City of Austin

AUDIT REPORT

Water Billing Process Audit

September 2014

A Report to the Austin City Council

Mayor
Lee Leffingwell

Mayor Pro Tem
Sheryl Cole

Council Members
Chris Riley
Mike Martinez
Kathie Tovo
Laura Morrison
Bill Spelman

Office of the City Auditor

City Auditor
Kenneth J. Mory
CPA, CIA, CISA, CRMA

Deputy City Auditor
Corrie E. Stokes
CIA, CGAP, CFE

REPORT SUMMARY

Austin Energy (AE) has a process to compare current water reads to historical water usage, but this process does not determine if water reads are accurate. Approximately 91% of reads are billed to customers without review by AE billing staff, and even this review may not ensure customer bills are accurate. Additionally, system controls do not prevent changes to key data fields and AE does not regularly review these changes. Lastly, Austin Water Utility is taking steps to improve performance related to maintenance and testing of large water meters, but does not proactively address issues related to small meters.

AUDIT NUMBER: AU14101

TABLE OF CONTENTS

BACKGROUND **1**

OBJECTIVE, SCOPE, AND METHODOLOGY **2**

AUDIT RESULTS **3**

Appendix
Appendix A: Management Response 10

Exhibits
Exhibit 1: Overview of Water Billing Process 1
Exhibit 2: Issues with Processing Water Meter Reads 3
Exhibit 3: System Control Issues in CC&B 7

GOVERNMENT AUDITING STANDARDS COMPLIANCE

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

AUDIT TEAM

Katie Houston, CPA, CFE, CLEA, Assistant City Auditor
Andrew Keegan, CIA, CGAP, Auditor-in-Charge
JoJo Cruz, CICA, CRMA, Auditor
Michael Gaudini, Auditor Intern

Office of the City Auditor
Austin City Hall
phone: (512)974-2805
email: oca_auditor@austintexas.gov
website: http://www.austintexas.gov/auditor

Copies of our audit reports are available at http://www.austintexas.gov/auditor/reports

Printed on recycled paper
Alternate formats available upon request

September 2014

WATER BILLING PROCESS AUDIT

Audit Report Highlights

Why We Did This Audit

This audit was conducted in response to numerous customer complaints of inaccurate water and wastewater charges and in response to issues with CC&B identified in prior audits.

What We Recommend

AE Management should:

- Implement, monitor and periodically evaluate a process to improve accuracy of meter reads;
- Improve process for reviewing potentially inaccurate reads and implement a process to identify and communicate potential water leaks; and
- Implement and monitor a process to record and review changes to key data fields.

For more information on this or any of our reports, email oca_auditor@austintexas.gov

Mayor and Council,

I am pleased to present this audit on the Water Billing Process.

BACKGROUND

The City has approximately 229,000 water meters and Austin Water Utility (AWU) pays Austin Energy (AE) to obtain meter reads and bill customers for water usage. AE has contracted with a vendor to read the meters and uses the Customer Care and Billing system (CC&B) to compare all incoming reads to an expected range that is based on historical usage. CC&B then bills customers for reads within the range, and highlights the remaining reads for review by AE billing staff.

OBJECTIVE AND SCOPE

The objective of this audit was to determine if AE's water meter reading process results in accurate water charges on customer utility bills. The scope is from Fiscal Year 2013 through June 2014.

WHAT WE FOUND

AE uses CC&B to review water reads and determine if they are acceptable based on historical water usage, but AE does not have a process to determine if water reads are accurate. This CC&B process results in approximately 91% of reads being billed to customers without review by AE billing staff, and AE's process for reviewing those reads that CC&B does not accept still may not ensure customer bills are accurate. Specifically, reads outside the range may be accepted and billed without detailed reviews by AE billing staff, meter re-reads may not be obtained before bills are generated, and the use of system estimates has resulted in untimely identification of water leaks. Furthermore, AE has not reviewed the parameters that CC&B uses to identify reads as out of the expected usage range since implementing the system in 2011.

Additionally, system controls in CC&B do not prevent changes to key data fields, including the meter read field and the source of the meter read field, and AE does not regularly review these changes to ensure they are authorized. Lastly, AWU is taking steps to address performance related to maintenance and testing of large water meters, but does not proactively address issues related to small meters which represent the majority of meters.

We appreciate the cooperation and assistance we received from AE and AWU staff during this audit.

Kenneth J. Mory, City Auditor

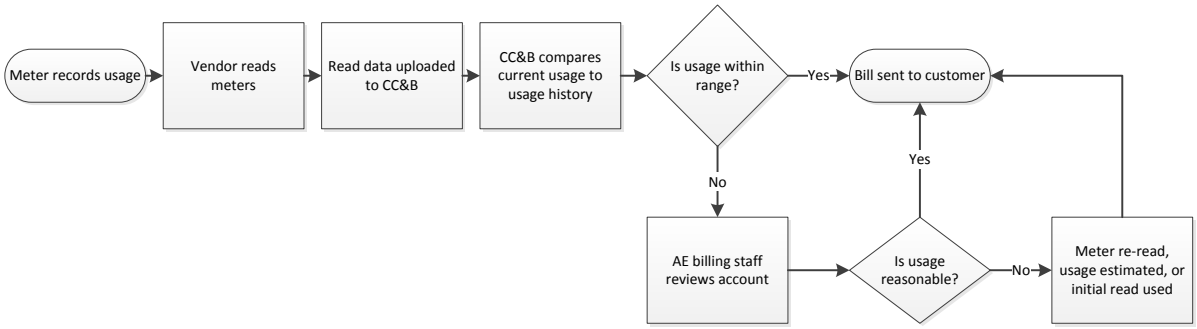
BACKGROUND

The City has approximately 229,000 water meters, the majority of which are for residential customers. Currently, Austin Water Utility (AWU) pays Austin Energy (AE) to obtain water meter reads and bill customers for water usage. AWU is responsible for maintaining water meters to minimize the likelihood of inaccurate reads.

Water meters are divided into 20 billing cycle groups and AE contracts with an outside vendor to read each water meter approximately once per month. An acceptable error rate of one inaccurate read for every 1,000 reads obtained is included in this contract and the contract does not require AE to pay the vendor for errors that exceed the acceptable limit.

After meter readers obtain water reads, reads are uploaded to the Customer Care and Billing system (CC&B), which compares the incoming read against historical usage. CC&B generates bills for usage that is within the expected range and highlights the remaining reads for further review by AE billing staff. During this review, AE billing staff can accept the original read, request a meter re-read, or use CC&B to estimate usage for billing purposes. Exhibit 1 below provides an overview of the water meter reading and billing process.

Exhibit 1
Overview of Water Billing Process



Source: OCA analysis of billing process, July 2014

OBJECTIVE, SCOPE, AND METHODOLOGY

The Water Billing Process Audit was conducted as part of the Office of the City Auditor's Fiscal Year (FY) 2014 Strategic Audit Plan, as presented to the City Council Audit and Finance Committee. This audit initially focused on determining if CC&B properly charges customers the appropriate rates for water and electric services. However, AE and AWU staff, as well as external auditors, have reviewed this process. As a result, the focus of this audit was to evaluate the accuracy of water[1] meter reads and water charges on customer utility bills.

Objective

The objective of the audit was to determine if AE's water meter reading process results in accurate water charges contained in customer utility bills.

Scope

The audit scope included water service transactions in FY 2013 through the June 2014.

Methodology

To accomplish our audit objective, we performed the following steps:

- reviewed applicable laws, City Code, and policies and procedures related to meter reading and water billing;
- interviewed AE, AWU, and meter read vendor staff associated with the meter reading process and CC&B;
- selected and tested a statistically valid sample of 270 meters in three separate billing cycles and reviewed five meter reads for each selected meter (for a total review of 1,350 reads);
- analyzed meter read data;
- researched best practices related to quality management of water meter reading and processing of meter read data;
- evaluated risk of fraud, waste, and abuse relevant to the production of water bills; and
- assessed the reliability of information in CC&B.

[1] Unlike electric meters, water meters must be read manually which increases the risk of inaccurate reads. Therefore, auditors focused this audit on water services only.

AUDIT RESULTS

AE uses CC&B to review water reads and determine if they are acceptable based on historical water usage. This review process is applied to all incoming reads and is less resource-intensive than physically validating every read. However, AE does not have a process to determine if water reads are accurate. Moreover, AE has not reviewed this process since implementing the system in 2011. Furthermore, AE's process for reviewing the reads that CC&B does not accept may not ensure customer bills are accurate. These issues are summarized in Exhibit 2 below.

Additionally, system controls in CC&B do not prevent changes to key data fields, and AE does not regularly review these changes to ensure they are authorized. Lastly, AWU is taking steps to address performance related to maintenance and testing of large water meters, but does not proactively address issues related to small meters.

Exhibit 2
Issues with Processing Water Meter Reads

Meter Read	CC&B Action	Possible AE Actions	Customer Accurately Billed?	Effect to Customer	Error Corrected?[2]
Read is *within* range and *accurate*	Accepted and automatically billed	Not reviewed by AE	Yes	None	N/A
Read is *within* range and *inaccurate*	Accepted and automatically billed	Not reviewed by AE	No See Finding 1	Customer is over or undercharged	May be corrected in future periods[3]
Read is *outside* range and *accurate*	Not accepted and highlighted for AE staff review	1. Accept & bill 2. Order re-read 3. Estimate usage & bill	1. Yes 2. Depends[4] See Finding 2 3. No See Finding 2	1. None 2. Potentially inaccurate bill 3. Inaccurate bill; Possible water leak may not be detected	1. N/A 2. Depends[4] 3. May be corrected in future periods[3]
Read is *outside* range and *inaccurate*	Not accepted and highlighted for AE staff review	1. Accept & bill 2. Order re-read 3. Estimate usage & bill	1. No See Finding 2 2. Depends[4] See Finding 2 3. Relatively accurate	1. Customer is over or undercharged 2. Potentially inaccurate bill 3. Minor (estimate approximates usage)	1. Corrected in future periods[3] 2. Corrected in future periods 3. N/A

Source: OCA analysis of water meter read processing, August 2014

[2] Assuming an accurate read is obtained in the following month.
[3] Error will not be identified and corrected unless subsequent reads are outside of the expected range. Unidentified meter reading errors during wastewater averaging months may result in an inaccurate calculation of the customer's wastewater billing rate, resulting in inaccurate wastewater charges for the entire year in which that rate is applied. Additionally, since wastewater rates are applied to recorded water usage, an unidentified meter reading error in any month will result in inaccurate wastewater charges for that month.
[4] Outcome depends on whether the read is accepted or usage is estimated.

Finding 1: While AE uses CC&B to identify water meter reads that are outside of an expected range, it does not have a process to determine if reads are accurate. Also, AE does not periodically review the parameters used to establish the expected range.

Currently, AE uses CC&B to evaluate water meter reads and determine if they are within an expected range. In this process, CC&B analyzes a customer's historical water usage and then generates a range of usage for the customer's current billing period. This range is obtained by multiplying the historical usage by defined parameters, which are currently set at 25% and 400%. CC&B highlights reads outside of this range for additional review and automatically bills customers for usage that is within that expected range. However, this process does not determine if reads accurately reflect customer usage. AE does not evaluate the accuracy of incoming reads that are within the expected range and an analysis of three billing cycles showed that approximately 91% of incoming water reads were accepted by CC&B and automatically billed to customers without AE billing staff review.

> AWU reports that residential customers used an average of about 8,000 gallons of water per month in 2012. Using current parameters, CC&B would establish an expected range of between 2,000 and 32,000 gallons each month. As a result, a 24,000-gallon increase in usage within one billing period would be automatically billed to the customer without additional review by AE billing staff. In this scenario, the average customer's water bill would increase from $40 to over $300 in one period. This will also result in an increase in the customer's wastewater charges.

Additionally, auditors noted that the parameters used by CC&B to highlight reads for additional review are based on parameters that have been in effect for years and have not been evaluated since CC&B system installation in October 2011. Auditors were unable to locate documentation to support when and why the parameters were established, but AE management asserted that the current parameters were set at the established levels to generate a reasonable workload for AE billing staff, rather than to effectively identify potentially inaccurate reads.

In fact, auditors identified instances in which the current parameters did not identify inaccurate reads. In a review of 1,350[5] water meter reads, auditors noted three significant read errors and three insignificant read errors.[6] While CC&B identified one of three significant errors prior to billing, it automatically billed customers for the other two incorrect usages. As a result, AE overcharged these residential customers by an average of $262 in those billing periods. Both errors were identified in the subsequent billing cycle and the customers' bills were corrected. Although the contract with the meter read vendor allows AE to withhold payment for inaccurate reads that exceed an acceptable rate[7], AE paid the vendor for each of these three reads.

Without an effective process to determine if reads are accurate, AE cannot ensure that customers are receiving bills that reflect accurate water usage. Inaccurate water reads in select months may also result in customers receiving inaccurate wastewater charges throughout the year. Additionally, AE may be paying for inaccurate reads since it is not effectively identifying inaccurate reads.

---

[5] Five reads for each meter selected in a statistically valid sample of 270 meters from three billing cycles.

[6] This only includes errors identified when a read in one month was lower than the previous month. Additional read errors are possible, but cannot be identified given the current billing process.

[7] The meter read contract established a tolerable error rate at one inaccurate read per 1,000 reads.

Finding 2: Billing staff review of water reads that are outside of the expected range of usage does not always ensure customers receive accurate water bills.

As stated, AE billing staff review meter reads that are outside of the expected range established by CC&B. After reviewing the meter reads, AE billing staff can:

- accept the read and bill the customer;
- create a work order to request a meter re-read, or
- use CC&B to estimate a customer's usage for that billing period.

Reads outside of the expected range may be billed to customers without detailed reviews.
Auditors observed that AE billing staff members are less likely to perform detailed reviews of water reads that slightly exceed the expected usage range. However, as noted in Finding 1, the high end of the range is already 400% of what CC&B determined to be an appropriate estimate for the current read. Therefore, reads slightly above this range are still more than four times higher than the customer's historical usage, and merit a meaningful review to determine if the read is accurate.

The meter re-reading process may not effectively and efficiently assist AE with generating accurate customer bills.
AE billing staff has three options for assigning meter re-read work orders. According to AE's stated policy, the meter read vendor is the first option because the meter read contract stipulates that the vendor must perform re-reads at no cost to the City. If the initial read is still in question after the first re-read, AE billing staff can request a second re-read from AE personnel. The last option is to request a third re-read from an AE supervisor.

In practice, however, AE billing staff are not obligated to assign re-reads in this order. AE management stated that deviations from the stated policy may be justified in certain situations, but these situations have not been documented. Additionally, auditors noted one instance in which a vendor re-read and an AE re-read were requested simultaneously.

Lastly, re-reading a meter is time-sensitive because bills are generated a short time after the initial read. Any issues that delay the meter readers' ability to obtain the re-read (i.e. bad weather or unusually high workload) may result in the re-read not being recorded in CC&B in time for the updated water read to be included on the customer's bill. Auditors noted several instances in which this occurred. In these instances, CC&B either uses the initial read on the customer bill or estimates the customer's usage for that period making the requested re-read unnecessary.

Without clearly documenting when it is acceptable to deviate from the meter re-read policy, there is an increased risk that AE billing staff may not assign the re-read to the appropriate personnel, resulting in unnecessary cost to the City. The City also incurs unnecessary cost when two re-reads are ordered simultaneously, or when re-reads are not obtained in time to include the updated read on the customer's bill.

The use of system estimates has resulted in the untimely identification of water leaks.
AE billing staff can use CC&B to estimate a customer's usage for that billing period if a valid read is not available prior to the creation of a customer's bill. AE only estimates a small percentage of water reads each year and the use of estimates is generally considered an acceptable industry practice. However, auditors confirmed one instance in which the use of a system estimate contributed to a long delay before a significant water leak was detected.

CC&B highlighted a potential issue when the vendor's initial meter read indicated that the customer's usage for that period was almost 40 times higher than expected. AE attempted to confirm the high read but was delayed, in part due to a flooded meter box. As a result, the customer was billed using a system-generated estimate. When obtained, this re-read also indicated usage was significantly above what was expected. However, it took eight more days before AE noted in CC&B that AWU should investigate the possible water leak.

The following month, the vendor's read recorded similarly high usage and AE billing staff ordered another re-read which again confirmed the high usage. Although it appears that the leak was addressed some time after this last re-read, the customer did not receive a bill for the actual usage until nearly three months after AE first became aware of the high usage. The corrected bill eventually sent to the customer listed water charges of over $12,000. The City later issued a $10,000 water leak credit to this customer, which indicates more than 800,000[8] gallons of water was lost as a result of this leak.

> The Committee of Sponsoring Organizations, dedicated to providing guidance on enterprise risk management, internal control, and fraud deterrence, lists accuracy as an information-processing objective. Accuracy is defined as recording transactions at the correct amount in the right account.

Auditors noted two other similar situations that occurred during the audit scope, but issues with CC&B, described in Finding 3, prevented auditors from obtaining a definite understanding of the details surrounding those situations. Those two incidents resulted in the issuance of nearly $50,000 in water leak credits and the loss of approximately 4 million gallons of water due to the untimely detection and correction of these leaks.

Without an effective and efficient process to review reads that are outside of the expected range, AE increases the risk that customers will receive bills that do not accurately reflect water usage, and may contribute to errors in a customer wastewater bills as well. Additionally, there is an increased risk that water leaks will not be identified in a timely manner, leading to the loss of water that could have otherwise been prevented.

Finding 3: CC&B system controls do not effectively prevent and detect unauthorized entries nor ensure water reads that are outside of the expected range are reviewed prior to billing.

Generally accepted information technology (IT) security standards[9] require an organization to maintain the integrity of information and keep a complete, accurate record of relevant system activity. As shown in Exhibit 3 below, auditors noted several instances in which CC&B deviates from those principles.

[8] This estimate of water lost is based on the amount of the water leak credit and the current water rates.

[9] National Institute of Standards and Technology SP 800-14 (Generally Accepted Principles and Practices for Securing IT systems) and Government Accountability Office 09-690G (Assessing the Reliability of Computer-Processed Data).

Exhibit 3
System Control Issues in CC&B

IT Standards	CC&B Process	Issue
Data is reliable when it is complete and accurate and protected from inappropriate alteration.	The meter read field can be changed.	Altered reads may result in inaccurate charges to customers.
Data is reliable when it is complete and accurate and protected from inappropriate alteration.	The meter read source field to be changed.	Reads entered manually into CC&B can be made to appear as if they were part of the vendor's batch upload.
Audit trails should be reviewed periodically.	Reports on changes to recorded fields are not regularly generated and reviewed.	Inappropriate or unauthorized changes to data may not be identified.
Access control is often based on *least privilege*, which means users should only be given access to information and resources required for their job duties.	CC&B allows some users to access both electric and water reads.	Personnel responsible for installing new water meters (which requires entering a read for the new meter) also have the ability to change electric meter reads.

Source: OCA analysis of CC&B system controls, July 2014

In June 2014, AE billing staff noticed that water usage for an account had been reduced in CC&B. At the time, AE thought that changes to the meter read field were not recorded in CC&B audit tables. After discussing the issue with auditors, AE did additional research and discovered that changes to the meter read field are, in fact, recorded. As a result, AE was able to review this alteration further and determine who executed the change. Also, as mentioned in Finding 2, auditors were unable to determine the exact circumstances relating to the use of system estimates instead of valid reads. During the analysis, auditors noted that the customer's usage history in CC&B appeared to have been changed because it did not match usage listed on customer's bills.

Additionally, auditors noted that some water reads, which CC&B highlighted because they were out of the expected range, could be billed to customers even if AE billing staff has not reviewed them. Unless the read is substantially out of the expected range, CC&B is designed to consider this a valid read and will use it to generate a bill. AE billing staff must manually mark these reads as invalid in order to prevent billing from happening. If this is not done, CC&B will generate a bill using that read.

Without effective system controls, data can be intentionally or unintentionally changed, and there is increased risk that these changes will not be detected. As a result, AE cannot ensure that customer bills are accurate because changes to relevant data can be made without management knowledge, review, or authorization.

Additional Observation: AWU has taken a proactive approach to improve meter maintenance operations related to large meters, but has not proactively addressed meter issues for smaller meters.

AWU's Meter Maintenance Division is working with AWU's Internal Audit Division to improve performance related to meters that are three inches in diameter and larger. These larger meters represent approximately 1.4% of all water meters in the City, but account for nearly 33% of AWU's water meter revenue.

However, at the time of our review, there was not a program to proactively repair, replace, or maintain the other 98.6% of water meters. Instead, meter issues (i.e. leaking or defective meters) are addressed only after a customer or the meter read vendor identifies the concern. This reactive approach to meter maintenance may increase the likelihood that undetected leaks continue for long periods of time. Additionally, this approach may increase the risk that defective meters continue to improperly record water usage resulting in loss of revenue for the City.

RECOMMENDATIONS

The recommendations listed below are a result of our audit effort and subject to the limitation of our scope of work. We believe that these recommendations provide reasonable approaches to help resolve the issues identified. We also believe that operational management is in a unique position to best understand their operations and may be able to identify more efficient and effective approaches and we encourage them to do so when providing their response to our recommendations. As such, we strongly recommend the following:

To address our first finding:

1. **AE Management should develop, implement, and monitor a process to measure, evaluate, and improve the accuracy of meter reads, including those that fall within the expected range calculated by CC&B.**

MANAGEMENT RESPONSE: **CONCUR.** Refer to Appendix A for management response and action plan.

To address our first finding:

2. **AE Management should also periodically evaluate, and if necessary revise, the parameters CC&B uses to calculate the expected range of usage.**

MANAGEMENT RESPONSE: **CONCUR.** Refer to Appendix A for management response and action plan.

To address our second finding:

3. **AE Management should improve review processes to ensure all system-flagged reads are thoroughly reviewed prior to billing and document in policy how re-reads should be ordered as well as acceptable deviations to the prescribed policy.**

MANAGEMENT RESPONSE: **CONCUR.** Refer to Appendix A for management response and action plan.

To address our second finding:

4. **AE Management should also develop, implement, and monitor a process that ensures the timely identification and communication of potential water leaks to relevant stakeholders.**

MANAGEMENT RESPONSE: **PARTIALLY CONCUR.** Refer to Appendix A for management response and action plan.

To address our third finding:

5. **AE Management should develop, implement, and monitor a process that ensures changes to key data fields are recorded, authorized, and monitored.**

MANAGEMENT RESPONSE: **CONCUR.** Refer to Appendix A for management response and action plan.

MEMORANDUM

TO: **Ken Mory, City Auditor**

FROM: **Elaine Kelly-Diaz, Vice President, Customer Account Management**

DATE: **September 17, 2014**

SUBJECT: **Management Response to OCA's Water Billing Process Audit**

Austin Energy (AE) reviewed the Water Billing Process Audit findings, and concurs with the majority of the recommendations provided by city auditors. Please find our management response in the attached Action Plan document. As the entity responsible for accurate and timely billing of customer utility accounts, Austin Energy follows standard industry practices and applicable regulations for water and electric meter reading and billing across 20 bill cycles per month. We generate and produce over 5.4 million bills on an annual basis for up to seven City services, and approximately 2.7 million of those bills include metered water bill segments.

With regard to the audit recommendations:
Austin Energy strives for bill accuracy, however, the monthly manual water meter read process may allow for a very small number of erroneous reads or estimated bills. In fact, estimated water bills are less than .07% of all bills produced on an annual basis. To minimize errors and estimations, a formal read and re-read process exists, using both a third-party meter read vendor and Austin Energy employees. The formal read process includes a high/low meter read validation during the meter read and a high/low validation before the customer's bill generates. Additionally, as a result of a recent process improvement, we now flag extremely high bill segments created after bill generation to initiate an additional manual review. Furthermore, if a read error results in an incorrect bill, Austin Energy follows established protocol to ensure that the customer is rebilled at the correct usage and tiered rate.

As with any manual process, we recognize that additional improvements and quality checks can aid in minimizing errors. As such, Austin Energy will further develop its processes to include a statistically valid quality assurance review of water meter reads to verify read accuracy. We will also review our billing system parameters and improve internal processes to ensure that reads falling outside of historical usage ranges are carefully reviewed, meter re-reads are ordered in the manner appropriate to the situation, and changes to key data fields in the billing system are closely monitored. In conjunction with Austin Water Utility, we will further refine our internal notification process for extreme high water usage situations.

Austin Energy will incorporate these audit recommendations into our continual process improvement efforts; we expect to have three out of the five recommendations completed in the next 90 days.

Concur: _____
Kerry Overton, Deputy General Manager, Austin Energy

ACTION PLAN

WATER BILLING PROCESS AUDIT

Rec #	Recommendation	Concurrence and Proposed Strategies for Implementation	Status of Strategies	Proposed Implementation Date
01	**AE Management should develop, implement, and monitor a process to measure, evaluate, and improve the accuracy of meter reads, including those that fall within the expected range calculated by CC&B.**	**Management concurs with this recommendation.** Beyond our standard meter read and re-read processes, AE will perform additional duties; including: • Working with our third-party meter read vendor on a water meter read verification pilot program. • Developing a quality assurance strategy to randomly sample and review water meter reads, including those that fall within the expected range calculated by CC&B, to validate accuracy. • Management review of accuracy validation completed on a regular basis with process improvements implemented as necessary.	• AE expects the water meter read verification pilot program to be completed by end of calendar year; determination of future program expansion dependent on vendor commitment and pilot results. • Quality assurance process development is underway.	• Estimated completion of the Pilot program is November 30, 2014. • Quality Assurance program will be implemented before December 31, 2014.

Appendix A

Rec #	Recommendation	Concurrence and Proposed Strategies for Implementation	Status of Strategies	Proposed Implementation Date
02	**AE Management should also periodically evaluate, and if necessary revise, the parameters CC&B uses to calculate the expected range of usage.**	**Management concurs with this recommendation.** • AE is currently establishing a cross-functional team to gather pertinent data points and develop a process for annual review of out-of-range CC&B read parameters. • Depending on the results of the review parameters will be revised, if necessary.	• Identification of team members is underway. • Gathering of pertinent data points is in the planning stage. • System parameter changes will be applied, if necessary.	Process established and first review completed by June 30, 2015.
03	**AE Management should improve review processes to ensure all system-flagged reads are thoroughly reviewed prior to billing and document in policy how re-reads should be ordered as well as acceptable deviations to the prescribed policy.**	**Management concurs with this recommendation.** • Process improvement and documentation is underway to ensure proper ordering of re-reads by Billing. • This process will also address and outline acceptable deviations.	• Process review is underway. • Process changes and employee training are planned.	November 30, 2014
04	**AE Management should also develop, implement, and monitor a process that ensures the timely identification and communication of potential water leaks to relevant stakeholders.**	**Management partially concurs with this recommendation.** • As AE obtains standard water meter reads used for monthly utility billing purposes, AE disputes the expectation that monthly reads are a mechanism to identify potential water leaks. • However, AE, in conjunction with Austin Water Utility, will review the existing field activity process for escalating extreme out-of-range reads for areas of opportunity.	• Discussions with Austin Water Utility are underway. • Process changes are planned.	December 31, 2014

Appendix A

Rec #	Recommendation	Concurrence and Proposed Strategies for Implementation	Status of Strategies	Proposed Implementation Date
05	**AE Management should develop, implement, and monitor a process that ensures changes to key data fields are recorded, authorized, and monitored.**	**Management concurs with this recommendation.** • Audit information regarding changes to key data fields currently exists within CC&B. AE will develop a reporting process for such changes.	• Process development underway. • Reports will be generated and monitored by appropriate management team.	March 31, 2015