



Interoffice Memorandum

TO: WSSC BOARD OF COMMISSIONERS

THRU: CARLA A. REID, GENERAL MANAGER/CEO

FROM: DAMION R. LAMPLEY, P.E., DIRECTOR – UTILITY SERVICES

DATE: FEBRUARY 19, 2021

RE: MOTION TO POSTPONE AMI OPT-OUT

AMI Contract Closeout

At the November 18, 2020 Commission meeting, Commissioners passed a motion deferring the implementation of Advanced Metering Infrastructure (AMI) indefinitely and barring any further action or expenditure by WSSC Water on the project. As a result of this action, the project team has suspended all activities with AMI, including the project closeout. However, the IT Project Management Office (IT PMO) seeks to proceed with closeout activities for the AMI project based on the suggestion of the General Counsel's Office. These activities include the following:

- Re-engaging Arcadis (contract #1152) to support the project team with
 - RFP revisions and completion of the AMI solicitation
 - Completion of the "Statement of Work" for AMI/C2M integration services, detailing needed support to tie an AMI solution into WSSC Water's billing system
 - Review of Oracle license contract to assess the financial impact of delaying purchase of interval data licenses, which are needed for AMI data storage in C2M
- IT PMO Project Closeout documentation of AMI

Based on our interpretation of the passed motion, none of the bulleted items may be completed by Arcadis under contract #1152 and the contract should be terminated "for convenience" under the terms of the contract and Chapter 6.15.570(d) of the WSSC Code of Regulations.

We seek approval from the Commissioners to keep the Arcadis contract open for the consultant team to complete the items listed above, within two months of

authorization, ensuring we have a complete record of project requirements and final AMI Request for Proposal and integration solicitation documents. To date, we have spent \$1,505,826 of the \$8,667,982 contract award with a remaining balance of \$7,162,156. We estimate these efforts costing an additional \$25,000, for which we have an allowance under the AMI project as shown in the FY'22 CIP mid-cycle update.

Should we resume the AMI project in the future, we will advertise a new solicitation for a project management firm to assist us with deployment of an AMI solution. If we complete the items listed above now, then at the time of project re-engagement, we can restore the finalized solicitation documents for an AMI solution and integration support, regardless of which project management firm is selected. If we do not complete the Request for Proposal documents with Arcadis now, there is a risk that we would duplicate costs for RFP development, and we would be unable to recover \$1.5M work already conducted by Arcadis.

Meter Relocations

I would like to thank you, the Commissioners, for your ongoing support of our efforts to enhance our customers' experience and continue our "Journey to World Class" as outlined in our strategic roadmap. I also appreciate Vice Chair Bell's interest in the topic of meter relocations raised during the January 27th Commission Meeting and the implementation of policies that improve WSSC Water's efficiency.

Commissioners asked staff to provide options for relocating indoor meters without charging a fee to the customer. While preparing the AMI project RFP, WSSC Water received several quotes from contractors for meter relocation from inside to outside. The average of the quotes came in at \$3,000 per installation. This would result in a capital cost of over \$1 billion.

It is important to note that not all relocations would be straightforward. Design and Right-of-Entry or permit acquisition services will be required for many relocations where space for a meter pit is limited, service connection piping requires excavating in areas with other existing utilities, vehicle traffic is a safety concern, or private property must be protected. In addition, external paving and restoration contractors will need to be mobilized if driveways, roadways, or intricate landscaping are disturbed. These are complexities that will add to the cost in these circumstances.

Water Meter Replacement Program

Similar to infrastructure such as water mains, valves, and treatment facilities, water meters age over time and require regular replacement. In addition, the software and hardware used to process reads from water meters needs to be upgraded over time to conform with modern technology standards. As the water

metering system reaches the end of its useful life, water meters can become less accurate or even fail. These types of problems directly impact the customer's utility bill and WSSC Water's revenue by causing the bill to be based on an estimated usage or incorrect water usage data.

WSSC Water has a variety of meter locations and installation types across its network.

- WSSC Water currently has approximately 500,000 water meters in its existing population.
- 32% are located outdoors in meter pits or vaults, while 68% are located indoors.
- Of the 333,505 indoor meters, approximately 23,000 are indoors without a remote reading device. Because WSSC Water staff cannot easily access these meters, we rely on the customer to provide the meter read to produce a correct utility bill.
- The remaining 310,000 or so are read by a touchpad manually or using the drive-by meter reading system. Those that are providing reliable reads do not warrant relocation.

WSSC Water regularly analyzes and monitors the state of our water meter reading systems. A 2019 needs assessment revealed that an estimated 273,000+ water meters – 266,687 small residential and 6,563 large commercial – would be obsolete or past their useful life in five years (2024).

The current meter reading system for large meters, Advanced Meter Reading (AMR), is obsolete, and becoming more expensive and more difficult to maintain, further adding to the challenges in the meter-to-cash process.

Replacement/upgrade of the system, which supports approximately 9,800 large commercial meters and 7,400 residential meters, was deferred until the AMI implementation. With the indefinite postponement of AMI, WSSC Water will need to spend upwards of \$250,000 for a new AMR system in fiscal year 2021.

Additionally, when WSSC Water examined a meter replacement program and its requirements, we concluded that we do not have the resources in-house to support an aggressive program that would target the aging infrastructure in a timely manner. The replacement rate for a successful meter replacement program would be approximately 100,000 meters per year. It also requires personnel for scheduling appointments, software systems to track and maintain the appointments, along with manpower to complete the installations.

WSSC Water's Meter Services Division completes approximately 200,000 field activities per year across our 1,000 square miles service area. These activities range from meter repairs, meter replacements, meter interface unit repairs and replacements, and other miscellaneous work. Despite our best efforts, we have a backlog of activities of at least 11,000 that are not completed due to covid-19 protocols and restrictions.

The AMI project was intended to be the vehicle to implement WSSC Water's meter replacement strategy which was designed to provide the resources and technology to advance WSSC Water's meter reading capabilities. The project provided resources to schedule, track, and replace end-of-life meters. In fact, as part of our ongoing maintenance, our team replaces approximately 25,000 water meters per year.

To expand our annual meter replacement capacity and address all meters nearing the end of their useful life, we would need to procure additional personnel support, equipment, and increase the supply of AMI-compatible meters which will be ready when we eventually upgrade to an AMI network.

However, this approach imposes long term financial and operational risks. A resumption of the AMI project in the midst of a formal meter replacement program could result in different vendors for the meter body and register versus the selected AMI system. A mismatch of installed meter vendor and the selected AMI solution vendor would not allow us to take full advantage of the many alarms which maximize the benefits of the AMI system.

To allow us to take full advantage of the benefits of the selected AMI system, it is recommended that the procurement of an AMI solution and meters are standardized. This could result in WSSC Water having to replace a large number of meters or registers within a short period, once an AMI vendor is procured.

We would like to work closely with the Commissioners on a collaborative plan to expedite solutions for an impactful meter replacement and relocation program which includes the evaluation of options to reduce billing issues, accurately capture water consumption, address our meters that are past the end of their useful life, and be financially responsible with rate payer dollars with AMI implementation still on the horizon.