Hidden Valley Lake Community Services District
Special Meeting

DATE: October 8, 2018

TIME: 5:00 p.m.

PLACE: Hidden Valley Lake CSD
          Administration Office, Boardroom
          19400 Hartmann Road
          Hidden Valley Lake, CA

1)   <u>CALL TO ORDER</u>

2)   <u>PLEDGE OF ALLEGIANCE</u>

3)   <u>ROLL CALL</u>

4)   <u>APPROVAL OF AGENDA</u>

5)   <u>DISCUSSION:</u> Daniel Eisenberg of Utility Service Co., Inc. (a subsidiary of Suez) to present a potential AMI meter solution to the Board for review and discussion.

6)   <u>PUBLIC COMMENT</u>

7)   <u>ADJOURNMENT</u>

AMI Metering Asset Management: Enhance Revenues and Deliver Superior Customer Service

Daniel Eisenberg
Water System Consultant

Hidden Valley Lake CSD, CA

October 8, 2018

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Key Questions You Need Answered Today

➢ Who is Suez and can I trust them to install my AMI System?
➢ Will you stand by the system and be around for the full 15 years to help HVLCSD?
➢ What is AMI and what benefits will it bring to HVLCSD?
➢ Is this project a good use of our money?
➢ How will I pay for this system?
➢ What options do I have?

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AMI Metering Asset Management
Enhance Revenues & Deliver Superior Customer Service

Contents

I SUEZ (USCI) Company Overview
I Testimonial
I Our Value Proposition
I Asset Management & Maintenance Program
I Benefits of AMI
I Cost Justification
I Case Studies

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SUEZ Experience

- **Global Leader in Water and Waste Water Asset Management**
- **Listed on 2 global stock exchanges**
- **With our partner Aclara, over 7,000,000 meters in operation across the USA**
- **SUEZ Maintains annually more than 150,000 miles of pipes globally**
- **SUEZ maintains over 8,000 water tanks across the USA on our MP**
- **We own and manage water and waste water utilities just like you and work with more than 4,000 clients just like you**
- **Awarded 2017 Smart Water Company of the Year Award**
- **Committed partner of the industry, active in CRWA, AWWA, CSD, ACWA**
- **4 Divisions in North America: Utilities, ES, AS, WTS**

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SUEZ Advanced Solutions
North American Leader in Water Asset Management Solutions

650+
Employees
(Full Time Engineering Dept.)

Founded in USA
half a century ago
(Based in Atlanta, GA)

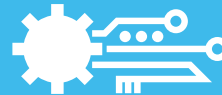**4,000+** municipal &
industrial customers

8,000+ water assets
managed

19 service centers
nationwide.
30+ NACE Inspectors

50 community-based
water system
consultants

World-class
innovative
technologies

Technological and
financial strength from
Global leader

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SUEZ Advanced Solutions Offerings & Asset Management / Maintenance Programs

Water Wells

- Condition assessment
- Maintenance program
- Pumps services
- Rehabilitation
- Drilling

Water Quality

- Asset chemical cleaning
- Mixers
- THM removal
- Ice Pigging
- Filter media replacement
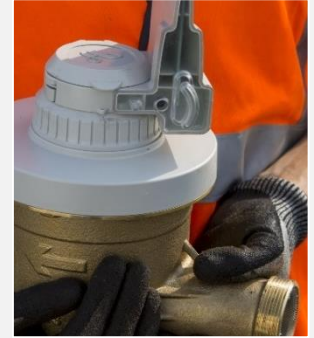
Steel Water Tanks

- Condition assessment
- Maintenance program
- Rehabilitation
- Drone inspections

Concrete Structures

- Condition assessment
- Maintenance program
- Rehabilitation
- Water, wastewater and storm water assets

Network assets & Meters

- Maintenance program with AMI
- Advanced Network management (Aquadvanced)
- Network condition assessment and rehabilitation

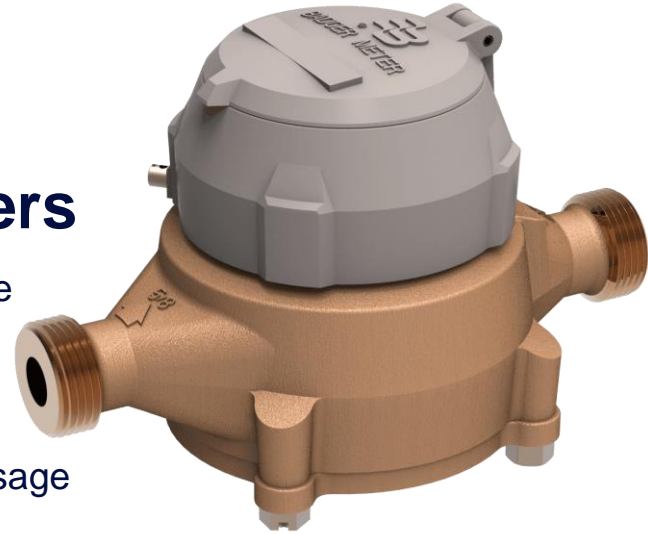suez

Industry Overview

Small California Water Utilities – like HVLCSD - face many challenges

- Managing Capital Costs

- California mandate to install water meters: SB750, AB2572

- Non-Revenue Water

- Water Scarcity/Conservation

- Customer Service

- Aging Infrastructure

- Small workforce, limited manpower, need for redundancy in system

Challenges

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Water Meters Are Your Cash Registers

○ Meters make it possible to charge customers in proportion to the amount of water they use

○ Meters allow the system to demonstrate accountability

○ Meters are fair for all customers because they record specific usage

○ Meters encourage customers to conserve water (especially as compared to flat rates)

○ Meters aid in the detection of leaks and waterline breaks in the distribution system

Challenges

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Key Questions You Need Answered

○ **What is SUEZ (USCI) Professional Service Offering**?

- A Full Comprehensive Asset Management AMI/Metering Program with Preventative and Corrective Maintenance.

○ **Who Is The Program Designed For?**

- This program is specially designed for Small to Mid-Size Utilities.

○ **Why Such A Program for Small to Mid-Size Utilities?**

- Small to Mid-size utilities want all of the benefits an AMI system has to offer, but lack the funds, project management resources, and most importantly the ability to **Take Care of an AMI System over its Lifetime**.
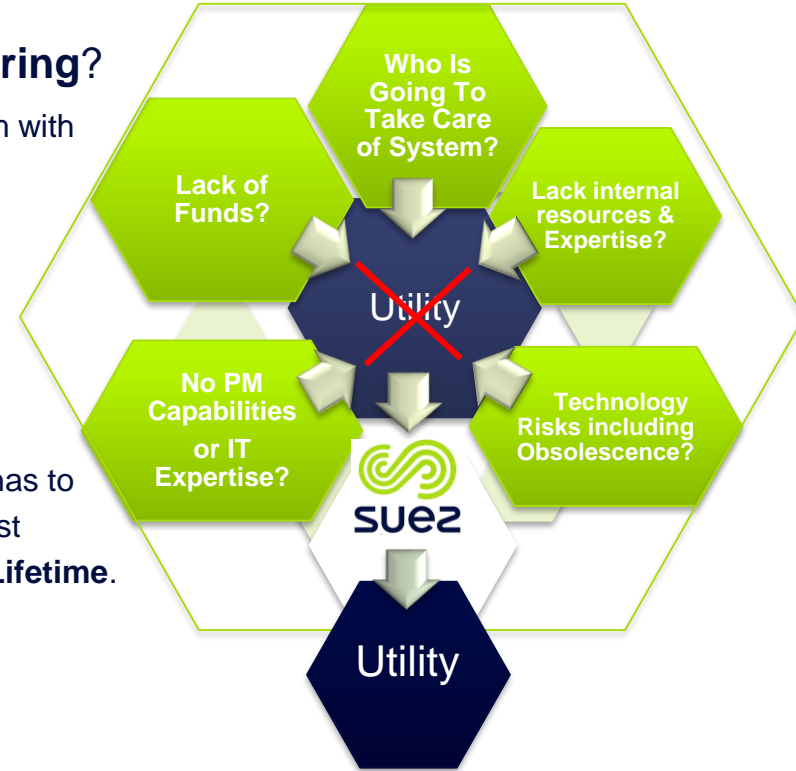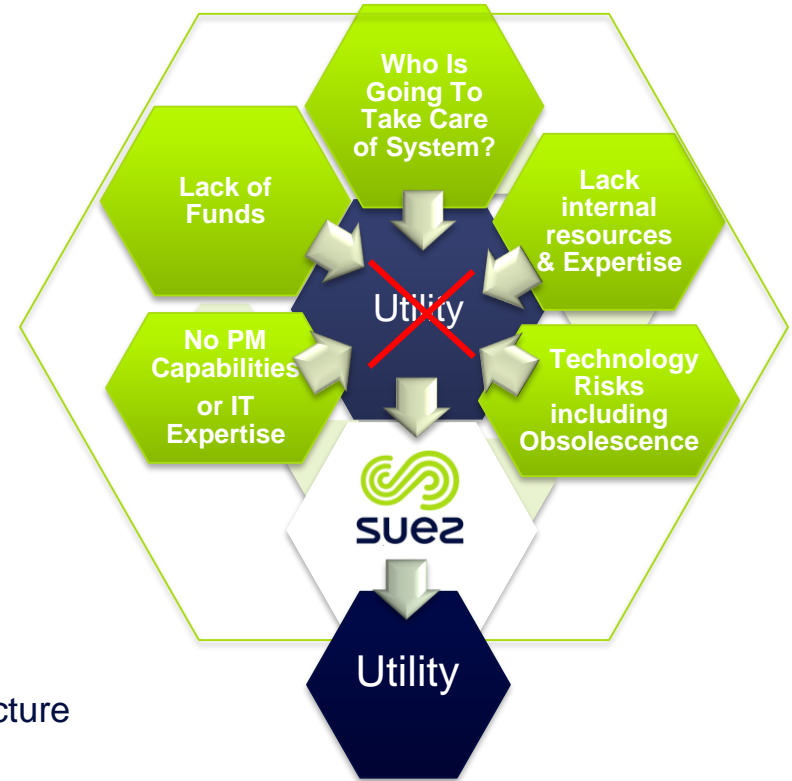
AMI Metering Asset Management – Value Proposition

⭕ What Are The Professional Service Benefits?

⭕ Who will take care of the system?

- Full Comprehensive Asset Management Program (15yrs)
- Includes Preventive and Corrective Maintenance
- Manufacturers Guarantee Included
- Project Management with SaaS Hosted Services & IT support
- Spread the Costs Over Time
- Suez Assumes Technology and Obsolescence Risks
- Single Source of Responsibility and Accountability
- Eliminate the Finger Pointing
- Release City Workers to Other Tasks: Forget about Reading
- Continuous Supervision & Failure Investigation
- Condition Assessment, Reporting & Repair of Failing Infrastructure
- Service Level Agreement and Emergency Response

Who Is Going To Take Care of System?

Lack of Funds

Lack internal resources & Expertise

No PM Capabilities or IT Expertise

Technology Risks including Obsolescence

Utility

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Utility

Challenges

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Metering Maintenance Program

What's included?

Deployment

○ Project Management

○ Supply water meters

○ Supply Metering Technology

- Hardware
- Backhaul Communications
- Software

○ IT Implementation

○ Provide Installation Services

- Network
- Meters/Endpoints

Maintenance

○ Continuous condition assessment reporting

○ AMI Network preventive and corrective maintenance

○ Meter corrective maintenance

○ Transmitter corrective maintenance

○ Software Support and Upgrades

○ Hosting services and IT support

○ Backhaul Communications

Scope of work

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Overcoming Lack of Funds

Utilities can benefit from a full implementation now and pay over time

○ Many utilities need to replace old and inaccurate water meters

○ Multiple financing options available – we are also a water utility, we know you, we trust you, we are there to help get the system in place

○ Payback can be funded by
- reductions in meter reading/customer service costs
- Improved meter accuracy
- Improved billing/decreased Non Revenue Water
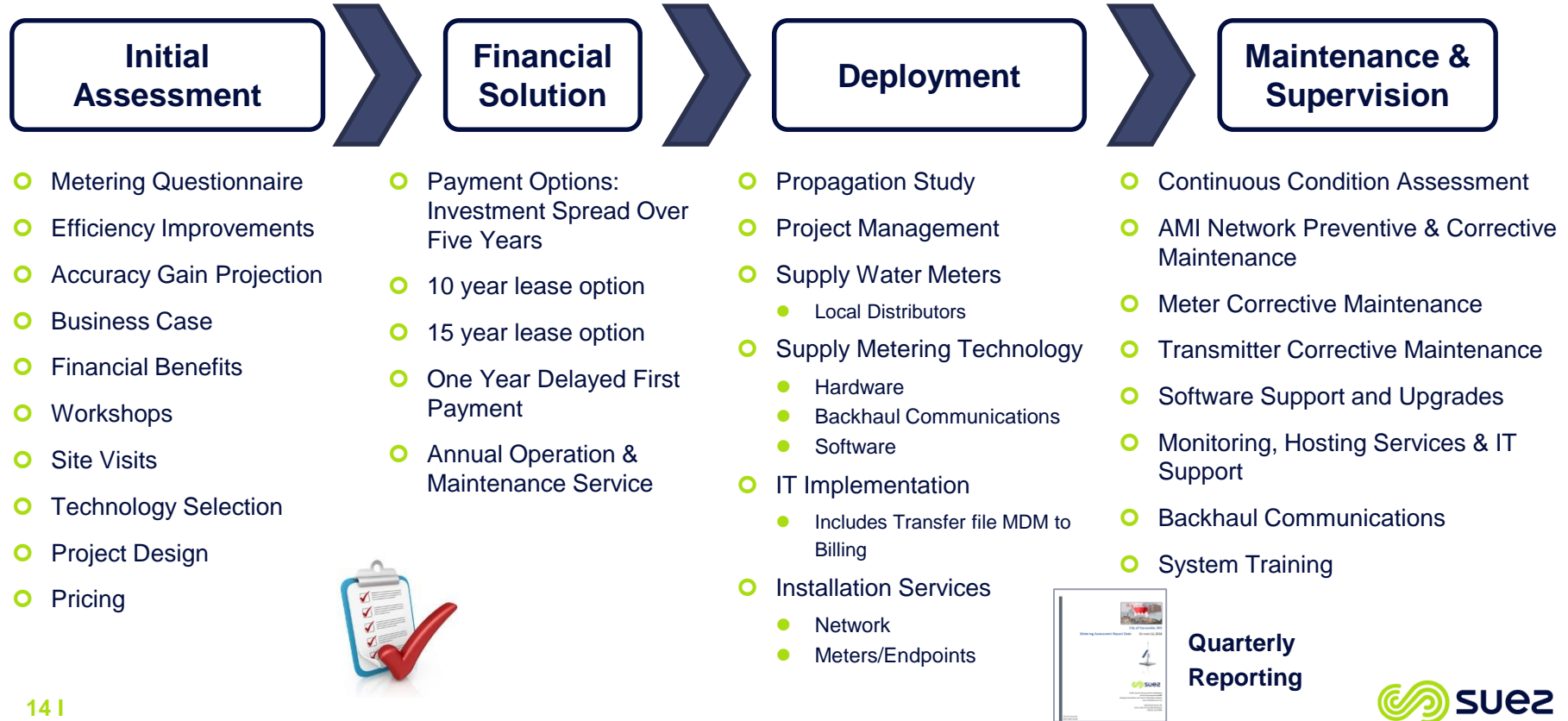
Challenges

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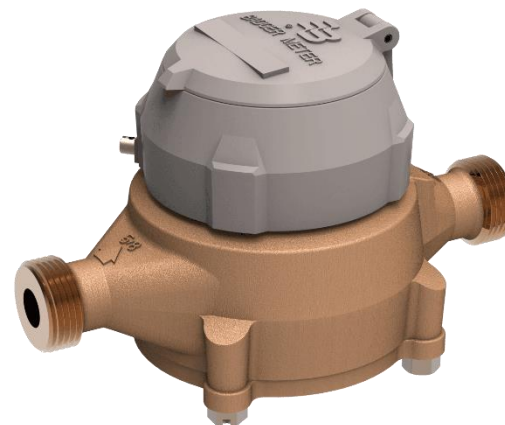
Overcoming Lack of IT Resources

Software as a Service (IT Cloud)

- Reliable access to data

- Eliminates need of internal IT resources

- Includes swift implementation and integration with CIS and other systems

- Assures disaster recovery is well managed
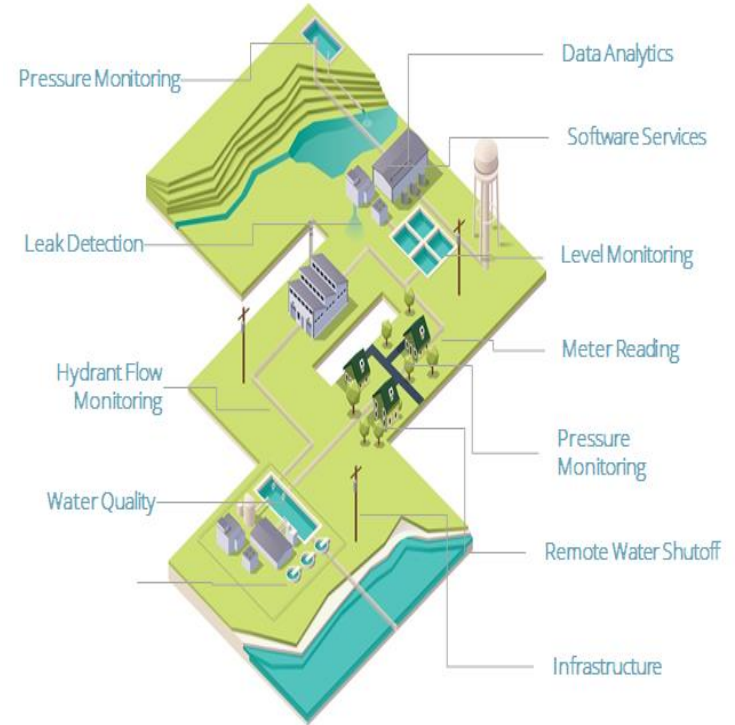
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Asset Management with Metering Maintenance Program

What's Included?

Initial Assessment	Financial Solution	Deployment	Maintenance & Supervision

Initial Assessment
- Metering Questionnaire
- Efficiency Improvements
- Accuracy Gain Projection
- Business Case
- Financial Benefits
- Workshops
- Site Visits
- Technology Selection
- Project Design
- Pricing

Financial Solution
- Payment Options: Investment Spread Over Five Years
- 10 year lease option
- 15 year lease option
- One Year Delayed First Payment
- Annual Operation & Maintenance Service

Deployment
- Propagation Study
- Project Management
- Supply Water Meters
  - Local Distributors
- Supply Metering Technology
  - Hardware
  - Backhaul Communications
  - Software
- IT Implementation
  - Includes Transfer file MDM to Billing
- Installation Services
  - Network
  - Meters/Endpoints

Maintenance & Supervision
- Continuous Condition Assessment
- AMI Network Preventive & Corrective Maintenance
- Meter Corrective Maintenance
- Transmitter Corrective Maintenance
- Software Support and Upgrades
- Monitoring, Hosting Services & IT Support
- Backhaul Communications
- System Training

Quarterly Reporting

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Advanced Metering Infrastructure (AMI)

Water Meter with an AMI transmitter

AMI Data Collector

Meter Data Management System

Utility Company

Manual Reading

AMR

Old utilities

Today's utilities

AMI

Reactive Monthly reading | Proactive Online hourly readings

Solution

15

Today's Solution – Benefits of AMI

Benefits of AMI

- Data Resolution
  - Hourly Water Meter Readings
- Revenue Enhancement
  - Reduce Billing Adjustments, Theft Detection, Revenue Forecasting
- Operating Cost Savings
  - Meter Reading Cost Savings, Customer Service Call Savings
- Improved Customer Service
  - Reactive to Proactive, Anticipate Notifications, More Detailed Information to Customer, Resolve Inquiries with First Call. Flexible Billing
- Operational Tools
  - Conservation, Right Sizing, Water Accountability
- Better Asset Management
  - Asset Accountability
- Responsible Resource Management
  - Reduce Non-Revenue Water

Pressure Monitoring
Leak Detection
Hydrant Flow Monitoring
Water Quality
Data Analytics
Software Services
Level Monitoring
Meter Reading
Pressure Monitoring
Remote Water Shutoff
Infrastructure

Benefits

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Benefits of AMI: Revenue Enhancement

Revenue Optimization

- ⭕ Reduce Billing Adjustments

- ⭕ Theft Detection

- ⭕ Customized Rates

- ⭕ Custom Billing Dates

Cash Flow Management

- ⭕ Revenue forecasting

- ⭕ Improved Rate Design

Benefits

17 |

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Benefits of AMI: Release workers from the metering process

With our AMI program we release you from meter readings

O No workforce required for readings and investigations

O Not technical expertise required to handle new radios, readers, download tools and
software to feed billing

O No more manual processes to handle data

O No more trips / reading routes / eliminate dangerous situations

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Benefits of AMI: Cost Savings

Meter Reading Cost Savings

○ Labor

○ Vehicle

○ Miscellaneous Costs

Customer Service Cost Savings

○ Fewer calls to call center

○ Fewer field visits related to metering issues

○ Reduced billing costs

Benefits

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Benefits of AMI: <u>Superior Customer Service</u>

Online reading allows to improve Customer Service

- Anticipate notifications to avoid high bills due to internal leaks

- Ability to provide detailed information to customers

- Ability to resolve most customer inquiries with first call

- Flexible billing

- Quick resolution of In/Outs

Customer leak with AMR or Manual reading
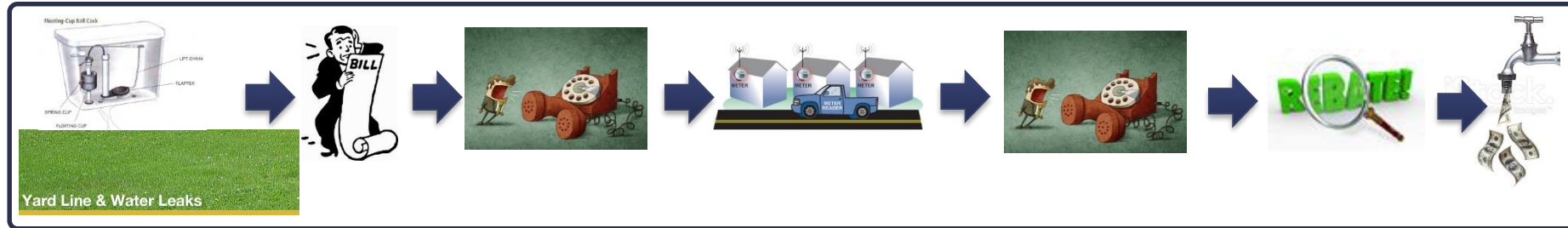
Benefits of AMI: Real World Experience

Real-World Experience

○ Reductions is number of field investigations by utility personnel

○ Reductions in volume of inquiries at call center (After an initial increase)

○ Identification of significant theft

○ Non-revenue water reduction

○ Extremely high performance - 99%+ expected read rate

Benefits

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AMI Metering Asset Management & Maintenance Program:

First presented a 5 year spread

Made some changes, reduced out the cost of meters already replaced and offer different plans to help you fit it in your budget

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Operation Support & Maintenance What's Included?

Annual Support & Maintenance with Asset Maintenance	
INCLUDES:	
Full Comprehensive Asset Management Program	Included
Preventative and Corrective Maintenance	Included
AMI System Monitoring Service	Included
Labor (Travel and Expenses) and Batteries	Included
DCU Backhaul Costs	Included
DCU Maintenance Fees	Included
Software License and Maintenance Fees	Included
Hosting Fees (SaaS)	Included
Application Support	Included
Guaranteed AMI System Performance	Included
All Firmware Updates	Included
Technology Risks	Included
Obsolescense Risks	Included
Manufacturers Guarantees	Included
Annual Training	Included

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AMI/System Equipment & Services with Installation

Equipment & Services:

Equipment:	Quantity
Aclara Technologies Network STAR® Data Collecting Units (DCU)	4
STAR® DCU Mounting Hardware	Included

Endpoint

Aclara Technologies Model 3300 STAR®Endpoints for Water Meters	2377

Hosted Server & Software

Aclara Technologies iiDEAS® Hosted Server and Software	Included

Network, SaaS and Project Management

Network Installation (DCU's, Poles, Hardware, etc)	4
Software as a Service (SaaS) - Application Support Service	Included
Billing Interface	Included
Project Management w/Project Manager	Included
Training	Included

Meters

Badger Water Meters	**2377**
Water Meter Site Surveys	Included
Water Meter and Endpoint Installation	Included

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Cost Justification- 5 year spread with price adjustments

Assumptions

Number of Water Meters	**2,377**	meters
Population Served	7,250	
Average consumption	96	gpcd

Water Rates	$2.30	CCF
Sewer Rates	$2.41	CCF
Age of Meters	17	years
Non-Revenue Water	20.5%	

Meter Reading Cost	$4.50	per read
Number of Customer Service Calls	119	
Cost for Customer Service Call	$100.00	per call

Cost Savings

Meter Reading Cost	**$10,697**	per month
Customer Service Calls	$11,900	per month
Total Cost Savings	**$22,597**	**per month**

Revenue Enhancement

Water underbilling	$5,162	per month
Sewer underbilling	$5,409	per month
Total Revenue Enhancement	**$10,570**	**per month**
Annual Financial Benefit	**$398,002**	Per year

Pricing

Annual Fee: Years 1-5	$274,185
Maintenance Fee: Years 1-15	$27,483

New: $267,202

New: $27,414   *(Cash Positive)*

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AMI Metering Asset Management & Maintenance Program:

Cost Justification – 10 Year

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Cost Justification

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Annual Financial Benefit	**$398,002**	per year

Budgetary Pricing

Annual Fee Year 1-10	$149,000
Maintenance Fee: Years 1-15	$27,414

(Cash Positive)

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Cost Justification

Billings vs Revenue Enhancement/Savings - 8%

$4,178,192

$1,471,698

Legend: Revenue Enhancement | USG Billing | Accumulated Cash Flow

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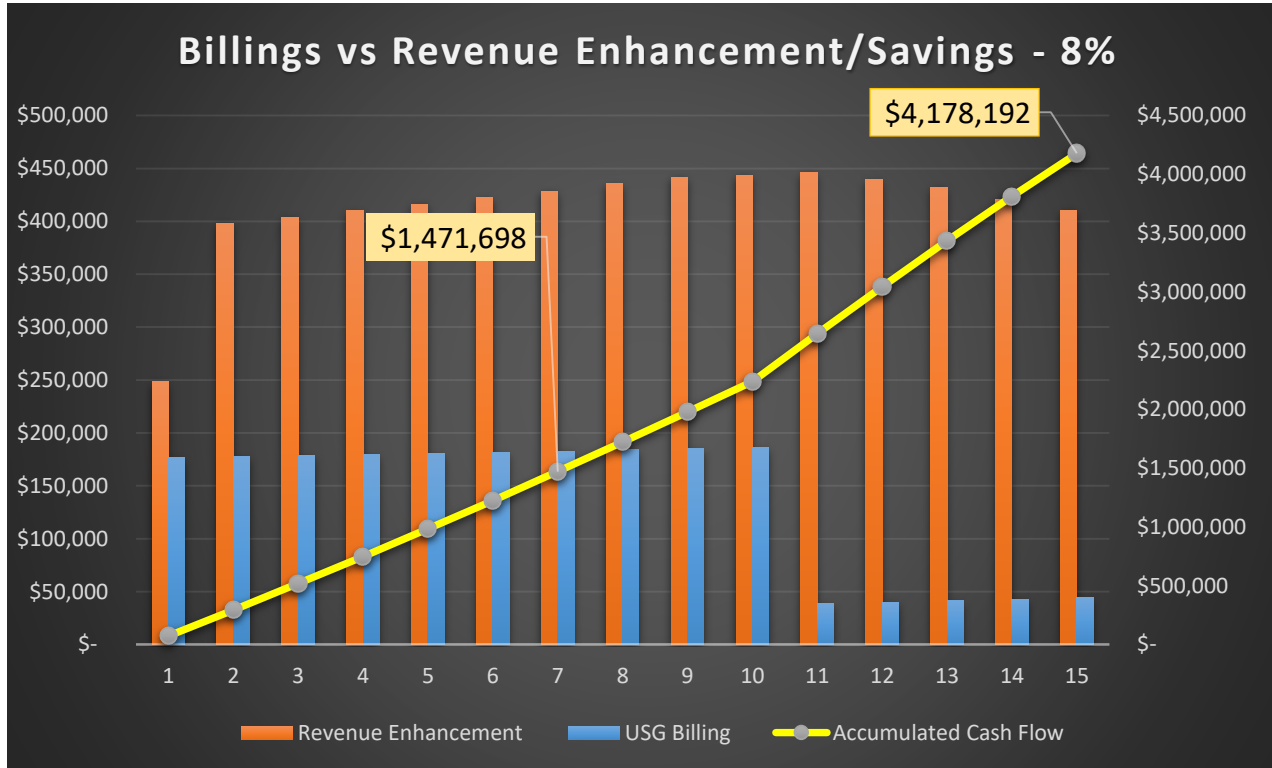
AMI Metering Asset Management & Maintenance Program:

Cost Justification – 15 Year

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Cost Justification

Assumptions

Number of Water Meters	2,377	meters
Population Served	7,250	
Average consumption	96	gpcd

Water Rates	$2.30	CCF
Sewer Rates	$2.41	CCF
Age of Meters	17	years
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Meter Reading Cost	$4.50	per read
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Total Revenue Enhancement	**$10,570**	**per month**
Annual Financial Benefit	**$398,002**	per year

Budgetary Pricing

Annual Fee with Maintenance: Years 1-15	$139,000

(Cash Positive)

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Cost Justification

Billings vs Revenue Enhancement/Savings - 8%

$1,730,698

$3,988,192

Legend: Revenue Enhancement | USG Billing | Accumulated Cash Flow
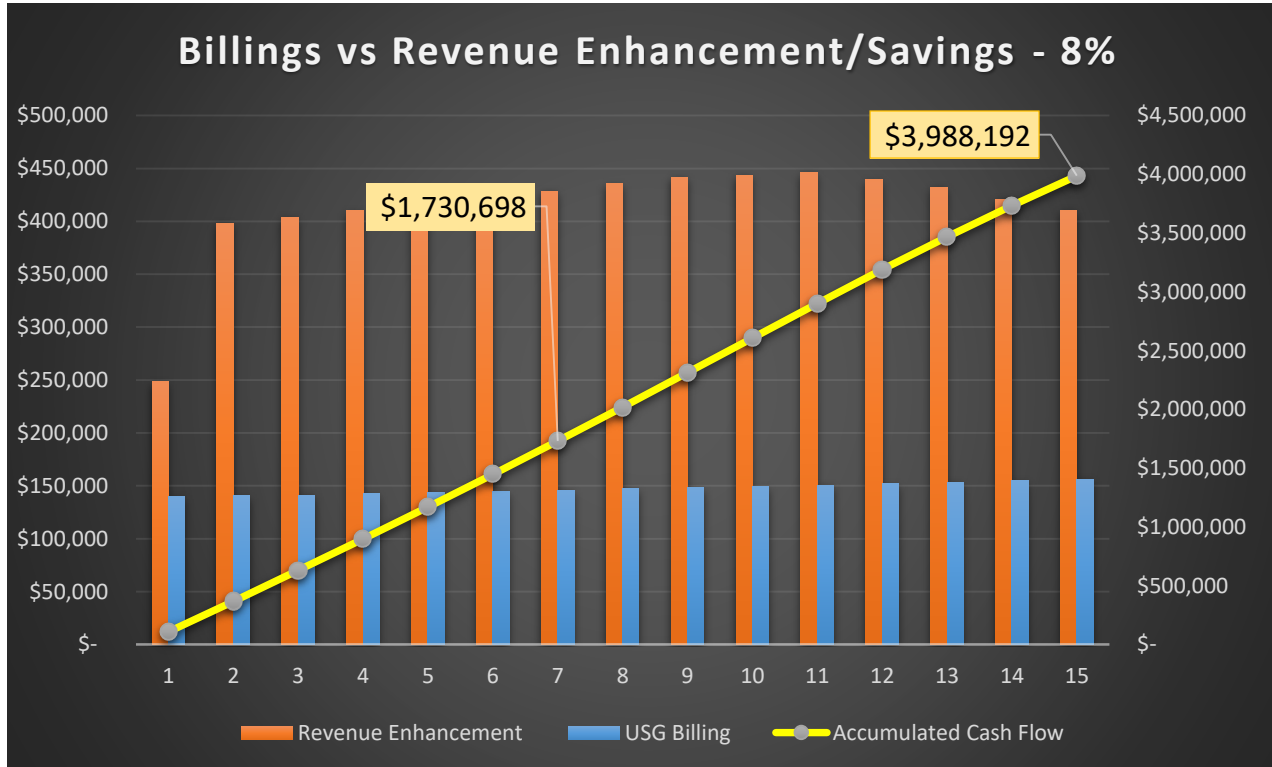
AMI Metering Asset Management & Maintenance Program:

Hidden Valley Lake CSD - AMI Financing Options								
Pricing - Option 1 - 5 year Spread , you own it after 6 years				Option 2 - 10 year Lease		Option 3 - 15 year Lease		
Annual Fee: Years 1-5	$267,202	$1,336,010		$149,000	$1,490,000	$139,000	$2,085,000	
Maintenance Fee: Years 1-15	$27,414	$411,210		$27,414	$411,210	$0	$0	
Total Cost 15 year Project		$1,747,220			$1,901,210		$2,085,000	
	y2-y6	y7-y15						
Amount Due for infastructure/capex	$267,202	$0		$149,000		$139,000		
Cash In/additional billing/year*	$126,840	$126,840		$126,840		$126,840		
Suggested Meter/Infastructure Fee**	$27,414	$27,414		$27,414		$27,414		
Cash Out	$112,948	-$154,254		-$5,254		-$15,254		
Total Cash Out	$564,740	-$1,542,540						
		-$977,800						
*: revenue enhancement of $10,570/mo x 12 = $126,840/yr								
**: $27,414/2477 = $11.07/meter/yr = $.92/meter/mo infastructure charge = 100% offset of system, rest of savings go to your bottom line								

AMI Metering Asset Management & Maintenance Program:

Case Studies

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References – Case Studies

Case Study – Concordia. MO   Est: 6%; Actual: 12-18%

References – Case Studies

Case Study – Greensboro, MD

CASE STUDY
METERING SERVICES

TOWN OF GREENSBORO, MD

Project Summary

Customer:
Town of Greensboro, MD

Type of Project:
Metering Maintenance Program - including installation of a new AMI system and new Meters - Aclara® AMI System with Neptune E-Coder® water meters

Date: 2016

Results:
- Increased meter reading efficiency (100% reading)
- Increased revenue generated by more accurate readings and more efficient process
- Improved cash flow
- Improved Customer Service
- Increased availability of Utility Staff resources for other activities

Solutions

The new AMI system combines radio frequency transmitters with over 820 Neptune E-Coder® water meters and an easy to use software to provide the utility with near real-time data. The new water meters use state-of-the-art technology to accurately display readings on consumption, rate of flow, and indicate direction of flow and possible leaks.

" Greensboro was facing a challenge to financially support maintenance projects and invest in new ones "

The Town of Greensboro is located on the North banks of the Choptank River in Caroline County, Maryland. In this small community of 1931 people, living is at its best. Residents, business owners, city officials, all know each other. With its quaint downtown retail area and broad spectrum of recreational activities, Greensboro is the perfect place to spend a relaxing weekend or a lifetime. Greensboro's potable water is provided by three wells that pump water from the Pine Point underground aquifer. Water is then treated and sent to the distribution system.

As other small communities, Greensboro was facing a challenge to financially support maintenance projects and invest in new ones. One of the major projects being considered was the replacement of an aging 15 year-old touch-read metering system. On average, it took 4 days to manually read and collect the information in the town. However, due to the heavy workload on the town resources, meter reading could only be done on a quarterly basis. In addition to the time it took to read the meters, the city also knew it was collecting readings from old meters with decreasing accuracy.

Realizing that it needed to increase the efficiency of its metering infrastructure, Greensboro's water system contacted its long-time service partner, SUEZ Water Advanced Solutions (Utility Service Co., Inc.). For the past 14 years, SUEZ has successfully maintained the town's tank assets under a maintenance program agreement, providing excellent customer service and building a high level of trust. After carefully reviewing the town's requirements, SUEZ recommended the installation of a new Advanced Metering System (AMI) and new water meters. The company installed the new metering infrastructure without putting any burden on the Utility staff and handles all future maintenance so the Utility can focus on its core competency.

"The new AMI system and new meters and the fact that SUEZ Water Advanced Solutions is in charge of all future maintenance has freed up my team to perform other critical tasks. The labor efficiencies and added revenue generated by more accurate meter readings will provide a quick payback on our investment" – David Kibbler, Utility Director

Capturing more revenue

Since their installation, the new and more accurate meters have allowed the Utility to capture more revenue. In addition, the new automated system has reduced significantly the time dedicated to reading, processing and billing which allows Utility staff to perform other important tasks. Moving from a quarterly billing to a monthly billing has also greatly improved the Utility cash flow.

"The new AMI system and new meters and the fact that SUEZ Water Advanced Solutions is in charge of all future maintenance has freed up my team to perform other critical tasks. The labor efficiencies and added revenue generated by more accurate meter readings will provide a quick payback on our investment" says Utility Director - David Kibler. With its innovative Metering maintenance program - which allows the initial AMI infrastructure costs to be spread over time and guarantees a timely preventative maintenance of all equipment for the duration of the contract, SUEZ Water Advanced Solutions is bringing AMI to small utilities, that couldn't afford to install or maintain AMI networks until now.

Improved Customer Service

The new AMI system, provides hourly data on any customer which helps the Utility be more proactive by pinpointing and quickly alerting customers of potential leaks. Thanks to the accurate data collected continuously and available online, the Utility can respond more diligently and efficiently to any customer inquiry or complaint. For example, the analysis of a customer utility bill over time helps identify recurrent patterns and allows the Utility to understand if and when a true discrepancy occurred, thus reducing billing disputes.

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Tel: 855-526-4413 | www.utilityservice.com

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AMI Metering Asset Management & Maintenance Program:

Next Steps

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Next Steps:

Agree on best financing option to fit your budget.

Board Resolution to proceed.

Paperwork.

○ Replace Hidden Valley Lake CSD Water Meters and deploy an AMI Metering system under the SUEZ Asset Management and Maintenance Program.

○ Minimize the impact on the Village by spreading infrastructure costs for the complete system over 5 or 10 or 15 years.

○ Delay billing for one (1) year from date of contract. This will allow the City to maximize the increased revenue from new water meters and the customer service and meter reading operation benefits and savings from the AMI system.

SUEZ (USCI) has been a partner to Utilities like Hidden Valley Lake CSD for many years.

We look forward to being a partner for many more.

Summary

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