

LET'S SAVE ENERGY

School Energy Efficiency News

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



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Six years of energy savings totaling \$68 million: New report shows 84 percent of school districts have cut energy use

New data shows the success of statewide efforts by public schools to save energy since state law began requiring districts to track energy use six years ago.

The major yardstick for these calculations is energy use intensity (EUI), which measures energy use (kBtu) per square foot. For the base year 2009-10, the statewide EUI index was 65.4 kBtu per square foot. In 2013-14 the EUI index was 60.9. That figure has now dropped to 57.6 kBtu per square foot for 2014-15. Further, the corresponding cumulative avoided cost during that period through consumption reduction, rate corrections, rebates, refunds and utility case interventions is over \$68 million. Also significant is that 84 percent of districts have reduced energy consumption over the same period.

Those findings have been submitted to the Legislative Research Commission and the state Department for Energy Development and Independence in the annual Energy Management Report required by KRS 160.325 and local school board policy. Each year, the report reviews the status and development of energy management plans by local boards of education and the anticipated savings to be obtained by those plans.

Other overall observations and conclusions when comparing 2014-15 with base year 2009-10 include:

- Conditioned square footage has increased 6.3 percent.
- Total energy use (MMBTU) has decreased 6.5 percent even with the addition of over 6 million square feet.
- Total expenditure of energy for public school districts has increased 6.8 percent since 2009-10. These are the contributing factors:
 - ◆ Spending on electricity has increased 9.7 percent.
 - ◆ The cost per kilowatt hour of electricity has increased 16.3 percent.
 - ◆ Spending on natural gas has decreased 32 percent.
 - ◆ The cost per 100 cubic feet of natural gas has decreased 26.7 percent.

Thirty-three districts also reported active energy performance contracts to help them reduce their energy usage and costs.

KSBA's School Energy Managers Project (SEMP) has funded and trained local school energy managers since 2010. This funding currently is in partnership with Louisville Gas & Electric/Kentucky Utilities Company and Kentucky Power Company. SEMP personnel help school districts:

- Break down analytical and technical issues.
- Develop and implement energy management plans.
- Comply with statutory and board policy requirements.
- Track energy usage.
- Coordinate recognition events.
- Consolidate and report statewide energy data to Legislative Research Commission and the Energy and Environment Cabinet.
- Collaborate with the Kentucky Energy and Environment Cabinet, utility companies, and other stakeholders to work on energy-saving activities.

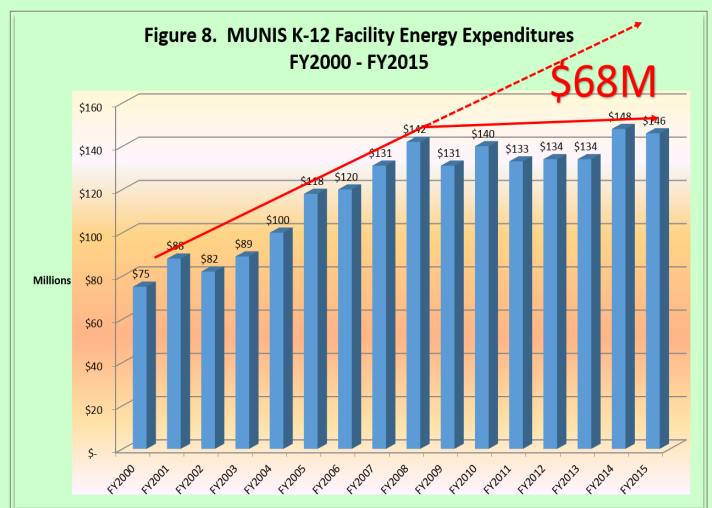


Figure 8 above shows a graph of the MUNIS-reported school energy costs from fiscal year 2000 through fiscal year 2015. This graph shows that these costs had nearly doubled between fiscal years 2000 and 2008. The red lines on the graph illustrate the projected trajectory of costs and the cumulative savings of over \$68 million.

Table 2, FY 2014-15 District Ranking By Energy Use Intensity

Rank	District	2010 EUI	2015 EUI	Rank	District	2010 EUI	2015 EUI	Rank	District	2010 EUI	2015 EUI	Rank	District	2010 EUI	2015 EUI
1	Butler	42.8	32.7	45	Floyd	52.0	49.5	89	Williamsburg	54.9	56.1	133	Carroll	82.9	63.6
2	Owen	62.5	36.1	46	Whitley	57.7	49.7	90	Monroe	48.6	56.4	134	Danville	64.6	63.7
3	Nelson	51.5	37.8	47	Daviess	53.9	49.9	91	Cloverport	72.7	56.5	135	BowlingGre	73.6	63.9
4	Scott	53.3	39.3	48	Paintsville	53.3	50.0	92	Rockcastle	59.9	56.7	136	Jefferson	68.2	64.0
5	Oldham	45.7	40.5	49	Clark	74.7	50.0	93	Calloway	56.2	56.9	137	Todd	70.0	64.0
6	EastBernst		40.7	50	Marion	60.3	50.2	94	West Point		56.9	138	Bardstown	72.9	64.3
7	Corbin	51.6	41.7	51	Edmonson	58.7	50.3	95	Wayne	64.2	57.2	139	Mayfield	60.9	65.1
8	Warren	50.7	41.7	52	Frankfort	80.7	50.6	96	Beechwood	62.6	57.4	140	LaRue	55.1	65.5
9	Anderson	52.3	42.0	53	Greenup	64.1	50.9	97	Harlan Co	55.7	57.5	141	Ludlow	107.9	65.7
10	WaltonVer	44.6	42.3	54	Pineville	58.5	51.0	98	Bell	81.5	57.8	142	Hickman	67.6	66.0
11	Bullitt	53.7	42.3	55	Pulaski	60.9	51.0	99	Campbellsvi	76.4	58.2	143	Hopkins	71.7	66.4
12	Robertson	114.5	42.8	56	Owsley		51.3	100	Mason	59.2	58.3	144	Fayette	78.2	67.4
13	Allen	57.1	43.4	57	Adair	71.1	51.4	101	Rowan	72.3	58.4	145	Ballard	80.1	67.7
14	Henry	67.7	43.8	58	Metcalfe	60.9	51.5	102	Fort Thomas	72.2	58.7	146	Laurel		68.1
15	Jessamine	50.3	43.8	59	Knott		51.6	103	Magoffin	64.7	58.8	147	Henderson	74.1	68.3
16	Gallatin	60.0	44.6	60	Knox	64.8	51.7	104	Silver Grove	69.2	58.9	148	Bath	87.8	68.6
17	Shelby	71.6	44.6	61	Russellville	52.5	51.7	105	Paducah	73.9	59.0	149	Graves		68.9
18	Trimble	52.3	45.0	62	Lawrence	68.6	52.5	106	McCracken	62.7	59.1	150	Montgomery	70.2	69.5
19	Meade	48.7	45.3	63	Lee	78.3	52.5	107	Johnson	78.2	59.5	151	Boone	74.0	69.9
20	Trigg	60.2	45.8	64	Grayson	60.0	52.7	108	Fulton Co	69.4	59.7	152	Barbourville	76.8	70.7
21	Burgin	60.5	46.1	65	Russell	80.5	52.7	109	Franklin	87.3	59.9	153	Breckinridge	72.1	71.4
22	Harlan Ind	52.3	46.1	66	Boyd	81.2	53.0	110	Lewis	65.6	60.2	154	Caverna	84.2	72.0
23	Woodford	63.5	46.1	67	Carter	59.3	53.1	111	Fulton Ind.	69.0	60.3	155	Wolfe		72.2
24	Murray	47.2	47.0	68	Ohio	64.4	53.3	112	Dayton	67.4	60.4	156	Marshall	70.9	74.7
25	Elliott		47.1	69	Barren	49.8	53.3	113	Pike County	64.9	60.6	157	Simpson	73.6	75.1
26	Casey	49.5	47.2	70	Paris	59.6	53.5	114	Morgan	116.8	60.6	158	Breathitt	64.0	75.3
27	Erlanger	56.9	47.2	71	Madison	56.4	53.6	115	Nicholas	80.7	60.7	159	Bellevue	68.4	75.8
28	Hardin	54.3	47.4	72	DawsonSpr	61.0	53.7	116	Harrison	61.9	61.0	160	Berea	75.7	76.3
29	McLean	45.9	47.4	73	Livingston	56.9	53.9	117	Clay	63.3	61.1	161	Anchorage	73.8	76.4
30	Spencer		47.7	74	Carlisle	46.9	54.0	118	Garrard	51.5	61.1	162	Eminence	85.3	76.4
31	Hancock	57.8	47.7	75	Crittenden	57.1	54.0	119	Mercer	78.3	61.2	163	Hart	73.5	77.5
32	Clinton	53.5	48.0	76	Kenton	64.9	54.1	120	RacelandWort	67.0	61.2	164	Campbell	70.2	78.4
33	Newport	44.5	48.1	77	Hazard	87.2	54.2	121	Grant	70.7	61.8	165	CovingtonInd.	80.5	78.6
34	Caldwell	60.7	48.1	78	Bracken	55.0	54.2	122	Ashland	75.1	61.9	166	Elizabethtown	76.9	79.0
35	Glasgow	62.6	48.3	79	Washington	83.5	54.5	123	Perry	67.0	62.0	167	Somerset	89.8	79.7
36	Logan	54.5	48.4	80	Jackson Co	55.2	54.6	124	Union	69.1	62.1	168	Menifee	90.4	83.0
37	Estill	53.4	48.5	81	Lyon	53.7	54.8	125	Middlesbor	97.2	62.2	169	Green	88.2	85.4
38	Fleming	69.8	48.5	82	Owensboro	70.1	55.1	126	Taylor	64.7	62.2	170	Fairview	79.7	85.9
39	South Gate	47.2	48.6	83	Webster	75.5	55.2	127	Muhlenberg	68.5	62.3	171	Powell	97.0	86.0
40	Russell ind	70.3	48.7	84	Boyle	65.9	55.5	128	Pikeville	81.9	62.6	172	McCreary	94.8	92.3
41	Jenkins	0.0	48.8	85	Christian	70.1	55.8	129	Bourbon	65.0	62.6	173	Jackson Ind	117.6	106.5
42	Letcher	62.9	48.8	86	Pendleton	55.9	55.8	130	Lincoln	70.7	63.0				
43	Science Hill	56.5	49.3	87	Cumberlan	71.1	55.9	131	Martin		63.1				
44	Williamsto	63.3	49.5	88	Augusta	55.6	55.9	132	Leslie	69.4	63.1				