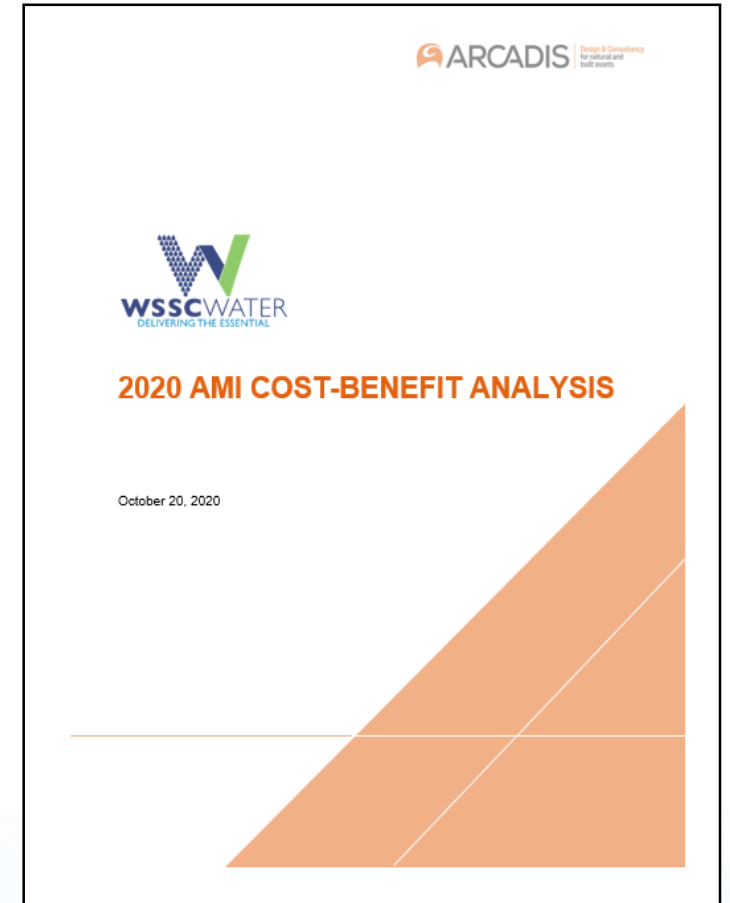




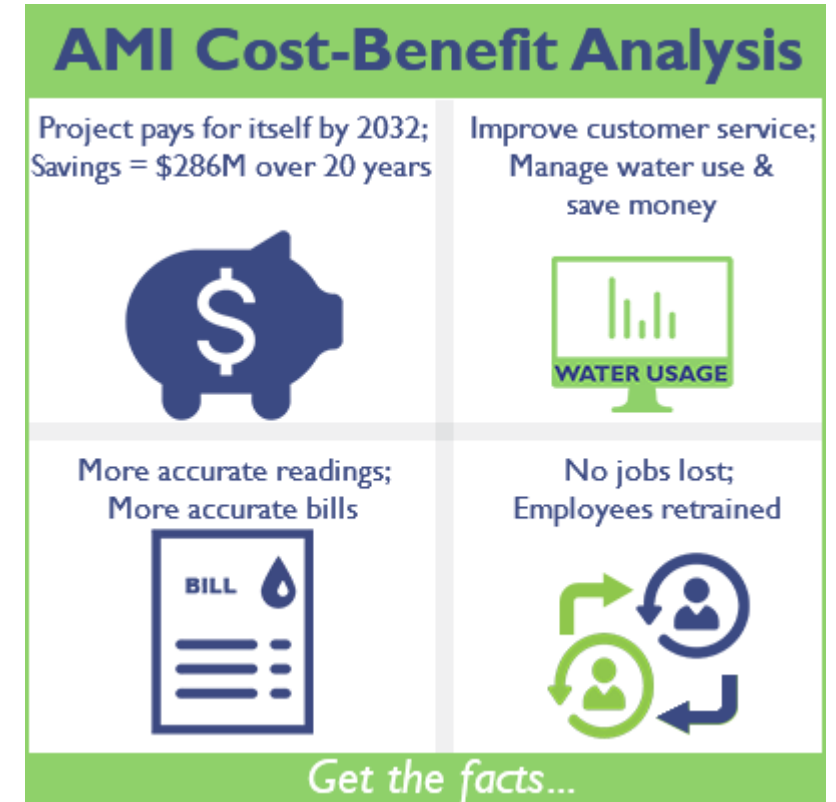
Agenda

- Report Highlights
- Cost Review
- Benefit Review
- Comparable Projects
- Opt-Out Impacts
- Benefits
- Conclusion



Report Highlights

- Advanced Metering Infrastructure (AMI) project pays for itself by 2032
- Saves \$286 million over 20 years
 - Helps to stabilize rates
- Achieves significant cost savings with more accurate meters and redeploying existing meter readers
 - No jobs will be lost
- Significantly improves customer service
 - Better manage water use to save money
 - More accurate readings & bills



wsscwater.com/AMI

Report Highlights Cont.

- AMI installation is estimated to cost \$208 million*
 - Cost estimate is in line with comparably sized water utilities
 - Primary driver of cost is replacement of all 492,805 customer meters
- Originally budgeted \$103 million for planning purposes only
 - Fully expected price to change as project advanced
 - Early budget estimate based on replacement of 152,186 meters

***Note:** All costs and related benefits in this analysis are current estimates and subject to change based on vendor bids, contract negotiations, market conditions, operational issues and other factors.

Report Highlights Cont.

FACTORS	2011 STUDY	2020 STUDY	PERCENT INCREASE
Number of Meters to be Replaced	152,186	492,805	+324%
Average Meter Age	12 years	17 years	+42%
Total Meter Population	456,000	492,805	+8%
Meter Reader II Annual Salary	\$38,463	\$46,303	+20%
Network Operating Cost Estimate	\$516,000	\$1,908,000	+370%

Cost Review

CAPITAL COSTS	NET PRESENT VALUE	CASH VALUE
Capital Project Cost Plus 10% Contingency	\$ 161,248,721	\$ 181,814,058
Project Management	\$ 7,687,530	\$ 8,667,982
System Integration	\$ 8,529,684	\$ 9,291,800
Salvage Value of Meters	\$ (1,040,586)	\$ (1,173,300)
Opt-Out Related Costs	\$ 8,068,174	\$ 9,816,168
Total Acquisition Cost	\$ 184,493,524	\$ 208,416,707

Cost Review Cont.

OPERATING COSTS	NET PRESENT VALUE	CASH VALUE
Network Operating Costs	\$ 28,160,727	\$ 46,896,273
Meter/Meter Interface Unit Maintenance Costs	\$ 14,389,883	\$ 24,049,392
Integration Post-Production Support	\$ 4,327,952	\$ 4,960,000
Monthly Billing Operating Costs	\$ 25,453,600	\$ 44,721,194
20-Year Lifecycle Cost (Capital + Operating Costs)	\$ 256,825,686	\$ 329,043,566

Cost Review Cont.

PROJECT PHASE	FISCAL YEAR	PHASE COST
Procurement	FY 2021	\$ 0.4M
Integration and Proof of Concept	FY 2022	\$ 9.2M
Deployment	FY 2023-2026	\$ 198.6M
Project Closeout	FY 2027	\$ 0.2M

Benefit Review

BENEFITS	NET PRESENT VALUE	CASH VALUE
Savings on Normal Meter Turnover	\$ 35,663,289	\$ 48,814,535
Labor Savings	\$ 17,991,615	\$ 30,036,274
Carbon Footprint Reduction	\$ 1,607,438	\$ 2,525,288
Reduction in Workers' Comp. Claims	\$ 1,508,039	\$ 2,365,932
Customer Leak Detection	\$ (34,601,136)	\$ (56,501,126)
Revenue Gain from Meter Accuracy	\$ 371,096,064	\$ 588,407,479
20-Year Lifecycle Benefits	\$ 393,265,309	\$ 615,648,382

Comparable Projects

WATER UTILITY	AMI STATUS	ACQUISITION COST	METER POPULATION	UNIQUE FACTORS
City of Baltimore	Complete (2017)	\$180M (\$439/mtr)	410,000	Mix of AMI and AMR
Detroit	Complete (2012)	\$150M (\$750/mtr)	200,000	Project delays extended project
Cleveland	Complete (2016)	\$86M (\$203/mtr)	425,000*	2010 contract start, comparable to 2011 WSSC Water Estimate * Only ~250k replacements
Austin Water	In Progress	\$95M (\$358/mtr)	265,000	
Columbia SC	In Progress	\$49M (\$350/mtr)	140,000	
Akron	In Progress	\$35M (\$437/mtr)	80,000	
WSSC Water	Planning	Est. \$208M (\$423/mtr)	492,805	

Opt-Out Impacts

- Maryland Public Service Commission (PSC) has ordered that all electric and gas companies implementing AMI must assess a fee for customers choosing to opt out to comply with rate making principles. Case 9208, Order 8529
- Opt-Out Fee for Manual Reads (Option 3):
 - \$209 for touchpad installation
 - \$8.87 fee per read for manual meter reading (ongoing fee per read)
 - Minimal cost impact if both set-up fee and ongoing manual meter reading fee are assessed and increased due to inflation
- Opt-Out Meter Relocation Fee (Option 4):
 - \$300 for meter relocation from inside to outside, paid over one year
 - \$8M Net Present Value Cost to WSSC Water if 1% Opt-Out
- Customers will be able to apply for assistance

Opt-Out Impacts Cont.

Options	Assumes 1.0% Opt-Out			Assumes 2.5% Opt-Out			Assumes 5% Opt-Out		
	Cost	NPV	Payback Period	Cost	NPV	Payback Period	Cost	NPV	Payback Period
No Opt-Out	\$0	\$144,507,797	10	\$0	\$144,507,797	10	\$0	\$144,507,797	10
Opt-Out with No Fee	\$5,176,378	\$139,331,419	10	\$13,147,319	\$131,360,478	10	\$26,294,638	\$118,213,159	11
Opt-Out with a Fee*	\$0	\$144,507,797	10	\$0	\$144,507,797	10	\$0	\$144,507,797	10
Opt-Out with Meter Relocation*	\$8,068,174	\$136,439,623	11	\$20,170,436	\$124,337,361	11	\$40,340,871	\$104,166,926	12

Assumptions:

*Costs are net of fees for options #3 & #4;

Opt-Out Setup occurs in Year 5. Quarterly reads transition to Monthly in 4th Quarter of Year 8

Benefits

Customer	WSSC Water
<ul style="list-style-type: none">• Access to near real-time water usage information<ul style="list-style-type: none">○ Customers receive alerts and information to better manage water use• Enhanced ability to conserve water and save money• More accurate meter reads and bills• Enables monthly billing<ul style="list-style-type: none">○ Smaller, more frequent bills to provide for easier budgeting	<ul style="list-style-type: none">• Reduces estimated bills<ul style="list-style-type: none">○ Less customer dependency○ Less meter reading errors• Reduces meter staff field visits<ul style="list-style-type: none">○ Meter readers retrained / no jobs lost• Distribution system leak detection• Distribution system planning• Water quality monitoring• Decreases WSSC Water's carbon footprint with less trucks on the road

Conclusion

- **Net Present Value Benefit** – The estimated net present value benefit is \$136,439,623 over the 20-year period
- **Addressing Obsolete Infrastructure and Aging Systems** – Many of the meters across the system are at, or beyond, their useful life, with consumption going unmetered due to the decreased accuracy of older meters
- **Operational Efficiency Gains** – With AMI, approximately 74% all current truck rolls related to meter reads are no longer needed
- **No Job Loss** – The project will result in no jobs lost, with an addition of 10 essential positions in Utility Services and Customer Service

Questions?

