

# EPM SAVINGS TIMES

MANUFACTURERS OF COMPUTERIZED TEMPERATURE CONTROL FOR OVER THIRTY YEARS

Volume 03 Issue 09

UTILITY COST SAVINGS WITHOUT SACRIFICE

Sept 1, 2009

## EPM CTC SYSTEMS BENEFITS

- Reduce energy costs between 20% and 42%.
- Continuous training eliminates costly maintenance contracts.
- Quick identification of heating and air conditioning service issues.
- Free annual verification of CTC system operation.
- If we cannot help you, we will tell you who can, we promise.

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## “WE’VE GOT ONE OF THOSE ALREADY!”

Over the past fifteen years few commercial buildings were built without some sort of energy management system (EMS) or building automation system (BAS), commonly referred to as a direct digital control (DDC).

Most are specified by consulting engineers whose only knowledge is what the big three DDC companies have told them.

The DDC systems have really pretty graphics and look really complicated. But, most simply act like a programmable thermostat.

**Many buildings are on a demand electric rate and their DDC system probably increases their energy cost.**

DDC systems are designed so that anyone with fundamental knowledge of heating and air conditioning can install the DDC system. All DDC manufacturers provide a short programming school to select and arrange the canned programs provided with the DDC system. **With DDC one size fits all comes to mind.**

Unlike the DDC systems, our Computerized Temperature Con-

trol (CTC) system’s installation and software are custom designed by engineers with degrees in electrical engineering, computer design engineering and computer programming from major universities. The design is unique for each facility and specific heating and air conditioning equipment.

The CTC system controls the heating and air conditioning equipment eliminating the conflicts, maximizing comfort and minimizing utility cost. Our CTC system employs our patented Temperature Based Demand Limiting (TBDL). TBDL provides maximum electrical demand limiting and

cost reduction without affecting comfort like DDC systems. Read on-this issue is devoted to the differences recently illustrated at MODOT.

**NO YOU DON’T HAVE ONE OF THOSE - THAT’S WHY YOUR UTILITY COST IS PROBABLY 30% TOO HIGH.**

EPM can help, contact us.  
(573) 642-6550 (316) 269-2660

[www.epmctc.com](http://www.epmctc.com)



## What Makes EPM's CTC System Different From Others?

A year ago, we finished installing our CTC system in the **Missouri Department of Transportation (MODOT)** complex in Hannibal, Missouri. Our CTC system replaced a DDC system built and serviced by a big three control company.

When we first approached MODOT, they said, "We have one of those energy control systems." After several months and visits to our other CTC systems they said, "We really do not have the same thing as your CTC system." With comfort, heating and air conditioning

and utility cost problems, they too started the process to acquire a CTC system. They selected an engineer

**The EPM CTC system is drastically different and superior to the DDC system.**

and instructed him to design a CTC system, not a DDC system. Plans were placed in plan rooms and sent directly to the big three control companies.

After the DDC system was removed and our CTC system was installed, the building became comfortable.

Their maintenance man was trained to maintain our CTC system. One year later, Mr. Gary Tolliver, MODOT (573) 248-4900, said, "The EPM CTC system is drastically different and superior to the DDC system. EPM's CTC system is ten times easier to use than the DDC system."

The first year, the EPM CTC system reduced the annual utility cost more than the DDC system by 26.47% or over \$23,500.

**NO THEY DIDN'T HAVE ONE OF THOSE!**

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## Jim's Engineer Corner – ANOTHER DDC GONE

Over the past year, our CTC system has controlled and monitored the operation of the heating and air conditioning at MODOT Hannibal. During the year other MODOT district offices visited Hannibal.

St. Joseph had a DDC system installed, not by one of the big three, but by a mechanical contractor DDC vendor. St. Joseph wanted to see for themselves if our CTC system really did what Hannibal said it did.

St. Joseph stated, "Before installing their DDC system, they questioned the mechanical contractor-DDC vendor at great length. The vendor assured them their

DDC system provided the same control, ease of use and savings as our CTC system.

St. Joseph said, "Untrue to the prom-

ises, the DDC system simply acted like a programmable thermostat, but it did give us a lot of pretty pictures."

After St. Joseph's visit to Hannibal, they were shocked. The Hannibal CTC system was truly an integrated control system controlling and coordinating all of the heating and air conditioning equipment, exactly as promised, but not deliv-

**After St. Joseph's visit to Hannibal, they were shocked.**

ered by the St. Joseph DDC vendor. In addition, the

CTC system monitored and protected the heating and air conditioning equip-

ment. Hannibal maintenance personnel easily make CTC system changes. Also, the utility cost savings was over 25% more than the removed DDC system.

St. Joseph hired the same engineer as Hannibal, they qualified for a large energy grant, CTC system plans and specifications were bid and we are starting the job.

Get what you were promised  
[jim@epmctc.com](mailto:jim@epmctc.com)

## Mike's Service Corner-CTC System & Comfort

Hannibal MODOT purchased and installed our CTC system to provide a comfortable work environment and have reduced utility and maintenance costs pay for the CTC system.

At the first indication of a heating or air conditioner problem our CTC system monitoring and alarm programs notify them and us. If the controlled heating or air conditioning fails to properly respond to the CTC system commands, the CTC system will generate a mechanical equipment alarm.

There are two types of alarms. The first is a high priority alarm such as a freezer compressor that fails to start or a boiler that fails to heat.

The CTC system immediately sends the 24/7 EPM alarm monitoring an e-mail describing the alarm. An alarm text message is also sent to the customer's cell phone.

The second type of alarm is a non-emergency alarm. This is sent during normal working hours. If the customer does not act within a specific time, the message is

sent to the EPM alarm computer.

At Hannibal MODOT alarms have notified them of minor heating and air conditioning problems while they were relatively inexpensive to repair; such as low suction temperature, bad condenser fan and low static pressure. Before the EPM CTC system was installed these problems escalated and become very expensive to repair.

**I can help small problems stay small.**  
**[service@epmctc.com](mailto:service@epmctc.com)**

## Chris' CTC Research and Development Corner

Hannibal MODOT was one of the first large installations of our new SBD-3200 Computerized Temperature Control (CTC) system. The new SBD-3200 CTC system replaces our SBD-2590 CTC system. The SBD-3200 is backward compatible with our SBD-1000 through SBD-2590 CTC systems.

The SBD-3200 CTC system is written without Microsoft®. It uses Linux®. Unlike other operating systems, Linux does not require expensive updates and is not abandoned. Now Hannibal will never be required to update their control system as required by DDC system providers.

With DDC and previous CTC systems you had to have a communication software package to access the programs. With the SBD-3200 you only need an Internet browser, such as Internet Explorer® or Firefox®.

The advantage of the new communication package is the SBD-3200 system simply acts like a password protected interactive web page. You can access the new SBD-3200 from any computer with an Internet connection. Encryption and firewalls protect all communication.

When the SBD-3200 is installed it is connected to

your network and Internet. If you have an IT staff we work with them. If you don't have a on we will do it for you working with your Internet provider.

**Hannibal MODOT**  
**Utility Cost Savings**  
**Over DDC**  
**\$23,500 a year or 26.47%**  
**Five year payback**

MODOT elected to use a secure technology for multiple CTC systems, similar to that used by our multiple bank customers.

**We make it easy and secure.**  
**[cadam@epmctc.com](mailto:cadam@epmctc.com)**

# EPM

[www.epmctc.com](http://www.epmctc.com)

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Fulton, Missouri 65251  
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Wichita, Kansas 67211  
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## SCOREBOARD

### RECENT Savings RESULTS:

<b>Russell Bickerdyke Elementary School</b>	<b>21.05% (first eight months)</b>
<b>Wesley Methodist Church, Sedalia</b>	<b>29.64% (first eight months)</b>
<b>Peabody Elementary</b>	<b>26.38% (fourth year)</b>
<b>MODOT Hannibal</b>	<b>26.47% (first year)</b>

Above is the current score of energy use reduction as compare to the year before the EPM CTC was installed.

## Rick's Corner-You Really Don't Have One? Find Out For Sure!

Many of you think, "I have a CTC system," but you really don't. If you really don't have one you could be wasting tens of thousands of dollars each year. How do you find out?

If your building is uncomfortable, your heating and air conditioning equipment cause problems and your utility cost is high, you probably have a DDC system and not a CTC

chances are you have a DDC system. If the DDC system is improperly installed or programmed it can be damaging your heating and air conditioning equipment and increasing your utility cost.

MODOT had a DDC system and found replacing it with our CTC system generated utility cost savings sufficient to pay for the complete CTC system in five years.

There are instances when the upgrade to an efficient EPM CTC system not only makes sense, it is the right thing to do. We cannot help everyone. If we cannot we will let you know.

As with MODOT, we need to do the research and due diligence to see if the particular building is a fit for an EPM CTC system. During this process we found the St. Joseph MODOT CTC system

was eligible for a grant from the electric company.

**GRANTS MAY BE  
AVAILABLE TO ASSIST  
IN YOUR CTC SYSTEM  
PURCHASE  
CONTACT ME TO FIND  
OUT**

Many EPM systems are financed or lease/purchased. This allows the building owner to pay for the solution and the improvements with savings from the existing operating budget. The evaluation process only costs you some time, but could provide significant savings.

Our CTC system is custom made to exactly fit your building. One at a time-every time.

**Need more information or  
for an analysis?**

**[rnick@epmctc.com](mailto:rnick@epmctc.com)**

### EPM CTC SYSTEM

- operate efficiently
- solve comfort problems
- monitor safe operation
- pay with utility savings

system. If you suspect you have a DDC system, we can find out by doing a Short-sheet. The Shortsheet is an analysis of your utility usage and cost. If your building is above the national standard,



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**EPM Computerized Temperature Control Savings Examples - Commercial Business**

Facility	Cost (\$)	Projected	Actual	Simple	Primary Contact	Phone	Installation Date	KBTU Per Square	
		Savings	Savings	Payback				Foot Per Year	
		(%)	(%)	(# Years)				Before	After
Alton Bowl Haven	\$22,646.20	14.17%	15.68%	3.25	Bill Netzhammer	(618) 465-6626	Mar 16, 1990	86	74
First Bank-Formerly Bank of Jerseyville	\$21,674.00	19.75%	23.57%	2.67	Vicki Jackson	(618) 498-2151	Nov 20, 1992	104	79
B & B Theater Festus	\$35,762.00	14.10%	13.50%	4.17	Gary Drury	(636) 933-4033	Jun 24, 1999	67	56
B & B Theater Dodge City	\$43,386.00	14.64%	22.77%	1.83	Ernie Sinclair	(620) 227-8100	Nov 2, 1999	77	47
B & B Theater Iola	\$41,094.78	10.00%	28.60%	4.25	Dan VanOrden	(573) 642-3813	Nov 15, 2001	81	62
B & B Theater Moberly	\$37,000.00	14.31%	24.15%	3.33	Chris Tickner	(660) 263-8100	Nov 18, 1998	80	61
B & B Theater Neosho	\$37,883.12	18.00%	28.50%	3.33	Paul Farnworth	(417) 455-1802	Jan 1, 2001	75	44
B & B Theater Waynesville	\$41,152.00	15.88%	26.18%	3.75	Dan VanOrden	(573) 642-3813	Jun 24, 1999	75	51
Callaway County Missouri Court House	\$33,548.00	18.88%	29.11%	2.00	Lee Fritz	(573) 642-0737	Jul 23, 2008	70	42
Central Bank and Trust California	\$37,249.00	22.76%	23.15%	3.17	Keith Ziegelbein	(573) 634-5600	Dec 12, 2002	81	60
Central Bank and Trust Fulton	\$37,248.00	15.68%	11.30%	5.25	Keith Ziegelbein	(573) 634-5600	Dec 13, 2001	75	73
Central Bank and Trust Holls Summit	\$29,250.00	20.22%	29.72%	0.75	Keith Ziegelbein	(573) 634-5600	Dec 13, 2001	237	114
Central Bank and Trust 238 Madison Jefferson City	\$43,121.73	13.80%	19.32%	3.67	Keith Ziegelbein	(573) 634-5600	Dec 4, 1984	74	59
Central Bank and Trust 500 Madison Jefferson City	\$84,225.00	12.02%	15.30%	4.17	Keith Ziegelbein	(573) 634-5600	Mar 1, 2001	230	205
Central Bank and Trust West Jefferson City	\$24,262.96	15.22%	27.38%	3.25	Keith Ziegelbein	(573) 634-5600	Dec 23, 1983	84	61
Central Technology Services	\$99,993.00	13.34%	11.17%	4.08	Keith Ziegelbein	(573) 634-5600	Dec 29, 2000	135	123
Citizens Bank and Trust company Overland Park	\$37,986.00	17.01%	64.11%	0.67	Bryan LaGree	(913) 491-1061	Oct 17, 2001	270	125
Citizens Bank and Trust Company Topeka	\$57,552.00	19.94%	33.74%	2.50	Bryan LaGree	(913) 491-1061	Nov 27, 2003	184	116
Empire Bank South National	\$118,506.00	30.57%	37.52%	3.33	Jim Brandenburg	(417) 881-3100	Nov 22, 2006	130	81
Empire Bank 1800 South Glenstone	\$127,115.26	22.65%	30.15%	2.92	Steve Viehland	(417) 881-3100	Jul 21, 2003	214	130
Empire Bank Glen Isle	\$23,753.00	22.65%	26.50%	2.17	Steve Viehland	(417) 881-3100	Jun 27, 2003	163	161
Empire Bank North	\$22,103.25	25.00%	NEW	3.17	Steve Viehland	(417) 881-3100	NEW	165	NEW
First Bank of Creve Coeur	\$69,100.00	25.00%	28.23%	1.83	Ronda Asher-Hibbon	(314) 592-2772	May 15, 1988	132	96
First Bank of Illinois Belleville	\$20,865.52	16.80%	23.08%	3.08	Elaine Patterson	(618) 233-0538	May 17, 1994	107	80
First United Methodist Church Sterling	\$54,967.50	24.56%	30.74%	4.67	Debbie Wolfe	(620) 278-2615	Sep 24, 2007	50	37
Focus Bank of Caruthersville	\$23,830.00	18.98%	20.10%	3.25	Scott Avis	(573) 333-2240	Sep 18, 2003	73	67
Focus Bank of Paragould	\$22,938.00	20.10%	19.77%	2.17	Jacob Kellelt	(870) 236-7000	Mar 9, 2006	113	94
Harpos - Columbia	\$5,000.00	15.00%	27.36%	2.67	Dennis Harper	(573) 443-5418	Aug 1, 1979	145	112
Henges Enterprises, Inc.	\$18,750.00	11.52%	14.62%	2.83	Craig Buechler	(870) 236-5464	Mar 5, 1987	85	71
Kennett National Bank	\$41,400.00	16.69%	26.00%	3.33	Kim McCormick	(573) 888-9051	Feb 21, 2001	99	69
Kneibert Clinics	\$114,801.41	25.00%	35.22%	2.67	Robert Christian	(573) 778-7210	Jul 7, 1988	175	108
Macon-Atlanta State Bank	\$51,021.00	24.72%	24.94%	3.50	Rusty Neil	(660) 385-3161	Mar 28, 2005	108	82
Missouri Farm Bureau Jefferson City	\$169,353.00	10.23%	21.97%	3.25	Randy Seidel	(573) 893-1400	Oct 31, 2000	92	79
Missouri Department of Transportation- Hannibal	\$109,323.00	22.96%	26.47%	2.83	Todd Roth	(573) 248-2428	Jun 20, 2008	147	114
OATS Mid-Missouri Regional Office	\$62,539.00	24.06%	48.51%	1.67	Jack Heusted	(573) 449-3789	Jan 13, 2008	147	93
Peabody State Bank	\$16,150.00	16.01%	11.98%	6.83	R. S. Avery	(620) 983-2181	Aug 6, 2004	126	114
Peoples Bank & Trust Hawk Point	\$7,742.74	27.00%	22.00%	3.83	David Thompson	(636) 528-7001	Jul 27, 1989	93	66
Peoples Bank & Trust O'Fallon	\$6,416.00	30.00%	21.28%	2.58	David Thompson	(636) 528-7001	Dec 24, 2002	111	86
Peoples Bank & Trust Cherry & Wood Troy	\$11,802.29	26.50%	25.53%	2.00	David Thompson	(636) 528-7001	Jul 29, 1987	118	86
Peoples Bank & Trust #9 Troy Square Troy	\$6,416.00	12.00%	30.73%	6.42	David Thompson	(636) 528-7001	Dec 24, 2002	84	76
Peoples Bank Franklin Street Cuba	\$18,450.00	20.27%	20.76%	2.75	Tina Hannon	(573) 885-2511	Dec 24, 2002	112	87
Peoples Bank Washington Street Cuba	\$17,642.00	22.07%	36.10%	2.25	Bill Adam	(573) 885-2511	Jun 3, 2003	97	68
St. John's Bank & Trust Bridgeton	\$38,141.14	26.00%	39.55%	1.67	Alan Epperson	(314) 428-1059	Jul 19, 1988	154	92
St. John's Bank & Trust Cave Springs	\$79,974.83	26.00%	36.97%	2.00	Alan Epperson	(314) 428-1059	Jun 4, 1992	257	158
St. John's Bank Natural Bridge	\$19,784.91	25.00%	14.41%	2.92	Alan Epperson	(314) 428-1059	Nov 10, 1988	202	177
Tri-County Trust Company	\$8,269.00	10.02%	13.78%	2.92	Tim Monning	(660) 338-2234	Mar 19, 1999	73	61
UMB Bank (63 Facilities)	\$1,196,515.78	22.74%	37.60%	2.40	Mark Garten	(816) 474-5600	Jul 1989	143	87
Wesley United Methodist Church Sedalia	\$52,895.00	28.00%	29.64%	3.08	Kevin Holburg	(660) 826-4502	Oct 29, 2008	115	81
YMCA Callaway County	\$48,526.80	18.00%	29.64%	2.92	Patricia Kelly	(573) 642-1065	Nov 1, 2002	71	55

<b>AVERAGE</b>	<b>\$44,149.67</b>	<b>19.51%</b>	<b>25.68%</b>	<b>3.06</b>				<b>122.17</b>	<b>87.92</b>
								100%	72%

CTC system installations shown in BLUE had operating night setback systems removed at the time of the CTC system installation. The CTC system savings is above and beyond the night setback savings from the removed night setback systems

CTC system installations shown in RED had operating Direct Digital Control (DDC) systems removed at the time of the CTC system installation. The CTC system savings is above and beyond the DDC system savings from the removed DDC systems

The percent dollar savings may differ from KBTU per SF per YR reduction depending upon if the CTC system is primarily a consumption, electric demand or combination consumption and demand savings CTC system.

**For further information contact the Fulton Engineering Office at (573)642-6550**

[www.epmctc.com](http://www.epmctc.com)



**EPM Computerized Temperature Control Savings Examples - Schools**

Facility	Cost (\$)	Projected Savings (%)	Actual Savings (%)	Simple Payback (# Years)	Primary Contact	Phone	Installation Date	KBTU Per Square	
								Foot Per Year	
								Before	After
<a href="#">Ozark R-VI North Elementary</a>	\$142,172.00	18.38%	28.58%	3.75	Kevin Patterson	(417) 582-5900	3/15/2007	69	50
<a href="#">Ozark R-VI South Elementary</a>	\$117,231.00	19.36%	32.99%	2.33	Kevin Patterson	(417) 582-5900	4/26/2008	42	28
<a href="#">Ozark R-VI Junior High School</a>	\$270,333.00	24.65%	36.15%	2.92	Kevin Patterson	(417) 582-5900	2/21/2007	43	29
<a href="#">Ozark R-VI High School</a>	\$365,611.00	26.11%	25.98%	2.67	Kevin Patterson	(417) 582-5900	2/23/2007	65	52
<a href="#">Peabody-Burns USD #398 Elementary</a>	\$85,969.00	26.28%	30.42%	4.94	Rex Watson	(620) 983-2198	12/10/2004	72	49
<a href="#">Peabody-Burns USD #398 Brown Building</a>	\$61,980.00	24.52%	25.61%	4.17	Rex Watson	(620) 983-2198	12/23/2004	32	24
<a href="#">Peabody-Burns USD #398 Middle-High</a>	\$120,000.00	24.52%	43.98%	4.00	Rex Watson	(620) 983-2198	12/23/2004	61	32
<a href="#">Quinter USD #293 Elementary</a>	\$129,836.00	21.24%	24.19%	5.18	Tom Herman	(785) 754-3660	4/5/2004	80	61
<a href="#">Quinter USD #293 Jr-Sr High School</a>	\$118,796.00	20.35%	29.44%	3.33	Tom Herman	(785) 754-3660	6/4/2004	94	66
<a href="#">Reeds Spring R-IV Primary School</a>	\$158,052.00	18.14%	20.49%	6.67	Michael Mason	(417) 272-8173	6/28/2006	42	35
<a href="#">Reeds Spring R-IV Elementary School</a>	\$170,918.00	25.00%	28.13%	5.33	Michael Mason	(417) 272-8173	3/6/2006	47	40
<a href="#">Reeds Spring R-IV Intermediate School</a>	\$149,426.00	12.15%	17.73%	7.00	Michael Mason	(417) 272-8173	6/2/2006	39	34
<a href="#">Reeds Spring R-IV Middle &amp; Tech School</a>	\$225,117.00	25.25%	36.55%	3.50	Michael Mason	(417) 272-8173	4/25/2006	68	51
<a href="#">Reeds Spring R-IV High School</a>	\$227,618.00	23.49%	25.42%	4.92	Michael Mason	(417) 272-8173	2/1/2006	70	53
<a href="#">Reeds Spring R-IV Admin. &amp; Alternative School</a>	\$29,963.00	23.75%	26.51%	4.17	Michael Mason	(417) 272-8173	4/17/2006	63	44
<a href="#">Reeds Spring R-IV Sports Facility</a>	\$15,872.00	23.22%	42.53%	1.92	Michael Mason	(417) 272-8173	2/2/2006	127	82
<a href="#">Richmond R-XVI Middle School</a>	\$118,437.00	17.64%	35.81%	2.17	Jim Robins	(816) 776-6912	6/23/2004	93	42
<a href="#">Richmond R-XVI High School</a>	\$124,612.00	18.77%	26.14%	2.67	Jim Robins	(816) 776-6912	6/15/2004	85	46
<a href="#">Rolla Public Schools - Administration**</a>	\$16,600.00	20.00%	42.32%	2.36	Aaron Zalis	(573) 364-1329	7/18/1996	N/A	N/A
<a href="#">Rolla Public School - Allied Health**</a>	\$134,817.00	20.00%	42.32%	2.36	Aaron Zalis	(573) 364-1329	12/10/1998	N/A	N/A
<a href="#">Rolla Public School - High School**</a>	\$160,250.00	20.00%	42.32%	2.36	Aaron Zalis	(573) 364-4746	9/16/1992	N/A	N/A
<a href="#">Rolla Public School - Vo Tech**</a>	\$34,000.00	20.00%	42.32%	2.36	Aaron Zalis	(573) 364-3726	4/23/1990	N/A	N/A
<a href="#">Rolla Public School - Junior High**</a>	\$32,380.00	20.00%	42.32%	2.36	Aaron Zalis	(573) 364-3014	4/23/1990	N/A	N/A
<a href="#">Rolla Public School - Middle School**</a>	\$105,500.00	20.00%	42.32%	2.36	Aaron Zalis	(573) 364-2151	9/2/1992	N/A	N/A
<a href="#">Rolla Public School - Truman Elementary**</a>	\$66,000.00	20.00%	42.32%	2.36	Aaron Zalis	(573) 364-8193	4/23/1990	N/A	N/A
<a href="#">Russell County USD #407 Admin Office</a>	\$23,085.00	24.73%	27.86%	3.67	David Couch	(785) 483-2173	12/31/2008	141	80
<a href="#">Russell County USD #407 Brickerdyke Elem</a>	\$74,205.00	23.37%	21.05%	5.67	David Couch	(785) 483-2173	9/18/2009	93	65
<a href="#">Russell County USD #407 Luray-Lucas Elem</a>	\$43,076.00	20.52%	23.55%	5.50	David Couch	(785) 483-2173	8/26/2008	97	70
<a href="#">Russell County USD #407 Simpson Elem</a>	\$69,143.00	24.02%	22.14%	4.33	David Couch	(785) 483-2173	11/4/2008	117	79
<a href="#">Russell County USD #407 Ruppenthal Middle</a>	\$134,797.00	17.93%	NEW	NEW	David Couch	(785) 483-2173	NEW	65	NEW
<a href="#">Russell County USD #407 Lucas-Luray High</a>	\$100,408.00	23.33%	NEW	NEW	David Couch	(785) 483-2173	NEW	83	NEW
<a href="#">Russell County USD #407 Russell High</a>	\$247,460.00	20.17%	20.05%	4.25	David Couch	(785) 483-2173	12/17/2009	174	144
<a href="#">Silver Lake West Elementary #372</a>	\$37,500.00	19.26%	27.53%	5.50	Randy Freeman	(785) 582-4026	1/11/2001	112	79
<a href="#">Silver Lake East Elementary</a>	\$94,000.00	20.86%	32.35%	3.33	Randy Freeman	(785) 582-4026	1/11/2001	164	100
<a href="#">Silver Lake High School</a>	\$189,599.00	20.00%	34.89%	8.83	Randy Freeman	(785) 582-4026	8/15/2001	107	58
<a href="#">Sterling USD #376 Grade School</a>	\$80,273.00	27.48%	18.14%	4.08	Fred Dierksen	(620) 278-3621	12/29/2003	144	111
<a href="#">Sterling USD #376 Middle-High School</a>	\$109,416.00	13.49%	31.13%	2.50	Fred Dierksen	(620) 278-3621	2/12/2004	76	49
<a href="#">Stewartville C-2 Elementary &amp; High</a>	\$87,647.00	14.83%	24.61%	4.68	Allen Kerr	(816) 669-3792	9/22/1999	63	48
<a href="#">Sullivan C-2-Primary School</a>	\$123,227.00	20.00%	32.28%	3.84	Tanya Voss	(573) 468-5171	3/2/2002	65	44
<a href="#">Sullivan C-2-Middle School</a>	\$166,315.00	24.16%	29.86%	3.75	Tanya Voss	(573) 468-5171	8/28/2003	77	49
<a href="#">Sullivan C-2-High School</a>	\$460,674.00	17.07%	27.21%	5.00	Tanya Voss	(573) 468-5171	5/31/2005	60	42
<a href="#">Van-Far R-I - Elementary</a>	\$61,916.00	19.44%	29.30%	4.41	Christopher Felmlee	(573) 594-6111	7/20/1995	97	50
<a href="#">Van-Far R-I - High</a>	\$101,192.00	25.00%	37.54%	4.95	Christopher Felmlee	(573) 594-6111	11/10/1995	102	52
<a href="#">Waconda USD #272 at Downs</a>	\$107,365.00	23.21%	23.67%	3.42	Jeff Travis	(785) 781-4328	11/11/2005	80	68
<a href="#">Waconda USD #272 at Cawker City</a>	\$97,558.00	23.83%	25.10%	5.58	Jeff Travis	(785) 781-4328	11/11/2005	89	64
<a href="#">Waynesville East Elementary</a>	\$61,519.98	19.60%	56.01%	0.78	Judne Blackburn	(573) 774-6169	7/23/1993	68	60
<a href="#">Waynesville Middle School</a>	\$109,098.38	15.00%	52.13%	1.05	Judne Blackburn	(573) 774-6169	9/17/1993	118	95
<a href="#">Waynesville Early Childhood Center</a>	\$74,384.72	10.00%	15.00%	6.29	Judne Blackburn	(573) 774-6169	11/4/1994	71	58
<a href="#">William Woods University 12 Buildings</a>	\$71,552.05	15.00%	20.00%	5.00	Mike Dillon	(573) 642-2251	Various	N/A	N/A
<a href="#">Winfield R-IV Primary School</a>	\$41,070.08	20.00%	NEW	NEW	Martha McAdams	(636) 668-8188	10/15/2005	65	N/A
<a href="#">Winfield R-IV Middle School</a>	\$37,150.83	20.00%	NEW	NEW	Martha McAdams	(636) 668-8188	10/15/2005	65	N/A
<a href="#">Winfield R-IV High School</a>	\$99,750.00	18.34%	18.38%	2.00	Martha McAdams	(636) 668-8188	3/15/2004	71	60
<a href="#">Winfield R-IV High School Addition</a>	\$46,712.44	18.34%	NEW	NEW	Martha McAdams	(636) 668-8188	9/10/2005	71	NEW
<b>AVERAGE</b>	<b>\$111,363.77</b>	<b>20.30%</b>	<b>29.99%</b>	<b>4.00</b>				<b>82</b>	<b>57</b>
								100%	70%
**Savings Analysis Completed by School District									
CTC system installations shown in BLUE had operating night setback systems removed at the time of the CTC system installation. The CTC system savings is above and beyond the night setback savings from the removed night setback systems.									
CTC system installations shown in RED had operating Direct Digital Control (DDC) systems removed at the time of the CTC system installation. The CTC system savings is above and beyond the DDC system savings from the removed DDC systems.									
The percent dollar savings may differ from KBTU per SF per YR reduction depending upon if the CTC system is primarily a consumption, electric demand or combination consumption and demand savings CTC system.									
<b>For further information contact the Fulton Engineering Office at (573)642-6550</b>									
<a href="http://www.epmctc.com"><b>www.epmctc.com</b></a>									
									08/13/09