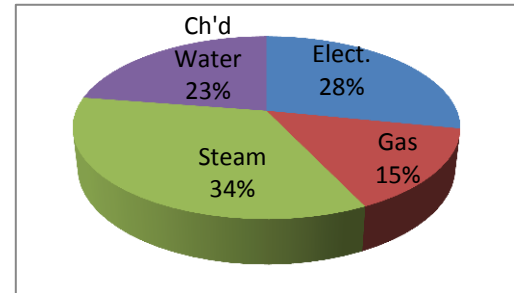


FY 2018 – 2nd Quarter Energy Report

TTUHSC buildings consumed 57 kBtu/sf in the 2nd quarter, which is expected to meet our institutional goal of keeping energy utilization index (EUI) value of less than 240 kBtu/sf/yr. Water consumption intensity for the 2nd quarter was 4 Gal/sf, which is within the limits of SECO (State Energy Conservation Office) water conservation guidelines.

Campus Energy Use (kBtu/Sq ft): December – February

Utility	FY18 Actual	FY17 Actual	Change
Electricity	16.01	16.03	-0.10%
Natural Gas	8.43	8.62	-2.16%
Steam	19.68	20.48	-3.89%
Chilled Water	12.86	11.44	12.39%
Total	56.99	56.57	.74%



- In the 2nd quarter FY 2018, average Cooling Degree Days (CDD) and Heating Degree Days (HDD) were 4 and 1,966 respectively, as compared to 9 and 1,701 respectively in the 2nd quarter FY 2017.
- Due to the implementation of energy conservation projects, employee awareness program, and building equipment operational improvements, the energy utilization index has continuously decreased the last 5 years.
- We have secured a long term electricity contract thru Tradition Energy, to serve the buildings in Permian Basin and Abilene areas. Lubbock, Power & Light, and XCEL Energy have the sole authority to provide electricity to serve buildings in Lubbock and Amarillo areas respectively. TTU central plant provides steam, and chilled water to the HSC buildings in the main campus. ATMOS provides natural gas at all locations.
- We have completed the retrofit of three air handling units. Each unit has new modular fans, variable frequency drives, pressure independent chilled water control valve, steam heating, and DDC control system. Plans are to continue with the retrofit of older air handling units at the Lubbock campus.
- ESL of Texas A&M completed an energy assessment and energy simulation of the main building. The report indicates significant savings are achievable by upgrading air terminal boxes to DDC variable air volume boxes.
- We are continuing the replacement of fluorescent T8 tubes and associated ballasts with LED T8 tubes, in the hallways, and equipment spaces. This will reduce electricity consumption, and provide better illumination.
- Plans are underway to replace 150 HID fixtures with LED fixtures in the main campus parking lots. This will improve illumination, light quality, color rendering, and reduce power consumption.
- New energy efficient LED lights are being tested for performance and reliability. We select products from manufacturers with less than 1% failure rate and no significant depreciation in illumination.
- We continue to review the design documents and product submittals for the new building construction projects, to ensure compliance with ASHARE 90.1-2010 energy code, and other applicable code requirements & project specifications. Some equipment is being selected based on life-cycle cost analysis.
- Total miles driven by vehicles in the 2nd quarter FY2018 have increased by 17.91% (or 22,217 miles) as compared to the 2nd quarter FY2017. Total fuel cost for the quarter has also increased by 26.78% (or \$3,625.44) due to rising gasoline costs and more trips taken.
- We work with operation and maintenance departments to improve control parameters, equipment conditions, and identify projects and measures for the campus energy conservation.
- We have prepared energy design guidelines for the new construction and renovation projects.

