services, and miscellaneous events such as meter re-reads and meter tests, we found 13 instances (5%) where fees were not correctly applied.

**Meter Management.** Use of the PeopleSoft CIS Periodic should be enhanced to account for all meter activity and to enable an efficient process for identifying meters for periodic testing based on meter age and prior test dates.

Office of the City Auditor



# **ELECTRIC REVENUES**

**AUDIT REPORT #0602**

**November 2005**



Copies of this audit report #0602 (project #0506) may be obtained from the City Auditor's web site (<http://talgov.com/auditing/index.cfm>), by telephone (850 / 891-8397), by FAX (850 / 891-0912), by mail or in person (City Auditor, 300 S. Adams Street, Mail Box A-22, Tallahassee, FL 32301-1731), or by e-mail ([auditors@talgov.com](mailto:auditors@talgov.com)).

Audit conducted by:

Bert Fletcher, CPA, Audit Manager

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

# Table of Contents

**Executive Summary** .....1

*We reviewed Electric Utility revenue activities during the period January 2004 through July 2005. ....1*

*During FY 2004, City customers generated electric revenues of \$248 million. ....1*

*Overall, electric power consumption was properly determined and billed; related fees were properly assessed; ECRC rates were correctly established; and meter management practices were in place. ....1*

*Two instances of unbilled consumption were identified and totaled \$53,569. ....1*

*The unbilled consumption was not identified by Utility Accounting controls due to a software programming error. ....2*

*Identified billing errors included instances where three customers were incorrectly assessed State sales taxes that approximated \$150,000. ....2*

*While the ECRC rate determination process was logical and accurate, we identified an error that, if not corrected, would likely result in the City’s under-recovery of fuel costs in the amount of \$1.2 million. ....2*

*In our test of 240 sampled activities, we identified 13 instances where non-consumption fees were not correctly assessed. ....3*

*As similarly noted in our audit of City gas revenues, the current process for charging reconnection fees occasionally results in the improper assessment of those fees. ....3*

*The Electric Meter Shop should use the PeopleSoft CIS to manage and track all meter activity and eliminate the inefficient manual index card system. ....3*

*The current process for identifying and selecting meters for testing does not ensure that all meters will be periodically tested. ....4*

*Some City electric meters have not been properly and accurately accounted for in the PeopleSoft CIS. ....4*

**Objectives**.....5

*This audit focused on determining whether the City properly billed for consumption of City electricity and other related revenues. ....5*

**Scope**.....5

*Revenue activity during the period January 2004 through July 2005 was reviewed. ....5*

**Methodology**.....5

*We reviewed operations and activities of the Electric Utility, Utility Business and Customer Services, and other applicable departments. ....5*

*Procedures were performed to ensure consumption and related fees were properly and accurately billed, service point locations were correctly classified, meters were properly accounted for and maintained, and rates established to recover energy costs were properly and accurately determined. ....6*

*Audit procedures included observations and site visits, interviews of staff, sampling and testing transactions and events, and analytical and data mining procedures. ....7*

**Background**.....8

*The City has thirteen basic service point classifications. ....8*

*In August 2005 the City had 112,869 active electric service points and 105,626 active customer service agreements.....10*

*Electric consumption revenues for FY 2004 totaled \$245 million.....11*

*Utility Accounting establishes semiannual rates to recover the City’s costs for fuel used in generating electricity for consumer consumption. ....12*

*Various meter types are used to measure consumption; staff within Utility Accounting and the Electric Meter Shop read the City’s electric meters.....13*

*The Electric Meter Shop manages the City’s electric meters; including testing, installation, and removal of meters.....14*

*Meter seals are used to detect meter tampering. ....15*

*Customers are also charged fees for new service points, service connections and reconnections, and miscellaneous activities; fees for those events during FY 2004 totaled \$2,944,897.....16*

*Various City departments and units perform functions that impact electric revenues..18*

**Overall Summary .....20**

*Overall, electric consumption was properly determined and accurately billed, related fees were properly assessed, energy cost recovery rates were correctly determined, and meter management practices were in place; however, issues were identified for management’s consideration and disposition.....20*

**Unbilled Consumption .....20**

*Two instances were identified where unbilled consumption totaling \$53,569 occurred without detection because of a software programming error.....21*

*An inefficient process requiring manual communications between different staffs may have contributed to instances of unbilled consumption for private outdoor lighting....22*

*Actions need to be taken to ensure that the correct status of electric service points is shown in the PeopleSoft CIS. ....24*

**Billed Consumption .....25**

*State sales taxes of approximately \$150,000 were incorrectly charged and collected from three customers.....25*

*Our data mining procedures disclosed 38 instances where customers were not correctly billed because of misclassifications in rate structure, service point type, and/or customer type.....28*

*Our observations and testing of 285 sampled service points disclosed that (1) the county public service tax was incorrectly not charged for certain private outdoor lighting and (2) one customer charged demand rates did not meet minimum demand levels required for those rates.....31*

*Our data mining procedures disclosed 75 services points that were incorrectly classified in the PeopleSoft CIS as to City limit status, thereby resulting in the incorrect application of taxes and surcharges for the applicable customers.....33*

**ECRC Rate Determination .....34**

*An undetected error resulted in a \$1.2 million understatement of fuel costs; if not corrected this error would have resulted in that amount not being considered when establishing subsequent ECRC rates. ....35*

**Non-Consumption Fees .....36**

*In a sample of 240 activities, we noted 13 instances where non-consumption fees were not correctly charged. ....37*

*As similarly noted in our audit of City gas revenues, the current process for charging reconnection fees occasionally results in the improper assessment of those fees. ....39*

*The \$35 cut-in fee for new service points within the City limits is not substantiated by an official City fee schedule. ....40*

**Meter Management.....41**

*The Meter Shop uses an inefficient and outdated manual card system to track certain meter activity. ....41*

*Certain meter characteristics recorded in the PeopleSoft CIS are incorrect or incomplete. ....42*

*The current environment does not provide for an efficient manner/method for identifying meters that should be tested or replaced based on meter age and length of service. ....44*

*Although our review of meter test results showed that, overall, the City’s electric meters are accurately measuring consumption, we noted that 29% of sampled installed meters had not been tested within the last 20 years. ....45*

*Approximately 1.7% of the City’s electric meters have not been properly and accurately accounted for in the PeopleSoft CIS. ....46*

*To help detect unbilled consumption and provide accountability of City electric meters, periodic reconciliations of uninstalled meters reflected in the PeopleSoft CIS to meters in the meter shop and in the custody of applicable staff should be performed. ....48*

*As a means to ensure meter seals are not used for unauthorized purposes, periodic comparisons of quantities acquired/used to related activity recorded in the PeopleSoft CIS should be performed. ....48*

**Conclusion.....49**

*Overall, electric consumption and related fees are properly billed and charged; however, issues were identified that indicate that certain activities should be better managed and monitored. ....49*

**Response From Appointed Official.....50**

**Appendix A – Action Plan .....51**





# ***ELECTRIC REVENUES***



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

*Report #0602*

*November 15, 2005*

## ***Executive Summary***

*We reviewed Electric Utility revenue activities during the period January 2004 through July 2005.*

*During FY 2004, City customers generated electric revenues of \$248 million.*

*Overall, electric power consumption was properly determined and billed; related fees were properly assessed; ECRC rates were correctly established; and meter management practices were in place.*

*Two instances of unbilled consumption were identified and totaled \$53,569.*

This audit reviewed Electric Utility revenues and activities during the period January 2004 through July 2005. The primary focus of our review addressed revenues generated from the sale of electricity to City customers. We also reviewed activities related to revenues generated from new service points, connections and reconnections of services, and miscellaneous activities/events such as customer-requested meter re-reads and meter tests. The process for establishing rates to recover the City's costs of energy used in the generation of electricity was reviewed. Meter testing and meter inventory management was also addressed in this audit.

The City has 13 basic service point classifications. As of August 15, 2005, there were 112,869 active electric service points and 105,626 active customer service agreements. Consumption revenue during FY 2004 totaled almost \$245 million. Related non-consumption revenues for that year totaled approximately \$3 million.

Overall, we found electric consumption was properly determined and billed to customers. Generally, fees for new service points, service connections and reconnections, and miscellaneous activities were properly assessed. The process for determining the energy cost recovery rate was appropriate and logical and, with the exception of one error, the related calculations were supported and accurate. Controls and processes were in place regarding meter testing and inventory management. However, we identified issues that indicate the need to better manage operations, activities, and records impacting consumption and related revenues.

Unbilled Consumption. Utility Accounting, with the assistance of Information System Services, has developed various queries and software programming to identify instances where recorded consumption is not billed to applicable customers. We designed and ran our own queries for detecting unbilled consumption to determine if Utility Accounting's queries and reports were accurate and comprehensive. When we ran our queries, we identified consumption (valued at \$24,149) over a seven-month period that had

*The unbilled consumption was not identified by Utility Accounting controls due to a software programming error.*

*Identified billing errors included instances where three customers were incorrectly assessed State sales taxes that approximated \$150,000.*

*While the ECRC rate determination process was logical and accurate, we identified an error that, if not corrected, would likely result in the City's under-recovery of fuel costs in the amount of \$1.2 million.*

not been billed to a commercial customer. Utility Accounting researched this instance and determined it occurred due to a software programming error that resulted in the exclusion of that customer type (commercial demand customers) in the determination of unbilled consumption. Another instance was identified (unbilled consumption valued at \$29,420) by Utility Accounting when interim measures were taken to rectify the identified error. In addition, we identified instances of unbilled consumption for private outdoor lighting attributable to miscommunications between staff turning power on and off and staff in Utility Accounting and/or Utility Customer Services. Other than those issues, we found that Utility Accounting has effective controls for detecting unbilled consumption.

Billing Errors. Our sampling and testing of transactions and events and our analyses and data mining procedures disclosed some billing errors. We found three instances where customers were incorrectly charged State sales taxes in amounts approximating \$150,000. We identified 38 instances where customers were incorrectly billed because of misclassifications in rates structures, service point type, and customer type. Two of those instances resulted in billing errors totaling \$3,027 for the two applicable customers. We noted that certain City customers residing outside the City limits were incorrectly not charged County public service taxes for private outdoor lighting. Other procedures disclosed that premises for 75 service points were misclassified in the PeopleSoft Customer Information System (CIS) as to inside or outside the City limits, thereby resulting in the incorrect application of taxes and surcharges. Notwithstanding the significance of these instances from an individual customer perspective, we found that, overall, City customers were correctly and accurately billed.

ECRC Rate Determination. Utility Accounting staff, with the assistance of staffs in the Electric Control Center and Energy Services, establishes semiannual energy cost recovery (ECRC) rates. Our review of the process and rate determinations for the period October 2004 through March 2005 showed the process was logical, appropriate, and accurate. However, our review of records maintained by the Electric Control Center staff disclosed an error that resulted in a \$1.2 million understatement in fuel oil costs. Had this error not been detected, future ECRC rate determinations likely would have resulted in the City not recovering fuel costs in that amount. Utility Accounting staff indicated that an adjustment

*In our test of 240 sampled activities, we identified 13 instances where non-consumption fees were not correctly assessed.*

*As similarly noted in our audit of City gas revenues, the current process for charging reconnection fees occasionally results in the improper assessment of those fees.*

*The Electric Meter Shop should use the PeopleSoft CIS to manage and track all meter activity and eliminate the inefficient manual index card system.*

would be made correcting this error such that the subsequent ECRC determination properly considers those costs.

Non-Consumption Fee Issues. We sampled and tested 240 activities relating to new service points, initial connection and reconnection of services, and miscellaneous events such as unjustified customer-requested meter re-reads and meter tests. Those tests disclosed 13 instances (5%) where those fees were not correctly applied. Those included four instances where fees were incorrectly not charged, six instances where the wrong fees were applied, two instances where fees were charged that were not applicable under the circumstances, and one instance where a fee was incorrectly charged twice. Those instances were attributable to errors by Utility Customer Services and Utility Accounting staffs.

City Ordinance 21-33 established a fee for reconnecting services after customers pay delinquent amounts subsequent to their services being turned off for nonpayment. As similarly noted in GAS REVENUES Audit Report #0409, issued April 12, 2004, the City's process for applying that fee occasionally results in the improper assessment of that fee. Specifically, that fee is assessed automatically by the PeopleSoft CIS based on the disconnection activity instead of the reconnection activity. In the majority of those instances the customers have their services restored. For those instances, there is no adverse impact of charging the fee based on the disconnect activity. However, in those instances where services are disconnected for nonpayment and the services are not restored, the fee (usually \$29) is still charged. Our test of 48 instances where electric services were disconnected because of nonpayment showed five instances where this situation occurred. In response to this issue as initially noted in our Gas Revenues audit, Utility Accounting has indicated plans to rectify this issue through new system functionality (i.e., to charge that fee based on the reconnect action) added to the PeopleSoft CIS as part of the fall 2005 update.

Meter Management. The Electric Meter Shop uses both the PeopleSoft CIS and an outdated manual index card system to track and account for its meters. Data accurately maintained on the index cards is generally not maintained in the PeopleSoft CIS (e.g., meter test dates and results, accurate acquisition dates, and meter type). As a result, there is no efficient manner for management to identify and review certain activity regarding electric meters. Management currently relies on manually prepared reports or the manual extraction of data from the index cards to review that activity. Both

approaches are inefficient and labor intensive. We recommend tracking all data using the PeopleSoft CIS and eliminating the manual index card system.

*The current process for identifying and selecting meters for testing does not ensure that all meters will be periodically tested.*

Because of the lack of a method to efficiently identify age and length of service of City electric meters (i.e., see preceding paragraph), the Electric Meter Shop cannot ensure that all meters are being tested on a periodic basis. Our review of a sample of 90 installed meters showed that 26 (representing 29%) had not been tested within the last 20 years (each of those 26 had been in service for at least 20 years). Once the PeopleSoft CIS is updated to accurately reflect applicable characteristics (i.e., acquisition date, test results, test dates), the Electric Meter Shop should use that system to identify and select meters for testing based on age and length of service since last tested.

*Some City electric meters have not been properly and accurately accounted for in the PeopleSoft CIS.*

We also noted that 1,797 City electric meters (representing approximately 1.7% of all City electric meters) have not been properly and accurately accounted for in the PeopleSoft CIS. Our comparison of available (uninstalled) meters on hand to the 2,979 active meters reflected as uninstalled by the PeopleSoft CIS showed (1) 643 active meters at the Meter Shop that were not included in the PeopleSoft CIS, (2) 569 meters shown by the PeopleSoft CIS as active but for which the manual index cards show as out-of-service (retired), (3) 455 meters shown in the PeopleSoft CIS that could not be located, and (4) 130 meters reflected as active in the PeopleSoft CIS that also could not be located, but the PeopleSoft CIS had notations stating those meters were stolen, missing, out-of-service, destroyed, discarded, dead, or returned to the factory. These findings indicate the PeopleSoft CIS should be more effectively used to manage meter inventory. Lack of adequate inventory management reduces the assurance that meters are used only for authorized City customers and that all customers with active installed meters are properly billed for consumption.

We would like to acknowledge the full and complete cooperation and support of the staffs of Utility Accounting, Utility Customer Services, the Electric Meter Shop, Power Engineering, applicable Electric Transmission and Distribution units, the Electric Control Center, Energy Services, and Information Systems Services during this audit.

# ***ELECTRIC REVENUES***



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

***Report #0602***

***November 15, 2005***

## ***Objectives***

*This audit focused on determining whether the City properly billed for consumption of City electricity and other related revenues.*

The objectives of this audit were to determine whether: (1) consumption of City electricity is properly measured and billed to City customers; (2) amounts billed are proper based on customer class, premises location, contractual terms and conditions, and applicable City ordinances; (3) rates established to recover energy costs are properly and accurately determined; (4) fees for connection, reconnection, and other miscellaneous activities are properly charged; and (5) controls and processes pertaining to electric meter inventory and maintenance are adequate.

## ***Scope***

*Revenue activity during the period January 2004 through July 2005 was reviewed.*

The scope of this audit included a review of activity impacting revenues relating to the Electric Utility during the period January 2004 through the end of our audit fieldwork in July 2005. The primary focus of our audit addressed revenues generated from the sale of electricity to City customers. We also reviewed revenues generated from charges to customers for initiation of services, reconnection of services after disconnection because of nonpayment by the customer, and miscellaneous activities, including meter tampering, meter re-reads, and meter testing. The process for establishing rates charged to recover the City's costs of energy was also reviewed during this audit.

## ***Methodology***

*We reviewed operations and activities of the Electric Utility, Utility Business and Customer Services, and other applicable departments.*

To address the stated audit objectives, we reviewed applicable operations and activities performed by the Electric Utility, Utility Business and Customer Services (UBCS), and Energy Services. We interviewed staff from those departments and performed various tests and analyses of:

- Information maintained in the PeopleSoft Customer Information System (CIS);

- Information maintained in City and other Geographical Information Systems (GIS);
- Records maintained by Utility Accounting, the Electric Control Center, and Energy Services for the establishment of energy costs recovery rates; and
- Records maintained by the Electric Meter Shop in regard to meters and meter seals.

We also made site visits to selected customer premises to observe electric service points and meters.

Specific procedures performed included:

*Procedures were performed to ensure consumption and related fees were properly and accurately billed, service point locations were correctly classified, meters were properly accounted for and maintained, and rates established to recover energy costs were properly and accurately determined.*

- Testing for unbilled consumption through development of system queries to identify instances where consumption was recorded in the PeopleSoft CIS but not billed to customers.
- Testing activity within the PeopleSoft CIS to ascertain if customers were properly billed based on recorded consumption, customer and service point type and location, rates established by City ordinances, applicable taxes, and any controlling contractual terms and conditions. That testing included ensuring customers' geographical location within the City had no bearing on amounts billed.
- Performing data mining of the PeopleSoft CIS to identify improper classifications of accounts as to type of service point, premises, service agreement, and rate class. (Residential activity should be billed at different rates than commercial accounts. Rates also vary among the different commercial classifications. Temporary service points should be billed at applicable commercial rates. Certain taxes applicable to commercial accounts do not apply to residential accounts.)

NOTE: Data mining involves the analyses of entire transaction or account populations for the purpose of

identifying unusual activity or transactions likely to have been executed fraudulently or in error.

- Testing activity recorded in the PeopleSoft CIS (i.e., field activities and orders) for new and existing service points and service agreements to determine if connection and reconnection fees, as well as other miscellaneous fees for meter tampering, meter re-reads, and meter tests, were appropriately charged.
- Performing data mining of the PeopleSoft CIS and available City and other GIS databases to identify instances where service point locations are improperly classified as to inside or outside the city limits. (Locations outside the city limits are subject to different taxes and a slightly different rate structure.)
- Identifying and testing records maintained for and controls over meters and meter seals. Procedures included comparing meters on hand (not installed at a service point) to meters that should be on hand per the PeopleSoft CIS.
- Determining and evaluating procedures for testing and maintenance of electric meters.
- Making site visits to selected premises to determine if: (1) billing set-ups in the PeopleSoft CIS were correct based on the physical characteristics of the applicable service points and meters and (2) consumption entered into the PeopleSoft CIS was reasonable based on observed meter measurements.
- Testing the semiannual determination of the rate charged customers for the recovery of City energy costs.

*Audit procedures included observations and site visits, interviews of staff, sampling and testing transactions and events, and analytical and data mining procedures.*

This audit was conducted in accordance with Generally Accepted Government Auditing Standards and Standards for the Professional Practice of Internal Auditing, as applicable.

**Background**

**General.** The City has been providing electricity to City customers since 1902. The City’s Purdom and Hopkins power plants generate the bulk of the City’s electricity. A small portion is produced at the Corn hydroelectric plant located at Lake Talquin. In addition, when appropriate, the City purchases generated power on the open market (i.e., due to occasional instances when the City’s current production capacity is not expected to meet moments of projected peak demand, or produced power can be purchased at costs lower than costs of generation).

*The City has thirteen basic service point classifications.*

**Electric Service Points/Service Agreements.** The City has several customer classifications that consume electricity at multiple service point types pursuant to service agreements. A service point represents a physical location where electricity can be delivered to a customer’s premises. The service agreement represents the billing arrangement with the customer. The various service point/service agreement classifications are defined in City ordinances (Chapter 21, Article VII) and summarized in the following table.

**TABLE 1 – ELECTRIC SERVICE POINT/AGREEMENT CLASSIFICATIONS**

	<b>TYPE (Note 1)</b>	<b>DESCRIPTION</b>
1.	Residential	Residential (non-commercial) entities – includes single-family units and multifamily units such as apartment complexes.
2.	General Services (GS) Non-Demand	Commercial (non-residential) entities that have a maximum annual demand less than 25 kilowatts. Typical customers include small businesses and professional firms such as doctor and attorney offices.
3.	Cable	GS Non-Demand customers whose consumption is more efficiently measured by devices (“cable amps”) other than meters. There is currently one customer (Comcast Cable) with multiple service points.
4.	GS Demand (Note 2)	Commercial entities that have a maximum annual demand between 25 and 499 kilowatts. Typical customers include large churches, fast food restaurants, and grocery stores.
5.	GS Large Demand (Note 2)	Commercial entities that have a maximum annual demand 500 kilowatts or higher. Typical customers include large manufacturing entities and large institutions (e.g., schools and prisons).
6.	Curtailable GS Demand (Note 2)	GS Large Demand customers that contract with the City for a reduced billing rate in exchange for agreeing to curtail (reduce) the electricity provided by the City at the City’s request. The City would typically make such requests during times of peak demand on City resources. Currently, there is one City customer with such an



		agreement. That customer (hospital) has the capability of generating its own electricity on a temporary basis in the event its City-provided power is curtailed.
7.	Interruptible GS Demand <i>(Note 2)</i>	GS Large Demand customers that contract with the City for a reduced billing rate in exchange for agreeing to a total interruption (opposed to curtailing) of electricity provided by the City at the City's request. The City would typically make such requests during times of peak demand on City's resources. Currently, there are two customers with such agreements. Both customers (FSU Magnet Laboratory and a private commercial building that houses the Florida State Board of Administration) have the capability of generating their own power on a temporary basis in the event their City-provided electricity is interrupted.
8.	Temporary	Commercial customers – generally contractors needing temporary services while building or remodeling facilities (residential or commercial).
9.	Area Lights - Residential	Private outdoor lighting provided to residences. Used for nighttime lighting of yards, driveways, walkways, and other areas as requested by the customer. Consumption for billing purposes is not metered but instead based on the type and size of the light fixture.
10.	Area Lights - Commercial	Private outdoor lighting provided to commercial entities. Used for nighttime lighting of commercial premises as requested by the customer. Consumption for billing purposes is not metered but instead based on the type and size of the light fixture.
11.	Talquin Area Lights	Private outdoor lighting provided to City customers by Talquin Electric Cooperative (TEC), for which the City collects and remits to Talquin Electric Cooperative a monthly fee of \$1.50 per service point.
12.	Street Lights	Public streetlights provided by the City. The Electric Utility bills the City General Fund for this service. Consumption is not metered but instead determined based on light fixture type and quantity of streetlights.
13.	Traffic Lights	Traffic control devices placed on street intersections. The City owns the majority of these service points. The others are owned by the county, school board, State, or FSU.
Note 1	Meters are used to determine consumption for all service points other than Cable, Area Lights (Residential and Commercial), Talquin Area Lights, and Street Lights. Consumption determination for those other service points is addressed above in the applicable descriptions.	
Note 2	In addition to being billed for consumption of kilowatt hours (KWHs) at applicable rates established for those service points, "demand" customers are billed for their "peak demand" that occurs during the billing period. For those purposes, demand is measured in 30-minute intervals in kilowatts (KW). This separate demand charge is based on the concept that the City must ensure that, at a minimum, an adequate amount of power must be available (generated) to ensure those entities have sufficient power to operate during their peak periods of consumption.	

In August 2005 the City had 112,869 active electric service points and 105,626 active customer service agreements.

As of August 15, 2005, there were approximately 112,869 active electric service points. There were 105,626 active customer service agreements for those service points as of that date. The following table provides a breakdown of those service points and agreements by customer type.

<b>TABLE 2 – ACTIVE SERVICE POINTS/AGREEMENTS AS OF 8/15/05</b>			
	<b>TYPE</b>	<b>ACTIVE SERVICE POINTS (Note 2)</b>	<b>ACTIVE SERVICE AGREEMENTS</b>
1.	Residential	91,862	87,812
2.	General Services (GS) Non-Demand	11,342	10,348
3.	Cable	640	570
4.	GS Demand	2,374	2,280
5.	GS Large Demand	109	90
6.	Curtable GS Demand	2	1
7.	Interruptible GS Demand	2	2
8.	Temporary	1,277	548
9.	Area Lights - Residential	2,533	1,779
10.	Area Lights - Commercial	2,279	1,775
11.	Talquin Area Lights	78	76
12.	Street Lights	2	2
13.	Traffic Lights	369	343
<b>TOTAL (Note 1)</b>		<b>112,869</b>	<b>105,626</b>
Note 1	The number of active service points exceeds the number of active service agreements because (1) active service points sometimes do not have a customer (e.g., vacant house or business) and (2) some individual service agreements cover multiple service points.		
Note 2	An “active” service point represents a physical connection at a premises that is capable of providing electricity to that premises. Power may be turned on or off at that active service point.		

*Electric consumption revenues for FY 2004 totaled \$245 million.*

**Consumption Revenues and Billing Structures.** During the City fiscal year (FY) 2004, customers were billed \$244,848,886 for the consumption of City electricity. The breakdown of that billed consumption by service point/service agreement type, and the related billing structures, are shown in Table 3 that follows.

<b>TABLE 3 – CONSUMPTION REVENUES AND BILLING STRUCTURES</b>			
	<b>Service Point/ Agreement Type</b>	<b>Billing Structure (Notes 1, 2, and 3)</b>	<b>FY 2004 Revenues</b>
1.	Residential	(1) Flat (fixed) monthly customer charge; (2) charge per kilowatt hour (KWH) consumed during month to recover fuel (energy) and non-fuel operating costs; (3) and applicable taxes and surcharges. Residential customers are exempt from State sales taxes pursuant to Florida Statute.	\$111,602,644
2.	General Services (GS) Non-Demand	(1) Fixed monthly customer charge; (2) charge per kilowatt hour (KWH) consumed during month to recover fuel (energy) and non-fuel operating costs; (3) and applicable taxes and surcharges. Unless specifically exempt pursuant to applicable legal authority, commercial customers are subject to State sales taxes pursuant to Florida Statute. Churches or religious institutions are eligible for discounts.	\$18,671,401
3.	Cable	Same structure and rates as GS Non-Demand.	\$236,026
4.	GS Demand	(1) Fixed monthly customer charge; (2) charge per kilowatt hour (KWH) consumed during month to recover fuel (energy) and non-fuel operating costs; (3) demand charge per kilowatt used during peak period; and (4) applicable taxes and surcharges. Discounts may be applicable based on efficient use of power or in the event the customers have their own transformers.	\$57,055,869
5.	GS Large Demand	Same as GS Demand (other than different rates and amounts for fixed charges).	\$48,282,990
6.	Curtable GS Demand	Same as GS Large Demand except that a credit (discount) is applied for the right to curtail the customer's power. The amount of the credit is based on the amount of peak demand (kilowatts) occurring during the billing period.	\$1,950,304
7.	Interruptible GS Demand	The billing structure for the FSU Magnet Laboratory is based on established contractual terms and conditions that include a fixed charge and variable charges based on measured consumption (KWHs) and demand (kilowatts). In addition, there is a minimum charge of \$50,000 per month. For customers other than the Magnet Laboratory, the billing structure is similar to that for GS Large Demand except that a credit (discount) is applied based on the measured demand in exchange for the City's right to interrupt the power. In addition, there is a minimum monthly charge of \$2,810. Applicable taxes and surcharges are charged to these customers.	\$3,754,553

8.	Temporary	Same structure and rates as GS Non-Demand. (In the few instances where the temporary service point has high demand levels, the customers are charged based on the structure and rates established for GS Demand customers.)	\$238,124
9.	Area Lights - Residential	(1) Fixed monthly charge based on light fixture type; (2) consumption charge intended to recover fuel (energy) costs based on light fixture type and number of days in the billing period; (3) and applicable taxes and surcharges. Residential customers are exempt from State sales taxes pursuant to Florida Statute.	\$164,558
10.	Area Lights - Commercial	Same structure and rates as Area Light – Residential except that these customers are subject to State sales tax.	\$1,394,062
11.	Talquin Area Lights	Fixed charge of \$1.50 per month for each service point plus applicable taxes and surcharges.	\$1,367
12.	Street Lights	(1) Charge per kilowatt hour (KWH) consumed during month to recover fuel (energy) and non-fuel operating costs and (2) applicable taxes.	\$1,281,317
13.	Traffic Lights	(1) Fixed monthly customer charge; (2) charge per kilowatt hour (KWH) consumed during month to recover fuel (energy) and non-fuel operating costs; and (3) and applicable taxes and surcharges.	\$215,671
<b>TOTAL</b>			<b>\$244,848,886</b>
Note 1 Flat charges and rates per KWH and KW vary by service point/agreement type.			
Note 2 Taxes and surcharges that may be applied include the State gross receipts tax, City public service tax, City surcharge, County public service tax, and State sales tax. Generally all service points are subject to the gross receipts tax. Service points located within the City limits are subject to the City public service tax, while service points located outside the City limits are subject to the City surcharge and the County public service tax. Certain entities may be exempt from the City surcharge and City/County public service taxes (e.g., churches and governmental entities). State sales taxes are applicable to commercial entities other than entities meeting specified legal exemptions (e.g., governmental entities, religious institutions, and certain non-profit organizations).			
Note 3 GS Demand, GS Large Demand, Curtailable, and Interruptible customers are eligible for discounts upon entering into “preferred customer agreements” with the City. Those agreements provide for 5% or 7% discounts in exchange for contracting to purchase all electric power from the City.			

*Utility Accounting establishes semiannual rates to recover the City’s costs for fuel used in generating electricity for consumer consumption.*

**Energy Cost Recovery Charge.** Section 21-233 of the City ordinances provides for an “energy cost recovery charge” (ECRC) per kilowatt hour consumed, to be applied to all customers regardless of type/classification (except for Talquin Area Lights). The charge is intended to recover the City’s costs for fuel (e.g., natural gas and fuel oil) used to generate electricity for consumer consumption. That ECRC charge (or factor) is recalculated and adjusted semiannually, as appropriate. Recent rates applicable to our audit period were:

- October 2003 through March 2004 - \$.05707 per KWH.
- April 2004 through September 2004 - \$.05707 per KWH (no change deemed necessary from prior period).
- October 2004 through March 2005 - \$.05286 per KWH.
- April 2005 through September 2005 - \$.05688 per KWH.

Utility Accounting staff prepares and submits the proposed ECRC rates for approval by management. The proposed rates are based on projected consumption and fuel costs for the applicable six-month period, adjusted for any over- or under-recoveries resulting from differences between amounts charged/collected (based on application of the ECRC factor) in prior periods and actual fuel costs for those periods. Various City departments and offices provide Utility Accounting information used in the ECRC cost determination process. For example, staff in the Electric Control Center use a software simulation model to assist in determining projected consumption and related fuel costs. In addition, staffs in the Electric Control Center and Energy Services maintain records of actual costs of fuel used by the City's power plants.

*Various meter types are used to measure consumption; staff within Utility Accounting and the Electric Meter Shop read the City's electric meters.*

**Measuring Consumption.** As described in the notes to Table 1 above, electric meters are used by the City to measure consumption for the majority of electric service points. The type meter used depends on the physical characteristics of the service point. Generally, more complex service points with large consumption require more technically complex meters. Because there are often variables and factors associated with the different meter types, it is critical that electric service points be properly entered into the PeopleSoft CIS as to meter type and configuration. For example, the consumption and/or demand reads reflected on a more complex meter may need to be multiplied by a constant to obtain the true consumption and/or demand for the billing period. Accordingly, the proper constant (or "multiplier") must be recorded in the PeopleSoft CIS to ensure accurate billings for consumption/demand.

The vast majority of meters are read monthly by meter reading staff housed within Utility Accounting. Each service point is assigned to a specific read route. Meter readers generally record observed measurements in handheld electronic devices. After the read route is completed, the readings are downloaded from those devices into the PeopleSoft CIS for billing determination purposes. For the most complex service points (e.g., FSU Magnet Laboratory, Federal Correctional Institution, hospitals, large schools), the consumption and demand measurements are extracted from installed meters by knowledgeable Meter Shop staff using electronic reading devices. Meter Shop staff subsequently download those readings into the PeopleSoft CIS for billing purposes.

*The Electric Meter Shop manages the City's electric meters; including testing, installation, and removal of meters.*

**Meter Management.** Periodic testing is a critical component to ensuring that the City's electric meters are accurately measuring consumption. As a municipal-owned utility, the City is not subject to the meter testing requirements of the Florida Public Service Commission. However, the City does have a meter testing function that is administered by the Electric Utility Meter Shop. In addition to administering the meter-testing program, the Meter Shop is responsible for installing, removing, and exchanging electric meters at City service points. When appropriate, other Electric Utility units sometimes also administer these installation, removal, and exchange functions. Accountability for electric meters is the responsibility of the Meter Shop.

“Seals” are control devices used by the Electric Utility and UBCS meter readers to detect any unauthorized instances of meter tampering. Meter tampering represents attempts by individuals to alter meter reads. Examples include turning meters upside down so that they read backwards (negative consumption) and jamming mechanical meters so they will not turn (and thereby not register any consumption). There are two basic types of seals as explained below:

*Meter seals are used to detect meter tampering.*

- Meter seals – These are tagged wire seals placed on meter sockets by appropriate Electric Utility and UBCS staff. Once placed on the meter socket, the seals must be cut before the socket can be opened and the meter accessed or removed. Anytime that a City employee cuts a seal for purposes of accessing/removing a meter, they place a new seal on the socket upon completion of the applicable activity. Accordingly, anytime that a meter reader or other City employee goes to a premises and notes that the seal is cut or missing, a concern is automatically raised as to potential meter tampering and investigative action is initiated. Different color seals are used to designate specific circumstances. For example, gray seals are placed on active service points with active service agreements. Red seals are placed on service points where the power has been turned off at the customer’s request. Pink seals are placed on service points where the power has been turned off because of non-payment by the customer.
- Demand seals – These are plastic seals that are attached to demand meters. As described above in Table 1, demand service points are for customers that are billed, in part, based on their measured periods of peak usage of City power. Those intervals of usage (or demand) are measured by demand meters. Specifically, in addition to recording consumption (KWHs), a demand meter records the usage (demand or KWs) for each 30-minute interval occurring during the monthly billing cycle. The highest reading (representing the peak usage during that month) is what is retained and reflected by the meter when read. After the meter readers record that peak demand measurement, they push the reset button on the meter such that it will start a new cycle.

Similar to regular meter seals, a new demand seal is placed on the meter each time that it is accessed for reading or maintenance. That seal must be cut before the reset button can again be accessed. Accordingly, investigative action is initiated anytime that a meter reader, Meter Shop employee, or other applicable staff notices that the demand seal has been cut or removed from an installed demand meter. As with regular seals, different color seals are used to designate different circumstances.

Because of the significant assurances they provide, it is essential that the supply of meter and demand seals be properly accounted for and adequately safeguarded.

**Non-Consumption Revenues – New service points, Service Connections and Reconnections, and Miscellaneous Activities.**

In addition to charges for consumption, fees are assessed City electric customers for:

- New electric service points connected to the City's distribution system (cut-in fees);
- Initiation of services (i.e., new service agreements) at existing service points (connection fees);
- Reconnections of services at existing service points for customers who pay delinquent amounts after their power was turned off because of non-payment (reconnect fees); and
- Miscellaneous fees for:
  - Meter tampering,
  - Meter re-reads made based on unjustified customer requests,

*Customers are also charged fees for new service points, service connections and reconnections, and miscellaneous activities; fees for those events during FY 2004 totaled \$2,944,897.*



- Unsuccessful meter re-read attempts due to customers not making the meter accessible to City meter readers (e.g., locked fence or aggressive dogs), and
- Meter testing based on unjustified customer requests.

Fees and FY 2004 revenues for those activities are shown in the following table:

<b>TABLE 4 – NON-CONSUMPTION FEES AND REVENUES (FY 2004)</b>		
<b>TYPE</b>	<b>FEE</b>	<b>REVENUES</b>
Cut-in Fees	\$35	\$149,065
Connection Fees	\$16	\$670,144
Reconnect Fees	\$29 during normal work hours; \$59 if done outside normal work hours	\$2,082,928
Miscellaneous	\$20 for re-read activities, varies for tampering and unjustified tests	\$42,760
<b>TOTAL</b>		<b>\$2,944,897</b>

**Organizational Units.** The Electric Utility is responsible for the generation, transmission, and distribution of electricity to City customers. Various other City departments/units play key roles in activities and processes pertaining to electric revenues. The following provides a brief description of the applicable City departments/units.

Within the Electric Utility, applicable units include the:

- Power Plants – generate electricity.

*Various City departments and units perform functions that impact electric revenues.*

- Transmission and Distribution Division – maintains transmission and distribution infrastructure; installs and abolishes services points.
- Electric Meter Shop - manages meters (including installing, exchanging, and removal from service points as well as meter testing) and determines monthly consumption for the most complex accounts and service points.
- Electric Control Center – designated staff assist in the establishment of rates charged to recover energy costs.
- Electric Power Engineering – designated staff turn power on and off for area lights (private outdoor lighting).

Applicable units within UBCS included:

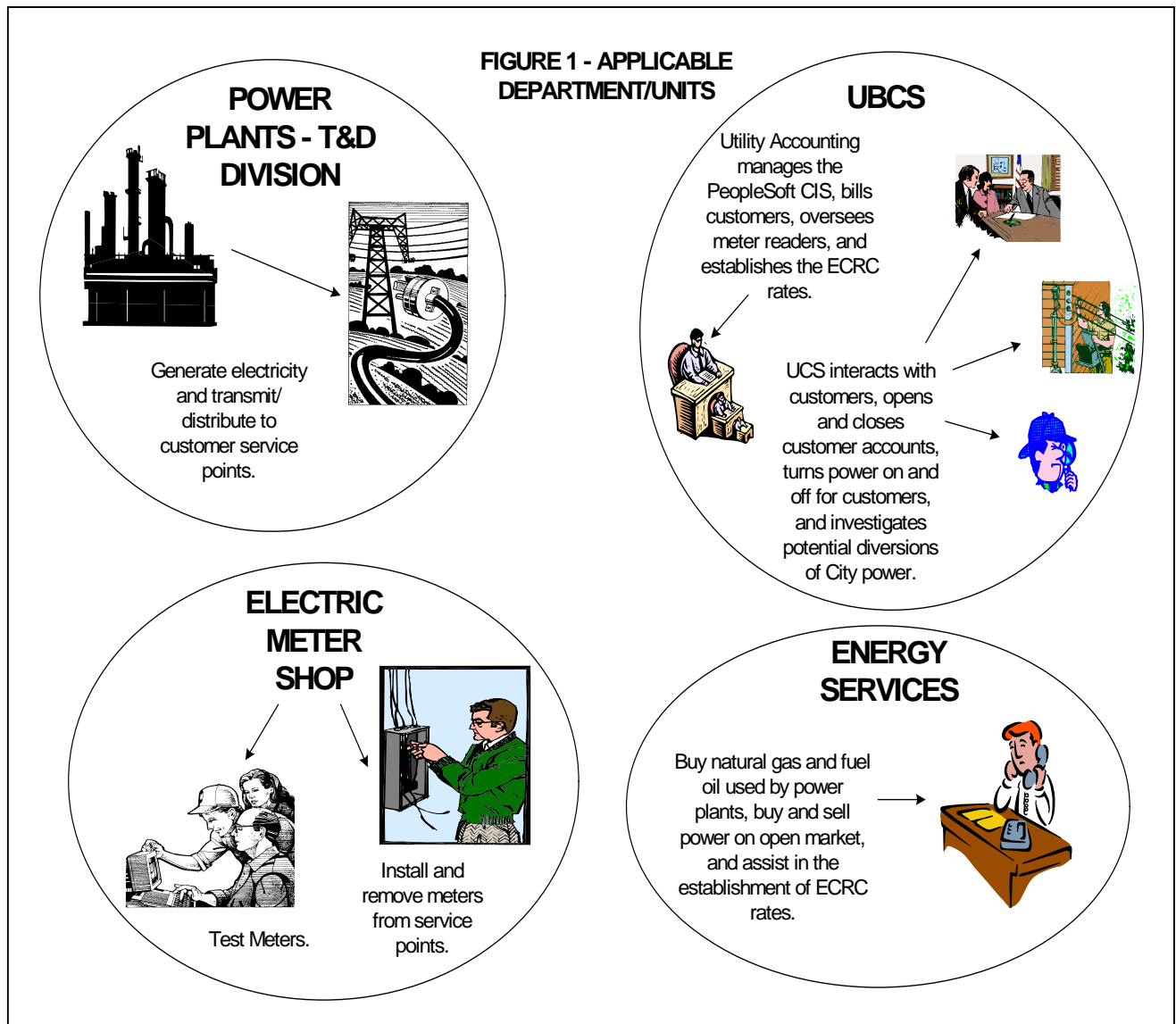
- Utility Accounting – manages the PeopleSoft Customer Information System (CIS) that is used to track consumption and related activities and generate bills sent to City customers. Also, oversees the meter reading function and establishes and recommends to management rates to recover energy costs.
- Utility Customer Services (UCS) – interacts with customers and uses the PeopleSoft CIS to establish new accounts, close existing accounts, and requests turn-on and turn-off of power for customers. Also, oversees the following two units:
  - Field Services - turns power on and off at the service point for most customers.
  - Diversion – investigates suspected meter tampering and other potential unauthorized diversions of City electricity.

Key activities performed by Energy Services include:

- Buy natural gas and fuel oil used by the power plants to generate electricity.

- Sell excess City-generated power on the open market.
- Buy available non-City-generated power on the open market when appropriate.
- Maintain and provide records used in the determination of rates charged to recover energy costs.

Figure 1 below provides an overview of these departments/units functions.



NOTE: The Electric Control Center also assists in the establishment of the ECRC rates. In addition, designated staff in Power Engineering turn power on and off for area lights.

## Overall Summary

*Overall, electric consumption was properly determined and accurately billed, related fees were properly assessed, energy cost recovery rates were correctly determined, and meter management practices were in place; however, issues were identified for management's consideration and disposition.*

The results of our audit procedures showed that, overall, electric consumption was being properly read by meter readers, recorded in the PeopleSoft CIS, and billed to City customers. The determinations of amounts to bill for that consumption were generally correct based on customer and service point classification (e.g., residential versus commercial), premises location (inside or outside City limits), contractual terms and conditions (i.e., for large customers), and applicable City ordinances. We also found that, overall, related non-consumption fees were properly charged based for applicable activities. In addition, with the exception of one calculation error, energy cost recovery rate determinations were accurate and correct. Furthermore, controls and processes were in place regarding meter inventory and maintenance.

In addition to the overall conclusions as stated above, we did identify issues that indicate improvements and enhancements need to be made in regard to the following areas: (1) detecting and preventing unbilled consumption; (2) correctly billing customers for consumption based on characteristics of the customer, service point, and premises; (3) establishing accurate energy cost recovery rates; (4) correctly billing customers for activities relating to creation of new service points, connecting and reconnecting services, and miscellaneous events such as unjustified meter re-read and tests; (5) meter testing; and (6) meter management. These issues are addressed in the following sections of this report.

## Unbilled Consumption

**Overview.** As described previously in this report under "Audit Methodology," we performed tests and analyses to identify consumption that was recorded in the PeopleSoft CIS but not billed to customers. Audit procedures included identifying meter reads indicating consumption was occurring at service points that no longer had active service agreements (and thus no customer to bill). In addition, for non-metered service points (e.g., Area Lights and Cable) with no active service agreements, characteristics recorded in the PeopleSoft CIS were evaluated for indications of potential

unbilled consumption. Although Utility Accounting had developed its own queries and software programs to detect unbilled consumption, our reviews were performed using queries created and run by audit staff. Using auditor-generated queries provided a means to independently determine if Utility Accounting's queries and reports were accurate and appropriate.

**Issue No. 1.** Overall, our review showed that Utility Accounting has developed appropriate controls, queries, and reports to timely identify instances of unbilled consumption. However, we identified the following instances of unbilled consumption.

*Two instances were identified where unbilled consumption totaling \$53,569 occurred without detection because of a software programming error.*

- We found one commercial (GS Demand) service point with consumption over a seven-month period that had not been billed to the applicable customer. The value of that unbilled consumption was \$24,149. When we brought this to the attention of Utility Accounting staff, they determined that the software programming established to identify unbilled consumption inadvertently excluded demand type service points. When they made interim modifications to address that programming oversight, they identified an additional commercial service point that had not been billed for consumption occurring over the most recent 19 months. The unbilled consumption for that customer totaled \$29,420.

Upon identification of these two instances, Utility Accounting immediately initiated service agreements and back-billed the two customers for the unbilled consumption. The first customer was back-billed for the entire amount of \$24,149. Because of the City's policy of not back-billing customers more than 12 months for City errors/mistakes, the second customer was back-billed \$21,920. The remaining \$7,500 will not be recovered by the City. In addition, Utility Accounting has initiated actions to have permanent corrections made to the software programming (i.e., include

demand service points) that identifies unbilled consumption in the PeopleSoft CIS.

*An inefficient process requiring manual communications between different staffs may have contributed to instances of unbilled consumption for private outdoor lighting.*

- Out of a sample of 84 Area Lights, we identified three instances where the power was on but either the customers (all commercial) were not being billed (two instances) or there was no current customer (one instance) at the premises. If the power has remained on since the termination of the last active service agreements, the periods of unbilled consumption for these three service points ranged from 15 to 34 months. The value of unbilled consumption based on those periods approximates \$385. Reasons for this unbilled consumption were not clear based on a review of activity recorded in the PeopleSoft CIS. Specifically:
  - For one service point, the system showed that a work order had been created to turn the power off, but that order was cancelled.
  - For a second service point, a work order was timely created to turn the power off; however, that work order was cancelled seven months later. Prior to the cancellation of that work order a manual work order was created and completed to reconnect the services (turn the power on). However, appropriate action evidently was not taken to resume billing the customer for those services (i.e., a service agreement was not activated).
  - For the third service point, a determination of the circumstances could not be made as the applicable service agreement terminated prior to the implementation of the PeopleSoft CIS in October 2002.

The three primary circumstances for which an Area Light would be turned off and the service agreement closed are: (1) the customer no longer wants the services, (2) the current customer moves from the premises, or (3) the customer is delinquent in paying the bill. System work orders are normally created by Utility Customer Services (UCS) staff for those circumstances and dispatched to designated staff in Power Engineering for completion. However, based on our interviews of applicable staff, requests to turn power on or off for Area Lights are sometimes made directly to Power Engineering. In those instances, Power Engineering turns the power on or off and completes a manual order reflecting that action, and then submits the manual order to Utility Accounting for entry into the PeopleSoft CIS and initiation/termination of a service agreement. In regard to the two of the three instances noted above, Electric Utility staff suspects that activities (e.g., turn power back on or not turn power off) may have been undertaken by Power Engineering staff based on customers' requests, but for unknown reasons the service agreements were not activated in PeopleSoft CIS.

That process of Power Engineering staff completing actions based on requests received directly from customers and having to notify (through manual work orders) UCS or Utility Accounting of those actions increases the risk of unbilled consumption in the event of incomplete communications between Power Engineering and UCS or Utility Accounting staffs. A more efficient process may be assigning Power Engineering staff responsibility for initiating and completing activity (e.g., system work orders and service agreements) in the PeopleSoft CIS for customer requests received and related actions taken.

**Recommendations.** In regard to the significant unbilled consumption for two GS Demand service points, Utility Accounting

has initiated corrective actions. A request has been made of Information System Services to modify the applicable software programming to include demand type customers when identifying unbilled consumption. In the interim, Utility Accounting indicated that a temporary query is being used to identify any unbilled consumption for demand type customers. We recommend that Utility Accounting complete those corrective actions.

In regard to the unbilled consumption for the noted Area Lights, we recommend that the power be immediately turned off or service agreements activated. If applicable, the two current customers should be back-billed pursuant to City policy. In addition, Power Engineering should ensure that (1) appropriate actions are completed based on PeopleSoft CIS work orders and (2) proper communications are made to UCS and Utility Accounting for any actions completed based on direct requests (i.e., verbal requests instead of PeopleSoft CIS work orders). To eliminate the risks of incomplete communications between staffs, consideration should be given to training applicable Power Engineering staff to use and update the PeopleSoft CIS for requests received and actions taken.

**Issue No. 2.** In addition to the instances of unbilled consumption described above, our testing for unbilled consumption at certain non-metered service points (Cable and Area Lights) showed that the PeopleSoft CIS was not always properly updated to show the correct status. Specifically, we noted:

*Actions need to be taken to ensure that the correct status of electric service points is shown in the PeopleSoft CIS.*

- For 12 of the 14 sampled Cable service points without an active service agreement, the power was off but the PeopleSoft CIS showed a “connected” status; the status should have been shown as “disconnected.”
- For 44 of 84 sampled Area Light service points without an active service agreement, the power was off but the PeopleSoft CIS showed a “connected” status; the status should have been shown as “disconnected.” (NOTE:



Although the power was determined to be off, for five of those 44 instances, there also was no evidence that system work orders to turn the power off had been generated and completed.)

For those 56 service points, the system incorrectly implied that consumption was occurring for the applicable service points. In addition, for those five instances without evidence of system work orders, there is an implication that the PeopleSoft CIS was not properly used to document work performed. Incorrect service point statuses and not documenting work performed limits the use of the PeopleSoft CIS as a management/monitoring tool.

**Recommendations.** Applicable staff should be instructed to update the service point status to “disconnected” when service agreements are terminated. Staff should also be reminded to use the PeopleSoft CIS work order process to document actions (turning power on and off) completed at service points.

## *Billed Consumption*

**Overview.** Audit procedures included selecting and testing representative samples of active service points/service agreements to determine if customers were properly billed based on documented circumstances. Separate samples were selected for each service point/agreement type. Also, for residential, Non-Demand, and Temporary service points/agreements, samples were selected to ensure a representative sample of the different geographical areas within the City. In addition, data mining (analyses) was performed of service point and service agreement characteristics to identify any incorrect billing relationships. The following issues were identified.

*State sales taxes of approximately \$150,000 were incorrectly charged and collected from three customers.*

**Issue No. 1.** As noted in the Background section of this report, certain commercial (non-residential) entities are exempt from State of Florida sales taxes and may also be exempt from City and County public service taxes. For State sales taxes, exempt entities are required to provide Utility Accounting with either a letter

asserting their tax-exempt status or a copy of their Florida Department of Revenue tax exemption certificate. Upon receipt of that documentation, Utility Accounting staff record the exemption in the PeopleSoft CIS under the applicable service agreements. That system is programmed to not charge the applicable taxes through the recorded expiration date of the letter or certificate. Prior to the scheduled expiration of letters/certificates, Utility Accounting sends the customer a letter notifying them that a new updated letter or certificate is needed in order for their tax-exempt status to be continued. In addition, Utility Accounting (either directly or through staff in Energy Services) may verbally contact the customer to notify and/or remind them of the need to update their exemption documentation. In the event that the customer does not provide updated documentation, the exemption status will expire and taxes will be charged for subsequent consumption.

In our review of 285 sampled service points, we noted State sales taxes were charged to three commercial customers that were exempt from those taxes. Public service taxes were also incorrectly charged one of those three customers. The circumstances for each customer are explained below.

- The PeopleSoft CIS showed that the State sales tax exemption for a hospital (Tallahassee Memorial Regional Medical Center) expired April 9, 2004. State sales taxes were assessed on consumption subsequent to that date, as the system did not reflect an updated exemption. As a result, taxes totaling \$141,044 were charged and collected from that customer over the 13-month period April 2004 through the time of our review (April 2005). Upon notification of this occurrence, Utility Accounting determined that the updated exemption certificate had been timely obtained but, due to oversight, staff had not updated the PeopleSoft CIS to reflect a continued exempt status. Evidently, the customer also did not detect this error.

Utility Accounting took immediate corrective action by (1) coding the updated tax-exempt status in the PeopleSoft CIS (so prospective consumption would not be taxed), (2) credited the customer's account for the incorrectly assessed taxes, and (3) recovered the \$141,044 from the Florida Department of Revenue (i.e., through a reduction to monthly amounts remitted to the State).

- Similar to the above, an exempt customer (U.S. Army – Armory on Ausley Road) was charged State sales taxes after the expiration date (October 2003) passed for their tax exemption status. We noted that Utility Accounting did send a letter in September 2003 notifying the customer that a new certificate was needed. In response to our inquiry, Energy Services staff also indicated that the customer was verbally reminded to provide the new exemption certificate. When the customer did not respond, sales taxes were assessed on subsequent consumption. Sales taxes charged and collected from this customer from October 2003 through the date of our fieldwork in April 2005 (19-month period) totaled \$3,740. Subsequent to our inquiry on this matter, Utility Accounting again contacted the customer and obtained an updated sales tax exemption certificate. In addition, they credited the customer for the \$3,740 and recovered that amount from the Florida Department of Revenue.
- In a third instance, an exempt customer (Federal agency) was incorrectly charged both State sales taxes and City public service taxes for consumption during the 10-month period April 2004 through January 2005. These taxes were incorrectly charged when UCS staff created new service agreements for this customer for separate premises (all premises were formerly combined on a single service agreement) but, inadvertently, did not record the tax exemption status in PeopleSoft CIS for one of the new service agreements. This oversight was detected by Utility

Accounting staff before our fieldwork and the service agreement was corrected such that taxes were not assessed on subsequent consumption. However, Utility Accounting did not credit the customer for the incorrectly assessed taxes (totaling \$8,150). Subsequent to our inquiry on this matter, Utility Accounting credited the customer for those taxes and recovered applicable amounts from the State (sales taxes) and/or City General Fund (i.e., for public service taxes).

In total, the three customers were incorrectly charged taxes totaling \$152,934. As described, actions have been taken to reimburse those customers and ensure taxes are not applied to subsequent consumption.

**Recommendations.** To help preclude future instances of incorrect application of taxes, Utility Accounting should consider developing queries that generate periodic (monthly) reports of customers for which taxes are applied because new exemption statuses were not recorded in the PeopleSoft CIS. Those reports should be reviewed and appropriate actions taken. Such actions may include recording updated information into the PeopleSoft CIS and/or notifying the customers of the consequences (taxes paid to date) for not submitting the necessary documentation.

**Issue No. 2.** We performed data mining (analyses) of all active service points and all active service agreements to identify any incorrect relationships in regard to service point type, service agreement type, premises type, and rate structure. As noted in the Background section of this report (see Table 2), there are in excess of 100,000 active service points/service agreements. Our review showed that virtually all (99.96%) of the relationships were correct, thereby indicating that City customers are generally billed correctly for electric services. However, as noted below, 38 instances were noted where customers were not correctly billed.

*Our data mining procedures disclosed 38 instances where customers were not correctly billed because of misclassifications in rate structure, service point type, and/or customer type.*

- Two instances were identified where GS Demand customers were incorrectly billed at GS Non-Demand rates. A

determination was made in each instance that the customers (which were initially correctly billed as GS Demand) had requested to be billed at the lower Non-Demand rates during periods of low activity (i.e., demand levels were low enough during those periods to justify billing at the less expensive Non-Demand rates). However, when those periods of low activity stopped and demand levels increased, actions were not taken by UCS staff to change the rates back to GS Demand. As a result, one customer was under-billed \$1,776 for a 20-month period and the other customer was under-billed \$1,251 for a 12-month period. When we identified these instances, Utility Accounting took corrective action by (1) changing the rates back to GS Demand and (2) back-billing the customers pursuant to the City's back-bill policy. As that policy only allows the City to back-bill for the most recent 12 months when the under-billed amounts are due to City error, \$710 will not be recovered from the one customer under-billed for 20 months.

- At our request, Utility Accounting researched all 15 temporary service points and service agreements (e.g., used by contractors when constructing buildings or facilities) in the PeopleSoft CIS that were over five years old. Their review showed that each of those service points existed but were no longer "temporary" in nature. As a result, the service points and agreements were re-classified in PeopleSoft CIS to a Residential or GS Non-Demand status, as appropriate. There was no adverse billing impact for the ten service points re-classified as GS Non-Demand because the rate structure was the same as that used for the temporary classification. However, for the five service points that were re-classified as Residential, the applicable customers were incorrectly charged as the rate structure was different (e.g., different flat fees and rates; also, State sales taxes were charged when they should not have been). The amount of the incorrect billings was not determined due to

difficulties in determining the specific points in time that the service points became permanent in nature, and the relatively minor amounts involved. As the service points were corrected prospectively, that action appeared reasonable.

- Four residential customers were billed commercial rates when residential service points were incorrectly coded as “GS Demand” or “Area Light-Commercial” within the PeopleSoft CIS. As a result, the applicable customers were undercharged or overcharged. Our analysis showed the overcharges/undercharges to be minor (e.g., little more than \$1 per month in one instance). As a result, the only corrective action taken by Utility Accounting was to re-classify these service points as Residential, so that subsequent consumption will be correctly billed. That action appeared reasonable.
- Sixteen commercial customers were incorrectly billed residential rates when commercial area lights were incorrectly coded as “Area Light-Residential” in the PeopleSoft CIS. Similar to the preceding item, Utility Accounting took appropriate corrective action by re-classifying those service points to “Area Lights-Commercial.”
- One governmental customer was charge State sales taxes when the customer type was incorrectly recorded as “commercial” within the PeopleSoft CIS. Similar to the preceding items, Utility Accounting took appropriate corrective action by re-classifying the customer to “governmental.”

In summary, our data mining techniques disclosed 38 incorrect billing relationships. For two of those 38 instances, the resulting billing errors totaled \$3,027. The amount of the billing errors for the remaining 36 items was determined to be relatively minor (e.g.,

\$1 per month per customer). Upon notification by our staff, Utility Accounting corrected these billing relationships.

**Recommendations.** We noted that Utility Accounting had already developed various queries to assist in the identification of incorrect billing relationships. We recommend that additional queries be developed to address the type of incorrect relationships noted above. For example, queries should be developed and run periodically to identify temporary service points that are more than a few years old. Research should then be performed to determine the propriety of those service points and changes made when appropriate. In addition, activity for commercial customers who convert from Demand to Non-Demand status should be periodically reviewed to ensure the Non-Demand status remains appropriate.

**Issue No. 3.** During our initial observations and testing of billed consumption for 285 sampled service points, we identified the following:

*Our observations and testing of 285 sampled service points disclosed that (1) the county public service tax was incorrectly not charged for certain private outdoor lighting and (2) one customer charged demand rates did not meet minimum demand levels required for those rates.*

- The County public service tax was incorrectly not applied to the 78 Talquin Area Lights. Those service points represent private outdoor lighting provided City customers by Talquin Electric Cooperative (TEC). Those City customers reside outside the City limits. Pursuant to City ordinance, the City is to charge each of those customers \$1.50 per month. (Amounts collected are to be remitted to TEC.) To that amount the City should apply State gross receipts taxes, the City surcharge, and the County public service tax. (The County public service tax became effective October 2003.) Upon our notification that the County public service tax was not being applied, Utility Accounting took corrective action by (1) making appropriate changes to the PeopleSoft CIS such that the tax is now properly applied to these service points, effective April 2005, and (2) reimbursing the County \$229 for the period October 2003 through March 2005. Because the undercharged amount for each individual

customer was minor (less than \$3 per customer), Utility Accounting did not back-bill any customers.

- One of 30 sampled GS Demand and GS Large Demand customers did not meet the criteria established in City ordinances to be billed at demand rates. Specifically, from September 2002 through the date of our fieldwork in March 2005, the demand never exceeded 5.76 kilowatts. City ordinances provide that demand rates are available only to customers with a minimum demand of 10 kilowatts for twelve consecutive months. As a result, the customer paid \$90 more than what would have been charged if Non-Demand rates were charged. (It is not advantageous for a customer to pay demand rates if they do not use the minimum demand.)

**Recommendations.** As noted, Utility Accounting has completed appropriate correction action for the 78 Talquin Area Light service points. We recommend that Utility Accounting also revise the billing structure for the demand customer not meeting demand minimums. To ensure that demand customers meet minimum demand levels, Utility Accounting should consider developing and periodically running queries that identify customers billed at demand rates but not meeting that minimum. (NOTE: In response to this latter recommendation, Utility Accounting responded that because of workload issues that may result, it will instead continue to rely on Energy Services staff's role as customer liaison for demand customers to ensure those customers are set up to be billed the appropriate rates.)

**Issue No. 4.** While the majority of the City service area is located within the City limits, the City does serve some customers that reside outside the City limits. Billing structures are different for those customers located outside the City limits. Specifically, those customers are not subject to the City public service tax, they are instead subject to the City surcharge and the County public service tax. To ensure the proper application of those taxes and surcharge,



*Our data mining procedures disclosed 75 services points that were incorrectly classified in the PeopleSoft CIS as to City limit status, thereby resulting in the incorrect application of taxes and surcharges for the applicable customers.*

utility premises (to which service points are attached) are coded in the PeopleSoft CIS as either inside or outside City limits. Those determinations are generally made by the City's Growth Management Department and/or UCS staff when premises are created. In addition, Utility Accounting staff revises those designations as appropriate when areas are annexed into the City.

To ensure the proper classification of Electric Utility service points as inside or outside City limits, we compared applicable premises designations recorded in PeopleSoft CIS to designations recorded in the Electric Utility Geographical Informational Systems (GIS). This comparison was done with the assistance of Information System Services (ISS). In addition, we compared designations for certain premises to the Leon County/City of Tallahassee GIS and to the Leon County Property Appraiser's records. We were able to analyze premises relating to 82,541 of the 112,869 active electric service points. Premises for the remaining 30,328 service points were not analyzed, as the service points had not yet been migrated into the Electric Utility GIS (an on-going project).

Our review showed that the vast majority of premises were correctly designated in the PeopleSoft CIS as inside or outside the City limits. However, we identified premises for 75 service points that were incorrectly coded. In 69 of those instances the PeopleSoft CIS incorrectly showed the premises as inside the City limits, and in the remaining six instances the PeopleSoft incorrectly showed the premises as outside the City limits. Also, for an additional six premises, our review showed that the PeopleSoft CIS designation was questionable because the location (physical address and/or parcel number) recorded in PeopleSoft CIS was different than the location reflected in the Electric Utility GIS. If the Electric GIS location is correct in these six instances, the inside/outside City limit designation in PeopleSoft CIS is incorrect for those service points.

Basically, differences in customers billings for incorrect designations result because a customer located outside the City

limits is subjected to two 10% taxes (City surcharge and County public service tax), while customer inside the City limits are subject just to the 10% City public service tax. The actual dollar impact on a customer's billings for an incorrect designation depends on the amount of consumption. For example, if a customer's premises was incorrectly classified as outside the City limit and the customer was billed \$300 before taxes, the result would be an over-billing of approximately \$30. Conversely, if a customer was incorrectly classified as inside the City limits, the customer would be under-billed approximately \$30.

**Recommendations.** We recommend that Utility Accounting correct the inside/outside City limit designations for the premises relating to the 75 service points. Utility Accounting should also research the 6 questionable service points to determine if the correct physical locations are recorded in the PeopleSoft CIS, and make any appropriate corrections based on that research. Applicable Growth Management and UCS staff should also be made aware of these exceptions and reminded on the importance of correctly coding premises locations in the PeopleSoft CIS. Also, after all Electric Utility service points have been successfully migrated into the Electric Utility GIS, consideration should be given to running periodic queries to identify incorrectly coded premises. City management should determine which staff (Utility Accounting, Electric Utility, Growth Management, or UCS) should develop and work such queries. Lastly, management should make a decision whether prior billings should be retroactively corrected for the customers at the 75 incorrectly coded premises.

## ***ECRC Rate Determination***

**Overview.** As noted in the Background section of this report, the Energy Cost Recovery Charge (ECRC) is applied to consumption (i.e., rate per KWH) to allow the City to recover the costs of natural gas and fuel oil used in the generation of electricity. The ECRC is determined semiannually by Utility Accounting, with the assistance of staff in Energy Services and the Electric Control Center, and

provided to management for approval. The ECRC rates are based on projected consumption and fuel costs for the applicable six-month period, adjusted for any over- or under-recoveries resulting from differences between amounts charged/collected (based on application of the ECRC factor in prior periods) and actual fuel costs (i.e., during the applicable prior periods).

*An undetected error resulted in a \$1.2 million understatement of fuel costs; if not corrected this error would have resulted in that amount not being considered when establishing subsequent ECRC rates.*

**Issue.** We reviewed the ECRC rate of \$.05286/KWH established for the period October 2004 through March 2005. That rate was based on projected consumption of 1,255,789,000 kilowatt hours and projected costs of \$66,376,000 (after adjustment for over recovery of \$6,260,000 for prior periods) for that period. We found that the process and calculations were logical, properly supported by appropriate records and activities, and mathematically accurate. No issues were identified relative to the determination of that rate.

However, we noted an error in records documenting actual costs of fuel oil used in the production of City electricity. The error occurred when the costs of 33,174 barrels of fuel oil transferred from Purdom Power Plant to Hopkins Power Plant (in January 2005) was not recorded in Hopkins inventory records maintained by staff in the Electric Control Center. Specifically, the quantity was reflected in the applicable worksheet but the costs of \$1,298,931 were inadvertently excluded. That error, in turn, resulted in the cost per barrel of fuel oil being understated. As a result, the cost of fuel oil used was understated by \$1,298,931.

Had this error not been detected, future ECRC rate determinations likely would have resulted in the City not recovering fuel costs in the amount of \$1,298,931.

**Recommendations.** In response to this issue, Utility Accounting indicated that appropriate adjustments would be made to over/under cost recoveries for that period such that the subsequent ECRC rate determination would properly consider those costs. We recommend that this planned corrective action be completed. In addition, to

help ensure detection of future errors of this type, we recommend that the Electric Control Center provide for periodic managerial reviews of records prepared and maintained to reflect actual costs incurred in the production of electricity.

## *Non-Consumption Fees*

**Overview.** Table 4 of the Background section of this report lists the Non-Consumption revenue activities and related fees that pertain to City electric services provided City customers. These include fees charged for:

- Cut-in services (\$35 fee) – represents connecting new service points to the City’s distribution system.
- Connection services (\$16 fee) – represents initiating services (turning on power) for customers at existing service points.
- Reconnection services (\$29 fee if during normal work hours; \$59 outside normal work hours) – represents turning power back on for customers that pay delinquent amounts after their power was turned off because of non-payment of overdue amounts.
- Miscellaneous activities such as meter tampering by customers, unjustified meter re-reads and meter tests by City staff based on customer requests, and unsuccessful meter re-read attempts due to customers not making meters accessible (e.g., locked gates). Fees vary depending on the activity and circumstances.

These activities may be initiated based on customer requests made to UCS staff, based on automatic system identifications of events (e.g., unpaid delinquent accounts), or observations by City staff (e.g., potential meter tampering).

Once UCS, other City staff (e.g., Utility Accounting or Electric

Meter Shop), or the system determines that an action is appropriate, a PeopleSoft CIS work order (field activity/order) is created and dispatched to the applicable staff for completion. In some instances the system determines the fee based on the action completed (to be completed). For example, for a reconnection service, a fee of \$29 is automatically charged by the system. In other instances, staff must select and/or determine the fees based on the circumstances. For example, for connection-type services, the applicable UCS staff must select the applicable fee to charge the customer based on the nature of the services (i.e., \$35 if a cut-in for a new service point or \$16 if a new service agreement at an existing service point).

**Issue No. 1.** To determine if cut-in fees, connection fees, reconnection fees, and miscellaneous fees were properly charged, we selected and tested activity for representative samples of 80 new service points, 72 new service agreements, 48 completed work orders where services were stopped because of non-payment, and 40 completed work orders for miscellaneous activities (meter tampering, meter re-reads and meter tests). Overall, our tests showed that fees were properly determined and charged for these activities. However, the following instances of incorrect fee application were noted:

*In a sample of 240 activities, we noted 13 instances where non-consumption fees were not correctly charged.*

- In two instances, the \$16 fee for new service agreements (residential area lights) was incorrectly not charged.
- For two new Traffic Light service points, the \$35 cut-in fee was incorrectly not charged.
- In one instance, a residential customer was incorrectly charged the \$16 connection fee twice for the same connection activity.
- For one new Temporary service point, the customer was incorrectly charged a \$16 connection fee instead of the \$35 cut-in fee.

- In one instance, a customer was incorrectly charged a \$35 fee for meter testing. Pursuant to City ordinance, each customer is entitled to request and receive one free re-read every 12 months, regardless of whether a re-read is justified. In this instance, the customer had not requested and received a free re-read within the last several years. Accordingly, the \$35 fee should not have been applied.
- In one instance, a customer whose power was restored after payment of delinquent fees was properly charged the applicable \$29 reconnection fee. However, that customer was incorrectly also charged a \$16 connection fee for that same activity. This incorrect charge occurred when a connection work order was inadvertently created by UCS staff to have the services restored. Instead of correctly “canceling” that work order, UCS staff changed the status to “completed.” That completed status resulted in the incorrect application of a \$16 fee.

In response to our inquiry, UCS management attributed these instances to errors by UCS staff, such as selecting and/or applying the incorrect fee type for the activities performed. In addition to those errors involving UCS staff, we noted the following errors attributable to Utility Accounting staff.

- In instances where customers contact designated Power Engineering staff to request new area lights, that staff prepared manual work orders (outside of the PeopleSoft CIS) for the establishment of the new service points. After the work is completed, Power Engineering staff notifies Utility Accounting (e.g., via fax of the completed manual work order) that the work is done. Utility Accounting staff then prepares and completes a PeopleSoft CIS work order (field activity and order) to reflect the creation of the new service point and service agreement. Utility Accounting staff should select and apply the appropriate fee for those

services. We noted that Utility Accounting often selected the incorrect fee to apply in those instances. Specifically, instead of correctly selecting and applying the \$35 cut-in fee, the \$16 connection fee was incorrectly selected and applied to five of nine new service points tested. As a result, the applicable customers were undercharged for those services.

In summary, out of 240 activities selected and tested, we noted 13 instances (5.4% error rate) where fees were not correctly charged. Those 13 instances included fees incorrectly not charged (4 instances), wrong fees selected and applied (6 instances), fees charged that were not applicable (2 instances), and a fee incorrectly charged twice (1 instance).

**Recommendations.** The applicable customer accounts should be charged or credited for the incorrect fees in accordance with City policy. We recommend that Utility Accounting and UCS management emphasize to their staffs the importance of identifying and applying the correct fees based on the activities performed. Additional training for those staff should be considered.

**Issue No. 2.** City Ordinance 21-33 provides, in part, that “when service is discontinued or ordered discontinued for cause or because of nonpayment of amounts due, there shall be a service charge of \$29 for the reestablishment electric service made during normal work hours.” We noted that the PeopleSoft CIS is set up to charge that fee based on the disconnection (for nonpayment) action instead of the reconnection (i.e., reestablishment) of the services. In the majority of such instances the customers pay their delinquent bill and have their service restored (reconnected). In those instances, there is no impact of charging the fee based on the disconnect activity. However, in those few instances where the services are disconnected for nonpayment and the services are not restored (e.g., customer moves from premises), the \$29 fee is still charged. In our test of a representative sample of 48 instances where electric

*As similarly noted in our audit of City gas revenues, the current process for charging reconnection fees occasionally results in the improper assessment of those fees.*

services were cut because of nonpayment by the customer, we noted five instances (10% of the items tested) where this situation occurred. A charge under those circumstances does not appear to be in accordance with the ordinance.

This same issue was identified in the City Auditor's GAS REVENUES Audit Report #0409, issued April 12, 2004, in regard to disconnecting and reconnecting City gas services. In response to that finding, Utility Accounting prepared an action plan step to rectify this issue. That step now involves including, in the updated version of PeopleSoft CIS (update scheduled for completion in fall 2005), the functionality that allows the \$29 fee to be charged based on the reconnect activity instead of the disconnect activity. If that planned action is completed, this issue should be resolved.

**Recommendations.** For the five applicable instances where we noted services were not reconnected after being cut for nonpayment, we recommend that the applicable customer accounts be credited for the \$29 reconnection fees. We also recommend that Utility Accounting continue efforts to resolve this issue as part of the update to the current version of PeopleSoft CIS.

**Issue No. 3.** As noted in the above overview, the City charges a \$35 or cut-in fee for new electric service points. For new service points located outside the City limits, City Ordinance 21-125 authorizes that \$35 fee. However, for service points established within the City limits, City Ordinance 21-253 provides that the associated cut-in fee shall be indicated in the City's "schedule of fees." In response to our inquiry, Utility Accounting researched this matter and determined that there was no official City fee schedule substantiating the \$35 cut-in fee for new service points located within the City limits. Without an official schedule of fees establishing the fee amount, the authority for charging \$35 for those services could not be verified.

*The \$35 cut-in fee for new service points within the City limits is not substantiated by an official City fee schedule.*



**Recommendations.** We recommend that UBCS establish an official schedule of fees that includes the \$35 cut-in fee for new service points located within the City limits.

## *Meter Management*

**Overview.** The Electric Meter Shop is responsible for management of the City's 100,000 plus electric meters. Those responsibilities include installing, removing, and exchanging meters at electric service points, as well as meter testing and adjustments. Furthermore, Meter Shop staff read and enter measured consumption into the PeopleSoft CIS for some of the more technical and complex meters. To effectively and efficiently perform those responsibilities, it is essential that the Meter Shop maintain adequate records accounting for and tracking meters and related activities (e.g., installations, removals, exchanges, test results, adjustments made).

As described in the Background section of this report, meter seals (regular and demand) are used by the Electric Meter Shop and UBCS meter readers as a control to deter and detect unauthorized meter tampering. Because an unauthorized individual with uncontrolled access to those seals is in the position to conceal meter tampering, it is essential that the supply of seals be adequately accounted for and safeguarded.

**Issue No. 1.** The Meter Shop tracks meters using both the PeopleSoft CIS and an outdated manual index card system. Both systems track meters by badge number. (Each meter is assigned a unique badge number upon acquisition and receipt in the Electric Meter Shop. The badge number is physically imprinted on the meter.) In regard to the card system, each meter is tracked on a single index card. As meters are taken out of service (retired), the index card is removed from the active meter file and placed in the retired meter file. Currently, there are more than 150,000 index cards for active and retired meters.

*The Meter Shop uses an inefficient and outdated manual card system to track certain meter activity.*

We noted that the PeopleSoft CIS has been used to track service points at which meters are installed. In addition, that system has been used to track meter exchanges, removals, and miscellaneous activities such as diversion investigations or customer inquiries. However, other aspects/activities have been tracked using the manual index card system. Data that has traditionally been tracked on those index cards includes (1) physical characteristics and factors such as model type and size, (2) date of acquisition (i.e., date of initial receipt by the Electric Utility), (3) dates of meter tests, (4) meter test results and results of any adjustments, and (5) date taken out of service.

All data tracked on these index cards can be, and sometimes is, tracked using the PeopleSoft CIS. However, we noted that the PeopleSoft CIS has not effectively been used (and not relied on by Meter Shop staff) for those purposes. Specifically:

*Certain meter characteristics recorded in the PeopleSoft CIS are incorrect or incomplete.*

- The acquisition date (date meter initially received and tested by the Meter Shop) as reflected in the PeopleSoft CIS is often incorrect. In approximately 1/3 of the 110 meters selected for review during our fieldwork, the dates of acquisition per the PeopleSoft CIS were significantly later (by several years) than the acquisition dates per the manual index cards.
- Meter test results are documented only on the index cards. While Meter Shop staff started documenting the test dates in the PeopleSoft CIS during the 2004 calendar year, the test results are only documented on the index cards. In addition, the test dates are documented in a “comment box” within the PeopleSoft CIS. System queries cannot be efficiently created and processed on information recorded in such comment boxes, thereby making that information of limited use for managerial oversight.

- The meter model type is often not documented in the PeopleSoft CIS. In 86 of the 110 meters selected, the model type was listed as “unknown.” That lack of complete information limits management’s ability to use the PeopleSoft CIS to monitor and service meters by type.

As a result of these circumstances, there currently is no efficient manner for management to identify and review certain activity regarding electric meters. For activity not accurately recorded in the PeopleSoft CIS, management must either rely on manually prepared reports or have staff extract data from the index cards. Both approaches are inefficient and labor intensive. If complete data was properly and efficiently recorded in the PeopleSoft CIS, management could use that system to identify desired circumstances/characteristics and run various reports for monitoring and oversight purposes. For example, meters of a certain type could be identified and reflected in printed reports. That information could, in turn, be used to determine meters that should be tested or replaced. Furthermore, using the PeopleSoft CIS for meter management eliminates the risk of lost/misplaced index cards.

**Recommendation.** We recommend that the Meter Shop update the PeopleSoft CIS to accurately and efficiently track the characteristics noted above (acquisition date, test results, test dates, and model type) for all electric meters and discontinue use of the manual index card system. Preferably, that information should be tracked in system fields that can be queried with related results extracted for reporting purposes. (NOTE: During the initial update/transition process, it would be reasonable to enter only the most recent test date and results recorded on the index cards into the PeopleSoft CIS. The manual index cards could then be retained as a historical reference for meter test data performed prior to the most recent test date.)

**Issue No. 2.** As a municipal utility, the City of Tallahassee’s

Electric Utility is not subject to meter testing requirements of the Florida Public Service Commission (PSC). However, due to the great importance of accurate consumption measurement, the City has implemented a meter testing function. The Electric Meter Shop performs that function.

*The current environment does not provide for an efficient manner/method for identifying meters that should be tested or replaced based on meter age and length of service.*

Meter testing is specifically designed to determine whether the meters are accurately measuring consumed electricity. PSC requirements governing investor-owned utilities provide that meters (i.e., standard non-demand meters) must measure within 2 percent of actual consumption to be considered acceptable (i.e., to “pass” the test). The City’s requirements are more stringent as the Meter Shop requires meters to measure within a ½ percent of actual consumption to be considered accurate and acceptable. Meters tested and not meeting those parameters are either adjusted to meet the parameters or taken out of service.

We noted that the Meter Shop does test a significant number of meters. Specifically, each new meter is tested upon receipt into the Meter Shop before being released for installation at a service point. In addition, installed meters are removed from service points (replaced with another meter) and tested based on the following factors/criteria:

- There is a known or suspected defect for a particular meter type. For example, manufacturers may send notifications to the Meter Shop if they become aware of a problem with a certain model or type.
- Customer complaints regarding measured consumption or meter observations.
- Edits in the PeopleSoft CIS that indicate abnormal fluctuations in meter measurements.

- Other suspected problems identified internally or externally, such as potential problems identified during service investigations.
- Older (aged) meters and meters that have not been recently tested as identified by Meter Shop staff.

The PeopleSoft CIS indicates that there are in excess of 103,000 electric meters currently installed at active electric service points. In addition, those records and our research indicate that there are approximately 3,000 active uninstalled meters. Based on manual reports prepared and maintained in the Meter Shop for the last three fiscal years, the Meter Shop is testing an average of 3,800 new meters and 4,000 existing meters each year.

*Although our review of meter test results showed that, overall, the City's electric meters are accurately measuring consumption, we noted that 29% of sampled installed meters had not been tested within the last 20 years.*

As noted above, installed meters are selected for testing based on various factors. One of those factors includes meter age and years of service. However, there currently is no efficient method/manner for Meter Shop staff to identify the aged meters and the meters that have not been recently tested (See Issue No. 1 above). Our review of records for a random sample of 90 installed meters showed 26 of those meters (29%) had not been tested within the last 20 years. (Note: Each of those 26 meters had been in service for at least 20 years; five of those 26 represented meters that were between 30 and 39 years old, which had not been tested since their initial installation at a service point.)

Meter tests support that the City's electric meters are, for the most part, accurately measuring customer consumption. (Of 47 meter tests reviewed, 29 showed meters were accurately measuring consumption and 18 showed meters that were not measuring consumption within the strict parameters established by the Electric Utility; however, in each of those 18 instances the meters were measuring within the parameters established by PSC for investor-owned utilities. Furthermore, appropriate actions were taken in regard to those 18 meters, including adjusting and retesting meters

until the results showed measurements within the City's ½ percent parameters). In addition, when identified, older meters and meters that have not been recently tested are tested by Meter Shop staff. However, without an efficient means to identify those meters, the Meter Shop cannot ensure adequate testing of those meters is being conducted.

**Recommendation.** Upon updating the PeopleSoft CIS to accurately reflect acquisition dates, test dates, and test results for all electric meters (see recommendation for Issue No. 1 above), we recommend that the Electric Meter Shop use that system to identify and select meters for testing based on age and last test date. In addition, a periodic testing schedule that provides for all meters to be tested at least once in a pre-designated period (e.g., every "X" number of years) should be adopted and implemented.

**Issue No. 3.** We identified 1,797 City electric meters (representing 1.7% of all City electric meters) that were not properly and accurately accounted for in the PeopleSoft CIS. Our queries of the PeopleSoft CIS in June 2005 showed the system reflected 106,234 active (i.e., not retired) electric meters. Of that total, 103,255 were shown as installed at service points and 2,979 were shown as not installed.

*Approximately 1.7% of the City's electric meters have not been properly and accurately accounted for in the PeopleSoft CIS.*

We compared the available (uninstalled) meters on hand in the Electric Meter Shop and other locations to the 2,979 active meters reflected as uninstalled per the PeopleSoft CIS. (NOTE: Other locations where meters were found included service vehicles assigned to various groups including the Meter Shop, UCS Diversion and Field Services units, and applicable Electric Transmission and Distribution units.) Our review disclosed the following issues:

- We identified 643 active meters at the Electric Meter Shop that were not included in the PeopleSoft CIS. Meter Shop staff indicated that these represented meters that had not

been installed at a service point since implementation of the PeopleSoft CIS in October 2002. To ensure complete accountability, these meters should either be recorded as active uninstalled meters in that system, or taken out of service and recorded as “retired” in that system.

- We identified 569 meters shown as active installed meters in the PeopleSoft CIS but for which the manual index cards show the meters as retired (out-of-service). The status of those meters should be corrected in the PeopleSoft CIS.
- We could not locate 455 meters shown in the PeopleSoft CIS as active uninstalled meters. Of those meters, the PeopleSoft CIS shows that 220 have not been installed at any service point since the implementation of that system in October 2002. The PeopleSoft CIS shows that the remaining 235 were at one time installed at a service point since October 2002. There were no notations in the PeopleSoft CIS or manual index cards explaining the location or disposition of these meters.
- For an additional 130 meters, which were reflected as active uninstalled meters in the PeopleSoft CIS but could not be located, we found notations in the PeopleSoft CIS indicating the meters were (1) stolen, (2) missing, (3) destroyed, (4) out-of-service, (5) discarded, (6) dead, (7) faulty/broken, or (8) returned to the factory. Based on those notations, it appears that the status of the meters should be revised/updated in the PeopleSoft CIS.

These findings indicate that the PeopleSoft CIS should be more effectively used to manage the City’s electric meter inventory (i.e., especially active uninstalled meters). In addition, these findings show that the meter statuses are not always properly reflected on the manual index cards. Without adequate management of meter inventory, there is reduced assurance that City electric meters are

(1) used only for authorized City customers and (2) all customers with active installed meters are properly billed for consumption.

*To help detect unbilled consumption and provide accountability of City electric meters, periodic reconciliations of uninstalled meters reflected in the PeopleSoft CIS to meters in the meter shop and in the custody of applicable staff should be performed.*

**Recommendations.** We recommend that the Electric Meter Shop take appropriate actions to properly and accurately reflect the status of all City electric meters in the PeopleSoft CIS. Efforts should also be made to locate and account for the meters that were not found. Once those actions are completed, we recommend that the Electric Meter Shop staff implement procedures providing for periodic (at least annual) reconciliations of:

- (1) Meters acquired from vendors (e.g., meters are generally acquired through the City's Municipal Supply Center) to meters entered into the PeopleSoft CIS, and
- (2) Active uninstalled meters in the PeopleSoft CIS to meters in Meter Shop inventory and in the custody of other staff (e.g., UCS Diversion, Field Services, and applicable Electric Transmission and Distribution units).

Providing for meter accountability through those periodic reconciliations will assist in the determinations of instances of unbilled consumption (e.g., help detect instances where meters are installed at a service point and power turned on, but the installation not recorded in the PeopleSoft CIS so billing can occur), as well as instances where a City meter is used for unauthorized purposes.

*As a means to ensure meter seals are not used for unauthorized purposes, periodic comparisons of quantities acquired/used to related activity recorded in the PeopleSoft CIS should be performed.*

**Issue No. 4.** There are no periodic reviews of the quantities of meter seals purchased and used by the Electric Meter Shop and UBCS staff (e.g., Utility Accounting meter readers, UCS Field Services staff who turn power on and off at meters, and UCS Diversion staff). We noted that the supplies of regular and demand meter seals were adequately safeguarded. In addition, we recognize that the vast quantities acquired and the necessity of making seals available to multiple staffs would make a reconciliation of individual seals cost prohibitive. However, periodic comparisons



of quantities used (determined based on differences between quantities purchased and quantities available, i.e., on hand) to meter and service point activity recorded in the PeopleSoft CIS would help management determine, from an overall perspective, that those seals were being used for only authorized purposes. Meter and service point activities that indicate seal usage includes meter readings, installations, exchanges, removals, investigations, turn-ons and turn-offs.

**Recommendations.** We recommend that UBCS management provide for independent determinations of meter seal quantities used, with comparison of those quantities to activity recorded in the PeopleSoft CIS. Any significant deviations resulting from such determinations and comparisons should be investigated.

## Conclusion

*Overall, electric consumption and related fees are properly billed and charged; however, issues were identified that indicate that certain activities should be better managed and monitored.*

Overall, we found that electric consumption was properly determined and billed to City customers. Generally, fees for new service points, connections and reconnections of services, and miscellaneous activities were properly charged. In addition, with the exception of one calculation error, energy cost recovery rates determinations were accurate and correct. Furthermore, controls and procedures were in place regarding meter inventory and maintenance. However, we identified issues that indicate certain improvements and enhancements should be made. Specifically, we noted:

- Instances of unbilled consumption;
- Instances where consumption was not properly billed based on the characteristics of the customer, service point, and premises;

- An error in determining energy costs within the records used in the semiannual establishment of the energy cost recovery rates;
- Instances of incorrect billings for new service points, connection and reconnection services, and miscellaneous activities;
- Inefficient and incorrect/incomplete records for managing the City’s electric meter inventory and the need to better manage that inventory; and
- The need to update and use the PeopleSoft CIS to identify meters that should be tested and/or replaced based on age and length of service (since the last meter test).

Specific recommendations were made to address these issues.

We would like to acknowledge the full and complete cooperation and support of the staffs of Utility Accounting, Utility Customer Services, the Electric Meter Shop, Power Engineering, applicable Electric Transmission and Distribution units, the Electric Control Center, Energy Services, and Information Systems Services during this audit.

***Response From  
Appointed  
Official***

**City Manager:**

The audit results reflect a thorough and cooperative effort that identified opportunities for improvement in an effective system of internal control. I thank the audit staff for their professional assistance in ensuring maximization of revenues and strengthening of our control system. We look forward to implementing the recommendations as indicated in our Action Plan detailed in the body of the report.

### *Appendix A – Action Plan*

Action Steps	Responsible Employee	Target Date
<b>A. Objective: To ensure consumption is correctly and accurately billed.</b>		
<i>Utility Accounting</i>		
1. With the assistance of ISS, complete the modification to the software programming such that demand service points are included in the determinations of any unbilled consumption.	Cindy McAdams	1/31/06
2. Follow up on the three instances where Area Lights were on but no customers were billed to ensure that either (1) PeopleSoft CIS field activities/orders are initiated and completed to turn the power off or (2) billing agreements are initiated for the applicable customers.	Martha Johnson	11/30/05
3. For the applicable Area Lights addressed in Step A.2 above, customers will be back-billed in accordance with City policy if warranted by the circumstances.	Martha Johnson	11/30/05
4. Queries will be developed to identify service agreements for which State sales taxes or public service taxes are applied when new exemption statuses are not recorded in PeopleSoft CIS after the current exemptions expire. Those reports will be reviewed and appropriate actions taken, including updating the system for new exemptions and (when applicable) notifying the customers.	Kim Meeks	1/31/06
5. Staff will use queries to periodically identify temporary service points over five years old. Those service points will be investigated and determinations made as to whether they are still temporary in nature. If not, the status will be revised to the appropriate type (i.e., permanent service point). In those instances, customers will be back-billed or refunded as appropriate in accordance with City policy.	Kim Meeks	3/16/05*

Action Steps	Responsible Employee	Target Date
6. Existing queries will be enhanced to identify instances where premises type and service point type do not match (e.g., commercial premises but residential service point) and instances where the customer type does not match the rate structure (e.g., commercial customer but government type service point/agreement). Appropriate actions will be taken based on the query results.	Kim Meeks	4/30/06
7. The City limit designations for the 75 premises noted in the audit report will be corrected in the PeopleSoft CIS.	Kim Meeks	2/28/06
8. The customers at the 75 premises noted in step A.7 above will be back-billed or refunded in accordance with City policy for the taxes and surcharges incorrectly applied.	Kim Meeks	2/28/06
9. Utility Accounting staff, with the assistance of ISS staff, will research the six applicable service points with physical locations different that the physical locations recorded in the Electric Utility GIS. Corrections will be made as appropriate to the PeopleSoft CIS.	Kim Meeks	4/30/06
10. Provide applicable staff in Power Engineering access and permissions in PeopleSoft CIS allowing them to initiate and complete system field activities/orders. Train that staff in initiating and completing system field activities/orders.	Lynn Hammelman Martha Johnson	4/30/06
<b><i>Utility Customer Services</i></b>		
11. GS Demand customers billed at GS Non-Demand rates will be identified and their consumption tracked to ensure that their demand levels remain at the appropriate levels (i.e., low activity and demand levels) to justify billing at lower rates. When demand levels increase, the rates will be changed back to GS Demand.	Jackie Rush	1/31/06

<b><i>Power Engineering</i></b>		
12. Staff responsible for responding to requests for turning Area Lights on and off will be provided access to and permissions in PeopleSoft CIS allowing them to initiate and complete system field activities/orders. That staff will obtain training in using PeopleSoft CIS in completing their job assignments. Upon receipt of the system permissions and accesses and completion of training, that staff will complete (and initiate as needed) system field activities/order for Area Light turn ons and turn offs.	Patrick Dooley	10/31/06
<b><i>Information System Services</i></b>		
13. Assist Utility Accounting staff in researching the six service points with physical locations in the PeopleSoft CIS that are different than the physical locations recorded in the Electric GIS. Correct the Electric GIS as appropriate.	Jim Van Riper Alan Henderson	2/1/06
<b><i>Electric Utility and UBCS Management</i></b>		
14. Determine which City department/unit should be responsible for developing and periodically running queries that compare City limit designations in the PeopleSoft CIS to City limit designations in the Electric GIS. Upon completion of the successful migration of all electric service points into the Electric GIS, assign that responsibility to the appropriate department/unit.	Kim Meeks Brian Fisher	1/31/07
<b>B. Objective: To enhance use of the PeopleSoft CIS as a tool to provide accountability and monitor activities.</b>		
<b><i>Power Engineering</i></b>		
1. Upon completion of Step A.12, staff in Power Engineering will change the status of non-metered service points (e.g., Cable and Area Lights) from “connected” to “disconnected” in the PeopleSoft CIS when services at those service points are terminated and the cable amps and lamp photoelectric eyes removed. The status of current “connected” service points where the services are not on and the cable	Brian Fisher	4/30/07

amps and lamp photoelectric eyes removed will be changed to “disconnected”.		
<b>C. Objective: To ensure accurate determinations of over/under recoveries of energy costs when establishing semiannual ECRC rates.</b>		
<b><i>Electric Control Center</i></b>		
1. Management will periodically ensure the mathematical accuracy of records prepared to determine actual energy costs incurred by the City in the generation of electricity.	Rusty Foster David Byrne	10/1/05*
<b><i>Utility Accounting</i></b>		
2. Make appropriate adjustments so that the subsequent ECRC determination properly considers the understated costs of \$1.2 million.	Reese Goad	6/1/05*
<b>D. Objective: To ensure correct application of non-consumption fees.</b>		
<b><i>UBCS</i></b>		
1. For incorrect fees identified in the audit report, applicable customers will be charged or credited for the over/under charges in accordance with City policy.	Martha Johnson Jackie Rush	2/28/06
2. Management will address the instances of incorrect non-consumption fee application (see step D.1 above) identified in the audit report with staff, and emphasize the importance of identifying and applying the correct non-consumption fees based on the activities performed.	Reese Goad Jacquie Lawson	12/31/05
3. Staff will continue efforts to include functionality in the updated version of PeopleSoft CIS that provides for reconnection fees to be based on the reconnect activity instead of the disconnect activity.	Reese Goad	10/31/06
4. The City’s official fee schedule will include the \$35 fee charged for new service points located within the City limits.	Reese Goad	10/31/06

<b>E. Objective: To ensure meters accurately measure consumption.</b>		
<b><i>Electric Meter Shop</i></b>		
1. Upon completion of steps F.2 through F.4 below, the PeopleSoft CIS will be used to identify and select meters for testing based on age and length of service since last tested. Goals will be established that provide for all meters to be tested at least once every 25 years.	Isaac Simmons	8/31/08
<b>F. Objective: To ensure effective and efficient meter management practices.</b>		
<b><i>Utility Accounting</i></b>		
1. Complete appropriate modifications to PeopleSoft CIS that allow meter test dates and results to be tracked in fields that can be efficiently queried for monitoring and managerial oversight purposes.	Kim Meeks Cindy McAdams	1/31/06
<b><i>Electric Meter Shop</i></b>		
2. Meter test dates and results will be tracked in the PeopleSoft CIS. System fields that can be efficiently queried will be used for this purpose.	Isaac Simmons	7/31/08
3. Correct acquisition dates for all electric meters will be recorded in the PeopleSoft CIS (including correction of incorrect dates currently recorded in the system).	Isaac Simmons	7/31/08
4. Model types will be recorded in the PeopleSoft CIS for all active meters.	Isaac Simmons	7/31/08
5. Upon completion of steps F.2 through F.4 above, the manual card system will no longer be used to track meter tests (or other) activity. (However, the manual card system will be retained and used as a historical reference for prior meter test data not entered into the PeopleSoft CIS.)	Isaac Simmons	7/31/08
6. All City electric meters will be tracked in the PeopleSoft CIS (including all uninstalled meters). This will include updating that system to reflect the 643 active uninstalled meters currently not in the system, as identified in the audit report.	Isaac Simmons	10/31/06

7. Efforts will be made to find and/or determine the status of the 585 meters not located by the auditor’s procedures.	Isaac Simmons	10/31/06
8. Based on the results of step F.7, the status of those meters will be updated in the PeopleSoft CIS as appropriate.	Isaac Simmons	10/31/06
9. For the 569 out-of-service meters incorrectly shown in the PeopleSoft CIS as “active uninstalled,” the system status will be revised to “retired.”	Isaac Simmons	7/31/06
10. Periodic (annual) reconciliations will be conducted of (1) meters acquired and issued to the Electric Meter Shop by the Municipal Supply Center to meters recorded in the PeopleSoft CIS and (2) meters on hand in the Meter Shop and other locations to uninstalled meters per PeopleSoft CIS. Differences will be researched and resolved.	Isaac Simmons	10/31/06
<b><i>UBCS</i></b>		
11. Management will provide for the periodic (annual) independent determinations of meter seal quantities used (based on the difference between quantities purchased and quantities on hand). That independent staff will compare those quantities used to activity recorded in the PeopleSoft CIS. Any significant deviations will be investigated.	Division Managers responsible for applicable field units	6/30/06

\* As per department, action plan step has been completed as of indicated date. Completion will be verified during follow up process.