

**COMMONWEALTH OF KENTUCKY
BEFORE THE
KENTUCKY PUBLIC SERVICE COMMISSION**

In the Matter of:

The Application of Duke Energy Kentucky,)
Inc., for (1) a Certificate of Public)
Convenience and Necessity Authorizing)
the Construction of an Advanced Metering) Case No. 2016-00152
Infrastructure; (2) Request for Accounting)
Treatment; and (3) All Other Necessary)
Waivers, Approvals, and Relief.)

**DUKE ENERGY KENTUCKY, INC.'S FIRST SET OF
INTERROGATORIES AND REQUESTS FOR PRODUCTION OF
DOCUMENTS PROPOUNDED UPON THE ATTORNEY GENERAL**

Comes now Duke Energy Kentucky, Inc. (Duke Energy Kentucky), and addresses the following First Set of Data Requests to the Attorney General of the Commonwealth of Kentucky, Office of Rate Intervention (Attorney General) to be answered by the date specified in the Commission's Order of Procedure, and in accordance with the following instructions:

I. DEFINITIONS AND INSTRUCTIONS

1. With respect to each discovery request, all information is to be divulged that is within the knowledge, possession or control of the parties to whom it is addressed, including their agents, employees, attorneys and/or investigators.

2. Please identify the witness(es) who will be prepared to answer questions concerning each request.

3. 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.

4. All answers must be separately and fully stated in writing under oath.
5. Where an interrogatory calls for an answer in more than one part, each part should be separated in the answer so that the answer is clearly understandable.
6. For purpose of these discovery requests, the following terms shall have meanings set forth below:

- (a) As used herein, "document," "documentation" and/or "record," whether stated as the singular or the plural, means any course of binders, book, pamphlet, periodical, letter, correspondence, memoranda, including but not limited to, any memorandum or report of a meeting or telephone or other conversation, invoice, account, credit memo, debit memo, financial statement, general ledger, ledger, journal, work papers, account work papers, report, diary, telegram, record, contract, agreement, study, draft, telex, handwritten or other note, sketch, picture, photograph, plan, chart, paper, graph, index, tape, data processing card, data processing disc, data cells or sheet, check acceptance draft, e-mail, studies, analyses, contracts, estimates, summaries, statistical statements, analytical records, reports and/or summaries of investigations, opinions or reports of consultants, opinions or reports of accountants, trade letters, comparisons, brochures, pamphlets, circulars, bulletins, notices, forecasts, electronic communication, printouts, all other data compilations from which information can be obtained (translated if necessary by defendants into usable form), any preliminary versions, drafts or revisions of any of the

foregoing, and/or any other written, recorded, transcribed, punched, taped, filmed or graphic matter, however produced or reproduced and regardless of origin or location, in the possession, custody and/or control of the defendant and/or their agents, accountants, employees, representatives and/or attorneys. "Document" and "record" also mean all copies of documents by whatever means made, if the copy bears any other markings or notations not found on the original.

- (b) The terms "relating to," "referring to," "referred to," "pertaining to," "pertained to" and "relates to" means referring to, reporting, embodying, establishing, evidencing, comprising, connected with, commenting on, responding to, showing, describing, analyzing, reflecting, presenting and/or constituting and/or in any way involving.
- (c) The terms "and," "or," and "and/or" within the meaning of this document shall include each other and shall be both inclusive and disjunctive and shall be construed to require production of all documents, as above-described, in the broadest possible fashion and manner.
- (d) The term "Attorney General" shall mean Attorney General of the Commonwealth of Kentucky, Office of Rate Intervention, and shall include, but is not limited to, each and every agent, employee, servant, insurer and/or attorney of the Attorney General. The term "you" shall be deemed to refer to the Attorney General.
- (e) The term "Commission" shall mean the Kentucky Public Service Commission.

- (f) The term "Duke Energy Kentucky" shall mean Duke Energy Kentucky, Inc., its employees, agents, officers, directors and representatives.
- (g) To "identify" shall mean:
 - (1) With respect to a document, to state its date, its author, its type (for example, letter, memorandum, chart, photograph, sound reproduction, etc.), its subject matter, its present location, and the name of its present custodian. The document may be produced in lieu of supplying the foregoing information. For each document which contains information as privileged or otherwise excludable from discovery, there shall be included a statement as to the basis for such claim of privilege or other grounds for exclusion.
 - (2) With regard to a natural person, to state his or her full name, last known employer or business affiliation, title and last known home address.
 - (3) With regard to a person other than a natural person, state the title of that person, any trade name, or corporate name or partnership name used by that person, and the principal business address of that person.
- (h) The term "Meter Upgrade" shall mean Duke Energy Kentucky's request in this proceeding to construct and install the advanced metering systems that are the subject of this proceeding.
- (i) To "produce" or to "identify and produce," shall mean that the Attorney General shall produce each document or other requested tangible thing.

For each tangible thing which the Attorney General contends are privileged or otherwise excludable from discovery, there shall be included a statement as to the basis for such claim of privilege or other grounds for exclusion.

- (j) The terms "Party or Parties" shall mean any organization, person, corporation, entity, etc., which intervened in the above-captioned proceeding and shall further include the Kentucky Public Service Commission Staff.

II. REQUESTS FOR INFORMATION

1. Other than Mr. Alvarez, please identify any persons, including experts whom the Attorney General has consulted, retained, or is in the process of retaining with regard to evaluating the Company's Application in this proceeding.

2. For each person identified in (prior) response to Interrogatory No. 1 above, please state (1) the subject matter of the discussions/consultations/evaluations; (2) the written opinions of such persons regarding the Company's Application; (3) the facts to which each person relied upon; and (4) a summary of the person's qualifications to render such discussions/consultations/evaluations.

3. For each person identified in response to Interrogatory No. 1 above, please identify all proceedings in all jurisdictions in which the witness/persons has offered evidence, including but not limited to, pre-filed testimony, sworn statements, and live testimony. For each response, please provide the following:

- (a) the jurisdiction in which the testimony or statement was pre-filed, offered, given, or admitted into the record;

- (b) the administrative agency and/or court in which the testimony or statement was pre-filed, offered, admitted, or given;
- (c) the date(s) the testimony or statement was pre-filed, offered, admitted, or given;
- (d) the identifying number for the case or proceeding in which the testimony or statement was pre-filed, offered, admitted, or given; and
- (e) whether the person was cross-examined.

4. Identify and provide all documents or other evidence that the Attorney General may seek to introduce as exhibits or for purposes of witness examination in the above-captioned matter.

5. Please identify all proceedings in all jurisdictions in which Paul Alvarez has offered evidence, including but not limited to, pre-filed testimony, sworn statements, and live testimony and analysis. For each response, please provide the following:

- (a) the jurisdiction in which the testimony, statement or analysis was pre-filed, offered, given, or admitted into the record;
- (b) the administrative agency and/or court in which the testimony, statement or analysis was pre-filed, offered, admitted, or given;
- (c) the date(s) the testimony, statement or analysis was pre-filed, offered, admitted, or given;
- (d) the identifying number for the case or proceeding in which the testimony, statement or analysis was pre-filed, offered, admitted, or given;
- (e) whether the witness was cross-examined;
- (f) the custodian of the transcripts and pre-filed testimony, statements or

analysis for each proceeding; and

(g) copies of all such testimony, statements or analysis.

6. Please provide copies of the following documents listed in Appendix A:

Curriculum Vitae of Paul Alvarez attached to Mr. Alvarez's testimony:

- (a) **Regulatory Reform Proposal to Base a Significant Portion of Utility Compensation on Performance in the Public Interest.** Testimony before the Maryland PSC on behalf of the Coalition for Utility Reform, case 9361. December 8, 2014.
- (b) **Best Practices in Grid Modernization Capability Optimization: Visioning, Strategic Planning, and New Capability Portfolio Management.** Top-5 US utility; client confidential. 2014.
- (c) **Smart Grid Economic and Environmental Benefits: A Review and Synthesis of Research on Smart Grid Benefits and Costs.** Secondary research report prepared for the Smart Grid Consumer Collaborative. October 8, 2013. Companion piece: Smart Grid Technical and Economic Concepts for Consumers.
- (d) **Maximizing Customer Benefits: Performance Measurement and Action Steps for Smart Grid Investments.** Public Utilities Fortnightly. January, 2012.
- (e) **Smart Grid Regulation: Why Should We Switch to Performance-based Compensation?** Smart Grid News. August 15, 2014.
- (f) **A Better Way to Recover Smart Grid Costs.** Smart Grid News. September 3, 2014.
- (g) **Is This the Future? Simple Methods for Smart Grid Regulation.** Smart Grid News. October 2, 2014.
- (h) **The True Cost of Smart Grid Capabilities.** Intelligent Utility. June 30, 2014.
- (i) **NARUC Committee on Energy Resources and the Environment.** *How big data can lead to better decisions for utilities, customers, and regulators.* Washington DC. February 15, 2016.
- (j) **National Conference of Regulatory Attorneys 2014 Annual Meeting.** *Smart Grid Hype & Reality.* Columbus, Ohio. June 16, 2014.

- (k) **NASUCA 2013 Annual Conference.** *A Review and Synthesis of Research on Smart Grid Benefits and Costs.* Orlando. November 18, 2013.
- (l) **IEEE Power and Energy Society, ISGT 2013.** *Distribution Performance Measures that Drive Customer Benefits.* Washington DC. February 26, 2013.
- (m) **Canadian Electric Institute 2013 Annual Distribution Conference.** *The (Smart Grid) Story So Far: Costs, Benefits, Risks, Best Practices, and Missed Opportunities.* Keynote. Toronto, Canada. January 23, 2013.
- (n) **Great Lakes Smart Grid Symposium.** *What Smart Grid Deployment Evaluations are Telling Us.* Chicago. September 26, 2012.
- (o) **Mid-Atlantic Distributed Resource Initiative.** *Smart Grid Deployment Evaluations: Findings and Implications for Regulators and Utilities.* Philadelphia. April 20, 2012.
- (p) **DistribuTECH 2012.** *Lessons Learned: Utility and Regulator Perspectives.* Panel Moderator. January 25, 2012.
- (q) **DistribuTECH 2012.** *Optimizing the Value of Smart Grid Investments.* Half-day course. January 23, 2012.
- (r) **NARUC Subcommittee on Electricity.** *Maximizing Smart Grid Customer Benefits: Measurement and Other Implications for Investor-Owned Utilities and Regulators.* St. Louis. November 13, 2011.

7. Please provide copies of any and all documents, analysis, summaries, white papers, work papers, spreadsheets (electronic versions with cells intact), including drafts thereof, as well as any underlying supporting materials created by Mr. Alvarez as part of his evaluation of the Company's CPCN for a Metering Upgrade or used in the creation of Mr. Alvarez's testimony.

8. Please provide copies of any and all documents not created by Mr. Alvarez, including but not limited to, analysis, summaries, cases, reports, evaluations, *etc.*, that Mr. Alvarez relied upon, referred to, or used in the development of his testimony.

9. Referring generally to Mr. Alvarez's direct testimony at page 2, during his time at Xcel Energy, please state whether Mr. Alvarez was a witness in any electric base rate proceedings.

- (a) If the response is affirmative, please identify all such rate case proceedings and Mr. Alvarez's role and area of involvement.
- (b) If the response is affirmative, please state whether Mr. Alvarez submitted testimony or was cross-examined.
 - (1) If the response is affirmative, please provide copies of such testimony and transcript of cross examination.

10. Refer to page 3 of Mr. Alvarez's testimony where he explains that he started Wired Group in 2012, please identify by name, title, and area of responsibility, any Wired Group personnel who assisted Mr. Alvarez in his review of the Company's filing in this proceeding.

- (a) For the person(s) identified in response to the above, please describe the nature of the work performed by each person with respect to the Company's Meter Upgrade proceeding.
- (b) For the person(s) identified in response to the above, please provide copies of any summaries, analysis, research, memorandum, work papers, or documents of any kind, that were created by such person(s) with respect to this proceeding.

11. Referring to Alvarez testimony at 3, please provide the curriculum and syllabus for the courses Mr. Alvarez taught at University of Colorado's Global Energy Management Program and Michigan State University's Institute for Public Utilities.

12. Refer to Mr. Alvarez's testimony at page 3, lines 3-10 and footnote 2, Please describe and explain Mr. Alvarez's specific involvement in the creation of MetaVu's Duke Energy Ohio Smart Grid Audit and Assessment Report for the Public Utilities Commission of Ohio mentioned in his testimony.

13. Refer to Page 3 of Mr. Alvarez's testimony that "Wired Group clients include utilities". Please provide a list of those utilities for the last 4 years and summarize the nature of such engagements.

14. See Alvarez testimony at Page 4-5:

- (a) Is it Mr. Alvarez's opinion that the determination of "the rate impact of stranded cost recovery" is required for CPCN approval?
- (b) If the response is in the affirmative, please explain or provide the basis upon which Mr. Alvarez is making such a claim.
- (c) If the response is in the affirmative, please state whether Mr. Alvarez is aware of the Commission ever finding that the rate impact of stranded cost recovery must be known at the time of CPCN evaluation and prior to approval, and provide support for that position.

15. Referring to page 5, line 1 of Mr. Alvarez's testimony, Does Mr. Alvarez agree that the rate impact of the Company's early retirement of its existing meter infrastructure (est. \$9.6 million) is dependent upon both the balance of the regulatory asset and the amortization period ordered by the Commission?

- (a) If Mr. Alvarez does not agree, please explain why.

16. Referring to page 5, line 2 of Mr. Alvarez's testimony, does Mr. Alvarez agree that the Company is not seeking to increase its rates to customers as part of this CPCN proposal?

- (a) If Mr. Alvarez does not agree, please identify and explain where in the Company's application that Mr. Alvarez believes the Company is seeking to increase customer rates in this proceeding.

17. Referring to page 5, line 2 of Mr. Alvarez's testimony, does Mr. Alvarez believe that if the Commission approves the Company's CPCN application in this proceeding that the Commission is ceding its authority to evaluate the prudence of the Company's Meter Upgrade investment in a future rate case?

- (a) If the response is in the affirmative, please explain Mr. Alvarez's belief.

18. Referring to page 5, line 2 of Mr. Alvarez's testimony, does Mr. Alvarez agree that if the Company's Meter Upgrade CPCN is approved in this proceeding, the costs to deploy the Meter Upgrade will be funded by the Company and its shareholders until such time as the Company seeks base rate recovery in the future?

- (a) If Mr. Alvarez does not agree, please explain fully.

19. Referring to page 5, line 3, is Mr. Alvarez familiar with the rate making concept of cost causation?

- (a) If the response is in the affirmative, please explain Mr. Alvarez's understanding of the rate making principle of cost causation.

20. Referring to page 5, line 3, does Mr. Alvarez agree that the rate making concept of cost causation should be followed with respect to rates enabled by smart meters?

- (a) If the response is in the negative, please explain why Mr. Alvarez does not agree.

21. Referring to page 5, line 3, regarding Mr. Alvarez's statement that "design of new rates made possible by smart meters can be determined in advance," does Mr. Alvarez agree that

“new rates made possible by smart meters” cannot actually go into effect until the smart meters and supporting infrastructure described in the Company’s Meter Upgrade are actually deployed?

- (a) If Mr. Alvarez does not agree, please explain how Mr. Alvarez believes that a new rate made possible by smart meters can somehow go into effect before the meter and supporting infrastructure is actually deployed?

22. Does Mr. Alvarez agree that if the Commission approves the Company’s Meter Upgrade in the current CPCN proceeding, and the Company files its next base rate case after the Meter Upgrade deployment commences, that the Company could still propose new customer rates that are made possible by the Meter Upgrade?

- (a) If Mr. Alvarez does not agree, please explain why Mr. Alvarez believes that the Company could not propose new customer rates that are made possible by the Meter Upgrade?

23. Please identify any Commission rule, Commission precedent, or Kentucky law that requires the Company’s CPCN for a Meter Upgrade to only be evaluated in a base rate case.

24. Please identify any Commission rule, Commission precedent, or Kentucky law that requires “the design of new rates made possible by smart meters” be determined in advance of such smart meter deployment?

25. Referring to page 6, footnote 3 of Mr. Alvarez’s testimony, please explain which state legislatures he is referring to in his statement that the collective track records on such matters to be very poor from a customer standpoint?

- (a) Please explain, citing specific examples, of poor smart meter or grid modernization legislation, and why Mr. Alvarez believes them to be poor.

26. Referring to page 6, line 11 of Mr. Alvarez’s testimony where he states the

Company's application is notable for the large size of the asset write-offs relative to meter deployment costs:

- (a) On what basis does Mr. Alvarez believe the Company's application is notable?
- (b) Please explain what Mr. Alvarez believes is a typical asset write-off to meter deployment cost percentage or ratio?
- (c) Provide all comparisons of meter asset write-offs relative to smart meter deployments that Mr. Alvarez has made to support his conclusion that makes the Company's filing notable.
- (d) Does Mr. Alvarez agree that if the Commission approves the Company's proposal for the creation of the regulatory asset related to the retired meter cost, currently estimated at approximately \$9.62 million (ref. Peggy Laub Testimony at pg. 6), that once included in rates, that balance will be amortized over a period of years?
 - (1) If Mr. Alvarez does not agree, please explain.
- (e) Does Mr. Alvarez agree that the \$9.6 million estimated cost of early retirement of the existing metering system is a nominal value versus a net present value?
 - (1) If Mr. Alvarez does not agree, please explain why.

27. Referring to Mr. Alvarez's testimony at page 9, lines 5-9, does Mr. Alvarez agree that Duke Energy Kentucky did not request carrying costs as part of its request for regulatory asset related to early retirement of its existing metering system.

- (a) If the response is in the negative, please cite to where in the Company's

application it made a request for inclusion of carrying costs.

28. Referring to Mr. Alvarez's testimony on page 9, lines 11 through 18 where he discusses the Duke Energy Indiana Cause No. 44720 proceeding and cites to testimony of Duke Energy Indiana witness Brian P. Davey:

(a) Please state whether or not either Mr. Alvarez or the Wired Group, participated in Duke Energy Indiana's Cause No. 44720 in any way.

(1) If the response is in the affirmative, please explain and describe in detail the participation of Mr. Alvarez and/or the Wired Group in Duke Energy Indiana's Cause No. 44720, including on whose behalf was such participation and the level of such participation.

(a) Please provide copies of any and all summaries, documents, work papers, and analysis prepared by either Mr. Alvarez or the Wired Group as part of such participation.

(2) If the response is in the negative, please explain how Mr. Alvarez became aware of the Duke Energy Indiana Cause No. 44720.

29. Please see Mr. Alvarez's testimony on Page 10, which reads: "The Commission possesses no predefined mechanism to hold a CPCN holder accountable for cost overruns".

(a) Does Mr. Alvarez agree that the Commission could disallow inclusion of imprudent cost overruns in utility rate base at the time of a rate case?

(1) If Mr. Alvarez does not agree, please explain why he believes the Commission cannot do so.

30. Referring to Mr. Alvarez's testimony on page 11, lines 2 through 12. Does Mr.

Alvarez agree that if the Company's Meter Upgrade CPCN was proposed in a rate case that used a historical test period, that no costs or benefits related to Meter Upgrade deployment would be reflected in base rates during that case because the investment had not yet occurred?

- (a) If Mr. Alvarez does not agree, please explain how the Commission could include costs yet to be incurred, in base rates when a historic test period is used?
- (b) Please cite to any relative precedent, law, or regulation that would support Mr. Alvarez's position that future costs can be included in a Kentucky base rate case preceding that uses a historic test period.

31. Referring to Mr. Alvarez's testimony on page 11, lines 2 through 12. Does Mr. Alvarez agree that if the Company's Meter Upgrade CPCN was proposed in a rate case that used a forecasted test period, that only the costs and benefits that occur during that future test period could be includable in the utility's base rates as part of that case?

- (a) If Mr. Alvarez does not agree, please explain Mr. Alvarez's belief that the Commission could allow base rate recovery of future costs or benefits projected to be incurred outside of the forecasted test period?
- (b) Please cite to any relative precedent, law, or regulation that would support Mr. Alvarez's position that such costs could be recoverable in rates.
- (c) Does Mr. Alvarez agree that if the Company's CPCN Application were included as part of a base rate case that included a forecasted test period, that forecasted costs of meter deployment and cost savings would be used as the basis for inclusion in rates and not actual costs?
 - (1) If Mr. Alvarez does not agree, please explain.

32. Referring to Mr. Alvarez's testimony page 13, lines 6-12 and foot note 9, where he quotes an excerpt from Duke Energy Indiana's June 29, 2016 press release, does Mr. Alvarez agree that Attachment 1 to this data request is a true, accurate, and complete copy of the press release cited in his testimony?

- (a) if the response is negative, please provide a copy of the press release Mr. Alvarez is referring to.

33. Referring to page 14 of Mr. Alvarez's direct testimony discussing time-varying rates and demand rates, does Mr. Alvarez agree that Duke Energy Kentucky is not seeking to introduce any such rates in this proceeding?

- (a) If Mr. Alvarez does not agree, please cite to where in the Company's application it is proposing to implement such rates.
- (b) Does Mr. Alvarez agree that if the Commission approves the Company's Meter Upgrade CPCN application in the current proceeding and outside of a rate case, that the Company would still be able to design optional time of use rates in the future?
 - (1) If Mr. Alvarez does not agree, please explain.
- (c) Does Mr. Alvarez agree that if the Commission considers and approves the Company's Meter Upgrade CPCN in the current proceeding (i.e. not part of a base rate case) that the Commission would still be able to review and evaluate optional time of use rates in a future rate case?
 - (1) If Mr. Alvarez does not agree, please explain.

34. Referring to page 17, lines 20-22, discussing reconnection fees, does Mr. Alvarez agree that Duke Energy Kentucky's reconnection costs will not decrease due to the Metering Upgrade technologies until the Metering Upgrade is actually deployed and automatic reconnection is enabled?

- (a) If Mr. Alvarez does not agree, please explain how Mr. Alvarez believes the Company's reconnection costs will be reduced prior to the Meter Upgrade deployment and enabling of automatic reconnection?
- (b) Has Mr. Alvarez conducted any studies to determine whether the Company's current reconnection fee is accurately reflecting the Company's current costs for reconnection?
 - (1) If the response is in the affirmative, please provide such studies.

35. Referring to page 18, line 9 through 10 of his testimony, please provide all studies, analysis, case studies, comparisons, regulatory proceedings, and instances upon which Mr. Alvarez bases his statement that "In my experience, smart meter cost-benefit analysis are more likely than not to underestimate costs and overestimate benefits."

- (a) For the response(s) indicated above, please identify which such studies, analysis, comparisons, etc., were performed by Mr. Alvarez.

Respectfully submitted,

DUKE ENERGY KENTUCKY, INC.



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CERTIFICATE OF SERVICE

This is to certify that a copy of the foregoing has been served via electronic mail to the following party on this 4 day of August, 2016.

Hon. Rebecca Goodman
Office of the Attorney General
Utility Intervention and Rate Division
1024 Capital Center Drive
Frankfort, Kentucky 40601



Rocco O. D'Ascenzo

News Release



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June 29, 2016

Indiana state utility regulators approve Duke Energy's plan to modernize its statewide energy grid

- **Indiana Utility Consumer Counselor, industrial consumers, and other groups support seven-year energy grid improvement plan**
- **Advanced technology, infrastructure upgrades to improve customer service**

PLAINFIELD, Ind. – The Indiana Utility Regulatory Commission Wednesday approved Duke Energy's settlement with some of Indiana's key consumer groups on the company's plan to build a smarter energy infrastructure that delivers power to more than 800,000 Hoosier homes, businesses and industries.

In March, the company reached agreement with the Indiana Office of Utility Consumer Counselor, the Duke Energy Indiana Industrial Group, Companhia Siderurgica Nacional, Steel Dynamics, Wabash Valley Power Association, Indiana Municipal Power Agency, Hoosier Energy Rural Electric Cooperative and the Environmental Defense Fund on a seven-year plan using a combination of advanced technology and infrastructure upgrades to improve service to customers.

"We have an aging energy grid -- some equipment that is decades old -- and our work will focus on replacing some older infrastructure to reduce power outages," said Duke Energy Indiana President Melody Birmingham-Byrd. "We'll also be building a smarter energy structure with technology to provide the type of information and services that consumers have come to expect."

In May 2015, the Indiana Utility Regulatory Commission denied Duke Energy Indiana's original plan, asking for more details and more focus on electric grid projects. In December, the company filed a revised plan addressing the commission's issues. The company then reached a settlement with key consumer groups. The commission has approved the settlement without changes.

As part of the settlement, Duke Energy reduced the level of capital investments recovered through the plan's customer bill tracker from approximately \$1.8 billion to approximately \$1.4 billion. Part of the reduction came from \$192 million earmarked for new advanced digital meters -- known as smart meters -- but the company retains the ability to pursue the meters and defer some of their costs for consideration in a future rate case rather than through a monthly bill tracker as other items in the plan.

The company also agreed to reduce its return on equity on plan investments from 10.5 to 10 percent for investments that flow through the plan's bill tracker. This does not affect the company's 10.5 percent allowed return on equity on its other remaining investments.

As a result of the plan, customers will see a gradual rate increase averaging 0.75 percent per year between 2017 and 2022.

Some of the plan's consumer benefits include:

- Improved energy reliability and safety from updating and replacing aging energy grid infrastructure, including substations, utility poles, power lines and transformers.
- Fewer and shorter power outages where "self-healing" systems are installed. Today, when a tree or other object comes in contact with a power line causing an outage, every customer served by that line — and other lines connected to it — loses power. With self-healing technology, the company can automatically detect the problem, isolate it and reroute energy — so fewer customers are affected while repairs are made.
- Improved information for consumers. Equipment such as line sensors will enable the company to provide customers more information about power outages affecting them and estimated restoration times. In some cases, the equipment can reduce the need to dispatch field personnel to find an outage's location, which speeds power restoration.
- Energy savings from technology that optimizes voltage and reduces overall power consumption by about 1 percent on upgraded power lines.
- If the company pursues smart meters, as part of the settlement, it committed to exploring energy efficiency pilot programs that are now possible with smart meter technology.

Smart meters have additional benefits, including fewer estimated customer bills because meters can be read automatically. There also is quicker service because some customer requests can be performed remotely through the new meters without having to wait for a technician to arrive. Smart meters also provide customers with greater,

quicker access to information on their energy use, which can help consumers make wise energy decisions. Approximately 40 percent of the nation already has made the transition to smart meter technology.

The company filed the plan under the provisions of Indiana Senate Enrolled Act 560, state legislation which was passed in 2013 and is aimed at improving utility infrastructure.

Under the law, a utility can file a seven-year infrastructure improvement plan with state utility regulators.

If approved, a utility can request recovery of 80 percent of its investment through a customer bill tracker. Recovery of the remaining 20 percent would be deferred for review until the energy company's next base rate case. Under the new law, utilities must file a base rate case before the end of their seven-year plans.

About Duke Energy

Duke Energy is one of the largest electric power holding companies in the United States. Its regulated utility operations serve approximately 7.4 million electric customers located in six states in the Southeast and Midwest, representing a population of approximately 24 million people. Its Commercial Portfolio and International business segments own and operate diverse power generation assets in North America and Latin America, including a growing portfolio of renewable energy assets in the United States.

Headquartered in Charlotte, N.C., Duke Energy is an S&P 100 Stock Index company traded on the New York Stock Exchange under the symbol DUK. More information about the company is available at duke-energy.com.

The [Duke Energy News Center](#) serves as a multimedia resource for journalists and features news releases, helpful links, photos and videos. Hosted by Duke Energy, [illumination](#) is an online destination for stories about remarkable people, innovations, and community and environmental topics. It also offers glimpses into the past and insights into the future of energy.

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