

SCHOOL ENERGY MANAGERS PROJECT

Kentucky Board of Education

December 6, 2017

Ron Willhite, Director

Kentucky School Boards Association-School Energy Managers Project



School Energy Managers Project

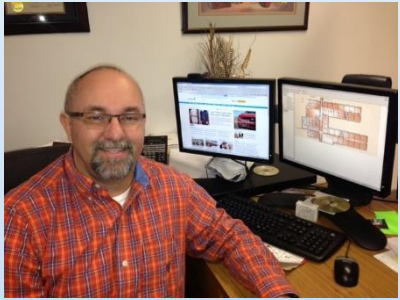
- Originated March 2010
- Federal Funding - \$5 Million – FY2010 to FY2012
- Energy Cabinet - \$800,000 - FY2013 to FY2016
- Utility DSM Funding - \$4.4 Million - FY2014 forward



Energy Manager

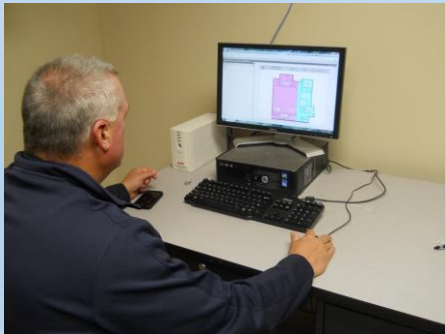
- Dedicated Resource

- No Priority Shuffling – Boots on the Ground
- Significant ROI (NON Classroom Position Saves Multiple Classroom Positions)
- Knowledgeable Connection to Utility Companies



- Skilled Resource

- Evaluates and Presents Energy Saving Options
- Facilitates Policy Compliance
- Translates Technical Information



KSBA Functions

- Funding & Technical Support
- Energy Manager Training
- Utility Billing and Service Issues
- Data Tracking and Reporting Assistance
- Stakeholder Collaboration
- Rate Case Intervention



KSBA - SEMP Message

Best Fuel Source – Energy Efficiency

- Doesn't Require New Technology
- Can Do It Today
- Reduces Greenhouse Gas
- Lowers Cost

What have schools done

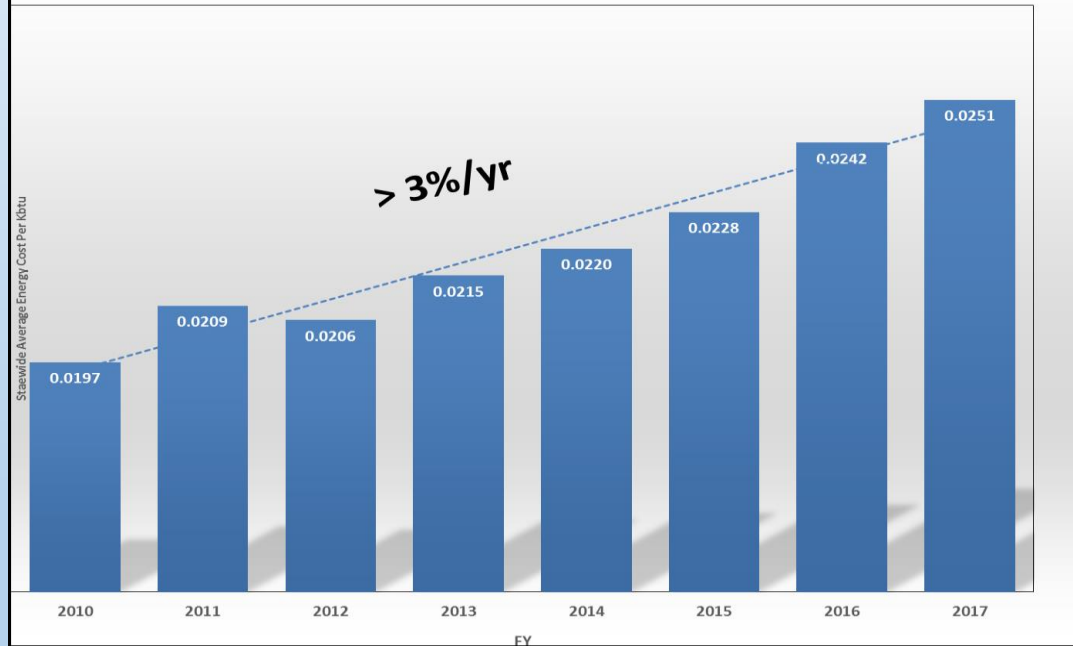
- Employed Energy Managers
- Facility & Operation Audits
- Behavior - Staff/Student Involvement
- Implemented Efficiency Measures
 - Adjusted HVAC temperature set points
 - Incorporated HVAC temperature set backs
 - Building Automation Systems
 - Equipment Upgrades
 - Lighting Retrofits
- Performance Contracts



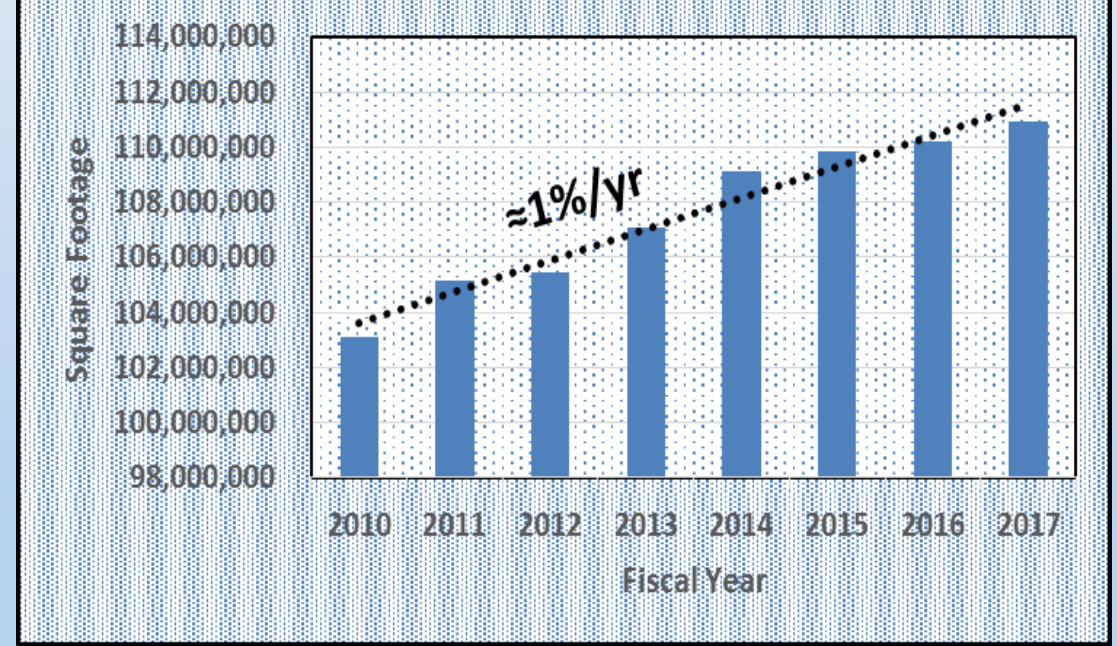
ANNUAL SCHOOL ENERGY REPORT

UTILITY COSTS AND SPACE INCREASES

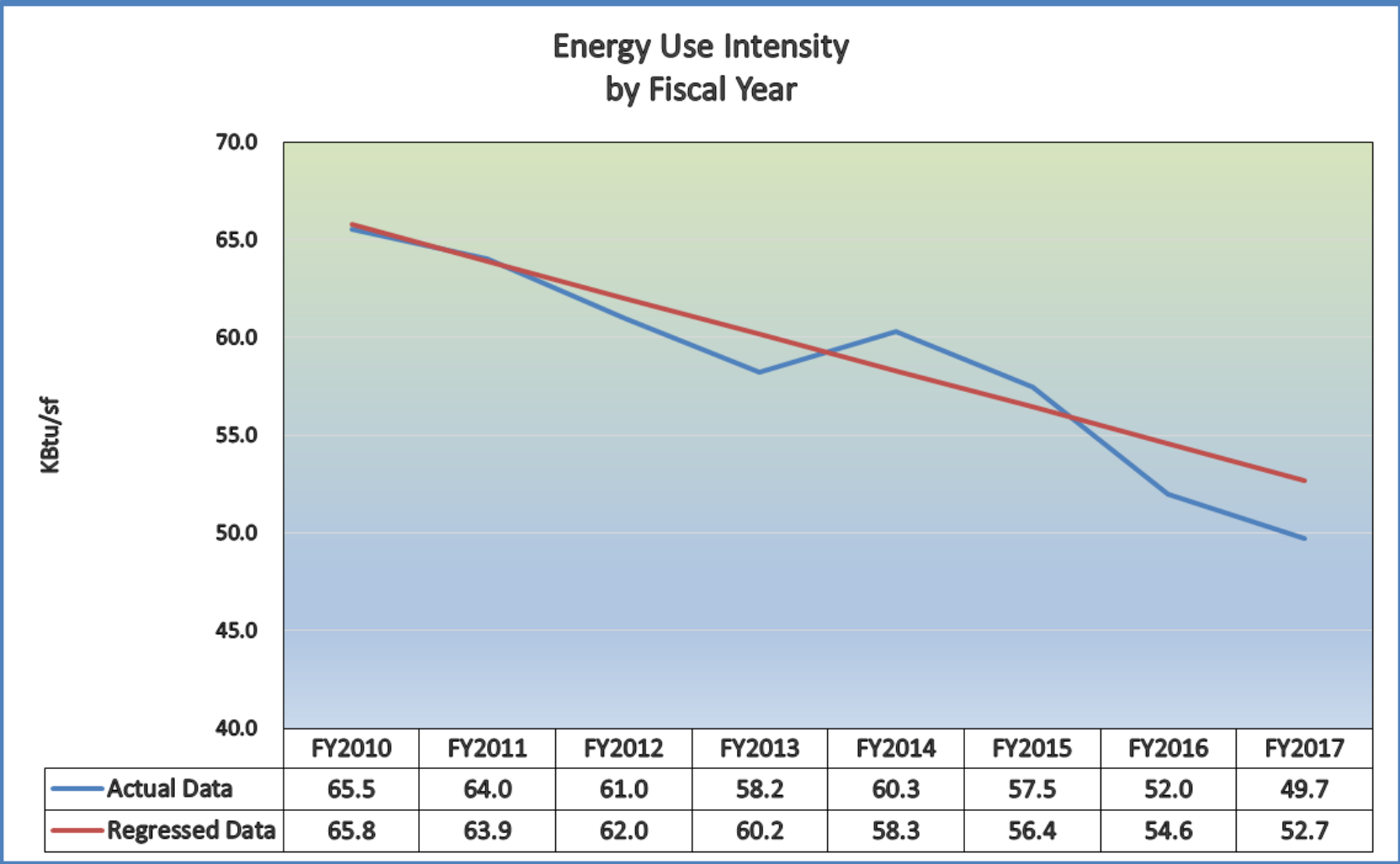
Figure 4, Cost of School Energy per KBtu by Fiscal Year



Conditioned Square Footage



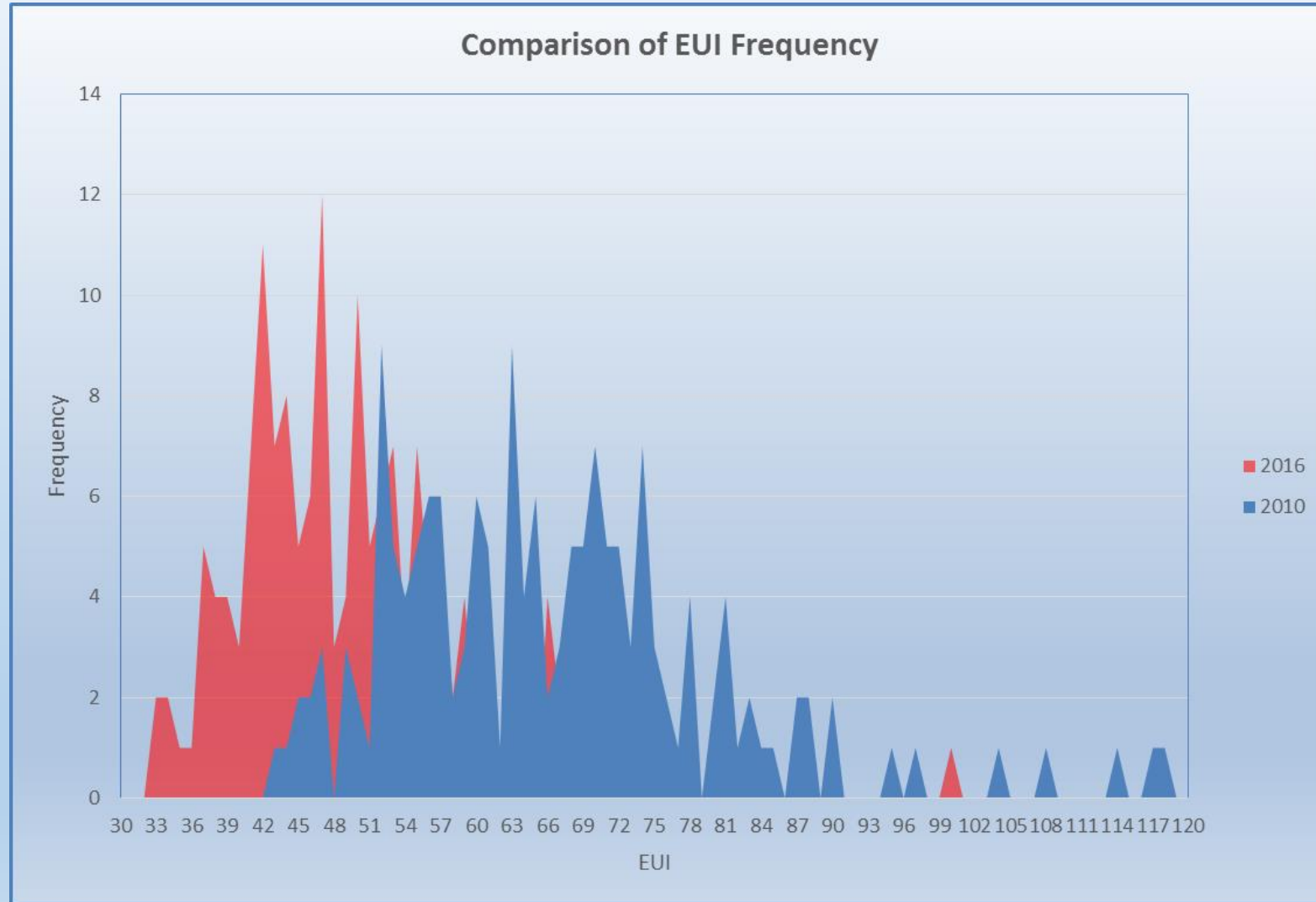
DISTRICTS BECOMING MORE EFFICIENT



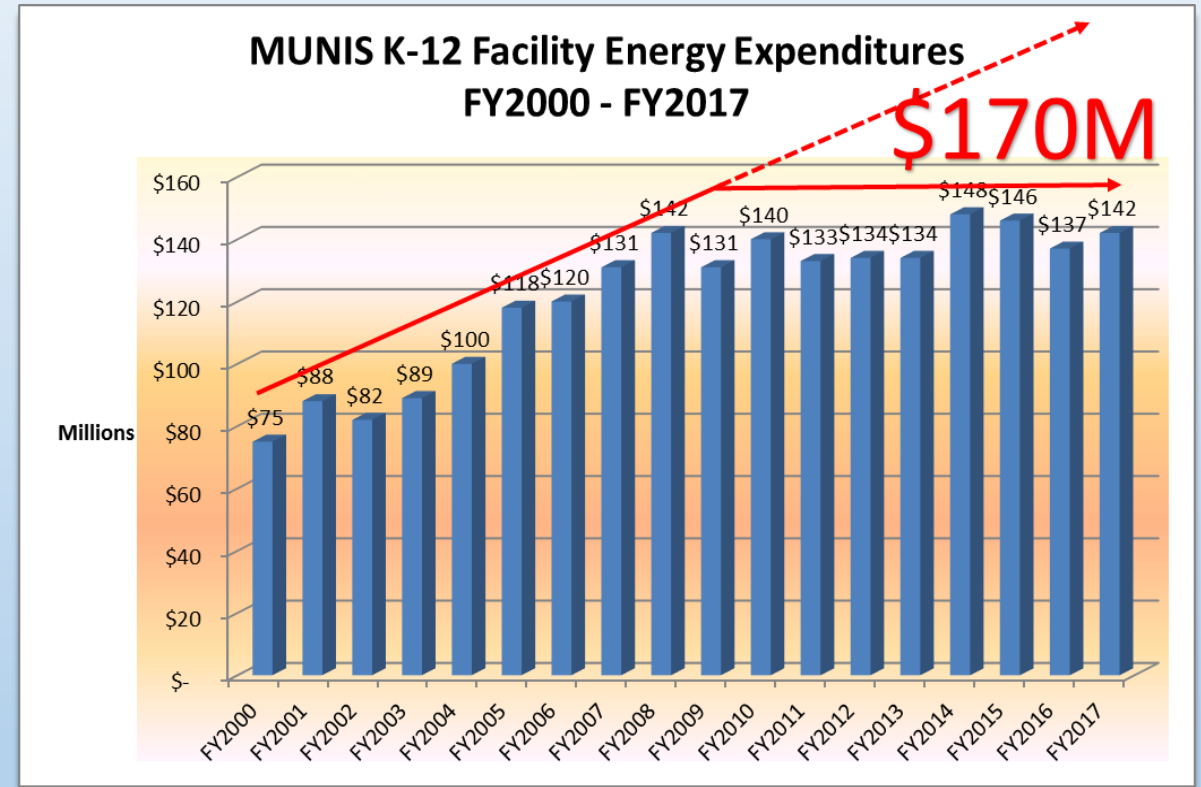
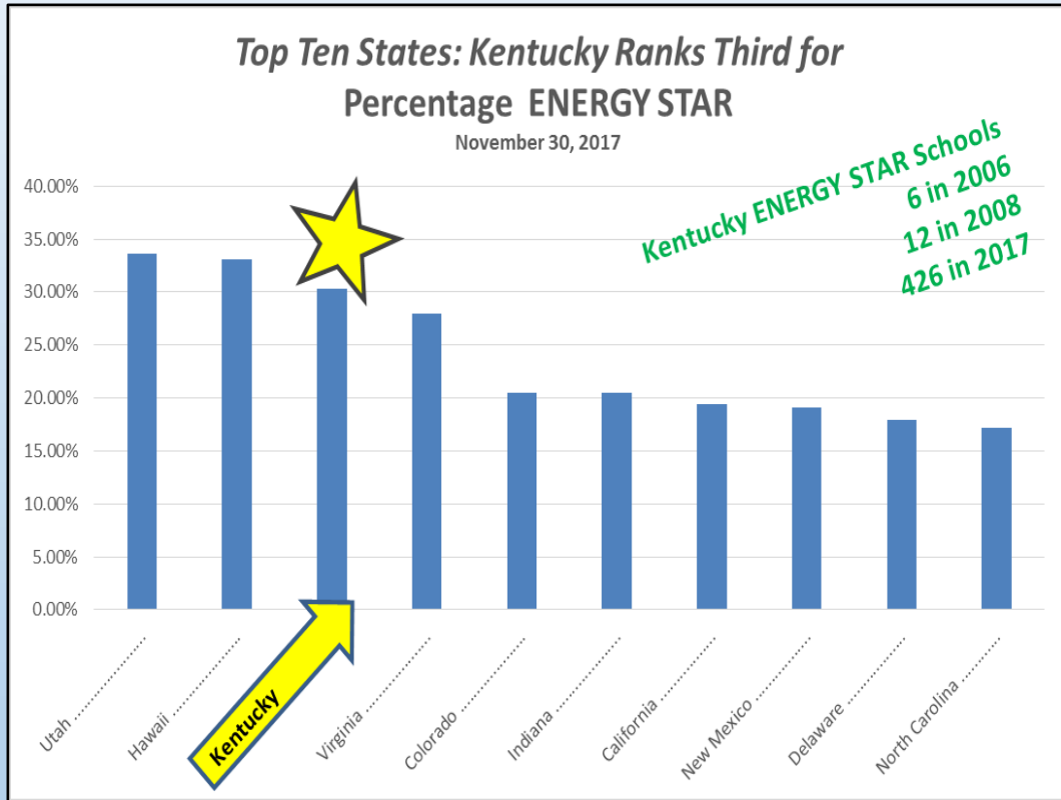
EUI: Energy Use per Square Foot



EUI FREQUENCY DISTRIBUTION



RESULTS



ANNUAL ENERGY SAVINGS POTENTIAL

Annual Energy Savings Potential				
Level	EUI	Incremental Savings	Annual Savings	Districts Operating below
Base Year, FY2010	65.5			
Current	49.7		\$42M	
ENERGY STAR	50	\$10M	\$52M	95
Best Performers	40	\$29M	\$81M	22
BAG Performance	30	\$55M	\$136M	0



EUI: Energy Use per Square Foot



UTILITY RATE CASE INTERVENTION

- 2016 KU/LGE
 - Request Reduction - \$3.3 M → \$.7 M
 - Pilot School Rate - \$1.5 M Benefit
- 2016 Kentucky Power (Pending)
- Duke (Pending)





April 16 – 17, 2018

Embassy Suites

Lexington, KY

