

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC JOINT APPLICATION OF)	
LOUISVILLE GAS AND ELECTRIC)	
COMPANY AND KENTUCKY UTILITIES)	
COMPANY FOR REVIEW, MODIFICATION,)	
AND CONTINUATION OF CERTAIN)	CASE NO. 2017-00441
EXISTING DEMAND-SIDE MANAGEMENT)	
AND ENERGY EFFICIENCY PROGRAMS)	

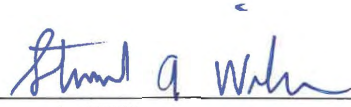
RESPONSE OF
LOUISVILLE GAS AND ELECTRIC COMPANY
AND KENTUCKY UTILITIES COMPANY
TO THE ATTORNEY GENERAL'S SUPPLEMENTAL DATA REQUESTS
DATED FEBRUARY 21, 2018

FILED: MARCH 7, 2018

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Stuart A. Wilson**, being duly sworn, deposes and says that he is Director, Energy Planning, Analysis & Forecasting for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.



Stuart A. Wilson

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 6th day of March 2018.



Notary Public (SEAL)

My Commission Expires:
JUDY SCHOOLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
Notary ID # 512743

**LOUISVILLE GAS AND ELECTRIC COMPANY
AND KENTUCKY UTILITIES COMPANY**

**Response to the Attorney General's Supplemental Data Requests
Dated February 21, 2018**

Case No. 2017-00441

Question No. 1

Witness: Stuart A. Wilson

- Q-1. Refer to the Companies' Response to the Attorney General's Initial Request For Information ("RFI") Question 1.a.-c. Explain whether the Companies will set a higher target reserve margin range in the 2018 IRP than the current range of 16-21%.
- a. Further considering the factors which led to higher reserve margin forecasting for 2018-2021, explain the Companies' planning for such excess capacity.
- A-1. The Companies have not yet determined the target reserve margin range that will be included in their 2018 Integrated Resource Plan, which will be filed in November 2018.
- a. See Kentucky Utilities Company's Response to the June 22, 2017 Order of the Kentucky Public Service Commission in Case No. 2016-00370, filed on September 20, 2017, in Case No. 2016-00370.¹ Beginning in 2019, the Companies forecast capacity to be approximately 100 MW above the current target reserve margin range of 16 to 21 percent. The Companies' have six routine business and planning processes that evaluate alternatives for reliably meeting our customers' future energy needs: (1) completing a supply-side portfolio review; (2) proposing the demand-side management ("DSM") program changes in this current proceeding; (3) conducting a reserve margin study; (4) completing a regional transmission organization ("RTO") membership study; (5) continuing capacity and energy marketing efforts; and (6) continuing economic development efforts.

¹ Available online at: https://psc.ky.gov/psccf/2016-00370/rick.lovekamp@lge-ku.com/09202017043612/Closed/20170920_KU_Muni_Rpt.pdf

**LOUISVILLE GAS AND ELECTRIC COMPANY
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**Response to the Attorney General's Supplemental Data Requests
Dated February 21, 2018**

Case No. 2017-00441

Question No. 2

Witness: Stuart A. Wilson

- Q-2. Refer to the Companies' Response to the Attorney General's Initial RFI Question 2. Explain whether the Companies reasonably anticipate an increase in either off-system sales or off-system purchases in the next four (4) years.
- a. If available, provide off-system sales figures for the months December 2017 through the present date.
- A-2. The Companies do not expect off-system sales and purchases to change materially in the next four years.
- a. See the table below. Off-system sales in January 2018 were driven by strong market prices that resulted from high demand and high natural gas prices that pushed up electricity prices during brief periods of colder-than-normal weather in early January.

	3 rd Party Off-System Sales	
	Energy (GWh)	Revenue (\$ Millions)
December 2017	30.9	1.2
January 2018	225.6	21.6

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**Response to the Attorney General's Supplemental Data Requests
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Case No. 2017-00441

Question No. 3

Witness: Rick E. Lovekamp

- Q-3. Refer to the Companies' Response to the Attorney General's Initial RFI Question 5, and the Companies' Application pgs. 11–12. Explain fully the Companies' reasoning behind the proposed 10.20% return on equity and the comparative 50-basis-point incentive to the allowed return on equity rate in the Companies' most recent base rate case.
- A-3. See the response to PSC Question No. 1-13.

**LOUISVILLE GAS AND ELECTRIC COMPANY
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**Response to the Attorney General’s Supplemental Data Requests
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Case No. 2017-00441

Question No. 4

Witness: Gregory S. Lawson / Rick E. Lovekamp

- Q-4. Provide the total and average amount LG&E residential gas customers paid through the DSM surcharge in the past reporting period, the projected amount for calendar year 2018, and the actual amount for years 2010–2017. For the same time periods, provide the average total residential gas bill, including base rates, all surcharges, and riders. This information should reasonably lead to the ability to calculate the percentage of the total residential gas bill that DSM charges represent for the average LG&E customer. Accordingly, please provide such percentage and the calculations which produced same in native electronic format with all formulas intact and unprotected, with all cells accessible.
- A-4. The following table shows the actual residential DSM surcharge for 2010-2017 and the projected 2018 cost compared to the total residential gas bill including all surcharges and riders. The percentage of the bill that is from the DSM surcharge is calculated for each company.

(\$ thousands)	Projected 2018	Actual								
		2017	2016	2015	2014	2013	2012	2011	2010	
LG&E Gas										
Residential DSM Revenues (\$000)	\$ 1,955	\$ 3,622	\$ 3,210	\$ 2,983	\$ 3,022	\$ 3,132	\$ 3,271	\$ 3,606	\$ 2,402	
Total Residential Revenues (\$000)	\$ 214,198	\$ 200,229	\$ 188,183	\$ 206,848	\$ 231,041	\$ 208,709	\$ 164,617	\$ 194,842	\$ 193,160	
Percent DSM of Total Bill	0.91%	1.81%	1.71%	1.44%	1.31%	1.50%	1.99%	1.85%	1.24%	

The average total residential gas bill for 2018 was calculated using the annual forecast for 2018. The average total residential gas bill for years 2010-2017 are based on actual annual revenue for base rates and adjustment clauses. See attached Excel document.

The attachment is being provided in a separate file in Excel format.

**LOUISVILLE GAS AND ELECTRIC COMPANY
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**Response to the Attorney General's Supplemental Data Requests
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Case No. 2017-00441

Question No. 5

Witness: David E. Huff

Q-5. Refer to the Companies' Response to the Attorney General's Initial RFI Question 6. In subpart d. of its Response the Companies state in full:

The Companies believe the role of their advisory and collaborative groups is to share information and views with the Companies. The Companies are ultimately responsible for their filings and for providing safe, reliable, and reasonable-cost service to their customers, subject to regulation by the Commission. Therefore, the Companies cannot delegate decision-making responsibility to advisory or collaborative group participants.

- a. Confirm that under Kentucky's regulatory structure, the Companies' customers are captive and do not have any choice in which utility to take electric service from if they live in the Companies' service area.
 - b. Explain whether the Companies convene advisory and collaborative groups to simply collect information and views from various stakeholders or whether it expects to use these opinions to help guide its decisions in any way.
 - c. Explain the Companies' understanding of the difference between delegating its decision-making responsibility and implementing the constructive input from stakeholders into its decision-making in a transparent and fair manner.
- A-5. Please note that the question to which the Companies were responding was, "Explain whether these [advisory or collaborative] groups had any voting or veto power on what was eventually filed at the Commission. ... If not, explain why not." As discussed more fully below, the Companies reaffirm their previous answer and reiterate that their advisory or collaborative groups cannot and should not have voting or veto power regarding what the Companies file at the Commission.
- a. The Companies confirm they have an exclusive right to serve electric-utility customers inside the Companies' Kentucky certified service territories. KRS 278.018(1) states in relevant part, "Except as otherwise provided herein, each retail electric supplier shall have the exclusive right to furnish retail electric service to all electric-consuming facilities located within its certified territory" The Companies' right does not

preclude customers from initially choosing to locate in other service territories, from moving between service territories, or from choosing to self-supply some or all of their own electric consumption from their own generating facilities. Therefore, the Companies disagree with characterizing their electric customers as “captive.”

There are no exclusive service territories for gas service in Kentucky. In addition, gas customers can initially choose to locate in other service territories, move between service territories, or choose between substitute services, including propane or using electricity for heating. Therefore, the term “captive” is even more inapt when applied to LG&E gas customers.

But more importantly, the Companies’ right to provide electric-utility service carries with it the obligation to serve, i.e., to provide adequate service as regulated by the Commission. If the Companies fail to provide such service to a customer, KRS 278.018(3) authorizes the Commission first to order the Companies to provide adequate service, then to allow another utility to provide electric service to that customer. In addition, violating Commission orders can result in civil or criminal penalties under KRS 278.990(1). No other advisory or collaborative participant has the obligation and responsibility to serve the Companies’ electric customers.

Therefore, the Companies reaffirm their response to the Attorney General’s Initial RFI Question 6(d), and reiterate that they cannot and should not delegate decision-making responsibility to advisory or collaborative group participants. The Companies take seriously their obligation to provide safe, reliable, and reasonable-cost service to their customers, and they cannot delegate that ultimate responsibility to another party.

- b. The Companies believe the role of their advisory and collaborative groups is to share information and views with the Companies. The Companies value the customer and strive to meet or exceed customer expectations with its program and service offerings. Input the Companies receive through the advisory and collaborative groups is important, but it should be noted that the Companies receive input in a variety of means from customers such as through JD Power and Bellomy surveys, PSC complaints, direct customer interaction such as through the call centers. Customer information and feedback is always considered by the Companies when analyzing and making a variety of decisions.
- c. See the responses to a. and b. above.

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Case No. 2017-00441

Question No. 6

Witness: Stuart A. Wilson

- Q-6. Refer to the Companies' Response to the Attorney General's Initial RFI Question 7. Explain whether the Companies have considered joining an RTO in order to access capacity markets.
- a. Explain the Companies' stance on whether access to capacity markets by way of joining an RTO is in the best interests of the Companies' ratepayers.
 - b. State whether the Companies have commissioned any independent studies into the feasibility and cost/benefit analysis of gaining access to capacity markets. If so, provide the results of those studies along with the methodology used, as well as any other related data or analyses, and fully explain the Companies' position on this issue. If not, explain fully why not.
 - c. Do the Companies expect to assign a monetary value to its unused capacity in the near future? Fully explain why or why not.
 - d. State whether there are any markets which do value capacity. Fully explain the Companies' rationale as to capacity valuation in light of this answer.
 - e. Given the Companies' significant excess capacity projections through the year 2021, explain whether the companies have considered selling their shares in Ohio Valley Electric Corporation (OVEC). If selling of the companies' shares in OVEC is not a possibility, provide a discussion as to whether it is feasible for the companies to exit OVEC, and if so, whether it could be done in a cost-effective manner.
- A-6. The Companies already have access to capacity markets. The Companies do not have to be a member of an RTO to sell capacity into an RTO or to purchase capacity from resources located in an RTO.
- a. A decision to join an RTO requires consideration of a broad range of issues, in addition to potential impacts to the Companies' generation portfolio. The Companies completed a RTO membership study in 2012, which demonstrated that it was not in the interests of the Companies' ratepayers to join an RTO. The Companies will continue to evaluate

the benefit and costs to customers of being part of an RTO and will provide the results of their currently ongoing analysis to the Commission no later than the end of calendar year 2018.

- b. No. See response to part a; the Companies already have access to capacity markets. The Companies have not commissioned a third-party study of the kind addressed in the question because the Companies have the capability to perform this type of analysis as demonstrated repeatedly over decades of proceedings at the Commission such as generation and environmental project CPCNs.
- c. The Companies do not have any unused capacity. Absent planned maintenance or forced outage events, all generating capacity is available to reliably serve customers' energy needs every hour of the year if called upon.
- d. The capacity markets in PJM and MISO develop short-term capacity values, which vary annually, through their annual capacity auctions. However, these markets only value capacity up to a certain point. Any capacity that does not clear the capacity auction does not receive a capacity payment. For example, in PJM's most recent capacity auction for the 2020/2021 planning year, 183,351 MW of capacity were offered into the auction; however only 165,109 MW cleared.

Historically, the underlying rationale for evaluating and justifying DSM programs has been testing whether or not paying some customers to reduce their load was more or less expensive to all customers than acquiring additional supply side resources (i.e., the California tests). Because the Companies do not have a need for capacity for the foreseeable future, the avoided cost of capacity utilized to evaluate future demand reductions using this method was appropriately set at \$0/kW.

- e. The Companies would not characterize themselves as having "significant excess capacity" projected through 2021. As stated to the Commission on September 20, 2017, the Companies have a regular business planning process that evaluates the economic value of all supply-side resources including OVEC as it relates to reliably meeting our customers' future energy needs.² It is that process that led to the decision to retire Brown Units 1 & 2 next spring. In the future, should the planning process indicate that retiring or selling any existing generating resource (including OVEC) would result in a lower cost means to reliably meet customers' future energy needs, then the Companies will formally present that analysis to the Commission.

² See Kentucky Utilities Company's Response to the June 22, 2017 Order of the Kentucky Public Service Commission in Case No. 2016-00370, filed on September 20, 2017, in Case No. 2016-00370.

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AND KENTUCKY UTILITIES COMPANY**

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Case No. 2017-00441

Question No. 7

Witness: Gregory S. Lawson

- Q-7. Refer to the Companies' Response to Staff's Initial RFI Question 3 and the Companies' Response to Metropolitan Housing Coalition's Initial RFI Question 3. Explain how much of program-specific advertising costs are included in the budgets of each program being referred to.
- a. Provide an estimate of how much additional cost the Companies expect to incur through future energy-efficiency education efforts which are not already included in individual DSM-EE program budgets.
 - b. Explain fully whether the Companies have conducted any studies on the cost-effectiveness of its energy-efficiency education efforts. If so, provide the results and methodology of any such studies along with all related analyses and workpapers. If not, why not?
 - c. Detail the relative cost-effectiveness of mailers, partnerships with trade allies, and local energy conferences in furtherance of energy-efficiency education.

A-7.

The proposed 2019-2025 DSM-EE Program Plan budgets include a total of \$2.4 million in advertising costs; \$1.4 million for the Low Income Weatherization Program (WeCare) and \$1.0 million for the Nonresidential Rebates Program. \$2.4 million is the total for all seven years of the DSM-EE Program Plan.

- a. The Companies will continue to provide general energy efficiency education. The Companies are currently in their business planning process and the budget for this effort has not been determined.
- b. The Companies have not conducted specific studies on the cost-effectiveness of their energy-efficiency education efforts. However, the Companies have included the costs of energy-efficiency education in the overall portfolio cost of DSM-EE programs for the purpose of calculating portfolio costs and benefits. Additionally, the Companies review the performance of customer education by holding meetings as needed between personnel from their corporate communications, marketing, and energy efficiency

groups, as well as the Companies' marketing agency for DSM-EE programs. The Companies use these meetings to monitor closely customer education by campaign to ensure that the measures used are attaining the Companies' goals and objectives and are meeting or exceeding industry benchmarks in providing leads to the DSM-EE programs. Also, the Companies use the meeting to monitor customer-education budgets and ensure spending remains within approved limits.

- c. The Companies have offered these as examples of things they have offered and may offer in the future. Each of these vary in cost-per-customer and efficacy. Nonetheless, the Companies believe customer education provided through each of the cited channels has value, and the Companies work to ensure that total spending is within the approved limits for the portfolio and to reduce DSM-EE participant acquisition cost.

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Case No. 2017-00441

Question No. 8

Witness: Gregory S. Lawson / Rick E. Lovekamp

- Q-8. State the average annual kWh usage per customer for the residential class over the past ten (10) years.
- a. Break out this usage according to the four generally distinct service areas: Louisville, Lexington, Western Ky. Area, and Bell/Harlan county area.
- A-8. The LG&E and KU service territory is not defined by the four areas listed in part a. See attached, which provides 2011 - 2017 annual kWh usage per customer for the residential class by county.

Average Annual kWh Usage

Company	County	2011	2012	2013	2014	2015	2016	2017
LG&E	BULLITT	1,107	1,082	1,050	1,054	1,036	1,037	983
	HARDIN	924	896	927	941	894	905	851
	HENRY	1,664	1,471	1,593	1,695	1,609	1,478	1,317
	JEFFERSON	1,003	987	967	956	937	946	892
	MEADE	1,037	990	995	1,035	1,006	987	945
	OLDHAM	1,586	1,512	1,521	1,538	1,483	1,466	1,383
	SHELBY	1,349	1,302	1,329	1,336	1,376	1,490	1,492
	SPENCER	1,047	951	947	1,035	943	940	887
	TRIMBLE	733	1,037	1,156	1,234	1,224	1,202	1,354
	LG&E TOTAL		1,034	1,014	996	987	966	973
KU	ADAIR	1,171	1,104	1,147	1,213	1,142	1,122	1,050
	ANDERSON	1,302	1,218	1,283	1,323	1,242	1,212	1,153
	BALLARD	1,227	1,191	1,204	1,218	1,172	1,126	1,088
	BARREN	1,114	1,059	1,079	1,110	1,051	1,046	965
	BATH	1,138	1,088	1,151	1,181	1,134	1,086	1,037
	BELL	1,270	1,185	1,245	1,290	1,220	1,172	1,090
	BOURBON	1,451	1,359	1,440	1,498	1,413	1,341	1,278
	BOYLE	1,159	1,093	1,112	1,151	1,096	1,082	1,015
	BRACKEN	1,271	1,213	1,256	1,320	1,244	1,190	1,136
	BULLITT	1,280	1,229	1,297	1,347	1,257	1,224	1,158
	CALDWELL	1,250	1,160	1,206	1,268	1,183	1,144	1,072
	CAMPBELL	1,189	1,130	1,156	1,228	1,130	1,107	1,058
	CARLISLE	1,542	1,394	1,227	1,031	1,309	1,304	1,193
	CARROLL	1,156	1,116	1,161	1,191	1,128	1,103	1,044
	CASEY	1,215	1,115	1,196	1,232	1,161	1,107	1,046
	CHRISTIAN	1,204	1,128	1,133	1,201	1,138	1,084	1,008
	CLARK	1,310	1,238	1,287	1,323	1,260	1,224	1,159
	CLAY	1,163	1,102	1,147	1,186	1,104	1,092	1,019
	CRITTENDEN	1,186	1,122	1,144	1,199	1,118	1,070	1,026
	DAVISS	-	-	-	-	-	247	342
	EDMONSON	546	471	470	569	533	506	495
	ESTILL	1,067	1,021	1,067	1,080	1,037	1,022	964
	FAYETTE	1,155	1,101	1,124	1,159	1,100	1,073	1,008
	FLEMING	1,225	1,166	1,224	1,269	1,203	1,170	1,093
	FRANKLIN	1,485	1,404	1,511	1,534	1,426	1,419	1,350
	FULTON	982	931	919	970	909	854	765
	GALLATIN	1,086	1,057	1,145	1,141	1,078	1,047	992
	GARRARD	1,345	1,254	1,323	1,388	1,302	1,268	1,190
	GRANT	1,250	1,148	1,191	1,245	1,185	1,072	1,087
	GRAYSON	1,188	1,118	1,155	1,209	1,150	1,094	1,044
	GREEN	1,042	974	980	1,017	973	973	908
	HARDIN	1,168	1,110	1,139	1,176	1,120	1,083	1,029
	HARLAN	1,429	1,323	1,405	1,444	1,347	1,274	1,193
	HARRISON	1,178	1,118	1,151	1,197	1,137	1,103	1,060
HART	1,130	1,074	1,105	1,147	1,087	1,058	1,005	

Average Annual kWh Usage

Company	County	2011	2012	2013	2014	2015	2016	2017
KU	HENDERSON	1,324	1,281	1,279	1,331	1,252	1,212	1,157
	HENRY	1,253	1,190	1,245	1,288	1,203	1,164	1,122
	HICKMAN	1,031	1,005	1,017	1,060	1,004	1,009	915
	HOPKINS	1,386	1,301	1,349	1,394	1,302	1,256	1,184
	JESSAMINE	1,410	1,331	1,395	1,449	1,366	1,323	1,251
	KNOX	1,268	1,188	1,246	1,287	1,228	1,175	1,106
	LARUE	1,181	1,106	1,149	1,186	1,121	1,091	1,033
	LAUREL	1,371	1,268	1,328	1,382	1,297	1,246	1,177
	LEE	1,030	981	1,023	1,049	1,018	966	915
	LINCOLN	1,213	1,137	1,207	1,258	1,188	1,157	1,099
	LIVINGSTON	1,268	1,203	1,269	1,366	1,264	1,166	1,133
	LYON	1,102	1,058	1,083	1,129	1,068	1,021	960
	MADISON	1,286	1,186	1,247	1,283	1,206	1,154	1,089
	MARION	1,122	1,073	1,092	1,133	1,084	1,077	1,010
	MASON	1,191	1,139	1,174	1,217	1,156	1,117	1,061
	MCCRACKEN	1,353	1,303	1,325	1,346	1,298	1,254	1,214
	MCCREARY	1,246	1,143	1,223	1,280	1,197	1,179	1,108
	MCLEAN	1,216	1,162	1,169	1,236	1,162	1,137	1,074
	MERCER	1,241	1,163	1,213	1,262	1,191	1,156	1,083
	MONTGOMERY	1,298	1,225	1,290	1,340	1,265	1,226	1,166
	MUHLENBERG	1,395	1,312	1,363	1,416	1,321	1,294	1,211
	NELSON	1,394	1,329	1,400	1,457	1,372	1,315	1,247
	NICHOLAS	1,257	1,200	1,294	1,316	1,230	1,208	1,130
	OHIO	1,186	1,129	1,153	1,180	1,116	1,112	1,039
	OLDHAM	1,243	1,213	1,235	1,235	1,173	1,177	1,115
	OWEN	1,291	1,191	1,283	1,325	1,216	1,135	1,085
	PENDLETON	1,183	1,149	1,248	1,269	1,208	1,163	1,078
	PULASKI	1,165	1,084	1,142	1,191	1,125	1,106	1,032
	ROBERTSON	1,132	1,080	1,103	1,165	1,091	1,040	1,052
	ROCKCASTLE	1,198	1,111	1,218	1,241	1,175	1,132	1,066
	ROWAN	1,086	1,032	1,068	1,097	1,047	1,014	951
	RUSSELL	1,263	1,152	1,251	1,309	1,192	1,168	1,077
	SCOTT	1,481	1,389	1,473	1,532	1,433	1,378	1,304
	SHELBY	1,251	1,205	1,226	1,256	1,201	1,176	1,110
	SPENCER	1,573	1,489	1,577	1,643	1,543	1,478	1,407
	TAYLOR	947	905	901	917	892	897	837
	TRIMBLE	1,390	1,277	1,342	1,422	1,342	1,263	1,223
UNION	1,326	1,244	1,276	1,329	1,241	1,181	1,132	
WASHINGTON	1,158	1,078	1,100	1,144	1,100	1,068	1,015	
WEBSTER	1,344	1,265	1,297	1,321	1,249	1,206	1,142	
WHITLEY	1,109	1,052	1,098	1,120	1,076	1,058	984	
WOODFORD	1,415	1,343	1,401	1,443	1,362	1,328	1,257	
	KU TOTAL	1,241	1,172	1,215	1,255	1,186	1,152	1,086