

Special Report

# Water Meter Reading and Billing Accuracy

March 2018



For a sample of meters, customers' bills accurately reflected actual water usage for the sampled period. Additionally, Austin Energy handled a sample of complaints about high water bills in accordance with their policies and procedures. Lastly, while a flat rate may lower the billed amount for customers with high bills, it would likely increase the billed amount for most Austin Water customers.

---

## Objective

The objective of this special request was to answer the following questions:

1. Were the meters physically read for the sampled customers?
2. Did customer bills accurately reflect the actual water usage?
3. Were complaints handled following applicable policies/procedures?
4. How did tiered rates impact customers with high bills?

Cover: OCA photo, January 2018

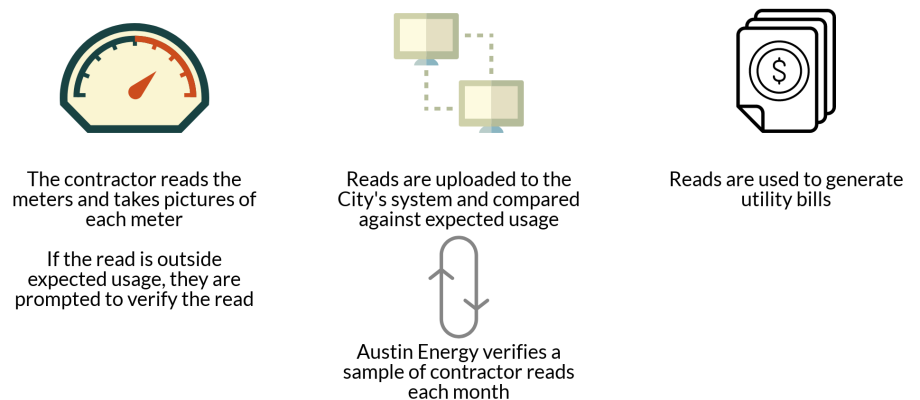
---

## Background

The City has approximately 229,000 water meters and the City contracts with a vendor to manually read these meters.<sup>1</sup> This contract is managed by Austin Energy and it includes various performance and accuracy goals, including a goal of 99.5% accuracy for all meter reads in a given month. Austin Energy has the option to terminate the contract if the contractor does not achieve these goals. In January 2018, Austin Energy amended the contract to require that the contractor take a picture of every meter they read. Austin Energy asserted that this amendment would allow them to better address customer complaints.

For each billing cycle, the contractor reads meters along individually assigned routes and uploads the reads to Austin Energy's Customer Care and Billing system, which generates a bill for the customer. The meter reading process is shown in Exhibit 1.

### Exhibit 1: Water Meter Reading Process



SOURCE: OCA analysis of the water meter reading process, January 2018

Bill amounts are determined by a system of tiered rates based on monthly water use.<sup>2</sup> In this system, customers who use more water are charged more. See Exhibit 2 for an explanation of this rate structure.

<sup>1</sup> In May 2017, a new contractor was selected to perform meter reading services.

<sup>2</sup> Water bills also contain other charges, such as a meter charge which varies based on meter size, a tiered minimum charge, the Reserve Fund Surcharge (\$0.19 per 1,000 gallons), and the Community Benefit Charge (\$0.15 per 1,000 gallons).

## Exhibit 2: Austin Water's Tiered Rate System

Gallons	Rate per 1,000 gallons	
20,001+ gallons	\$14.28	
11,001 - 20,000 gallons	\$12.77	
6,001 - 11,000 gallons	\$8.41	<div style="text-align: center;"> <b>Example</b>                      A customer uses <b>7,000 gallons</b> </div> <div style="margin-top: 10px;"> <math>\\$8.41 \times 1 \text{ (1,000 gallons)} = \\$8.41</math>  <math>\quad + \text{ Water volume charges}</math>  <math>\\$4.90 \times 4 \text{ (4,000 gallons)} = \\$19.6</math>  <math>\quad +</math>  <math>\\$3.03 \times 2 \text{ (2,000 gallons)} = \\$6.06</math>  <math>\quad = \mathbf{\\$34.01}</math> </div>
2,001 - 6,000 gallons	\$4.90	
0 - 2,000 gallons	\$3.03	

SOURCE: OCA analysis of Austin Water's tiered rate system, February 2018

On January 31, 2018, Austin Water and Austin Energy acknowledged issues with the previous contractor in a memo to City Council. They identified a pattern of abnormal water usage over August and September 2017, and plan to issue administrative adjustments to customers affected by this pattern, which occurred under the previous meter reading contractor. Our observations reflect the performance of a different contractor than that referenced by Austin Energy and Austin Water.

## What We Learned

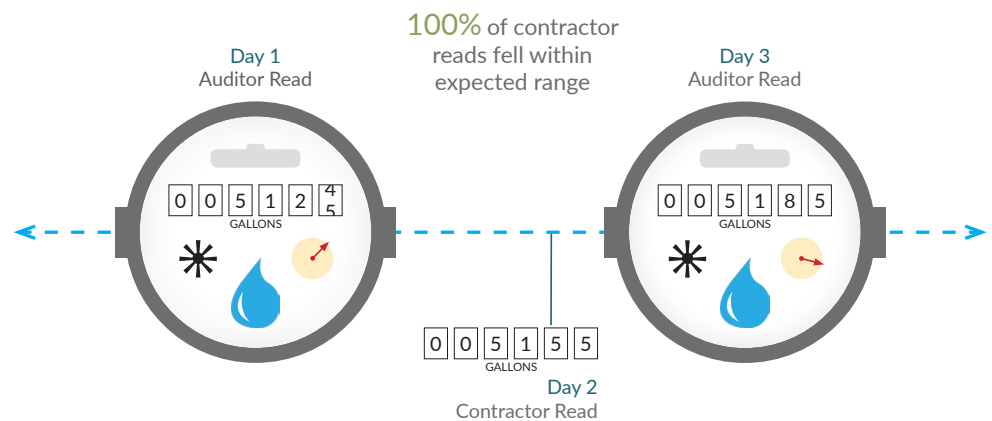
For a sample of meters, customers' bills accurately reflected actual water usage for the sampled period. Additionally, Austin Energy handled a sample of complaints about high water bills in accordance with their policies and procedures. Lastly, while a flat rate may lower the billed amount for customers with high bills, a flat rate would likely increase the billed amount for most Austin Water customers.

## Meter Accuracy

### Customers' bills accurately reflected actual water usage.

For a sample of 70 residential meters, auditors read the meter the day before and the day after the contractor was scheduled to read the meter. All of the contractor's reads were within the range established by the auditor's reads and reflect the customer's recorded water usage. Exhibit 3 describes this testing process.

**Exhibit 3: Meter Read Testing Process**



SOURCE: OCA meter read testing, January 2018

## Complaints

### The City appears to handle complaints related to high water bills in accordance with applicable policies and procedures.

Customers who think their water bill is incorrect may submit a complaint to Austin Energy. According to Austin Energy's policies, a complaint requires that staff research possible causes for the high bill and review the customer's usage history. At the customer's request, staff may authorize another meter read or a leak check.

There were approximately 3,000 complaints made to Austin Energy in fiscal year 2017.<sup>3</sup> Records related to a sample of 41 of those complaints indicated Austin Energy handled every complaint in accordance with their policies.<sup>4</sup>

<sup>3</sup> This amount is similar to the amount received in fiscal year 2015 and below the amount received in fiscal year 2016.

<sup>4</sup> We selected a sample of 50 complaints (five from each Council District) that were submitted in fiscal year 2017. Nine of the complaints were not relevant to this special request.

Customers who are not satisfied with the resolution of their complaint by Austin Energy and Austin Water may request an administrative hearing. In calendar year 2017, customers made 211 hearing requests. The outcomes of these requests are shown in Exhibit 4.

**Exhibit 4: Outcomes of Water Bill Hearing Requests**

Outcome	Number of Requests
Denied after receiving administrative adjustment	72
Denied for other reasons	32
In administrative processing	73
Settled before hearing	28
Ruling received	6

SOURCE: OCA analysis of AWU hearing requests, February 2018

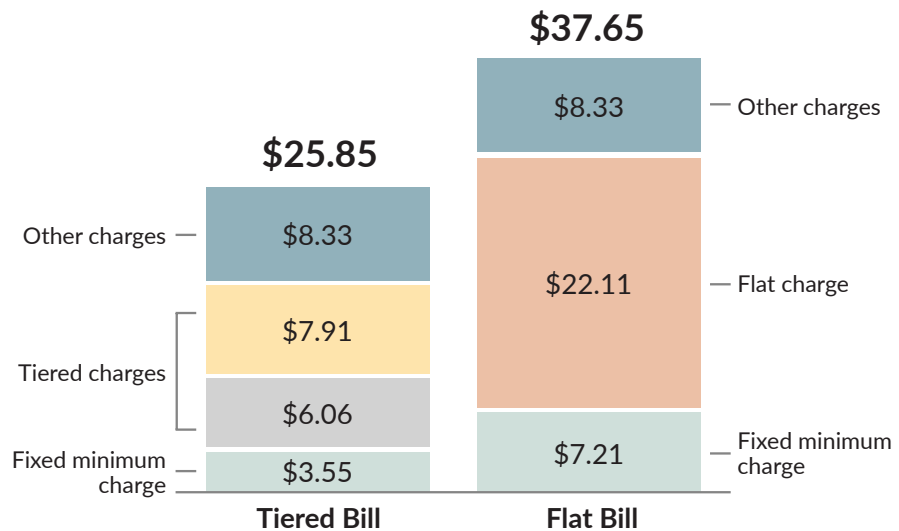
## Tiered Rates

**Tiered water rates resulted in lower water bills for a sample of Austin Water customers.**

Austin Water staff reported that customers who use more than 11,000 gallons a month – approximately 11% of all residential customers – would have lower bills under a flat rate system.

Based on a sample of 69 bills from January 2018, 96% of those customers would have higher bills under a flat rate system.<sup>5</sup> On average, these customers would have seen an increase of around \$12.<sup>6</sup> Exhibit 5 shows how flat and tiered rates affect the average customer in our sample.

**Exhibit 5: Bill under flat and tiered rate systems for an average customer using 3,614 gallons**



SOURCE: OCA analysis of flat and tiered rate structures, February 2018

<sup>5</sup> This analysis is based on a single month of bills, and the proportion of customers who would have higher bills under a flat rate system may change during other months.

<sup>6</sup> Austin Water determined this flat rate by dividing total revenue from volumetric rates by forecasted water usage. This calculation produced a flat rate of \$6.12 per 1,000 gallons for 2017. The calculation also includes a new, higher fixed charge of \$7.21 to replace the tiered minimum charge which was determined in the same way.

---

## Why We Did This Report

This report responds to a request from Council Members Troxclair and Alter regarding the accuracy of water bills.

---

## Scope

The scope for this special request included the City of Austin's water meter reading and billing processes in January 2018 and complaint processes in fiscal year 2017.

---

## Methodology

To complete this special request, we performed the following steps:

- Reviewed Austin Energy's policies and procedures related to water billing;
- Reviewed Austin Energy's contract for water meter reading;
- Reviewed Austin Energy's policies and procedures related to water bill complaints;
- Selected and tested a sample of meters to determine if these meters were being physically read and if reads reflected actual usage;
- Selected and tested a sample of high water bill complaints to determine if complaints were handled according to applicable policy and procedure;
- Recalculated a sample of water bills using a flat water rate to determine how a flat rate would affect bill amounts;
- Interviewed Austin Energy staff related to the water meter reading and billing process.

---

## Project Type

Special request projects conducted by the Office of the City Auditor are considered non-audit projects under Government Auditing Standards and are conducted in accordance with the ethics and general standards (Chapters 1-3).

This page intentionally left blank.

The Office of the City Auditor was created by the Austin City Charter as an independent office reporting to City Council to help establish accountability and improve City services. Special requests are designed to answer specific questions to assist Council in decision-making. We do not draw conclusions or make recommendations in these reports.

#### **Team**

Andrew Keegan, Audit Manager  
Sam Naik, Auditor-in-Charge  
Cameron Lagrone

#### **City Auditor**

Corrie Stokes

#### **Deputy City Auditor**

Jason Hadavi

#### **Office of the City Auditor**

**phone:** (512) 974-2805

**email:** [AustinAuditor@austintexas.gov](mailto:AustinAuditor@austintexas.gov)

**website:** <http://www.austintexas.gov/auditor>



AustinAuditor



@AustinAuditor

Copies of our audit reports are available at  
<http://www.austintexas.gov/page/audit-reports>

*Alternate formats available upon request*