Department of Legislative Services

Maryland General Assembly
2019 Session

FISCAL AND POLICY NOTE
Preliminary

MC/PG 101-19 (Montgomery County Delegation and Prince George's County Delegation)

Washington Suburban Sanitary Commission - Moratorium and Study on Advanced Metering Infrastructure MC/PG 101-19

This proposed bill prohibits the Washington Suburban Sanitary Commission (WSSC) from implementing advanced metering infrastructure (AMI) for five years, from June 1, 2019, through May 31, 2024. WSSC may implement automatic meter reading technology during this period. The bill also requires the Department of Legislative Services (DLS) to conduct a study comparing the costs and benefits of implementing advanced metering infrastructure or automatic meter reading by public water utilities. The study must include a (1) summary of available reports on the topic and (2) a survey of the metering practices and recent investments of public water utilities in the Washington, D.C. region, Maryland and other comparable large public water utilities in the United States. DLS must report the findings of the study to the General Assembly by September 30, 2019. **The bill takes effect June 1, 2019, and terminates May 31, 2024.**

Fiscal Summary

State Effect: None. DLS can handle the bill's study requirements with available resources.

Local Effect: WSSC expenditures increase by an indeterminate amount due to the inability to realize operating cost savings from implementing AMI technology. In addition, WSSC will not be able to recoup the $8.7 million already paid to a vendor for program and project management. Revenues are not affected.

Small Business Effect: None.

Analysis

Bill Summary/Current Law: Under current law, the metering practices authorized by WSSC are not defined. The bill defines an AMI as smart technology that is composed of remote transmitters, two-way technology that is composed of remote transmitters, two-way communication between a utility customer's premises and a utility company through a wireless network, and data management. The bill defines "automatic meter reading" (AMR) as the automatic collection of data from a meter device and the transferring of that data to a central database.

Background: WSSC is among the largest water and wastewater utilities in the country, providing water and sewer services to 1.8 million residents in Montgomery and Prince George's counties. It has approximately 475,000 customer accounts, serves an area of around 1,000 square miles, and currently employs more than 1,500 people. The commission operates three reservoirs, two water filtration plants, and six wastewater treatment plants. The six wastewater treatment facilities, as well as the Blue Plains Advanced Wastewater Treatment Plant, handle more than 200 million gallons of wastewater per day. The commission maintains more than 5,700 miles of water main lines and over 5,500 miles of sewer main lines.

Implementation of AMI Technology

WSSC believes its current meter reading process is outdated. The current meter reading process is comprised of 37 meter readers (hand-held computers and laptops) and vehicles that serve more than 456,000 residential meters and 23,000 commercial meters which are fitted with AMR technology. Meter readings are collected daily and require WSSC personnel to retrieve data at each meter location.

The AMI project was first adopted and approved by both the Montgomery and Prince George's county councils in the fiscal 2013 budget after reviewing a study conducted by independent consultants R.W. Beck. The project has been delayed until fiscal 2019 due to the replacement of WSSC's customer service information system with customer-to-meter software. In July 2018, WSSC announced its approved fiscal 2020-2025 *Capital Improvement Program* budget, which includes $96.7 million earmarked for an AMI project. Based on its implementation schedule, WSSC intends to start installing meters and the AMI system in March 2020 through October 2023.

WSSC believes the transition to AMI would help (1) resolve some of the challenges that come with high employee turnover; (2) fix inaccurate readings, delays, and data entry errors by meter readers; (3) deal with issues of meter accessibility; (4) solve challenges that come with inclement weather; and (5) facilitate a transition from quarterly to monthly billing cycles. The goal of the AMI project is to maximize customer service and operational

efficiency. For customers, a transition to AMI would allow them to obtain instant information of their water usage via an online portal, allow customers to be billed monthly, and avoid unusually high water bills by identifying leaks early. AMI technology would allow WSSC to increase its revenues by replacing obsolete meters. WSSC would also be able to improve its data quality, such as forecasting and calculating water loss.

Difference between AMI and AMR

According to the Texas Water Resources Institute, 1 of 54 institutes within the National Institutes for Water Resources supported by the U.S. Geological Survey, AMR is a fixed system that improves customer service through more frequent readings and the ability to detect leaks and tampering. AMR allows utilities to collect additional data, such as GPS survey, time-of-day rate systems, and system modeling. This technology does not require extensive installation or significant maintenance but, because it is a fixed system, it requires employee visits. While AMR technology can take frequent reads, the collected data is not available until weeks after it is registered.

On the other hand, AMI is a complex system that requires a large physical network. In addition to performing the same data collection functions as AMR, AMI transmits data in real time and does not require an employee to collect the data. The data collected in AMI is more commonly transmitted over radio frequency, because of its reliability and cost-effectiveness. It is also possible to transmit data over nonradio technology, a less frequent practice. For example, data can be sent over power lines, a practice common with electric utilities. Data can be sent using cable television lines, an option available to utilities or municipalities that own their power lines. Data can be sent over cellular endpoints or also by satellite data transmission, an option favored in rural areas with low meter density. Finally, data can be transmitted over telephone landlines, a less common option.

Health and Privacy Concerns of AMI

Various concerns have been raised about the safety of the smart meters in the AMI system. Many individuals fear that these meters could lead to an increase in health or cancer risks, fires, and pose problems regarding privacy.

There is a growing concern over the impact of radio frequency from meters and the associated electromagnetic radiation on human health. According to the American Cancer Society, there is a possibility that smart meters could increase cancer risk. This is based on the finding of a study between cell phone use and a specific type of brain tumor. Nevertheless, there are no studies that have focused on the health risks surrounding smart meters in particular.

In addition, there are privacy concerns surrounding smart meters. Because smart meters constantly collect data and communicate with the utility, some fear that the use of AMI systems could lead to a loss of privacy. Among the customer privacy concerns are the fear of being under surveillance. For example, there is concern that data collected by the AMI system could be used to determine when the customer is at home based on fluctuations in their consumption data. There are also fears that this data could be hacked or transmitted to third parties.

In response to privacy and health concerns, some utilities offer opt-out programs that allow customers to decline participating in the AMI system. Some of the opt-out programs include allowing customers to keep their analog meters, providing a smart meter but not turning on the radio capability, providing a smart meter without the radio capability included at all, and providing a nonwireless smart meter that transmits information by phone line.

Local Fiscal Effect: WSSC has already paid $8.7 million to a vendor to provide AMI program and project management, oversight of the execution of the AMI project, and support of the customer billing system implementation. WSSC indicates that if the project is delayed until May 31, 2024, the commission would have to start the contracting process all over again. Furthermore, in anticipation of the shift to AMI, WSSC has been deferring the replacement of tens of thousands of AMR meters to avoid sunk costs into meters that would have been replaced under the scheduled transition to AMI. If the bill is enacted, WSSC would most likely incur these expenses. Furthermore, the loss of accuracy of meters results in a commensurate loss of revenue.

Absent the AMI project, WSSC customers will continue to be billed based on a quarterly cycle. As a result, the bills may be based on estimated usage, rather than actual meter reading. According to WSSC, even though the estimated bills are reconciled upon actual reading, there tends to be confusion and dissatisfaction among customers. WSSC advises that, by not transitioning to AMI, some customers will continue to pay up to three times their actual bill amount due to undetected leaks. In the long term, this could force WSSC to expand its customer affordability programs.

WSSC states that, if the bill is enacted, it will reprioritize the funds earmarked for AMI in the *Capital Improvement Program* budget to other capital projects.

Additional Comments: The Baltimore City Department of Public Works, which services Baltimore City and portions of Anne Arundel, Baltimore, Carroll, Harford, and Howard counties, began using AMI technology in October 2016.

Additional Information

Prior Introductions: None.

Cross File: Unavailable at this time.

Information Source(s): Washington Suburban Sanitary Commission; Texas Water Resources Institute; American Cancer Society; Department of Legislative Services

Fiscal Note History:
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