

Testimony House Energy and Utilities Committee Jim Modig, Director KU Office of Design and Construction Management February 15, 2012

A general overview of the campus utilities, the main campus has a central steam plant that provides steam service through 16,000 L ft. of tunnels. Many of the buildings have steam meters. In some cases, the steam service needs to be prorated to provide estimated utility usage. On west campus there is a new steam plant that initially serves only a couple buildings. The electrical and water service is a University distributed utility. Every building has an electrical meter and most buildings have water meters. Natural gas is provided by a private vendor and each building that has gas is metered. The campus consists of 1,000 acres, 200 buildings, over 9 million square feet and an average age of the facilities is 45 years.

The University has undergone two energy performance contracts. The first contract was completed in approximately 2008 and performed \$10 million in energy conservation improvements and leveraged \$8 million in excess savings for deferred maintenance. In 2010 KU entered into a second energy performance contract to implement \$25 million in energy conservation improvements. The latest round of energy conservation improvements was completed in September 2011.

In 2007 the University adopted an energy design policy for all new buildings and major renovations. The University requires architects and engineers to design the new facilities to meet ASHRAE 90.1 plus a 30% improvement. Facilities like the New School of Pharmacy, the Edwards Campus Business, Engineering, Science and Technology (BEST) building and GSP Residence Hall Renovation were designed to meet this standard. The end result will be facilities that will significantly perform below national average energy usage.

Utilizing the actual meter readings and pro-rated utility consumption, the audit was prepared comparing 2010 KU building use to national averages from the U.S Energy Information Administration's Commercial Buildings Energy Consumption Survey which includes non-commercial building types. Some of the facilities on campus are unique and finding comparable facilities is a little difficult at times. One example would be the Library Annex. This facility has a high level of temperature and humidity controls in a high bay storage unit for books. This is not your typical library facility. From the audit, 28 out of 40 buildings (70%) of the buildings performed very well, performing below national average energy usage. Of the 12 buildings that exhibited higher than national average energy usage four of the buildings received the energy conservation improvements after the June 2011 reporting period. The relatively small number of buildings with high energy usage based on this audit (part 1 of 5 on a five-year cycle) will make it easier to follow-up in determining whether the higher energy usage for these buildings was attributable to data and methodology limitations or whether it actually reflected under-performing buildings, and if so, to focus resources on corrective actions as appropriate.

Please accept my apology for the delay in submitting this information to the Committee.

HOUSE ENERGY AND UTILITIES

Design and Construction Management

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