

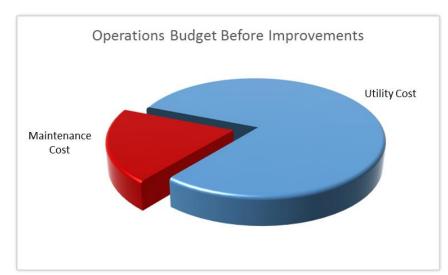
# **Guaranteed Energy Savings Contract Annual Savings Reconciliation – Year 3**

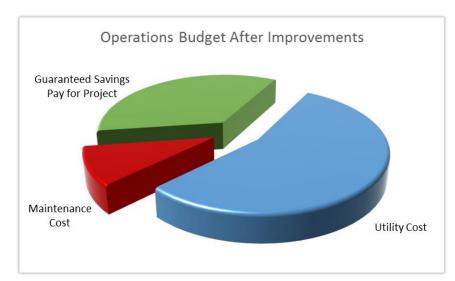


### What is a Guaranteed Energy Savings Contract?

- ➤ KRS 45A.352 gives school districts statutory authority to upgrade facilities through GESC.
- ➤ Savings guaranteed by Qualified Provider provide cash flow to fund debt service.

  Annual savings reconciliation required.
- > Typical upgrades include HVAC, controls systems, lighting, water conservation, building envelope improvements, etc.
- ➤ Popular funding mechanism for school districts that have facility needs in excess of their bonding potential.







## **GESC Project at a Glance**

#### Scope of Work Highlights:

- ➤ HVAC and Lighting Renovations at:
  - Knight Academy (Formerly Lebanon Middle School)
- ➤ HVAC Controls Upgrades
- Miscellaneous LED Lighting Upgrades District Wide
- Water Conservation at Marion Co.
  HS and Lebanon ES









44 Frankfort

37.8

#### FY2017 District Ranking by Energy Use Intensity



Rank 1 2 3	District	2017 EUI	2010 EUI	Rank	District	2017 EUI	2010 EUI	Rank	District	2017 EUI	2010 EUI	Rank	District	2017 EUI	2010 EUI
2	Owen														
		33.2	62.5	45	McCreary	43.2	94.8	89	Danville	48.8	64.6	133	Bardstown	55.2	72.9
	Butler	33.5	42.8	46	Gallatin	43.3	60.0	90	Bracken	49.0	55.0	134	Anchorage	55.3	73.8
	Nelson	33.6	51.5	47	Meade	43.4	48.7	91	Paducah	49.4	73.9	135	Pikeville	55.6	81.9
	Walton-														
4	Verona	34.2	44.6	48	Hardin	43.4	54.3	92	Boyd	49.4	81.2	136	Rowan	55.6	72.3
5	Scott	35.4	53.3	49	Allen	43.7	57.1	93	Madison	49.5	56.4	137	Ashland	55.6	75.1
6	Oldham	35.8	45.7	50	West Point	44.2	dnr	94	Fleming	49.6	69.8	138	Harrison	55.7	61.9
	Jackson														
7	County	36.7	55.2	51	Clark	44.2	74.7	95	Bell	49.8	81.5	139	Webster	55.7	75.5
8	Bullitt	37.0	53.7	52	Murray	44.3	47.2	96	Mayfield	49.8	60.9	140	Rockcastle	56.6	59.9
9	Newport	37.2	44.5	53	Clinton	44.3	53.5	97	Lincoln	49.8	70.7	141	Bath	57.0	87.8
					et				6.11				t-		
															65.9
									_						78.2
12		37.8	60.3	56	Carter	44.5	59.3	100	Mason	50.1	59.2	144	Hickman	57.4	67.6
12		37.0	69.4	5.7	Martin	44.8	dnr	101	Cavarna	50.2	84.2	145	Dauton	58.4	67.4
															71.1
14	Jessamme	31.3	30.3	36	rioyu	44.5	32.0	102	Russellville	30.2	32.3	140		30.3	/1.1
15	Corbin	38.2	51.6	59	Spencer	45.0	dnr	103	Lyon	50.3	53.7	147	Green	58.5	73.6
	Warren	38.2	50.7			45.1	53.9			50.5	64.9		Bellevue		68.4
				_											72.1
		_				12.72									dnr
10		30.0	74.5	02		45.4	04.4	100	Dourdon	30.0	03.0	150	200.01	33.2	
19	Anderson	39.1	52.3	63	Springs	45.6	61.0	107	Pulaski	50.9	60.9	151	Ballard	59.7	80.1
20	Shelby	39.4	71.6	64	Knox	45.6	64.8	108	Fulton Ind	51.3	69.0	152	Barbourville	60.7	76.8
21	Robertson	39.9	114.5	65	Estill	45.7	53.4	109	Beechwood	51.4	68.8	153	Cumberland	61.5	71.1
22	Greenup	40.4	64.1	66	Silver Grove	45.8	69.2	110	Harlan County	51.6	55.7	154	Henderson	62.1	74.1
23	Woodford	40.6	63.5	67	Williamstown	45.9	63.3	111	Fort Thomas	51.9	72.2	155	Fayette	62.8	78.2
24	Elliott	40.8	dnr	68	Kenton	45.9	64.9	112	Muhlenberg	52.1	68.5	156	Fairview	62.9	79.7
25	Erlanger	41.0	56.9	69	Jenkins	45.9	dnr	113	Graves	52.3	dnr	157	Powell	63.0	97.0
		41.1	54.9	70	Ludlow	46.4	107.9		LaRue	52.3	55.1		Elizabethtown	63.5	76.9
							_								70.2
															75.7
													_		74.0
			_				_								70.2
															78.3
															89.8
															70.9
				_											
34	Paris	41.9	59.6	78	Lawrence	47.4	68.6	122		53.0	83.5	100	Eminence	6/.1	85.3
35	Morgan	42.0	116.8	79	Leslie	47.4	69.4	123		53.1	67.0	167	Hart	67.5	73.5
													-		73.6
															88.2
															90.4
30	ringusta	46.0	33.0	92	Science min	47.0	30.3	120	TTUZIKIIII	34.4	07.3	170		74.4	30.4
39	Trimble	42.4	53.7	83	Wayne	47.8	64.2	127	Carroll	54.5	82.9	171	Ind.	72.7	80.5
40	Wolfe	42.4	dnr	84	Union	47.9	69.1	128	Todd	54.7	70.0	172	Nicholas	73.5	80.7
41	Crittenden	42.4	57.1	85		47.9	64.7	129	Russell County	54.7	80.5	173	Jackson Ind	100.1	117.6
42	Metcalfe	42.8	60.9	86		48.0	60.5	130	Grant	54.9	4				
43	Casev	_		87	Pendleton		_								
	8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 40 40 40 40 40 40 40 40 40 40 40 40	7 County 8 Bullitt 9 Newport East 10 Bernstadt 11 Christian 12 Marion Futton 13 County 14 Jessamine 15 Corbin 16 Warren 17 Pineville 18 Lee 19 Anderson 20 Shelby 21 Robertson 22 Greenup 23 Woodford 24 Elliott 25 Erlanger 26 Williamsburg 27 Harlan Ind 28 Hancock 29 Trigg 30 Hazard 31 Southgate 32 Owensboro 33 Middlesboro 34 Paris 35 Morgan 36 McLoan 37 Whitley 38 Augusta 39 Trimble 40 Wolfe 41 Crittenden 42 Metcalfe	7 County 36.7 8 Bullitt 37.0 9 Newport 37.2 East 37.3 10 Enristant 37.4 12 Marion 37.8 13 County 37.9 14 Jessamine 37.9 15 Corbin 38.2 16 Warren 38.2 17 Pineville 38.6 18 Lee 38.8 19 Anderson 39.1 20 Shelby 39.4 21 Robertson 39.9 22 Greenup 40.4 23 Woodford 40.6 24 Elliott 40.8 25 Erlanger 41.0 26 Williamsburg 41.1 27 Harlan Ind 41.2 28 Hancock 41.2 29 Trigg 41.2 30 Hazard 41.3 31 Southgate 41.7 32 Owensboro 41.9 33 Middlesboro 41.9 34 Paris 41.9 35 Morgan 42.0 36 McLoan 42.0 37 Whitley 42.3 38 Augusta 42.4 40 Wolfe 42.4 40 Wolfe 42.4	7         County         36.7         55.2           8         Bullitt         37.0         53.7           9         Newport         37.2         44.5           10         Bentsddt         37.3         dnr           11         Christian         37.4         70.1           12         Marion         37.8         60.3           Furton         37.9         69.4           14         Jessamine         37.9         50.3           15         Corbin         38.2         51.6           16         Warren         38.2         50.7           17         Pineville         38.6         58.5           18         Lee         38.8         78.3           19         Anderson         39.1         52.3           20         Shelby         39.4         71.6           21         Robertson         39.9         114.5           22         Greenup         40.4         64.1           23         Woodford         40.6         63.5           24         Elliott         40.8         dnr           25         Erlanger         41.0         56.9	7         County         36.7         55.2         51           8         Bullitt         37.0         53.7         52           9         Newport         37.2         44.5         53           East         37.3         dnr         54           10         Bernstadt         37.3         dnr         54           11         Christian         37.4         70.1         55           12         Marion         37.8         60.3         56           12         Marion         37.9         69.4         57           14         Jessamine         37.9         50.3         58           15         Corbin         38.2         51.6         59           16         Warren         38.2         50.7         60           17         Pineville         38.6         58.5         61           18         Lee         38.8         78.3         62           19         Anderson         39.1         52.3         63           20         Shelby         39.4         71.6         64           21         Robertson         39.9         114.5         65           2	7         County         36.7         55.2         51         Clark           8         Bullitt         37.0         53.7         52         Murray           9         Newport         37.2         44.5         53         Clinton           10         Bernstadt         37.3         dnr         54         Cloverport           11         Christian         37.4         70.1         55         Logan           12         Marion         37.8         60.3         56         Carter           12         Marion         37.9         69.4         57         Martin           14         Jessamine         37.9         50.3         58         Floyd           15         Corbin         38.2         51.6         59         Spencer           16         Warren         38.2         50.7         60         Daviess           17         Pineville         38.6         58.5         61         Barren           18         Lee         38.8         78.3         62         Ohio           19         Anderson         39.1         52.3         63         Springs           20         Shelby         39.4	7         County         36.7         55.2         51         Clark         44.2           8         Bullitt         37.0         53.7         52         Murray         44.3           9         Newport         37.2         44.5         53         Clinton         44.3           10         Bernstadt         37.3         dnr         54         Cloverport         44.4           11         Christian         37.4         70.1         55         Logan         44.5           12         Marion         37.9         69.4         57         Martin         44.8           12         Marion         37.9         69.4         57         Martin         44.8           14         Jessamine         37.9         50.3         58         Hoyd         44.9           15         Corbin         38.2         51.6         59         Spencer         45.0           16         Warren         38.2         51.6         59         Spencer         45.0           16         Warren         38.2         50.7         60         Daviess         45.1           17         Pineville         38.6         58.5         61 <t< td=""><td>  County   36.7   55.2   51   Clark   44.2   74.7    </td><td>7         County         36.7         55.2         51         Clark         44.2         74.7         95           8         Bullitt         37.0         53.7         52         Murray         44.3         47.2         96           9         Newport         37.2         44.5         53         Clinton         44.3         53.5         97           10         Bernstadt         37.3         dnr         54         Cloverport         44.4         72.7         98           11         Christian         37.4         70.1         55         Logan         44.5         54.5         99           12         Marion         37.8         60.3         56         Carter         44.5         59.3         100           13         County         37.9         69.4         57         Martin         44.8         dnr         101           14         Jessamine         37.9         50.3         58         Floyd         44.9         52.0         102           15         Corbin         38.2         51.6         59         Spencer         45.0         dnr         103           16         Warren         38.2         51.6</td><td>  7   County   36.7   55.2   51   Clark   44.2   74.7   95   Bell     8   Bullitt   37.0   53.7   52   Murray   44.3   47.2   96   Mayfield     9   Newport   37.2   44.5   53   Clinton   44.3   33.5   97   Lincoln     East   37.3   dnr   54   Cloverport   44.4   72.7   98   Calloway     11   Christian   37.4   70.1   55   Logan   44.5   54.5   99   Glasgow     12   Marion   37.8   60.3   56   Carter   44.4   57.7   98   Calloway     13   County   37.9   69.4   57   Martin   44.8   dnr   101   Caverna     14   Jessamine   37.9   50.3   58   Floyd   44.9   52.0   102   Russeliville     15   Corbin   38.2   51.6   59   Spencer   45.0   dnr   103   Lyon     16   Warren   38.2   50.7   60   Daviess   43.1   53.9   104   Pike County     17   Pineville   38.6   58.5   61   Barren   45.3   49.8   105   Breathitt     18   Lee   38.8   78.3   62   Ohio   45.4   64.4   106   Bourbon     19   Anderson   39.1   52.3   63   Springs   45.6   61.0   107   Pulaski     20   Shelby   39.4   71.6   64   Knox   45.6   64.8   108   Fulton     21   Robertson   39.9   114.5   65   Estill   45.7   53.4   109   Beechwood     22   Greenup   40.4   64.1   66   Silver Grove   45.8   69.2   110   Harlan County     23   Woodford   40.6   63.5   67   Williamstown   45.9   63.3   111   Fort Thomas     24   Elliott   40.8   dnr   68   Kenton   45.9   dnr   113   Graves     25   Erlanger   41.0   56.9   99   Jenkins   45.9   dnr   113   Graves     26   Williamsburg   41.1   54.9   70   Ludlow   46.4   107.9   114   LaRue     27   Harlan Ind   41.2   52.3   71   Caldwell   46.5   50.7   115   Livingston     30   Hazard   41.3   87.2   74   Paintsville   46.8   53.3   118   Perry     31   Southgate   41.7   47.2   75   Henry   47.1   67.9   119   Knott     32   Owensboro   41.9   97.2   77   Campbellsville   47.4   68.6   122   Washington     34   Paris   41.9   59.6   78   Lawrence   47.4   68.6   122   Washington     35   Modelan   42.0   45.9   80   Owsley   47.4   dnr   124   Letcher     37   Whitley   42.3   57.7   81   Russell Ind   47.5   5</td><td>  County</td><td>  County</td><td>  County</td><td>  County</td><td>  South   Solution   S</td></t<>	County   36.7   55.2   51   Clark   44.2   74.7	7         County         36.7         55.2         51         Clark         44.2         74.7         95           8         Bullitt         37.0         53.7         52         Murray         44.3         47.2         96           9         Newport         37.2         44.5         53         Clinton         44.3         53.5         97           10         Bernstadt         37.3         dnr         54         Cloverport         44.4         72.7         98           11         Christian         37.4         70.1         55         Logan         44.5         54.5         99           12         Marion         37.8         60.3         56         Carter         44.5         59.3         100           13         County         37.9         69.4         57         Martin         44.8         dnr         101           14         Jessamine         37.9         50.3         58         Floyd         44.9         52.0         102           15         Corbin         38.2         51.6         59         Spencer         45.0         dnr         103           16         Warren         38.2         51.6	7   County   36.7   55.2   51   Clark   44.2   74.7   95   Bell     8   Bullitt   37.0   53.7   52   Murray   44.3   47.2   96   Mayfield     9   Newport   37.2   44.5   53   Clinton   44.3   33.5   97   Lincoln     East   37.3   dnr   54   Cloverport   44.4   72.7   98   Calloway     11   Christian   37.4   70.1   55   Logan   44.5   54.5   99   Glasgow     12   Marion   37.8   60.3   56   Carter   44.4   57.7   98   Calloway     13   County   37.9   69.4   57   Martin   44.8   dnr   101   Caverna     14   Jessamine   37.9   50.3   58   Floyd   44.9   52.0   102   Russeliville     15   Corbin   38.2   51.6   59   Spencer   45.0   dnr   103   Lyon     16   Warren   38.2   50.7   60   Daviess   43.1   53.9   104   Pike County     17   Pineville   38.6   58.5   61   Barren   45.3   49.8   105   Breathitt     18   Lee   38.8   78.3   62   Ohio   45.4   64.4   106   Bourbon     19   Anderson   39.1   52.3   63   Springs   45.6   61.0   107   Pulaski     20   Shelby   39.4   71.6   64   Knox   45.6   64.8   108   Fulton     21   Robertson   39.9   114.5   65   Estill   45.7   53.4   109   Beechwood     22   Greenup   40.4   64.1   66   Silver Grove   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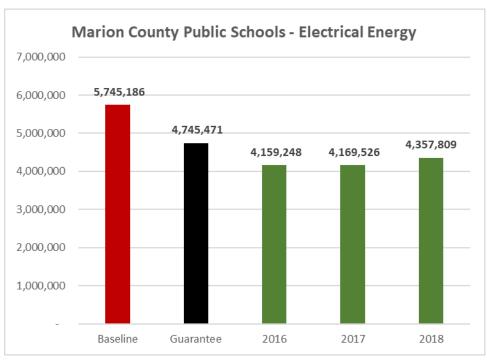
## **ENERGY STAR Recognition**

All Schools are ENERGY STAR certified for 2018!

Among only 15 Districts out of 173 in the state of Kentucky to have 100% of schools ENERGY STAR certified!

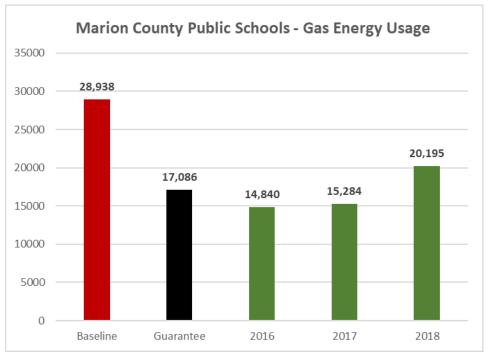
Congratulations to **Marion County Public Schools!** 





- ➤ 17% Electricity Reduction Guaranteed
- ➤ 3YR avg Reduction = 26%

- 41% Gas Reduction Guaranteed
- ➤ 3YR avg Reduction = 42%



	Utility Cost Savings										
Facility	Electric		Demand		Gas	Water					
	kWh		kW		ccf	kgal					
MCHS	\$ 20,092	\$	-	\$	-	\$	1,389				
MCKA	\$ 68,753	\$	-	\$	-	\$	-				
MCMS	\$ 12,009	\$	-	\$	-	\$	-				
CES	\$ 2,207	\$	-	\$	1,111	\$	-				
LES	\$ 3,705	\$	-	\$	3,835	\$	1,392				
GES	\$ 9,609	\$	-	\$	-	\$	-				
WMES	\$ 2,495	\$	-	\$	-	\$	-				
Central Office	\$ 881	\$	-	\$	(31)	\$	-				
Bus Garage	\$ 2,576	\$	-	\$	2,193	\$	-				
Fieldhouse	\$ 3,296	\$	-	\$	674	\$	=				
Total Savings	\$					136	,184.24				
Guaranteed Savings	\$	_				113	,834.00				
% Relative to Guarantee							19.6%				

Savings Summary										
Utility Cost Savings	\$	136,184								
O&M Savings	\$	18,084								
Total General Fund Savings	\$	154,268								
YR3 General Fund Debt Service	\$	131,918								
YR3 General Fund Excess Savings	\$	22,350								
YR3 % Excess Savings		16.9%								



## Marion County Schools Proposed Project Financial Pro-Forma

Cost Inputs			Savings Inputs	
Project Cost	\$	3,545,537	Year 1 Guaranteed Energy Savings (GES)	\$ 104,241
Bond Issuance Cost 3.1%	\$	114,463	Year 1 O&M Savings	\$ 17,213
Total Bond Issue		3,660,000	Annual Energy Escalation Rate	4.50%
Interest Rate		3.08%	Annual O&M Rate Escalation	2.50%
Financing Term (Years)		20	Restricted Funds Requirement	\$ 935,747
Year 2 Additional Maintenance/M&V	\$	3,000	Rebate <sup>1</sup>	\$ 25,000

	Year	ar Bond Payment				M&V	To	otal Cost	Energy Savings	0&1	M Savings	Tot	al Savings	C	Yearly Cashflow	umulative Cashflow
Γ	2016	\$	201,336	\$ -	\$	201,336	\$ 104,241	\$	42,213	\$	146,454	\$	(54,882)	\$ (54,882)		
١	2017	\$	180,706	\$ 3,000	\$	183,706	\$ 108,932	\$	17,643	\$	126,575	\$	(57,131)	\$ (112,013)		
	2018	\$	184,941	\$ 3,075	\$	188,016	\$ 113,834	\$	18,084	\$	131,918	\$	(56,098)	\$ (168,111)		

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