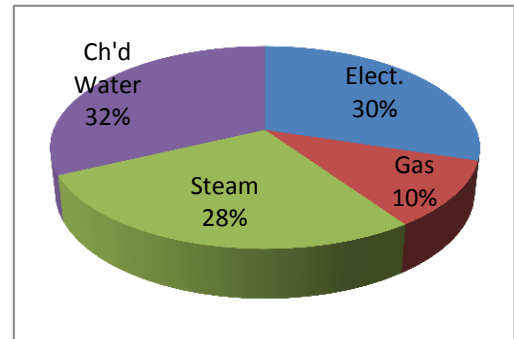


## **FY 2018 – 3<sup>rd</sup> Quarter Energy Report**

TTUHSC buildings consumed 55 kBtu/sf in the 3<sup>rd</sup> quarter, which is expected to meet the institutional goal of keeping energy utilization index (EUI) value of less than 240 kBtu/sf/yr. Water consumption intensity for the 3<sup>rd</sup> quarter was 5.6 Gal/sf, which is within the limits of State Energy Conservation Office water conservation guidelines.

### **Campus Energy Use (kBtu/Sq ft): March – May**

Utility	FY18 Actual	FY17 Actual	Change
Electricity	16.34	16.03	1.91%
Natural Gas	5.79	6.00	-3.51%
Steam	15.11	13.23	14.18%
Chilled Water	17.55	16.70	5.09%
<b>Total</b>	<b>54.78</b>	<b>51.96</b>	<b>5.43%</b>



- In the 3<sup>rd</sup> quarter FY 2018, average Cooling Degree Days (CDD) and Heating Degree Days (HDD) were 505 and 478 respectively, as compared to 264 and 435 respectively in the 3<sup>rd</sup> quarter FY 2017.
- Due to the implementation of energy conservation projects, employee awareness, management support, and building equipment operational improvements, the energy utilization index has continuously decreased and is one of the lowest among all health related institutions in Texas.
- Engineering Services has secured a long term electricity contract 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.
- Facilities has, as of 3<sup>rd</sup> quarter, refurbished five air handling units (AHUs). Each unit has new modular fans, variable frequency drives, a pressure independent chilled water control valve, steam heating, and a new control system. The current plan is to continue with the refurbishment / retrofit of older AHUs at the Lubbock campus.
- Facilities also has plans in place to retrofit existing AHUs with new BACnet BTL listed control systems and components. Five units have been identified at present, and are in process at one stage or another.
- Engineering Services has installed a parallel fan powered variable volume box for test and evaluation purposes. This is expected to save energy and improve indoor air quality and thermal conditioning of the space.
- Facilities have replaced a significant number of fluorescent T8 tubes and associated ballasts with LED T8 tubes, particularly in the hallways and equipment spaces (24/7 operation areas). Reduced electricity consumption and better illumination has been achieved.
- 52 HID fixtures were replaced with LED fixtures in the Lubbock campus parking lots. This has improved illumination, light quality, and color rendering, all while reducing power consumption.
- Engineering Services continues 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.
- Total miles driven by vehicles in the 3<sup>rd</sup> quarter FY2018 has increased by 22.44% (or 33,706 miles) as compared to the 3<sup>rd</sup> quarter FY2017. Total fuel cost for the quarter has also increased by 42.51% (or \$7,489.58) due to rising gasoline costs and more trips taken.
- Engineering Services continues to work with operation and maintenance departments to improve control parameters, equipment conditions, and identify projects and measures for the campus energy conservation.

