COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY UTILITIES COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC RATES	**)** **)** **)** **)**	**CASE NO. 2012-00221**

TESTIMONY OF

RONALD L. WILLHITE

SCHOOL ENERGY MANAGER PROJECT DIRECTOR

KENTUCKY SCHOOL BOARDS ASSOCIATION

FILED: OCTOBER 3, 2012

INTRODUCTION

Q. Please state your name and business address.

A. My name is Ronald L. Willhite, 7375 Wolf Spring Trace, Louisville, KY 40241.

Q. By whom are you employed?

A. I have been engaged by the Kentucky School Boards Association to examine the filing of Kentucky Utilities ("KU") in this proceeding and to address concerns of its member public school districts receiving service from KU. The Kentucky School Boards Association (KSBA) is a nonprofit corporation of school boards from each public school district in Kentucky. The association, founded in 1936, now has over 75 years of serving school board members and school districts in such areas as governmental relations, board member and team development, risk management, facility planning, energy management, legal services, policy services, publications and community relations. It is governed by a 27-member board of directors made up of representatives elected as regional chairpersons or as directors-at-large. With nearly 900 school board members, KSBA is the largest organization of elected officials in Kentucky.

Q. Please describe your regulatory and public school experience.

A. In December 2001 I retired from LG&E Energy Services. Prior to the formation of the service organization and following the PowerGen acquisition of LG&E Energy Corp., I had been employed by the Kentucky Utilities Company. During my tenure at KU I testified before this and other commissions on numerous rate and regulatory matters. In March 2010 I was employed by KSBA to develop and direct the School Energy Managers Project (SEMP). From 1989 to 1998 I served on the Scott County Board of Education, the last six years as its chairman, and since 2009 have served on their Energy Committee. I graduated from the University of Kentucky in 1969 earning a B.S. in Electrical Engineering.

Q. Please describe Kentucky's public schools and the role of boards of education.

A. Kentucky has some 1233 P-12 public schools serving 640,000 students that are overseen per statute by 174 local school boards pursuant to KRS 160.290:

> ***"Each board of education shall have general control and management of the public schools in its district and may establish schools and provide for courses and other services as it deems necessary for the promotion of education and the general health and welfare of pupils, consistent with the administrative regulations of the Kentucky Board of Education. Each board shall have control and management of all school funds and all public school property of its district and may use its funds and***

property to promote public education. Each board shall exercise generally all powers prescribed by law in the administration of its public school system, appoint the superintendent of schools, and fix the compensation of employees."

Q. What specific issues are you addressing?

A. I will address the following; 1) efforts being taken by public schools to manage their use of energy, 2) Rate Schedule AES, 3) Rate Schedules PS, TODS and TOD demand and minimum charges, 4) the kw threshold for Rate Schedules TODS and TODP service 5) sport field lighting, and 6) billing errors.

Q. How will the requested increase affect schools?

A. Kentucky's public schools are being severely impacted by today's economic conditions. After personnel energy is the second highest cost for schools. Unlike businesses that can increase sales or prices to offset cost increases, public schools must either cut programs or attempt to raise taxes. Public schools cannot refuse service to a student or limit their enrollment.

Public School District Energy Management Initiatives

Q. What are schools doing to manage energy costs?

A. First of all the General Assembly and Governor are focused on assisting schools in making intelligent energy choices.

"In an effort to reduce rising energy costs that are straining school budgets" the General Assembly in 2008 passed House Bill 2, which became law on July 15, 2008 as KRS 160.325. Pursuant to KRS 160.325 boards of education began reporting annually through the Kentucky Pollution Prevention Center ("KPPC") to the Department for Energy Development and Independence and the Legislative Research Commission on the status of the development of energy management plans by those boards of education and the anticipated savings to be obtained from those plans.

On July 15, 2010 KRS 157.455 became law stating that the Kentucky Department of Education and all school districts undertaking the construction of new school buildings or the major renovation of existing school buildings are strongly encouraged to:

(a) Meet or exceed efficient school design standards in planning and designing all new buildings and major renovation projects;

(b) Use life-cycle cost analysis to evaluate different design proposals; and

(c) Consider the possibility that each new school building or major renovation of a building could be a net zero building, either during the construction or renovation, or at a later date as resources become available.

The statute further requires the Department of Education to develop and adopt guidelines for efficient school design, net zero buildings, and life-cycle cost analysis, including the identification of appropriate computer-based simulation programs for use in undertaking life-cycle cost analysis. The Departments of Education and Energy Development and Independence are required to assist school districts in:

(a) Developing methods for measuring ongoing operating savings resulting from the use of efficient school design;

(b) Identifying sources for training for school staff and students to ensure that efficient school design features and components are fully utilized; and

(c) Identifying ways that efficient school design and its energy-saving components can be integrated into the school curriculum.

Finally, the statute requires the Departments of Education and Energy Development and Independence to report annually to the Legislative Research Commission and the Governor the following for new school buildings or building renovations:

(a) An assessment of the implementation of efficient school design within Kentucky's education system;

(b) Documented energy savings from any buildings built using efficient school design or net zero school buildings in operation;

(c) A list of the new or renovated school buildings completed or identified for future construction during the prior year using efficient school design, including the name of the school district, name of the school, total project cost, additional cost or savings, if any, associated with efficient school design features, and efficient school design features included in the project;

(d) A list of all school buildings that operate as a net zero building, and school buildings which school districts plan to convert to net zero. The list shall include the name of the school district, the name of the school, the total cost associated with the school building becoming a net zero building, and the components that will be installed to make the building a net zero building;

(e) Any recommendations relating to efficient school design; and

(f) A list of new school buildings completed during the prior year without using efficient school design and an explanation of why efficient school design was not used.

Q. Please describe the School Energy Managers Project (SEMP).

A. In support of the state's energy plan to increase energy efficiency in Kentucky's public schools, Governor Beshear authorized $5.1million in Recovery Act funds from the U.S. Department of Energy to create the School Energy Managers Project (SEMP). The Kentucky School Boards Association ("KSBA) was chosen to develop and administer

SEMP. The Project was initiated in March 2010 and coordinated the development of a state-wide energy management infrastructure that has focused public school districts on fostering intelligent energy choices in new and existing buildings through implementation of energy efficiency projects. SEMP provided matching funds for districts to employ energy managers to assemble information, access technical resources and formulate and implement energy management plans. As a result of SEMP 35 energy managers were employed to go along with 14 then existing energy managers to serve 144 of the 174 districts. This effort has resulted in both significant emission reductions and monetary savings to enhance the educational opportunities for the Commonwealth's public school students. Even though funding for SEMP expired this past April, 32 of 49 of the energy managers were retained.

Q. What actions have been taken by boards of education?

A. All 174 public school boards of education have adopted and implemented an Energy Management Policy. Most district policies are as follows:

Energy Management

It is the intent of the Board that the District use energy resources in a safe and efficient manner with an on-going focus on identifying and implementing cost saving measures and developing staff and student commitment to identified energy management practices.

To promote this effort, the Superintendent/designee shall direct the development of an energy management plan (EMP) for Board approval and oversee the implementation and maintenance of that plan, which shall address the following components:

1. A District level committee shall be appointed by the Superintendent/designee to develop and implement the energy management plan (EMP).

2. The District level committee shall track and monitor the EMP to determine progress toward managing and reducing energy costs.

3. Effective with the 2011-2012 school year, the Superintendent/designee shall report the EMP results for each fiscal year, including annual District energy usage, costs and anticipated savings to KPPC - the Kentucky Pollution Prevention Center – by October 1st annually through the Kentucky Energy Efficiency Program for Schools (KEEPS).

A status report on implementation of the plan in Board-owned and Board-operated facilities shall be provided to the Board following the end of each fiscal year

Q. Please explain activities undertaken by the school energy managers.

A. Most districts have established an energy committee and have developed and implemented an energy management plan under the leadership and assistance by their energy manager. The energy managers initially reviewed utility bills and developed

historical baselines. Numerous tariff application and billing errors were detected. Working with KU account managers most of the problems have been reconciled. Recognizing that students are the future home and community energy managers, energy managers working in conjunction with the Kentucky National Energy Education Development Project (NEED) and the Kentucky Green and Healthy School Program (KGHS) are actively involved with teachers in curriculum modifications that are being implemented to foster energy awareness as envisioned by the Governor's comprehensive energy plan for Kentucky, "Intelligent Energy Choices for Kentucky's Future." The energy managers have worked closely with KU's demand-side management staff to benefit from energy audits and capture rebates from the Company's program as they have replaced inefficient lighting.

Q. Please explain how Kentucky's public schools utilization of energy compares to schools across the nation.

A. A common metric is the energy utilization index or "EUI" (kBtu per square foot). The national average for K-12 schools is 73, while the Kentucky school district average in FY2011 was 63. To achieve an Energy Star rating (upper 25 percent of nation) approximately 50 is necessary. 179 Kentucky schools have attained the Energy Star rating. Currently, 20 of Kentucky's school districts overall EUI's are 50 or lower. New schools being constructed are in the 18 – 22 range. So, overall Kentucky schools are doing very well.

Q. How are districts able to construct these very efficient schools?

A. Districts utilize the expertise of skilled architects well versed in energy efficiency methods in the design of construction projects. In addition, the Facilities Branch of the Kentucky Department of Education reviews and approves all construction projects. Use of modern wall and roof construction technologies, geothermal space conditioning technologies, day-lighting and building automation control systems are primary factors contributing to highly efficient projects. It is important to note that many existing efficient schools came into being through KU's support and recognition of the joint efficiency value to its system and schools of all electric schools.

Rate Schedule AES

Q. Please describe KU's Rate Schedule AES?

A. Rate AES is available to school facilities who totally use electric energy for other than incidental instructional and miscellaneous purposes. KU froze Rate AES to new customers effective February 6, 2009 pursuant to the Commission's Order in Case No. 2008-00251. Even though KU account managers had subsequently been advising schools that AES would be totally eliminated in the next proceeding, KU chose to leave the frozen rate in place in Case No. 2010-00548. The Commission did authorize KU to allow then existing qualifying all electric facilities to switch to Rate AES subject to a revenue differential cap of $500,000.

Q. Is Rate AES a win-win situation?

A. Rate AES is a win-win situation for KU, schools, other customers, taxpayers and most importantly K-12 students for a number of reasons. First, Rate AES provides for increased system efficiency. Schools must use electric energy for lighting, cooling, ventilation, refrigeration, computer labs and other uses. However, all electric schools allow KU to use their same capacity during the winter season to produce more units of output and increase efficiency. Second, all-electric customers are more likely over time to provide a more consistent use of otherwise under- utilized winter capacity compared to off-system sales. Third, Rate AES does not harm other customers as it is more than profitable as demonstrated by Bellar Table 1 – Per Forma Rates of Return which shows Rate AES to be providing a return of 7.25 % versus the Kentucky Jurisdiction average of 6.02 %. In fact, Rate AES is providing a higher return than all but rates GS and PS secondary and would continue profitable if KU is granted its request. Fourth, Kentucky schools are directed by law to construct and operate efficiently which in large part can be achieved by year round use of geothermal technology to heat and cool buildings.

Q. In response to KSBA Initial Question 3 KU stated Rate AES is not supportable from an economic standpoint. Please comment.

A. KU cites as reasons for their conclusion that Rate AES does not have separate primary and secondary charges and that the single customer and energy charges do not reflect the differing load characteristics of the various accounts. Assuming those inferences to be correct simply means there is intra-class cross-subsidization among the school accounts. However, since Rate AES is more than profitable schools are subsidizing other classes.

Q. What is your recommendation regarding Rate AES?

A. The Commission should approve unfreezing Rate AES and by doing so schools will be afforded an additional option to evaluate when constructing new and remodeling existing schools that capitalize on implementing energy efficiency initiatives which will benefit the public and, most importantly, Kentucky's K-12 students. In Case No. 2010-00204 KU agreed to maintain Rate AES as long as it is supported by Cost of Service Studies. That justification is certainly provided by KU in this case and gives conclusive support for the Commission to open the rate to all total electric school facilities.

PS, TODS and TODP Minimum and Demand Charges

Q. Please explain the minimum bill application of KU's Rate Schedules PS, TODS and TODP.

A. Proposed Rate Schedules TODS and TODP have three time differentiated demand charge levels; base, intermediate and peak. If the current month peak and intermediate measured demand is not twice the demand in the preceding eleven (11) months a customer is then charged for 50 percent of the highest past demand. In the application of the base demand charge a customer pays the higher of: a) the current month measured demand b) 250 kw; c) 75 percent of the highest demand of the preceding eleven (11) months; c) 75 percent of contract capacity.

Proposed Rate Schedule PS has separate summer and winter demand charges. In the application of the demand charges a customer pays the higher of: a) the current month measured demand; b) 50 kw; c) 50 percent of the highest demand of the preceding eleven (11) months; or d) 60 percent of contract capacity.

Q. What problem do you see with the Rate PS, TODS and TODP demand minimum application?

A. School district energy managers are confronted by a dilemma as they are encouraged by KU's demand-side management program to pursue demand and energy use reductions. On the one hand they initiate actions to reduce demand and consumption, while on the other hand they experience imposition of rate schedule minimums that diminish the monetary value of their efforts. While equitable recovery of fixed cost from customers is a reasonable objective, imposition of rate minimums in off-peak months must be balanced with today's emphasis on slowing the growth of capacity additions.

KU is uniquely positioned as a dual winter – summer peaking utility which means they sell their capacity equally in the summer and winter. However, due to differing seasonal load requirements of individual customers equivalent capacity is not necessarily used by any single customer in both periods. Therefore, when applying the minimum charge while at the same time charging another customer for the same capacity KU is charging twice for that capacity. Also, as shown by KU Response to PSC -75 a portion of demand cost are being recovered through the secondary and primary energy charges as they are greater than the experienced energy costs.

Q. What is your recommendation to the Commission?

A. Lowering the ratchet percentage to 40 percent for both the highest billing demand in the preceding eleven months and the contract capacity applications would be more appropriate for Proposed Rate Schedule PS. Similarly for Proposed Rate Schedules TODS and TODP the ratchet percentage should be lowered to 40 percent for the peak, intermediate and base billing demand calculation

Q. There is a difference in the summer and winter demand charges for Rate PS. Is that appropriate?

A. No. Given the fact that KU is a dual summer – winter peaker there is no need for individual seasonal demand charges. In its final Order in this proceeding the Commission should direct KU to replace the summer and winter demand charges in Rate Schedule PS with a single demand charge applicable to all months.

TODS and TODP Service Threshold

Q. Please explain the availability criteria for service under Proposed Rate Schedules TODS and TOPP.

A. Customers must have a 12-month average minimum load of 250 kw. However, this minimum precludes many schools from this rate, particularly elementary and middle schools. With the required focus on energy management both KU and schools would benefit from the incentive to reduce peak demand provided by the rate structure.

Q. Is they any reason to not lower the threshold for service on Proposed Rate Schedules TODS and TODP?

A. KU responded to KSBA Initial Question 5 that time differentiated rates are appropriate when the additional cost of metering is justified. In response to KSBA Supplemental No.5 KU stated the installed cost for time-based metering to be $352 for secondary service and $519 for primary service. In response the Staff Third No. 31 KU stated the difference in cost of time-based metering to be $19.40 plus labor.

Q. What is your recommendation to the Commission?

A. My recommendation is that Commission order KU to reduce the TODS and TODP thresholds to 100 kw. If the metering cost is a concern KU should include an upfront contribution or a monthly metering charge for the time-based meter cost differential (time-based vs. non time-based) as a condition for service under the rate schedules for any customer whose 12-month average maximum load is less than 250 kw, but greater than 100 kw.

Sport Field Lighting

Q. On what Rate Schedule are school sport fields served?

A. Prior to KU's elimination of primary voltage service under Rate GS in Case No. 2008-00251 and initiation of the 50 kw cap sport fields in service on July 1, 2004 were served on Rates GS or PS. Today sport fields are served on a number of rates including rate AES. Even though service on Rate GS is limited to average monthly loads of 50 kw any secondary load greater than 50 kw as of February 6, 2009 was grandfathered under Rate GS. All remaining primary voltage served loads served on GS were switched to Rate PS effective February 6, 2009. This requirement caused many sport field account billings to increase annually by as much as $15,000 (400 – 500%). Neither KU (Response to KSBA Supplemental Question No.4) or KSBA were aware of the problem on June 7, 2010 when the Stipulation and Recommendation was executed in Case No. 2010-00546. I believe KU account managers had become aware of the problem because these accounts were among the first to be identified and switched to Rate AES after August 1, 2010 pursuant to the Stipulation and Recommendation. The oversight, even though unintentional, was a

windfall to KU and would have continued absent the Order in Case No. 2010-00548. The situation could have been avoided if KU had offered a rate for sport field lighting or simply switched the affected accounts to Rate AES prior the effective date of Rate GS primary voltage service being eliminated in Case 2008-00251.

Q. Should KU refund districts for the overbilling that occurred from February 6, 2009 until the accounts were switched to Rate AES?

A. Yes. Since this was unintentional and presented a windfall, KU would not be harmed.

Q. Should KU add a Sport Field Rate Schedule to their tariff?

A. Yes. Otherwise, new sport fields will be served on Rate PS and be faced with paying a demand charge and minimum payments in the months they are not in operation. Sports fields are not similar to other commercial and industrial loads served on Rate Schedule PS.

In the alternative KU could modify the Availability of Service provision of Rate Schedule LE to permit service to sport fields. Rate LE is available for public street and highway lighting where the customer owns and maintains all street lighting equipment and other facilities on the customer's side of the point of delivery. Schools similarly own and maintain the lighting equipment utilized on their sport fields. Sport field lights do operate significant fewer annual hours than the 4000 operational hours of street lighting and do not require additional capacity as they are operated in after school hours.

Tariff Billing Errors

Q. Are there remaining tariff issues with regard to Rate AES?

A. With a few exceptions KU has accepted responsibility for billing errors caused by service under a wrong rate for accounts qualifying for Rate AES and made refunds. KSBA is hopeful of resolving remaining situations in the near future. In these situations it is the firm belief of districts that KU was fully aware of a facility being all electric and the account should have been placed on Rate AES from the onset and appropriate refunds should now be made.

Q. Does this conclude your testimony?

A. Yes.

VERIFICATION

STATE OF KENTUCKY

COUNTY OF JEFFERSON

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared, Ronald L. Willhite, who, being by me first duly sworn deposed and said that:

He is appearing as a witness on the behalf of the Kentucky School Boards Association before the Kentucky Public Service Commission in an Application filed by Kentucky Utilities Company, and if present before the Commission and duly sworn, his testimony would be set forth in the annexed testimony.

Ronald L. Willhite

Ronald L. Willhite

SWORN TO AND SUBSCRIBED BEFORE ME this

25th day of September, 2012

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NOTARY PUBLIC

Commission exp. 9/11/2013