Utility Usage Reconciliation

Purpose: The purpose of this procedure is to establish the review and reconciliation actions for Medical Center utility usage, to verify that charges and consumption rates are accurate. This includes Electricity, Steam, Water/Sewer, and Natural Gas utilities.

Process: The Building Systems Manager or other appropriate staff shall review utility usage monthly and quarterly for irregularities or errors, by comparing billed usage against building historical usage data and/or VUMC owned meters.

Utility Infrastructure

A. Electricity
   1. Main Campus
      a. VUMC is billed from Vanderbilt University monthly for electrical usage based on 8 main electric meters owned by Vanderbilt University; meters B-305, B-16, B-26 feeding the VUH South Vault, meters B-12, B-22, B-302 feeding the MCN North Vault, and meters B-15 and B-25 feeding the MRB-4 Vault.
      b. VUMC has 7 electric meters along with one Eaton IQ Analyzer that are used to reconcile the billed electrical usage with the VU revenue meters. These meters are identified as Meters B-41 and B-31 along with an IQ Analyzer in the MCN North Vault; Meters HS-1, HS-2 and HS-3 in the VUH South Vault; and Meters B-15 and B-25 in the MRB-4 Vault.
      c. In addition to the revenue meters, there are several deduct meters that are fed from VUMC buildings. The usage of these meters is subtracted from the 8 main VU revenue meters to establish the billed usage.
   2. Off-Campus
      a. Electricity for the following buildings is billed directly from Nashville Electric Service: Dayani Center, Crystal Terrace, 100 Oaks and 3326 Briley Park.
      b. Electricity for the following buildings is billed directly from Middle Tennessee Electric: Medcore Building, Franklin Walk-in Clinic, VICC Franklin, Franklin Bone & Joint Clinic, Franklin Bone & Joint Surgery, Franklin Women’s Center and 324 Cool Springs.

B. Steam
   1. Vanderbilt University provides all steam used by Vanderbilt University Medical Center. The VUMC usage is derived by subtracting Vanderbilt University individual building steam meters from 5 main line meters located at the VU Power House.
   2. VUMC is in the process of installing steam meters at each service entrance to the Medical Center. This work is expected to be complete in 2019 and will provide
VUMC with the ability to reconcile our measured usage with the billed usage from the University.
3. Both VUMC and VU capture steam usage trends on 5-minute increments.

C. Water and Sewer
   1. Water meters at each individual building, both on campus and off campus, are read by the utility provider. This utility is provided by either Metro Water or the City of Franklin.

D. Natural Gas
   1. Natural gas used on the main campus is currently metered at 9 property entrance locations and is distributed throughout the campus from these locations. All gas used on the main campus is provided by Piedmont Natural Gas.
   2. Natural gas used at our off-campus facilities is provided by either Piedmont Natural Gas or by Atmos Energy. Each building contains its' own gas meter and is read monthly by the utility provider.

Utility Review and Reconciliation

A. Monthly Utility Review
   1. The following utilities will be reviewed each month by the Building Systems Manager or other appropriate staff, to confirm reasonable equality between the billed usage and the usage measured by VUMC meters. The review will also confirm that the utility rates charged by Vanderbilt University are reasonable when compared to other Middle Tennessee utility providers. Both historical and weather data may also be used to validate accuracy of the billed usage. It is understood that consideration must be given to meter accuracy when comparing usage from multiple meter readings.
      a. Electricity purchased from Vanderbilt University
      b. Steam purchased from Vanderbilt University
      c. Natural Gas used at 100 Oaks
      d. Electrical usage of one random satellite facility.
   2. VUMC Facilities Management Assistant Manager for Finance will conduct a monthly review of 25% of 3rd Party Utility invoices to test for accuracy and any incorrect other charges. Invoices reviewed will be signed and saved on the Document Server and any charge issues will be sent to the Vice President for Facilities Management and Disbursement Manager for review with the solutions identified and completion date.
   3. The Building Systems Manager will provide signature and date of reviewed utility usage statements and submit to the Facilities Management office and saved on the Documentation Server for documentation of review completion.
   4. Should discrepancies or irregularities be found, the Building Systems Manager will notify the Vice President of Facilities Management and the Assistant Director of
Facilities Management and will work with internal and external resources to
determine the cause of the discrepancy.
5. Once the cause of the discrepancy has been identified, the corrective actions or
   explanation of the error will be documented and provided to the Assistant Director of
   Facilities Management for record purposes.

B. Quarterly Utility Review
1. The following utilities will be reviewed once each quarter by the Building Systems
   Manager or other appropriate staff for accuracy compared to historical usage.
   a. Main campus building water/sewer usage.
   b. Water usage of one random satellite facility.
   c. Natural Gas used at one random main campus meter.
2. The Building Systems Manager will provide signature and date of reviewed utility
   usage statements and submit to the Facilities Management office and saved on the
   Documentation Server for documentation of review completion.
3. Should discrepancies or irregularities be found, the Building Systems Manager will
   notify the Vice President of Facilities Management and the Senior Director of
   Facilities Management and will work with internal and external resources to
determine the cause of the discrepancy.
4. Once the cause of the discrepancy has been identified, the corrective actions or
   explanation of the error will be documented and provided to the Assistant Director of
   Facilities Management for record purposes.

Lead Author and Content Experts:

Lead Author: Mike Gable – Building Systems Manager
Reviewed By: Gary Streayt – Vice President of Facilities Management
Reviewed By: David Banks – Assistant Director of Facilities Management

Public Utility Account Information:

Metro Water website - https://mwsonline.nashville.gov/jwr/user/login.seam
Piedmont Natural Gas website -
http://piedmontng.com/youraccount/onlineservices/home.aspx
Atmos Energy website -
https://www.atmosenergy.com/accountcenter/logon/login.html
City of Franklin website -
Nashville Electric Service website - https://www.nespower.com/
Middle Tennessee Electric website - https://www.mtemc.com/