

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In The Matter of:

ELECTRONIC APPLICATION OF LOUISVILLE GAS &)	
ELECTRIC COMPANY FOR AN ADJUSTMENT)	CASE NO.
OF ITS ELECTRIC AND GAS RATES AND FOR)	2016-00371
CERTIFICATES OF PUBLIC CONVENIENCE AND)	
NECESSITY)	

ATTORNEY GENERAL’S SUPPLEMENTAL DATA REQUESTS

Comes now the intervenor, the Attorney General of the Commonwealth of Kentucky, by and through his Office of Rate Intervention, and submits these Supplemental Data Requests to Louisville Gas & Electric Company [hereinafter “LG&E”] to be answered by the date specified in the Commission’s Order of Procedure, and in accord with the following:

- (1) In each case where a request seeks data provided in response to a staff request, reference to the appropriate request item will be deemed a satisfactory response.
- (2) Please identify the witness who will be prepared to answer questions concerning each request.
- (3) Please repeat the question to which each response is intended to refer. The Office of the Attorney General can provide counsel for LG&E with an electronic version of these questions, upon request.
- (4) These requests shall be deemed continuing so as to require further and supplemental responses if the company receives or generates additional information within the scope of these requests between the time of the response and the time of any hearing conducted hereon.
- (5) Each response shall be answered under oath or, for representatives of a public or private corporation or a partnership or association, be accompanied by a signed certification of the preparer or person supervising the preparation of the response on behalf of the entity

that the response is true and accurate to the best of that person's knowledge, information, and belief formed after a reasonable inquiry.

(6) If you believe any request appears confusing, please request clarification directly from Counsel for the Office of Attorney General.

(7) To the extent that the specific document, workpaper or information as requested does not exist, but a similar document, workpaper or information does exist, provide the similar document, workpaper, or information.

(8) To the extent that any request may be answered by way of a computer printout, please identify each variable contained in the printout which would not be self-evident to a person not familiar with the printout.

(9) If the company has objections to any request on the grounds that the requested information is proprietary in nature, or for any other reason, please notify the Office of the Attorney General as soon as possible.

(10) As used herein, the words "document" or "documents" are to be construed broadly and shall mean the original of the same (and all non-identical copies or drafts thereof) and if the original is not available, the best copy available. These terms shall include all information recorded in any written, graphic or other tangible form and shall include, without limiting the generality of the foregoing, all reports; memoranda; books or notebooks; written or recorded statements, interviews, affidavits and depositions; all letters or correspondence; telegrams, cables and telex messages; contracts, leases, insurance policies or other agreements; warnings and caution/hazard notices or labels; mechanical and electronic recordings and all information so stored, or transcripts of such recordings; calendars, appointment books, schedules, agendas and diary entries; notes or memoranda of conversations (telephonic or

otherwise), meetings or conferences; legal pleadings and transcripts of legal proceedings; maps, models, charts, diagrams, graphs and other demonstrative materials; financial statements, annual reports, balance sheets and other accounting records; quotations or offers; bulletins, newsletters, pamphlets, brochures and all other similar publications; summaries or compilations of data; deeds, titles, or other instruments of ownership; blueprints and specifications; manuals, guidelines, regulations, procedures, policies and instructional materials of any type; photographs or pictures, film, microfilm and microfiche; videotapes; articles; announcements and notices of any type; surveys, studies, evaluations, tests and all research and development (R&D) materials; newspaper clippings and press releases; time cards, employee schedules or rosters, and other payroll records; cancelled checks, invoices, bills and receipts; and writings of any kind and all other tangible things upon which any handwriting, typing, printing, drawings, representations, graphic matter, magnetic or electrical impulses, or other forms of communication are recorded or produced, including audio and video recordings, computer stored information (whether or not in printout form), computer-readable media or other electronically maintained or transmitted information regardless of the media or format in which they are stored, and all other rough drafts, revised drafts (including all handwritten notes or other marks on the same) and copies of documents as hereinbefore defined by whatever means made.

(11) For any document withheld on the basis of privilege, state the following: date; author; addressee; indicated or blind copies; all persons to whom distributed, shown, or explained; and, the nature and legal basis for the privilege asserted.

(12) In the event any document called for has been destroyed or transferred beyond the control of the company, please state: the identity of the person by whom it was destroyed or

transferred, and the person authorizing the destruction or transfer; the time, place, and method of destruction or transfer; and, the reason(s) for its destruction or transfer. If destroyed or disposed of by operation of a retention policy, state the retention policy.

(13) Please provide any written responses, together with any and all exhibits pertaining thereto, in one or more bound volumes, separately indexed and tabbed by each response, in compliance with Kentucky Public Service Commission Regulations.

Respectfully submitted,

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Certificate of Service and Filing

Counsel certifies that: (a) the foregoing is a true and accurate copy of the same document being filed in paper medium; (b) pursuant to 807 KAR 5:001 § 8(7)(c), there are currently no parties that the Commission has excused from participation by electronic means in this proceeding; and (c) the original and six copies in paper medium are being filed with the Commission no later than two (2) business days following the electronic filing.

I further certify that in accordance with 807 KAR 5:001 § 4 (8), the foregoing is being contemporaneously provided via electronic mail to:

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this 7th day of February, 2017



Assistant Attorney General

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I. REVENUE REQUIREMENTS

1. Refer to the Company's response to AG-1-36.
 - a. Has the Company included any asset in rate base relating to the Accumulated Deferred Income Tax balance for CCR Pond Closures? If so, identify, quantify and explain the related asset.
 - b. Referring to the amount of ADIT for "FAC Under Recovery KY-Current" identify the amount of FAC under (or over) recovery (1) for the 13 month average ending February 28, 2017 ("base period") and (2) as projected for the twelve-month forecasted test period beginning July 1, 2017, and ending June 30, 2018 ("forecasted Test Year").
 - c. Show in detail how the Federal NOL amount was derived.
 - d. Identify, quantify and provide all projections as to when the Company expects to utilize the Federal NOL to reduce income taxes.
 - e. How much of the Federal NOL relates to accelerated tax depreciation including bonus tax depreciation? Identify, quantify and explain the amounts.
 - f. How much of the Federal NOL relates to tax deductions other than accelerated tax depreciation including bonus tax depreciation? Identify, quantify and explain the amounts.
 - g. Referring to the ADIT balance for Pensions - Regulatory Asset, has the Company included any asset in rate base relating to that ADIT component? If not, explain fully why not. If so, identify, quantify and explain the related asset.
2. Refer to the response to AG-1-36.
 - a. Why does the Company show a debit-balance ADIT amount for a "Recycling Credit Carryforward"? Explain fully.
 - b. What sections of the tax code produced the Recycling Credit?
 - c. On which tax forms is the Recycling Credit claimed?
 - d. For which years and in what amounts was a Recycling credit claimed?

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- e. When does the Company expect to utilize the Recycling Credit Carryforward? Explain fully and provide projections.
3. Refer to the response to AG-1-36.
 - a. Why does the Company show a debit-balance ADIT amount for a "Research & Experimental Credit Carryforward"? Explain fully.
 - b. What sections of the tax code produced the Research & Experimental Credit?
 - c. On which tax forms is the Research & Experimental Credit claimed?
 - d. For which years and in what amounts was a Research & Experimental credit claimed?
 - e. When does the Company expect to utilize the Research & Experimental Credit Carryforward? Explain fully and provide projections.
4. Refer to the response to AG-1-36.
 - a. Why does the Company show a debit-balance ADIT amount for a "Solar Credit Carryforward"? Explain fully.
 - b. What sections of the tax code produced the Solar Credit?
 - c. On which tax forms is the Solar Credit claimed?
 - d. For which years and in what amounts was a Solar credit claimed?
 - e. When does the Company expect to utilize the Solar Credit Carryforward? Explain fully and provide projections.
5. Refer to the response to AG-1-36.
 - a. Provide the detail for the Tax Repair Expensing amounts, including the amounts of repairs deductions that were claimed in each year, and the income tax rates that were applied to the annual Tax Repair Expensing amounts to produce the ADIT amounts.
6. Refer to the response to AG-1-37.
 - a. Explain what is included in the "Other" category.

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- b. How much of the amounts in the "Other" category are expensed? Quantify and include supporting calculations.
 - c. How much of the amounts in the "Other" category are capitalized? Quantify and include supporting calculations.
7. Refer to the response to AG-1-37.
- a. Why are the Expensed amounts for 2016 lower than 2015?
 - b. Why are the Capitalized amounts for 2016 lower than 2015?
 - c. Why are the Other Labor Cost amounts for 2016 lower than 2015?
 - d. Why is the Total Labor Cost for 2016 lower than 2015?
8. Refer to the response to AG-1-49.
- a. Does the Company's claimed revenue requirement include Labor Cost for authorized but unfilled positions?
 - b. Is the \$2.4 million amount for LG&E's 22 vacant positions for payroll costs only? If not, show a detailed breakout between payroll and benefit costs, showing the amount for each type of benefit.
 - c. Is the \$5.7 million amount for LG&E and KU Services Company's 34 vacant positions for payroll costs only? If not, show a detailed breakout between payroll and benefit costs, showing the amount for each type of benefit.
 - d. Show in detail how much LG&E and KU Services Company Labor Cost was included in the claimed revenue requirement for (1) LG&E gas utility and (2) LG&E electric utility.
 - e. If possible, show the amounts identified in the response to part d, above, by account.
9. Refer to the response to AG-1-50(c), Charges from LG&E and KU Services Company.
- a. Why are the charges from this affiliate projected to increase from \$208.8 million for the base period to \$273.4 million for the forecast period?
 - b. Identify and provide a copy of each advertisement and advertising campaign for which LG&E and KU Services Company is charging cost to the utility.
10. Refer to the response to AG-1-50(c), Charges from LG&E and KU Services Company.

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- a. Why are affiliate charges for CWIP (account 107) projected to increase from \$37.973 million in the base period to \$94.365 million in the Forecast Test Period?
 - b. Why are there no affiliate charges in the Forecast Test Period in account 165, Prepayments (but \$13.152 million in the base period)?
 - c. Why are affiliated charges for Maintenance of Overhead lines (account 571) increasing from \$1.244 million in the base period to \$3.336 million in the Forecast Test Period?
 - d. Why are affiliated charges for Maintenance of Meters (account 597) zero in the base period and projected to be \$1.428 million in the Forecast Test Period?
 - e. What advertising is included in the base period and Forecast Test Period amounts for each of these accounts (1) account 910, (2) account 913 and (3) account 930.1?
 - f. Why are Miscellaneous General Expenses in account 930.2 increasing from \$2.647 in the base period to \$3.373 million in the Forecast Test Period?
11. Refer to the response to AG-1-50(d). Provide an itemization showing what is included in the forecasted PPL Services Corporation charges to LG&E for each account:
- a. account 920
 - b. account 921
 - c. account 926
12. Refer to the response to AG-1-51. Identify and explain the best practices that were exchanged and quantify the savings to LG&E that resulted from the exchange of best practices.
13. Refer to the response to AG-1-51. Are any costs charged to LG&E (1) during the test period or (2) projected to be charged to LG&E during the forecast period by PPL EU Services Corporation? If so, identify, quantify and explain the amounts of such charges (1) during the test period or (2) projected to be charged to LG&E during the forecast period by account.
14. Refer to the response to AG-1-51. Identify the "federal affiliate transaction regulations" that are being referred to in the response.
15. Refer to the response to AG-1-54. For each of the following, show in detail how the target amounts were developed and also show in detail how actual achieved results were calculated:
- a. LKE Net Income Target and Actual

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- b. LKE EBIT Target and Actual
- c. Customer Satisfaction payout percentage
- d. Electric Distribution Operations payout percentage
- e. Payout percentage for each Plant
- f. Information Technology payout percentage

16. Refer to the response to AG-1-54. Refer to the 2015 Customer Satisfaction Results Summary.

- a. What does a 50 percent customer satisfaction measurement indicate?
- b. Does a 50 percent customer satisfaction measurement indicate that half of the customers are satisfied and the other half are not? If not, explain fully.
- c. What does a 43 percent customer satisfaction measurement indicate?
- d. What does a 66.6 percent customer satisfaction measurement indicate? Does this mean that two-thirds of the customer are satisfied and one-third are not? If not, explain fully.
- e. Which companies are in the "Peer Average" for 2015 Customer Satisfaction?
- f. How were the companies in the "Peer Average" selected?

17. Refer to the response to AG-1-68.

- a. How much of the \$10.867 million Team Incentive Award was reflected as expense by (1) LG&E gas utility operations and (2) LG&E electric utility operations in the test year? Show the amounts by account.
- b. What is the comparable total amount of Team Incentive Award for the forecasted period?
- c. How much of the total forecasted period Team Incentive Award was reflected as expense by (1) LG&E gas utility operations and (2) LG&E electric utility operations in the forecasted period? Show the amounts by account.
- d. Identify each item and the related dollar amount that is included in the \$2.2 million of Other Benefits.

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- e. How much of the \$2.2 million Other Benefits were expense by (1) LG&E gas utility operations and (2) LG&E electric utility operations in the test year? Show the amounts by account.
 - f. What is the comparable total amount of Other Benefits Expense for the forecasted period? Show a breakout between (1) LG&E gas utility operations and (2) LG&E electric utility operations and show the amounts by account.
 - g. What calendar period are the "Test Year" amounts in the Attachment to the response to AG-1-68 for?
18. Workers Compensation. Refer to the response to AG-1-69.
- a. For the forecast period 7/1/17 - 6/30/18 show how the total claimed forecasted WC Cost of \$637,574 is allocated between (1) LG&E gas utility operations and (2) LG&E electric utility operations.
 - b. Identify the comparable total amount for the 12-month period ending February 28, 2017.
 - c. The response to AG-1-69 (b) indicates that the policy premium for 12/31/15-12/30/16 was \$449,660. An invoice was attached to the response showing a premium of \$461,748 for the policy term of 12/31/2016 - 12/31/2017. The response to AG-1-69 (b) states that "LG&E estimated a 1% increase in that premium for 2017 and a 5% increase for 2018." Does the Company agree that the comparison of the 2017 premium of \$461,748 with the 2016 premium of \$449,660 indicates a 2.7% increase? If not, explain fully why not.
 - d. Show in detail how the 1% 2017 increase and 5% 2018 estimated increases were derived.
19. Workers Compensation. Refer to the response to AG-1-72. Why does the cost for Workers Comp decrease from \$927,476 in 2015 to \$531,252 in 2016?
20. Refer to the response to AG-1-72. Identify and provide the journal entries that resulted in the \$797,073 credit for FASB 112 costs in December 2015 and the \$168,699 credit to FASB 112 costs in December 2016.
21. Refer to the response to AG-1-72. Identify, quantify and explain each type of Other Benefit that is included in the \$1.497 million for 2015 and \$1.013 million for 2016.
22. Refer to the response to AG-1-81. Have any expenses for lawsuit judgment and/or settlements been included in the Forecasted Test Year? If not, explain fully why not. If so, identify the amounts included and explain fully how they were derived.

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23. Refer to the response to AG-1-84.

- a. Provide a breakout of the 2016 and 2015 Bad Debt Write-Offs amounts by rate class.
- b. Provide a breakout of the 2016 and 2015 Collection of Written-Off Accounts amounts by rate class.

24. Refer to the response to AG-1-89. Are the amounts in the "Test" column for the forecast period 7/1/2017 through 6/30/2018? If not, provide comparable amounts for the forecast period 7/1/2017 through 6/30/2018.

25. Refer to the response to AG-1-102.

- a. As of December 31, 2016, how many AMI meters were deployed and what was the cost of those AMI meters?
- b. What is the average service life of each type of meters that the Company had installed as of December 31, 2016?
- c. What is the average cost of the AMI meters that the Company proposes to install?

26. Refer to the response to AG-1-108.

- a. Show in detail how the Real Risk-Free Return of -0.71% was derived.
- b. Show in detail how the Equity Risk Premium of 6.0% was derived.
- c. Is the 8.96% the projected return for common stock equity investments? If not, explain fully.

27. Refer to the response to AG-1-67.

- a. How has the Company estimated the impact of work force turnover for the Forecasted Test Year ending June 30, 2018? Identify, quantify and explain how the impact of work force turnover has been incorporated.
- b. Of the 133 positions listed in the response to AG-1-67 where turnover occurred and a replacement was hired, does the Company agree that the annual salaries of the replacement employee are typically [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL] than the annual salary of the employee who has been replaced? If not, explain fully why not.

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- h. Show in detail which assets are projected to be disposed of, and how the \$2.479 million Tax Gain/(Loss) on Disposal of Assets was derived.

- 31. Refer to the response to AG-1-142.
 - a. Has the Company included any deferred tax asset related to NOL carryforwards or contribution carryforwards in rate base for the Forecasted Test Year?
 - b. If the answer to part a is "yes" identify the amount, and provide a breakout of the Forecasted Test Year deferred tax asset amount between (1) net operating loss carryforward and (2) contribution carryforwards.

- 32. Refer to the response to AG-1-145. Provide a break out of the anticipated property tax increase in account 408.1 from the \$28.650 million for 2016 to the \$33.127 million for the Forecasted Test Year between (1) changes in the property tax rates, (2) changes due to increased plant and (3) other (explain any other factors associated with the projected property tax expense increase).

- 33. Refer to the response to AG-1-181.
 - a. Identify and provide a copy of all support relied upon for the 2.5% inflation factor used for terminal net salvage projections.
 - b. How much lower would the terminal net salvage component of depreciation rates be if a 2.0% inflation factor was used?
 - c. Provide supporting calculations for the response to part b.
 - d. For each plant asset for which terminal net salvage was computed, show in detail exactly how the 2.5% inflation factor was applied to the dismantlement estimates and clearly identify the period during which the 2.5% annual inflation factor was applied.
 - e. Provide calculations for part (d), above, showing exactly how the 2.5% inflation factor was applied, for how many years it was applied, and the starting balance of dismantlement cost estimate for each plant asset to which it was applied.

- 34. Refer to the response to AG-1-189. Provide similar comparable information as projected for these periods:
 - a. 2017
 - b. 2018

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- c. Forecast Test Year ended 6/30/2018
35. Refer to the response to AG-1-193. Does the Company have any meter replacement programs that will affect meter plant lives? If so, identify and explain fully (1) the programs and (2) how meter plant lives will be affected.
36. Refer to the response to AG-1-205. Provide similar comparable information as projected for these periods:
- a. 2017
 - b. 2018
 - c. Forecast Test Year ended 6/30/2018
37. Refer to the response to AG-1-207. Provide similar comparable information as projected for these periods:
- a. 2017
 - b. 2018
 - c. Forecast Test Year ended 6/30/2018
38. Refer to the response to AG-1-209. Provide similar comparable information as projected for the Forecast Test Year ended 6/30/2018.
39. Health and medical insurance. Refer to the response to AG-1-217.
- a. Is the Company's cost of medical insurance projected for the Forecast Test Year ended 6/30/2018 impacted by any provisions of the Affordable Health Care Act (Obamacare)? If so, please explain.
 - b. Would the Company's cost of medical insurance projected for the Forecast Test Year ended 6/30/2018 be impacted if Obamacare were to be repealed? If not, explain fully why not. If so, identify, quantify and explain the impacts.
40. Refer to the response to AG-1-223.
- a. In which customer class was the customer that was related to the \$52,730 write off?
 - b. What were the circumstances related to that write-off?
41. Refer to the response to AG-1-226.

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- a. Provide similar comparable information as projected for the Forecast Test Year ended 6/30/2018.
 - b. Is the \$1 million donation item included in the \$3.780 million Electric base year amount?
 - c. Are any other amounts for donations included in any of the 2015, 2016, or base year Gas or Electric amounts? If so, identify the donation amounts.
 - d. Explain the basis for reclassifying the \$1 million Electric injuries and damages amount to account 426 as a donation.
42. Refer to the response to AG-1-230 re: storm damage expense.
- a. State the amount of storm cost amortization expense of regulatory assets in each year.
 - b. What is the comparable amount of storm damage expense for the Forecast Test Year ended 6/30/2018?
 - c. Show in detail how the amount identified in response to part (b) was derived.
43. Refer to the response to AG-1-231. What were the comparable budgeted/forecast amounts for years 2014, 2015 and 2015?
44. Refer to the response to AG-1-233(a).
- a. Explain the basis for the exclusion of items from the current KU and LGE rate cases on the attachment.
 - b. What amount of ash pond and landfill closure costs has the Company reflected for the Forecast Test Year ended 6/30/2018 by account?
45. Refer to the response to AG-1-236. Identify the comparable amounts of vegetation management costs for transmission and distribution for the Forecast Test Year ended 6/30/2018 by account.
46. Refer to the response to AG-1-240. Has a full year's worth of revenue for each of the customers listed in the response been included in the Forecast Test Year ended 6/30/2018?
- a. If not, explain fully why not, and show the amount of revenue and sales for each of the customers listed in the response that was reflected in the Forecast Test Year ended 6/30/2018.

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- b. If so, show the annualized amount of revenue and sales for each of the customers listed in the response that was reflected in the Forecast Test Year ended 6/30/2018.
47. Refer to the response to AG-1-241. Has a full year's worth of revenue for each of the customers listed in the response who are expanding operations been included in the Forecast Test Year ended 6/30/2018?
- a. If not, explain fully why not, and show the amount of revenue and sales for each of the customers listed in the response that was reflected in the Forecast Test Year ended 6/30/2018.
- b. If so, show the annualized amount of revenue and sales for each of the customers listed in the response that was reflected in the Forecast Test Year ended 6/30/2018.
48. Refer to the response to AG-1-242. Have all of the estimated reduced load and estimated reduced revenue amounts listed in the response been reflected by the Company in the Forecast Test Year ended 6/30/2018? If not, which amounts were not fully reflected and why?
49. Refer to the response to AG-1-244 and 245.
- a. Has the Company projected any reduction in postage expense for the Forecast Test Year ended 6/30/2018 related to increasing use of electronic transmission of bills? If not, explain fully why not. If so, identify the amount and show how it was derived.
- b. Refer to the volume of customer bills, notices and letters in response to AG-1-245(c). How many of those were (1) mailed and (2) electronically transmitted?
50. Refer to the response to AG-1-264. Refer to page 2 of 57 of the CONFIDENTIAL Attachment 1.
- a. What are the [BEGIN CONFIDENTIAL] [REDACTED] [REDACTED]? [END CONFIDENTIAL]
- b. Refer to the statement that [BEGIN CONFIDENTIAL] [REDACTED] [REDACTED] [END CONFIDENTIAL] Identify, the percentage of the Company's capital expenditures that are subject to no or minimal regulatory lag.
51. Refer to the responses to AG-1-249(b) and AG-1-251.
- a. As of June 30, 2017 approximately how much Aldyl-A main pipe does the Company expect that it will still have on its system?

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- b. Projecting forward from June 30, 2017, how many years does the Company expect it will take to replace the remaining Aldyl-A pipe, and what is the expected cost in total and by year?
- c. Refer to the response to AG-1-249(b). Provide comparative costs for each program for the Forecast Test Year ended 6/30/2018.

52. Refer to the response to AG-1-253.

- a. Refer to the \$317,000 the Company has projected for in-line inspections ("ILI") for the Forecast Test Year ended 6/30/2018. Identify the amounts, by account.
- b. Provide comparable information on ILI costs for 2015 and 2016, showing the amounts by account. Include a description of which line segments were inspected using ILI in each year.
- c. What amounts for the \$14.781 million and \$193,800 amounts for the Transmission Modernization Program (1) have been included in the Company's proposed base rate revenue requirement? (2) would be included in and recovered through the Gas Line Tracker Mechanism?

53. Refer to the response to AG-1-257.

- a. How does the Company distinguish between gas utility capital investments (1) that are included in its base rate increase request and (2) would be included in the GLT mechanism? Explain fully.
- b. Why does the Company need a separate GLT mechanism when it is using a fully forecast test year for setting gas utility base rates? Explain fully.
- c. Are any gas utility plant investments that are forecast by the Company for the Forecast Test Year ended 6/30/2018 being excluded from the Company's base rate increase request so they can be included in a separate GLT mechanism filing? If not, explain fully why not. If so, identify all such amounts, and explain the reasons for excluding them from the Company's base rate application.

54. Refer to the response to AG-1-258(a) which states that cost savings for these examples are not individually tracked.

- a. Does the Company have some way of identifying and quantifying cost savings that result from its increased spending on gas-specific initiatives? If not, explain fully why not. If so, identify and explain how the Company identifies and quantifies such savings.

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- b. Are any savings associated with any spending on gas-specific initiatives reflected in the gas utility revenue requirement for the Forecast Test Year ended 6/30/2018? If not, explain fully why not. If so, identify, quantify and explain all such savings.

55. Refer to the response to AG-1-259.

- a. Why are the amounts reflected in the Company's filing for many of the positions higher than the Annual Rate amounts listed for the position?
- b. For each position for the "Amount reflected in the Company's Filing" show how that amount was derived and show how it relates to the comparable "Annual Rate" amount and the timing of when each position is anticipated to be filled.
- c. For each position that is expected to be filled after July 1, 2017, did the Company include more than an "Annual Rate" salary amount in for the Forecast Test Year ended 6/30/2018? If so, explain the reason for including more than an "Annual Rate" salary amount in for the Forecast Test Year ended 6/30/2018 for positions that are anticipated to be filled for only a fraction of the Forecast Test Year.

56. On February 7, 2017, LG&E filed a notice of intent to file another gas line tracker case, Case no. 2017-00066.

- a. Why is LG&E filing such a GLT case at this time? Explain fully, and specifically address the timing of the new intended GLT filing in view of the Commission's Final Order in the most recent LG&E GLT case, Case no. 2016-00383, which the Commission entered only a few minutes after the company filed its notice of intent to file a new gas line tracker case.
- b. Is it LG&E's expectation that a new GLT case will result in increased charges to customers? If not, explain fully why not. If so, what increases is LG&E projecting?
- c. How does LG&E propose to avoid double counting with gas line tracker costs and the costs its has projected for its gas utility operation for the Forecasted Test Year in the current rate case? Explain fully.
- d. Explain fully whether the new gas line tracker application will change any of the responses to data requests propounded by the Commission and intervenors regarding the gas line tracker.

57. Refer to the response to AG-1-261(c) - (e).

- a. Did the Company reflect the retirement of the employees listed on the attachment and the replacement of such positions at lower replacement salaries in deriving its Forecasted Test Year payroll costs? If not, explain fully why not.

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- b. Show in detail how the Company reflected the retirement of the employees listed on the attachment and the replacement of such positions at lower replacement salaries in deriving its Forecasted Test Year payroll costs.

58. Refer to the response to AG-1-263.

- a. Is there any advantage to the Company in recovering costs related to gas utility capital investment (1) in the GLT versus (2) in base rates? If not, explain fully why not. If so, explain the advantage of GLT-based recovery.
- b. Does the GLT mechanism use the same forecast period (July 1, 2017 through June 30, 2018) as the Company's Forecasted Test Year? If not, what period is used for the GLT?
- c. If different forecast periods are being used for setting GLT mechanism surcharges and base rates, how does that present an advantage or disadvantage to the Company for preferring one form of rate recovery over the other? Explain fully.

II. RATE DESIGN

- 59. With regard to the Company's class cost of service study ("CCOSS") models provided in response to PSC 1-53, tab "Functional Assignment, row 481 (Total Distribution Operation and Maintenance Labor Expenses): confirm or deny that there is a programming error in that Total System amounts are calculated as the sum of Distribution Operations Labor plus Distribution Maintenance Labor, whereas the functional assignment utilizes a lookup table based on Total Distribution Plant ("PDIST").
 - a. If the Company so confirms, provide a summary of class rates of return under current and proposed rates with this correction.
 - b. If the Company denies, explain why this apparent inconsistency is appropriate considering the programming functionalization of distribution O&M expenses.
- 60. With respect to Rate Schedule TLE (Traffic Street Lighting), provide a separation of the current number of traffic signals that are metered and unmetered.
- 61. With respect to Rate Schedule TLE (Traffic Street Lighting), provide the current number of separate accounts; i.e., number of bills rendered monthly.
- 62. With respect to Rate Schedule LE (Street Lighting), provide the current number of separate accounts; i.e., number of bills rendered monthly.

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63. With respect to Rate Schedules RLS, LS and DSK (Street Lighting), provide the current number of separate accounts; i.e., number of bills rendered monthly.
64. With respect to Rate Schedules RLS, LS and DSK (Street Lighting), indicate if customers served under these Rate Schedules are billed separately or if charges under these rates are incorporated under each customer's non-lighting bill.
65. With respect to Rate Schedules RLS, LS, DSK, and LE, indicate if any lights are metered. If yes, provide the current number of separately metered lights by rate schedule.
66. With regard to the Company's CCOSS, confirm or deny that Rate Schedules RLS, LS, DSK, and LE are allocated Meter Reading expenses.
67. With regard to customers whose transformer (high side) is served from primary or secondary voltage lines, provide the current (actual or estimated) number of customers whose transformers are served at primary and secondary voltage separately for each of the following Rate Schedules:
 - a. Residential (RS); and,
 - b. General Service (GS).
68. With regard to the Company's response to AG 1-294 concerning hourly Loss of Load Probabilities ("LOLP"), provide all calculations and components of system LOLP including the "direct numerical convolution" for each station's capacity and availability resulting in a system LOLP of 0.1260% at 1500 hours on August 9, 2017.
69. With regard to the Company's response to KIUC 1-51(a) [Case No. 2016-00371], is the column entitled "Company" meant to refer to individual CSR customers?
70. With regard to the Company's response to KIUC 1-51(a) and 1-52(a) [Case No. 2016-00371], provide an explanation of whether Customer 2 or Customer 3 provided in response to KIUC 1-51(a) have been curtailed at any time during the last 60 months; if yes, provide a list of all curtailments for each customer.
71. With regard to the Company's response to KIUC 1-52(a) [Case No. 2016-00371], provide a detailed explanation of what is meant by the column entitled "Load Not Compliant (kVA)."
72. With regard to the Company's response to KIUC 1-52(a) [Case No. 2016-00371], provide a detailed explanation as to why only Customer 1 was curtailed on January 7, 2014. In this response, explain why other CSR customers were not curtailed during this time period.

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73. With regard to the Company's response to KIUC 1-52(a) [Case No. 2016-00371], provide a detailed explanation as to why only Customer 1 was curtailed on January 6, 2014. In this response, explain why other CSR customers were not curtailed during this time period.
74. Provide system peak load at generation (KU and LG&E) and total system generation output (KU and LG&E) for each of the following hours:
 - a. January 7, 2014, hour ending 1000;
 - b. January 7, 2014, hour ending 0900;
 - c. January 7, 2014, hour ending 0800; and,
 - d. January 6, 2014, hour ending 1900.
75. With respect to write-offs or uncollectible expenses, provide a list and amount of any write-offs during the last five years associated with customers served under the following Rate Schedules:
 - a. Power Service (PS);
 - b. Time of Day (TOD);
 - c. Retail Transmission Service (RTS); and,
 - d. Special Contracts.
76. Provide details of booked uncollectible expense for each of the last three years by rate class or customer group as available; i.e., in the finest level of detail available other than on a total Company basis.
77. With regard to the Company's CCOSS, explain why Rate PS-Secondary and Rate TOD-Secondary are not allocated any secondary lines (overhead or underground) costs.
78. With regard to the Company excluding an allocation of secondary lines costs to Rate PS-Secondary and Rate TOD-Secondary in this case, explain what facts and circumstances have changed since Case No. 2012-00222, wherein the Company did allocate secondary lines costs to these classes.
79. Provide:
 - a. The cost per (avoided) MW used for the cost-benefit tests in the Companies' most recent DSM application (2014-00003); and
 - b. The cost per (avoided) MW used in the Companies' most recent Integrated Resource Plan (2014-00131).

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80. Explain the time period utilized to estimate class contributions to peak demands within Mr. Seeyle's CCOSS; e.g., Residential Summer CP Demand equals 1,069,022 and Residential NCP Demand equals 1,559,289.
81. Explain and reconcile differences in class contributions to coincident peak and non-coincident peak demands contained in Mr. Seeyle's CCOSS (tab: Allocation) with those provided in response to PSC 2-109.
82. Explain and reconcile differences in class contributions to coincident peak and non-coincident peak demands contained in Mr. Seeyle's CCOSS (tab: Allocation) with those provided in response to OAG 1-291, Attachment 3.
83. With regard to the attachment to PSC 2-109, explain and separate (as appropriate) what rate schedules (consistent with the Company's CCOSS) are included in the following classes or categories. In other words, for the following three categories, define and separate consistent with the classes within the Company's CCOSS:
 - a. Industrial Service Trans;
 - b. Muni Primary; and,
 - c. Muni Transmission.

Provide hourly loads by class consistent with the CCOSS. Provide in electronic (Excel) format.

84. With regard to the attachment to OAG 1-291, explain and separate (as appropriate) what rate schedules (consistent with the Company's CCOSS) are included in the following classes or categories. In other words, for the following three categories, define and separate consistent with the classes within the Company's CCOSS:
 - a. Comp 2; and,
 - b. Comp 3.

Provide hourly loads by class consistent with the CCOSS. Provide in electronic (Excel) format.

III. ADVANCED METERING SYSTEMS

85. Reference the Malloy testimony at page 21, line 17, in which Mr. Malloy indicates that the AMS experience of the Companies' affiliate, PPL Electric Utilities, was used

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in the development of the Companies' AMS Business Case. The Companies' AMS Business Case indicates a net present value for the Recovery of Non-technical Losses over 20 years at \$489 million (page 31). It is the OAG's understanding that PPL's Pennsylvania deployment of AMS has just begun. Provide the following data from any AMS business case PPL Electric Utilities developed for its Pennsylvania AMS deployment:

- a. Present value of reductions in non-technical losses
- b. Business processes and technologies to be employed to reduce non-technical losses
- c. Utility revenues and customer counts for bundled and delivery-only service

86. Reference the AMS Business Case, Exhibit JPM-1, page 34, "Reduced Staffing for Ad-Hoc Field Services" and the Companies' response to AG-1-346 [Case No. 2016-00371]. Complete the table below, where "Total Count, 2016" is the number of each operation performed in 2016; "Count of Unique Customers, 2016" is the number of unique customers for which each operation was performed (i.e., a customer disconnected for non-payment 6 times in 2016 equals 1); and "Cost, 2016" is the cost of all such operations in 2016.

	Total Count 2016	Count of Unique Customers, 2016	Cost, 2016
Off-Cycle Meter Reads			
Meter Re-reads			
Move-in Connections			
Bill Payment Reconnections			
Disconnections for Non-Payment			
Disconnections for all other reasons			
TOTALS			

87. Reference the AMS Business Case, Exhibit JPM-1, page 38. The AMS Cost-Benefit Summary 2016-2039 indicates that the net present value of meter retirement is only \$3.8 million, while the nominal value of meter retirement is \$39.7 million.

- a. Explain why the net present value of meter retirement is so much less than the nominal value.
- b. Provide all assumptions and calculations used to determine a net present value of \$3.8 million from a nominal value of \$39.7 million. Include calculations by year over the 20-year benefit period utilized in the AMS

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business case in an executable MS Excel file with all cells and equations intact.

88. Reference the AMS Business Case, Exhibit JPM-1, page 40. The Meter Capital cost indicated in the table entitled "Project Costs 2016-2021" is \$167 million, or approximately \$176.53 per customer assuming 945,000 customers. Provide:
- a. The number of smart meters to be installed for the \$167 million capital cost estimate;
 - b. The portion of the capital cost estimate associated with the optional remote service disconnect-reconnect switch offered by Landis + Gyr; and
 - c. The number of smart meters to be equipped with the optional remote service disconnect-reconnect switch offered by Landis + Gyr.
89. Reference the AMS Business Case, Exhibit JPM-1, page 158. The Companies provide the following estimates used to calculate non-technical loss reduction benefits:
- 2% of revenues are lost due to non-technical losses
 - AMS will detect 60% of such losses
 - 60% of losses detected will be recovered
- a. Provide any studies or research (other than the EPRI report the Company cited) which support any of these three estimates.
 - b. Explain how the Companies used existing experience to determine each of these three estimates. For any of the three estimates which was not developed through the benefit of existing experience, describe how the Companies developed each.
 - c. Provide, for 2014, 2015, and 2016:
 - i. The dollar value of non-technical line losses identified and quantified
 - ii. Of non-technical line losses identified and quantified, the dollars actually recovered to date from customers and/or thieves.
90. Reference the Companies' response to KIUC 1-17 (c) [Case No. 2016-00371]. Explain how the report provided, "2010 Analysis of System Losses", supports the Companies' estimate that 2% of its revenues are lost through non-technical means. Cite any specific text, tables, charts, appendices, or other components of the report applicable to the Companies' response.
91. Reference the Companies' response to ACM 1-33 [Case No. 2016-00371]. The 2009 E-On AMI benefit-cost analysis provided as a response to that question, page 14,

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indicates that the present value of the combined revenue protection added to system loss benefits for all three Companies at \$28 million. This is a vast difference from the Companies' latest AMS benefit-cost analysis, which estimates the present value of reductions in non-technical losses at \$489 million. Explain the difference between the Companies' current estimate and the 2009 E-On estimate.

92. Reference the Companies' response to PSC 2-22 [Case No. 2016-00371]. Upon finding a meter base which is sufficiently dysfunctional to prevent the installation of an AMI meter, the response describes how the affected customer can: 1) allow the Companies to proceed with meter base repairs at no cost; or 2) repair the meter base with a contractor of the customer's own choosing. The Malloy testimony, pp. 26-27, indicates that customers will not have the opportunity to Opt-Out of AMI meter installation. With no Opt-Out available, explain what the Companies propose to do if a customer refuses to repair, or to allow the Companies to repair, a dysfunctional meter base.
93. Reference the Companies' response to OAG 1-326 [Case No. 2016-00371]. The Companies report the following quantities of single-phase electronic meters were installed in 1999. Report how many of the single-phase electronic meters installed in 1999 are still in operation by completing the table below.

Meter	Quantity Installed 1999	Quantity Installed 1999 Still In Operation 12-31-16
GE I210	81	
Itron C1S	1035	
Landis + Gyr ALF	283	
Landis + Gyr AX	5	
TOTALS	1,404	

94. Reference the Company's response to OAG 1-327.f [Case No. 2016-00371]. The Company reports the following meters from the 2007 pilot are still in operation. Provide the quantities originally installed by completing the table below.

Meter	Quantity Installed in 2007	Quantity Still in Operation
Landis + Gyr ALF		331
Landis + Gyr AX		45
TOALS		376

95. Reference the Company's response to OAG 1-329 [Case No. 2016-00371], which indicates that 4,181 customers on rates RS and RTOD have enrolled in the AMS

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Customer Offering. Provide the number of customers in each category described who accessed their e-portal by completing the table below.

	Customer Count
Customer accessed ePortal once	
Customer accessed ePortal more than six times	
Customer never accessed ePortal	
TOTALS	4,181

96. Reference the Companies’ response to Sierra Club 1-32 [Case No. 2016-00371]. The response indicates the Companies defined “active users” as those customers participating in the AMS Customer Offering who visited the ePortal more than 6 times, and that 36% of the 48% of customers who registered for ePortal access (17% of AMS offering participants) meet this definition. As the Companies are well aware, customers who opt-in to an AMS offering are the most engaged and conservation-conscious customers in the Companies’ base. Yet, the Companies appear to have assumed that the same 17% of customers in the overall customer base, who will not express the same level of engagement or conservation-consciousness, will also be active users in the Companies’ calculation of the ePortal conservation benefit estimate.
- a. Describe any adjustment the Companies made in the calculation of the ePortal conservation benefit estimate to reflect differences between customers participating in the AMS Customer Offering and the overall base of customers.
 - b. Describe the adjustment the Companies believe is reasonable to reflect this difference. Include in the Companies’ response any research or studies the Companies used to determine such an adjustment.
97. Reference the Companies’ response to OAG 1-331.a [Case No. 2016-00371]. The Companies provided the survey the Companies used to gather customer feedback about their experience with the Advanced Meter Service (Email Study #16295). Provide the results of the survey.
98. Reference the Companies’ response to OAG 1-333.a [Case No. 2016-00371], describing how the Companies will use the proposed AMS system to localize and resolve power outages.

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- a. Describe how the Companies will guard against false-positive outage reports.
 - b. The OAG understands how the Companies plan to integrate AMS with the Companies' OMS systems. In the experience of the OAG's expert, outage reports from AMS allow grid operators to understand the area and extent of customers impacted by an outage, much like OMS does today without AMS. However, the fault must still be located. Describe how the AMS system will, as described on AMS Business Case page 155, reduce fault location time by 50% (from 19.2 minutes on average to 9.6 minutes on average).
 - c. The Companies claim present value savings from reductions in restoration time/costs of \$3.3 million (AMS Business Case page 155). This appears to be about the same as the reduction in headcount for linemen/troublemen of about 1. Confirm the Companies will reduce lineman/troubleman headcount by 1 at full AMF deployment as a result of this AMS capability.
99. Reference the Companies' response to OAG 1-341 [Case No. 2016-00371], describing how the Companies calculated ePortal savings as detailed on page 157 of the AMS business case. The OAG's expert is the author of the Smart Grid Consumer Collaborative report cited by the Companies in its ePortal benefit calculation. The OAG expert makes several observations of the Companies' calculations:
- The Companies used a total bill reduction to calculate benefits. Actual economic savings to customers in the long run will be limited to fuel cost reductions, as reductions in sales volumes will result in \$/kWh increases to recover the Companies' fixed costs.
 - The Companies assume that 48% of customers will access the ePortal, and that 36% of these will reduce their energy use, resulting in an "adoption rate" (customers who use the ePortal to conserve energy) of 17.28% (48% x 36%). In the research cited, adoption rates of 2% (reference case) to 5% (ideal case) are indicated.
 - In the research cited, conservation rates of 5% to 15% were reported *with the use of direct, real-time energy usage feedback* (i.e., in-home displays). In the report author's informed opinion, conservation rates of this size will not be possible without the use of in-home displays, a high-cost option not included in the Companies' AMS proposal.
- Recalculate the present value of ePortal benefits using the following assumptions:
- a. Fuel cost savings only, 2% adoption rate, 3% energy conservation effect (OAG most likely case)

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- b. Fuel cost savings only, 5% adoption rate, 3% energy conservation effect (OAG ideal case)
 - c. Fuel cost savings only, 5% adoption rate, 5% energy conservation effect (OAG extremely unlikely case)
100. Reference the Companies response to OAG 1-341 [Case No. 2016-00371]. Provide the revenue projections, including MWh volume and prices by year, upon which the Companies calculated their conservation benefit by year and resulting in a nominal estimate of \$166.3 million. Also describe the revenue projections (i.e., “residential and small commercial”, etc.). The data provided, in conjunction with the assumptions provided in the AMS business case, should be sufficient for the OAG to duplicate the Companies’ estimates.
101. Refer to the Companies’ response to OAG 1-343 [Case No. 2016-00371], describing how the Companies calculated savings associated with a reduction in “OK on Arrival” truck rolls as detailed on page 156 of the AMS business case. The Companies claim present value savings from reductions in OK on Arrival of \$6.9 million. This appears to be about the same as a reduction in headcount for linemen/troublemen of about 2. Confirm the Companies will reduce lineman/troubleman headcount by 2 at full AMF deployment as a result of this AMS capability.
102. Refer to the Companies’ response to OAG 1-345 and 1-346 [Case No. 2016-00371]. The Companies provided a breakdown of Meter reading savings by year totaling \$203 million over 20 years, and meter services spending totaling \$92 million over 20 years
- a. Provide 2015 meter reading spending with FERC Uniform System of Account details.
 - b. Provide 2015 meter services spending with FERC Uniform System of Account details.
103. Refer to the Companies’ response to OAG 1-348 [Case No. 2016-00371]. Provide the revenue projections, including MWh and MW volume and prices by year, which the Companies employed to calculate its non-technical losses benefit estimate by year and resulting in a nominal estimate of \$488.6 million. Also describe each component of the revenue projections (i.e., “residential and small commercial”, “large commercial”, “industrial”, etc.) The data provided, in conjunction with the assumptions provided in the AMS business case, should be sufficient for the OAG to duplicate the Companies’ estimates.

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104. Refer to the Companies' response to OAG 1-355 [Case No. 2016-00371]. The Companies indicate that no affiliated utilities have executed a system-wide conversion to AMI meters. The OAG is aware that PPL Electric Utilities Corp filed an application with the Pennsylvania PUC for approval of its smart meter implementation plan on or around June 30, 2014 in case M-2014-2430781. The OAG was unable to locate anything other than the cover page and certificate of service on the Pennsylvania PUC website. Provide the entire application and smart meter implementation plan submitted by PPL Electric Utilities Corp to the Pennsylvania PUC in case M-2014-2430781, including any cost-benefit analyses which may have accompanied the application and implementation plan.

105. Refer to the Companies' response to OAG 1-367 [Case No. 2016-00371], in which the Companies state the hardware, firmware, and software associated with the Companies' proposed AMS implementation is "aligned with" NIST Interoperability Standards Release 3.0. The OAG notes that "alignment" is not the same as "compliance". NIST Interoperability Standards Release 3.0 describes 72 standards on pages 59-120. Identify each standard with which the Companies' proposed AMS implementation does not comply. For each non-compliant standard:
 - a. Describe how the Companies' proposed AMS implementation is out of compliance with the standard.
 - b. Provide a justification, if any, as to why the Companies are proposing AMS designs not in compliance with the standard.
 - c. For standards with no justification, describe how the Companies are willing to modify their AMS design to comply with the standard.
 - d. For standards with no justification, estimate the incremental cost of the compliance modifications

106. Refer to the Companies' response to OAG 1-368 [Case No. 2016-00371], which references Appendix A-2 of Exhibit JPM-1 "Application Landscape".
 - a. Identify the system or application on this page in which meter data is translated into billing data, and eventually into customer bills.
 - b. Identify vendors, names, versions, and other descriptive information on software or applications the Companies have, or plan to implement, to bill customers using AMS data.
 - c. Describe the capabilities of each software or application identified above.
 - d. If the capabilities described above do not include the ability to bill rates with peak demand response features, such as Critical Peak Price and Peak Time

Rebate, describe the required software modifications and incremental costs required to do so.

IV. GAS MAINS, ELECTRIC TRANSMISSION & DISTRIBUTION

107. Regarding Section 9.0 of the DIMP provided in response to AG 1 – 250, provide the following information:
- a. The latest list of risks and ranking of these risks (section 9.1).
 - b. Relative risk score of each system category (section 9.2).
 - c. Description and background information for all items or issues included in each system category (bucket).
108. Regarding Section 10.1.2 of the DIMP provided in response to AG 1 – 250, provide the following information:
- a. All leaks related to customer service risers addressed by the current GLT mechanism and the severity evaluation of each identified leak over the past 5 years.
 - b. All leaks related to main replacement addressed by the current GLT mechanism and the severity evaluation of each identified leak over the past 5 years.
 - c. All leaks related to service line replacement under the current GLT mechanism and the severity evaluation of each identified leak over the past 5 years.
 - d. All leaks related to steel customer service lines that will be addressed by the proposed GLT mechanism and the severity evaluation of each identified leak over the past 5 years.
 - e. All leaks related to removal of county loops that will be addressed by the proposed GLT mechanism and the severity evaluation of each identified leak over the past 5 years.
 - f. All leaks related to steel curbed services that will be addressed by the proposed GLT mechanism and the severity evaluation of each identified leak over the past 5 years.
109. Regarding Section 11.1.1 of the DIMP provided in response to AG 1 – 250, provide the last 5 annual reports using PHMSA Form 7100.1-1.
110. Regarding Section 11.1.2 of the DIMP provided in response to AG 1 – 250, provide the last 5 calculated performance measures.
111. Regarding Section 11.3 of the DIMP provided in response to AG 1 – 250, provide the last 5 completed effectiveness evaluation templates.

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112. Regarding the response to AG 1 – 257, provide detailed explanations of the following:
 - a. why LG&E believes that \$106 million of capital investments should be recovered through the GLT mechanism and \$87 million should be recovered through base rates;
 - b. the difference between these types of expenditures;
 - c. Does LG&E propose to change the rate design such that the GLT mechanism is recovered the same way as the base rate investments? Why, or why not?
 - d. the difference between gas distribution mains recovered in base rates and gas distribution mains charged in the GLT mechanism;
 - e. the difference between gas distribution services recovered in base rates and recovered in the GLT mechanism;
 - f. the difference between gas transmission recovered in base rates and recovered in the GLT mechanism;
 - g. the gas distribution measuring and regulating equipment expenditures; and
 - h. the gas storage expenditures.

113. Regarding the response to AG 1 – 433, explain all costs in detail for the advanced engine compressor analyzer technology initiative as well as implementation plans and steps.

114. Regarding the response to PSC Staff 2 – 68, provide LG&E's anticipated schedule and plans to return to the PSC for future rate increases at each phase of the TPMP.

115. Regarding response to KIUC 1 – 35, provide the attached spreadsheet in electronic form.

116. Regarding response to Louisville Metro 1 – 52, provide the following information:
 - a. Detailed activities and costs for Mill Creek 2 generation outage during test year.
 - b. Detailed activities and costs for Trimble County 1 generation outage during test year.
 - c. Detailed activities and costs for all combustion turbine outages during test year.
 - d. Provide how major combustion turbine outage activities, including combustor inspections, are scheduled for all combustion turbines and combined cycle unit combustion turbines.
 - e. For each combustion turbine, including those in combined cycle units, explain if outage activities scheduled are based on hours or equivalent starts or both.

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- f. For each combustion turbine, including those in combined cycle units, provide the number of operating hours or equivalent starts between each major outage activity.
 - g. For each combustion turbine, including those in combined cycle units, explain whether the current forecast shows major outage activity based on hours or equivalent starts.
 - h. For each combustion turbine, including those in combined cycle units, provide the current 10-year forecast of annual run hours and equivalent starts.
117. Regarding the response to AG 1 – 11, describe in detail how the DA initiative will be used to improve reliability on each of the worst performing circuits.
118. Regarding the response to AG 1 – 396, provide the following:
- a. Detailed description of each time in the past 5 years a portable transformer was installed, including why, the cost, the time involved for the temporary installation, effort and action required to locate repair or replacement parts, permanent repair or replacement solution implemented, and the time to provide a permanent replacement or repair. The description for each event should also include the cause, the number of customers affected and how they were affected.
 - b. Please describe in detail all spare substation transformers maintained.
 - c. Please describe any and all mobile “substations” (transformers and associated equipment) the company has access to or owns for substation transformer failures.
 - d. Describe in detail all preventative maintenance and inspection activities the company currently implements to identify potential substation transformer failures.
 - e. Detailed description of any outage related to substation transformer failure over the past 5 years and subsequent actions taken to prevent recurrence.
119. Regarding the response to AG 1 – 397, provide the following:
- a. Does the company currently have a SCADA system for their distribution system?
 - b. How many SCADA capable reclosers does the company currently have on their distribution system?
 - c. What is the difference between the proposed DA initiative SCADA capable reclosers and the ones currently installed on the distribution system?
 - d. Did the company receive a CPCN for installation of its current distribution SCADA system or SCADA capable reclosers?
 - i. If not, why not?

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- e. Describe in detail at what level of deployment the company needs a CPCN to install SCADA capable reclosers.
 - f. Describe in detail how the company will use the information from the AMS system to determine where to install SCADA capable reclosers.
 - g. Describe in detail how the company will use the information from the distribution vegetation management program to determine where to install SCADA capable reclosers.
120. Regarding the response to AG 1 – 398, provide the following:
- a. Since the AMS and DSCADA are two distinct systems, describe in detail how information gained from AMS deployment will be used to locate DA equipment such as SCADA capable reclosers.
 - b. Explain how AMS deployment and SCADA capable recloser initiatives can be done simultaneously while optimizing recloser locations.
 - c. Describe any needed improvements to distribution transformer maintenance, inspections and diagnostic maintenance.
121. Regarding the response to AG 1 – 401, provide clarification with a detailed description of the following:
- a. Distribution SCADA investments over the past 5 years.
 - b. Distribution SCADA capable equipment installations over the past 5 years.
 - c. Distribution SCADA capable reclosers installed over the past 5 years.
 - d. Redundant distribution transformer installations over the past 5 years.
 - e. CPCNs received for any of the above activities.
122. Regarding the response to AG 1 – 416, provide the following:
- a. 5-year program costs if the distribution automation initiative were scaled back to a pilot program.
 - b. Would this require a CPCN?
123. Regarding the response to AG 1 – 308, provide the loss factors for all categories over the past 10 years and describe the voltage levels for primary and secondary.
124. Regarding the response to AG1 – 386, provide the MW miles for each transmission line listed in response to AG1 – 386(c). Provide the response in an excel spreadsheet.
125. Regarding the response to AG 1 – 388, provide an explanation of the following:
- a. Why 2013 switch replacement costs were negative.
 - b. Why no expenditures were made in the 5-year period for underground cable replacement.
 - c. Accelerated defective equipment replacement.

d. High expenditures for circuit breaker replacement in 2012.

126. Regarding the response to AG 1 – 378, provide the following:

- a. Explain why project 151744 costs more than project 151811.
- b. All costs involved in an auto switch installation such as the projects listed above.
- c. Explain why a 69 kV switch installation (project 147482 for example) is estimated to cost more than an auto switch installation (project 151811 for example).
- d. All costs involved in a switch replacement.
- e. Why project 144364 costs more than project 144632.
- f. All costs involved in a breaker installation such as the projects listed above.
- g. All costs involved in project 151794.
- h. All costs involved in project 147565.
- i. All costs involved in projects 147592, 147593, and 147594

127. Regarding the response to AG 1 – 441, provide the following:

- a. When does LKE expect to perform an updated RTO membership analysis?
- b. Did the 2012 analysis consider revenue from the PJM capacity market value? If not why?
- c. Reserve margin requirements if LKE joined either PJM or MISO.
- d. Any changes to assumptions regarding cost allocation of regional PJM or MISO projects since 2012.
- e. Current present value benefits of reduction in spinning reserve.
- f. Current estimate of third party transmission revenue to LKE with PJM or MISO membership.
- g. Current reduction of cost for elimination of ITO and RC less increased staff costs for joining and RTO.
- h. Reduction of depancaking costs if LKE joined an RTO.
- i. Avoided long-term firm PTP transmission charges from joining an RTO.
- j. Current forecast of 10-year capacity market revenue from sales in either PJM or MISO.
- k. Current adjusted projection cost savings from joining MISO for the next 10 years.
- l. Current adjusted projection cost savings from joining PJM for the next 10 years.

V. OTHER

128. Has the Company ever considered requesting Commission approval for tariffs regarding any of the following: (i) “Seasonal;” (ii) “Seasonal Agriculture;” and/or (iii) “Agriculture”?

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- a. If not, why not?
 - b. If so, why does the Company not have such a tariff now?
129. Has the Company performed any studies, analyses or research regarding the need for or adoption of tariffs regarding any one of the three subject matters referenced immediately above, or any combination thereof?
- a. If not, why not?
 - b. If so, provide all studies, analyses, or research the Company has performed regarding the aforementioned tariffs?
130. Has the Company ever considered requesting Commission approval for a tariff specific to sports-related facilities and/or sports fields owned by municipalities or schools?
- a. If not, why not?
 - b. If so, why does the Company not have such a tariff now?
131. Has the Company performed any studies, analyses or research regarding the need for or adoption of a tariff related to sports-related facilities and/or sports fields?
- a. If not, why not?
 - b. If so, provide all studies, analyses, or research the Company has performed regarding tariffs for the aforementioned subjects?
132. Has the Company ever engaged in any meetings, correspondence or conversations with individuals or organizations regarding tariffs for: (i) "Seasonal;" (ii) "Seasonal Agriculture;" (iii) "Agriculture," and/or sports-related facilities and/or sports fields?
- a. If so, what has been the outcome of these engagements?