

Fiscal Year  
2022-2023  
Annual Report

*for the*



*Final*



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## Executive Summary

On behalf of Constellation, I am pleased to present the twentieth “*Annual Report*” to the Metropolitan Government of Nashville and Davidson County, Tennessee (Metro). My tenure managing the Constellation Energy Solutions (CES) team and the business at the Metro Nashville District Energy System (MNDES) started in September of 2022. The MNDES 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 MNDES for the period July 1, 2022 through June 30, 2023.

CES’s experienced work force continues to operate and maintain the MNDES in a manner that produces outstanding results. Both steam and chilled water availability and reliability were greater than 99%. The safety record was 100%, as there were no accidents in the past 12 months. CES’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.

CES remains committed to providing the best service possible to Metro, State, and private MNDES customers. I would like to thank the Metro and CES personnel for their continued dedication toward achieving these objectives.

Sincerely,

Mike Winters  
General Manager  
DE Asset Operations, a subsidiary of Constellation Energy Solutions, LLC  
Metro Nashville District Energy System



## Monthly Operations Report Summary

Constellation Energy Solutions, LLC (CES) submits a written report to the Metro Nashville District Energy System (MNDES) team on or about the 10<sup>th</sup> 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 MNDES customers over the past twelve months. There was one scheduled total system chilled water outage this year and one scheduled steam outage. There was also an emergency outage due to a safety issue on the incoming 69kV power from Nashville Electric Service (NES) that was requested from NES on June 30, 2023.

Some MNDES 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 staffed with an outstanding work force. There were zero reportable incidents and zero lost time accidents for the year. Training classes were conducted online due to COVID-19 protocols, as regular in person meetings were cancelled. Employees also received training related to plant systems, equipment, and corporate programs and requirements. For the nineteenth 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 MNDES customers are performed on a routine basis. Any customer issues that exist are dealt with courteously and expeditiously.



## News, Events, and 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:

- The MNDES Advisory Board Meetings were held in person and via Microsoft Teams the third Thursday of August 2022, November 2022, February 2023, and May 2023.
- CES issued a draft copy of the FY22 Annual Report to Metro on July 29, 2022.
- The Monthly CES/MNDES Operations Meeting and Monthly Report review was held, via conference call, August 17, 2022.
- MNDES Advisory Board was held, both virtual and in person, August 18, 2022.
- The open Electrician and Plant General Manager (GM) positions were filled. The GM began work on September 6, 2022, and the Electrician began September 26, 2022.
- The Monthly CES/MNDES Operations Meeting and Monthly Report review was held, via conference call, September 21, 2022.
- The Monthly CES/MNDES Operations Meeting and Monthly Report review was held, via conference call, October 19, 2022.
- The Monthly CES/MNDES Operations Meeting and Monthly Report review was held, via conference call, November 16, 2022.
- MNDES Advisory Board was held, both virtual and in person, November 17, 2022.
- The Monthly CES/MNDES Operations Meeting and Monthly Report review was held, via conference call, December 21, 2022.
- The Monthly CES/MNDES Operations Meeting and Monthly Report review was held, via conference call, January 18, 2023.
- Chilled Water outage was scheduled on January 4, 2023, to replace chilled water valves at the Plant and make repairs in the Distribution System.
- The Monthly CES/MNDES Operations Meeting and Monthly Report review was held, via conference call, February 15, 2023.
- MNDES Advisory Board was held, both virtual and in person, February 16, 2023.
- The Monthly CES/MNDES Operations Meeting and Monthly Report review was held, via conference call, March 15, 2023.
- The Monthly CES/MNDES Operations Meeting and Monthly Report review was held, via conference call on April 19, 2023.
- The Monthly CES/MNDES Operations Meeting and Monthly Report review was held, via conference call on May 17, 2023.
- MNDES Advisory Board was held, both virtual and in person, May 18, 2023.
- The Annual Customer Meeting was held on May 25, 2023 at the Downtown Nashville Partnership.
- The Monthly CES/MNDES Operations Meeting and Monthly Report review was held, via conference call on June 21, 2023.



## Plant Performance

### Plant Reliability

The EGF continued to provide reliable service to the MNDES customers. Except for 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 August 16, 2022, there was one reportable incident due to a scheduled steam outage to replace two valves on #1 Deaerator. This outage resulted in the steam pressure being below 150 psi for approximately 6 hours and 15 minutes. Due to the scheduled outage, the pressure was 0 psi. The outage was completed ahead of schedule.
- On September 18, 2022, there was one reportable incident with steam when a Boiler Feed Water Pump began cavitating causing #3 Boiler to trip off line. Two of the other BFWP's were put on line. After failing to re-light #3 Boiler, #1 Boiler was placed on line. This resulted in the steam pressure being below 150 psi for approximately 90 minutes with a low pressure of 138 psi.
- On November 29, 2022 at approximately 12:11 p.m. the Plant lost power momentarily which tripped all Plant equipment. The Chillers restarted and the chilled water temperatures were not above 43.3°F for more than 30 minutes. The Boilers were restarted immediately, however, the pressure dropped to a low of 75 psi and was below 150 psi for approximately 100 minutes. There was no indication of any failure on the electrical side at the Plant. CES's I & E Supervisor contacted NES and was informed that at 12:11 p.m. there was a fault at the Finn Street Substation
- On December 1, 2022 at approximately 3:08 a.m., the boiler pressure dropped to a low of 128.2 psi and was below 150 psi for approximately 45 minutes. #1 Boiler tripped due to a failed flame scanner, and #4 Boiler was started in its place.
- On December 15, 2022, at approximately 10:30 a.m. the plant lost pressure to the chilled water system and dropped down to approximately 70 psi. CES dispatched three crews to check for leaks in the system as well as the Customer Service Representative (CSR) calling customers. There were no leaks found in the tunnels, storm drains, or under the Woodland Street Bridge. The CSR was informed by the Bridgestone Arena Building Engineer that they were testing the ice machine condenser on city water. The normal procedure is for the MNDES valves to close during this process, but the valves did not perform as normal. This caused the MNDES chilled water to go directly to drain and caused a loss of pressure on the system. The chilled water temperature was above 43.3°F for approximately 36 minutes reaching a high temperature of 47.0 °F.



- On December 23, 2022 at approximately 5:15 a.m. #3 Boiler tripped and another boiler was started. The pressure dipped to a low of 111 psi and took until around 8:45 a.m. to recover. This was the morning of the unusually low temperatures which reached -1°F with wind chills exceeding -20°F. As the system had come back up to pressure, the plant experienced abnormal voltage imbalance from the utility, causing issues with MCCs, boiler feedwater pumps, and condensate pumps. This eventually caused all of the boilers to trip offline. CES Managers, Mechanics and Electricians were on site to troubleshoot the system. The Plant was brought back online slowly, overload relays adjusted, and the pumps were placed in manual control until the system settled out. The System reached a low of 12.6 psi at 10:26 a.m. and was back to normal operating pressure of 150 psi at 1 p.m.
- On January 1, 2023 at approximately 2:45 p.m. steam flow went from 40,000 pph to 68,000 pph suddenly which dropped the header pressure to a low of 108 psi. An additional boiler was started immediately. The pressure was below 150 psi for approximately 75 minutes.
- On January 4, 2023, there was a scheduled 24 hour chilled water outage to make repairs in the Energy Distribution System as well as the Energy Generating Facility (EGF). The chilled water system was above 43.3°F for approximately 1,464 minutes.
- On January 5, 2023, at approximately midnight #2 Boiler tripped and was immediately re-started. The low pressure was 95.7 psi and the system was below 150 psi for approximately 45 minutes.
- On January 9, 2023, the steam system was below 150 psi for approximately 150 minutes while performing tune-ups on Boilers #2 and #4. The low pressure was 54.6 psi. The system pressure has to be lowered during this testing to prevent lifting the safety valves as the firing rate of the boilers are raised and lowered in 10 percent increments.
- On January 26, 2023, at approximately 11:00 a.m., #2 Boiler tripped and was immediately re-started. The low pressure was 134.7 psi and the system was below 150 psi for approximately 45 minutes. CES I&E personnel are investigating the cause of these nuisance trips on this Boiler.
- On January 31, 2023, at approximately 11:45 a.m., #3 Boiler tripped and was immediately re-started. The pressure was below 150 psi for approximately 45 minutes. The low pressure was 137.9 psi.
- In February 2023, Trane performed the Annual Preventive Maintenance on all 9 Chillers including Tube Cleaning on all 9 Condensers and 3 Evaporators. Eddy Current Testing was performed on Chillers 2, 3 and 9. During the PMs, water flow is required through some offline units which causes some spikes in temperatures. There were three instances which exceeded the 30 minute reportable threshold. They are as follows:
  1. On February 6, 2023, the temperature exceeded the guarantee for approximately 118 minutes reaching a high of 47.2 °F.
  2. On February 7, 2023 beginning at 10:18 a.m., the temperature exceeded the guarantee for approximately 36 minutes reaching a high of 45.3 °F.
  3. On February 7, 2023 beginning at 2:22 p.m., the temperature exceeded the guarantee for approximately 36 minutes reaching a high of 45.8 °F.

- On February 21, 2023 the Music City Center (MCC) informed CES's Customer Service Representative (CSR) of a need to isolate their steam system to make some repairs. Once the MCC notified the Plant Control Room the system pressure was dropped momentarily to accommodate this load loss. The pressure was below 150 psi for approximately 30 minutes and reached a low of 145.4 psi.
- On February 22, 2023, the MCC restored steam service to their Building and the pressure was below 150 psi for approximately 30 minutes and reached a low of 132.5 psi.
- On March 3, 2023, #6 Chiller tripped on low differential oil pressure. This caused the temperature to rise to a high of 45.0 degrees and was above the reportable threshold for approximately 42 minutes.
- On March 11, 2023, #2 Boiler tripped during testing for the annual Boiler run inspection and was immediately restarted. The pressure dropped to a low of 143 psi and was below 150 psi for approximately 45 minutes.
- On March 18, 2023, #2 Boiler tripped and was attempted to re-start. It was determined to be an issue with the flame scanner. Another boiler was placed in service. The pressure dropped to a low of 76 psi and the system pressure was below 150 psi for approximately 135 minutes.
- On April 4, 2023, while swapping boilers the steam pressure dropped to 143 psi for approximately 30 minutes.
- On April 19, 2023, #3 Boiler tripped which caused the steam pressure to drop to 115 psi for approximately 60 minutes. #2 Boiler was put into service. CES I & E personnel found a problem with the I to P converter on the Feedwater regulating valve. A new converter was installed and the Boiler was tested and worked properly.
- On May 19, 2023, #2 Boiler tripped which caused the steam pressure to drop to a low of 136 psi for approximately 60 minutes. #3 Boiler was put into service. CES I & E personnel found a problem with the Fire Eye Flame scanner. A new scanner was installed and the Boiler was tested and worked properly.
- On June 5, 2023, while removing #2 Deaerator from service to perform the Annual PM's, #2 Boiler tripped due to low water. The #1 Deaerator controls were slow to re-act was the cause and CES I & E personnel adjusted the controller. The Boiler was placed back in service. The steam was below the guarantee for approximately 90 minutes with a low pressure of 103 psi.
- On June 30, 2023, NES had an emergency outage that required the Plant to be shutdown for them to make repairs to the 69 kV line. The steam system was below the guarantee for approximately 195 minutes with a low pressure of 18 psi. The chilled water system was above the guarantee for approximately 294 minutes with a high temperature of 55.3 °F.



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. Reliability does not include scheduled outages allowed per the Amended and Restated Management Agreement (ARMA).

	<b>Downtime</b>		<b>Availability</b>	<b>Reliability</b>
	<b>Scheduled</b>	<b>Unscheduled</b>		
<b>Boilers</b>	570 minutes	1465 minutes	99.61%	99.72%
<b>Chillers</b>	1758 minutes	298 minutes	99.61%	99.94%



## Plant Efficiency

When the annual boiler inspections were completed at the end of July 2022, 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 online. 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 was put back in service during the month of November 2022 in preparation for the heating season.

Constellation and Metro agreed upon the final version of the Metro MNDES annual reconciliation for FY23 on September 6, 2023. The annual reconciliation for this time consisted of a true-up for the FEA, propane, engineering, and insurance 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:

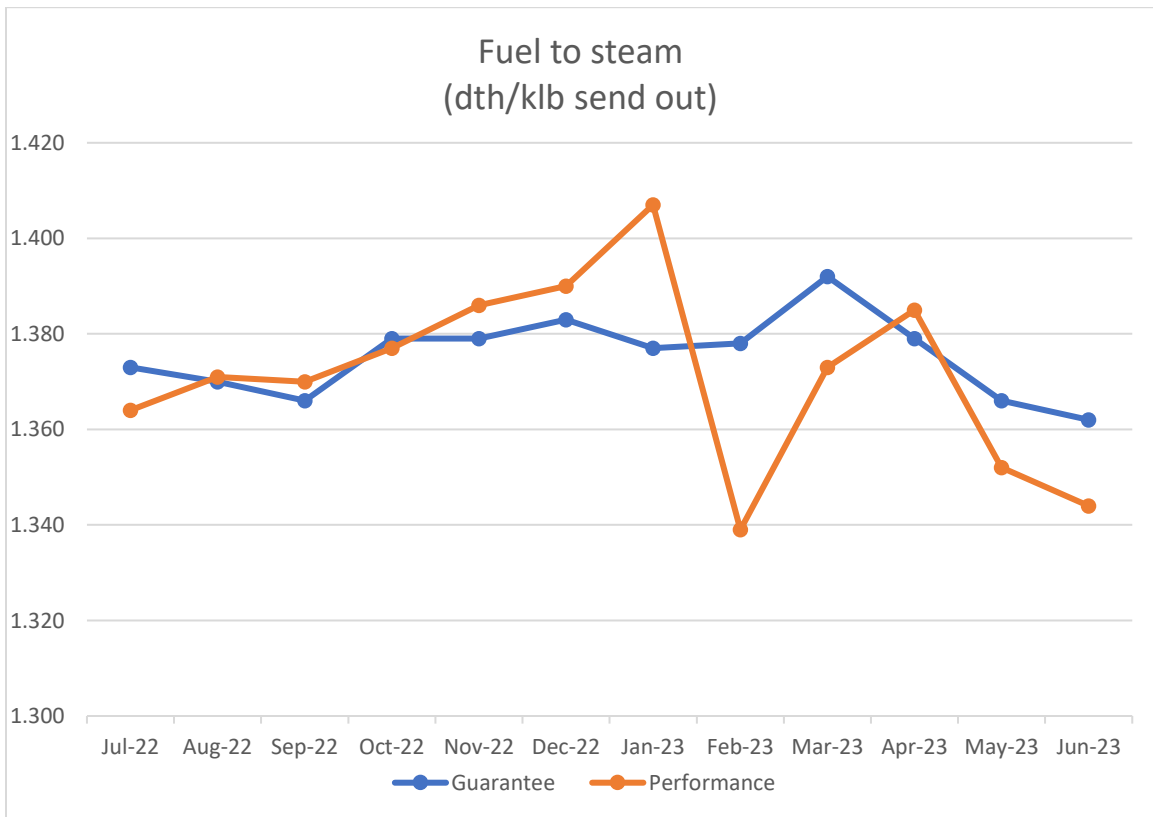
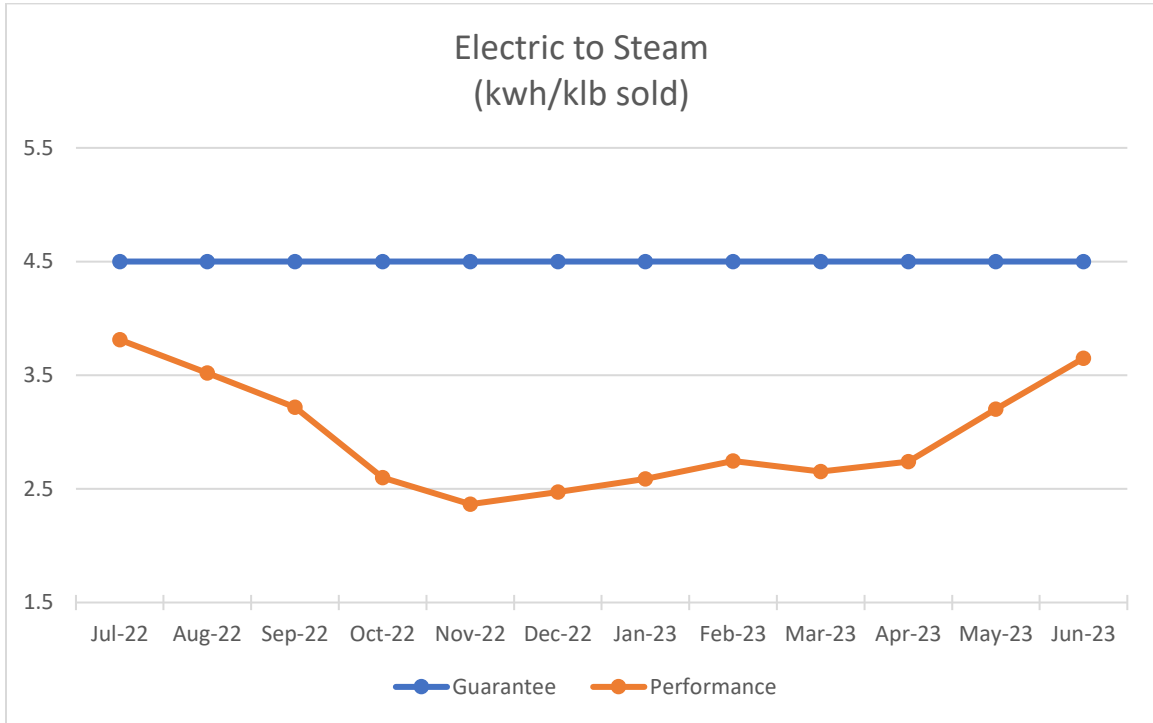
1. Electric-to-Steam (kWh per klb-sold)
2. Fuel-to-Steam (Dekatherm per klb-send-out)
3. Water-to-Steam (gallons)
4. Electric-to-Chilled Water (kWh per ton hr-sold)
5. Water-to-Chilled Water (gallon per ton hr-sold)

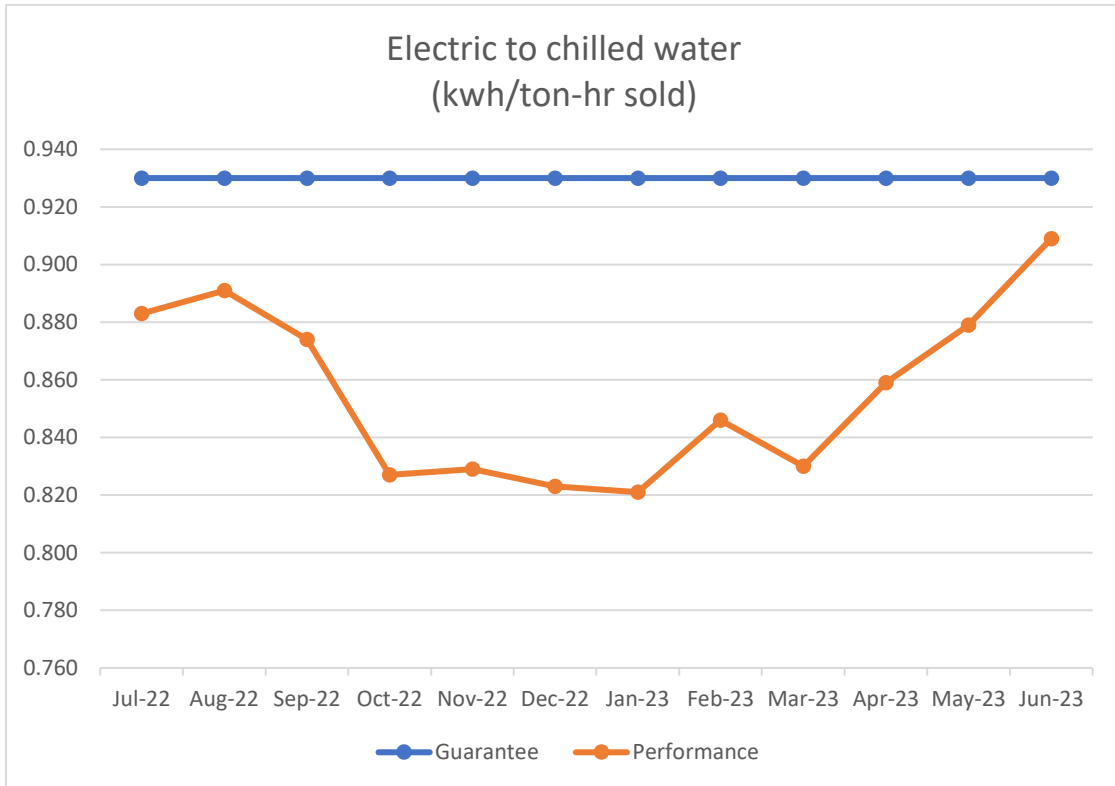
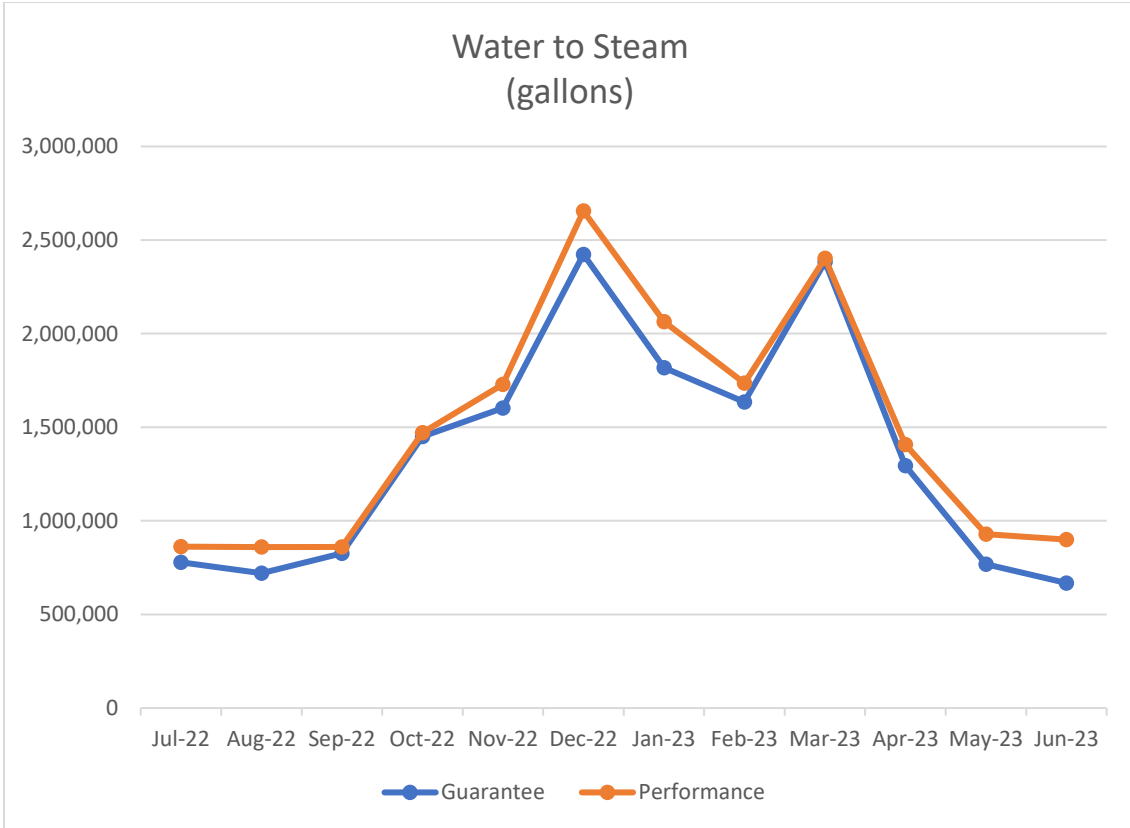
Efficiency for the fiscal year 2022-2023:

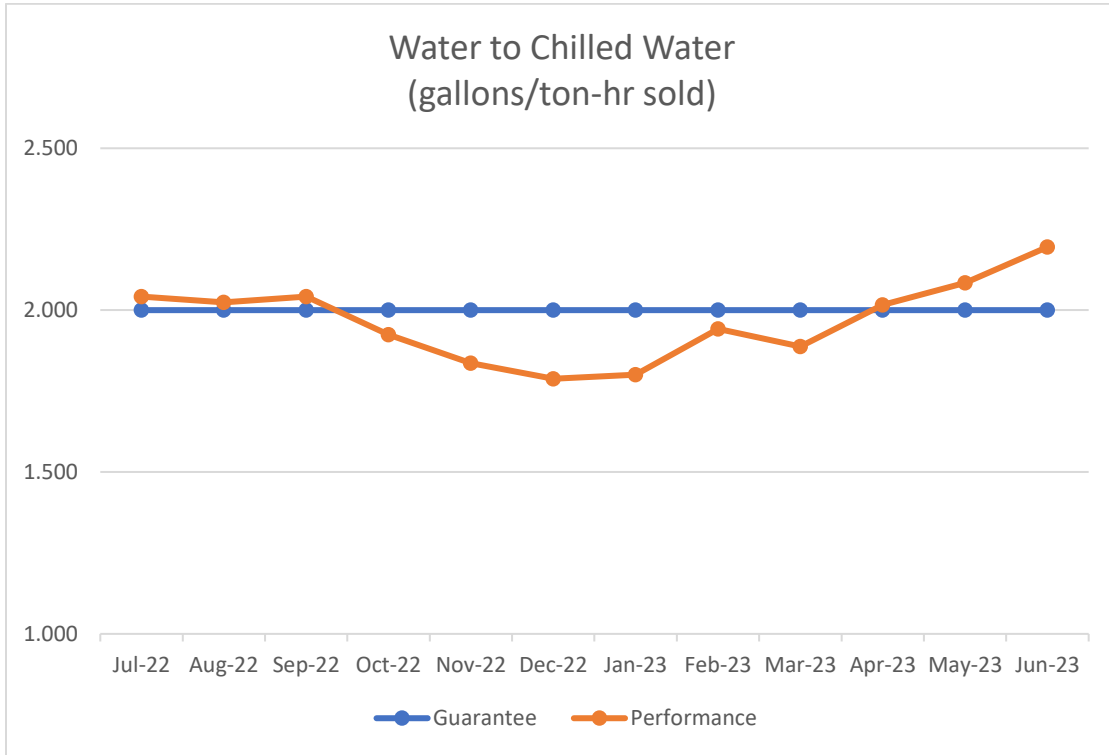
	<b>Units</b>	<b>Guarantee</b>	<b>Actual Rate</b>
<b>Electric-to-Steam</b>	kWh/klb-sold	4.500	2.831
<b>Fuel-to-Steam</b>	Dth/klb-sent out	1.377	1.375
<b>Water-to-Steam</b>	gallons	16,370,156	17,877,424
<b>Electric-to-Chilled Water</b>	kWh/ton hr-sold	0.930	0.882
<b>Water-to-Chilled Water</b>	gallons/ton hr-sold	2.000	2.0007

The guarantees instituted in July of 2020 are much tighter, as they were reduced by 25% or more from the original performance guarantees. As equipment ages, it generally becomes less efficient. CES continues to investigate ways to operate more efficiently to meet these commitments, implementing suggestions from the third-party engineering assessment that was finalized in December 2022.

The following graphs represent the efficiency guarantee results from July 2022 through June 2023 on a monthly basis:







CES did not meet, nor did they exceed every single guarantee each month during the past year. When CES exceeds a performance guarantee, they are penalized 100% of the amount exceeded. When they beat the guaranteed value, they receive a 25% bonus, allowing the additional 75% to be returned to customers as a savings. CES received a net bonus of \$84,960.83 for FY23.



## 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. Storm Water Pollution Prevention Plan (SWPPP) and Spill Prevention Controls and Countermeasures (SPCC) training was conducted online.

### Regulatory Compliance

Required reporting activities were submitted as follows:

- The Semi-Annual Emissions Monitoring Report for January-June 2022 was sent to the Metro Nashville Health Department on July 7, 2022.
- The Semi-Annual Monitoring Report for July-December 2022 was sent to the Metro Health Department on January 12, 2023.
- The Title V Certificate of Compliance for 2022 was sent to the EPA on January 13, 2023. A copy was also sent to the Metro Health Department the same day.
- The Tier II report was sent to the State Emergency Planning Committee, Davidson County LEPC and the Nashville Fire Department on January 23, 2023.
- The Air Permit Renewal Application was sent to the Metro Health Department on January 23, 2023.
- The Annual Greenhouse Gas Report was sent to the U.S. EPA on February 21, 2023.
- The Annual Emission Inventory Report for 2022 was sent to the Metro Health Department on March 16, 2023. The Annual Emission Fees were sent the same day.
- The Air Permit Renewal Application was approved, and a copy sent to CES on June 14, 2023.

### Health

Things are beginning to get back to normal, but new variants of the COVID-19 Virus continue to present challenges. Several employees contracted the virus and had to be quarantined. This also resulted in additional cleaning and disinfecting of the facility. CES protocols, based on CDC guidelines, remain in effect. Conference calls, Microsoft Teams, Skype, etc. meetings are being utilized instead when possible.





## Safety

CES plant personnel continue to conduct themselves in a safe manner. There were no reportable accidents in the past year. CES has operated 1,064 days without an accident.

Monthly safety meetings were coordinated and scheduled by CES’s site Safety Officer. Training classes were conducted online due to the COVID-19 restrictions in place. 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*

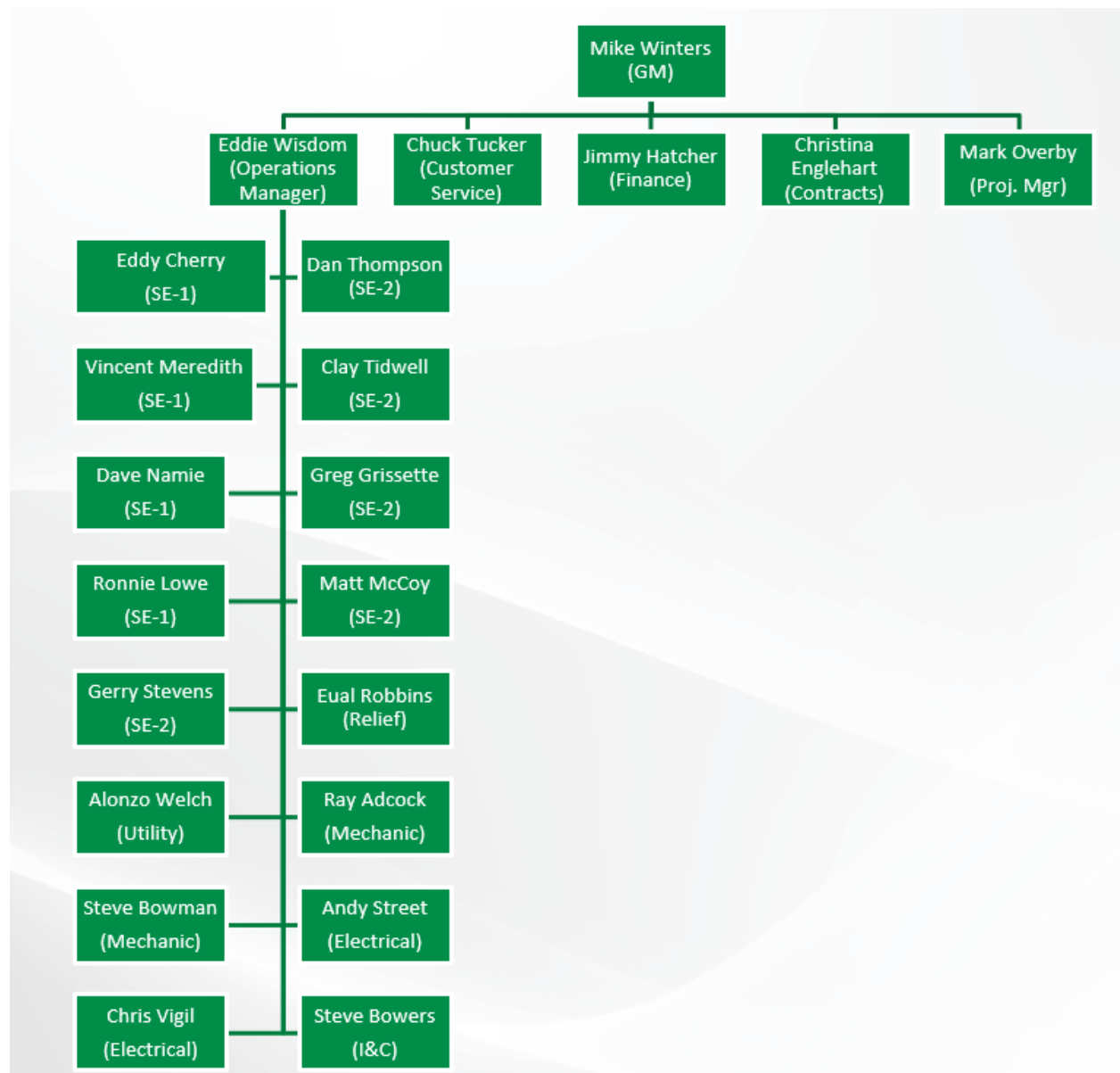
	Total	OSHA	Lost Time	Total
	Accidents	Reportable	Accidents	Lost Days
July 2022	0	0	0	0
August	0	0	0	0
September	0	0	0	0
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0
January 2023	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	0	0	0	0
May	0	0	0	0
June	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## System Assessment and Status

### Personnel

The plant is fully staffed with an exceptional work force of nineteen full time employees, two shared employees, and one remote part-time employee. CES prides itself on keeping employees engaged which results in a very low turnover rate.

CES’s former Plant General Manager retired on June 30, 2022, and his replacement, Mr. Mike Winters, began work on September 6, 2022. A new electrician, Mr. Christopher Vigil began work on September 26, 2022, replacing a retired former electrician.





## 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:

- Employees completed Constellation Retail Electric and Natural Gas compliance training.
- Corporate conference call information sessions, regarding COVID-19 pandemic and company updates, were conducted weekly.
- Employees completed corporate on-line security training, FERC Training, IT and Phishing Awareness Training.

Training classes were not held in person this year due to COVID-19 protocols. The following safety classes were completed by CES personnel online using the LMS (Learning Management System):

- Fire Safety
- 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
- Lock Out/Tag Out (LOTO)
- Safe Work Practices
- Elevated Work & Vehicle Safety
- Personal Protective Equipment
- Chemical Safety & Hazard Communications



## Customer Service

CES 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 troubleshooting 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, which was held on May 25, 2023, and other meetings with customers were conducted throughout the year. These activities build relationships, help further a positive image of the MNDES in the community and promote existing building owners to assist us in our sales efforts.

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

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



## Energy Generating Facility (EGF)

During normal operation, preventative, predictive, and routine maintenance items must be scheduled and completed. During the summer months the lawn is mowed weekly, and the landscape 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:

CES 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, 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 #2 de-aerator tank were inspected in July 2022. #1 and #3 boilers and #1 de-aerator tank were most recently inspected in June 2023. All of the boilers received a passing grade and their respective permits have been renewed. #2 and #4 boilers and #2 de-aerator are scheduled to be re-inspected in July 2023.

Boiler inspections were witnessed by our chemical vendor's representative and plant personnel. When units are offline 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 #2, #3 and #9 Chillers. Controls and purge units were also checked for proper operation.

As part of the Preventive and Predictive maintenance program CES had a contractor take alignment and vibration readings on all pumps, fans and motors. These readings are compared to the previous year's readings. All equipment readings were within acceptable limits.

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



The high-voltage switchgear preventive maintenance was scheduled and executed during the fall of 2022. Maintenance on transformers, vacuum breakers, relays, and load break switches was completed, and infrared inspections and oil sample analysis were also executed.

Annual maintenance costs for these activities: \$ 175,343.77 (excludes salaried personnel & corporate overhead).

#### Repairs and Replacements

The following are routine maintenance items performed daily or weekly:

- Office Janitorial Services & equipment room clean up
- Pick up debris around exterior of EGF
- Mowed and landscaped lawn
- Checked & repaired plant computers & servers
- Repaired plant lighting and electrical
- Checked & adjusted packing on all pumps

From time-to-time repairs and replacements must be made. The following are examples of repairs that have been performed in the EGF in the past 12 months:

#### **July 2022**

- Repaired leak on #3 Softener
- Changed filters on #6A Chiller
- Control Room AC was not Working Properly
- Repaired chemical line leaks
- Replaced refrigerant filters on #5B Chiller
- Repaired Sprinkler System
- Changed cylinder on Transformer 1B
- #4 ChW Pump VFD failed
- #4 CWP motor failed
- Reset Switchgear 6B Meter
- M/H 18 Condensate Pump Project Review
- Investigated Chilled Water Makeup Meter
- #3 BFWP motor failed
- #3 Condensate Pump Motor failed
- Peabody Union Blast Monitoring
- Purchased new Pallet Jack

## August 2022

- Purchased iMaint Customer Support Agreement
- Investigated Issues with Main Steam Meter
- Replaced evaporator actuator #5 Chiller
- Trane replaced Evaporator Temperature Sensor on #1 Chiller
- Trane replaced purge Solenoid Valve on 7B Chiller
- Trane troubleshot load issue on #9 Chiller
- Trane bled air out of #5 Chiller
- Trane replaced Purge Unit on 5B Chiller
- Trane replaced control panel on 9B Chiller
- Repaired Sprinkler System
- Repaired leak on #3 Boiler Pressure Transmitter
- Sent #4 CWP Motor out for repair
- Replaced 3" Gate and 3" Globe Valve on #1 DA
- Replaced belt on #16 Cooling Tower
- Replaced Chilled Water Makeup Meter
- Sent #3 BFWP Motor out for repair

## September 2022

- Repaired leak on 31905 Chemical Line
- Adjusted belts #4, #7 and #15 Cooling Towers
- Investigated issues with Manlift (replaced battery)
- Replaced evaporator actuator #5 Chiller
- Cleaned Batteries in Switchgear #1
- Repaired Sprinkler System Backflow preventer
- Replaced drain line #4 BFWP
- Replaced ceiling tile in Restrooms
- Cleared Boiler Sample Water Cooler
- #4 CWP Motor Rewired
- Removed Portable Refrigerant Filters from Chillers 5B and 6A
- Repaired/Replaced locks, signage and access gates at Facility
- Replaced conductivity probe controller for #3 Boiler
- Repaired actuator on #4 Chiller Condenser Inlet Valve
- #3 BFWP Motor Rewired
- #3 Condensate Pump Motor Failed and was Replaced
- Peabody Union Blast Monitoring
- Checked Cooling Tower Basin Heaters
- Replaced #2 Chiller differential pressure switch

### **October 2022**

- Repaired leak on 40215 Chemical Line
- Replaced Mini Split AC Unit in Control Room
- Repaired Refrigerant Alarm
- Repaired actuator on #7 Chiller
- Repaired Sprinkler System Backflow preventer
- #4 CWP Motor - wire and check rotation
- Repaired/Replaced locks, signage and access gates at Facility
- Peabody Union Blast Monitoring
- Performed Winterization (curtains, heaters, heat trace, sprinklers, etc.)

### **November 2022**

- Replaced Chilled Water Makeup Pump Controller
- Performed Switchgear Room Maintenance
- Repaired Cooling Tower Makeup Valve
- Repaired Cooling Tower Level Indicator Line
- Replaced 3 Building Heater Motors (2,5 and 7)
- Replaced Metro Flag
- Repaired #1 Deaerator Door
- Repaired #3 Softener Controls
- Repaired leak on #3 Boiler Blowdown Valve
- Repaired leak on 12900 Chemical Line
- Repaired Shop Air Tank Leak
- Removed Refrigerant from #6A Chiller
- Trane leak checked #6 Chiller
- Peabody Union Blast Monitoring
- Purchased Chiller Valves for Chiller's 1,4,5 and 9
- Repaired #1 Boiler Feedwater Valve



## **December 2022**

- Repaired plant lighting and electrical
- Repaired Cooling Tower Makeup Valve
- Refurbished GE 750 Multilin Relay
- Investigated possible chilled water leak
- Repaired #3 BFWP differential pressure switch
- Prepared for Chilled Water Outage Items
- Repaired Roof Leak
- Checked for tube leak on #1 Boiler (None Found)
- Repaired water leaks
- Repaired Propane Vaporizer
- Completed Refrigerant removal from #6A Chiller
- Re-piped brine draw lines for Water Softeners
- Repaired #1 Boiler Flame Scanner
- Repaired Forklift and Genie Lift

## **January 2023**

- Repaired plant lighting and electrical
- Installed electrical conduit and wiring for Skyspark water meter monitoring
- Water Softener UPS and Brine Draw piping replacement
- Repaired Cooling Tower Air Regulators
- Repaired Cooling Tower Level Indicator Piping
- Cleaned drains on Boiler/Chiller Level
- Replaced #2 DA Pressure Transmitter
- Chilled Water Outage Repairs
- Installed new Boiler Conductivity Controller on #2 Boiler
- Tuned Up Boilers #2 and #4
- Painted Offices, Hallways, Restrooms, Stairwell, etc.
- Replaced belts on Cooling Towers #2, #3 and #17
- Moved Refrigerant back into #6A Chiller
- Performed Annual Chiller Tube Cleaning

## **February 2023**

- Repaired plant lighting and electrical
- Tested Vaporizer
- Troubleshoot #2 Low Water Cut Out
- Repaired leak on #1 Boiler Economizer Tube
- Rebuilt #3 Boiler Blowdown Valve
- Cleaned drains on Boiler/Chiller Level
- Tested and reset #2 Boiler High Steam Pressure Alarm Switch
- Repaired #3 BFWP (Thrust Bearings and Oil seals on outboard end)
- Repaired #5 BFWP (Thrust Bearings and Oil seals on outboard end)
- Replaced coupling on #2 Condensate Pump
- Repaired Shop Air Compressor
- Troubleshoot Door Controls
- Performed Chiller Actuator Modifications and Installation (Chillers 1,4, 5 and 9)
- Performed Eddy Current Testing on Chillers 2,3 and 9
- Completed Annual Chiller Tube Cleaning
- Repaired vacuum breaker on water line on Chiller Level

## **March 2023**

- Fire Extinguisher inspection
- #5 Cooling Tower Fill Repair
- Annual Cooling Tower Cleaning
- Cooling Tower Drive Belt Changed
- Cooling tower motor Adjusted #14
- Removed Refrigerant from Chiller 6B
- Fixed Leaking/Valve Sealing Issue on New Side stream Filter Wet Tap (OT)

## **April 2023**

- #2 Boiler Level Transmitter repair
- Replaced #1 Boiler Conductivity Probe
- #3 Boiler Feedwater Valve Repairs
- Replaced breaker on #18 Cooling Tower Fan Motor
- #6A Chiller Repairs with Trane – Oil Transducer
- #7B Chiller Repairs – Oil Regulator
- #9 Cooling Tower Hot Deck Cleaning
- #1 DA placed in service
- 40215 Chemical Pump Not pumping (Chemical Vendor Pump)
- Annual Sprinkler System Inspections
- Annual Backflow Preventer Inspections
- Annual Safety Valve Testing
- Replaced steam trap on #1 Boiler
- Replaced steam trap on #4 Boiler
- Replaced steam trap between #1 & #2 Boilers
- Replaced steam trap on PRV Station
- #4 CHWP VFD Replacement

## **May 2023**

- Irrigation System Startup
- Replaced #2 Boiler Conductivity Probe
- #1 Boiler Conductivity Controller Replacement
- #1 CHWP Motor Wiring Repairs
- #1 Cooling Tower Breaker Repair
- #2 Boiler Fire Eye Replacement
- Repaired Cooling Water Makeup Line
- Removed and Replaced Plant Address Sign
- #4 CHWP VFD Replacement
- Installed Lighting around BFWPs
- Plant Camera Repairs
- Repaired Plant Gate

## June 2023

- Repaired #2 Deaerator
- Repaired Exhaust Fan Motor on Switchgear 1
- #2 Boiler Conductivity Controller Replacement
- #1 CHWP Motor Wiring Repairs
- Installed new exhaust vents on CHWP VFD's
- Installed Lighting around BFWP's
- Replaced 5 Steam Traps in Boiler Area
- Annual Boiler Inspection #1 and #3
- Forklift/Genie Lift Repairs
- #8 A Chiller Filter Drier/Remove Refrigerant

Annual maintenance costs for these activities: \$640,835.95 (excludes salaried personnel & corporate overhead).

- Administrative functions include reports, purchase orders, material acquisition, office supplies, meetings, etc.

Annual costs for these items and activities: \$124,111.16 (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 September 1, 2022. Changes are included in the copy of the program located in Exhibit 2 of this report.

## Modifications and Improvements

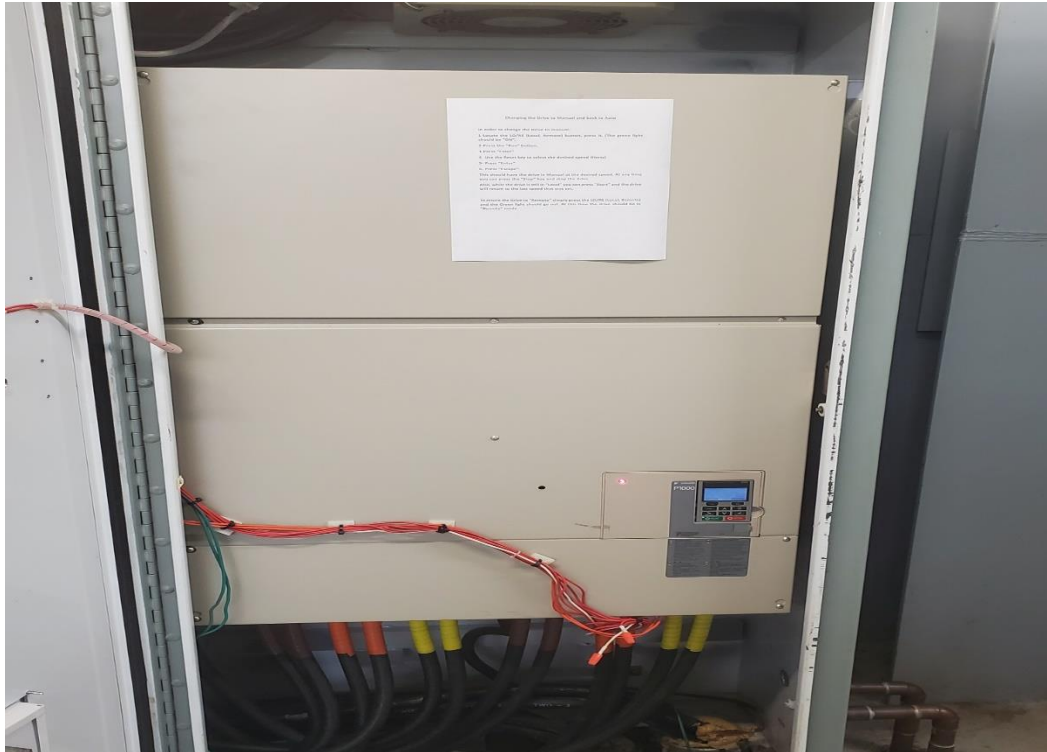
The following are improvements that were performed in and around the Energy Generation Facility and in the Energy Distribution System:



#1 Boiler Conductivity Controller Upgraded (new panel)



Vaporizer Rebuild



#4 Chilled Water Pump VFD





New Lighting at Side Stream Filter



New Lighting at Boiler Feedwater Pumps



Plant Painting





Plant Painting



## Energy Distribution System (EDS)

### EDS 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 or damaged insulation. Depending on the severity of the thermal temperature variance from the surrounding area, a determination is made whether to excavate the affected area.

CES 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.

CES 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 CES has limited control over what the MNDES 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. Samples are being taken at several customer buildings periodically and tests indicate an improvement has been made. Bacteria levels remain below the acceptable limits. A new side stream filter was installed at the EGF in March 2023 and became operational in May 2023.



## Repairs and Replacements

Some repairs can be made without disrupting service to the customers while others require sections of the system to be shut down. When possible, CES will hire an on-line leak repair contractor to facilitate steam leak repairs without interrupting service to the MNDES 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 police officers 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 FY22-23.

### **July 2022**

- Checked calibration on 6" RTD's for MCCC
- Performed setup on spare Cx Panel
- Assisted TEG with review of MNDES Service Lines in TN Tower Gold Lot
- Assisted Contractor with review of W-18 bracket repairs in State Tunnel
- Checked sump pumps & pumped out steaming manholes
- Replaced gasket on #2 Condensate Pump in M/H 18
- Replaced nipple on #3 Condensate Pump in M/H 18
- Removed tree limbs & debris from M/H N2
- Restored comms with Parkway Tower
- Investigated source of condensate hardness in State loop
- Assisted Siemens with review of M/H 18 Condensate Pump & VFD controls (DES-198)
- Assisted TEG with review of completed work in M/H 5 (DES-178)

### **August 2022**

- Assisted TEG with review of grounding issue at James K. Polk Building
- Assisted TEG with review of W18 bracket repairs in State Tunnel
- Checked sump pumps & pumped out steaming manholes
- Assisted Insulation contractors with access to Manhole 5 for pre-bid
- Rewired motor on 7<sup>th</sup> Avenue Tunnel ventilation fan
- Repaired Coupon Station at Renaissance Hotel
- Picked up Manhole Frames and Lids from John Bouchard
- Assisted Contractor with Insulation Blanket Installation at Manholes 3 & 4

### **September 2022**

- Assisted Contractor with review of grounding issue at James K. Polk Building
- Assisted TEG with review of Tunnel Projects, Manhole N1, etc.
- Checked sump pumps & pumped out steaming manholes
- Assisted Contractor with installation of steam trap at Manhole 13
- Repaired floats on sump pumps in Manhole B
- Repaired Coupon Station at Renaissance Hotel
- Cleaned State Tunnel and EDS Tunnel
- Assisted Contractor with Insulation Blanket Installation at Manholes 3 & 4
- Tunnel Electrical and Mechanical Walkthrough List Repairs
- Reviewed Project with Enecon (DES-180)
- Assisted Contractor with mechanical room access (DES-191)
- Assisted Contractor with Installation of Sparge Tube (DES-199)

### **October 2022**

- MH 18 Sump Pump Check Valve Replacement
- MH B Sump Pump Will not shut off/ float adjustment
- Checked sump pumps & pumped out steaming manholes
- Renaissance Ballroom IP Connection Repairs
- Emergency Light Replacement at A.A. Birch Tunnel
- Tunnel Electrical and Mechanical Walkthrough List Repairs
- Purchased Steam Traps

### **November 2022**

- Customer Building Meter Calibrations
- Calibrated RTD's
- MH B Sump Pump Will not shut off/ float adjustment
- Checked sump pumps & pumped out steaming manholes
- Replaced float on MH B Sump Pump
- Replaced MH 18 Sump Pump Check Valve

### **December 2022**

- Customer Building Meter Calibrations
- Calibrated RTD's
- Replaced float on MH 9 Sump Pump
- Checked sump pumps & pumped out steaming manholes
- Replaced battery on Hydraulic Pump
- Replaced MH 18 Sump Pump Check Valve
- Removed damaged 7<sup>th</sup> Avenue Ventilation Fan

### **January 2023**

- Customer Building Meter Calibrations
- Calibrated RTD's
- Checked sump pumps & pumped out steaming manholes
- Investigated War Memorial Building Future Metering Requirements
- Set up A.A. Birch Sump Pump Alarm Auto Dialer
- Investigated 7<sup>th</sup> Avenue Ventilation Fan Replacement Options

### **February 2023**

- Customer Building Meter Calibrations
- Calibrated RTD's
- Checked sump pumps & pumped out steaming manholes
- Investigated War Memorial Water Infiltration
- Tunnel Electrical/Lighting Repairs
- Investigated 7<sup>th</sup> Avenue Ventilation Fan Replacement Options
- Repaired A.A. Birch Sump Pump

### **March 2023**

- Customer Building Meter Calibrations
- Calibrated RTD's
- Checked sump pumps & pumped out steaming manholes
- Repair MH-9 Sump Pump Floats
- Ordered Material to replace manhole lid and frame (Qty.1)
- AA Birch Tunnel/MH-D2 Pumped
- Bridgestone Arena meter investigated.

### **April 2023**

- Customer Building Meter Calibrations
- Calibrated RTD's
- Checked sump pumps & pumped out steaming manholes
- Manhole B2 Sump Pump Discharge Line Investigation
- Reviewed State Tunnel R&I work with TEG
- Installed Scaffold over service lines near 5th& Broad entrance to EDS Tunnel

### **May 2023**

- Customer Building Meter Calibrations
- Calibrated RTD's
- Checked sump pumps & pumped out steaming manholes
- Cleaned out Manhole 18
- Replaced belt on Hydraulic Water Pump
- Tunnel Electrical/Lighting Repaired
- Replaced Block and bleed valves at Symphony & Municipal Auditorium



## June 2023

- Checked sump pumps & pumped out steaming manholes
- Assisted with Project Work/Bids
- Andrew Jackson Air Compressor Repairs
- Tunnel Electrical/Lighting Repairs
- Switched Steam Meter from winter to summer- Bridgestone Arena
- Checked Condensate System for Source of Hardness
- Customer Building Meter Calibrations
- Calibrated RTD's

Annual maintenance costs for EDS activities: \$327,979.61 (excludes salaried personnel & corporate overhead).

## DES Projects

Below is a brief description of the MNDES projects performed during FY22-23 in various stages of completion.

### **DES-177      Manhole B1 Ladder & Platform**

A Pre-bid meeting was held on June 15, 2021, to review the Bid drawings and documents and visit the job site. Bids were received on June 25, 2021, from all 4 bidders. The project was awarded to S. M. Lawrence and the submittals were sent to TEG for review. Metro decided to cancel this project in March 2023.

### **DES-178      Manhole 5 Coatings and Repairs**

The Coating portion of this work began on June 16, 2022 and was completed on June 25, 2022. The insulation portion was bid on September 2, 2022, and a Change Order #1 for this part of the project was sent to TEG for review on November 8, 2022. The Change Order was approved on November 22, 2022. CES has issued the Purchase order to the Insulating Contractor and blankets are scheduled to be delivered the first week of June. Installation is expected to begin shortly following delivery.

### **DES-180      State Tunnel Pipe Support Repairs**

The Phase 1 project to have Enecon clean and coat various pipe supports in the State Tunnel was sent to TEG for review and approval on September 23, 2022. The proposal for this project was approved by Metro on April 27, 2023. The project work began May 22, 2023 and was completed on June 6, 2023. A representative from TEG reviewed the work and punch list items were completed satisfactorily during the walkthrough. CES has invoiced Metro for this work.



- DES-191 Manhole 20 Repairs**  
This project was awarded to TN Underground and excavation began on September 14, 2022. The re-routing of the conduit, installation, and core drilling of the new upper section of the vault was completed on September 19, 2022. The excavation was backfilled, and paving was completed on September 20, 2022. The mechanical tie ins took place the first week in January 2023. A meeting was held with TN Underground and their mechanical contractor to review the remainder of their work April 28, 2023.
- DES-194 Manhole B4 Structural Steel and Insulation Repairs**  
A Pre-bid Meeting and walkthrough of the project was conducted on January 25, 2023, with Mechanical, Insulation and Coating Contractors. Bids were received on February 14, 2023. A proposal was sent to Metro on February 24, 2023 for review and approval. Metro approved on March 2, 2023 and the Contracts were finalized with the vendors on March 23, 2023. The coating portion of the project began on April 24, 2023 and was completed on April 28, 2023. TEG reviewed this portion on April 28, 2023, and the punch list items were completed while their representative was present. The Insulation Contractor began their portion of this project on May 15, 2023 and was completed on June 1, 2023 except for the blankets which were sent back to the manufacturer for modifications. These blankets are scheduled to be installed on July 12, 2023.
- DES-196 Manhole 9 to Manhole 10 Condensate Line Replacement**  
A Pre-bid Meeting and walkthrough of this project was held on May 31, 2023. This project will include the replacement of a substantial portion of the condensate piping from Manhole 9 to Manhole 10 as well as additional small sections to the west of Manholes 10 and 11. The bids were received on June 27, 2023.
- DES-198 M/H 18 Condensate Return Pump Replacement**  
The pumps for this project have been received. The VFD's were delivered in mid-October. TEG issued preliminary drawings for the controls on May 27, 2022. Siemens reviewed the control scheme and provided a quote for this portion of the project. Due to the late delivery of the VFD's and the heating season, a decision was initially made to delay this project. A Pre-bid Meeting was held on June 13, 2023 and bids were received on June 23, 2023. The contract is expected to be finalized with the Contractor the first week of July 2023.
- DES-199 Manhole D3 Sparge Tube and Condensate Pipe Support Installation**  
The project to install a sparge tube and condensate line support was approved by Metro and installation began in early September 2022. A discrepancy was noted by TEG regarding the pipe support during the walkthrough in October 2022. The Contractor made the modifications to the pipe support that were requested in November 2022. This project has been completed.

- DES-200 Chilled Water System Side Stream Filter**  
The piping for the side stream filter began in late January 2023. Materials were received the first week of March 2023 and the majority of the piping and electrical has been completed as of this report. The commissioning of the unit began on May 9, 2023 and was completed later that day. A representative from TEG reviewed the initial installation and issued a punch list. Punch list items have been completed except for the backwash meter which is expected to be installed in mid-July 2023.
- DES-204 MNDES Building Sign Replacement**  
The Sign Contractor requested approval of the MNDES Signs on August 15, 2022. Metro gave approval on August 31, 2022. The Change Order for a larger sign on the Korean Veterans side of the building was approved. Sign installation began on November 28, 2022, with the installation of the Peabody Street and Hermitage Avenue facing signs completed the same day. The Korean Veterans facing sign was completed in early January 2023. This project has been completed.
- DES-205 January 2023 Chilled Water Outage**  
The planned chilled water system outage was formally agreed to by all parties to address valves at 5<sup>th</sup> and Union as well as vent valves in MH-15. Due to the emergency nature of the leak at 5<sup>th</sup> and Union, MTI was contacted to dig the site and they excavated on December 27-28, 2022. This shutdown was completed on January 4, 2023, with the vent valves being removed and plugs installed in their place. One Corporation stop valve was removed and replaced with a plug and the other corporation valve was replaced with a functional corporation valve that was closed and plugged. Drain lines were removed the same day. Additional work, including mechanical joints and repairs to some concrete anchors was completed the week of February 8, 2023. The area was backfilled, and the binder and cold mix was installed the same week. Final milling and paving were completed on April 29, 2023. Striping in the crosswalk was completed in May 2023. CES has invoiced metro for this work.
- DES-206 7<sup>th</sup> Avenue Fan Replacement**  
The 7<sup>th</sup> Avenue Fan broke apart during operation. After review, the best option was to replace the unit. The fan arrived on April 21, 2023, and the fabric expansion joint was delayed and arrived mid-June 2023. CES has been given approval to proceed with the replacement and once the traffic plan and excavation permits have been issued by Metro the work is anticipated to begin mid July 2023.
- DES-207 Manhole N1 Insulation**  
The insulation contractor, Warren, has been issued a purchase order and has ordered material. Further discussion was had between the Contractor and TEG and revised drawings have been issued for the insulation. A meeting is scheduled for July 7, 2023 to review the project.





**DES-208      2023 Steam Outage**  
CES's CSR is in the process of scheduling a Steam Outage late summer to make repairs to the steam system in the EDS and the Plant. As of this report the outage is to take place September 24- 25, 2023.

**DES-209      Manhole B2 Sump Pump Line Excavation**  
CES personnel met with GPRS personnel on April 17, 2023, to investigate a potential blockage of the discharge line on the Manhole B2 Sump Pump. The investigation indicates a possible blockage approximately 23 feet into the discharge piping. Work is anticipated to begin in FY 2024.

**EDS Emergency Repair Projects**

DES-205 was initially classified as an Emergency Project (EMR23-001) see information on this project under the MNDES Projects section of this report.



## Outstanding Issues and Recommendations

Each year CES meets with Metro representatives in their monthly meetings. As part of this, they discuss outstanding issues and project recommendations. Below is a list of those items.

### **Outstanding Issues**

- State of Tennessee to complete repairs to their steam tunnel.
- Resolve issue regarding CES mark-up on MNDES project work.

### **Recommendations for FY 24**

- Add expansion loops to steam and condensate lines in Broadway tunnel to allow access to tunnel from 5<sup>th</sup> & Broadway parking garage.
- Build a maintenance platform under the 7<sup>th</sup> Avenue Tunnel exhaust fan.
- Install safety decking around deaerators and above the boilers toward the cooling tower makeup valve in the EGF.
- Potential projects that should be considered:
  - Automated Oxygen Trim on Boilers
  - Capacitor Bank on Electrical feed to plant



## Sales and Marketing

Due to the amount of development taking place south of Broadway, the potential exists for system expansion. Metro actively markets the remaining capacity of the system.

The following table, furnished by Thermal Engineering Group, Inc. on March 6, 2023 indicates the remaining current system capacity.

<b>System Capacity</b>		
<b>Diversity Factor</b>	<b>66.54%</b>	<b>72.29%</b>
	Chilled Water (tons)	Steam (pph)
Installed capacity including redundant equipment	23,400	260,000
Installed capacity	20,800	195,000
Distribution losses	600	10,948
In-Plant losses (DA,etc.)	-	17,540
Max Allowable Customer Load	20,200	166,512
Maximum System Peaks	18,584	141,135
Net Undiversified Capacity Available for Sale	1,616	25,377
<b>Net Diversified Capacity Available for Sale</b>	<b>2,429</b>	<b>35,105</b>
Diversified Potential for Contract Capacities	34,328	352,798
Contract Capacity for Existing Customers	30,359	284,616
Potential Contract Capacity for Sale	3,969	68,182

Ongoing activities include the following:

- A Sales and Marketing Report is included in the Monthly Operations Report.
- CES participates in meetings and social events with business groups, engineers, and developers throughout the year. They also provide presentations and tours of the EGF to point out the positive attributes of the system.
- Metro is pursuing development opportunities on the East Bank of the Cumberland River which include Oracle and the surrounding developments.



## Utilities and Fuel Procurement

### Natural Gas and Propane

During FY 2022-2023, CES provided proactive support to Metro in the areas of fuel procurement and risk management. Metro, in a collaborative effort with CES, Insight Sourcing Group and International FC Stone Financial Inc., made natural gas and propane procurement recommendations. Procurement decisions were made 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 and budgetary considerations.

Natural gas supply was procured from Constellation NewEnergy-Gas Division, LLC (“CNEG”) under the terms and conditions of an agreement between CES and CNEG for a service period extending through June 2025. 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, and the risk management fees, but it does not include the Fuel Efficiency Adjustment.

Following is a report of the natural gas and propane purchased in FY2022-2023.

<b>Natural Gas</b>			
Month	Quantity (DT)	Unit Cost	Amount
July, 22	25,091.3	\$ 6.2165	\$ 155,980.94
August	27,211.2	\$ 7.1861	\$ 195,542.04
September	29,864.0	\$ 7.3271	\$ 218,816.78
October	44,695.6	\$ 6.1917	\$ 276,742.33
November	60,806.7	\$ 5.9907	\$ 364,275.28
December	76,730.2	\$ 6.1817	\$ 474,321.54
January, 23	69,983.7	\$ 6.2317	\$ 436,114.67
February	54,769.4	\$ 6.3137	\$ 345,796.01
March	57,939.4	\$ 5.3763	\$ 311,501.30
April	41,451.6	\$ 5.3847	\$ 223,205.32
May	32,692.9	\$ 5.2358	\$ 171,174.46
June	27,012.3	\$ 5.6278	\$ 152,019.90
<b>Total</b>	<b>548,248.3</b>	<b>\$ 6.0657</b>	<b>\$ 3,325,490.57</b>



On November 18, 2022, 90,000 gallons of propane was purchased for placement in TARGA’s storage facility in the event of a natural gas curtailment due to extreme winter temperatures. Since the plant did not have a natural gas curtailment, the propane was sold back to TARGA March 1, 2023. The net cost is not included in the table below.

The following is a report of propane used during the fiscal year:

<b>Propane</b>			
Month	Quantity (DT)	Unit Cost	Amount
July, 22	-	N/A	\$ -
August	-	N/A	\$ -
September	-	N/A	\$ -
October	-	N/A	\$ -
November	-	N/A	\$ -
December	-	N/A	\$ -
January, 23	33	\$ 9.8493	\$ 325.03
February	8	\$ 10.1571	\$ 81.26
March	-		\$ -
April	-		\$ -
May	-		\$ -
June	-	N/A	\$ -
<b>Total</b>	<b>41</b>	<b>\$ 9.9095</b>	<b>\$ 406.29</b>



## Electricity

During FY 22 – 23, 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 and Exhibit I of this report.

<b>Electricity</b>			
Month	Quantity (Kwh)	Unit Cost	Amount
July, 22	8,807,568	\$ 0.09512	837,766.64
August	8,057,952	\$ 0.10543	849,548.67
September	6,094,844	\$ 0.09827	598,913.55
October	3,808,000	\$ 0.10309	392,576.99
November	3,175,004	\$ 0.09898	314,277.33
December	2,734,144	\$ 0.10510	287,364.82
January, 23	2,686,348	\$ 0.10825	290,799.31
February	2,729,888	\$ 0.11341	309,585.07
March	3,086,888	\$ 0.09840	303,748.30
April	3,630,060	\$ 0.09387	340,768.33
May	5,132,176	\$ 0.08879	455,691.60
June	6,349,896	\$ 0.09998	634,868.99
<b>Total</b>	<b>56,292,768</b>	<b>\$ 0.09976</b>	<b>\$ 5,615,909.60</b>



## Water & Sewer

The following table indicates the water purchased during FY22 -23 based on the Metro Water Services rate schedule. The quantities in this table are from the actual water bills. They differ from those reported in the Monthly Reports because the Water Department’s billing cycle is not based on the calendar month.

<b>Water &amp; Sewer</b>			
Month	Quantity (Kgal)	Unit Cost	Amount
July, 22	19,151,044	\$ 0.00668	\$ 128,001.47
August	21,507,244	\$ 0.00669	\$ 143,983.70
September	18,191,360	\$ 0.00671	\$ 122,070.24
October	13,792,372	\$ 0.00671	\$ 92,522.77
November	8,782,268	\$ 0.00674	\$ 59,181.02
December	8,274,376	\$ 0.00675	\$ 55,827.31
January, 23	8,379,844	\$ 0.00702	\$ 58,864.65
February	7,335,636	\$ 0.00697	\$ 51,112.95
March	8,620,700	\$ 0.00695	\$ 59,908.80
April	9,982,060	\$ 0.00693	\$ 69,181.34
May	8,883,996	\$ 0.00694	\$ 61,616.29
June	14,586,000	\$ 0.00692	\$ 100,924.18
<b>Total</b>	<b>147,486,900</b>	<b>\$ 0.00680</b>	<b>\$ 1,003,194.72</b>



## 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 (MNDES).

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 MNDES to each customer for FY22-23.

### Appendix 3 – Customer Rate Reconciliation

Monthly Reconciliation charts from July 2022 to June 2023 are found in this appendix. The final chart is a Summary Reconciliation table for FY22-23. 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).

- **Capacity Charge** – Associated with each customer and their agreed upon contracted capacity amount for chilled water and steam services.
- **System Operator Charge** – Includes the system operator’s fee which is most of the operations and maintenance costs of the system.
- **EDS Improvements Charge** –FY22-23 for the annual repair and replacement fund.
- **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 MNDES 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 initial system customers only to cap their annual cost of any EDS repairs made by Metro
  - **Water and Sewer** – Actual costs charged by Metro Water Services
- **Energy Charges**
  - **Electricity**
  - **Natural Gas**
  - **Propane**

### Appendix 4 – CES Invoice Reconciliation (FEA)





- Exhibit 1 – Performance Guarantee Calculation**
- Exhibit 2 – Information Technology System Program**
- Exhibit 3 – Constellation Asset List**
- Exhibit 4 – Spare Parts Inventory**



## Appendix 1 – Customer List

Metro Nashville District Energy System Customers					
Private		State		Metro	
1	Bobby Hotel (fka Wells Fargo)	20	Andrew Jackson	34	A. A. Birch
2	Parkway Tower	21	Cordell Hull	35	Metro Courthouse
3	Sheraton Hotel	22	John Sevier	36	Municipal Auditorium
4	Hermitage Hotel	23	War Memorial	37	Downtown Detention Center (fka CJC)
5	501 Union Building	24	Library & Archives	38	Bridgestone Arena
6	4 <sup>th</sup> & Church Building	25	Supreme Court	39	Nissan Stadium
7	Fifth-Third Financial Center	26	State Capitol	40	Hume-Fogg High School
8	Renaissance Hotel	27	James K. Polk	41	Nashville Public Library
9	City Space (fka Ren. Office Tower)	28	Citizens Plaza	42	Music City Center
10	St. Mary's Catholic Church	29	Tennessee Tower		
11	Nashville City Center	30	Tennessee State University		
12	Wildhorse Saloon	31	Tennessee Performing Arts Center		
13	Ryman Auditorium	32	Legislative Plaza		
14	Schermerhorn Symphony Center	33	Rachael Jackson		
15	Viridian Residential Tower				
16	Hyatt Place Hotel				
17	Fairlane Hotel (fka 401 Union)				
18	5 <sup>th</sup> & Broadway (fka Nash Conv Ctr)				
19	Hyatt Centric Hotel				

\*fka = formally known as



## Appendix 2 – Consumption & Revenues

Metro Nashville District Energy System  
Revenues  
Chilled Water and Steam  
Fiscal Year Ending June 30, 2023

Customer No.	Customer Name	July	August	September	October	November	December	January	February	March	April	May	June (Including True Up)	Total
2	A. A. Birch	\$ 67,427.23	\$ 68,118.86	\$ 54,642.50	\$ 58,362.97	\$ 57,007.83	\$ 58,235.15	\$ 60,529.09	\$ 61,213.52	\$ 55,223.89	\$ 50,524.31	\$ 53,807.80	\$ 60,261.07	\$ 705,354.22
4	Metro Courthouse	\$ 35,982.67	\$ 36,277.16	\$ 31,817.82	\$ 28,068.15	\$ 26,665.83	\$ 28,278.98	\$ 26,898.42	\$ 27,029.39	\$ 25,133.73	\$ 25,447.04	\$ 27,957.17	\$ 31,212.33	\$ 350,768.69
7	Parkway Tower	\$ 27,533.83	\$ 28,400.81	\$ 29,840.53	\$ 33,352.88	\$ 34,025.71	\$ 37,152.42	\$ 34,885.18	\$ 35,198.83	\$ 32,363.28	\$ 29,407.98	\$ 24,464.89	\$ 25,582.96	\$ 372,209.30
9	Bobby Hotel	\$ 15,199.94	\$ 15,959.82	\$ 14,153.42	\$ 10,441.97	\$ 8,618.26	\$ 8,320.23	\$ 7,484.53	\$ 7,703.20	\$ 7,873.63	\$ 8,962.20	\$ 10,305.65	\$ 17,632.25	\$ 132,655.10
10	Fairlane Hotel	\$ 12,494.95	\$ 12,258.38	\$ 10,790.24	\$ 9,239.06	\$ 9,640.68	\$ 10,511.34	\$ 10,172.82	\$ 9,689.81	\$ 9,467.03	\$ 9,072.93	\$ 9,513.70	\$ 10,562.23	\$ 123,413.17
11	Sheraton Hotel	\$ 63,506.50	\$ 64,795.45	\$ 61,956.61	\$ 58,331.95	\$ 58,019.38	\$ 61,109.71	\$ 54,822.58	\$ 52,092.85	\$ 50,589.50	\$ 50,360.52	\$ 51,478.62	\$ 58,873.49	\$ 685,937.16
12	Municipal Auditorium	\$ 24,841.95	\$ 25,449.80	\$ 22,489.94	\$ 23,281.48	\$ 24,401.18	\$ 27,802.97	\$ 28,152.76	\$ 24,814.68	\$ 24,391.67	\$ 21,142.21	\$ 21,432.88	\$ 25,235.44	\$ 293,436.96
21	Hermitage Hotel	\$ 28,713.07	\$ 29,692.93	\$ 25,315.91	\$ 21,015.31	\$ 21,088.53	\$ 22,321.38	\$ 21,020.81	\$ 20,414.97	\$ 21,053.18	\$ 20,680.70	\$ 21,525.92	\$ 23,986.84	\$ 276,829.55
24	Criminal Justice Center	\$ 35,973.52	\$ 41,544.40	\$ 37,781.29	\$ 33,790.62	\$ 34,460.71	\$ 35,659.86	\$ 34,325.83	\$ 35,175.54	\$ 34,714.91	\$ 36,237.85	\$ 45,076.00	\$ 52,666.88	\$ 457,407.41
25	501 Union Building	\$ 11,899.99	\$ 11,464.13	\$ 9,267.57	\$ 9,703.98	\$ 9,741.41	\$ 10,102.48	\$ 9,369.45	\$ 9,375.79	\$ 9,199.54	\$ 9,458.08	\$ 9,950.17	\$ 11,852.57	\$ 121,385.16
28	4th & Church Building	\$ 50,064.85	\$ 49,449.72	\$ 38,620.44	\$ 46,044.65	\$ 46,704.27	\$ 52,518.46	\$ 45,099.56	\$ 42,304.85	\$ 41,779.60	\$ 34,971.09	\$ 32,244.17	\$ 36,128.87	\$ 515,930.53
29	Fifth-Third Financial Center	\$ 40,373.24	\$ 41,241.30	\$ 29,668.13	\$ 26,284.03	\$ 24,936.38	\$ 23,895.50	\$ 23,910.15	\$ 25,011.99	\$ 24,546.31	\$ 22,588.05	\$ 30,683.75	\$ 33,292.67	\$ 346,431.50
32	Renaissance Hotel	\$ 105,526.60	\$ 117,956.34	\$ 116,593.39	\$ 94,304.51	\$ 91,187.74	\$ 96,189.47	\$ 95,355.31	\$ 92,319.00	\$ 85,434.66	\$ 82,183.70	\$ 93,825.17	\$ 108,532.17	\$ 1,179,408.06
33	5th & Broadway	\$ 85,665.46	\$ 87,990.64	\$ 69,492.15	\$ 50,781.79	\$ 45,348.60	\$ 33,518.94	\$ 40,675.85	\$ 39,812.73	\$ 42,403.39	\$ 49,393.98	\$ 57,001.51	\$ 69,859.36	\$ 671,944.40
34	Renaissance Office Tower	\$ 15,487.12	\$ 15,688.87	\$ 12,502.40	\$ 10,615.38	\$ 8,846.14	\$ 8,775.77	\$ 8,853.18	\$ 10,141.28	\$ 9,302.82	\$ 9,872.54	\$ 11,372.97	\$ 13,402.29	\$ 134,860.76
35	St. Mary's Catholic Church	\$ 1,121.20	\$ 1,121.20	\$ 1,121.20	\$ 1,121.20	\$ 1,121.20	\$ 1,121.20	\$ 1,121.20	\$ 1,121.20	\$ 1,121.20	\$ 1,121.20	\$ 1,121.20	\$ 1,121.20	\$ 13,454.40
36	Nashville City Center	\$ 41,039.44	\$ 41,594.90	\$ 28,951.96	\$ 24,806.15	\$ 21,536.39	\$ 20,723.53	\$ 21,886.24	\$ 21,114.40	\$ 20,791.34	\$ 23,668.61	\$ 27,779.00	\$ 33,131.48	\$ 327,023.44
38	Wildhorse Saloon	\$ 17,793.30	\$ 17,930.94	\$ 17,528.48	\$ 12,749.00	\$ 13,848.44	\$ 11,415.87	\$ 9,597.19	\$ 9,846.66	\$ 10,262.55	\$ 11,262.66	\$ 11,043.83	\$ 12,460.63	\$ 155,739.55
39	Ryman Auditorium	\$ 21,935.25	\$ 22,621.14	\$ 22,148.87	\$ 19,994.51	\$ 18,413.34	\$ 19,816.83	\$ 18,728.50	\$ 19,472.60	\$ 18,638.53	\$ 18,426.40	\$ 18,471.60	\$ 20,930.84	\$ 239,598.41
40	Bridgestone Arena	\$ 156,001.63	\$ 171,211.77	\$ 150,039.80	\$ 110,590.51	\$ 107,846.93	\$ 116,308.16	\$ 123,267.88	\$ 96,497.43	\$ 89,585.89	\$ 97,032.20	\$ 87,085.95	\$ 96,289.95	\$ 1,401,758.10
41	Nissan Stadium	\$ 79,095.24	\$ 82,614.90	\$ 65,022.57	\$ 44,662.27	\$ 36,884.15	\$ 32,431.90	\$ 32,222.29	\$ 31,114.70	\$ 34,577.46	\$ 42,094.25	\$ 51,182.52	\$ 63,667.57	\$ 595,569.82
43	Hume-Fogg High School	\$ 19,256.42	\$ 20,459.75	\$ 12,242.09	\$ 8,796.56	\$ 10,955.50	\$ 11,947.06	\$ 12,780.35	\$ 15,098.26	\$ 13,185.24	\$ 8,570.86	\$ 9,907.70	\$ 10,219.93	\$ 153,419.72
44	Schermerhorn Symphony Center	\$ 42,202.44	\$ 43,401.53	\$ 39,437.28	\$ 34,069.83	\$ 31,393.43	\$ 35,094.81	\$ 32,342.51	\$ 31,491.78	\$ 33,050.24	\$ 29,624.69	\$ 33,237.59	\$ 41,591.07	\$ 426,937.20
45	Nashville Public Library	\$ 34,752.55	\$ 37,290.91	\$ 37,006.64	\$ 37,517.37	\$ 37,825.28	\$ 36,813.97	\$ 37,473.85	\$ 35,961.33	\$ 33,311.15	\$ 32,598.95	\$ 31,504.13	\$ 32,685.40	\$ 424,741.53
49	Viridian Residential Tower	\$ 25,470.61	\$ 24,848.89	\$ 22,665.56	\$ 19,323.44	\$ 17,870.20	\$ 17,037.57	\$ 17,031.97	\$ 17,321.21	\$ 17,529.13	\$ 18,011.84	\$ 19,423.58	\$ 21,963.39	\$ 238,497.39
50	Music City Center	\$ 294,706.18	\$ 288,285.34	\$ 255,598.96	\$ 237,447.39	\$ 228,018.99	\$ 252,178.60	\$ 233,214.13	\$ 228,863.39	\$ 237,382.71	\$ 223,241.29	\$ 220,723.43	\$ 251,507.52	\$ 2,951,167.93
51	Hyatt Place Hotel	\$ 26,674.81	\$ 27,814.09	\$ 24,896.61	\$ 21,685.33	\$ 20,696.09	\$ 22,092.50	\$ 22,003.57	\$ 22,470.09	\$ 23,388.31	\$ 23,565.76	\$ 23,532.01	\$ 22,484.57	\$ 281,303.74
52	Hyatt Centric	\$ 15,033.62	\$ 13,624.66	\$ 11,637.43	\$ 9,941.92	\$ 8,541.94	\$ 7,531.17	\$ 7,898.01	\$ 8,938.74	\$ 8,674.77	\$ 8,721.79	\$ 10,945.68	\$ 12,849.82	\$ 124,339.55
51	State Government of TN	\$ 520,757.91	\$ 545,639.63	\$ 485,437.06	\$ 467,397.88	\$ 483,643.74	\$ 519,584.06	\$ 506,196.78	\$ 474,094.95	\$ 462,031.99	\$ 430,352.27	\$ 437,655.91	\$ 491,580.92	\$ 5,824,373.10
	Grand Totals	\$ 1,916,531.52	\$ 1,984,748.26	\$ 1,738,666.85	\$ 1,563,722.09	\$ 1,539,288.27	\$ 1,618,489.89	\$ 1,577,319.99	\$ 1,505,705.17	\$ 1,477,007.65	\$ 1,428,595.95	\$ 1,484,254.50	\$ 1,691,565.71	\$ 19,525,895.85



# Appendix 3 – Customer Rate Reconciliation

Metro Nashville District Energy System  
 Revenues  
 Chilled Water and Steam  
 Fiscal Year Ending June 30, 2023

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	\$ 116,286.72	\$ 175,583.88	\$ 9,505.44	\$ 22,459.44	\$ 33,765.99	\$ 7,091.78	\$ 1,989.67	\$ 1,294.83	\$ 3,195.21	\$ -	\$ 12,851.56	\$ 205,048.13	\$ 116,264.08	\$ 17.49	\$ 705,354.22
4	Metro Courthouse	\$ 55,050.00	\$ 81,933.36	\$ 4,435.44	\$ 10,480.30	\$ 18,894.22	\$ 4,038.49	\$ 935.18	\$ 605.65	\$ 1,491.01	\$ -	\$ 1,438.80	\$ 106,212.13	\$ 65,247.02	\$ 7.09	\$ 350,768.69
7	Parkway Tower	\$ 50,187.36	\$ 79,481.64	\$ 4,302.72	\$ 10,166.79	\$ 21,218.26	\$ 4,744.83	\$ 879.91	\$ 581.65	\$ 1,446.38	\$ 9,255.12	\$ 258.92	\$ 110,931.28	\$ 78,743.39	\$ 11.05	\$ 372,209.30
9	Bobby Hotel	\$ 18,498.72	\$ 28,809.84	\$ 1,559.64	\$ 3,685.13	\$ 7,732.81	\$ 1,386.29	\$ 321.57	\$ 211.39	\$ 524.28	\$ 3,324.00	\$ 786.56	\$ 50,579.87	\$ 15,233.78	\$ 1.22	\$ 132,655.10
10	Fairlane Hotel	\$ 19,186.92	\$ 29,687.76	\$ 1,607.16	\$ 3,797.38	\$ 6,517.07	\$ 1,262.60	\$ 332.36	\$ 218.06	\$ 540.26	\$ 4,050.00	\$ 1,935.29	\$ 37,549.91	\$ 16,725.52	\$ 2.88	\$ 123,413.17
11	Sheraton Hotel	\$ 105,896.76	\$ 159,659.40	\$ 8,643.24	\$ 20,422.46	\$ 31,723.69	\$ 7,426.37	\$ 1,810.56	\$ 1,177.68	\$ 2,905.42	\$ 16,052.04	\$ 5,761.18	\$ 173,072.33	\$ 151,368.64	\$ 17.39	\$ 685,937.16
12	Municipal Auditorium	\$ 53,141.88	\$ 84,834.48	\$ 4,592.52	\$ 10,851.50	\$ 10,648.92	\$ 2,404.95	\$ 935.62	\$ 620.05	\$ 1,543.78	\$ -	\$ 1,013.50	\$ 70,120.69	\$ 52,718.64	\$ 10.43	\$ 293,436.96
21	Hermitage Hotel	\$ 51,150.00	\$ 74,867.52	\$ 4,053.00	\$ 9,576.47	\$ 12,508.86	\$ 2,496.98	\$ 861.71	\$ 554.97	\$ 1,362.42	\$ 3,612.96	\$ 4,773.97	\$ 73,453.81	\$ 37,552.24	\$ 4.64	\$ 276,829.55
24	Criminal Justice Center	\$ 86,490.36	\$ 123,101.28	\$ 6,664.20	\$ 15,746.20	\$ 16,329.98	\$ 4,446.87	\$ 1,437.07	\$ 916.86	\$ 2,240.16	\$ -	\$ 890.97	\$ 91,234.22	\$ 107,898.28	\$ 10.96	\$ 457,407.41
25	501 Union Building	\$ 20,167.20	\$ 30,179.52	\$ 1,633.80	\$ 3,860.43	\$ 5,400.14	\$ 1,117.19	\$ 343.61	\$ 222.89	\$ 549.21	\$ 3,036.96	\$ -	\$ 37,455.56	\$ 17,416.39	\$ 2.26	\$ 121,385.16
28	4th & Church Building	\$ 277,366.44	\$ -	\$ -	\$ -	\$ 23,194.96	\$ 4,655.87	\$ 1,127.66	\$ 740.68	\$ -	\$ -	\$ 793.21	\$ 133,726.01	\$ 74,314.22	\$ 11.48	\$ 515,930.53
29	Fifth-Third Financial Center	\$ 61,632.00	\$ 111,660.72	\$ 6,044.88	\$ 14,282.83	\$ 13,328.93	\$ 1,974.03	\$ 1,161.21	\$ 800.94	\$ 2,031.96	\$ 10,266.96	\$ 9,574.42	\$ 113,672.62	\$ -	\$ -	\$ 346,431.50
32	Renaissance Hotel	\$ 159,767.88	\$ 235,784.28	\$ 12,764.40	\$ 30,159.81	\$ 70,209.38	\$ 15,580.96	\$ 2,702.43	\$ 1,745.37	\$ 4,290.73	\$ 19,086.96	\$ 1,745.95	\$ 343,828.85	\$ 281,707.91	\$ 33.15	\$ 1,179,408.06
33	5th & Broadway	\$ 70,909.32	\$ 128,468.64	\$ 6,954.72	\$ 16,432.73	\$ 59,005.25	\$ 9,035.26	\$ 1,336.00	\$ 921.50	\$ 2,337.84	\$ -	\$ 16,913.88	\$ 359,629.26	\$ -	\$ -	\$ 671,944.40
34	Renaissance Office Tower	\$ 15,068.28	\$ 27,299.64	\$ 1,477.92	\$ 3,491.98	\$ 11,470.33	\$ 1,801.96	\$ 283.89	\$ 195.82	\$ 496.79	\$ 2,966.04	\$ 723.79	\$ 69,584.32	\$ -	\$ -	\$ 134,860.76
35	St. Mary's Catholic Church	\$ 13,020.36	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 434.04	\$ -	\$ -	\$ -	\$ -	\$ 13,454.40
36	Nashville City Center	\$ 50,227.44	\$ 90,998.64	\$ 4,926.24	\$ 11,639.87	\$ 17,670.65	\$ 2,629.73	\$ 946.35	\$ 652.73	\$ 1,655.96	\$ 9,833.04	\$ 906.21	\$ 134,936.58	\$ -	\$ -	\$ 327,023.44
38	Wildhorse Saloon	\$ 18,697.92	\$ 29,806.44	\$ 1,613.52	\$ 3,812.60	\$ 9,713.28	\$ 1,973.01	\$ 329.03	\$ 217.90	\$ 542.40	\$ 2,384.88	\$ 2,849.44	\$ 53,455.61	\$ 30,341.44	\$ 2.08	\$ 155,739.55
39	Ryman Auditorium	\$ 19,290.24	\$ 31,260.96	\$ 1,692.36	\$ 3,998.65	\$ 17,645.16	\$ 3,918.12	\$ 342.24	\$ 227.95	\$ 568.88	\$ 2,312.88	\$ 573.22	\$ 92,879.76	\$ 64,881.20	\$ 6.79	\$ 239,598.41
40	Bridgestone Arena	\$ 207,742.68	\$ 337,541.64	\$ 18,273.24	\$ 43,175.85	\$ 89,213.55	\$ 16,877.32	\$ 3,691.44	\$ 2,460.31	\$ 6,142.46	\$ -	\$ 449.98	\$ 490,296.28	\$ 185,873.58	\$ 19.77	\$ 1,401,758.10
41	Nissan Stadium	\$ 88,636.56	\$ 160,585.80	\$ 8,693.52	\$ 20,541.01	\$ 40,915.69	\$ 5,909.54	\$ 1,670.07	\$ 1,151.88	\$ 2,922.28	\$ -	\$ 1,121.52	\$ 263,421.95	\$ -	\$ -	\$ 595,569.82
43	Hume-Fogg High School	\$ 29,518.92	\$ 45,850.56	\$ 2,482.20	\$ 5,864.78	\$ 4,789.33	\$ 1,112.33	\$ 512.47	\$ 336.58	\$ 834.37	\$ -	\$ 4,822.46	\$ 32,287.22	\$ 25,005.08	\$ 3.42	\$ 153,419.72
44	Schermerhorn Symphony Center	\$ 202,150.68	\$ -	\$ -	\$ -	\$ 18,432.17	\$ 4,385.11	\$ 806.47	\$ 532.64	\$ -	\$ -	\$ -	\$ 114,514.14	\$ 86,108.46	\$ 7.53	\$ 426,937.20
45	Nashville Public Library	\$ 91,647.72	\$ -	\$ -	\$ -	\$ 37,773.40	\$ 7,602.89	\$ 1,277.38	\$ 833.98	\$ -	\$ -	\$ 26.73	\$ 195,972.67	\$ 89,594.58	\$ 12.18	\$ 424,741.53
49	Viridian Residential Tower	\$ 164,602.68	\$ -	\$ -	\$ -	\$ 8,138.89	\$ 1,193.28	\$ 570.00	\$ 393.17	\$ -	\$ -	\$ 15,102.28	\$ 48,497.09	\$ -	\$ -	\$ 238,497.39
50	Music City Center	\$ 930,813.36	\$ 122,949.00	\$ -	\$ 79,785.62	\$ 159,333.60	\$ 36,696.35	\$ 9,304.62	\$ 6,150.78	\$ -	\$ -	\$ 3,280.41	\$ 902,069.07	\$ 700,710.50	\$ 74.62	\$ 2,951,167.93
51	Hyatt Place Hotel	\$ 146,510.88	\$ -	\$ -	\$ -	\$ 10,318.44	\$ 2,768.79	\$ 653.01	\$ 415.00	\$ -	\$ -	\$ 3,324.69	\$ 54,629.67	\$ 63,677.40	\$ 5.86	\$ 281,303.74
52	Hyatt Centric	\$ 61,140.00	\$ -	\$ -	\$ -	\$ 7,875.18	\$ 1,195.28	\$ 283.89	\$ 195.82	\$ -	\$ -	\$ 3,907.86	\$ 49,741.52	\$ -	\$ -	\$ 124,339.55
51	State Government of TN	\$ 1,639,133.76	\$ 1,393,343.52	\$ -	\$ -	\$ 232,911.46	\$ 54,986.25	\$ -	\$ 9,175.44	\$ 22,628.27	\$ -	\$ 63,342.49	\$ 1,296,132.56	\$ 1,112,576.30	\$ 143.05	\$ 5,824,373.10
	Grand Totals	\$ 4,823,933.04	\$ 3,583,688.52	\$ 111,920.16	\$ 344,231.83	\$ 996,679.59	\$ 210,712.43	\$ 36,845.42	\$ 33,552.52	\$ 60,250.07	\$ 86,615.88	\$ 158,169.29	\$ 5,704,933.11	\$ 3,373,958.65	\$ 405.34	\$ 19,525,895.85
	Rate Calculation Totals	\$ 5,719,551.12	\$ 4,922,088.48	\$ 184,376.04	\$ 431,898.04	\$ 996,985.80	\$ 210,827.76	\$ 36,562.00	\$ 33,584.28	\$ 61,977.36	\$ 86,615.88	\$ 158,169.29	\$ 5,705,870.76	\$ 3,378,375.41	\$ 406.29	\$ 21,927,288.51
	Deviation	\$ (895,618.08)	\$ (1,338,399.96)	\$ (72,455.88)	\$ (87,666.21)	\$ (306.21)	\$ (115.33)	\$ 283.42	\$ (31.76)	\$ (1,727.29)	\$ -	\$ -	\$ (937.65)	\$ (4,416.76)	\$ (0.95)	\$ (2,401,392.66)



Metro Nashville District Energy System  
Revenues  
Chilled Water and Steam  
July, 2022

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	\$ 9,690.56	\$ 14,631.99	\$ 792.12	\$ 1,962.83	\$ 4,694.24	\$ 614.49	\$ 340.13	\$ -	\$ 410.09	\$ -	\$ 276.22	\$ 31,655.04	\$ 2,359.52	\$ -	\$ 67,427.23
4	Metro Courthouse	\$ 4,587.50	\$ 6,827.78	\$ 369.62	\$ 915.92	\$ 2,438.84	\$ 368.53	\$ 159.86	\$ -	\$ 191.36	\$ -	\$ 12.90	\$ 16,424.43	\$ 3,685.93	\$ -	\$ 35,982.67
7	Parkway Tower	\$ 4,182.28	\$ 6,623.47	\$ 358.56	\$ 888.52	\$ 1,739.72	\$ 210.22	\$ 150.42	\$ -	\$ 185.63	\$ 771.26	\$ -	\$ 12,423.75	\$ -	\$ -	\$ 27,533.83
9	Bobby Hotel	\$ 1,541.56	\$ 2,400.82	\$ 129.97	\$ 322.06	\$ 1,179.95	\$ 170.13	\$ 54.97	\$ -	\$ 67.29	\$ 277.00	\$ -	\$ 7,680.73	\$ 1,375.46	\$ -	\$ 15,199.94
10	Fairlane Hotel	\$ 1,598.91	\$ 2,473.98	\$ 133.93	\$ 331.87	\$ 911.26	\$ 113.34	\$ 56.82	\$ -	\$ 69.34	\$ 337.50	\$ 87.73	\$ 6,218.90	\$ 161.37	\$ -	\$ 12,494.95
11	Sheraton Hotel	\$ 8,824.73	\$ 13,304.95	\$ 720.27	\$ 1,784.81	\$ 4,135.59	\$ 607.98	\$ 309.51	\$ -	\$ 372.89	\$ 1,337.67	\$ -	\$ 26,703.22	\$ 5,404.88	\$ -	\$ 63,506.50
12	Municipal Auditorium	\$ 4,428.49	\$ 7,069.54	\$ 382.71	\$ 948.36	\$ 1,336.66	\$ 161.52	\$ 159.94	\$ -	\$ 198.13	\$ -	\$ -	\$ 10,156.60	\$ -	\$ -	\$ 24,841.95
21	Hermitage Hotel	\$ 4,262.50	\$ 6,238.96	\$ 337.75	\$ 836.93	\$ 1,904.54	\$ 254.94	\$ 147.30	\$ -	\$ 174.85	\$ 301.08	\$ 282.45	\$ 12,733.50	\$ 1,238.27	\$ -	\$ 28,713.07
24	Criminal Justice Center	\$ 7,207.53	\$ 10,258.44	\$ 555.35	\$ 1,376.13	\$ 1,689.45	\$ 272.36	\$ 245.65	\$ -	\$ 287.51	\$ -	\$ -	\$ 10,674.79	\$ 3,406.31	\$ -	\$ 35,973.52
25	501 Union Building	\$ 1,680.60	\$ 2,514.96	\$ 136.15	\$ 337.38	\$ 785.55	\$ 98.49	\$ 58.73	\$ -	\$ 70.49	\$ 253.08	\$ -	\$ 5,786.52	\$ 178.04	\$ -	\$ 11,899.99
28	4th & Church Building	\$ 23,113.87	\$ -	\$ -	\$ -	\$ 3,344.46	\$ 404.13	\$ 192.77	\$ -	\$ -	\$ -	\$ -	\$ 23,009.62	\$ -	\$ -	\$ 50,064.85
29	Fifth-Third Financial Center	\$ 5,136.00	\$ 9,305.06	\$ 503.74	\$ 1,248.24	\$ 2,242.96	\$ 271.03	\$ 198.50	\$ -	\$ 260.79	\$ 855.58	\$ 332.14	\$ 20,019.20	\$ -	\$ -	\$ 40,373.24
32	Renaissance Hotel	\$ 13,313.99	\$ 19,648.69	\$ 1,063.70	\$ 2,635.80	\$ 9,567.96	\$ 1,372.23	\$ 461.97	\$ -	\$ 550.69	\$ 1,590.58	\$ -	\$ 44,532.27	\$ 10,788.72	\$ -	\$ 105,526.60
33	5th & Broadway	\$ 5,909.11	\$ 10,705.72	\$ 579.56	\$ 1,436.13	\$ 8,229.73	\$ 994.44	\$ 228.38	\$ -	\$ 300.04	\$ -	\$ 764.28	\$ 56,518.07	\$ -	\$ -	\$ 85,665.46
34	Renaissance Office Tower	\$ 1,255.69	\$ 2,274.97	\$ 123.16	\$ 305.18	\$ 1,340.60	\$ 161.99	\$ 48.53	\$ -	\$ 63.76	\$ 247.17	\$ 24.71	\$ 9,641.36	\$ -	\$ -	\$ 15,487.12
35	St. Mary's Catholic Church	\$ 1,085.03	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,121.20
36	Nashville City Center	\$ 4,185.62	\$ 7,583.22	\$ 410.52	\$ 1,017.26	\$ 2,820.78	\$ 340.85	\$ 161.77	\$ -	\$ 212.53	\$ 819.42	\$ -	\$ 23,487.47	\$ -	\$ -	\$ 41,039.44
38	Wildhorse Saloon	\$ 1,558.16	\$ 2,483.87	\$ 134.46	\$ 333.20	\$ 1,334.09	\$ 218.32	\$ 56.24	\$ -	\$ 69.62	\$ 198.74	\$ 136.66	\$ 8,418.03	\$ 2,851.91	\$ -	\$ 17,793.30
39	Ryman Auditorium	\$ 1,607.52	\$ 2,605.08	\$ 141.03	\$ 349.46	\$ 1,875.18	\$ 279.75	\$ 58.51	\$ -	\$ 73.01	\$ 192.74	\$ -	\$ 12,098.75	\$ 2,654.22	\$ -	\$ 21,935.25
40	Bridgestone Arena	\$ 17,311.89	\$ 28,128.47	\$ 1,522.77	\$ 3,773.33	\$ 11,470.97	\$ 1,753.33	\$ 631.03	\$ -	\$ 788.35	\$ -	\$ -	\$ 72,286.43	\$ 18,335.06	\$ -	\$ 156,001.63
41	Nissan Stadium	\$ 7,386.38	\$ 13,382.15	\$ 724.46	\$ 1,795.17	\$ 7,194.26	\$ 869.32	\$ 285.48	\$ -	\$ 375.05	\$ -	\$ 20.77	\$ 47,062.20	\$ -	\$ -	\$ 79,095.24
43	Hume-Fogg High School	\$ 2,459.91	\$ 3,820.88	\$ 206.85	\$ 512.55	\$ 800.22	\$ 193.27	\$ 87.60	\$ -	\$ 107.09	\$ -	\$ 303.22	\$ 5,942.82	\$ 4,822.01	\$ -	\$ 19,256.42
44	Schermerhorn Symphony Center	\$ 16,845.89	\$ -	\$ -	\$ -	\$ 2,023.29	\$ 374.30	\$ 137.86	\$ -	\$ -	\$ -	\$ -	\$ 16,339.84	\$ 6,481.26	\$ -	\$ 42,202.44
45	Nashville Public Library	\$ 7,637.31	\$ -	\$ -	\$ -	\$ 3,383.06	\$ 421.71	\$ 218.36	\$ -	\$ -	\$ -	\$ -	\$ 22,447.25	\$ 644.86	\$ -	\$ 34,752.55
49	Viridian Residential Tower	\$ 13,716.89	\$ -	\$ -	\$ -	\$ 1,348.73	\$ 162.97	\$ 97.44	\$ -	\$ -	\$ -	\$ 905.31	\$ 9,239.27	\$ -	\$ -	\$ 25,470.61
50	Music City Center	\$ 77,567.78	\$ 10,245.75	\$ -	\$ 6,972.82	\$ 18,545.58	\$ 3,062.59	\$ 1,590.57	\$ -	\$ -	\$ -	\$ -	\$ 135,698.36	\$ 41,022.73	\$ -	\$ 294,706.18
51	Hyatt Place Hotel	\$ 12,209.24	\$ -	\$ -	\$ -	\$ 1,266.68	\$ 245.05	\$ 111.63	\$ -	\$ -	\$ -	\$ 49.25	\$ 8,200.29	\$ 4,592.67	\$ -	\$ 26,674.81
52	Hyatt Centric	\$ 5,095.00	\$ -	\$ -	\$ -	\$ 1,143.55	\$ 138.18	\$ 48.53	\$ -	\$ -	\$ -	\$ 336.27	\$ 8,272.09	\$ -	\$ -	\$ 15,033.62
51	State Government of TN	\$ 136,594.48	\$ 116,111.96	\$ -	\$ -	\$ 27,274.93	\$ 4,221.82	\$ -	\$ -	\$ 2,904.20	\$ -	\$ 2,317.82	\$ 185,096.98	\$ 46,235.72	\$ -	\$ 520,757.91
	Grand Totals	\$ 401,994.42	\$ 298,640.71	\$ 9,326.68	\$ 30,083.95	\$ 126,022.83	\$ 18,357.28	\$ 6,298.50	\$ -	\$ 7,732.71	\$ 7,217.99	\$ 5,849.73	\$ 848,767.78	\$ 156,238.94	\$ -	\$ 1,916,531.52
	Rate Calculation Totals	\$ 476,629.26	\$ 410,174.04	\$ 15,364.67	\$ 38,072.92	\$ 126,051.29	\$ 18,360.79	\$ 6,250.00	\$ -	\$ 7,954.34	\$ 7,217.99	\$ 5,849.73	\$ 848,888.52	\$ 156,238.93	\$ -	\$ 2,117,052.48
	Deviation:	\$ (74,634.84)	\$ (111,533.33)	\$ (6,037.99)	\$ (7,988.97)	\$ (28.46)	\$ (3.51)	\$ 48.50	\$ -	\$ (221.63)	\$ -	\$ -	\$ (120.74)	\$ 0.01	\$ -	\$ (200,520.96)



Metro Nashville District Energy System  
Revenues  
Chilled Water and Steam  
August, 2022

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	9,090.06	14,631.99	792.12	1,962.63	5,024.39	631.44	340.13	0	371.69	0	479.75	30,916.20	3,277.06	0	\$ 68,118.86
4	Metro Courthouse	4,587.50	6,627.76	309.62	915.92	2,626.13	363.39	159.06	0	173.54	0	6.45	15,956.59	4,290.38	0	\$ 36,277.16
7	Parkway Tower	4,152.28	6,623.47	356.56	886.52	2,010.03	242.13	150.42	0	166.34	771.26	0	12,504.69	501.11	0	\$ 28,400.81
9	Bobby Hotel	1,541.56	2,400.62	129.97	322.06	1,309.51	175.04	54.97	0	61.02	277	0	6,024.06	1,663.61	0	\$ 15,959.82
10	Fairlane Hotel	1,598.91	2,473.96	133.93	331.67	979.66	117.6	56.82	0	62.65	337.5	105.99	5,845.54	210.3	0	\$ 12,258.38
11	Sheraton Hotel	6,524.73	13,304.95	720.27	1,784.61	4,627.66	629.28	309.51	0	338.16	1,337.67	65.77	26,149.08	6,703.36	0	\$ 64,795.45
12	Municipal Auditorium	4,426.49	7,069.54	362.71	946.36	1,543.16	161.06	159.94	0	179.66	0	0	10,543.75	13.09	0	\$ 25,449.80
21	Hermitage Hotel	4,262.00	6,236.96	337.75	636.93	2,061.45	274.53	147.3	0	156.57	301.06	304.6	12,391.29	2,357.97	0	\$ 29,692.93
24	Criminal Justice Center	7,207.53	10,256.44	555.35	1,376.13	2,052.30	332.55	245.65	0	260.73	0	332.09	11,617.53	7,106.10	0	\$ 41,544.40
25	501 Union Building	1,060.60	2,514.96	136.15	337.36	791.66	95.67	56.73	0	63.92	253.06	0	5,312.46	219.32	0	\$ 11,464.13
28	4th & Church Building	23,113.07	0	0	0	3,619.36	424.32	192.77	0	0	0	0	22,099.40	0	0	\$ 49,449.72
29	Fifth-Third Financial Center	5,136.00	9,305.06	503.74	1,246.24	2,422.18	263.97	196.5	0	236.5	655.56	462.11	20,559.42	0	0	\$ 41,241.30
32	Renaissance Hotel	13,313.99	19,646.69	1,063.70	2,635.60	10,132.66	1,326.56	461.97	0	499.39	1,590.56	0	56,564.92	10,716.06	0	\$ 117,956.34
33	5th & Broadway	5,909.11	10,705.72	579.56	1,436.13	9,254.52	1,064.97	226.36	0	272.1	0	697.2	57,622.95	0	0	\$ 87,990.64
34	Renaissance Office Tower	1,255.09	2,274.97	123.16	305.16	1,466.24	171.9	48.53	0	57.62	247.17	14.12	9,724.09	0	0	\$ 15,688.87
35	St. Mary's Catholic Church	1,065.03	0	0	0	0	0	0	0	0	36.17	0	0	0	0	\$ 1,121.20
36	Nashville City Center	4,165.62	7,583.22	410.52	1,017.26	3,146.29	369.09	161.77	0	192.74	619.42	129.46	23,577.51	0	0	\$ 41,594.90
38	Wildhorse Saloon	1,556.16	2,463.67	134.46	333.2	1,496.30	219.37	56.24	0	63.13	196.74	166.64	7,636.19	3,376.64	0	\$ 17,930.94
39	Ryman Auditorium	1,607.52	2,605.08	141.03	349.46	2,121.95	291.87	56.51	0	66.21	192.74	0	11,655.46	3,331.31	0	\$ 22,621.14
40	Bridgestone Arena	17,311.89	26,126.47	1,522.77	3,773.33	13,844.92	1,924.00	631.03	0	714.92	0	0	60,043.12	23,916.52	0	\$ 171,211.77
41	Nissan Stadium	7,366.36	13,362.15	724.46	1,795.17	6,301.67	973.26	265.46	0	340.12	0	63.07	49,343.14	0	0	\$ 82,614.90
44	Hume-Fogg High School	2,459.91	3,620.66	206.65	512.55	976.76	176.57	67.6	0	97.11	0	303.22	7,037.99	4,776.31	0	\$ 20,459.75
43	Schermerhorn Symphony Center	16,645.09	0	0	0	2,363.93	390.46	137.66	0	0	0	0	15,065.06	6,576.33	0	\$ 43,401.53
45	Nashville Public Library	7,637.31	0	0	0	4,091.65	496.55	216.36	0	0	0	0	23,545.04	1,301.60	0	\$ 37,290.91
49	Viridian Residential Tower	13,716.89	0	0	0	1,406.74	165.16	97.44	0	0	0	1,042.48	6,416.18	0	0	\$ 24,848.89
50	Music City Center	77,567.76	10,245.75	0	6,972.62	21,127.02	3,113.00	1,590.57	0	0	0	0	119,452.77	49,215.03	0	\$ 288,285.34
51	Hyatt Place Hotel	12,209.24	0	0	0	1,405.57	235.4	111.63	0	0	0	132.96	6,261.49	5,457.76	0	\$ 27,814.09
52	Hyatt Centric	5,095.00	0	0	0	1,094.38	126.3	48.53	0	0	0	259.64	6,996.61	0	0	\$ 13,624.66
51	State Government of TN	136,994.48	116,111.96	0	0	31,205.90	4,421.52	0	0	2,633.72	0	3,196.16	192,494.53	66,979.34	0	\$ 545,639.63
	Grand Totals	401,994.42	296,640.71	9,326.66	30,063.95	142,552.79	19,240.40	6,296.50	0	7,012.49	7,217.99	7,966.95	650,993.06	195,396.32	0	\$ 1,984,748.26
	Rate Calculation Totals	476,629.26	410,174.04	15,364.67	36,072.92	142,596.74	19,244.32	6,290.00	0	7,213.54	7,217.99	7,966.95	659,122.39	195,396.32	0	\$ 2,185,263.14
	Deviation	-74,634.84	-111,533.33	-6,037.99	-7,968.97	-33.95	-3.92	48.5	0	-201.05	0	0	-129.33	0	0	\$ (200,514.88)





Metro Nashville District Energy System  
 Revenues  
 Chilled Water and Steam  
 September, 2022

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	\$ 9,690.56	\$ 14,631.99	\$ 792.12	\$ 1,962.83	\$ 3,623.93	\$ 545.92	\$ 340.13	\$ -	\$ 337.79	\$ -	\$ 988.58	\$ 18,539.84	\$ 3,188.81	\$ -	\$ 54,642.50
4	Metro Courthouse	\$ 4,587.50	\$ 6,827.78	\$ 369.62	\$ 915.92	\$ 2,228.15	\$ 384.93	\$ 159.86	\$ -	\$ 157.62	\$ -	\$ 12.90	\$ 11,147.26	\$ 5,026.28	\$ -	\$ 31,817.82
7	Parkway Tower	\$ 4,182.28	\$ 6,623.47	\$ 358.56	\$ 888.52	\$ 2,120.98	\$ 346.28	\$ 150.42	\$ -	\$ 152.90	\$ 771.26	\$ -	\$ 10,714.00	\$ 3,531.86	\$ -	\$ 29,840.53
9	Bobby Hotel	\$ 1,541.56	\$ 2,400.82	\$ 129.97	\$ 322.06	\$ 1,218.39	\$ 194.97	\$ 54.97	\$ -	\$ 55.42	\$ 277.00	\$ -	\$ 6,174.80	\$ 1,783.46	\$ -	\$ 14,153.42
10	Fairlane Hotel	\$ 1,598.91	\$ 2,473.98	\$ 133.93	\$ 331.87	\$ 823.35	\$ 120.30	\$ 56.82	\$ -	\$ 57.11	\$ 337.50	\$ 132.92	\$ 4,231.26	\$ 492.29	\$ -	\$ 10,790.24
11	Sheraton Hotel	\$ 8,824.73	\$ 13,304.95	\$ 720.27	\$ 1,784.81	\$ 4,027.53	\$ 713.93	\$ 309.51	\$ -	\$ 307.15	\$ 1,337.67	\$ 355.14	\$ 20,056.70	\$ 10,214.22	\$ -	\$ 61,956.61
12	Municipal Auditorium	\$ 4,428.49	\$ 7,069.54	\$ 382.71	\$ 948.36	\$ 1,460.62	\$ 199.37	\$ 159.94	\$ -	\$ 163.20	\$ -	\$ 99.69	\$ 7,578.02	\$ -	\$ -	\$ 22,489.94
21	Hermitage Hotel	\$ 4,262.50	\$ 6,238.96	\$ 337.75	\$ 836.93	\$ 1,656.10	\$ 264.53	\$ 147.30	\$ -	\$ 144.03	\$ 301.08	\$ 337.83	\$ 8,395.59	\$ 2,393.31	\$ -	\$ 25,315.91
24	Criminal Justice Center	\$ 7,207.53	\$ 10,258.44	\$ 555.35	\$ 1,376.13	\$ 1,658.21	\$ 353.10	\$ 245.65	\$ -	\$ 236.82	\$ -	\$ 48.60	\$ 7,955.41	\$ 7,886.05	\$ -	\$ 37,781.29
25	501 Union Building	\$ 1,680.60	\$ 2,514.96	\$ 136.15	\$ 337.38	\$ 602.91	\$ 89.45	\$ 58.73	\$ -	\$ 58.06	\$ 253.08	\$ -	\$ 3,091.54	\$ 444.71	\$ -	\$ 9,267.57
28	4th & Church Building	\$ 23,113.87	\$ -	\$ -	\$ -	\$ 2,421.26	\$ 330.50	\$ 192.77	\$ -	\$ -	\$ -	\$ -	\$ 12,562.04	\$ -	\$ -	\$ 38,620.44
29	Fifth-Third Financial Center	\$ 5,136.00	\$ 9,305.06	\$ 503.74	\$ 1,248.24	\$ 1,824.89	\$ 249.10	\$ 198.50	\$ -	\$ 214.81	\$ 855.58	\$ 664.29	\$ 9,467.92	\$ -	\$ -	\$ 29,668.13
32	Renaissance Hotel	\$ 13,313.99	\$ 19,648.69	\$ 1,063.70	\$ 2,635.80	\$ 9,087.61	\$ 1,583.78	\$ 461.97	\$ -	\$ 453.60	\$ 1,590.58	\$ -	\$ 45,394.05	\$ 21,359.62	\$ -	\$ 116,593.39
33	5th & Broadway	\$ 5,909.11	\$ 10,705.72	\$ 579.56	\$ 1,436.13	\$ 7,790.53	\$ 1,063.40	\$ 228.38	\$ -	\$ 247.14	\$ -	\$ 1,113.19	\$ 40,418.99	\$ -	\$ -	\$ 69,492.15
34	Renaissance Office Tower	\$ 1,255.69	\$ 2,274.97	\$ 123.16	\$ 305.18	\$ 1,288.48	\$ 175.88	\$ 48.53	\$ -	\$ 52.52	\$ 247.17	\$ 45.90	\$ 6,684.92	\$ -	\$ -	\$ 12,502.40
35	St. Mary's Catholic Church	\$ 1,085.03	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 36.17	\$ -	\$ -	\$ -	\$ 1,121.20
36	Nashville City Center	\$ 4,185.62	\$ 7,583.22	\$ 410.52	\$ 1,017.26	\$ 2,308.26	\$ 315.08	\$ 161.77	\$ -	\$ 175.06	\$ 819.42	\$ -	\$ 11,975.75	\$ -	\$ -	\$ 28,951.96
38	Wildhorse Saloon	\$ 1,558.16	\$ 2,483.87	\$ 134.46	\$ 333.20	\$ 1,397.10	\$ 254.06	\$ 56.24	\$ -	\$ 57.34	\$ 198.74	\$ 188.99	\$ 6,924.68	\$ 3,941.64	\$ -	\$ 17,528.48
39	Ryman Auditorium	\$ 1,607.52	\$ 2,605.08	\$ 141.03	\$ 349.46	\$ 1,931.83	\$ 348.19	\$ 58.51	\$ -	\$ 60.14	\$ 192.74	\$ 6.37	\$ 9,590.92	\$ 5,257.08	\$ -	\$ 22,148.87
40	Bridgestone Arena	\$ 17,311.89	\$ 28,128.47	\$ 1,522.77	\$ 3,773.33	\$ 12,323.14	\$ 2,027.73	\$ 631.03	\$ -	\$ 649.35	\$ -	\$ -	\$ 62,168.91	\$ 21,503.18	\$ -	\$ 150,039.80
41	Nissan Stadium	\$ 7,386.38	\$ 13,382.15	\$ 724.46	\$ 1,795.17	\$ 6,501.35	\$ 887.43	\$ 285.48	\$ -	\$ 308.93	\$ -	\$ 20.77	\$ 33,730.45	\$ -	\$ -	\$ 65,022.57
43	Hume-Fogg High School	\$ 2,459.91	\$ 3,820.88	\$ 206.85	\$ 512.55	\$ 571.18	\$ 96.55	\$ 87.60	\$ -	\$ 88.21	\$ -	\$ 373.83	\$ 2,868.48	\$ 1,156.05	\$ -	\$ 12,242.09
44	Schermerhorn Symphony Center	\$ 16,845.89	\$ -	\$ -	\$ -	\$ 2,349.31	\$ 451.39	\$ 137.86	\$ -	\$ -	\$ -	\$ -	\$ 11,520.73	\$ 8,132.10	\$ -	\$ 39,437.28
45	Nashville Public Library	\$ 7,637.31	\$ -	\$ -	\$ -	\$ 3,911.26	\$ 609.84	\$ 218.36	\$ -	\$ -	\$ -	\$ -	\$ 19,904.28	\$ 4,725.59	\$ -	\$ 37,006.64
49	Viridian Residential Tower	\$ 13,716.89	\$ -	\$ -	\$ -	\$ 1,210.78	\$ 165.27	\$ 97.44	\$ -	\$ -	\$ -	\$ 1,193.37	\$ 6,281.81	\$ -	\$ -	\$ 22,665.56
50	Music City Center	\$ 77,567.78	\$ 10,245.75	\$ -	\$ 6,972.82	\$ 18,220.94	\$ 3,244.06	\$ 1,590.57	\$ -	\$ -	\$ -	\$ -	\$ 90,666.24	\$ 47,090.80	\$ -	\$ 255,598.96
51	Hyatt Place Hotel	\$ 12,209.24	\$ -	\$ -	\$ -	\$ 1,278.70	\$ 249.07	\$ 111.63	\$ -	\$ -	\$ -	\$ 157.61	\$ 6,253.28	\$ 4,637.08	\$ -	\$ 24,896.61
52	Hyatt Centric	\$ 5,095.00	\$ -	\$ -	\$ -	\$ 979.22	\$ 133.66	\$ 48.53	\$ -	\$ -	\$ -	\$ 300.60	\$ 5,080.42	\$ -	\$ -	\$ 11,637.43
51	State Government of TN	\$ 136,594.48	\$ 116,111.96	\$ -	\$ -	\$ 25,950.39	\$ 4,593.04	\$ -	\$ -	\$ 2,392.15	\$ -	\$ 5,151.90	\$ 129,266.29	\$ 65,376.85	\$ -	\$ 485,437.06
	Grand Totals	\$ 401,994.42	\$ 298,640.71	\$ 9,326.68	\$ 30,083.95	\$ 120,766.40	\$ 19,990.81	\$ 6,298.50	\$ -	\$ 6,369.35	\$ 7,217.99	\$ 11,192.48	\$ 608,644.58	\$ 218,140.98	\$ -	\$ 1,738,666.85
	Rate Calculation Totals	\$ 476,629.26	\$ 410,174.04	\$ 15,364.67	\$ 38,072.92	\$ 120,797.81	\$ 19,995.74	\$ 6,250.00	\$ -	\$ 6,551.88	\$ 7,217.99	\$ 11,192.48	\$ 608,804.54	\$ 218,179.32	\$ -	\$ 1,939,230.65
	Deviation	\$ (74,634.84)	\$ (111,533.33)	\$ (6,037.99)	\$ (7,988.97)	\$ (31.41)	\$ (4.93)	\$ 48.50	\$ -	\$ (182.53)	\$ -	\$ -	\$ (159.96)	\$ (38.34)	\$ -	\$ (200,563.80)



Metro Nashville District Energy System  
Revenues  
Chilled Water and Steam  
October, 2022

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	\$ 9,690.56	\$ 14,631.99	\$ 792.12	\$ 1,962.83	\$ 2,973.32	\$ 520.36	\$ 340.13	\$ -	\$ 342.89	\$ -	\$ 1,221.19	\$ 14,004.57	\$ 11,883.01	\$ -	\$ 58,362.97
4	Metro Courthouse	\$ 4,587.50	\$ 6,827.78	\$ 369.62	\$ 915.92	\$ 1,784.77	\$ 291.38	\$ 159.86	\$ -	\$ 160.01	\$ -	\$ 45.16	\$ 7,566.88	\$ 5,359.27	\$ -	\$ 28,068.15
7	Parkway Tower	\$ 4,182.28	\$ 6,623.47	\$ 358.56	\$ 888.52	\$ 2,480.21	\$ 412.61	\$ 150.42	\$ -	\$ 155.22	\$ 771.26	\$ -	\$ 9,232.96	\$ 8,097.37	\$ -	\$ 33,352.88
9	Bobby Hotel	\$ 1,541.56	\$ 2,400.82	\$ 129.97	\$ 322.06	\$ 688.61	\$ 104.85	\$ 54.97	\$ -	\$ 56.26	\$ 277.00	\$ 44.72	\$ 3,393.97	\$ 1,427.18	\$ -	\$ 10,441.97
10	Fairlane Hotel	\$ 1,598.91	\$ 2,473.98	\$ 133.93	\$ 331.87	\$ 561.84	\$ 82.20	\$ 56.82	\$ -	\$ 57.98	\$ 337.50	\$ 175.45	\$ 2,547.91	\$ 880.67	\$ -	\$ 9,239.06
11	Sheraton Hotel	\$ 8,824.73	\$ 13,304.95	\$ 720.27	\$ 1,784.81	\$ 3,208.81	\$ 573.86	\$ 309.51	\$ -	\$ 311.80	\$ 1,337.67	\$ 802.36	\$ 13,288.81	\$ 13,864.37	\$ -	\$ 58,331.95
12	Municipal Auditorium	\$ 4,428.49	\$ 7,069.54	\$ 382.71	\$ 948.36	\$ 896.19	\$ 163.59	\$ 159.94	\$ -	\$ 165.67	\$ -	\$ 149.53	\$ 4,764.73	\$ 4,152.73	\$ -	\$ 23,281.48
21	Hermitage Hotel	\$ 4,262.50	\$ 6,238.96	\$ 337.75	\$ 836.93	\$ 997.80	\$ 160.17	\$ 147.30	\$ -	\$ 146.21	\$ 301.08	\$ 409.83	\$ 4,411.78	\$ 2,765.00	\$ -	\$ 21,015.31
24	Criminal Justice Center	\$ 7,207.53	\$ 10,258.44	\$ 555.35	\$ 1,376.13	\$ 1,087.46	\$ 235.62	\$ 245.65	\$ -	\$ 240.41	\$ -	\$ -	\$ 4,404.11	\$ 8,179.92	\$ -	\$ 33,790.62
25	501 Union Building	\$ 1,680.60	\$ 2,514.96	\$ 136.15	\$ 337.38	\$ 454.64	\$ 77.29	\$ 58.73	\$ -	\$ 58.94	\$ 253.08	\$ -	\$ 2,507.64	\$ 1,624.57	\$ -	\$ 9,703.98
28	4th & Church Building	\$ 23,113.87	\$ -	\$ -	\$ -	\$ 2,505.58	\$ 429.18	\$ 192.77	\$ -	\$ -	\$ -	\$ -	\$ 10,577.52	\$ 9,225.73	\$ -	\$ 46,044.65
29	Fifth-Third Financial Center	\$ 5,136.00	\$ 9,305.06	\$ 503.74	\$ 1,248.24	\$ 873.15	\$ 111.57	\$ 198.50	\$ -	\$ 218.06	\$ 855.58	\$ 996.43	\$ 6,837.70	\$ -	\$ -	\$ 26,284.03
32	Renaissance Hotel	\$ 13,313.99	\$ 19,648.69	\$ 1,063.70	\$ 2,635.80	\$ 6,532.06	\$ 1,100.57	\$ 461.97	\$ -	\$ 460.46	\$ 1,590.58	\$ 305.99	\$ 24,690.13	\$ 22,500.57	\$ -	\$ 94,304.51
33	5th & Broadway	\$ 5,909.11	\$ 10,705.72	\$ 579.56	\$ 1,436.13	\$ 4,984.46	\$ 636.92	\$ 228.38	\$ -	\$ 250.88	\$ -	\$ 1,495.33	\$ 24,555.30	\$ -	\$ -	\$ 50,781.79
34	Renaissance Office Tower	\$ 1,255.69	\$ 2,274.97	\$ 123.16	\$ 305.18	\$ 1,107.21	\$ 141.48	\$ 48.53	\$ -	\$ 53.31	\$ 247.17	\$ 81.21	\$ 4,977.47	\$ -	\$ -	\$ 10,615.38
35	St. Mary's Catholic Church	\$ 1,085.03	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 36.17	\$ -	\$ -	\$ -	\$ -	\$ 1,121.20
36	Nashville City Center	\$ 4,185.62	\$ 7,583.22	\$ 410.52	\$ 1,017.26	\$ 1,388.29	\$ 177.40	\$ 161.77	\$ -	\$ 177.71	\$ 819.42	\$ -	\$ 8,884.94	\$ -	\$ -	\$ 24,806.15
38	Wildhorse Saloon	\$ 1,558.16	\$ 2,483.87	\$ 134.46	\$ 333.20	\$ 1,011.52	\$ 163.92	\$ 56.24	\$ -	\$ 58.20	\$ 198.74	\$ 238.42	\$ 3,578.74	\$ 2,933.53	\$ -	\$ 12,749.00
39	Ryman Auditorium	\$ 1,607.52	\$ 2,605.08	\$ 141.03	\$ 349.46	\$ 1,778.96	\$ 298.78	\$ 58.51	\$ -	\$ 61.05	\$ 192.74	\$ 57.32	\$ 6,796.76	\$ 6,047.30	\$ -	\$ 19,994.51
40	Bridgestone Arena	\$ 17,311.89	\$ 28,128.47	\$ 1,522.77	\$ 3,773.33	\$ 9,409.83	\$ 1,326.06	\$ 631.03	\$ -	\$ 659.18	\$ -	\$ 34.61	\$ 37,328.25	\$ 10,465.09	\$ -	\$ 110,590.51
41	Nissan Stadium	\$ 7,386.38	\$ 13,382.15	\$ 724.46	\$ 1,795.17	\$ 3,058.17	\$ 390.77	\$ 285.48	\$ -	\$ 313.61	\$ -	\$ 41.54	\$ 17,284.54	\$ -	\$ -	\$ 44,662.27
43	Hume-Fogg High School	\$ 2,459.91	\$ 3,820.88	\$ 206.85	\$ 512.55	\$ 162.53	\$ 20.77	\$ 87.60	\$ -	\$ 89.54	\$ -	\$ 502.60	\$ 933.33	\$ -	\$ -	\$ 8,796.56
44	Schermerhorn Symphony Center	\$ 16,845.89	\$ -	\$ -	\$ -	\$ 1,593.39	\$ 271.37	\$ 137.86	\$ -	\$ -	\$ -	\$ -	\$ 9,486.94	\$ 5,734.38	\$ -	\$ 34,069.83
45	Nashville Public Library	\$ 7,637.31	\$ -	\$ -	\$ -	\$ 4,151.63	\$ 641.02	\$ 218.36	\$ -	\$ -	\$ -	\$ -	\$ 15,515.68	\$ 9,353.37	\$ -	\$ 37,517.37
49	Viridian Residential Tower	\$ 13,716.89	\$ -	\$ -	\$ -	\$ 719.81	\$ 91.98	\$ 97.44	\$ -	\$ -	\$ -	\$ 1,357.97	\$ 3,339.35	\$ -	\$ -	\$ 19,323.44
50	Music City Center	\$ 77,567.78	\$ 10,245.75	\$ -	\$ 6,972.82	\$ 15,506.65	\$ 2,655.55	\$ 1,590.57	\$ -	\$ -	\$ -	\$ -	\$ 65,863.95	\$ 57,044.32	\$ -	\$ 237,447.39
51	Hyatt Place Hotel	\$ 12,209.24	\$ -	\$ -	\$ -	\$ 977.72	\$ 175.57	\$ 111.63	\$ -	\$ -	\$ -	\$ 295.51	\$ 3,630.94	\$ 4,284.72	\$ -	\$ 21,685.33
52	Hyatt Centric	\$ 5,095.00	\$ -	\$ -	\$ -	\$ 713.88	\$ 91.22	\$ 48.53	\$ -	\$ -	\$ -	\$ 315.89	\$ 3,677.40	\$ -	\$ -	\$ 9,941.92
51	State Government of TN	\$ 136,594.48	\$ 116,111.96	\$ -	\$ -	\$ 21,138.03	\$ 3,773.64	\$ -	\$ -	\$ 2,428.39	\$ -	\$ 5,122.23	\$ 91,460.69	\$ 90,768.46	\$ -	\$ 467,397.88
	Grand Totals	\$ 401,994.42	\$ 298,640.71	\$ 9,326.68	\$ 30,083.95	\$ 92,746.52	\$ 15,119.70	\$ 6,298.50	\$ -	\$ 6,465.78	\$ 7,217.99	\$ 13,693.29	\$ 405,542.99	\$ 276,591.56	\$ -	\$ 1,563,722.09
	Rate Calculation Totals	\$ 476,629.26	\$ 410,174.04	\$ 15,364.67	\$ 38,072.92	\$ 92,776.49	\$ 15,126.58	\$ 6,250.00	\$ -	\$ 6,651.13	\$ 7,217.99	\$ 13,693.29	\$ 405,612.69	\$ 276,842.95	\$ -	\$ 1,764,412.01
	Deviation	\$ (74,634.84)	\$ (111,533.33)	\$ (6,037.99)	\$ (7,988.97)	\$ (29.97)	\$ (6.88)	\$ 48.50	\$ -	\$ (185.35)	\$ -	\$ -	\$ (69.70)	\$ (251.39)	\$ -	\$ (200,689.92)





Metro Nashville District Energy System  
 Revenues  
 Chilled Water and Steam  
 November, 2022

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	\$ 9,690.56	\$ 14,631.99	\$ 792.12	\$ 1,962.83	\$ 1,864.17	\$ 595.74	\$ 340.13	\$ -	\$ 300.63	\$ -	\$ 1,381.11	\$ 11,311.45	\$ 14,137.10	\$ -	\$ 57,007.83
4	Metro Courthouse	\$ 4,587.50	\$ 6,827.78	\$ 369.62	\$ 915.92	\$ 1,067.24	\$ 318.81	\$ 159.86	\$ -	\$ 140.29	\$ -	\$ 148.40	\$ 5,762.61	\$ 6,367.80	\$ -	\$ 26,665.83
7	Parkway Tower	\$ 4,182.28	\$ 6,623.47	\$ 358.56	\$ 888.52	\$ 1,700.06	\$ 508.68	\$ 150.42	\$ -	\$ 136.09	\$ 771.26	\$ -	\$ 8,497.10	\$ 10,209.27	\$ -	\$ 34,025.71
9	Bobby Hotel	\$ 1,541.56	\$ 2,400.82	\$ 129.97	\$ 322.06	\$ 309.20	\$ 88.15	\$ 54.97	\$ -	\$ 49.33	\$ 277.00	\$ 102.60	\$ 1,823.93	\$ 1,518.67	\$ -	\$ 8,618.26
10	Fairlane Hotel	\$ 1,598.91	\$ 2,473.98	\$ 133.93	\$ 331.87	\$ 338.12	\$ 103.34	\$ 56.82	\$ -	\$ 50.83	\$ 337.50	\$ 194.06	\$ 1,823.33	\$ 2,197.99	\$ -	\$ 9,640.68
11	Sheraton Hotel	\$ 8,824.73	\$ 13,304.95	\$ 720.27	\$ 1,784.81	\$ 2,028.56	\$ 672.42	\$ 309.51	\$ -	\$ 273.37	\$ 1,337.67	\$ 907.58	\$ 10,600.45	\$ 17,255.06	\$ -	\$ 58,019.38
12	Municipal Auditorium	\$ 4,428.49	\$ 7,069.54	\$ 382.71	\$ 948.36	\$ 597.21	\$ 223.60	\$ 159.94	\$ -	\$ 145.25	\$ -	\$ 215.99	\$ 3,162.78	\$ 7,067.31	\$ -	\$ 24,401.18
21	Hermitage Hotel	\$ 4,262.50	\$ 6,238.96	\$ 337.75	\$ 836.93	\$ 601.22	\$ 186.64	\$ 147.30	\$ -	\$ 128.19	\$ 301.08	\$ 437.52	\$ 3,476.49	\$ 4,133.95	\$ -	\$ 21,088.53
24	Criminal Justice Center	\$ 7,207.53	\$ 10,258.44	\$ 555.35	\$ 1,376.13	\$ 693.78	\$ 282.46	\$ 245.65	\$ -	\$ 210.77	\$ -	\$ -	\$ 3,659.14	\$ 9,971.46	\$ -	\$ 34,460.71
25	501 Union Building	\$ 1,680.60	\$ 2,514.96	\$ 136.15	\$ 337.38	\$ 262.94	\$ 86.12	\$ 58.73	\$ -	\$ 51.68	\$ 253.08	\$ -	\$ 2,203.89	\$ 2,155.88	\$ -	\$ 9,741.41
28	4th & Church Building	\$ 23,113.87	\$ -	\$ -	\$ -	\$ 1,618.40	\$ 515.35	\$ 192.77	\$ -	\$ -	\$ -	\$ -	\$ 9,134.27	\$ 12,129.61	\$ -	\$ 46,704.27
29	Fifth-Third Financial Center	\$ 5,136.00	\$ 9,305.06	\$ 503.74	\$ 1,248.24	\$ 494.10	\$ 109.57	\$ 198.50	\$ -	\$ 191.19	\$ 855.58	\$ 1,039.76	\$ 5,854.64	\$ -	\$ -	\$ 24,936.38
32	Renaissance Hotel	\$ 13,313.99	\$ 19,648.69	\$ 1,063.70	\$ 2,635.80	\$ 3,749.40	\$ 1,193.01	\$ 461.97	\$ -	\$ 403.71	\$ 1,590.58	\$ 359.99	\$ 18,736.88	\$ 28,030.02	\$ -	\$ 91,187.74
33	5th & Broadway	\$ 5,909.11	\$ 10,705.72	\$ 579.56	\$ 1,436.13	\$ 3,088.08	\$ 684.81	\$ 228.38	\$ -	\$ 219.97	\$ -	\$ 1,595.02	\$ 20,901.82	\$ -	\$ -	\$ 45,348.60
34	Renaissance Office Tower	\$ 1,255.69	\$ 2,274.97	\$ 123.16	\$ 305.18	\$ 686.18	\$ 152.17	\$ 48.53	\$ -	\$ 46.74	\$ 247.17	\$ 77.67	\$ 3,628.68	\$ -	\$ -	\$ 8,846.14
35	St. Mary's Catholic Church	\$ 1,085.03	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 36.17	\$ -	\$ -	\$ -	\$ -	\$ 1,121.20
36	Nashville City Center	\$ 4,185.62	\$ 7,583.22	\$ 410.52	\$ 1,017.26	\$ 755.34	\$ 167.50	\$ 161.77	\$ -	\$ 155.81	\$ 819.42	\$ -	\$ 6,279.93	\$ -	\$ -	\$ 21,536.39
38	Wildhorse Saloon	\$ 1,558.16	\$ 2,483.87	\$ 134.46	\$ 333.20	\$ 701.59	\$ 208.93	\$ 56.24	\$ -	\$ 51.03	\$ 198.74	\$ 238.42	\$ 3,747.93	\$ 4,135.87	\$ -	\$ 13,848.44
39	Ryman Auditorium	\$ 1,607.52	\$ 2,605.08	\$ 141.03	\$ 349.46	\$ 1,102.54	\$ 324.94	\$ 58.51	\$ -	\$ 53.53	\$ 192.74	\$ 70.06	\$ 5,671.41	\$ 6,236.52	\$ -	\$ 18,413.34
40	Bridgestone Arena	\$ 17,311.89	\$ 28,128.47	\$ 1,522.77	\$ 3,773.33	\$ 6,272.81	\$ 1,612.77	\$ 631.03	\$ -	\$ 577.94	\$ -	\$ 103.84	\$ 30,722.63	\$ 17,189.45	\$ -	\$ 107,846.93
41	Nissan Stadium	\$ 7,386.38	\$ 13,382.15	\$ 724.46	\$ 1,795.17	\$ 1,465.49	\$ 324.99	\$ 285.48	\$ -	\$ 274.96	\$ -	\$ 332.30	\$ 10,912.77	\$ -	\$ -	\$ 36,884.15
43	Hume-Fogg High School	\$ 2,459.91	\$ 3,820.88	\$ 206.85	\$ 512.55	\$ 222.05	\$ 71.88	\$ 87.60	\$ -	\$ 78.50	\$ -	\$ 436.14	\$ 1,303.86	\$ 1,755.28	\$ -	\$ 10,955.50
44	Schermerhorn Symphony Center	\$ 16,845.89	\$ -	\$ -	\$ -	\$ 1,022.91	\$ 313.16	\$ 137.86	\$ -	\$ -	\$ -	\$ -	\$ 6,381.31	\$ 6,692.30	\$ -	\$ 31,393.43
45	Nashville Public Library	\$ 7,637.31	\$ -	\$ -	\$ -	\$ 2,860.72	\$ 791.20	\$ 218.36	\$ -	\$ -	\$ -	\$ -	\$ 14,159.95	\$ 12,157.74	\$ -	\$ 37,825.28
49	Viridian Residential Tower	\$ 13,716.89	\$ -	\$ -	\$ -	\$ 364.46	\$ 80.82	\$ 97.44	\$ -	\$ -	\$ -	\$ 1,412.84	\$ 2,197.75	\$ -	\$ -	\$ 17,870.20
50	Music City Center	\$ 77,567.78	\$ 10,245.75	\$ -	\$ 6,972.82	\$ 9,465.46	\$ 2,996.68	\$ 1,590.57	\$ -	\$ -	\$ -	\$ -	\$ 49,588.22	\$ 69,591.71	\$ -	\$ 228,018.99
51	Hyatt Place Hotel	\$ 12,209.24	\$ -	\$ -	\$ -	\$ 529.34	\$ 175.37	\$ 111.63	\$ -	\$ -	\$ -	\$ 374.31	\$ 2,800.17	\$ 4,496.03	\$ -	\$ 20,696.09
52	Hyatt Centric	\$ 5,095.00	\$ -	\$ -	\$ -	\$ 382.12	\$ 84.74	\$ 48.53	\$ -	\$ -	\$ -	\$ 402.50	\$ 2,529.05	\$ -	\$ -	\$ 8,541.94
51	State Government of TN	\$ 136,594.48	\$ 116,111.96	\$ -	\$ -	\$ 15,013.30	\$ 4,931.67	\$ -	\$ -	\$ 2,129.09	\$ -	\$ 6,110.92	\$ 78,527.38	\$ 124,224.94	\$ -	\$ 483,643.74
	Grand Totals	\$ 401,994.42	\$ 298,640.71	\$ 9,326.68	\$ 30,083.95	\$ 59,256.79	\$ 17,805.52	\$ 6,298.50	\$ -	\$ 5,668.90	\$ 7,217.99	\$ 15,941.03	\$ 325,399.82	\$ 361,653.96	\$ -	\$ 1,539,288.27
	Rate Calculation Totals	\$ 476,629.26	\$ 410,174.04	\$ 15,364.67	\$ 38,072.92	\$ 59,273.08	\$ 17,815.75	\$ 6,250.00	\$ -	\$ 5,831.48	\$ 7,217.99	\$ 15,941.03	\$ 325,439.47	\$ 362,172.54	\$ -	\$ 1,740,182.23
	Deviation	\$ (74,634.84)	\$ (111,533.33)	\$ (6,037.99)	\$ (7,988.97)	\$ (16.29)	\$ (10.23)	\$ 48.50	\$ -	\$ (162.58)	\$ -	\$ -	\$ (39.65)	\$ (518.58)	\$ -	\$ (200,893.96)



Metro Nashville District Energy System  
Revenues  
Chilled Water and Steam  
December, 2022

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	\$ 9,690.56	\$ 14,631.99	\$ 792.12	\$ 1,962.83	\$ 1,717.97	\$ 599.48	\$ 340.13	\$ -	\$ 202.41	\$ -	\$ 1,482.87	\$ 10,129.34	\$ 16,685.45	\$ -	\$ 58,235.15
4	Metro Courthouse	\$ 4,587.50	\$ 6,827.78	\$ 369.62	\$ 915.92	\$ 1,033.34	\$ 344.21	\$ 159.86	\$ -	\$ 94.45	\$ -	\$ 193.56	\$ 5,252.18	\$ 8,500.56	\$ -	\$ 28,278.98
7	Parkway Tower	\$ 4,182.28	\$ 6,623.47	\$ 358.56	\$ 888.52	\$ 1,754.53	\$ 575.28	\$ 150.42	\$ -	\$ 91.63	\$ 771.26	\$ 22.85	\$ 8,159.36	\$ 13,574.26	\$ -	\$ 37,152.42
9	Bobby Hotel	\$ 1,541.56	\$ 2,400.82	\$ 129.97	\$ 322.06	\$ 233.93	\$ 76.22	\$ 54.97	\$ -	\$ 33.21	\$ 277.00	\$ 131.53	\$ 1,353.88	\$ 1,765.08	\$ -	\$ 8,320.23
10	Fairlane Hotel	\$ 1,598.91	\$ 2,473.98	\$ 133.93	\$ 331.87	\$ 305.10	\$ 110.16	\$ 56.82	\$ -	\$ 34.23	\$ 337.50	\$ 210.01	\$ 1,609.48	\$ 3,309.35	\$ -	\$ 10,511.34
11	Sheraton Hotel	\$ 8,824.73	\$ 13,304.95	\$ 720.27	\$ 1,784.81	\$ 1,860.25	\$ 683.52	\$ 309.51	\$ -	\$ 184.05	\$ 1,337.67	\$ 1,012.81	\$ 9,793.81	\$ 21,293.33	\$ -	\$ 61,109.71
12	Municipal Auditorium	\$ 4,428.49	\$ 7,069.54	\$ 382.71	\$ 948.36	\$ 497.45	\$ 244.44	\$ 159.94	\$ -	\$ 97.80	\$ -	\$ -	\$ 2,496.87	\$ 11,477.37	\$ -	\$ 27,802.97
21	Hermitage Hotel	\$ 4,262.50	\$ 6,238.96	\$ 337.75	\$ 836.93	\$ 539.94	\$ 196.67	\$ 147.30	\$ -	\$ 86.31	\$ 301.08	\$ 448.60	\$ 2,906.59	\$ 6,018.75	\$ -	\$ 22,321.38
24	Criminal Justice Center	\$ 7,207.53	\$ 10,258.44	\$ 555.35	\$ 1,376.13	\$ 608.87	\$ 276.20	\$ 245.65	\$ -	\$ 141.91	\$ -	\$ 16.20	\$ 3,081.77	\$ 11,891.81	\$ -	\$ 35,659.86
25	501 Union Building	\$ 1,680.60	\$ 2,514.96	\$ 136.15	\$ 337.38	\$ 233.82	\$ 87.52	\$ 58.73	\$ -	\$ 34.79	\$ 253.08	\$ -	\$ 1,938.86	\$ 2,826.59	\$ -	\$ 10,102.48
28	4th & Church Building	\$ 23,113.87	\$ -	\$ -	\$ -	\$ 1,728.82	\$ 617.44	\$ 192.77	\$ -	\$ -	\$ -	\$ -	\$ 8,744.62	\$ 18,120.94	\$ -	\$ 52,518.46
29	Fifth-Third Financial Center	\$ 5,136.00	\$ 9,305.06	\$ 503.74	\$ 1,248.24	\$ 417.39	\$ 102.43	\$ 198.50	\$ -	\$ 128.72	\$ 855.58	\$ 1,054.20	\$ 4,945.64	\$ -	\$ -	\$ 23,895.50
32	Renaissance Hotel	\$ 13,313.99	\$ 19,648.69	\$ 1,063.70	\$ 2,635.80	\$ 3,280.62	\$ 1,191.40	\$ 461.97	\$ -	\$ 271.81	\$ 1,590.58	\$ 359.99	\$ 16,133.15	\$ 36,237.77	\$ -	\$ 96,189.47
33	5th & Broadway	\$ 5,909.11	\$ 10,705.72	\$ 579.56	\$ 1,436.13	\$ 2,688.53	\$ 659.77	\$ 228.38	\$ -	\$ 148.10	\$ -	\$ 1,661.48	\$ 9,502.16	\$ -	\$ -	\$ 33,518.94
34	Renaissance Office Tower	\$ 1,255.69	\$ 2,274.97	\$ 123.16	\$ 305.18	\$ 623.98	\$ 153.13	\$ 48.53	\$ -	\$ 31.47	\$ 247.17	\$ 81.21	\$ 3,631.28	\$ -	\$ -	\$ 8,775.77
35	St. Mary's Catholic Church	\$ 1,085.03	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 36.17	\$ -	\$ -	\$ -	\$ -	\$ 1,121.20
36	Nashville City Center	\$ 4,185.62	\$ 7,583.22	\$ 410.52	\$ 1,017.26	\$ 656.55	\$ 161.12	\$ 161.77	\$ -	\$ 104.90	\$ 819.42	\$ 341.30	\$ 5,281.85	\$ -	\$ -	\$ 20,723.53
38	Wildhorse Saloon	\$ 1,558.16	\$ 2,483.87	\$ 134.46	\$ 333.20	\$ 427.79	\$ 140.36	\$ 56.24	\$ -	\$ 34.36	\$ 198.74	\$ 261.68	\$ 2,468.56	\$ 3,318.45	\$ -	\$ 11,415.87
39	Ryman Auditorium	\$ 1,607.52	\$ 2,605.08	\$ 141.03	\$ 349.46	\$ 1,082.35	\$ 349.27	\$ 58.51	\$ -	\$ 36.04	\$ 192.74	\$ 79.61	\$ 5,467.99	\$ 7,847.23	\$ -	\$ 19,816.83
40	Bridgestone Arena	\$ 17,311.89	\$ 28,128.47	\$ 1,522.77	\$ 3,773.33	\$ 5,782.49	\$ 1,619.72	\$ 631.03	\$ -	\$ 389.11	\$ -	\$ 173.07	\$ 38,152.11	\$ 18,824.17	\$ -	\$ 116,308.16
41	Nissan Stadium	\$ 7,386.38	\$ 13,382.15	\$ 724.46	\$ 1,795.17	\$ 721.83	\$ 177.14	\$ 285.48	\$ -	\$ 185.12	\$ -	\$ 228.45	\$ 7,545.72	\$ -	\$ -	\$ 32,431.90
43	Hume-Fogg High School	\$ 2,459.91	\$ 3,820.88	\$ 206.85	\$ 512.55	\$ 217.93	\$ 81.07	\$ 87.60	\$ -	\$ 52.85	\$ -	\$ 465.22	\$ 1,453.90	\$ 2,588.30	\$ -	\$ 11,947.06
44	Schermerhorn Symphony Center	\$ 16,845.89	\$ -	\$ -	\$ -	\$ 1,198.08	\$ 401.71	\$ 137.86	\$ -	\$ -	\$ -	\$ -	\$ 6,409.08	\$ 10,102.19	\$ -	\$ 35,094.81
45	Nashville Public Library	\$ 7,637.31	\$ -	\$ -	\$ -	\$ 2,517.05	\$ 754.96	\$ 218.36	\$ -	\$ -	\$ -	\$ 16.04	\$ 12,794.35	\$ 12,875.90	\$ -	\$ 36,813.97
49	Viridian Residential Tower	\$ 13,716.89	\$ -	\$ -	\$ -	\$ 225.33	\$ 55.30	\$ 97.44	\$ -	\$ -	\$ -	\$ 1,591.16	\$ 1,351.45	\$ -	\$ -	\$ 17,037.57
50	Music City Center	\$ 77,567.78	\$ 10,245.75	\$ -	\$ 6,972.82	\$ 9,180.41	\$ 3,252.42	\$ 1,590.57	\$ -	\$ -	\$ -	\$ 42.33	\$ 49,570.86	\$ 93,755.66	\$ -	\$ 252,178.60
51	Hyatt Place Hotel	\$ 12,209.24	\$ -	\$ -	\$ -	\$ 516.46	\$ 190.93	\$ 111.63	\$ -	\$ -	\$ -	\$ 408.79	\$ 2,634.31	\$ 6,021.14	\$ -	\$ 22,092.50
52	Hyatt Centric	\$ 5,095.00	\$ -	\$ -	\$ -	\$ 269.89	\$ 66.23	\$ 48.53	\$ -	\$ -	\$ -	\$ 438.17	\$ 1,613.35	\$ -	\$ -	\$ 7,531.17
51	State Government of TN	\$ 136,594.48	\$ 116,111.96	\$ -	\$ -	\$ 15,210.28	\$ 5,481.21	\$ -	\$ -	\$ 1,433.42	\$ -	\$ 6,395.29	\$ 74,340.45	\$ 164,016.97	\$ -	\$ 519,584.06
	Grand Totals	\$ 401,994.42	\$ 298,640.71	\$ 9,326.68	\$ 30,083.95	\$ 55,530.98	\$ 18,649.31	\$ 6,298.50	\$ -	\$ 3,816.69	\$ 7,217.99	\$ 17,116.42	\$ 298,762.97	\$ 471,051.27	\$ -	\$ 1,618,489.89
	Rate Calculation Totals	\$ 476,629.26	\$ 410,174.04	\$ 15,364.67	\$ 38,072.92	\$ 55,555.90	\$ 18,665.08	\$ 6,250.00	\$ -	\$ 3,926.18	\$ 7,217.99	\$ 17,116.42	\$ 298,811.63	\$ 471,935.40	\$ -	\$ 1,819,719.49
	Deviation	\$ (74,634.84)	\$ (111,533.33)	\$ (6,037.99)	\$ (7,988.97)	\$ (24.92)	\$ (15.77)	\$ 48.50	\$ -	\$ (109.49)	\$ -	\$ -	\$ (48.66)	\$ (884.13)	\$ -	\$ (201,229.60)



Metro Nashville District Energy System  
Revenues  
Chilled Water and Steam  
January, 2023

Customer Number	Customer Name	Capacity	Operating	EDS Improvement	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	RIFs	Electricity	Natural Gas	Propane	Total
2	A. A. Birch	\$ 9,690.56	\$ 14,631.99	\$ 792.12	\$ 1,962.83	\$ 1,983.58	\$ 596.91	\$ 340.13	\$ -	\$ 183.68	\$ -	\$ 1,497.41	\$ 10,611.20	\$ 18,224.80	\$ 13.88	\$ 60,529.09
4	Metro Courthouse	\$ 4,587.50	\$ 6,827.78	\$ 369.62	\$ 915.92	\$ 1,093.68	\$ 294.07	\$ 159.86	\$ -	\$ 85.71	\$ -	\$ 193.56	\$ 4,987.07	\$ 7,378.03	\$ 5.62	\$ 26,898.42
7	Parkway Tower	\$ 4,182.28	\$ 6,623.47	\$ 358.56	\$ 888.52	\$ 1,760.99	\$ 467.78	\$ 150.42	\$ -	\$ 83.15	\$ 771.26	\$ 129.46	\$ 8,017.00	\$ 11,443.58	\$ 8.71	\$ 34,885.18
9	Bobby Hotel	\$ 1,541.56	\$ 2,400.82	\$ 129.97	\$ 322.06	\$ 174.69	\$ 48.41	\$ 54.97	\$ -	\$ 30.14	\$ 277.00	\$ 160.47	\$ 1,055.64	\$ 1,287.82	\$ 0.98	\$ 7,484.53
10	Fairlane Hotel	\$ 1,598.91	\$ 2,473.98	\$ 133.93	\$ 331.87	\$ 355.76	\$ 104.60	\$ 56.82	\$ -	\$ 31.05	\$ 337.50	\$ 202.04	\$ 1,462.96	\$ 3,081.05	\$ 2.35	\$ 10,172.82
11	Sheraton Hotel	\$ 8,824.73	\$ 13,304.95	\$ 720.27	\$ 1,784.81	\$ 1,606.74	\$ 529.19	\$ 309.51	\$ -	\$ 167.02	\$ 1,337.67	\$ 131.53	\$ 7,848.16	\$ 18,244.11	\$ 13.89	\$ 54,822.58
12	Municipal Auditorium	\$ 4,428.49	\$ 7,069.54	\$ 382.71	\$ 948.36	\$ 512.64	\$ 238.85	\$ 159.94	\$ -	\$ 88.75	\$ -	\$ -	\$ 3,159.26	\$ 11,155.72	\$ 8.50	\$ 28,152.76
21	Hermitage Hotel	\$ 4,262.50	\$ 6,238.96	\$ 337.75	\$ 836.93	\$ 518.54	\$ 156.85	\$ 147.30	\$ -	\$ 78.32	\$ 301.08	\$ 509.52	\$ 2,802.80	\$ 4,826.58	\$ 3.68	\$ 21,020.81
24	Criminal Justice Center	\$ 7,207.53	\$ 10,258.44	\$ 555.35	\$ 1,376.13	\$ 633.75	\$ 260.21	\$ 245.65	\$ -	\$ 128.78	\$ -	\$ -	\$ 2,532.39	\$ 11,119.13	\$ 8.47	\$ 34,325.83
25	501 Union Building	\$ 1,680.60	\$ 2,514.96	\$ 136.15	\$ 337.38	\$ 245.05	\$ 74.97	\$ 58.73	\$ -	\$ 31.57	\$ 253.08	\$ -	\$ 1,689.91	\$ 2,345.26	\$ 1.79	\$ 9,369.45
28	4th & Church Building	\$ 23,113.87	\$ -	\$ -	\$ -	\$ 1,453.51	\$ 422.97	\$ 192.77	\$ -	\$ -	\$ -	\$ -	\$ 7,651.73	\$ 12,255.38	\$ 9.33	\$ 45,099.56
29	Fifth-Third Financial Center	\$ 5,136.00	\$ 9,305.06	\$ 503.74	\$ 1,248.24	\$ 438.90	\$ 79.16	\$ 198.50	\$ -	\$ 116.81	\$ 855.58	\$ 1,039.76	\$ 4,988.40	\$ -	\$ -	\$ 23,910.15
32	Renaissance Hotel	\$ 13,313.99	\$ 19,648.69	\$ 1,063.70	\$ 2,635.80	\$ 3,612.99	\$ 1,101.66	\$ 461.97	\$ -	\$ 246.66	\$ 1,590.58	\$ 575.98	\$ 16,781.78	\$ 34,295.39	\$ 26.12	\$ 95,355.31
33	5th & Broadway	\$ 5,909.11	\$ 10,705.72	\$ 579.56	\$ 1,436.13	\$ 2,557.74	\$ 461.33	\$ 228.38	\$ -	\$ 134.39	\$ -	\$ 1,860.86	\$ 16,802.63	\$ -	\$ -	\$ 40,675.85
34	Renaissance Office Tower	\$ 1,255.69	\$ 2,274.97	\$ 123.16	\$ 305.18	\$ 714.41	\$ 128.85	\$ 48.53	\$ -	\$ 28.56	\$ 247.17	\$ 102.39	\$ 3,624.27	\$ -	\$ -	\$ 8,853.18
35	St. Mary's Catholic Church	\$ 1,085.03	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 36.17	\$ -	\$ -	\$ -	\$ -	\$ 1,121.20
36	Nashville City Center	\$ 4,185.62	\$ 7,583.22	\$ 410.52	\$ 1,017.26	\$ 763.69	\$ 137.74	\$ 161.77	\$ -	\$ 95.19	\$ 819.42	\$ 176.53	\$ 6,535.28	\$ -	\$ -	\$ 21,886.24
38	Wildhorse Saloon	\$ 1,558.16	\$ 2,483.87	\$ 134.46	\$ 333.20	\$ 341.31	\$ 89.55	\$ 56.24	\$ -	\$ 31.18	\$ 198.74	\$ 296.57	\$ 1,939.30	\$ 2,132.99	\$ 1.62	\$ 9,597.19
39	Ryman Auditorium	\$ 1,607.52	\$ 2,605.08	\$ 141.03	\$ 349.46	\$ 1,103.78	\$ 291.16	\$ 58.51	\$ -	\$ 32.70	\$ 192.74	\$ 98.72	\$ 5,225.09	\$ 7,017.37	\$ 5.34	\$ 18,728.50
40	Bridgestone Arena	\$ 17,311.89	\$ 28,128.47	\$ 1,522.77	\$ 3,773.33	\$ 7,145.92	\$ 1,564.73	\$ 631.03	\$ -	\$ 353.10	\$ -	\$ 138.46	\$ 41,658.38	\$ 21,023.79	\$ 16.01	\$ 123,267.88
41	Nissan Stadium	\$ 7,386.38	\$ 13,382.15	\$ 724.46	\$ 1,795.17	\$ 750.60	\$ 135.38	\$ 285.48	\$ -	\$ 167.99	\$ -	\$ 166.15	\$ 7,428.53	\$ -	\$ -	\$ 32,222.29
43	Hume-Fogg High School	\$ 2,459.91	\$ 3,820.88	\$ 206.85	\$ 512.55	\$ 363.59	\$ 110.48	\$ 87.60	\$ -	\$ 47.97	\$ -	\$ 419.52	\$ 1,327.08	\$ 3,421.31	\$ 2.61	\$ 12,780.35
44	Schermerhorn Symphony Center	\$ 16,845.89	\$ -	\$ -	\$ -	\$ 1,127.65	\$ 305.96	\$ 137.86	\$ -	\$ -	\$ -	\$ -	\$ 6,102.18	\$ 7,817.02	\$ 5.95	\$ 32,342.51
45	Nashville Public Library	\$ 7,637.31	\$ -	\$ -	\$ -	\$ 3,009.48	\$ 710.18	\$ 218.36	\$ -	\$ -	\$ -	\$ 10.69	\$ 13,122.75	\$ 12,755.37	\$ 9.71	\$ 37,473.85
49	Viridian Residential Tower	\$ 13,716.89	\$ -	\$ -	\$ -	\$ 239.39	\$ 43.18	\$ 97.44	\$ -	\$ -	\$ -	\$ 1,591.16	\$ 1,343.91	\$ -	\$ -	\$ 17,031.97
50	Music City Center	\$ 77,567.78	\$ 10,245.75	\$ -	\$ 6,972.82	\$ 9,215.79	\$ 2,685.57	\$ 1,590.57	\$ -	\$ -	\$ -	\$ 1,121.69	\$ 45,763.79	\$ 77,990.98	\$ 59.39	\$ 233,214.13
51	Hyatt Place Hotel	\$ 12,209.24	\$ -	\$ -	\$ -	\$ 586.21	\$ 183.19	\$ 111.63	\$ -	\$ -	\$ -	\$ 300.44	\$ 2,705.83	\$ 5,902.54	\$ 4.49	\$ 22,003.57
52	Hyatt Centric	\$ 5,095.00	\$ -	\$ -	\$ -	\$ 351.75	\$ 63.44	\$ 48.53	\$ -	\$ -	\$ -	\$ 422.89	\$ 1,916.40	\$ -	\$ -	\$ 7,898.01
51	State Government of TN	\$ 136,594.48	\$ 116,111.96	\$ -	\$ -	\$ 15,788.89	\$ 4,842.94	\$ -	\$ -	\$ 1,300.81	\$ -	\$ 6,419.42	\$ 72,968.27	\$ 152,054.20	\$ 115.81	\$ 506,196.78
	Grand Totals	\$ 401,994.42	\$ 298,640.71	\$ 9,326.68	\$ 30,083.95	\$ 58,451.02	\$ 16,129.31	\$ 6,298.50	\$ -	\$ 3,463.53	\$ 7,217.99	\$ 17,565.22	\$ 302,051.99	\$ 425,772.42	\$ 324.25	\$ 1,577,319.99
	Rate Calculation Totals	\$ 476,629.26	\$ 410,174.04	\$ 15,364.67	\$ 38,072.92	\$ 58,479.67	\$ 16,147.92	\$ 6,250.00	\$ -	\$ 3,562.79	\$ 7,217.99	\$ 17,565.22	\$ 302,110.27	\$ 426,808.35	\$ 325.03	\$ 1,778,708.13
	Deviation	\$ (74,634.84)	\$ (111,533.33)	\$ (6,037.99)	\$ (7,988.97)	\$ (28.65)	\$ (18.61)	\$ 48.50	\$ -	\$ (99.26)	\$ -	\$ -	\$ (58.28)	\$ (1,035.93)	\$ (0.78)	\$ (201,388.14)



Metro Nashville District Energy System  
Revenues  
Chilled Water and Steam  
February, 2023

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	\$ 9,690.56	\$ 14,631.99	\$ 792.12	\$ 1,962.83	\$ 1,971.28	\$ 618.58	\$ 340.13	\$ -	\$ 197.75	\$ -	\$ 1,279.34	\$ 14,256.71	\$ 15,468.62	\$ 3.61	\$ 61,213.52
4	Metro Courthouse	\$ 4,587.50	\$ 6,827.78	\$ 369.62	\$ 915.92	\$ 1,010.33	\$ 288.90	\$ 159.86	\$ -	\$ 92.28	\$ -	\$ 116.14	\$ 6,377.52	\$ 6,282.07	\$ 1.47	\$ 27,029.39
7	Parkway Tower	\$ 4,182.28	\$ 6,623.47	\$ 358.56	\$ 888.52	\$ 1,584.71	\$ 455.95	\$ 150.42	\$ -	\$ 89.51	\$ 771.26	\$ 45.69	\$ 10,028.63	\$ 10,017.49	\$ 2.34	\$ 35,198.83
9	Bobby Hotel	\$ 1,541.56	\$ 2,400.82	\$ 129.97	\$ 322.06	\$ 233.13	\$ 59.60	\$ 54.97	\$ -	\$ 32.45	\$ 277.00	\$ 134.16	\$ 1,480.28	\$ 1,036.96	\$ 0.24	\$ 7,703.20
10	Fairlane Hotel	\$ 1,598.91	\$ 2,473.98	\$ 133.93	\$ 331.87	\$ 305.30	\$ 93.46	\$ 56.82	\$ -	\$ 33.44	\$ 337.50	\$ 194.06	\$ 1,871.09	\$ 2,258.92	\$ 0.53	\$ 9,689.81
11	Sheraton Hotel	\$ 8,824.73	\$ 13,304.95	\$ 720.27	\$ 1,784.81	\$ 1,303.34	\$ 490.59	\$ 309.51	\$ -	\$ 179.81	\$ 1,337.67	\$ 894.43	\$ 7,938.84	\$ 15,000.40	\$ 3.50	\$ 52,092.85
12	Municipal Auditorium	\$ 4,428.49	\$ 7,069.54	\$ 382.71	\$ 948.36	\$ 434.55	\$ 219.41	\$ 159.94	\$ -	\$ 95.54	\$ -	\$ 49.84	\$ 2,757.22	\$ 8,267.15	\$ 1.93	\$ 24,814.68
21	Hermitage Hotel	\$ 4,262.50	\$ 6,238.96	\$ 337.75	\$ 836.93	\$ 488.68	\$ 158.50	\$ 147.30	\$ -	\$ 84.32	\$ 301.08	\$ 454.14	\$ 2,967.91	\$ 4,135.94	\$ 0.96	\$ 20,414.97
24	Criminal Justice Center	\$ 7,207.53	\$ 10,258.44	\$ 555.35	\$ 1,376.13	\$ 629.65	\$ 295.45	\$ 245.65	\$ -	\$ 138.64	\$ -	\$ -	\$ 3,801.08	\$ 10,665.13	\$ 2.49	\$ 35,175.54
25	501 Union Building	\$ 1,680.60	\$ 2,514.96	\$ 136.15	\$ 337.38	\$ 262.34	\$ 81.73	\$ 58.73	\$ -	\$ 33.99	\$ 253.08	\$ -	\$ 1,992.67	\$ 2,023.69	\$ 0.47	\$ 9,375.79
28	4th & Church Building	\$ 23,113.87	\$ -	\$ -	\$ -	\$ 1,156.60	\$ 365.06	\$ 192.77	\$ -	\$ -	\$ -	\$ -	\$ 8,274.93	\$ 9,199.47	\$ 2.15	\$ 42,304.85
29	Fifth-Third Financial Center	\$ 5,136.00	\$ 9,305.06	\$ 503.74	\$ 1,248.24	\$ 529.67	\$ 95.15	\$ 198.50	\$ -	\$ 125.76	\$ 855.58	\$ 953.11	\$ 6,061.18	\$ -	\$ -	\$ 25,011.99
32	Renaissance Hotel	\$ 13,313.99	\$ 19,648.69	\$ 1,063.70	\$ 2,635.80	\$ 3,389.83	\$ 1,123.84	\$ 461.97	\$ -	\$ 265.55	\$ 1,590.58	\$ 72.00	\$ 18,630.05	\$ 30,115.97	\$ 7.03	\$ 92,319.00
33	5th & Broadway	\$ 5,909.11	\$ 10,705.72	\$ 579.56	\$ 1,436.13	\$ 2,503.52	\$ 449.74	\$ 228.38	\$ -	\$ 144.69	\$ -	\$ 1,811.02	\$ 16,044.86	\$ -	\$ -	\$ 39,812.73
34	Renaissance Office Tower	\$ 1,255.69	\$ 2,274.97	\$ 123.16	\$ 305.18	\$ 669.43	\$ 120.26	\$ 48.53	\$ -	\$ 30.75	\$ 247.17	\$ 95.33	\$ 4,970.81	\$ -	\$ -	\$ 10,141.28
35	St. Mary's Catholic Church	\$ 1,085.03	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 36.17	\$ -	\$ -	\$ -	\$ -	\$ 1,121.20
36	Nashville City Center	\$ 4,185.62	\$ 7,583.22	\$ 410.52	\$ 1,017.26	\$ 660.31	\$ 118.62	\$ 161.77	\$ -	\$ 102.49	\$ 819.42	\$ 129.46	\$ 5,925.71	\$ -	\$ -	\$ 21,114.40
38	Wildhorse Saloon	\$ 1,558.16	\$ 2,483.87	\$ 134.46	\$ 333.20	\$ 355.35	\$ 97.54	\$ 56.24	\$ -	\$ 33.57	\$ 198.74	\$ 282.04	\$ 2,341.59	\$ 1,971.44	\$ 0.46	\$ 9,846.66
39	Ryman Auditorium	\$ 1,607.52	\$ 2,605.08	\$ 141.03	\$ 349.46	\$ 1,106.36	\$ 305.38	\$ 58.51	\$ -	\$ 35.21	\$ 192.74	\$ 95.54	\$ 6,737.80	\$ 6,236.52	\$ 1.45	\$ 19,472.60
40	Bridgestone Arena	\$ 17,311.89	\$ 28,128.47	\$ 1,522.77	\$ 3,773.33	\$ 4,448.37	\$ 1,074.60	\$ 631.03	\$ -	\$ 380.16	\$ -	\$ -	\$ 23,110.05	\$ 16,113.00	\$ 3.76	\$ 96,497.43
41	Nissan Stadium	\$ 7,386.38	\$ 13,382.15	\$ 724.46	\$ 1,795.17	\$ 1,097.47	\$ 197.15	\$ 285.48	\$ -	\$ 180.86	\$ -	\$ 41.54	\$ 6,024.04	\$ -	\$ -	\$ 31,114.70
43	Hume-Fogg High School	\$ 2,459.91	\$ 3,820.88	\$ 206.85	\$ 512.55	\$ 417.44	\$ 134.02	\$ 87.60	\$ -	\$ 51.64	\$ -	\$ 365.53	\$ 3,588.70	\$ 3,452.33	\$ 0.81	\$ 15,098.26
44	Schermerhorn Symphony Center	\$ 16,845.89	\$ -	\$ -	\$ -	\$ 975.38	\$ 290.93	\$ 137.86	\$ -	\$ -	\$ -	\$ -	\$ 6,471.93	\$ 6,768.21	\$ 1.58	\$ 31,491.78
45	Nashville Public Library	\$ 7,637.31	\$ -	\$ -	\$ -	\$ 2,419.03	\$ 615.64	\$ 218.36	\$ -	\$ -	\$ -	\$ -	\$ 14,476.57	\$ 10,591.95	\$ 2.47	\$ 35,961.33
49	Viridian Residential Tower	\$ 13,716.89	\$ -	\$ -	\$ -	\$ 238.97	\$ 42.93	\$ 97.44	\$ -	\$ -	\$ -	\$ 1,536.29	\$ 1,688.69	\$ -	\$ -	\$ 17,321.21
50	Music City Center	\$ 77,567.78	\$ 10,245.75	\$ -	\$ 6,972.82	\$ 8,630.75	\$ 2,666.26	\$ 1,590.57	\$ -	\$ -	\$ -	\$ -	\$ 55,909.78	\$ 65,264.45	\$ 15.23	\$ 228,863.39
51	Hyatt Place Hotel	\$ 12,209.24	\$ -	\$ -	\$ -	\$ 534.80	\$ 196.41	\$ 111.63	\$ -	\$ -	\$ -	\$ 132.98	\$ 3,414.96	\$ 5,868.70	\$ 1.37	\$ 22,470.09
52	Hyatt Centric	\$ 5,095.00	\$ -	\$ -	\$ -	\$ 355.81	\$ 63.92	\$ 48.53	\$ -	\$ -	\$ -	\$ 387.22	\$ 2,988.26	\$ -	\$ -	\$ 8,938.74
51	State Government of TN	\$ 136,594.48	\$ 116,111.96	\$ -	\$ -	\$ 13,143.99	\$ 4,357.32	\$ -	\$ -	\$ 1,400.48	\$ -	\$ 7,278.31	\$ 78,427.15	\$ 116,754.02	\$ 27.24	\$ 474,094.95
	Grand Totals	\$ 401,994.42	\$ 298,640.71	\$ 9,326.68	\$ 30,083.95	\$ 50,856.39	\$ 15,076.94	\$ 6,298.50	\$ -	\$ 3,728.89	\$ 7,217.99	\$ 16,348.17	\$ 318,559.01	\$ 347,492.43	\$ 81.09	\$ 1,505,705.17
	Rate Calculation Totals	\$ 476,629.26	\$ 410,174.04	\$ 15,364.67	\$ 38,072.92	\$ 50,877.57	\$ 15,094.63	\$ 6,250.00	\$ -	\$ 3,835.74	\$ 7,217.99	\$ 16,348.17	\$ 318,610.29	\$ 348,313.84	\$ 81.26	\$ 1,706,870.38
	Deviation	\$ (74,634.84)	\$ (111,533.33)	\$ (6,037.99)	\$ (7,988.97)	\$ (21.18)	\$ (17.69)	\$ 48.50	\$ -	\$ (106.85)	\$ -	\$ -	\$ (51.28)	\$ (821.41)	\$ (0.17)	\$ (201,165.21)



Metro Nashville District Energy System  
Revenues  
Chilled Water and Steam  
March, 2023

Customer Number	Customer Name	Capacity	Operating	EDS Improve	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	PIF's	Electricity	Natural Gas	Propane	Total
2	A. A. Birch	\$ 9,690.56	\$ 14,631.99	\$ 792.12	\$ 1,962.83	\$ 2,105.56	\$ 621.36	\$ 340.13	\$ -	\$ 192.67	\$ -	\$ 1,279.34	\$ 11,475.09	\$ 12,132.24	\$ -	\$ 55,223.89
4	Metro Courthouse	\$ 4,587.50	\$ 6,827.78	\$ 369.62	\$ 915.92	\$ 1,111.36	\$ 306.88	\$ 159.86	\$ -	\$ 89.91	\$ -	\$ 116.14	\$ 5,302.02	\$ 5,346.74	\$ -	\$ 25,133.73
7	Parkway Tower	\$ 4,182.28	\$ 6,623.47	\$ 358.56	\$ 888.52	\$ 1,744.96	\$ 488.13	\$ 150.42	\$ -	\$ 87.21	\$ 771.26	\$ 45.69	\$ 8,312.82	\$ 8,709.96	\$ -	\$ 32,363.28
9	Bobby Hotel	\$ 1,541.56	\$ 2,400.82	\$ 129.97	\$ 322.06	\$ 309.12	\$ 71.72	\$ 54.97	\$ -	\$ 31.61	\$ 277.00	\$ 134.16	\$ 1,797.04	\$ 803.60	\$ -	\$ 7,873.63
10	Fairlane Hotel	\$ 1,598.91	\$ 2,473.98	\$ 133.93	\$ 331.87	\$ 373.87	\$ 105.76	\$ 56.82	\$ -	\$ 32.58	\$ 337.50	\$ 194.06	\$ 1,902.31	\$ 1,925.44	\$ -	\$ 9,467.03
11	Sheraton Hotel	\$ 8,824.73	\$ 13,304.95	\$ 720.27	\$ 1,784.81	\$ 1,681.21	\$ 567.46	\$ 309.51	\$ -	\$ 175.20	\$ 1,337.67	\$ 894.43	\$ 7,726.85	\$ 13,262.41	\$ -	\$ 50,589.50
12	Municipal Auditorium	\$ 4,428.49	\$ 7,069.54	\$ 382.71	\$ 948.36	\$ 686.78	\$ 269.90	\$ 159.94	\$ -	\$ 93.09	\$ -	\$ 49.84	\$ 2,975.53	\$ 7,327.49	\$ -	\$ 24,391.67
21	Hermitage Hotel	\$ 4,262.50	\$ 6,238.96	\$ 337.75	\$ 836.93	\$ 638.72	\$ 192.04	\$ 147.30	\$ -	\$ 82.15	\$ 301.08	\$ 454.14	\$ 3,703.42	\$ 3,858.19	\$ -	\$ 21,053.18
24	Criminal Justice Center	\$ 7,207.53	\$ 10,258.44	\$ 555.35	\$ 1,376.13	\$ 793.26	\$ 346.56	\$ 245.65	\$ -	\$ 135.08	\$ -	\$ -	\$ 3,588.66	\$ 10,208.25	\$ -	\$ 34,714.91
25	501 Union Building	\$ 1,680.60	\$ 2,514.96	\$ 136.15	\$ 337.38	\$ 301.19	\$ 89.91	\$ 58.73	\$ -	\$ 33.12	\$ 253.08	\$ -	\$ 2,007.42	\$ 1,787.00	\$ -	\$ 9,199.54
28	4th & Church Building	\$ 23,113.87	\$ -	\$ -	\$ -	\$ 1,499.98	\$ 451.59	\$ 192.77	\$ -	\$ -	\$ -	\$ -	\$ 7,430.81	\$ 9,090.58	\$ -	\$ 41,779.60
29	Fifth-Third Financial Center	\$ 5,136.00	\$ 9,305.06	\$ 503.74	\$ 1,248.24	\$ 581.53	\$ 104.77	\$ 198.50	\$ -	\$ 122.53	\$ 855.58	\$ 953.11	\$ 5,537.25	\$ -	\$ -	\$ 24,546.31
32	Renaissance Hotel	\$ 13,313.99	\$ 19,648.69	\$ 1,063.70	\$ 2,635.80	\$ 3,473.10	\$ 1,149.22	\$ 461.97	\$ -	\$ 258.73	\$ 1,590.58	\$ 72.00	\$ 15,525.13	\$ 26,241.75	\$ -	\$ 85,434.66
33	5th & Broadway	\$ 5,909.11	\$ 10,705.72	\$ 579.56	\$ 1,436.13	\$ 2,872.93	\$ 517.59	\$ 228.38	\$ -	\$ 140.98	\$ -	\$ 1,811.02	\$ 18,201.97	\$ -	\$ -	\$ 42,403.39
34	Renaissance Office Tower	\$ 1,255.69	\$ 2,274.97	\$ 123.16	\$ 305.18	\$ 741.47	\$ 133.58	\$ 48.53	\$ -	\$ 29.96	\$ 247.17	\$ 95.33	\$ 4,047.78	\$ -	\$ -	\$ 9,302.82
35	St. Mary's Catholic Church	\$ 1,085.03	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 36.17	\$ -	\$ -	\$ -	\$ -	\$ 1,121.20
36	Nashville City Center	\$ 4,185.62	\$ 7,583.22	\$ 410.52	\$ 1,017.26	\$ 823.79	\$ 148.41	\$ 161.77	\$ -	\$ 99.86	\$ 819.42	\$ 129.46	\$ 5,412.01	\$ -	\$ -	\$ 20,791.34
38	Wildhorse Saloon	\$ 1,558.16	\$ 2,483.87	\$ 134.46	\$ 333.20	\$ 477.99	\$ 123.36	\$ 56.24	\$ -	\$ 32.71	\$ 198.74	\$ 282.04	\$ 2,714.86	\$ 1,866.92	\$ -	\$ 10,262.55
39	Ryman Auditorium	\$ 1,607.52	\$ 2,605.08	\$ 141.03	\$ 349.46	\$ 1,271.99	\$ 346.76	\$ 58.51	\$ -	\$ 34.30	\$ 192.74	\$ 95.54	\$ 6,040.42	\$ 5,895.18	\$ -	\$ 18,638.53
40	Bridgestone Arena	\$ 17,311.89	\$ 28,128.47	\$ 1,522.77	\$ 3,773.33	\$ 5,576.40	\$ 1,230.38	\$ 631.03	\$ -	\$ 370.40	\$ -	\$ -	\$ 19,725.73	\$ 11,315.49	\$ -	\$ 89,585.89
41	Nissan Stadium	\$ 7,386.38	\$ 13,382.15	\$ 724.46	\$ 1,795.17	\$ 1,177.09	\$ 122.07	\$ 285.48	\$ -	\$ 176.22	\$ -	\$ 41.54	\$ 9,396.90	\$ -	\$ -	\$ 34,577.46
43	Hume-Fogg High School	\$ 2,459.91	\$ 3,820.88	\$ 206.85	\$ 512.55	\$ 394.56	\$ 122.64	\$ 87.60	\$ -	\$ 50.31	\$ -	\$ 365.53	\$ 2,579.97	\$ 2,584.44	\$ -	\$ 13,185.24
44	Schermerhorn Symphony Center	\$ 16,845.89	\$ -	\$ -	\$ -	\$ 1,398.49	\$ 395.26	\$ 137.86	\$ -	\$ -	\$ -	\$ -	\$ 7,089.03	\$ 7,183.71	\$ -	\$ 33,050.24
45	Nashville Public Library	\$ 7,637.31	\$ -	\$ -	\$ -	\$ 2,704.89	\$ 672.66	\$ 218.36	\$ -	\$ -	\$ -	\$ -	\$ 12,787.05	\$ 9,290.88	\$ -	\$ 33,311.15
49	Viridian Residential Tower	\$ 13,716.89	\$ -	\$ -	\$ -	\$ 316.71	\$ 57.06	\$ 97.44	\$ -	\$ -	\$ -	\$ 1,536.29	\$ 1,804.74	\$ -	\$ -	\$ 17,529.13
50	Music City Center	\$ 77,567.78	\$ 10,245.75	\$ -	\$ 6,972.82	\$ 10,201.34	\$ 3,080.81	\$ 1,590.57	\$ -	\$ -	\$ -	\$ -	\$ 65,419.00	\$ 62,304.64	\$ -	\$ 237,382.71
51	Hyatt Place Hotel	\$ 12,209.24	\$ -	\$ -	\$ -	\$ 740.68	\$ 265.22	\$ 111.63	\$ -	\$ -	\$ -	\$ 132.98	\$ 3,322.74	\$ 6,605.82	\$ -	\$ 23,388.31
52	Hyatt Centric	\$ 5,095.00	\$ -	\$ -	\$ -	\$ 434.65	\$ 78.31	\$ 48.53	\$ -	\$ -	\$ -	\$ 387.22	\$ 2,631.06	\$ -	\$ -	\$ 8,674.77
51	State Government of TN	\$ 136,594.48	\$ 116,111.96	\$ -	\$ -	\$ 15,776.16	\$ 4,925.13	\$ -	\$ -	\$ 1,364.46	\$ -	\$ 7,278.31	\$ 75,572.11	\$ 104,409.38	\$ -	\$ 462,031.99
	Grand Totals	\$ 401,994.42	\$ 298,640.71	\$ 9,326.68	\$ 30,083.95	\$ 60,209.78	\$ 17,074.54	\$ 6,298.50	\$ -	\$ 3,633.08	\$ 7,217.99	\$ 16,348.17	\$ 314,029.72	\$ 312,150.11	\$ -	\$ 1,477,007.65
	Rate Calculation Totals	\$ 476,629.26	\$ 410,174.04	\$ 15,364.67	\$ 38,072.92	\$ 60,232.45	\$ 17,088.18	\$ 6,250.00	\$ -	\$ 3,737.36	\$ 7,217.99	\$ 16,348.17	\$ 314,070.75	\$ 312,635.72	\$ -	\$ 1,677,821.51
	Deviation	\$ (74,634.84)	\$ (111,533.33)	\$ (6,037.99)	\$ (7,988.97)	\$ (22.67)	\$ (13.64)	\$ 48.50	\$ -	\$ (104.28)	\$ -	\$ -	\$ (41.03)	\$ (485.61)	\$ -	\$ (200,813.86)





Metro Nashville District Energy System  
 Revenues  
 Chilled Water and Steam  
 April, 2023

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	\$ 9,690.56	\$ 14,631.99	\$ 792.12	\$ 1,962.83	\$ 2,073.94	\$ 549.51	\$ 340.13	\$ -	\$ 195.04	\$ -	\$ 1,148.50	\$ 12,030.07	\$ 7,109.62	\$ -	\$ 50,524.31
4	Metro Courthouse	\$ 4,587.50	\$ 6,827.78	\$ 369.62	\$ 915.92	\$ 1,322.78	\$ 340.75	\$ 159.86	\$ -	\$ 91.02	\$ -	\$ 141.95	\$ 6,479.96	\$ 4,209.90	\$ -	\$ 25,447.04
7	Parkway Tower	\$ 4,182.28	\$ 6,623.47	\$ 358.56	\$ 888.52	\$ 1,794.20	\$ 491.49	\$ 150.42	\$ -	\$ 88.29	\$ 771.26	\$ -	\$ 7,371.65	\$ 6,687.84	\$ -	\$ 29,407.98
9	Bobby Hotel	\$ 1,541.56	\$ 2,400.82	\$ 129.97	\$ 322.06	\$ 489.24	\$ 104.65	\$ 54.97	\$ -	\$ 32.00	\$ 277.00	\$ 73.66	\$ 2,692.40	\$ 843.87	\$ -	\$ 8,962.20
10	Fairlane Hotel	\$ 1,598.91	\$ 2,473.98	\$ 133.93	\$ 331.87	\$ 439.08	\$ 102.33	\$ 56.82	\$ -	\$ 32.97	\$ 337.50	\$ 172.79	\$ 2,355.01	\$ 1,037.74	\$ -	\$ 9,072.93
11	Sheraton Hotel	\$ 8,824.73	\$ 13,304.95	\$ 720.27	\$ 1,784.81	\$ 2,072.59	\$ 656.83	\$ 309.51	\$ -	\$ 177.35	\$ 1,337.67	\$ 539.29	\$ 9,934.80	\$ 10,697.72	\$ -	\$ 50,360.52
12	Municipal Auditorium	\$ 4,428.49	\$ 7,069.54	\$ 382.71	\$ 948.36	\$ 757.50	\$ 188.38	\$ 159.94	\$ -	\$ 94.23	\$ -	\$ 199.38	\$ 4,727.98	\$ 2,185.70	\$ -	\$ 21,142.21
21	Hermitage Hotel	\$ 4,262.50	\$ 6,238.96	\$ 337.75	\$ 836.93	\$ 852.49	\$ 209.97	\$ 147.30	\$ -	\$ 83.17	\$ 301.08	\$ 409.83	\$ 4,609.16	\$ 2,391.56	\$ -	\$ 20,680.70
24	Criminal Justice Center	\$ 7,207.53	\$ 10,258.44	\$ 555.35	\$ 1,376.13	\$ 1,419.09	\$ 490.64	\$ 245.65	\$ -	\$ 136.74	\$ -	\$ -	\$ 5,858.17	\$ 8,690.11	\$ -	\$ 36,237.85
25	501 Union Building	\$ 1,680.60	\$ 2,514.96	\$ 136.15	\$ 337.38	\$ 393.31	\$ 102.81	\$ 58.73	\$ -	\$ 33.52	\$ 253.08	\$ -	\$ 2,645.71	\$ 1,301.83	\$ -	\$ 9,458.08
28	4th & Church Building	\$ 23,113.87	\$ -	\$ -	\$ -	\$ 1,279.02	\$ 291.98	\$ 192.77	\$ -	\$ -	\$ -	\$ 106.78	\$ 7,167.40	\$ 2,819.27	\$ -	\$ 34,971.09
29	Fifth-Third Financial Center	\$ 5,136.00	\$ 9,305.06	\$ 503.74	\$ 1,248.24	\$ 834.84	\$ 135.43	\$ 198.50	\$ -	\$ 124.03	\$ 855.58	\$ 866.46	\$ 3,380.17	\$ -	\$ -	\$ 22,588.05
32	Renaissance Hotel	\$ 13,313.99	\$ 19,648.69	\$ 1,063.70	\$ 2,635.80	\$ 4,737.45	\$ 1,391.40	\$ 461.97	\$ -	\$ 261.91	\$ 1,590.58	\$ -	\$ 16,294.28	\$ 20,783.93	\$ -	\$ 82,183.70
33	5th & Broadway	\$ 5,909.11	\$ 10,705.72	\$ 579.56	\$ 1,436.13	\$ 4,007.62	\$ 650.11	\$ 228.38	\$ -	\$ 142.71	\$ -	\$ 1,628.25	\$ 24,106.39	\$ -	\$ -	\$ 49,393.98
34	Renaissance Office Tower	\$ 1,255.69	\$ 2,274.97	\$ 123.16	\$ 305.18	\$ 869.51	\$ 141.05	\$ 48.53	\$ -	\$ 30.32	\$ 247.17	\$ 49.43	\$ 4,527.53	\$ -	\$ -	\$ 9,872.54
35	St. Mary's Catholic Church	\$ 1,085.03	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 36.17	\$ -	\$ -	\$ -	\$ -	\$ 1,121.20
36	Nashville City Center	\$ 4,185.62	\$ 7,583.22	\$ 410.52	\$ 1,017.26	\$ 1,042.56	\$ 169.12	\$ 161.77	\$ -	\$ 101.08	\$ 819.42	\$ -	\$ 8,178.04	\$ -	\$ -	\$ 23,668.61
38	Wildhorse Saloon	\$ 1,558.16	\$ 2,483.87	\$ 134.46	\$ 333.20	\$ 641.41	\$ 162.82	\$ 56.24	\$ -	\$ 33.11	\$ 198.74	\$ 258.78	\$ 3,440.74	\$ 1,961.13	\$ -	\$ 11,262.66
39	Ryman Auditorium	\$ 1,607.52	\$ 2,605.08	\$ 141.03	\$ 349.46	\$ 1,429.58	\$ 383.83	\$ 58.51	\$ -	\$ 34.72	\$ 192.74	\$ 50.95	\$ 6,503.64	\$ 5,069.34	\$ -	\$ 18,426.40
40	Bridgestone Arena	\$ 17,311.89	\$ 28,128.47	\$ 1,522.77	\$ 3,773.33	\$ 4,768.67	\$ 1,073.40	\$ 631.03	\$ -	\$ 374.94	\$ -	\$ -	\$ 29,443.31	\$ 10,004.39	\$ -	\$ 97,032.20
41	Nissan Stadium	\$ 7,386.38	\$ 13,382.15	\$ 724.46	\$ 1,795.17	\$ 2,307.51	\$ 374.32	\$ 285.48	\$ -	\$ 178.38	\$ -	\$ 41.54	\$ 15,618.86	\$ -	\$ -	\$ 42,094.25
43	Hume-Fogg High School	\$ 2,459.91	\$ 3,820.88	\$ 206.85	\$ 512.55	\$ 164.03	\$ 26.61	\$ 87.60	\$ -	\$ 50.94	\$ -	\$ 473.52	\$ 767.97	\$ -	\$ -	\$ 8,570.86
44	Schermerhorn Symphony Center	\$ 16,845.89	\$ -	\$ -	\$ -	\$ 1,374.88	\$ 381.66	\$ 137.86	\$ -	\$ -	\$ -	\$ -	\$ 5,591.44	\$ 5,292.96	\$ -	\$ 29,624.69
45	Nashville Public Library	\$ 7,637.31	\$ -	\$ -	\$ -	\$ 3,078.83	\$ 723.78	\$ 218.36	\$ -	\$ -	\$ -	\$ -	\$ 13,455.27	\$ 7,485.40	\$ -	\$ 32,598.95
49	Viridian Residential Tower	\$ 13,716.89	\$ -	\$ -	\$ -	\$ 472.45	\$ 76.64	\$ 97.44	\$ -	\$ -	\$ -	\$ 1,289.39	\$ 2,359.03	\$ -	\$ -	\$ 18,011.84
50	Music City Center	\$ 77,567.78	\$ 10,245.75	\$ -	\$ 6,972.82	\$ 12,073.81	\$ 3,410.29	\$ 1,590.57	\$ -	\$ -	\$ -	\$ 1,432.09	\$ 61,510.01	\$ 48,438.17	\$ -	\$ 223,241.29
51	Hyatt Place Hotel	\$ 12,209.24	\$ -	\$ -	\$ -	\$ 862.72	\$ 331.65	\$ 111.63	\$ -	\$ -	\$ -	\$ 147.76	\$ 3,506.59	\$ 6,396.17	\$ -	\$ 23,565.76
52	Hyatt Centric	\$ 5,095.00	\$ -	\$ -	\$ -	\$ 521.37	\$ 84.58	\$ 48.53	\$ -	\$ -	\$ -	\$ 320.98	\$ 2,651.33	\$ -	\$ -	\$ 8,721.79
51	State Government of TN	\$ 136,594.48	\$ 116,111.96	\$ -	\$ -	\$ 16,348.55	\$ 4,708.20	\$ -	\$ -	\$ 1,381.24	\$ -	\$ 5,319.63	\$ 81,280.75	\$ 68,607.46	\$ -	\$ 430,352.27
	Grand Totals	\$ 401,994.42	\$ 298,640.71	\$ 9,326.68	\$ 30,083.95	\$ 68,429.03	\$ 17,754.23	\$ 6,298.50	\$ -	\$ 3,677.71	\$ 7,217.99	\$ 14,670.96	\$ 348,487.66	\$ 222,014.11	\$ -	\$ 1,428,595.95
	Rate Calculation Totals	\$ 476,629.26	\$ 410,174.04	\$ 15,364.67	\$ 38,072.92	\$ 68,451.39	\$ 17,764.43	\$ 6,250.00	\$ -	\$ 3,783.21	\$ 7,217.99	\$ 14,670.96	\$ 348,544.12	\$ 222,236.07	\$ -	\$ 1,629,159.06
	Deviation	\$ (74,634.84)	\$ (111,533.33)	\$ (6,037.99)	\$ (7,988.97)	\$ (22.36)	\$ (10.20)	\$ 48.50	\$ -	\$ (105.50)	\$ -	\$ -	\$ (56.46)	\$ (221.96)	\$ -	\$ (200,563.11)



Metro Nashville District Energy System  
 Revenues  
 Chilled Water and Steam  
 May, 2023

Customer Number	Customer Name	Capacity	Operating	EDS Improvement	Metro Incremental	Water And Sewer	Chemical Treatment	Engineering	Insurance	EDS Electricity	EDS Maint Costs Alloc	FFIS	Electricity	Natural Gas	Propane	Total
2	A. A. Birch	\$ 9,690.56	\$ 14,631.99	\$ 792.12	\$ 1,962.83	\$ 2,020.13	\$ 731.80	\$ 340.13	\$ -	\$ 223.19	\$ -	\$ 944.97	\$ 17,201.80	\$ 5,268.28	\$ -	\$ 53,807.80
4	Metro Courthouse	\$ 4,587.50	\$ 6,827.78	\$ 369.62	\$ 915.92	\$ 1,187.50	\$ 462.21	\$ 159.86	\$ -	\$ 104.14	\$ -	\$ 354.86	\$ 8,945.68	\$ 4,042.10	\$ -	\$ 27,957.17
7	Parkway Tower	\$ 4,182.28	\$ 6,623.47	\$ 358.56	\$ 888.52	\$ 959.72	\$ 360.24	\$ 150.42	\$ -	\$ 101.04	\$ 771.26	\$ 15.23	\$ 7,180.10	\$ 2,874.05	\$ -	\$ 24,464.89
9	Bobby Hotel	\$ 1,541.56	\$ 2,400.82	\$ 129.97	\$ 322.06	\$ 527.09	\$ 166.56	\$ 54.97	\$ -	\$ 36.63	\$ 277.00	\$ 5.26	\$ 4,188.79	\$ 654.94	\$ -	\$ 10,305.65
10	Fairlane Hotel	\$ 1,598.91	\$ 2,473.98	\$ 133.93	\$ 331.87	\$ 405.75	\$ 131.27	\$ 56.82	\$ -	\$ 37.74	\$ 337.50	\$ 143.55	\$ 3,267.68	\$ 594.70	\$ -	\$ 9,513.70
11	Sheraton Hotel	\$ 8,824.73	\$ 13,304.95	\$ 720.27	\$ 1,784.81	\$ 1,863.95	\$ 802.65	\$ 309.51	\$ -	\$ 202.95	\$ 1,337.67	\$ 157.84	\$ 13,547.79	\$ 8,621.50	\$ -	\$ 51,478.62
12	Municipal Auditorium	\$ 4,428.49	\$ 7,069.54	\$ 382.71	\$ 948.36	\$ 677.97	\$ 185.94	\$ 159.94	\$ -	\$ 107.84	\$ -	\$ 207.69	\$ 7,257.07	\$ 7.33	\$ -	\$ 21,432.88
21	Hermitage Hotel	\$ 4,262.50	\$ 6,238.96	\$ 337.75	\$ 836.93	\$ 796.51	\$ 273.13	\$ 147.30	\$ -	\$ 95.16	\$ 301.08	\$ 371.06	\$ 6,243.29	\$ 1,622.25	\$ -	\$ 21,525.92
24	Criminal Justice Center	\$ 7,207.53	\$ 10,258.44	\$ 555.35	\$ 1,376.13	\$ 1,845.52	\$ 792.13	\$ 245.65	\$ -	\$ 156.48	\$ -	\$ 202.49	\$ 13,976.30	\$ 8,459.98	\$ -	\$ 45,076.00
25	501 Union Building	\$ 1,680.60	\$ 2,514.96	\$ 136.15	\$ 337.38	\$ 374.40	\$ 140.38	\$ 58.73	\$ -	\$ 38.36	\$ 253.08	\$ -	\$ 3,299.64	\$ 1,116.49	\$ -	\$ 9,950.17
28	4th & Church Building	\$ 23,113.87	\$ -	\$ -	\$ -	\$ 860.97	\$ 235.80	\$ 192.77	\$ -	\$ -	\$ -	\$ 427.11	\$ 7,413.65	\$ -	\$ -	\$ 32,244.17
29	Fifth-Third Financial Center	\$ 5,136.00	\$ 9,305.06	\$ 503.74	\$ 1,248.24	\$ 919.87	\$ 251.94	\$ 198.50	\$ -	\$ 141.93	\$ 855.58	\$ 678.73	\$ 11,444.16	\$ -	\$ -	\$ 30,683.75
32	Renaissance Hotel	\$ 13,313.99	\$ 19,648.69	\$ 1,063.70	\$ 2,635.80	\$ 4,532.73	\$ 1,880.35	\$ 461.97	\$ -	\$ 299.71	\$ 1,590.58	\$ -	\$ 29,542.93	\$ 18,854.72	\$ -	\$ 93,825.17
33	5th & Broadway	\$ 5,909.11	\$ 10,705.72	\$ 579.56	\$ 1,436.13	\$ 4,116.74	\$ 1,127.50	\$ 228.38	\$ -	\$ 163.30	\$ -	\$ 1,246.11	\$ 31,488.96	\$ -	\$ -	\$ 57,001.51
34	Renaissance Office Tower	\$ 1,255.69	\$ 2,274.97	\$ 123.16	\$ 305.18	\$ 711.02	\$ 194.74	\$ 48.53	\$ -	\$ 34.70	\$ 247.17	\$ 38.84	\$ 6,138.97	\$ -	\$ -	\$ 11,372.97
35	St. Mary's Catholic Church	\$ 1,085.03	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 36.17	\$ -	\$ -	\$ -	\$ -	\$ 1,121.20
36	Nashville City Center	\$ 4,185.62	\$ 7,583.22	\$ 410.52	\$ 1,017.26	\$ 1,086.34	\$ 297.53	\$ 161.77	\$ -	\$ 115.67	\$ 819.42	\$ -	\$ 12,101.65	\$ -	\$ -	\$ 27,779.00
38	Wildhorse Saloon	\$ 1,558.16	\$ 2,483.87	\$ 134.46	\$ 333.20	\$ 576.61	\$ 193.57	\$ 56.24	\$ -	\$ 37.89	\$ 198.74	\$ 244.24	\$ 4,174.96	\$ 1,051.89	\$ -	\$ 11,043.83
39	Ryman Auditorium	\$ 1,607.52	\$ 2,605.08	\$ 141.03	\$ 349.46	\$ 1,097.32	\$ 443.27	\$ 58.51	\$ -	\$ 39.74	\$ 192.74	\$ 19.11	\$ 7,705.67	\$ 4,212.15	\$ -	\$ 18,471.60
40	Bridgestone Arena	\$ 17,311.89	\$ 28,128.47	\$ 1,522.77	\$ 3,773.33	\$ 3,034.48	\$ 983.17	\$ 631.03	\$ -	\$ 429.06	\$ -	\$ -	\$ 26,783.77	\$ 4,487.98	\$ -	\$ 87,085.95
41	Nissan Stadium	\$ 7,386.38	\$ 13,382.15	\$ 724.46	\$ 1,795.17	\$ 2,981.57	\$ 816.60	\$ 285.48	\$ -	\$ 204.12	\$ -	\$ 41.54	\$ 23,565.05	\$ -	\$ -	\$ 51,182.52
43	Hume-Fogg High School	\$ 2,459.91	\$ 3,820.88	\$ 206.85	\$ 512.55	\$ 170.01	\$ 46.56	\$ 87.60	\$ -	\$ 58.28	\$ -	\$ 427.83	\$ 2,117.23	\$ -	\$ -	\$ 9,907.70
44	Schermerhorn Symphony Center	\$ 16,845.89	\$ -	\$ -	\$ -	\$ 1,105.78	\$ 493.17	\$ 137.86	\$ -	\$ -	\$ -	\$ -	\$ 9,038.34	\$ 5,616.55	\$ -	\$ 33,237.59
45	Nashville Public Library	\$ 7,637.31	\$ -	\$ -	\$ -	\$ 2,255.70	\$ 798.82	\$ 218.36	\$ -	\$ -	\$ -	\$ -	\$ 15,251.81	\$ 5,342.13	\$ -	\$ 31,504.13
49	Viridian Residential Tower	\$ 13,716.89	\$ -	\$ -	\$ -	\$ 514.09	\$ 140.80	\$ 97.44	\$ -	\$ -	\$ -	\$ 1,001.33	\$ 3,953.03	\$ -	\$ -	\$ 19,423.58
50	Music City Center	\$ 77,567.78	\$ 10,245.75	\$ -	\$ 6,972.82	\$ 9,833.71	\$ 3,995.63	\$ 1,590.57	\$ -	\$ -	\$ -	\$ -	\$ 72,083.91	\$ 38,433.26	\$ -	\$ 220,723.43
51	Hyatt Place Hotel	\$ 12,209.24	\$ -	\$ -	\$ -	\$ 647.19	\$ 371.68	\$ 111.63	\$ -	\$ -	\$ -	\$ 108.35	\$ 4,346.42	\$ 5,737.50	\$ -	\$ 23,532.01
52	Hyatt Centric	\$ 5,095.00	\$ -	\$ -	\$ -	\$ 554.67	\$ 151.91	\$ 48.53	\$ -	\$ -	\$ -	\$ 208.90	\$ 4,886.67	\$ -	\$ -	\$ 10,945.68
51	State Government of TN	\$ 136,594.48	\$ 116,111.96	\$ -	\$ -	\$ 13,334.61	\$ 5,500.54	\$ -	\$ -	\$ 1,580.60	\$ -	\$ 4,558.67	\$ 105,426.42	\$ 54,548.63	\$ -	\$ 437,655.91
	Grand Totals	\$ 401,994.42	\$ 298,640.71	\$ 9,326.68	\$ 30,083.95	\$ 58,991.95	\$ 21,969.89	\$ 6,298.50	\$ -	\$ 4,208.53	\$ 7,217.99	\$ 11,403.71	\$ 462,571.74	\$ 171,546.43	\$ -	\$ 1,484,254.50
	Rate Calculation Totals	\$ 476,629.26	\$ 410,174.04	\$ 15,364.67	\$ 38,072.92	\$ 59,008.50	\$ 21,976.81	\$ 6,250.00	\$ -	\$ 4,329.17	\$ 7,217.99	\$ 11,403.71	\$ 462,645.80	\$ 171,618.20	\$ -	\$ 1,684,691.07
	Deviation	\$ (74,634.84)	\$ (111,533.33)	\$ (6,037.99)	\$ (7,988.97)	\$ (16.55)	\$ (6.92)	\$ 48.50	\$ -	\$ (120.64)	\$ -	\$ -	\$ (74.06)	\$ (71.77)	\$ -	\$ (200,436.57)



Metro Nashville District Energy System  
Revenues  
Chilled Water and Steam  
June, 2023

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	\$ 9,690.56	\$ 14,631.99	\$ 792.12	\$ 1,962.83	\$ 3,429.36	\$ 466.19	\$ 340.13	\$ -	\$ 237.18	\$ -	\$ 872.28	\$ 23,786.94	\$ 4,286.40	\$ -	\$ 60,495.98
4	Metro Courthouse	\$ 4,587.50	\$ 6,827.78	\$ 369.62	\$ 915.92	\$ 1,831.35	\$ 274.43	\$ 159.86	\$ -	\$ 110.68	\$ -	\$ 96.78	\$ 12,495.49	\$ 3,546.49	\$ -	\$ 31,215.90
7	Parkway Tower	\$ 4,182.28	\$ 6,623.47	\$ 358.56	\$ 888.52	\$ 1,395.30	\$ 186.04	\$ 150.42	\$ -	\$ 107.37	\$ 771.26	\$ -	\$ 9,020.98	\$ 1,564.73	\$ -	\$ 25,248.93
9	Bobby Hotel	\$ 1,541.56	\$ 2,400.82	\$ 129.97	\$ 322.06	\$ 992.24	\$ 125.99	\$ 54.97	\$ -	\$ 38.92	\$ 277.00	\$ -	\$ 11,117.97	\$ 800.77	\$ -	\$ 17,802.27
10	Fairlane Hotel	\$ 1,598.91	\$ 2,473.98	\$ 133.93	\$ 331.87	\$ 661.85	\$ 78.24	\$ 56.82	\$ -	\$ 40.11	\$ 337.50	\$ 119.63	\$ 4,584.10	\$ 247.75	\$ -	\$ 10,664.69
11	Sheraton Hotel	\$ 8,824.73	\$ 13,304.95	\$ 720.27	\$ 1,784.81	\$ 3,050.85	\$ 498.66	\$ 309.51	\$ -	\$ 215.67	\$ 1,337.67	\$ -	\$ 20,280.91	\$ 7,956.24	\$ -	\$ 58,284.27
12	Municipal Auditorium	\$ 4,428.49	\$ 7,069.54	\$ 382.71	\$ 948.36	\$ 1,162.56	\$ 128.87	\$ 159.94	\$ -	\$ 114.60	\$ -	\$ 41.54	\$ 10,808.48	\$ 13.53	\$ -	\$ 25,258.62
21	Hermitage Hotel	\$ 4,262.50	\$ 6,238.96	\$ 337.75	\$ 836.93	\$ 1,326.17	\$ 169.01	\$ 147.30	\$ -	\$ 101.14	\$ 301.08	\$ 354.45	\$ 9,136.87	\$ 1,100.85	\$ -	\$ 24,313.01
24	Criminal Justice Center	\$ 7,207.53	\$ 10,258.44	\$ 555.35	\$ 1,376.13	\$ 3,086.70	\$ 509.59	\$ 245.65	\$ -	\$ 166.29	\$ -	\$ 291.59	\$ 20,302.82	\$ 8,299.71	\$ -	\$ 52,299.80
25	501 Union Building	\$ 1,680.60	\$ 2,514.96	\$ 136.15	\$ 337.38	\$ 646.09	\$ 92.85	\$ 58.73	\$ -	\$ 40.77	\$ 253.08	\$ -	\$ 5,119.94	\$ 1,055.40	\$ -	\$ 11,935.95
28	4th & Church Building	\$ 23,113.87	\$ -	\$ -	\$ -	\$ 1,514.66	\$ 167.55	\$ 192.77	\$ -	\$ -	\$ -	\$ 259.32	\$ 10,248.41	\$ -	\$ -	\$ 35,496.58
29	Fifth-Third Financial Center	\$ 5,136.00	\$ 9,305.06	\$ 503.74	\$ 1,248.24	\$ 1,626.39	\$ 179.91	\$ 198.50	\$ -	\$ 150.83	\$ 855.58	\$ 534.32	\$ 14,909.95	\$ -	\$ -	\$ 34,648.52
32	Renaissance Hotel	\$ 13,313.99	\$ 19,648.69	\$ 1,063.70	\$ 2,635.80	\$ 7,530.88	\$ 1,166.92	\$ 461.97	\$ -	\$ 318.51	\$ 1,590.58	\$ -	\$ 42,796.02	\$ 16,479.55	\$ -	\$ 107,006.61
33	5th & Broadway	\$ 5,909.11	\$ 10,705.72	\$ 579.56	\$ 1,436.13	\$ 6,370.26	\$ 704.68	\$ 228.38	\$ -	\$ 173.54	\$ -	\$ 1,030.12	\$ 45,059.82	\$ -	\$ -	\$ 72,197.32
34	Renaissance Office Tower	\$ 1,255.69	\$ 2,274.97	\$ 123.16	\$ 305.18	\$ 1,147.44	\$ 126.93	\$ 48.53	\$ -	\$ 36.88	\$ 247.17	\$ 17.65	\$ 8,295.02	\$ -	\$ -	\$ 13,878.62
35	St. Mary's Catholic Church	\$ 1,085.03	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 36.17	\$ -	\$ -	\$ -	\$ -	\$ 1,121.20
36	Nashville City Center	\$ 4,185.62	\$ 7,583.22	\$ 410.52	\$ 1,017.26	\$ 2,054.52	\$ 227.27	\$ 161.77	\$ -	\$ 122.92	\$ 819.42	\$ -	\$ 17,774.10	\$ -	\$ -	\$ 34,356.62
38	Wildhorse Saloon	\$ 1,558.16	\$ 2,483.87	\$ 134.46	\$ 333.20	\$ 868.36	\$ 101.21	\$ 56.24	\$ -	\$ 40.26	\$ 198.74	\$ 252.96	\$ 6,117.25	\$ 254.10	\$ -	\$ 12,398.81
39	Ryman Auditorium	\$ 1,607.52	\$ 2,605.08	\$ 141.03	\$ 349.46	\$ 1,596.58	\$ 254.92	\$ 58.51	\$ -	\$ 42.23	\$ 192.74	\$ -	\$ 9,635.99	\$ 3,865.45	\$ -	\$ 20,349.51
40	Bridgestone Arena	\$ 17,311.89	\$ 28,128.47	\$ 1,522.77	\$ 3,773.33	\$ 4,379.64	\$ 686.63	\$ 631.03	\$ -	\$ 455.95	\$ -	\$ -	\$ 31,150.74	\$ 9,978.30	\$ -	\$ 98,018.75
41	Nissan Stadium	\$ 7,386.38	\$ 13,382.15	\$ 724.46	\$ 1,795.17	\$ 4,981.99	\$ 551.11	\$ 285.48	\$ -	\$ 216.92	\$ -	\$ 62.31	\$ 36,620.93	\$ -	\$ -	\$ 66,006.90
43	Hume-Fogg High School	\$ 2,459.91	\$ 3,820.88	\$ 206.85	\$ 512.55	\$ 288.45	\$ 31.91	\$ 87.60	\$ -	\$ 61.93	\$ -	\$ 386.30	\$ 2,486.08	\$ -	\$ -	\$ 10,342.46
44	Schermerhorn Symphony Center	\$ 16,845.89	\$ -	\$ -	\$ -	\$ 1,729.23	\$ 315.74	\$ 137.86	\$ -	\$ -	\$ -	\$ -	\$ 15,482.67	\$ 6,143.30	\$ -	\$ 40,654.69
45	Nashville Public Library	\$ 7,637.31	\$ -	\$ -	\$ -	\$ 3,068.07	\$ 366.53	\$ 218.36	\$ -	\$ -	\$ -	\$ -	\$ 19,486.73	\$ 1,339.54	\$ -	\$ 32,116.54
49	Viridian Residential Tower	\$ 13,716.89	\$ -	\$ -	\$ -	\$ 1,004.95	\$ 111.17	\$ 97.44	\$ -	\$ -	\$ -	\$ 644.69	\$ 6,739.60	\$ -	\$ -	\$ 22,314.74
50	Music City Center	\$ 77,567.78	\$ 10,245.75	\$ -	\$ 6,972.82	\$ 16,028.15	\$ 2,532.89	\$ 1,590.57	\$ -	\$ -	\$ -	\$ 684.30	\$ 95,575.01	\$ 37,507.91	\$ -	\$ 248,705.18
51	Hyatt Place Hotel	\$ 12,209.24	\$ -	\$ -	\$ -	\$ 891.90	\$ 149.25	\$ 111.63	\$ -	\$ -	\$ -	\$ 83.73	\$ 5,806.86	\$ 2,497.03	\$ -	\$ 21,749.64
52	Hyatt Centric	\$ 5,095.00	\$ -	\$ -	\$ -	\$ 1,001.48	\$ 110.79	\$ 48.53	\$ -	\$ -	\$ -	\$ 127.38	\$ 6,710.47	\$ -	\$ -	\$ 13,093.65
51	State Government of TN	\$ 136,594.48	\$ 116,111.96	\$ -	\$ -	\$ 20,842.59	\$ 3,229.22	\$ -	\$ -	\$ 1,679.71	\$ -	\$ 4,191.81	\$ 137,128.49	\$ 45,592.15	\$ -	\$ 465,370.41
	Grand Totals	\$ 401,994.42	\$ 298,640.71	\$ 9,326.68	\$ 30,083.95	\$ 94,508.01	\$ 13,544.50	\$ 6,298.50	\$ -	\$ 4,472.41	\$ 7,217.99	\$ 10,051.16	\$ 638,678.64	\$ 152,529.20	\$ -	\$ 1,667,346.17
	Rate Calculation Totals	\$ 476,629.26	\$ 410,174.04	\$ 15,364.67	\$ 38,072.92	\$ 94,535.65	\$ 13,547.53	\$ 6,250.00	\$ -	\$ 4,600.54	\$ 7,217.99	\$ 10,051.16	\$ 638,773.74	\$ 152,529.22	\$ -	\$ 1,867,746.72
	Deviation	\$ (74,634.84)	\$ (111,533.33)	\$ (6,037.99)	\$ (7,988.97)	\$ (27.64)	\$ (3.03)	\$ 48.50	\$ -	\$ (128.13)	\$ -	\$ -	\$ (95.10)	\$ (0.02)	\$ -	\$ (200,400.55)





Metro Nashville District Energy System  
 Revenues  
 Chilled Water and Steam  
 Fiscal Year 22 - 23 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	TIPS	Electricity	Natural Gas	Propane	Total
2	A. A. Birch	\$ -	\$ -	\$ -	\$ (1,094.52)	\$ 284.12	\$ -	\$ (2,091.89)	\$ 1,294.83	\$ -	\$ -	\$ -	\$ (870.12)	\$ 2,242.67	\$ -	\$ (234.91)
4	Metro Courthouse	\$ -	\$ -	\$ -	\$ (510.74)	\$ 158.75	\$ -	\$ (983.14)	\$ 605.65	\$ -	\$ -	\$ -	\$ (485.56)	\$ 1,211.47	\$ -	\$ (3.57)
7	Parkway Tower	\$ -	\$ -	\$ -	\$ (495.45)	\$ 172.85	\$ -	\$ (925.13)	\$ 581.65	\$ -	\$ -	\$ -	\$ (531.76)	\$ 1,531.87	\$ -	\$ 334.03
9	Bobby Hotel	\$ -	\$ -	\$ -	\$ (179.59)	\$ 67.71	\$ -	\$ (338.07)	\$ 211.39	\$ -	\$ -	\$ -	\$ (203.62)	\$ 272.16	\$ -	\$ (170.02)
10	Fairlane Hotel	\$ -	\$ -	\$ -	\$ (185.06)	\$ 55.93	\$ -	\$ (349.48)	\$ 218.06	\$ -	\$ -	\$ -	\$ (169.66)	\$ 327.75	\$ -	\$ (102.46)
11	Sheraton Hotel	\$ -	\$ -	\$ -	\$ (995.26)	\$ 256.41	\$ -	\$ (1,903.56)	\$ 1,177.68	\$ -	\$ -	\$ -	\$ (797.09)	\$ 2,851.04	\$ -	\$ 589.22
12	Municipal Auditorium	\$ -	\$ -	\$ -	\$ (528.82)	\$ 85.63	\$ -	\$ (983.66)	\$ 620.05	\$ -	\$ -	\$ -	\$ (267.60)	\$ 1,051.22	\$ -	\$ (23.18)
21	Hermitage Hotel	\$ -	\$ -	\$ -	\$ (466.69)	\$ 106.70	\$ -	\$ (905.89)	\$ 554.97	\$ -	\$ -	\$ -	\$ (324.88)	\$ 709.62	\$ -	\$ (326.17)
24	Criminal Justice Center	\$ -	\$ -	\$ -	\$ (767.36)	\$ 131.94	\$ -	\$ (1,510.73)	\$ 916.86	\$ -	\$ -	\$ -	\$ (417.95)	\$ 2,014.32	\$ -	\$ 367.08
25	501 Union Building	\$ -	\$ -	\$ -	\$ (188.13)	\$ 46.04	\$ -	\$ (361.15)	\$ 222.89	\$ -	\$ -	\$ -	\$ (140.64)	\$ 337.61	\$ -	\$ (83.38)
28	4th & Church Building	\$ -	\$ -	\$ -	\$ -	\$ 192.34	\$ -	\$ (1,185.58)	\$ 740.68	\$ -	\$ -	\$ -	\$ (588.39)	\$ 1,473.24	\$ -	\$ 632.29
29	Fifth-Third Financial Center	\$ -	\$ -	\$ -	\$ (696.05)	\$ 123.06	\$ -	\$ (1,220.79)	\$ 800.94	\$ -	\$ -	\$ -	\$ (363.01)	\$ -	\$ -	\$ (1,355.85)
32	Renaissance Hotel	\$ -	\$ -	\$ -	\$ (1,469.79)	\$ 582.09	\$ -	\$ (2,841.21)	\$ 1,745.37	\$ -	\$ -	\$ -	\$ (1,792.74)	\$ 5,301.84	\$ -	\$ 1,525.56
33	5th & Broadway	\$ -	\$ -	\$ -	\$ (800.83)	\$ 540.59	\$ -	\$ (1,404.56)	\$ 921.50	\$ -	\$ -	\$ -	\$ (1,594.66)	\$ -	\$ -	\$ (2,337.96)
34	Renaissance Office Tower	\$ -	\$ -	\$ -	\$ (170.18)	\$ 104.36	\$ -	\$ (298.47)	\$ 195.82	\$ -	\$ -	\$ -	\$ (307.86)	\$ -	\$ -	\$ (476.33)
35	St. Mary's Catholic Church	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
36	Nashville City Center	\$ -	\$ -	\$ -	\$ (567.25)	\$ 161.93	\$ -	\$ (994.89)	\$ 652.73	\$ -	\$ -	\$ -	\$ (477.66)	\$ -	\$ -	\$ (1,225.14)
38	Wildhorse Saloon	\$ -	\$ -	\$ -	\$ (185.80)	\$ 81.86	\$ -	\$ (345.85)	\$ 217.90	\$ -	\$ -	\$ -	\$ (249.22)	\$ 542.93	\$ -	\$ 61.82
39	Ryman Auditorium	\$ -	\$ -	\$ -	\$ (194.87)	\$ 146.74	\$ -	\$ (359.88)	\$ 227.95	\$ -	\$ -	\$ -	\$ (450.14)	\$ 1,211.53	\$ -	\$ 581.33
40	Bridgestone Arena	\$ -	\$ -	\$ -	\$ (2,104.11)	\$ 755.91	\$ -	\$ (3,880.92)	\$ 2,460.31	\$ -	\$ -	\$ -	\$ (2,277.15)	\$ 3,317.16	\$ -	\$ (1,728.80)
41	Nissan Stadium	\$ -	\$ -	\$ -	\$ (1,001.03)	\$ 376.69	\$ -	\$ (1,755.69)	\$ 1,151.88	\$ -	\$ -	\$ -	\$ (1,111.18)	\$ -	\$ -	\$ (2,339.33)
43	Hume-Fogg High School	\$ -	\$ -	\$ -	\$ (285.82)	\$ 38.58	\$ -	\$ (538.73)	\$ 336.58	\$ -	\$ -	\$ -	\$ (120.19)	\$ 447.05	\$ -	\$ (122.53)
44	Schermerhorn Symphony Center	\$ -	\$ -	\$ -	\$ -	\$ 149.85	\$ -	\$ (847.85)	\$ 532.64	\$ -	\$ -	\$ -	\$ (464.41)	\$ 1,566.15	\$ -	\$ 936.38
45	Nashville Public Library	\$ -	\$ -	\$ -	\$ -	\$ 321.83	\$ -	\$ (1,342.94)	\$ 833.98	\$ -	\$ -	\$ -	\$ (974.06)	\$ 1,730.05	\$ -	\$ 568.86
49	Viridian Residential Tower	\$ -	\$ -	\$ -	\$ -	\$ 74.48	\$ -	\$ (599.28)	\$ 393.17	\$ -	\$ -	\$ -	\$ (219.72)	\$ -	\$ -	\$ (351.35)
50	Music City Center	\$ -	\$ -	\$ -	\$ (3,888.22)	\$ 1,303.99	\$ -	\$ (9,782.22)	\$ 6,150.78	\$ -	\$ -	\$ -	\$ (4,032.83)	\$ 13,050.84	\$ -	\$ 2,802.34
51	Hyatt Place Hotel	\$ -	\$ -	\$ -	\$ -	\$ 80.47	\$ -	\$ (686.55)	\$ 415.00	\$ -	\$ -	\$ -	\$ (254.21)	\$ 1,180.22	\$ -	\$ 734.93
52	Hyatt Centric	\$ -	\$ -	\$ -	\$ -	\$ 72.41	\$ -	\$ (298.47)	\$ 195.82	\$ -	\$ -	\$ -	\$ (213.59)	\$ -	\$ -	\$ (243.83)
51	State Government of TN	\$ -	\$ -	\$ -	\$ -	\$ 1,883.84	\$ -	\$ -	\$ 9,175.44	\$ -	\$ -	\$ -	\$ (5,856.95)	\$ 21,008.18	\$ -	\$ 26,210.51
	Grand Totals	\$ -	\$ -	\$ -	\$ (16,775.57)	\$ 8,357.10	\$ -	\$ (38,736.58)	\$ 33,552.52	\$ -	\$ -	\$ -	\$ (25,556.85)	\$ 63,378.92	\$ -	\$ 24,219.54
	Rate Calculation Totals	\$ -	\$ -	\$ -	\$ (24,977.00)	\$ 8,359.26	\$ -	\$ (38,438.00)	\$ 33,584.28	\$ -	\$ -	\$ -	\$ (25,563.45)	\$ 63,466.55	\$ -	\$ 16,431.64
	Deviation	\$ -	\$ -	\$ -	\$ 8,201.43	\$ (2.16)	\$ -	\$ (298.58)	\$ (31.76)	\$ -	\$ -	\$ -	\$ 6.60	\$ (87.63)	\$ -	\$ 7,787.90



# Appendix 4 – CES Invoice Reconciliation (FEA)

REV: 1  
DATE: 07/26/23



NASHVILLE, TENNESSEE

## CNE INVOICE RECONCILIATION - FY 2022 - 2023

SALES SUMMARY FROM CUSTOMER METER READS												1	2	3	4	5	6	TOTAL
MONTH		7	8	9	10	11	12	1	2	3	4	5	6					
STEAM SALES	Previously invoiced, lbs	13,724,826	15,152,744	16,131,338	27,058,318	39,597,333	51,451,313	46,526,964	37,066,667	38,328,673	24,602,075	18,076,583	14,551,718	342,268,552				
	Reconciled, lbs	13,724,826	15,152,744	16,131,338	27,058,318	39,597,333	51,451,313	46,526,964	37,066,667	38,328,673	24,602,075	18,076,583	14,551,718	342,268,552				
CHW SALES	Previously invoiced, ton-hrs	9,752,209	8,934,983	6,836,030	4,428,925	3,628,275	3,067,214	3,016,549	3,015,457	3,487,424	4,055,115	5,682,142	6,847,887	62,752,210				
	Reconciled, ton-hrs	9,752,209	8,934,983	6,836,030	4,428,925	3,628,275	3,067,214	3,016,549	3,015,457	3,487,424	4,055,115	5,682,142	6,847,887	62,752,210				
SUMMARY FROM CUSTOMER METER READS from INVOICES																		
START DATE		07/01/22	08/01/22	09/01/22	10/01/22	11/01/22	12/01/22	01/01/23	02/01/23	03/01/23	04/01/23	05/01/23	06/01/23	07/01/22				
END DATE		07/31/22	08/31/22	09/30/22	10/31/22	11/30/22	12/31/22	01/31/23	02/28/23	03/31/23	04/30/23	05/31/23	06/30/23	06/30/23				
CHW SALES	ton-hrs	9,752,209	8,934,983	6,836,030	4,428,925	3,628,275	3,067,214	3,016,549	3,015,457	3,487,424	4,055,115	5,682,142	6,847,887	62,752,210				
CHW SENDOUT	ton-hrs	10,324,800	9,457,600	7,238,200	4,638,800	3,808,500	3,200,600	3,140,400	3,284,100	3,735,000	4,450,800	6,164,600	7,437,200	66,880,600				
CHW ELECTRIC	kWh	8,612,969	7,960,767	5,974,961	3,661,721	3,006,319	2,522,783	2,477,261	2,551,668	2,893,720	3,484,349	4,994,008	6,227,822	54,366,348				
CHW MUW	galls	19,729,000	17,750,000	13,634,000	8,164,000	6,311,000	5,011,000	4,989,000	5,429,000	6,091,000	7,653,000	11,392,000	14,465,000	120,618,000				
STEAM SALES	mlbs	13,725	15,153	16,131	27,058	39,597	51,451	46,527	37,067	38,329	24,602	18,077	14,552	342,269				
STEAM SENDOUT	mlbs	18,359	19,853	21,805	32,462	43,866	55,198	49,762	40,903	42,199	29,931	24,181	20,100	398,649				
STEAM PRODUCTION	mlbs	21,305	24,102	26,165	39,371	52,067	66,590	59,417	47,897	50,301	36,166	29,219	24,075	476,675				
NATURAL GAS	mmBtu	25,091	27,211	29,864	44,696	60,807	76,730	69,984	54,769	57,939	41,452	32,693	27,012	548,248				
PROPANE	mmBtu	0	0	0	0	0	0	33	8	0	0	0	0	41				
STEAM ELECTRIC	kWh	52,321	53,323	52,923	72,200	93,636	127,152	120,426	101,730	101,620	67,385	57,880	53,105	953,701				
CONDENSATE RETURN	galls	1,578,182	1,807,336	1,954,819	2,718,788	3,984,318	4,660,207	4,521,062	3,593,262	3,100,969	2,544,521	2,296,939	1,853,582	34,643,955				
	mlbs	12,871	14,740	15,943	22,174	32,495	38,008	36,873	29,306	25,291	20,753	18,733	15,362	282,549				
	*F	181 °F	178 °F	184 °F	178 °F	169 °F	172 °F	171 °F	172 °F	176 °F	176 °F	178 °F	183 °F	175				
STEAM MUW	galls	853,150	851,390	852,700	1,456,110	1,711,700	2,628,560	2,044,080	1,719,280	2,378,730	1,394,110	919,920	890,690	17,700,420				
	mlbs	7,120	7,105	7,116	12,152	14,285	21,936	17,058	14,348	19,851	11,634	7,677	7,433	147,715				
Days in Service		31	31	30	31	30	31	31	28	31	30	31	30	365				
Efficiency - Cooling	kWh/ton-hr-Sold	0.883	0.891	0.874	0.827	0.829	0.822	0.821	0.846	0.830	0.859	0.879	0.909	0.86639734				
Efficiency - Heating	Dth/klb-Sendout	1.364	1.371	1.370	1.377	1.386	1.390	1.407	1.339	1.373	1.385	1.352	1.344	1.37536838				

UTILITY INVOICES (Paste Link)														
Month of Service		7	8	9	10	11	12	1	2	3	4	5	6	TOTAL
<b>ELECTRIC SERVICE (NES)</b>														
Service Date	From To	6/30/2022	7/31/2022	8/31/2022	9/30/2022	10/31/2022	11/30/2022	12/31/2022	1/31/2023	2/28/2023	3/31/2023	4/30/2023	5/31/2023	6/30/2023
PEAK Demand	kW	16,072	15,456	14,280	10,304	7,728	7,728	7,672	7,952	8,008	10,126	12,452	15,960	16,072
Service Period Use	kWh	8,807,568	8,957,952	6,994,844	3,808,000	3,175,004	2,724,144	2,636,240	2,729,888	3,006,888	3,630,060	5,132,176	6,349,896	56,292,768
Service Period Charge	\$	\$ 337,766.64	\$ 349,548.67	\$ 599,913.55	\$ 292,576.99	\$ 314,277.33	\$ 287,364.82	\$ 290,799.31	\$ 309,585.07	\$ 302,748.20	\$ 340,768.33	\$ 455,691.60	\$ 534,868.99	\$ 5,615,909.60
Average Charge	\$/kWh	\$ 0.095100	\$ 0.105400	\$ 0.095300	\$ 0.103100	\$ 0.099000	\$ 0.105100	\$ 0.108300	\$ 0.113400	\$ 0.098400	\$ 0.095900	\$ 0.088800	\$ 0.100000	\$ 0.099763
<b>NATURAL GAS SERVICE</b>														
Service Date	From To	7/1/2022	8/1/2022	9/1/2022	10/1/2022	11/1/2022	11/1/2022	1/1/2023	2/1/2023	3/1/2023	4/1/2023	5/1/2023	6/1/2023	7/1/2022
UTILITY LDC INVOICE DATA	Start	609,293	632,729	658,190	686,094	727,843	784,921	857,023	922,804	974,308	1,028,595	1,067,340	1,097,920	6/30/2023
UTILITY METER Multiplier		10	10	10	10	10	10	10	10	10	10	10	10	
HEAT FACTOR		1.071	1.069	1.070	1.071	1.064	1.064	1.064	1.067	1.069	1.070	1.069	1.063	
Service Period Use	CCF	234,360	254,610	279,040	417,490	570,780	721,020	657,810	515,040	542,770	387,550	305,800	254,090	5,140,360
Service Period Charge	Dth	25,091.3	27,211.2	29,864.0	44,695.6	60,806.7	76,730.2	69,983.7	54,769.4	57,939.4	41,451.6	32,692.9	27,012.3	548,248.3
CONSULTANTS	\$	\$ 6,251.46	\$ 6,251.46	\$ 6,251.46	\$ 6,251.46	\$ 6,251.46	\$ 6,251.46	\$ 6,251.46	\$ 6,251.46	\$ 6,251.46	\$ 6,251.46	\$ 6,251.46	\$ 6,251.46	75,017.52
NASHVILLE LDC	\$	\$ 17,725.37	\$ 16,637.57	\$ 19,779.75	\$ 26,163.91	\$ 31,900.98	\$ 39,952.99	\$ 37,049.01	\$ 30,500.12	\$ 30,653.21	\$ 24,747.56	\$ 20,909.54	\$ 19,545.28	215,905.69
OHG	\$	\$ 132,004.11	\$ 170,652.71	\$ 192,755.57	\$ 244,326.96	\$ 326,832.34	\$ 426,117.09	\$ 392,814.20	\$ 309,044.43	\$ 274,566.53	\$ 192,156.20	\$ 142,933.46	\$ 127,223.16	2,934,487.36
TOTAL	\$	\$ 155,980.94	\$ 195,542.04	\$ 218,816.78	\$ 276,742.33	\$ 364,275.28	\$ 474,321.54	\$ 436,114.67	\$ 345,796.01	\$ 311,501.20	\$ 223,205.32	\$ 171,174.46	\$ 152,019.90	\$ 3,325,490.57
Average Charge	\$/Dth	\$ 6.2165	\$ 7.1861	\$ 7.3271	\$ 6.1917	\$ 5.9907	\$ 6.1817	\$ 6.2317	\$ 6.3127	\$ 5.3763	\$ 5.3847	\$ 5.2358	\$ 5.6278	\$ 6.06570
<b>WATER SERVICE (DOMESTIC AND PLANT)</b>														
Service Date	From To	6/30/2022	7/31/2022	8/31/2022	9/30/2022	10/31/2022	11/30/2022	12/31/2022	1/31/2023	2/28/2023	3/31/2023	4/30/2023	5/31/2023	6/30/2023
UTILITY COPS INVOICE DATA ENTRY														
DOMESTIC	Start													
PLANT METER #1	Start													
PLANT METER #2	Start													
Service Period Use	CCF	15	40	50	25	13	15	250	21	21	17	12	20	515
PLANT METER #1	CCF	25,603	28,753	24,320	18,439	11,741	11,062	11,203	9,807	11,525	13,245	11,877	19,500	197,175
PLANT METER #2	CCF													0
TOTAL	CCF	25,618	28,801	24,378	18,464	11,754	11,077	11,452	9,828	11,546	13,262	11,889	19,520	197,690
PLANT ONLY	CCF	25,603	28,753	24,320	18,439	11,741	11,062	11,203	9,807	11,525	13,245	11,877	19,500	197,175
GALLONS		19,151,044	21,507,244	18,191,360	13,792,372	8,782,268	8,274,376	8,379,844	7,335,636	8,620,700	9,982,060	8,883,996	14,588,000	147,486,900
Service Period Charge														
DOMESTIC	SEWER \$	\$ 220.25	\$ 426.93	\$ 499.53	\$ 292.95	\$ 217.83	\$ 220.25	\$ 1,701.45	\$ 276.00	\$ 276.00	\$ 250.20	\$ 217.95	\$ 249.55	\$ 4,899.09
PLANT	SEWER \$	\$ 75,713.03	\$ 85,005.53	\$ 71,928.18	\$ 54,579.23	\$ 34,820.13	\$ 32,817.08	\$ 32,233.03	\$ 30,002.98	\$ 35,225.70	\$ 40,758.50	\$ 36,295.78	\$ 59,469.70	\$ 589,848.87
STATE FEE @ 10%		\$ 40,064.00	\$ 44,996.38	\$ 38,060.80	\$ 28,852.24	\$ 18,373.10	\$ 17,308.90	\$ 17,528.00	\$ 15,808.95	\$ 18,582.45	\$ 21,517.20	\$ 19,150.05	\$ 31,443.75	\$ 311,686.42
TOTAL		\$ 11,909.23	\$ 13,362.15	\$ 11,370.02	\$ 8,833.89	\$ 5,691.00	\$ 5,396.12	\$ 5,624.06	\$ 4,919.36	\$ 5,718.99	\$ 6,561.94	\$ 5,874.21	\$ 9,639.56	\$ 94,739.53
PLANT, WATER ONLY	\$	\$ 128,001.47	\$ 143,883.70	\$ 122,070.24	\$ 92,522.77	\$ 59,181.02	\$ 55,827.31	\$ 58,864.65	\$ 51,112.95	\$ 59,808.80	\$ 69,181.34	\$ 61,616.29	\$ 100,924.18	\$ 1,003,194.72
Average Charge	\$/k-Gall	\$ 3.9525	\$ 3.9524	\$ 3.9540	\$ 3.9572	\$ 3.9648	\$ 3.9661	\$ 3.9658	\$ 4.0900	\$ 4.0862	\$ 4.0832	\$ 4.0855	\$ 4.0772	\$ 3.9993
<b>MONTHLY FEES</b>														
Service Date	From To	7/1/2022	8/1/2022	9/1/2022	10/1/2022	11/1/2022	12/1/2022	1/1/2023	2/1/2023	3/1/2023	4/1/2023	5/1/2023	6/1/2023	7/1/2022
STEAM	ELECTRIC	\$224.51	\$291.69	\$493.24	\$1,277.69	\$2,092.36	\$2,742.98	\$2,408.59	\$1,844.32	\$1,743.40	\$1,017.03	\$520.88	\$309.60	\$15,056.19
	FUEL GAS	\$257.99	-\$143.72	-\$637.46	\$100.62	-\$2,102.74	-\$2,386.14	-\$9,306.32	\$2,517.83	\$1,124.42	-\$969.25	\$443.74	\$509.32	-\$10,551.71
	WATER	-\$330.85	-\$549.41	-\$127.19	-\$79.23	-\$497.74	-\$916.15	-\$890.14	-\$414.21	-\$75.36	-\$465.02	-\$657.78	-\$944.09	-\$6,047.22
CHW	ELECTRIC	\$10,897.37	\$9,182.03	\$9,407.75	\$11,758.01	\$9,069.78	\$3,703.83	\$7,181.00	\$5,579.05	\$6,758.76	\$6,433.32	\$3,595.15	\$2,500.00	\$100,468.42
	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	-\$1,619.33	-\$847.55	-\$1,135.24	\$333.00	\$589.80	\$644.74	\$595.16	\$178.83	\$399.01	-\$264.93	-\$1,950.01	-\$5,444.44	-\$8,520.96
		\$ 9,429.69	\$ 8,023.04	\$ 7,981.10	\$ 13,390.04	\$ 9,151.46	\$ 8,789.26	\$ 1,619.66	\$ 11,307.67	\$ 11,780.52	\$ 6,076.59	\$ 4,790.15	\$ (1,974.46)	\$ 80,374.72

FINALIZE FUEL EFFICIENCY ADJUSTMENTS						
<b>SUMMARY</b>						
STEAM SYSTEM	ELECTRIC FEA	FUEL GAS FEA	WATER FEA	System TOTAL	Include FEA in INVOICE (YES/NO)?	
	\$14,141.33	\$1,208.59	(\$6,028.02)	\$9,321.90	YES	
CHILLED WATER SYSTEM	\$75,819.83	\$0.00	(\$180.90)	\$75,638.93		
<b>TOTAL</b>	<b>\$89,961.16</b>	<b>\$1,208.59</b>	<b>(\$6,208.92)</b>	<b>\$84,960.83</b>		
<b>ELECTRICITY-TO-STEAM CONVERSION</b>						
CONTRACTUAL GUARANTEE	4.500	kWh per mlb sold	<b>CNE PENALTY/BONUS CALCULATION</b>		<b>PENALTY</b>	<b>BONUS</b>
Metering Inaccuracy Buffer	0%		RATE VARIANCE	kWh per mlb sold	0.000	1,656,587
GUARANTEED MAX QUANTITY	4,500,000	kWh per mlb sold	STEAM SOLD	342,268,552 mlb		
CEPS FUEL EFFICIENCY ADJUSTM	4,500,000	kWh per mlb sold	VARIANCE in kWh = RATE VARIANCE x STEAM SOLD		0	566,997
CEPS ACTUAL CONVERSION RATE	2,843,413	kWh per mlb sold	AVERAGE ELECTRIC PRICE	\$0.099763 / kWh		
			CEPS PENALTY / BONUS		\$0.00	\$14,141.33
NOTE: Penalty at 100% of variance and Bonus at 25% of variance						
<b>FUEL GAS-TO-STEAM CONVERSION</b>						
CONTRACTUAL GUARANTEE (varies by Condensate Return, see below)	71% of Send-out		<b>CNE PENALTY/BONUS CALCULATION</b>		<b>PENALTY</b>	<b>BONUS</b>
Given Condensate Return at	175 F	avg. Temp.	RATE VARIANCE	Dth. per mlb sold	0.000	0.002
GUARANTEED MAX QUANTITY	1,377,000	Dth. per mlb sold	STEAM SEND-OUT	398,649 mlb		
CEPS FUEL EFFICIENCY ADJUSTM	1,377,000	Dth. per mlb sold	VARIANCE in Dth. = RATE VARIANCE x STEAM SOLD		0	797
CEPS ACTUAL CONVERSION RATE	1,375,000	Dth. per mlb sold	AVERAGE FUEL PRICE	\$6.06570 / Dth.		
			CEPS PENALTY / BONUS		\$0.00	\$1,208.59
NOTE: Penalty at 100% of variance and Bonus at 25% of variance						
<b>WATER-TO-STEAM CONVERSION</b>						
CONTRACTUAL GUARANTEE (varies by Plant Send-out, see below)	15% PLANT LOSSES		<b>CNE PENALTY/BONUS CALCULATION</b>		<b>PENALTY</b>	<b>BONUS</b>
VOLUMETRIC CONVERSION	7.4805	gallons per cft	VARIANCE in gallons = GMQ - CES ACTUAL USE		-1,507,268	0
CONDENSATE RETURN SPEC. VOL	8.15585	gall per lb	AVERAGE WATER PRICE	\$3.9993 / kGall		
GUARANTEED MAX QUANTITY	16,370,156	gallons	CEPS PENALTY / BONUS		-\$6,028.02	\$0.00
CEPS ACTUAL USE	17,877,424	gallons	Average water price excludes sewer.			
NOTE: Penalty at 100% of variance and Bonus at 25% of variance						
<b>ELECTRICITY-TO-CHILLED WATER CONVERSION</b>						
CONTRACTUAL GUARANTEE	0.930	kWh per ton-hr sold	<b>CNE PENALTY/BONUS CALCULATION</b>		<b>PENALTY</b>	<b>BONUS</b>
Metering Inaccuracy Buffer	0%		RATE VARIANCE	kWh per ton-hr sold	0.000	0.04844448
GUARANTEED MAX QUANTITY	0.93000000	kWh per ton-hr sold	CHILLED WATER SOLD	62,752,210 ton-hrs		
CEPS FUEL EFFICIENCY ADJUSTM	0.93000000	kWh per ton-hr sold	VARIANCE in kWh = RATE VARIANCE x CHW SOLD		0	3,039,998
CEPS ACTUAL CONVERSION RATE	0.88155552	kWh per ton-hr sold	AVERAGE ELECTRIC PRICE	\$0.099763 / kWh		
			CEPS PENALTY / BONUS		\$0.00	\$75,819.83
NOTE: Penalty at 100% of variance and Bonus at 25% of variance						
<b>WATER-TO-CHILLED WATER CONVERSION</b>						
CONTRACTUAL GUARANTEE	2.000	gall per ton-hr sold	<b>CNE PENALTY/BONUS CALCULATION</b>		<b>PENALTY</b>	<b>BONUS</b>
Metering Inaccuracy Buffer	0%		RATE VARIANCE	gall per ton-hr sold	-0.000721	0.000
GUARANTEED MAX QUANTITY	2,000,000	gall per ton-hr sold	CHILLED WATER SOLD	62,752,210 ton-hrs		
CEPS FUEL EFFICIENCY ADJUSTM	2,000,000	gall per ton-hr sold	VARIANCE in gallons = RATE VARIANCE x CHW SOLD		-45,232	0
CEPS ACTUAL CONVERSION RATE	2,000,721	gall per ton-hr sold	AVERAGE WATER PRICE	\$3.9993 / kGall		
			CEPS PENALTY / BONUS		-\$180.90	\$0.00
NOTE: Penalty at 100% of variance and Bonus at 25% of variance						

COMPARISON PREVIOUSLY BILLED VS. RECONCILED AMOUNTS							
<b>STEAM SYSTEM</b>				<b>CHILLED WATER SYSTEM</b>			
	CALCULATED	RECONCILED	VARIANCE		CALCULATED	RECONCILED	VARIANCE
ELECTRIC	\$15,056.19	\$14,141.33	(\$914.86)	ELECTRIC	\$100,468.42	\$75,819.83	(\$24,648.59)
FUEL GAS	(\$10,581.71)	\$1,208.59	\$11,790.30	FUEL GAS	\$0.00	\$0.00	\$0.00
WATER	(\$6,047.22)	(\$6,028.02)	\$19.20	WATER	(\$8,520.96)	(\$180.90)	\$8,340.06
<b>TOTAL</b>	<b>(\$1,572.74)</b>	<b>\$9,321.90</b>	<b>\$10,894.64</b>	<b>TOTAL</b>	<b>\$91,947.46</b>	<b>\$75,638.93</b>	<b>(\$16,308.53)</b>

COMPARISON AMOUNT COLLECTED BY METRO VS 97-13 CAP						
<b>FEA COLLECTED BY METRO</b>			<b>FEA RECONCILE</b>	<b>METRO OWES</b>	<b>CUSTOMER OWES</b>	
	STEAM	CHILLED WATER	TOTAL	CNE	CNE *	METRO
ELECTRIC	\$15,056.19	\$100,468.42	\$115,524.61	\$89,961.16	(\$25,563.45)	(\$25,563.45)
FUEL GAS	(\$10,581.71)	\$0.00	(\$10,581.71)	\$1,208.59	\$11,790.30	\$11,790.30
WATER	(\$6,047.22)	(\$8,520.96)	(\$14,568.18)	(\$6,208.92)	\$8,359.26	\$8,359.26
<b>TOTAL</b>	<b>(\$1,572.74)</b>	<b>\$91,947.46</b>	<b>\$90,374.72</b>	<b>\$84,960.83</b>	<b>(\$5,413.89)</b>	<b>(\$5,413.89)</b>

PLANT READINGS (Paste Link)															
Month		7	8	9	10	11	12	1	2	3	4	5	6	TOTAL	
DATE OF READINGS		From	7/1/2022	8/1/2022	9/1/2022	10/1/2022	11/1/2022	12/1/2022	1/1/2023	2/1/2023	3/1/2023	4/1/2023	5/1/2023	6/1/2023	7/1/2022
(coincides with Customer Dates)		To	7/31/2022	8/31/2022	9/30/2022	10/31/2022	11/30/2022	12/31/2022	1/31/2023	2/28/2023	3/31/2023	4/30/2023	5/31/2023	6/30/2023	6/30/2023
<b>ELECTRIC METERS</b>															
<b>SVG-2A</b>	Start Reading		57,527.40	59,248.80	60,436.42	61,460.48	62,397.59	63,252.99	64,090.24	64,422.18	64,702.46	65,533.65	66,327.89	67,170.00	
	End Reading		59,248.80	60,436.42	61,460.48	62,397.59	63,252.99	64,090.24	64,422.18	64,702.46	65,533.65	66,327.89	67,170.00	67,268.31	
	Period Use in units = 1,000 x kWh		1,721,400	1,187,620	1,024,060	937,110	855,400	837,250	331,940	280,280	831,190	1,394,240	242,110	96,310	9,740,910
<b>SVG-2B</b>	Start Reading		123,980.84	125,433.91	127,069.63	128,001.82	128,800.56	129,286.27	129,800.76	130,855.11	131,290.92	131,628.13	131,903.85	133,318.69	
	End Reading		125,433.91	127,069.63	128,001.82	128,800.56	129,286.27	129,800.76	130,855.11	131,290.92	131,628.13	131,903.85	133,318.69	135,458.49	
	Period Use in units = 1,000 x kWh		1,453,070	1,635,720	932,190	798,740	495,710	514,490	854,350	635,810	337,210	275,720	1,414,840	2,139,800	11,477,650
<b>SVG-3A</b>	Start Reading		97,454.80	99,621.89	101,171.73	102,593.17	102,917.57	102,948.94	102,971.99	103,601.06	103,860.17	104,404.31	105,410.29	106,715.67	
	End Reading		99,621.89	101,171.73	102,593.17	102,917.57	102,948.94	102,971.99	103,601.06	103,860.17	104,404.31	105,410.29	106,715.67	108,700.57	
	Period Use in units = 1,000 x kWh		2,167,090	1,549,840	1,411,440	234,400	131,370	23,050	629,070	259,110	544,140	1,005,380	1,305,380	1,984,900	11,245,770
<b>SVG-3B</b>	Start Reading		2,055.09	3,701.63	5,633.26	6,899.59	7,757.89	8,575.00	9,120.45	9,196.23	9,991.21	10,502.92	10,529.20	11,471.49	
	End Reading		3,701.63	5,633.26	6,899.59	7,757.89	8,575.00	9,120.45	9,196.23	9,991.21	10,502.92	10,529.20	11,471.49	12,103.56	
	Period Use in units = 1,000 x kWh		1,646,540	1,331,630	1,266,330	858,300	817,110	545,450	75,780	794,980	511,710	26,280	942,290	632,070	10,048,470
<b>SVG-4A</b>	Start Reading		25,907,512.00	26,424,606.00	26,954,704.00	27,343,360.00	27,532,181.00	27,692,285.00	27,775,614.00	27,928,544.00	28,067,360.00	28,344,444.00	28,660,967.00	28,981,675.00	
	End Reading		26,424,606.00	26,954,704.00	27,343,360.00	27,532,181.00	27,692,285.00	27,775,614.00	27,928,544.00	28,067,360.00	28,344,444.00	28,660,967.00	28,981,675.00	29,229,277.00	
	Period Use in units = 1x kWh		517,094	530,098	388,656	188,821	160,104	83,329	152,930	138,816	277,084	316,523	320,708	247,602	3,321,765
<b>SVG-4B</b>	Start Reading		10,482,384.00	10,681,729.00	10,896,785.00	11,098,111.00	11,273,839.00	11,426,606.00	11,587,148.00	11,687,397.00	11,781,760.00	11,781,760.00	11,791,336.00	11,907,437.00	
	End Reading		10,681,729.00	10,896,785.00	11,098,111.00	11,273,839.00	11,426,606.00	11,587,148.00	11,687,397.00	11,781,760.00	11,781,760.00	11,791,336.00	11,907,437.00	12,237,698.00	
	Period Use in units = 1x kWh		199,345	216,056	201,326	175,728	152,767	160,542	100,249	94,363	0	10,176	15,501	330,221	1,755,274
<b>SVG-5A</b>	Start Reading		15,734,401.00	15,919,497.00	16,139,541.00	16,318,037.00	16,479,566.00	16,504,740.00	16,560,633.00	16,740,020.00	16,766,090.00	16,826,673.00	16,978,277.00	17,132,628.00	
	End Reading		15,919,497.00	16,139,541.00	16,318,037.00	16,479,566.00	16,504,740.00	16,560,633.00	16,740,020.00	16,766,090.00	16,826,673.00	16,978,277.00	17,132,628.00	17,312,628.00	
	Period Use in units = 1x kWh		185,096	220,044	178,496	151,529	25,174	55,893	179,387	26,070	60,583	151,604	144,654	9,637	1,398,227
<b>SVG-5B</b>	Start Reading		209,538.00	464,841.00	644,947.00	795,467.00	861,898.00	1,051,455.00	1,191,474.00	1,191,474.00	1,350,346.00	1,492,388.00	1,561,672.00	1,731,445.00	
	End Reading		464,841.00	644,947.00	795,467.00	861,898.00	1,051,455.00	1,191,474.00	1,191,474.00	1,350,346.00	1,492,388.00	1,561,672.00	1,731,445.00	2,091,552.00	
	Period Use in units = 1x kWh		255,303	180,106	150,520	66,419	189,569	140,019	0	158,872	142,042	69,284	169,773	360,107	1,882,014
<b>MCC-1</b>	Start Reading		1,962,321.00	2,207,741.00	2,444,955.00	2,633,949.00	2,727,321.00	2,799,077.00	2,865,969.00	2,912,052.00	2,967,415.00	3,042,666.00	3,145,969.00	3,304,343.00	
	End Reading		2,207,741.00	2,444,955.00	2,633,949.00	2,727,321.00	2,799,077.00	2,865,969.00	2,912,052.00	2,967,415.00	3,042,666.00	3,145,969.00	3,304,343.00	3,508,296.00	
	Period Use in units = 1x kWh		245,420	237,214	188,994	93,372	71,156	66,892	46,083	55,363	75,251	103,303	158,374	203,913	1,545,935
<b>MCC-2</b>	Start Reading		287,316.38	25,066.47	60,638.28	58,472.61	73,242.81	56,402.00	16,334.90	88,058.50	63,108.30	43,792.80	39,984.40	80,665.50	
	End Reading		325,066.47	260,638.28	258,472.61	73,242.81	156,402.00	116,334.90	88,058.50	163,108.30	143,792.80	139,984.40	190,665.50	262,577.50	
	Period Use in units = 1x kWh		37,750	235,572	197,834	14,770	83,159	59,933	71,724	75,050	80,685	96,192	140,681	181,912	1,275,261
<b>MCC-3</b>	Start Reading		32,693.89	50,555.96	51,310.82	51,777.14	56,872.60	89,137.40	17,183.90	45,921.60	89,015.20	49,722.20	72,023.30	96,894.80	
	End Reading		50,555.96	51,310.82	51,777.14	56,872.60	89,137.40	17,183.90	45,921.60	89,015.20	149,722.20	72,023.30	96,894.80	121,974.40	
	Period Use in units = 1x kWh		17,862	755	466	5,095	32,265	28,047	27,738	43,094	60,707	22,301	24,872	25,080	289,282
<b>MCC-4</b>	Start Reading		44,134.61	77,494.64	29,810.71	81,959.11	46,554.80	6,854.30	4,173.80	94,150.10	51,489.80	91,228.80	35,642.20	68,194.60	
	End Reading		77,494.64	123,810.71	81,959.11	146,554.80	106,854.30	104,173.80	94,150.10	151,489.80	91,228.80	135,642.20	68,194.60	95,896.80	
	Period Use in units = 1x kWh		33,360	52,316	52,148	64,596	60,300	97,320	89,976	57,340	39,739	44,413	32,552	27,692	651,752
<b>NOTES:</b>															

OTHER METERS (Paste Link)														
<b>FT_6120: Propane Gas</b>	Available for Use	13,950.00	13,950.00	13,950.00	13,950.00	13,950.00	13,950.00	13,950.00	13,590.00	13,500.00	13,500.00	13,500.00	13,500.00	
	Ending Inventory	13,950.00	13,950.00	13,950.00	13,950.00	13,950.00	13,950.00	13,950.00	13,500.00	13,500.00	13,500.00	13,500.00	13,500.00	
	Period Use in units = Gallons	0.00	0.00	0.00	0.00	0.00	0.00	360.00	90.00	0.00	0.00	0.00	0.00	450
	Period Use in units = Gallons Per DT	10.989	10.989	10.989	10.989	10.989	10.989	10.989	10.989	10.989	10.989	10.989	10.989	
<b>FIQY_3000: Stm Sendout</b>	Start Reading	1,490,705	1,509,094	806,819	828,624	861,086	904,952	960,150	1,009,912	1,050,815	1,093,014	1,122,945	1,147,126	
	End Reading	1,509,094	1,528,947	828,624	861,086	904,952	960,150	1,009,912	1,050,815	1,093,014	1,122,945	1,147,126	1,167,226	
	Period Use in units = 1xMLB	18,389	19,853	21,805	32,462	43,866	55,198	49,762	40,903	42,199	29,931	24,181	20,100	398,649
<b>VQ_1800: CHW Sendout</b>	Start Reading	187,315	290,563	385,139	457,521	503,909	541,994	574,000	605,404	638,245	675,595	720,103	781,749	
	End Reading	290,563	385,139	457,521	503,909	541,994	574,000	605,404	638,245	675,595	720,103	781,749	856,121	
	Period Use in units = 1x TON-HRS	10,324,800	9,457,600	7,238,200	4,638,800	3,808,500	3,200,600	3,140,400	3,284,100	3,735,000	4,450,800	6,164,600	7,437,200	66,880,600
<b>FT_8100: Cond. Return</b>	Start Reading	29,511,704	31,089,886	32,897,222	34,852,041	37,570,829	41,555,147	46,215,354	50,736,416	54,329,678	57,430,647	59,975,168	62,272,107	
	End Reading	31,089,886	32,897,222	34,852,041	37,570,829	41,555,147	46,215,354	50,736,416	54,329,678	57,430,647	59,975,168	62,272,107	64,155,689	
	Period Use in units = 1x GALL	1,578,182	1,807,336	1,954,819	2,718,788	3,984,318	4,660,207	4,521,062	3,593,262	3,100,969	2,544,521	2,296,939	1,883,582	34,643,985
<b>VQ_8100: Cond. Return</b>	Start Reading	67,985	69,900	72,056	74,481	77,727	82,169	87,505	92,612	96,709	100,358	103,351	106,092	
	End Reading	69,900	72,056	74,481	77,727	82,169	87,505	92,612	96,709	100,358	103,351	106,092	108,408	
	Period Use in units = 1x mmBtu	1,915	2,156	2,425	3,246	4,442	5,336	5,107	4,097	3,649	2,993	2,741	2,316	40,423
<b>Condensate Return Temp</b>		181 F	178 F	184 F	178 F	169 F	172 F	171 F	172 F	176 F	176 F	178 F	183 F	175 F
<b>FT_4500: MUV, Stm.</b>	Start Reading	5,429,800	6,282,950	7,134,340	7,987,040	8,443,150	1,154,850	3,783,410	5,827,490	7,546,770	9,325,500	1,319,610	2,239,530	
	End Reading	6,282,950	7,134,340	7,987,040	8,443,150	11,154,850	3,783,410	5,827,490	7,546,770	9,325,500	11,319,610	2,239,530	3,130,220	
	Period Use in units = 1x GALL	853,150	851,390	852,700	1,456,110	1,711,700	2,628,560	2,044,080	1,719,280	2,378,730	1,394,110	919,920	890,690	17,700,420
<b>FT_4200: MUV, CV.</b>	Start Reading	69,255,000	88,984,000	6,734,000	20,368,000	28,532,000	34,843,000	38,854,000	44,843,000	50,272,000	56,363,000	64,016,000	75,408,000	
	End Reading	88,984,000	106,734,000	20,368,000	28,532,000	34,843,000	38,854,000	44,843,000	50,272,000	56,363,000	64,016,000	75,408,000	89,873,000	
	Period Use in units = 1x GALL	19,729,000	17,750,000	13,634,000	8,164,000	6,311,000	5,011,000	4,989,000	5,429,000	6,091,000	7,653,000	11,392,000	14,465,000	120,618,000
<b>FT_4100: MUV, CHW.</b>	Start Reading	38,385,600	38,573,971	280,080	607,669	965,087	315,119	787,119	609,814	35,691	530,535	54,278	506,617	
	End Reading	38,573,971	38,905,693	607,669	965,087	1,315,119	787,119	1,609,814	1,035,691	530,535	1,054,278	506,617	1,071,876	
	1x GALL	188,371	331,722	327,589	357,418	350,032	472,000	442,458	425,877	494,844	523,743	452,339	565,259	
	Excess of Daily Cap	0	0	0	0	0	0	390,237	0	0	0	0	0	
	Period Use in units = 1x GALL	188,371	331,722	327,589	357,418	350,032	472,000	442,458	425,877	494,844	523,743	452,339	565,259	4,931,652
<b>2" PLANT WATER</b>	Start Reading in 10 x soft	0	0	0	0	0	0	0	0	0	0	0	0	
<b>UTILITY METER</b>	Start Reading in 10 x soft	0	0	0	0	0	0	0	0	0	0	0	0	
	Period Use in units = 1x SCFT	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>6" PLANT WATER</b>	Start Reading	225,314	253,332	27,867,700	29,853,000	31,195,500	32,316,800	33,418,900	34,485,400	35,510,100	36,733,500	38,023,100	39,743,400	
<b>UTILITY METER</b>	End Reading	253,332	278,677	29,853,000	31,195,500	32,316,800	33,418,900	34,485,400	35,510,100	36,733,500	38,023,100	39,743,400	41,883,700	
	Period Use in units = 1x SCFT	28,018	25,345	1,985,300	1,342,500	1,121,300	1,102,100	1,066,500	1,024,700	1,223,400	1,289,600	1,720,300	2,140,300	14,069,363
<b>2" DOMESTIC WATER</b>	Start Reading	67.0	109.0	170.0	198.0	210.0	224.0	224.0	446.0	493.0	512.0	510.0	512.0	
<b>UTILITY METER</b>	End Reading	109.0	170.0	198.0	210.0	224.0	224.0	446.0	493.0	512.0	510.0	512.0	512.0	
	Period Use in units = 1x SCFT	42	61	28	12	14	222	47	19	19	21	20	22	527





PERFORMANCE CALCULATIONS														TOTAL
Month		7	8	9	10	11	12	13	14	15	16	17	18	
<b>ELECTRIC-TO-STEAM CONVERSION</b>														
Emainutility	kWh	8,807,568	8,057,952	6,094,844	3,808,000	3,175,004	2,734,144	2,686,348	2,729,888	3,086,888	3,630,060	5,132,176	6,349,896	56,292,768
Echwh, metered	kWh	8,428,108	7,922,900	5,939,846	3,529,789	2,971,519	2,486,848	2,441,513	2,518,714	2,859,894	3,449,302	4,954,311	6,188,532	53,691,276
Esteam, metered	kWh	51,222	53,071	52,614	69,691	92,565	125,367	118,714	100,434	100,446	66,714	57,424	52,772	941,034
Esteam, unmetered	kWh		540.0	884.0	3,816.0	3,234.0	5,591.0	4,074.0	4,118.0	2,096.0	1,348.0	902.0		32,177
CAPACITY TEST ADJUSTMENT, kWh		0	0	0	0	0	0	0	0	0	0	0	0	0
Esteam, total	kWh	51,222	53,611	53,498	73,507	95,799	130,958	124,288	104,508	104,564	68,810	58,772	53,674	973,211
Customer Steam, Sns-e	lbs	13,724,826	15,152,744	16,131,338	27,058,318	39,597,333	51,451,313	46,526,964	37,066,667	38,328,673	24,602,075	18,076,583	14,551,718	342,268,552
nelec, actual	kWh/klb	3.732	3.538	3.316	2.717	2.419	2.545	2.671	2.919	2.728	2.797	3.251	3.688	2.843413
<b>FUEL GAS-TO-STEAM CONVERSION</b>														
Metered Plant Steam Send-out	lbs	18,389,000	19,853,000	21,805,000	32,462,000	43,866,000	55,198,000	49,762,000	40,903,000	42,199,000	29,931,000	24,181,000	20,100,000	398,649,000
CAPACITY TEST ADJUSTMENT, lbs		0	0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED Plant Steam SO	lbs	18,389,000	19,853,000	21,805,000	32,462,000	43,866,000	55,198,000	49,762,000	40,903,000	42,199,000	29,931,000	24,181,000	20,100,000	398,649,000
Natural Gas use, NG	Dth	25,091.3	27,211.2	29,864.0	44,696.6	60,806.7	76,730.2	69,983.7	54,769.4	57,939.4	41,451.6	32,692.9	27,012.3	548,248.3
Propane Gas use, P	gallon	0	0	0	0	0	360	90	0	0	0	0	0	450
Dth		0	0	0	0	0	33	8	0	0	0	0	0	41
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	25,091.3	27,211.2	29,864.0	44,696.6	60,806.7	76,730.2	70,016.7	54,777.6	57,939.4	41,451.6	32,692.9	27,012.3	548,289.5
nhhv, actual	Dth/klb	1.364	1.371	1.370	1.377	1.386	1.390	1.407	1.339	1.373	1.385	1.352	1.344	1.3750
Condensate Return, CR	gallon	1,578,182	1,807,336	1,954,819	2,718,788	3,984,318	4,660,207	4,521,062	3,593,262	3,100,969	2,544,521	2,296,939	1,883,582	34,643,985
% of SO		70.00%	74.25%	73.12%	68.31%	74.08%	68.86%	74.10%	0.00%	0.00%	0.00%	0.00%	0.00%	70.88%
Condensate Return Energy	mmBtu	1,915	2,156	2,425	3,246	4,442	5,336	5,107	4,097	3,649	2,993	2,741	2,316	40,423
Condensate Return Temperature	avg	181 F	178 F	184 F	178 F	169 F	172 F	171 F	172 F	176 F	176 F	178 F	183 F	175 F
nhhv, guarantee	Dth/klb													1.377000
														1.377000
<b>WATER-TO-STEAM CONVERSION</b>														
Metered Steam Makeup, Mv	Gallons	853,150	851,390	852,700	1,456,110	1,711,700	2,628,560	2,044,080	1,719,280	2,378,730	1,394,110	919,920	890,690	17,700,420
CAPACITY TEST ADJUSTMENT, Gallons		0	0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED Steam Makeup, Mv	Gallons	853,150	851,390	852,700	1,456,110	1,711,700	2,628,560	2,044,080	1,719,280	2,378,730	1,394,110	919,920	890,690	17,700,420
Actual Steam Makeup, nwater	Gallons	861,682	859,904	861,227	1,470,671	1,728,817	2,654,846	2,064,521	1,736,473	2,402,517	1,408,051	929,119	899,597	17,877,424
Guarantee Steam Makeup, nguar	Gallons	777,995	720,898	826,530	1,450,636	1,603,276	2,423,850	1,817,374	1,635,198	2,384,075	1,294,164	788,116	668,043	16,370,156
<b>ELECTRICITY-TO-CHW CONVERSION</b>														
Emainutility	kWh	8,807,568	8,057,952	6,094,844	3,808,000	3,175,004	2,734,144	2,686,348	2,729,888	3,086,888	3,630,060	5,132,176	6,349,896	56,292,768
CAPACITY TEST ADJUSTMENT, kWh		0	0	0	0	0	0	0	0	0	0	0	0	0
Echwh, metered	kWh	8,428,108	7,922,900	5,939,846	3,529,789	2,971,519	2,486,848	2,441,513	2,518,714	2,859,894	3,449,302	4,954,311	6,188,532	53,691,276
Esteam, total	kWh	51,222	53,611	53,498	73,507	95,799	130,958	124,288	104,508	104,564	68,810	58,772	53,674	973,211
Echwh, unmetered	kWh	328,238	81,441	101,500	204,704	107,696	116,338	120,547	106,666	122,430	111,948	119,093	107,690	1,628,281
Echwh, total	kWh	8,756,346	8,004,341	6,041,346	3,734,493	3,079,205	2,603,186	2,562,060	2,625,390	2,982,324	3,561,250	5,073,404	6,296,222	55,319,557
Customer CHW, CHW's-e	Ton-hrs	9,752,209	8,934,983	6,836,030	4,428,925	3,628,275	3,067,214	3,016,549	3,016,457	3,487,424	4,055,115	5,682,142	6,847,887	62,752,210
nelec, actual	kWh/ton-hr	0.898	0.896	0.884	0.843	0.849	0.849	0.849	0.871	0.855	0.878	0.893	0.919	0.881556
<b>CV-TO-CHW CONVERSION</b>														
Cond Water Makeup incl loss, CM	Gallons	19,917,371	18,081,722	13,961,589	8,521,418	6,661,032	5,483,000	5,431,458	5,854,877	6,585,844	8,176,743	11,844,339	15,030,259	125,549,652
Customer CHW, CHW's-e	Ton-hrs	9,752,209	8,934,983	6,836,030	4,428,925	3,628,275	3,067,214	3,016,549	3,016,457	3,487,424	4,055,115	5,682,142	6,847,887	62,752,210
nwater, actual	Gallons/ton-hr	2.0423	2.0237	2.0424	1.9240	1.8359	1.7876	1.8006	1.9416	1.8885	2.0164	2.0845	2.1949	2.000721

<b>METER CHECKS AND ESTIMATES</b>															
<b>WATER METER CHECKS</b>		<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>TOTAL</b>	
Utility Meters - Utility Dates	gallons	19,151,044	21,507,244	18,191,360	13,792,372	8,782,268	8,274,376	8,379,844	7,335,636	8,620,700	9,982,060	8,883,996	14,586,000	147,486,900	
Utility Meters - Customer Dates	gallons	209,575	189,581	14,850,044	10,041,900	8,287,324	8,243,708	7,977,420	7,664,796	9,151,032	9,646,208	12,867,844	16,009,444	105,238,835	
variance (line 184-line 183)	gallons	-18,941,469	-21,317,663	-3,341,316	-3,750,472	-394,944	-30,668	-402,424	329,120	530,332	-335,852	3,983,848	1,423,444	-42,248,065	
	% of TOTAL (line 183)	-9%	-9%	-18%	-27%	-4%	0%	-5%	4%	6%	-3%	45%	10%	-28.65%	
<b>Plant Meters</b>															
CHW	gallons	188,371	331,722	327,589	357,418	350,032	472,000	442,458	425,877	494,844	523,743	452,339	565,259	4,931,652	
CW	gallons	19,729,000	17,750,000	13,634,000	8,164,000	6,311,000	5,011,000	4,989,000	5,429,000	6,091,000	7,653,000	11,392,000	14,465,000	120,618,000	
STEAM	gallons	853,150	851,390	852,700	1,456,110	1,711,700	2,628,560	2,044,080	1,719,280	2,378,730	1,394,110	919,920	890,690	17,700,420	
<b>TOTAL</b>	<b>gallons</b>	<b>20,770,521</b>	<b>18,933,112</b>	<b>14,814,289</b>	<b>9,977,528</b>	<b>8,372,732</b>	<b>8,111,560</b>	<b>7,475,538</b>	<b>7,574,157</b>	<b>8,964,574</b>	<b>9,570,853</b>	<b>12,764,259</b>	<b>15,920,949</b>	<b>143,250,072</b>	
variance (line 181-line 184)	gallons	20,560,946	18,743,531	-35,795	-64,372	-14,592	-132,148	-501,882	-90,599	-186,458	-75,355	-103,585	-88,495	38,011,237	
	% of TOTAL (line 184)	107%	87%	0%	0%	0%	-2%	-6%	-1%	-2%	-1%	-1%	-1%	25.77%	
<b>CV MUV CHECK</b>															
CHW Send-out	ton-hrs	10,324,800	9,457,600	7,238,200	4,638,800	3,808,500	3,200,600	3,140,400	3,284,100	3,735,000	4,450,800	6,164,600	7,437,200	66,880,600	
CW MUV/Rate	gal/ton-hr	1.911	1.877	1.884	1.760	1.657	1.566	1.589	1.653	1.631	1.719	1.848	1.945	1.803	
<b>FINAL MAKEUP WATER RESULTS</b>															
CHW	gallons	188,371	331,722	327,589	357,418	350,032	472,000	442,458	425,877	494,844	523,743	452,339	565,259	4,931,652	
CW	gallons	19,729,000	17,750,000	13,634,000	8,164,000	6,311,000	5,011,000	4,989,000	5,429,000	6,091,000	7,653,000	11,392,000	14,465,000	120,618,000	
STEAM	gallons	853,150	851,390	852,700	1,456,110	1,711,700	2,628,560	2,044,080	1,719,280	2,378,730	1,394,110	919,920	890,690	17,700,420	
<b>TOTAL</b>	<b>gallons</b>	<b>20,770,521</b>	<b>18,933,112</b>	<b>14,814,289</b>	<b>9,977,528</b>	<b>8,372,732</b>	<b>8,111,560</b>	<b>7,475,538</b>	<b>7,574,157</b>	<b>8,964,574</b>	<b>9,570,853</b>	<b>12,764,259</b>	<b>15,920,949</b>	<b>143,250,072</b>	
variance	gallons	20,560,946	18,743,531	-35,795	-64,372	-14,592	-132,148	-501,882	-90,599	-186,458	-75,355	-103,585	-88,495	38,011,237	
	% of TOTAL (line 184)	107%	87%	0%	0%	0%	-2%	-6%	-1%	0%	-1%	-1%	-1%	26%	
<b>STEAM PLANT MASS BALANCE CK</b>															
STEAM SENDOUT	klbs	18,389	19,853	21,805	32,462	43,866	55,198	49,762	40,903	42,199	29,931	24,181	20,100	398,649	
STEAM PRODUCTION	klbs	21,305	24,102	26,165	39,371	52,067	66,590	59,417	47,897	50,201	36,166	29,219	24,075	476,675	
		-2,916	-4,249	-4,360	-6,909	-8,201	-11,392	-9,655	-6,994	-8,102	-6,235	-5,038	-3,975		
<b>CALC'D LOSSES</b>															
BLOWDOWN 4%	klbs	852	864	1,047	1,575	2,083	2,664	2,377	1,916	2,012	1,447	1,169	963	19,067	
DEA VENT 0.50%	klbs	107	121	131	197	260	333	297	239	252	181	146	120	2,393	
<b>TOTAL CALC'D LOSSES</b>	<b>klbs</b>	<b>959</b>	<b>1,085</b>	<b>1,177</b>	<b>1,772</b>	<b>2,343</b>	<b>2,997</b>	<b>2,674</b>	<b>2,155</b>	<b>2,264</b>	<b>1,627</b>	<b>1,315</b>	<b>1,083</b>	<b>21,450</b>	
<b>CONDENSATE RETURN</b>	<b>gallons</b>	<b>1,578,182</b>	<b>1,807,336</b>	<b>1,954,819</b>	<b>2,718,788</b>	<b>3,984,318</b>	<b>4,660,207</b>	<b>4,521,062</b>	<b>3,593,262</b>	<b>3,100,969</b>	<b>2,544,521</b>	<b>2,296,939</b>	<b>1,883,582</b>	<b>34,643,985</b>	
	8.16585 klbs	12,871	14,740	15,943	22,174	32,495	38,008	36,873	29,306	25,291	20,753	18,733	15,362	282,551	
STEAM MUV	8.3453 klbs	7,120	7,105	7,116	12,152	14,285	21,938	17,058	14,348	19,851	11,634	7,677	7,433	147,715	
<b>TOTAL LEAVING PLANT</b>	<b>klbs</b>	<b>19,348</b>	<b>20,938</b>	<b>22,982</b>	<b>34,234</b>	<b>46,209</b>	<b>58,195</b>	<b>52,436</b>	<b>43,058</b>	<b>44,463</b>	<b>31,558</b>	<b>25,496</b>	<b>21,183</b>	<b>420,099</b>	
<b>TOTAL ENTERING PLANT</b>	<b>klbs</b>	<b>19,991</b>	<b>21,845</b>	<b>23,059</b>	<b>34,326</b>	<b>46,780</b>	<b>59,944</b>	<b>53,932</b>	<b>43,654</b>	<b>45,142</b>	<b>32,387</b>	<b>26,410</b>	<b>22,795</b>	<b>430,266</b>	
<b>OVERAGE / SHORTFALL</b>	<b>klbs</b>	<b>643</b>	<b>908</b>	<b>77</b>	<b>92</b>	<b>571</b>	<b>1,750</b>	<b>1,496</b>	<b>596</b>	<b>680</b>	<b>829</b>	<b>915</b>	<b>1,612</b>	<b>10,167</b>	
		3.3%	4.3%	0.3%	0.3%	1.2%	3.0%	2.3%	1.4%	1.5%	2.6%	3.6%	7.6%	2.42%	
<b>FINAL CONDENSATE RETURN CALCULATIONS</b>															
RECALC'D TOTAL ENTERING	klbs	19,928	21,566	23,672	35,261	47,959	59,940	54,009	44,390	45,796	32,505	26,261	21,819		
RECALC'D COND RETURN	klbs	12,808	14,461	16,556	23,109	33,311	38,004	36,950	30,002	25,945	20,871	18,584	14,386		
	gallons	1,570,451	1,773,036	2,029,937	2,833,430	4,084,263	4,659,795	4,530,537	3,678,612	3,181,177	2,559,017	2,278,576	1,763,863		



## Exhibit 1 – Performance Guarantee Calculation

### EXHIBIT 1 - CALCULATION DETAIL FOR PLANT PERFORMANCE PER APPENDIX 19

#### ELECTRICITY-TO-STEAM CONVERSION

(1)	E (MainUtility) = total electric use per main utilitymeters	58,292,768 kWh
(2)	E (Steam,metered) = metered electric use for steam plant	941,034 kWh
	MCC-3	289,282
	MCC-4	651,752
(3)	E (CHW,metered) = metered electric use for chilled water plant	53,691,276 kWh
	SWGR-2A	9,740,910
	SWGR-2B	11,477,650
	SWGR-3A	11,245,770
	SWGR-3B	10,048,470
	SWGR-4A	3,321,765
	SWGR-4B	1,755,274
	SWGR-5A	1,398,227
	SWGR-5B	1,882,014
	MCC-1	1,545,935
	MCC-2	1,275,261
(4)	Esteam,unmetered = un-metered electric use for steam plant = [ (2) / (1) ] x [ (1) - (2) - (3) ]	27,758 kWh *
(5)	Echw,unmetered = un-metered electric use for chilled water plant = (1) - (2) - (3) - (4)	1,632,700 kWh *
(6)	Esteam,total = total electric use for steam plant = (2) + (4)	968,792 kWh *
(7)	Customer Steam Sales, metered + unmetered	342,268,552 lbs

$$n \text{ (elec): Actual Steam Plant Electric Conversion} = (6) / [(7) \times 0.001] = 2.831 \text{ kWh/lb}$$

#### NATURAL GAS-TO-STEAM CONVERSION

(8)	NG = Total Natural Gas Use per main utility meters	548,248.3 Dth
(9)	P = Total Propane Gas	41 Dth
(10)	HHV = Higher Heating Value of Propane	1.002052 Btu/scf
(11)	SO = Plant Steam Send Out	398,649,000 lbs
	Meter Reading at the beginning, n-1	1,490,705
	Meter Reading at the end, n (Adjusted for meter reset)	1,889,354
	Units of Measure	1 x SCFT

$$n \text{ (HHV): Actual Plant Efficiency} = [(8) + (9) \times (10)] / [(11) \times 0.001] = 1.375 \text{ Dth/lb}$$

(12)	CR = Condensate Return per plant meter	34,643,985 gallons **
	Meter Reading at the beginning, n-1	29,511,704
	Meter Reading at the end, n	64,155,689
	Units of Measure	1 x SCFT
(13)	H = Condensate Return energy	40,423 mmBtu
	Meter Reading at the beginning, n-1	67,985
	Meter Reading at the end, n	108,408
	Units of Measure	1 x MMBTU

$$T \text{ (cr,avg): Average Condensate Return Temperature} = 175 \text{ }^\circ\text{F}$$

**EXHIBIT 1 - CALCULATION DETAIL FOR PLANT PERFORMANCE PER APPENDIX 19**

**WATER-TO-STEAM CONVERSION**

(14)	MW = Steam system makeup water plant meter		17,700,420 gallons
		<i>Meter Reading at the beginning, n-1</i>	5,429,800
		<i>Meter Reading at the end, n</i>	3,130,220
		<i>Units of Measure</i>	1 x SCFT

**n (water): Actual steam plant water use = (14) \* 1.01 = 17,877,424 gallons**

**G (water): Guaranteed steam plant water use = [(11) / 8.15585 - (12)] = 16,370,156 gallons**

**ELECTRICITY-TO-CHILLED WATER CONVERSION**

(15)	E (chwh,total) = Total CHW Electric use = (3) + (5) =	55,323,976 kWh *
(16)	Customer CHW Sales, metered + unmetered	62,752,210 tonhrs

**n (elec): Actual chilled water plant electric conversion = (15) / (16) = 0.882 kw/ton**

**CONDENSER WATER-TO-CHILLED WATER CONVERSION**

(17)	CM = water makeup		125,549,652 gallons **
		<i>Meter Reading at the beginning, n-1</i>	69,255,000
		<i>Meter Reading at the end, n</i>	89,873,000
		<i>Units of Measure</i>	1 x GALL
	Cooling Tower Makeup		120,618,000
		<i>Meter Reading at the beginning, n-1</i>	38,385,600
		<i>Meter Reading at the end, n</i>	1,071,876
		<i>Units of Measure</i>	Excess of Daily Cap
	EDS ChWMakeup		4,931,652

**n (water): Actual chilled water plant conversion = (17) / (16) = 2.001 gal/ton-hr**

NOTES: \* - There is a 15,888 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".



## Exhibit 2 – Information Technology System Program

### Networks

The Operating System for the Metro Nashville District Energy System (DES) Energy Generation Facility (EGF) was provided and installed by Siemens Building Technologies. This System has recently been upgraded from Apogee Insight to Desigo CC. This software controls all the equipment and machinery in the plant.

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 Energy Solutions, LLC (CES) 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. CES is obligated to provide equipment which meets or exceeds industry standards. The following table shows equipment acquired by CES for the Nashville DES:

<b><u>Equipment</u></b>
<u>Plant Server</u> Dell PowerEdge T330/1 x Xeon e3-1200 v6 3.00 GHz Processor/64 GB RAM/RAID 5 Configuration/DVD drive
<u>Siemens Server</u> Dell Precision 5820/duel Xeon W-2223 3.6 GHz Processor/16 GB RAM/RAID 5 Configuration/DVD drive
<u>Firewall</u> Sonicwall TZ 400
<u>Desktop Computers</u> Dell OptiPlex 7080 small frame with Intel Core i7-10700 Processor, 16 GB Ram, 2.90 GHz , x64 based processor, 1 TB HD
<u>Monitors</u> Dell Professional E2420HS 24" Ultra Sharp LCD Flat Panel
<u>Laptop Computers</u> Dell Vostro 15 5501, with Intel i7-1065G7, 15.6 HD Display, 1.50GHz, x64 based processor, 16 GB Ram, 500 GB Hard Drive
<u>Docking Stations</u> Dell D6000 Universal Docking Station Ultra slim, wireless, keyboard & mouse



Per industry standards, computer hardware should be replaced every three to five years. This equipment was most recently replaced in 2020, the Metro computer in 2023. The Siemens server was replaced in 2020. The CES server was replaced with a solid-state Dell T330 in 2018. An equipment inventory is located on page 77 of this document.

CES has a performance contract with Metro to operate and manage the Nashville DES. Except for a designated workstation in the Metro office, CES will have exclusive use of and responsibility for this equipment in the same way CES has exclusive rights to boilers, chillers, pumps, etc., as defined in the ARMA.

**Software**

Each server has the following software installed:

<b>Operating System</b>	Microsoft 8 R2 Server/Microsoft Server 2016 Standard
<b>Data base</b>	Microsoft SQL 2008
<b>AntiVirus</b>	Malwarebytes

Each computer has the following software installed:

<b>Operating System</b>	Windows10 Professional
<b>Microsoft Office Professional 2019</b>	Word, Excel, Power Point, Outlook, One Note, Office Publisher
<b>AntiVirus</b>	Malwarebytes

Additional software installed on specific machines includes:

- Adobe Acrobat Professional 2019 - General Manager, Operations Manager, Administrative Operations Representative and I&C Technician.
- I-Maint - Control Room, Plant Operations Manager, Maintenance Office, Electrical Office and Metro office.

**Connectivity**

	<b>Metro</b>	<b>Constellation</b>
<b>Internet Connection</b>	Fiber optic	Comcast Cable

CES accesses customer meter data through the internet. The State has granted CES 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 Lenovo desktop computer, furnished by CES, is located in the Metro office at the EGF. The purpose of this computer is to give Metro administrative access to plant data. CES personnel check to make sure the required data files are transferred from the CES Administrative server to the Metro workstation periodically. These include: a copy of the Siemens data base, the I-Maint CMMS data base, customer billing system data and customer meter data.

## **Data Backup and Storage**

CES's Administrative Server is backed up continuously. The offsite, online repository used by CES 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, back up data from the computer in the Metro Office to Carbonite. This is maintained by Metro's Project Administrator.

If issues cause data not to transfer, CES will assist a Metro Representative with troubleshooting. CES 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*

CES has contracted with a third-party vendor, Vertical IT Solutions, LLC, for ITS service and support. These services include:

1. Installation and setup of new workstations 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*

The Siemens Desigo CC control system had a one-year warranty beginning in January 2021. Constellation Energy will continue to have Siemens repair, replace, and maintain their proprietary equipment when the warranty expires. Services will include annual software updates, annual network maintenance, annual preventative maintenance to modular panels, routine backups, diagnostics and operator coaching.

### *Cyber Security*

Access to the server room is behind a key card monitored, locked door.

There is no outside connectivity to the Siemens server. Building automation is segregated on a separate network. There is no WiFi or Bluetooth on the Siemens network.

The administrative network server is behind a Sonicwall TZ400 firewall. There is no wireless access to the network inside the firewall. Remote access requires a VPN. All network traffic is monitored by Malwarebytes software. Sonicwall and Malwarebytes firmware is kept up to date.

CES employees receive Cyber Security Awareness training and Phishing training.

### **Program Review**

The Information Technology Services Program is reviewed with Project Administrator and Metro annually and updated as required. This document incorporates all changes that were made to the program.

## Hardware Inventory

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

<b>Office Location</b>	<b>Computer</b>	<b>ID Number</b>	<b>Monitor</b>	<b>Keyboard &amp; Mouse</b>
Data Room	2-Servers	CPKGM83 (Siemens) 8P8RMN2 (CES)	2-24" Flat Panels	1-each
Metro Office	1-Desktop	MJ0JERFT	1-24" Flat Panel	1-each
General Manager	1-Laptop with Docking Station	5R20763	1-24" Flat Panel	1-each
Operations Manager	1-Laptop with Docking Station	1K20763	1-24" Flat Panel	1-each
Finance & Administration Representative	1-Laptop with Docking Station	D7PRO43	1-24" Flat Panel	1-each
Customer Service Representative	1-Desktop	GBX7673	1-24" Flat Panel	1-each
Electrical Office	1-Desktop	GBX1J63	1-24" Flat Panel	1-each
Instrumentation & Controls Technician	1-Laptop	2MTZ663	N/A	N/A
Maintenance Office	1-Desktop	GBWYH63	1-24" Flat Panel	1-each
Operations Office	1 - Desktop 1-Docking Station	GBWZH63 N/A	2-24" Flat Panels	1-each
Reception Area	1-Docking Station	N/A	1-24" Flat Panel	1-each
Control Room	3 Desktops	GBX9673 GHJXH63 GBX0J63	8-24" Flat Panels	1-each
Control Room (Security)	1 Desktop	BYPC8M2	1-23" Flat Panel 1-42" Flat Panel	1-each

## Exhibit 3 – Constellation Assets

- 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.
- Zoll AED & cabinet
- Epson Video Projector
- 3-OKI printers
- 2-HP printers
- 1-Brother Printer
- 27" JVC TV
- JVC VCR/DVR
- Honda self-propelled Push Mower
- Echo Weedeater
- Echo backpack blower
- 3 – Kerosene torpedo heaters
- 40 cal/cm<sup>2</sup> rated high voltage suit with hood and fan
- 1 pair 10 kV gloves
- 1 pair 20 kV gloves
- Arc protection face shield
- 20 kV mat
- Hot stick
- Voltage detector (Glow stick)
- Remote switch operator (Chicken switch)
- Ricoh Copier (Leased)
- General Manager's HP Laptop – SN#EXPCT7978

## Exhibit 4 – Spare Parts Inventory

Quantity	Description	Location
4	4 inch 150# Buttweld Valves	Connex
5	ATS 2 inch TP2W-121 300°F 150 psi 8 inch travel	Connex
1	ATS 3 inch TP2W-121 300°F 150 psi 4 inch travel	Connex
1	ATS 18 inch TP2W-131 500°F 300 psi 12 inch Travel	Chiller Alley
1	Re-wound Toshiba 350HP CWP Motor	Chiller Alley
1	Trane Chiller Seal Ring	Maintenance Shop
1	Trane Chiller Vane Actuator	Maintenance Shop
1	Trane Motor Changeout Gasket Kit	Maintenance Shop
1	Trane Heater Element	Maintenance Shop
1	Trane Vane Operator Assembly	Maintenance Shop
1	Trane Chiller Oil Regulator Valve	Maintenance Shop
12	Trane Chiller Oil Filters	Maintenance Shop
1 Lot	Goulds Pumps Misc. Gaskets, o-rings, etc	Maintenance Shop
1	Shaft Sleeve- CWP	Maintenance Shop
Various	Misc Pipe Fittings from 1/4 to 1 1/2	Maintenance Shop
Various	Misc Bolts, Nuts and washers from 1/4 to 1 inch	Maintenance Shop
Various	Misc Plate and flat bar	Maintenance Shop
Various	Misc Pipe from 3/8 to 3 inch	Maintenance Shop
2	Shaft Sleeves- BFWP	Maintenance Shop
1	175# Boiler Safety Valve	Mezzanine
1	185# Boiler Safety Valve	Mezzanine
1	35# Deaerator Safety Valve	Mezzanine
1	60 HP Cooling Tower Fan Motor	Mezzanine
1	Cooling Tower Fan Shaft	Mezzanine
2	Cooling Tower Belts	Mezzanine
1	Weil 460V Sump Pump	Mezzanine
1	Weil 208V Sump Pump	Mezzanine
6	Temperature Sensors- Trane	Maintenance Office
5	Wiring Harnesses- Trane	Maintenance Office
5	Solenoid Valves-Trane	Maintenance Office
1	Chiller Purge Unit- Trane	Mezzanine
6	Air Compressor Filters	Maintenance Office
2	Differential Gauges- Air Compressor	Maintenance Office
2	Pressure Switch- Air Compressor	I&E Lab
6	Weksler Thermometer 30/240F	Main Electrical Room
6	Weksler Thermometer 0/120F	Main Electrical Room
2	Weksler Thermometer 50/550F	Main Electrical Room
10	Treice Thermometer 0/100F	Main Electrical Room



Quantity	Description	Location
4	Trerice Thermometer 50/550F	Main Electrical Room
1	Siemens Control Valve 1" 274-03131	Main Electrical Room
1	Siemens Control Valve 2" 274-03134	Main Electrical Room
11	Brass Temperature Wells (assorted lengths)	Main Electrical Room
3	Stainless Temperature Wells (assorted lengths)	Main Electrical Room
2	Trerice Steam Pressure Gauge 0-300 psi	Main Electrical Room
4	Trerice CHW Pressure Gauge 0-300 psi	Main Electrical Room
4	Steam Pressure Pigtails	Main Electrical Room
8	Yokogawa Steam & CHW Converter Cables	Main Electrical Room
1	Yokogawa Pressure Transmitter 0-200 psi	Main Electrical Room
1	Yokogawa Pressure Transmitter 0-290 psi	Main Electrical Room
1	Yokogawa Meter Transmitter (Head)	Main Electrical Room
1	Yokogawa Temperature Transmitter	Main Electrical Room
1	DP Transmitter for Manhole 18	Main Electrical Room
2	Yokogawa Steam Flow Converter	Main Electrical Room
2	Yokogawa Mag Flow Converter	Main Electrical Room
6	Yokogawa Transmitter Mounting Brackets	Main Electrical Room
1	Yokogawa 6 inch MV Steam Flow Meter	Main Electrical Room
1	Yokogawa 10 inch Mag Flow Meter	Main Electrical Room
1	Yokogawa ADMAG AXF Flow Meter	Main Electrical Room
1	Yokogawa 2 inch MV Steam Flow Meter	Main Electrical Room
2	Maxon Gas Valves for Boilers	Main Electrical Room
3	Hubbell Replacement High Bay Lenses	Main Electrical Room
1	Siemens Load Center 12-24 120/208 VAC MLO Panel	Main Electrical Room
1	ABZ028 Valve Actuator	Main Electrical Room
1	ABZ015 Valve Actuator	Main Electrical Room
1	100 ft of SOOW 6/4 Cable for Temporary Boiler	Main Electrical Room
4	DAMAR 400 watt Metal Halide Ballasts	Main Electrical Room
4	DAMAR 175 watt Metal Halide Ballasts	Main Electrical Room
5	DAMAR Compact Fluorescent Ballasts	Main Electrical Room
5	DAMAR Compact Fluorescent Bulbs	Main Electrical Room
4	DAMAR 400 watt Metal Halide Bulbs	Main Electrical Room
5	DAMAR 175 watt Metal Halide Bulbs	Main Electrical Room
2	Tunnel Light Fixtures	I&E Lab
18	F32T8 Lamps	Main Electrical Room
13	F96T8 Lamps	Main Electrical Room
16	F25T8 Lamps	Main Electrical Room
4	27 watt LED Lamps	Main Electrical Room
3	18 watt LED Lamps	Main Electrical Room
2	5 watt LED Lamps	Main Electrical Room

Quantity	Description	Location
Various	Miscellaneous Electrical Wire sizes and amounts	Main Electrical Room
Various	Miscellaneous Instrumentation Wire sizes and amounts	Main Electrical Room
2	Johnson Controls Pressure Switches	Main Electrical Room
1	Coilhouse 27FC4-M Air Pressure Regulator	Main Electrical Room
6	Pressure Gauge 0-30 psi	I&E Lab
12	Pressure Gauge 0-100 psi	I&E Lab
7	Pressure Gauge 0-160 psi	I&E Lab
17	Pressure Gauge 0-300 psi	I&E Lab
6	Pressure Gauge 0-600 psi	I&E Lab
2	Siemens AEM Micro Server	I&E Lab
2	Mercoid Switches	I&E Lab
Various	Misc. Electrical Switches	I&E Lab
Various	Misc. Electrical Relays	I&E Lab
Various	Misc. Electrical Connectors	I&E Lab
3	United Electric DP Switches	I&E Lab
Quantity	Description	Location
1	Fire-eye Boiler Flame Scanner	I&E Lab
2	Power Supply for Chiller Starters	I&E Lab
1	Power Supply for CX/GX Panels	I&E Lab
1	Boiler Gas Valve Rebuild Kit	I&E Lab
1	Walchem Conductivity Controller & Probe	Main Electrical Room
1	Chiller Flow Switch IFM	I&E Lab
Various	Misc. Breakers	I&E Lab
1	Flow Meter for Water Softeners	I&E Lab
1	Netbiter Temp Data Collection at Customer Bldgs.	I&E Lab
Various	Misc. Fire Alarm Parts	I&E Lab
18	Glass Fuse Holders	I&E Lab
5	Misc. Control Transformers	I&E Lab
3	E-Stop pushbuttons	I&E Lab
Various	Misc. Tunnel Radio Parts	I&E Lab
1	GE 850 Multilin Relay	I&E Lab
1	WEG Propane Pump Motor	Mezzanine
1	Cooling Tower Basin Heater	I&E Lab
8	Gallons - Distilled Water	I&E Office