

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

In the Matter of:

APPLICATION OF DUKE ENERGY KENTUCKY,)
INC. FOR (1) A CERTIFICATE OF PUBLIC)
CONVENIENCE AND NECESSITY)
AUTHORIZING THE CONSTRUCTION OF AN) CASE NO.
ADVANCED METERING INFRASTRUCTURE; (2)) 2016-00152
REQUEST FOR ACCOUNTING TREATMENT;)
AND (3) ALL OTHER NECESSARY WAIVERS,)
APPROVALS, AND RELIEF)

ATTORNEY GENERAL’S INITIAL 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 Initial Data Requests to Duke Energy Kentucky, Inc. [hereinafter “DEK”] 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 DEK 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 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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ATTORNEY GENERAL



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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 copy in paper medium is being filed with the Commission on May 24, 2016.

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

Hon. Rocco O. D'Ascenzo

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Adele Frisch

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this 23rd day of May, 2016



Assistant Attorney General

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1. Reference the Henning testimony at p. 6 wherein he discusses the “small number of advanced electric meters and natural gas modules” implemented as part of an advanced metering pilot between 2007-2008. Discuss whether upgrading these particular meters would be more cost-effective as opposed to replacing them as the company proposes in the instant application.
2. Reference the Henning testimony at p. 7, lines 11-18. With regard to gas-only customers for whose meters DEK proposes to add a “drive-by AMR module[,],” state the types of plant, if any, the company proposes to retire.
3. What types of actual gas meters does DEK plan to utilize in order to replace actual meters (not just modules) when the retirement date of a gas meter approaches?
4. Reference the Henning testimony at p. 9 lines 1-2. Does DEK believe that its customers' needs and desires are fully identical with those of Duke Ohio, Duke Indiana and Duke Carolinas?
5. Reference the Henning testimony at p. 9 lines 2-6, wherein he states that DEK “. . . must be able to provide its customers with access to a greater level of their individual energy (electric and natural gas) consumption data”
 - a. Provide the legal requirement whereby DEK is compelled to “provide its customers with access to a greater level of their individual energy (electric and natural gas) consumption data.”
 - b. If no legal requirement can be cited in response to subpart (a), above, does the company acknowledge that the Mr. Henning’s statement as quoted from his testimony refers to DEK’s own “strategic vision” as Mr. Henning states in his testimony at p. 9, line 17?
 - c. Acknowledge that if the Kentucky Public Service Commission (“Commission”) approves this program, the company’s ratebase for both electric and gas operations will grow larger.
 - (i) If DEK acknowledges the statement posed in subpart (c), above, provide the amount by which the company’s ratebase for both electric and gas operations will grow.
 - d. Acknowledge that if the Commission approves DEK’s application, the company, once the meter upgrade program has been completed, will be replacing those meters on an earlier and more frequent basis than the replacement rate applicable to the company’s current metering infrastructure.

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6. Has DEK explored whether parts or portions of the existing meter infrastructure such as firmware and/or software could be replaced or upgraded as opposed to having to replace entire meters? If so, please provide copies of all studies in this regard. If not, explain fully why not.
7. Reference the Henning testimony at p. 9, lines 10-13. Provide copies of any and all studies indicating that DEK's customers want the metering upgrade in order to give them ". . . greater access to data and control over their energy consumption. . . ."
8. Reference the Henning testimony at p. 9, lines 19-21 wherein he discusses customer access to interval consumption information. In other Duke jurisdictions where DEK's affiliate operating companies have carried-out large-scale or system-wide deployment of AMI, provide the percentage of customers in each service territory who access their data: (a) on a daily basis; (b) weekly; (c) monthly; and (d) annually.
9. Reference the Henning testimony generally. Provide copies of (or hyperlinks to) all studies DEK, its parent and affiliated entities consulted showing that system-wide deployment of AMI leads to long-term conservation and savings on bills for ratepayers.
 - a. Provide copies of (or hyperlinks to) all studies DEK, its parent and affiliated entities consulted showing that system-wide deployment of AMI do not lead to long-term conservation and savings on bills for ratepayers.
10. Reference the Henning testimony at p. 10, line 2, wherein he states the metering upgrade technologies will "will enable more efficient operations." Will "more efficient operations" lead to cost savings? If so, provide any and all estimates of all such cost savings. If the more efficient operations will not lead to cost savings, explain fully why not.
11. Reference the Henning testimony at p. 10, lines 3-7 wherein he states that the metering upgrade will mean that DEK will provide the company with "greater awareness and understanding of customer outages and can respond more efficiently." Provide all studies and quantifications of expected cost savings that will be derived from the greater awareness and the ability to respond more efficiently to outages.
12. Reference the Henning testimony at p. 10, lines 8-14, wherein he states that the metering program will provide customers greater convenience. Provide copies of all

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studies and/or surveys indicating that DEK customers would be willing to pay more for greater convenience.

13. Reference the Henning testimony at p. 10, lines 17-20. How much will DEK charge for remote connects/disconnects as opposed to current charges for connects/disconnects?
 - a. Describe the procedures DEK will follow for remote disconnects for non-payment. Does DEK believe these procedures will comply with Kentucky PSC legal requirements?
 - b. In the event the Commission approves the instant application, will DEK agree to follow all existing legal requirements pertaining to connection of service, disconnections, and reconnections? If not, why not?
 - c. Will the implementation of remote disconnect features incent the company to rely on disconnection as opposed to efforts to contact the customer to resolve non-payment situations? Explain fully.
 - d. Does DEK anticipate that utilizing remote disconnect features will increase the volume of disconnections from their current level? Explain fully.
14. Reference the Henning testimony generally. In the event the Commission approves the instant application, would DEK be willing to track and report the following data separately for both credit-based and prepayment residential customers:
 - a. Number of customers with arrears of 30 days or more;
 - b. Dollar value of arrears;
 - c. Number of disconnection notices sent;
 - d. Number of service disconnections for non-payment;
 - e. Number of service reconnections after disconnection for non-payment;
 - f. Number of new payment agreements entered;
 - g. Number of payment agreements successfully completed; and
 - h. Number of failed payment agreements
15. Reference the Henning testimony generally. With regard to pre-pay customers, will DEK charge more for customers who pre-pay at kiosks and/or through third-parties?
16. Reference the Henning testimony at p. 11, lines 9-11. Provide all estimates for the amount of cost savings that will arise from the conversion of all interior meters to an AMI or AMR infrastructure.

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17. Reference the Henning testimony at p. 10, lines 12-16. Explain whether enhanced customer service will lead to cost savings, and if so, provide quantifications and/or estimates of any and all such savings.
18. Reference the Henning testimony at p. 10, line 17 through and including p. 11, line 5. How much aggregate energy savings does DEK anticipate from the AMI metering upgrade?
19. Reference the Henning testimony at p. 12, lines 6-9. On an annual basis, state how much more revenue DEK will capture as a result of the proposed metering upgrade.
 - a. Provide copies of any and all studies in this regard.
 - b. Will the anticipated increase in revenue capture lead to a drop in uncollectible expense, and if so, by how much?
 - c. How does DEK propose to reflect the anticipated increased revenues in its books? Will there be any way to directly trace any such additional revenue capture to the proposed metering upgrade, and if so, please fully explain.
20. Reference the Henning testimony at p. 13, lines 2-4, wherein Mr. Henning discusses threats DEK representatives encounter when they enter customer property or premises. Provide a breakdown of all costs paid for such incidents during the past five (5) years.
21. Reference the Henning testimony at p. 13, lines 5-7. Does DEK expect a reduction in insurance costs associated with the drop in safety threats associated with manual meter reads following the metering upgrade? If so, how much of a reduction?
22. Reference the Henning testimony at p. 14, lines 1-4. Is DEK aware that LG&E-KU were both able to offer a pick-your-due-date option for all customers without having to engage in a system-wide conversion to AMI meters?
23. Reference the Henning testimony at p. 14, lines 11-13. Explain the basis for DEK's conclusion that DEK's own customers both desire the enhanced basic service programs, and that they are willing to pay for them.
24. Reference the Henning testimony at p. 15, lines 1-10, wherein Mr. Henning states that the metering upgrade will allow DEK to become more efficient and to manage its costs over the long term. Will the upgrade allow DEK to reduce costs over the

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long term, especially given that if the upgrade is approved, DEK will have to replace entire meters on a more frequent basis? Please explain fully.

25. Reference the Henning testimony at p. 17, lines 18-21. Confirm that the cost-benefit analysis upon which DEK relies in support of its application contains only estimates of both costs and benefits.
 - a. In the event DEK's estimates of the amounts of costs and benefits should change, will DEK provide updated estimates?
 - b. Is DEK willing to provide semi-annual updated, experience-based cost-benefit studies until the project is completed? If not, why not?
26. Reference the Henning testimony generally. Will DEK be willing to restrict the availability of pre-payment plans to vulnerable populations, including but not limited to: (i) elderly; (ii) disabled; and (iii) those with serious illnesses? If not, why not?
27. Reference the Laub testimony generally. Provide copies of the RFPs the company issued for both the AMI meters and the AMI gas modules.
 - a. Provide the per unit cost of the AMI meters, and the AMI modules.
 - b. Are there any AMI modules being manufactured with a longer service life than the nine (9) year of the modules the company contemplates using in the instant filing?
 - (i) If the response to subpart (b) above is "yes," please identify the manufacturer, model numbers, and explain why DEK did not select that manufacturer.
 - (ii) Is the reason that the service life of the modules is only 9 years due to mechanical considerations, or an issue with the technology becoming obsolete? Explain.
28. Reference the Laub testimony at p. 3, lines 13-15, wherein she states, "Duke Energy Kentucky intend to eventually recover the costs of the Metering Upgrade through future base rate proceeding." Provide an approximate date for the filing of DEK's next base rate proceeding.
29. Reference the Laub testimony at p. 4, lines 12-18. Is the 15 year "expected life" of the electric meters the actual estimated life of the meter by the manufacturer, or the "expected useful life" anticipated by the company?

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- a. If the company's answer is the "expected useful life anticipated by the company," provide an explanation of what scenario the company expects that will lead to the meters meeting the end of their "useful life" (i.e., battery failure, technology obsolete, etc.).
30. Reference the Laub testimony at p. 5, lines 4-10. Is the 9 year "expected life" of the gas meter module the actual estimated life of the module by the manufacturer, or the "expected useful life" anticipated by the company?
- a. If the company's answer is the "expected useful life anticipated by the company," provide an explanation of what scenario the company expects that will lead to the modules' meeting the end of their "useful life" (i.e. battery failure, technology obsolete, etc.).
31. Reference the Laub testimony at p. 5, lines 14-20. Has the company considered asking for a waiver to the 10-year limitation contained in the cited regulation, so as to extend the useful life of the gas modules?
32. Reference the Laub testimony at p. 6, lines 10-15. What were the expected useful life and depreciation of the AMI pilot meters deployed in 2007?
33. Reference the Laub testimony at p. 8, lines 7-11, wherein she states that by implementing an automated meter reading solution for both gas and electric customers, the savings in deployments costs and meter reading expenses will, over time, exceed the costs associated with the program.
- a. Provide an estimate of how much time will pass before the expected cost savings exceed the expected program costs.
 - b. Clarify whether meter reading savings alone will exceed the total costs of the program.
34. Reference the Schneider testimony, p. 3 wherein he discusses the cost-benefit analysis he conducted regarding the proposed meter replacement program. Describe all costs associated with the program that the cost-benefit analysis took into consideration.
- a. Describe any and all costs associated with the proposed meter replacement program which the cost-benefit analysis did not take into consideration.

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- (i) Explain why the cost-benefit analysis did not take into consideration any such costs.
35. Reference the Schneider testimony, p. 3, lines 9-10. Describe how the metering infrastructure DEK proposes to use in the instant application differs from that utilized in DEK's 2007 pilot program.
- a. Provide the average service life of meters utilized in the 2007 pilot program.
36. Reference the Schneider testimony, p. 4, lines 3-11. Provide the remaining useful life of the metering infrastructure utilized in the 2007 pilot program.
- a. Provide the rationale for why DEK could not continue utilizing the metering infrastructure utilized in the 2007 pilot program.
37. Reference the Schneider testimony, p. 4, lines 14-17, wherein he states that the 2007 pilot project did not provide DEK and its customers with the level of benefits and opportunities that AMI technologies available today provide.
- a. Does this mean that meter reading savings alone are not enough to make the project cost-effective?
 - b. Does the additional capability of remote connection/disconnection, as he discusses on lines 19-20 of that same page, make the project cost-effective?
38. Reference the Schneider testimony, p. 5, lines 21-22. Describe the other types of metering technology and types of infrastructure from other manufacturers that DEK considered but did not elect to utilize in the instant filing.
39. Reference the Schneider testimony generally. Will the proposed metering technology and infrastructure allow customers who choose to net meter to continue to do so? Please discuss.
40. Reference the Schneider testimony at p. 10, lines 7 through 17, wherein he discusses the ability of routers to communicate firmware/program updates. Explain whether this refers to firmware/program updates both for meters and the AMI modules that will be attached to meters.

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41. Reference the Schneider testimony at p. 11, wherein he discusses why DEK is interested in customer data. For purposes of this question and its subparts, the term “customer data” refers to any and all data regarding or pertaining to DEK customers and/or their family members or other persons residing in the same residential household or unit, including but not limited to the following: (i) customers’ identity; (ii) personal information, including but not limited to street address, e-mail address, telephone number(s), credit history, checking account(s), credit and/or debit card data; and (iii) electrical and/or gas consumption usage, consumption and usage patterns.
- a. For how long will the company retain customer data?
 - b. Does DEK believe that customer data belongs to its customers, or to the company? Explain the reasons for DEK’s beliefs.
 - c. What will the company do with customer data when the retention period which the company selects has expired?
 - d. How will DEK allow its customers to decide whether to allow DEK to sell or otherwise disclose customer data? Will it be via affirmative “opt-in,” or by an affirmative “opt-out” which customers will have to select in order to not allow DEK to disclose their data?
 - (i) Please provide copies of the “opt-in” or “opt-out” choices regarding the disclosure/sale of customer data which DEK plans to provide to its customers.
 - e. Will the company sell customer data regarding those customers who opt to allow the company to disclose such information to third parties?
 - f. If your response to subpart (e), above is yes:
 - (i) state what protections, if any, the company plans to employ to protect confidentiality of customer data;
 - (ii) state what the company intends to do with the proceeds of the customer information which it sells; and
 - (iii) state whether those customers who opt to allow disclosure of their customer data will receive any monetary benefit, and if so, how much and in what form.
 - g. If DEK does not intend to sell customer data, but will otherwise disclose customer data pertaining to customers who authorize DEK to do so, state what protections, if any, the company plans to employ to protect confidentiality of data that can identify customers, including but not limited to information such as account numbers, credit card numbers, etc.

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42. Reference the Schneider testimony at p. 11, lines 17-19, wherein he discusses various alerts that will better allow DEK to manage its distribution grid. Will the alerts, including tamper alerts and data analytics, lead to cost savings? Please discuss.
43. Reference the Schneider testimony generally, and in particular p. 12 lines 4-10. If DEK's application is approved, does the company plan to institute any or all of the following:
 - a. mandatory, system-wide time-of-day rates for residential customers;
 - b. mandatory, system-wide time-of-use rates for residential customers; and/or
 - c. demand charges for residential customers.
44. Reference the Schneider testimony at p. 14, lines 1-8, wherein he discusses "enhanced basic customer services." Will the overall customer class be subsidizing any extra costs created by those customers who end up subscribing to the enhanced services, or will any additional costs be borne solely by those customers who subscribe to the enhanced level of services?
45. Reference the Schneider testimony at p. 15, lines 1-7. For each of the past five (5) calendar years, provide costs DEK incurred as a result of the incidents associated with manual meter reads.
46. Reference the Schneider testimony at p. 20, lines 5-19.
 - a. With regard to lessons learned in other Duke Energy jurisdictions, identify all lessons learned in those jurisdictions which either are not, or may not be applicable to DEK.
 - b. Identify any and all challenges for communication network optimization that exist in DEK's service territory.
47. Reference the Schneider testimony at p. 21. Will DEK provide an opt-out for customers who have health concerns with AMI technology? If not, why not?
48. Reference the Schneider testimony at p. 25. If DEK's petition is approved, and after the completion of the upgrade program, in the event that DEK's cost-benefit analysis performed in regard to the instant filing does not establish that benefits are greater than costs, would DEK be willing to make a partial rate refund to restore its

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ratepayers to at least the point at which they suffer no financial detriment? If not, why not?

- a. Does DEK's cost-benefit analysis include all costs and all benefits? If not, why not?
- b. Does DEK's cost-benefit analysis provide a monetary value for all quantifiable benefits? If so, explain how that monetary value was derived.
- c. As part of DEK's commitment that its proposed meter upgrade will provide greater quantifiable benefits than the cost of the program, is DEK willing to provide annual reporting for each of five (5) years following the completion of the program that would update both costs and benefits? If not, why not?
- d. Provide a per-meter breakdown of costs and quantifiable benefits (in monetary terms) which DEK believes ratepayers in each class will receive.

49. Reference the Schneider testimony at pp. 27-28, wherein he discusses potential energy savings due to next-day interval usage data customer feedback, which he refers to as the "Prius Effect."

- a. Provide the amount of estimated savings for this benefit.

50. Since DEK asserts that the meter upgrade program will lead to enhanced revenue collection and operational savings to the company, does it agree that if the program is approved, it will face less financial risk? If it does not so agree, why not?

51. Reference the Schneider testimony at p. 28, lines 5-15 wherein he discusses operational savings, and in which he states that once the meter upgrade program is completed, DEK's annual operational costs will be lower than what they otherwise would be.

- a. Has this proven true in other Duke Energy jurisdictions that have employed an AMI meter upgrade program? If so, provide the amount of the decrease in terms of a percentage.

52. Reference the Schneider testimony at p. 32, lines 10-14, wherein he discusses DEK's "robust planning and evaluation process for its grid investments." Elaborate on the nature and extent of this plan, including the type of investments and programs envisioned.

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53. Reference the Schneider testimony at p. 32, wherein he discusses cybersecurity. State whether the AMI architecture and infrastructure DEK plans to deploy in the instant filing can provide upgraded cybersecurity measures such as those envisioned and/or mandated by FERC and NERC without having to replace entire meters, meter modules and other associated hardware.
54. Reference the Weintraub testimony at pp. 3-4. Is the Duke Customer Solutions Organization a subsidiary of Duke Energy?
55. Reference the Weintraub testimony at p. 4, line 11, wherein he references Duke Energy's research of its residential customers. State whether this research involves only DEK's residential customers, or whether it is based on the combined jurisdictions of Duke Energy?
 - a. Provide all studies and/or survey research regarding the concerns of DEK's residential customers.
56. Reference the Weintraub testimony at p. 6, lines 9-10. Since the EBS programs will all be new to DEK customers, how is it reasonable to conclude that DEK customers "have grown to expect" them from DEK?
57. Reference the Weintraub testimony at p. 6, lines 12-13. Identify the company or organizations which conducted the customer satisfaction surveys, and identify what company's customers responded to the surveys.
58. Reference the Weintraub testimony at p. 6, lines 17-19. Will participants in those programs be subsidized by ratepayers who do not partake in those programs?
59. Describe the measures DEK is proposing to take to insure that the technology it has chosen for its software, firmware, middleware and hardware does not become obsolete.
 - a. Has the company factored into its cost projections the costs for software, firmware and/or hardware upgrades necessary to satisfy any potential standards from the National Institute for Standards and Technology (NIST)? If not, provide a cost projection that includes these estimates.
60. To what extent will the proposed AMI architecture and infrastructure be interoperable with DEK's other systems, including but not limited to: IT office systems, metering systems, SCADA and DSM systems, outage management

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systems, analytic systems, and external partners and services? For purposes of this question, the term “interoperable” means the ability of different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged.

61. Reference the Confidential versions of Attachments DLS-3 and DLS-4, p. 2 of 13. Are all capital and O & M costs identified in these two documents? If not, please identify all such costs, the amounts thereof, and restate the impact of all such additional costs on DEK's cost-benefit analysis.

62. Reference the Confidential version of Attachment DLS-3.

- a. Are all of the operational savings identified under the program benefits identified in this document based on estimates derived from Duke Energy's experience in its other service territories in which system-wide AMI and AMR replacements have been executed?
- b. With regard to each operational saving identified in this document, state to what degree each item of savings is based upon: (i) estimates, and if any, identify the source of the estimates; or (ii) experience, and if any, identify what experience it is based upon.
- c. To what extent are the estimates of program benefits contained in this attachment based on the individual characteristics and/or peculiarities of DEK's own service territory?

63. Reference the Confidential version of Attachment DLS-4, pp. 8-9.

- a. With regard to the dollar figures provided in years 2 through 17, state to what degree each benefit type is based upon: (i) estimates, and if any, identify the source of the estimates; or (ii) experience, and if any, identify what experience it is based upon.
- b. To what extent are the estimates of program benefits contained in this attachment based on the individual characteristics and/or peculiarities of DEK's own service territory?

64. Reference the Confidential version of Attachment DLS-4, pp. 10-11.

- a. With regard to the dollar figures provided in years 2 through 17, state to what degree each benefit type is based upon: (i) estimates, and if any, identify the source of the estimates; or (ii) experience, and if any, identify what experience it is based upon.

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- b. To what extent are the estimates of program benefits contained in this attachment based on the individual characteristics and/or peculiarities of DEK's own service territory?
65. Reference the Confidential version of Attachment DLS-4, pp. 12-13.
- a. With regard to the dollar figures provided in years 2 through 17, state to what degree each benefit type is based upon: (i) estimates, and if any, identify the source of the estimates; or (ii) experience, and if any, identify what experience it is based upon.
 - b. To what extent are the estimates of program benefits contained in this attachment based on the individual characteristics and/or peculiarities of DEK's own service territory?
66. Were DEK's material and labor estimates developed by DEK or affiliate company employees historically responsible for preparing similar cost estimates for DEK? If not, explain why not.
67. With regard to DEK's assertions of cost and benefit estimates based on experience of other Duke Energy subsidiaries, provide documentation supporting the historical cost and benefit information from such other subsidiaries regarding the deployment of AMI and associated architecture and infrastructure, including but not limited to testimony in other jurisdictions supporting internal estimation procedures.
68. Confirm that Duke Energy's conversion to AMI meters in North Carolina, South Carolina and Florida is being done on an incremental and not a system-wide basis.
69. Provide copies of any and all workpapers showing how DEK's estimates of costs and benefits were performed.
70. Confirm that the application's cost estimates include any and all costs related to: (i) substation upgrades; and (ii) transformers which will be required as a result of the program.
71. Confirm that costs included within the application include any and all costs necessary to upgrade DEK's data backbone and back office computer infrastructure.
72. Confirm that the project will require no changes to DEK's transmission system.

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- a. If DEK cannot so confirm, confirm that all costs related to transmission upgrades required as a result of the instant program are included in the application's cost estimates.
73. Regarding the employees who currently perform meter reading services for DEK, describe what will be done with those positions in the event the Commission should approve all or a portion of DEK's application in the instant matter.
74. In the event the Commission should approve DEK's application in the instant matter, state whether the company would be willing to allow residential customers to opt-out of the program for medical purposes, in the event such customers agree to the following:
- a. to pay any and all costs associated with manual connects/disconnects;
 - b. to pay for manual meter readings; and
 - c. to pay for any and all other metering-related costs included within customers' existing rates, which otherwise would have to be socialized within the remaining residential customer rate base.
75. State whether DEK is seeking a return on equity (ROE) associated with all or any portion of the instant application, and if so, identify the amount thereof.
- a. If DEK is seeking an ROE:
 - (i) provide an annual amount in dollars that each residential customer can expect to pay for that ROE, based upon yearly cost estimates as provided in the application, for each year of the project until the year that total benefits exceed total costs;
 - (ii) confirm that shareholders receive 100% of the benefit of the ROE;
 - (iii) confirm that shareholders will benefit as a result of the enhanced revenue collection DEK envisions as a result of implementing this program.
76. In the event the Commission should approve the application, state the number of years following the completion of the project until estimated total savings will exceed estimated total costs.

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- a. If the number of years is greater than 15, state whether a longer period of time would be required given that the expected life span of AMI meters to be deployed in the project is only 15 years.
 - b. Provide copies of any independent analyses conducted on behalf of DEK regarding the cost-effectiveness of the project.
77. Confirm that the instant filing is not intended in any manner to be a part of, or augment DEK's DSM program pursuant to KRS 278.285.
78. Provide copies of any studies or analyses DEK performed, or which were performed on DEK's behalf regarding any and all alternatives to the proposed project.
 - a. Has DEK considered any and all other direct load control programs as a means of meeting its load management goals, including but not limited to: (i) air conditioning controls; and (ii) programmable thermostats? If not, why not?
79. State whether DEK has any net metering customers, and if so, explain whether such customers will continue to be able to net meter if they so choose.
 - a. Describe all costs that DEK requires net metering customers to pay under its current net metering tariff.
 - b. Describe all changes to DEK's net metering tariff that will result as a consequence of the instant application, if approved.
 - c. Does DEK anticipate that AMI meters to be installed under this project will more accurately capture the amounts of electricity that net metering customers sell to the company? If so:
 - (i) provide all estimates that DEK and/or other Duke Energy subsidiaries have performed regarding effects that net metering customers can anticipate once they receive a new AMI meter under the instant program; and
 - (ii) state whether the solar credit reporting system will report actual meter reading, or readings from the prior month.
80. With regard to other Duke Energy subsidiaries in which system-wide conversion to AMI meters has been executed, provide a breakdown of any estimated increases in conservation that can fairly be attributed to the AMI program.

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81. In the event that the Commission approves the instant application, state whether DEK believes that the company would be sharing in the risks associated with the deployment of the new technologies identified in the application, and if so, state how it would be so sharing.
82. In the event that the Commission approves the instant application, and in the event that total program costs exceed total program benefits, would DEK object to having shareholders being made responsible for that portion of costs that exceed benefits? If so, why?
83. Provide a complete description of the education program DEK plans to undertake to make ratepayers aware of the goals of the program, and its costs and benefits.
 - a. Provide copies of any and all bill inserts or scripts of advertisements DEK plans to use in this regard. If such materials are not yet completed, will DEK agree to provide them to the Commission and the Attorney General when they are available? If not, why not?
 - b. State whether DEK's education program will explain: (i) how much the bill of a residential customer will increase as a result of program implementation; and (ii) how the program will eventually pay for itself.
84. Explain why it would not be cost-effective for DEK to replace existing meters on a rolling basis (i.e., whenever they reach the end of their effective life span), rather than replacing all meters on an immediate, system-wide basis.
 - a. Does DEK believe that a system-wide replacement of meters will prove cost-effective for all residential customers? Explain fully.
85. Provide an estimate of how much the average residential customer's bill will increase once the proposed program has been fully implemented.
 - a. Describe how and where total program savings will be reflected in the company's statutory and regulatory accounting.
86. Describe whether DEK's cost-benefit analysis took into consideration that some of its residential customers do not have home computers and/or lack remote internet access through which they could view the company's internet-based energy usage portal.

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87. Does DEK agree that outage detection and restoration at the circuit level could be accomplished without a system-wide roll-out of AMI meters? If not, why not?
88. Does DEK's cost-benefit analysis take into consideration that any AMI meters deployed as a result of the program will have to be replaced in 15 years?
 - a. In the event new AMI metering technology and/or infrastructure is developed, is DEK willing to commit that it will not seek to deploy such new technology prior to the end of the projected lifespan of the technology that will be deployed in the instant project? If not, why not?
89. If the Commission should approve the instant application, state whether DEK plans to introduce mandatory dynamic pricing, and if so, what protections it plans to provide for those customers who lack options to avoid peak pricing.