

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY)	
UTILITIES COMPANY FOR AN)	CASE NO. 2014-00371
ADJUSTMENT OF ITS)	
ELECTRIC RATES)	

TESTIMONY OF
RONALD L. WILLHITE
SCHOOL ENERGY MANAGER PROJECT DIRECTOR
KENTUCKY SCHOOL BOARDS ASSOCIATION

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1 INTRODUCTION
2

3 **Q. Please state your name and business address.**

4 A. My name is Ronald L. Willhite and business address is 260 Democrat Drive, Frankfort,
5 KY 40601.

6 **Q. By who are you employed?**

7 A. I am employed by the Kentucky School Boards Association as Director of the School
8 Energy Managers Project. The Kentucky School Boards Association (KSBA) is a
9 nonprofit corporation of school boards from each public school district in Kentucky. The
10 association, founded in 1936, now has over 75 years of serving school board members
11 and school districts in such areas as governmental relations, board member and team
12 development, risk management, facility planning, energy management, legal services,
13 policy services, publications and community relations. It is governed by a 27-member
14 board of directors made up of representatives elected as regional chairpersons or as
15 directors-at-large. With nearly 900 school board members, KSBA is the largest
16 organization of elected officials in Kentucky.
17

18 **Q. Please describe your regulatory and public school experience.**

19
20 A. In December 2001 I retired from LG&E Energy Services. During my tenure at the
21 Companies I testified before this and other commissions on numerous rate and regulatory
22 matters. In March 2010 I was employed by KSBA to develop and direct the School
23 Energy Managers Project (SEMP). From 1989 to 1998 I served on the Scott County
24 Board of Education, the last six years as its chairman, and since 2009 have served on
25 their Energy Committee. I graduated from the University of Kentucky in 1969 earning a
26 B.S. in Electrical Engineering.
27

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

29
30 A. Kentucky has some 1233 P-12 public schools serving 675,000 students that are overseen
31 per statute by 173 local school boards pursuant to KRS 160.290:

32 *“Each board of education shall have general control and management*
33 *of the public schools in its district and may establish schools and provide*
34 *for courses and other services as it deems necessary for the promotion of*
35 *education and the general health and welfare of pupils, consistent with*
36 *the administrative regulations of the Kentucky Board of Education.*
37 *Each board shall have control and management of all school funds and*
38 *all public school property of its district and may use its funds and*
39 *property to promote public education. Each board shall exercise*
40 *generally all powers prescribed by law in the administration of its public*
41 *school system, appoint the superintendent of schools, and fix the*
42 *compensation of employees.”*

1

2 **Q. What specific issues are you addressing?**

3

4 A. I will address the following; 1) impact of the proposed increase on public schools, 2)
5 public school energy management initiatives, 3) test-year wage and employment levels,
6 4) class cost of service study, 5) revenue increase allocation, 6) school load profiles, 7)
7 Rate PS and TOD school service, 8) all-electric school service, 9) sports field lighting and
8 10) billing errors.

9

10 **Q. How will the requested increase impact schools?**

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

16 The Company has advertised the overall increase as 9.6 percent. However, close
17 examination of the filing reveals a far greater increase of over 17 percent will be imposed
18 on some school accounts if the proposed base rates are approved. While schools
19 understand the Company is faced with significant challenges the revenue increase as
20 proposed would be extremely unfair to schools and their students. I will address options
21 for the Commission to mitigate the impact on public schools.

22 **Q. Why does the purposed increase result in such excessive impacts for public school**
23 **accounts?**

24

25 A. The Company's proposal to increase all rate schedules by the same percentage penalizes
26 schools as they are served on rate schedules that provide a greater than average rate of
27 return (ROR). In addition, the Company has purposed recovering most, if not all, of the
28 increase allocated to Rates PS-sec and TODS through increased demand charges. Such an
29 approach violates the principals of gradualism and is contradictory to sound cost of
30 service principals.

31 **Public School District Energy Management Initiatives**

32 **Q. What are schools doing to manage energy costs?**

33 A. The General Assembly and Governor have directed and encouraged public schools to
34 focus on making intelligent energy choices.

35 *"In an effort to reduce rising energy costs that are straining school budgets"* the
36 General Assembly in 2008 passed House Bill 2, which became law on July 15, 2008 as
37 KRS 160.325. Pursuant to KRS 160.325 boards of education began reporting annually

1 through the Kentucky Pollution Prevention Center (“KPPC”) to the Department for
2 Energy Development and Independence (“DEDI”) and the Legislative Research
3 Commission (“LRC”) on the status of the development of energy management plans by
4 those boards of education and the anticipated savings to be obtained from those plans.
5 Boards now report through KSBA to the LRC and DEDI.

6 On July 15, 2010 KRS 157.455 became law stating that the Kentucky Department of
7 Education and all school districts undertaking the construction of new school buildings or the
8 major renovation of existing school buildings are strongly encouraged to:
9

- 10 (a) Meet or exceed efficient school design standards in planning and designing all new
11 buildings and major renovation projects;
- 12
- 13 (b) Use life-cycle cost analysis to evaluate different design proposals; and
- 14
- 15 (c) Consider the possibility that each new school building or major renovation of a
16 building could be a net zero building, either during the construction or renovation, or
17 at a later date as resources become available.
- 18

19 The statute further requires the Department of Education to develop and adopt guidelines for
20 efficient school design, net zero buildings, and life-cycle cost analysis, including the
21 identification of appropriate computer-based simulation programs for use in undertaking life-
22 cycle cost analysis. The Departments of Education and Energy Development and
23 Independence are required to assist school districts in:
24

- 25 (a) Developing methods for measuring ongoing operating savings resulting from the use
26 of efficient school design;
- 27
- 28 (b) Identifying sources for training for school staff and students to ensure that efficient
29 school design features and components are fully utilized; and
- 30
- 31 (c) Identifying ways that efficient school design and its energy-saving components can
32 be integrated into the school curriculum.
- 33

34 Finally, the statute requires the Departments of Education and Energy Development and
35 Independence to report annually to the Legislative Research Commission and the Governor
36 the following for new school buildings or building renovations:
37

- 38 (a) An assessment of the implementation of efficient school design within Kentucky's
39 education system;
- 40
- 41 (b) Documented energy savings from any buildings built using efficient school design or
42 net zero school buildings in operation;
- 43
- 44 (c) A list of the new or renovated school buildings completed or identified for future
45 construction during the prior year using efficient school design, including the name of
46 the school district, name of the school, total project cost, additional cost or savings, if

1 any, associated with efficient school design features, and efficient school design
2 features included in the project;

3
4 (d) A list of all school buildings that operate as a net zero building, and school buildings
5 which school districts plan to convert to net zero. The list shall include the name of
6 the school district, the name of the school, the total cost associated with the school
7 building becoming a net zero building, and the components that will be installed to
8 make the building a net zero building;

9
10 (e) Any recommendations relating to efficient school design; and

11
12 (f) A list of new school buildings completed during the prior year without using efficient
13 school design and an explanation of why efficient school design was not used.
14

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

16
17 A. In support of the state's energy plan to increase energy efficiency, Governor Beshear
18 authorized \$5.1million in Recovery Act funds from the U.S. Department of Energy to
19 create the School Energy Managers Project ("SEMP"). The Kentucky School Boards
20 Association ("KSBA") was chosen to develop and administer SEMP. The Project was
21 initiated in March 2010 and coordinated the development of a state-wide energy
22 management infrastructure that has focused public school districts on fostering intelligent
23 energy choices in new and existing buildings through implementation of energy
24 efficiency projects. SEMP initially provided matching funds and training for districts to
25 employ energy managers to assemble information, access technical resources and
26 formulate and implement energy management plans. As a result of SEMP 35 energy
27 managers were employed to go along with 14 then existing energy managers to serve 144
28 of the then 174 public school districts. This effort has resulted in both significant
29 emission reductions and monetary savings to enhance the educational opportunities for
30 the Commonwealth's public school students. SEMP terminated briefly in June 2012, but
31 was reestablished in December 2012 when funding became available from DEDI. Since
32 that time additional funding from the Kentucky Energy and Environment Cabinet
33 ("Cabinet") and the Louisville Gas and Electric, Kentucky Utilities and Kentucky Power
34 Companies is supporting SEMP. Part of the funding is distributed on a matching salary
35 basis for districts to employ an energy manager. KSBA-SEMP staff assists
36 districts/partnerships in the employment, coaching, monitoring and evaluation of energy
37 managers; coordinates professional development opportunities for energy managers;
38 provides analytical and technical support; utilizes its outreach capacities to timely
39 communicate success stories to board members, superintendents, governmental officials
40 and the general public; fosters best practice implementation; and monitors and
41 coordinates utility activities and relations. Funding from the utilities is used for energy
42 managers serving only schools receiving service from the particular utility. Cabinet
43 funding is used to support all 173 district's energy management activities. I will describe
44 latter the results the LGE-KU School Energy Program.
45

46 **Q. What actions have been taken by boards of education?**
47

1 A. All 173 public school boards of education have adopted and implemented an Energy
2 Management Policy. Most district policies are as follows:

3 **Energy Management**

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

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

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

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

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

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

25
26 **Q. Please explain activities undertaken by the school energy managers.**

27
28 A. Most districts have established an energy committee and have developed and
29 implemented an energy management plan under the leadership and assistance by their
30 energy manager. Recognizing that students are the future home and community energy
31 managers, school energy managers working in conjunction with the Kentucky National
32 Energy Education Development Project (NEED) and the Kentucky Green and Healthy
33 School Program (KGHS) are actively involved with teachers in curriculum modifications
34 that are being implemented to foster energy awareness as envisioned by the Governor's
35 comprehensive energy plan for Kentucky, "Intelligent Energy Choices for Kentucky's
36 Future." The energy managers work closely with the Company's demand-side
37 management staff to benefit from energy audits and capture rebates from the Company's
38 program as they install energy conservation measures such as efficient lighting.

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

1 A. Kentucky's public schools had not been ignoring energy efficiency, but SEMP has
2 successfully facilitated an acceleration and more comprehensive focus. A common metric
3 is the energy utilization index or "EUI" (kBtu per square foot). The national average for
4 K-12 schools is 73, while the Kentucky school district average in FY2014 was 60, down
5 from 65 in the first year of the program. Kentucky's ENERGY STAR schools have
6 increased from 12 in 2008 to 271, placing Kentucky fourth in the nation as a percent of
7 K-12 eligible buildings. In addition, EPA has recognized SEMP as an ENERGY STAR
8 Partner of the Year for energy efficiency program delivery.
9

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

11
12 A. Districts utilize the expertise of skilled architects well versed in energy efficiency
13 methods in the design of construction projects. In addition, the Facilities Branch of the
14 Kentucky Department of Education reviews and approves all construction projects. Use
15 of modern wall and roof construction technologies, geothermal and variable refrigerant
16 flow space conditioning technologies, efficient LED lighting, day-lighting and building
17 automation control systems are primary factors contributing to highly efficient projects.
18 However, it takes a skilled solid energy management plan lead by a skilled energy
19 manager for facilities to daily maintain design potential. It is also important to note that
20 many existing efficient schools came into being through KU's support and recognition of
21 the joint efficiency value to its system and schools of all electric schools.
22

23 **Q. What is the status of the LGE/KU School Energy Management Program approved**
24 **by the Commission in Case No. 2013-00067?**

25
26 A. The Program is nearing the end of the initially approved two-year period on June 30,
27 2015. The first Annual Program Report was presented to LGE/KU on August 15, 2015.
28 The Company subsequently submitted the report to the Commission on September 12. It
29 can be accessed via the Commission's website in Case No. 2013-00067. Below is the
30 Executive Summary.
31

32 **Executive Summary**

33
34

35 The Application in Case No. 2013-00067 identified the primary goal of the Energy Management
36 Program for Schools to "support school districts in utilizing energy more wisely" with the overall
37 objective for each school district to reduce consumption over time by an annual rate of 2.5
38 percent and achieve energy utilization indices ("EUI") of fifty or lower. The participation goal was
39 for all districts served by LGE or KU to retain or employ an employ energy manager through at
40 least FY2015 to maximize district response to KRS 160.325.

41 The KU districts are exceeding the target for demand reduction (13.5%) and are under the target
42 for energy reduction (8.8%). Fifty-three (53) of seventy-nine (79) districts receiving KU electric
43 service participated in the program and seventeen (17) have achieved EUI's less than 50.

44 With the progress thus far and the process that has been established the primary goal is expected
45 to be achieved for fiscal year 2015.

1 The partnership established between LGE-KU and KSBA has provided a means for the School
2 Energy Managers Project (SEMP) to maintain a major presence within schools in Kentucky. Five
3 School Districts within the LGE-service area and 53 School Districts within the KU-service area
4 have benefitted financially and technically from this work.

5 The School Energy Managers serving these school districts have benefited from continuity of
6 employment, technical training and improved skills, due to the funding which was provided. They
7 and their school districts will benefit from the knowledge that has been gained. Knowing that an
8 expectation of a 2.5% annual reduction provides leverage for energy and demand conservation
9 measures which may not otherwise be undertaken. Future results and further technological
10 upgrades will be impacted.

11 **Q. What are the plans for extending the LGE/KU Program beyond June 30 of this**
12 **year?**

13
14 A. KSBA met with LGE/KU officials on October 14, 2014 to discuss the Report and
15 program continuation. Whether KSBA's quantifications had captured demand and energy
16 reductions that were attributable to the Company's DSM rebate incentive programs for
17 installation of efficient equipment was discussed. When the Company expressed there
18 was not time available for them to do the analysis, KSBA agreed to revisit its
19 calculations. However, when KSBA reviewed a provided list of rebate recipients, with
20 few exceptions, the districts receiving rebates had an energy manager which strongly
21 indicates success of the rebate programs for efficient lighting, motors, etc. is more
22 directly tied to SEMP through the activity of an energy manager.

23
24 **Q. What was the Companies' response to extending their School Energy Management**
25 **Program?**

26
27 A. Simply, they did not have the time to do further analysis and they had too many matters
28 currently before the Commission. KSBA believes the Company experts are more
29 appropriate to perform applicable analysis and anxiously awaits on behalf of affected
30 public schools and their students the Company's reconsideration of requesting
31 Commission approval to extend the Program.

32
33 **Q. What's at risk if the Program is not timely extended?**

34
35 A. Loss of momentum in capturing demand and energy savings beneficial to the Company
36 and all ratepayers and the loss of energy managers to serve schools in implementation of
37 the Commonwealth's energy efficiency initiatives. Many districts may not retain and/or
38 rehire a non-teaching position such as an energy manager without that position being part
39 of its operating budget which must be approved by May.

40 Company Expenses

41
42
43 **Q. Have you reviewed the Company's historical and purposed future test period costs?**
44

1 A. Yes. In particular I have examined the employment levels and budgeted wage increase.
2 Company employees have experienced annual compensation of over three percent for the
3 last several years and three percent is included in the test year. Unfortunately school
4 boards and the General Assembly have been unable to provide that level of increase and
5 the average classroom teacher salary has increased by **less than one percent** annually
6 since FY 2009.
7

8 **Q. What do you recommend to be an appropriate level to be included in the test**
9 **period?**

10
11 A. I believe it reasonable that a 1 to 1.5 percent increase be included in the test year. The
12 Company based on its experienced known and measureable results can then decide
13 whether to provide employees the full or greater amount based on achievement of the
14 forecasted business plan.
15

16 Q. What has been the Company's track record in actually attaining employment levels
17 consistent with their forecasts?
18

19 A. Exhibit RLW No. 1 is a comparison of forecast to actual employment levels from 2011 to
20 2014 from data provided by the Company's response to KSBA - 1 Question Nos. 13 and
21 14. It is clear on a total corporate basis that the actual number of employees consistently
22 falls below the forecast levels. From a budgeting standpoint it is reasonable to be
23 conservative, but it is unreasonable to place the entire risk of that conservatism on
24 ratepayers when utilizing a forecast test period. Therefore, the Company's revenue
25 requirement should be appropriately reduced to recognize the Company's historical
26 experience in matching actual to forecast employment levels.
27
28

KU's Class Cost of Service Study

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31 **Q. Have you reviewed KU Witness Martin Blake's Exhibit MJB-9 Class Cost of Service**
32 **Study.**

33
34 A. Yes. I believe it to be a reasonable assessment of the relative rate of returns ("ROR") for
35 each rate class. MJB-9 clearly shows the ROR for Rates GS, PS-sec and TODS pursuant
36 to which public schools receive service are in excess of the overall Kentucky jurisdiction
37 ROR and the Rate AES ROR is only slightly below the jurisdictional return.
38

Allocation of Revenue Increase

39
40
41 **Q. Do you concur with the Company's proposal to allocate the requested increase by**
42 **an equal percentage basis to each rate class?**

43
44 A. No. The purpose of Exhibit MJB-9 is to provide guidance in establishing just and
45 reasonable rates to equitably and fairly facilitate recovery of the cost of serving

1 customers. More of the proposed increase should be assigned to those classes with ROR's
2 less than the system average shown on MJB-9.

3
4 **Q. Do you agree with Dr. Blake as stated in his response to Staff 2nd Question No. 45**
5 **that the proposed flat percentage increase is consistent with the principle of**
6 **gradualism?**

7
8 A. No. While the proposed average increase for KU is 9.6 percent some schools will
9 experience base rate increases 75 percent greater than other customers on Rate PS and
10 Rate TODS.

11 Load Profiles

12
13
14 **Q. Please explain RLW Exhibits 2 and 3.**

15
16 A. The Exhibits were prepared using data provided by the Company and show when schools
17 peak relative to class or Company's peak. RLW Exhibit 2 shows 24 hour peak day load
18 profiles for AES schools and for the total Company load for the July and August peak
19 days in 2013 and 2104. RLW Exhibit 3 was prepared using data for schools and other
20 customers served on Rate TODS as more data points are available for school accounts.
21 The Exhibit shows 24 hour load profiles for schools, non-schools and system. In order to
22 create the profile each hourly load was divided by the minimum load for that day. The
23 magnitude for each profile only shows the relation of the hourly loads and is not an
24 indication of the relative magnitude of school loads to the class or system.

25
26 While schools, commercial and industrial customers operate on a defined schedule, those
27 schedules are drastically different. Many industries operate 2nd, 3rd and weekend shifts
28 while stores operate extended hours into the evening year round seven days per week.
29 Schools typically are fully occupied from 7:30 am until 2:30 pm weekdays only nine to
30 ten months of the year with numerous shut down periods for breaks throughout the year.
31 Schools continue open beyond instructional periods for extra-curricular activities, but by
32 this time automation systems have begun adjusting temperatures for unoccupied space. In
33 a nutshell school load build up typically begins around 7 am, peaks at lunch time in the
34 warmer months and declines at a significant pace until and after the instructional day
35 ends in early-afternoon. In the colder months schools tend to peak across the morning
36 hours and similar to the warm periods usage/peak decline after lunch. As shown by
37 Exhibit RLW Nos. 2 and 3 schools have different load characteristics than other
38 customers including industrial and commercial customers served along with schools on
39 Rates PS and TODS.

40 Rate PS and TOD School Service

41
42
43 **Q. Are schools served on Rate Schedules PS and TODS subject to an unreasonable**
44 **disadvantage to the benefit of other customers served on those rates?**

1 A. Yes. As shown by Exhibit RLW Nos. 2 and 3 schools have different load characteristics
2 than industrial and commercial customers served on those rates. Without specific load
3 data, one would intuitively question why schools are served on the same rate schedule as
4 industrial and business customers. As a result schools served on rates PS and TOD are
5 being billed on their maximum demand (NCP) for a rate determined primarily on peaks
6 coincident with the system peak (CP). This is not fair to schools or any other similar
7 customer to pay for costs attributable to customers whose maximum load is more
8 coincident with the demand cost assignment factor.
9

10 **Q. What is your recommendation with regard to schools served on Rates PS and**
11 **TODS.**

12
13 A. The Commission should direct the Company to add Rates PS-School and TOD-School to
14 its tariff and the demand charges be set at no greater than 75 percent of the PS and TODS
15 demand charges.
16

17 **All-electric School Service - Rate Schedule AES**

18
19 **Q. Please describe KU's Rate Schedule AES?**

20
21 A. Service on Rate AES is to school facilities that use only electric energy for other than
22 incidental instructional and miscellaneous purposes. KU froze Rate AES to new
23 customers effective February 6, 2009 pursuant to the Commission's Order in Case No.
24 2008-00251. The Commission authorized KU in Case Nos. 2010-00548 and 2012-
25 00221 to allow then existing qualifying all electric facilities to switch to Rate AES
26 subject to revenue differential caps of \$500,000 and of \$50,000.
27

28 **Q. Do you concur with KU's prior assertions that Rate AES is a promotional rate?**

29
30 A. I do not. Rate AES is for a class of homogeneous customers who happen to be schools.
31 As shown by Exhibit RLW No. 2 the peak day school load profile differs significantly
32 from the system profile. In addition, Exhibit MJB – 9 clearly shows that the unadjusted
33 Rate AES ROR is just slightly (4.64 vs. 4.73) below the Company average ROR. It is
34 clear that Rate AES does not provide either, an unreasonable preference or advantage for
35 schools¹. To the contrary, Rate AES customers are being unreasonably prejudiced and
36 disadvantaged as are other all-electric schools forced to be served now or in the future on
37 Rates PS-sec and TODS.
38

¹ **278.170 Discrimination as to rates or service -- Free or reduced rate services.**

(1) No utility shall, as to rates or service, give any unreasonable preference or advantage to any person or subject any person to any unreasonable prejudice or disadvantage, or establish or maintain any unreasonable difference between localities or between classes of service for doing a like and contemporaneous service under the same or substantially the same conditions.

1 **Q. Is Rate AES a win-win situation?**

2
3 A. Yes. Rate AES is a win-win situation for KU, schools, other customers, taxpayers and
4 most importantly K-12 students for a number of reasons. First, Rate AES provides for
5 increased system efficiency. Schools must use electric energy for lighting, cooling,
6 ventilation, refrigeration, computer labs and other uses. However, all electric schools
7 allow LGE/KU to use their same capacity during the winter season to produce more units
8 of output and increase efficiency. This is entirely consistent with Mr. Conroy's Rebuttal
9 at page 5 in Case No. 2012 – 00221 where he states: "efficiency relates to the extent to
10 which the capacity is fully utilized" and "greater utilization of a fixed asset
11 corresponds to greater efficiency" (Conroy Rebuttal page 5), Second, all-electric
12 customers are more likely over time to provide a more consistent use of otherwise under-
13 utilized winter capacity compared to off-system sales. Third, as described above Rate
14 AES does not harm other customers as it is profitable. In fact, Rate AES is providing a
15 higher ROR than Rates, TODP, RTS and FLS. Finally, recognition of the benefits of all-
16 electric schools would enhance compliance with the Governor's Energy Strategy and
17 statutes governing school construction as Kentucky schools are directed by law to
18 construct and operate efficiently. All-electric schools are highly efficient users of energy
19 through by year round use of geothermal and VFR systems to heat and cool buildings,
20 efficient lighting and efficient building envelopes.

21
22 **Q. What is your recommendation regarding Rate AES?**

23
24 A. The Commission should approve unfreezing Rate AES and by doing so schools will be
25 afforded an additional option to evaluate when constructing new and remodeling existing
26 schools that capitalize on implementing energy efficiency initiatives which will benefit
27 the public and, most importantly, Kentucky's K-12 students. In Case No. 2010-00204
28 KU agreed to maintain Rate AES as long as it is supported by Cost of Service Studies.
29 That justification is certainly provided by KU in this case and gives conclusive support
30 for the Commission to open the rate to all total electric school facilities.

31
32 In the alternative, KU's expressed concerns that Rate AES does not have separate
33 primary and secondary charges and that the single customer and energy charges do not
34 reflect the differing load characteristics of the various accounts can be addressed. First,
35 assuming those inferences to be correct simply means there is intra-class cross-
36 subsidization among the school accounts. Second, I understand KU's concern to the
37 extent that Rate AES does not reflect strict cost of service and rate design objectives by
38 not having a demand charge. As a solution I propose KU provide a revenue-neutral
39 Modified Rate AES available on a going forward basis to new qualifying school accounts
40 and for accounts currently on Rate AES to switch to at their option. I believe as schools
41 continue to comply with the statutory direction of KRS160.325 and KRS157.455 a
42 modified AES Rate with a demand charge would be beneficial to both the Company and
43 schools. For schools a demand charge would provide a further incentive to invest in
44 building automation systems to manage peak demand and would be consistent with
45 Company objectives of managing load growth and energy usage similar to their DSM
46 programs.

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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 a 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 some sport field account billings to increase annually by as much as \$15,000 (400 – 500%). Neither KU 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, should be fully rectified. First, new sport fields will be served on Rate PS and be faced with paying a demand charge and minimum payments based on off-peak night-time load in the months they are not in operation. Second, those sport fields now served on Rates GS and AES will continue paying an excessive rate not reflective of the cost to serve an off-peak load. Sports fields clearly are not similar to other commercial and industrial loads served on Rate Schedule PS.

Q. What is the predominate end use at a sports field?

A. While as the Company states in response to KSBA 2nd Question 9, there may be a concession stand, locker room or ticket office on the same meter, without question the field lights are the primary load.

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

A. Yes. It is my recommendation that the PSC direct the Company to add a sports field rate rider to Rate Schedule PS and the charges be reflective of the cost to serve such facilities, including an appropriate recognition of any concession stand load that may exist and be contributing to system peak demand.

Billing Errors

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

1 A. Beginning in 2014 KU contacted some schools advising of best available rate options for
2 them to select. Schools are very pleased with this practice, but realize such contacts if
3 made in prior years would have avoided payment of unnecessary amounts for many all-
4 electric schools that were placed on Rate PS at their inception. With a few exceptions,
5 KU accepted responsibility for billing errors caused by service under a wrong rate for
6 accounts qualifying for Rate AES and made refunds where documentation could be
7 shown showing KU had been advised by the district that the facility was all-electric. An
8 example was a Load Data Sheet routinely required by KU where the customer provided a
9 detail list of energy consuming equipment. In this proceeding it has become clear that KU
10 was fully aware of when a school was all-electric as KU provides the secondary line
11 whereas the school is required to provide the secondary line for any non all-electric
12 school served on Rates PS and TODS. This is clearly articulated in KU's response to
13 KSBA 1st Question No. 8:

14 *“The customers served under Rate AES receive service from a primary*
15 *line with a transformer that steps the voltage down to a secondary*
16 *voltage. Secondary lines then take the power to the AES customer. With*
17 *Rate AES customer, Kentucky Utilities owns the primary conductor,*
18 *transformer, and secondary conductor. Customers served under PS-*
19 *Secondary and TODS also receive service from a primary line with a*
20 *transformer that steps the voltage down to secondary voltage. However,*
21 *Kentucky Utilities does not own the secondary conductor for customers*
22 *served under PS-Secondary and TODS.”*
23

24 KSBA continues to be hopeful of resolving remaining situations in the near future. In
25 these situations it is the firm belief of districts that KU was fully aware of a facility being
26 all electric and the account should have been placed on Rate AES from the onset and
27 appropriate refunds should be made.

28 **Q. Does this conclude your testimony?**

29 A. Yes.

VERIFICATION

STATE OF KENTUCKY

FAYETTE
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

6th day of March, 2015

Andra Cannon

NOTARY PUBLIC

ID# 466916

Expiration 05-21-16

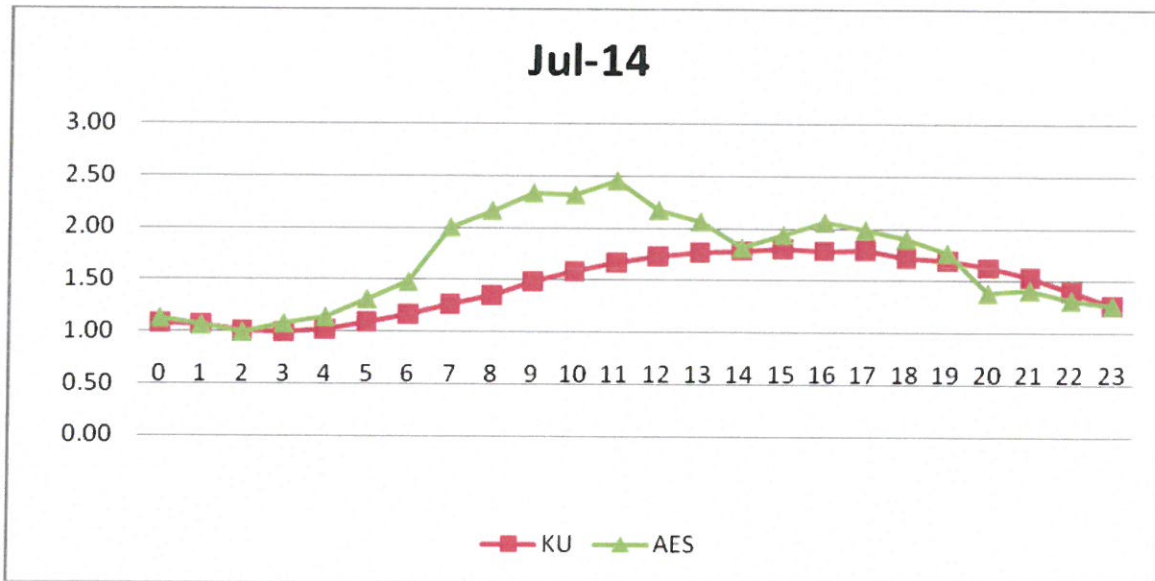
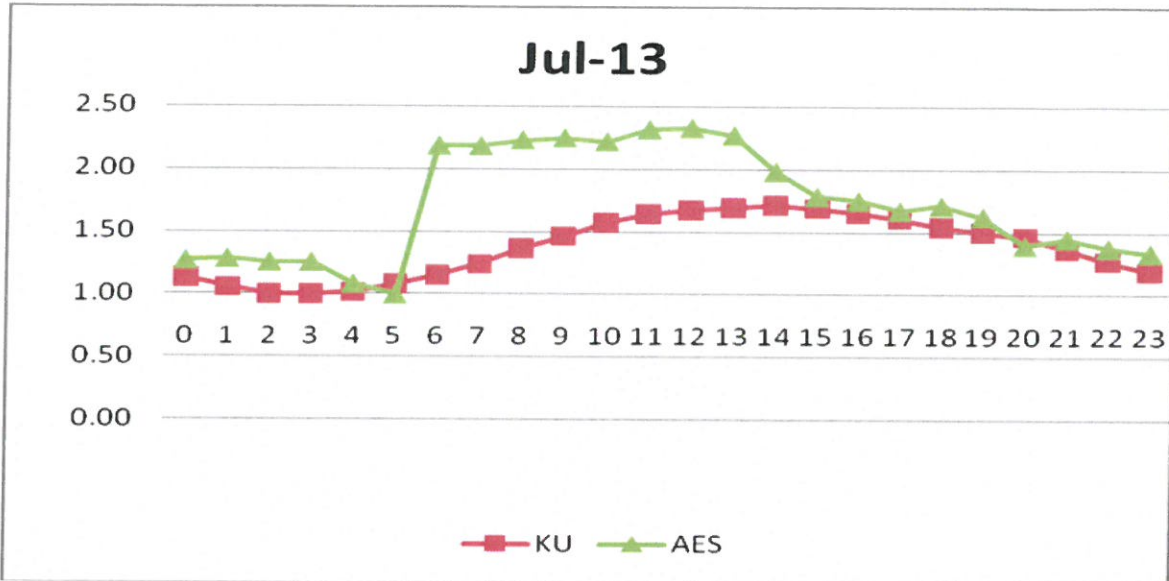
Employee Headcount

TOTAL-GEN	2011	2012	2013	2014	2015	2016	2017	2018
2011	1096	0	0	0	0	0	0	0
2012	0	1101	1124	1138	0	0	0	0
2013	0	0	1112	1131	0	0	0	0
2014	0	0	0	1111	1073	1067	1049	1093
Actual	1036	1049	1079	1104				
Variance	60	52	33	7				
					-31	-37	-55	-11
TOTAL-TRAN								
2011	128	0	0	0	0	0	0	0
2012	0	142	144	145	0	0	0	0
2013	0	0	145	146	0	0	0	0
2014	0	0	0	149	154	156	156	156
Actual	134	137	140	147				
Variance	-6	5	5	2				
					7	9	9	9
TOTAL Gas Dist								
2011	230	0	0	0	0	0	0	0
2012	0	225	227	227	0	0	0	0
2013	0	0	225	225	0	0	0	0
2014	0	0	0	242	238	241	243	241
Actual	218	219	228	243				
Variance	12	6	-3	-1				
					-5	-2	0	-2
TOTAL Elect-Dist								
2011	676	0	0	0	0	0	0	0
2012	0	670	679	685	0	0	0	0
2013	0	0	674	686	0	0	0	0
2014	0	0	0	681	693	696	699	699
Actual	645	647	654	675				
Variance	31	23	20	6				
					18	21	24	24

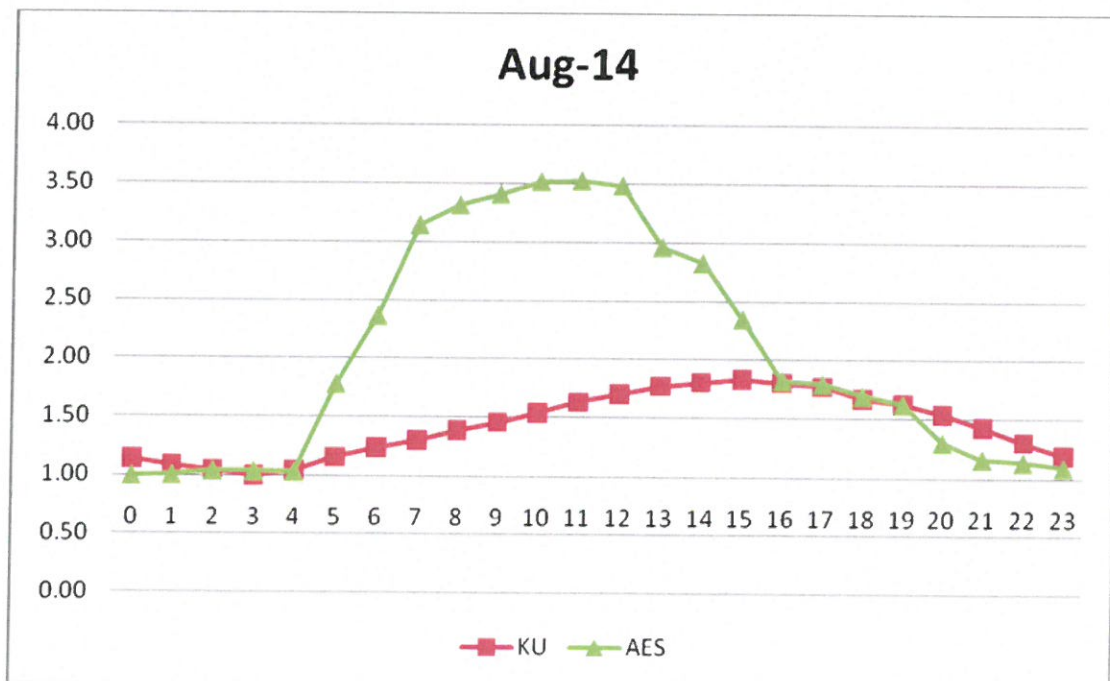
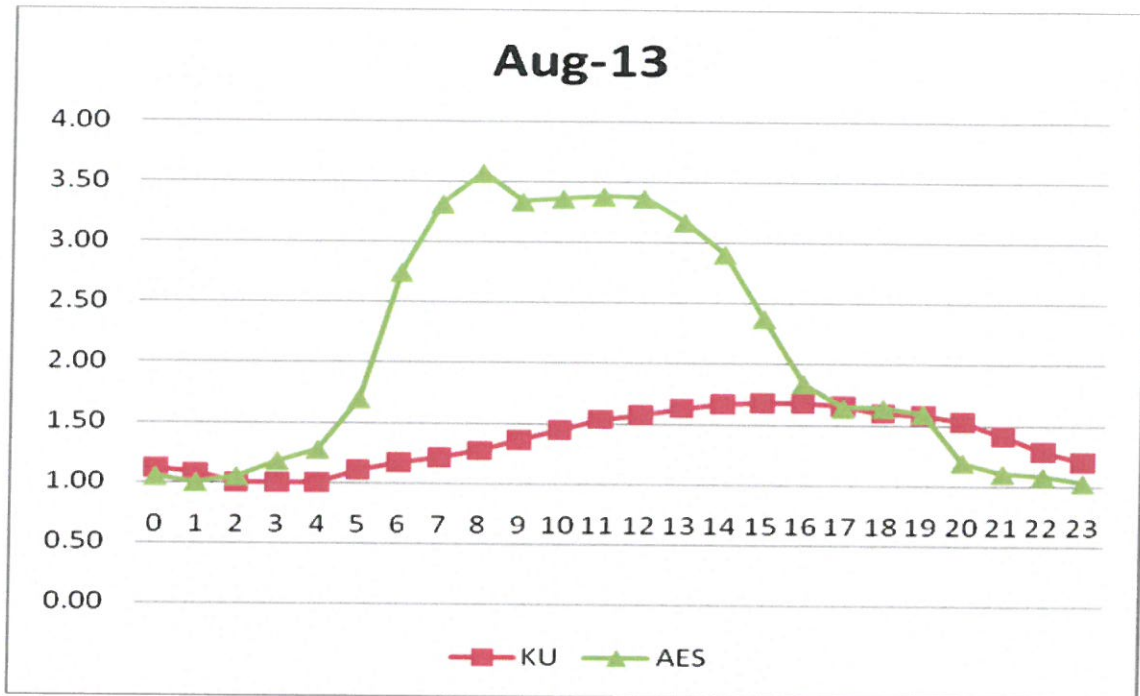
Employee Headcount

TOTAL KU-CS	2011	2012	2013	2014	2015	2016	2017	2018
2011	551	0	0	0	0	0	0	0
2012	0	655	666	669	0	0	0	0
2013	0	0	637	636	0	0	0	0
2014	0	0	0	687	709	711	712	712
Actual	564	605	632	649				
Variance	-13	50	5	38				
					60	62	63	63
TOTAL KU-ADM								
2011	608	0	0	0	0	0	0	0
2012	0	630	642	644	0	0	0	0
2013	0	0	639	647	0	0	0	0
2014	0	0	0	676	683	686	688	691
Actual	593	619	643	664				
Variance	15	11	-4	12				
					19	22	24	27
TOTAL								
2011	3289	0	0	0	0	0	0	0
2012	0	3423	3482	3508	0	0	0	0
2013	0	0	3432	3471	0	0	0	0
2014	0	0	0	3546	3550	3557	3547	3592
Actual	3190	3276	3376	3482				
Variance	99	147	56	64				
					68	75	65	110

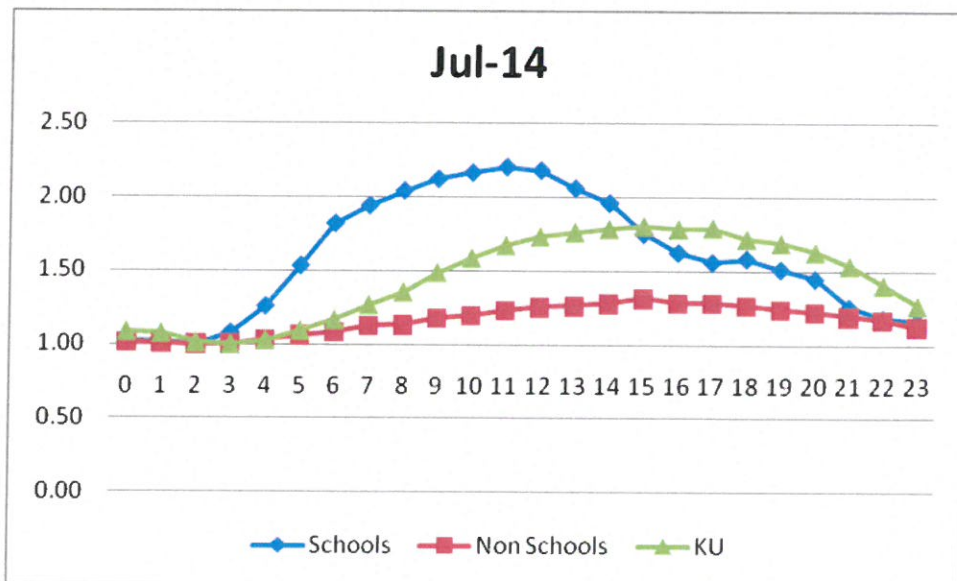
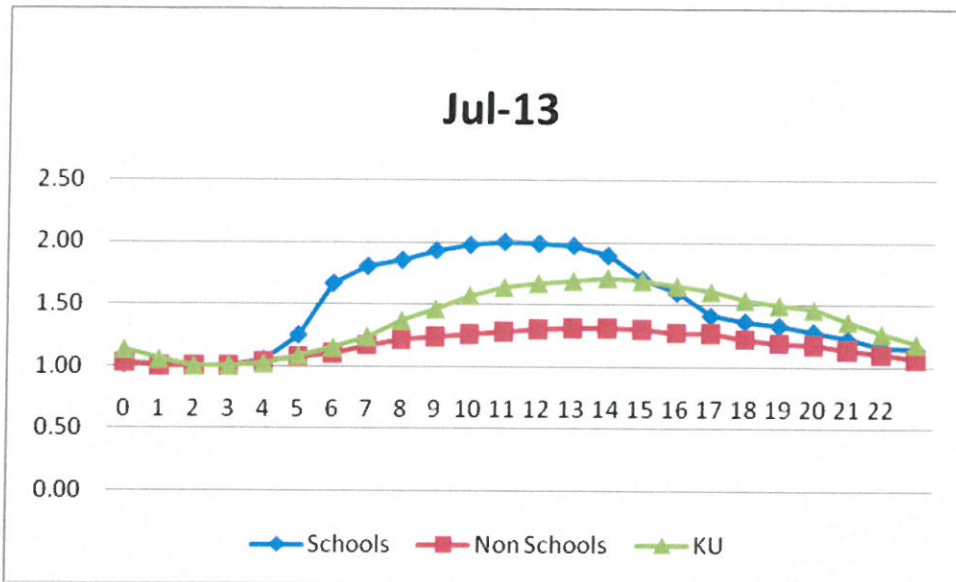
AES vs. System Profile



AES vs. System Profile

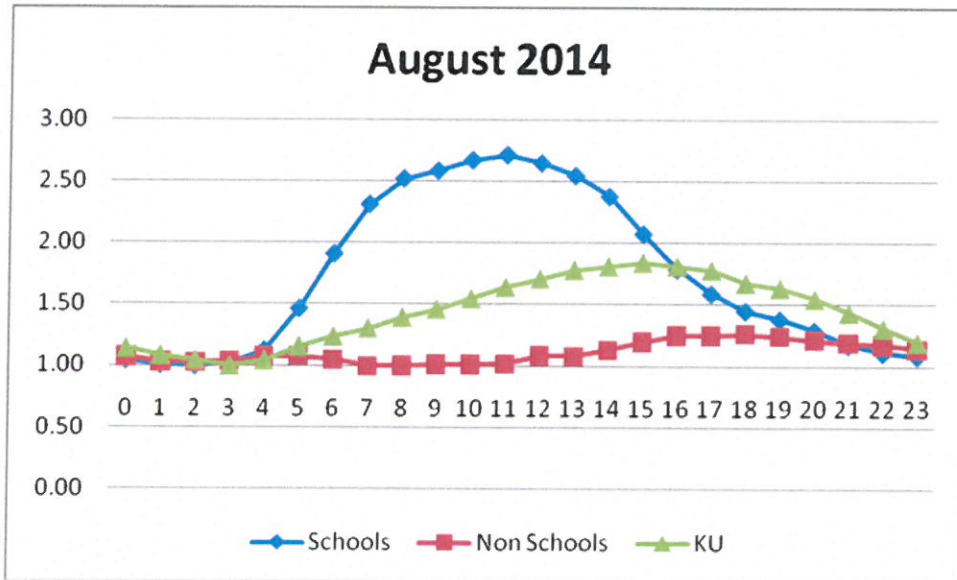
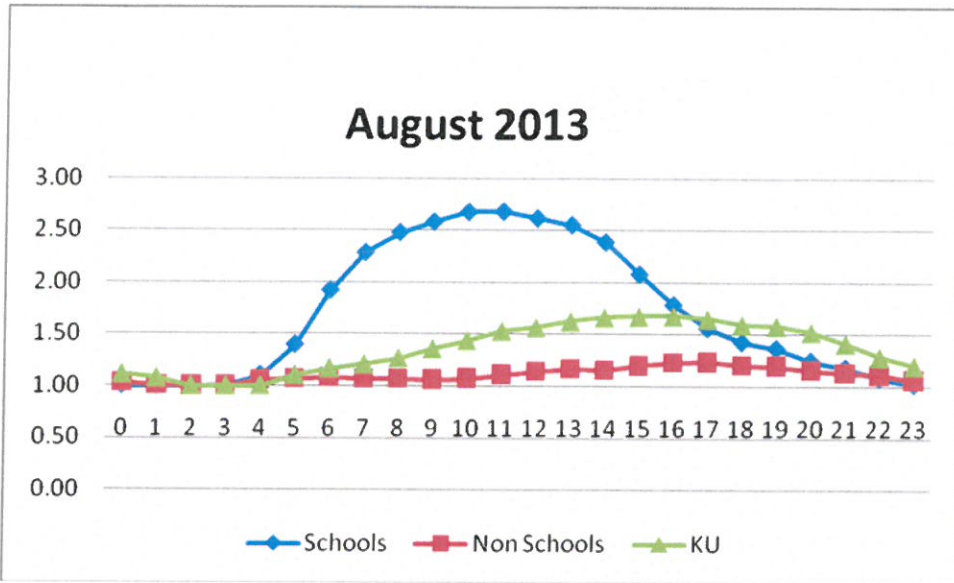


School vs. Class Profile



Data Source: KSBA 1- 2 and KSBA 2 - 1 for TODS

School vs. Class Profile



Data Source: KSBA 1-2 and KSBA 2-1 for TODS