

STAFF REPORT

To: David Dickson, General Manager
From: Joe Guistino, Superintendent of Operations
Agenda: May 13, 2008

Report
Date: May 7, 2008

Subject: AMR Pilot Program Results

Recommendation:
Information only.

Background:

In July 2007, The Board directed staff to proceed with procurement of the Orion Automatic Meter Reading (AMR) System for the meters along highway 92. This was to be a pilot program to determine the benefits of going to a system-wide AMR system. In January 2008, National Meter and Automation Inc. contracted IWP Repair Service Company to install 72 AMR devices on meters of various sizes on all of our customers along highway 92. Installation took 4 days upon which 52 old meters were replaced with new ones.

Results:

The actual meter reading consists of loading the proper route into the toughbook laptop, installing it on the front seat of the truck, connecting the antenna and driving the route at the normal speed limit. The AMR devices on the meters are polled and the data sent to the laptop as indicated by a short audio signal and change in annotation of the meters symbols on the screen.

District Staff have 3 months experience reading these meters along highway 92 and can report the following:

- The time for reading this route has been reduced from 2 person-hours to 0.25 person hours, a reduction of 88%.
- The meter system software generates exception and unread meter reports which indicate suspected tampering, underreads, reverse flows, possible leaks and faulty reads.

- Of the 98 meters read in the last quarter, staff made 19 responses as follows:
 - 6 for suspected leaks (these were nurseries that run water at many hours during the night and morning hours)
 - 4 for suspected tampering (nothing unusual found. Inquiries with other Districts with the same system found that this is common when the system is new).
 - 8 under reads (fire meters)
 - 1 reverse flow (operator error when installing initial meter read)
- Staff is no longer required to re-read meters with high usage. This is an additional time saving of 30 minutes/month.
- Staff is no longer at risk of a vehicular confrontation when standing along the edge of the road.

Discussion:

Installation

The installation contractor is able to install the AMR device on an existing meter in 10 – 20 minutes, depending on whether or not the meter is replaced.

Field Time Savings

It presently takes 5 – 6 people 5 days to conduct the monthly meter reads. It takes 1 person an extra 8 hours to conduct all of the re-reads. With AMR, it would take 1 person 4 hours to read our entire system with a reduced number of return trips. This represents a savings of 196 – 240 person-hours per month. One field staff works 173 person hours per month. This is a time savings of 1.1 – 1.4 people per month which can then be reallocated to other important District functions.

Administrative Impacts

The AMR has shown to dovetail smoothly with the Springbrook billing software. Staff has not had any issues with data transfer or billing. The AMR software provides a robust report generating capability for ease of management analysis.

Santa Cruz reported a reduction in insurance rates “by providing increasing safety for readers who once faced protective dogs or unsuspecting customers to access meters tucked deep behind property lines.”

Revenues

Other systems have reported an increase in revenues based on the accelerated replacement of old meters as part of the AMR installation program. We have not accumulated enough data at this time to make this assessment.

Implementation of AMR would also allow us to read meters and bill all accounts on a monthly basis, improving cash flow.

Next Steps:

At a future meeting, staff will present a more detailed cost-benefit analysis, along with a recommended approach for implementing AMR.