GreenvilleWater

MINUTES OF REGULAR MEETING
COMMISSIONERS OF PUBLIC WORKS
407 West Broad Street
Commission Room, Level Two
Greenville, South Carolina
July 11, 2017
8:15 a.m.

Commissioners of Public Works in attendance:
Chairman Phillip A. Kilgore, Vice-Chairman James W. Bannister, Debra M. Sofield and Mayor Knox H. White. Absent: J. David Sudduth. A quorum was present.

Greenville Water Staff in attendance:
Chief Executive Officer David H. Bereskin, Chief Financial Officer Phil Robey, Chief Operations Officer Rebecca West, Controller Jondia Berry, Director of Information Technology Joe Beineke, Human Resources Director Richard Posey, Water Resources Director Rick Pfleiderer, Business Process Analyst Jane Arrington, Manager of Field Operations Wayne Benson, Communications Manager Olivia Vassey, Billing Supervisor Jan Tinsley, CIP Engineer Mark Hattendorf, Customer Service Supervisor Kathy Reeder, Assistant Water Resources Director Jon Sherer, Facilities Maintenance Fleet Manager Allen White and Commission Attorney David Ward.

The Regular Meeting of the Commissioners of Public Works was called to order at 8:15 a.m. by Chairman Kilgore.

1. WELCOME

2. PUBLIC COMMENT

No comments were presented at this time.

3. CONSENT AGENDA

Chairman Kilgore listed the items of the Consent Agenda which were the meeting minutes of the Regular Commission Meeting June 6, 2017, the Water Resources Report, the Financial Update, New Development and New Annexation Covenants. There being no questions or comments regarding the consent agenda, the items were deemed approved.

4. SOLAR PANEL PROJECT FEASIBILITY

Chairman Kilgore welcomed CIP Engineer Mark Hattendorf to present on the feasibility of a solar panel project for Greenville Water's Central Campus. Mr. Hattendorf explained three sites were examined which included the Admin Building, the Operations Building and the Metal Storage Building behind the parking garage. Some of the items looked at were the power capacity of the existing facilities, the utility locations and the incentives available to Greenville Water. There were good and bad points for each facility when analyzing for site selection. The Admin Building has easy access to the electrical transformer and switchgear but unfortunately there was a space challenge, the roof is very steep and aesthetics of putting panels on the slate roof were a detractor. The Operations Building has easy access to the electrical transformer and there was room for the panels because of the low sloped roof. Also, there was the ability to face south. Again, the overall square footage of the building was going to create challenges to get the capacity needed. The Metal Storage Building behind the Admin Building has the space for the needed capacity, it is easy mounting for the panels and the roof has a low slope. However, there is more of a challenge to tie into the existing electrical infrastructure.

Mr. Hattendorf reviewed the power capacity of the buildings, incentives available for Greenville Water and costs should the solar panel project be determined to be feasible. The return on investment is estimated at ten years using conservative production values, with $31,000 in power savings in the first year.

The project does have its risks. There could be changes to the Net Metering Policy through legislation and the inverters which are an integral component to the installation only have a ten year warranty. These are minor risks, but they are risks nonetheless. Greenville Water Staff recommends proceeding with the budgeting of this project for the 2018 CIP. Greenville Water's view on green infrastructure and the ability of a 10 year payback encourages a long term investment.

Chief Executive Officer David Bereskin explained to the Commission this was an informative presentation to prepare for the budget cycle that will start in October. Chairman Kilgore asked Legislative Liaison Bob Knight if he knew of any activity going on with Legislative incentives. Mr. Knight shared about a recent article he read explaining utilities across the Country are cutting out all net metering, adding if net metering is available now the opportunity should be pursued.

Chairman Kilgore questioned if solar panels had been explored for the treatment plants. Mr. Bereskin responded it had been talked about but it had not been pursued to the point of pricing. This project is Greenville Water's first attempt at solar power.

5. CUSTOMER SERVICE KEY PERFORMANCE INDICATORS

Chairman Kilgore welcomed Customer Service Supervisor Kathy Reeder to present on Customer Service Key Performance Indicators. Chief Financial Officer Phil Robey launched the presentation by explaining in 2016 Mr. Bereskin had challenged Staff to be more active in the analysis of the statistics for the Customer Service Call Center. The objective was not only to find out how Greenville Water's Customer Service Representatives were doing but to know what the performance standards should be. Most importantly, what can Greenville Water do to make process and work flow advances to improve standards.

Before beginning, Ms. Reeder called attention to the fact that the 2017 data only included through the end of May. Ms. Reeder presented data for the Average Daily Customer Demand 2012 – 2017 for call, mail and e-mail volume; Annual Totals for Payment Options 2013 – 2017 and Average Daily Customer Contact 2012 – 2017. In addition to tracking daily customer interactions, Staff wanted to examine benchmarks to establish a measurement. American Water Works Association 2015 Benchmarks and Water Research Foundation Benchmarks were used to focus on certain areas such as average wait time, abandoned call ratio and the average talk time. These were the measurements that are important to Greenville Water. Ms. Reeder reviewed the Recommended Customer Service Standards put into place based on these benchmarks which were:

Abandoned call ratio	5% or less
Average calls per phone representative	Average calls per Phone Reps = 90 or less
Average talk time	2.5 minutes
Average wait time	1 minute or less
Response time	80% of calls answered within 30 seconds from the time they enter the queue

Greenville Water Customer Service Representatives greatly surpassed and almost doubled the Water Research Foundation benchmarks of 50 calls for average calls per phone representative each year in 2012 through 2017. The average talk time per Phone Rep for Greenville Water was well below the Water Research Foundation and AWWA's benchmark. Ms. Reeder emphasized this is due to employees having been trained to focus on the call, to deliver quality and move on to the next phone call.

In reviewing the analysis of 2016 and 2017 data, Ms. Reeder pointed out that out of 251 work days the abandoned call ratio of less than five percent was met 41 percent of the time and in 2017 out of 103 work days the goal was met 75 percent of the time. This increase was due to shifting of non-phone duties so phone representatives could just focus on taking phone calls and an upgrade to the phone system to include a loop back around to the IVR system. If a customer found out they were number six in line to be helped by a phone representative, they could opt out of waiting and loop back around to the IVR system to make a payment. Mr. Bereskin pointed out that in 2017 the average wait time has been under one minute 71 percent of the time.

Conclusions from the 2016 data were:

- Ability to meet standards begins to deteriorate when the average number of calls per phone rep exceeds 90 calls per day
- Average daily call volume was 1,019
- Average number of phone reps answering the phone was 10.2
- Average number of calls per phone rep was 99 calls per day

In addition to shifting duties and upgrading the phone system, staff thought about how to help improve performance. Processes were reviewed to determine what could be streamlined and what technology could be taken advantage of to make the service center more efficient. Some of the changes that were implemented were:

- Use of Interactive Voice Response (IVR) technology to make outbound courtesy calls for recurring credit card expiration and high consumption.
- GIS enhancements; Customer Service Representatives are able to access detailed information regarding field work.

Mr. Bereskin stressed that Greenville Water Customer Service Representatives are meeting very good performance measures. The department is staffed properly, answering about twice as many calls as what is expected in a water utility. All this information is being monitored to know if and when the need should arise for more staff.

6. RATE SURVEY ANALYSIS

Chairman Kilgore invited Mr. Robey to speak about the comparison of Greenville Water to the 2016 National Water Rate Survey Results. Mr. Robey explained that every two years Greenville Water's rate consultant, Raftelis Financial Consultants, Inc., and the American Water Works Association partner to do a national water and waste water rate study. About 264 water utilities participate in the survey. Mr. Robey reviewed the data as provided in the Commission Agenda package.

Greenville Water's recently completed Facilities Master Plan, which reported the Per Capita Consumption is on a downward trend is consistent with the rate survey and is in line with national and regional trends. This is related to more efficient fixtures and appliances, smaller households and more conservation consciousness among water customers in this day and time.

In the last ten years the national median residential monthly bills have been growing while Greenville Water's median residential monthly bills are staying fairly consistent and are considerably lower than the national trends. The median monthly bills by region over a 12 year period again shows Greenville Water rates are low particularly when compared to the southern region. The southern comparison is a good benchmark against which to compare.

Chairman Kilgore asked if there was any data to compare Greenville Water to sister utilities in South Carolina. Mr. Robey shared a State wide ratings comparison was included in the information provided in the ratings update with Fitch Ratings. Greenville Water was at the bottom in terms of rates relative to other comparable utilities in the State. The opportunity to retell the great rate story of Greenville Water comes around every two years through ratings updates with the ratings agencies. The Fitch Ratings update was in June, where a AAA rating was reaffirmed. The great Greenville Water story is a story of plentiful resources, great leadership and management, financial depth and affordability of rates. All these elements are mentioned when rating agencies talk about Greenville Water. The rate affordability information shared in the presentation is a critical element to maintaining a AAA rating.

Chairman Kilgore expressed interest in research that had been done where it has been determined that Greenville Water is one of only five water utilities in the country with a triple AAA rating. Staff was asked to find out where Greenville Water's rates ranked of these five.

7. 2016 WATER AUDIT RESULTS

Chairman Kilgore welcomed Business Process Analyst Jane Arrington to provide results from the 2016 Water Audit. Dr. Arrington explained she would be showing how the water audit results lead into the water loss control initiatives at Greenville Water.

Utilities traditionally have reported Unaccounted For Water, which Greenville Water's 2016 Facilities Master Plan Report shows hovering around 13 percent over the last couple of decades. However, the water industry is moving away from the term Unaccounted For Water and is replacing it with the term Non-Revenue Water. Unaccounted For Water is mathematically skewed, depending upon the amount of water supplied due to customer consumption. Dr. Arrington provided a graphical description of this effect. The American Water Works Association (AWWA) further breaks Non-Revenue Water down into Real Losses and Apparent Losses. Both AWWA and the Water Research Foundation (WRF) argue that all water can be accounted for, by either measurement or estimation.

Revenue water results from wholesale, residential, industrial and commercial customer consumption. Non-Revenue water can be categorized as: Unbilled Authorized Consumption, Apparent Losses and Real Losses. Unbilled Authorized Consumption includes Unbilled Metered Consumption and Unbilled Unmetered Consumption, for water quality and fire abatement. This consumption is all authorized and accounted for, but does not produce revenue. The two categories to be attacked are the Apparent Losses and the Real Losses. The biggest component of Apparent Losses is the fact that meters typically under-register. A good meter testing program is important to attacking Apparent Losses. Apparent Losses also include Unauthorized Consumption and gaps in policy that need to be shored up. Real Losses include leakage on mains, storage overflows and leakage on customer service connections.

Dr. Arrington led the Commission through the AWWA Water Audit Reporting Worksheet, explaining how the results are calculated and describing what goes into the water audit. Greenville's Water Real Losses are around 11 percent and the Non-Revenue Water is around 15 percent. Once everything is input into the water audit, it must then be validated. A value of performing a validated water audit is the ability to benchmark against other utilities. There are two major datasets in the water industry. The first is the AWWA Water Audit Data Initiative (WADI), which is a relatively small dataset with only 20 to 30 water utilities included in the benchmark. California, Hawaii and Georgia are the only three states required by state law to perform validated water audits. Third parties have to validate the water audits in these states. Georgia has launched a Qualified Water Loss Auditors (QWLA) program in which participants undergo substantial training and testing to become qualified to conduct validation services for utility water. Dr. Arrington stated she obtained QWLA certification in 2016. Training lasts two full days, digging into the water audit details and methodology. Water loss reporting is relatively new, beginning in just the last five or six years.

The desire to look carefully at the water audit data has prompted Greenville Water to establish a Water Loss Control Program. As the water loss audit spreadsheet is completed, performance indicators are also calculated. Now instead of a vague percentage, estimated losses are measured in terms of both actual volume and revenue. More important to Greenville Water is the ability to carefully assess operational efficiency, which is normalized for system size based on the number of connections. This performance indicator allows for better comparison with other utilities. Dr. Arrington reviewed data comparing Greenville Water values to the Water Research Foundation Project 4372b Summary Performance Indicators. Greenville Water excelled in all three financial areas of customer retail unit cost, variable production cost and percent of operating cost. In terms of Apparent Losses, Greenville Water's values were at the median, while both the Real Loss values and the Infrastructure Leakage Index (ILI) were lower than the median. . The Infrastructure Leakage Index is the ratio of Current Annual Real Losses (Real Losses) to the Unavoidable Annual Real Losses (UARL). The ILI is a highly effective performance indicator for comparing (benchmarking) the performance of utilities in operational management of Real Losses. Greenville Water is a large utility with 177,000 connections, resulting in higher real losses than in a smaller system. An ILI under 2 is considered exceptional and Greenville Water's index was below two in 2014, 2015 and 2016.

A Water Loss Control Team has been assembled and meets monthly, keeping an eye on seven key volumes to see how they are trending. The seven key volumes are: Volume from Own Sources, Water Imported, Water Exported, Billed Metered Consumption, Unbilled Metered Consumption and Unbilled Unmetered Consumption. The monthly meetings consist of reviewing the data and then discussing water loss control initiatives. Initiatives include verifying and validating free water accounts, calibrating auto-flushers, initiating a meter testing and replacement program, field verification of inactive accounts, data analysis of timely locates and repairs and strategic leak detection, the topic of the next presentation.

8. FIELD OPERATIONS LEAK DETECTION STRATEGY

Chairman Kilgore welcomed Manager of Field Operations Wayne Benson to review the history of leak detection at Greenville Water. In 2011 leak detection hardware was purchased to help improve efficiency of the Field Operations crews. Equipment purchased includes an Xmic, and two correlators. Crews place loggers on valves and at 2:00 AM the logger activates for ten minutes listening for leaks. If a leak is not detected, the logger turns off after the ten minutes and remains off. If a leak is detected, the logger turns back on at 3:00 AM to confirm what was

detected at 2:00 AM. If a leak is confirmed, the correlators will then be placed on two valves. The distance between the valves will be measured and entered along with the category of pipe and size pipe. The correlators will determine where the leak is by providing a distance from each of the two valves. The field crews will then go out to repair the leak. Mr. Benson provided a snap shot of the leak detection database he created showing where crews have been, what has been found, estimated leakage and how accurate the detection equipment has been.

At the inception of the leak detection program the plan was to follow the South Carolina Department of Transportation paving schedule. This was a good start, but not at all efficient or particularly fruitful. Mr. Benson consulted other utilities but to no avail, finally deciding to send the leak detection team behind the valve cleaning crews. This would mean the valves would already be found and cleaned out. This method proved to be much more fruitful and efficient. A map was provided demonstrating where the leak detection crew has been system wide and where confirmed leaks were found.

While going through the system, the leak detection crew moved ahead of the valve cleaning crews and did not really have a direction. Staff met to develop criteria for the leak detection crew. Five criteria were developed which are pressure, consequence of failure (major/minor roads), impact to service levels (size of main), break history and age. Geocortex software is then used to run a query from the leak detection criteria to produce the leak detection map with important areas to check shown in red. One downfall to the equipment is it is only good for 12-inch size mains and smaller. The accuracy is not great on larger mains. Mr. Benson shared future avenues include looking into advanced technologies for testing mains 16-inch and larger.

9. CHIEF EXECUTIVE REPORT

Mr. Bereskin reviewed important dates for events coming up including the Employee Appreciation Night at the Greenville Drive on July 28th, Conservation Voters Green Tie Event on September 20th and Habitat for Humanity's No Place Like Home – A Ruby Slipper Event on October 16th.

A letter from Greenville Water to South Carolina Department of Natural Resources (DNR) Hydrologist, Mr. Alex Pellett was distributed for Commissioner information. Mr. Bereskin explained DNR is moving forward with the State Water Planning. Greenville Water has been asked to comment on permits as well as provide more information on water allocations. Ground work is being laid to ensure permits will be available 70 to 100 years from now. The letter includes a Water Demand Projection Summary graph contained in a timeframe the State will be able to manage.

Mr. Bereskin called attention to recent news regarding the fact that the pension problem South Carolina is facing is not only a South Carolina issue and not only a Government problem. The problem exists in all types of industries and across the Country. South Carolina's pension was a big issue in the 2016-2017 legislature and a plan to resolve it is being devised. Mr. Bereskin and Government Liaison Bob Knight will be visiting Columbia to continue to pursue the health of the pension plan and to make sure the one percent the Legislators budgeted, will remain budgeted, because it is subject to be taken out of the budget process in 2017-2018. This is important because one percent increases are planned through 2019. Greenville Water wants to ensure its employees are taken care of in the future. Mr. Knight added he and Mr. Bereskin would be visiting one of the key members of the pension subcommittee and will report back.

A request to abandon and release a right-of-way on Rainey Road has been received and will be approved. This is a unique document, being a 1917 easement from the Enoree Plant. It was executed two months before Greenville Water existed.

Mr. Bereskin presented copies of the future water bill for Commissioners to review, adding Mr. Robey and his team worked very hard to come up with the design. It takes a lot of work behind the scenes between Greenville Water Staff and SourceLink. Commissioner Sofield asked Billing Supervisor Jan Tinsley if the new bill design would help the customer who calls to say I do not know what I am paying, why do I owe so much. Ms. Tinsley stated she believed it would because the charges are specified by the entity logo beside the charges. Cut-off information is also outlined very well in this design. Mr. Robey acknowledged Customer Service Representative Ericka Alzate for being on the team and providing the customer's perspective. Commissioner Sofield thanked the team for the work put into developing the new design.

10. COMMISSION COMMENTS

Commissioner Sofield thanked Staff for a job well done. Chairman Kilgore seconded, adding the reports were very good. Commissioner Bannister further added the presentations were well prepared.

11. ADJOURNMENT

There being no further business, the meeting was adjourned at 9:34 a.m.

Phillip A. Kilgore, Chairman

Kimberly J. Haulter, Executive Assistant