



# Johnson Controls AMI Presentation to Marco Island City Council

June 2, 2025

The power behind **your mission**



# Background on the Project

- April 2024  
Marco Island City Council approved JCI to conduct Investment Grade Audit of city water meter system
- May 2024- Jan 2025  
JCI conducts multiple workshops with staff, onsite engineering, and water meter testing.  
Marco Island Utilities select equipment and system to move forward with; JCI solicited material and labor bids and negotiates the best price for City.
- March 2025  
JCI finalizes scope of work, savings, revenue impact, and construction plan with Utilities staff



# Current Marco Island Meter System

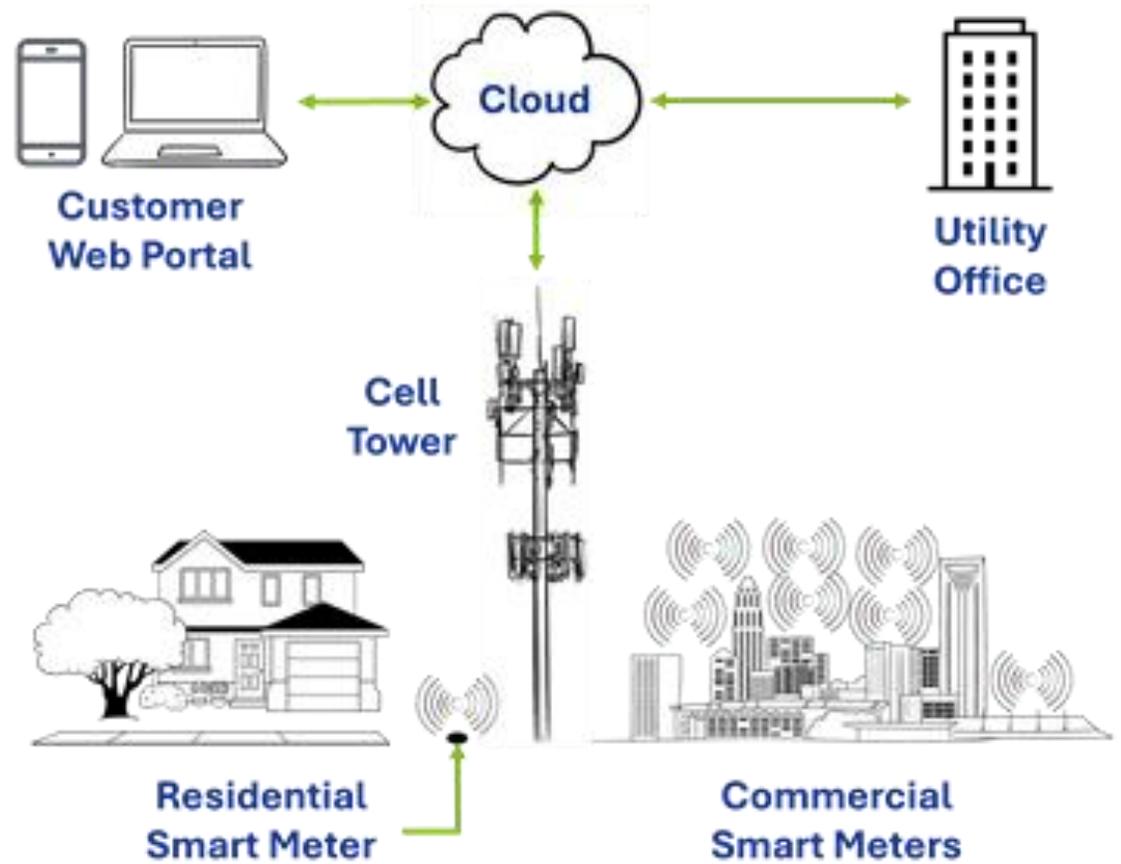
- Wide range of age of current water meters
  - 64% of 2” and smaller water meters either have no installation date or were installed before 2006. The oldest water meter installation date is from January 1967.
  - Most 1” and smaller meters have far exceeded their design life and are inaccurate
- Current meter reading practice is a combination of manual read and/or drive by system installed on newer water meters. The manual read is a very labor-intensive process.
- Residents receive only one reading per month. If there is a leak or a potentially high bill, residents will not know about it for up to 25 days after the event.
- Marco Island one of only 4 utilities in SW Florida that have not yet migrated to AMI

<b>Decade</b>	<b>Qty. of Meters Installed</b>	<b>% of Total</b>
1961-1970	49	0.41%
1971-1980	571	4.79%
1981-1990	2,176	18.27%
1991-2000	1,552	13.03%
2001-2010	1,332	11.18%
2011-2020	1,626	13.65%
2021-2024	2,604	21.86%
Unknown	2,000	16.79%
<b>Total</b>	<b>11,910</b>	<b>100.00%</b>

# What is Advanced Metering Infrastructure (AMI)

- *AMI Definition: a metering system that records customer consumption hourly or more frequently and that provides for daily or more frequent transmittal of measurements over a communication network to a central collection point.*
- Provides residents with improved meter reading and billing accuracy.
- Customers can track usage at their convenience through the portal
- Provides water usage data in near real time and can detect customer leaks within 24 hours of the event.
- Near real time usage data can help Marco Island understand usage, demand, and how to optimize the distribution system

Cellular Advanced Metering Infrastructure (AMI) System



# Benefits of this AMI Project

- Increased revenue to the Enterprise Fund with new, accurate water meters
- Increased staff efficiency & decrease O&M costs by replacing all meters and by reducing meter reading time, vehicle and fuel costs, and traffic on the island.
- Enhanced customer service: The customer portal provides citizens with near real time access to their water usage.
- Leak detection: The customer portal notifies a resident that a leak has been detected, typically within 24 hours.
- EPA Lead & Copper Rule compliance: A lead and copper line survey during the meter change out to comply with state EPA rules



# Small and Intermediate Water Meter Accuracy Results

## Small and Intermediate Water Meter Accuracy Results

Meter Size	Overall Weighted Average Accuracy
5/8" x 3/4"	82.89%
1"	89.20%
1.5" Potable	98.41%
2" Potable	96.85%
1.5" Reclaim	98.17%
2" Reclaim	79.88%

## Inaccurate Large Water Meters

Account Number	Customer Name	Service Address	Size	Meter Mfg.	Meter Model	Meter S/N	Overall Weighted Average Accuracy	Accuracy Used in Benefit Calculations
05580	[REDACTED]	[REDACTED]	3	Sensus	Omni C2	81261131	95.90%	95.90%
05674	[REDACTED]	[REDACTED]	3	Sensus	Omni C2	79073440	92.50%	92.50%
04339	[REDACTED]	[REDACTED]	4	Sensus	Omni C2	79237336	32.80%	72.05%
04365	[REDACTED]	[REDACTED]	4	Sensus	Omni C2	79237326	97.23%	97.23%
05158	[REDACTED]	[REDACTED]	4	Sensus	Omni C2	79604767	97.53%	97.53%
05588	[REDACTED]	[REDACTED]	4	Sensus	Omni C2	79896053	95.57%	95.57%
05592	[REDACTED]	[REDACTED]	4	Sensus	Omni C2	79896050	96.77%	96.77%
05594	[REDACTED]	[REDACTED]	4	Sensus	Omni C2	70896951	96.90%	96.90%
05704	[REDACTED]	[REDACTED]	4	Sensus	Omni C2	79896047	95.13%	95.13%
05723	[REDACTED]	[REDACTED]	4	Sensus	Omni C2	79604778	97.47%	97.47%
05874	[REDACTED]	[REDACTED]	4	Sensus	Omni C2	79604771	96.23%	96.23%
09946	[REDACTED]	[REDACTED]	4	Sensus	Omni C2	79896055	97.43%	97.43%
11236	[REDACTED]	[REDACTED]	4	Sensus	Omni C2	79604773	97.93%	97.93%

# Project Financial Impact

Meter Size	Service Type	Yearly Amount
5/8" x 3/4"	Potable	\$934,885
3/4"	Potable	\$70,257
1"	Potable	\$120,121
1.5"	Potable	\$2,564
2"	Potable	\$16,550
5/8" x 3/4"	Reclaimed	\$1,083
3/4"	Reclaimed	\$497
1"	Reclaimed	\$1,772
1.5"	Reclaimed	\$2,550
2"	Reclaimed	\$54,286
Large Meters	Potable	\$23,028
	<b>Total</b>	<b>\$1,226,993</b>

O&M Benefit Source	Yearly Amount
Avoided meter reading labor cost	\$23,517
Avoided meter reading fleet cost	\$4,235
Avoided meter replacement material cost	\$171,143
Avoided meter replacement labor cost	\$17,565
Avoided meter re-reading cost	\$21,600
<b>Total</b>	<b>\$238,059</b>

**Total Annual Project Benefits = \$1,465,052**

# Scope of Work

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- Replace all 11,500 aging meters with ultrasonic smart meters
- Deploy and integrate an island-wide AMI network with the Tyler Technologies utility billing software
- Audit 4,871 service lines for Lead & Copper EPA compliance
- Provide full project management and a \$446,941 owner-initiated contingency (released only with written City approval to cover tariffs and unforeseen field repairs)
- Annual Measurement & Verification visits to ensure project guarantees are being met



# JCI Performance Guarantee

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## Guaranteed AMI System Performance

- The AMI system shall support a 98% successful reading rate for at least daily if not more frequent intervals.
- The 2% of reads not read daily must be read within 72 hours
- If system not performing as guaranteed, JCI and AMI provider will determine why, implement measures to meet or exceed the performance expectation at no addition cost to Marco Island.
- If additional equipment is needed to meet standard, it will be provided and installed at no additional cost to Marco Island



## Meter Accuracy

- JCI guarantees 99%-meter accuracy post retrofit on 2" & smaller meters.
- JCI guarantees 99%-meter accuracy post retrofit on the 13 3" & larger meters that benefit is being calculated on.
- If during testing meter loses accuracy prematurely or malfunction, meter will be replaced under warranty, but JCI would be responsible for missed revenues while meter accuracy was lost.



# Ready to Move Forward!



**Material & labor costs are locked in.** JCI will take the risk on all price increases if the project moves forward quickly.



**Meter data integration handled 100% by JCI** so there is zero impact on Marco Island staff, billings and revenues.



**Guaranteed maximum price.**  
No change orders.



**Our experienced team** guarantees a successful project & minimizes customer complaints.



**Annual M&V program to ensure financial performance** and provide on-going support for the AMI



Completion of lead and copper inventory requirements.



**Guaranteed performance** of the AMI system.



**Best cost-effective** solution.



**Ready to start** project now.

# Thank You