

HON. STEPHEN R. JOHNSON

**P.O. BOX 669
CAMPTON KY 41301
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August 30, 2011

Mr. Jeff Derouen
Executive Director
Public Service Commission
211 Sower Blvd.
Frankfort, KY 40601

RECEIVED

AUG 31 2011

PUBLIC SERVICE
COMMISSION

RE: Case No. 2011-00076
Menifee County Board of Education v. Clark Energy

Dear Mr. Derouen:

Enclosed please find the original and 10 copies of Menifee County Board of Education's Response to Staff's first set of Requests in the above captioned case. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen R. Johnson". The signature is fluid and cursive, with a large initial "S" and "J".

Hon. Stephen R. Johnson
Attorney for Menifee County Board of Ed.

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

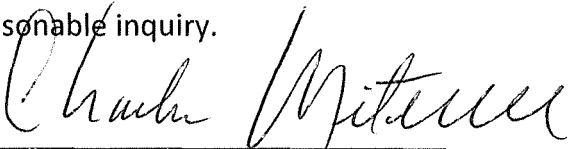
In the Matter of:

MENIFEE COUNTY BOARD OF EDUCATION)
COMPLAINANT) Case No.
V.) 2011-00076
CLARK ENERGY COOPERATIVE, INC.)
DEFENDANT)

* * * * *

MENIFEE COUNTY BOARD OF EDUCATION
RESPONSES TO COMMISSION'S FIRST REQUEST FOR INFORMATION

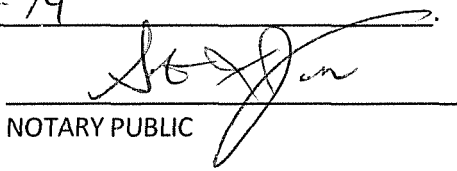
The undersigned, Charles Mitchell, being duly sworn, deposes and says that he is the Superintendent of Menifee County Schools, that he has supervised the preparation of response(s) to the foregoing information request; and that the matters set forth in the foregoing response to information request are true and accurate to the best of his knowledge, information and belief, after reasonable inquiry.



Charles Mitchell, Affiant

STATE OF Ky
COUNTY OF Warr

The foregoing was acknowledged, subscribed and sworn to me this the 30th day of August , 2011, by CHARLES MITCHELL.

My Commission expires: 12-20-14


NOTARY PUBLIC

1) **REQUEST :**

Refer to Clark Exhibit No. 2 from July 18, 2011 Informal Conference. Identify what load is served by meter points two and three at the Menifee County High School. Explain.

RESPONSE:

Meter #2 serves the vocational ag shops, greenhouse, and metal modular building which are used for various purposes including "in-school" suspensions. Meter #2 is the High School Account #2280310 and is the account which is related to the basis of the complaint. Meter#3 serves Elementary and Middle School (K-8) and was installed in 2003. This particular meter is not part of the complaint of "over-billing".

*Response provided by: Charles Mitchell - Menifee County School Board Superintendent
& Terry Anderson – Energy Manager for Menifee County School Board*

2) **REQUEST:**

Refer to Clark Exhibit No. 2 from July 18th 2011 Informal Conference. Did Menifee County consult with Clark Energy Cooperative, Inc. ("Clark Energy") or Clark Energy's electrical contractor as to whether both meter points two and three were required, since they are so close together ? Explain.

RESPONSE:

Superintendent Charles Mitchell does not have any independent recollection of any consultations or discussions directly with Clark Energy regarding this matter; however, it is possible that the general contractor and/or architect in charge of design and construction of the renovation to the Middle School may have had consultation. The crux of the renovations at the Middle School where to remove the "window air conditioning" units and install central heating and air and a "cooling tower". The renovations did not include construction of new buildings or expansion of square footage of existing building(s).

*Response provided by: Charles Mitchell - Menifee County School Board Superintendent
& Terry Anderson – Energy Manager for Menifee County School Board*

3) **REQUEST:**

During its annual budget preparation process, does Menifee County compare its past year's energy costs to the amounts it had budgeted for that year? Explain

RESPONSE:

Generally speaking, yes, the Menifee County Board compares prior year's budget appropriations in an effort to project what may be needed in a particular area of the budget for the following year. Each school has an amount in the budget marked for "utilities" , but there is no further breakdown of costs used to project potential needs for following year(s). There is not specific budget preparations for individual accounts or other utilities.

*Response provided by: Charles Mitchell - Menifee County School Board Superintendent
& Terry Anderson – Energy Manager for Menifee County School Board*

4) **REQUEST:**

If a variance exists in actual energy costs and budgeted energy costs form one fiscal year to the next, does a review of bills or other analysis occur ? Explain.

RESPONSE:

Some changes from year to year are expected due to the amount of variables involved including but not limited to: weather conditions, student enrollment, technology (for example – additional computers or smart boards), number of classes etc. Up until 2010, there existed no protocol to compare energy bills that may fit in a reasonable variance. However, in July 2010 the Menifee County Board entered into an agreement (via the “American Recovery Act”) and with the Kentucky School Boards Association and State Wide School Energy Mangers Project, to provide a shared “Energy Manager” for the district. The Energy Manager for Menifee County is Terry Anderson and part of his job responsibilities is to review energy bills and track utilities (monthly and annually). Through his role as energy manager, Mr. Anderson discovered the depth of the overbilling set forth in the underlying complaint and subsequently began to assist the Superintendent in the process to recover re-payment from Clark Energy for the overbilling.

*Response provided by: Charles Mitchell - Menifee County School Board Superintendent
& Terry Anderson – Energy Manager for Menifee County School Board*

5) **REQUEST:**

Are there financial controls in place to review large monthly expenditures, such as energy costs, to determine why the monthly bills are what they are ? Explain.

RESPONSE:

The Menifee County Board of Education approves all expenditures and “orders of the Treasure” at the regular monthly meeting. Board members may question any expenditure and request an explanation. However, utility costs and bills are not normally broken down for “line item” discussion and up until July 2010, there was no specific person employed by the Menifee County Board of Education who would have been expected to make inquiry into “energy billing”. Terry Anderson began working for the Menifee County Board of Education as “Energy Manager” in July 2010, and part of his job responsibilities is to review energy bills and track utilities (monthly and annually).

*Response provided by: Charles Mitchell - Menifee County School Board Superintendent
& Terry Anderson – Energy Manager for Menifee County School Board*

6) **REQUEST:**

Provide a copy of the contract agreement with Clark Energy that indicates the minimum contract demand is 135 kW.

RESPONSE:

This document does not exist to the knowledge of the Complainant.

*Response provided by: Charles Mitchell - Menifee County School Board Superintendent
& Terry Anderson – Energy Manager for Menifee County School Board*

7) REQUEST:

Provide a list of all of Menifee County's accounts with Clark Energy including service address, meter number, description of the facility, and the rate schedule billed.

RESPONSE:

See Attached Exhibit "A"

*Response provided by: Charles Mitchell - Menifee County School Board Superintendent
& Terry Anderson – Energy Manager for Menifee County School Board*

8) REQUEST :

Refer to paragraph 3 of the Complaint filed April 20, 2011 ("Complaint").

- a. Fully describe the addition that required the installation of the underground pad-mount transformer.
- b. Did Menifee County hire a third-party company to manage the project ? If so, who was hired ?
- c. Who was responsible for contacting Clark Energy regarding the installation of the underground pad-mount transformer ?
- d. Describe Menifee County's procedures in administering third-party contracts

RESPONSE:

- a. The "addition" referenced in paragraph #3 refers to renovation of the Middle School building which also included an "addition" of a cooling tower and "additional" heating and cooling equipment (HVAC).
- b. "Tate-Hill-Jacobs" of Lexington KY was the architectural firm hired to oversee the project and "DW Wilburn" was the general contractor. No project manager was hired to oversee general contractor.
- c. Typically the general contractor would have been responsible for contacting Clark Energy regarding this matter and Superintendent Mitchell has no information or recollection which would change this assumption.
- d. Project(s) are bid according to Model Procurement guidelines and once contract is awarded, recipient is reasonable for implementing and constructing the project. In addition, the Menifee County School Board follows all applicable Kentucky Revised Statutes and Administrative Regulations. All "new buildings" and "renovations or additions" must also be submitted and approved by the Ky Department of Education - Division of Facilities (aka "Buildings and Grounds).

*Response provided by: Charles Mitchell - Menifee County School Board Superintendent
& Terry Anderson – Energy Manager for Menifee County School Board*

9) REQUEST:

In paragraph 5 of the Complaint, Menifee County states that “[t]he overhead transformer system serving the high school account has . . . an average metered demand of 37 KW.”

- a. When did Menifee County determine that the average metered demand for the overhead transformer system serving the high school account was 37 KW?
- b. Did the average metered demand for the overhead transformer system serving the high school account reach 37 KW as a result of transferring load to the new underground pad-mount transformer ?
- c. Did Menifee County ever contact Clark Energy about being billed a minimum demand 135 KW , when they were actually experiencing an average metered demand that was much less? If not, why?

RESPONSE:

- a. In July of 2010, Terry Anderson began work as the “Energy Manager” for the Menifee County School Board and was given information that a billing problem may have surfaced a few months earlier. Mr. Anderson began the process of reviewing bills from the previous years and investigating the matter. Part of Mr. Anderson’s job responsibilities for the Kentucky Energy Efficiency Program for Schools (KEEPS) was to compile 2 years of past billing of all energy consumption. After reviewing relevant records he determined that “average demand” from July 2009-June 2010 was 37 KW (see attached exhibit “B” for breakdown)
- b. Yes
- c. Clark Energy was contacted after the depth of the error was discovered by Terry Anderson and upon completion of his review of the billing records. The actual bills sent to the Menifee County Board of Education only show what the “minimum charge” would be and does not reflect the basis for the charge and does not set forth what the demand charge would be (see copy of sample bill dated 2/05/07 for reference, Exhibit “C”). Therefore, the depth of the billing error was only discovered as a result of Mr. Anderson’s expertise in the area. Mr. Anderson contacted Clark Energy by phone and spoke to Holly Eades concerning overbilling in September 2010. Mr. Charles Mitchell then contacted Clark Energy via a letter to Mr. Paul Embs, (President) with letter dated October 20, 2010 (attached as Exhibit “D”). Prior to these contacts with Clark Energy, and sometime in January or February 2010, Mr. David Duval, of Clark Energy, informed Ms. Lori Franklin (Community Education Director) that an “overbilling had occurred” but gave the impression that it had been resolved. Mr. Duvall also provided to Ms. Franklin written “proposed” billing at 135 KW (attached as Exhibit “E”) At that time, neither Ms. Franklin nor Mr. Mitchell understood the depth of the problem and only after Mr. Anderson’s investigation was completed, were more concentrated efforts made to obtain a refund for over payment.

*Response provided by: Charles Mitchell - Menifee County School Board Superintendent
& Terry Anderson – Energy Manager for Menifee County School Board
& Lori Franklin - Community Education Director for Menifee County School Board*

10. REQUEST:

Refer to paragraph 7 of the Complaint filed April 20, 2011.

- a. Discuss the reasons that led Menifee County to request an energy audit of its facilities by Clark Energy in December 2009.
- b. Provide a copy of any documentation that Clark Energy produced regarding the results of the audit.
- c. What specifically occurred in the energy audit that led to the discovery that Menifee County was being billed a higher minimum demand than it was actually experiencing?

RESPONSE:

- a. Ms. Lori Franklin (Community Education Director of Menifee County School Board) attended a KEEPS training in Morehead on Sept 15, 2009 and was instructed at that training to request an energy audit from the local coop and also request that the coop review services to make sure that the 'right rates' were being used. Information was given at the training indicating that many school districts were being overbilled. An audit and review of the billing was requested and Clark Energy conducted that in December 2009 and a copy of that audit was sent to the Board in January of 2010. Sometime in January or February 2010, David Duvall, (who was then vice-president of Clark Energy), brought a copy of the energy rates that were being used and indicated that those rates were not correct and that the Board was being overbilled. (Mr. Duvall no longer works at Clark Energy as he was relieved of his duties shortly after the meeting with Ms. Franklin) Mr. Duvall also stated to Ms. Franklin that the Board had been overcharged and had been on the wrong rates since the current High School was constructed (1997). Mr. Duvall indicated that the Board would see an immediate change in the billing which would save the Board some money but also indicated that the net savings would be at a minimum because the actual underlying rate was also being increased. No refund of the overbilling was discussed at that point.
- b. see attached copy of Audit as Exhibit "F"
- c. The Energy Audit was not the initial indicator of the error. Mr. David Duvall of Clark Energy first pointed out the billing discrepancies to Lori Franklin in January or February 2010. Superintendent Mitchell was made aware of this issue but at that time thought that the matter had been resolved per explanation of Mr. Duvall. It was only when Terry Anderson was hired as the Energy Manager that the depth of the billing problem was discovered. Ms. Franklin informed Mr. Anderson of the Energy Audit and Mr. Duvall's comments when he (Terry Anderson) began work in July 2010. Terry Anderson investigated the issue at that time and realized that Clark Energy was legally obligated to submit repayment for the overbilling. It was only at that time that the Board began pursuing the repayment as a remedy.

*Response provided by: Charles Mitchell - Menifee County School Board Superintendent
& Terry Anderson - Energy Manager for Menifee County School Board
& Lori Franklin - Community Education Director for Menifee County School Board*

11. REQUEST:

Refer to Menifee Exhibit No. 3 from the July 18, 2011 Informal Conference

- a. Explain the calculations that resulted in the amounts shown in the columns titles "Minimum Charged on 135 KW" and "Minimum Charge Based on 50 KW"
- b. Provide this schedule in electronic format with all formulas unprotected and intact

RESPONSE:

- a. The numbers for "Minimum Charged on 135 KW" were not derived from a calculation, rather they were taken from the actual billing of Clark Energy to the Menifee County Board. The numbers from "Minimum Charge Based on 50 KW" was calculated by subtracting the actual measured kilowatt demand from 50 times (x) the demand charge that was in effect during the billing time. (attachment Exhibit "G" has footnote added as well for clarification). Terry Anderson also used information provided to him by Bob Russell (of PSC) showing changes to rate "L". (attached as Exhibit "H").
- b. Emailed on August 30, 2011 to "psc.info@ky.gov" with case reference

*Response provided by: Charles Mitchell - Menifee County School Board Superintendent
& Terry Anderson – Energy Manager for Menifee County School Board*

12. REQUEST:

Since any additional service requests would have to be initiated by Menifee County or its agent, why were the billings elements, such as the minimum demand charge and any request for a change in rate schedule, not established during the initial service request ?

RESPONSE:

Assuming the "initial service request" is referring to the time period when the service was changed in 2003 due to the renovation to the Middle School – no request for a rate change was made at that time because there was no indication that a problem existed. Furthermore, the assumption was correctly made that the Utility Company obtained the necessary information in order to install the correct transformer size. It is stipulated that the transformer size at the location(s) was (and is) in fact correct to meet the current kilowatt demand at each location, but the kilowatt minimum demand charge continued to be based upon a 135 KW instead of 50KW. Therefore, Clark Energy should have known the charge(s) were incorrect but Menifee County Board would have had no cause to question the billing until such time as Mr. Anderson reviewed the records (as set forth above) in 2010.

*Response provided by: Charles Mitchell - Menifee County School Board Superintendent
& Terry Anderson – Energy Manager for Menifee County School Board*

CLARK ENERGY ACCOUNTS

MENIFEE COUNTY SCHOOL ACCOUNTS

ACCOUNT NUMBER	SERVICE LOCATION	METER NUMBER	RATE SCHEDULE	DESCRIPTION
2280310	119 Indian Creek Road, Frenchburg, KY	32684	C3	High School Shops, Greenhouse, Metal Bldg
2280210	119 Indian Creek Road, Frenchburg, KY	32905	L	High School & Gymnasium
2914400	57 Indian Creek Road, Frenchburg, KY	35947	L	Elementary and Middle School
97510	202 Back Street, Frenchburg, KY	50573	E	Central Administration Offices
19611	826 Rt. 36, Frenchburg, KY	37759	E	Alternative School- Storage
19411	826 Rt. 36, Frenchburg, KY	16030	E	Alternative School-Classrooms
2907200	6882 Hwy 460 East, Denniston, KY	32005	L	Botts Elementary School
1139111	6882 Hwy 460 East, Denniston, KY	38191	E	Old Botts School
2313210	6882 Hwy 460 East, Denniston, KY	NONE	T	Leased Security Light Only
2281110	6882 Hwy 460 East, Denniston, KY	32911	E	Botts Elementary Computer Room
3103700	6882 Hwy 460 East, Denniston, KY	17780	E	Botts Elementary, Lights, Scoreboard, Sewer Pump, ETC
19210	Hwy 460, Frenchburg, KY	60853	E	School Sign
2423300	Hwy 460, Frenchburg, KY	45538	E	Headstart
2796300	814 Hwy 36, Frenchburg, KY	60401	E	Wellness Center

July 2009 - June 2010

x	MENIFEE COUNTY HIGH SCHOOL
Address:	119 INDIAN CREEK ROAD, FRENCHBURG, KY
Utility Provider(s):	CLARK ENERGY
Account Number(s):	2280310 (RATE C-3 PH (changed 5/25/10 from Rate L)
Meter Number(s):	32684
Square Footage:	39,168

Month	Electric Demand (kW)	Metered Electricity Usage (kWh)	Unmetered Electricity Usage (kWh)	Electricity Cost	Natural Gas Usage (ccf)	Natural Gas Cost	Propane Usage (gal)	Propane Cost	Fuel Oil Usage (gal)	Fuel Oil Cost
July	34	6,560		\$1,403.75						
August	48	12,840		\$2,010.32						
September	37	11,080		\$1,725.61						
October	30	7,800		\$1,520.25						
November	33	8,800		\$1,470.52						
December	44	13,920		\$1,872.86						
January	42	15,320		\$1,538.90						
February	38	15,120		\$1,637.76						
March	36	9,600		\$1,148.27						
April	39	8,160		\$963.38						
May	39	7,040		\$806.34						
June	27	8,600		\$964.40						
Average	37	10,403	#DIV/0!	\$1,421.86	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Total	N/A	124,840	0	\$17,062.36	0	\$0.00	0	\$0.00	0	\$0.00

Audit -

NOTE -

AVERAGE FOR 12 MONTHS

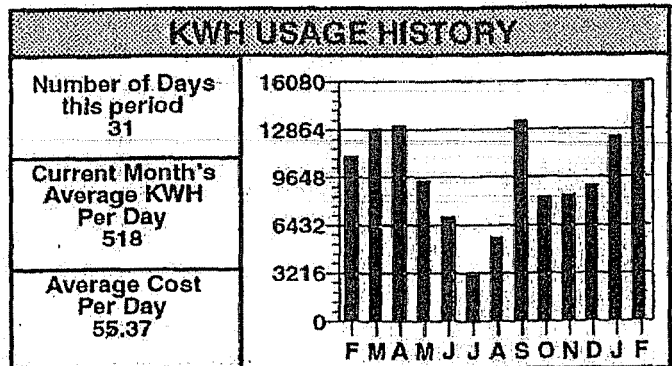


CLARK ENERGY
A Business Energy Company of KEC

PO Box 748
Winchester, KY 40392

(859) 744-4251 or (800) 992-3269
www.clarkenergy.com

MENIFEE CO BD OF ED
PO BOX 110
FRENCHBURG KY 40322-0110



Clark Energy is now accepting applications from area high school juniors for the Rural Youth Tour. Information is available in your high school counselor's office, on our website at www.clarkenergy.com or at any Clark Energy office.

ACCOUNT NUMBER	NAME	BILL DATE	TELEPHONE	PLEASE VERIFY TELEPHONE NUMBER AND MAKE ANY CHANGES ON BACK OF STUB				
2280310	MENIFEE CO BD OF ED	02/05/2007	606-768-8002					
SERVICE DESCRIPTION		SERVICE LOCATION		MAP NUMBER	FUEL FACTOR	BILL TYPE		
HIGH SCHOOL		HIGH SCHOOL		03-43-17	0.0042830	REGULAR BILL		
FROM	TO	NO. DAYS	METER NUMBER	PREVIOUS READING	PRESENT READING	RATE	MULTIPLIER	KWH USAGE
12/31/2006	01/31/2007	31	32684	9291	9693	L	40.0000	16080
Demand Information				Current Bill Information			\$ Amount	
ACTUAL DEMAND				62.440	ENERGY		824.26	
BILLED DEMAND				62.440	MINIMUM CHARGE		391.82	
POWER FACTOR PERCENT				0.0000	DEMAND CHARGE		337.18	
Activity Since Last Bill				\$ Amount				
PREVIOUS BALANCE				1577.15	SECURITY LIGHT		56.04	
PAYMENT				-1577.15	FUEL ADJUSTMENT @ 0.0042830		72.05	
OTHER CHARGES/ADJUSTMENTS				0.00	SCHOOL TAX		53.18	
PRIOR BALANCE				0.00	ENVIRONMENTAL SURCHARGE @ 5.43%		91.30	
					TOTAL CURRENT CHARGES		1825.83	
For billing inquiries please call: (859) 744-4251 or (800) 992-3269 8:00 A.M. - 4:30 P.M., M-F Failure to receive your bill does not exempt you from payment, late charges or disconnection. Five percent (5%) penalty will be added after due date. Night depositories are available at each Clark Energy office.				Due Date		02/20/2007	Amt Due	\$1825.83
				Past Due After		02/20/2007	Gross Due	\$1917.12

PLEASE DETACH AND RETURN BOTTOM PORTION WITH PAYMENT

MENIFEE COUNTY BOARD OF EDUCATION

Building a Foundation for Success

Charles Mitchell, Superintendent
P.O. BOX 110
FRENCHBURG, KY 40322

Telephone: (606) 768-8002
Fax: (606) 768-8050
Email: Charles.Mitchell@menifee.kyschools.us

October 21, 2010

Mr. Paul G. Embs, President
Clark Energy
2640 Iron Works Road
Winchester, Kentucky 40391

RE: Menifee County High School
Account # 2280310

Dear Mr. Embs,

I am writing to express appreciation to Clark Energy for agreeing to change the above account from Rate L to Rate C-3 and reviewing all other accounts to ensure they were being billed on the most economical rate tariff available. The above account had been incorrectly billed on a minimum demand charge of 135 KW, but never exceeded a demand on your system above 50 KW. This occurred from 1997 to 2010.

While I was very concerned to learn of this incorrect billing, it is my understanding that the Public Service Commission regulations require refunds when such a situation occurs. I have attached a copy for your review.

I appreciate your attention to correcting this oversight and look forward to continued excellent service by Clark Energy

Sincerely,



Charles Mitchell, Superintendent
Menifee County School District

Cc: Terry Anderson-Energy Manager

Section 10. Bill Adjustment for Gas, Electric and Water Utilities. (1) If upon periodic test, request test, or complaint test a meter in service is found to be more than two (2) percent fast, additional tests shall be made to determine the average error of the meter. Said tests shall be made in accordance with commission administrative regulations applicable to the type of meter involved.

(2) If test results on a customer's meter show an average error greater than two (2) percent fast or slow, or if a customer has been incorrectly billed for any other reason, except in an instance where a utility has filed a verified complaint with the appropriate law enforcement agency alleging fraud or theft by a customer, the utility shall immediately determine the period during which the error has existed, and shall recompute and adjust the customer's bill to either provide a refund to the customer or collect an additional amount of revenue from the underbilled customer. The utility shall readjust the account based upon the period during which the error is known to have existed. If the period during which the error existed cannot be determined with reasonable precision, the time period shall be estimated using such data as elapsed time since the last meter test, if applicable, and historical usage data for the customer. If that data is not available, the average usage of similar customer loads shall be used for comparison purposes in calculating the time period. If the customer and the utility are unable to agree on an estimate of the time period during which the error existed, the commission shall determine the issue. In all instances of customer overbilling, the customer's account shall be credited or the overbilled amount refunded at the discretion of the customer within thirty (30) days after final meter test results. A utility shall not require customer repayment of any underbilling to be made over a period shorter than a period coextensive with the underbilling.

PROVIDED BY DAVID DUVALL TO LORI FRANKLIN

MENIFEE COUNTY BOARD OF EDUCATION			
Account# 2280310			
Monthly Proposed Average Calculation		Monthly Existing Average Calculation	
Energy Usage (kWh)	10723	Energy Usage (kWh)	10723
Billing Demand (kW)	135.00	Billing Demand (kW)	135.00
Facility Charge	\$61.63		
Demand Charge	\$843.75	Demand Charge	\$795.15
Energy Charge	\$808.43	Energy Charge	\$788.06
Fuel Adjustment Charge	\$49.30	Fuel Adjustment Charge	\$49.30
Environmental Surcharge	\$118.30	Environmental Surcharge	\$109.54
Proposed Subtotal	\$1,881.41	Existing Subtotal	\$1,742.05
Local Tax (3%)	\$56.44	Local Tax (3%)	\$52.26
Sales Tax (6%)	\$0.00	Sales Tax (6%)	\$0.00
Proposed Billing	\$1,937.85	Existing Billing	\$1,794.31

135 kW
Billing
Minimum

\$143.54 Difference
8.00%

Rate Schedule	
Proposed Rate L	
Facility Charge	\$61.63
Demand Charge	\$6.25
Energy Charge	\$0.07539
Existing Rate L	
Demand Charge	\$5.89
Energy Charge	\$0.07349

PROVIDED BY DAVID DUVAL TO LORI FRANKLIN

135 KW

BILLING
MINIMUM

Account# 2280310

MENIFEE COUNTY BOARD OF EDUCATION
Annual Comparison of Existing and Proposed Rate L Power Costs

DATE	AMOUNT	AMOUNT	AMOUNT	PERCENT	AMOUNT	AMOUNT			
Dec-08	41.68	12840	0	100.00%	135.00	\$59.03			
Jan-09	48.60	12400	0	100.00%	135.00	\$57.00			
Feb-09	49.28	14560	0	100.00%	135.00	\$66.93			
Mar-09	47.64	12480	0	100.00%	135.00	\$57.37			
Apr-09	50.32	10360	0	100.00%	135.00	\$47.62			
May-09	36.12	8920	0	100.00%	135.00	\$41.01			
Jun-09	42.24	11400	0	100.00%	135.00	\$52.41			
Jul-09	41.28	7440	0	100.00%	135.00	\$34.20			
Aug-09	33.76	6560	0	100.00%	135.00	\$30.16			
Sep-09	48.28	12840	0	100.00%	135.00	\$59.03			
Oct-09	37.48	11080	0	100.00%	135.00	\$50.93			
Nov-09	30.32	7800	0	100.00%	135.00	\$35.86			

Dec-08	\$61.63	\$968.01	\$843.75	\$1,932.42	\$129.67	\$61.86	\$0.00	\$2,123.95
Jan-09	\$61.63	\$934.84	\$843.75	\$1,897.22	\$127.30	\$60.74	\$0.00	\$2,085.26
Feb-09	\$61.63	\$1,097.68	\$843.75	\$2,069.99	\$138.90	\$66.27	\$0.00	\$2,275.16
Mar-09	\$61.63	\$940.87	\$843.75	\$1,903.62	\$127.73	\$60.94	\$0.00	\$2,092.29
Apr-09	\$61.63	\$781.04	\$843.75	\$1,734.04	\$116.35	\$55.51	\$0.00	\$1,905.90
May-09	\$61.63	\$672.48	\$843.75	\$1,618.87	\$108.63	\$51.82	\$0.00	\$1,779.32
Jun-09	\$61.63	\$859.45	\$843.75	\$1,817.24	\$121.94	\$58.18	\$0.00	\$1,997.36
Jul-09	\$61.63	\$560.90	\$843.75	\$1,500.48	\$100.68	\$48.03	\$0.00	\$1,649.19
Aug-09	\$61.63	\$494.56	\$843.75	\$1,430.10	\$95.96	\$45.78	\$0.00	\$1,571.84
Sep-09	\$61.63	\$968.01	\$843.75	\$1,932.42	\$129.67	\$61.86	\$0.00	\$2,123.95
Oct-09	\$61.63	\$835.32	\$843.75	\$1,791.63	\$120.22	\$57.36	\$0.00	\$1,969.21
Nov-09	\$61.63	\$588.04	\$843.75	\$1,529.28	\$102.61	\$48.96	\$0.00	\$1,680.85
Total	\$739.56	\$9,701.20	\$10,125.00	\$21,157.31	\$1,419.66	\$677.31	\$0.00	\$23,254.28

Dec-08	\$746.55	\$756.40	\$1,561.98	\$104.81	\$50.00	\$0.00	\$1,716.79
Jan-09	\$746.55	\$730.48	\$1,534.03	\$102.93	\$49.11	\$0.00	\$1,686.07
Feb-09	\$746.55	\$857.73	\$1,671.21	\$112.14	\$53.50	\$0.00	\$1,836.85
Mar-09	\$746.55	\$735.20	\$1,539.12	\$103.27	\$49.27	\$0.00	\$1,691.66
Apr-09	\$746.55	\$610.31	\$1,404.48	\$94.24	\$44.96	\$0.00	\$1,543.68
May-09	\$795.15	\$560.18	\$1,396.34	\$93.69	\$44.70	\$0.00	\$1,534.73
Jun-09	\$795.15	\$715.92	\$1,563.48	\$104.91	\$50.05	\$0.00	\$1,718.44
Jul-09	\$795.15	\$467.23	\$1,296.58	\$87.00	\$41.51	\$0.00	\$1,425.09
Aug-09	\$795.15	\$411.97	\$1,237.28	\$83.02	\$39.61	\$0.00	\$1,359.91
Sep-09	\$795.15	\$943.61	\$1,797.79	\$120.63	\$57.55	\$0.00	\$1,975.97
Oct-09	\$795.15	\$814.27	\$1,660.35	\$111.41	\$53.15	\$0.00	\$1,824.91
Nov-09	\$795.15	\$573.22	\$1,404.23	\$94.22	\$44.95	\$0.00	\$1,543.40
Total	\$9,298.80	\$8,176.52	\$18,066.87	\$1,212.29	\$578.36	\$0.00	\$19,857.52

ENVISION
ENERGY SERVICES

ENERGY AUDIT

Menifee County School System
P O Box 110 202 Back Street
Frenchburg, KY 40322

By: Larry Jones, Energy Advisor
Clark Energy

Dan Playforth, Sr. Engineer
ENVISION

Date: January 5, 2010

4775 Lexington Road
Winchester, KY 40391
859-745-9658

A Subsidiary of
Clark Energy

Menifee County Schools personnel requested an energy audit and on December 28th a visit was made to the Menifee County School system. The buildings visited were the high school, shop, portable classrooms and K through 8.

The average cost of \$0.10 per kWh was used in all economic analyses. School operating hours were considered to be 7AM till 8PM, forty weeks per year.

Soda vending machines cost about \$50 per month to operate and over ½ of this cost is in the machine's lights. At least twenty pop machines are currently being used and removing the lights from these machines will save around \$6,000 per year. Reducing the number of machines will also save money. If five machines can be removed an additional \$1,500 per year can be saved for a total of \$7,500 in annual savings from pop machines.

EXIT signs use either incandescent or fluorescent bulbs and most fixtures can be retrofitted to energy saving LED bulbs. LED retrofit kits are readily available and paybacks are less than one year. An additional benefit is the virtual elimination of EXIT sign maintenance due to the 20 year life of LED bulbs.

Older fluorescent light fixtures use T-12 bulbs and magnetic ballasts. Replacing or upgrading the existing fixtures to T-8 bulbs and electronic ballasts can save 35% in energy use and maintain the same light levels. Generally any T-12 fixture can be converted to T-8. For example one 4-bulb T-12 fixture based on the above operating schedule cost about \$46 to operate and upgrading this fixture to efficient T-8 technology it would cost about \$30 to operate.

Certainly upgrading older light fixtures to new efficient technology will save energy dollars; however simply controlling the present lights will generate significant savings. Most schools are all-on in the morning and all-off as the cleaning crew leaves the building. If one classroom has nine 4-bulb T-12 fixtures the cost to operate these lights is around \$82 per year. If these lights are only on when students are present in the room savings will add up. A conservative estimate of the savings is \$32 per year per classroom just by turning the lights on and off as necessary.

The gymnasiums' lights are high bay metal halide 400Watt fixtures with the exception of Botts school which uses 300Watt incandescent bulbs. Replacing the 400Watt metal halides with 6-lamp T-8 fixtures saves 204Watts per fixture at a fixture replacement cost of \$250 including labor. The annual savings are estimated to be \$53 per fixture producing a payback of less than 5 years. An additional benefit to the fluorescent fixture is the ability to turn the lights on and off as needed. Adding the savings from controlling the gymnasium lights produces a total savings of \$80 per year for a payback period of just over three years. It is important to note that the fluorescent fixtures have a better Color Rendering Index resulting in better light for the human eye.

Botts school uses twenty-four 300Watt incandescent bulbs in the gymnasium. Replacing these fixtures with screw in 85Watt compact fluorescent bulbs will save 70% in energy use. The bulbs cost about \$24 each and the savings are estimated to be over \$54 per fixture per year. The payback period is less than six months.

Report Summary

As a start to becoming energy efficient items that can be considered "low hanging fruit" are soda vending machines, turning lights on and off as needed and maintaining doors and windows. The "Guide to Operating and Maintaining an Energy Smart School" effectively illustrates the progression from present energy use to becoming energy efficient and is a valuable energy efficiency resource.

Energy dollars can be saved by replacing inefficient lights with efficient ones, limiting the number of soda vending machines, removing the lights from vending machines, controlling the lights and maintaining windows and doors.

Soda vending machines cost about \$50 per month to operate and the lights are over ½ of this cost. The 20 machines identified are costing about \$12,000 per year to operate and \$6,000 can be saved by removing the lights. Additional savings can be realized by removing machines and having only the number necessary to meet the demand for product.

Fluorescent fixtures with T-8 bulbs and electronic ballasts are 35% more efficient than the older T-12 bulbs and magnetic ballasts. Almost all fixtures with T-12 bulbs and magnetic ballasts can be upgraded to T-8 technology without replacing the fixtures. The cost is reasonable and payback periods are usually acceptable.

Controlling lights can generate large energy savings but is usually hard to maintain. Turning lights on and off as needed certainly sounds simple, but takes a commitment from administrators and staff to produce significant savings. Just one classroom can save over \$30 per year by turning the lights off during lunch, planning periods and as soon as students leave at the end of the day. Leaving the lights on until the cleaning staff is finished wastes energy.

Gymnasium lights are usually 400Watt metal halide fixtures. These lights are inefficient and cannot be turned on and off as needed due to the long turn-on time. Replacing these inefficient uncontrollable lights with efficient high bay fluorescent fixtures is energy wise. Both the high school and elementary school have metal halide lights, while Botts school uses 300Watt incandescent bulbs for their gymnasium and these lights can be replaced by 85Watt compact fluorescent bulbs for a 70% savings in energy.

Gymnasium	# of fixtures	Annual Savings
High School	27	\$2,160
Menifee Elementary	24	\$1,920
Botts School	24	\$1,342
Total Annual Savings from gymnasiums' light upgrades		<u>\$5,422</u>

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High School	27	\$2,160
Meniffee Elementary	24	\$1,920
Botts School	24	\$1,342
Total Annual Savings from gymnasiums' light upgrades		<u>\$5,422</u>

Most schools turn on their cafeteria lights first thing in the morning and leave them on until the cleaning staff turns them off at the end of the day. Considering that most cafeterias have at least twenty-five four bulb fixtures this practice is wasteful. Most cafeterias are used only about three hours of the school day. If the students are in the cafeteria the lights should be on and if they are not the lights should be off.

The visit revealed that almost every classroom had a small compact refrigerator. Inspection of these refrigerators revealed that most only had a couple of drinks inside. Placing one refrigerator for each building section and eliminating the refrigerator in each classroom will save energy. One small compact refrigerator uses about 320kWh per year while one medium sized freezer on top residential refrigerator uses about 1,000kWh per year. If 5 small refrigerators can be consolidated into one medium sized refrigerator the savings are 600kWh per year or \$60.

Replacing single pane windows with double pane ones will save energy and increase comfort. Keeping door and window seals in good working order will eliminate unwanted air infiltration into the building. Consider a 1/4" crack around an entry door is equivalent to a 6" X 6" hole in the wall. If the school has three entry doors and all have a 1/4" crack around them the equivalent hole in the wall would 1.5 feet X 1.5 feet.

The U.S. Department of Energy has produced a guide titled "Guide to Operating and Maintaining Energy Smart Schools". Attached is an electronic copy of the guide, which should prove very useful in your quest to save energy.

Also attached with this report are data sheets about lighting controls, T-8 fluorescent fixtures, EXIT sign retrofit kits, kitchen efficiency sheet and compact fluorescent bulbs.

MENIFEE COUNTY BOARD OF EDUCATION			
Account# 2280310			
Monthly Proposed Average Calculation		Monthly Existing Average Calculation	
Energy Usage (kWh)	10723	Energy Usage (kWh)	10723
Billing Demand (kW)	135.00	Billing Demand (kW)	135.00
Facility Charge	\$61.63	Demand Charge	\$795.15
Demand Charge	\$843.75	Energy Charge	\$788.06
Energy Charge	\$808.43	Fuel Adjustment Charge	\$49.30
Fuel Adjustment Charge	\$49.30	Environmental Surcharge	\$109.54
Environmental Surcharge	\$118.30	Proposed Subtotal	\$1,881.41
Proposed Subtotal	\$1,881.41	Existing Subtotal	\$1,742.05
Local Tax (3%)	\$56.44	Local Tax (3%)	\$52.26
Sales Tax (6%)	\$0.00	Sales Tax (6%)	\$0.00
Proposed Billing	\$1,937.85	Existing Billing	\$1,794.31

\$143.54 Difference
8.00%

Rate Schedule	
Proposed Rate L	
Facility Charge	\$61.63
Demand Charge	\$6.25
Energy Charge	\$0.07539
Existing Rate L	
Demand Charge	\$5.89
Energy Charge	\$0.07349

MENIFEE COUNTY HIGH SCHOOL
KILOWATT (KW) METERED DEMAND AND HISTORICAL MINIMUM BILLINGS

ACCT # 2280310
METER #32684

June 2006-May 2010

RATE L

Note: Costs do not include fees, surcharges, or taxes

Month/Year	Cost Per KW	Kilowatt (KW) Demand	Minimum Charged on *135 KW*	Minimum Charge Based on 50 KW	Cost Difference
Jun-06	\$5.40	14.64	\$649.94	\$190.94	
Jul-06	\$5.40	28.88	\$573.05	\$114.05	
Aug-06	\$5.40	45.80	\$481.68	\$22.68	
Sep-06	\$5.40	42.36	\$500.26	\$41.26	
Oct-06	\$5.40	50.36	\$457.06	\$0.00	
Nov-06	\$5.40	47.80	\$470.88	\$11.88	
Dec-06	\$5.40	53.52	\$439.99	\$0.00	
Totals:			\$3,572.86	\$380.81	\$3,192.05
Jan-07	\$5.40	62.44	\$391.82	\$0.00	
Feb-07	\$5.40	60.64	\$401.54	\$0.00	
Mar-07	\$5.40	53.36	\$440.86	\$0.00	
Apr-07	\$5.40	52.84	\$436.79	\$0.00	
May-07	\$5.40	41.20	\$501.16	\$47.52	
Jun-07	\$5.40	25.32	\$588.98	\$133.27	
Jul-07	\$5.40	27.32	\$577.92	\$122.47	
Aug-07	\$5.40	49.16	\$457.15	\$4.54	
Sep-07	\$5.53	48.76	\$476.91	\$6.86	
Oct-07	\$5.53	42.80	\$509.87	\$39.82	
Nov-07	\$5.53	38.80	\$531.99	\$61.94	
Dec-07	\$5.53	45.80	\$492.83	\$23.23	
Totals:			\$5,807.82	\$439.64	\$5,368.18
Jan-08	\$5.53	47.12	\$485.98	\$15.93	
Feb-08	\$5.53	45.92	\$492.61	\$22.56	
Mar-08	\$5.53	43.12	\$508.10	\$38.05	
Apr-08	\$5.53	37.88	\$537.07	\$67.02	
May-08	\$5.53	34.52	\$555.65	\$85.60	
Jun-08	\$5.53	21.60	\$627.10	\$157.05	
Jul-08	\$5.53	20.04	\$635.73	\$165.68	
Aug-08	\$5.53	45.32	\$495.93	\$25.88	
Sep-08	\$5.53	43.28	\$507.21	\$37.16	
Oct-08	\$5.53	48.48	\$478.46	\$8.41	
Nov-08	\$5.53	41.68	\$516.06	\$46.01	
Dec-08	\$5.53	48.60	\$477.79	\$7.74	
Totals:			\$6,317.69	\$677.09	\$5,640.60
Jan-09	\$5.53	49.28	\$474.03	\$3.98	
Feb-09	\$5.53	47.64	\$483.10	\$13.05	
Mar-09	\$5.53	50.32	\$468.28	\$0.00	
Apr-09	\$5.89	36.12	\$582.40	\$81.75	
May-09	\$5.89	42.24	\$546.36	\$45.71	
Jun-09	\$5.89	41.28	\$552.01	\$51.36	
Jul-09	\$5.89	33.76	\$596.30	\$95.65	
Aug-09	\$5.89	48.28	\$510.78	\$10.13	
Sep-09	\$5.89	37.48	\$574.39	\$73.74	
Oct-09	\$5.89	30.32	\$616.57	\$115.92	
Nov-09	\$5.89	32.80	\$601.96	\$101.31	
Dec-09	\$5.89	44.48	\$533.16	\$32.51	
Totals:			\$6,539.34	\$625.12	\$5,914.22
Changed to 50 KW Billing Minimum on Rate L					
Jan-10	\$5.89	41.56	\$49.71	\$49.71	
Feb-10	\$5.89	37.76	\$72.09	\$72.09	
Mar-10	\$5.89	36.12	\$81.75	\$81.75	
Apr-10	\$5.89	38.96	\$65.03	\$65.03	
May-10					
Totals:			\$268.58	\$268.58	\$0.00
Changed to Rate C-3 phase					
Total KW Minimum Cost			\$22,506.29	LESS	\$2,391.24
					\$20,115.05

NOTES

COLUMN C EQUALS BILLING MONTH AND YEAR
COLUMN E EQUALS BILLING KILOWATT (KW) DEMAND RATE PER PSC EMAIL FROM BOB RUSSELL DATED 1/03/2011
COLUMN G EQUALS KILOWATT (KW) DEMAND READING PER ACTUAL CLARK ENERGY BILLS ON FILE
COLUMN J EQUALS KILOWATT (KW) DEMAND MINIMUM BILLING PER ACTUAL CLARK ENERGY BILLS ON FILE
(BILLS DO NOT EXPLAIN WHAT THE MINIMUM IS BASED ON AND DOESN'T EXPLAIN THAT IT IS BASED ON 135 KW DEMAND)
COLUMN M EQUALS MINIMUM BASED ON 50 KW PER MONTH (50 KW - ACTUAL BILLING KW) X KW DEMAND RATE AT THE TIME OF BILLING)
(EXAMPLE: APRIL 2010 BILLING, 50 KW - 38.96 KW X \$5.89 = \$65.03)
COLUMNS I AND N CALCULATES TOTALS FOR EACH YEAR OF ACTUAL BILLS ON FILE
COLUMN P SHOWS THE DIFFERENCE IN THE ACTUAL BILLED MINIMUM COMPARED TO MINIMUM BASED ON 50 KW
SEE MENIFEE EXHIBIT NO. 3, A MATHEMATICAL ERROR WAS FOUND IN CELL M31 OF \$1.11 AND CORRECTED ON THIS ELECTRONIC COPY

Clark Energy Cooperative Inc.

Schedule L : General Power Service

Available to all commercial and industrial consumers for general power requirements with Kilowatt (kW) demands of 50 kW or greater but less than 500 kW

Line No.	Case No	Effective Date	Facility Charge	per kW of Billing Demand	per kWh for All Energy
1	2009-00314	04-16-2010	\$61.63	\$6.25	\$0.07539
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					

Schedule L : General Power Service

Available to all commercial and industrial consumers for general power requirements with Kilowatt (kW) demands of 50 kW or greater but less than 2,500 kW

Case No	Effective Date	Facility Charge	per kW of Billing Demand	per kWh for All Energy
2008-00525	08-01-2009	\$0.00	\$5.89	\$0.07349
2008-00412	04-01-2009	\$0.00	\$5.89	\$0.06280
2006-00513	03-03-2008	\$0.00	\$5.53	\$0.05891
2006-00513	08-01-2007	\$0.00	\$5.53	\$0.05891
2006-00476	04-01-2007	\$0.00	\$5.53	\$0.05248
2004-00470	06-01-2005	\$0.00	\$5.40	\$0.05126
2002-00438	05-01-2003	\$0.00	\$5.40	\$0.04634
98-569	05-01-1999	\$0.00	\$5.40	\$0.04390
96-528	09-01-1997	\$0.00	\$5.40	\$0.04303
94-419	03-01-1996	\$0.00	\$5.40	\$0.04328