

LET'S SAVE ENERGY

School Energy Efficiency News

KSBA-SEMP ... Cultivating energy efficiency, best practices in Kentucky school districts



September 2017

Annual utility reporting shows continued energy reduction and savings

The partnership KSBA has with Louisville Gas & Electric, Kentucky Utilities Company and Kentucky Power Company requires annual reports to monitor the progress for the one-of-a-kind grant from each company. Annual reports covering FY2017 were submitted by KSBA-SEMP on August 15.

Each grant continues to show participating school districts reducing demand (kW) and energy (kWh). As a district improves its energy efficiency, it becomes more difficult to continue to improve. However, there are districts that have developed energy projects or initiatives to generate further reductions.

"These are more of a pay-for-performance grant," describes Jon Nipple, SEMP project manager. "It is a win for the school district's budget to reduce demand and energy, as well as a benefit to the utility company to reduce the 'load,' thereby delaying the future construction of expensive power plants."



Reporting is made annually to utility partners.

KU FY2017 Annual Report

Compared with the FY2010 baseline, the KU districts achieved the following:

- August Demand Reduction (14.9%)
- January Demand Reduction (12.3%)
- Summer Energy Reduction (15.2%)
- Winter Energy Reduction (12.9%)

LG&E FY2017 Annual Report

Compared with the FY2010 baseline, the LG&E districts achieved the following:

- August Demand Reduction (10.5%)
- January Demand Reduction (3.5%)
- Summer Energy Reduction (6.9%)
- Winter Energy Reduction (10.5%)

Kentucky Power Company (KPC) FY2017 Annual Report

Compared with the FY2015 baseline, the KPC districts achieved the following:

- Summer Demand Reduction (9.56%)
- Winter Demand Reduction (13.72%)
- Total Energy Reduction (9.66%)

As Kentucky schools continue to deal with the reductions in education funding, energy efficiency is an expense for which reductions can be found, when properly managed.

Why energy management, if there's no funding?

Morgan County Schools find a reason

Many stories in Let's Save Energy are about districts that receive funding to make utility efficiency improvements from the electric provider. While the goal of KSBA-SEMP is to identify a level of funding for all districts, that is difficult to secure.

This does not mean districts that don't have access to these kinds of funds should have no interest in energy management. School energy costs should be a top priority for all, as it this can be a managed expense.

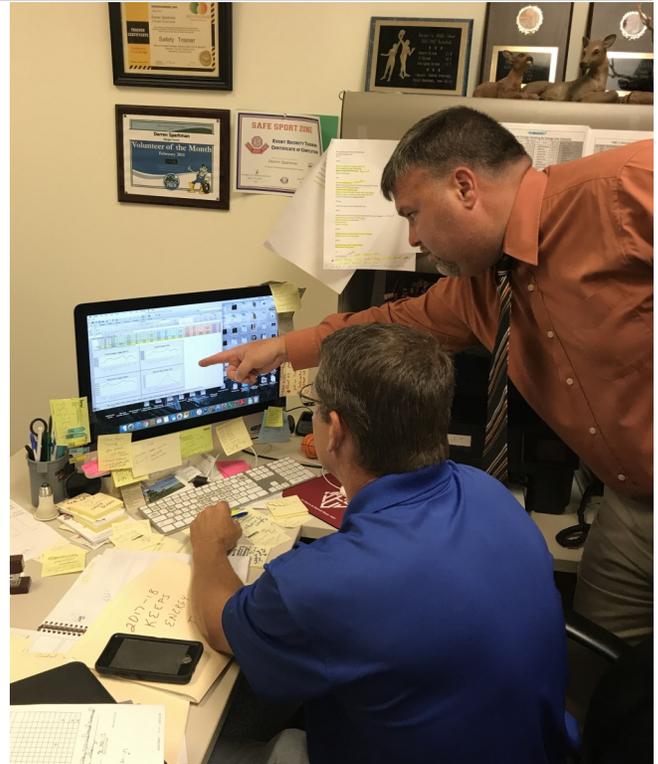
When this effort began in 2010, a few significant, and quick to accomplish, opportunities were uncovered. A few include:

- *Correcting HVAC control systems that were running 24/7/365, meant a monthly saving of \$2,500/month, per school.*
- *Correcting utility billing to remove state sales tax meant a savings of \$6,500/annually for one school.*
- *Ensuring that control systems are working properly and updating lighting where possible – and involving students and staff – could have an estimated 10 percent impact on energy reduction.*

Morgan County Schools has not had access to funding from utilities to make energy efficiency improvements, but that did not stop Facilities Director Darren Sparkman, from participating in training from KSBA-SEMP. It was a challenge for him to attend this training because his other responsibilities included safety, health, construction projects and middle school athletics.

After attending regional training in Morehead in 2012, Sparkman left the session with the goal of reducing energy consumption and costs in his district, where energy use was significantly above the state average energy utilization index (EUI) of 65. "We saw this as a way to free up monies that were being spent on utility costs for use on needs of our students and staff in the classroom," Sparkman said.

District efforts started paying off, and in 2014 the district EUI was in the low 60's



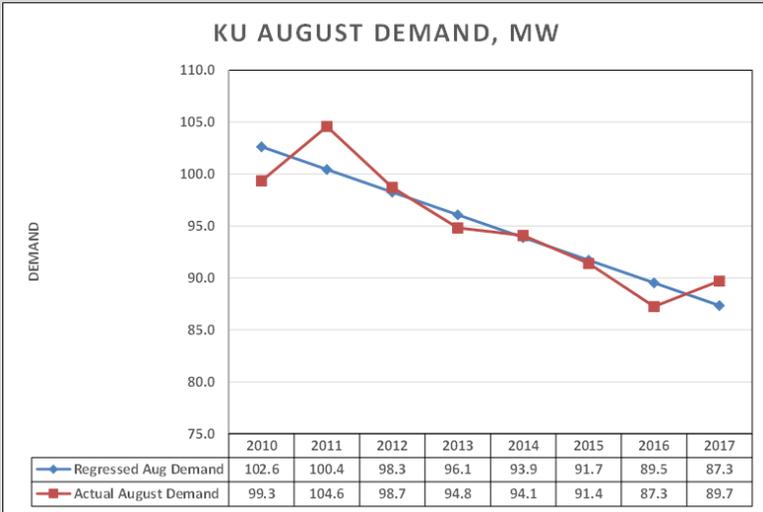
Morgan County Schools Facilities Director, Darren Sparkman, and Superintendent, Dr. Thomas Potter, review the annual energy reporting.

and gaining on the statewide EUI that had continued to drop to 60. The cumulative consumption savings at that point was over \$500,000.

The district had done everything it could to reduce energy consumption but still had to address HVAC, plumbing and lighting upgrades that were desperately needed in four of the six schools. "In the summer of 2016, we began a guaranteed energy savings contract (aka performance contract) in four of our six schools buildings which addressed our critical needs," said Sparkman. The projects were completed in about six months, with a \$107,000 guarantee of additional energy savings.

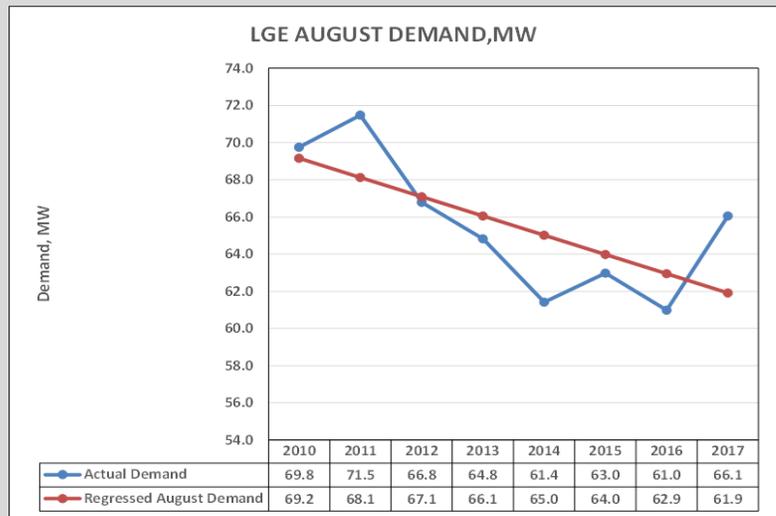
Now, five of the district's six schools are labeled as ENERGY STAR, and Sparkman encourages other districts to, "look at all options in dealing with school energy management issues."

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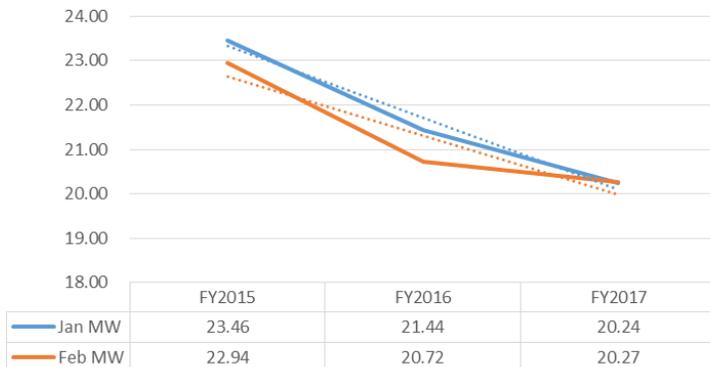


The August reduction is particularly significant as LG&E-KU is a summer- peaking utility. Of the 78 districts receiving KU electric service, 40 districts now have district-wide energy use intensity (EUI) measures of less than 50.

Like the KU-supplied districts, the August reduction is particularly significant as LG&E-KU also is a summer-peaking utility. Of the six districts receiving LG&E electric service, four districts have a district-wide EUI of less than 50kbtu/sf/yr.



KPC - Winter Demand



The Winter Demand reduction is particularly significant as Kentucky Power Company is a winter-peaking utility. Districts show a 13.72 percent reduction in January Demand and an 11.66 percent reduction in February Demand from FY2015 to FY2017. Of the 17 districts receiving KPC electric service, five districts have a district-wide EUI less than 50kbtu/sf/yr.