



3410 Taft Boulevard, Wichita Falls, Texas 76308-2099
Office: (940) 397-4648 Fax (940) 397-4859

Memorandum

Date: October 31, 2018
To: State Energy Conservation Office
From: Kyle Owen
Subject: Energy and Water Management Plan Update
Re: Midwestern State University's Strategic Management Master Plan Update, 2017-2022

Midwestern State University (MSU) provided an energy management master plan to the LBB in November 2012 in compliance with Executive Order RP 49 and updated the plan in a submission to the LBB in October 2017. A yearly status report is to be submitted to SECO so the following update to energy conservation strategies listed in section G of the 2017-2022 Master Plan (included in this email for reference) are listed for your use:

1. Continuous self-commissioning: Monthly reviews of energy consumption data has continued and has resulted in reviews of various meters. Currently investigating the replacement of BTU meters for the student center stemming from its data analysis.
2. Education and Behavior Modification: Continue efforts to educate personnel and students on the need to turn off lights when rooms are not in use and set dorm thermostats at reasonable values, particularly through email postmaster releases.
3. Building System Evaluation: The following items were investigated or corrected this past year:
 - In the spring of 2018, an independent contractor, 5 Energy, reviewed MSU's peak demand data, performed load analytics, and reviewed power factor correction needs. Recommendations were minor, but assisted with our understanding of our peak demand periods.
 - A failed lighting system in our Rec Center is being tied into the existing campus energy management control system for more reliable control.
 - Construction of a new health sciences and human services building includes all modern energy efficient equipment/systems including batt insulation at all exterior

walls, continuous Polyiso board at all exterior walls and the roof, thermally broken curtain wall systems with a low solar heat gain coefficient and low U-value, entire lighting package consists of all LED lights, fan coil units connected to campus chilled water to cool electric room and data rooms, fan static reset and supply air temperature reset control loops to each AHU to minimize fan energy and reduce chilled water demand, and condensing boiler for comfort heating and VFDs for each pump to optimize flow.

- We continued efforts to replace compact fluorescent bulbs with LEDs when they burn out in two campus buildings: Dillard and D. L. Ligon's Football Locker Room.
 - Replacing halogen exterior security lighting with LED when they burn out.
 - Will be replacing several motor starters in older buildings in the next several months to ensure the safe operation of these electrical systems.
4. The SECO LoanSTAR Energy Conservation Project and the FY2017-FY2022 Strategic Energy Management master plan stated MSU had a goal of an additional 2% reduction in energy consumption over each of the next five years. For FY18 compared to FY17, MSU observed a 0.9% reduction in electricity usage, a 2.8% increase in gas usage, and a 1.0% increase in water usage. For FY18 compared to FY12, MSU observed a 4.4% increase in electricity usage, an 8.3% reduction in gas usage, and a 51.2% reduction in water usage. It should be noted that MSU added ~1% more square footage between FY12 and FY18.