



Fiscal Year 2018-2019

Annual Report

for the



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Executive Summary

On behalf of Constellation NewEnergy, Inc. (CNE), operator of the Metro Nashville District Energy System (DES), I am pleased to present the sixteenth “*Annual Report*” to the Metropolitan Government of Nashville and Davidson County, Tennessee (Metro).

The DES is made up of two basic parts, the Energy Generation Facility (EGF) and the Energy Distribution System (EDS). This report summarizes activities related to the performance of the DES for the period July 1, 2018 through June 30, 2019.

CNE has been operating and managing the Nashville District Energy System for over fifteen years. A two-year contract extension was negotiated and executed when the initial contract term expired on December 17, 2018.

CNE’s work force continues to operate and maintain the DES in a manner that produces outstanding results. Both steam and chilled water availability and reliability were greater than 99% and all contractual guarantees were met. CNE’s environmental record remains intact with zero excursions, violations or fines. All data, records, reporting requirements and submittals are kept up to date and in order. CNE employees continue to volunteer, participate in community service projects, fund-raising activities and the DES customers are reported to be happy with the services they are being provided.

Sincerely,

A handwritten signature in blue ink that reads "Tim Hestle". The signature is written in a cursive, flowing style.

Tim Hestle
Plant/General Manager



Monthly Operations Report Summary

Constellation NewEnergy, Inc. (CNE) submits a written report to the Metro Nashville District Energy System (DES) team on or about the 10th day of each month to convey the operational activities of the prior month. These reports are broken up in to four major sections. The first item included in each report is the Summary. This section gives an overview of the entire report, addresses news, events, and other business activities. The next section is Operations, which includes plant reliability and efficiency data, environmental, health & safety, accidents, personnel, and employee training. The third section of the report lists and discusses all Maintenance activities in and around the Energy Generation Facility (EGF). Items covered in this section include the building and grounds, warranty issues, preventive and predictive maintenance and construction projects. The final section of these reports is about the Energy Distribution System (EDS). Items discussed in this section are customers, sales and marketing, system maintenance and repairs, and distribution system projects.

Operations Summary

The EGF continued to furnish reliable steam and chilled water service to the DES customers over the past twelve months. There was one chilled water outage, one steam outage and one cold plant outage.

- A seven-hour chilled water outage took place February 18, 2019 to replace the isolation valves on #5 Chiller.
- A cold plant outage took place April 5, 2019 to allow NES to make repairs to their equipment in the EGF switch gear yard prior to isolating their Central feed for the NFL draft.
- On June 28, 2019, a seven-hour steam outage was required to replace the feed water bypass valve on #1 boiler.

Some DES customers requested service interruptions so they could make repairs in their respective buildings and some sections of the EDS were isolated to make steam and chilled water repairs. Apart from these, there have been no significant service interruptions.

The plant is fully staffed with an outstanding work force. There were two reportable and zero lost time accidents for the year. Training classes were conducted in conjunction with the monthly Safety Meetings. Employees also received training related to plant systems, equipment and corporate programs and requirements. For the sixteenth consecutive year, there were no environmental excursions or violations.

Maintenance activities were performed as scheduled in the EGF and in the EDS. A great deal of planning and coordination go into the project work both in the plant and in the distribution system.

Communications with the DES customers are performed on a routine basis. Any issues they might have are dealt with courteously and expeditiously. According to the annual customer survey, they are satisfied with the services we are providing.



News, Events & Other Business

Routine business activities such as the Monthly Operations Meeting and Natural Gas Purchasing conference calls were conducted as scheduled each month. Other news and events include the following:

- A quarterly review was held with the plant's chemical vendor July 13, 2018
- Metro Fire Department conducted fire safety training July 24, 2018
- Exelon insurance carrier conducted a Boiler and Machinery site evaluation July 24, 2018
- An insurance property appraisal was conducted July 27, 2018
- A draft copy of FY18 Annual Report issued to Metro July 31, 2018
- Met with Trane regarding a new control system August 9, 2018
- MNDES Advisory Board met in EGF conference room August 16, 2018. A presentation was made by FVB during this meeting.
- Reviewed Annual Report with TEG August 27, 2018
- A special meeting of the MNDES Advisory Board was held in EGF conference room September 18, 2018. Metro notified the board of their plans to move forward with an RFP to sell the DES and/or operate the DES.
- Employees participated in a Habitat for Humanity project in Gallatin, TN October 3, 2018
- Plant GM attended Tennessee Chamber of Commerce meeting October 15, 2018
- Employees, family members and friends participated in the Nashville Walk to End Alzheimer's October 25, 2018
- Plant GM attended Tennessee Titans Suite Holders meeting October 29, 2018
- Employees participated in the Making Strides Against Breast Cancer walk November 3, 2018
- A meeting was held with Metro and Rolling Mill Hill developers regarding the possibility of reopening Crockett Street through the EGF parking lot.
- CNE employees enjoyed their annual Thanksgiving potluck lunch November 16, 2018
- The plant's 15-year anniversary occurred December 17, 2018. Metro gave Constellation a 2-year contract extension.
- Employees celebrated at their annual Christmas Lunch held December 21, 2018.
- Several meetings were held to discuss the possibility of reopening Crockett Street.
- EDS and EGF tours were conducted for Metro RFP respondents January 8, 2019
- Employees enjoyed a BBQ Lunch provided by Trane January 11, 2019
- A quarterly review was held with the plant's chemical vendor January 18, 2019
- Submitted required Environmental reports and documents to the proper authorities throughout the month of January.
- Natural Gas meeting with International F. C. Stone, Metro and CNE February 11, 2019



- CNE's Plant/General Manager attended the annual Tennessee Chamber of Commerce meeting February 19, 2019
- MNDES Advisory Board met in EGF Conference Room February 21, 2019
- CNE's Management Team met with Nashville employees March 13, 2019
- Metro issued a letter of intent to Engie to sell the MNDES on March 22, 2019
- Stored propane was sold back to vendor March 25, 2019
- NES conducted a power outage April 5, 2019 which took the plant down for approximately four hours. CNE coordinated the timing of the outage with NES & the MNDES customers to lessen its impact.
- Engie Representatives were onsite, at the EGF, April 10th – 12th performing due diligence activities. CNE & TEG personnel assisted Engie in this effort.
- CNE's Plant GM and OPS Manager attended the Tennessee 811 annual meeting on April 24, 2019.
- CNE has protested Metro's letter of intent to sell Engie the MNDES. CNE had a hearing with Metro's Purchasing Agent April 24, 2019.
- CNE's Office Coordinator attended a meeting with the Sumner County Habitat for Humanity organization to investigate potential volunteer activities.
- CNE Managers attended a fund raiser for "Live Love Nashville". This organization aids under privileged children in the Nashville area.
- CNE Managers also attended a fund raiser for "Jovenes en Camino", an Orphans Home in Honduras.
- State Building Facility Managers toured the EGF May 1, 2019.
- CNE continued to provide Engie with due diligence information during the month of May.
- A quarterly water treatment review was held with the plant's chemical vendor May 3, 2019.
- NES re-energized the central electrical feed to the EGF May 8, 2019. This was shut down for the NFL draft.
- CNE managers attended the Association of Energy Engineers annual meeting May 10, 2019.
- The MNDES Advisory Board met in the EGF Conference Room May 16, 2019.
- The 27th Annual CNE/NDE Golf Tournament was held May 18, 2019.
- The annual MNDES Customer meeting was held in the Downtown Partnership Meeting Room May 23, 2019.
- Metro's purchasing agent issued a determination letter May 23, 2019 regarding CNE's protest of RFQ 1044673.
- CNE filed a Notice of Appeal to the Procurement Appeals Board on May 30, 2019 regarding RFQ 1044673.
- CNE Managers attended National Boiler Service Annual Meeting on June 7, 2019

Community Service Activities

Constellation employees continue to participate in community service and fund-raising activities. The following are examples of service activities:

- Employees participated in a Habitat for Humanity project in Gallatin, TN October 3, 2018. CNE employees painted the porches and shutters on this Habitat for Humanity house. They also moved appliances. The organization plans to sell this house to raise money to purchase more property.



Participants included (l to r): Eddie Wisdom, Daniel Steger, Steven Wheeler, Angela West, Tim Hestle and Andy Street.

- On Saturday October 27, 2018, CNE employees and family members participated in the “2017 Walk to End Alzheimer's - Nashville Walk”. This 2.5 mile walk around Rolling Mill Hill began and ended at the Music City Hall of Fame Park across the street from the Country Music Hall of Fame. This group walked in the rain on one of the first cool mornings of the month. I am proud to report the group exceeded their fund-raising goal.



Participants included (l to r): Elecia Adcock, Ray Adcock, Jan Watt, Tim Hestle, Katherine Bowman, Steve Bowman and Gayle Bowman.

- On Saturday, November 3, 2018, CNE employees and family members met at the Energy Generation Facility to participate in the 4.5 mile “2018 Making Strides Against Breast Cancer Nashville Walk”. It began and ended at Nissan Stadium after circling downtown. With our walk to and from the stadium, we logged an extra mile.



Participants included: (kneeling) Angela West & Elecia Adcock (standing) Anna Moeller, Kara Moeller, Lynn Moeller, Doug Moeller, Ray Adcock, Gayle Bowman and Steve Bowman



Constellation/Nashville District Energy Invitational Golf Tournament

The 26th Annual Constellation/Nashville District Energy Invitational Golf Tournament was held at Twelve Stones Golf Course in Goodlettsville, Tennessee on May 18, 2019. This was the 16th consecutive year the event was organized and put on by Constellation NewEnergy, Inc. Players included NDES customers, contractors, vendors, employees, family and friends. The winning team shot a 13 under par round of 59. Their nearest competitor shot 63. Ed Ezell won the “Closest-to-the-Pin” contest and Chad Pace was awarded the prize for the “Longest Drive” contest. First place team members and the individual contest winners each received a trophy and a cash prize.



First Place Team: Ron Richards, Andrew Orel, Zack Rushing and Ricky Gibbs



Ed Ezell



Chad Pace

Constellation sponsored a Hole-in-One contest on all the par 3 holes and provided lunch for participants. This year’s event was another tremendous success, and everyone is already looking forward to the next one.

Plant Performance

Facility Operations

Plant Reliability

The EGF continued to provide reliable service to the DES customers. With the exception of uncontrollable circumstances, the guarantees are to maintain 150 psig of export steam pressure leaving the EGF and deliver 43.3-degree F chilled water to each customer. The following items describe minor incidents, short in duration, when the EGF experienced an excursion outside parameters of the performance guarantees.

- On July 11, 2018, NES had an electrical power glitch on their 161kV line which caused the chillers, condenser water and chilled water pumps to trip offline. All equipment was immediately restarted. The chilled water supply temperature reached 47.2°F before returning to normal approximately 50 minutes later.
- On July 20, 2018, Trane requested #3 Chiller be started to check for proper operation. The chiller did not load up properly and the send out temperature gradually rose to 45°F before an additional chiller was started. Trane found a problem with the purge unit and made the repair. The chilled water supply temperature returned to normal in approximately 90 minutes.
- On September 18, 2018, at approximately 5:00 p.m., #4 Boiler tripped off line due to flame failure. The boiler was immediately restarted, but system pressure was below 150 psi for 30 minutes with a low pressure of 138 psi.
- On September 19, 2018, at approximately 8:40 p.m., #4 Boiler tripped off line again due to flame failure. This time another boiler was placed in service. System pressure and was below 150 psi for 30 minutes with a low pressure of 129 psi. The cause of the failure is still under investigation.
- On September 28, 2018, at approximately 12:10 p.m., the pressure dropped to 139 psi while putting another boiler online due to an increase in load demand. The steam system was below 150 psi for approximately 45 minutes.
- On December 23, 2018, #3 Boiler tripped off line. #2 Boiler was immediately started. The steam pressure was below 150 psi for approximately 60 minutes reaching a low of 120 psi.
- On December 24, 2018, #3 Boiler tripped again. This was due to a flame scanner malfunction. Another Boiler was started, but steam pressure went below 150 psi for approximately 90 minutes reaching a low of 64 psi. Repairs were made to the existing flame scanner and a new flame scanner was ordered.
- On January 15, 2019, the chilled water temperature was above the 43.3 °F guarantee for 34 minutes. On January 22, 2019, the chilled water temperature was above the guarantee for 60 minutes. Both of these excursions were the result of swapping chillers to perform annual maintenance. The highest temperature reading during these times was 44.2°F.
- On January 21, 2019, the steam pressure dropped below 150 psi for approximately 105 minutes due to an issue with the damper controller on #4 Boiler that would not allow the firing rate to exceed 55%. This has been corrected.



- On February 18, 2019, the chilled water temperature was above the 43.3 °F for approximately 7 hours due to the scheduled chilled water outage to replace valves in the Plant. The outage was scheduled for 12 hours but was completed early due to the diligence of CNE employees and contractors.
- On March 9, 2019, a lightning strike caused Switch Gear 1A to trip off line. The plant was immediately re-started. Steam pressure was below 150 psi for approximately 60 minutes, reaching a low of 102 psi. The chilled water temperature was above 43.3 °F for approximately 16 minutes, which is not a reportable incident. SWG 1A had to go through an extensive rebuild.
- On April 5, 2019, the plant was shutdown to allow NES to perform maintenance on the air switches on their side of the electrical switchyard. The chilled water temperature was above 43.3°F for approximately 5 hours and the steam was below 150 psi for approximately 7 hours.
- On May 7, 2019, while restoring chilled water service to the Renaissance Hotel after they had made repairs inside their building, the valves were opened too quickly. As the building refilled, the system chilled water temperature went above 43.3°F for approximately 40 minutes. The highest temperature recorded was 46.3°F.
- On June 28, 2019, CNE Maintenance personnel replaced a feedwater bypass valve at the Plant which required the steam system to be shutdown. The steam pressure was below 150 psi for approximately 7 hours.

Constellation is required to report upsets that last longer than thirty minutes. The following table includes every minute the plant was outside the contractual service delivery parameters, whether reportable or not, and not necessarily down. Reliability does not include scheduled outages allowed per the Amended and Restated Management Agreement (ARMA).

	Downtime		Availability	Reliability
	Scheduled	Unscheduled		
Boilers	840 minutes	420 minutes	99.84%	99.92%
Chillers	720 minutes	290 minutes	99.86%	99.94%

Plant Efficiency

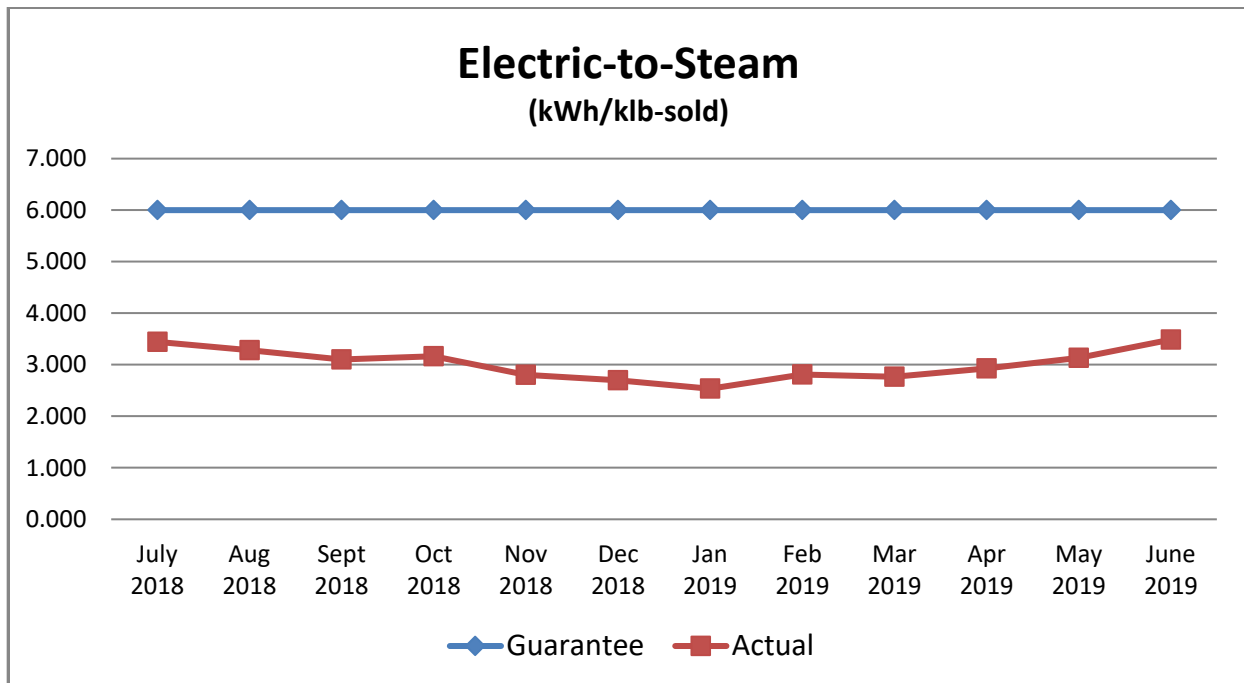
As usual, following the annual boiler inspections at the end of July 2018, two boilers were placed in wet lay-up, one in stand-by, and one de-aerator tank was isolated due to the reduced steam demand during the summer months. One boiler and one de-aerator were left on line. This equipment is rotated monthly. This is done to increase steam efficiency during the cooling season. Stand-by boilers were taken out of wet lay-up and the second DA Tank was put back in service during the month of November 2018 in preparation for the heating season.

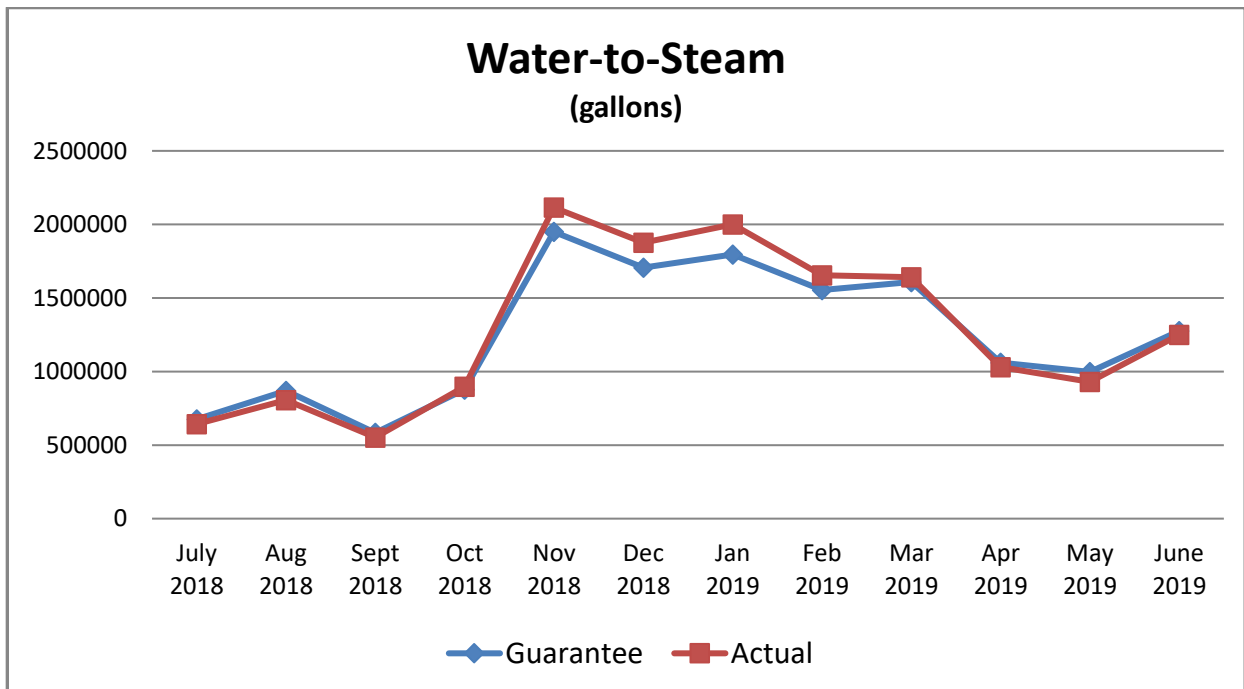
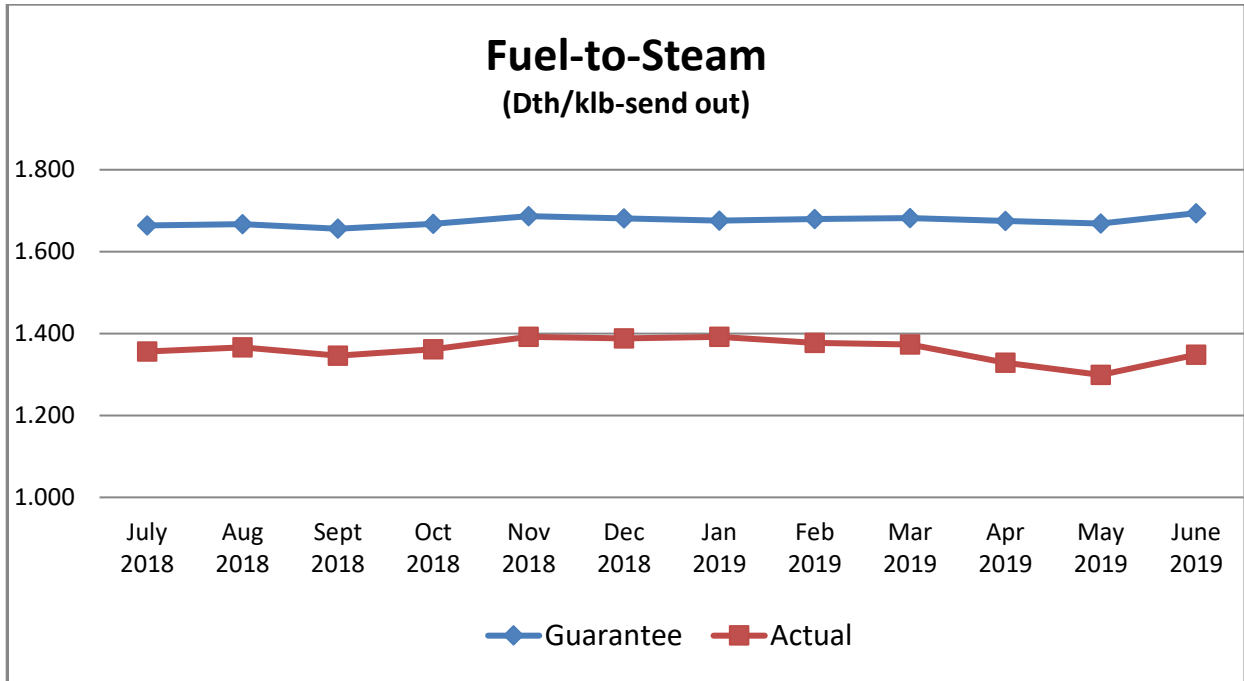
Constellation and Metro agreed upon the final version of the Metro DES annual reconciliation for FY19 on November 19, 2019. The annual reconciliation for this time period consisted of a true-up for the FEA, Engineering, Insurance and Metro Incremental Administrative costs. For reference, the annual reconciliation is included in Appendix 4 of this report.

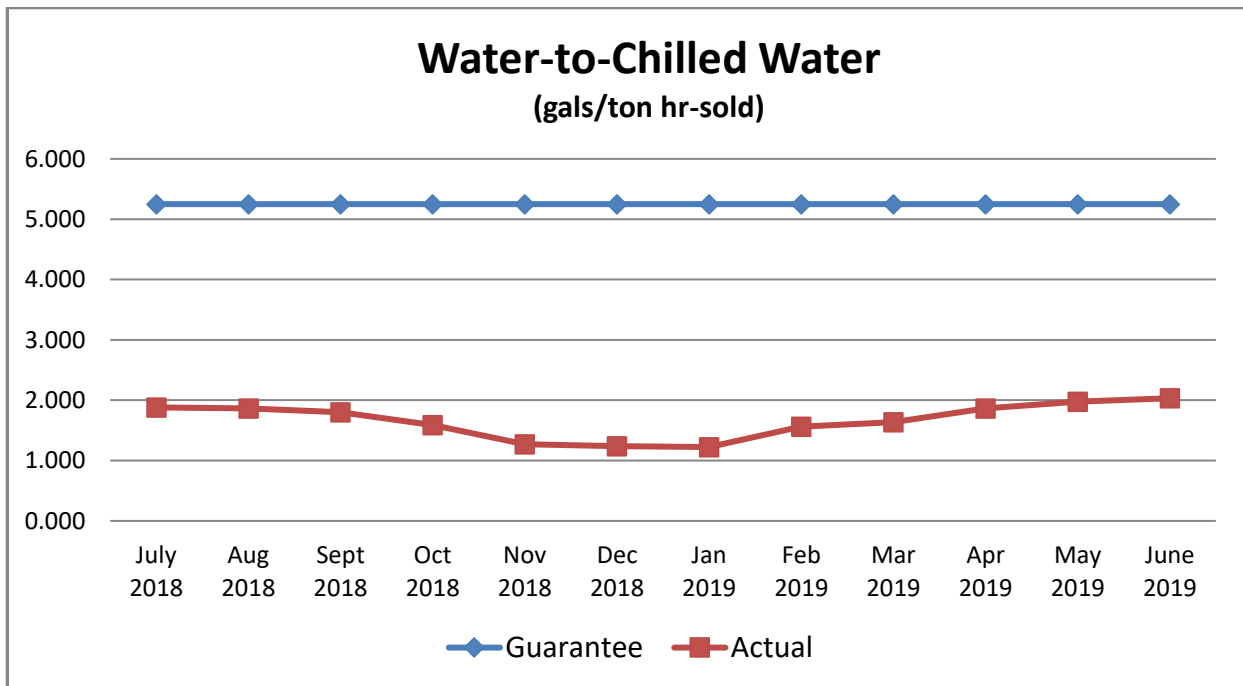
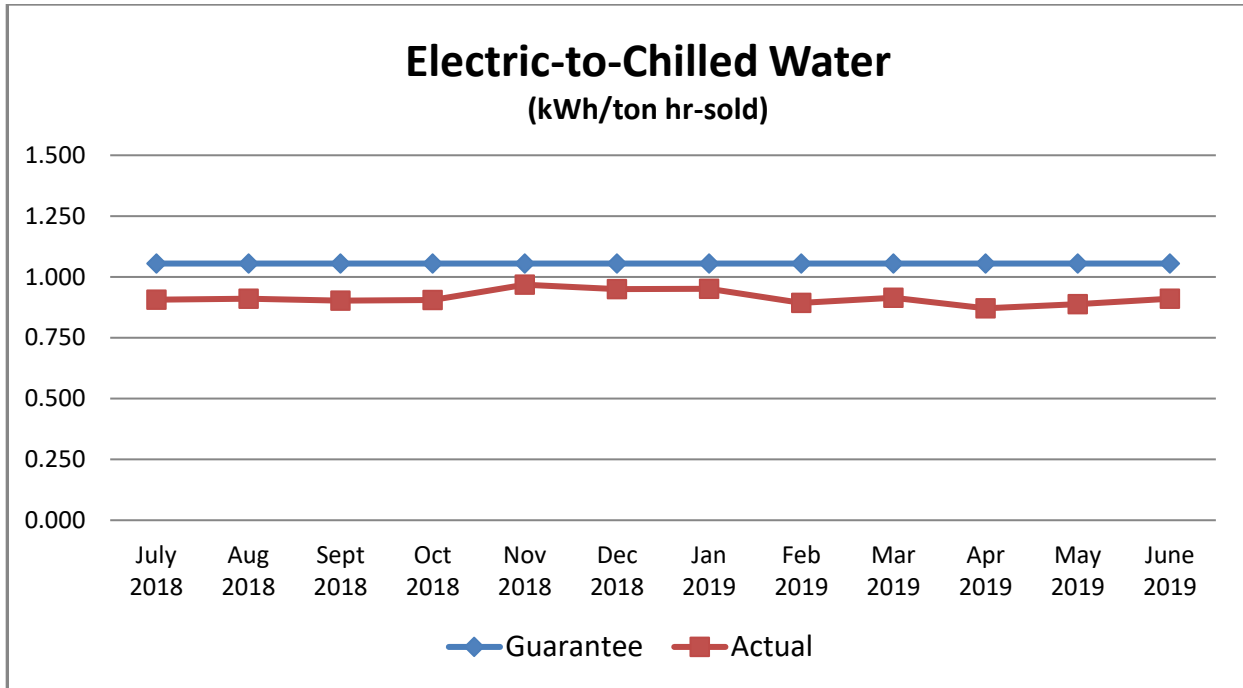
Constellation Energy’s efficiency guarantees consist of five key conversion rates:

1. Electric-to-Steam (kWh per klb-sold)
2. Fuel-to-Steam (Dekatherm per klb-send-out)
3. Water-to-Steam (gallons)
4. Electric-to-Chilled Water (kWh per ton hr-sold)
5. Water-to-Chilled Water (gallon per ton hr-sold)

The following graphs represent the efficiency guarantee results from July 2018 through June 2019:









Environmental, Health and Safety

Environmental

There have been no environmental violations since the plant began commercial operations in December 2003.

Storm water samples were collected, inspections conducted, and a report was generated quarterly. A Storm Water Pollution Prevention Plan (SWPPP) and a Spill Prevention Controls and Countermeasures (SPCC) refresher training class was also conducted.

The Metro Health Department conducted Radon testing in the EGF 4/23/19 – 4/25/19. All test results were within acceptable limits.

Regulatory Compliance

Required reporting activities were submitted as follows:

- The Semi-Annual Emissions Monitoring Report for January-June 2018 was sent to the Metro Nashville Health Department on July 18, 2018.
- The Semi-Annual Monitoring Report for July-December 2018 was sent to the Metro Health Department on January 10, 2019.
- The Title V Certificate of Compliance for 2018 was sent to the EPA on January 10, 2019. A copy was also sent to the Metro Health Department the same day.
- The Annual Emission Inventory Report for 2018 was sent to the Metro Health Department on January 31, 2019. The Annual Emission Fees were also sent in on that date.
- The Tier II report was sent to the State Emergency Planning Committee, Davidson County LEPC and the Nashville Fire Department on January 22, 2019.
- The Annual Greenhouse Gas Report was sent to the U.S. EPA on February 15, 2019.
- The Metro Health Department conducted the Annual Site Inspection and Record Review on April 4, 2019 and found no issues.
- The Metro Health Department renewed the Operating Permit for 5 years on May 31, 2019.

Health

Due to the increasing cost of health insurance and Constellation's commitment to their employee's wellbeing, several programs are offered throughout the year. Many Nashville employees have taken advantage of the Healthy Habits Program, Healthy Eating Program and two Walking Challenge Programs.



Safety

CNE plant personnel continue to conduct themselves in a safe manner. There were two reportable accidents in the past year. An employee slipped on a ladder while exiting the EDS tunnel and injured his shoulder. Another employee injured his hand while repairing this same ladder.

Monthly safety meetings were coordinated and scheduled by the CNE site Safety Officer. Training classes are conducted in conjunction with each safety meeting. Safety and accident reports are issued and posted each month.

The refrigerant alarm and gas monitors are checked weekly. Preventative maintenance and calibrations are performed monthly on the portable gas monitors used in the EDS. Fire extinguishers are also checked monthly.

Per OSHA, the NEC and NFPA 70E 1910 Subpart S, our arc flash Personal Protective Equipment was sent out for inspection and recertification as required.

Accident Report

	Total	OSHA	Lost Time	Total
	Accidents	Reportable	Accidents	Lost Days
July 2018	0	0	0	0
August	1	1	0	0
September	0	0	0	0
October	0	0	0	0
November	0	0	0	0
December	1	1	0	0
January 2019	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	0	0	0	0
May	0	0	0	0
June	0	0	0	0
Total	2	2	0	0



System Assessment and Status

Personnel

The plant is fully staffed with an exceptional work force. CNE prides itself on keeping employees engaged which results in a very low turnover rate. The consequences of having an aging workforce have been several employees missing work to deal with medical issues this year. While this has not impacted Metro, it has resulted in a substantial amount of overtime for CNE.

Training

To maintain and operate the facility safely, reliably and efficiently a significant amount of employee training is required. The following demonstrates some of the training that was conducted throughout the year:

- Managers participated in Exelon Innovation Training in July 2018.
- Employees received computer Phishing Awareness Training in July 2018.
- Employees completed Exelon D&I Awareness Training in August 2018.
- Employees received corporate “Respectful Workplace” training February 12-13, 2019.
- Employees completed corporate FERC Training & Phishing Awareness Training in May 2019.

Training classes conducted in conjunction with our monthly safety meetings included:

- Fire Safety (Annual Fire Extinguisher refresher conducted by the Metro Fire Department)
- Accident Investigation, Reporting & Record Keeping
- Tool & Equipment Safety
- Compressed Gas Cylinder Safety & Hot Work
- Confined Space Entry
- Storm Water Pollution Prevention Plan & Spill Prevention, Controls & Countermeasures
- Bloodborne Pathogens, Heat Stress & Cold Stress
- Steam Safety & Refrigerant Safety (conducted by the Constellation’s Plant Safety Officer)
- Lock out/Tag out
- Safe Work Practices
- Elevated Work & Vehicle Safety
- Personal Protective Equipment
- Chemical Safety & Hazard Communications



Customer Service

CNE personnel routinely communicate with the customers each month through e-mails, phone calls or visits. When customers have heating or cooling issues inside their buildings, we assist them with trouble-shooting and attempt to resolve their problems. When a service interruption is required, whether it is project related or an emergency, activities are coordinated closely with the customers to keep the impact to a minimum.

The annual MNDES customer meeting took place May 23, 2019 in the Downtown Partnership conference room. MNDES Contract Administrator personnel made a power point presentation regarding the state of the EDS, upcoming projects, fuel costs, water treatment and several other issues.

DES customers are routinely invited to participate in the Constellation/Nashville District Energy Annual Golf Tournament, attend Tennessee Titans football games, or meet for breakfast or lunch. These relationships help further a positive image of the DES in the community and promote existing building owners to assist us in our sales efforts.

CNE's Customer Service Representative reviews each customers meter readings monthly. For those who do not meet their contractual chilled water return temperature requirements, a Thermal-Inefficiency-Fuel-Surcharge (TIFS) penalty is assessed. TIFS are added directly to customer invoices.

When a customer habitually exceeds their contractual demand capacity, the meter data is sent to the MNDES Contract Administrator for review and evaluation. The reason for the excursion is investigated and suggestions are made to keep it from reoccurring. If a capacity adjustment is deemed appropriate, a letter is sent to the customer with an explanation of the adjustment and its duration.



Energy Generation Facility and Equipment Maintenance

During normal operation, preventative, predictive and routine maintenance items must be scheduled and completed. During the summer months the lawn is mowed weekly and landscaping is routinely manicured. This includes trimming trees and shrubs, putting mulch in the beds, maintaining the irrigation system and removing dead plants. The building and grounds are policed daily and the lighting is maintained year-round. The carpeting is shampooed in the office areas and the tile floors are stripped, waxed and sealed annually.

EGF Preventive and Predictive Maintenance

The following items were accomplished to increase equipment life, reliability, efficiency and safety:

CNE personnel perform daily equipment inspections, check bearing temperatures, oil levels, belt tensions, etc. In addition, preventative maintenance is performed on the following equipment monthly: HVAC units, cooling towers cell, condenser water pumps, chilled water pumps, boiler feed water pumps, condensate pumps, motors, instrument air compressors and driers. The roof surface is inspected and cleaned. The propane system is also test fired and leak checked monthly.

Annual pressure vessel inspections are scheduled to be completed during the cooling season. The inspections are conducted by F. M. Global. They are State Certified Boiler Inspectors, working as a subcontractor to our insurance carrier. These inspections are required in order to renew our operating permits. Boiler inspections consist of a visual examination of the mud drum, steam drum, economizer, tubes and fire box. #2 and #4 boilers and #1 de-aerator tank were inspected in July 2018. #1 and #3 boilers and #2 de-aerator tank were most recently inspected in June 2019. All units received a passing grade and their respective permits have been renewed. #2 and #4 boilers and #1 de-aerator are scheduled to be re-inspected in July 2019.

Inspections were witnessed by our chemical vendor's representative and plant personnel. When units are off line for inspection, preventative maintenance is performed on the forced draft fans, low water cut out switches and other associated equipment.

Annual chiller inspections are scheduled and executed during the heating season as a good maintenance practice. These inspections include opening the condensers and cleaning the tubes, performing vibration analysis and taking oil sample analysis on each chiller. Eddy current testing was conducted on the evaporator and condenser on #1, #5 and #9 Chillers. Controls and purge units were also checked for proper operation.

As part of the Preventive and Predictive maintenance program CNE had a contractor take alignment and vibration readings on all pumps, fans and motors. These readings are compared to the previous year's readings. Misalignment Issues discovered with #4 Boiler Feed Water Pump and #2 Condenser water pump were addressed. All other equipment readings were within acceptable limits.

Infrared testing was conducted on all electrical switchgears and starters. No problems were found during this testing.



The high-voltage switch gear preventive maintenance was scheduled and executed during the fall on the following equipment: transformers, vacuum breakers, relays, load break switches, infrared inspections and oil sample analysis.

Annual maintenance costs for these activities: \$126,507.82 (excludes salaried personnel & corporate overhead).

Information Technology System Program

The Information Technology System Program is reviewed with Metro annually. The last review was conducted on August 27, 2018. A copy of the program is included in Exhibit 2 of this report. A few minor changes have been made during the past 12 months.

Repairs and Replacements

From time to time emergency repairs and replacements must be made. The following are examples of the routine maintenance and emergency repairs that have been performed in the EGF:

July 2018

- Mow/weed eat/herbicide property/trimmed shrubs (weekly from March -November)
- Repaired lawn irrigation system
- Checked & repaired plant computers
- Replaced plant server
- Repaired plant lighting
- Began replacement of softener controls
- Installed gantry and hoist on mezzanine
- Replaced Control Room door lock
- Repaired water column leak on #2 Boiler
- Replaced thermometers on #1 Boiler
- Repaired low water cut out - #1 and #3 Boilers
- Repaired DA Tank vent lines
- Repaired Boiler Feed Water Valves
- Replaced HVAC unit in Control Room
- Replaced ceiling tiles in Control Room
- Repaired refrigerant alarm
- Installed new cooling tower blow down meter and valve
- Repaired propane pump switch
- Repaired leak in Vaporizer
- Checked equipment after NES power glitch
- Assisted contractor repair tube leak in #1 Boiler

August 2018

- Replaced softener controls
- Fabricated cooling tower make-up line spool piece
- Repaired softener sample line
- Repaired low water cut out on #1 Boiler
- Repaired low water cut out on #3 Boiler
- Trane reprogrammed Dyna-view on #8 Chiller
- Repaired 1B & 9A Chiller starters
- Checked PRV's at DA
- Installed motorized ball valve to blow down instrument air compressor
- #2 CWP motor bearing replacement
- Replaced #4 Boiler Walchem probe
- Replaced actuator on cooling tower blow down valve
- Cleared nozzles on #1 and #9 cooling towers
- Repaired float switch on #18 cooling tower
- Assisted Roto-Rooter clear floor drains
- Checked & adjusted packing on all pumps
- Repaired cooling tower M/U line leak
- Replaced wheels on hand truck
- Disconnect switches on transformers during daily blasts (DES-148)
- Assisted geologist remove seismograph equipment (DES-148)

September 2018

- Checked softener flow meter
- Trane checked 6A Chiller (Thrust bearing needs to be replaced)
- Removed refrigerant from 6A Chiller
- Repaired control air piping
- Checked #1 chilled water pump and VFD
- Checked #4 Boiler continuous blow down valve
- Checked cooling tower level transmitter
- John Bouchard and Son's replaced pressure switch on fire sprinkler system
- Checked & adjusted packing on all pumps

October 2018

- Replaced #4 Boiler safety switch & checked wiring
- Trane replaced thrust bearing in 6A Chiller
- Check flow meter on #6 chiller
- Adjusted regeneration frequency on softeners
- Sent #2 CWP motor out for repair

- Repaired #14 Cooling Tower fan shroud
- Repaired #4 chiller inlet valve
- Checked cooling tower level transmitter
- Checked & adjusted packing on all pumps
- Repaired Camera 3
- Replaced battery in MBC 4
- Replaced gauge on #3 BFWP
- Trane replaced temp. sensor on #9 Chiller
- Trane replaced purge sensor on #8 Chiller
- Sealed transformer cabinets
- Repaired door knob on mezzanine level
- Replaced battery in AED
- Repaired breakroom sink
- Siemens worked on boiler communications with Insite

November 2018

- Repaired gas valve on #3 Boiler
- Checked & adjusted packing on all pumps
- Checked Softener control valves
- Repaired #1 Softener limit switch
- Repaired #2 CWP motor
- Repaired #1 DA low level alarm
- Repaired #4 Boiler Walchem B/D Valve
- Repaired #2 Boiler Walchem B/D Valve
- Repaired starter and vibration switch on #7 cooling tower
- Checked fan on #18 cooling tower
- Cleaned flow meter on #2 Softener
- Replaced toilet flush valves in Men's Room
- Repaired service air compressor
- Adjusted belts on #5, 10 & 18 cooling tower fans
- CE Power performed main SWG auto transfer investigation

December 2018

- Adjusted #4 Boiler O₂
- Installed chain operators on DA Tank isolation valves
- Checked & adjusted packing on all pumps
- Repaired service air compressor
- Repaired MBC 6
- Repaired #3 Boiler flame scanner

- Repaired Genie Lift
- Replaced #4 Boiler Walchem
- Repaired #14 cooling tower inlet valve
- Replaced solenoid on #9 Chiller
- Checked plant water meters
- Winterized Boiler Room

January 2019

- Repaired & insulated cooling tower equalizing line
- Installed rebuilt motor on #2 CWP
- Checked & adjusted packing on all pumps
- Replaced leaking section of cooling tower makeup line
- Repaired MBC-449 Chemical Tank
- Replaced #3 Boiler flame scanner
- Repaired faucet on lab sink
- Repaired Genie Lift
- Adjusted belt on #4 Cooling Tower
- Replaced gauges on BFWPs
- Repaired #3 Boiler feed water valve
- Repaired starter on #3 BFWP motor
- Replaced sensor in burner O₂ analyzer
- Checked/replaced Softener controls
- Repaired chilled water makeup meter
- Assist MWS repair leak on plant water meter
- Replaced empty compressed gas cylinders
- Repaired low water cut out switch on #1 Boiler
- Repaired oil pump on #7 Chiller
- Replaced purge sensor on #4B Chiller

February 2019

- Replaced damaged ceiling tiles in hallway
- Repaired actuator on #17 cooling tower
- Checked & adjusted packing on all pumps
- Cleaned evaporator flow tube on #2 chiller
- Repaired regulator on #6 chiller
- Repaired refrigerator in break room
- Repaired drain on #18 Cooling Tower
- Painted chiller condenser covers

- Replaced gauge on #5 CWP
- Replaced gauges on #3 BFWP
- Repaired #17 cooling tower isolation valve
- Repaired starter on #3 BFWP motor
- Replaced isolation valves on #5 Chiller (scheduled outage)
- Checked Softener controls
- Assist MWS replace plant water meter scanner
- Moved furniture/striped & waxed tile/shampooed carpets

March 2019

- Repaired manlift
- Painted chillers
- Checked & adjusted packing on all pumps
- Repaired #2 Softener controls
- Repaired actuator on #5 chiller
- Repaired starter on #13 cooling tower
- Adjusted belts on #12 cooling tower
- Checked plant water meters
- Repaired valve on #9 chiller evaporator
- Replaced fan shaft & bearings on #5 Cooling tower
- Repaired #3 boiler blow down meter
- Forklift Systems repaired boom lift
- Repaired SWG 1A
- Repaired refrigerant alarm
- Re-certify test equipment
- Had test gauge re-certified

April 2019

- Repaired cooling tower drain lines
- Replaced flash tank site glass
- Checked & adjusted packing on all pumps
- Replaced temperature gauge on Forklift
- Check issue security camera #10
- Remove curtains in Boiler Room
- Repaired #1 Softener controls
- Repair #2 CWP Motor
- Repaired #3 VFD
- Checked firing rate on #3 Boiler
- Checked condensate leak between DA Tanks

- Checked for instrument air leaks
- Replaced fan shaft & bearings on #5 Cooling tower
- Replaced fan shaft & bearings on #18 Cooling tower
- Repaired #6 Chiller
- Repaired Condensate Return Tank controls
- Replaced air regulators on #2 & #3 Boilers
- NES Power Outage
- Researched Plant efficiency for TEG
- Assisted with Engie due diligence requests

May 2019

- Trimmed shrubs
- Repaired communications with #5 chiller
- Repaired #5 CWP packing gland
- Repaired cooling tower B/D strainer
- Repaired #3 Softener controls
- #2 CWP Motor returned from shop
- Repaired burner fuel valve on #2 boiler
- Installed booster pump on condensing water sample line
- Checked DA PRV controls
- Assisted with Engie due diligence requests
- Repaired switch on fire sprinkler system

June 2019

- Repaired Flash Tank Sight Glass
- Repaired cooling tower level controller
- Repaired #1 Softener controls
- Repaired EGF fire suppression air compressor
- #10 Security Camera replacement in progress
- Check city water meters
- Investigated #5 CWP trip
- Replaced spool piece on #2 DA vent line
- Replaced #4 Chiller Dynaview Controller
- Picked up Service truck generator from shop
- Replaced #1 Boiler Feed Water Bypass valve (outage)
- Roof leaks repaired

Annual maintenance costs for these activities: \$360,870.95 (excludes salaried personnel & corporate overhead).



EGF Emergency Repair Projects

EMR18-001 Propane Vaporizer Emergency Leak Repair

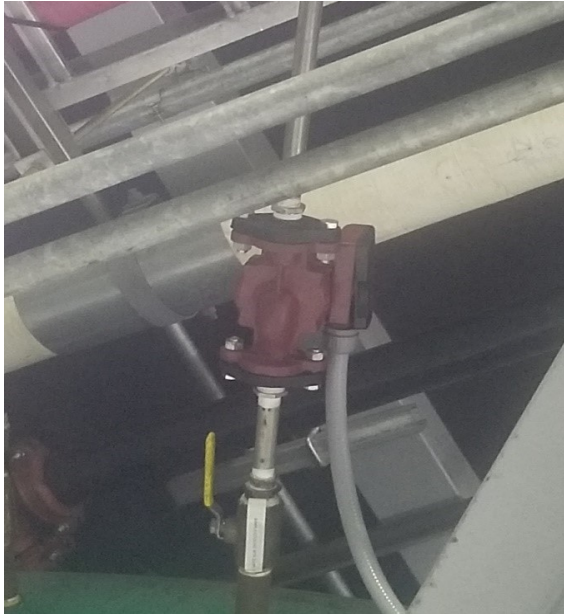
Glycol was discovered leaking around the burner. Goodwin's Boiler & Piping Maintenance Service, LLC was engaged to locate and repair the vaporizer July 2, 2108. The floor was replaced in the rear firebox. The boiler inspector inspected and approved the repair May 19, 2018. The casing, insulation and siding were replaced. The vaporizer was placed back in service.

EMR18-002 Emergency Tube Leak Repair in #1 Boiler

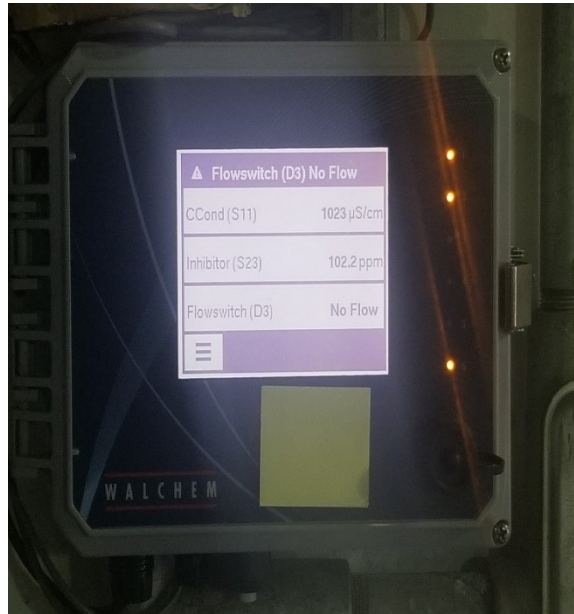
A tube leak was discovered by an operator while making his rounds July 10, 2018. Goodwin's Boiler & Piping Maintenance Service, LLC was engaged to locate and repair the leak July 11, 2108. One tube was repaired in the lower northeast corner and a second tube adjacent to the repaired tube was plugged. Repairs were completed July 19, 2018. The boiler inspector inspected and approved the repair July 23, 2018. Refractory, insulation and sheet metal was replaced and the boiler was placed back in service.

Modifications and Improvements

The following are improvements that were performed in and around the Energy Generation Facility and in the Energy Distribution System:



Cooling Tower Sample Line Pump



Cooling Tower Chemical Controller



1 Deaerator Chainwheel



#2 Deaerator Chainwheel



Control Room HVAC unit



5th & Broadway Chilled Water Supply Connection



5th & Broadway Chilled Water Return Connection



Energy Distribution System

Preventive and Predictive Maintenance

All the direct buried portions of the EDS are checked monthly by means of thermographic imaging. When a hot spot is detected, it indicates a possible piping leak. Depending on the severity of the thermal temperature variance from the surrounding area, a determination is made whether to dig up the affected area.

Constellation Energy maintenance personnel perform monthly inspections of EDS tunnels, as well as, the State steam tunnel and the A. A. Birch (AAB) building tunnel. Monthly manhole inspections are also conducted. The condition of the structures, piping, supports, insulation, seals, lighting and ventilation is documented. Any deficiencies noted are prioritized and scheduled for repair accordingly.

CNE personnel have been very diligent in monitoring condensate return quality. When unacceptable levels of iron and hardness contamination are discovered, the condensate return is placed to drain either in the customers building or in the EDS tunnel. This water is not suitable for use in the boilers. Since Constellation Energy has limited control over what the DES customers return, alternative remedies continue to be explored for this problem.

When the customer meter readings are taken for the preceding month, the readings are reviewed. If they vary 30% high or low, from their three-year average, Instrumentation personnel check the questionable metering devices for calibration as required in the customer buildings.

The air compressor in the Andrew Jackson Building mechanical room, which operates the Pressure Reducing Valve on the State steam loop, is inspected monthly and maintenance is performed as required. An alarm on this air compressor is tested on a regular basis. Sump pump alarms in Manhole D, Manhole 18 and in the AAB Tunnel are also tested periodically. Tempering Stations on the condensate return system in the Fairlane Hotel and in the Municipal Auditorium are inspected for proper operation monthly.

The chilled water loop is being treated with a biocide to kill localized bacteria at customer interfaces and clean heat exchanger surfaces. Samples are being taken at several customer buildings periodically and tests indicate an improvement has been made. Bacteria levels are now below acceptable limits. An option being considered to make further improvement includes installing a side stream filter at the EGF.

Routine Maintenance and Emergency Repairs

Some repairs can be made without disrupting service to the customers while others require sections of the system to be shut down. When possible, CNE will hire an on-line leak repair contractor to facilitate steam leak repairs without interrupting service to the DES customers. Several expansion joints, valves and flanges were repaired throughout the system during the past year using this technique.



Most jobs performed in the EDS require off duty policemen to perform security and traffic control. The following are examples of the routine maintenance and emergency repairs that have been performed on the EDS in FY18-19.

July 2018

- Repaired portable Manhole ventilation fan
- Repaired lights in AAB Tunnel
- Replaced corrosion coupons at the Renaissance Hotel, Viridian and Metro Courthouse
- Repaired coupon station at the Renaissance Hotel
- Restored communications with 501 Union, Ryman Auditorium and TSU Cx Panels
- Checked calibration on 4” RTD’s for Parkway Tower
- Performed annual meter certification at Parkway Tower
- Checked calibration on 4” RTD’s for the 501 Union Building
- Performed annual meter certification at the 501 Union Building
- Downloaded DAQ Std program on computer at Cordell Hull Building
- Temporarily rerouted condensate leak in M/H 4
- Repaired sump pump in Manhole B
- Sealed cracks and holes in concrete at Manhole K and Manhole S1
- Swapped to summer steam meter at Bridgestone Arena
- Marked manhole lids for Metro Police prior to 4th of July festivities
- Deliver metering devices to CJC (DES-124.4)
- Assisted contractor at 5th and Broad measure for NES vault (DES-133.1)
- Assisted contractor with measurements in Manhole 6 (DES-144)
- Assisted geologist take seismograph readings around EGF (DES-148)
- Disconnect switches on transformers during daily blasts (DES-148)
- Assisted TEG access Manhole 23 to review proposed structural repairs (DES-151)

August 2018

- Sample Condensate in EDS for hardness
- Assisted Hermitage Hotel locate leak in heat exchanger
- Replaced chilled water supply gauge at Viridian
- Repaired condensate pumps in M/H 18
- Restored communications with Ryman VPN
- Restored communications with Hume-Fogg VPN
- Checked chilled water pressure at 4th & Church Building
- Installed clamp on condensate line in M/H U
- Repaired sump pump in M/H B
- Replaced grease lines on 4th Avenue Tunnel exhaust fan
- Replaced O-rings on Fiber-lite M/H lids



- Assisted CNE Corporate Safety Officer with EDS ladder review
- Assisted TEG access Manhole D for review (DES-138)
- Meeting with TPAC regarding Manhole 6 steam service interruptions (DES-144)
- Assisted TEG access Manhole L to review proposed structural repairs (DES-153)
- Assisted TEG access Manhole K to review proposed structural repairs (DES-154)

September 2018

- Sample Condensate in EDS for hardness
- Fabricated trap assembly for M/H 9
- Changed name on meter at Bobby Hotel
- Repair steam system air compressor in the Andrew Jackson Building
- Repaired State steam system auto-dialer
- Checked condensate level controller in M/H 18
- Repaired and replaced sump pumps in AAB Tunnel
- Repaired alarm in AAB Tunnel
- Relocated sump pump controls in AAB Tunnel
- Repaired sump pump in M/H B
- Repaired steam transmitter at the Metro Courthouse
- Repaired sump pump disconnect switch in M/H 9
- Fabricated new M/H lid puller
- Assisted Hermitage Hotel isolate steam leak in their mechanical room
- Attempted to free up steam valve in M/H 6A. Valve is not operational.
- Repaired portable sump pump on service truck
- Repaired steam leaks in 4th & Church Building pipe chase
- Tested steam valves on Union Street 9/7/18 (DES-144)
- Isolated steam between M/H 5 and M/H 23 on Union Street for Manhole 6 project 9/29/18 (DES-144)
- 7th & Broadway condensate line repair pre-bid held 9/18/18 (DES-155)
- Broadway Tunnel Anchor repair pre-bid held 9/18/18 (DES-156)

October 2018

- Repaired AAB sump pumps & alarm
- Replaced trap assembly in M/H 9
- Changed display on Cx Panel at Renaissance Hotel
- Repaired air compressor at Andrew Jackson Building for State steam PRV
- Replaced steam flow converter in metering panel at State Capitol
- Replaced block valves on steam transmitter at Cordell Hull
- Repaired M/H D1 sump pump and alarm
- Repaired steam leak in chase at 4th & Church

- Repair steam leak on trap in Andrew Jackson Building
- Assisted MWS test backflow preventer at Fairlane Hotel
- Checked for chilled water leaks in EDS
- Coupled Sheraton Hotel so they could clean their chilled water heat exchanger. Decoupled upon completion.
- Took photos in M/H 9 for TEG
- Changed MCH meter panel IP Address
- Replaced O-rings on M/H M lids
- Purchased belts for tunnel exhaust fans
- Replaced leaking chilled water drain valve near Nissan Stadium
- Purchased & installed new welding machine on service truck
- Assisted with CJC Metering installation (DES-124)
- Checked steam isolation valves on Union Street (DES-144)
- Isolate steam between M/H 5 and M/H 23 for M/H 6 Repair Project. Restored steam upon completion. (DES-144)
- Performed emergency chilled water leak repair at 4th Avenue and Union Street (EMR18-003)

November 2018

- AAB Sump pump and alarm repairs
- M/H B Sump pump and alarm repairs
- Ordered frequency converter in Cx panel at Bobby Hotel
- Checked steam meter at Wildhorse Saloon
- Reset totalizers at Sheraton and Nashville Public Library
- Assisted AAB repair steam leak in mechanical room
- Replaced broken lid at M/H 19
- Replaced sump pump float switch in M/H B1
- Repaired condensate pumps in M/H 18
- Checked steam valve at Hyatt Place Hotel
- Met with John Sevier reps regarding building renovations
- Checked for chilled water leaks in EDS
- Check for safety valves in State steam loop
- Repaired generator on service truck
- CJC Metering installation (DES-124)
- Assisted TEG with review of M/H 6 work (DES-144)
- Assisted TEG with access to 7th Ave. Tunnel (DES-155)
- Isolated condensate in 7th Ave. Tunnel (DES-155)
- Restored condensate in 7th Ave. Tunnel (DES-155)



- Assisted BESCO access to 7th Ave. condensate line (DES-156)
- Assisted TEG with review 7th Ave. condensate line (DES-156)
- Emergency Chilled Water leak repair at 4th & Union (EMR18-003)

December 2018

- Repaired M/H B2 sump pump switch
- Winterized tunnel
- Modified ladder in M/H 22
- Replaced trap assembly in M/H B8
- Replaced trap assembly in M/H B10
- Replaced trap assembly in M/H B4
- Replaced trap assembly in M/H B9
- Replaced trap assembly in M/H B2
- Replaced trap assembly in M/H 9
- Replaced trap assemblies in M/H L
- Replaced trap assemblies in M/H 18A
- Replaced trap assemblies in M/H K
- Isolated steam & Chilled water to John Sevier Building for renovations
- Removed metering devices & reviewed drawings for John Sevier Building
- Put dye in chilled water system to check for leaks in EDS
- Checked metering and lined up steam to CJC (DES-124)
- Assisted with Pre-bid walk through (DES-151)
- Assisted TEG with access to M/H 9 (DES-157)
- Purchased metering for 5th & Broadway Building (DES-160)

January 2019

- Replaced M/H B2 lid gasket
- Replaced frequency converter for Bobby Hotel steam meter
- Checked steam data for Bobby Hotel
- Weld cap on steam bypass at John Sevier Building
- Remove metering devices from John Sevier Building
- Furnish sump pump data to TEG
- Fabricated trap assemblies for manholes
- Assist phone company repair connection to AAB auto dialer
- Changed meter panel IP Address at Metro Courthouse (C-Tech)
- Replaced portable sump pump on service truck
- Purchased plugs for Corporation Stop Valves (Inventory)
- Assisted with Metro RFP Tours (DES-139)
- M/H 18A Pre-bid walk through (DES-158)



- Assemble/order metering for 5th & Broadway Building (DES-160)
- 5th & Broadway Chilled Water Connection Pre-bid walk through (DES-160)

February 2019

- Repaired RTD at Cordell Hull
- Repaired steam meter at Bobby Hotel
- Assisted contractor access M/H B3
- Checked sump pumps and alarm in AAB Tunnel
- Repaired lighting in AAB Tunnel
- Repaired lighting in EDS Tunnel
- Added isolation valves to Chilled Water transmitters at Sheraton Hotel
- Added isolation valves to Chilled Water transmitters at Renaissance Hotel
- Assisted C. K. Masonry with Manhole cover replacement survey
- Review John Sevier metering drawings
- Assisted TEG with Manhole cover replacement survey
- Assisted TEG with Condensate pump test at M/H 18
- Replaced condensate pump in M/H 18
- Assisted contractor with access to State Tunnel
- Installed fittings on new portable sump pump on service truck
- Assisted AAB repair steam leak in their mechanical room
- Fabricated trap assemblies for manholes
- Pre-bid walk through (DES-151)
- Prep for Chilled water connection service interruption (DES-160)
- Isolated Chilled Water to Renaissance Buildings (DES-160)
- Pre-bid walk through (DES-160)
- Assisted TEG with review of Broadway Tunnel work (DES-164)

March 2019

- Repaired steam leak at Municipal Auditorium
- Assisted Metro Water sample water entering M/H 18
- Assisted contractor access M/H 6
- Repaired M/H 18 Sump Pump Controller
- Repaired expansion joint table in 4th Ave. Tunnel
- Assist contractor with M/H lids & frames
- 7th Ave. Chilled Water leak test
- 5th Ave. Chilled Water leak test
- Cleaned up M/H 23 (DES-151)
- Assisted TEG with project review (DES-151)
- Assisted contractor access to M/H 18 (DES-158)



- Assisted TEG with project review (DES-158)
- Assisted TEG with review of Broadway Tunnel work (DES-164)
- Assisted TEG with project review (DES-165)
- Assisted TEG with project review (DES-166)

April 2019

- Assisted with Engie Due Diligence
- Repaired AJ Air Compressor and alarm
- Repair connection with Ryman VPN
- Repair connection with Bridgestone Arena Meter
- Repair connection with Cordell Hull Meter
- Repaired HP steam transmitter at AAB
- Repaired steam leak in M/H B8
- Repaired M/H 9 Sump Pump
- Repaired M/H 18 Sump Pumps
- Replaced M/H B Sump Pump
- Check on metering for 5th & Broadway (DES-160)
- Emergency Chilled Water Leak Repair in M/H N2 (EMR19-002)

May 2019

- Investigated source of hardness in condensate return (Hermitage Hotel)
- Repaired steam leak at TN Tower
- Repaired security gate at Viridian
- Investigate/correct hot spot at entrance to Sheraton Hotel
- Isolate/restore Chilled Water to Renaissance Hotel for customer
- Isolate/restore Steam to Sheraton Hotel for customer
- Isolate steam to War Memorial Building for customer
- Repaired M/H M Sump Pump
- Repaired M/H 18 Sump Pumps
- Replaced ventilation grate at M/H 18
- Repaired steam leak in M/H 4
- Repaired steam leak in M/H C
- Check Chilled Water flow at TN Tower
- Check Chilled Water flow at Nashville City Center
- Assist TEG with access to M/H L (DES-153) and M/H B2 (DES-159)
- Check on metering for 5th & Broadway (DES-160)
- Emergency Chilled Water Leak Repair in M/H N2 (EMR19-002)



June 2019

- Replaced shedder bar in MCCC Steam Meter
- Investigated condensate return issue at Symphony
- Replaced lids at M/H D3 and M/H 22
- Isolated and restored chilled water service to the Nashville Public Library for customer to make internal repairs
- Isolated and restored steam service to the Fairlane Hotel for customer to make internal repairs
- Repaired State tunnel PRV Air Compressor
- Repaired M/H B2 Sump Pump
- Checked chilled water flow at Metro Courthouse. Heat exchanger appears to be fouled.
- Furnished metering data to Cordell Hull. Customer checking building efficiency.
- Installed DAQ Std program on Cordell Hull Computer
- Deliver metering for 5th & Broad contractor (DES-160)
- Assist TEG with access to M/H 6 (DES-161)
- Assist TEG with access to M/H 20 (DES-169)

Annual maintenance costs for EDS activities: \$391,812.54 (excludes salaried personnel & corporate overhead).

EDS Emergency Repair Projects

EMR18-003 Emergency Chilled Water Leak Repair at 4th Avenue & Union Street

CNE Maintenance personnel were asked to mark a Tennessee One Call at the intersection of 4th Avenue North and Union Street about 1:00 pm on October 31, 2019. Green dye was observed coming through the pavement. CNE personnel immediately barricaded the intersection and began contacting contractors to excavate the area and make repairs.

CNE's CSR contacted the two affected customers and CNE Maintenance personnel isolated the chilled water. A repair clamp was installed on the 6" line and service was restored at approximately 10:00 pm. Chilled water make-up decreased from ~130,000 gal/day to ~35,000 gal/day after this repair. The insulation and backfill was completed on November 9, 2018. Final paving was completed on December 8, 2018. The crosswalk striping was completed on February 2, 2019. The T&M backup documentation has been reviewed and approved. CNE has issued an invoice to Metro.

EMR19-001 Emergency Steam Leak Repair at Municipal Auditorium

On February 28, 2018, a steam leak was reported in the Municipal Auditorium mechanical room. CNE personnel investigated and found a gauge line leaking on the DES side of the first valve inside the building. S. M. Lawrence company was engaged to make the repair which took place March 1, 2019. S. M. Lawrence had Warren Insulation insulate the repaired line on March, 12, 2019.



EMR19-002 Emergency Chilled Water Leak Repair at Manhole N2

During the routine monthly manhole inspections, CNE found a chilled water leak in Manhole N2. BESCO was engaged to make the necessary emergency repairs. As this line only serves Nissan Stadium, at the customer's request, service isolation was postponed until 3:00 pm April 18, 2019. CNE isolated and began draining this line at the requested time. BESCO removed and replaced the leaking 2" piping and valves in the bypass line. CNE restored service to the stadium by approximately 11:00 pm the same day. BESCO returned the following day and installed additional fittings to assist with draining this line in the future.



DES Projects

Below is a brief description of the DES projects performed during FY19 in various stages of completion.

DES-124.4 Criminal Justice Center New Service Installation

This project was substantially completed in FY18 except for a few items. The questions on the red-line drawings were answered on July 18, 2018 and the record drawings were delivered July 23, 2018. CNE personnel delivered metering devices to CJC contractor for installation. The contractor provided conduit and electric power. CNE personnel landed the wire connections on devices and tested the meter panel on December 11, 2018. The steam and chilled water service to the new building commenced on December 12, 2018.

DES-135 Exploratory Excavation and Chilled Water Leak Repairs

Chilled water make-up was >135,000 gallons per day until October 31, 2018. The Chilled water make-up dropped to approximately 35,000 gallons per day following EMR18-003 Emergency Leak Repairs at 4th and Union.

At the request of the Metro, CNE conducted several tests in November 2018 by isolating sections of the chilled water distribution system to determine the leak rates. The first test involved the area between Manhole 5C on 5th Avenue North to Deaderick Street between 4th and 5th Avenues. The second test involved the area between Manhole 5C on 5th Avenue North to Union Street and west on Union between 5th Avenue and 7th Avenue. The final test conducted was from 1st Avenue North, near Fort Nashboro, going north to the new CJC and A. A. Birch Buildings and included the lines to the Nissan Stadium. None of these tests indicated a substantial leak.

DES-144 Manhole 6 Structural Repairs

The pre-bid meeting was held at 9:00 a.m. on July 11, 2018 to review the proposed project work. Bids were received on July 20, 2018. Metro approved the proposal August 29, 2018. The work was done in two phases. The first phase of this project began on September 29, 2018. The steam system was isolated between Manholes 5 and 23 at 10:00 p.m. Concrete repairs in the vault took place on September 30, 2018. The structural steel work was completed on October 9, 2018 and steam service was restored by 4:00 p.m. A walkthrough was conducted October 22, 2018 and a punch list developed. Punch list items were completed on November 14, 2018. A representative from TEG reviewed and reported all items were satisfactorily completed.

DES-148 Rolling Mill Hill- Site I Development (Peabody Plaza)

This project began in early April 2018. Blasting started on May 1, 2018. The contractor installed seismograph equipment at the plant and performed a building survey prior to the start of blasting. Vibratex also installed seismograph equipment on May 2, 2018 and performed a site survey documenting pre-blast conditions.



Blasting tripped the plant off line May 21, 2018. Since that time, CNE closely monitored each blast daily. The final blast was performed on August 11, 2018. Metro had Vibratex perform a post-blast site survey to document conditions on August 31, 2018.

DES-149 1st and Molloy Exploratory Excavation and Steam Line Repair

This project was substantially completed in FY18. The backup documentation was approved by Metro on July 20, 2018. CNE issued an invoice for this work in early August 2018.

DES-150 Federal Courthouse Construction Related Costs

The construction for the new Federal Courthouse began in August 2018. Metro was originally informed that blasting would be required. Due to the close proximity of the site to the 7th Avenue Tunnel, Metro DES Representatives and CNE developed an Emergency Response Plan. This would allow service to be furnished to the Nashville Public Library and/or the Hume Fogg High School in the event blasting damaged the piping or tunnel structure. CNE, TEG and TEG's Structural Engineer met with the Federal Courthouse contractors on August 21, 2018 to discuss our concerns regarding the proximity of the MNDES 7th Avenue Tunnel to their site and potential blasting. An email was sent on September 18th from a representative with the Federal Courthouse Contractor informing DES that they will not be blasting on the project site.

DES-151 Manhole 23 Structural Repairs

CNE Maintenance personnel assisted a TEG with gathering measurements and photos to prepare drawings and a scope of work for this project on July 31, 2018. A Pre-bid Meeting was held on December 12, 2018. Bids were received on January 11, 2019. The contract was awarded to F. M. Sylvan and a Pre-Construction Meeting was held February 1, 2019. Work was completed on March 27, 2019. A punch list was issued March 28, 2019. The punch list items were completed in early April 2019.

DES-155 7th & Broadway Condensate Leak Repair

A pre-bid walkthrough was conducted on September 18, 2018 with three mechanical contractors to review the replacement of a section of the 6" condensate piping at the intersection of the 7th and Broadway tunnels. The contract was awarded to F. M. Sylvan on October 31, 2018. The project began on November 28, 2018 and was completed on November 29, 2018. A final walkthrough was conducted on December 5, 2018. No punch list items were found. An invoice was issued December 19, 2018.

DES-156 Broadway Tunnel Anchor Repair at B-65

A pre-bid walkthrough was conducted on September 18, 2018 with three mechanical contractors to review the replacement of an anchor kicker at Station B-65 in the Broadway tunnel. The contract was awarded to BESCO on October 31, 2018. The project began on November 14, 2018 and was completed on November 15, 2018. A walkthrough was conducted on November 16, 2018 and a punch list was developed. The punch list items were completed on November 21, 2018 and a follow-up review



on November 28, 2018 found no deficiencies. An invoice was issued to Metro on December 19, 2018.

DES-158 Manhole 18A Structural Repairs

A Pre-bid Meeting and walk through was held on January 23, 2019. The bids were due on February 6, 2019. BESCO was awarded the contract. The project was completed March 28, 2019. The backup documentation for this project has been reviewed and approved and CNE issued an invoice to Metro.

A brace was added to the steam line in M/H 18 as a change order until the failed expansion joint anchor table can be repaired. CNE's disputed charges have been resolved.

DES-160 5th & Broadway Chilled Water Service Connection

A Pre-bid Meeting was held at 9:00 a.m. on January 7, 2019. Bids were received January 22, 2019 and the project was awarded to S. M. Lawrence Company. A pre-construction meeting was held with the Renaissance Hotel, City Space Office Tower, TEG, S. M. Lawrence and CNE representatives on February 5, 2019. The project began on February 27, 2019 at 10:00 p.m. and was completed at 11:00 a.m. February 28, 2019. Metering equipment was delivered to the Contractor on June 18, 2019.

DES-162 3rd & Molloy Hotel Chilled Water Service Connection

TEG issued preliminary drawings for review on June 21, 2019.

DES-164 Broadway Tunnel Structural Repairs

Proshot Concrete has been awarded the contract to make repairs. The work began on February 5, 2019. Work was completed mid- March 2019. Punch list items were completed April 30, 2019.

DES-165 A. A. Birch Tunnel Structural Repairs

Proshot Concrete has been awarded the contract to make repairs. Work was completed March 27, 2019. Punch list items were completed by the April 30, 2019.

DES-166 4th Avenue and 7th Avenue Tunnel Repairs

Proshot Concrete has been awarded the contract to make repairs. Work was completed March 27, 2019. Punch list items were completed by the April 30, 2019.



Outstanding Issues and Recommendations

Each year CNE meets with Metro representatives to discuss outstanding issues and project recommendations. Below is a list of those items.

Outstanding Issues

- Potential Sale of DES
- Chilled water leak near Tennessee Performing Arts Center
- New service contract with Hyatt Centric Hotel

Recommendations for FY 20

- Pipe insulation restoration in manholes and in the tunnels
- Manhole and Tunnel Structural Steel Rehabilitation and Corrosion Prevention
- Install electric hoist to access Broadway tunnel in 5th & Broad parking garage
- Install a side stream filter on the chilled water system
- Build a maintenance platform under the 7th Avenue Tunnel exhaust fan
- Investigate the installation of additional Division Valves
- Investigate system expansion
 - Add additional equipment to existing plant for potential new customers
 - Add new service lines from plant to allow for system redundancy and to serve potential new customers south of Broadway
 - Investigate the possibility of a satellite plant
- Pursue service contract with:
 - Peabody Union Building (east of EGF)
 - Marriott Hotel (1st Avenue & Molly)
- Potential projects that should be customer funded:
 - Polisher on Condensate return system
 - Oxygen Trim on burners
 - Capacitor Bank on Electrical feed to plant



Sales and Marketing

Sales and Marketing Review

Due to the amount of development taking place south of Broadway, the potential exists for system expansion. Metro has actively begun to try and sell system remaining capacity.

The following table, furnished by Thermal Engineering Group, Inc. on May 15, 2019, indicates the remaining current system capacity.

System Capacity		
Diversity Factor	66.54%	74.60%
	Chilled Water (tons)	Steam (pph)
Installed capacity including redundant equipment	23,400	260,000
Installed capacity	20,800	195,000
System losses	600	19,430
Max Allowable Customer Load	20,200	166,433
Maximum System Peaks	18,584	148,065
Net Undiversified Capacity Available for Sale	1,616	18,368
Net Diversified Capacity Available for Sale	2,429	24,622
Diversified Potential for Contract Capacities	34,328	331,948
Contract Capacity for Existing Customers	30,359	284,616
Potential Contract Capacity for Sale	3,969	47,332

Customers currently on the system that are redeveloping their property:

- The Nashville Convention Center is being converted to a dual tower mixed use complex called the 5th & Broadway.
- The Criminal Justice Center is building a new jail on the existing site.

Ongoing activities include the following:

- A Sales and Marketing Report is included in the Monthly Operations Report.
- The DES e-Newsletter is produced and issued semi-annually.
- The Annual CNE/NDE Golf Tournament is held each year for existing and potential new customers as well as strategic partners.
- CNE participates in meetings and social events with business groups, engineers and developers throughout the year.
- CNE provides presentations and tours of the EGF to point out the positive attributes of the system.



Utilities and Fuel Procurement

During FY18-19, CNE was proactive in the procurement of fuel and risk management. CNE made a propane purchase recommendation. Natural gas procurement recommendations were made by Trane Energy Supply Services and International F. C. Stone Financial, Inc. In a collaborative effort with Metro, CNE made procurement decisions based upon a matrix of pricing and consumption factors including but not limited to then-current pricing conditions, future pricing conditions, technical and fundamental pricing trends, consumption variances as a function of incremental demand and conservation, product availability and budgetary considerations. When Trane’s contract expired in December 2018, CNE engaged Insight Sourcing Group, LLC to provide fuel consulting services.

Natural gas was purchased from Constellation NewEnergy – Gas Division, LLC (CNEG) under the terms and conditions of an agreement between CNE and CNEG for a service period through December 2020. The costs include the amount paid to CNEG for the cost of gas (including transportation to the Nashville city gate), Piedmont for the cost of transportation from the city gate to the plant, risk management fees, but it does not include the Fuel Efficiency Adjustment (FEA).

The following is a report of the natural gas purchased in FY18-19:

Natural Gas

Month	Quantity (DT)	Unit Cost	Amount
July, 2018	30,273.2	\$3.7260	\$112,797.01
August	31,219.5	\$3.6611	\$114,298.51
September	31,793.3	\$3.6750	\$116,839.07
October	43,222.4	\$3.6391	\$157,289.86
November	66,902.6	\$3.8840	\$259,852.53
December	73,986.8	\$4.8639	\$359,861.79
January, 2019	85,819.0	\$4.2384	\$363,733.69
February	67,053.6	\$3.5332	\$236,912.77
March	66,526.2	\$3.6565	\$243,256.03
April	41,257.3	\$3.7696	\$155,521.61
May	32,693.3	\$3.7350	\$122,110.69
June	29,925.4	\$3.6908	\$110,449.27
Total	600,672.6	\$3.9171	\$2,352,922.83



100,000 gallons of propane was purchased from TARGA December 4, 2018 and placed in storage. Since the plant did not have a natural gas curtailment, the propane was sold back to TARGA March 25, 2019.

The following is a report of propane used:

Propane

Month	Quantity (DT)	Unit Cost	Amount
July, 2018	0	N/A	\$0.00
August	0	N/A	\$0.00
September	0	N/A	\$0.00
October	0	N/A	\$0.00
November	37	\$24.4416	\$904.34
December	49	\$24.8347	\$1,216.90
January, 2019	278	\$24.8049	\$6,895.76
February	0	N/A	\$0.00
March	0	N/A	\$0.00
April	0	N/A	\$0.00
May	8	\$25.3947	\$203.16
June	0	N/A	\$0.00
Total	372	\$24.7853	\$9,220.16



During FY18-19, electricity was purchased each month based on the Nashville Electric Service rate schedule. Quantities reported in the Monthly Reports are taken from plant meters. The difference between the plant meter readings and billed quantities have been reconciled in Appendix 4 & Exhibit 1 of this report.

Electricity

Month	Quantity (Kwh)	Unit Cost	Amount
July, 2018	8,001,140	\$0.08606	\$688,583.72
August	7,980,812	\$0.08555	\$682,785.18
September	7,212,408	\$0.08580	\$618,834.33
October	4,879,980	\$0.09041	\$441,182.05
November	2,892,540	\$0.08233	\$238,129.36
December	2,826,208	\$0.08706	\$246,046.12
January, 2019	2,662,996	\$0.08663	\$230,708.59
February	2,877,924	\$0.09966	\$286,800.27
March	3,118,948	\$0.08705	\$271,511.00
April	3,887,520	\$0.08254	\$320,888.28
May	5,631,584	\$0.07783	\$438,291.50
June	6,336,008	\$0.08259	\$523,280.94
Total	58,308,068	\$0.08553	\$4,987,041.34



The following table indicates the water purchased during FY18-19 based on the Metro Water Services rate schedule. The quantities in this table are from the water bills. They differ from those reported in the Monthly Reports because the water departments billing cycle is not based on an actual month.

Water & Sewer

Month	Quantity (gal)	Unit Cost	Amount
July, 2018	19,074,748	\$0.00365	\$69,680.80
August	17,495,720	\$0.00366	\$63,990.75
September	22,169,972	\$0.00365	\$81,006.80
October	15,431,240	\$0.00366	\$56,465.67
November	9,701,560	\$0.00368	\$35,664.96
December	6,286,940	\$0.00381	\$23,962.57
January, 2019	7,684,204	\$0.00378	\$29,056.07
February	20,024,708	\$0.00368	\$73,664.77
March	7,763,492	\$0.00377	\$29,282.73
April	8,236,976	\$0.00376	\$30,988.15
May	11,133,232	\$0.00374	\$41,643.26
June	17,356,592	\$0.00369	\$64,062.91
Total	162,359,384	\$0.00369	\$599,469.44

Financial Report

The following is an explanation of the Appendices associated with this financial report.

Appendix 1 – Customer List

This chart lists the number of customers served by the District Energy System (DES). The customers are sorted according to three categories:

- Private Customers
- State of Tennessee Customers
- Metropolitan Nashville (Metro) Customers

Appendix 2 – Revenues

This chart summarizes the revenues charged per month by DES to each customer for FY18-19.

Appendix 3 – Customer Rate Reconciliation

Monthly Reconciliation charts from July 2018 to June 2019 are found in this appendix. The final chart is a Summary Reconciliation table for FY18-19. These tables detail the amount allocable to customers to the amount allocated to customers. The difference in the allocable amount and the amount allocated to customers is paid by Metro and is called the Metro Funding Amount (MFA).

- **Facilities Capital Charge** – The debt service on revenue bonds issued for the project.
- **System Operator Charge** – Includes the system operator’s fee which is most of the operations and maintenance costs of the system.
- **EDS Improvements Charge** – Due to a CPI adjustment of 1.021%, the annual replacement and repair allowance was \$199,343 for FY18-19.
- **Metro Incremental Administrative Charge** – Per the customer service agreement, these charges are the “actual, reasonable and necessary” cost over and above current Metro operating costs to manage the DES system and operator.
- **Pass Through Charges**
 - **Water Treatment & Chemicals** – actual costs of chemicals to treat water
 - **Engineering** – The engineering costs required for any non-capital projects, customer related issues, meetings, etc.
 - **Insurance** – The cost to maintain all-risk property insurance and business insurance policies.
 - **EDS Electricity** – The cost of electricity for tunnel lights and safety equipment.
 - **EDS Surcharge** – Surcharge to private customers only to cap their annual cost of any EDS repairs made by Metro (\$79,640).
 - **Water and Sewer** – Actual costs charged by Metro Water Services
- **Energy Charges**
 - **Electricity**
 - **Natural Gas**
 - **Propane**

Appendix 4 – CEPS Invoice Reconciliation (FEA)

Exhibit 1 – Performance Guarantee Calculation



Appendix 1



Metro Nashville District Energy System Customers

Private		State		Metro	
1	Bobby Hotel (fka Wells Fargo)	18	Andrew Jackson	32	A.A. Birch
2	Parkway Tower	19	Cordell Hull	33	Metro Courthouse
3	Sheraton Hotel	20	John Sevier	34	Municipal Auditorium
4	Hermitage Hotel	21	War Memorial	35	Criminal Justice Center
5	501 Union Building	22	Library & Archives	36	Bridgestone Arena
6	4 th & Church Building	23	Supreme Court	37	Nissan Stadium
7	Fifth-Third Financial Center	24	State Capitol	38	Hume-Fogg High School
8	Renaissance Hotel	25	James K. Polk	39	Nashville Public Library
9	City Space (fka Ren. Office Tower)	26	Citizens Plaza	40	Music City Center
10	St. Mary's Catholic Church	27	Snodgrass Tennessee Tower		
11	Nashville City Center	28	Tennessee State University		
12	Wildhorse Saloon	29	Tennessee Performing Arts Center		
13	Ryman Auditorium	30	Legislative Plaza		
14	Schermerhorn Symphony Center	31	Rachael Jackson		
15	Viridian Residential Tower				
16	Hyatt Place Hotel				
17	Fairlane Hotel (fka 401 Union)				



Appendix 2

Metro Nashville District Energy System
Revenues
Chilled Water and Steam
Fiscal Year Ending June 30, 2019

Customer No.	Customer Name	July	August	September	October	November	December	January	February	March	April	May	June (including True Up)	Total
2	A. A. Birch	\$ 66,939.71	\$ 64,011.90	\$ 62,258.81	\$ 59,115.52	\$ 55,389.47	\$ 66,107.23	\$ 62,529.34	\$ 58,515.66	\$ 57,123.09	\$ 56,314.43	\$ 53,735.68	\$ 36,107.14	\$ 698,147.98
4	Metro Courthouse	\$ 34,519.90	\$ 34,096.24	\$ 33,688.27	\$ 31,093.75	\$ 28,321.78	\$ 29,794.64	\$ 29,098.76	\$ 27,317.19	\$ 26,904.53	\$ 25,282.00	\$ 27,120.18	\$ 20,943.30	\$ 348,180.54
7	Parkway Tower	\$ 28,664.97	\$ 28,627.87	\$ 27,851.03	\$ 26,063.95	\$ 26,934.75	\$ 32,828.12	\$ 32,861.60	\$ 29,135.94	\$ 28,303.76	\$ 22,703.35	\$ 24,294.61	\$ 18,972.05	\$ 327,242.00
9	Bobby Hotel (fka Wells Fargo)	\$ 18,396.72	\$ 18,319.86	\$ 16,079.73	\$ 16,434.24	\$ 18,459.40	\$ 21,114.53	\$ 10,325.60	\$ 9,483.71	\$ 9,191.23	\$ 10,076.37	\$ 13,154.46	\$ 11,352.08	\$ 172,387.93
10	Fairlane Hotel (fka 401 Union)	\$ 12,756.25	\$ 12,213.40	\$ 11,744.77	\$ 10,359.08	\$ 9,625.18	\$ 10,343.84	\$ 11,418.51	\$ 11,699.73	\$ 11,485.66	\$ 10,039.37	\$ 10,710.45	\$ 8,214.44	\$ 130,610.68
11	Sheraton Hotel	\$ 59,262.90	\$ 59,639.81	\$ 60,308.91	\$ 58,323.19	\$ 56,755.17	\$ 60,188.55	\$ 59,349.55	\$ 57,757.72	\$ 55,365.84	\$ 55,083.34	\$ 56,995.25	\$ 41,640.92	\$ 680,671.15
12	Municipal Auditorium	\$ 24,372.78	\$ 25,192.56	\$ 25,280.65	\$ 21,028.80	\$ 28,382.00	\$ 31,691.34	\$ 32,080.34	\$ 25,559.29	\$ 25,447.76	\$ 21,917.83	\$ 22,049.74	\$ 14,728.05	\$ 297,731.14
21	Hermitage Hotel	\$ 24,701.00	\$ 24,232.08	\$ 24,450.46	\$ 21,910.06	\$ 21,142.10	\$ 22,745.46	\$ 21,258.12	\$ 20,600.79	\$ 21,631.55	\$ 21,935.13	\$ 24,151.00	\$ 15,451.83	\$ 264,209.58
24	Criminal Justice Center	\$ 21,786.99	\$ 21,744.98	\$ 23,116.26	\$ 23,124.16	\$ 23,116.60	\$ 26,705.51	\$ 32,887.89	\$ 32,258.23	\$ 31,425.13	\$ 28,574.75	\$ 26,666.11	\$ 22,693.16	\$ 314,099.77
25	501 Union Building	\$ 15,255.75	\$ 14,498.78	\$ 14,481.18	\$ 11,110.82	\$ 11,007.36	\$ 11,708.00	\$ 11,037.20	\$ 10,524.73	\$ 9,582.19	\$ 10,323.51	\$ 10,914.75	\$ 8,842.90	\$ 139,287.17
28	4th & Church Building	\$ 45,192.13	\$ 43,722.67	\$ 38,856.01	\$ 37,771.73	\$ 39,022.74	\$ 42,320.20	\$ 42,701.11	\$ 37,009.61	\$ 36,560.30	\$ 32,251.77	\$ 34,429.14	\$ 37,749.63	\$ 467,587.04
29	Fifth-Third Financial Center	\$ 45,064.62	\$ 44,139.84	\$ 43,584.06	\$ 38,511.67	\$ 31,522.72	\$ 33,331.03	\$ 32,417.39	\$ 31,504.16	\$ 30,908.77	\$ 35,282.92	\$ 36,558.50	\$ 29,651.17	\$ 432,476.85
32	Renaissance Hotel	\$ 96,801.89	\$ 95,465.47	\$ 96,464.96	\$ 88,431.86	\$ 82,872.25	\$ 91,973.49	\$ 89,171.16	\$ 79,803.20	\$ 78,461.91	\$ 79,648.20	\$ 91,852.08	\$ 64,393.55	\$ 1,035,340.02
34	Renaissance Office Tower	\$ 14,367.93	\$ 13,858.67	\$ 13,253.78	\$ 12,153.95	\$ 10,231.19	\$ 10,731.02	\$ 10,348.35	\$ 10,722.92	\$ 10,148.33	\$ 10,698.60	\$ 11,340.43	\$ 10,263.39	\$ 138,118.56
35	St. Mary's Catholic Church	\$ 1,030.92	\$ 1,030.92	\$ 1,030.92	\$ 1,030.92	\$ 1,030.92	\$ 1,030.92	\$ 1,030.92	\$ 1,030.92	\$ 1,030.92	\$ 1,030.92	\$ 1,030.92	\$ 1,030.92	\$ 12,371.04
36	Nashville City Center	\$ 42,296.95	\$ 42,181.92	\$ 39,097.49	\$ 33,712.45	\$ 22,797.93	\$ 21,859.99	\$ 21,127.36	\$ 24,009.35	\$ 23,041.43	\$ 25,710.73	\$ 31,041.13	\$ 27,687.51	\$ 354,564.24
38	Wildhorse Saloon	\$ 15,673.87	\$ 15,484.08	\$ 14,022.72	\$ 12,184.22	\$ 12,509.16	\$ 10,498.64	\$ 11,074.65	\$ 9,960.78	\$ 10,963.55	\$ 12,409.61	\$ 13,013.26	\$ 11,370.48	\$ 149,165.02
39	Ryman Auditorium	\$ 19,291.23	\$ 18,812.53	\$ 17,722.38	\$ 15,575.52	\$ 13,890.73	\$ 15,209.92	\$ 14,468.14	\$ 14,066.06	\$ 14,046.31	\$ 14,569.19	\$ 15,572.11	\$ 13,657.17	\$ 186,881.29
40	Bridgestone Arena	\$ 126,928.04	\$ 125,359.68	\$ 158,045.07	\$ 130,543.65	\$ 97,301.35	\$ 102,187.38	\$ 92,736.58	\$ 117,586.13	\$ 100,149.06	\$ 102,563.86	\$ 93,839.54	\$ 88,881.05	\$ 1,336,121.39
41	Nissan Stadium	\$ 74,394.61	\$ 76,121.54	\$ 68,909.19	\$ 51,998.44	\$ 36,263.21	\$ 33,125.47	\$ 31,335.90	\$ 34,936.63	\$ 34,369.61	\$ 37,920.81	\$ 53,277.01	\$ 51,582.70	\$ 584,235.12
43	Hume-Fogg High School	\$ 12,988.54	\$ 13,864.54	\$ 12,832.77	\$ 12,264.56	\$ 11,424.98	\$ 12,453.78	\$ 11,948.30	\$ 11,210.62	\$ 10,898.05	\$ 11,797.38	\$ 12,216.86	\$ 6,926.51	\$ 140,826.89
44	Schermerhorn Symphony Center	\$ 34,880.87	\$ 30,630.89	\$ 35,024.31	\$ 29,061.74	\$ 25,765.24	\$ 27,837.51	\$ 27,286.43	\$ 27,019.40	\$ 26,442.79	\$ 27,986.84	\$ 30,027.23	\$ 33,930.02	\$ 355,893.27
45	Nashville Public Library	\$ 37,473.17	\$ 37,380.61	\$ 37,414.14	\$ 36,178.96	\$ 38,944.94	\$ 44,544.15	\$ 43,431.56	\$ 39,377.92	\$ 36,118.15	\$ 34,850.57	\$ 34,227.53	\$ 34,714.89	\$ 454,656.59
49	Viridian Residential Tower	\$ 23,763.28	\$ 23,030.06	\$ 21,993.66	\$ 19,254.33	\$ 15,550.96	\$ 15,932.33	\$ 15,844.68	\$ 16,272.58	\$ 16,098.26	\$ 17,006.23	\$ 19,498.44	\$ 20,583.35	\$ 224,828.16
50	Music City Center	\$ 292,313.80	\$ 299,442.35	\$ 282,873.86	\$ 242,160.95	\$ 200,504.25	\$ 223,435.07	\$ 227,229.97	\$ 211,243.35	\$ 209,349.83	\$ 195,705.16	\$ 210,479.38	\$ 247,739.83	\$ 2,842,477.80
51	Hyatt Place Hotel	\$ 20,817.07	\$ 19,790.51	\$ 18,297.41	\$ 17,554.11	\$ 16,661.65	\$ 16,860.56	\$ 17,129.57	\$ 17,002.69	\$ 17,087.47	\$ 16,003.28	\$ 16,677.81	\$ 17,352.63	\$ 211,234.76
51	State Government of TN	\$ 480,814.29	\$ 480,666.67	\$ 458,761.55	\$ 431,686.13	\$ 422,648.37	\$ 444,246.51	\$ 458,523.53	\$ 403,208.92	\$ 407,950.54	\$ 370,974.18	\$ 401,548.84	\$ 408,389.36	\$ 5,169,418.89
	Grand Totals:	\$ 1,690,750.18	\$ 1,683,560.43	\$ 1,657,444.35	\$ 1,488,638.76	\$ 1,358,076.40	\$ 1,460,805.19	\$ 1,450,652.51	\$ 1,368,818.23	\$ 1,340,086.02	\$ 1,288,660.33	\$ 1,376,422.44	\$ 1,304,850.03	\$ 17,468,764.87



Appendix 3

Metro Nashville District Energy System
Revenues
Chilled Water and Steam
Fiscal Year Ending June 30, 2019

Customer Number	Customer Name	Capacity	Operating	EDS Improvement	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	TIFS	Electricity	Natural Gas	Propane	Total
2	A. A. Birch	\$ 115,280.03	\$ 204,356.30	\$ 9,170.28	\$ 27,084.49	\$ 24,563.48	\$ 8,473.87	\$ 1,385.96	\$ 572.68	\$ 3,517.24	\$ -	\$ 14,286.46	\$ 182,245.15	\$ 106,770.41	\$ 441.63	\$ 698,147.98
4	Metro Courthouse	\$ 54,713.77	\$ 95,402.77	\$ 4,281.24	\$ 12,644.37	\$ 14,527.11	\$ 4,854.95	\$ 646.98	\$ 267.46	\$ 1,642.03	\$ -	\$ 4,321.01	\$ 102,011.23	\$ 52,678.59	\$ 189.03	\$ 348,180.54
7	Parkway Tower	\$ 49,863.72	\$ 92,371.03	\$ 4,144.70	\$ 12,242.26	\$ 12,954.03	\$ 4,230.13	\$ 626.48	\$ 258.54	\$ 1,589.73	\$ 8,508.96	\$ 2,582.41	\$ 100,020.11	\$ 37,634.37	\$ 215.53	\$ 327,242.00
9	Bobby Hotel (fka Wells Fargo)	\$ 19,803.46	\$ 36,571.61	\$ 1,641.31	\$ 4,824.05	\$ 7,506.81	\$ 2,694.14	\$ 242.04	\$ 93.80	\$ 628.15	\$ 3,056.04	\$ 1,179.61	\$ 54,157.47	\$ 39,882.64	\$ 106.80	\$ 172,387.93
10	Fairlane Hotel (fka 401 Union)	\$ 19,034.29	\$ 34,526.41	\$ 1,549.30	\$ 4,575.91	\$ 5,259.39	\$ 1,703.21	\$ 234.18	\$ 96.69	\$ 594.23	\$ 3,723.12	\$ 1,621.44	\$ 38,259.75	\$ 19,341.11	\$ 91.65	\$ 130,610.68
11	Sheraton Hotel	\$ 105,495.88	\$ 185,830.93	\$ 8,339.08	\$ 24,629.29	\$ 24,272.85	\$ 9,381.24	\$ 1,260.25	\$ 520.79	\$ 3,198.41	\$ 14,759.04	\$ 1,674.20	\$ 161,045.81	\$ 139,776.78	\$ 486.60	\$ 680,671.15
12	Municipal Auditorium	\$ 52,681.79	\$ 98,568.54	\$ 4,422.62	\$ 13,063.60	\$ 7,849.02	\$ 3,143.99	\$ 668.54	\$ 275.83	\$ 1,696.37	\$ -	\$ 4,491.49	\$ 58,623.33	\$ 51,947.84	\$ 298.18	\$ 297,731.14
21	Hermitage Hotel	\$ 50,769.85	\$ 87,222.10	\$ 3,914.32	\$ 11,560.17	\$ 8,832.75	\$ 2,802.65	\$ 591.49	\$ 244.64	\$ 1,501.27	\$ 3,321.96	\$ 6,229.14	\$ 62,668.47	\$ 24,447.46	\$ 103.31	\$ 264,209.58
24	Criminal Justice Center	\$ 86,356.66	\$ 143,546.84	\$ 6,442.58	\$ 19,025.64	\$ 2,315.51	\$ 1,433.13	\$ 973.46	\$ 402.91	\$ 2,470.82	\$ -	\$ -	\$ 17,548.49	\$ 33,400.05	\$ 183.68	\$ 314,099.77
25	501 Union Building	\$ 20,109.39	\$ 35,134.82	\$ 1,576.78	\$ 4,656.67	\$ 5,785.36	\$ 1,888.15	\$ 238.34	\$ 98.48	\$ 604.73	\$ 2,792.88	\$ 30.04	\$ 45,839.86	\$ 20,463.08	\$ 68.59	\$ 139,287.17
28	4th & Church Building	\$ 250,176.60	\$ -	\$ -	\$ -	\$ 16,874.40	\$ 5,298.95	\$ 795.73	\$ 328.57	\$ -	\$ -	\$ 34.40	\$ 141,959.54	\$ 51,827.19	\$ 291.66	\$ 467,587.04
29	Fifth-Third Financial Center	\$ 60,925.44	\$ 129,279.85	\$ 5,798.98	\$ 17,132.90	\$ 17,007.84	\$ 4,224.94	\$ 876.95	\$ 360.71	\$ 2,224.62	\$ 9,440.04	\$ 3,652.90	\$ 181,551.68	\$ -	\$ -	\$ 432,476.85
32	Renaissance Hotel	\$ 159,343.90	\$ 274,620.62	\$ 12,324.14	\$ 36,397.51	\$ 46,227.74	\$ 15,514.44	\$ 1,862.51	\$ 770.05	\$ 4,726.69	\$ 17,550.00	\$ 531.52	\$ 279,192.94	\$ 185,513.45	\$ 764.51	\$ 1,035,340.02
34	Renaissance Office Tower	\$ 14,873.86	\$ 31,607.23	\$ 1,417.78	\$ 4,188.73	\$ 9,640.31	\$ 2,534.67	\$ 214.39	\$ 88.19	\$ 543.90	\$ 2,727.00	\$ 1,372.95	\$ 68,909.55	\$ -	\$ -	\$ 138,118.56
35	St. Mary's Catholic Church	\$ 11,971.92	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 399.12	\$ -	\$ -	\$ -	\$ -	\$ 12,371.04
36	Nashville City Center	\$ 49,668.20	\$ 105,357.50	\$ 4,725.96	\$ 13,962.64	\$ 16,750.87	\$ 3,910.47	\$ 714.69	\$ 293.96	\$ 1,812.98	\$ 9,041.04	\$ 2,638.70	\$ 145,687.23	\$ -	\$ -	\$ 354,564.24
38	Wildhorse Saloon	\$ 18,584.75	\$ 34,633.38	\$ 1,553.98	\$ 4,590.02	\$ 6,224.03	\$ 1,924.59	\$ 234.87	\$ 96.93	\$ 596.05	\$ 2,193.96	\$ 543.74	\$ 59,888.05	\$ 18,043.36	\$ 57.31	\$ 149,165.02
39	Ryman Auditorium	\$ 20,511.41	\$ 38,096.46	\$ 1,708.18	\$ 5,032.10	\$ 10,300.09	\$ 3,376.68	\$ 254.83	\$ 101.56	\$ 657.00	\$ 2,127.12	\$ -	\$ 70,676.49	\$ 33,922.74	\$ 116.63	\$ 186,881.29
40	Bridgestone Arena	\$ 206,561.23	\$ 391,983.23	\$ 17,587.06	\$ 51,950.16	\$ 65,341.99	\$ 18,377.62	\$ 2,658.68	\$ 1,096.46	\$ 6,745.96	\$ -	\$ 2,239.85	\$ 475,729.79	\$ 95,597.79	\$ 251.57	\$ 1,336,121.39
41	Nissan Stadium	\$ 87,823.56	\$ 185,925.02	\$ 8,339.90	\$ 24,639.82	\$ 28,347.01	\$ 6,126.76	\$ 1,261.16	\$ 518.76	\$ 3,199.37	\$ -	\$ 1,212.70	\$ 236,841.06	\$ -	\$ -	\$ 584,235.12
43	Hume-Fogg High School	\$ 29,117.82	\$ 53,317.38	\$ 2,392.40	\$ 7,066.34	\$ 2,261.30	\$ 888.30	\$ 361.64	\$ 149.31	\$ 917.62	\$ -	\$ 6,494.78	\$ 22,531.74	\$ 15,267.65	\$ 60.61	\$ 140,826.89
44	Schermerhorn Symphony Center	\$ 182,332.32	\$ -	\$ -	\$ -	\$ 12,793.06	\$ 4,491.28	\$ 573.48	\$ 236.70	\$ -	\$ -	\$ -	\$ 104,221.65	\$ 51,087.88	\$ 156.90	\$ 355,893.27
45	Nashville Public Library	\$ 82,668.00	\$ -	\$ -	\$ -	\$ 34,662.43	\$ 11,894.81	\$ 893.83	\$ 369.25	\$ -	\$ -	\$ 2,946.91	\$ 214,355.28	\$ 106,490.02	\$ 376.06	\$ 454,656.59
49	Viridian Residential Tower	\$ 148,469.76	\$ -	\$ -	\$ -	\$ 7,249.70	\$ 1,674.63	\$ 430.45	\$ 177.07	\$ -	\$ -	\$ 10,615.60	\$ 56,210.95	\$ -	\$ -	\$ 224,828.16
50	Music City Center	\$ 930,813.36	\$ 110,894.52	\$ -	\$ 90,742.55	\$ 132,886.46	\$ 45,157.83	\$ 6,625.13	\$ 2,734.08	\$ -	\$ -	\$ 404.85	\$ 988,587.29	\$ 531,792.57	\$ 1,839.16	\$ 2,842,477.80
51	Hyatt Place Hotel	\$ 130,527.84	\$ -	\$ -	\$ -	\$ 5,080.34	\$ 1,967.16	\$ 439.91	\$ 182.13	\$ -	\$ -	\$ 4,278.13	\$ 36,506.45	\$ 32,149.21	\$ 103.59	\$ 211,234.76
51	State Government of TN	\$ 1,638,010.10	\$ 1,281,139.20	\$ -	\$ -	\$ 153,489.53	\$ 55,670.47	\$ -	\$ 4,056.58	\$ 24,817.34	\$ -	\$ 62,031.94	\$ 1,201,929.29	\$ 745,274.90	\$ 2,999.54	\$ 5,169,418.89
	Grand Totals:	\$ 4,596,488.91	\$ 3,650,385.74	\$ 101,330.59	\$ 390,009.22	\$ 679,003.41	\$ 223,639.06	\$ 25,065.97	\$ 14,392.13	\$ 63,684.51	\$ 79,640.28	\$ 135,414.77	\$ 5,107,198.65	\$ 2,393,309.09	\$ 9,202.54	\$ 17,468,764.87
	Rate Calculation Totals:	\$ 5,584,931.97	\$ 5,170,980.79	\$ 169,528.32	\$ 502,129.10	\$ 679,197.60	\$ 223,752.63	\$ 36,247.58	\$ 14,406.24	\$ 65,138.59	\$ 79,640.28	\$ 135,414.77	\$ 5,107,992.67	\$ 2,396,219.65	\$ 9,219.16	\$ 20,174,799.35
	Deviation:	\$ (988,443.06)	\$ (1,520,595.05)	\$ (68,197.73)	\$ (97,441.42)	\$ (195.51)	\$ (113.57)	\$ (5,559.91)	\$ 14.11	\$ (1,454.08)	\$ -	\$ -	\$ (807.10)	\$ (2,944.88)	\$ (17.60)	\$ (2,706,034.48)

Metro Nashville District Energy System
Revenues
Chilled Water and Steam
July, 2018

Customer Number	Customer Name	Capacity	Operating	EDS Improvement	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	TIFS	Electricity	Natural Gas	Propane	Total
2	A. Birch	\$ 10,604.48	\$ 16,627.21	\$ 728.34	\$ 2,026.42	\$ 3,527.67	\$ 651.79	\$ 82.56	\$ -	\$ 363.47	\$ -	\$ 595.21	\$ 27,017.25	\$ 4,715.31	\$ -	\$ 66,939.71
4	Metro Courthouse	\$ 5,020.14	\$ 7,758.55	\$ 339.87	\$ 945.60	\$ 1,853.41	\$ 353.76	\$ 38.54	\$ -	\$ 169.60	\$ -	\$ 227.97	\$ 14,891.55	\$ 2,920.91	\$ -	\$ 34,519.90
7	Parkway Tower	\$ 4,576.74	\$ 7,527.45	\$ 329.70	\$ 917.31	\$ 1,410.99	\$ 212.61	\$ 37.34	\$ -	\$ 164.53	\$ 709.08	\$ 277.61	\$ 12,501.61	\$ -	\$ -	\$ 28,664.97
9	Bobby Hotel (fka Wells Fargo)	\$ 1,686.95	\$ 2,728.38	\$ 119.51	\$ 332.50	\$ 1,219.13	\$ 240.08	\$ 13.54	\$ -	\$ 59.64	\$ 254.67	\$ -	\$ 9,531.39	\$ 2,210.93	\$ -	\$ 18,396.72
10	Fairlane Hotel (fka 401 Union)	\$ 1,749.70	\$ 2,811.49	\$ 123.15	\$ 342.63	\$ 741.65	\$ 121.35	\$ 13.96	\$ -	\$ 61.45	\$ 310.26	\$ -	\$ 6,104.31	\$ 376.30	\$ -	\$ 12,756.25
11	Sheraton Hotel	\$ 9,657.00	\$ 15,119.16	\$ 662.29	\$ 1,842.64	\$ 2,805.25	\$ 575.56	\$ 75.07	\$ -	\$ 330.51	\$ 1,229.92	\$ 14.75	\$ 20,956.19	\$ 5,994.56	\$ -	\$ 59,262.90
12	Municipal Auditorium	\$ 4,846.18	\$ 8,034.54	\$ 351.91	\$ 979.09	\$ 889.00	\$ 134.87	\$ 39.85	\$ -	\$ 175.61	\$ -	\$ 4.66	\$ 8,881.09	\$ 35.98	\$ -	\$ 24,372.78
21	Hermitage Hotel	\$ 4,664.48	\$ 7,089.19	\$ 310.56	\$ 864.05	\$ 1,231.66	\$ 186.27	\$ 35.22	\$ -	\$ 154.98	\$ 276.83	\$ 441.07	\$ 9,420.07	\$ 26.62	\$ -	\$ 24,701.00
24	Criminal Justice Center	\$ 7,887.22	\$ 11,655.65	\$ 510.64	\$ 1,420.71	\$ -	\$ -	\$ 57.94	\$ -	\$ 254.83	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 21,786.99
25	501 Union Building	\$ 1,839.10	\$ 2,857.84	\$ 125.19	\$ 348.31	\$ 861.98	\$ 169.41	\$ 14.20	\$ -	\$ 62.47	\$ 232.74	\$ 5.44	\$ 7,189.05	\$ 1,550.02	\$ -	\$ 15,255.75
28	4th & Church Building	\$ 20,848.05	\$ -	\$ -	\$ -	\$ 2,545.34	\$ 383.54	\$ 47.42	\$ -	\$ -	\$ -	\$ -	\$ 21,367.78	\$ -	\$ -	\$ 45,192.13
29	Fifth-Third Financial Center	\$ 5,620.52	\$ 10,577.95	\$ 463.19	\$ 1,288.71	\$ 2,258.23	\$ 340.28	\$ 52.36	\$ -	\$ 231.15	\$ 786.67	\$ -	\$ 23,445.56	\$ -	\$ -	\$ 45,064.62
32	Renaissance Hotel	\$ 14,569.61	\$ 22,326.81	\$ 978.07	\$ 2,721.19	\$ 6,816.04	\$ 1,195.30	\$ 110.92	\$ -	\$ 488.08	\$ 1,462.50	\$ -	\$ 39,535.63	\$ 6,597.74	\$ -	\$ 96,801.89
34	Renaissance Office Tower	\$ 1,374.15	\$ 2,586.17	\$ 113.24	\$ 315.07	\$ 1,035.94	\$ 156.10	\$ 12.80	\$ -	\$ 56.51	\$ 227.25	\$ 9.90	\$ 8,480.80	\$ -	\$ -	\$ 14,367.93
35	St. Mary's Catholic Church	\$ 997.66	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 33.26	\$ -	\$ -	\$ -	\$ -	\$ 1,030.92
36	Nashville City Center	\$ 4,580.48	\$ 8,620.58	\$ 377.48	\$ 1,050.24	\$ 2,777.12	\$ 418.46	\$ 42.67	\$ -	\$ 188.37	\$ 753.42	\$ -	\$ 23,488.13	\$ -	\$ -	\$ 42,296.95
38	Wildhorse Saloon	\$ 1,705.13	\$ 2,822.92	\$ 123.64	\$ 344.00	\$ 969.50	\$ 186.77	\$ 14.00	\$ -	\$ 61.70	\$ 182.83	\$ -	\$ 7,667.83	\$ 1,595.55	\$ -	\$ 15,673.87
39	Ryman Auditorium	\$ 1,962.37	\$ 3,206.41	\$ 140.44	\$ 390.74	\$ 1,360.88	\$ 246.33	\$ 15.91	\$ -	\$ 70.08	\$ 177.26	\$ -	\$ 10,102.45	\$ 1,618.36	\$ -	\$ 19,291.23
40	Bridgestone Arena	\$ 18,944.77	\$ 31,969.27	\$ 1,400.18	\$ 3,895.61	\$ 6,476.79	\$ 1,132.10	\$ 158.54	\$ -	\$ 698.73	\$ -	\$ 77.65	\$ 56,050.46	\$ 6,123.94	\$ -	\$ 126,928.04
41	Nissan Stadium	\$ 8,083.21	\$ 15,212.78	\$ 666.15	\$ 1,853.36	\$ 5,407.32	\$ 814.79	\$ 75.31	\$ -	\$ 332.43	\$ -	\$ 46.59	\$ 41,902.67	\$ -	\$ -	\$ 74,394.61
43	Hume-Fogg High School	\$ 2,691.91	\$ 4,342.18	\$ 190.20	\$ 529.16	\$ 397.86	\$ 74.49	\$ 21.55	\$ -	\$ 94.92	\$ -	\$ 309.84	\$ 3,766.47	\$ 569.96	\$ -	\$ 12,988.54
44	Schermerhorn Symphony Center	\$ 15,194.36	\$ -	\$ -	\$ -	\$ 1,468.60	\$ 303.36	\$ 34.18	\$ -	\$ -	\$ -	\$ -	\$ 14,661.64	\$ 3,218.73	\$ -	\$ 34,880.87
45	Nashville Public Library	\$ 6,889.00	\$ -	\$ -	\$ -	\$ 3,097.62	\$ 567.80	\$ 53.25	\$ -	\$ -	\$ -	\$ 207.36	\$ 22,695.24	\$ 3,962.90	\$ -	\$ 37,473.17
49	Viridian Residential Tower	\$ 12,372.48	\$ -	\$ -	\$ -	\$ 1,227.61	\$ 184.98	\$ 25.70	\$ -	\$ -	\$ -	\$ 228.89	\$ 9,723.62	\$ -	\$ -	\$ 23,763.28
50	Music City Center	\$ 77,567.78	\$ 9,241.21	\$ -	\$ 7,082.89	\$ 17,062.63	\$ 3,522.15	\$ 394.93	\$ -	\$ -	\$ -	\$ 286.19	\$ 139,856.08	\$ 37,299.94	\$ -	\$ 292,313.80
51	Hyatt Place Hotel	\$ 10,877.32	\$ -	\$ -	\$ -	\$ 882.15	\$ 181.74	\$ 26.18	\$ -	\$ -	\$ -	\$ 84.41	\$ 6,851.01	\$ 1,914.26	\$ -	\$ 20,817.07
51	State Government of TN	\$ 136,594.48	\$ 106,761.60	\$ -	\$ -	\$ 19,843.83	\$ 3,928.12	\$ -	\$ -	\$ 2,574.07	\$ -	\$ 3,233.36	\$ 171,093.02	\$ 36,785.81	\$ -	\$ 480,814.29
	Grand Totals:	\$ 393,405.27	\$ 299,877.34	\$ 8,053.75	\$ 29,490.23	\$ 88,168.20	\$ 16,282.01	\$ 1,493.94	\$ -	\$ 6,593.13	\$ 6,636.69	\$ 6,050.90	\$ 717,180.90	\$ 117,517.82	\$ -	\$ 1,690,750.18
	Rate Calculation Totals:	\$ 481,337.65	\$ 438,531.70	\$ 14,127.36	\$ 39,305.42	\$ 88,190.71	\$ 16,285.43	\$ 2,191.67	\$ -	\$ 7,049.94	\$ 6,636.69	\$ 6,050.90	\$ 717,287.94	\$ 117,517.85	\$ -	\$ 1,934,513.26
	Deviation:	\$ (87,932.38)	\$ (138,654.36)	\$ (6,073.61)	\$ (9,815.19)	\$ (22.51)	\$ (3.42)	\$ (697.73)	\$ -	\$ (456.81)	\$ -	\$ -	\$ (107.04)	\$ (0.03)	\$ -	\$ (243,763.08)

Metro Nashville District Energy System
Revenues
Chilled Water and Steam
August, 2018

Customer Number	Customer Name	Capacity	Operating	EDS Improvement	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	TIFS	Electricity	Natural Gas	Propane	Total
2	A. Birch	\$ 10,604.48	\$ 16,627.21	\$ 728.34	\$ 2,026.42	\$ 3,027.40	\$ 733.38	\$ 82.52	\$ -	\$ 303.60	\$ -	\$ 619.67	\$ 24,603.32	\$ 4,655.56	\$ -	\$ 64,011.90
4	Metro Courthouse	\$ 5,020.14	\$ 7,758.55	\$ 339.87	\$ 945.60	\$ 1,707.48	\$ 420.19	\$ 38.51	\$ -	\$ 141.67	\$ -	\$ 311.20	\$ 14,564.81	\$ 2,848.22	\$ -	\$ 34,096.24
7	Parkway Tower	\$ 4,576.74	\$ 7,527.45	\$ 329.70	\$ 917.31	\$ 1,308.02	\$ 257.63	\$ 37.32	\$ -	\$ 137.44	\$ 709.08	\$ 260.53	\$ 12,566.65	\$ -	\$ -	\$ 28,627.87
9	Bobby Hotel (fka Wells Fargo)	\$ 1,832.45	\$ 3,002.21	\$ 131.50	\$ 365.86	\$ 1,118.60	\$ 282.95	\$ 14.88	\$ -	\$ 54.81	\$ 254.67	\$ -	\$ 9,135.10	\$ 2,126.83	\$ -	\$ 18,319.86
10	Fairlane Hotel (fka 401 Union)	\$ 1,749.70	\$ 2,811.49	\$ 123.15	\$ 342.63	\$ 654.97	\$ 139.12	\$ 13.95	\$ -	\$ 51.33	\$ 310.26	\$ -	\$ 5,673.40	\$ 343.40	\$ -	\$ 12,213.40
11	Sheraton Hotel	\$ 9,657.00	\$ 15,119.16	\$ 662.29	\$ 1,842.64	\$ 2,655.42	\$ 703.69	\$ 75.03	\$ -	\$ 276.06	\$ 1,229.92	\$ 110.66	\$ 21,172.94	\$ 6,135.00	\$ -	\$ 59,639.81
12	Municipal Auditorium	\$ 4,846.18	\$ 8,034.54	\$ 351.91	\$ 979.09	\$ 1,107.84	\$ 221.63	\$ 39.83	\$ -	\$ 146.69	\$ -	\$ 186.37	\$ 9,161.91	\$ 116.57	\$ -	\$ 25,192.56
21	Hermitage Hotel	\$ 4,664.48	\$ 7,089.19	\$ 310.56	\$ 864.05	\$ 1,101.28	\$ 217.63	\$ 35.20	\$ -	\$ 129.45	\$ 276.83	\$ 444.18	\$ 9,074.76	\$ 24.47	\$ -	\$ 24,232.08
24	Criminal Justice Center	\$ 7,887.22	\$ 11,655.65	\$ 510.64	\$ 1,420.71	\$ -	\$ -	\$ 57.91	\$ -	\$ 212.85	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 21,744.98
25	501 Union Building	\$ 1,839.10	\$ 2,857.84	\$ 125.19	\$ 348.31	\$ 762.28	\$ 192.57	\$ 14.19	\$ -	\$ 52.19	\$ 232.74	\$ 21.74	\$ 6,611.87	\$ 1,440.76	\$ -	\$ 14,498.78
28	4th & Church Building	\$ 20,848.05	\$ -	\$ -	\$ -	\$ 2,181.09	\$ 429.58	\$ 47.39	\$ -	\$ -	\$ -	\$ -	\$ 20,216.56	\$ -	\$ -	\$ 43,722.67
29	Fifth-Third Financial Center	\$ 5,620.52	\$ 10,577.95	\$ 463.19	\$ 1,288.71	\$ 2,066.04	\$ 406.93	\$ 52.32	\$ -	\$ 193.08	\$ 786.67	\$ -	\$ 22,684.43	\$ -	\$ -	\$ 44,139.84
32	Renaissance Hotel	\$ 14,569.61	\$ 22,326.81	\$ 978.07	\$ 2,721.19	\$ 6,347.38	\$ 1,433.05	\$ 110.86	\$ -	\$ 407.69	\$ 1,462.50	\$ -	\$ 38,898.76	\$ 6,209.55	\$ -	\$ 95,465.47
34	Renaissance Office Tower	\$ 1,374.15	\$ 2,586.17	\$ 113.24	\$ 315.07	\$ 939.03	\$ 184.95	\$ 12.79	\$ -	\$ 47.21	\$ 227.25	\$ 31.68	\$ 8,027.13	\$ -	\$ -	\$ 13,858.67
35	St. Mary's Catholic Church	\$ 997.66	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 33.26	\$ -	\$ -	\$ -	\$ -	\$ 1,030.92
36	Nashville City Center	\$ 4,580.48	\$ 8,620.58	\$ 377.48	\$ 1,050.24	\$ 2,467.71	\$ 486.04	\$ 42.64	\$ -	\$ 157.35	\$ 753.42	\$ -	\$ 23,645.98	\$ -	\$ -	\$ 42,181.92
38	Wildhorse Saloon	\$ 1,705.13	\$ 2,822.92	\$ 123.64	\$ 344.00	\$ 898.15	\$ 216.71	\$ 13.99	\$ -	\$ 51.53	\$ 182.83	\$ -	\$ 7,773.28	\$ 1,351.90	\$ -	\$ 15,484.08
39	Ryman Auditorium	\$ 1,962.37	\$ 3,206.41	\$ 140.44	\$ 390.74	\$ 1,222.52	\$ 288.92	\$ 15.90	\$ -	\$ 58.54	\$ 177.26	\$ -	\$ 9,715.35	\$ 1,634.08	\$ -	\$ 18,812.53
40	Bridgestone Arena	\$ 18,944.77	\$ 31,969.27	\$ 1,400.18	\$ 3,895.61	\$ 5,892.44	\$ 1,326.78	\$ 158.43	\$ -	\$ 583.65	\$ -	\$ -	\$ 55,544.93	\$ 5,643.62	\$ -	\$ 125,359.68
41	Nissan Stadium	\$ 8,083.21	\$ 15,212.78	\$ 666.15	\$ 1,853.36	\$ 5,296.19	\$ 1,043.13	\$ 75.24	\$ -	\$ 277.68	\$ -	\$ 23.30	\$ 43,590.50	\$ -	\$ -	\$ 76,121.54
43	Hume-Fogg High School	\$ 2,691.91	\$ 4,342.18	\$ 190.20	\$ 529.16	\$ 397.10	\$ 103.40	\$ 21.54	\$ -	\$ 79.28	\$ -	\$ 386.71	\$ 4,267.73	\$ 855.33	\$ -	\$ 13,864.54
44	Schermerhorn Symphony Center	\$ 15,194.36	\$ -	\$ -	\$ -	\$ 1,139.27	\$ 292.78	\$ 34.16	\$ -	\$ -	\$ -	\$ -	\$ 11,648.26	\$ 2,322.06	\$ -	\$ 30,630.89
45	Nashville Public Library	\$ 6,889.00	\$ -	\$ -	\$ -	\$ 2,866.07	\$ 695.99	\$ 53.22	\$ -	\$ -	\$ -	\$ 209.77	\$ 22,201.68	\$ 4,464.88	\$ -	\$ 37,380.61
49	Viridian Residential Tower	\$ 12,372.48	\$ -	\$ -	\$ -	\$ 1,098.73	\$ 216.41	\$ 25.68	\$ -	\$ -	\$ -	\$ 253.64	\$ 9,063.12	\$ -	\$ -	\$ 23,030.06
50	Music City Center	\$ 77,567.78	\$ 9,241.21	\$ -	\$ 7,078.26	\$ 17,089.83	\$ 4,496.37	\$ 394.67	\$ -	\$ -	\$ -	\$ 118.66	\$ 145,073.64	\$ 38,381.93	\$ -	\$ 299,442.35
51	Hyatt Place Hotel	\$ 10,877.32	\$ -	\$ -	\$ -	\$ 737.57	\$ 194.92	\$ 26.17	\$ -	\$ -	\$ -	\$ 142.16	\$ 6,126.58	\$ 1,685.79	\$ -	\$ 19,790.51
51	State Government of TN	\$ 136,594.48	\$ 106,761.60	\$ -	\$ -	\$ 18,417.96	\$ 4,766.18	\$ -	\$ -	\$ 2,150.10	\$ -	\$ 3,892.93	\$ 169,423.76	\$ 38,659.66	\$ -	\$ 480,666.67
	Grand Totals:	\$ 393,550.77	\$ 300,151.17	\$ 8,065.74	\$ 29,518.96	\$ 82,500.37	\$ 19,750.93	\$ 1,494.34	\$ -	\$ 5,512.20	\$ 6,636.69	\$ 7,013.20	\$ 710,466.45	\$ 118,899.61	\$ -	\$ 1,683,560.43
	Rate Calculation Totals:	\$ 481,337.65	\$ 438,531.70	\$ 14,127.36	\$ 39,305.42	\$ 82,520.81	\$ 19,754.89	\$ 2,191.67	\$ -	\$ 5,888.90	\$ 6,636.69	\$ 7,013.20	\$ 710,569.72	\$ 118,899.60	\$ -	\$ 1,926,777.61
	Deviation:	\$ (87,786.88)	\$ (138,380.53)	\$ (6,061.62)	\$ (9,786.46)	\$ (20.44)	\$ (3.96)	\$ (697.33)	\$ -	\$ (376.70)	\$ -	\$ -	\$ (103.27)	\$ 0.01	\$ -	\$ (243,217.18)

Metro Nashville District Energy System
Revenues
Chilled Water and Steam
September, 2018

Customer Number	Customer Name	Capacity	Operating	EDS Improvement	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	TIFS	Electricity	Natural Gas	Propane	Total
2	A. A. Birch	\$ 11,253.18	\$ 17,609.24	\$ 771.36	\$ 2,146.11	\$ 3,497.39	\$ 688.19	\$ 82.52	\$ -	\$ 345.88	\$ -	\$ 651.87	\$ 21,360.11	\$ 3,852.96	\$ -	\$ 62,258.81
4	Metro Courthouse	\$ 5,330.54	\$ 8,221.58	\$ 360.15	\$ 1,002.03	\$ 2,026.35	\$ 416.55	\$ 38.51	\$ -	\$ 161.50	\$ -	\$ 334.99	\$ 12,818.45	\$ 2,977.62	\$ -	\$ 33,688.27
7	Parkway Tower	\$ 4,846.41	\$ 7,957.09	\$ 348.53	\$ 969.67	\$ 1,478.55	\$ 251.99	\$ 37.32	\$ -	\$ 156.27	\$ 709.08	\$ 292.04	\$ 10,804.08	\$ -	\$ -	\$ 27,851.03
9	Bobby Hotel (fka Wells Fargo)	\$ 1,940.77	\$ 3,174.05	\$ 139.03	\$ 386.80	\$ 1,037.54	\$ 232.62	\$ 14.88	\$ -	\$ 62.34	\$ 254.67	\$ 34.39	\$ 6,469.45	\$ 2,333.19	\$ -	\$ 16,079.73
10	Fairlane Hotel (fka 401 Union)	\$ 1,854.75	\$ 2,974.64	\$ 130.30	\$ 362.51	\$ 733.42	\$ 133.03	\$ 13.95	\$ -	\$ 58.42	\$ 310.26	\$ -	\$ 4,837.35	\$ 336.14	\$ -	\$ 11,744.77
11	Sheraton Hotel	\$ 10,248.39	\$ 16,013.08	\$ 701.45	\$ 1,951.59	\$ 3,159.73	\$ 705.73	\$ 75.03	\$ -	\$ 314.53	\$ 1,229.92	\$ 162.97	\$ 18,753.52	\$ 6,992.97	\$ -	\$ 60,308.91
12	Municipal Auditorium	\$ 5,129.85	\$ 8,490.54	\$ 371.88	\$ 1,034.66	\$ 1,252.05	\$ 218.08	\$ 39.83	\$ -	\$ 166.75	\$ -	\$ 529.34	\$ 7,851.12	\$ 196.55	\$ -	\$ 25,280.65
21	Hermitage Hotel	\$ 4,956.39	\$ 7,517.43	\$ 329.32	\$ 916.24	\$ 1,334.63	\$ 229.48	\$ 35.20	\$ -	\$ 147.67	\$ 276.83	\$ 470.53	\$ 8,152.06	\$ 84.68	\$ -	\$ 24,450.46
24	Criminal Justice Center	\$ 8,390.53	\$ 12,374.29	\$ 542.13	\$ 1,508.31	\$ -	\$ -	\$ 57.91	\$ -	\$ 243.09	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 23,116.26
25	501 Union Building	\$ 1,952.36	\$ 3,027.72	\$ 132.64	\$ 369.01	\$ 919.32	\$ 193.55	\$ 14.19	\$ -	\$ 59.47	\$ 232.74	\$ 2.86	\$ 6,035.10	\$ 1,542.22	\$ -	\$ 14,481.18
28	4th & Church Building	\$ 20,848.05	\$ -	\$ -	\$ -	\$ 2,051.92	\$ 349.71	\$ 47.39	\$ -	\$ -	\$ -	\$ -	\$ 15,558.94	\$ -	\$ -	\$ 38,856.01
29	Fifth-Third Financial Center	\$ 5,912.59	\$ 11,127.64	\$ 487.26	\$ 1,355.67	\$ 2,380.63	\$ 405.73	\$ 52.32	\$ -	\$ 218.49	\$ 786.67	\$ 17.04	\$ 20,840.02	\$ -	\$ -	\$ 43,584.06
32	Renaissance Hotel	\$ 15,476.02	\$ 23,667.48	\$ 1,036.80	\$ 2,884.61	\$ 6,814.11	\$ 1,281.90	\$ 110.86	\$ -	\$ 464.90	\$ 1,462.50	\$ -	\$ 38,223.16	\$ 5,042.62	\$ -	\$ 96,464.96
34	Renaissance Office Tower	\$ 1,445.55	\$ 2,720.56	\$ 119.13	\$ 331.44	\$ 1,058.39	\$ 180.38	\$ 12.79	\$ -	\$ 53.42	\$ 227.25	\$ 60.41	\$ 7,044.46	\$ -	\$ -	\$ 13,253.78
35	St. Mary's Catholic Church	\$ 997.66	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 33.26	\$ -	\$ -	\$ -	\$ -	\$ 1,030.92
36	Nashville City Center	\$ 4,818.51	\$ 9,068.55	\$ 397.10	\$ 1,104.82	\$ 2,710.87	\$ 462.01	\$ 42.64	\$ -	\$ 178.06	\$ 753.42	\$ -	\$ 19,561.51	\$ -	\$ -	\$ 39,097.49
38	Wildhorse Saloon	\$ 1,805.06	\$ 2,983.29	\$ 130.67	\$ 363.54	\$ 902.91	\$ 155.37	\$ 13.99	\$ -	\$ 58.59	\$ 182.83	\$ -	\$ 7,364.13	\$ 62.34	\$ -	\$ 14,022.72
39	Ryman Auditorium	\$ 2,078.61	\$ 3,390.27	\$ 148.50	\$ 413.15	\$ 1,394.66	\$ 274.37	\$ 15.90	\$ -	\$ 66.59	\$ 177.26	\$ -	\$ 8,229.43	\$ 1,533.64	\$ -	\$ 17,722.38
40	Bridgestone Arena	\$ 20,037.26	\$ 33,761.12	\$ 1,478.67	\$ 4,113.97	\$ 11,543.27	\$ 2,267.96	\$ 158.43	\$ -	\$ 663.03	\$ -	\$ -	\$ 71,448.21	\$ 12,573.15	\$ -	\$ 158,045.07
41	Nissan Stadium	\$ 8,503.25	\$ 16,003.32	\$ 700.76	\$ 1,949.67	\$ 5,602.31	\$ 954.80	\$ 75.24	\$ -	\$ 314.22	\$ -	\$ 98.03	\$ 34,707.59	\$ -	\$ -	\$ 68,909.19
43	Hume-Fogg High School	\$ 2,853.02	\$ 4,593.47	\$ 201.20	\$ 559.79	\$ 351.13	\$ 74.12	\$ 21.54	\$ -	\$ 90.22	\$ -	\$ 575.90	\$ 2,915.01	\$ 597.37	\$ -	\$ 12,832.77
44	Schermerhorn Symphony Center	\$ 15,194.36	\$ -	\$ -	\$ -	\$ 1,874.79	\$ 406.86	\$ 34.16	\$ -	\$ -	\$ -	\$ -	\$ 13,861.57	\$ 3,652.57	\$ -	\$ 35,024.31
45	Nashville Public Library	\$ 6,889.00	\$ -	\$ -	\$ -	\$ 3,534.72	\$ 736.72	\$ 53.22	\$ -	\$ -	\$ -	\$ 221.83	\$ 20,361.92	\$ 5,616.73	\$ -	\$ 37,414.14
49	Viridian Residential Tower	\$ 12,372.48	\$ -	\$ -	\$ -	\$ 1,228.28	\$ 209.34	\$ 25.68	\$ -	\$ -	\$ -	\$ 364.99	\$ 7,792.89	\$ -	\$ -	\$ 21,993.66
50	Music City Center	\$ 77,567.78	\$ 9,241.21	\$ -	\$ 7,078.26	\$ 19,876.36	\$ 4,235.37	\$ 394.67	\$ -	\$ -	\$ -	\$ -	\$ 129,022.66	\$ 35,457.55	\$ -	\$ 282,873.86
51	Hyatt Place Hotel	\$ 10,877.32	\$ -	\$ -	\$ -	\$ 692.48	\$ 158.81	\$ 26.17	\$ -	\$ -	\$ -	\$ 226.57	\$ 4,610.12	\$ 1,705.94	\$ -	\$ 18,297.41
51	State Government of TN	\$ 136,594.48	\$ 106,761.60	\$ -	\$ -	\$ 20,661.93	\$ 4,412.67	\$ -	\$ -	\$ 2,449.86	\$ -	\$ 3,765.93	\$ 146,840.56	\$ 37,274.52	\$ -	\$ 458,761.55
	Grand Totals:	\$ 400,174.17	\$ 310,678.17	\$ 8,526.88	\$ 30,801.85	\$ 98,117.74	\$ 19,635.34	\$ 1,494.34	\$ -	\$ 6,273.30	\$ 6,636.69	\$ 7,809.69	\$ 645,463.42	\$ 121,832.76	\$ -	\$ 1,657,444.35
	Rate Calculation Totals:	\$ 481,337.65	\$ 438,531.70	\$ 14,127.36	\$ 39,305.42	\$ 98,140.15	\$ 19,639.68	\$ 2,191.67	\$ -	\$ 6,334.71	\$ 6,636.69	\$ 7,809.69	\$ 645,548.92	\$ 121,851.77	\$ -	\$ 1,881,455.41
	Deviation:	\$ (81,163.48)	\$ (127,853.53)	\$ (5,600.48)	\$ (8,503.57)	\$ (22.41)	\$ (4.34)	\$ (697.33)	\$ -	\$ (61.41)	\$ -	\$ -	\$ (85.50)	\$ (19.01)	\$ -	\$ (224,011.06)

Metro Nashville District Energy System
Revenues
Chilled Water and Steam
October, 2018

Customer Number	Customer Name	Capacity	Operating	EDS Improvement	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	TIFS	Electricity	Natural Gas	Propane	Total
2	A. A. Birch	\$ 11,253.18	\$ 17,609.24	\$ 771.36	\$ 2,146.11	\$ 2,374.85	\$ 669.34	\$ 82.52	\$ -	\$ 357.13	\$ -	\$ 1,320.90	\$ 15,315.12	\$ 7,215.77	\$ -	\$ 59,115.52
4	Metro Courthouse	\$ 5,330.54	\$ 8,221.58	\$ 360.15	\$ 1,002.03	\$ 1,534.69	\$ 434.36	\$ 38.51	\$ -	\$ 166.74	\$ -	\$ 453.00	\$ 9,500.21	\$ 4,051.94	\$ -	\$ 31,093.75
7	Parkway Tower	\$ 4,846.41	\$ 7,957.09	\$ 348.53	\$ 969.67	\$ 1,119.80	\$ 321.59	\$ 37.32	\$ -	\$ 161.36	\$ 709.08	\$ 215.66	\$ 7,985.08	\$ 1,392.36	\$ -	\$ 26,063.95
9	Bobby Hotel (fka Wells Fargo)	\$ 1,940.77	\$ 3,174.05	\$ 139.03	\$ 386.80	\$ 752.36	\$ 204.93	\$ 14.88	\$ -	\$ 64.37	\$ 254.67	\$ 108.13	\$ 4,718.05	\$ 4,676.20	\$ -	\$ 16,434.24
10	Fairlane Hotel (fka 401 Union)	\$ 1,854.75	\$ 2,974.64	\$ 130.30	\$ 362.51	\$ 447.39	\$ 127.84	\$ 13.95	\$ -	\$ 60.33	\$ 310.26	\$ 18.82	\$ 3,284.97	\$ 773.32	\$ -	\$ 10,359.08
11	Sheraton Hotel	\$ 10,248.39	\$ 16,013.08	\$ 701.45	\$ 1,951.59	\$ 2,314.43	\$ 641.45	\$ 75.03	\$ -	\$ 324.76	\$ 1,229.92	\$ 333.70	\$ 13,807.11	\$ 10,682.28	\$ -	\$ 58,323.19
12	Municipal Auditorium	\$ 5,129.85	\$ 8,490.54	\$ 371.88	\$ 1,034.66	\$ 588.11	\$ 167.54	\$ 39.83	\$ -	\$ 172.18	\$ -	\$ 637.17	\$ 3,207.60	\$ 1,189.44	\$ -	\$ 21,028.80
21	Hermitage Hotel	\$ 4,956.39	\$ 7,517.43	\$ 329.32	\$ 916.24	\$ 873.28	\$ 252.49	\$ 35.20	\$ -	\$ 152.47	\$ 276.83	\$ 581.62	\$ 5,503.92	\$ 514.87	\$ -	\$ 21,910.06
24	Criminal Justice Center	\$ 8,390.53	\$ 12,374.29	\$ 542.13	\$ 1,508.31	\$ -	\$ -	\$ 57.91	\$ -	\$ 250.99	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 23,124.16
25	501 Union Building	\$ 1,952.36	\$ 3,027.72	\$ 132.64	\$ 369.01	\$ 495.60	\$ 140.42	\$ 14.19	\$ -	\$ 61.41	\$ 232.74	\$ -	\$ 3,427.78	\$ 1,256.95	\$ -	\$ 11,110.82
28	4th & Church Building	\$ 20,848.05	\$ -	\$ -	\$ -	\$ 1,496.85	\$ 425.64	\$ 47.39	\$ -	\$ -	\$ -	\$ -	\$ 11,667.10	\$ 3,286.70	\$ -	\$ 37,771.73
29	Fifth-Third Financial Center	\$ 5,912.59	\$ 11,127.64	\$ 487.26	\$ 1,355.67	\$ 1,723.12	\$ 501.23	\$ 52.32	\$ -	\$ 225.59	\$ 786.67	\$ 323.76	\$ 16,015.82	\$ -	\$ -	\$ 38,511.67
32	Renaissance Hotel	\$ 15,476.02	\$ 23,667.48	\$ 1,036.80	\$ 2,884.61	\$ 4,465.84	\$ 1,264.10	\$ 110.86	\$ -	\$ 480.02	\$ 1,462.50	\$ -	\$ 25,836.07	\$ 11,747.56	\$ -	\$ 88,431.86
34	Renaissance Office Tower	\$ 1,445.55	\$ 2,720.56	\$ 119.13	\$ 331.44	\$ 995.32	\$ 289.53	\$ 12.79	\$ -	\$ 55.15	\$ 227.25	\$ 99.99	\$ 5,857.24	\$ -	\$ -	\$ 12,153.95
35	St. Mary's Catholic Church	\$ 997.66	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 33.26	\$ -	\$ -	\$ -	\$ -	\$ 1,030.92
36	Nashville City Center	\$ 4,818.51	\$ 9,068.55	\$ 397.10	\$ 1,104.82	\$ 1,940.37	\$ 564.43	\$ 42.64	\$ -	\$ 183.85	\$ 753.42	\$ 256.91	\$ 14,581.85	\$ -	\$ -	\$ 33,712.45
38	Wildhorse Saloon	\$ 1,805.06	\$ 2,983.29	\$ 130.67	\$ 363.54	\$ 540.70	\$ 153.56	\$ 13.99	\$ -	\$ 60.50	\$ 182.83	\$ 18.87	\$ 4,681.19	\$ 1,250.02	\$ -	\$ 12,184.22
39	Ryman Auditorium	\$ 2,078.61	\$ 3,390.27	\$ 148.50	\$ 413.15	\$ 1,014.13	\$ 288.93	\$ 15.90	\$ -	\$ 68.75	\$ 177.26	\$ -	\$ 5,941.31	\$ 2,038.71	\$ -	\$ 15,575.52
40	Bridgestone Arena	\$ 20,037.26	\$ 33,761.12	\$ 1,478.67	\$ 4,113.97	\$ 7,867.74	\$ 2,261.56	\$ 158.43	\$ -	\$ 684.59	\$ -	\$ -	\$ 51,084.93	\$ 9,095.38	\$ -	\$ 130,543.65
41	Nissan Stadium	\$ 8,503.25	\$ 16,003.32	\$ 700.76	\$ 1,949.67	\$ 2,691.23	\$ 782.84	\$ 75.24	\$ -	\$ 324.44	\$ -	\$ 122.53	\$ 20,845.16	\$ -	\$ -	\$ 51,998.44
43	Hume-Fogg High School	\$ 2,853.02	\$ 4,593.47	\$ 201.20	\$ 559.79	\$ 168.13	\$ 45.93	\$ 21.54	\$ -	\$ 93.16	\$ -	\$ 666.58	\$ 2,059.18	\$ 1,002.56	\$ -	\$ 12,264.56
44	Schermerhorn Symphony Center	\$ 15,194.36	\$ -	\$ -	\$ -	\$ 1,348.59	\$ 381.30	\$ 34.16	\$ -	\$ -	\$ -	\$ -	\$ 8,412.44	\$ 3,690.89	\$ -	\$ 29,061.74
45	Nashville Public Library	\$ 6,889.00	\$ -	\$ -	\$ -	\$ 3,302.45	\$ 938.32	\$ 53.22	\$ -	\$ -	\$ -	\$ 262.82	\$ 17,230.94	\$ 7,502.21	\$ -	\$ 36,178.96
49	Viridian Residential Tower	\$ 12,372.48	\$ -	\$ -	\$ -	\$ 709.49	\$ 206.38	\$ 25.68	\$ -	\$ -	\$ -	\$ 1,008.36	\$ 4,931.94	\$ -	\$ -	\$ 19,254.33
50	Music City Center	\$ 77,567.78	\$ 9,241.21	\$ -	\$ 7,078.26	\$ 14,015.56	\$ 3,964.31	\$ 394.67	\$ -	\$ -	\$ -	\$ -	\$ 92,047.96	\$ 37,851.20	\$ -	\$ 242,160.95
51	Hyatt Place Hotel	\$ 10,877.32	\$ -	\$ -	\$ -	\$ 462.60	\$ 126.91	\$ 26.17	\$ -	\$ -	\$ -	\$ 366.51	\$ 3,122.28	\$ 2,572.32	\$ -	\$ 17,554.11
51	State Government of TN	\$ 136,594.48	\$ 106,761.60	\$ -	\$ -	\$ 15,221.49	\$ 4,273.12	\$ -	\$ -	\$ 2,529.56	\$ -	\$ 4,841.54	\$ 109,506.66	\$ 51,957.68	\$ -	\$ 431,686.13
	Grand Totals:	\$ 400,174.17	\$ 310,678.17	\$ 8,526.88	\$ 30,801.85	\$ 68,464.12	\$ 19,428.05	\$ 1,494.34	\$ -	\$ 6,477.35	\$ 6,636.69	\$ 11,636.87	\$ 460,571.91	\$ 163,748.36	\$ -	\$ 1,488,638.76
	Rate Calculation Totals:	\$ 481,337.65	\$ 438,531.70	\$ 14,127.36	\$ 39,305.42	\$ 68,480.93	\$ 19,432.51	\$ 2,191.67	\$ -	\$ 6,540.71	\$ 6,636.69	\$ 11,636.87	\$ 460,641.15	\$ 163,895.74	\$ -	\$ 1,712,758.40
	Deviation:	\$ (81,163.48)	\$ (127,853.53)	\$ (5,600.48)	\$ (8,503.57)	\$ (16.81)	\$ (4.46)	\$ (697.33)	\$ -	\$ (63.36)	\$ -	\$ -	\$ (69.24)	\$ (147.38)	\$ -	\$ (224,119.64)

Metro Nashville District Energy System
Revenues
Chilled Water and Steam
November, 2018

Customer Number	Customer Name	Capacity	Operating	EDS Improvement	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	TIF5	Electricity	Natural Gas	Propane	Total
2	A. A. Birch	\$ 11,253.18	\$ 17,609.24	\$ 771.36	\$ 2,146.11	\$ 1,205.55	\$ 635.10	\$ 82.52	\$ -	\$ 346.36	\$ -	\$ 1,964.20	\$ 8,181.13	\$ 11,157.28	\$ 37.44	\$ 55,389.47
4	Metro Courthouse	\$ 5,330.54	\$ 8,221.58	\$ 360.15	\$ 1,002.03	\$ 1,018.20	\$ 446.81	\$ 38.51	\$ -	\$ 161.72	\$ -	\$ 487.26	\$ 5,130.52	\$ 6,103.98	\$ 20.48	\$ 28,321.78
7	Parkway Tower	\$ 4,846.41	\$ 7,957.09	\$ 348.53	\$ 969.67	\$ 989.23	\$ 416.36	\$ 37.32	\$ -	\$ 156.49	\$ 709.08	\$ 215.66	\$ 4,998.68	\$ 5,272.54	\$ 17.69	\$ 26,934.75
9	Bobby Hotel (fka Wells Fargo)	\$ 1,940.77	\$ 3,174.05	\$ 139.03	\$ 386.80	\$ 619.47	\$ 409.58	\$ 14.88	\$ -	\$ 62.43	\$ 254.67	\$ 159.54	\$ 2,451.16	\$ 8,817.43	\$ 29.59	\$ 18,459.40
10	Fairlane Hotel (fka 401 Union)	\$ 1,854.75	\$ 2,974.64	\$ 130.30	\$ 362.51	\$ 229.99	\$ 124.00	\$ 13.95	\$ -	\$ 58.51	\$ 310.26	\$ 164.68	\$ 1,160.44	\$ 2,233.65	\$ 7.50	\$ 9,625.18
11	Sheraton Hotel	\$ 10,248.39	\$ 16,013.08	\$ 701.45	\$ 1,951.59	\$ 1,711.24	\$ 883.55	\$ 75.03	\$ -	\$ 314.97	\$ 1,229.92	\$ 167.62	\$ 8,234.96	\$ 15,172.46	\$ 50.91	\$ 56,755.17
12	Municipal Auditorium	\$ 5,129.85	\$ 8,490.54	\$ 371.88	\$ 1,034.66	\$ 606.55	\$ 416.03	\$ 39.83	\$ -	\$ 166.98	\$ -	\$ 534.24	\$ 2,371.61	\$ 9,189.00	\$ 30.83	\$ 28,382.00
21	Hermitage Hotel	\$ 4,956.39	\$ 7,517.43	\$ 329.32	\$ 916.24	\$ 572.86	\$ 230.36	\$ 35.20	\$ -	\$ 147.88	\$ 276.83	\$ 581.62	\$ 2,914.10	\$ 2,654.96	\$ 8.91	\$ 21,142.10
24	Criminal Justice Center	\$ 8,390.53	\$ 12,374.29	\$ 542.13	\$ 1,508.31	\$ -	\$ -	\$ 57.91	\$ -	\$ 243.43	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 23,116.60
25	501 Union Building	\$ 1,952.36	\$ 3,027.72	\$ 132.64	\$ 369.01	\$ 384.84	\$ 168.37	\$ 14.19	\$ -	\$ 59.55	\$ 232.74	\$ -	\$ 2,370.04	\$ 2,288.22	\$ 7.68	\$ 11,007.36
28	4th & Church Building	\$ 20,848.05	\$ -	\$ -	\$ -	\$ 1,224.97	\$ 582.68	\$ 47.39	\$ -	\$ -	\$ -	\$ -	\$ 7,273.69	\$ 9,015.71	\$ 30.25	\$ 39,022.74
29	Fifth-Third Financial Center	\$ 5,912.59	\$ 11,127.64	\$ 487.26	\$ 1,355.67	\$ 939.84	\$ 260.37	\$ 52.32	\$ -	\$ 218.79	\$ 786.67	\$ 596.41	\$ 9,785.16	\$ -	\$ -	\$ 31,522.72
32	Renaissance Hotel	\$ 15,476.02	\$ 23,667.48	\$ 1,036.80	\$ 2,884.61	\$ 2,517.35	\$ 1,279.85	\$ 110.86	\$ -	\$ 465.55	\$ 1,462.50	\$ 138.05	\$ 12,179.20	\$ 21,581.56	\$ 72.42	\$ 82,872.25
34	Renaissance Office Tower	\$ 1,445.55	\$ 2,720.56	\$ 119.13	\$ 331.44	\$ 787.59	\$ 218.20	\$ 12.79	\$ -	\$ 53.49	\$ 227.25	\$ 168.73	\$ 4,146.46	\$ -	\$ -	\$ 10,231.19
35	St. Mary's Catholic Church	\$ 997.66	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 33.26	\$ -	\$ -	\$ -	\$ -	\$ 1,030.92
36	Nashville City Center	\$ 4,818.51	\$ 9,068.55	\$ 397.10	\$ 1,104.82	\$ 815.63	\$ 225.96	\$ 42.64	\$ -	\$ 178.31	\$ 753.42	\$ 333.29	\$ 5,059.70	\$ -	\$ -	\$ 22,797.93
38	Wildhorse Saloon	\$ 1,805.06	\$ 2,983.29	\$ 130.67	\$ 363.54	\$ 418.81	\$ 188.65	\$ 13.99	\$ -	\$ 58.67	\$ 182.83	\$ 77.20	\$ 3,586.68	\$ 2,690.74	\$ 9.03	\$ 12,509.16
39	Ryman Auditorium	\$ 2,078.61	\$ 3,390.27	\$ 148.50	\$ 413.15	\$ 637.82	\$ 267.02	\$ 15.90	\$ -	\$ 66.68	\$ 177.26	\$ -	\$ 3,337.70	\$ 3,346.59	\$ 11.23	\$ 13,890.73
40	Bridgestone Arena	\$ 20,037.26	\$ 33,761.12	\$ 1,478.67	\$ 4,113.97	\$ 3,807.07	\$ 1,224.05	\$ 158.43	\$ -	\$ 663.96	\$ -	\$ 367.60	\$ 25,393.52	\$ 6,274.64	\$ 21.06	\$ 97,301.35
41	Nissan Stadium	\$ 8,503.25	\$ 16,003.32	\$ 700.76	\$ 1,949.67	\$ 533.73	\$ 147.87	\$ 75.24	\$ -	\$ 314.66	\$ -	\$ 134.79	\$ 7,899.92	\$ -	\$ -	\$ 36,263.21
43	Hume-Fogg High School	\$ 2,853.02	\$ 4,593.47	\$ 201.20	\$ 559.79	\$ 69.07	\$ 70.20	\$ 21.54	\$ -	\$ 90.34	\$ -	\$ 715.59	\$ 352.44	\$ 1,891.97	\$ 6.35	\$ 11,424.98
44	Schermerhorn Symphony Center	\$ 15,194.36	\$ -	\$ -	\$ -	\$ 905.21	\$ 370.92	\$ 34.16	\$ -	\$ -	\$ -	\$ -	\$ 4,794.01	\$ 4,451.64	\$ 14.94	\$ 25,765.24
45	Nashville Public Library	\$ 6,889.00	\$ -	\$ -	\$ -	\$ 3,254.08	\$ 1,213.21	\$ 53.22	\$ -	\$ -	\$ -	\$ 283.07	\$ 15,664.26	\$ 11,549.34	\$ 38.76	\$ 38,944.94
49	Viridian Residential Tower	\$ 12,372.48	\$ -	\$ -	\$ -	\$ 230.40	\$ 63.83	\$ 25.68	\$ -	\$ -	\$ -	\$ 1,515.63	\$ 1,342.94	\$ -	\$ -	\$ 15,550.96
50	Music City Center	\$ 77,567.78	\$ 9,241.21	\$ -	\$ 7,078.26	\$ 7,511.58	\$ 3,433.90	\$ 394.67	\$ -	\$ -	\$ -	\$ -	\$ 44,979.36	\$ 50,129.28	\$ 168.21	\$ 200,504.25
51	Hyatt Place Hotel	\$ 10,877.32	\$ -	\$ -	\$ -	\$ 309.82	\$ 179.79	\$ 26.17	\$ -	\$ -	\$ -	\$ 459.80	\$ 1,315.51	\$ 3,481.56	\$ 11.68	\$ 16,661.65
51	State Government of TN	\$ 136,594.48	\$ 106,761.60	\$ -	\$ -	\$ 10,914.76	\$ 5,502.93	\$ -	\$ -	\$ 2,453.30	\$ -	\$ 7,091.36	\$ 61,162.51	\$ 91,859.18	\$ 308.25	\$ 422,648.37
	Grand Totals:	\$ 400,174.17	\$ 310,678.17	\$ 8,526.88	\$ 30,801.85	\$ 42,215.66	\$ 18,959.59	\$ 1,494.34	\$ -	\$ 6,282.07	\$ 6,636.69	\$ 16,156.34	\$ 246,085.70	\$ 269,161.73	\$ 903.21	\$ 1,358,076.40
	Rate Calculation Totals:	\$ 481,337.65	\$ 438,531.70	\$ 14,127.36	\$ 39,305.42	\$ 42,229.55	\$ 18,972.51	\$ 2,191.67	\$ -	\$ 6,343.48	\$ 6,636.69	\$ 16,156.34	\$ 246,127.01	\$ 269,500.46	\$ 904.34	\$ 1,582,364.18
	Deviation:	\$ (81,163.48)	\$ (127,853.53)	\$ (5,600.48)	\$ (8,503.57)	\$ (13.89)	\$ (12.92)	\$ (697.33)	\$ -	\$ (61.41)	\$ -	\$ -	\$ (41.31)	\$ (338.73)	\$ (1.13)	\$ (224,287.78)

Metro Nashville District Energy System
Revenues
Chilled Water and Steam
December, 2018

Customer Number	Customer Name	Capacity	Operating	EDS Improvement	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	TIFS	Electricity	Natural Gas	Propane	Total
2	A. A. Birch	\$ 11,253.18	\$ 17,259.90	\$ 771.36	\$ 2,146.11	\$ 1,143.71	\$ 1,043.84	\$ 82.52	\$ -	\$ 229.52	\$ -	\$ 1,786.37	\$ 10,522.06	\$ 19,804.09	\$ 64.57	\$ 66,107.23
4	Metro Courthouse	\$ 5,330.54	\$ 8,058.47	\$ 360.15	\$ 1,002.03	\$ 698.46	\$ 564.80	\$ 38.51	\$ -	\$ 107.16	\$ -	\$ 443.37	\$ 5,231.65	\$ 7,933.63	\$ 25.87	\$ 29,794.64
7	Parkway Tower	\$ 4,846.41	\$ 7,799.26	\$ 348.53	\$ 969.67	\$ 881.03	\$ 703.48	\$ 37.32	\$ -	\$ 103.70	\$ 709.08	\$ 186.26	\$ 6,717.96	\$ 9,494.47	\$ 30.95	\$ 32,828.12
9	Bobby Hotel (fka Wells Fargo)	\$ 1,940.77	\$ 3,111.09	\$ 139.03	\$ 386.80	\$ 425.85	\$ 460.19	\$ 14.88	\$ -	\$ 41.36	\$ 254.67	\$ 180.22	\$ 2,653.33	\$ 11,468.95	\$ 37.39	\$ 21,114.53
10	Fairlane Hotel (fka 401 Union)	\$ 1,854.75	\$ 2,915.63	\$ 130.30	\$ 362.51	\$ 149.40	\$ 144.88	\$ 13.95	\$ -	\$ 38.77	\$ 310.26	\$ 274.02	\$ 1,064.77	\$ 3,074.58	\$ 10.02	\$ 10,343.84
11	Sheraton Hotel	\$ 10,248.39	\$ 15,695.41	\$ 701.45	\$ 1,951.59	\$ 1,107.43	\$ 1,012.68	\$ 75.03	\$ -	\$ 208.72	\$ 1,229.92	\$ 160.86	\$ 8,446.40	\$ 19,287.79	\$ 62.88	\$ 60,188.55
12	Municipal Auditorium	\$ 5,129.85	\$ 8,322.12	\$ 371.88	\$ 1,034.66	\$ 421.56	\$ 474.67	\$ 39.83	\$ -	\$ 110.65	\$ -	\$ 619.24	\$ 2,677.57	\$ 12,448.72	\$ 40.59	\$ 31,691.34
21	Hermitage Hotel	\$ 4,956.39	\$ 7,368.29	\$ 329.32	\$ 916.24	\$ 391.10	\$ 313.09	\$ 35.20	\$ -	\$ 97.98	\$ 276.83	\$ 590.22	\$ 3,196.43	\$ 4,260.48	\$ 13.89	\$ 22,745.46
24	Criminal Justice Center	\$ 8,390.53	\$ 12,128.77	\$ 542.13	\$ 1,508.31	\$ 44.41	\$ 90.23	\$ 57.91	\$ -	\$ 161.31	\$ -	\$ -	\$ 155.57	\$ 3,614.56	\$ 11.78	\$ 26,705.51
25	501 Union Building	\$ 1,952.36	\$ 2,967.66	\$ 132.64	\$ 369.01	\$ 269.22	\$ 218.82	\$ 14.19	\$ -	\$ 39.47	\$ 232.74	\$ -	\$ 2,379.32	\$ 3,122.39	\$ 10.18	\$ 11,708.00
28	4th & Church Building	\$ 20,848.05	\$ -	\$ -	\$ -	\$ 854.12	\$ 730.59	\$ 47.39	\$ -	\$ -	\$ -	\$ 34.40	\$ 7,780.12	\$ 11,986.45	\$ 39.08	\$ 42,320.20
29	Fifth-Third Financial Center	\$ 5,912.59	\$ 10,906.97	\$ 487.26	\$ 1,355.67	\$ 768.97	\$ 469.28	\$ 52.32	\$ -	\$ 144.98	\$ 786.67	\$ 597.09	\$ 11,849.23	\$ -	\$ -	\$ 33,331.03
32	Renaissance Hotel	\$ 15,476.02	\$ 23,197.94	\$ 1,036.80	\$ 2,884.61	\$ 1,694.94	\$ 1,551.53	\$ 110.86	\$ -	\$ 308.49	\$ 1,462.50	\$ 94.34	\$ 14,447.31	\$ 29,611.61	\$ 96.54	\$ 91,973.49
34	Renaissance Office Tower	\$ 1,445.55	\$ 2,666.61	\$ 119.13	\$ 331.44	\$ 623.04	\$ 380.22	\$ 12.79	\$ -	\$ 35.45	\$ 227.25	\$ 170.65	\$ 4,718.89	\$ -	\$ -	\$ 10,731.02
35	St. Mary's Catholic Church	\$ 997.66	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 33.26	\$ -	\$ -	\$ -	\$ -	\$ 1,030.92
36	Nashville City Center	\$ 4,818.51	\$ 8,888.71	\$ 397.10	\$ 1,104.82	\$ 475.31	\$ 290.07	\$ 42.64	\$ -	\$ 118.16	\$ 753.42	\$ 733.34	\$ 4,237.91	\$ -	\$ -	\$ 21,859.99
38	Wildhorse Saloon	\$ 1,805.06	\$ 2,924.11	\$ 130.67	\$ 363.54	\$ 210.04	\$ 159.49	\$ 13.99	\$ -	\$ 38.88	\$ 182.83	\$ 69.42	\$ 2,801.88	\$ 1,792.88	\$ 5.85	\$ 10,498.64
39	Ryman Auditorium	\$ 2,078.61	\$ 3,323.02	\$ 148.50	\$ 413.15	\$ 454.47	\$ 354.81	\$ 15.90	\$ -	\$ 44.18	\$ 177.26	\$ -	\$ 3,750.27	\$ 4,435.29	\$ 14.46	\$ 15,209.92
40	Bridgestone Arena	\$ 20,037.26	\$ 33,091.47	\$ 1,478.67	\$ 4,113.97	\$ 3,219.51	\$ 2,170.09	\$ 158.43	\$ -	\$ 439.97	\$ -	\$ 584.57	\$ 25,098.90	\$ 11,756.21	\$ 38.33	\$ 102,187.38
41	Nissan Stadium	\$ 8,503.25	\$ 15,685.96	\$ 700.76	\$ 1,949.67	\$ 357.12	\$ 217.94	\$ 75.24	\$ -	\$ 208.51	\$ -	\$ 120.95	\$ 5,306.07	\$ -	\$ -	\$ 33,125.47
43	Hume-Fogg High School	\$ 2,853.02	\$ 4,502.35	\$ 201.20	\$ 559.79	\$ 90.09	\$ 102.96	\$ 21.54	\$ -	\$ 59.86	\$ -	\$ 636.18	\$ 670.30	\$ 2,747.53	\$ 8.96	\$ 12,453.78
44	Schermerhorn Symphony Center	\$ 15,194.36	\$ -	\$ -	\$ -	\$ 639.96	\$ 501.21	\$ 34.16	\$ -	\$ -	\$ -	\$ -	\$ 5,111.05	\$ 6,336.11	\$ 20.66	\$ 27,837.51
45	Nashville Public Library	\$ 6,889.00	\$ -	\$ -	\$ -	\$ 2,478.03	\$ 1,788.94	\$ 53.22	\$ -	\$ -	\$ -	\$ 300.91	\$ 17,140.28	\$ 15,842.12	\$ 51.65	\$ 44,544.15
49	Viridian Residential Tower	\$ 12,372.48	\$ -	\$ -	\$ -	\$ 191.69	\$ 116.98	\$ 25.68	\$ -	\$ -	\$ -	\$ 1,503.26	\$ 1,722.24	\$ -	\$ -	\$ 15,932.33
50	Music City Center	\$ 77,567.78	\$ 9,241.21	\$ -	\$ 7,078.26	\$ 5,512.66	\$ 4,610.36	\$ 394.67	\$ -	\$ -	\$ -	\$ -	\$ 47,443.99	\$ 71,353.51	\$ 232.63	\$ 223,435.07
51	Hyatt Place Hotel	\$ 10,877.32	\$ -	\$ -	\$ -	\$ 168.01	\$ 166.70	\$ 26.17	\$ -	\$ -	\$ -	\$ 482.01	\$ 1,454.35	\$ 3,674.02	\$ 11.98	\$ 16,860.56
51	State Government of TN	\$ 136,594.48	\$ 106,761.60	\$ -	\$ -	\$ 7,510.72	\$ 6,653.37	\$ -	\$ -	\$ 1,625.64	\$ -	\$ 6,729.59	\$ 59,471.01	\$ 118,513.72	\$ 386.38	\$ 444,246.51
	Grand Totals:	\$ 400,174.17	\$ 306,816.55	\$ 8,526.88	\$ 30,801.85	\$ 30,780.85	\$ 25,291.22	\$ 1,494.34	\$ -	\$ 4,162.76	\$ 6,636.69	\$ 16,297.27	\$ 256,048.86	\$ 372,559.11	\$ 1,214.64	\$ 1,460,805.19
	Rate Calculation Totals:	\$ 481,337.65	\$ 432,133.73	\$ 14,127.36	\$ 39,305.42	\$ 30,791.62	\$ 25,310.08	\$ 2,191.67	\$ -	\$ 4,203.54	\$ 6,636.69	\$ 16,297.27	\$ 256,098.63	\$ 373,260.40	\$ 1,216.90	\$ 1,682,910.96
	Deviation:	\$ (81,163.48)	\$ (125,317.18)	\$ (5,600.48)	\$ (8,503.57)	\$ (10.77)	\$ (18.86)	\$ (697.33)	\$ -	\$ (40.78)	\$ -	\$ -	\$ (49.77)	\$ (701.29)	\$ (2.26)	\$ (222,105.77)

Metro Nashville District Energy System
Revenues
Chilled Water and Steam
January, 2019

Customer Number	Customer Name	Capacity	Operating	EDS Improvement	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	TIFS	Electricity	Natural Gas	Propane	Total
2	A. A. Birch	\$ 11,253.18	\$ 16,835.71	\$ 771.36	\$ 2,146.11	\$ 1,206.18	\$ 883.10	\$ 82.52	\$ -	\$ 214.39	\$ -	\$ 1,849.56	\$ 8,719.66	\$ 18,233.97	\$ 333.60	\$ 62,529.34
4	Metro Courthouse	\$ 5,330.54	\$ 7,860.41	\$ 360.15	\$ 1,002.03	\$ 823.01	\$ 495.15	\$ 38.51	\$ -	\$ 100.10	\$ -	\$ 458.49	\$ 4,935.62	\$ 7,556.50	\$ 138.25	\$ 29,098.76
7	Parkway Tower	\$ 4,846.41	\$ 7,607.60	\$ 348.53	\$ 969.67	\$ 1,050.99	\$ 621.52	\$ 37.32	\$ -	\$ 96.87	\$ 709.08	\$ 244.39	\$ 7,002.93	\$ 9,158.73	\$ 167.56	\$ 32,861.60
9	Bobby Hotel (fka Wells Fargo)	\$ 1,940.77	\$ 3,034.63	\$ 139.03	\$ 386.80	\$ 240.99	\$ 145.99	\$ 14.88	\$ -	\$ 38.64	\$ 254.67	\$ 187.68	\$ 1,641.70	\$ 2,258.50	\$ 41.32	\$ 10,325.60
10	Fairlane Hotel (fka 401 Union)	\$ 1,854.75	\$ 2,843.98	\$ 130.30	\$ 362.51	\$ 227.45	\$ 178.00	\$ 13.95	\$ -	\$ 36.21	\$ 310.26	\$ 246.80	\$ 1,181.33	\$ 3,960.51	\$ 72.46	\$ 11,418.51
11	Sheraton Hotel	\$ 10,248.39	\$ 15,309.66	\$ 701.45	\$ 1,951.59	\$ 1,299.45	\$ 943.71	\$ 75.03	\$ -	\$ 194.96	\$ 1,229.92	\$ 158.30	\$ 7,589.15	\$ 19,294.93	\$ 353.01	\$ 59,349.55
12	Municipal Auditorium	\$ 5,129.85	\$ 8,117.62	\$ 371.88	\$ 1,034.66	\$ 495.13	\$ 473.61	\$ 39.83	\$ -	\$ 103.36	\$ -	\$ 618.90	\$ 2,928.26	\$ 12,537.85	\$ 229.39	\$ 32,080.34
21	Hermitage Hotel	\$ 4,956.39	\$ 7,187.19	\$ 329.32	\$ 916.24	\$ 357.01	\$ 228.67	\$ 35.20	\$ -	\$ 91.53	\$ 276.83	\$ 593.51	\$ 2,305.59	\$ 3,909.12	\$ 71.52	\$ 21,258.12
24	Criminal Justice Center	\$ 8,390.53	\$ 11,830.65	\$ 542.13	\$ 1,508.31	\$ 147.61	\$ 265.03	\$ 57.91	\$ -	\$ 150.68	\$ -	\$ -	\$ 453.35	\$ 9,370.26	\$ 171.43	\$ 32,887.89
25	501 Union Building	\$ 1,952.36	\$ 2,894.72	\$ 132.64	\$ 369.01	\$ 257.99	\$ 162.36	\$ 14.19	\$ -	\$ 36.86	\$ 232.74	\$ -	\$ 2,241.42	\$ 2,693.63	\$ 49.28	\$ 11,037.20
28	4th & Church Building	\$ 20,848.05	\$ -	\$ -	\$ -	\$ 1,020.99	\$ 678.59	\$ 47.39	\$ -	\$ -	\$ -	\$ -	\$ 7,581.03	\$ 12,300.02	\$ 225.04	\$ 42,701.11
29	Fifth-Third Financial Center	\$ 5,912.59	\$ 10,639.01	\$ 487.26	\$ 1,355.67	\$ 902.72	\$ 360.87	\$ 52.32	\$ -	\$ 135.43	\$ 786.67	\$ 513.10	\$ 11,271.75	\$ -	\$ -	\$ 32,417.39
32	Renaissance Hotel	\$ 15,476.02	\$ 22,627.77	\$ 1,036.80	\$ 2,884.61	\$ 1,951.01	\$ 1,462.01	\$ 110.86	\$ -	\$ 288.16	\$ 1,462.50	\$ 82.52	\$ 10,200.05	\$ 31,021.30	\$ 567.55	\$ 89,171.16
34	Renaissance Office Tower	\$ 1,445.55	\$ 2,601.10	\$ 119.13	\$ 331.44	\$ 710.92	\$ 284.20	\$ 12.79	\$ -	\$ 33.11	\$ 227.25	\$ 174.01	\$ 4,408.85	\$ -	\$ -	\$ 10,348.35
35	St. Mary's Catholic Church	\$ 997.66	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 33.26	\$ -	\$ -	\$ -	\$ -	\$ 1,030.92
36	Nashville City Center	\$ 4,818.51	\$ 8,670.33	\$ 397.10	\$ 1,104.82	\$ 525.31	\$ 210.00	\$ 42.64	\$ -	\$ 110.37	\$ 753.42	\$ 424.90	\$ 4,069.96	\$ -	\$ -	\$ 21,127.36
38	Wildhorse Saloon	\$ 1,805.06	\$ 2,852.26	\$ 130.67	\$ 363.54	\$ 217.55	\$ 136.88	\$ 13.99	\$ -	\$ 36.32	\$ 182.83	\$ 58.32	\$ 2,965.46	\$ 2,270.23	\$ 41.54	\$ 11,074.65
39	Ryman Auditorium	\$ 2,078.61	\$ 3,241.36	\$ 148.50	\$ 413.15	\$ 449.16	\$ 281.87	\$ 15.90	\$ -	\$ 41.27	\$ 177.26	\$ -	\$ 2,882.82	\$ 4,653.11	\$ 85.13	\$ 14,468.14
40	Bridgestone Arena	\$ 20,037.26	\$ 32,278.31	\$ 1,478.67	\$ 4,113.97	\$ 3,078.58	\$ 1,467.03	\$ 158.43	\$ -	\$ 410.98	\$ -	\$ 654.61	\$ 18,113.05	\$ 10,749.03	\$ 196.66	\$ 92,736.58
41	Nissan Stadium	\$ 8,503.25	\$ 15,300.59	\$ 700.76	\$ 1,949.67	\$ 257.48	\$ 102.93	\$ 75.24	\$ -	\$ 194.77	\$ -	\$ 95.22	\$ 4,155.99	\$ -	\$ -	\$ 31,335.90
43	Hume-Fogg High School	\$ 2,853.02	\$ 4,391.71	\$ 201.20	\$ 559.79	\$ 63.86	\$ 78.50	\$ 21.54	\$ -	\$ 55.92	\$ -	\$ 645.08	\$ 624.37	\$ 2,409.23	\$ 44.08	\$ 11,948.30
44	Schermerhorn Symphony Center	\$ 15,194.36	\$ -	\$ -	\$ -	\$ 660.14	\$ 398.21	\$ 34.16	\$ -	\$ -	\$ -	\$ -	\$ 4,779.31	\$ 6,108.49	\$ 111.76	\$ 27,286.43
45	Nashville Public Library	\$ 6,889.00	\$ -	\$ -	\$ -	\$ 2,955.79	\$ 1,505.31	\$ 53.22	\$ -	\$ -	\$ -	\$ 306.22	\$ 16,730.03	\$ 14,722.63	\$ 269.36	\$ 43,431.56
49	Viridian Residential Tower	\$ 12,372.48	\$ -	\$ -	\$ -	\$ 225.65	\$ 90.21	\$ 25.68	\$ -	\$ -	\$ -	\$ 1,503.26	\$ 1,627.40	\$ -	\$ -	\$ 15,844.68
50	Music City Center	\$ 77,567.78	\$ 9,241.21	\$ -	\$ 7,078.26	\$ 6,508.10	\$ 4,267.01	\$ 394.67	\$ -	\$ -	\$ -	\$ -	\$ 45,046.15	\$ 75,741.06	\$ 1,385.73	\$ 227,229.97
51	Hyatt Place Hotel	\$ 10,877.32	\$ -	\$ -	\$ -	\$ 198.91	\$ 170.62	\$ 26.17	\$ -	\$ -	\$ -	\$ 484.23	\$ 1,152.94	\$ 4,143.57	\$ 75.81	\$ 17,129.57
51	State Government of TN	\$ 136,594.48	\$ 106,761.60	\$ -	\$ -	\$ 9,416.85	\$ 6,470.88	\$ -	\$ -	\$ 1,518.55	\$ -	\$ 6,220.83	\$ 66,199.54	\$ 123,088.82	\$ 2,251.98	\$ 458,523.53
	Grand Totals:	\$ 400,174.17	\$ 302,127.42	\$ 8,526.88	\$ 30,801.85	\$ 35,248.83	\$ 22,362.26	\$ 1,494.34	\$ -	\$ 3,888.48	\$ 6,636.69	\$ 15,519.93	\$ 240,807.71	\$ 376,181.49	\$ 6,882.46	\$ 1,450,652.51
	Rate Calculation Totals:	\$ 481,337.65	\$ 424,364.76	\$ 14,127.36	\$ 39,305.42	\$ 35,262.89	\$ 22,383.91	\$ 2,191.67	\$ -	\$ 3,926.59	\$ 6,636.69	\$ 15,519.93	\$ 240,861.75	\$ 376,908.53	\$ 6,895.76	\$ 1,669,722.91
	Deviation:	\$ (81,163.48)	\$ (122,237.34)	\$ (5,600.48)	\$ (8,503.57)	\$ (14.06)	\$ (21.65)	\$ (697.33)	\$ -	\$ (38.11)	\$ -	\$ -	\$ (54.04)	\$ (727.04)	\$ (13.30)	\$ (219,070.40)

Metro Nashville District Energy System
Revenues
Chilled Water and Steam
February, 2019

Customer Number	Customer Name	Capacity	Operating	EDS Improvement	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	TIFS	Electricity	Natural Gas	Propane	Total
2	A. A. Birch	\$ 11,253.18	\$ 16,835.71	\$ 771.36	\$ 2,146.11	\$ 2,520.89	\$ 675.92	\$ 82.57	\$ -	\$ 265.74	\$ -	\$ 1,682.93	\$ 10,924.47	\$ 11,356.78	\$ -	\$ 58,515.66
4	Metro Courthouse	\$ 5,330.54	\$ 7,860.41	\$ 360.15	\$ 1,002.03	\$ 1,569.06	\$ 358.27	\$ 38.54	\$ -	\$ 124.08	\$ -	\$ 521.35	\$ 5,401.65	\$ 4,751.11	\$ -	\$ 27,317.19
7	Parkway Tower	\$ 4,846.41	\$ 7,607.60	\$ 348.53	\$ 969.67	\$ 1,791.76	\$ 412.17	\$ 37.34	\$ -	\$ 120.07	\$ 709.08	\$ 148.38	\$ 6,605.98	\$ 5,538.95	\$ -	\$ 29,135.94
9	Bobby Hotel (fka Wells Fargo)	\$ 1,940.77	\$ 3,034.63	\$ 139.03	\$ 386.80	\$ 329.11	\$ 84.57	\$ 14.89	\$ -	\$ 47.89	\$ 254.67	\$ 191.12	\$ 1,713.86	\$ 1,346.37	\$ -	\$ 9,483.71
10	Fairlane Hotel (fka 401 Union)	\$ 1,854.75	\$ 2,843.98	\$ 130.30	\$ 362.51	\$ 674.47	\$ 175.51	\$ 13.95	\$ -	\$ 44.89	\$ 310.26	\$ 205.67	\$ 2,242.49	\$ 2,840.95	\$ -	\$ 11,699.73
11	Sheraton Hotel	\$ 10,248.39	\$ 15,309.66	\$ 701.45	\$ 1,951.59	\$ 3,075.42	\$ 822.84	\$ 75.08	\$ -	\$ 241.65	\$ 1,229.92	\$ 150.76	\$ 10,161.15	\$ 13,789.81	\$ -	\$ 57,757.72
12	Municipal Auditorium	\$ 5,129.85	\$ 8,117.62	\$ 371.88	\$ 1,034.66	\$ 803.81	\$ 305.12	\$ 39.85	\$ -	\$ 128.11	\$ -	\$ 399.90	\$ 2,281.35	\$ 6,947.14	\$ -	\$ 25,559.29
21	Hermitage Hotel	\$ 4,956.39	\$ 7,187.19	\$ 329.32	\$ 916.24	\$ 732.01	\$ 176.04	\$ 35.23	\$ -	\$ 113.46	\$ 276.83	\$ 599.86	\$ 2,731.25	\$ 2,546.97	\$ -	\$ 20,600.79
24	Criminal Justice Center	\$ 8,390.53	\$ 11,830.65	\$ 542.13	\$ 1,508.31	\$ 535.11	\$ 290.67	\$ 57.97	\$ -	\$ 186.77	\$ -	\$ -	\$ 1,041.30	\$ 7,874.79	\$ -	\$ 32,258.23
25	501 Union Building	\$ 1,952.36	\$ 2,894.72	\$ 132.64	\$ 369.01	\$ 575.91	\$ 129.87	\$ 14.20	\$ -	\$ 45.69	\$ 232.74	\$ -	\$ 2,494.21	\$ 1,683.38	\$ -	\$ 10,524.73
28	4th & Church Building	\$ 20,848.05	\$ -	\$ -	\$ -	\$ 1,782.49	\$ 435.27	\$ 47.42	\$ -	\$ -	\$ -	\$ -	\$ 7,449.72	\$ 6,446.66	\$ -	\$ 37,009.61
29	Fifth-Third Financial Center	\$ 5,912.59	\$ 10,639.01	\$ 487.26	\$ 1,355.67	\$ 1,780.89	\$ 261.37	\$ 52.32	\$ -	\$ 167.86	\$ 786.67	\$ 471.72	\$ 9,588.80	\$ -	\$ -	\$ 31,504.16
32	Renaissance Hotel	\$ 15,476.02	\$ 22,627.77	\$ 1,036.80	\$ 2,884.61	\$ 4,046.79	\$ 1,128.60	\$ 110.94	\$ -	\$ 357.18	\$ 1,462.50	\$ 144.41	\$ 10,679.82	\$ 19,847.76	\$ -	\$ 79,803.20
34	Renaissance Office Tower	\$ 1,445.55	\$ 2,601.10	\$ 119.13	\$ 331.44	\$ 1,253.35	\$ 183.94	\$ 12.79	\$ -	\$ 41.04	\$ 227.25	\$ 169.96	\$ 4,337.37	\$ -	\$ -	\$ 10,722.92
35	St. Mary's Catholic Church	\$ 997.66	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 33.26	\$ -	\$ -	\$ -	\$ -	\$ 1,030.92
36	Nashville City Center	\$ 4,818.51	\$ 8,670.33	\$ 397.10	\$ 1,104.82	\$ 1,120.47	\$ 164.44	\$ 42.64	\$ -	\$ 136.80	\$ 753.42	\$ 370.94	\$ 6,429.88	\$ -	\$ -	\$ 24,009.35
38	Wildhorse Saloon	\$ 1,805.06	\$ 2,852.26	\$ 130.67	\$ 363.54	\$ 440.86	\$ 110.54	\$ 14.00	\$ -	\$ 45.02	\$ 182.83	\$ 58.32	\$ 2,255.90	\$ 1,701.78	\$ -	\$ 9,960.78
39	Ryman Auditorium	\$ 1,860.81	\$ 2,989.69	\$ 136.96	\$ 381.05	\$ 1,092.62	\$ 244.28	\$ 14.68	\$ -	\$ 47.19	\$ 177.26	\$ -	\$ 4,006.06	\$ 3,115.46	\$ -	\$ 14,066.06
40	Bridgestone Arena	\$ 20,037.26	\$ 32,278.31	\$ 1,478.67	\$ 4,113.97	\$ 9,088.96	\$ 1,612.05	\$ 158.49	\$ -	\$ 509.40	\$ -	\$ 277.71	\$ 37,706.76	\$ 10,324.55	\$ -	\$ 117,586.13
41	Nissan Stadium	\$ 8,503.25	\$ 15,300.59	\$ 700.76	\$ 1,949.67	\$ 966.07	\$ 141.78	\$ 75.24	\$ -	\$ 241.41	\$ -	\$ 119.02	\$ 6,938.84	\$ -	\$ -	\$ 34,936.63
43	Hume-Fogg High School	\$ 2,853.02	\$ 4,391.71	\$ 201.20	\$ 559.79	\$ 133.99	\$ 56.38	\$ 21.55	\$ -	\$ 69.31	\$ -	\$ 640.32	\$ 920.47	\$ 1,362.88	\$ -	\$ 11,210.62
44	Schermerhorn Symphony Center	\$ 15,194.36	\$ -	\$ -	\$ -	\$ 1,396.03	\$ 317.79	\$ 34.18	\$ -	\$ -	\$ -	\$ -	\$ 5,886.05	\$ 4,190.99	\$ -	\$ 27,019.40
45	Nashville Public Library	\$ 6,889.00	\$ -	\$ -	\$ -	\$ 5,180.37	\$ 1,024.65	\$ 53.26	\$ -	\$ -	\$ -	\$ 282.10	\$ 16,134.96	\$ 9,813.58	\$ -	\$ 39,377.92
49	Viridian Residential Tower	\$ 12,372.48	\$ -	\$ -	\$ -	\$ 446.07	\$ 65.47	\$ 25.68	\$ -	\$ -	\$ -	\$ 1,435.21	\$ 1,927.67	\$ -	\$ -	\$ 16,272.58
50	Music City Center	\$ 77,567.78	\$ 9,241.21	\$ -	\$ 7,081.70	\$ 13,906.39	\$ 3,242.67	\$ 394.86	\$ -	\$ -	\$ -	\$ -	\$ 55,199.56	\$ 44,609.18	\$ -	\$ 211,243.35
51	Hyatt Place Hotel	\$ 10,877.32	\$ -	\$ -	\$ -	\$ 483.26	\$ 160.98	\$ 26.19	\$ -	\$ -	\$ -	\$ 462.02	\$ 1,650.04	\$ 3,342.88	\$ -	\$ 17,002.69
51	State Government of TN	\$ 129,782.48	\$ 101,300.16	\$ -	\$ -	\$ 17,911.68	\$ 4,595.82	\$ -	\$ -	\$ 1,787.69	\$ -	\$ 4,769.13	\$ 70,043.09	\$ 73,018.87	\$ -	\$ 403,208.92
	Grand Totals:	\$ 393,144.37	\$ 296,414.31	\$ 8,515.34	\$ 30,773.19	\$ 73,637.84	\$ 17,177.01	\$ 1,493.86	\$ -	\$ 4,721.25	\$ 6,636.69	\$ 13,100.83	\$ 286,752.70	\$ 236,450.84	\$ -	\$ 1,368,818.23
	Rate Calculation Totals:	\$ 481,337.65	\$ 424,364.76	\$ 14,127.36	\$ 39,305.42	\$ 73,664.77	\$ 17,193.57	\$ 2,191.67	\$ -	\$ 4,866.87	\$ 6,636.69	\$ 13,100.83	\$ 286,800.27	\$ 236,912.77	\$ -	\$ 1,600,502.63
	Deviation:	\$ (88,193.28)	\$ (127,950.45)	\$ (5,612.02)	\$ (8,532.23)	\$ (26.93)	\$ (16.56)	\$ (697.81)	\$ -	\$ (145.62)	\$ -	\$ -	\$ (47.57)	\$ (461.93)	\$ -	\$ (231,684.40)

Metro Nashville District Energy System
Revenues
Chilled Water and Steam
March, 2019

Customer Number	Customer Name	Capacity	Operating	EDS Improvement	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	TIFS	Electricity	Natural Gas	Propane	Total
2	A. A. Birch	\$ 11,253.18	\$ 16,835.71	\$ 771.36	\$ 2,146.11	\$ 1,087.89	\$ 683.38	\$ 82.57	\$ -	\$ 293.64	\$ -	\$ 1,699.59	\$ 9,725.79	\$ 12,533.40	\$ 10.47	\$ 57,123.09
4	Metro Courthouse	\$ 5,330.54	\$ 7,860.41	\$ 360.15	\$ 1,002.03	\$ 670.06	\$ 362.70	\$ 38.54	\$ -	\$ 137.10	\$ -	\$ 554.63	\$ 5,264.33	\$ 5,319.60	\$ 4.44	\$ 26,904.53
7	Parkway Tower	\$ 4,846.41	\$ 7,607.60	\$ 348.53	\$ 969.67	\$ 775.11	\$ 408.52	\$ 37.34	\$ -	\$ 132.67	\$ 709.08	\$ 117.83	\$ 6,648.07	\$ 5,698.17	\$ 4.76	\$ 28,303.76
9	Bobby Hotel (fka Wells Fargo)	\$ 1,940.77	\$ 3,034.63	\$ 139.03	\$ 386.80	\$ 151.55	\$ 81.81	\$ 14.89	\$ -	\$ 52.92	\$ 254.67	\$ 170.46	\$ 1,768.68	\$ 1,194.02	\$ 1.00	\$ 9,191.23
10	Fairlane Hotel (fka 401 Union)	\$ 1,854.75	\$ 2,843.98	\$ 130.30	\$ 362.51	\$ 294.41	\$ 176.61	\$ 13.95	\$ -	\$ 49.60	\$ 310.26	\$ 199.57	\$ 2,198.58	\$ 3,048.59	\$ 2.55	\$ 11,485.66
11	Sheraton Hotel	\$ 10,248.39	\$ 15,309.66	\$ 701.45	\$ 1,951.59	\$ 1,132.85	\$ 743.90	\$ 75.08	\$ -	\$ 267.02	\$ 1,229.92	\$ 150.76	\$ 9,161.20	\$ 14,382.01	\$ 12.01	\$ 55,365.84
12	Municipal Auditorium	\$ 5,129.85	\$ 8,117.62	\$ 371.88	\$ 1,034.66	\$ 311.86	\$ 283.91	\$ 39.85	\$ -	\$ 141.56	\$ -	\$ 295.17	\$ 2,493.79	\$ 7,221.58	\$ 6.03	\$ 25,447.76
21	Hermitage Hotel	\$ 4,956.39	\$ 7,187.19	\$ 329.32	\$ 916.24	\$ 375.27	\$ 217.49	\$ 35.23	\$ -	\$ 125.36	\$ 276.83	\$ 542.73	\$ 3,095.84	\$ 3,570.68	\$ 2.98	\$ 21,631.55
24	Criminal Justice Center	\$ 8,390.53	\$ 11,830.65	\$ 542.13	\$ 1,508.31	\$ 234.39	\$ 237.29	\$ 57.97	\$ -	\$ 206.37	\$ -	\$ -	\$ 1,998.54	\$ 6,413.59	\$ 5.36	\$ 31,425.13
25	501 Union Building	\$ 1,952.36	\$ 2,894.72	\$ 132.64	\$ 369.01	\$ 197.99	\$ 108.40	\$ 14.20	\$ -	\$ 50.49	\$ 232.74	\$ -	\$ 2,005.80	\$ 1,622.48	\$ 1.36	\$ 9,582.19
28	4th & Church Building	\$ 20,848.05	\$ -	\$ -	\$ -	\$ 798.58	\$ 461.49	\$ 47.42	\$ -	\$ -	\$ -	\$ -	\$ 6,853.70	\$ 7,544.76	\$ 6.30	\$ 36,560.30
29	Fifth-Third Financial Center	\$ 5,912.59	\$ 10,639.01	\$ 487.26	\$ 1,355.67	\$ 800.34	\$ 279.13	\$ 52.32	\$ -	\$ 185.48	\$ 786.67	\$ 422.07	\$ 9,988.23	\$ -	\$ -	\$ 30,908.77
32	Renaissance Hotel	\$ 15,476.02	\$ 22,627.77	\$ 1,036.80	\$ 2,884.61	\$ 1,604.36	\$ 1,058.87	\$ 110.94	\$ -	\$ 394.68	\$ 1,462.50	\$ 72.20	\$ 11,127.05	\$ 20,588.92	\$ 17.19	\$ 78,461.91
34	Renaissance Office Tower	\$ 1,445.55	\$ 2,601.10	\$ 119.13	\$ 331.44	\$ 534.19	\$ 186.31	\$ 12.79	\$ -	\$ 45.35	\$ 227.25	\$ 165.91	\$ 4,479.31	\$ -	\$ -	\$ 10,148.33
35	St. Mary's Catholic Church	\$ 997.66	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 33.26	\$ -	\$ -	\$ -	\$ -	\$ 1,030.92
36	Nashville City Center	\$ 4,818.51	\$ 8,670.33	\$ 397.10	\$ 1,104.82	\$ 530.26	\$ 184.94	\$ 42.64	\$ -	\$ 151.16	\$ 753.42	\$ 377.69	\$ 6,010.56	\$ -	\$ -	\$ 23,041.43
38	Wildhorse Saloon	\$ 1,805.06	\$ 2,852.26	\$ 130.67	\$ 363.54	\$ 211.37	\$ 109.04	\$ 14.00	\$ -	\$ 49.75	\$ 182.83	\$ 59.99	\$ 3,727.24	\$ 1,456.58	\$ 1.22	\$ 10,963.55
39	Ryman Auditorium	\$ 1,860.81	\$ 2,989.69	\$ 136.96	\$ 381.05	\$ 481.48	\$ 259.46	\$ 14.68	\$ -	\$ 52.13	\$ 177.26	\$ -	\$ 3,915.41	\$ 3,774.23	\$ 3.15	\$ 14,046.31
40	Bridgestone Arena	\$ 20,037.26	\$ 32,278.31	\$ 1,478.67	\$ 4,113.97	\$ 3,123.55	\$ 1,281.94	\$ 158.49	\$ -	\$ 562.88	\$ -	\$ 277.71	\$ 28,890.07	\$ 7,939.58	\$ 6.63	\$ 100,149.06
41	Nissan Stadium	\$ 8,503.25	\$ 15,300.59	\$ 700.76	\$ 1,949.67	\$ 454.11	\$ 158.38	\$ 75.24	\$ -	\$ 266.75	\$ -	\$ 119.02	\$ 6,841.84	\$ -	\$ -	\$ 34,369.61
43	Hume-Fogg High School	\$ 2,853.02	\$ 4,391.71	\$ 201.20	\$ 559.79	\$ 55.81	\$ 56.04	\$ 21.55	\$ -	\$ 76.59	\$ -	\$ 635.56	\$ 537.13	\$ 1,508.39	\$ 1.26	\$ 10,898.05
44	Schermerhorn Symphony Center	\$ 15,194.36	\$ -	\$ -	\$ -	\$ 639.11	\$ 341.69	\$ 34.18	\$ -	\$ -	\$ -	\$ -	\$ 5,331.23	\$ 4,898.13	\$ 4.09	\$ 26,442.79
45	Nashville Public Library	\$ 6,889.00	\$ -	\$ -	\$ -	\$ 2,081.21	\$ 985.25	\$ 53.26	\$ -	\$ -	\$ -	\$ 260.40	\$ 15,144.44	\$ 10,695.66	\$ 8.93	\$ 36,118.15
49	Viridian Residential Tower	\$ 12,372.48	\$ -	\$ -	\$ -	\$ 204.96	\$ 71.48	\$ 25.68	\$ -	\$ -	\$ -	\$ 1,391.90	\$ 2,031.76	\$ -	\$ -	\$ 16,098.26
50	Music City Center	\$ 77,567.78	\$ 9,241.21	\$ -	\$ 7,081.70	\$ 5,619.09	\$ 3,150.83	\$ 394.86	\$ -	\$ -	\$ -	\$ -	\$ 57,141.02	\$ 49,112.32	\$ 41.02	\$ 209,349.83
51	Hyatt Place Hotel	\$ 10,877.32	\$ -	\$ -	\$ -	\$ 190.95	\$ 148.23	\$ 26.19	\$ -	\$ -	\$ -	\$ 508.67	\$ 1,967.20	\$ 3,366.10	\$ 2.81	\$ 17,087.47
51	State Government of TN	\$ 143,406.48	\$ 112,223.04	\$ -	\$ -	\$ 6,713.15	\$ 4,064.13	\$ -	\$ -	\$ 2,079.82	\$ -	\$ 5,242.58	\$ 63,123.90	\$ 71,038.12	\$ 59.32	\$ 407,950.54
	Grand Totals:	\$ 406,768.37	\$ 307,337.19	\$ 8,515.34	\$ 30,773.19	\$ 29,273.90	\$ 16,101.22	\$ 1,493.86	\$ -	\$ 5,321.32	\$ 6,636.69	\$ 13,264.44	\$ 271,470.71	\$ 242,926.91	\$ 202.88	\$ 1,340,086.02
	Rate Calculation Totals:	\$ 481,337.65	\$ 424,364.76	\$ 14,127.36	\$ 39,305.42	\$ 29,282.73	\$ 16,112.29	\$ 2,191.67	\$ -	\$ 5,377.77	\$ 6,636.69	\$ 13,264.44	\$ 271,511.00	\$ 243,256.03	\$ 203.16	\$ 1,546,970.97
	Deviation:	\$ (74,569.28)	\$ (117,027.57)	\$ (5,612.02)	\$ (8,532.23)	\$ (8.83)	\$ (11.07)	\$ (697.81)	\$ -	\$ (56.45)	\$ -	\$ -	\$ (40.29)	\$ (329.12)	\$ (0.28)	\$ (206,884.95)

Metro Nashville District Energy System
Revenues
Chilled Water and Steam
April, 2019

Customer Number	Customer Name	Capacity	Operating	EDS Improvement	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	TIFS	Electricity	Natural Gas	Propane	Total
2	A. A. Birch	\$ 11,253.18	\$ 16,835.71	\$ 771.36	\$ 2,146.11	\$ 1,330.71	\$ 715.08	\$ 82.57	\$ -	\$ 275.11	\$ -	\$ 1,249.70	\$ 12,076.75	\$ 9,578.15	\$ -	\$ 56,314.43
4	Metro Courthouse	\$ 5,330.54	\$ 7,860.41	\$ 360.15	\$ 1,002.03	\$ 593.62	\$ 289.21	\$ 38.54	\$ -	\$ 128.45	\$ -	\$ 306.89	\$ 6,060.62	\$ 3,311.54	\$ -	\$ 25,282.00
7	Parkway Tower	\$ 4,846.41	\$ 7,607.60	\$ 348.53	\$ 969.67	\$ 514.59	\$ 191.86	\$ 37.34	\$ -	\$ 124.30	\$ 709.08	\$ 91.64	\$ 6,290.56	\$ 971.77	\$ -	\$ 22,703.35
9	Bobby Hotel (fka Wells Fargo)	\$ 1,940.77	\$ 3,034.63	\$ 139.03	\$ 386.80	\$ 292.23	\$ 133.63	\$ 14.89	\$ -	\$ 49.59	\$ 254.67	\$ 127.41	\$ 2,354.59	\$ 1,348.13	\$ -	\$ 10,076.37
10	Fairlane Hotel (fka 401 Union)	\$ 1,854.75	\$ 2,843.98	\$ 130.30	\$ 362.51	\$ 270.12	\$ 126.44	\$ 13.95	\$ -	\$ 46.47	\$ 310.26	\$ 196.53	\$ 2,543.70	\$ 1,340.36	\$ -	\$ 10,039.37
11	Sheraton Hotel	\$ 10,248.39	\$ 15,309.66	\$ 701.45	\$ 1,951.59	\$ 1,173.11	\$ 771.53	\$ 75.08	\$ -	\$ 250.18	\$ 1,229.92	\$ 128.14	\$ 10,245.82	\$ 12,998.47	\$ -	\$ 55,083.34
12	Municipal Auditorium	\$ 5,129.85	\$ 8,117.62	\$ 371.88	\$ 1,034.66	\$ 346.80	\$ 179.21	\$ 39.85	\$ -	\$ 132.63	\$ -	\$ 457.03	\$ 3,842.86	\$ 2,265.44	\$ -	\$ 21,917.83
21	Hermitage Hotel	\$ 4,956.39	\$ 7,187.19	\$ 329.32	\$ 916.24	\$ 445.90	\$ 234.09	\$ 35.23	\$ -	\$ 117.46	\$ 276.83	\$ 476.08	\$ 3,928.99	\$ 3,031.41	\$ -	\$ 21,935.13
24	Criminal Justice Center	\$ 8,390.53	\$ 11,830.65	\$ 542.13	\$ 1,508.31	\$ 189.84	\$ 111.42	\$ 57.97	\$ -	\$ 193.35	\$ -	\$ -	\$ 4,080.41	\$ 1,670.14	\$ -	\$ 28,574.75
25	501 Union Building	\$ 1,952.36	\$ 2,894.72	\$ 132.64	\$ 369.01	\$ 254.13	\$ 119.82	\$ 14.20	\$ -	\$ 47.30	\$ 232.74	\$ -	\$ 3,017.73	\$ 1,288.86	\$ -	\$ 10,323.51
28	4th & Church Building	\$ 20,848.05	\$ -	\$ -	\$ -	\$ 599.75	\$ 236.66	\$ 47.42	\$ -	\$ -	\$ -	\$ -	\$ 8,966.43	\$ 1,553.46	\$ -	\$ 32,251.77
29	Fifth-Third Financial Center	\$ 5,912.59	\$ 10,639.01	\$ 487.26	\$ 1,355.67	\$ 1,006.34	\$ 316.33	\$ 52.32	\$ -	\$ 173.78	\$ 786.67	\$ 231.72	\$ 14,321.23	\$ -	\$ -	\$ 35,282.92
32	Renaissance Hotel	\$ 15,476.02	\$ 22,627.77	\$ 1,036.80	\$ 2,884.61	\$ 2,047.46	\$ 1,080.18	\$ 110.94	\$ -	\$ 369.77	\$ 1,462.50	\$ -	\$ 18,462.48	\$ 14,089.67	\$ -	\$ 79,648.20
34	Renaissance Office Tower	\$ 1,445.55	\$ 2,601.10	\$ 119.13	\$ 331.44	\$ 486.18	\$ 152.82	\$ 12.79	\$ -	\$ 42.49	\$ 227.25	\$ 143.66	\$ 5,136.19	\$ -	\$ -	\$ 10,698.60
35	St. Mary's Catholic Church	\$ 997.66	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 33.26	\$ -	\$ -	\$ -	\$ -	\$ 1,030.92
36	Nashville City Center	\$ 4,818.51	\$ 8,670.33	\$ 397.10	\$ 1,104.82	\$ 671.17	\$ 210.97	\$ 42.64	\$ -	\$ 141.62	\$ 753.42	\$ 141.63	\$ 8,758.52	\$ -	\$ -	\$ 25,710.73
38	Wildhorse Saloon	\$ 1,805.06	\$ 2,852.26	\$ 130.67	\$ 363.54	\$ 300.86	\$ 146.11	\$ 14.00	\$ -	\$ 46.60	\$ 182.83	\$ 33.33	\$ 4,870.98	\$ 1,663.37	\$ -	\$ 12,409.61
39	Ryman Auditorium	\$ 1,860.81	\$ 2,989.69	\$ 136.96	\$ 381.05	\$ 549.82	\$ 268.77	\$ 14.68	\$ -	\$ 48.84	\$ 177.26	\$ -	\$ 5,045.25	\$ 3,096.06	\$ -	\$ 14,569.19
40	Bridgestone Arena	\$ 20,037.26	\$ 32,278.31	\$ 1,478.67	\$ 4,113.97	\$ 3,624.37	\$ 1,363.60	\$ 158.49	\$ -	\$ 527.36	\$ -	\$ -	\$ 31,742.06	\$ 7,239.77	\$ -	\$ 102,563.86
41	Nissan Stadium	\$ 8,503.25	\$ 15,300.59	\$ 700.76	\$ 1,949.67	\$ 1,102.90	\$ 346.68	\$ 75.24	\$ -	\$ 249.92	\$ -	\$ 154.72	\$ 9,537.08	\$ -	\$ -	\$ 37,920.81
43	Hume-Fogg High School	\$ 2,853.02	\$ 4,391.71	\$ 201.20	\$ 559.79	\$ 104.84	\$ 61.41	\$ 21.55	\$ -	\$ 71.75	\$ -	\$ 516.54	\$ 2,097.34	\$ 918.23	\$ -	\$ 11,797.38
44	Schermerhorn Symphony Center	\$ 15,194.36	\$ -	\$ -	\$ -	\$ 657.39	\$ 337.66	\$ 34.18	\$ -	\$ -	\$ -	\$ -	\$ 7,535.22	\$ 4,228.03	\$ -	\$ 27,986.84
45	Nashville Public Library	\$ 6,889.00	\$ -	\$ -	\$ -	\$ 1,741.83	\$ 819.46	\$ 53.26	\$ -	\$ -	\$ -	\$ 231.47	\$ 16,339.40	\$ 8,776.15	\$ -	\$ 34,850.57
49	Viridian Residential Tower	\$ 12,372.48	\$ -	\$ -	\$ -	\$ 341.13	\$ 107.23	\$ 25.68	\$ -	\$ -	\$ -	\$ 946.49	\$ 3,213.22	\$ -	\$ -	\$ 17,006.23
50	Music City Center	\$ 77,567.78	\$ 9,241.21	\$ -	\$ 7,081.70	\$ 5,914.99	\$ 2,850.79	\$ 394.86	\$ -	\$ -	\$ -	\$ -	\$ 60,655.91	\$ 31,997.92	\$ -	\$ 195,705.16
51	Hyatt Place Hotel	\$ 10,877.32	\$ -	\$ -	\$ -	\$ 203.83	\$ 143.08	\$ 26.19	\$ -	\$ -	\$ -	\$ 393.16	\$ 1,810.08	\$ 2,549.62	\$ -	\$ 16,003.28
51	State Government of TN	\$ 136,594.48	\$ 106,761.60	\$ -	\$ -	\$ 6,215.13	\$ 3,238.11	\$ -	\$ -	\$ 1,948.60	\$ -	\$ 6,863.32	\$ 67,901.24	\$ 41,451.70	\$ -	\$ 370,974.18
	Grand Totals:	\$ 399,956.37	\$ 301,875.75	\$ 8,515.34	\$ 30,773.19	\$ 30,979.04	\$ 14,552.15	\$ 1,493.86	\$ -	\$ 4,985.57	\$ 6,636.69	\$ 12,689.46	\$ 320,834.66	\$ 155,368.25	\$ -	\$ 1,288,660.33
	Rate Calculation Totals:	\$ 481,337.65	\$ 424,364.76	\$ 14,127.36	\$ 39,305.42	\$ 30,988.15	\$ 14,559.68	\$ 2,191.67	\$ -	\$ 5,038.48	\$ 6,636.69	\$ 12,689.46	\$ 320,888.28	\$ 155,521.61	\$ -	\$ 1,507,649.21
	Deviation:	\$ (81,381.28)	\$ (122,489.01)	\$ (5,612.02)	\$ (8,532.23)	\$ (9.11)	\$ (7.53)	\$ (697.81)	\$ -	\$ (52.91)	\$ -	\$ -	\$ (53.62)	\$ (153.36)	\$ -	\$ (218,988.88)

Metro Nashville District Energy System
Revenues
Chilled Water and Steam
May, 2019

Customer Number	Customer Name	Capacity	Operating	EDS Improvement	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	TIFS	Electricity	Natural Gas	Propane	Total
2	A. A. Birch	\$ 11,253.18	\$ 16,835.71	\$ 771.36	\$ 2,146.11	\$ 1,589.47	\$ 636.79	\$ 82.57	\$ -	\$ -	\$ -	\$ 533.21	\$ 15,721.98	\$ 4,151.49	\$ 13.81	\$ 53,735.68
4	Metro Courthouse	\$ 5,330.54	\$ 7,860.41	\$ 360.15	\$ 1,002.03	\$ 838.98	\$ 355.03	\$ 38.54	\$ -	\$ -	\$ -	\$ 170.09	\$ 8,473.01	\$ 2,682.47	\$ 8.93	\$ 27,120.18
7	Parkway Tower	\$ 4,846.41	\$ 7,607.60	\$ 348.53	\$ 969.67	\$ 697.84	\$ 222.10	\$ 37.34	\$ -	\$ -	\$ 709.08	\$ 274.93	\$ 8,250.31	\$ 329.70	\$ 1.10	\$ 24,294.61
9	Bobby Hotel (fka Wells Fargo)	\$ 1,940.77	\$ 3,034.63	\$ 139.03	\$ 386.80	\$ 528.07	\$ 205.65	\$ 14.89	\$ -	\$ -	\$ 254.67	\$ 20.66	\$ 5,399.32	\$ 1,225.89	\$ 4.08	\$ 13,154.46
10	Fairlane Hotel (fka 401 Union)	\$ 1,854.75	\$ 2,843.98	\$ 130.30	\$ 362.51	\$ 369.53	\$ 139.64	\$ 13.95	\$ -	\$ -	\$ 310.26	\$ 163.01	\$ 3,773.06	\$ 746.97	\$ 2.49	\$ 10,710.45
11	Sheraton Hotel	\$ 10,248.39	\$ 15,309.66	\$ 701.45	\$ 1,951.59	\$ 1,681.64	\$ 870.88	\$ 75.08	\$ -	\$ -	\$ 1,229.92	\$ -	\$ 15,381.83	\$ 9,513.16	\$ 31.65	\$ 56,995.25
12	Municipal Auditorium	\$ 5,129.85	\$ 8,117.62	\$ 371.88	\$ 1,034.66	\$ 481.15	\$ 148.26	\$ 39.85	\$ -	\$ -	\$ -	\$ 209.47	\$ 6,415.96	\$ 100.70	\$ 0.34	\$ 22,049.74
21	Hermitage Hotel	\$ 4,956.39	\$ 7,187.19	\$ 329.32	\$ 916.24	\$ 653.78	\$ 314.47	\$ 35.23	\$ -	\$ -	\$ 276.83	\$ 428.47	\$ 5,970.35	\$ 3,072.51	\$ 10.22	\$ 24,151.00
24	Criminal Justice Center	\$ 8,390.53	\$ 11,830.65	\$ 542.13	\$ 1,508.31	\$ 297.65	\$ 101.02	\$ 57.97	\$ -	\$ -	\$ -	\$ -	\$ 3,632.90	\$ 303.94	\$ 1.01	\$ 26,666.11
25	501 Union Building	\$ 1,952.36	\$ 2,894.72	\$ 132.64	\$ 369.01	\$ 338.74	\$ 142.41	\$ 14.20	\$ -	\$ -	\$ 232.74	\$ -	\$ 3,775.58	\$ 1,058.83	\$ 3.52	\$ 10,914.75
28	4th & Church Building	\$ 20,848.05	\$ -	\$ -	\$ -	\$ 911.24	\$ 273.44	\$ 47.42	\$ -	\$ -	\$ -	\$ -	\$ 12,348.99	\$ -	\$ -	\$ 34,429.14
29	Fifth-Third Financial Center	\$ 5,912.59	\$ 10,639.01	\$ 487.26	\$ 1,355.67	\$ 1,116.75	\$ 335.10	\$ 52.32	\$ -	\$ -	\$ 786.67	\$ 231.72	\$ 15,641.41	\$ -	\$ -	\$ 36,558.50
32	Renaissance Hotel	\$ 15,476.02	\$ 22,627.77	\$ 1,036.80	\$ 2,884.61	\$ 3,425.42	\$ 1,520.17	\$ 110.94	\$ -	\$ -	\$ 1,462.50	\$ -	\$ 30,478.66	\$ 12,786.64	\$ 42.55	\$ 91,852.08
34	Renaissance Office Tower	\$ 1,445.55	\$ 2,601.10	\$ 119.13	\$ 331.44	\$ 550.72	\$ 165.25	\$ 12.79	\$ -	\$ -	\$ 227.25	\$ 99.14	\$ 5,788.06	\$ -	\$ -	\$ 11,340.43
35	St. Mary's Catholic Church	\$ 997.66	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 33.26	\$ -	\$ -	\$ -	\$ -	\$ 1,030.92
36	Nashville City Center	\$ 4,818.51	\$ 8,670.33	\$ 397.10	\$ 1,104.82	\$ 1,145.43	\$ 343.71	\$ 42.64	\$ -	\$ -	\$ 753.42	\$ -	\$ 13,765.17	\$ -	\$ -	\$ 31,041.13
38	Wildhorse Saloon	\$ 1,805.06	\$ 2,852.26	\$ 130.67	\$ 363.54	\$ 400.51	\$ 151.74	\$ 14.00	\$ -	\$ -	\$ 182.83	\$ -	\$ 6,290.16	\$ 819.76	\$ 2.73	\$ 13,013.26
39	Ryman Auditorium	\$ 1,860.81	\$ 2,989.69	\$ 136.96	\$ 381.05	\$ 700.86	\$ 307.90	\$ 14.68	\$ -	\$ -	\$ 177.26	\$ -	\$ 6,459.81	\$ 2,534.66	\$ 8.43	\$ 15,572.11
40	Bridgestone Arena	\$ 20,037.26	\$ 32,278.31	\$ 1,478.67	\$ 4,113.97	\$ 3,079.60	\$ 982.62	\$ 158.49	\$ -	\$ -	\$ -	\$ -	\$ 30,185.63	\$ 1,519.93	\$ 5.06	\$ 93,839.54
41	Nissan Stadium	\$ 8,503.25	\$ 15,300.59	\$ 700.76	\$ 1,949.67	\$ 2,185.98	\$ 655.95	\$ 75.24	\$ -	\$ -	\$ -	\$ 95.22	\$ 23,810.35	\$ -	\$ -	\$ 53,277.01
43	Hume-Fogg High School	\$ 2,853.02	\$ 4,391.71	\$ 201.20	\$ 559.79	\$ 188.11	\$ 85.93	\$ 21.55	\$ -	\$ -	\$ -	\$ 397.52	\$ 2,749.73	\$ 765.75	\$ 2.55	\$ 12,216.86
44	Schermerhorn Symphony Center	\$ 15,194.36	\$ -	\$ -	\$ -	\$ 907.02	\$ 434.98	\$ 34.18	\$ -	\$ -	\$ -	\$ -	\$ 9,214.04	\$ 4,228.58	\$ 14.07	\$ 30,027.23
45	Nashville Public Library	\$ 6,889.00	\$ -	\$ -	\$ -	\$ 1,873.30	\$ 856.65	\$ 53.26	\$ -	\$ -	\$ -	\$ 207.36	\$ 16,672.72	\$ 7,649.79	\$ 25.45	\$ 34,227.53
49	Viridian Residential Tower	\$ 12,372.48	\$ -	\$ -	\$ -	\$ 576.30	\$ 172.93	\$ 25.68	\$ -	\$ -	\$ -	\$ 346.43	\$ 6,004.62	\$ -	\$ -	\$ 19,498.44
50	Music City Center	\$ 77,567.78	\$ 9,241.21	\$ -	\$ 7,081.70	\$ 7,993.44	\$ 3,568.87	\$ 394.86	\$ -	\$ -	\$ -	\$ -	\$ 74,134.19	\$ 30,396.19	\$ 101.14	\$ 210,479.38
51	Hyatt Place Hotel	\$ 10,877.32	\$ -	\$ -	\$ -	\$ 295.96	\$ 167.44	\$ 26.19	\$ -	\$ -	\$ -	\$ 359.84	\$ 2,901.95	\$ 2,042.31	\$ 6.80	\$ 16,677.81
51	State Government of TN	\$ 136,594.48	\$ 106,761.60	\$ -	\$ -	\$ 8,805.03	\$ 4,033.21	\$ -	\$ -	\$ -	\$ -	\$ 4,116.48	\$ 104,986.21	\$ 36,131.59	\$ 120.24	\$ 401,548.84
	Grand Totals:	\$ 399,956.37	\$ 301,875.75	\$ 8,515.34	\$ 30,773.19	\$ 41,632.52	\$ 17,192.14	\$ 1,493.86	\$ -	\$ -	\$ 6,636.69	\$ 7,653.55	\$ 438,226.00	\$ 122,060.86	\$ 406.17	\$ 1,376,422.44
	Rate Calculation Totals:	\$ 481,337.65	\$ 424,364.76	\$ 14,127.36	\$ 39,305.42	\$ 41,643.26	\$ 17,197.29	\$ 2,191.67	\$ -	\$ -	\$ 6,636.69	\$ 7,653.55	\$ 438,291.50	\$ 122,110.69	\$ 406.31	\$ 1,595,266.15
	Deviation:	\$ (81,381.28)	\$ (122,489.01)	\$ (5,612.02)	\$ (8,532.23)	\$ (10.74)	\$ (5.15)	\$ (697.81)	\$ -	\$ -	\$ -	\$ -	\$ (65.50)	\$ (49.83)	\$ (0.14)	\$ (218,843.71)

Metro Nashville District Energy System
Revenues
Chilled Water and Steam
June, 2019

Customer Number	Customer Name	Capacity	Operating	EDS Improvement	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	TIFS	Electricity	Natural Gas	Propane	Total
2	A. A. Birch	\$ 11,253.18	\$ 16,835.71	\$ 771.36	\$ 2,146.11	\$ 2,266.81	\$ 457.96	\$ 82.57	\$ -	\$ 522.40	\$ -	\$ 333.25	\$ 18,473.62	\$ 137.33	\$ -	\$ 53,280.30
4	Metro Courthouse	\$ 5,330.54	\$ 7,860.41	\$ 360.15	\$ 1,002.03	\$ 1,321.92	\$ 358.12	\$ 38.54	\$ -	\$ 243.91	\$ -	\$ 51.77	\$ 9,952.21	\$ 2,525.32	\$ -	\$ 29,044.92
7	Parkway Tower	\$ 4,846.41	\$ 7,607.60	\$ 348.53	\$ 969.67	\$ 1,052.68	\$ 210.30	\$ 37.34	\$ -	\$ 236.03	\$ 709.08	\$ 257.48	\$ 9,823.71	\$ -	\$ -	\$ 26,098.83
9	Bobby Hotel (fka Wells Fargo)	\$ 1,940.77	\$ 3,034.63	\$ 139.03	\$ 386.80	\$ 856.78	\$ 212.14	\$ 14.89	\$ -	\$ 94.16	\$ 254.67	\$ -	\$ 6,452.85	\$ 1,100.34	\$ -	\$ 14,487.06
10	Fairlane Hotel (fka 401 Union)	\$ 1,854.75	\$ 2,843.98	\$ 130.30	\$ 362.51	\$ 513.57	\$ 116.79	\$ 13.95	\$ -	\$ 88.25	\$ 310.26	\$ 152.34	\$ 4,274.72	\$ 381.16	\$ -	\$ 11,042.58
11	Sheraton Hotel	\$ 10,248.39	\$ 15,309.66	\$ 701.45	\$ 1,951.59	\$ 2,349.90	\$ 705.72	\$ 75.08	\$ -	\$ 475.05	\$ 1,229.92	\$ 135.68	\$ 17,577.92	\$ 6,345.36	\$ -	\$ 57,105.72
12	Municipal Auditorium	\$ 5,129.85	\$ 8,117.62	\$ 371.88	\$ 1,034.66	\$ 605.00	\$ 121.06	\$ 39.85	\$ -	\$ 251.85	\$ -	\$ -	\$ 6,666.07	\$ 5.34	\$ -	\$ 22,343.18
21	Hermitage Hotel	\$ 4,956.39	\$ 7,187.19	\$ 329.32	\$ 916.24	\$ 847.39	\$ 202.57	\$ 35.23	\$ -	\$ 223.03	\$ 276.83	\$ 479.25	\$ 6,495.32	\$ 894.01	\$ -	\$ 22,842.77
24	Criminal Justice Center	\$ 8,390.53	\$ 11,830.65	\$ 542.13	\$ 1,508.31	\$ 877.78	\$ 337.47	\$ 57.97	\$ -	\$ 367.15	\$ -	\$ -	\$ 6,264.72	\$ 4,353.66	\$ -	\$ 34,530.37
25	501 Union Building	\$ 1,952.36	\$ 2,894.72	\$ 132.64	\$ 369.01	\$ 519.12	\$ 142.15	\$ 14.20	\$ -	\$ 89.83	\$ 232.74	\$ -	\$ 4,376.11	\$ 1,032.24	\$ -	\$ 11,755.12
28	4th & Church Building	\$ 20,848.05	\$ -	\$ -	\$ -	\$ 1,560.56	\$ 311.76	\$ 47.42	\$ -	\$ -	\$ -	\$ -	\$ 15,131.33	\$ -	\$ -	\$ 37,899.12
29	Fifth-Third Financial Center	\$ 5,912.59	\$ 10,639.01	\$ 487.26	\$ 1,355.67	\$ 1,443.21	\$ 288.32	\$ 52.32	\$ -	\$ 329.99	\$ 786.67	\$ 248.27	\$ 16,273.07	\$ -	\$ -	\$ 37,816.38
32	Renaissance Hotel	\$ 15,476.02	\$ 22,627.77	\$ 1,036.80	\$ 2,884.61	\$ 4,909.39	\$ 1,258.88	\$ 110.94	\$ -	\$ 702.17	\$ 1,462.50	\$ -	\$ 29,846.12	\$ 7,468.88	\$ -	\$ 87,784.08
34	Renaissance Office Tower	\$ 1,445.55	\$ 2,601.10	\$ 119.13	\$ 331.44	\$ 764.74	\$ 152.77	\$ 12.79	\$ -	\$ 80.68	\$ 227.25	\$ 78.91	\$ 6,569.40	\$ -	\$ -	\$ 12,383.76
35	St. Mary's Catholic Church	\$ 997.66	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 33.26	\$ -	\$ -	\$ -	\$ -	\$ 1,030.92
36	Nashville City Center	\$ 4,818.51	\$ 8,670.33	\$ 397.10	\$ 1,104.82	\$ 1,749.19	\$ 349.44	\$ 42.64	\$ -	\$ 268.93	\$ 753.42	\$ -	\$ 16,230.01	\$ -	\$ -	\$ 34,384.39
38	Wildhorse Saloon	\$ 1,805.06	\$ 2,852.26	\$ 130.67	\$ 363.54	\$ 771.64	\$ 209.73	\$ 14.00	\$ -	\$ 88.49	\$ 182.83	\$ 168.29	\$ 5,989.24	\$ 1,492.52	\$ -	\$ 14,068.27
39	Ryman Auditorium	\$ 1,860.81	\$ 2,989.69	\$ 136.96	\$ 381.05	\$ 1,035.82	\$ 294.02	\$ 14.68	\$ -	\$ 92.75	\$ 177.26	\$ -	\$ 7,438.11	\$ 2,338.85	\$ -	\$ 16,760.00
40	Bridgestone Arena	\$ 20,037.26	\$ 32,278.31	\$ 1,478.67	\$ 4,113.97	\$ 5,158.83	\$ 1,287.84	\$ 158.49	\$ -	\$ 1,001.41	\$ -	\$ -	\$ 45,187.62	\$ 6,908.27	\$ -	\$ 117,610.67
41	Nissan Stadium	\$ 8,503.25	\$ 15,300.59	\$ 700.76	\$ 1,949.67	\$ 3,802.65	\$ 759.67	\$ 75.24	\$ -	\$ 474.58	\$ -	\$ 83.31	\$ 31,569.79	\$ -	\$ -	\$ 63,219.51
43	Hume-Fogg High School	\$ 2,853.02	\$ 4,391.71	\$ 201.20	\$ 559.79	\$ 259.71	\$ 78.94	\$ 21.55	\$ -	\$ 136.27	\$ -	\$ 368.96	\$ 1,617.37	\$ 726.48	\$ -	\$ 11,215.00
44	Schermerhorn Symphony Center	\$ 15,194.36	\$ -	\$ -	\$ -	\$ 1,269.08	\$ 404.52	\$ 34.18	\$ -	\$ -	\$ -	\$ -	\$ 13,182.87	\$ 4,055.08	\$ -	\$ 34,140.09
45	Nashville Public Library	\$ 6,889.00	\$ -	\$ -	\$ -	\$ 2,603.49	\$ 762.51	\$ 53.26	\$ -	\$ -	\$ -	\$ 173.60	\$ 18,511.64	\$ 6,509.88	\$ -	\$ 35,503.38
49	Viridian Residential Tower	\$ 12,372.48	\$ -	\$ -	\$ -	\$ 847.89	\$ 169.39	\$ 25.68	\$ -	\$ -	\$ -	\$ 117.54	\$ 6,896.55	\$ -	\$ -	\$ 20,429.53
50	Music City Center	\$ 77,567.78	\$ 9,241.21	\$ -	\$ 7,081.70	\$ 13,037.69	\$ 3,815.20	\$ 394.86	\$ -	\$ -	\$ -	\$ -	\$ 100,021.02	\$ 32,511.49	\$ -	\$ 243,670.95
51	Hyatt Place Hotel	\$ 10,877.32	\$ -	\$ -	\$ -	\$ 494.40	\$ 167.94	\$ 26.19	\$ -	\$ -	\$ -	\$ 308.75	\$ 3,642.09	\$ 1,857.73	\$ -	\$ 17,374.42
S1	State Government of TN	\$ 136,594.48	\$ 106,761.60	\$ -	\$ -	\$ 13,125.32	\$ 3,731.93	\$ -	\$ -	\$ 3,700.15	\$ -	\$ 5,264.89	\$ 114,734.05	\$ 29,805.32	\$ -	\$ 413,717.74
	Grand Totals:	\$ 399,956.37	\$ 301,875.75	\$ 8,515.34	\$ 30,773.19	\$ 64,044.56	\$ 16,907.14	\$ 1,493.86	\$ -	\$ 9,467.08	\$ 6,636.69	\$ 8,222.29	\$ 523,197.53	\$ 110,449.26	\$ -	\$ 1,481,539.06
	Rate Calculation Totals:	\$ 481,337.65	\$ 424,364.76	\$ 14,127.36	\$ 39,305.42	\$ 64,062.91	\$ 16,910.79	\$ 2,191.67	\$ -	\$ 9,567.60	\$ 6,636.69	\$ 8,222.29	\$ 523,280.94	\$ 110,449.27	\$ -	\$ 1,700,457.35
	Deviation:	\$ (81,381.28)	\$ (122,489.01)	\$ (5,612.02)	\$ (8,532.23)	\$ (18.35)	\$ (3.65)	\$ (697.81)	\$ -	\$ (100.52)	\$ -	\$ -	\$ (83.41)	\$ (0.01)	\$ -	\$ (218,918.29)

Metro Nashville District Energy System
Revenues
Chilled Water and Steam
Fiscal Year 18 - 19 True Up

Customer Number	Customer Name	Capacity	Operating	EDS Improvement	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	TIFS	Electricity	Natural Gas	Propane	Total
2	A. A. Birch	\$ (18,460.73)	\$ -	\$ -	\$ 1,570.55	\$ (215.04)	\$ -	\$ 395.43	\$ 572.68	\$ -	\$ -	\$ -	\$ (396.11)	\$ (621.68)	\$ (18.26)	\$ (17,173.16)
4	Metro Courthouse	\$ (8,631.91)	\$ -	\$ -	\$ 732.87	\$ (128.13)	\$ -	\$ 184.68	\$ 267.46	\$ -	\$ -	\$ -	\$ (213.40)	\$ (304.25)	\$ (8.94)	\$ (8,101.62)
7	Parkway Tower	\$ (7,753.86)	\$ -	\$ -	\$ 710.94	\$ (116.56)	\$ -	\$ 178.52	\$ 258.54	\$ -	\$ -	\$ -	\$ (175.51)	\$ (222.32)	\$ (6.53)	\$ (7,126.78)
9	Bobby Hotel (fka Wells Fargo)	\$ (3,123.64)	\$ -	\$ -	\$ 257.69	\$ (64.87)	\$ -	\$ 64.77	\$ 93.80	\$ -	\$ -	\$ -	\$ (132.01)	\$ (224.14)	\$ (6.58)	\$ (3,134.98)
10	Fairlane Hotel (fka 401 Union)	\$ (3,012.61)	\$ -	\$ -	\$ 265.55	\$ (46.98)	\$ -	\$ 66.77	\$ 96.69	\$ -	\$ -	\$ -	\$ (79.37)	\$ (114.82)	\$ (3.37)	\$ (2,828.14)
11	Sheraton Hotel	\$ (16,302.02)	\$ -	\$ -	\$ 1,428.11	\$ (193.02)	\$ -	\$ 359.60	\$ 520.79	\$ -	\$ -	\$ -	\$ (442.38)	\$ (812.02)	\$ (23.86)	\$ (15,464.80)
12	Municipal Auditorium	\$ (8,309.07)	\$ -	\$ -	\$ 758.82	\$ (59.84)	\$ -	\$ 190.46	\$ 275.83	\$ -	\$ -	\$ -	\$ (155.86)	\$ (306.47)	\$ (9.00)	\$ (7,615.13)
21	Hermitage Hotel	\$ (8,123.01)	\$ -	\$ -	\$ 669.67	\$ (83.42)	\$ -	\$ 168.92	\$ 244.64	\$ -	\$ -	\$ -	\$ (120.21)	\$ (143.32)	\$ (4.21)	\$ (7,390.94)
24	Criminal Justice Center	\$ (13,323.08)	\$ -	\$ -	\$ 1,101.12	\$ (11.28)	\$ -	\$ 278.21	\$ 402.91	\$ -	\$ -	\$ -	\$ (78.30)	\$ (200.89)	\$ (5.90)	\$ (11,837.21)
25	501 Union Building	\$ (3,092.41)	\$ -	\$ -	\$ 269.95	\$ (51.76)	\$ -	\$ 68.00	\$ 98.48	\$ -	\$ -	\$ -	\$ (84.15)	\$ (116.90)	\$ (3.43)	\$ (2,912.22)
28	4th & Church Building	\$ -	\$ -	\$ -	\$ -	\$ (153.50)	\$ -	\$ 226.87	\$ 328.57	\$ -	\$ -	\$ -	\$ (235.85)	\$ (306.57)	\$ (9.01)	\$ (149.49)
29	Fifth-Third Financial Center	\$ (9,441.50)	\$ -	\$ -	\$ 998.78	\$ (179.24)	\$ -	\$ 249.07	\$ 360.71	\$ -	\$ -	\$ -	\$ (153.03)	\$ -	\$ -	\$ (8,165.21)
32	Renaissance Hotel	\$ (24,555.52)	\$ -	\$ -	\$ 2,109.03	\$ (412.35)	\$ -	\$ 531.73	\$ 770.05	\$ -	\$ -	\$ -	\$ (721.37)	\$ (1,080.36)	\$ (31.74)	\$ (23,390.53)
34	Renaissance Office Tower	\$ (2,329.94)	\$ -	\$ -	\$ 244.19	\$ (99.10)	\$ -	\$ 60.90	\$ 88.19	\$ -	\$ -	\$ -	\$ (84.61)	\$ -	\$ -	\$ (2,120.37)
35	St. Mary's Catholic Church	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
36	Nashville City Center	\$ (7,677.86)	\$ -	\$ -	\$ 813.96	\$ (177.97)	\$ -	\$ 202.98	\$ 293.96	\$ -	\$ -	\$ -	\$ (151.95)	\$ -	\$ -	\$ (6,696.88)
38	Wildhorse Saloon	\$ (2,876.11)	\$ -	\$ -	\$ 266.62	\$ (58.87)	\$ -	\$ 66.93	\$ 96.93	\$ -	\$ -	\$ -	\$ (85.92)	\$ (104.31)	\$ (3.06)	\$ (2,697.79)
39	Ryman Auditorium	\$ (3,110.43)	\$ -	\$ -	\$ 279.62	\$ (94.15)	\$ -	\$ 70.12	\$ 101.56	\$ -	\$ -	\$ -	\$ (147.48)	\$ (196.30)	\$ (5.77)	\$ (3,102.83)
40	Bridgestone Arena	\$ (31,700.91)	\$ -	\$ -	\$ 3,019.24	\$ (618.72)	\$ -	\$ 757.11	\$ 1,096.46	\$ -	\$ -	\$ -	\$ (716.35)	\$ (550.28)	\$ (16.17)	\$ (28,729.62)
41	Nissan Stadium	\$ (13,375.36)	\$ -	\$ -	\$ 1,436.40	\$ (310.08)	\$ -	\$ 358.21	\$ 518.76	\$ -	\$ -	\$ -	\$ (264.74)	\$ -	\$ -	\$ (11,636.81)
43	Hume-Fogg High School	\$ (4,796.20)	\$ -	\$ -	\$ 410.12	\$ (18.40)	\$ -	\$ 103.10	\$ 149.31	\$ -	\$ -	\$ -	\$ (45.80)	\$ (88.03)	\$ (2.59)	\$ (4,288.49)
44	Schermerhorn Symphony Center	\$ -	\$ -	\$ -	\$ -	\$ (112.13)	\$ -	\$ 163.44	\$ 236.70	\$ -	\$ -	\$ -	\$ (196.04)	\$ (293.42)	\$ (8.62)	\$ (210.07)
45	Nashville Public Library	\$ -	\$ -	\$ -	\$ -	\$ (306.53)	\$ -	\$ 254.96	\$ 369.25	\$ -	\$ -	\$ -	\$ (472.23)	\$ (615.85)	\$ (18.09)	\$ (788.49)
49	Viridian Residential Tower	\$ -	\$ -	\$ -	\$ -	\$ (78.50)	\$ -	\$ 122.27	\$ 177.07	\$ -	\$ -	\$ -	\$ (67.02)	\$ -	\$ -	\$ 153.82
50	Music City Center	\$ -	\$ -	\$ -	\$ 5,781.60	\$ (1,161.86)	\$ -	\$ 1,887.88	\$ 2,734.08	\$ -	\$ -	\$ -	\$ (2,034.25)	\$ (3,049.00)	\$ (89.57)	\$ 4,068.88
51	Hyatt Place Hotel	\$ -	\$ -	\$ -	\$ -	\$ (39.60)	\$ -	\$ 125.76	\$ 182.13	\$ -	\$ -	\$ -	\$ (97.70)	\$ (186.89)	\$ (5.49)	\$ (21.79)
51	State Government of TN	\$ (1,123.66)	\$ -	\$ -	\$ -	\$ (1,268.32)	\$ -	\$ -	\$ 4,056.58	\$ -	\$ -	\$ -	\$ (2,556.26)	\$ (4,310.09)	\$ (126.63)	\$ (5,328.38)
	Grand Totals:	\$ (191,119.83)	\$ -	\$ -	\$ 23,124.83	\$ (6,060.22)	\$ -	\$ 7,136.69	\$ 14,392.13	\$ -	\$ -	\$ -	\$ (9,907.90)	\$ (13,847.91)	\$ (406.82)	\$ (176,689.03)
	Rate Calculation Totals:	\$ (191,119.83)	\$ -	\$ -	\$ 30,464.06	\$ (6,060.88)	\$ -	\$ 9,947.54	\$ 14,406.24	\$ -	\$ -	\$ -	\$ (9,914.44)	\$ (13,865.07)	\$ (407.31)	\$ (166,549.69)
	Deviation:	\$ -	\$ -	\$ -	\$ 7,339.23	\$ (0.66)	\$ -	\$ 2,810.85	\$ 14.11	\$ -	\$ -	\$ -	\$ (6.54)	\$ (17.16)	\$ (0.49)	\$ (10,139.34)



Appendix 4



NASHVILLE, TENNESSEE

REV: 1
DATE: 07/29/19

CNE INVOICE RECONCILIATION - FY 2018 - 2019

SALES SUMMARY FROM CUSTOMER METER READS

MONTH	7	8	9	10	11	12	1	2	3	4	5	6	TOTAL
STEAM SALES													
Previously invoiced, lbs	16,384,926	17,258,126	18,176,813	27,324,850	45,110,217	51,304,036	58,543,258	44,830,771	44,000,442	24,920,342	18,518,639	15,731,584	382,104,004
Reconciled, lbs	16,384,926	17,258,126	18,176,813	27,324,850	45,110,217	51,304,036	58,543,258	44,830,771	44,000,442	24,920,342	18,518,639	15,731,584	382,104,004
CHW SALES													
Previously invoiced, ton-hrs	8,669,006	8,630,350	7,847,216	5,214,050	2,774,971	2,751,071	2,558,241	2,995,155	3,203,082	4,292,897	6,211,811	6,829,230	61,977,080
Reconciled, ton-hrs	8,669,006	8,630,350	7,847,216	5,214,050	2,774,971	2,751,071	2,558,241	2,995,155	3,203,082	4,292,897	6,211,811	6,829,230	61,977,080

SUMMARY FROM CUSTOMER METER READS from INVOICES (paste link)

START DATE	07/01/18	08/01/18	09/01/18	10/01/18	11/01/18	12/01/18	01/01/19	02/01/19	03/01/19	04/01/19	05/01/19	06/01/18	06/01/18
END DATE	07/31/18	08/31/18	09/30/18	10/31/18	11/30/18	12/31/18	01/31/19	02/28/19	03/31/19	04/30/19	05/31/19	06/30/19	06/30/19
CHW SALES ton-hrs	8,669,006	8,630,350	7,847,216	5,214,050	2,774,971	2,751,071	2,558,241	2,995,155	3,203,082	4,292,897	6,211,811	6,829,230	61,977,080
CHW SENDOUT ton-hrs	8,966,400	8,931,200	8,098,600	5,393,500	2,928,400	2,915,700	2,706,000	3,132,900	3,358,500	4,473,200	6,512,700	7,276,400	64,693,500
CHW ELECTRIC kWh	7,857,776	7,853,600	7,086,380	4,718,653	2,685,337	2,614,507	2,432,063	2,675,759	2,931,489	3,738,563	5,516,669	6,211,667	56,322,463
CHW MUW galls	16,279,000	16,080,000	14,139,000	8,296,000	3,532,000	3,413,000	3,132,107	4,682,000	5,236,000	8,009,000	12,284,000	13,884,000	108,966,107
STEAM SALES mbs	16,385	17,258	18,177	27,325	45,110	51,304	58,543	44,831	44,000	24,920	18,519	15,732	382,104
STEAM SENDOUT mbs	22,326	22,849	23,620	31,848	48,093	53,345	61,830	48,707	48,439	31,041	25,188	22,132	439,458
STEAM PRODUCTION mbs	26,298	26,320	27,265	38,124	57,619	63,573	72,066	58,092	0	35,993	28,821	26,315	460,486
NATURAL GAS mmBtu	30,273	31,220	31,793	43,222	66,903	73,987	85,819	67,054	66,526	41,257	32,693	29,925	600,673
PROPANE mmBtu	0	0	0	0	37	49	278	0	8	0	16	0	388
STEAM ELECTRIC kWh	56,455	56,610	56,406	85,046	123,374	135,057	148,361	126,112	121,765	72,959	57,963	54,864	1,094,972
CONDENSATE RETURN galls	2,149,600	2,045,600	2,388,800	3,142,000	4,201,400	5,057,300	6,020,500	4,620,700	4,540,600	2,983,600	2,219,200	1,611,800	40,881,100
Efficiency - Cooling kWh/ton-hr-Sold	0.906	0.910	0.903	0.905	0.958	0.950	0.951	0.893	0.915	0.871	0.888	0.910	0.909
Efficiency - Heating Dth/kib-Sendout	1.356	1.366	1.346	1.357	1.392	1.388	1.392	1.377	1.374	1.329	1.300	1.348	1.368

CNE INVOICE RECONCILIATION - FY 2018 - 2019

UTILITY INVOICES (Paste Link)

Month of Service		7	8	9	10	11	12	1	2	3	4	5	6	TOTAL
ELECTRIC SERVICE (NES)														
Service Dates	From	7/1/2018	8/1/2018	8/1/2018	10/1/2018	11/1/2018	12/1/2018	1/1/2019	2/1/2019	3/1/2019	4/1/2019	5/1/2019	5/1/2019	7/1/2018
	To	7/31/2018	8/31/2018	8/31/2018	10/31/2018	11/30/2018	12/31/2018	1/31/2019	2/28/2019	3/31/2019	4/30/2019	5/31/2019	5/31/2019	5/31/2019
PEAK Demand	kWh	16,464	15,904	15,512	13,608	6,272	6,216	6,086	8,064	7,112	9,240	12,600	13,608	16,464
Service Period Use	kWh	8,001,140	7,980,812	7,212,408	4,879,980	2,892,540	2,826,208	2,662,996	2,877,924	3,118,948	3,887,520	5,631,584	6,336,008	58,308,068
Service Period Charge	\$	\$ 688,583.72	\$ 682,785.18	\$ 618,834.33	\$ 441,182.05	\$ 238,129.36	\$ 246,046.12	\$ 230,708.59	\$ 266,800.27	\$ 271,511.00	\$ 320,888.28	\$ 438,291.50	\$ 523,280.94	\$ 4,987,041.34
Average Charge	\$/kWh	\$ 0.086100	\$ 0.085600	\$ 0.085800	\$ 0.090400	\$ 0.082300	\$ 0.087100	\$ 0.086600	\$ 0.099700	\$ 0.087100	\$ 0.082500	\$ 0.077900	\$ 0.082600	\$ 0.085529
NATURAL GAS SERVICE														
Service Dates	From	7/1/2018	8/1/2018	9/1/2018	10/1/2018	11/1/2018	12/1/2018	1/1/2019	2/1/2019	3/1/2019	4/1/2019	5/1/2019	6/1/2019	7/1/2018
	To	7/31/2018	8/31/2018	9/30/2018	10/31/2018	11/30/2018	12/31/2018	1/31/2019	2/28/2019	3/31/2019	4/30/2019	5/31/2019	6/30/2019	6/30/2019
UTILITY CEPS INVOICE DATA ENT	Start	443,865	472,370	501,755	531,526	571,894	634,578	704,055	784,495	847,526	910,050	948,696	974,755	948,696
	Ending	472,370	501,755	531,526	571,894	634,578	704,055	784,495	847,526	910,050	948,696	974,755	1,002,892	
UTILITY METER Multiplier		10	10	10	10	10	10	10	10	10	10	10	10	
HEAT FACTOR		1.062	1.062	1.068	1.071	1.067	1.065	1.067	1.064	1.064	1.064	1.068	1.064	
Service Period Use	CCF	285,050	293,850	297,710	403,680	626,840	694,770	804,400	630,310	625,240	386,460	260,590	281,370	5,590,270
	Dth	30,273.2	31,219.5	31,793.3	43,222.4	66,902.6	73,986.8	85,819.0	67,053.6	66,526.2	41,257.3	32,693.3	29,925.4	600,672.6
Service Period Charges														
CONSULTANTS	\$	\$ 6,474.24	\$ 6,474.24	\$ 6,474.24	\$ 6,474.24	\$ 6,474.24	\$ 6,474.24	\$ 6,474.24	\$ 6,474.24	\$ 6,474.24	\$ 6,474.24	\$ 6,474.24	\$ 6,474.24	77,690.88
NASHVILLE GAS	\$	\$ 19,491.76	\$ 19,927.08	\$ 20,191.02	\$ 25,448.57	\$ 36,341.78	\$ 39,600.62	\$ 45,043.59	\$ 36,411.25	\$ 36,168.64	\$ 24,544.60	\$ 20,519.87	\$ 14,077.21	337,765.99
CNEG	\$	\$ 86,831.01	\$ 87,897.19	\$ 90,173.81	\$ 125,367.05	\$ 217,036.51	\$ 313,786.93	\$ 312,215.86	\$ 194,027.28	\$ 200,613.15	\$ 124,502.77	\$ 95,116.58	\$ 89,897.82	1,937,465.96
TOTAL	\$	\$ 112,797.01	\$ 114,298.51	\$ 116,839.07	\$ 157,289.86	\$ 259,852.53	\$ 359,861.79	\$ 363,733.69	\$ 236,912.77	\$ 243,256.03	\$ 155,521.61	\$ 122,110.69	\$ 110,449.27	2,352,922.83
Average Charge	\$/Dth	\$ 3.7260	\$ 3.6611	\$ 3.6750	\$ 3.6391	\$ 3.8840	\$ 4.8639	\$ 4.2384	\$ 3.5332	\$ 3.6565	\$ 3.7696	\$ 3.7350	\$ 3.6908	\$ 3.9171
WATER SERVICE (DOMESTIC AND PLANT)														
Service Dates	From	7/1/2018	8/1/2018	8/1/2018	10/1/2018	11/1/2018	12/1/2018	1/1/2019	2/1/2019	3/1/2019	4/1/2019	5/1/2019	5/1/2019	7/1/2018
	To	7/31/2018	8/31/2018	8/31/2018	10/31/2018	11/30/2018	12/31/2018	1/31/2019	2/28/2019	3/31/2019	4/30/2019	5/31/2019	5/31/2019	5/31/2019
UTILITY CEPS INVOICE DATA ENTRY														
DOMESTIC														
PLANT METER #1	Start													
	Ending													
PLANT METER #2	Start													
	Ending													
Service Period Use														
DOMESTIC	CCF	40	43	52	35	25	20	26	20	17	16	11	15	320
PLANT METER #1	CCF	25,501	23,390	29,639	20,630	12,970	8,405	10,273	26,771	10,379	11,012	14,884	23,204	217,058
PLANT METER #2	CCF													0
TOTAL	CCF	25,541	23,433	29,691	20,665	12,995	8,425	10,299	26,791	10,396	11,028	14,895	23,219	217,378
PLANT ONLY	CCF	25,501	23,390	29,639	20,630	12,970	8,405	10,273	26,771	10,379	11,012	14,884	23,204	217,058
	GALLONS	19,074,748	17,495,720	22,169,972	15,431,240	9,701,560	6,286,940	7,684,204	20,024,708	7,763,492	8,236,976	11,133,232	17,356,592	162,359,384
Service Period Charges														
DOMESTIC	WATER \$	\$ 113.95	\$ 120.37	\$ 139.63	\$ 103.25	\$ 81.85	\$ 71.15	\$ 83.99	\$ 71.15	\$ 64.73	\$ 62.59	\$ 51.89	\$ 60.45	\$ 1,025.00
	SEWER \$	\$ 229.89	\$ 242.85	\$ 281.73	\$ 208.29	\$ 165.09	\$ 143.49	\$ 169.41	\$ 143.49	\$ 130.53	\$ 126.21	\$ 104.61	\$ 121.89	\$ 2,067.48
PLANT	WATER \$	\$ 48,257.72	\$ 44,266.31	\$ 56,090.10	\$ 39,042.31	\$ 24,549.10	\$ 16,598.67	\$ 20,134.25	\$ 51,337.47	\$ 20,331.03	\$ 21,627.83	\$ 28,849.56	\$ 44,588.57	\$ 415,572.92
	SEWER \$	\$ 20,779.24	\$ 19,061.22	\$ 24,153.34	\$ 16,811.82	\$ 10,568.92	\$ 6,849.26	\$ 8,368.42	\$ 21,812.66	\$ 8,456.44	\$ 8,971.52	\$ 12,127.20	\$ 18,908.00	\$ 176,868.04
	STATE FEE @ 10%	\$ 300.00	\$ 300.00	\$ 342.00	\$ 300.00	\$ 300.00	\$ 300.00	\$ 300.00	\$ 300.00	\$ 300.00	\$ 300.00	\$ 510.00	\$ 384.00	\$ 3,936.00
TOTAL	\$	\$ 69,680.80	\$ 63,990.75	\$ 81,006.80	\$ 56,465.67	\$ 35,664.96	\$ 23,962.57	\$ 29,056.07	\$ 73,664.77	\$ 29,282.73	\$ 30,988.15	\$ 41,643.26	\$ 64,062.91	\$ 599,469.44
PLANT, WATER ONLY	\$	\$ 48,257.72	\$ 44,266.31	\$ 56,090.10	\$ 39,042.31	\$ 24,549.10	\$ 16,598.67	\$ 20,134.25	\$ 51,337.47	\$ 20,331.03	\$ 21,627.83	\$ 28,849.56	\$ 44,588.57	\$ 415,572.92
Average Charge	\$/kGall	\$ 2.5299	\$ 2.5301	\$ 2.5300	\$ 2.5301	\$ 2.5304	\$ 2.6402	\$ 2.6202	\$ 2.5637	\$ 2.6188	\$ 2.6136	\$ 2.5913	\$ 2.5690	\$ 2.5596
MONTHLY FEAs														
Service Dates	From	7/1/2018	8/1/2018	9/1/2018	10/1/2018	11/1/2018	12/1/2018	1/1/2019	2/1/2019	3/1/2019	4/1/2019	5/1/2019	6/1/2019	7/1/2018
	To	7/31/2018	8/31/2018	9/30/2018	10/31/2018	11/30/2018	12/31/2018	1/31/2019	2/28/2019	3/31/2019	4/30/2019	5/31/2019	6/30/2019	6/30/2019
STEAM	ELECTRIC	\$900.76	\$1,004.56	\$1,129.52	\$1,783.46	\$3,030.39	\$3,782.64	\$4,393.02	\$3,561.18	\$3,097.56	\$1,678.95	\$1,033.73	\$816.05	\$26,091.72
	FUEL GAS	\$4,720.84	\$4,801.09	\$5,012.70	\$6,605.88	\$9,647.93	\$13,398.61	\$13,174.84	\$9,293.20	\$9,749.02	\$7,635.32	\$6,763.80	\$5,221.70	\$95,824.93
	WATER	\$21.47	\$40.72	\$19.67	-\$52.18	-\$416.82	-\$450.67	-\$539.85	-\$255.37	-\$84.95	\$19.72	\$43.91	\$16.60	-\$1,637.75
CHW	ELECTRIC	\$27,803.46	\$26,779.98	\$25,585.07	\$17,675.64	\$4,967.26	\$6,289.97	\$5,760.14	\$12,093.98	\$9,764.58	\$16,291.54	\$20,176.88	\$20,448.42	\$193,636.92
	FUEL GAS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	WATER	\$18,488.44	\$18,489.34	\$17,113.68	\$12,067.44	\$6,981.41	\$7,279.72	\$6,746.67	\$7,077.82	\$7,580.86	\$9,492.05	\$13,167.07	\$14,110.00	\$138,594.50
	TOTAL	\$ 51,934.97	\$ 50,915.69	\$ 48,860.64	\$ 38,080.24	\$ 24,210.17	\$ 30,280.17	\$ 29,534.82	\$ 31,770.81	\$ 30,107.07	\$ 35,017.58	\$ 41,185.39	\$ 40,612.77	\$452,510.32
STEAM CAPACITY TEST ADJUSTMENTS														
Month		7	8	9	10	11	12							TOTAL
NATURAL GAS														
USAGE CREDIT	MCF													0
	Dth													0
	\$													\$ -
ELECTRIC														
USAGE CREDIT	kWh													0
	\$													\$ -
WATER														
USAGE CREDIT	kGallon													0

CNE INVOICE RECONCILIATION - FY 2018 - 2019

155	FT_4100: MUW, CHW.	Start Reading	166,744,800	168,816,100	171,703,000	174,960,000	178,675,900	179,681,400	180,723,200	181,936,200	183,040,000	184,273,100	185,718,400	187,418,200	187,418,200	
156		End Reading	168,816,100	171,703,000	174,860,000	178,675,900	179,681,400	180,723,200	181,836,200	183,040,000	184,273,100	185,718,400	187,418,200	189,346,500	189,346,500	
157		Period Use in units = 1 x GALL	2,071,300	2,886,900	3,157,000	3,815,900	1,005,500	1,041,800	1,213,000	1,103,800	1,233,100	1,445,300	1,699,800	1,928,300	22,601,700	
158	2" PLANT WATER	Start Reading in 10 x scft	15,299,900	15,372,900	15,372,900	15,372,900	15,372,900	15,152,500	1,605,300	1,753,600	1,893,900	2,047,800	2,204,100	2,376,600	2,376,600	
159	UTILITY METER	Start Reading in 10 x scft	15,372,900	15,372,900	15,372,900	15,372,900	15,372,900	1,605,300	1,753,600	1,893,900	2,047,800	2,204,100	2,376,600	2,484,900	2,484,900	
160		Period Use in units = 1 x SCFT	73,000	0	0	0	92,800	148,300	140,300	153,900	156,300	172,500	108,300	108,300	1,045,400	
161	6" PLANT WATER	Start Reading	2,203,035	2,227,730	2,253,470	2,276,710	2,293,970	2,302,825	2,311,030	2,319,080	2,327,710	2,337,070	2,349,570	2,367,770	2,367,770	
162	UTILITY METER	End Reading	2,227,730	2,253,470	2,276,710	2,293,970	2,302,825	2,311,030	2,319,080	2,327,710	2,337,070	2,349,570	2,367,770	2,388,790	2,388,790	
163		Period Use in units = 1 x SCFT	24,695	25,740	23,240	17,260	8,855	8,205	8,050	8,630	9,360	12,500	18,200	21,020	185,755	
164	2" DOMESTIC WATER	Start Reading	3,662,000.0	3,705,000.0	3,759,000.0	3,800,000.0	3,825,000.0	3,847,000.0	3,866,000.0	3,894,000.0	3,910,000.0	3,926,000.0	3,938,000.0	3,952,000.0	3,952,000.0	
165	UTILITY METER	End Reading	3,705,000.0	3,759,000.0	3,800,000.0	3,825,000.0	3,847,000.0	3,866,000.0	3,894,000.0	3,910,000.0	3,926,000.0	3,938,000.0	3,952,000.0	3,962,000.0	3,962,000.0	
166		Period Use in units = 1 x SCFT	43,000	54,000	41,000	25,000	22,000	19,000	28,000	16,000	16,000	12,000	14,000	10,000	300,000	

PERFORMANCE CALCULATIONS

Month	7	8	9	10	11	12	13	14	15	16	17	18	TOTAL
ELECTRIC-TO-STEAM CONVERSION													
Emainutility kWh	8,001,140	7,980,812	7,212,408	4,879,980	2,892,540	2,826,208	2,662,996	2,877,924	3,118,948	3,887,520	5,631,584	6,336,008	58,308,068
Echw, metered kWh	7,809,859	7,805,532	7,039,358	4,670,343	2,640,598	2,569,577	2,386,400	2,633,489	2,884,752	3,692,456	5,468,771	6,165,577	55,766,711
Esteam, metered kWh	56,113	56,266	56,034	84,184	121,354	132,777	145,630	124,152	119,855	72,070	57,464	54,460	1,080,359
Esteam, un-metered kWh	948	839	909	2,164	5,479	5,819	7,162	5,189	4,394	2,280	1,075	997	37,255
CAPACITY TEST ADJUSTMENT, kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
Esteam, total kWh	57,061	57,105	56,943	86,348	126,833	138,596	152,792	129,341	124,249	74,350	58,539	55,457	1,117,614
Customer Steam, S+n+e lbs	16,384,926	17,258,126	18,176,813	27,324,850	45,110,217	51,304,036	58,543,258	44,830,771	44,000,442	24,920,342	18,518,639	15,731,584	382,104,004
nelec, actual kWh/klb	3.483	3.309	3.133	3.160	2.812	2.701	2.610	2.885	2.824	2.984	3.161	3.525	2.925
FUEL GAS-TO-STEAM CONVERSION													
Metered Plant Steam Send-out lbs	22,326,000	22,849,000	23,620,000	31,848,000	48,093,000	53,345,000	61,830,000	48,707,000	48,439,000	31,041,000	25,168,000	22,192,000	439,458,000
CAPACITY TEST ADJUSTMENT, lbs	0	0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED Plant Steam SO lbs	22,326,000	22,849,000	23,620,000	31,848,000	48,093,000	53,345,000	61,830,000	48,707,000	48,439,000	31,041,000	25,168,000	22,192,000	439,458,000
Natural Gas use, NG Dth	30,273.2	31,219.5	31,793.3	43,222.4	66,902.6	73,986.8	85,819.0	67,053.6	66,526.2	41,257.3	32,693.3	29,925.4	600,672.6
Propane Gas use, P gallon	0	0	0	0	401	540	3,060	0	90	0	180	0	4,271
Dth	0	0	0	0	37	49	278	0	8	0	16	0	388
CAPACITY TEST ADJUSTMENT, Dth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
TOTAL FUEL GAS USE Dth	30,273.2	31,219.5	31,793.3	43,222.4	66,939.6	74,035.8	86,097.0	67,053.6	66,534.2	41,257.3	32,709.3	29,925.4	601,060.6
nhhv, actual Dth/klb	1.356	1.366	1.346	1.357	1.392	1.388	1.392	1.377	1.374	1.329	1.300	1.348	1.3680
Condensate Return, CR gallon	2,149,600	2,045,600	2,388,800	3,142,000	4,201,400	5,057,300	6,020,500	4,620,700	4,540,600	2,883,600	2,219,200	1,611,800	40,881,100
% of SO	78.53%	73.02%	82.48%	80.46%	77.32%	77.32%	79.42%	76.45%	77.37%	75.24%	71.91%	59.24%	75.87%
Condensate Return Energy mmBtu	2,679	2,683	3,008	3,802	5,027	5,870	7,027	5,377	5,306	3,512	2,917	2,170	49,378
Condensate Return Temperature avg	185 °F	193 °F	186 °F	180 °F	179 °F	174 °F	175 °F	175 °F	175 °F	181 °F	193 °F	197 °F	180 °F
nhhv, guarantee Dth/klb													GUARANTEED MAX RATE 1.676
													CES FEA RATE 1.591

WATER-TO-STEAM CONVERSION

197	Metered Steam Makeup, MW Gallons	635,690	797,000	546,810	889,100	2,093,440	1,858,030	1,980,870	1,637,270	1,624,550	1,020,360	919,710	1,237,360	15,240,190
198	CAPACITY TEST ADJUSTMENT, Gallons	0	0	0	0	0	0	0	0	0	0	0	0	0
199	ADJUSTED Steam Makeup, MW Gallons	635,690	797,000	546,810	889,100	2,093,440	1,858,030	1,980,870	1,637,270	1,624,550	1,020,360	919,710	1,237,360	15,240,190
200	Actual Steam Makeup, nwater Gallons	642,047	804,970	552,278	897,991	2,114,374	1,876,610	2,000,679	1,653,643	1,640,796	1,030,564	928,907	1,249,734	15,392,592
201	Guarantee Steam Makeup, nguar. Gallons	675,995	869,339	583,373	877,366	1,949,651	1,705,914	1,794,646	1,554,032	1,608,358	1,060,737	996,686	1,275,570	14,951,668

ELECTRICITY-TO-CHW CONVERSION

203	Emainutility kWh	8,001,140	7,980,812	7,212,408	4,879,980	2,892,540	2,826,208	2,662,996	2,877,924	3,118,948	3,887,520	5,631,584	6,336,008	58,308,068
204	CAPACITY TEST ADJUSTMENT, kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
205	Echw, metered kWh	7,809,859	7,805,532	7,039,358	4,670,343	2,640,598	2,569,577	2,386,400	2,633,489	2,884,752	3,692,456	5,468,771	6,165,577	55,766,711
206	Esteam, total kWh	57,061	57,105	56,943	86,348	126,833	138,596	152,792	129,341	124,249	74,350	58,539	55,457	1,117,614
207	Echw, un-metered kWh	134,220	118,175	116,107	123,289	125,109	118,035	123,804	115,094	109,947	120,714	104,274	1,423,743	
208	Echw, total kWh	7,944,079	7,923,707	7,155,465	4,793,632	2,765,707	2,687,612	2,510,204	2,748,583	2,994,699	3,813,170	5,573,405	6,280,551	57,190,454
209	Customer CHW, CHWs+e Ton-hrs	8,669,006	8,630,350	7,847,216	5,214,050	2,774,971	2,751,071	2,558,241	2,995,155	3,203,082	4,292,897	6,211,811	6,829,230	61,977,080
210	nelec, actual kWh/ton-hr	0.916	0.918	0.912	0.919	0.997	0.977	0.981	0.918	0.935	0.888	0.897	0.920	0.923

CHW-TO-CHW CONVERSION

211	Condenser Water Makeup, CM Gallons	16,279,000	16,080,000	14,139,000	8,296,000	3,532,000	3,413,000	3,132,107	4,682,000	5,236,000	8,009,000	12,284,000	13,884,000	108,966,107
213	Customer CHW, CHWs+e Ton-hrs	8,669,006	8,630,350	7,847,216	5,214,050	2,774,971	2,751,071	2,558,241	2,995,155	3,203,082	4,292,897	6,211,811	6,829,230	61,977,080
214	nwater, actual Gallons/ton-hr	1.8778	1.8632	1.8018	1.5911	1.2728	1.2406	1.2243	1.5632	1.6347	1.8656	1.9775	2.0330	1.7582

METER CHECKS AND ESTIMATES

	7	8	9	10	11	12	1	2	3	4	5	6	TOTAL
WATER METER CHECKS													
Utility Meters - Utility Dates gallons	19,074,748	17,495,720	22,169,972	15,431,240	9,701,560	6,286,940	7,684,204	20,024,708	7,763,492	8,236,976	11,133,232	17,356,592	162,359,384
Utility Meters - Customer Dates gallons	730,759	192,535	173,835	129,105	66,235	755,517	1,169,498	1,113,996	1,221,185	1,262,624	1,426,436	967,314	9,209,039
variance (line 184-line 183) gallons	-18,343,989	-17,303,185	-21,996,137	-15,302,135	-9,635,325	-5,531,423	-6,514,706	-18,910,712	-6,542,307	-6,974,352	-9,706,796	-16,389,278	-153,250,345
% of TOTAL (line 183)	-96%	-98%	-99%	-99%	-99%	-88%	-85%	-94%	-84%	-85%	-87%	-84%	-94.33%
Plant Meters													
CHW gallons	2,071,300	2,886,900	3,157,000	3,815,900	1,005,500	1,041,800	1,213,000	1,103,800	1,233,100	1,445,300	1,699,800	1,928,300	22,601,700
CW gallons	16,279,000	16,080,000	14,139,000	8,296,000	3,532,000	3,413,000	3,132,107	4,682,000	5,236,000	8,009,000	12,284,0		

CNE INVOICE RECONCILIATION - FY 2018 - 2019

228	variance (line 191-line 184)	gallons	18,255,231	19,571,365	17,668,975	12,871,895	6,564,705	5,557,313	5,156,479	6,309,074	6,872,465	9,212,036	13,477,074	16,082,346	137,598,958
229	% of TOTAL (line 184)		2498%	10165%	10164%	9970%	9911%	736%	441%	566%	563%	730%	945%	1663%	1494.17%
230															
231	CW MUW CHECK		7	8	9	10	11	12	1	2	3	4	5	6	TOTAL
232	CHW Send-out	ton-hrs	8,966,400	8,931,200	8,098,600	5,393,500	2,928,400	2,915,700	2,706,000	3,132,900	3,358,500	4,473,200	6,512,700	7,276,400	64,693,500
233	CW MUW Rate	gall/ton-hr	1.816	1.800	1.746	1.538	1.206	1.171	1.157	1.494	1.559	1.790	1.886	1.908	1.684
234															
235	FINAL MAKEUP WATER RESULTS		7	8	9	10	11	12	1	2	3	4	5	6	TOTAL
236	CHW	gallons	2,071,300	2,896,900	3,157,000	3,815,900	1,005,500	1,041,800	1,213,000	1,103,800	1,233,100	1,445,300	1,698,800	1,921,000	22,601,700
237	CW	gallons	16,279,000	16,080,000	14,139,000	8,296,000	3,532,000	3,413,000	3,132,107	4,682,000	5,236,000	8,009,000	12,284,000	13,884,000	108,966,107
238	STEAM	gallons	635,690	797,000	546,810	889,100	2,093,440	1,858,030	1,980,870	1,637,270	1,624,550	1,020,360	919,710	1,237,360	15,240,190
239	TOTAL	gallons	18,985,990	19,763,900	17,842,810	13,001,000	6,630,940	6,312,830	6,325,977	7,423,070	8,093,650	10,474,660	14,903,510	17,049,660	146,807,997
240	variance	gallons	18,255,231	19,571,365	17,668,975	12,871,895	6,564,705	5,557,313	5,156,479	6,309,074	6,872,465	9,212,036	13,477,074	16,082,346	137,598,958
241	% of TOTAL (line 184)		2498%	112%	80%	83%	68%	88%	67%	0%	0%	112%	121%	93%	85%
242															
243	STEAM PLANT MASS BALANCE CK		7	8	9	10	11	12	1	2	3	4	5	6	TOTAL
244	STEAM SENDOUT	kibs	22,326	22,848	23,620	31,848	48,093	53,345	61,830	48,707	48,439	31,041	25,168	22,192	439,458
245	STEAM PRODUCTION	kibs	26,298	26,320	27,265	38,124	57,619	63,573	72,066	58,092	0	35,993	28,821	23,315	460,486
246			-3,972	-3,471	-3,645	-6,276	-9,526	-10,228	-10,236	-9,385	48,439	-4,952	-3,653	-4,123	
247	CALC'D LOSSES														
248	BLOWDOWN 4%	kibs	1,052	1,053	1,091	1,525	2,305	2,543	2,883	2,324	0	1,440	1,153	1,053	18,419
249	DEA VENT 0.50%	kibs	131	132	136	191	288	318	360	290	0	180	144	132	2,302
250	TOTAL CALC'D LOSSES	kibs	1,183	1,184	1,227	1,716	2,593	2,861	3,243	2,614	0	1,620	1,297	1,184	20,722
251															
252	CONDENSATE RETURN	gallons	2,149,600	2,045,600	2,388,800	3,142,000	4,201,400	5,057,300	6,020,500	4,620,700	4,540,600	2,883,600	2,219,200	1,611,800	40,881,100
253	8.15585	kibs	17,532	16,684	19,483	25,626	34,266	41,247	49,102	37,686	37,032	23,518	18,099	13,146	333,420
254	8.3453	kibs	5,305	6,651	4,563	7,420	17,470	15,506	16,531	13,664	13,557	8,515	7,675	10,326	127,184
255															
256	TOTAL LEAVING PLANT	kibs	23,509	24,033	24,847	33,564	50,686	56,206	65,073	51,321	48,439	32,661	26,465	23,376	460,180
257	TOTAL ENTERING PLANT	kibs	22,837	23,335	24,046	33,045	51,736	56,752	65,633	51,349	50,590	32,033	25,775	23,472	460,604
258	OVERAGE / SHORTFALL	kibs	-673	-699	-801	-518	1,051	547	560	28	2,151	-627	-690	96	424
259			-2.9%	-2.9%	-3.2%	-1.5%	2.1%	1.0%	0.9%	0.1%	4.4%	-1.9%	-2.6%	0.4%	0.09%
260	FINAL CONDENSATE RETURN CALCULATIONS														
261	RECALC'D TOTAL ENTERING	kibs	24,215	24,754	25,592	34,570	52,206	57,892	67,025	52,861	49,892	33,641	27,259	24,077	
262	RECALC'D COND. RETURN	kibs	18,910	18,103	21,029	27,151	34,736	42,386	50,494	39,197	36,335	25,125	19,584	13,751	
263		gallons	2,318,541	2,219,658	2,578,399	3,328,982	4,259,034	5,197,023	6,191,164	4,806,031	4,455,061	3,080,647	2,401,177	1,686,068	
264															



Exhibit 1

CNE INVOICE RECONCILIATION - FY 2018 - 2019

FINALIZE FUEL EFFICIENCY ADJUSTMENTS

SUMMARY	ELECTRIC FEA	FUEL GAS FEA	WATER FEA	System TOTAL	Include FEA in INVOICE (YES/NO)
STEAM SYSTEM	\$25,124.36	\$95,967.97	(\$1,128.59)	\$119,963.74	
CHILLED WATER SYSTEM	\$175,235.34	\$0.00	\$138,483.04	\$313,718.38	
TOTAL	\$200,359.70	\$95,967.97	\$137,354.45	\$433,682.12	YES

ELECTRICITY-TO-STEAM CONVERSION

CONTRACTUAL GUARANTEE	6.000	kWh per mlb sold	CNE PENALTY/BONUS CALCULATION		PENALTY	BONUS
Metering Inaccuracy Buffer	0%		RATE VARIANCE	kWh per mlb sold	0.000	3.075
GUARANTEED MAX QUANTITY	6.000	kWh per mlb sold	STEAM SOLD	382,104 mlb		
CEPS FUEL EFFICIENCY ADJUSTME	6.000	kWh per mlb sold	VARIANCE in kWh = RATE VARIANCE x STEAM SOLD		0	1,175,010
CEPS ACTUAL CONVERSION RATE	2.925	kWh per mlb sold	AVERAGE ELECTRIC PRICE	\$0.0855 / kWh		
			CEPS PENALTY / BONUS		\$0.00	\$25,124.36
NOTE: Penalty at 100% of variance and Bonus at 25% of variance						

FUEL GAS-TO-STEAM CONVERSION

CONTRACTUAL GUARANTEE (varies by Condensate Return, see below)			CNE PENALTY/BONUS CALCULATION		PENALTY	BONUS
Given Condensate Return at	76%	of Send-out	RATE VARIANCE	Dth. per mlb sold	0.000	0.223
	180 °F	avg. Temp.	STEAM SEND-OUT	439,458 mlb		
GUARANTEED MAX QUANTITY	1.676	Dth.per mlb sold	VARIANCE in Dth. = RATE VARIANCE x STEAM SOLD		0	97,999
CEPS FUEL EFFICIENCY ADJUSTME	1.591	Dth.per mlb sold	AVERAGE FUEL PRICE	\$3.9171 / Dth.		
CEPS ACTUAL CONVERSION RATE	1.368	Dth.per mlb sold	CEPS PENALTY / BONUS		\$0.00	\$95,967.97
NOTE: Penalty at 100% of variance and Bonus at 25% of variance						

WATER-TO-STEAM CONVERSION

CONTRACTUAL GUARANTEE (varies by Plant Send-out, see below)			CNE PENALTY/BONUS CALCULATION		PENALTY	BONUS
PLANT LOSSES	15%		VARIANCE in gallons = GMQ - CES ACTUAL USE		-440,924	0
VOLUMETRIC CONVERSION	7.4805	gallons per cft	AVERAGE WATER PRICE	\$2.5596 / kGall		
CONDENSATE RETURN SPEC. VOL.	8.15585	gall per lb	CEPS PENALTY / BONUS		-\$1,128.59	\$0.00
GUARANTEED MAX QUANTITY	14,951,668	gallons	Average water price excludes sewer.			
CEPS ACTUAL USE	15,392,592	gallons	NOTE: Penalty at 100% of variance and Bonus at 25% of variance			

ELECTRICITY-TO-CHILLED WATER CONVERSION

CONTRACTUAL GUARANTEE	1.055	kWh per ton-hr sold	CNE PENALTY/BONUS CALCULATION		PENALTY	BONUS
Metering Inaccuracy Buffer	0%		RATE VARIANCE	kWh per ton-hr sold	0.000	0.132
GUARANTEED MAX QUANTITY	1.055	kWh per ton-hr sold	CHILLED WATER SOLD	61,977,080 ton-hrs		
CEPS FUEL EFFICIENCY ADJUSTME	1.055	kWh per ton-hr sold	VARIANCE in kWh = RATE VARIANCE x CHW SOLD		0	8,195,365
CEPS ACTUAL CONVERSION RATE	0.923	kWh per ton-hr sold	AVERAGE ELECTRIC PRICE	\$0.0855 / kWh		
			CEPS PENALTY / BONUS		\$0.00	\$175,235.34
NOTE: Penalty at 100% of variance and Bonus at 25% of variance						

WATER-TO-CHILLED WATER CONVERSION

CONTRACTUAL GUARANTEE	5.250	gall per ton-hr sold	CNE PENALTY/BONUS CALCULATION		PENALTY	BONUS
Metering Inaccuracy Buffer	0%		RATE VARIANCE	gall per ton-hr sold	0.000	3.492
GUARANTEED MAX QUANTITY	5.250	gall per ton-hr sold	CHILLED WATER SOLD	61,977,080 ton-hrs		
CEPS FUEL EFFICIENCY ADJUSTME	5.250	gall per ton-hr sold	VARIANCE in gallons = RATE VARIANCE x CHW SOLD		0	216,413,563
CEPS ACTUAL CONVERSION RATE	1.758	gall per ton-hr sold	AVERAGE WATER PRICE	\$2.5596 / kGall		
			CEPS PENALTY / BONUS		\$0.00	\$138,483.04
NOTE: Penalty at 100% of variance and Bonus at 25% of variance						

COMPARISON PREVIOUSLY BILLED VS. RECONCILED AMOUNTS

STEAM SYSTEM				CHILLED WATER SYSTEM			
	CALCULATED	RECONCILED	VARIANCE		CALCULATED	RECONCILED	VARIANCE
ELECTRIC	\$26,091.72	\$25,124.36	(\$967.36)	ELECTRIC	\$193,636.92	\$175,235.34	(\$18,401.58)
FUEL GAS	\$95,824.93	\$95,967.97	\$143.04	FUEL GAS	\$0.00	\$0.00	\$0.00
WATER	(\$1,637.75)	(\$1,128.59)	\$509.16	WATER	\$138,594.50	\$138,483.04	(\$111.46)
TOTAL	\$120,278.90	\$119,963.74	(\$315.16)	TOTAL	\$332,231.42	\$313,718.38	(\$18,513.04)

COMPARISON AMOUNT COLLECTED BY METRO VS 97-13 CAP

FEA COLLECTED BY METRO				METRO PAID	METRO OWES
	STEAM	CHILLED WATER	TOTAL	CNE	CUSTOMER
ELECTRIC	\$16,004.25	\$114,861.52	\$130,865.77		
FUEL GAS	\$57,161.89	\$0.00	\$57,161.89		
WATER	(\$1,377.66)	\$87,166.70	\$85,789.04		
TOTAL	\$71,788.48	\$202,028.22	\$273,816.70	\$244,976.30	\$28,840.40



NASHVILLE, TENNESSEE

EXHIBIT 1 - CALCULATION DETAIL FOR PLANT PERFORMANCE PER APPENDIX 19

ELECTRICITY-TO-STEAM CONVERSION

(1)	E (MainUtility) = total electric use per main utility meters		58,308,068 kWh
(2)	E (Steam,metered) = metered electric use for steam plant		1,080,359 kWh
	MCC-3	410,582	
	MCC-4	669,777	
(3)	E (CHW,metered) = metered electric use for chilled water plant		55,766,711 kWh
	SWGR-2A	7,181,700	
	SWGR-2B	10,235,220	
	SWGR-3A	10,165,850	
	SWGR-3B	15,377,840	
	SWGR-4A	2,100,309	
	SWGR-4B	3,278,459	
	SWGR-5A	1,820,288	
	SWGR-5B	2,005,788	
	MCC-1	1,797,913	
	MCC-2	1,803,344	
(4)	Esteam,unmetered = un-metered electric use for steam plant = [(2) / (1)] x [(1) - (2) - (3)]		27,070 kWh *
(5)	Echw,unmetered = un-metered electric use for chilled water plant = (1) - (2) - (3) - (4)		1,433,928 kWh *
(6)	Esteam,total = total electric use for steam plant = (2) + (4)		1,107,429 kWh *
(7)	Customer Steam Sales, metered + unmetered		382,104,004 lbs

$$n \text{ (elec): Actual Steam Plant Electric Conversion} = (6) / [(7) \times 0.001] = 2.898 \text{ kWh/klb}$$

NATURAL GAS-TO-STEAM CONVERSION

(8)	NG = Total Natural Gas Use per main utility meters		600,672.6 Dth
(9)	P = Total Propane Gas		388 Dth
(10)	HHV = Higher Heating Value of Propane		1.002052 Btu/scft
(11)	SO = Plant Steam Send Out		439,458,000 lbs***
	Meter Reading at the beginning, n-1	5,527,837	
	Meter Reading at the end, n	5,982,572	
	Units of Measure	1 x SCFT	

$$n \text{ (HHV): Actual Plant Efficiency} = [(8) + (9) \times (10)] / [(11) \times 0.001] = 1.368 \text{ Dth/klb}$$

(12)	CR = Condensate Return per plant meter		40,881,100 gallons **
	Meter Reading at the beginning, n-1	372,096,200	
	Meter Reading at the end, n	412,977,300	
	Units of Measure	1 x SCFT	
(13)	H = Condensate Return energy		49,378 mmBtu
	Meter Reading at the beginning, n-1	242,210	
	Meter Reading at the end, n	291,588	
	Units of Measure	1 x MMBTU	

$$T \text{ (cr,avg): Average Condensate Return Temperature} = 180 \text{ }^\circ\text{F}$$



NASHVILLE, TENNESSEE

EXHIBIT 1 - CALCULATION DETAIL FOR PLANT PERFORMANCE PER APPENDIX 19

WATER-TO-STEAM CONVERSION

(14)	MW = Steam system makeup water plant meter		15,240,190 gallons
	<i>Meter Reading at the beginning, n-1</i>	156,767,670	
	<i>Meter Reading at the end, n</i>	172,007,860	
	<i>Units of Measure</i>	1 x SCFT	

n (water): Actual steam plant water use = (14) * 1.01 = 15,392,592 gallons

G (water): Guaranteed steam plant water use = [(11) / 8.15585 - (12) = 14,951,668 gallons

ELECTRICITY-TO-CHILLED WATER CONVERSION

(15)	E (chw,total) = Total CHW Electric use = (3) + (5) =	57,200,639 kWh *
(16)	Customer CHW Sales, metered + unmetered	61,977,080 kWh

n (elec): Actual chilled water plant electric conversion = (15) / (16) = 0.923 kw/ton

CONDENSER WATER-TO-CHILLED WATER CONVERSION

(17)	CM = Condenser water makeup plant meter		105,827,000 gallons **
	<i>Meter Reading at the beginning, n-1</i>	1,496,237,000	
	<i>Meter Reading at the end, n</i>	1,602,064,000	
	<i>Units of Measure</i>	1 x GALL	

n (water): Actual chilled water plant conversion = (17) / (16) = 1.708 gal/ton-hr

NOTES: * - There is a 13,053 kWh variance from the FEA due to rounding errors resulting from monthly vs. annual summation.
 ** - Estimated due to incorrect totalization resulting from "low flow cut-off".
 *** - Meter Change out



Exhibit 2



Information Technology Services Program for



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Networks

The Operating System Network for the Metro Nashville District Energy System (DES) Energy Generation Facility (EGF) was provided and installed by Siemens Building Technologies. This System controls all the equipment and machinery in the plant using the Siemens proprietary Apogee and Insite software. This system was approved and accepted by Metro prior to plant start up.

Metro had a T-1, fiber optic, line installed to the EGF so that Metro representatives could access the Metro.gov network from the Metro office.

Constellation NewEnergy, Inc. (CNE) installed an Administrative Computer Network to be used for non-operating, office functions; such as, the Computerized Maintenance Management System data base (CMMS), e-mail, reporting, accounting, customer billing, etc. The following addresses equipment, programs and scheduled activities to support this network.

Hardware

The computer equipment in the EGF belongs to Metro. CNE is obligated to provide equipment which meets or exceeds industry standards. The following table shows equipment acquired by CNE for the Nashville DES:

Equipment
<u>Server</u> Dell PowerEdge T620/dual Xeon e5-2640 2.5GHz Processor/ 4x4 GB RAM/4x1TB SATA HDs/PERC H310/ RAID 5 Configuration/DVD drive
<u>Firewall</u> Sonicwall TZ 400
<u>Desktop Computer</u> Lenovo ThinkCentre M92P Series with Intel i5 Processor, 4 GB Ram, AMD Radon HD 7350 graphics adapter, 500 GB HD & DVDRW
<u>Monitor</u> Dell Professional P2312H 23" Ultra Sharp LCD Flat Panel
<u>Laptop Computer</u> Lenovo ThinkPad L530 notebook, with Intel i7 3520 QM Processor, 15.6 HD Display, 8 GB Ram, 500 GB HD, DVDRW, Centrino N2230 & Bluetooth
<u>Docking Station</u> ThinkPad MiniDock replicator Ultra slim keyboard & mouse

Per industry standards, computer hardware should be replaced every three to five years. This equipment was most recently replaced in 2013. The mother board on the Siemens server was replaced under warranty in 2016. The CNE server was replaced with a solid-state Dell T330 in 2018. An equipment inventory is located on page 5 of this document.

CNE has a performance contract with Metro to operate and manage the Nashville DES. With the exception of a designated work station in the Metro office, CNE will have exclusive use of and responsibility for this equipment in the same way CNE has exclusive rights to boilers, chillers, pumps, etc., as long as the ARMA is in effect.

Software

Each server has the following software installed:

Operating System	Microsoft 8 R2 Server/Microsoft Server 2016
Data base	Microsoft SQL 2008
AntiVirus	Malwarebytes

Each computer has the following software installed:

Operating System	Microsoft 7 Professional
Microsoft Office 2010	Word, Excel, Power Point, Outlook, One Note, Office Publisher
AntiVirus	Malwarebytes

Additional software installed on specific machines includes:

- Microsoft Office, Access - Administrative Operations Representative and the Office Coordinator.
- Adobe Acrobat X - General Manager and the Administrative Operations Representative.
- I-Maint - Control Room, Plant Operations Manager, Operations Supervisor, Maintenance Supervisor, Instrumentation & Electrical Supervisor and Metro office.

Connectivity

	Metro	Constellation
Internet Connection	Fiber optic	Comcast Cable

CNE accesses customer meter data through the internet. The State has granted CNE access to their building meters through a VPN at no cost. Metro building meters are accessed through the fiber optic line Metro installed to the EGF.

Metro Access to Data

A Dell server, furnished by CNE, is located in the Metro office at the EGF. The purpose of this server is to give Metro administrative access to plant data. This server acts as a work station and contains a copy of network data for Metro's use. CNE personnel check to insure the required data files are transferred from the CNE Administrative server to the Metro Server daily. Information stored on the Metro office server includes a copy of the Siemens SQL data base, the I-Maint/CMMS data base, the EGF control room shift readings, the customer billing system data base (updated twice per month by the Administrative Operations Representative) and customer meter data (updated once per month by the Customer Service Representative).

Data Backup and Storage

CNE's Administrative Server is backed up continuously. The offsite, online repository used by CNE is Carbonite.

The Siemens SQL database is also backed up to Carbonite. Other trend data is manually backed up on two external drives every Monday, the last day of the month and when any changes or updates are made.

Metro, at their own expense, backed up their Server data to Mozy. Mozy was purchased by Carbonite, so now Metro's data is backed up to Carbonite daily.

If issues cause data not to transfer, CNE will assist a Metro Representative with trouble shooting. CNE personnel check to see if there have been any software security updates and make corrections to reestablish connectivity. Metro checks their backup at least once per month. From time to time, Metro has to purge old data or purchase additional storage space.

Support and Service

Administrative System

A three year extended service plan was purchased from Lenovo for all of the new hardware. CNE has contracted with a third party vendor, FrontGate Technology Solutions, LLC, for ITS service and support. These services include:

1. Installation and set up of new work stations and servers. Fully test and verify set up.
2. Provide information technology consulting, support and maintenance services to maintain the IT infrastructure at the Energy Generation Facility. This includes: Server and desktop hardware support, troubleshooting, repairing or replacement of system components and peripherals.
3. Hardware support will include and may not be limited to: memory upgrades, hard disk replacement, network card replacement, system board replacement and hardware accessories installation.
4. Software support includes installation, configuration, and troubleshooting of the supported applications. This will also include monthly patches, anti-virus and security upgrades.
5. Response time for critical system and system-down issues will be within 4 hours and non-critical system tasks will be resolved within 24 hours. An on-site equipment inspection will be performed at least once per month.

Operating System

Constellation Energy purchased a Bronze Level service agreement with Siemens to maintain, repair, replace and install all software upgrades on their proprietary system. These services include: annual software updates, annual network maintenance, annual preventative maintenance to MBC 40 devices, data protection and data recovery, routine backups, online diagnostics and operator coaching.

Program Review

The Information Technology Services Program is reviewed with Metro annually and updated as required. A summary of revisions and changes will be included in the Annual Report. If no changes are made, a statement to that effect will be included.

Hardware Inventory

There are three servers, four laptops and eleven desktop workstations. Below is a detailed list of what is included at each workstation and where each is located (Equipment descriptions are located in the Hardware section of this program above).

Office Location	Computer	ID Number	Monitor	Keyboard & Mouse
Data Room	2 Servers	G4SLBY1 (Siemens) 8P8RMN2 (CNE)	2-23" Flat Panels	1-each
Metro Office	1 Server	4501BP1	1-17" Flat Panel	1-each
General Manager	1 Laptop	R9-W1C7R-12/12	1-24" Flat Panel	1-each
Operations Manager	1 Laptop	R9-W1C7T-12/12	1-23" Flat Panel	1-each
Finance & Administration Representative	1 Laptop	R9-W1C7V-12/12	1-23" Flat Panel	1-each
Customer Service Representative	1 Desktop	1S3212CTOMJXTNXA	1-23" Flat Panel	1-each
Instrumentation & Electrical Supervisor	1 Desktop	1S3212CTOMJXTNXD	1-23" Flat Panel	1-each
Instrumentation & Controls Technician	1 Laptop	R9-W1C7W-12/12	N/A	N/A
Maintenance Supervisor	1 Desktop	1S3212CTOMJXTNXB	1-23" Flat Panel	1-each
Operations Supervisor	2 Desktops	1S3212CTOMJXTNXC 1S3212CTOMJXTNXE	2-23" Flat Panels	1-each
Office Coordinator	1 Desktop	1S3212CTOMJXTNMV	1-23" Flat Panel	1-each
Control Room	3 Desktops	1S3212CTOMJXTNMR 1S3212CTOMJXTNMT 1S3212CTOMJXTNMW	8-17" Flat Panels	1-each
Control Room (SE-2)	1 Desktop	ESO6826516	1-17" Flat Panel	1-each
Control Room (Security)	1 Desktop	BYPC8M2	1-17" Flat Panel	1-each



Exhibit 3

Constellation NewEnergy, Inc. Assets
(Equipment used at MNDES owned by CNE)

- 2011 GMC Canyon Crew Cab Pickup Truck
- 2015 Chevrolet 3500 Crew Cab Flatbed Pickup Truck
- 2016 Ford F-150 Crew Cab Pickup Truck
- Ecom Combustion Analyzer
- Fluke Multi-meter
- Fluke Insulation Tester (megger)
- Greenlee Circuit Analyzer
- Fluke Clamp Meter
- Fluke 87 Multi-meter
- Salisbury Audio/Visual Voltage Detector
- Quad Tech Decade Resistor
- Fluke 719 Pro Pressure Calibrator
- Piecal Thermocouple Tester
- Altek loop Calibrator
- Fluke 45 Dual Display Multi-meter
- Hart Scientific Temperature Bath
- Miller Bobcat 225 Welding Machine
- Miller Bobcat 250 Welding Machine
- Hytorc Hydraulic Torque Wrench System
- Milwaukee Electric Mag-base drill press
- Ryobi portable pressure washer
- Miller Filtair 130 Welding Fume Extractor
- Miller CST 280 Welding Machine
- Goodway RAM-4 Tube Cleaning Machine
- Goodway Cooling Tower Vacuum System
- Vestil 2,000 lb. Capacity Aluminum A Frame
- Vestil 4,000 lb. Capacity Aluminum A Frame
- Vestil 8,000 lb. Capacity Steel A Frame
- 2,000 lb. Capacity Electric Chain Hoist
- 1,000 lb. Capacity Electric Chain Hoist
- 3 – Bucks of scaffolding with braces, safety pins, handrails, walk boards and kick plates
- Hyster Model S50XM Lift Truck
- Buffalo Vaneaxial Exhaust Fan
- Generac XG 10000E Generator
- H&H Pump Com Hydraulic Powered Dewatering Pump (Green Machine)
- Trane 3,400 lb. Refrigerant Recovery Tank
- Service First Refrigerant Recovery Machine



- Distribution Truck hand tools, cones, pry bars, hoses, pumps, etc.
- Phillips AED & cabinet
- Epson Video Projector
- 5-OKI desk top printers
- 2-HP printers
- 27" JVC TV
- JVC VCR/DVR
- Poulan Push Mower
- Echo Weed eater
- Echo back pack blower
- 2 – Kerosene torpedo heaters
- Ricoh Copier (Leased)