



# BULLITT COUNTY PUBLIC SCHOOLS ENERGY MANAGEMENT PROGRAM: 2020/2021 YEAR END REPORT



Hi, my name is Cadence. I learned that Wind Turbines turn wind into electricity for our homes.

## History

- BCPS began the energy conservation program in November 2006 with KEEPS (Kentucky Energy Efficiency Program for Schools)
- Hired an energy manager, created an energy plan, promoted energy conservation, and made low cost/no-cost changes to reduce energy use
- 2008 Energy Savings Performance Contract (ESPC) to address capital lighting and HVAC needs
- 2018 Energy Savings Performance Contract (ESPC) for district wide LED lighting upgrade and to address additional HVAC needs

## 2020/2021 School Year

This report summarizes the energy usage for the 2020/2021 fiscal year. Actions used for energy savings are included, as well as goals for the upcoming year.

- Total district electric consumption (kWh) was **50% less** than the baseline usage. This resulted in a cost avoidance of approximately **\$766,616**
- The district is now tracking electric demand (kW) savings due to current rate structures. Total district electric demand (kW) cost avoidance was approximately **\$272,635**
- Total district natural gas consumption was also **50% less** than the baseline usage. This resulted in a cost avoidance of approximately **\$86,697**
- Propane for heating and cooking has been eliminated across the district (replaced with electricity or natural gas). This continues to result in a cost avoidance of approximately **\$39,248**

\*BCPS baseline data is typically an average of the 2004/2005 and the 2005/2006 data.

Had we not reduced our electric (consumption and demand), natural gas, and propane usage by these amounts, given the adjustment with today's utility rates, we would have spent approximately **\$1,165,195 more** on utility bills for the 2020/2021 school year.

Total savings since the BCPS energy management program began in 2006:

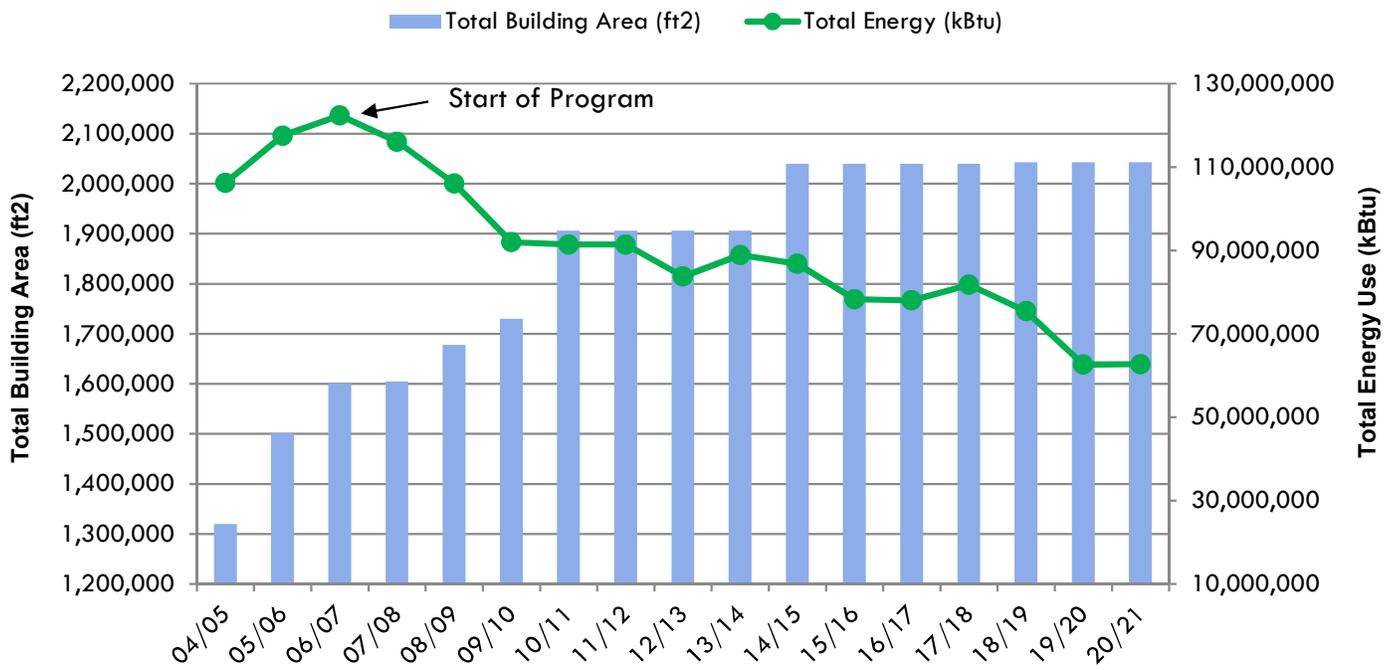
- Approximately **\$9,942,091** in savings/avoided utility costs

## District Energy Management Program Success

Figures 1 and 2 on the following page illustrate how our district's energy use and cost have decreased, while our growth in building space (square footage) has significantly increased since the 2004/2005 school year. From just over 1.3 million square feet in 04/05, to the current square footage of just over 2.0 million square feet, the district is using 41% LESS energy. Comparisons like these, to the early years of our utility tracking, help to illustrate where the over \$9.9 million in cost savings/cost avoidance comes from. With utility rates continuing to increase year to year, the district is being fiscally responsible by participating and supporting an energy management program.

\*It should be noted that there was a significant reduction in energy use due to school closures in response to the pandemic. Efforts were made to ensure that temperatures were setback in areas that were vacant during this time. It is expected that energy use will increase as in-school activities increase.

**FIGURE 1—ENERGY USE COMPARED TO DISTRICT GROWTH**



**FIGURE 2 - ENERGY COST COMPARED TO DISTRICT GROWTH**

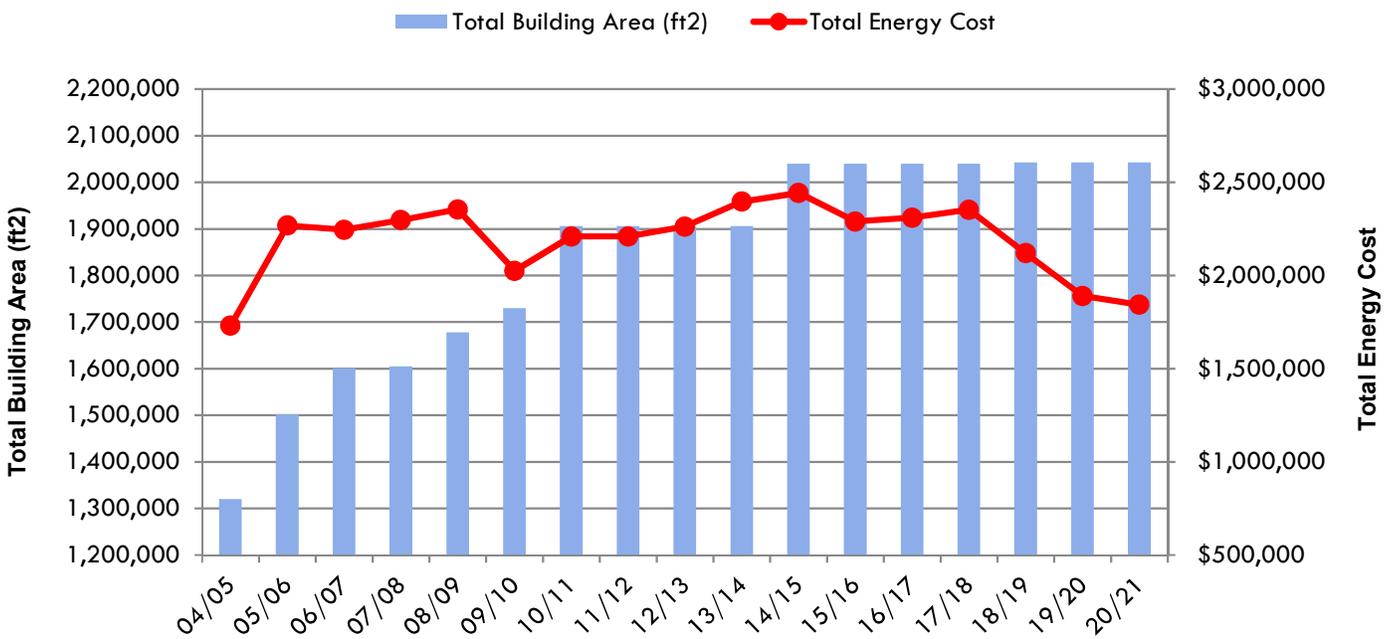


Figure 3 ranks our facilities by total annual energy use per square foot (kBtu/ft<sup>2</sup>). Zoneton, Maryville, and Eastside are currently the most efficient schools in the district. Almost all schools are operating well below the state average of 49 kBtu/ft<sup>2</sup>.

**Figure 3 – BCPS Building Energy Use Profile**

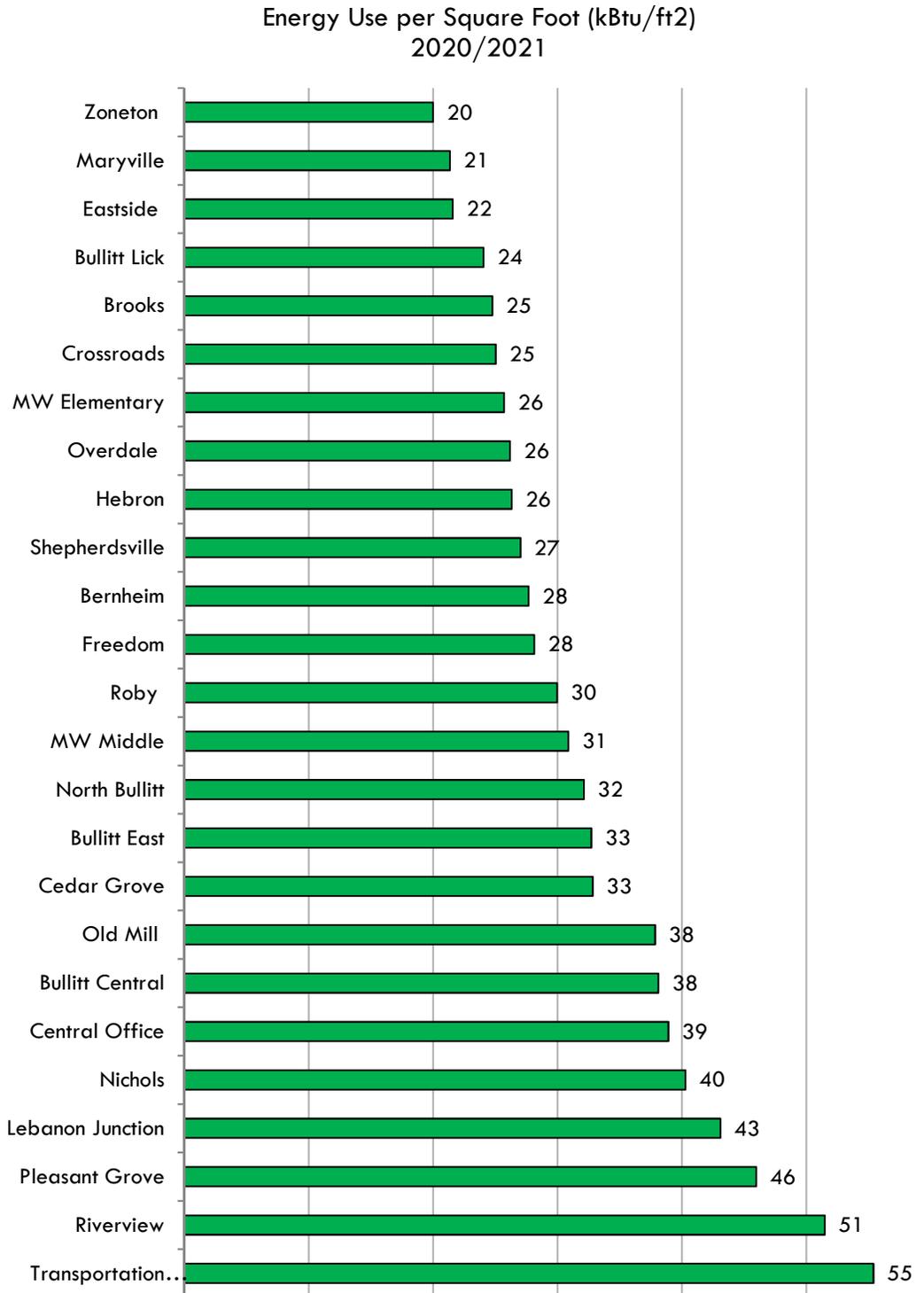
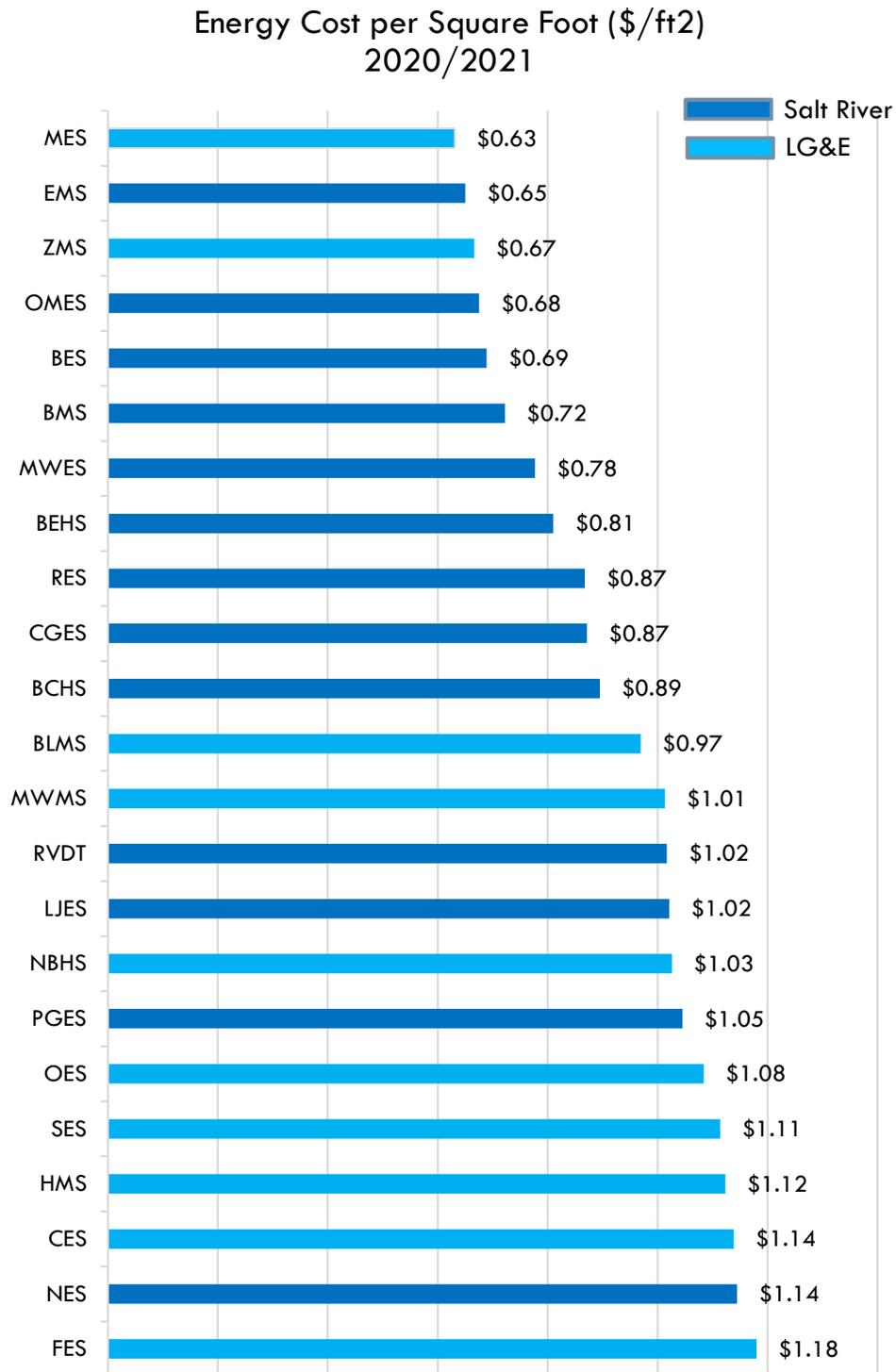


Figure 4 ranks our facilities by total annual energy cost per square foot (\$/ft<sup>2</sup>). Factors that affect cost are not only building efficiency but also utility provider and rate structure. Fuel source also plays a role as electric, on average, cost three times as much per btu than gas.

**Figure 4 – BCPS Building Energy Cost Profile**



\*Maryville and Zoneton are served by LG&E but were grandfathered in on a General Service/All Electric School rate. Therefore, they do not have demand charges which significantly reduces their cost per square foot.

**ENERGY STAR®**

As of the 2020/2021 school year, using ENERGY STAR's benchmarking tool (Portfolio Manager), the district has 20 schools eligible for ENERGY STAR® certification. Due to the shutdowns in 2020, we did not meet the building use eligibility requirements to recertify for that calendar year; however, we should meet the requirements for 2021.

The EPA's energy performance rating system, based on source energy, accounts for the impact of weather variations as well as changes in key physical and operating characteristics of each building. A building must score at least 75 to be ENERGY STAR certified. A building score of 75 means that (from an energy consumption standpoint), the building performs better than 75% of all similar buildings nationwide.

**TABLE 1—BCPS ENERGY STAR SCORES**

Property Name	ENERGY STAR® Certification - Year(s) Certified*	Current Score
Brooks Elementary School	2019, 2018, 2017, 2016, 2015, 2014, 2013, 2011	94
Bullitt Central High School	2019, 2018	90
Bullitt East High School	2018	90
Bullitt Lick Middle School	2017, 2016, 2015, 2014, 2012, 2010	97
Cedar Grove Elementary	2017, 2016, 2015, 2014, 2013, 2012	85
Crossroads Elementary School	2019, 2018, 2017, 2016, 2015, 2014, 2012, 2011	95
Eastside Middle School	2019, 2018, 2017, 2016, 2015, 2014, 2009	98
Freedom Elementary School	2019, 2018, 2017, 2016, 2015, 2014, 2012, 2009	88
Hebron Middle School	2019, 2018, 2017, 2016, 2015, 2014	90
Lebanon Junction Elementary	2017, 2016, 2015, 2014, 2013, 2012	80
Maryville Elementary School	2019, 2018, 2017, 2015, 2014, 2013, 2010	96
Mt. Washington Elementary	2019, 2018, 2017	95
Mt. Washington Middle School	2019, 2017, 2016, 2015, 2014, 2013	91
North Bullitt High School	2019, 2018, 2017, 2016, 2015, 2014, 2013	96
Old Mill Elementary School	2019	91
Overdale Elementary School	2019, 2018, 2017, 2016, 2015, 2014, 2013, 2011	96
Pleasant Grove Elementary School	2019, 2018, 2017, 2016, 2015, 2014, 2013	87
Roby Elementary School	2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2010	87
Shepherdsville Elementary	2019, 2018, 2017, 2016, 2015, 2014, 2012, 2009	95
Zoneton Middle School	2019, 2018, 2017, 2016, 2015, 2014, 2013, 2009	98

## Projects

A summary of energy saving measures that were in place during the 2020/2021 school year are below.

- Energy manager tracking and analyzing utility usage and costs monthly
- New energy dashboard in place and actively monitoring real time energy use ([www.traneconnect.com](http://www.traneconnect.com))
  - Brought in additional schools that did not have live metering
- Utility rate review and evaluations
- Non-school hour energy conservation HVAC procedures including:
  - Shutdowns over long breaks
  - Additional HVAC reduction during NTI
  - Temperature setbacks
  - Outside air units only operating during occupied school hours
- Staff education and awareness such as:
  - Turning off lighting when leaving a room
  - Turning off computer monitors and ancillary equipment at the end of the day
- Student energy teams continued to be active in **16** schools during the 20/21 school year
- School walkthroughs to monitor energy use behaviors and equipment operation
- Daily monitoring of HVAC building automation systems to ensure proper equipment operation and scheduling
- Participating with the US Department of Energy in the Better Buildings Challenge

Additional activities included:

- Ventilation units evaluated to prepare for school reopening
- Monitoring of indoor air quality (IAQ) – temperature, relative humidity, and CO<sub>2</sub>
- Ongoing support of Preventative Maintenance assisting with filtration and water treatment programs.

## Planned Projects for 2021/2022

- Repair remainder of live meters on existing schools that are no longer operational and bring into dashboard
- Begin process of bringing the main building controllers up-to-date in order to address communication issues at Lebanon Junction and Riverview
- Continuation of student energy team program and provide teams access to dashboard and utility data.
- ENERGY STAR® re-certification for eligible buildings
- Continued participation in the Better Buildings Challenge
- Continued participation in LG&E's Enel X Program which provides incentives if we can shed load when asked to by LG&E during times of high electric demand
- Continued monitoring of utility bills, utility rates, and building automation systems
- Continuation of building awareness throughout the district about energy efficiency and savings opportunities
- Continue working as part of the facilities and construction teams with input on the upcoming new building project

The tables on the following pages provide additional data on energy consumption and savings. Table 2 shows the district’s utility use and cost for each year since 2004/2005. Tables 3 and 4 illustrate the energy usage per school, compared to their respective baseline. Energy savings and cost avoidance calculations account for current costs (rates) and heating or cooling degree days (weather corrections). Figures 5 through 7 illustrate the schools’ non-adjusted energy profile per month, as compared to weather trends.

A huge impact to the reduction in our electric use can be attributed to the LED lighting project throughout the district, as well as the replacement of HVAC controls/equipment as part of the 2018 energy savings performance contract. Also, further savings were realized due to the NTL days.

**Table 2 – Yearly Utility Use and Cost (Non-Adjusted)**

Utility Type - Usage	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012
Electric (kWh)	20,238,383	23,968,514	25,286,477	23,731,788	21,368,945	20,188,729	21,702,211	20,684,107
Natural Gas (ccf)	344,412	324,933	328,762	317,432	301,614	223,715	168,058	124,929
Propane (Gal)	18,307	24,547	24,321	26,067	22,637	738	726	264
Total Energy (kBtu)	106,202,889	117,494,719	122,365,317	116,053,487	106,048,368	91,994,115	91,424,347	91,423,984
Water/Sewer (Gal)	31,983,000	30,180,000	28,696,410	27,645,360	22,885,080	18,335,600	19,310,020	19,069,729
Utility Type - Cost	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012
Electric (kWh)	\$ 1,347,257	\$ 1,731,618	\$ 1,878,962	\$ 1,874,410	\$ 1,888,880	\$ 1,841,316	\$ 2,052,474	\$ 2,052,474
Natural Gas (ccf)	\$ 361,814	\$ 500,245	\$ 326,271	\$ 359,626	\$ 413,207	\$ 182,260	\$ 155,724	\$ 155,724
Propane (Gal)	\$ 22,543	\$ 36,697	\$ 40,337	\$ 63,841	\$ 52,343	\$ 1,497	\$ 1,405	\$ 1,405
Total Energy Cost	\$ 1,731,614	\$ 2,268,560	\$ 2,245,570	\$ 2,297,877	\$ 2,354,430	\$ 2,025,073	\$ 2,209,602	\$ 2,209,602
Water/Sewer Cost	\$ 174,520	\$ 161,663	\$ 166,568	\$ 177,149	\$ 159,270	\$ 131,292	\$ 159,127	\$ 185,462
Total Building Area (ft <sup>2</sup> )	1,319,733	1,501,305	1,600,859	1,604,359	1,677,440	1,729,599	1,906,093	1,906,093

Utility Type - Usage	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021
Electric (kWh)	20,056,854	20,498,172	20,437,868	19,513,015	19,791,690	19,750,114	17,815,291	14,476,119	13,982,882
Natural Gas (ccf)	148,647	183,984	165,613	113,805	101,675	139,692	142,069	128,238	145,683
Propane (Gal)	0	0	0	0	0	0	0	0	0
Total Energy (kBtu)	83,744,627	88,890,115	86,792,145	78,300,322	78,001,771	81,775,665	75,418,839	62,601,032	62,714,942
Water/Sewer (Gal)	19,650,014	18,547,260	19,983,830	20,808,890	22,058,630	20,159,630	21,201,337	17,976,635	13,815,200
Utility Type - Cost	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021
Electric (kWh)	\$ 2,131,190	\$ 2,225,301	\$ 2,282,901	\$ 2,183,273	\$ 2,199,326	\$ 2,205,925	\$ 1,974,403	\$ 1,748,206	\$ 1,689,516
Natural Gas (ccf)	\$ 131,426	\$ 170,870	\$ 159,694	\$ 106,868	\$ 111,118	\$ 147,034	\$ 145,752	\$ 141,920	\$ 153,456
Propane (Gal)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Energy Cost	\$ 2,262,616	\$ 2,396,171	\$ 2,442,595	\$ 2,290,141	\$ 2,310,444	\$ 2,352,959	\$ 2,120,155	\$ 1,890,126	\$ 1,842,972
Water/Sewer Cost	\$ 198,366	\$ 198,647	\$ 200,611	\$ 223,406	\$ 232,918	\$ 219,438	\$ 240,834	\$ 198,854	\$ 179,861
Total Building Area (ft <sup>2</sup> )	1,906,093	1,906,093	2,039,528	2,039,528	2,039,528	2,039,528	2,042,691	2,042,691	2,042,691

\*The only propane purchases that Bullitt County Public Schools continues to make are for the generator at Hebron Middle School.

**Table 3 – Electric Cost Avoidance Report**

Cost Avoidance Report									
Electric Consumption: 2020/2021 Compared to Baseline									
Building	Base Year Actual (kWh)	Base Year Weather Adjusted (kWh)	Evaluation Year Actual (kWh)	Use Avoidance Non-Adjusted (kWh)	Use Avoidance Weather Adjusted (kWh)	Change - Non Adjusted %	Change - Weather Adjusted %	kWh Cost Avoidance Weather Adjusted \$	Demand Cost Avoidance
Bernheim	968,378	985,811	385,903	-582,475	-599,908	-60%	-61%	\$ (34,525)	\$ (9,561)
Brooks	840,640	820,838	598,080	-242,560	-222,758	-29%	-27%	\$ (12,820)	\$ (7,775)
Bullitt Central	1,749,023	1,659,712	883,336	-865,687	-776,376	-49%	-47%	\$ (44,680)	\$ (2,024)
Bullitt East	2,058,205	2,050,619	1,074,665	-983,540	-975,954	-48%	-48%	\$ (56,166)	\$ (7,809)
Bullitt Lick	1,199,102	1,180,886	521,600	-677,502	-659,286	-57%	-56%	\$ (22,686)	\$ (31,128)
Cedar Grove	594,405	570,172	504,960	-89,445	-65,212	-15%	-11%	\$ (7,495)	\$ 3,361
Central Office	438,922	430,592	266,800	-172,122	-163,792	-39%	-38%	\$ (10,049)	\$ (3,181)
Crossroads	828,036	762,594	530,242	-297,794	-232,352	-36%	-30%	\$ (6,536)	\$ (12,057)
Eastside	1,677,878	1,645,818	629,568	-1,048,310	-1,016,250	-62%	-62%	\$ (58,485)	\$ (13,992)
Freedom	1,196,862	1,196,802	503,200	-693,662	-693,602	-58%	-58%	\$ (23,867)	\$ (21,317)
Hebron	1,364,982	1,362,161	529,600	-835,382	-832,561	-61%	-61%	\$ (28,648)	\$ (34,186)
Lebanon Junction	474,697	466,959	508,680	33,983	41,721	7%	9%	\$ 2,560	\$ 1,722
Maintenance	70,569	70,657	110,507	39,938	39,850	57%	56%	\$ 3,479	
Maryville	847,754	843,742	349,200	-498,554	-494,542	-59%	-59%	\$ (52,075)	
MW Elementary	1,293,255	1,314,936	380,640	-912,615	-934,296	-71%	-71%	\$ (53,769)	\$ (21,860)
MW Middle	1,357,261	1,327,241	511,200	-846,061	-816,041	-62%	-61%	\$ (28,080)	\$ (45,410)
Nichols	212,232	207,390	356,520	144,288	149,130	68%	72%	\$ 12,238	
North Bullitt	2,494,791	2,405,780	877,200	-1,617,591	-1,528,580	-65%	-64%	\$ (129,480)	\$ 14,092
Old Mill	625,863	602,261	250,320	-375,543	-351,941	-60%	-58%	\$ (20,254)	\$ (11,830)
Overdale	616,080	569,497	491,040	-125,040	-78,457	-20%	-14%	\$ (2,700)	\$ (10,468)
Pleasant Grove	1,173,670	1,141,306	510,912	-662,758	-630,394	-56%	-55%	\$ (38,675)	\$ (9,209)
BAC/ROC	391,633	382,474	260,960	-130,673	-121,514	-33%	-32%	\$ (6,993)	\$ (2,030)
Roby	877,360	844,286	633,920	-243,440	-210,366	-28%	-25%	\$ (12,906)	\$ (8,494)
Shepherdsville	1,067,200	1,036,057	499,225	-567,975	-536,832	-53%	-52%	\$ (18,472)	\$ (38,145)
Transportation	197,383	193,465	136,680	-60,703	-56,785	-31%	-29%	\$ (3,484)	\$ (1,336)
Zoneton	1,678,209	1,647,083	583,000	-1,095,209	-1,064,083	-65%	-65%	\$ (112,048)	
<b>TOTAL</b>	<b>26,294,390</b>	<b>25,719,138</b>	<b>12,887,958</b>	<b>-13,406,432</b>	<b>-12,831,180</b>	<b>-51%</b>	<b>-50%</b>	<b>\$ (766,616)</b>	<b>\$ (272,635)</b>

Special note should be made about the electricity use at Cedar Grove, Lebanon Junction and Nichols Elementary. Due to their previous renovations, the schools had a major change in energy use – shifting from propane to electricity. These buildings have increased efficiency since their renovations, and the absence of propane clearly offsets the increased electricity consumption. Also, North Bullitt went from two meters (one of which had no demand charges) to one in 2007. This increased demand charges but additional savings were seen in electric kWh charges.

**Table 4 – Natural Gas and Propane Cost Avoidance Report**

Cost Avoidance Report								
Natural Gas Consumption: 2020/2021 Compared to Baseline								
Building	Base Year Actual (ccf)	Base Year Weather Adjusted (ccf)	Evaluation Year Actual (ccf)	Use Avoidance Non-Adjusted (ccf)	Use Avoidance Weather Adjusted (ccf)	Change Non-Adjusted %	Change Weather Adjusted %	Cost Avoidance Weather Adjusted \$
Bernheim	19,203	21,880	4,987	-14,216	-16,893	-74%	-77%	\$ (9,256)
Brooks								
Bullitt Central	41,767	43,224	26,531	-15,236	-16,693	-36%	-39%	\$ (10,703)
Bullitt East	35,419	37,188	11,285	-24,134	-25,903	-68%	-70%	\$ (15,202)
Bullitt Lick	9,001	10,215	2,749	-6,252	-7,466	-69%	-73%	\$ (4,875)
Cedar Grove	22,476	24,828	4,841	-17,635	-19,987	-78%	-81%	\$ (12,951)
Central Office	244	277	364	120	87	49%	31%	\$ 59
Crossroads								
Eastside								
Freedom	11,448	12,188	2,426	-9,022	-9,762	-79%	-80%	\$ (6,218)
Hebron	19,885	20,572	0	-19,885	-20,572	-100%	-100%	\$ (13,224)
Lebanon Junction	25,234	27,870	6,596	-18,638	-21,274	-74%	-76%	\$ (13,806)
Maintenance	3,165	3,758	9,072	5,907	5,314	187%	141%	\$ 3,494
Maryville	3,894	3,941	2,662	-1,232	-1,279	-32%	-32%	\$ (799)
MW Elementary	7,831	8,036	3,561	-4,270	-4,475	-55%	-56%	\$ (2,840)
MW Middle	13,549	14,406	9,864	-3,685	-4,542	-27%	-32%	\$ (2,895)
Nichols								
North Bullitt	12,371	14,555	19,466	7,095	4,911	57%	34%	\$ 3,168
Old Mill	10,468	11,211	12,977	2,509	1,766	24%	16%	\$ 1,623
Overdale	3,114	3,114	1,647	-1,467	-1,467	-47%	-47%	\$ (933)
Pleasant Grove	8,412	8,806	8,915	503	109	6%	1%	\$ 326
Riverview/DT	8,784	9,630	6,850	-1,934	-2,780	-22%	-29%	\$ (1,241)
Roby	51	51	28	-23	-23	-45%	-45%	\$ (14)
Shepherdsville	3,201	3,253	1,832	-1,369	-1,421	-43%	-44%	\$ (908)
Transportation	3,159	3,507	3,930	771	423	24%	12%	\$ 499
Zoneton								
<b>TOTAL</b>	<b>262,676</b>	<b>282,510</b>	<b>140,583</b>	<b>-122,093</b>	<b>-141,927.09</b>	<b>-46%</b>	<b>-50%</b>	<b>\$ (86,697)</b>

Cost Avoidance Report								
Propane Consumption: 2019/2020 Compared to Baseline								
Building	Base Year Actual (Gal)	Base Year Weather Adjusted (Gal)	Evaluation Year Actual (Gal)	Use Avoidance Non-Adjusted (Gal)	Use Avoidance Weather Adjusted (Gal)	Change Non-Adjusted %	Change Weather Adjusted %	Cost Avoidance Weather Adjusted \$
Cedar Grove	1,180	1,180	0	-1,180	-1,180	-100%	-100%	\$ (750)
Lebanon Junction	841	841	0	-841	-841	-100%	-100%	\$ (1,597)
Nichols	19,421	20,437	0	-19,421	-20,437	-100%	-100%	\$ (36,900)
<b>TOTAL</b>	<b>21,442</b>	<b>22,458</b>	<b>0</b>	<b>-21,442</b>	<b>-22,458</b>	<b>-100%</b>	<b>-100%</b>	<b>\$ (39,248)</b>

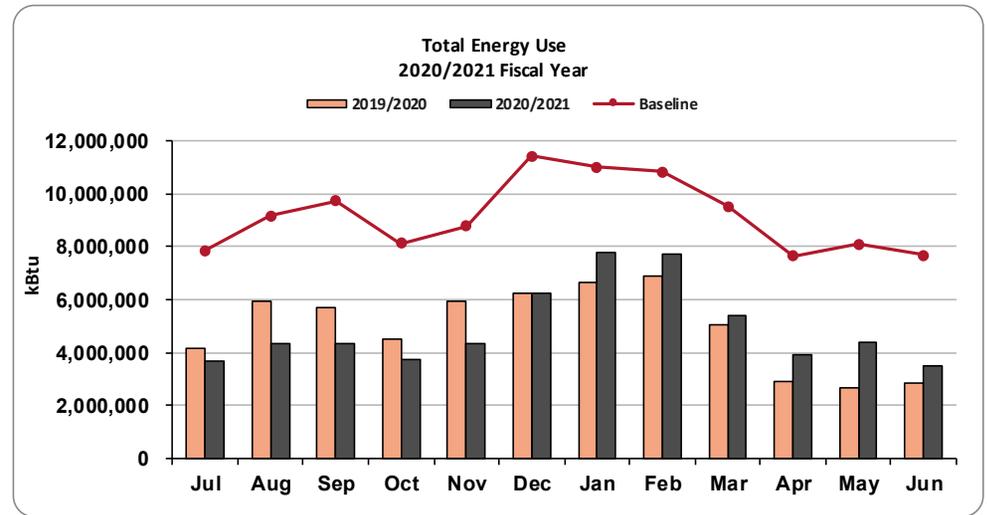
## Baseline Explanation

The baseline for the majority of the facilities is the average use of fiscal years 2004/2005 and 2005/2006, which are two years prior to the start of the energy management program. Schools such as Eastside, Zoneton, and Shepherdsville Elementary were constructed in mid-2005; therefore the 2006/2007 was used as their baseline. Old Mill Elementary had a building addition in 2005, so only the 2005/2006 year is used for their baseline. The Central Office added numerous computer servers, as well as a new air conditioning unit for the server room in 2006, therefore the 2006/2007 year is used for their baseline. With newly constructed buildings such as Roby, Brooks, Overdale, and Crossroads, their respective baselines have now been set as their first full year of energy use after opening.

The baseline has also been revised for schools that went under major renovation in the past five to six years: Cedar Grove (baseline 2011/2012), Hebron (2012/2013), Lebanon Junction (2011/2012), Nichols (2010/2011). These renovations had major changes made to their mechanical, electrical, and plumbing systems – causing significant changes in energy consumption. The district is still tracking and accounting for the significant change in energy usage since the original energy management baseline, and those changes are reflected in the cost savings/cost avoidance metrics.

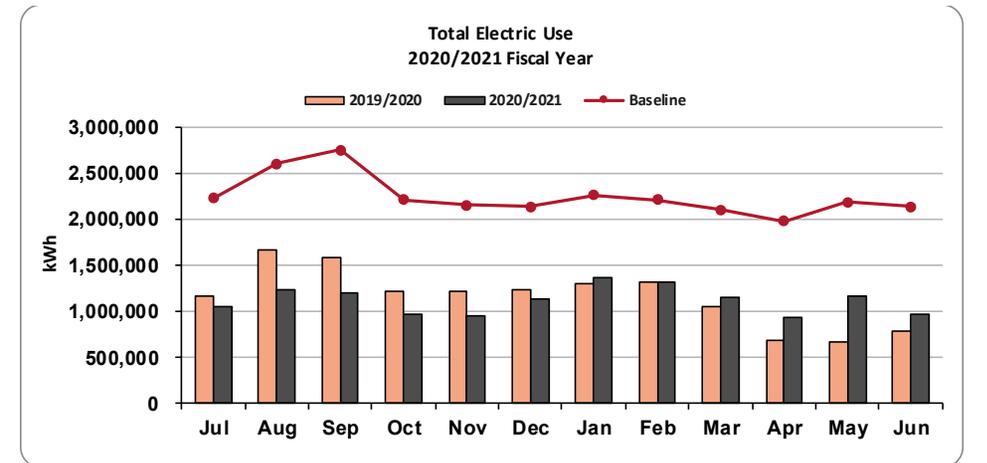
**Figure 5 –Non-Adjusted School Energy Use (Electric and Natural Gas)**

Month	Total Energy Usage (kBtu)				Weather Data			
	Baseline	2019/2020	2020/2021	% Change from Baseline	2020/2021		Baseline	
					CDD	HDD	CDD	HDD
Jul	7,842,724	4,151,417	3,699,372	-53%	453	0	429	0
Aug	9,163,947	5,935,917	4,352,928	-52%	327	0	389	5
Sep	9,724,941	5,673,020	4,306,980	-56%	165	36	218	17
Oct	8,119,551	4,538,357	3,706,929	-54%	35	246	47	167
Nov	8,785,461	5,959,809	4,316,336	-51%	4	430	4	436
Dec	11,421,630	6,259,197	6,241,795	-45%	0	831	0	910
Jan	11,009,598	6,648,890	7,806,418	-29%	0	904	0	725
Feb	10,839,871	6,884,124	7,718,769	-29%	0	906	0	702
Mar	9,523,164	5,035,751	5,391,348	-43%	2	425	0	595
Apr	7,649,624	2,929,911	3,906,248	-49%	23	292	45	171
May	8,102,269	2,643,597	4,365,447	-46%	70	169	93	97
Jun	7,672,321	2,832,441	3,504,014	-54%	251	7	317	0
<b>Total YTD</b>	<b>109,855,102</b>	<b>59,492,432</b>	<b>59,316,586</b>	<b>-46%</b>	<b>1330</b>	<b>4246</b>	<b>1540</b>	<b>3824</b>
<b>YTD Change from Last Year</b>				<b>0%</b>				



**Figure 6 – Non-Adjusted School Electric Use**

Month	Total Electric Usage (kWh)				Weather Data			
	Baseline	2019/2020	2020/2021	% Change from Baseline	2020/2021		Baseline	
					CDD	HDD	CDD	HDD
Jul	2,223,084	1,174,901	1,044,165	-53%	453	0	429	0
Aug	2,599,889	1,664,762	1,233,085	-53%	327	0	389	5
Sep	2,746,156	1,582,338	1,192,178	-57%	165	36	218	17
Oct	2,207,277	1,215,313	970,126	-56%	35	246	47	167
Nov	2,155,313	1,224,143	946,899	-56%	4	430	4	436
Dec	2,133,395	1,225,854	1,139,338	-47%	0	831	0	910
Jan	2,262,714	1,301,336	1,358,787	-40%	0	904	0	725
Feb	2,206,859	1,320,379	1,316,767	-40%	0	906	0	702
Mar	2,101,676	1,059,034	1,143,209	-46%	2	425	0	595
Apr	1,978,164	678,669	938,071	-53%	23	292	45	171
May	2,185,178	669,077	1,160,772	-47%	70	169	93	97
Jun	2,133,352	781,358	971,302	-54%	251	7	317	0
<b>Total YTD</b>	<b>26,933,055</b>	<b>13,897,164</b>	<b>13,414,699</b>	<b>-50%</b>	<b>1330</b>	<b>4246</b>	<b>1540</b>	<b>3824</b>
<b>YTD Change from Last Year</b>				<b>-3%</b>				



**Figure 7 – Non-Adjusted School Natural Gas Use**

Month	Total Natural Gas Usage (CCF)				Weather Data				
	Baseline	2019/2020	2020/2021	% Change Baseline	2020/2021		Baseline		
					CDD	HDD	CDD	HDD	HDD
Jul	4,621	1,385	1,327	-71%	453	0	429	0	0
Aug	5,811	2,483	1,414	-76%	327	0	389	5	
Sep	6,417	2,661	2,323	-64%	165	36	218	17	
Oct	8,363	3,803	3,853	-54%	35	246	47	167	
Nov	18,053	17,311	10,539	-42%	4	430	4	436	
Dec	45,479	20,161	22,858	-50%	0	831	0	910	
Jan	37,859	21,444	30,779	-19%	0	904	0	725	
Feb	37,649	23,097	31,320	-17%	0	906	0	702	
Mar	26,774	13,809	14,473	-46%	2	425	0	595	
Apr	11,774	5,964	6,850	-42%	23	292	45	171	
May	9,139	3,502	3,931	-57%	70	169	93	97	
Jun	5,827	1,616	1,844	-68%	251	7	317	0	
<b>Total YTD</b>	<b>217,763</b>	<b>117,236</b>	<b>131,511</b>	<b>-40%</b>	<b>1330</b>	<b>4246</b>	<b>1540</b>	<b>3824</b>	
	<b>YTD Change from Last Year</b>			<b>12%</b>					

