

MINUTES OF REGULAR MEETING
CLEVELAND UTILITIES BOARD
AUGUST 24, 2018

The Board of Public Utilities met at 12:30 p.m. at the Tom Wheeler Training Center.

Present were the following: Aubrey Ector, Chairman; Eddie Cartwright, Vice Chairman; Tom Rowland, Mayor; Joe Cate, Cleveland Utilities Board; Chari Buckner, Cleveland Utilities Board; David May, Jr., Cleveland City Council; Tim Henderson, President/CEO; Bart Borden, VP Electric Division; John Corum, VP Administrative Services; Amy Ensley, Utility Board Secretary; Craig Mullinax, VP Water & Wastewater; Jan Runyon, Assistant VP Administrative Services; Marshall Stinnett, VP/CFO; Walt Vineyard, Executive VP; Tad Bacon, Traffic Signal Coordinator; Nathan Casteel, Engineering Technician I; and Tim Siniard, *Cleveland Daily Banner*. Following the Pledge of Allegiance to the American Flag, Tad Bacon delivered the invocation.

MINUTES OF JULY 27, 2018

On motion by Mayor Tom Rowland and seconded by Vice Chairman Eddie Cartwright, the Board of Public Utilities voted to approve the July 27, 2018, minutes as written.

MANAGER'S UPDATE AND ANNOUNCEMENTS

Councilman David May, Jr.

President/CEO Tim Henderson introduced and welcomed Councilman David May, Jr., from District 4, who was in attendance. Councilman May will serve on the Utility Board as the City Council representative and fill Mayor Rowland's seat upon his retirement. His first official board meeting will be September 28. Councilman May has been involved in longstanding service to the City of Cleveland. He served as the Chief of the Cleveland Fire Department for 14 years.

Labor Day Holiday

Cleveland Utilities will be closed on Monday, September 3, 2018, in observance of Labor Day. The Call Center will be open and regular emergency/standby services will be maintained 24/7.

Report on Volleyball Tournament

One of the CU teams finished in first place at the River Counties Association of Realtors "Volley for a Cure" Volleyball Tournament on Thursday, August 16, 2018. Both CU teams faced each other in the first match by a random draw, and it was single elimination. CU has won four of the previous five tournaments. All proceeds benefit the American Cancer Society.

Annual Picnic

Board members were invited to attend Cleveland Utilities' annual family picnic scheduled for Thursday, October 4, 2018, at Fletcher Park beginning at 5 p.m. This is the sixth year at this venue, and everyone seems to have a great time.

Comment from Mayor Rowland

Cleveland 101 recently held a panel discussion for parents of new students at Lee University. Customer Relations Supervisor Jamie Creekmore represented CU at the event and did a great job.

DIVISION REPORTS

Financial

Marshall Stinnett reported on the following:

1. A chart tracking the kilowatt-hour cost in residential retail electric rates for the months of September 2014 through September 2018 was reviewed. For the month of September, the residential retail electric rate will change to 9.879 cents per kilowatt-hour, a decrease of 2.34 percent over August's rate of 10.116 cents per kilowatt-hour. This rate change is driven by TVA's Fuel Cost Adjustment. As a continued trend, Cleveland Utilities will pass the TVA fuel cost rate adjustment to its consumers.
2. The June and July 2018 financial and statistical statements were presented to the Utility Board. During June, the cost of purchased power as a percentage of retail sales was 80.7 percent. The results for June 2018 are electric sales revenue of \$9,035,720, which was offset by a purchased power expense of \$7,287,419. This resulted in an operating margin of \$1,748,301. Operating expenses for the month were \$1,607,462. These revenue numbers were driven by a customer base of 31,726. The net income for June 2018 was \$307,910. Results for FY 2018 are electric sales revenue of \$99,384,785, which was offset by a purchased power expense of \$79,078,347. This resulted in an operating margin of \$20,306,438. Operating expenses for FY 2018 totaled \$18,488,432. This brings the division to a combined net income of \$3,761,584 for FY 2018 and can be compared to the budgeted amount of \$2,405,068.
3. During July 2018, the cost of purchased power as a percentage of retail sales was 74.5 percent. The results for the month were electric sales revenue of \$10,205,448, which was offset by a purchased power expense of \$7,605,162. This resulted in an operating margin of \$2,600,286. Operating expenses for the month were \$1,735,394 and can be compared to a budgeted operating expense of \$1,593,280. The division serviced 31,845 customers during July. Net income for the month was \$1,038,640.
4. For June 2018, water sales revenue was \$1,297,341. The division serviced 31,889 customers. Operating expenses for June totaled \$824,287. The division recorded an operating income of \$606,185. The results for FY 2018 are water sales revenue of \$14,387,101. Operating expenses for FY 2018 were \$14,402,526. The resulting operating income for FY 2018 totaled \$1,404,109 and can be compared to the budgeted amount of \$1,229,238.
5. For July 2018, water sales revenue was \$1,283,572. The division serviced 32,082 customers. Operating expenses for July were \$1,231,288. The division recorded an operating income of \$196,517, which can be compared to a budgeted operating income of \$234,995 for the month.
6. For June 2018, wastewater treatment revenue was \$1,051,791. The division serviced 19,056 customers. Operating expenses for the month were \$763,054 and can be compared to a budgeted amount of \$966,718. An operating income of \$438,465 was recorded. The results for FY 2018 are wastewater treatment revenue of \$12,308,185. Operating expenses for FY 2018 were \$11,135,002. The resulting operating income for FY 2018 totaled \$2,224,417.
7. For July 2018, wastewater treatment revenue was \$1,027,147. The division serviced 19,167 customers. Operating expenses for the month were \$960,729. An operating income of \$169,293 was recorded, compared to budgeted operating income of \$145,346.
8. The external auditors have been onsite for the past two weeks. A letter was submitted to the Board by the CPA accounting firm of Arnett, Kirksey, Kimsey, Sullivan, Lay & Hall, PLLC, notifying they are in the audit process. Their field work was completed this week, and the final audit report is anticipated to be available at the October board meeting.

Electric Division

Bart Borden reported on the following:

1. The steel poles for the Spring Branch Industrial Park Innovation Drive Distribution Lines Project were delivered on site. All pole locations are being staked and construction should begin very soon.
2. In reference to the East Cleveland 69 kV Bus Breaker Addition Project, the 69 kV bus breaker has been received and personnel are working with the consultant to complete the control drawings.
3. The North Ocoee Street LED Street Lighting Conversion Project still remains on hold awaiting TDOT approval for the lighting design.
4. All necessary changes to the electric service at Lake Forest Middle School have been completed which include removal of the primary metering, downsizing of the 3-phase pad-mount transformer to the buildings that were demolished; and those remaining. The project was quite involved and required a lot of coordination with CU's engineering and operations personnel and the electrical contractor. Borden expressed appreciation to all who worked on the project to make it a success.
5. Engineering released a work order to replace the wildlife guards nearing their end of life at Mars Chocolate Substation on Peerless Road. The guards help protect from unwanted outages from wildlife contact such as squirrels, raccoons, snakes, etc. Staff has been very pleased with the performance of the equipment. Outages due to wildlife were experienced at this particular substation prior to the original installation in 2004; however, there have not been any since.
6. Engineering released a work order to install the underground electric facility installation for Phase 2 of Stone Creek Subdivision on New Murraytown Road consisting of 18 lots toward the front of the development. A total of 560 feet of underground primary, 782 feet of underground secondary and one, 75 kVA pad-mount transformer will be installed. An existing 75 kVA transformer installed in Phase I construction will serve the additional lots as well. The work order has been approved and released, but the developer has not begun the conduit installation. It is anticipated the conduit will be installed by the end of this month.
7. The Operations Department requested bids for the removal of the three power transformers at CU's East Cleveland delivery substation. A bid tabulation sheet for the sale of the units was reviewed. Four bids were received with Solomon Corporation being the high bidder at \$123,378, next was Asset Management Solutions at \$72,770, then TCI of Alabama at \$63,900 and TRC America at \$49,910.25. Solomon was awarded the project and has already made payment. They will remove the transformers prior to the arrival of the new units.
8. An update was presented for the Distribution Automation Project. A diagram was reviewed representing two substation circuits with three overhead switches that work together to auto-heal the system when a fault occurs. Several photographs of the equipment were provided. The SCADA communications equipment allows constant control, status and telemetry monitoring of the substation equipment. CU's new Schweitzer Engineering Laboratories Distribution Automation Control equipment operates in series with the SCADA system to isolate faults on the system and restore power to sections unaffected by the fault. The system monitors loads and verifies the ability of the system to self-heal, keeping the lights on for more customers. CU has installed three overhead line switches. Additionally, the

communications protocol files are having to be remapped in all the substations so they are the same. This process is very involved and takes time.

9. A performance review meeting was held with personnel from engineering, operations and the call center. After numerous summer storms were experienced and with the opening of the new call center, staff reviewed procedures, calls handling with the outage management system, additional training needed, personnel assignments, areas where improvements could be made, as well as successes. There were no major problematic issues, only ones that would improve the level of service to customers. The meeting was extremely productive and very informative.
10. An informative PowerPoint presentation was given on system reliability and infrared/camera inspections conducted with the new DJI Matrice 210 Drone. This particular drone has two cameras: a thermal infrared camera and a regular photo-type camera. Temperature differentials of the equipment can be measured with the photographs taken. Images captured during the inspection were shown. Several problems were identified including a lightning arrester with cracks in the top of the casing from getting too hot that would have failed, a cracked insulator which likely would have locked the breaker out eventually, a hot connector on a transformer, as well as 32 rotten pole tops (9 poles will require total replacement). A total of 7.2 miles of lines and 257 poles were inspected by CU's licensed drone pilots, Nathan Casteel and Jeff Luther. They covered 38,000 linear feet in an estimated four hours or eight total man hours, and it took roughly one hour to examine the photographs. A cost analysis was conducted, and this same work would take a lineman 86 hours for a total of 172 man hours for two linemen. The cost savings on this inspection alone was almost \$24,000. Borden expressed appreciation to Casteel and Luther for this work.
11. An update was presented on traffic lighting:
 - Traffic Signal Coordinator Tad Bacon prepared an estimate to retrofit the existing pedestrian signals at Dalton Pike and McGrady Drive with the Accessible Pedestrian Signals (APS) style. These signals vibrate and have audio commands. Currently, TDOT requires this type on new installs and the Manual for Uniform Traffic Control Devices (MUTCD) will likely require them for new installs in the upcoming addition. The estimate of \$48,678 includes all material, labor, overheads and equipment. The request to retrofit this intersection was made by members of the local chapter of the National Federation of the Blind. The city informed Bacon they will pursue funding through a grant process.
 - Bacon shared challenges faced in his role, as well as improvements that have been made and plans moving forward. Signal timing and programming are the core of his basic job responsibilities; however, there are a lot of other tasks and duties required to operate a safe and reliable network of 88 traffic signals. At each location, there are traffic cabinets housing multiple components requiring programming and firmware updates that have to be completed on a routine basis to keep the system functioning.

Other responsibilities include updating the GIS maps, maintaining multiple logs (both on and offsite) that store critical information, updating written specifications for cabinets and proprietary products, ensuring clearance intervals meet the ITE formula at all intersections (after 20 years of remaining the same, this formula was recently

updated and will impact a few of CU's larger intersections; therefore, those will be revisited).

CU does have some communications in place for the traffic system. Around 50 percent of the traffic controllers are on the Ethernet network and they communicate back to a central system. This technology allows the capability to remotely perform updates and receive alarms. Naturally, some of the updates require actual site visits. CU also has eight cameras in place that can be utilized from the office.

A couple of variables impacting travel time outside of CU's control are roadway capacity and interrupted flow from access points along roadway networks. CU works with local and state officials to get those necessary improvements and regulations, in conjunction with the correct signal timing, to ensure a safe and reliable network. Mayor Rowland expressed appreciation to Bacon. He said, "We have come a long way since you have taken over the traffic signalization. I appreciate it so much. You have done a great job."

In response to a question from Chairman Ector concerning hacking, Borden advised CU's network is on an island and not connected outside the traffic network, so it is more secure. Vineyard informed there are several protective measures in place to prevent access. Vice Chairman Eddie Cartwright asked who the responsible party is for the crosswalk at Lee University, as there have been issues at this location. Councilman May advised Public Works and stated he would inform Tommy Myers. Additionally, board member Buckner advised it appears more pedestrians are walking and asked if there have been additional requests for pedestrian access to certain intersections. Bacon advised there does seem to be a trend with more pedestrians walking these days. He thinks the greenway has attributed to this and there could be more requests for the APS technology moving forward. It is a very new technology and expensive.

Water Division

Craig Mullinax reported on the following:

1. The Headworks Rehabilitation Project at the Wastewater Treatment Plant (WWTP) is 99 percent complete. Photographs of the major project components and screening process were viewed. The contract amount is \$1,023,550.
2. Construction for the new maintenance building at the WWTP has began. TriCon has completed three percent of the project.
3. The Flocculation/Sedimentation Basin Improvements Project at the Cleveland Filter Plant (CFP) is underway and approximately 10 percent complete. Starting Monday at 6 a.m., plans are to start bypassing the raw water to the head of the treatment process. The CFP will shut down for approximately four hours. Hiwassee Utilities Commission (HUC) will provide any additional water needed during this time. The bypassing process will take about four weeks. Pictures were shown to give a better understanding of what the project will entail.
4. The Raw Water Pump Station Project at the CFP is ongoing. The electrical improvements and valving are 95 percent complete, and the building improvements are around 50 percent complete.

5. The upgrade of the carbon feeder equipment at the CFP is complete at a total contract amount of \$59,300.
6. Updated pictures showing progress of the Georgetown Road Water Storage Tank, Booster Pump Station and Water Main Extension Project were viewed. The construction of the water tank, water mains and pump station are all around 95 percent complete. The 500,000 gallon tank is 50 feet high and 41 feet in diameter. Once the station is energized, the tank will be filled with water, bacteriological tested and then placed in service.
7. Angel Construction is expected to start the Bough Springs Trail & Banther Road Water Main Extension Project next week. The project will consist of 3,392 feet of 6-inch water main and three fire hydrants.
8. Hampton Backhoe completed the Savannah and Spring Street Water Main Replacement Project at a total contract amount of \$201,550. The extra cost of \$7,820 was due to rock excavation.
9. Hampton Backhoe completed the Parker Street Water Main Replacement Project between 8th Street and Central Avenue this week. Mullinax commended Hampton Backhoe for their outstanding work.
10. Two letters were reviewed from the State Revolving Fund (SRF) regarding the 2010 Annexation Sewer Project on APD 40. On July 11, 2018, an approval letter was received notifying CU the request of \$1,350,000 was approved. The first loan is \$1,000,000 with \$100,000 in loan forgiveness, and the second loan is for \$350,000. Both loans will have an interest rate of 1.56 percent for 20 years. On July 19, 2018, an approval letter was received notifying the plans have been approved and construction can begin. A bid date of September 20, 2018, has been set.
11. Hampton Backhoe has completed 90 percent of the sewer main installation and 50 percent of both water main installations for Stone Creek, Phase 2, on New Murraytown Road. The project comprises 858 feet of 8-inch sewer main, 690 feet of 6-inch water main and 177 feet of 2-inch water main. Dennis Epperson is the developer.
12. An update was provided for the ongoing Wastewater Rehabilitation Project:
 - Westco is performing clearing along sewer main easements. They have been clearing for a month and have completed approximately 25,000 feet or 4.7 miles (68 percent) of a total of 36,750 feet or 7 miles of easement area.
 - In reference to Phase 1 of the Basin 10A-8 Rehabilitation & Basin 64-14A SSES Project, manhole inspections are 95 percent complete. Some have been paved over and those are on hold until they can be raised. Smoke testing was delayed this summer due to wet conditions. S&ME is assisting with the 10A-8 Rehab Project as necessary.
 - Phase I of the Basin 10A-8 Rehabilitation Project is underway. Portland Utilities has continued pre-televising sewer mains and have been performing point repairs. Lining was performed on Parker Street as part of road realignment. Insituform is scheduled to begin lining on August 27.
13. The Meter Department set 35 meters through July 2018 compared to 32 for July 2017 and 44 for July 2016. Of the 35 meter sets, 28 were single-family homes, 6 were commercial and 1 was irrigation.
14. As of August 21, 2018, a total of 5.34 inches of rainfall has been recorded at the CFP for this month. Even with the higher amount of rainfall in comparison to the last two years, water demand is still strong for this time of year.

NEW BUSINESS

Resolution to Issue Debt

On motion by Mayor Tom Rowland and seconded by Joe Cate, the Board of Public Utilities voted unanimously approving and recommending resolutions for the issuance by the City of Cleveland of \$2,500,000 in General Obligation Bonds/Loans for improvements and extensions of the Electric System (primarily for the expenditure for the East Cleveland Substation power transformers); and \$3,500,000 in General Obligation Bonds/Loans for the purpose of improving and extending the Water System (Cherokee Gateway Water Storage Tank, flocculation and sedimentation basin improvements and other capital improvements). Both resolutions will be submitted to the City Council for approval. CU is requesting the issuance of 20-year, fixed rate notes.

Resolution to Honor Mayor Tom Rowland's Retirement

On motion by Vice Chairman Eddie Cartwright and seconded by Chari Buckner, the Utility Board voted unanimously to adopt a resolution recognizing and honoring Mayor Rowland's retirement, signifying 27 years of faithful service to Cleveland Utilities. A plaque of the resolution was read aloud by President CEO Henderson and presented to Mayor Rowland as a small token of the Board's great admiration and respect. Everyone congratulated Mayor Rowland on this momentous occasion. Mayor Rowland said, "What makes CU is the workers on the front line that make everything happen. They are all professionals, which I have always appreciated, as well as the great leadership."

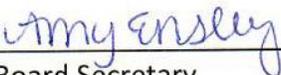
OTHER BUSINESS

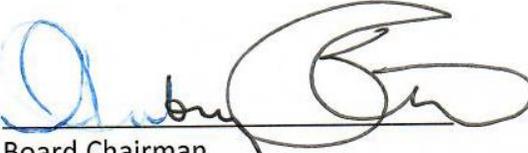
Future Board Meeting Dates

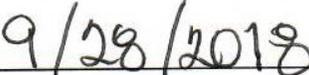
Future, regularly scheduled board meeting dates at the Tom Wheeler Training Center are as follows:

Friday, September 28, 2018, 12:30 p.m.

Friday, October 26, 2018, 12:30 p.m.


Board Secretary


Board Chairman


Date