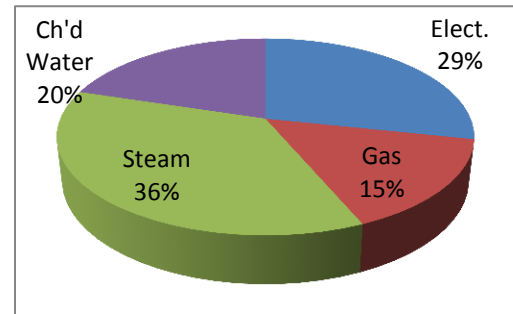


## FY 2017 – 2<sup>nd</sup> Quarter Energy Report

TTUHSC buildings consumed 57 kBtu/sf in the 2<sup>nd</sup> Quarter, which is expected to meet our institutional goal of keeping energy utilization index (EUI) value in the range of 226 and 289 kBtu/sf/yr. Water consumption intensity for the 2<sup>nd</sup> quarter was 4.1 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	FY17 Actual	FY16 Actual	Change
Electricity	16.03	15.87	1.04%
Natural Gas	8.62	8.47	1.73%
Steam	20.48	22.93	-10.69%
Chilled Water	11.44	14.02	-18.43%
<b>Total</b>	<b>56.57</b>	<b>61.29</b>	<b>-7.70%</b>



- In 2<sup>nd</sup> Quarter FY 2017, Cooling Degree Days (CDD) increased by 86%, and Heating Degree Days (HDD) decreased by 6%, as compared to 2<sup>nd</sup> Quarter FY 2016.
- 'EPA Portfolio Manager - Energy Data' is being updated on monthly basis. State Energy Conservation Office (SECO) has real time access to the data.
- We are continuing with the electricity contract thru Tradition Energy to serve the buildings in Permian Basin and Abilene areas. Lubbock, Power & Light, and XCEL Energy provide electricity to serve buildings in Lubbock and Amarillo areas respectively. ATMOS provides natural gas at all locations.
- We have obtained bids to replace two chillers which use R-22 refrigerant. The new air cooled scroll chillers will have R-410A refrigerant, high part load efficiency, and lowest available life cycle cost.
- We are continuing with installation of (500) 22W LED T8 tubes for lighting retrofit. The plan is to procure more of these LED tubes which will reduce electric consumption, and provide better illumination.
- We have completed replacement of one air handling unit. Another unit is being replaced in the Lubbock HSC building. The new AHUs have multiple fans, VFDs, pressure independent chilled water control valves, steam heating, and DDC control system.
- Parking lot light HID fixtures are being replaced by new LED fixtures to improve light quality, and reduce power consumption. A total of 27 LED fixtures have been procured.
- Occupancy sensors for automatic lighting control are being implemented through maintenance, new construction and renovation projects.
- New energy efficient LED lights are being tested for performance and reliability since FY2010. As of date, the failure rate is 5%, and no significant depreciation in illumination.
- We have reviewed the design documents of six new building construction projects, to ensure compliance with ASHARE 90.1-2010 energy code, and other applicable engineering standards and codes.
- Total miles driven by vehicles in 2<sup>nd</sup> Quarter FY2017 have slightly increased by .22% (or 270 miles) as compared to 2<sup>nd</sup> Quarter FY2016. Total fuel cost for the quarter has also increased by 21% (or \$2,335.11) due to rising gasoline costs.
- We work with operations groups to improve control logics, equipment conditions, identify projects and measures for the campus energy conservation. Projects are being implemented based on acceptable payback period, and availability of funding.

