TEXAS TECH UNIVERSITY
HEALTH SCIENCES CENTER™

April 1, 2009

Ms. Donna Geiger
Office of the Governor
1100 San Jacinto
Austin, Texas 78701

Mr. John O'Brien
Deputy Director
Legislative Budget Board (LBB)
Robert E. Johnson Bldg. – 5th Floor
1501 North Congress
Austin, Texas 78701

RE: RP-49, FY 2009 – 2nd Quarter Update

The Texas Tech University Health Sciences Center (TTUHSC) Energy Savings Update is being submitted in accordance with Governor's Executive Order, RP 49, Electric Conservation by State Agencies. TTUHSC continues to promote energy conservation measures and strategies and seek new ideas to reduce consumption and improve building system efficiencies.

A. Energy Consumption & Goals

Attached is Exhibit I where our 2nd Quarter FY2009 consumption breakdowns can be found. Exhibit I also includes previous quarters, overall totals for each utility and energy equivalents to facilitate comparisons between quarters and annual totals.

Additionally, Table I (Page 2) shows a breakdown for each type of utility in kBtu per square foot. The energy units were converted to kBtu to allow for comparisons of the various energy forms and then divided by the appropriate campus square footage to obtain an energy utilization index in kBtu/square foot. A negative % change indicates a decrease in consumption, while a positive number indicates an increase compared to the previous year.

In the 2nd Quarter FY2009, the campus consumed 62.53 kBtu/sq ft, an increase of 11.01% compared to the 2nd Quarter FY2008. Increase in consumption is mainly due to addition of an energy intensive research building in Amarillo. However, chilled water consumption per square foot has decreased by more than 5% as compared to the 2nd Quarter FY2008. Our overall institutional goal is to reduce our energy utilization index by 2.5% for the period from FY2009 to FY2013, with the base being FY2008.

Table I: Campus Energy Use (kBtu/Sq ft): December - February

Utility	FY08 Actual	FY09 Actual	% Change
Electricity	15.21	17.63	15.91 %
Nat. Gas	12.31	15.50	25.91 %
Steam	17.96	19.16	06.68 %
Chilled Water	10.85	10.24	- 05.62 %
Total	56.33	62.53	11.01 %

Refer attached 'EXHIBIT 1' for further details of campus energy use.

B. Current Energy Reduction Plans

Texas Tech University Health Sciences Center has identified the following tactics and measures for potential consideration in reducing the campus energy consumption. Projects will be prioritized based on a variety of factors including return on investment, cost and availability of funding. The successful implementation and funding of these and other projects will form the basis of the energy reduction goal of 2.5% per year reduction in energy utilization index for the period of FY2009 through FY2013. Below is a partial list and status of ongoing projects that are currently being evaluated.

1. Installation of pressure independent control valves for chilled water flow control to the air handling unit. *Pending funding approval*
2. Complete installation of occupancy sensors for lighting control, and vending machine operation. *Pending funding approval.*
3. Lighting retrofit to install new energy efficient and environmental friendly electronic ballast and T8 fluorescent lamps, to comply with the lighting power density requirement of the state energy code. *Pending funding approval.*
4. Installation of a dual duct air distribution system for TTU Health Sciences Center at El Paso to operate the air handling units according to the design intent. *Pending funding approval.*
5. Develop insulation replacement project to identify and replace damaged, missing, or inadequate insulation. *Contract awarded. Project in progress.*
6. Operational improvements such as implementation of Computer Maintenance Management System to track maintenance work and improvements. *Project in implementation phase.*
7. Mechanical system analysis and design to reduce energy consumption at the Medical Science Building, El Paso. *Project in implementation stage.*

C. Future Energy Reduction Plans

TTUHSC has identified various energy conservation projects which are projected to cost about $3,844,470 with an estimated payback of less than 8 years. The details of which are included in the 'Resource Efficiency Plan' in accordance with 34 TAC, Chapter 19.

D. Fuel Consumption Reduction Plans

TTUHSC continues to emphasize energy conservation awareness with strategies such as regular preventative maintenance, and an emphasis on tire pressure and conditions to gain economies. In the 2nd Quarter FY2009, the total miles driven is up by 13%, and the cost per gallon of fuel is down by 40% as compared to the 2nd Quarter FY2008. But the total miles driven in the 2nd Quarter FY2009 has reduced by 8% as compared to 1st Quarter FY2009.

Your consideration of this update and information is appreciated.

Sincerely,

George G. Morales, P.E.
Assistant Vice-President for Physical Plant & Support Services

Enclosure: EXHIBIT 1

XC:

1. Elmo Cavin
   Executive Vice-President of Finance & Administration

2. Director, State Energy Conservation Office
   Comptroller of Public Accounts
   111 E. 17th Street, Suite 1114, Austin, Texas 78774

EXHIBIT I

FY2008 ACTUAL ENERGY CONSUMPTION

ENERGY	1st Quarter FY 2008	2nd Quarter FY 2008	3rd Quarter FY 2008	4th Quarter FY 2008	Total FY 2008
ELECTRICITY, kwh	11,236,578	10,336,536	11,375,239	14,539,907	47,488,260
NATURAL GAS, ccf	185,272	277,589	164,918	143,333	771,112
STEAM, mlb	21,643	37,072	25,011	15,170	98,896
CHILLED WATER, tn-hr	2,745,312	2,095,668	2,470,362	4,033,161	11,344,503
THERMAL ENERGY*, mbtu	57,248,721	66,779,670	57,732,034	65,434,213	247,194,637
ENERGY EQUIVALENT, (mbtu)	114,645,138	130,594,461	113,509,302	129,793,501	488,542,402

*Natural Gas is used to produce the Thermal Energies of Steam and Chilled Water

FY2009 ACTUAL ENERGY CONSUMPTION

ENERGY	1st Quarter FY 2009	2nd Quarter FY 2009	3rd Quarter FY 2009	4th Quarter FY 2009	Total FY 2009
ELECTRICITY, kwh	12,332,590	11,993,848			24,326,438
NATURAL GAS, ccf	195,297	350,110			545,407
STEAM, mlb	22,840	39,612			62,451
CHILLED WATER, tn-hr	2,359,557	1,980,452			4,340,009
THERMAL ENERGY*, mbtu	53,963,521	68,249,329			122,212,851
ENERGY EQUIVALENT, (mbtu)	116,131,174	145,175,663	0	0	261,306,837

*Natural Gas is used to produce the Thermal Energies of Steam and Chilled Water