

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

**IN THE MATTER OF THE ADJUSTMENT  
OF THE ELECTRIC RATES OF DUKE ENERGY KENTUCKY, INC.**

**CASE NO. 2019-00271**

**FILING REQUIREMENTS**

**VOLUME 14**

**Duke Energy Kentucky, Inc.**  
**Case No. 2019-00271**  
**Forecasted Test Period Filing Requirements**  
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<b>Vol. #</b>	<b>Tab #</b>	<b>Filing Requirement</b>	<b>Description</b>	<b>Sponsoring Witness</b>
1	1	KRS 278.180	30 days' notice of rates to PSC.	Amy B. Spiller
1	2	807 KAR 5:001 Section 7(1)	The original and 10 copies of application plus copy for anyone named as interested party.	Amy B. Spiller
1	3	807 KAR 5:001 Section 12(2)	<p>(a) Amount and kinds of stock authorized.</p> <p>(b) Amount and kinds of stock issued and outstanding.</p> <p>(c) Terms of preference of preferred stock whether cumulative or participating, or on dividends or assets or otherwise.</p> <p>(d) Brief description of each mortgage on property of applicant, giving date of execution, name of mortgagor, name of mortgagee, or trustee, amount of indebtedness authorized to be secured thereby, and the amount of indebtedness actually secured, together with any sinking fund provisions.</p> <p>(e) Amount of bonds authorized, and amount issued, giving the name of the public utility which issued the same, describing each class separately, and giving date of issue, face value, rate of interest, date of maturity and how secured, together with amount of interest paid thereon during the last fiscal year.</p> <p>(f) Each note outstanding, giving date of issue, amount, date of maturity, rate of interest, in whose favor, together with amount of interest paid thereon during the last fiscal year.</p> <p>(g) Other indebtedness, giving same by classes and describing security, if any, with a brief statement of the devolution or assumption of any portion of such indebtedness upon or by person or corporation if the original liability has been transferred, together with amount of interest paid thereon during the last fiscal year.</p> <p>(h) Rate and amount of dividends paid during the five (5) previous fiscal years, and the amount of capital stock on which dividends were paid each year.</p> <p>(i) Detailed income statement and balance sheet.</p>	Christopher M. Jacobi Danielle L. Weatherston
1	4	807 KAR 5:001 Section 14(1)	Full name, mailing address, and electronic mail address of applicant and reference to the particular provision of law requiring PSC approval.	Amy B. Spiller
1	5	807 KAR 5:001 Section 14(2)	If a corporation, the applicant shall identify in the application the state in which it is incorporated and the date of its incorporation, attest that it is currently in good standing in the state in which it is incorporated, and, if it is not a Kentucky corporation, state if it is authorized to transact business in Kentucky.	Amy B. Spiller

1	6	807 KAR 5:001 Section 14(3)	If a limited liability company, the applicant shall identify in the application the state in which it is organized and the date on which it was organized, attest that it is in good standing in the state in which it is organized, and, if it is not a Kentucky limited liability company, state if it is authorized to transact business in Kentucky.	Amy B. Spiller
1	7	807 KAR 5:001 Section 14(4)	If the applicant is a limited partnership, a certified copy of its limited partnership agreement and all amendments, if any, shall be annexed to the application, or a written statement attesting that its partnership agreement and all amendments have been filed with the commission in a prior proceeding and referencing the case number of the prior proceeding.	Amy B. Spiller
1	8	807 KAR 5:001 Section 16 (1)(b)(1)	Reason adjustment is required.	Amy B. Spiller William Don Wathen, Jr.
1	9	807 KAR 5:001 Section 16 (1)(b)(2)	Certified copy of certificate of assumed name required by KRS 365.015 or statement that certificate not necessary.	Amy B. Spiller
1	10	807 KAR 5:001 Section 16 (1)(b)(3)	New or revised tariff sheets, if applicable in a format that complies with 807 KAR 5:011 with an effective date not less than thirty (30) days from the date the application is filed	Jeff L. Kern
1	11	807 KAR 5:001 Section 16 (1)(b)(4)	Proposed tariff changes shown by present and proposed tariffs in comparative form or by indicating additions in italics or by underscoring and striking over deletions in current tariff.	Jeff L. Kern
1	12	807 KAR 5:001 Section 16 (1)(b)(5)	A statement that notice has been given in compliance with Section 17 of this administrative regulation with a copy of the notice.	Amy B. Spiller
1	13	807 KAR 5:001 Section 16(2)	If gross annual revenues exceed \$5,000,000, written notice of intent filed at least 30 days, but not more than 60 days prior to application. Notice shall state whether application will be supported by historical or fully forecasted test period.	Amy B. Spiller
1	14	807 KAR 5:001 Section 16(3)	Notice given pursuant to Section 17 of this administrative regulation shall satisfy the requirements of 807 KAR 5:051, Section 2.	Amy B. Spiller
1	15	807 KAR 5:001 Section 16(6)(a)	The financial data for the forecasted period shall be presented in the form of pro forma adjustments to the base period.	Christopher M. Jacobi
1	16	807 KAR 5:001 Section 16(6)(b)	Forecasted adjustments shall be limited to the twelve (12) months immediately following the suspension period.	Sarah E. Lawler Melissa B. Abernathy Christopher M. Jacobi
1	17	807 KAR 5:001 Section 16(6)(c)	Capitalization and net investment rate base shall be based on a thirteen (13) month average for the forecasted period.	Sarah E. Lawler
1	18	807 KAR 5:001 Section 16(6)(d)	After an application based on a forecasted test period is filed, there shall be no revisions to the forecast, except for the correction of mathematical errors, unless the revisions reflect statutory or regulatory enactments that could not, with reasonable diligence, have been included in the forecast on the date it was filed. There shall be no revisions filed within thirty (30) days of a scheduled hearing on the rate application.	Christopher M. Jacobi

1	19	807 KAR 5:001 Section 16(6)(e)	The commission may require the utility to prepare an alternative forecast based on a reasonable number of changes in the variables, assumptions, and other factors used as the basis for the utility's forecast.	Christopher M. Jacobi
1	20	807 KAR 5:001 Section 16(6)(f)	The utility shall provide a reconciliation of the rate base and capital used to determine its revenue requirements.	Sarah E. Lawler
1	21	807 KAR 5:001 Section 16(7)(a)	Prepared testimony of each witness supporting its application including testimony from chief officer in charge of Kentucky operations on the existing programs to achieve improvements in efficiency and productivity, including an explanation of the purpose of the program.	All Witnesses
1	22	807 KAR 5:001 Section 16(7)(b)	Most recent capital construction budget containing at minimum 3 year forecast of construction expenditures.	Christopher M. Jacobi James Michael Mosley Ash M. Norton
1	23	807 KAR 5:001 Section 16(7)(c)	Complete description, which may be in prefiled testimony form, of all factors used to prepare forecast period. All econometric models, variables, assumptions, escalation factors, contingency provisions, and changes in activity levels shall be quantified, explained, and properly supported.	Christopher M. Jacobi
1	24	807 KAR 5:001 Section 16(7)(d)	Annual and monthly budget for the 12 months preceding filing date, base period and forecasted period.	Christopher M. Jacobi
1	25	807 KAR 5:001 Section 16(7)(e)	Attestation signed by utility's chief officer in charge of Kentucky operations providing: 1. That forecast is reasonable, reliable, made in good faith and that all basic assumptions used have been identified and justified; and 2. That forecast contains same assumptions and methodologies used in forecast prepared for use by management, or an identification and explanation for any differences; and 3. That productivity and efficiency gains are included in the forecast.	Amy B. Spiller
1	26	807 KAR 5:001 Section 16(7)(f)	For each major construction project constituting 5% or more of annual construction budget within 3 year forecast, following information shall be filed: 1. Date project began or estimated starting date; 2. Estimated completion date; 3. Total estimated cost of construction by year exclusive and inclusive of Allowance for Funds Used During construction ("AFUDC") or Interest During construction Credit; and 4. Most recent available total costs incurred exclusive and inclusive of AFUDC or Interest During Construction Credit.	Christopher M. Jacobi James Michael Mosley Ash M. Norton
1	27	807 KAR 5:001 Section 16(7)(g)	For all construction projects constituting less than 5% of annual construction budget within 3 year forecast, file aggregate of information requested in paragraph (f) 3 and 4 of this subsection.	Christopher M. Jacobi James Michael Mosley Ash M. Norton

1	28	807 KAR 5:001 Section 16(7)(h)	Financial forecast for each of 3 forecasted years included in capital construction budget supported by underlying assumptions made in projecting results of operations and including the following information: 1. Operating income statement (exclusive of dividends per share or earnings per share); 2. Balance sheet; 3. Statement of cash flows; 4. Revenue requirements necessary to support the forecasted rate of return; 5. Load forecast including energy and demand (electric); 6. Access line forecast (telephone); 7. Mix of generation (electric); 8. Mix of gas supply (gas); 9. Employee level; 10. Labor cost changes; 11. Capital structure requirements; 12. Rate base; 13. Gallons of water projected to be sold (water); 14. Customer forecast (gas, water); 15. MCF sales forecasts (gas); 16. Toll and access forecast of number of calls and number of minutes (telephone); and 17. A detailed explanation of any other information provided.	Christopher M. Jacobi John A. Verderame Benjamin W. B. Passty
1	29	807 KAR 5:001 Section 16(7)(i)	Most recent FERC or FCC audit reports.	Danielle L. Weatherston
1	30	807 KAR 5:001 Section 16(7)(j)	Prospectuses of most recent stock or bond offerings.	Christopher M. Jacobi
1	31	807 KAR 5:001 Section 16(7)(k)	Most recent FERC Form 1 (electric), FERC Form 2 (gas), or PSC Form T (telephone).	Danielle L. Weatherston
2	32	807 KAR 5:001 Section 16(7)(l)	Annual report to shareholders or members and statistical supplements for the most recent 2 years prior to application filing date.	Christopher M. Jacobi
3	33	807 KAR 5:001 Section 16(7)(m)	Current chart of accounts if more detailed than Uniform System of Accounts charts.	Danielle L. Weatherston
3	34	807 KAR 5:001 Section 16(7)(n)	Latest 12 months of the monthly managerial reports providing financial results of operations in comparison to forecast.	Danielle L. Weatherston
3	35	807 KAR 5:001 Section 16(7)(o)	Complete monthly budget variance reports, with narrative explanations, for the 12 months prior to base period, each month of base period, and subsequent months, as available.	Danielle L. Weatherston Christopher M. Jacobi
3-9	36	807 KAR 5:001 Section 16(7)(p)	SEC's annual report for most recent 2 years, Form 10-Ks and any Form 8-Ks issued during prior 2 years and any Form 10-Qs issued during past 6 quarters.	Danielle L. Weatherston
9	37	807 KAR 5:001 Section 16(7)(q)	Independent auditor's annual opinion report, with any written communication which indicates the existence of a material weakness in internal controls.	Danielle L. Weatherston
9	38	807 KAR 5:001 Section 16(7)(r)	Quarterly reports to the stockholders for the most recent 5 quarters.	Christopher M. Jacobi

10	39	807 KAR 5:001 Section 16(7)(s)	Summary of latest depreciation study with schedules itemized by major plant accounts, except that telecommunications utilities adopting PSC's average depreciation rates shall identify current and base period depreciation rates used by major plant accounts. If information has been filed in another PSC case, refer to that case's number and style.	John J. Spanos
10	40	807 KAR 5:001 Section 16(7)(t)	List all commercial or in-house computer software, programs, and models used to develop schedules and work papers associated with application. Include each software, program, or model; its use; identify the supplier of each; briefly describe software, program, or model; specifications for computer hardware and operating system required to run program	Sarah E. Lawler
10	41	807 KAR 5:001 Section 16(7)(u)	If utility had any amounts charged or allocated to it by affiliate or general or home office or paid any monies to affiliate or general or home office during the base period or during previous 3 calendar years, file: 1. Detailed description of method of calculation and amounts allocated or charged to utility by affiliate or general or home office for each allocation or payment; 2. method and amounts allocated during base period and method and estimated amounts to be allocated during forecasted test period; 3. Explain how allocator for both base and forecasted test period was determined; and 4. All facts relied upon, including other regulatory approval, to demonstrate that each amount charged, allocated or paid during base period is reasonable.	Jeffrey R. Setser
10	42	807 KAR 5:001 Section 16(7)(v)	If gas, electric or water utility with annual gross revenues greater than \$5,000,000, cost of service study based on methodology generally accepted in industry and based on current and reliable data from single time period.	James E. Ziolkowski
10	43	807 KAR 5:001 Section 16(7)(w)	Local exchange carriers with fewer than 50,000 access lines need not file cost of service studies, except as specifically directed by PSC. Local exchange carriers with more than 50,000 access lines shall file: 1. Jurisdictional separations study consistent with Part 36 of the FCC's rules and regulations; and 2. Service specific cost studies supporting pricing of services generating annual revenue greater than \$1,000,000 except local exchange access: a. Based on current and reliable data from single time period; and b. Using generally recognized fully allocated, embedded, or incremental cost principles.	N/A
10	44	807 KAR 5:001 Section 16(8)(a)	Jurisdictional financial summary for both base and forecasted periods detailing how utility derived amount of requested revenue increase.	Sarah E. Lawler

10	45	807 KAR 5:001 Section 16(8)(b)	Jurisdictional rate base summary for both base and forecasted periods with supporting schedules which include detailed analyses of each component of the rate base.	Sarah E. Lawler Melissa B. Abernathy Christopher M. Jacobi John R. Panizza James E. Ziolkowski Danielle L. Weatherston
10	46	807 KAR 5:001 Section 16(8)(c)	Jurisdictional operating income summary for both base and forecasted periods with supporting schedules which provide breakdowns by major account group and by individual account.	Sarah E. Lawler
10	47	807 KAR 5:001 Section 16(8)(d)	Summary of jurisdictional adjustments to operating income by major account with supporting schedules for individual adjustments and jurisdictional factors.	Sarah E. Lawler Melissa B. Abernathy Christopher M. Jacobi James E. Ziolkowski
10	48	807 KAR 5:001 Section 16(8)(e)	Jurisdictional federal and state income tax summary for both base and forecasted periods with all supporting schedules of the various components of jurisdictional income taxes.	John R. Panizza
10	49	807 KAR 5:001 Section 16(8)(f)	Summary schedules for both base and forecasted periods (utility may also provide summary segregating items it proposes to recover in rates) of organization membership dues; initiation fees; expenditures for country club; charitable contributions; marketing, sales, and advertising; professional services; civic and political activities; employee parties and outings; employee gifts; and rate cases.	Sarah E. Lawler
10	50	807 KAR 5:001 Section 16(8)(g)	Analyses of payroll costs including schedules for wages and salaries, employee benefits, payroll taxes, straight time and overtime hours, and executive compensation by title.	Sarah E. Lawler Renee H. Metzler
10	51	807 KAR 5:001 Section 16(8)(h)	Computation of gross revenue conversion factor for forecasted period.	Sarah E. Lawler
10	52	807 KAR 5:001 Section 16(8)(i)	Comparative income statements (exclusive of dividends per share or earnings per share), revenue statistics and sales statistics for 5 calendar years prior to application filing date, base period, forecasted period, and 2 calendar years beyond forecast period.	Danielle L. Weatherston Christopher M. Jacobi
10	53	807 KAR 5:001 Section 16(8)(j)	Cost of capital summary for both base and forecasted periods with supporting schedules providing details on each component of the capital structure.	Christopher M. Jacobi
10	54	807 KAR 5:001 Section 16(8)(k)	Comparative financial data and earnings measures for the 10 most recent calendar years, base period, and forecast period.	Melissa B. Abernathy Christopher M. Jacobi Danielle L. Weatherston
10	55	807 KAR 5:001 Section 16(8)(l)	Narrative description and explanation of all proposed tariff changes.	Jeff L. Kern
10	56	807 KAR 5:001 Section 16(8)(m)	Revenue summary for both base and forecasted periods with supporting schedules which provide detailed billing analyses for all customer classes.	Jeff L. Kern
10	57	807 KAR 5:001 Section 16(8)(n)	Typical bill comparison under present and proposed rates for all customer classes.	Jeff L. Kern
10	58	807 KAR 5:001 Section 16(9)	The commission shall notify the applicant of any deficiencies in the application within thirty (30) days of the application's submission. An application shall not be accepted for filing until the utility has cured all noted deficiencies.	William Don Wathen, Jr.

10	59	807 KAR 5:001 Section 16(10)	Request for waivers from the requirements of this section shall include the specific reasons for the request. The commission shall grant the request upon good cause shown by the utility.	Legal
10	60	807 KAR 5:001 Section (17)(1)	<p>(1) Public postings.</p> <p>(a) A utility shall post at its place of business a copy of the notice no later than the date the application is submitted to the commission.</p> <p>(b) A utility that maintains a Web site shall, within five (5) business days of the date the application is submitted to the commission, post on its Web sites:</p> <ol style="list-style-type: none"> <li>1. A copy of the public notice; and</li> <li>2. A hyperlink to the location on the commission's Web site where the case documents are available.</li> </ol> <p>(c) The information required in paragraphs (a) and (b) of this subsection shall not be removed until the commission issues a final decision on the application.</p>	Amy B. Spiller
10	61	807 KAR 5:001 Section 17(2)	<p>(2) Customer Notice.</p> <p>(a) If a utility has twenty (20) or fewer customers, the utility shall mail a written notice to each customer no later than the date on which the application is submitted to the commission.</p> <p>(b) If a utility has more than twenty (20) customers, it shall provide notice by:</p> <ol style="list-style-type: none"> <li>1. Including notice with customer bills mailed no later than the date the application is submitted to the commission;</li> <li>2. Mailing a written notice to each customer no later than the date the application is submitted to the commission;</li> <li>3. Publishing notice once a week for three (3) consecutive weeks in a prominent manner in a newspaper of general circulation in the utility's service area, the first publication to be made no later than the date the application is submitted to the commission; or</li> <li>4. Publishing notice in a trade publication or newsletter delivered to all customers no later than the date the application is submitted to the commission.</li> </ol> <p>(c) A utility that provides service in more than one (1) county may use a combination of the notice methods listed in paragraph (b) of this subsection.</p>	Amy B. Spiller



10	62	807 KAR 5:001 Section 17(3)	<p>(3) Proof of Notice. A utility shall file with the commission no later than forty-five (45) days from the date the application was initially submitted to the commission:</p> <p>(a) If notice is mailed to its customers, an affidavit from an authorized representative of the utility verifying the contents of the notice, that notice was mailed to all customers, and the date of the mailing;</p> <p>(b) If notice is published in a newspaper of general circulation in the utility's service area, an affidavit from the publisher verifying the contents of the notice, that the notice was published, and the dates of the notice's publication; or</p> <p>(c) If notice is published in a trade publication or newsletter delivered to all customers, an affidavit from an authorized representative of the utility verifying the contents of the notice, the mailing of the trade publication or newsletter, that notice was included in the publication or newsletter, and the date of mailing.</p>	Amy B. Spiller
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10	63	807 KAR 5:001 Section 17(4)	<p>(4) Notice Content. Each notice issued in accordance with this section shall contain:</p> <p>(a) The proposed effective date and the date the proposed rates are expected to be filed with the commission;</p> <p>(b) The present rates and proposed rates for each customer classification to which the proposed rates will apply;</p> <p>(c) The amount of the change requested in both dollar amounts and percentage change for each customer classification to which the proposed rates will apply;</p> <p>(d) The amount of the average usage and the effect upon the average bill for each customer classification to which the proposed rates will apply, except for local exchange companies, which shall include the effect upon the average bill for each customer classification for the proposed rate change in basic local service;</p> <p>(e) A statement that a person may examine this application at the offices of (utility name) located at (utility address);</p> <p>(f) A statement that a person may examine this application at the commission's offices located at 211 Sower Boulevard, Frankfort, Kentucky, Monday through Friday, 8:00 a.m. to 4:30 p.m., or through the commission's Web site at <a href="http://psc.ky.gov">http://psc.ky.gov</a>;</p> <p>(g) A statement that comments regarding the application may be submitted to the Public Service Commission through its Web site or by mail to Public Service Commission, Post Office Box 615, Frankfort, Kentucky 40602;</p> <p>(h) A statement that the rates contained in this notice are the rates proposed by (utility name) but that the Public Service Commission may order rates to be charged that differ from the proposed rates contained in this notice;</p> <p>(i) A statement that a person may submit a timely written request for intervention to the Public Service Commission, Post Office Box 615, Frankfort, Kentucky 40602, establishing the grounds for the request including the status and interest of the party; and</p> <p>(j) A statement that if the commission does not receive a written request for intervention within thirty (30) days of initial publication or mailing of the notice, the commission may take final action on the application.</p>	Jeff L. Kern
10	64	807 KAR 5:001 Section 17(5)	(5) Abbreviated form of notice. Upon written request, the commission may grant a utility permission to use an abbreviated form of published notice of the proposed rates, provided the notice includes a coupon that may be used to obtain all the required information.	N/A

11	-	807 KAR 5:001 Section 16(8)(a) through (k)	Schedule Book (Schedules A-K)	Various
12	-	807 KAR 5:001 Section 16(8)(l) through (n)	Schedule Book (Schedules L-N)	Jeff L. Kern
13	-	-	Work Papers	Various
14	-	807 KAR 5:001 Section 16(7)(a)	Testimony (Volume 1 of 4)	Various
15	-	807 KAR 5:001 Section 16(7)(a)	Testimony (Volume 2 of 4)	Various
16	-	807 KAR 5:001 Section 16(7)(a)	Testimony (Volume 3 of 4)	Various
17	-	807 KAR 5:001 Section 16(7)(a)	Testimony (Volume 4 of 4)	Various
18-19	-	KRS 278.2205(6)	Cost Allocation Manual	Legal

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

In the Matter of:

The Electronic Application of Duke )  
Energy Kentucky, Inc., for: 1) An )  
Adjustment of the Electric Rates; 2) ) Case No. 2019-00271  
Approval of New Tariffs; 3) Approval of )  
Accounting Practices to Establish )  
Regulatory Assets and Liabilities; and 4) )  
All Other Required Approvals and Relief. )

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**DIRECT TESTIMONY OF**  
**AMY B. SPILLER**  
**ON BEHALF OF**  
**DUKE ENERGY KENTUCKY, INC.**

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September 3, 2019

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**ATTACHMENTS:**

- Attachment ABS-1 2018 J.D. Power Electric Utility Residential Satisfaction Study
- Attachment ABS-2 Q-1 Duke Energy Midwest Fastrack Quarterly Report
- Attachment ABS-3 Duke Energy Midwest Fastrack June 2018 Update

## I. INTRODUCTION

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Amy B. Spiller, and my business address is 139 East Fourth Street,  
3 Cincinnati, Ohio 45202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Business Services LLC (DEBS), as State  
6 President of Duke Energy Kentucky, Inc., (Duke Energy Kentucky or the  
7 Company) and its parent, Duke Energy Ohio, Inc. (Duke Energy Ohio). DEBS  
8 provides various administrative and other services to Duke Energy Kentucky and  
9 other affiliated companies of Duke Energy Corporation (Duke Energy).

10 **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND**  
11 **PROFESSIONAL EXPERIENCE.**

12 A. I received a bachelor's degree in economics and management from Albion  
13 College in Michigan and a law degree from Wake Forest University in Winston-  
14 Salem, N.C. Following law school, I spent two years working for Business Laws,  
15 Inc., a legal publishing company in northeast Ohio. Then, from 1993 to 2003, I  
16 rose from associate to partner at Wilson & Markesbery Co., L.P.A., a small  
17 insurance defense law firm in Cincinnati, Ohio.

18 I joined Cinergy Corp., (Cinergy) in 2003 as an associate general counsel,  
19 focusing on litigation matters. In 2008, following the 2006 merger between  
20 Cinergy and Duke Energy, I was promoted to deputy general counsel, assuming  
21 responsibility relative to Duke Energy's strategic planning in Ohio and Kentucky.  
22 I was also responsible for advancing Duke Energy's rate and regulatory initiatives

1 before the Public Utilities Commission of Ohio and the Kentucky Public Service  
2 Commission (Commission). In January 2018, I was named Vice President of  
3 Government and Community Affairs for Duke Energy Ohio, where I was  
4 responsible for managing state government and regulatory policies, strategies, and  
5 relationships affecting Duke Energy Ohio's interests and those of our Ohio  
6 customers. On June 1, 2018, I was named to my current position of State  
7 President, Duke Energy Ohio and Duke Energy Kentucky.

8 **Q. PLEASE DESCRIBE YOUR DUTIES AS STATE PRESIDENT, DUKE**  
9 **ENERGY KENTUCKY.**

10 A. As State President, Duke Energy Kentucky, I am responsible for ensuring that our  
11 customers continue to have access to adequate, efficient, and reasonable electric  
12 and natural gas service at a fair, just, and reasonable rate and that these services  
13 are provided in accordance with applicable federal and state laws and regulations.  
14 I am also involved in external efforts relating to governmental and regulatory  
15 affairs, interacting with state and community leaders and regulators on matters  
16 relevant to Duke Energy Kentucky's business and presence in the  
17 Commonwealth. Finally, I am responsible for the Company's community  
18 relations and economic development efforts, as well as Duke Energy's charitable  
19 contributions in the Northern Kentucky/Greater Cincinnati region.

20 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**  
21 **PUBLIC SERVICE COMMISSION?**

22 A. Yes. I have previously testified before the Commission.

1 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THESE**  
2 **PROCEEDINGS?**

3 A. My testimony provides an overview of Duke Energy Kentucky's electric business  
4 operations and community involvement in our Northern Kentucky service  
5 territory. I discuss Duke Energy Kentucky's levels of customer satisfaction and  
6 how the constructive regulatory treatment sought in these proceedings will enable  
7 the Company to meet our customers' ever-changing expectations for adequate,  
8 efficient, and reasonable service at a fair, just, and reasonable rate.

9 I next provide an overview of Duke Energy Kentucky's need for an  
10 increase in electric rates and the reasonableness of this request. In this regard, I  
11 also address the Company's proposals to enhance our ability to meet our  
12 customers' expectations with regard to the services we provide. Within this  
13 application, the Company is proposing several initiatives intended to improve our  
14 services and increase customer satisfaction, including, but not limited to,  
15 development of a new Customer Information System (CIS), a proposal to  
16 implement a new major storm deferral mechanism, proposals for: 1) an electric  
17 vehicle (EV) charging pilot program to encourage EV development; 2) creation of  
18 a fee-free payment option for residential customers who wish to pay their utility  
19 bill with a credit or debit card; 3) a distribution battery storage pilot project; and  
20 4) several tariff changes. I also introduce the other witnesses who testify on the  
21 Company's behalf and, in doing so, provide an overview of their testimony.

22 I sponsor several Filing Requirements (FR), including those mandated  
23 under 807 KAR 5:001: FR 7(1), FR 14(1) through FR 14(4), FR 16(1)(b)(1), FR



1 16(1)(b)(2), FR 16(1)(b)(5), FR 16(2), and FR 16(3). I discuss the existing  
2 programs to achieve improvements in efficiency and productivity and the purpose  
3 of each program, as required by FR 16(7)(a). I provide the management statement  
4 of attestation, required by FR 16(7)(e), concerning the forecasted financial data.  
5 Additionally, I sponsor the affidavit in support of the notice requirements under  
6 FR 17(1) through (3). Finally, I sponsor the pre-filing notice as required by KRS  
7 278.180.

## **II. OVERVIEW OF KENTUCKY OPERATIONS**

### **A. COMPANY OVERVIEW**

8 **Q. PLEASE DESCRIBE DUKE ENERGY KENTUCKY'S UTILITY**  
9 **OPERATIONS IN NORTHERN KENTUCKY.**

10 A. Duke Energy Kentucky provides electric service to approximately 142,900  
11 customers and natural gas service to approximately 100,000 customers in Bracken  
12 (gas only), Boone, Campbell, Gallatin (gas only), Grant, Kenton, and Pendleton  
13 counties in Northern Kentucky.

14 From our Cincinnati headquarters, Duke Energy Kentucky directs the  
15 planning, construction, operation, and maintenance of our electric transmission  
16 and distribution systems. The Company's electric customers are served via an  
17 electric transmission and distribution system operated in accordance with good  
18 utility practice as further described by Duke Energy Kentucky witness, Ash M.  
19 Norton. Most customers continue to be served via overhead transmission and  
20 distribution lines; however, the Company is increasingly serving customers with  
21 underground facilities.

1 The Company's local electric operations are as follows:

- 2 • Cincinnati, Ohio – the headquarters for Duke Energy Kentucky;
- 3 • Rabbit Hash, Kentucky – the East Bend Generating Station;
- 4 • Trenton, Ohio – the Woodsdale Generating Station;
- 5 • Erlanger, Kentucky – Duke Energy Kentucky's construction and
- 6 maintenance facility; and
- 7 • Covington, Kentucky – Duke Energy Kentucky's meter reading
- 8 facility.

9 From these locations, Duke Energy Kentucky generates electricity;

10 provides for the construction, operation, and maintenance of our electric delivery

11 system; and conducts its business operations.

12 **Q. PLEASE PROVIDE AN OVERVIEW OF THE DUKE ENERGY**

13 **CORPORATE AND BUSINESS STRUCTURE.**

14 A. Duke Energy is one of the largest utility companies in the United States. Through

15 a series of mergers and acquisitions, including the 2006 merger with Cinergy, the

16 2012 merger with Progress Energy, and the more recent merger with Piedmont

17 Natural Gas Company, Duke Energy now serves approximately 7.4 million

18 electric customers and over 1.5 million natural gas customers, representing a

19 population of over 24 million in seven states, comprising Kentucky, Ohio,

20 Indiana, Florida, North Carolina, South Carolina, and Tennessee.

21 Duke Energy Kentucky is a wholly owned subsidiary of Duke Energy

22 Ohio. Duke Energy Ohio is a wholly owned subsidiary of Cinergy, which is

23 wholly owned by Duke Energy.

1    **Q.    PLEASE DESCRIBE HOW BEING A PART OF THE DUKE ENERGY**  
2    **FAMILY OF COMPANIES ASSISTS DUKE ENERGY KENTUCKY IN**  
3    **PROVIDING ADEQUATE, EFFICIENT, AND REASONABLE SERVICE**  
4    **AT A FAIR, JUST, AND REASONABLE RATE FOR ITS KENTUCKY**  
5    **CUSTOMERS.**

6    A.    As further explained by Duke Energy Kentucky witness Jeffrey R. Setser, Duke  
7    Energy Kentucky is a party to multiple Commission-approved affiliate service  
8    agreements that provide the Company with access to a vast level of resources,  
9    experience, and expertise beyond what Duke Energy Kentucky could achieve as a  
10   stand-alone utility.<sup>1</sup> These various agreements include, among other things, a  
11   service company/operating company agreement and an operating company  
12   agreement. Under the former, Duke Energy Kentucky and, by extension, our  
13   customers, benefit from the defined pool of highly skilled attorneys, accountants,  
14   engineers, customer service representatives, and other professionals whose time  
15   and cost are shared among all utility affiliates within Duke Energy. Under the  
16   latter agreement, Duke Energy Kentucky and our customers benefit from the  
17   services provided by affiliated utility companies that furnish natural gas and  
18   electric service in seven states.

19                Consequently, Duke Energy Kentucky’s customers have access to  
20   resources, including a highly trained and dedicated workforce from multiple

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<sup>1</sup> The Commission approved these services agreements in Case No. 2005-00228, involving the Duke Energy/Cinergy merger, again in Case No. 2011-00124 involving the merger between Duke Energy and Progress Energy, and most recently in Case No. 2016-00312 to incorporate Piedmont as an affiliate party to these agreements.

1 jurisdictions, that are familiar with the Company's systems and are experienced in  
2 the safe operation of the Company's utility infrastructure, thereby enabling the  
3 continued and efficient operation of Duke Energy Kentucky's utility system.  
4 Pursuant to Commission-approved service agreements, Duke Energy Kentucky is  
5 allocated only a portion of these costs. Although this structure affords significant  
6 benefit to our customers, it is not a structure with which they have reason to take  
7 notice. Indeed, the legal entity structure and relationships discussed above are  
8 essentially invisible to and seamless for our Kentucky customers, who receive all  
9 their utility services from Duke Energy Kentucky. This corporate structure is  
10 designed such that our Kentucky customers will continue to receive adequate,  
11 efficient, and reasonable service at a fair, just, and reasonable rate without regard  
12 to corporate structure or organization.

**B. COMMUNITY ENGAGEMENT**

13 **Q. PLEASE GIVE AN OVERVIEW OF DUKE ENERGY KENTUCKY'S**  
14 **ECONOMIC DEVELOPMENT ACTIVITIES.**

15 A. Duke Energy Kentucky embraces our responsibility to promote economic  
16 development in the communities in which we do business. We appreciate that  
17 access to affordable, reliable utility service is a critical factor in a company's  
18 decision about where to locate or expand its facilities. Duke Energy Kentucky is  
19 well positioned to meet our customers' energy needs and attract job-creating  
20 industries and capital investment to our service territory. However, business  
21 clients need more than reliable utility service. They also need readily available  
22 building sites, access to state and local incentives, flexible workforce training

1 programs, and proximity to a community of customers and business partners.  
2 Duke Energy Kentucky assists in meeting these needs through partnerships with  
3 our local communities and the Commonwealth of Kentucky.

4 In 2018, Site Selection magazine named Duke Energy to its Top 10  
5 Utilities in Site Selection for North America for the twentieth consecutive year.  
6 Additionally, Site Selection recognized Duke Energy's "Site Readiness" program  
7 as a best practice. This program is designed to improve large tracts of industrial  
8 land in the service territory, moving them closer to being "fully marketable." In  
9 collaboration with local economic development organizations, Duke Energy  
10 offers funding to local communities that have taken advantage of the program and  
11 spent dollars improving participant sites. In addition to this successful program,  
12 our economic development team collaborates with local, regional, and state  
13 economic development professionals in attracting new business and jobs to our  
14 communities, whether in the field of manufacturing, logistics, distribution, or  
15 professional services. Since inception in 2011, Duke Energy's Urban  
16 Revitalization Initiative has provided over \$2.4 million to 72 projects in our Duke  
17 Energy Ohio and Kentucky service areas for urban redevelopment projects in the  
18 urban core that spur commercial redevelopment and job creation. Around half of  
19 that funding has gone to projects in the Northern Kentucky River Cities.

20 Duke Energy Kentucky's strategic partnerships and board memberships  
21 with local and regional economic development efforts such as the Regional  
22 Economic Development Initiative (REDI) Cincinnati and Northern Kentucky Tri-

1 ED, combined with Duke Energy Kentucky's competitive rates, have resulted in a  
2 number of economic development successes in Northern Kentucky.

3 We estimate that our cooperative efforts, along with those of state and  
4 local economic development officials, have contributed to the creation of nearly  
5 29,468 Northern Kentucky jobs and more than \$4.5 billion of capital investment  
6 in Northern Kentucky since 2006.

7 Duke Energy Kentucky's employees have actively served, and continue to  
8 serve, on several boards and committees of organizations in the community that  
9 promote economic development in the region. Some of these organizations  
10 include:

- 11 • Catalytic Funding Corp. of Northern Kentucky;
- 12 • Cincinnati Business Committee;
- 13 • Cincinnati Center City Development Corporation;
- 14 • Cincinnati USA Regional Chamber of Commerce;
- 15 • Cintrifuse;
- 16 • Gateway Community & Technical College;
- 17 • GROW NKY;
- 18 • Horizon Community Funds of Northern Kentucky;
- 19 • Kentucky Association of Economic Development;
- 20 • Kentucky Chamber of Commerce;
- 21 • NKY Regional Alliance;
- 22 • NKY Workforce Investment Board;
- 23 • Northern Kentucky Chamber of Commerce;

- 1           • Northern Kentucky Tri-ED; and
- 2           • REDI.

3   **Q.   DESCRIBE DUKE ENERGY KENTUCKY’S CHARITABLE GIVING**  
4   **PHILOSOPHY.**

5   A.   Duke Energy Kentucky has made good corporate citizenship a priority by giving  
6       back to the communities we serve. Since 2009, Duke Energy Kentucky and the  
7       Duke Energy Foundation have contributed approximately \$5.3 million in  
8       shareholder dollars to Kentucky charitable organizations. Our contributions are  
9       not only financial in nature, but, rather, consistent with the culture of Duke  
10      Energy, our employees and retirees and their families regularly give back to our  
11      communities by volunteering their time. Indeed, during 2018 alone, we had 61  
12      volunteer events in Kentucky where employees and retirees and their families  
13      volunteered over 3,662 hours of their time.

14   **Q.   DESCRIBE THE METHODS EMPLOYED BY DUKE ENERGY**  
15   **KENTUCKY TO ENGAGE WITH CUSTOMERS.**

16   A.   Our customers depend on the services we provide to power their lives. Moreover,  
17       in this very diverse and dynamic environment, it is important that our customers  
18       are able to engage with Duke Energy Kentucky via a variety of platforms.  
19       Consequently, customers have opportunities to interact with the Company through  
20       various customer service channels both directly and remotely. These programs  
21       include:

- 22           • Automated Phone Service;
- 23           • Business and Industry Service Center at our Call Center;

- 1 • Contact Centers;
- 2 • Duke Energy Mobile App;
- 3 • Enhanced Web Functionality for Online Services;
- 4 • Focus Groups for small/medium businesses; and
- 5 • Third-Party Pay Agents.

6 **Q. DO CUSTOMERS HAVE OPTIONS FOR BOTH MANAGING AND**  
7 **PAYING THEIR BILLS?**

8 A. Yes. Duke Energy Kentucky has a number of programs designed to allow  
9 customers to conveniently manage their bills:

- 10 • Budget Billing: This program provides customers with predictable  
11 monthly payments and better control over their energy spending,  
12 which eases planning and budgeting. Customers who sign up for the  
13 free Budget Billing program may choose from two plans that adjust  
14 periodically based on actual energy usage. The Annual Plan provides  
15 11 months of equal payments with a settle-up on the 12<sup>th</sup> month, while  
16 the Quarterly Plan provides a quarterly review and adjustment of the  
17 budget billing amount, preventing a settle-up month.
- 18 • Adjusted Due Date: This program offers customers more control over  
19 when they pay their energy bill by adjusting their due date forward by  
20 up to 10 business days from their original due date at no charge.
- 21 • Pick Your Due Date: Residential and non-residential customers with  
22 Advanced Metering Infrastructure (AMI) (meter data management-  
23 managed only) meters are eligible for the Pick Your Due Date



1 program. These customers may have their billing cycle changed to  
2 align with their desired due date free of charge.

3 • Payment Confirmations: Duke Energy enrolls all email registered  
4 customers to automatically receive an email when their payment is  
5 received. Customers can choose to receive payment notifications via  
6 text message by updating their preference in My Account.

7 • Paperless Billing: This program allows customers to receive a bill-  
8 ready reminder via email and then view and pay their bill online at  
9 duke-energy.com or the Mobile App versus our standard paper bill that  
10 is mailed to the customer.

11 • Extended Payment Agreements: Customers have the option of making  
12 an Extended Payment Agreement with Customer Service. For  
13 example, if a customer received a disconnection notice and was unable  
14 to pay prior to the planned disconnection date, they may set up the  
15 account for an extended payment agreement.

16 • WinterCare: This program is designed to provide heating assistance to  
17 those in need. The WinterCare program is administered in partnership  
18 with the Northern Kentucky Community Action Commission using  
19 federal low-income guidelines, as well as true need, to determine  
20 program eligibility. Residential customer who are eligible for  
21 WinterCare may receive assistance of up to \$300 per program year.

22 • Home Energy Assistance (HEA): This program provides another  
23 source of relief for customers in need. The program is managed by the

1 Northern Kentucky Community Action Commission using federal  
2 low-income guidelines, as well as true need, to determine program  
3 eligibility. Customers at or below 150% of the Federal Poverty Level  
4 may be eligible to receive up to \$300 in assistance per program year.  
5 HEA program funds are available to income-qualifying customers  
6 once other low-income program funds have been depleted for the  
7 customer.<sup>2</sup>

- 8 • Duke Energy Mobile App: Duke Energy has a new mobile app for  
9 iPhone and Android devices through which Customers can manage  
10 their account, pay bills, report outages, and take advantage of products  
11 and services offered by Duke Energy.
- 12 • High Bill and Usage Alerts: Duke Energy Kentucky auto-enrolls all  
13 eligible non-AMI metered customers in our High Bill Alert program.  
14 These customers are alerted at mid-cycle when their bill is projected to  
15 be 30 percent and \$30 higher than the previous month based on  
16 weather and 12 months of historical usage. Duke Energy transitions all  
17 eligible customers who receive an AMI-MDM certified meter from  
18 High Bill Alerts to our Usage Alerts program, which uses interval data  
19 to calculate their electricity cost. These customers automatically  
20 receive an email at the midpoint of their billing cycle with their current  
21 electricity cost broken down by appliance and projected cost. Usage

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<sup>2</sup> On July 2, 2019, the Company filed a Motion to Amend its HEA program to increase the funding and available benefits and change the program to include monthly subsidy for qualifying customers. As of the date of this filing, the Company's request is still pending before the Commission.

1 Alerts customers can also select a dollar amount to receive budget  
2 alerts. Eligible customers who start service at premises with an AMI-  
3 MDM certified meter are automatically enrolled in our Usage Alerts  
4 program.

5 Although customers can pay their bills using the United States Postal  
6 Service, they also have other options. The Company offers several convenient bill  
7 payment options, which include:

- 8 • Online and Mobile App payments via Speedpay: Customers may make  
9 a one-time, same-day payment online or by phone using a credit card,  
10 debit card or electronic check, which applies the payment to the  
11 account immediately. Currently, a fee of \$1.50 for residential  
12 accounts and \$8.50 per non-residential account transaction up to  
13 \$10,000 applies to each payment. For payments more than  
14 \$10,000, the convenience fee is 2.75 percent of the amount paid.  
15 The fees cover the processing cost associated with handling credit  
16 card and electronic debit payments.
- 17 • Paperless Billing: Customers may enroll in a Paperless Billing option,  
18 allowing them to receive and, if they choose to pay, their bill online at  
19 no cost.
- 20 • Auto Pay: The Auto Pay function is a free service for customers  
21 enrolled in Paperless Billing and provides online access to either make  
22 a one-time payment or cancel or edit any scheduled future payments.

- 1                   • Email Bill Delivery: Residential and non-residential customers who  
2                   enroll in Email Bill Delivery are provided with a secure PDF copy of  
3                   their bill via email. Once enrolled, the customer receives their bill as  
4                   an offline email attachment, which can be accessed and paid through  
5                   any electronic device, including mobile devices. Customers do not  
6                   have to be enrolled in Paperless Billing to be eligible for this program.
- 7                   • Automatic Bank Draft; and This program allows customers to have  
8                   their monthly charges auto drafted from their personal checking or  
9                   savings account at no cost.
- 10                  • Pay Agent Network: Duke Energy offers over 60 locations in the Duke  
11                  Energy Kentucky service area for customers to make cash, check, or  
12                  money order payments. These locations are found in areas where  
13                  customers do other business, such as grocery stores, pharmacies,  
14                  convenience stores, and larger retailers.

**C. CUSTOMER SATISFACTION**

15 **Q. HOW DOES DUKE ENERGY KENTUCKY MEASURE PERFORMANCE**  
16 **FOR PROVIDING HIGH QUALITY CUSTOMER SERVICE?**

17 A. Duke Energy Kentucky strives to consistently provide high quality customer  
18 service. We currently measure customer satisfaction performance through three  
19 primary tools: the Customer Experience Monitor (CX Monitor) survey; the annual  
20 J.D. Power Electric Utility Residential Customer Satisfaction Study (J.D. Power  
21 Study); and Duke Energy’s proprietary transaction survey – Fastrack.

1 **Q. PLEASE DESCRIBE THE CX MONITOR SURVEY AND DUKE**  
2 **ENERGY KENTUCKY'S PERFORMANCE IN THIS STUDY.**

3 A. CX Monitor is a proprietary survey to measure Net Promoter Score (NPS) by  
4 asking customers to rate 'How likely it is that they will recommend Duke Energy  
5 Kentucky to a friend or colleague' on a '0-10' scale. NPS is a top metric utilized  
6 by companies across industries to measure customer advocacy. Duke Energy  
7 Kentucky's CX Monitor survey began fielding in January of 2018, meaning that  
8 2018 represents our first full year of baseline data gathered for the  
9 commonwealth. Duke Energy Kentucky measured an initial score of +15.5 in  
10 January of 2018 and improved our NPS score to +32.0 in December of 2018. This  
11 means that the Company has steadily improved scores in key experiences, and for  
12 the duration of 2018, had more promoters than detractors in the commonwealth.

13 **Q. PLEASE DESCRIBE THE J.D. POWER STUDIES AND DUKE ENERGY**  
14 **KENTUCKY'S PERFORMANCE UNDER THOSE STUDIES.**

15 A. J.D. Power is a well-known measure of consumer opinion and customer  
16 satisfaction in many key industries. J.D. Power annually surveys electric utilities'  
17 residential customers regarding their overall satisfaction with their utility, as well  
18 as key areas of their relationship. Duke Energy Midwest (Kentucky and Ohio)  
19 participates in these annual utility studies.

20 The J.D. Power Study calculates overall customer satisfaction based on six  
21 performance areas: (1) power quality and reliability; (2) billing and payment; (3)  
22 price and value; (4) corporate citizenship; (5) communications; and (6) customer  
23 service. J.D. Power published the final results of its 2019 Customer Satisfaction

1 Study on June 25, 2019.<sup>3</sup> Attachment ABS-1 is an excerpt from this recent  
2 publication that provides a relevant summary of residential customer satisfaction  
3 for Midwest utilities.

4 J.D. Power scores for Duke Energy Midwest have grown a significant +34  
5 points since the previous year's study, placing Duke Energy Midwest into the  
6 second quartile overall and +10 points above the industry average. Through these  
7 results, Duke Energy Midwest was recognized by J.D. Power as one of the top  
8 improvers in the country. We are excited about the improvement in these scores  
9 and believe they reflect our commitment to improving our customers' experience  
10 across several key areas.

11 **Q. PLEASE DESCRIBE FASTRACK AND THE COMPANY'S FASTRACK**  
12 **PERFORMANCE.**

13 A. In addition to the independent J.D. Power Study, our internal post-transaction  
14 customer satisfaction measurements continue to reflect strong performance in  
15 meeting the needs of our customers. Through Fastrack, Duke Energy's proprietary  
16 post-transaction study, we regularly survey residential customers who have had a  
17 recent service interaction with Duke Energy Kentucky. Because of sample size,  
18 Fastrack scores for Duke Energy Kentucky are combined with Duke Energy Ohio,  
19 and are expressed in aggregate in what we call Duke Energy Midwest (DEMW).  
20 Because Fastrack measures service repair and other transactional experiences that  
21 can be infrequent, the number of Duke Energy Kentucky customers who both had

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<sup>3</sup> The 2018 J.D. Power Gas Utility Residential Customer Satisfaction Study is comprised of four waves of interviews: 1) September/October 2017; 2) December 2017/January 2018; 3) March/April 2018; and 4) June/July 2018. The June/July 2018 wave of results will be released on or about September 11, 2018.

1 the type of service experience and then responded to the 2018 phone based  
2 Fastrack survey is too small to be statistically significant. Therefore, we combine  
3 these scores with customers in Ohio to review satisfaction trends at a more  
4 statistically valid and meaningful level.

5 In 2018, Fastrack was administered to a random sample of customers  
6 roughly 24-48 hours after these customers have a service interaction/experience  
7 with the Company. In 2018, customers responded to a live phone interview and  
8 provide ratings on their overall satisfaction, as well as ratings on each part of their  
9 end-to-end experience. From 2019 forward, Fastrack has transitioned to an online  
10 format and all customers are now surveyed via email. Two key processes are  
11 measured by these surveys, reflecting the majority of electric service interactions  
12 customers have with Duke Energy Kentucky: (1) service initiation requests  
13 (requests to turn on or transfer service); and (2) billing issues (billing  
14 inquiries/requests/complaints). The results of these surveys enable Duke Energy  
15 Kentucky to identify what aspects of the customer journey are working well and  
16 what aspects could be enhanced to improve the customer experience. While still  
17 in the phone format in 2018, these surveys were conducted daily (except Sundays  
18 and major holidays) throughout the year by an independent research firm –  
19 Bellomy Research. Between 2014 and 2018, we accumulated over 3,000 Duke  
20 Energy Kentucky survey responses, which represent the “voice” of our Kentucky  
21 customers.

22 The results are expressed on the basis of the percentage of respondents  
23 who are highly satisfied and the percentage who are least satisfied. Using a

1 ranking system of zero to ten, customers who rated the Company an eight or  
2 higher are considered to be highly satisfied and those who rated the Company at a  
3 four or below are considered to be least satisfied. Attachments ABS-2 and ABS-3  
4 are copies of the Q-1 Duke Energy Midwest Fastrack Quarterly Report and the  
5 Duke Energy Midwest Fastrack June 2018 Update, respectively.

6 Duke Energy Kentucky's customer satisfaction scores indicate that overall  
7 customer satisfaction is relatively high and either steady or improving. Through  
8 the first six months of 2018, customers provided the following ratings:

- 9 • **Service Initiation (Electric):** 91 percent of Duke Energy Kentucky  
10 residential customers were highly satisfied with their overall service  
11 initiation experience; and
- 12 • **Billing Questions/Requests/Complaints:** 84 percent of Duke Energy  
13 Kentucky residential customers were highly satisfied with their overall  
14 billing experience.

15 These surveys also indicate that our customers want timely electric service  
16 initiation and better communication to keep them informed.

**D. DEVELOPMENTS SINCE THE COMPANY'S LAST  
ELECTRIC RATE CASE**

17 **Q. PLEASE SUMMARIZE THE SIGNIFICANT OPERATIONAL**  
18 **DEVELOPMENTS AND INVESTMENTS THAT HAVE OCCURRED**  
19 **SINCE THE 2017 RATE CASE.**

20 **A.** Duke Energy Kentucky continues to make prudent operational decisions and  
21 investments in our electric generation and delivery system. Following the 2017  
22 Rate Case, Duke Energy Kentucky completed our deployment of an AMI. The



1 Company has also completed construction of our Woodsdale Generating Station's  
2 dual fuel system that provides emergency fuel and enables the station to meet  
3 capacity performance requirements implemented by PJM Interconnection L.L.C.  
4 (PJM).

5 In addition, Duke Energy Kentucky continues to invest in the safety and  
6 reliability of our electric delivery system, ensuring localized economic  
7 development is supported by having adequate infrastructure and capacity  
8 available in areas where growth is occurring. Duke Energy Kentucky is  
9 experiencing significant development in specific areas of our service territory in  
10 Northern Kentucky where additional capacity and facilities are necessary to  
11 provide safe, reliable, and adequate service. Company witness Norton discusses  
12 this and other necessary infrastructure investments further in her testimony.

13 **Q. PLEASE DESCRIBE THE INVESTMENTS THE COMPANY IS MAKING**  
14 **TO FURTHER ENHANCE SERVICES FOR CUSTOMERS.**

15 A. Looking forward, the Company is exploring strategies to improve the service we  
16 provide to customers and the overall performance of our electric delivery system.  
17 The Company continues to evaluate opportunities to make prudent investments in  
18 new technologies that provide value to our customers. Examples of such  
19 innovative technologies included in this proceeding, which I discuss later in my  
20 testimony, are a new CIS, pilot programs to support development of vehicle  
21 electrification infrastructure, and battery storage.

22 Additionally, Duke Energy Kentucky continues to work with local  
23 communities to guarantee that our energy delivery system can support key

1 initiatives for these communities. One such example is the capability for our  
2 municipal customers to deploy a digital electric delivery infrastructure through  
3 our lighting tariffs, as a framework for supporting local municipal “smart city”  
4 planning.

5 **Q. PLEASE BRIEFLY DESCRIBE THE COMPANY’S DIGITAL ELECTRIC**  
6 **DELIVERY INFRASTRUCTURE THAT SUPPORTS SMART CITY**  
7 **PLANNING.**

8 A. The term “smart city” can mean different things to different people, but for the  
9 purposes of my testimony, I am referencing the desire of cities to employ new  
10 technologies to operate more safely, efficiently, and effectively. Some examples  
11 of technologies associated with this term include but are not limited to:

- 12 • Cameras;
- 13 • Pedestrian counters;
- 14 • Traffic control;
- 15 • Environmental sensors (e.g., air quality, temperature, hazardous  
16 gases);
- 17 • Waste management sensors;
- 18 • Gunshot detection sensors;
- 19 • Parking space monitoring;
- 20 • Digital banners;
- 21 • Wi-Fi networks; and
- 22 • Small cell wireless.

1 Duke Energy Kentucky's lighting tariffs include offerings for customers,  
2 including municipalities, to install multi-use poles that to support these  
3 technologies.

**III. OVERVIEW OF DUKE ENERGY KENTUCKY'S RATE CASE**

4 **Q. PLEASE EXPLAIN WHY DUKE ENERGY KENTUCKY PROPOSES TO**  
5 **INCREASE ITS RETAIL ELECTRIC RATES.**

6 A. The Company proposes new rates because our present base rates are no longer  
7 sufficient to enable the Company to furnish adequate, efficient, and reasonable  
8 service or have the opportunity to earn a fair rate of return on investments. Duke  
9 Energy Kentucky also needs to reflect the costs of service related to our capital  
10 investments and the operations and maintenance of our electric generation,  
11 transmission, and distribution systems that have occurred since our last rate case.

12 **Q. PLEASE GENERALLY DESCRIBE DUKE ENERGY KENTUCKY'S**  
13 **PROPOSED RATE INCREASE.**

14 A. Duke Energy Kentucky proposes to increase our non-fuel electric base rates so as  
15 to increase our annual base electric rate revenues for our electric business by  
16 approximately \$45.6 million. Additionally, through this case, the Company is also  
17 proposing several enhancements for customers, including, but not limited to:

- 18 • Transaction Fee-Free Payment Option for Residential Customers: In  
19 an effort to enhance convenience and satisfaction for customers who  
20 desire to pay their electric bill with a credit or debit card, the Company  
21 is proposing to remove the point of sale transaction fee that is charged  
22 by vendors and incorporating those costs into base rates.

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- Encouraging EV development: Duke Energy Kentucky witness Lang W. Reynolds supports the Company’s proposal for an EV Pilot in his direct testimony. The EV Pilot is intended to provide both infrastructure for EV charging in the Company’s Northern Kentucky service territory and modest incentives to assist customers in investing in EV technologies. The EV Pilot Program consists of five distinct programs: 1) EV Fast Charge Program; 2) Electric Transit Bus Charging Program; 3) Non-Road Electrification Incentive Program; 4) Residential EV Charging Incentive Program; and 5) Commercial EV Charging Incentive Program.
- Implementation of a new CIS: Duke Energy Kentucky is updating our existing CIS to a new, state of the art system as more fully explained by Duke Energy Kentucky witness, Retha Hunsicker. This software investment will occur over time and will be fully in service by 2022 as part of a consolidated Duke Energy effort to modernize the customer experience in all jurisdictions and provide greater flexibility and efficiency in meeting ever-evolving customer expectations.
- Green Source Tariff: In response to large customers’ desire to have access to renewable resources in the wholesale market to meet their corporate sustainability goals, the Company is proposing to implement a new Green Source Advantage Tariff. This tariff is designed for customers that wish to invest in a specific renewable energy resource and receive the “green attributes” from a specific renewable resource.

1 Through this premium and voluntary tariff, Duke Energy Kentucky  
2 will continue to serve the customer under our normal tariffed rates, but  
3 customer can elect to have the Company, on the customer's behalf,  
4 contract with a third party in PJM, that will construct a renewable  
5 resource to the customer's sizing specifications whose output would  
6 then be sold directly into the market. The customer, through a long-  
7 term, lease-like arrangement, will be responsible for all costs of the  
8 asset over its life and will receive any revenues received from the  
9 energy and capacity (if any) obtained in the wholesale markets. Such  
10 revenues, to the extent they would exceed the sunk costs of the asset,  
11 can be used by the customer as an offset to its Duke Energy bill. If the  
12 resource's output revenues do not exceed the costs of the asset, the  
13 resource would result in a net charge on the customer's bill.

- 14 • Battery storage: as explained by duke energy Kentucky witness, dr.  
15 Zachary Kuznar, duke energy Kentucky is proposing an approximate  
16 5.5-megawatt (mw) distribution battery energy storage system to be  
17 attached to the company's distribution system in Edgewood,  
18 Kentucky. This battery pilot will provide benefits to all duke energy  
19 Kentucky customers through frequency regulation in the PJM market.  
20 The project will be located on a circuit that will benefit from enhanced  
21 reliability given its proximity to a major hospital.

22 The approximate \$45.6 million increase to the current electric base rate  
23 revenue requirement represents an increase to total electric revenues of

1 approximately 12.5 percent across all customer classes. This rate increase is  
2 necessary to allow Duke Energy Kentucky to recover our costs for providing  
3 reliable electric service, and have the opportunity to earn a fair return on our  
4 shareholders' investment in electric generation and local transmission and  
5 distribution facilities.

6 **Q. WHAT TEST PERIOD IS THE COMPANY USING IN THESE**  
7 **PROCEEDINGS?**

8 A. Duke Energy Kentucky is using a forecasted test period that spans the twelve  
9 months beginning April 1, 2020, and ending March 31, 2021. Duke Energy  
10 Kentucky witness Christopher Jacobi explains how the Company determined the  
11 basis for the forecasted test period.

12 **Q. PLEASE BRIEFLY DESCRIBE THE COMPANY'S PROPOSAL TO USE**  
13 **THE RATE BASE METHOD TO ESTABLISH RATES.**

14 A. Through his direct testimony, Company witness William Don Wathen Jr.  
15 discusses this proposal in greater detail and, as such, I only briefly mention it  
16 here. Historically, the Company's electric base rates have been determined with  
17 reference to a return on capitalization. Although this methodology may have been  
18 appropriate in the past, another methodology is more common today. Specifically,  
19 and as evident in other Duke Energy jurisdictions, a return-on-rate base approach  
20 provides a transparent and effective way to establish base rates. The Commission  
21 recently approved the return on rate-base approach for the Company's natural gas  
22 base rates in Case No. 2018-00261. It is logical, reasonable, and administratively  
23 more efficient for both the Company and the Commission for Duke Energy Ohio,

1 a combination electric and natural gas company, to have its rates determined in a  
2 similar manner for both services.

3 **Q. PLEASE FURTHER DESCRIBE THE COMPANY'S PROPOSAL TO**  
4 **IMPLEMENT A STORM DEFERRAL MECHANISM.**

5 A. Duke Energy Kentucky is seeking to implement a mechanism that will enable the  
6 Company to defer actual costs incurred during major storms that are incremental  
7 or decremental to amounts in base rates. Major storms are not predictable and can  
8 result in significant and unplanned expense. The Commission has a history of  
9 working with utilities during these anomalous events to create deferrals. Most  
10 recently, the Commission approved such a deferral for Duke Energy Kentucky  
11 related to a winter ice storm in November 2018.<sup>4</sup> In this case, Duke Energy  
12 Kentucky is seeking authority to create an annual deferral mechanism that will  
13 create a regulatory asset or liability as needed to account for actual storm  
14 restoration costs that are over or under amounts in base rates. Duke Energy  
15 Kentucky witnesses Danielle L. Weatherston and Wathen describe this  
16 mechanism in their direct testimonies.

#### IV. INTRODUCTION OF WITNESSES

17 **Q. PLEASE INTRODUCE THE OTHER WITNESSES IN THESE**  
18 **PROCEEDINGS.**

19 A. I identify below the other individuals who will present testimony on behalf of  
20 Duke Energy Kentucky, as well as the subject matters of their respective  
21 testimony:

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<sup>4</sup> *In the Matter of the Application of Duke Energy Kentucky, Inc. for an Order Approving the Establishment of a Regulatory Asset*, Case No. 2018-00416 (Ky. P.S.C., March 25, 2019).

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- Melissa B. Abernathy, Manager Accounting II, offers testimony on Duke Energy Kentucky’s actual net plant in service contained in rate base and other actual plant-related information.
- TK Christie, Director Distribution Vegetation Management, offers testimony on Duke Energy Kentucky’s vegetation management practices.
- Retha Hunsicker, Vice President Customer Connect-Solutions discusses the Company’s efforts to create an enhanced CIS that is capable of delivering new and better flexibility for customers to control and manage their energy consumption.
- Christopher M. Jacobi, Director, Regional Financial Forecasting, presents testimony regarding Duke Energy Kentucky’s credit ratings, financial objectives, cash requirements, and capital structure, as well as Duke Energy Kentucky’s budgeting and forecasting processes.
- Jeff L. Kern, Lead Rates and Regulatory Strategy Analyst, offers testimony as to rate design and tariff language.
- Zachary Kuznar PhD, Managing Director Combined Heat and Power Microgrid and Energy Storage Development, discusses the Company’s proposal for a battery storage project on our distribution system.
- Sarah E. Lawler, Director Rates, and Regulatory Planning, provides testimony supporting Duke Energy Kentucky’s overall revenue requirement for the test period and certain adjustments to the test period financial data.



- 1                   • Renee Metzler, Managing Director Retirement, supports the  
2                   Company's compensation and benefits programs.
- 3                   • Roger A. Morin, PhD, Principal, Utility Research International, offers  
4                   testimony on Duke Energy Kentucky's requested rate of return.
- 5                   • J. Michael Mosley, Vice President Midwest Generation, discusses the  
6                   Company's Generation Portfolio.
- 7                   • Ash M. Norton, Director Distribution Design Engineering, discusses  
8                   the Company's distribution system and how it provides safe, adequate,  
9                   efficient, and reasonable service.
- 10                  • John Panizza, Director, Tax Operations, addresses the Company's tax  
11                  expense in the test period revenue requirement.
- 12                  • Benjamin Walter Bohdan Passty, PhD, Lead Load Forecasting  
13                  Analyst, performed and supports the Company's electric load forecast.
- 14                  • Lesley G. Quick, Vice President Revenue Services discusses the  
15                  Company's proposal to create a transaction fee-free payment option  
16                  for residential customers wishing to pay their bill with a credit or debit  
17                  card and proposed deterrents for fraud and meter tampering.
- 18                  • Lang W. Reynolds, Director of Electrification Strategy, discusses the  
19                  Company's proposal for an EV Pilot.
- 20                  • Andrew S. Ritch, Wholesale Renewable Manager, discusses the  
21                  Company's proposed Green Source Tariff.
- 22                  • Jeffrey R. Setser, Director of Allocations and Reporting, supports the  
23                  Company's various service agreements and associated allocations.

- 1                   • John J. Spanos, Gannet Fleming Valuation and Rate Consultants, LLC,  
2                   provides testimony on Duke Energy Kentucky’s latest depreciation  
3                   study.
- 4                   • John A. Verderame, Managing Director Power Trading and Dispatch,  
5                   discusses the Company’s participation in the wholesale electric  
6                   markets.
- 7                   • Danielle L. Weatherston, Manager Accounting II, offers testimony on  
8                   Duke Energy Kentucky’s capital accounting processes and sponsors  
9                   certain accounting information used for the test period financial data
- 10                  • William Don Wathen Jr., Director, Rates and Regulatory Strategy,  
11                  Ohio and Kentucky, provides a more detailed overview of the filing  
12                  including support for the Company’s Storm Deferral and use of a rate  
13                  base methodology to calculate the revenue requirement.
- 14                  • James E. Ziolkowski, Director, Rates and Regulatory Planning,  
15                  provides testimony regarding Duke Energy Kentucky’s cost of service  
16                  study.

**V.     ATTACHMENTS SPONSORED BY WITNESS**

17   **Q.     PLEASE DESCRIBE FR 7(1).**

18   A.     FR 7(1) requires the original and 10 copies of the Application to be filed plus a  
19           copy for anyone named as an interested party.

20   **Q.     PLEASE DESCRIBE FR 14(1) THROUGH FR 14(4).**

21   A.     These filing requirements provide for the Company to seek proposed new rates  
22           through a written Application addressing various matters, including the full name,

1 address, and electronic mail address of the Company and set forth the facts upon  
2 which the Application is based, with a request for the order, authorization,  
3 permission, or certificate desired and a reference to the particular law requiring or  
4 providing the same. FR 14(2) applies to Duke Energy Kentucky because it is a  
5 corporation, registered to do business, and is in good standing in the  
6 Commonwealth of Kentucky. The Application submitted in these proceedings  
7 includes this information and was prepared at my direction. FR 14(3) and FR  
8 14(4) are not applicable to Duke Energy Kentucky because it is neither a limited  
9 liability company nor a limited partnership.

10 **Q. PLEASE DESCRIBE FR 16(1)(b)(1).**

11 A. FR 16(1)(b)(1) is a statement for the reason for the adjustment. As I explained  
12 above and as further explained by Mr. Wathen, the Company is proposing new  
13 electric base rates because the present rates reflect the cost of service from the  
14 2017 Rate Case, which is no longer sufficient to enable the Company to furnish  
15 adequate, efficient, and reasonable service at a fair, just, and reasonable rate.  
16 Duke Energy Kentucky also needs to reflect the costs of service related to capital  
17 investments and the operation and maintenance of our electric generation,  
18 transmission, and distribution systems generating and electric delivery systems  
19 that have occurred since the 2017 Rate Case.

20 **Q. PLEASE DESCRIBE FR 16(1)(b)(2).**

21 A. FR 16(1)(b)(2) is the certificate of assumed name. Duke Energy Kentucky's  
22 actual legal name is "Duke Energy Kentucky, Inc." The Company has filed for

1 the assumed name of “Duke Energy.” The certificate of assumed name is  
2 provided with our filing.

3 **Q. PLEASE DESCRIBE FR 16(1)(b)(5).**

4 A. FR 16(1)(b)(5) is a statement that customer notice has been given in accordance  
5 with the Commission’s rules. The Company is publishing notice in accordance  
6 with the Commission’s regulations.

7 **Q. PLEASE DESCRIBE FR 16(2).**

8 A. FR 16(2) is the notice of intent submitted to the Commission at least 30, but no  
9 more than 60, days prior to filing the Application. The notice was filed on August  
10 1, 2019, at my direction.

11 **Q. PLEASE DESCRIBE FR 16(3).**

12 A. FR 16(3) states that notice given in accordance with 807 KAR 5:001 Section 7  
13 will satisfy notice requirements of 807 KAR 5:051, Section 2. The Company  
14 provided notice to customers in accordance with 807 KAR 5:001 Section 7.

15 **Q. PLEASE DESCRIBE FR 16(7)(a).**

16 A. FR 16(7)(a) is a statement of attestation from me, the utility’s chief officer in  
17 charge of Kentucky operations on the existing programs to achieve improvements  
18 in efficiency and productivity, including an explanation of the purpose of each  
19 program. The efficiency and productivity benefits that have resulted from these  
20 programs have occurred over time and thus are reflected in the Company’s  
21 budgets included in the forecasted test period in these proceedings. These  
22 programs are described below:

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- Duke/Progress merger: In July 2012, Duke Energy and Progress Energy closed their merger. Duke Energy Kentucky has benefitted from the implementation of best practices and through the access to additional resources and expertise from its sister electric utilities in five other jurisdictions. The Company has benefitted from the economies of scale that naturally arise from being a part of a combined corporation with a market capitalization of more than \$52.1 billion.
- Service outage management systems: We manage electric outages using the following systems designed to enhance efficiency and productivity: Supervisory Control and Data Acquisition, the Distribution Outage Management System, and the Distribution Management System. Ms. Norton describes our outage management process and systems in more detail.
- Electric distribution system maintenance programs: Our major programs to achieve efficiency and productivity in maintaining our distribution system are the substation inspection program, the line inspection program, the vegetation management program, the underground replacement program, the capacitor installation maintenance program, and infrared scanning of equipment. These programs are all designed to keep our distribution systems in good working order through efficient use of our resources. These programs are part of our distribution maintenance practices, which Ms. Norton discusses.

- 1                   • Plant maintenance and pollution control improvements: Mr. Mosley  
2                   discusses various maintenance programs and capital improvement  
3                   programs to install pollution control equipment, which are designed to  
4                   enhance the efficiency and productivity of the Plants

5                   The cost savings impacts of these programs are reflected in the forecasted test  
6                   period.

7   **Q.   PLEASE DESCRIBE FR 16(7)(e).**

8   A.   FR 16(7)(e) is a statement of attestation signed by me, the utility’s chief officer in  
9           charge of Kentucky operations, that the forecast is reasonable, reliable, and made  
10          in good faith and all basic assumptions used in the forecast have been identified  
11          and justified and the forecast contains the same assumptions and methodologies  
12          as used in the forecast for use by management and an explanation for differences  
13          that exist, if applicable, and that productivity and efficiency gains are included.

14   **Q.   PLEASE DESCRIBE FR 17(1)**

15   A.   FR 17(1) relates to public postings. Duke Energy Kentucky will post a copy of the  
16          notice and Application at our place of business and will also make available on  
17          the Company’s website a copy of the public notice and a hyperlink to the  
18          Commission’s website where the case documents will be available.

19   **Q.   PLEASE DESCRIBE FR 17(2).**

20   A.   FR 17(2) is the customer notice.

21   **Q.   PLEASE DESCRIBE FR 17(3).**

22   A.   FR 17(3) includes the method of notice. Duke Energy Kentucky has published  
23          notice in newspapers of general circulation. Company witness Kern supports FR

1 17(4), which describes required content of the notice. Duke Energy Kentucky has  
2 included all content listed in FR 17(4) in its notice.

3 **Q. PLEASE DESCRIBE FR KRS 278.180.**

4 A. FR KRS 278.180 is the pre-filing notice.

**VI. CONCLUSION**

5 **Q. WERE FR 7(1), FR 14(1), FR 14(2), 14(3), 14(4), FR 16(1)(b)(1), FR**  
6 **16(1)(b)(2), FR 16(1)(b)(5), FR 16(2), FR 16(3), FR 16(7)(a), FR 16(7)(e), FR**  
7 **17(1), FR 17(2), FR 17(3), AND FR KRS 278.180 PREPARED BY YOU OR**  
8 **UNDER YOUR SUPERVISION?**

9 A. Yes.

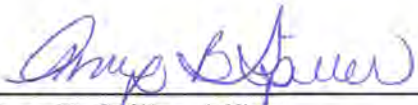
10 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

11 A. Yes.

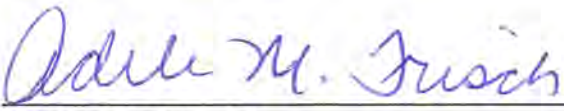
**VERIFICATION**

STATE OF OHIO                    )  
  )  
COUNTY OF HAMILTON        )        **SS:**

The undersigned, Amy B. Spiller, State President of Duke Energy Ohio, Inc. and its subsidiary, Duke Energy Kentucky, Inc., being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of her knowledge, information and belief.

  
\_\_\_\_\_  
Amy B. Spiller, Affiant

Subscribed and sworn to before me by Amy B. Spiller, on this 3<sup>rd</sup> day of September, 2019.

  
\_\_\_\_\_  
NOTARY PUBLIC



**ADELE M. FRISCH**  
Notary Public, State of Ohio  
My Commission Expires 01-05-2024

My Commission Expires: 1/5/2024





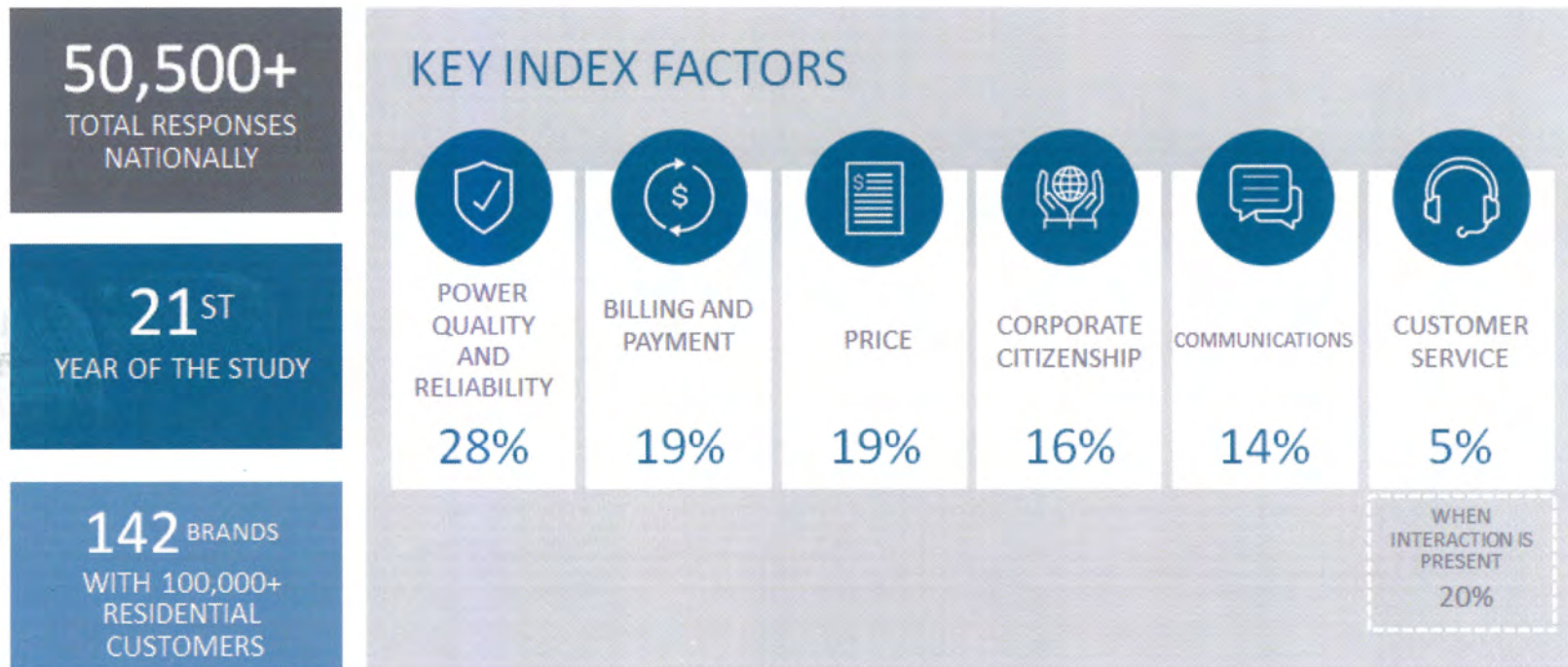
# J.D. POWER

2019 Electric Residential Customer  
Satisfaction Study<sup>SM</sup>

Final Results Preview

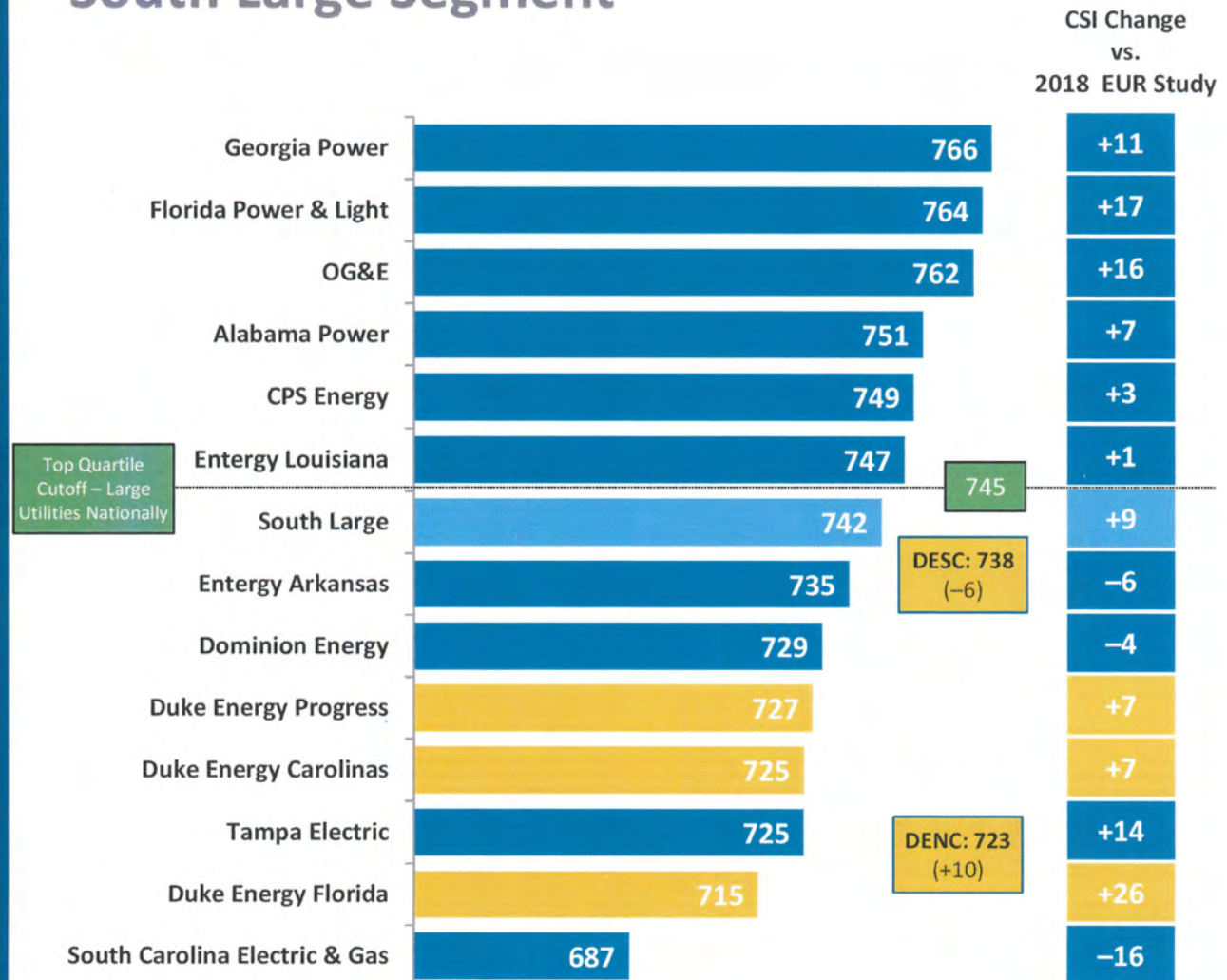
*June 26, 2019*

## 2019 J.D. Power Electric Utility Residential Study Study Overview & Key Index Factors



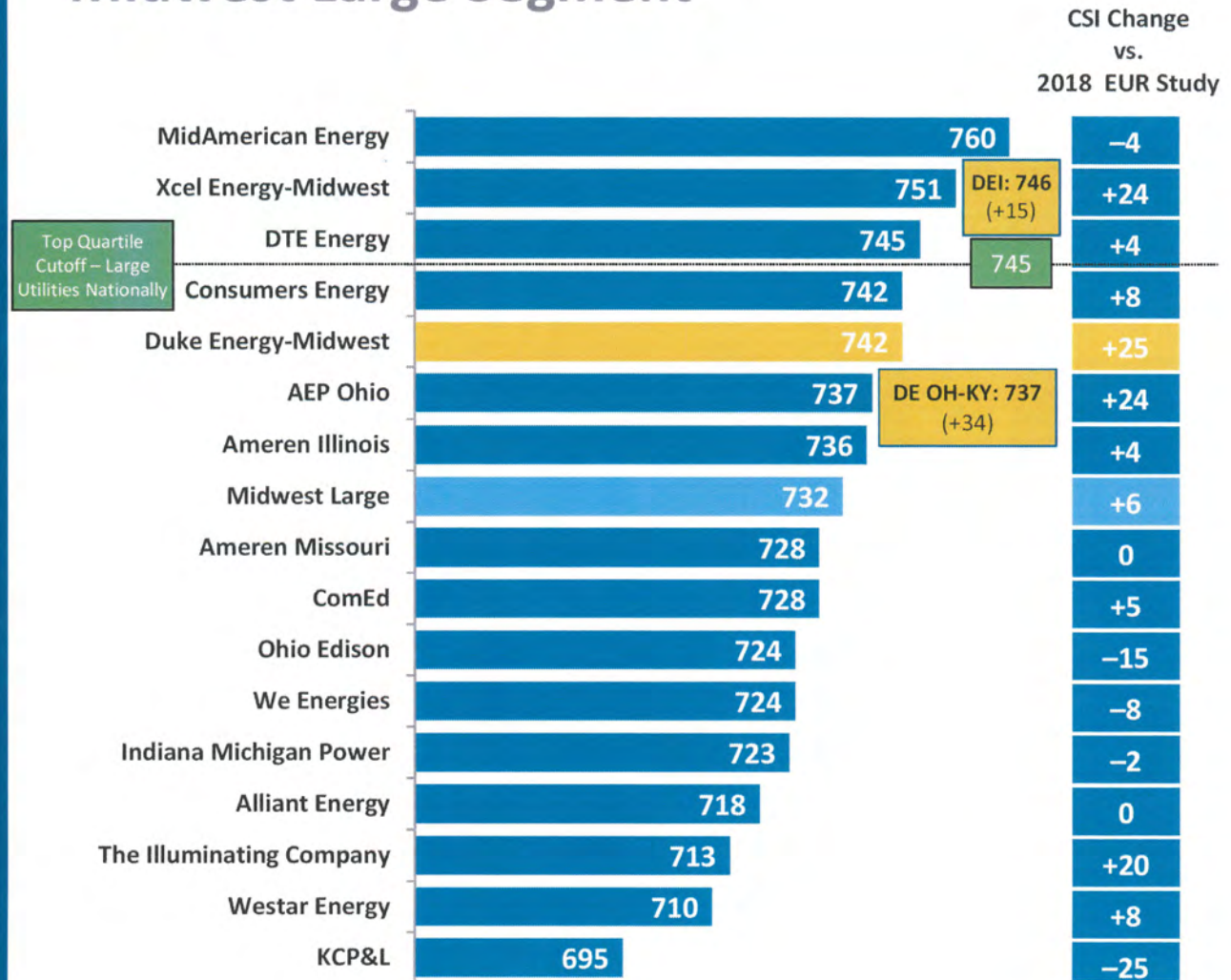
**South  
Large  
Region –  
Final Result**

**2019 Final Overall CSI:  
South Large Segment**



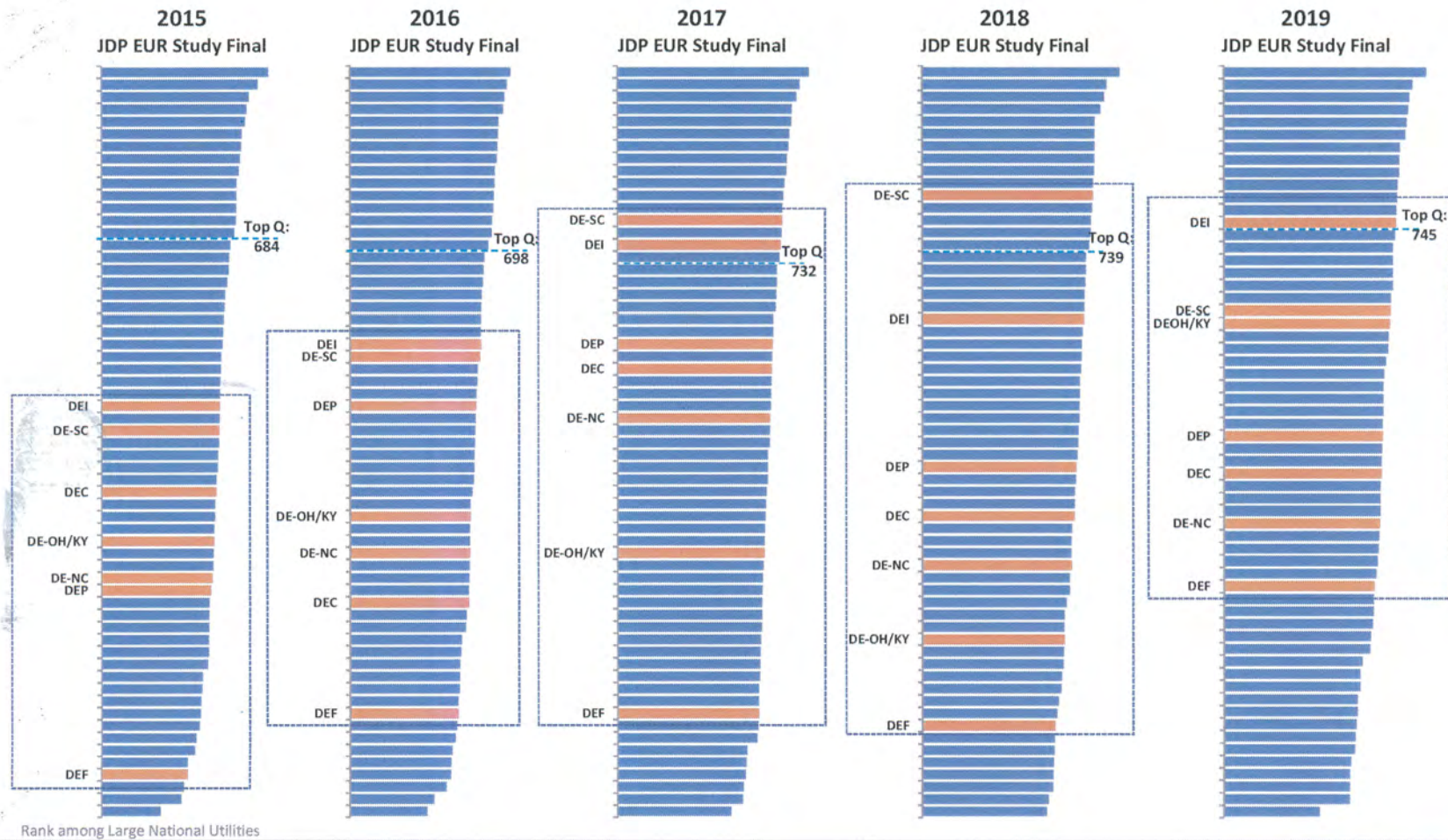
**Midwest  
Large  
Region –  
Final Result**

**2019 Final Overall CSI:  
Midwest Large Segment**



2019 Electric Utility Residential Customer Satisfaction Study<sup>SM</sup>

# 'Duke Energy Utilities' Rank Among Large Utilities Nationally



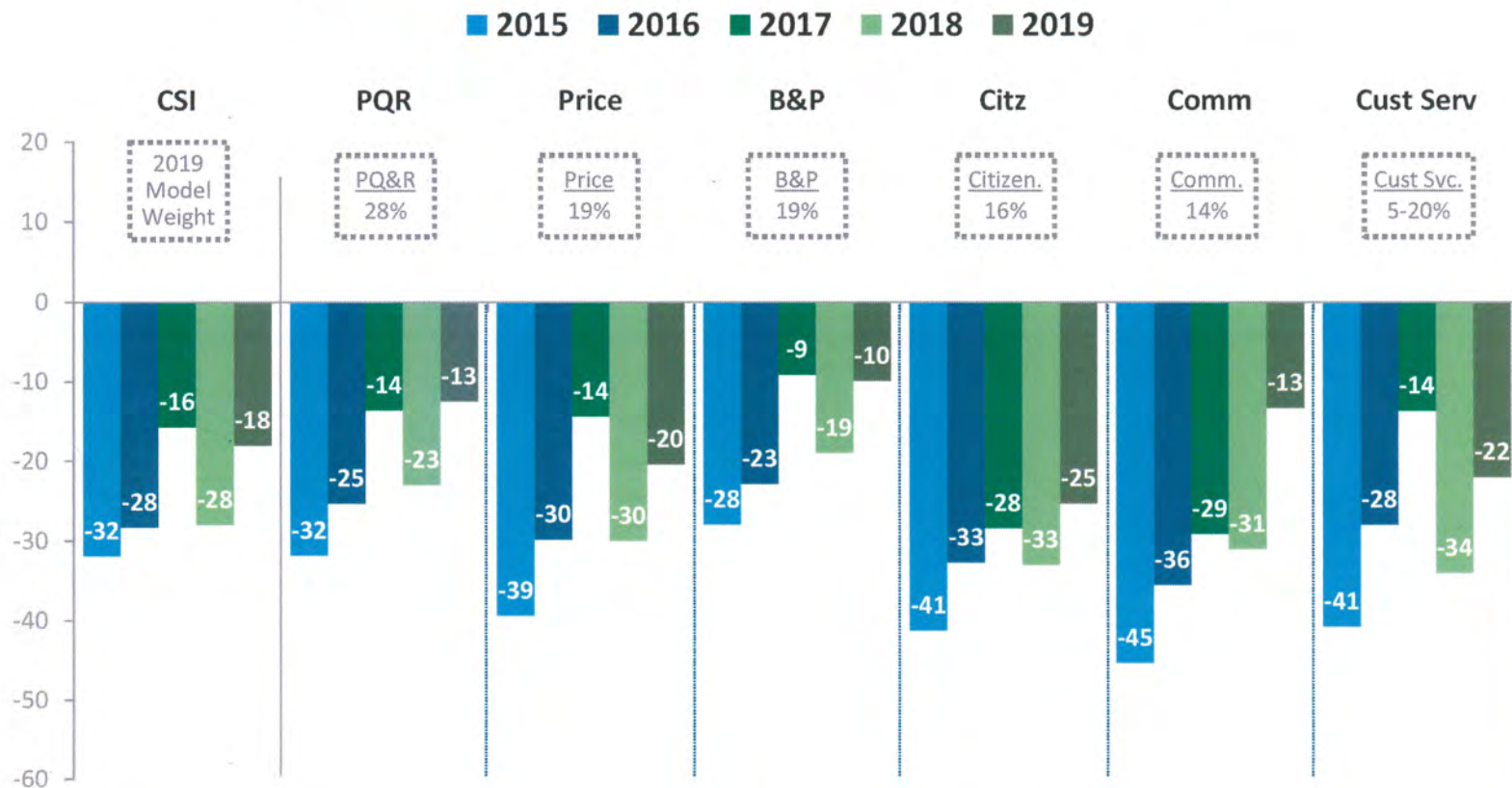
2019 Electric Utility Residential Customer Satisfaction Study<sup>SM</sup>

## 'Duke Energy Parent' Rank Among Large Parent Utilities Nationally



## Duke Energy Parent – Gap to Top Quartile Threshold

### Gap to Large Utility Top Quartile Threshold by Factor



Index gap to top quartile threshold score among large utilities

2019 Electric Utility Residential Customer Satisfaction Study<sup>SM</sup>

## Overall CSI and Factor Performance – Quartile Rankings Duke Energy Parent and Brands – 2019 J.D. Power Residential Study

2019 JDP EUR Study Final	CSI	PQR	Price	B&P	Citz	Comm	Customer Service
Duke Parent	727	777	664	787	659	686	780
DEC	725	777	663	782	650	694	771
DEP	727	779	660	789	652	688	784
DE-NC	723	775	660	783	645	690	773
DE-SC	738	791	668	793	678	700	789
DEF	715	764	651	786	653	661	782
DEI	746	797	686	798	686	708	780
DE-OHKY	737	785	678	790	681	688	801

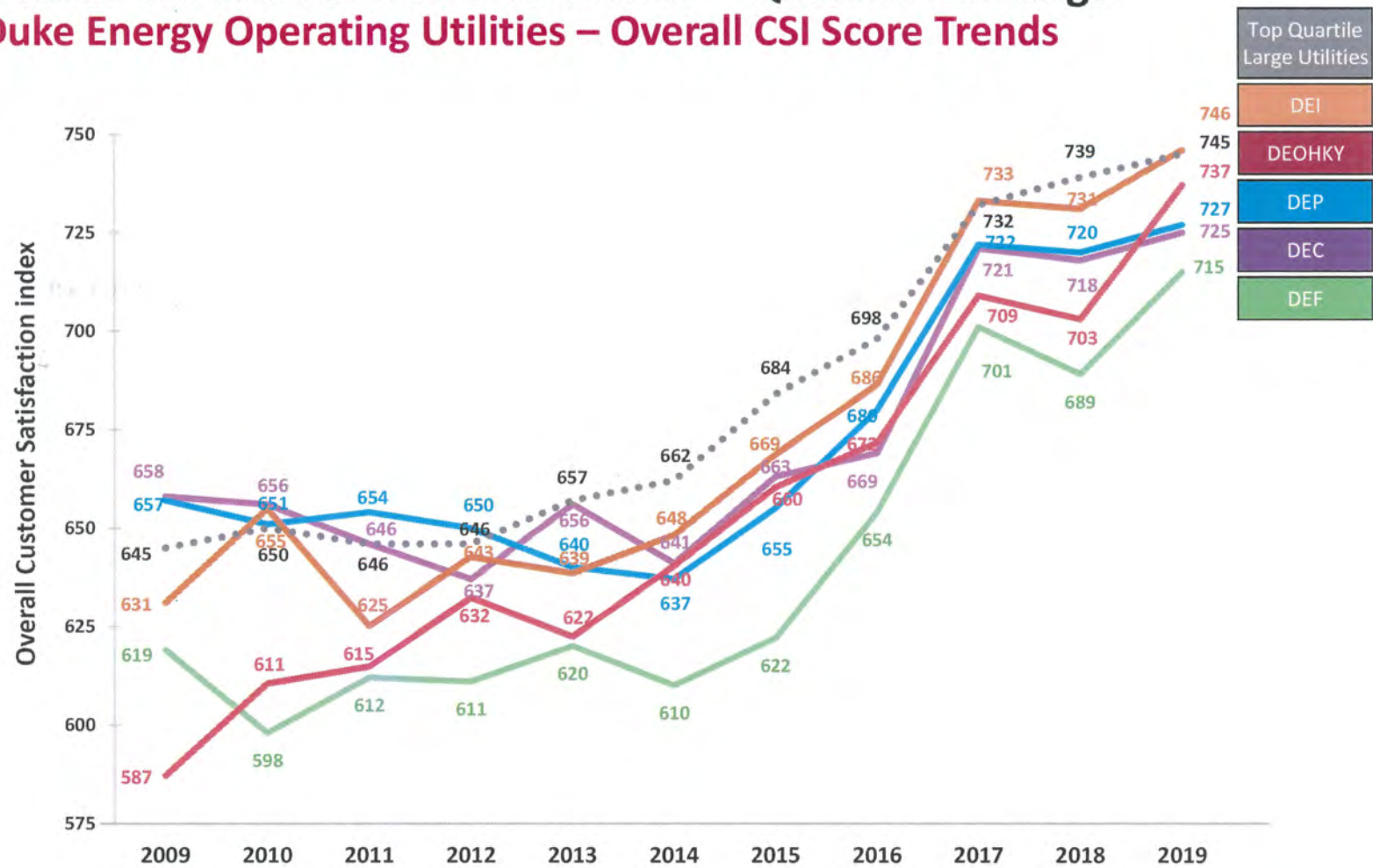




2019 Electric Utility Residential Customer Satisfaction Study<sup>SM</sup>

## Overall CSI and Factor Performance – Quartile Rankings

### Duke Energy Operating Utilities – Overall CSI Score Trends



## Comparing JDP CSI & CXM NPS – 2018 YE & 2019 YTD

	DEC	DEP	DENC	DESC	DEF	DEI	DEOH/KY
JDP CSI (2018)	718	720	713	744	689	733	709
JDP CSI (2019)	725	727	723	738	715	746	737
JDP CSI Trend	= 1.01%↑	= 1.01%↑	= 1.01%↑	= 1.0%↓	= 1.04%↑	= 1.02%↑	= 1.04%↑
CXM NPS (2018)	33.9	27.1	29.5	39.9	34.2	31.9	22.1
CXM NPS (2019 YTD)	37.2	32.1	35.1	36.1	41.1	38.8	33.4
CXM NPS Trend	= 1.1%↑	= 1.2%↑	= 1.2%↑	= 0.9%↓	= 1.2%↑	= 1.2%↑	= 1.5%↑



**1DF – Midwest  
Fastrack**

March 2018 Update



## Fastrack Description The Process



## Fastrack Description The Score Question

0 1 2 3 4 5 6 7 8 9 10

Highly Dissatisfied= % '0-4'

Highly Satisfied= % '8,9,10'

$$\text{Fastrack Score} = \frac{\text{\# of customers rating the score question '8, 9, 10'}}{\text{TOTAL customers interviewed}}$$













### Example

If there are 10 total interviews:

- ❖ 1 rated the score question '5'
- ❖ 3 rated the score question '8'
- ❖ 2 rated the score question '9'
- ❖ 4 rated the score question '10'




$$\text{The Fastrack Score would} = \frac{(3+2+4)}{10} = 90$$

## 1DF – Midwest Fastrack Goal Update – March 2018

	March Score	2018 YTD	2018 Goal	Goal Status
<b>Midwest Fastrack</b>	<b>86</b>	<b>84</b>	<b>83</b>	
Service Initiation	92	92	90	
Outage	90	85	79	
Outdoor Lighting	75	74	80	
<b>Indiana Fastrack</b>	<b>87</b>	<b>84</b>	<b>85</b>	
Service Initiation	92	93	90	
Outage	91	87	84	
Outdoor Lighting	77	72	80	
<b>Ohio/Kentucky Fastrack</b>	<b>85</b>	<b>84</b>	<b>82</b>	
Service Initiation	91	92	91	
Outage	89	84	76	
Outdoor Lighting	74	75	80	




## 1DF – Midwest Fastrack

### Total Goal Module Performance by Zone – March 2018

	March Score	2018 YTD	2018 Goal	Goal Status
<b>Duke Energy Midwest</b>	<b>86</b>	<b>84</b>	<b>83</b>	
Indiana	87	84	85	
Ohio/Kentucky	85	84	82	




## 1DF – Midwest Fastrack

### ‘Service Initiation’ Performance by Zone – March 2018

	March Score	2018 YTD	2018 Goal	Goal Status
<b>Duke Energy Midwest</b>	<b>92</b>	<b>92</b>	<b>90</b>	
Indiana	92	93	90	
Ohio/Kentucky	91	92	91	






## 1DF – Midwest Fastrack 'Outage' Performance by Zone – March 2018

	March Score	2018 YTD	2018 Goal	Goal Status
<b>Duke Energy Midwest</b>	<b>90</b>	<b>85</b>	<b>79</b>	
Indiana	91	87	84	
Ohio/Kentucky	89	84	76	

## 1DF – Midwest Fastrack

### ‘Outdoor Lighting’ Performance by Zone – March 2018

	March Score	2018 YTD	2018 Goal	Goal Status
<b>Duke Energy Midwest</b>	<b>75</b>	<b>74</b>	<b>80</b>	
Ohio/Kentucky	74	75	80	
Indiana	77	72	80	

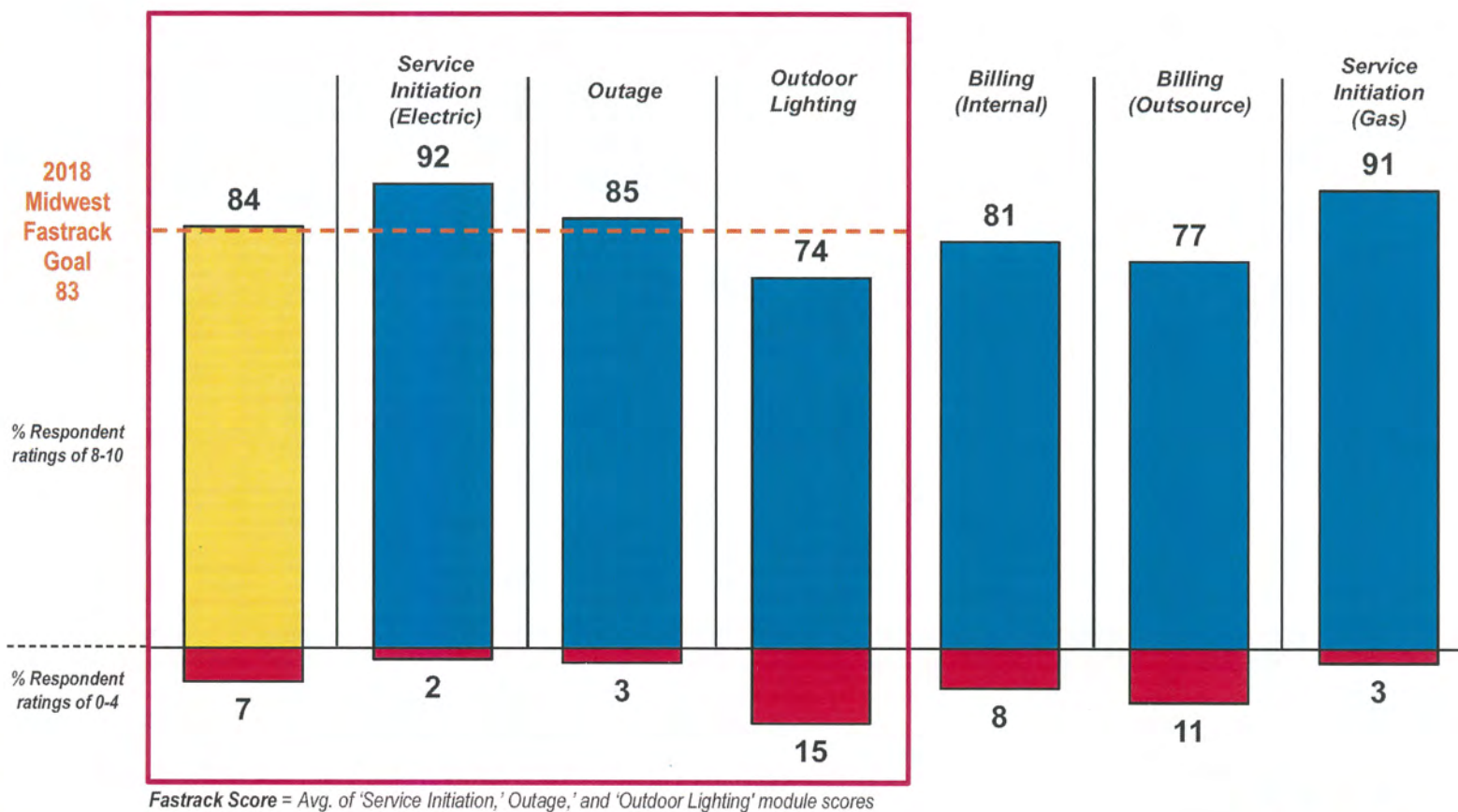


# Duke Energy Midwest Fastrack

Q1-18 Detailed Report



## Midwest Fastrack Fastrack Scores – 2018 YTD



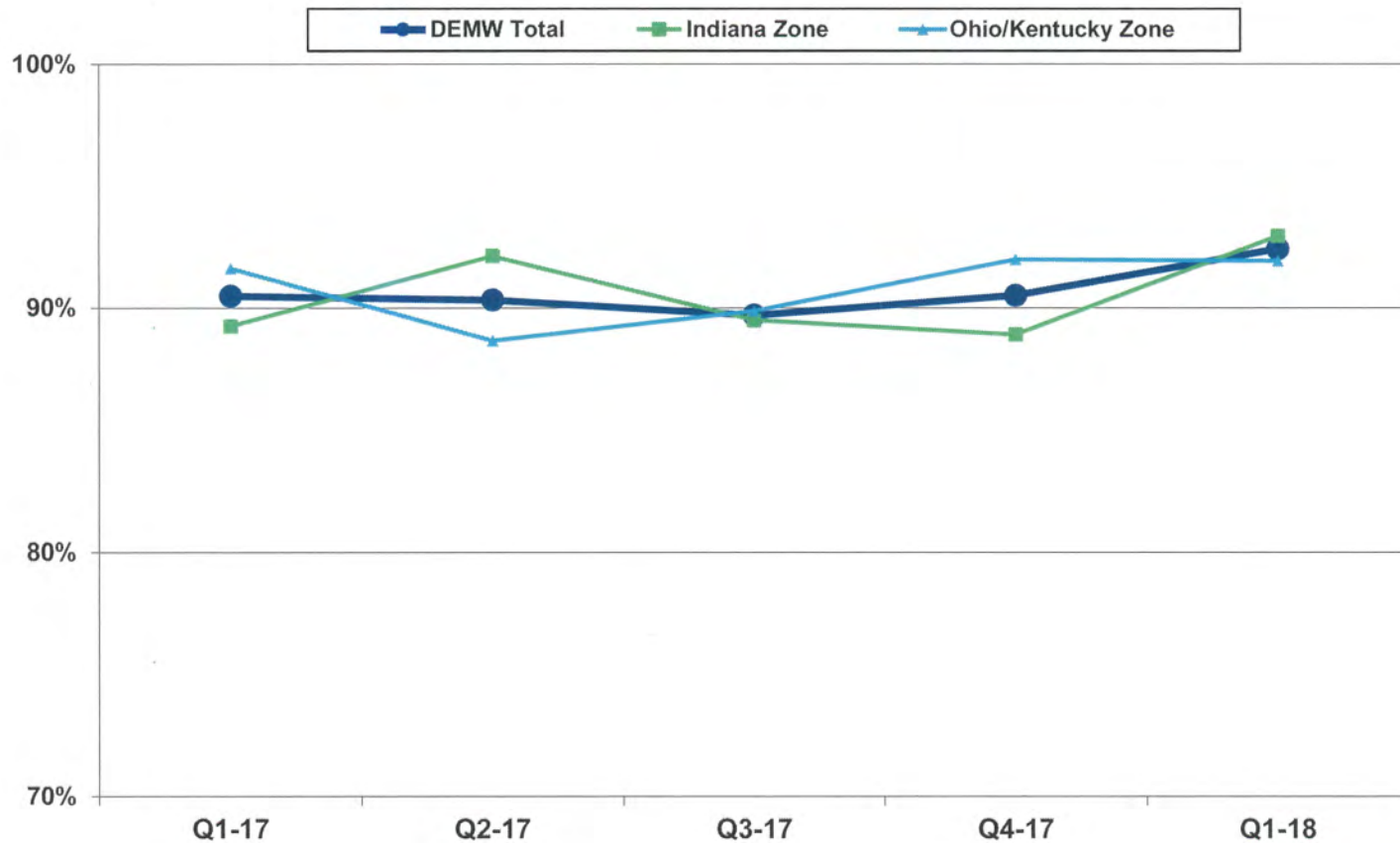
# Midwest Fastrack

## *Service Initiation Module*

Q1-18



## Service Initiation – Electric DE-MW Score Trends



## Service Initiation Impact on Overall Satisfaction

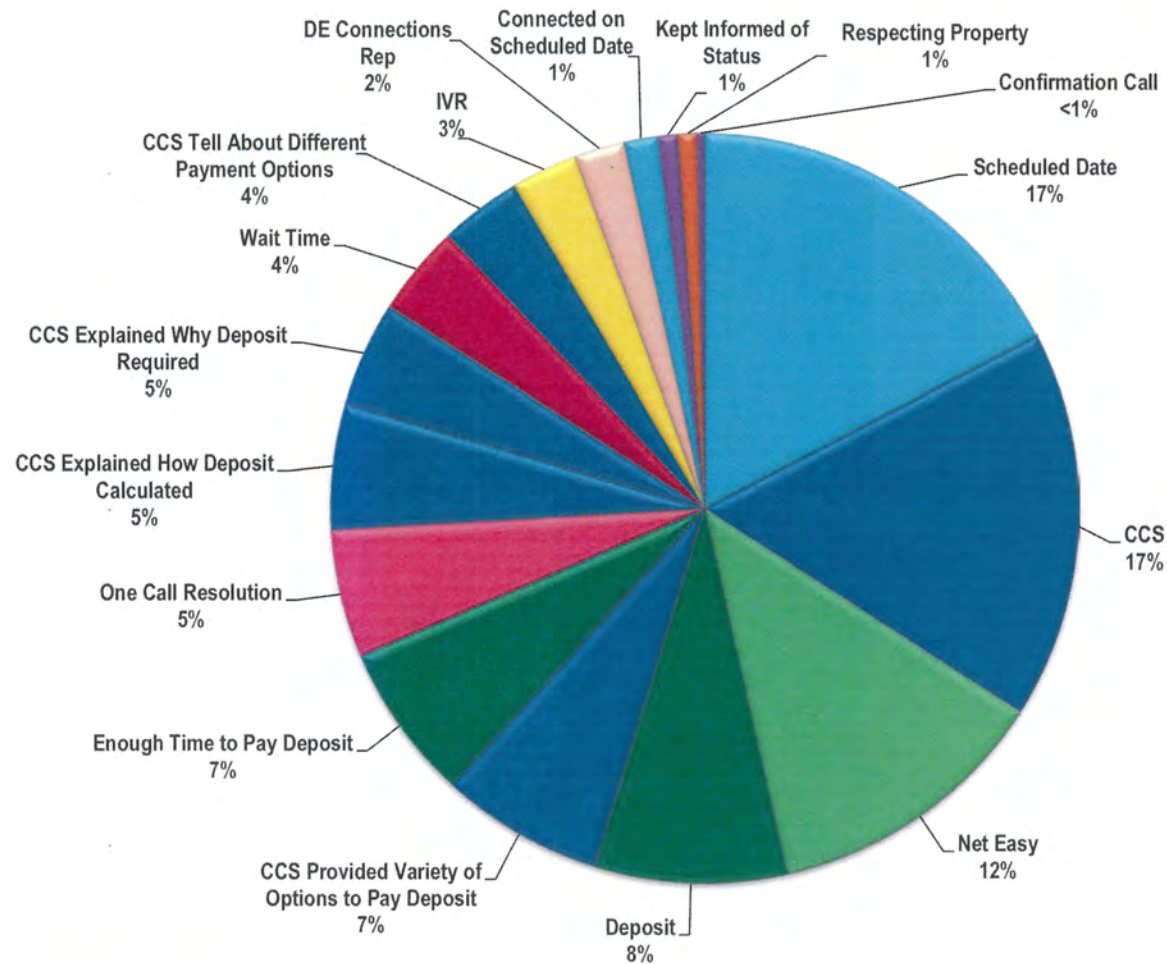
	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Overall Satisfaction with Duke Energy's overall performance as your electric supplier	92	92				92
	2	1				1
<i>Would you say that this recent service experience has had a positive, negative, or no effect on your overall satisfaction with Duke Energy?</i>						
<b>Net Effect<sup>1</sup></b>	<b>65</b>	<b>64</b>				<b>64</b>
<i>A positive effect</i>	<b>68</b>	<b>68</b>				<b>68</b>
<i>A negative effect</i>	<b>2</b>	<b>4</b>				<b>4</b>
<i>No effect</i>	<b>30</b>	<b>28</b>				<b>28</b>

## Impact on Overall Satisfaction DE-MW Fastrack Modules

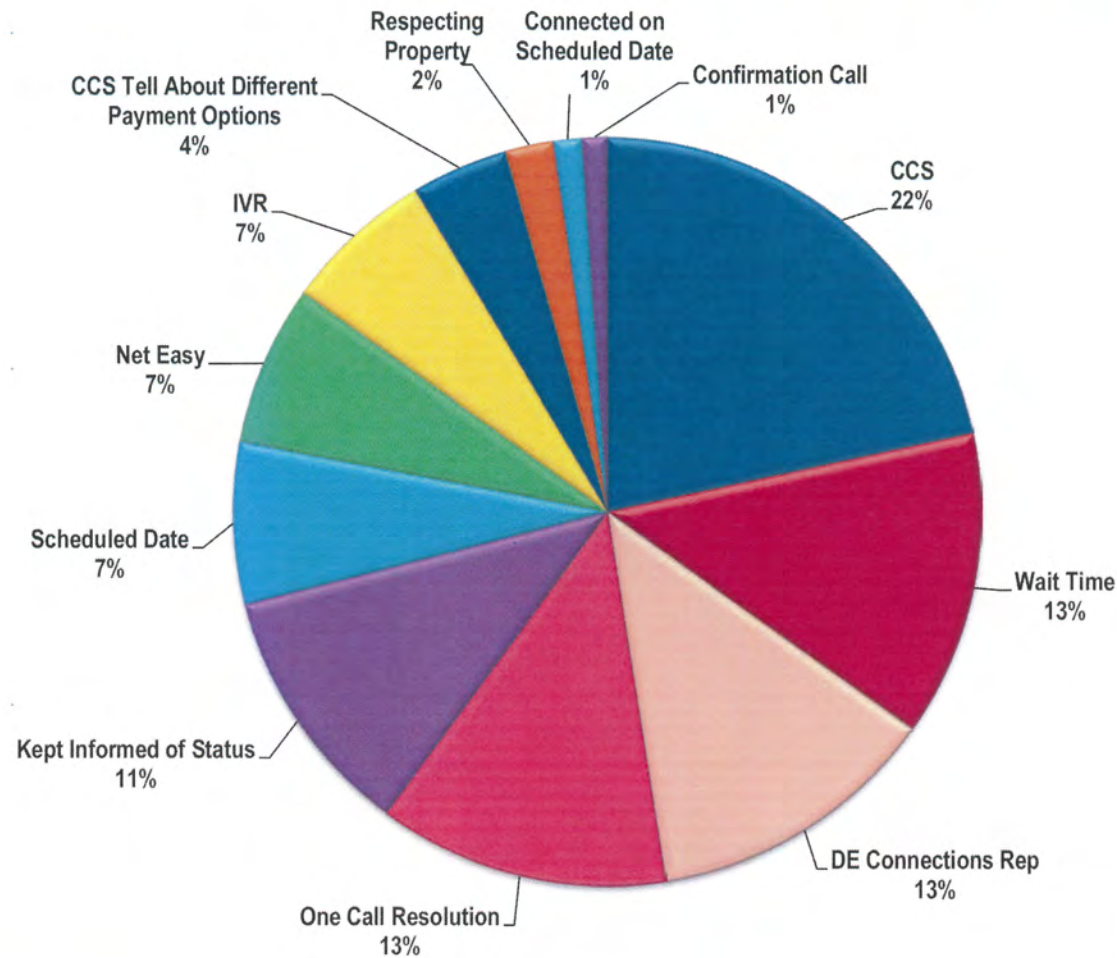
	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<i>Would you say that this recent service experience has had a positive, negative, or no effect on your overall satisfaction with Duke Energy?</i>						
<b>Net Effect<sup>1</sup></b>						
<i>Service Initiation</i>	65	64				64
<i>Service Initiation (Gas)</i>	58	62				62
<i>Outdoor Lighting</i>	43	45				45
<i>Billing (Internal)</i>	46	43				43
<i>Billing (Outsource)</i>	41	38				38
<i>Outage</i>	34	37				37



## Service Initiation – Deposit Required DEMW Q1-18 Opportunity Score



## Service Initiation – Deposit NOT Required DEMW Q1-18 Opportunity Score





## Service Initiation Call Center Metrics – Deposit Required

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Overall Satisfaction with IVR	78	81				81
	5	5				5
Amount of time you waited to be transferred to CCS	88	89				89
	2	1				1
Overall Satisfaction with Customer Care Specialist	94	94				94
	3	3				3
<i>Payment options explained (% Yes)</i>	73	82				82
<i>One call resolution (% Yes)</i>	84	91				91
Overall Satisfaction with Duke Energy Connections Representative	86	83				83
	7	8				8

% (8-10)
-----
% (0-4)



Deposit



No Deposit

## Service Initiation Call Center Metrics – Deposit NOT Required

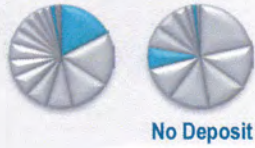
	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Overall Satisfaction with IVR	76	73				73
	8	7				7
Amount of time you waited to be transferred to CCS	90	87				87
	2	4				4
Overall Satisfaction with Customer Care Specialist	94	94				94
	2	2				2
<i>Payment options explained (% Yes)</i>	71	77				77
<i>One call resolution (% Yes)</i>	89	90				90
Overall Satisfaction with Duke Energy Connections Representative	85	87				87
	7	8				8

% (8-10)
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% (0-4)

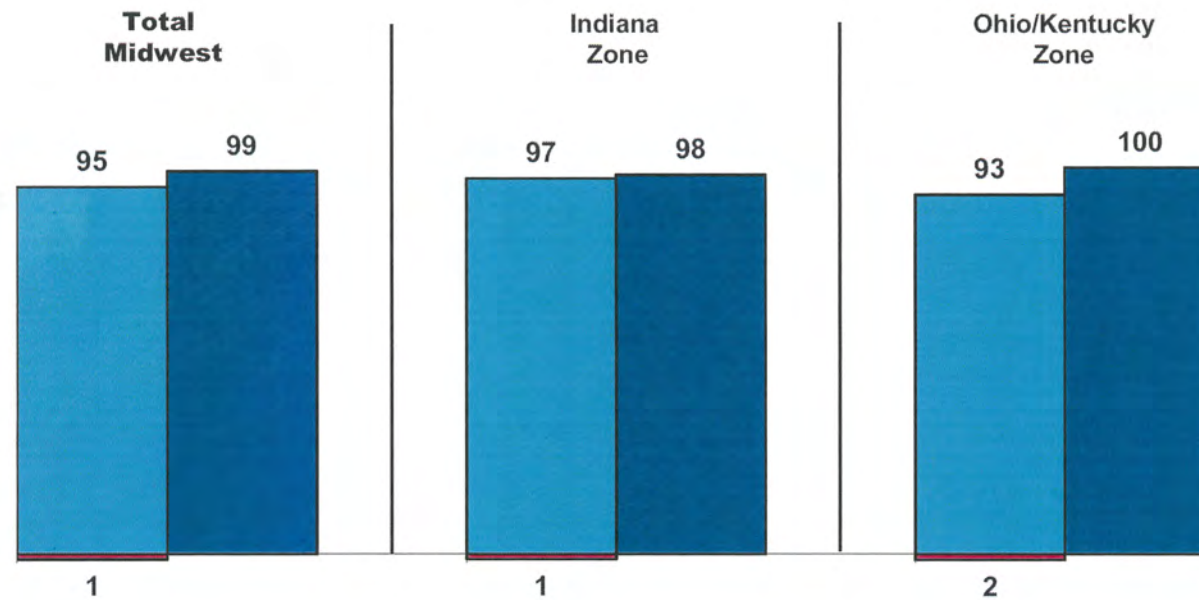


## Service Initiation Deposit

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Required to Pay Deposit (% Yes)</b>	<b>29</b>	<b>26</b>				<b>26</b>
<i>Deposit affected overall satisfaction</i>	<b>52</b>	<b>46</b>				<b>46</b>
<i>SOME effect on overall satisfaction</i>	<b>30</b>	<b>20</b>				<b>20</b>
BIG effect on overall satisfaction	<b>14</b>	<b>18</b>				<b>18</b>
<i>BIGGER impact on overall satisfaction than anything else</i>	<b>8</b>	<b>8</b>				<b>8</b>
<i>CCS explained why the deposit was required (% Yes)</i>	<b>59</b>	<b>73</b>				<b>73</b>
<i>CCS explained how the deposit was calculated (% Yes)</i>	<b>49</b>	<b>57</b>				<b>57</b>
<i>CCS provided a variety of options to pay or satisfy the deposit (% Yes)</i>	<b>75</b>	<b>78</b>				<b>78</b>
Overall satisfaction with providing enough time to pay the deposit	<b>80</b>	<b>83</b>				<b>83</b>
	<b>6</b>	<b>9</b>				<b>9</b>



## Service Initiation Scheduled Date & Performance – Q1-18



■ Satisfaction With Scheduled Date (% 8-10)      ■ Service Connected On Scheduled Date (% Yes)  
■ Satisfaction With Scheduled Date (% 0-4)



## Service Initiation Scheduled Date & Performance

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Scheduled Date &amp; Performance</b>						
Satisfaction with scheduled connection date	96	95				95
	1	1				1
<i>Service connected on scheduled date (%Yes)</i>	98	99				99
<i>Received confirmation call or phone message (% Yes)</i>	65	70				70
<i>Kept Informed About Status of Request (% Yes)</i>	85	87				87

% (8-10)
% (0-4)



## Service Initiation Field Service Technician

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Respecting your property	98 1	98 1				98 1
Talked with field service technician DURING visit (% Yes)	7	5				5
<b>Overall Satisfaction with service provided by Field Service Technician at your property</b>	<b>97 2</b>	<b>100 0</b>				<b>100 0</b>



## Service Initiation Field Service Technician

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Respecting your property	98 1	98 1				98 1
<i>Talked with field service technician DURING visit (% Yes)</i>	7	5				5
<b>Overall Satisfaction with service provided by Field Service Technician at your property</b>	96 0	100 0				100 0

## Service Initiation Field Service Technician

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Respecting your property	98 1	97 1				97 1
<i>Talked with field service technician DURING visit (% Yes)</i>	7	5				5
<b>Overall Satisfaction with service provided by Field Service Technician at your property</b>	97 3	100 0				100 0



## Service Initiation Net Easy – Connected on Scheduled Date

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Net Easy*</b>	<b>93</b>	<b>94</b>				<b>94</b>
Easy	96	97				97
Neither easy nor difficult	1	1				1
Difficult	3	2				2
<b>% Indicating Connected on Scheduled Date</b>	<b>98</b>	<b>99</b>				<b>99</b>
Easy	97	97				97
Neither easy nor difficult	1	1				1
Difficult	2	2				2
<b>% Indicating NOT Connected on Scheduled Date</b>	<b>2</b>	<b>1</b>				<b>1</b>
Easy	58	67				67
Neither easy nor difficult	9	33				33
Difficult	33	0				0



## Service Initiation Net Easy – Deposit Required

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Net Easy*</b>	<b>93</b>	<b>94</b>				<b>94</b>
<i>Easy</i>	<b>96</b>	<b>97</b>				<b>97</b>
<i>Neither easy nor difficult</i>	<b>1</b>	<b>1</b>				<b>1</b>
<i>Difficult</i>	<b>3</b>	<b>2</b>				<b>2</b>
<b>% Indicating Required to Pay Deposit</b>	<b>29</b>	<b>26</b>				<b>26</b>
<i>Easy</i>	<b>95</b>	<b>95</b>				<b>95</b>
<i>Neither easy nor difficult</i>	<b>1</b>	<b>1</b>				<b>1</b>
<i>Difficult</i>	<b>4</b>	<b>4</b>				<b>4</b>
<b>% Indicating NOT Required to Pay Deposit</b>	<b>71</b>	<b>74</b>				<b>74</b>
<i>Easy</i>	<b>96</b>	<b>97</b>				<b>97</b>
<i>Neither easy nor difficult</i>	<b>1</b>	<b>1</b>				<b>1</b>
<i>Difficult</i>	<b>2</b>	<b>2</b>				<b>2</b>

## Net Easy DE-MW Fastrack Modules

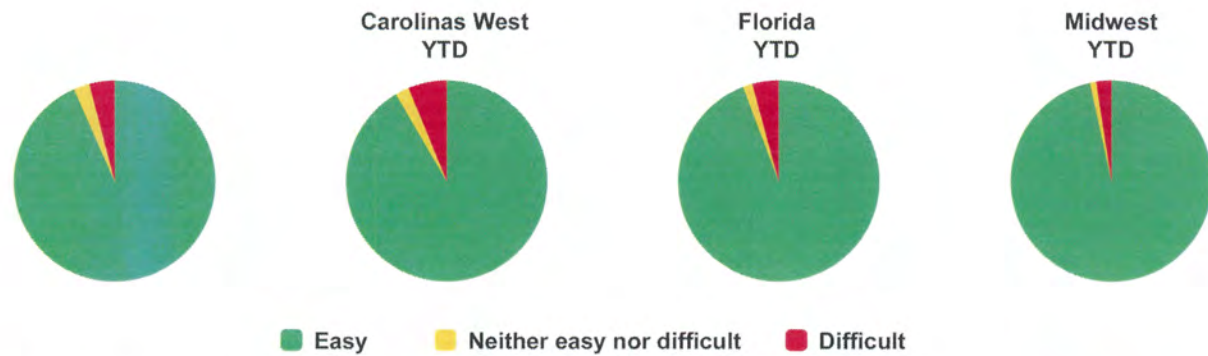
	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<i>All things considered, would you say it was easy - or difficult - for you to get your request resolved?</i>						
<b>Net Easy*</b>						
<i>Service Initiation</i>	93	94				94
<i>Service Initiation (Gas)</i>	88	93				93
<i>Outage</i>	76	79				79
<i>Billing (Internal)</i>	84	77				77
<i>Billing (Outsource)</i>	69	76				76
<i>Outdoor Lighting</i>	51	61				61

## Net Easy Service Initiation – 2018

27

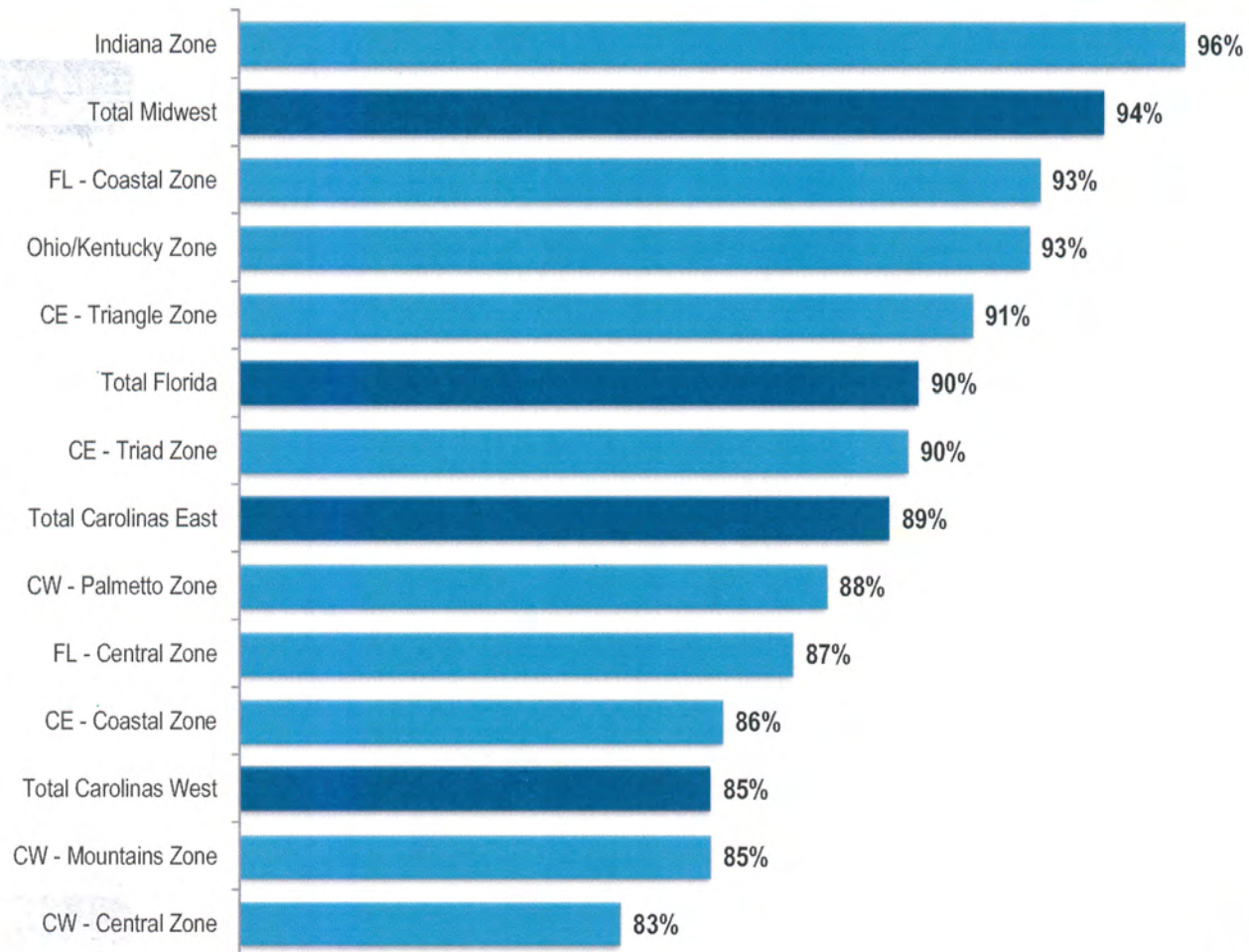
	Carolinas East					Carolinas West					Florida					Midwest					
	Q1	Q2	Q3	Q4	YTD	Q1	Q2	Q3	Q4	YTD	Q1	Q2	Q3	Q4	YTD	Q1	Q2	Q3	Q4	YTD	
<b>Net Easy*</b>	89				89	85				85	90				90	94					94
Easy	93				93	92				92	94				94	97					97
Neither easy nor difficult	3				3	2				2	2				2	1					1
Difficult	4				4	6				6	4				4	2					2

\*Net Easy score = Easy - Difficult



All things considered, would you say it was easy – or difficult – for you to get your service connected?

## Net Easy Service Initiation By Zone – Q1-18



28

29

# Midwest Fastrack

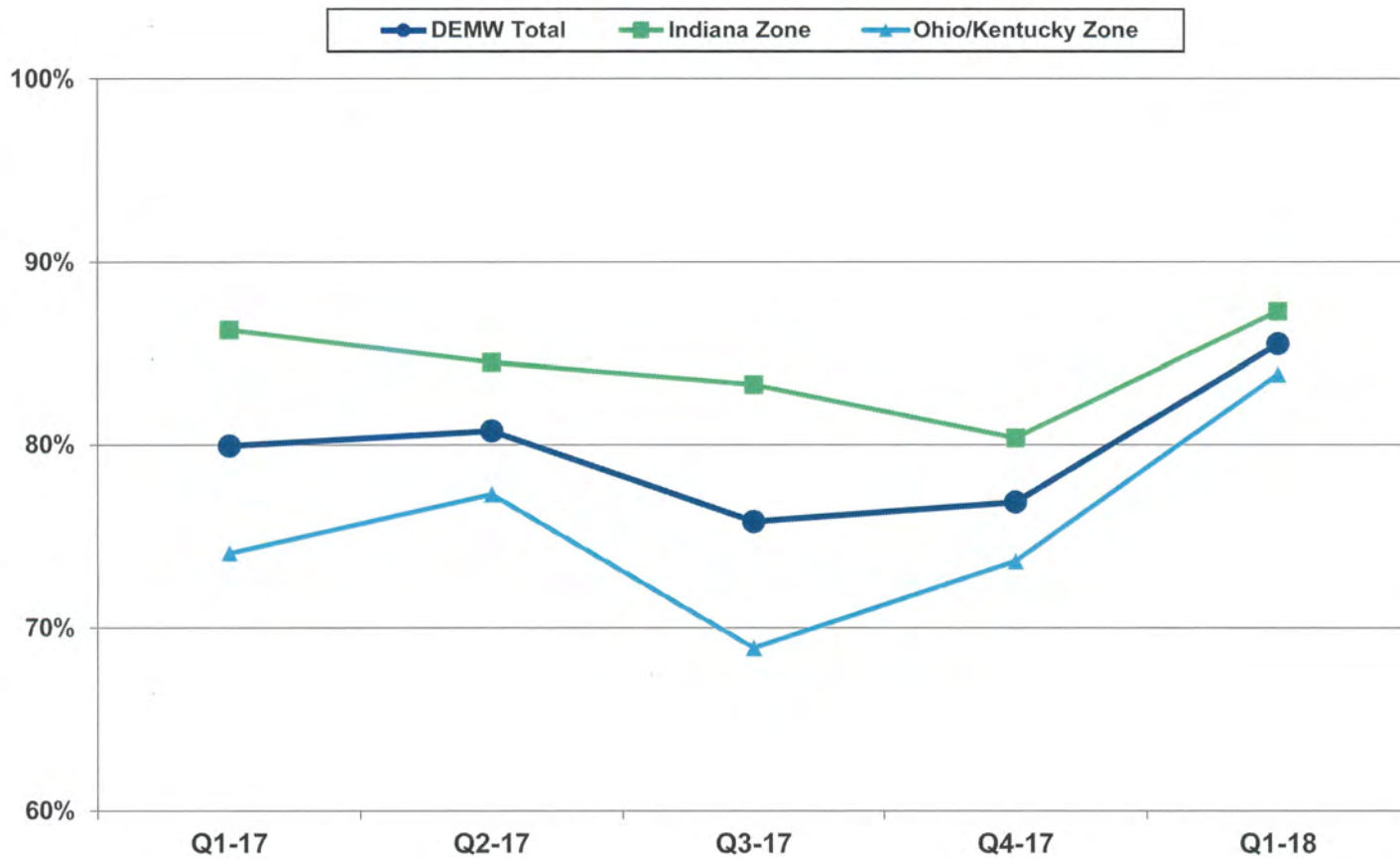
## *Outage Module*

Q1-18





## Outage DE-MW Score Trends



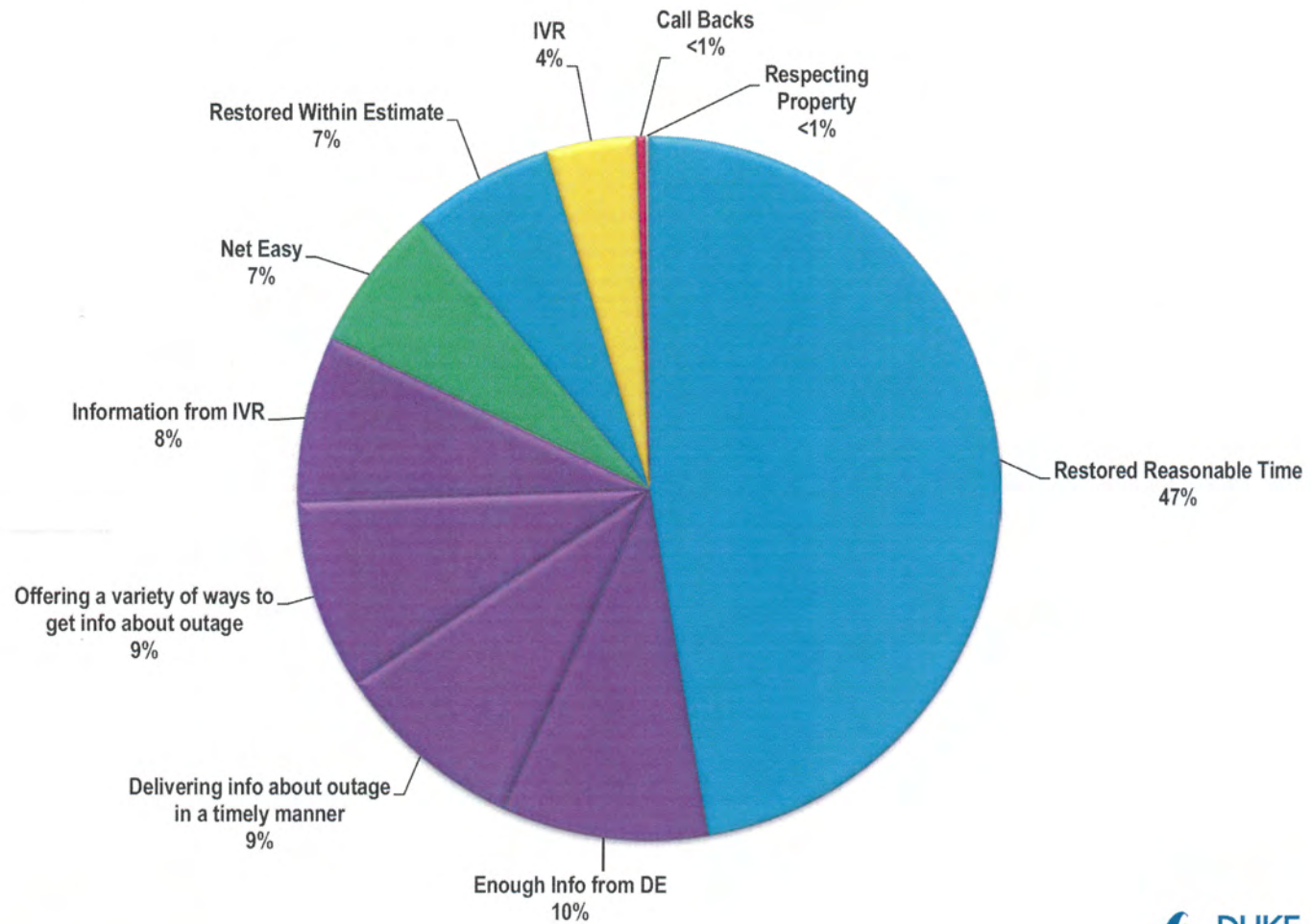
## Outage Impact on Overall Satisfaction

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Overall Satisfaction with Duke Energy's overall performance as your electric supplier	88	93				93
	2	1				1
<i>Would you say that this recent service experience has had a positive, negative, or no effect on this overall satisfaction with Duke Energy?</i>						
<b>Net Effect<sup>1</sup></b>	<b>34</b>	<b>37</b>				<b>37</b>
<i>A positive effect</i>	<i>45</i>	<i>44</i>				<i>44</i>
<i>A negative effect</i>	<i>10</i>	<i>7</i>				<i>7</i>
<i>No effect</i>	<i>45</i>	<i>50</i>				<i>50</i>

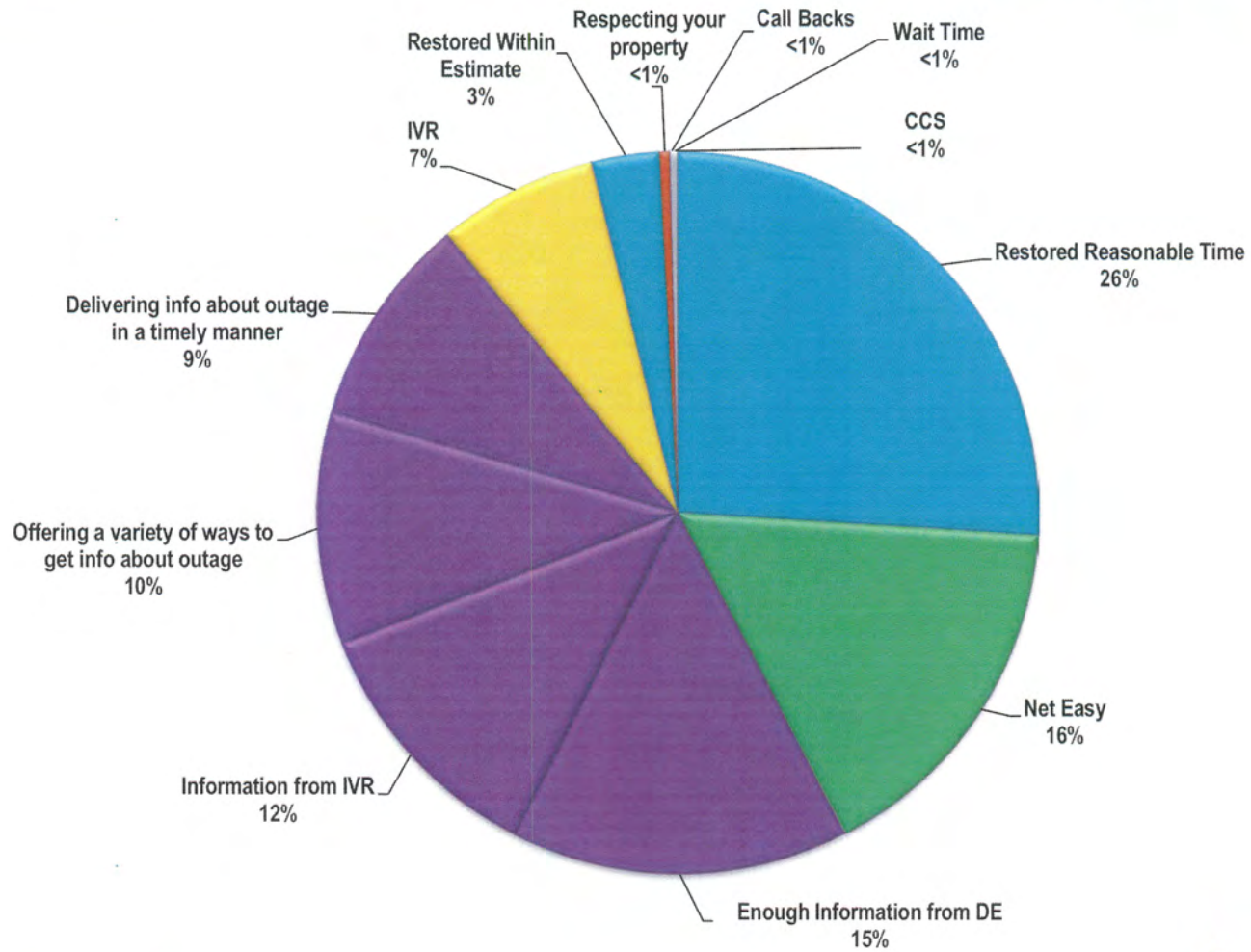
## Impact on Overall Satisfaction DE-MW Fastrack Modules

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<i>Would you say that this recent service experience has had a positive, negative, or no effect on your overall satisfaction with Duke Energy?</i>						
<b>Net Effect<sup>1</sup></b>						
<i>Service Initiation</i>	65	64				64
<i>Service Initiation (Gas)</i>	58	62				62
<i>Outdoor Lighting</i>	43	45				45
<i>Billing (Internal)</i>	46	43				43
<i>Billing (Outsource)</i>	41	38				38
<i>Outage</i>	34	37				37

## Outage (IVR Only) DEMW Q1-18 Opportunity Score



## Outage (IVR & CCS) DEMW Q1-18 Opportunity Score





## Outage Call Center Metrics

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Overall Satisfaction with IVR (IVR Only)	81	81				81
	7	5				5
Overall Satisfaction with IVR (IVR & CCS)	73	73				73
	10	11				11
Amount of time you waited to be transferred to CCS	90	86				86
	2	5				5
Overall Satisfaction with Customer Care Specialist	90	93				93
	2	3				3

% (8-10)

% (0-4)

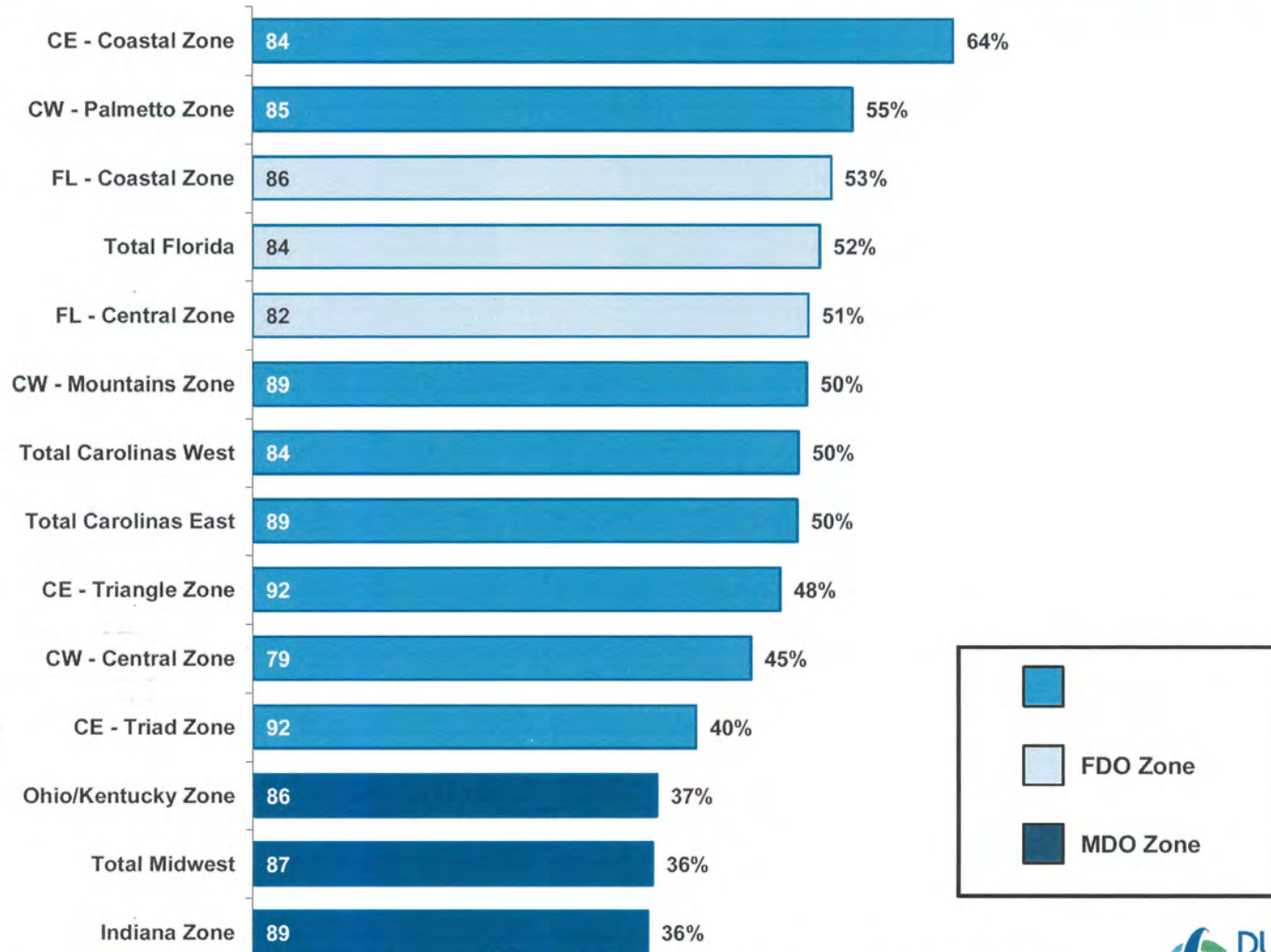


IVR & CCS

## Outage Outage Info Provided by Duke Energy

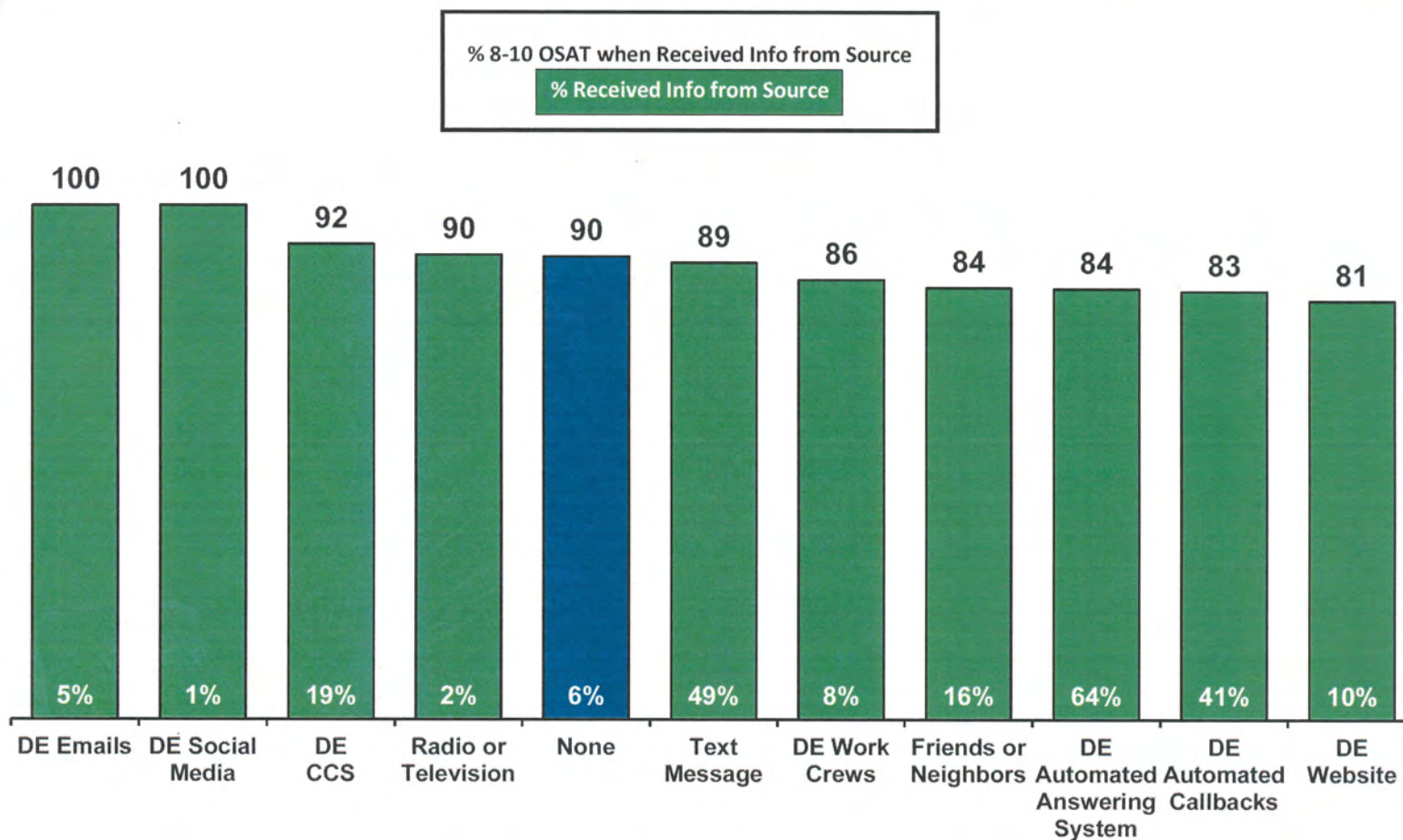
	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
IVR providing you with the outage information you needed	82	86				86
	8	4				4
Offering a variety of ways to get information about your outage	79	82				82
	8	6				6
Providing you with enough information about your outage	77	83				83
	10	8				8
Delivering information about your outage in a timely manner	78	84				84
	11	8				8
<b>Did Duke Energy Provide The Following Information? <sup>1</sup> (% Yes)</b>						
<i>The cause of the outage</i>	42	36				36
<i>The number of customers affected</i>	76	77				77
<i>Whether a crew was dispatched</i>	64	69				69
<i>The time the outage began</i>	63	65				65
<i>Duke Energy was aware of the outage</i>	79	78				78
<i>Estimated time of restoration</i>	85	90				90
<i>The time the outage was restored</i>	70	70				70
<i>No information provided</i>	2	2				2

## Duke Energy Total Fastrack 2018 YTD – % Received Cause of Outage\*

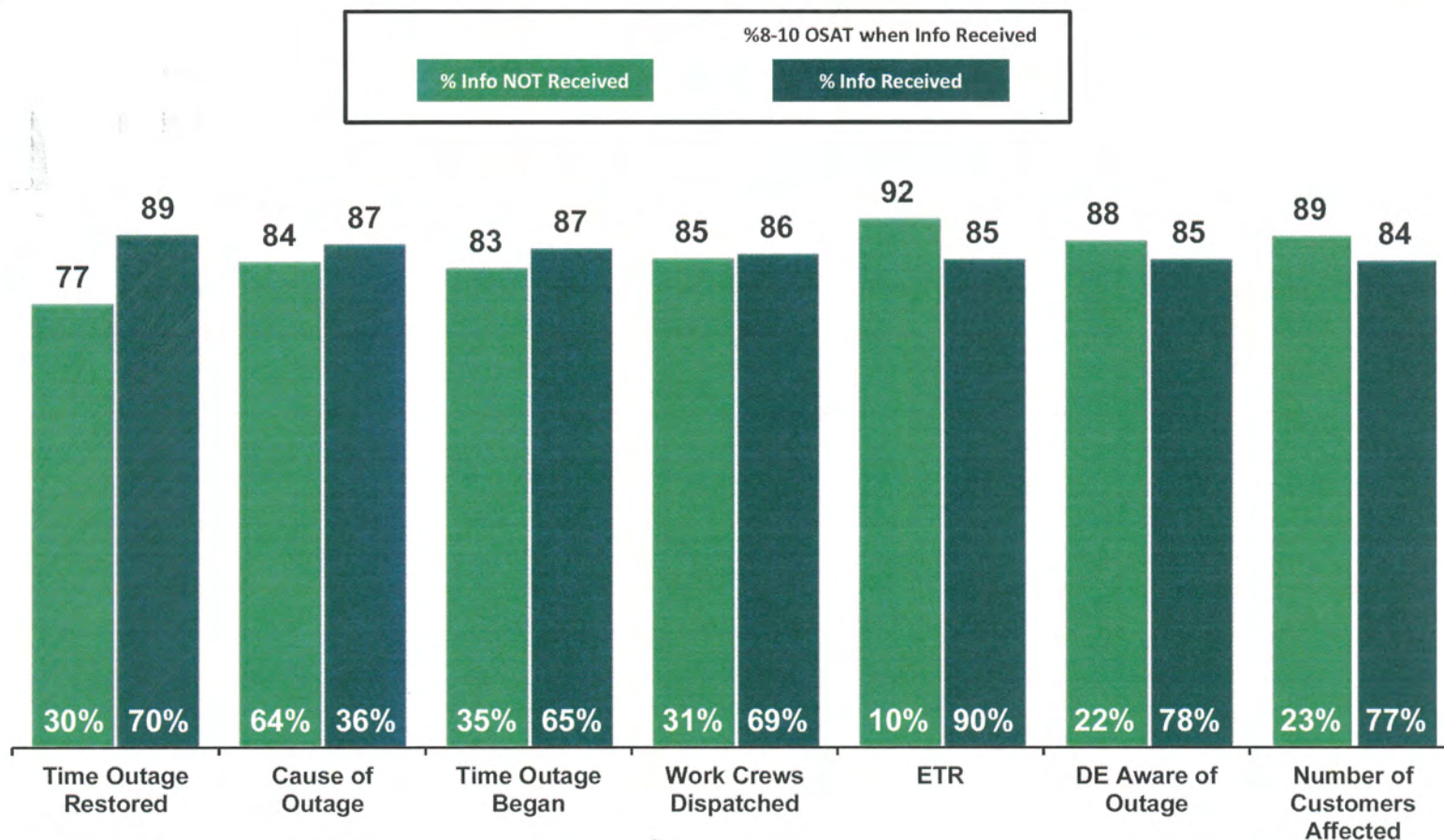




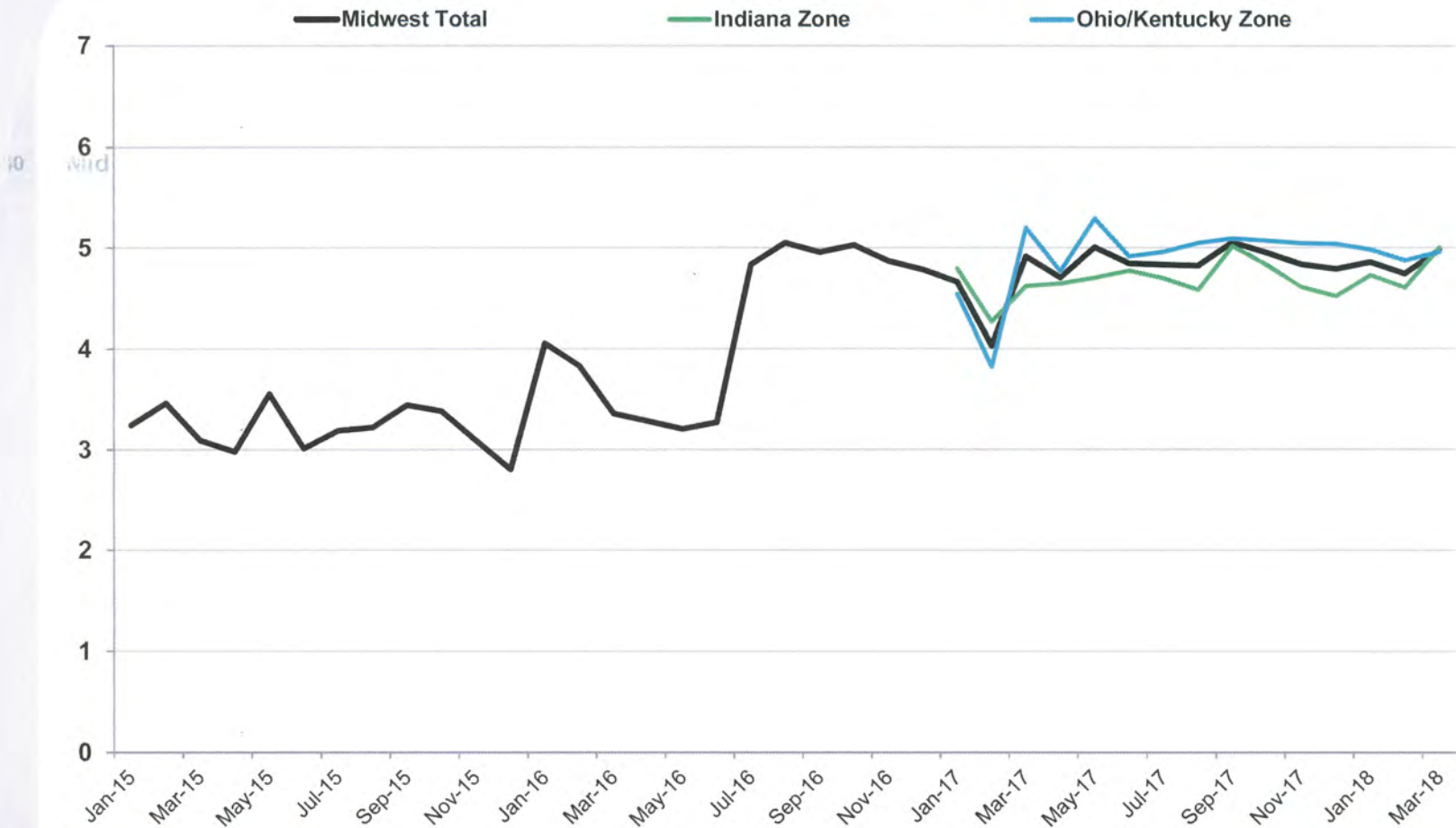
## Outage Satisfaction by Outage Info Source – Q1-18



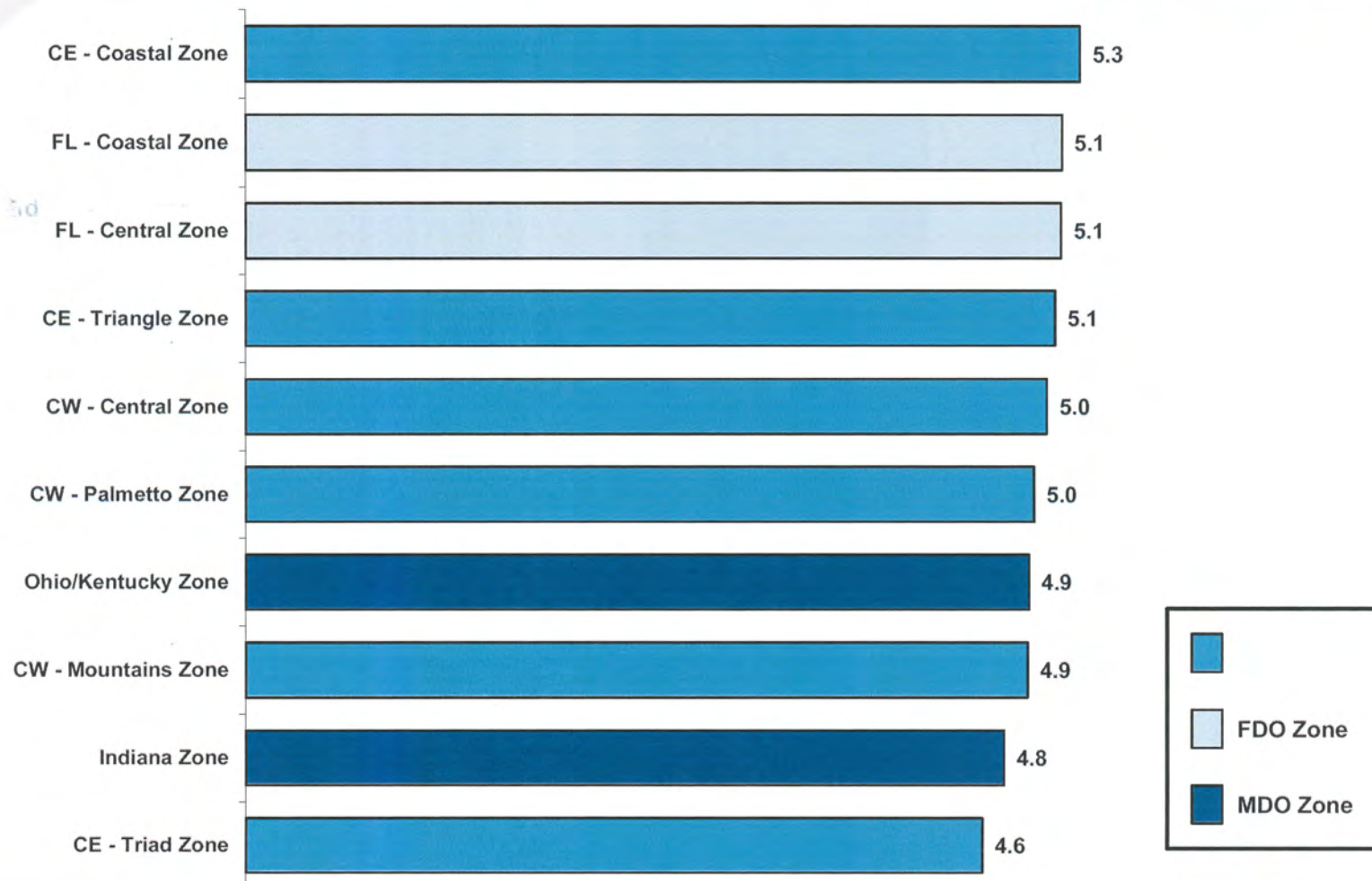
## Outage Satisfaction by Outage Info Received – Q1-18



## Midwest Fastrack Zones – Monthly Avg. # Outage Information Points



## 'Total Duke' Outage Performance by Zone Average # of Outage Info Points Received\* – 2018 YTD



\* Out of 7 possible information points. Includes information received during initial call and any other subsequent points of contact.



IVR Only



IVR & CCS

## Outage ETRs & Restoration

		YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Estimated Time of Restoration</b>							
<i>Received estimated time of restoration (% Yes)</i>	IVR Only	89	94				94
	IVR+CCS	78	83				83
<i>Restored within estimated time (% Yes)</i>	IVR Only	82	77				77
	IVR+CCS	87	87				87
<i>Restored within a reasonable time (% 8-10)</i>	IVR Only	79	80				80
	IVR+CCS	82	90				90

## Outage ETRs & Restoration

		YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Estimated Time of Restoration</b>							
<i>Received estimated time of restoration (% Yes)</i>	IVR Only	89	94				94
	IVR+CCS	76	82				82
<i>Restored within estimated time (% Yes)</i>	IVR Only	85	81				81
	IVR+CCS	86	88				88
<i>Restored within a reasonable time (% 8-10)</i>	IVR Only	86	84				84
	IVR+CCS	86	92				92

## Outage ETRs & Restoration

		YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Estimated Time of Restoration</b>							
<i>Received estimated time of restoration (% Yes)</i>	IVR Only	88	95				95
	IVR+CCS	81	85				85
<i>Restored within estimated time (% Yes)</i>	IVR Only	79	73				73
	IVR+CCS	87	86				86
<i>Restored within a reasonable time (% 8-10)</i>	IVR Only	74	75				75
	IVR+CCS	77	89				89



IVR & CCS

## Outage Power was Restored After ETR

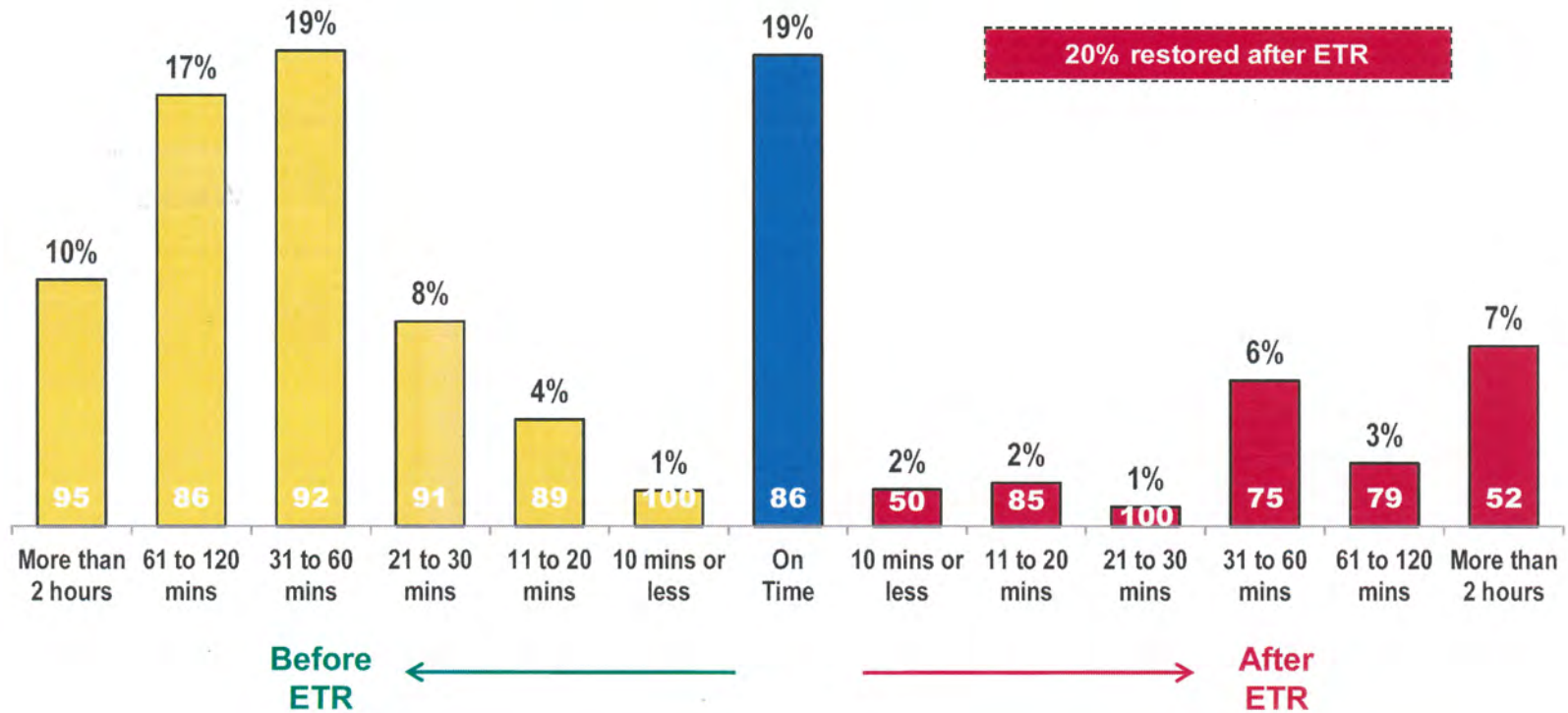
	2018				
	<u>Q1</u>	<u>Q2</u>	<u>Q3</u>	<u>Q4</u>	<u>YTD</u>
<b>DEMW Total</b>	20%				20%
Indiana Zone	17%				17%
Ohio/Kentucky Zone	22%				22%





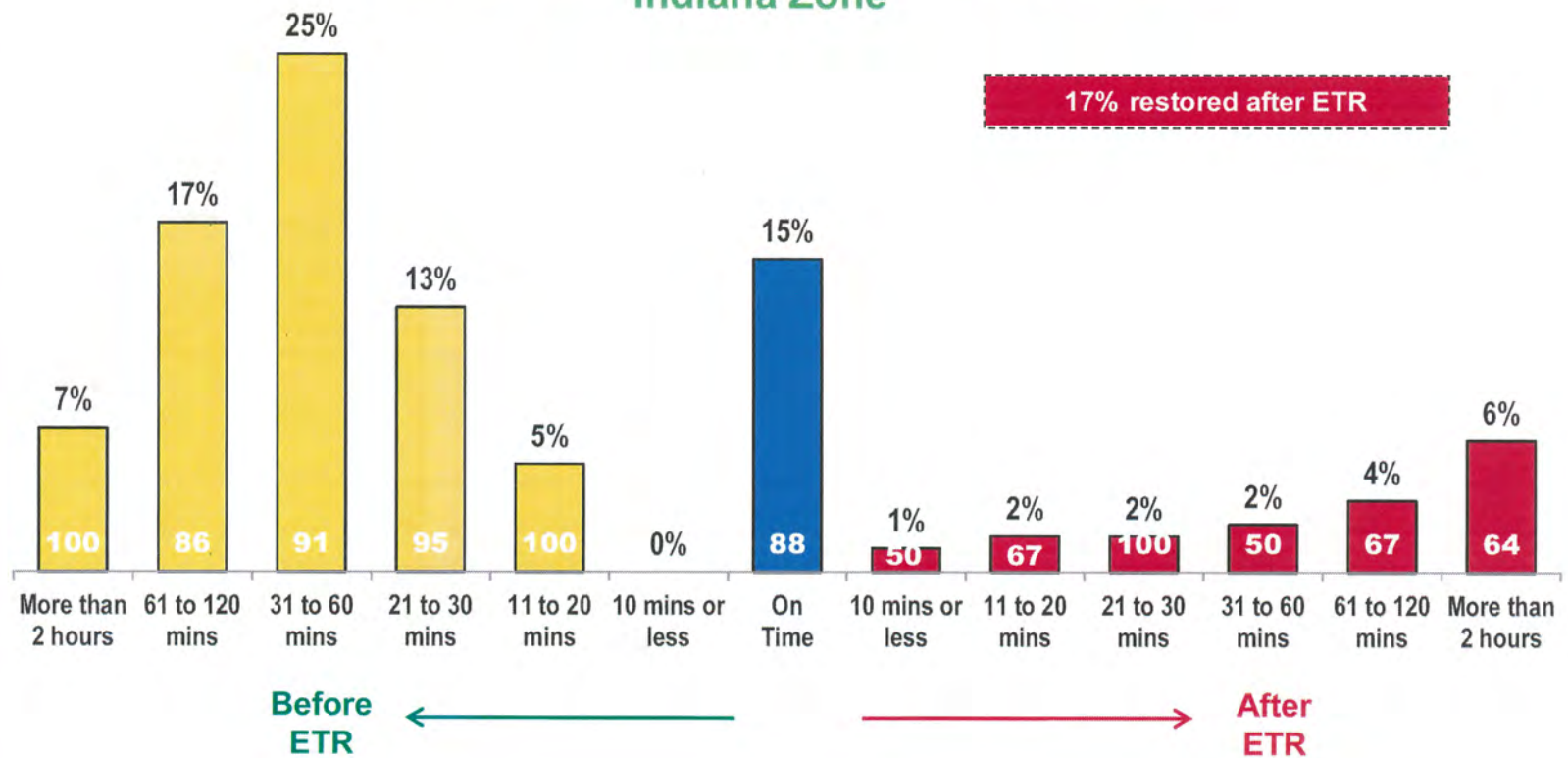
# Outage Restoration Time vs. Estimate – Q1-18

## Was Power Restored When Promised?



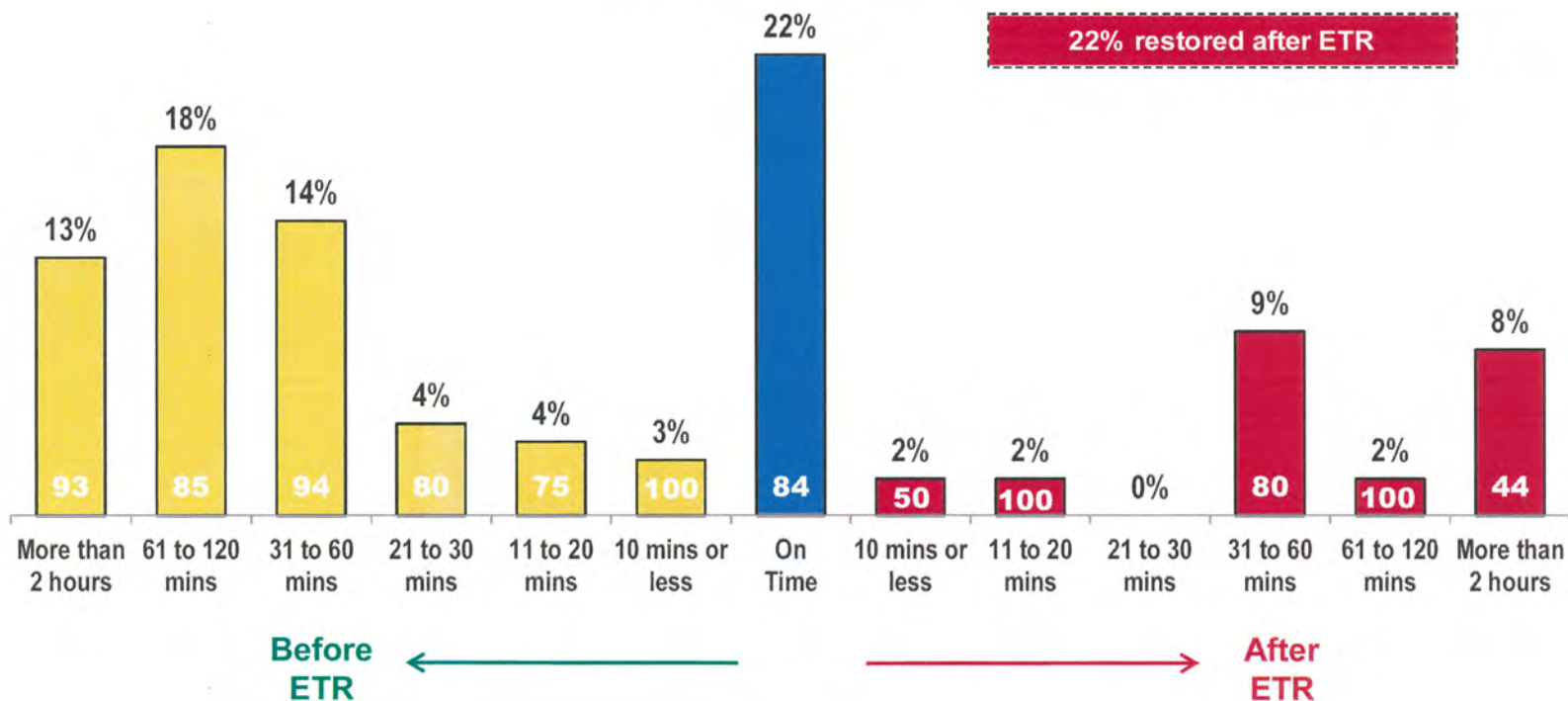
## Outage Restoration Time vs. Estimate – Q1-18

### Was Power Restored When Promised? Indiana Zone



## Outage Restoration Time vs. Estimate – Q1-18

### Was Power Restored When Promised? Ohio/Kentucky Zone





IVR & CCS

## Outage Quality of Field Service

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Respecting your property	96	95				95
	2	0				0
<i>Talked with field service technician DURING visit (% Yes)</i>	12	12				12
<b>Overall Satisfaction with service provided by Field Service Technician at your property</b>	93	98				98
	2	0				0



IVR & CCS

## Outage ETR Call-backs

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<i>Did you request a call-back or text message to confirm power restoration or receive an updated estimate? (% Yes)</i>						
<i>Requested call-back</i>	25	24				24
<i>Received call-back (Total)</i>	83	87				87
<i>Received call-back (IVR Only)</i>	83	86				86
<i>Received call-back (IVR &amp; CCS)</i>	80	90				90
<i>Requested text message</i>	42	38				38
<i>Received text message (Total)</i>	87	87				87
<i>Received text message (IVR Only)</i>	86	85				85
<i>Received text message (IVR &amp; CCS)</i>	86	92				92
<i>Requested email</i>	1	<1				<1
<i>Received email (Total)</i>	73	0				0
<i>Received email (IVR Only)</i>	85	0				0
<i>Received email (IVR &amp; CCS)</i>	71	0				0



## Outage Net Easy

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Net Easy*</b>	76	79				79
<i>Easy</i>	86	87				87
<i>Neither easy nor difficult</i>	4	5				5
<i>Difficult</i>	10	8				8

## Net Easy DE-MW Fastrack Modules

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<i>All things considered, would you say it was easy - or difficult - for you to get your request resolved?</i>						
<b>Net Easy*</b>						
<i>Service Initiation</i>	93	94				94
<i>Service Initiation (Gas)</i>	88	93				93
<i>Outage</i>	76	79				79
<i>Billing (Internal)</i>	84	77				77
<i>Billing (Outsource)</i>	69	76				76
<i>Outdoor Lighting</i>	51	61				61

## Net Easy Outage – 2018

	Carolinas East					Carolinas West					Florida					Midwest				
	Q1	Q2	Q3	Q4	YTD	Q1	Q2	Q3	Q4	YTD	Q1	Q2	Q3	Q4	YTD	Q1	Q2	Q3	Q4	YTD
<b>Net Easy*</b>	83				83	79				79	86				86	79				79
Easy	91				91	88				88	92				92	87				87
Neither easy nor difficult	2				2	4				4	3				3	5				5
Difficult	7				7	8				8	5				5	8				8

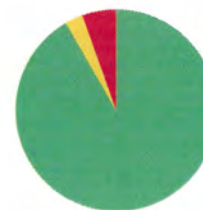
Carolinas East  
YTD



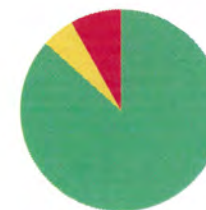
Carolinas West  
YTD



Florida  
YTD



Midwest  
YTD

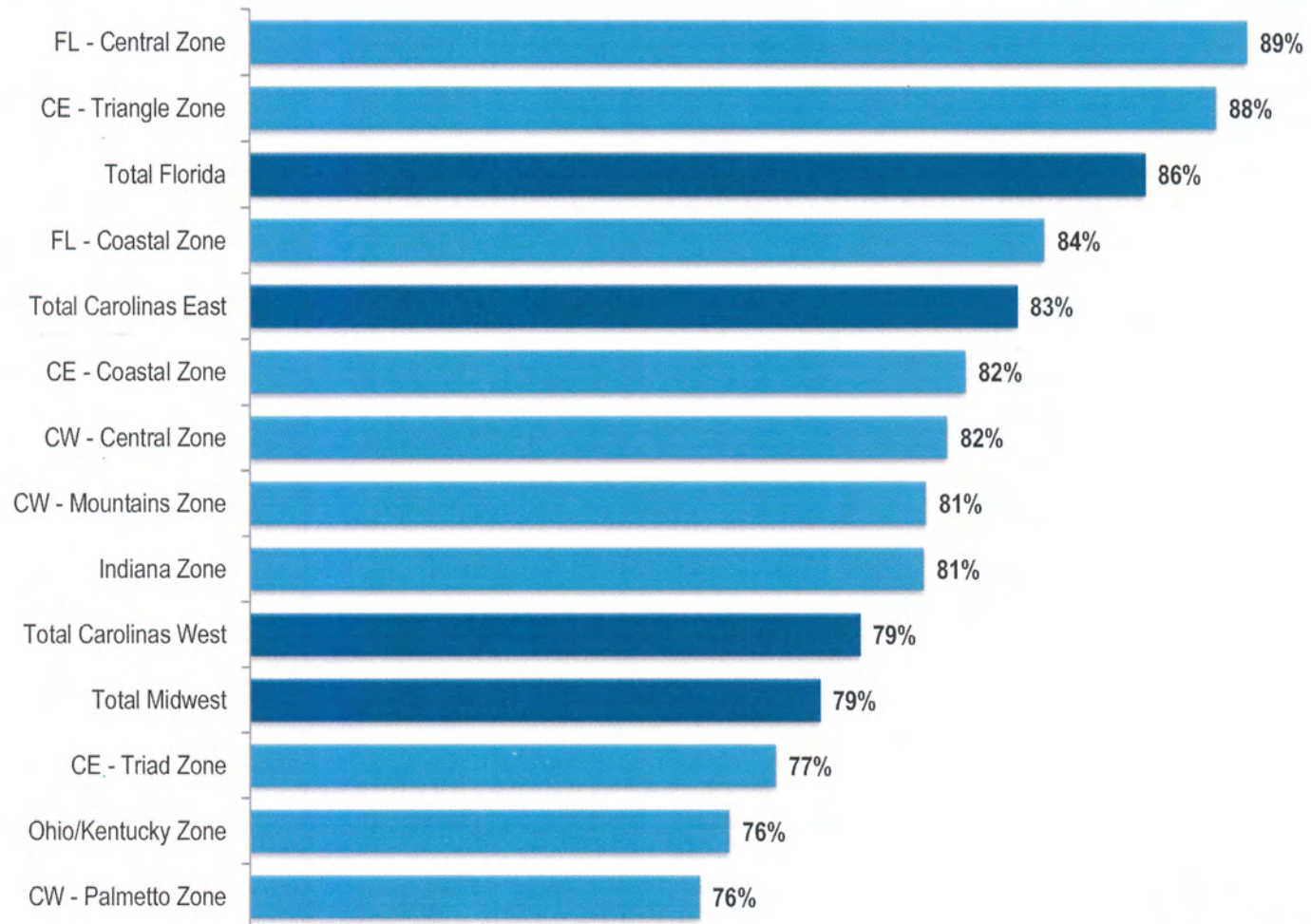


■ Easy    
 ■ Neither easy nor difficult    
 ■ Difficult

All things considered, would you say it was easy – or difficult – for you to get your power restored?



## Net Easy Outage By Zone – Q1-18



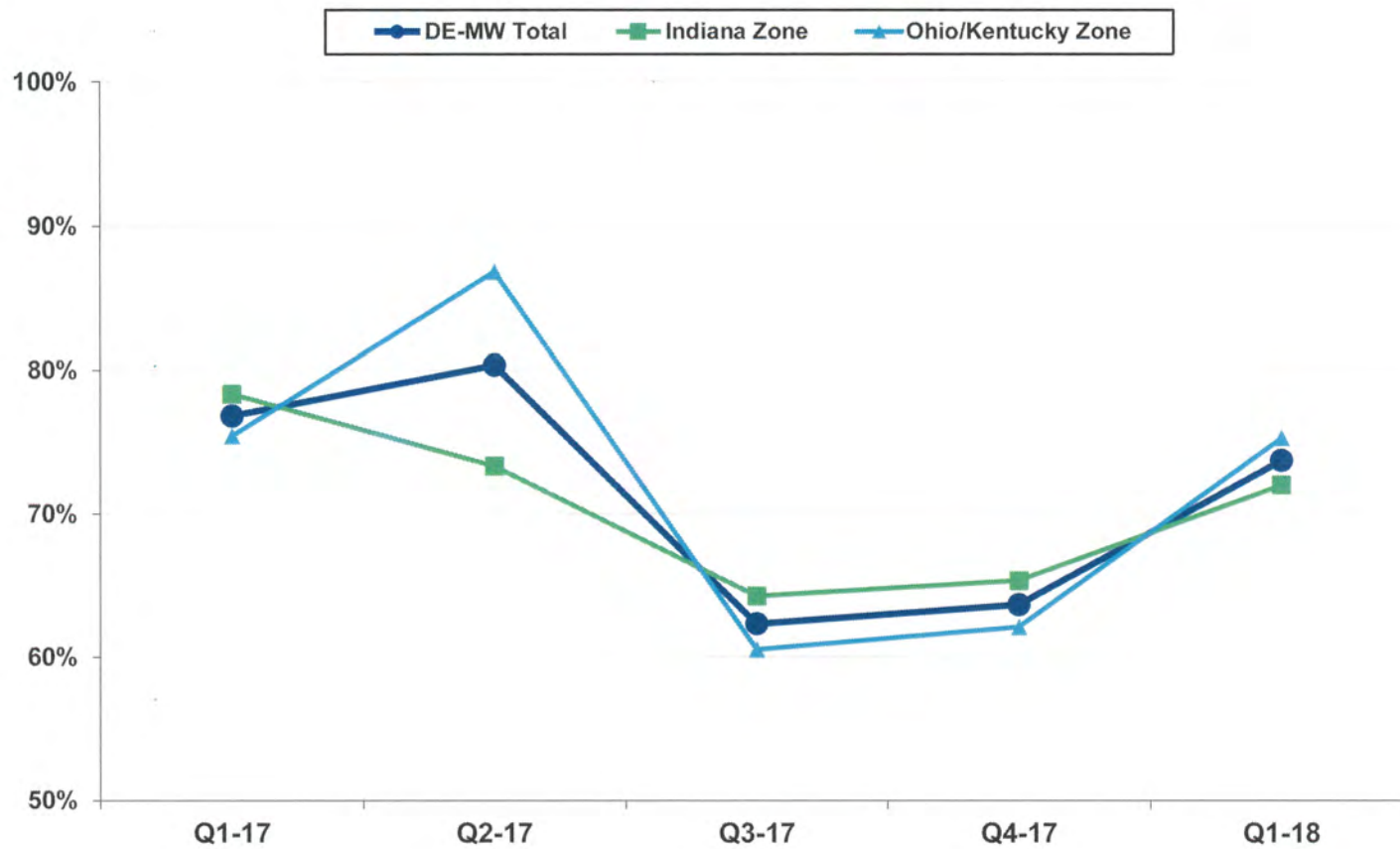
# Midwest Fastrack

## *Outdoor Lighting Module*

Q1-18



## Outdoor Lighting DE-MW Score Trends



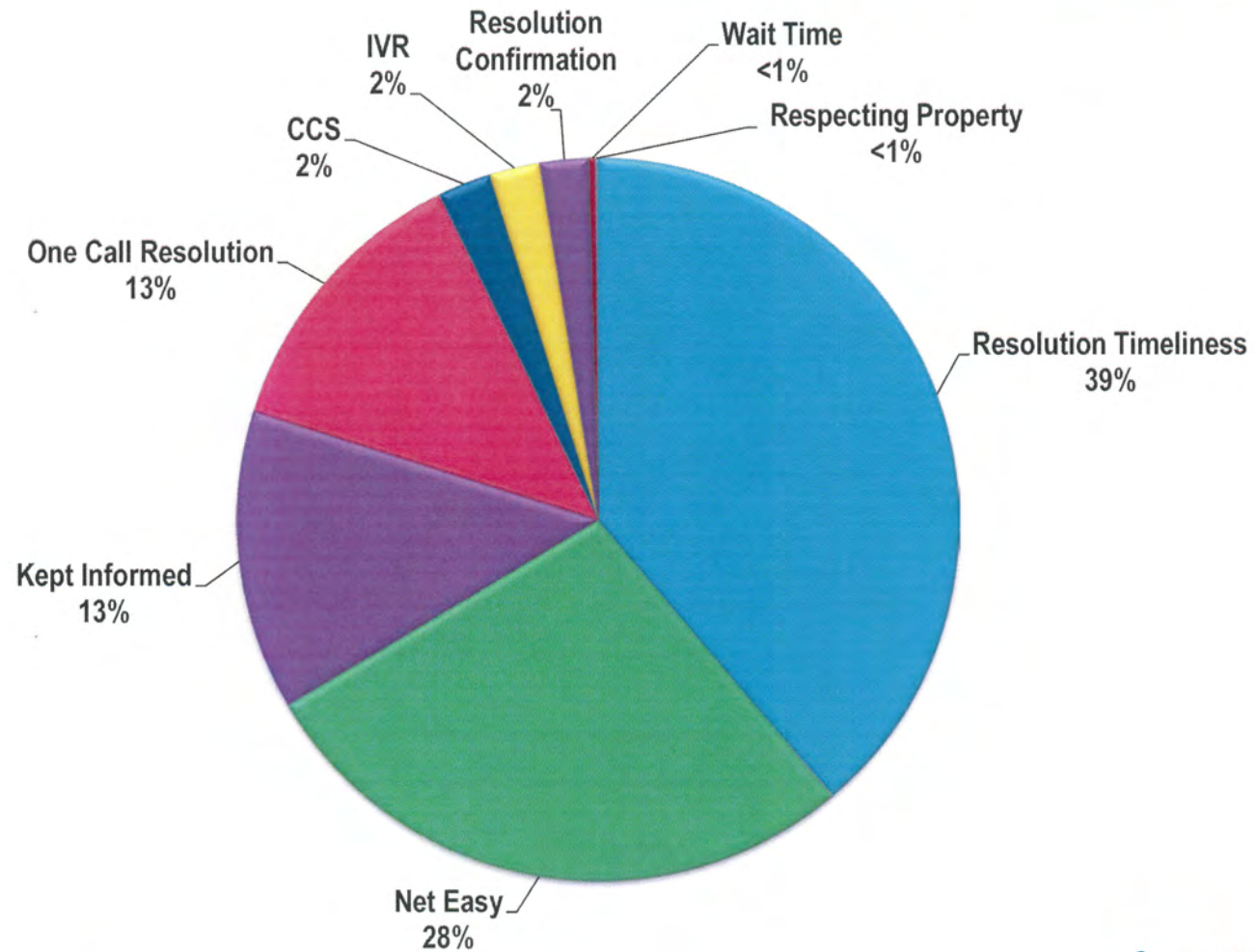
## Outdoor Lighting Impact on Overall Satisfaction

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Overall Satisfaction with Duke Energy's overall performance as your electric supplier	84	86				86
	4	3				3
<i>Would you say that this recent service experience has had a positive, negative, or no effect on this overall satisfaction with Duke Energy?</i>						
<b>Net Effect<sup>1</sup></b>	<b>43</b>	<b>45</b>				<b>45</b>
<i>A positive effect</i>	<b>55</b>	<b>54</b>				<b>54</b>
<i>A negative effect</i>	<b>12</b>	<b>9</b>				<b>9</b>
<i>No effect</i>	<b>33</b>	<b>37</b>				<b>37</b>

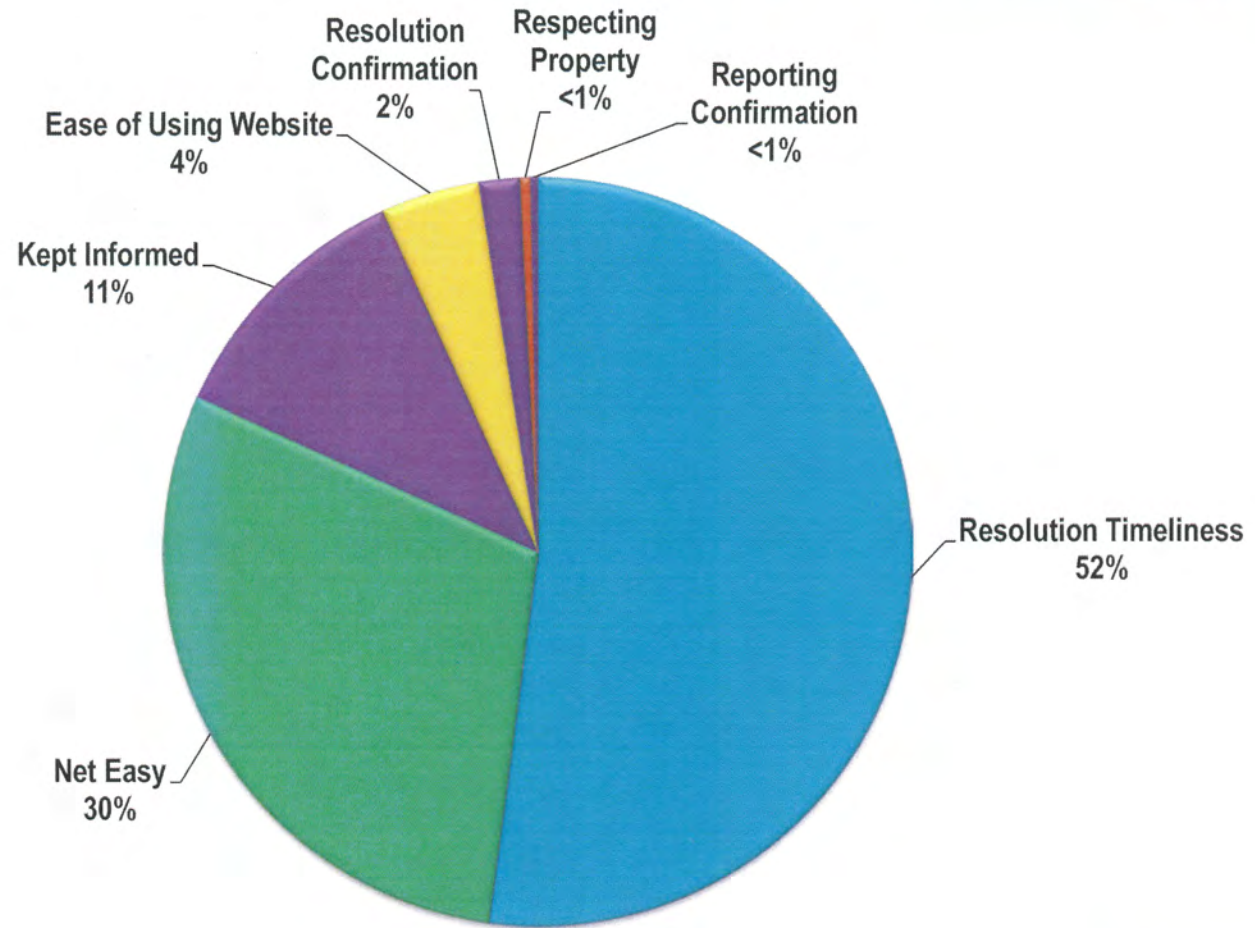
## Impact on Overall Satisfaction DE-MW Fastrack Modules

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<i>Would you say that this recent service experience has had a positive, negative, or no effect on your overall satisfaction with Duke Energy?</i>						
<b>Net Effect<sup>1</sup></b>						
<i>Service Initiation</i>	65	64				64
<i>Service Initiation (Gas)</i>	58	62				62
<i>Outdoor Lighting</i>	43	45				45
<i>Billing (Internal)</i>	46	43				43
<i>Billing (Outsource)</i>	41	38				38
<i>Outage</i>	34	37				37

## Outdoor Lighting (Reported by Phone) DEMW Q1-18 Opportunity Score



## Outdoor Lighting (Reported Online) DEMW Q1-18 Opportunity Score



60  
51

61  
60



Online Reported

## Outdoor Lighting IVR Ratings

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Overall Satisfaction with IVR	49	49				49
	21	23				23
Amount of time you waited to be transferred to CCS	74	76				76
	5	5				5
Overall Satisfaction with Customer Care Specialist	90	90				90
	4	3				3
One call resolution (% Yes)	70	65				65

Rating Scale (0 - 10):

% (8-10)
% (0-4)





Phone Reported



Online Reported

## Outdoor Lighting Website Ratings

62  
61

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Website Evaluation</b>						
Ease of using Duke Energy's website to make your outdoor lighting request	79	85				85
	7	3				3
<i>Did you receive a confirmation email your outdoor lighting repair has been reported? (% Yes)</i>	94	94				94
<i>One contact resolution (% Yes)</i>	79	94				94

Rating Scale (0 - 10):

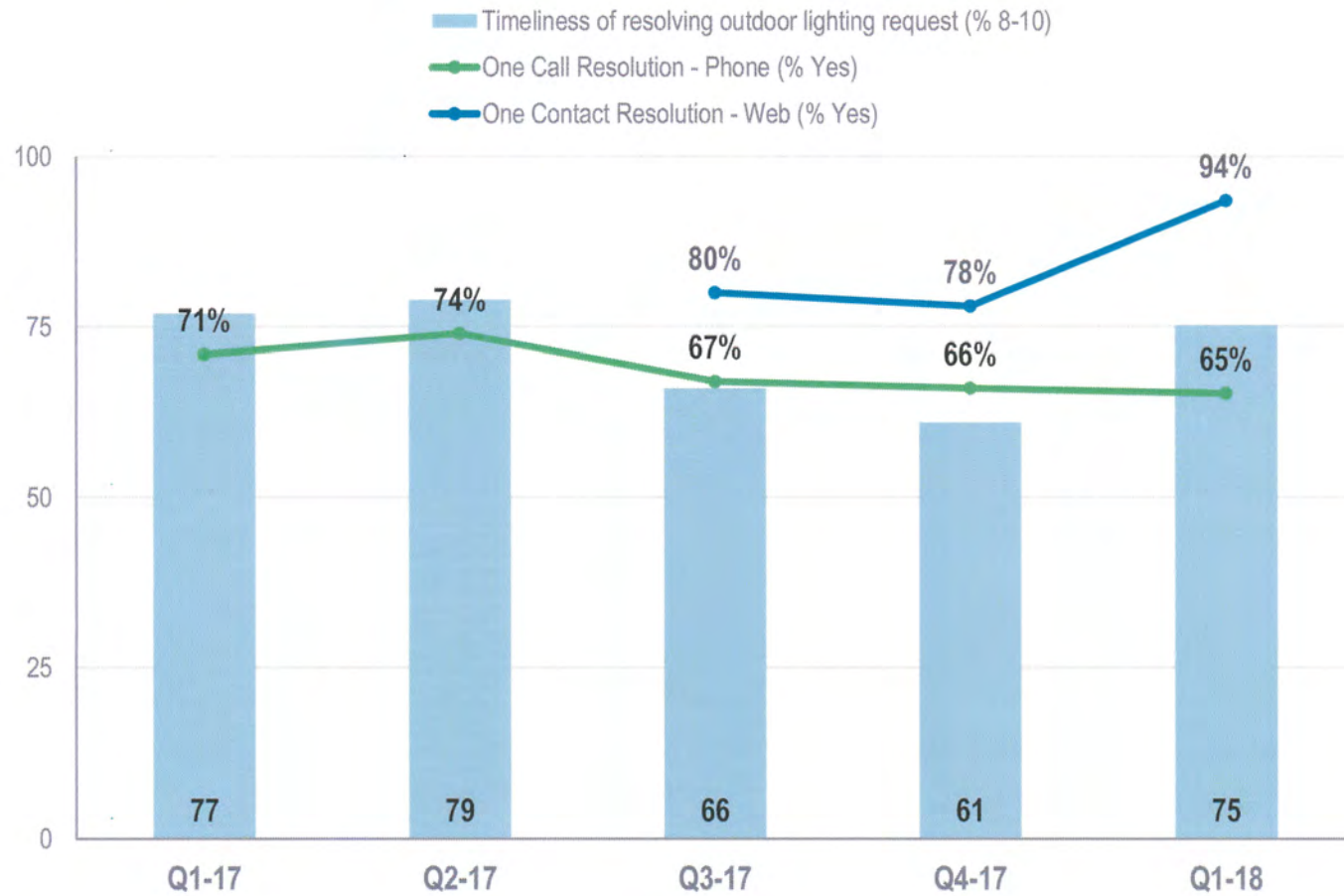
% (8-10)
% (0-4)

63  
62



Online Reported

## Outdoor Lighting Request Resolution





Online Reported

## Outdoor Lighting Kept Informed

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<i>Kept informed throughout the process of your request (% Yes)</i>	56	60				60
<i>Informed that your outdoor lighting request had been resolved (% Yes)</i>	44	49				49



## Outdoor Lighting Quality of Field Service

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<i>Did you speak with the Field Service Technician who repaired your light? (% Yes)</i>	18	18				18
Overall Satisfaction with service provided by Field Service Technician at your property	92 5	96 1				96 1
<i>Was the outdoor light located on your property? (% Yes)</i>	43	39				39
Respecting your property	96 3	93 2				93 2

% (8-10)
% (0-4)



## Outdoor Lighting Net Easy

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Net Easy*</b>	<b>51</b>	<b>61</b>				<b>61</b>
<i>Easy</i>	<b>74</b>	<b>79</b>				<b>79</b>
<i>Neither easy nor difficult</i>	<b>3</b>	<b>4</b>				<b>4</b>
<i>Difficult</i>	<b>23</b>	<b>18</b>				<b>18</b>

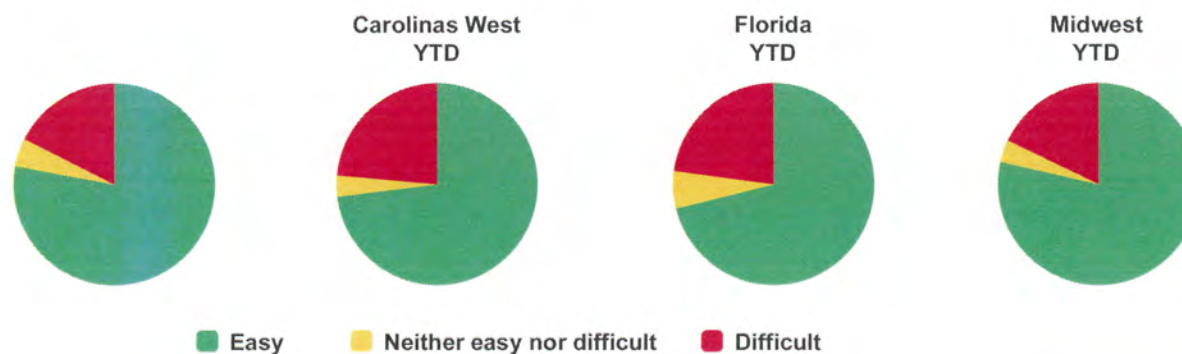
## Net Easy DE-MW Fastrack Modules

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<i>All things considered, would you say it was easy - or difficult - for you to get your request resolved?</i>						
<b>Net Easy*</b>						
<i>Service Initiation</i>	93	94				94
<i>Service Initiation (Gas)</i>	88	93				93
<i>Outage</i>	76	79				79
<i>Billing (Internal)</i>	84	77				77
<i>Billing (Outsource)</i>	69	76				76
<i>Outdoor Lighting</i>	51	61				61

## Net Easy Outdoor Lighting – 2018

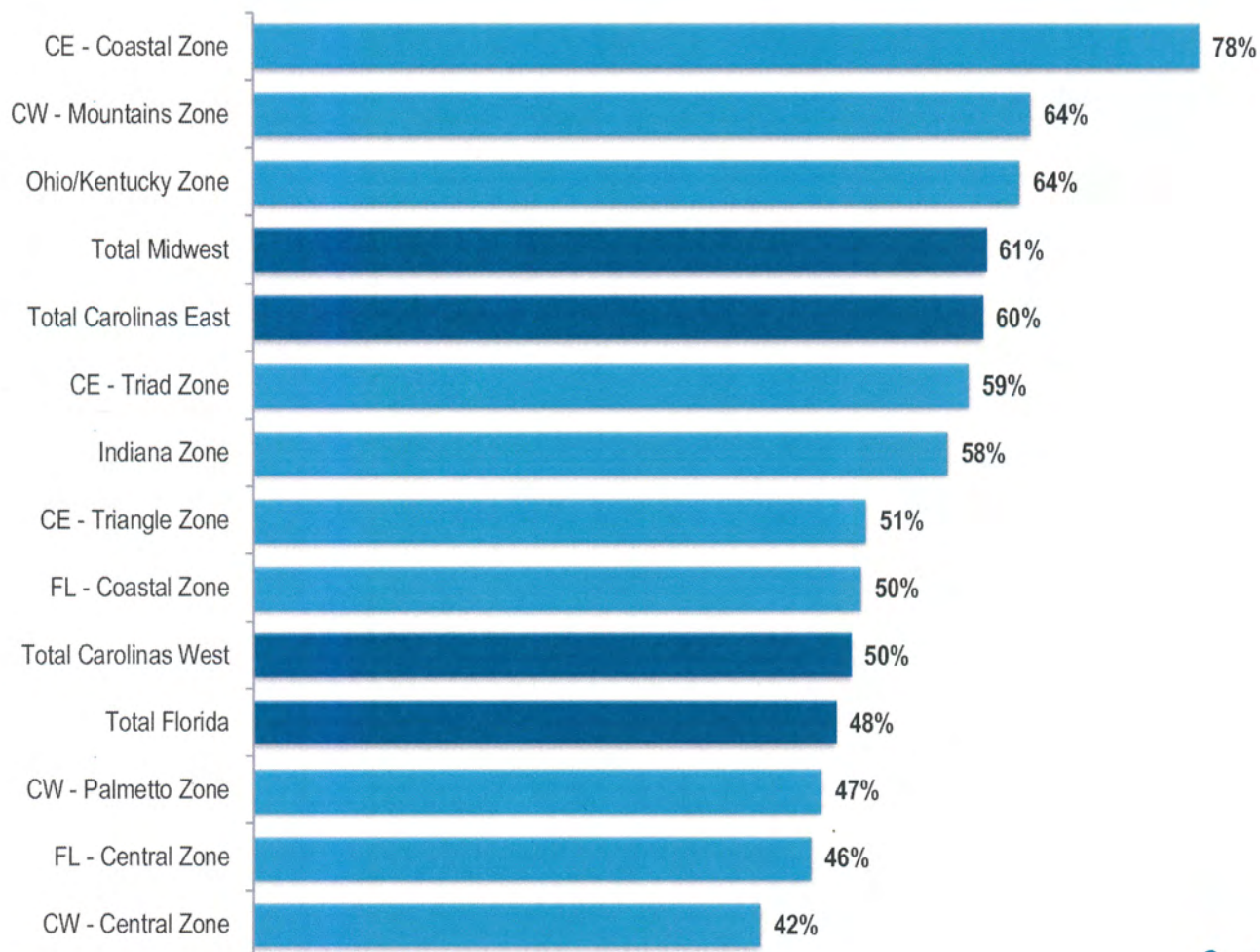
	Carolinas East					Carolinas West					Florida					Midwest					
	Q1	Q2	Q3	Q4	YTD	Q1	Q2	Q3	Q4	YTD	Q1	Q2	Q3	Q4	YTD	Q1	Q2	Q3	Q4	YTD	
<b>Net Easy*</b>	60				60	50				50	48				48	61					61
Easy	78				78	73				73	71				71	79					79
Neither easy nor difficult	5				5	3				3	6				6	4					4
Difficult	17				17	24				24	23				23	18					18

\*Net Easy score = Easy - Difficult



All things considered, would you say it was easy – or difficult – for you to get your request resolved?

## Net Easy Outdoor Lighting By Zone – Q1-18



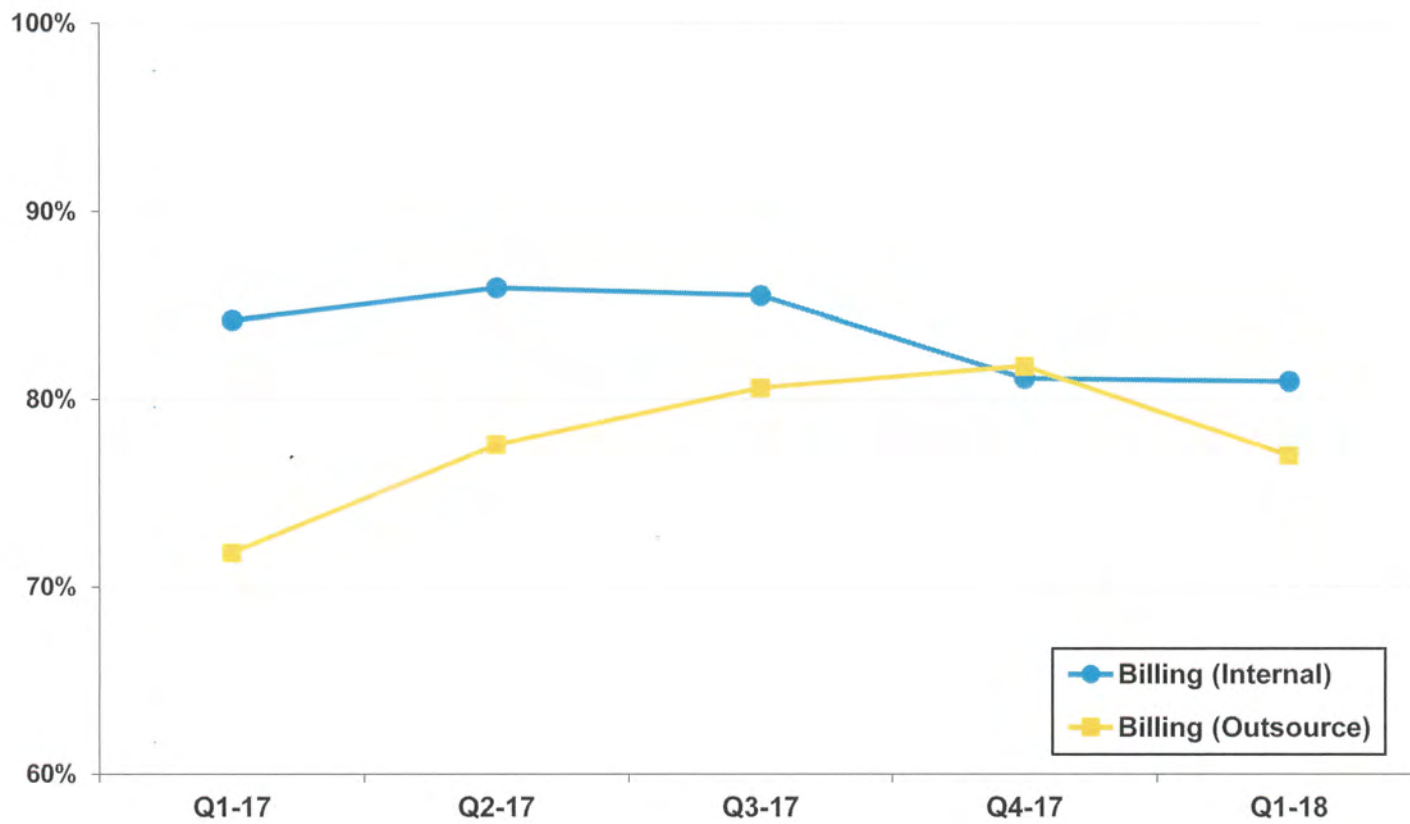


# Midwest Fastrack

## *Billing Module*

Q1-18

## Billing Score Trends



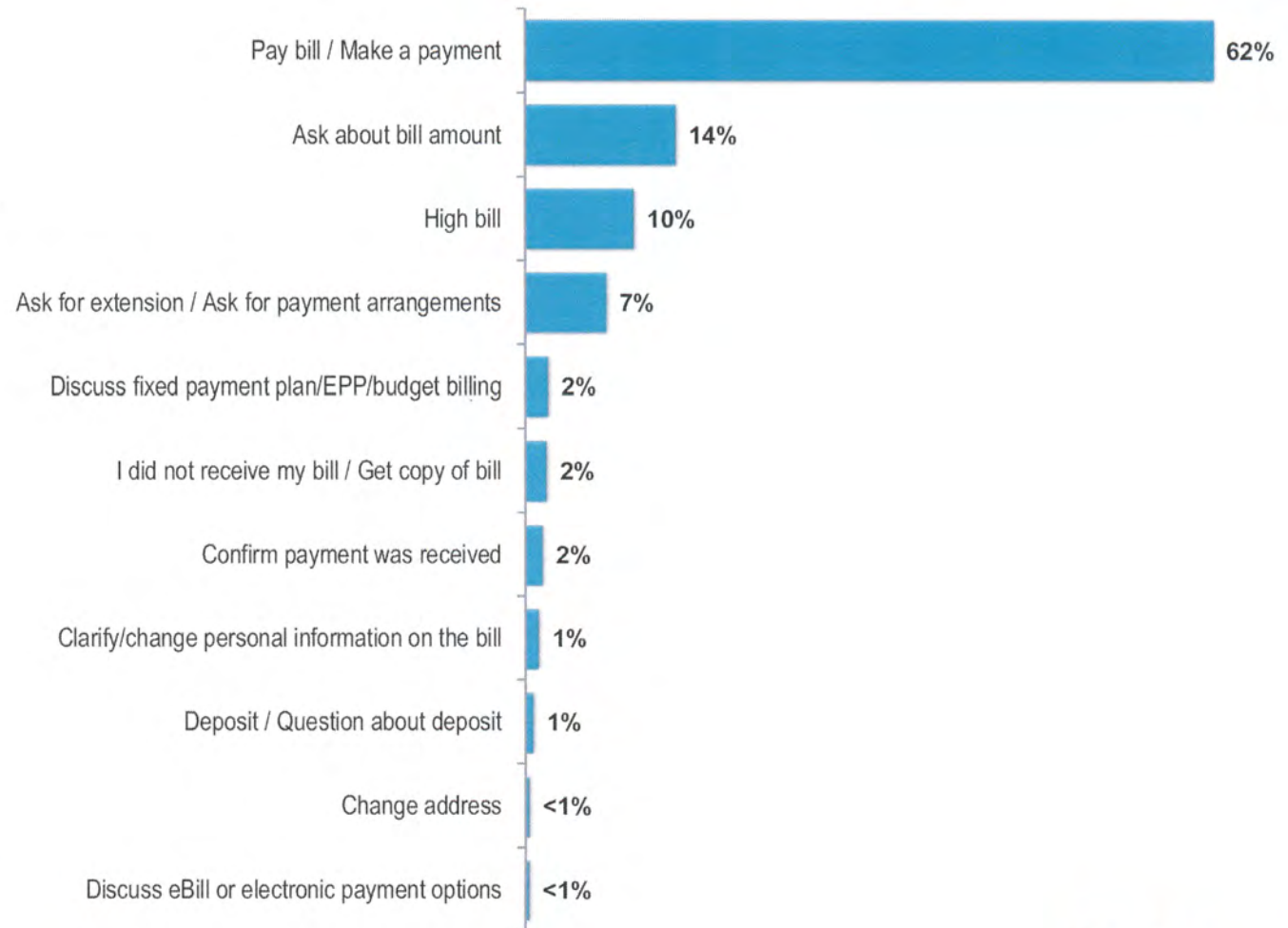
# Midwest Fastrack

## *Billing (Internal) Module*

Q1-18



## Billing (Internal) Reason for Call\* – Q1-18



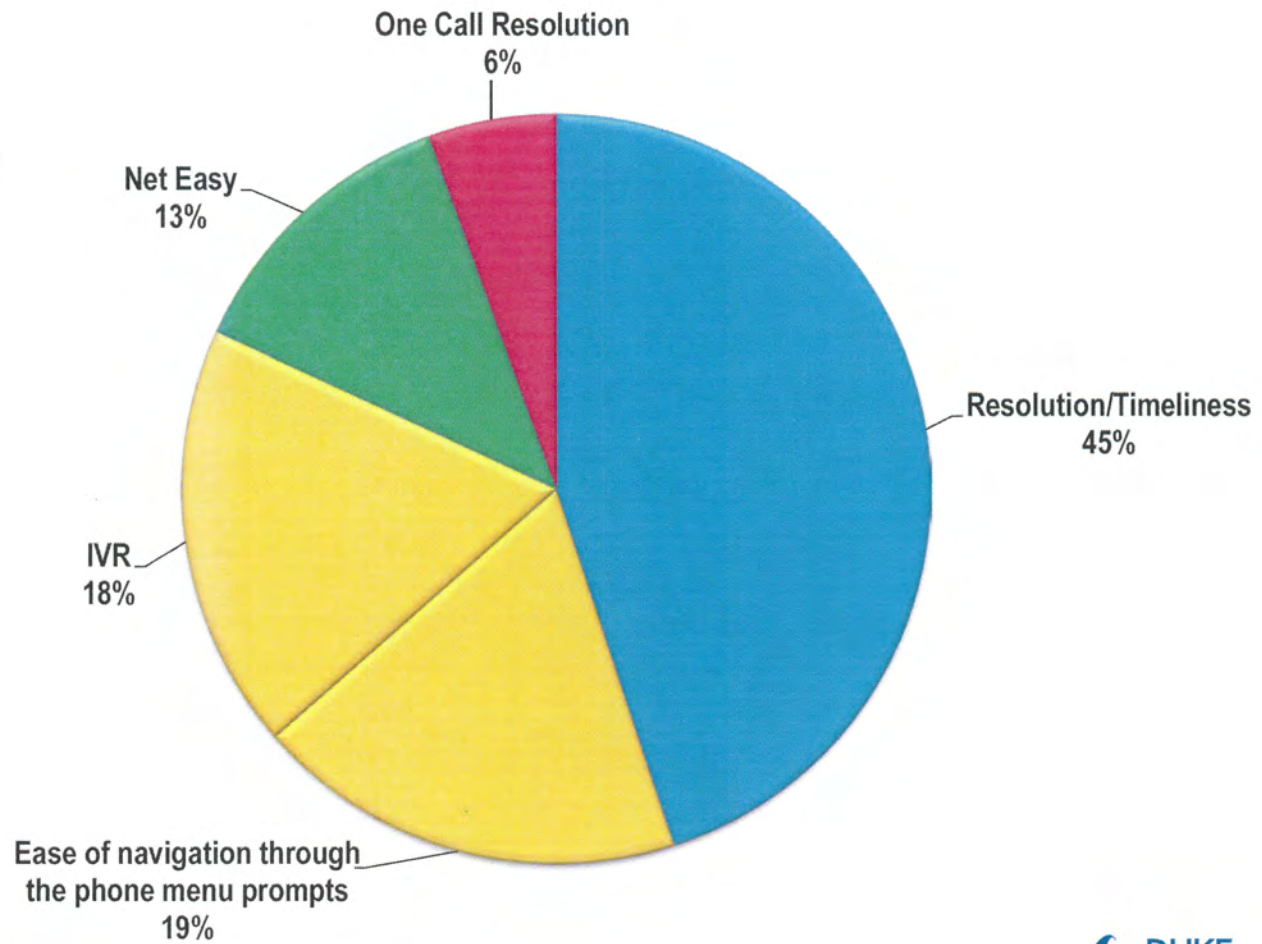
## Billing (Internal) Impact on Overall Satisfaction

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Overall Satisfaction with Duke Energy's overall performance as your electric supplier	87	79				79
	3	3				3
<i>Would you say that this recent service experience has had a positive, negative, or no effect on this overall satisfaction with Duke Energy?</i>						
<b>Net Effect<sup>1</sup></b>	<b>46</b>	<b>43</b>				<b>43</b>
<i>A positive effect</i>	<b>52</b>	<b>48</b>				<b>48</b>
<i>A negative effect</i>	<b>6</b>	<b>5</b>				<b>5</b>
<i>No effect</i>	<b>43</b>	<b>48</b>				<b>48</b>

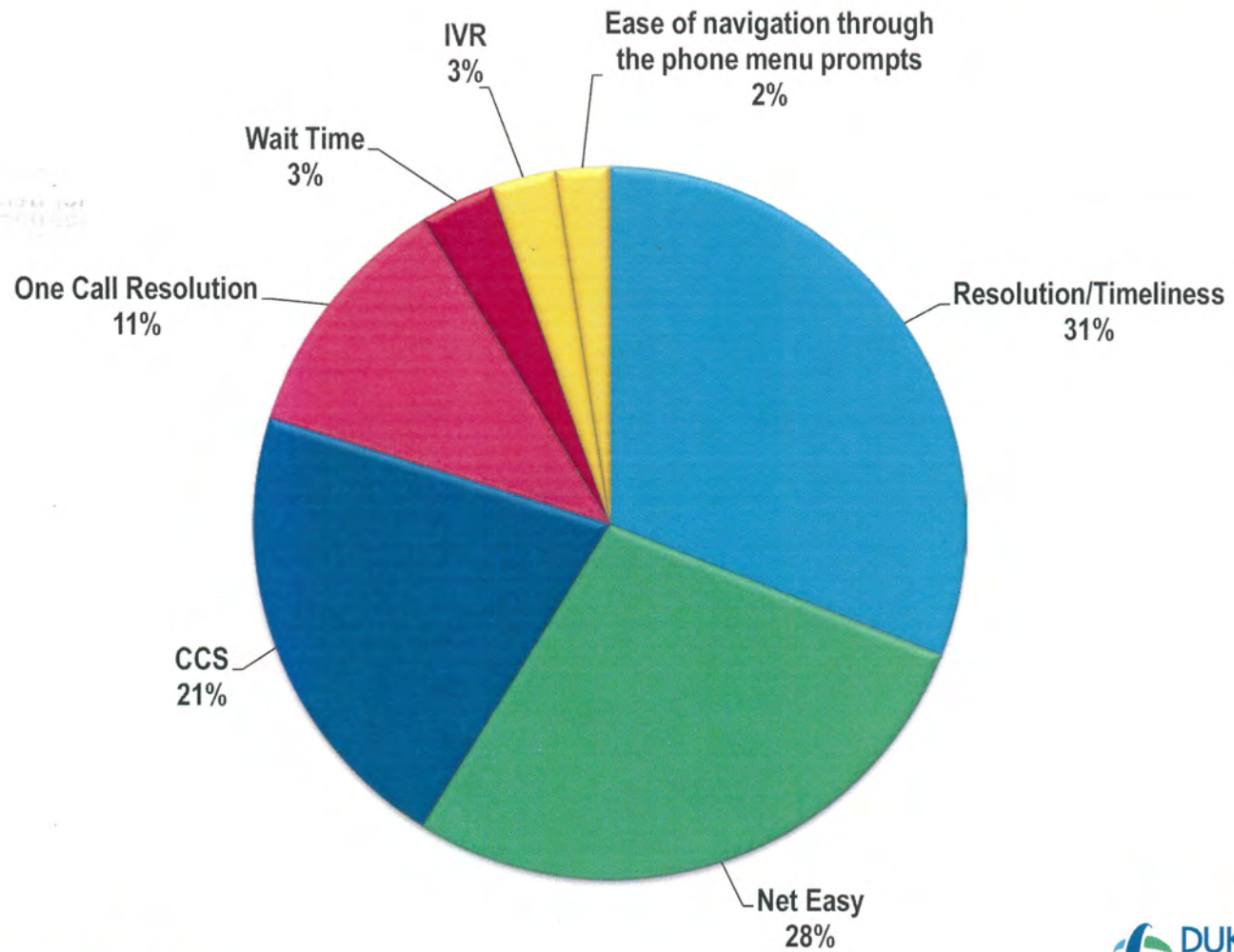
## Impact on Overall Satisfaction DE-MW Fastrack Modules

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<i>Would you say that this recent service experience has had a positive, negative, or no effect on your overall satisfaction with Duke Energy?</i>						
<b>Net Effect<sup>1</sup></b>						
<i>Service Initiation</i>	65	64				64
<i>Service Initiation (Gas)</i>	58	62				62
<i>Outdoor Lighting</i>	43	45				45
<i>Billing (Internal)</i>	46	43				43
<i>Billing (Outsource)</i>	41	38				38
<i>Outage</i>	34	37				37

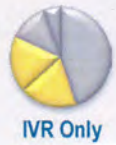
## Billing (Internal) - IVR Only DEMW Q1-18 Opportunity Score



## Billing (Internal) - IVR & CCS DEMW Q1-18 Opportunity Score







## Billing (Internal) IVR Ratings

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Overall Satisfaction with IVR</b>	76	76				76
	7	7				7
Ease of navigation through the phone menu prompts	83	81				81
	4	4				4
Amount of time you waited to be transferred to CCS	86	82				82
	1	4				4
<b>Overall Satisfaction with Customer Care Specialist</b>	91	87				87
	5	6				6

% (8-10)
% (0-4)



## Billing (Internal) Request Resolution

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Request Resolution</b>						
<i>Have requests or questions been resolved? (% Yes)</i>	89	90				90
<i>One call resolution (% Yes)</i>	92	90				90
<i>Timeliness of resolving request</i>	95	91				91
	1	2				2



## Billing (Internal) Net Easy

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Net Easy*</b>	<b>84</b>	<b>77</b>				<b>77</b>
<i>Easy</i>	<b>91</b>	<b>87</b>				<b>87</b>
<i>Neither easy nor difficult</i>	<b>2</b>	<b>4</b>				<b>4</b>
<i>Difficult</i>	<b>7</b>	<b>10</b>				<b>10</b>
<b>% Indicating Request Resolved</b>	<b>89</b>	<b>90</b>				<b>90</b>
<i>Easy</i>	<b>96</b>	<b>92</b>				<b>92</b>
<i>Neither easy nor difficult</i>	<b>2</b>	<b>4</b>				<b>4</b>
<i>Difficult</i>	<b>3</b>	<b>4</b>				<b>4</b>
<b>% Indicating Request NOT Resolved</b>	<b>4</b>	<b>4</b>				<b>4</b>
<i>Easy</i>	<b>50</b>	<b>43</b>				<b>43</b>
<i>Neither easy nor difficult</i>	<b>6</b>	<b>4</b>				<b>4</b>
<i>Difficult</i>	<b>44</b>	<b>52</b>				<b>52</b>

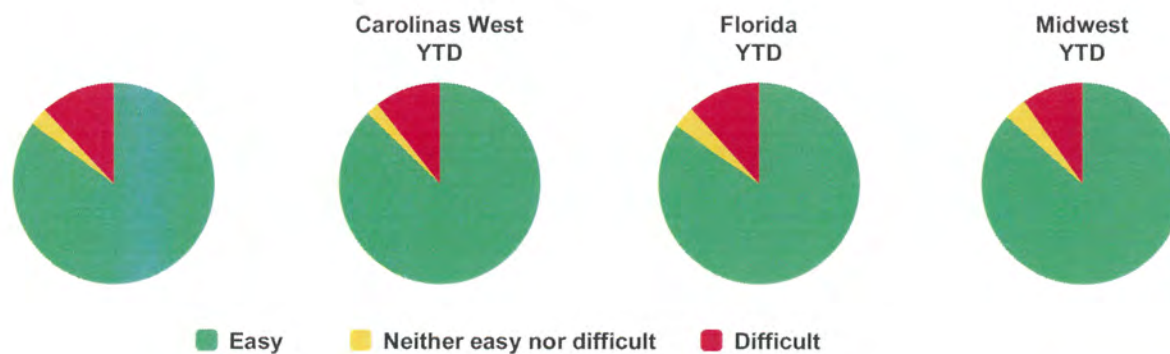
## Net Easy DE-MW Fastrack Modules

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<i>All things considered, would you say it was easy - or difficult - for you to get your request resolved?</i>						
<b>Net Easy*</b>						
<i>Service Initiation</i>	93	94				94
<i>Service Initiation (Gas)</i>	88	93				93
<i>Outage</i>	76	79				79
<i>Billing (Internal)</i>	84	77				77
<i>Billing (Outsource)</i>	69	76				76
<i>Outdoor Lighting</i>	51	61				61

## Net Easy Billing (Internal) – 2018

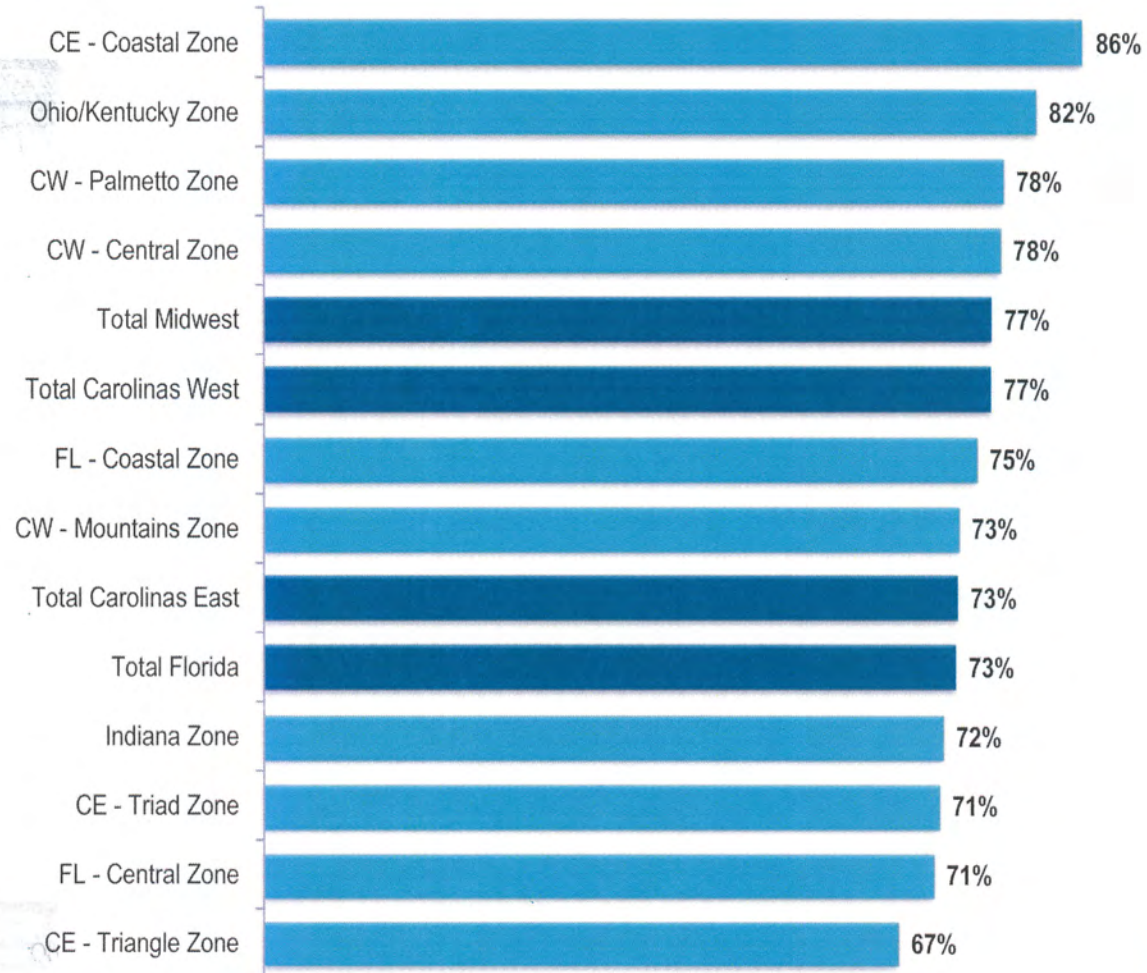
	Carolinas East					Carolinas West					Florida					Midwest				
	Q1	Q2	Q3	Q4	YTD	Q1	Q2	Q3	Q4	YTD	Q1	Q2	Q3	Q4	YTD	Q1	Q2	Q3	Q4	YTD
<b>Net Easy*</b>	73				73	77				77	73				73	77				77
<i>Easy</i>	85				85	87				87	85				85	87				87
<i>Neither easy nor difficult</i>	3				3	2				2	4				4	4				4
<i>Difficult</i>	12				12	11				11	12				12	10				10

\*Net Easy score = Easy - Difficult



All things considered, would you say it was easy – or difficult – for you to get your request resolved?

## Net Easy Billing (Internal) By Zone – Q1-18



83

84

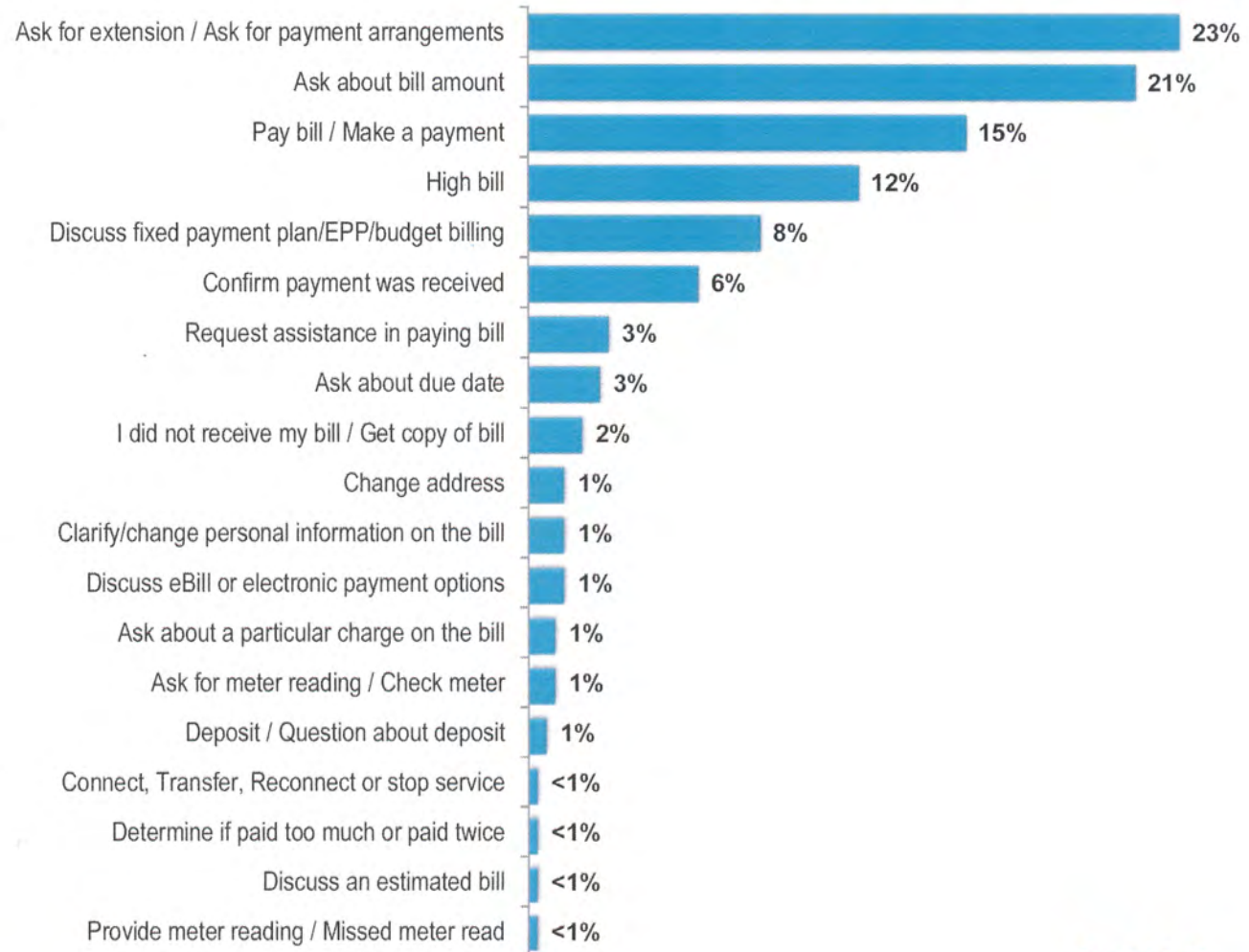
# Midwest Fastrack

## *Billing (Outsource) Module*

Q1-18



## Billing (Outsource) Reason for Call\* – Q1-18





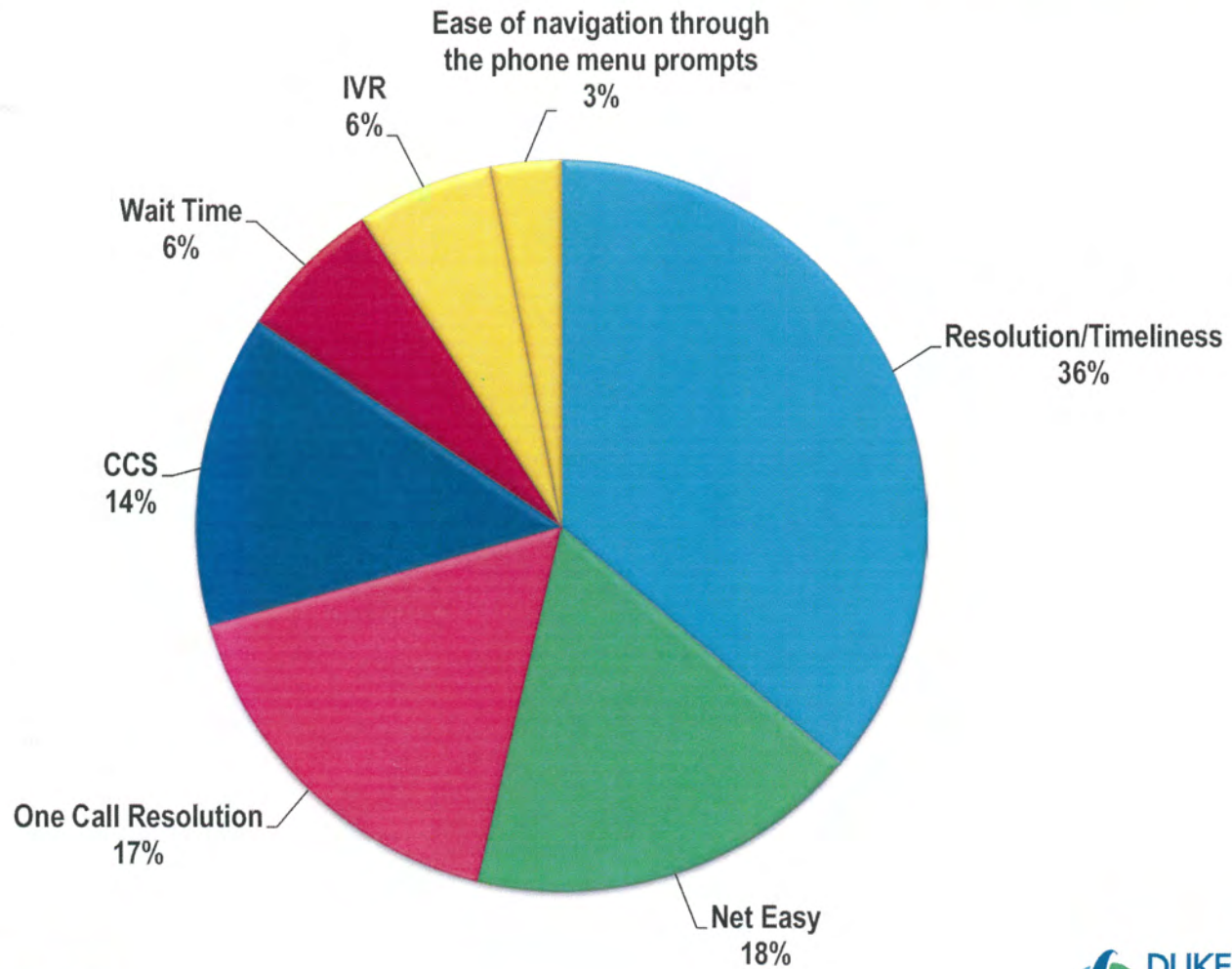
## Billing (Outsource) Impact on Overall Satisfaction

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Overall Satisfaction with Duke Energy's overall performance as your electric supplier	81	78				78
	6	7				7
<i>Would you say that this recent service experience has had a positive, negative, or no effect on this overall satisfaction with Duke Energy?</i>						
<b>Net Effect<sup>1</sup></b>	<b>41</b>	<b>38</b>				<b>38</b>
<i>A positive effect</i>	<b>54</b>	<b>49</b>				<b>49</b>
<i>A negative effect</i>	<b>12</b>	<b>11</b>				<b>11</b>
<i>No effect</i>	<b>34</b>	<b>39</b>				<b>39</b>

## Impact on Overall Satisfaction DE-MW Fastrack Modules

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<i>Would you say that this recent service experience has had a positive, negative, or no effect on your overall satisfaction with Duke Energy?</i>						
<b>Net Effect<sup>1</sup></b>						
<i>Service Initiation</i>	65	64				64
<i>Service Initiation (Gas)</i>	58	62				62
<i>Outdoor Lighting</i>	43	45				45
<i>Billing (Internal)</i>	46	43				43
<i>Billing (Outsource)</i>	41	38				38
<i>Outage</i>	34	37				37

## Billing (Outsource) DEMW Q1-18 Opportunity Score



88

89



## Billing (Outsource) IVR Ratings

89  
88

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Overall Satisfaction with IVR</b>	64	61				61
	13	14				14
Ease of navigation through the phone menu prompts	72	70				70
	10	10				10
Amount of time you waited to be transferred to CCS	85	85				85
	3	6				6
<b>Overall Satisfaction with Customer Care Specialist</b>	87	91				91
	7	4				4

% (8-10)
% (0-4)

90  
89



## Billing (Outsource) Request Resolution

90  
89

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Request Resolution</b>						
<i>Have requests or questions been resolved? (% Yes)</i>	78	79				79
<i>One call resolution (% Yes)</i>	83	84				84
Timeliness of resolving request	93	91				91
	3	1				1

91  
90



## Billing (Outsource) Net Easy

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Net Easy*</b>	69	76				76
Easy	83	87				87
Neither easy nor difficult	3	2				2
Difficult	14	11				11
<b>% Indicating Request Resolved</b>	78	79				79
Easy	94	98				98
Neither easy nor difficult	2	1				1
Difficult	4	2				2
<b>% Indicating Request NOT Resolved</b>	7	5				5
Easy	44	44				44
Neither easy nor difficult	9	8				8
Difficult	47	48				48

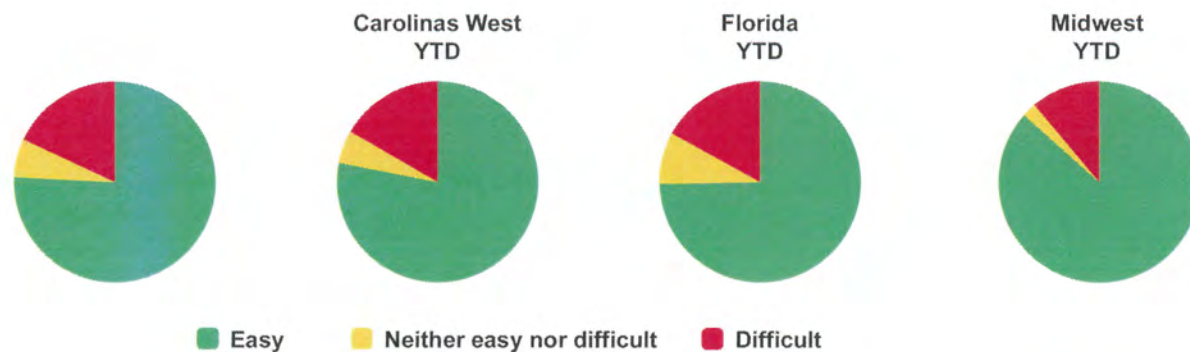
## Net Easy DE-MW Fastrack Modules

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<i>All things considered, would you say it was easy - or difficult - for you to get your request resolved?</i>						
<b>Net Easy*</b>						
<i>Service Initiation</i>	93	94				94
<i>Service Initiation (Gas)</i>	88	93				93
<i>Outage</i>	76	79				79
<i>Billing (Internal)</i>	84	77				77
<i>Billing (Outsource)</i>	69	76				76
<i>Outdoor Lighting</i>	51	61				61

## Net Easy Billing (Outsource) – 2018

	Carolinas East					Carolinas West					Florida					Midwest				
	Q1	Q2	Q3	Q4	YTD	Q1	Q2	Q3	Q4	YTD	Q1	Q2	Q3	Q4	YTD	Q1	Q2	Q3	Q4	YTD
<b>Net Easy*</b>	58				58	61				61	58				58	76				76
Easy	76				76	78				78	75				75	87				87
Neither easy nor difficult	6				6	5				5	8				8	2				2
Difficult	18				18	17				17	17				17	11				11

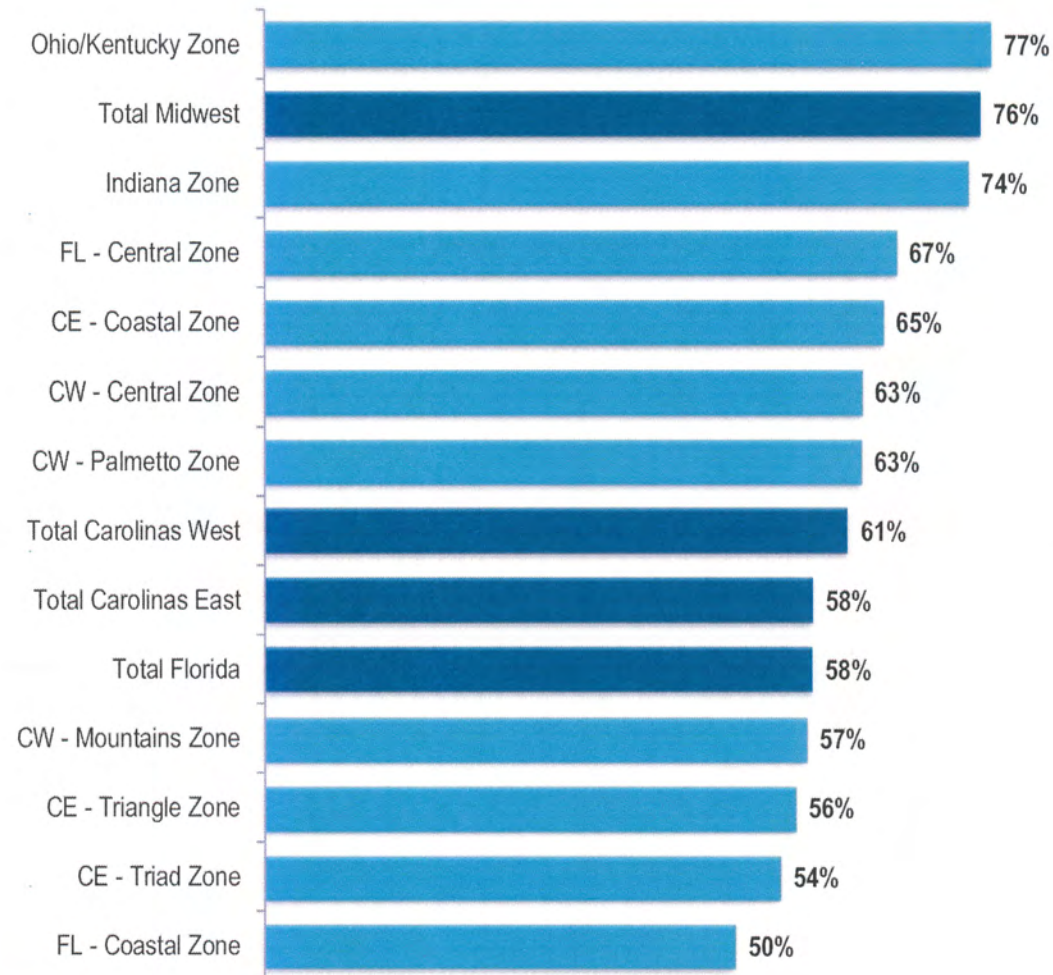
\*Net Easy score = Easy - Difficult



All things considered, would you say it was easy – or difficult – for you to get your request resolved?



## Net Easy Billing (Outsource) By Zone – Q1-18



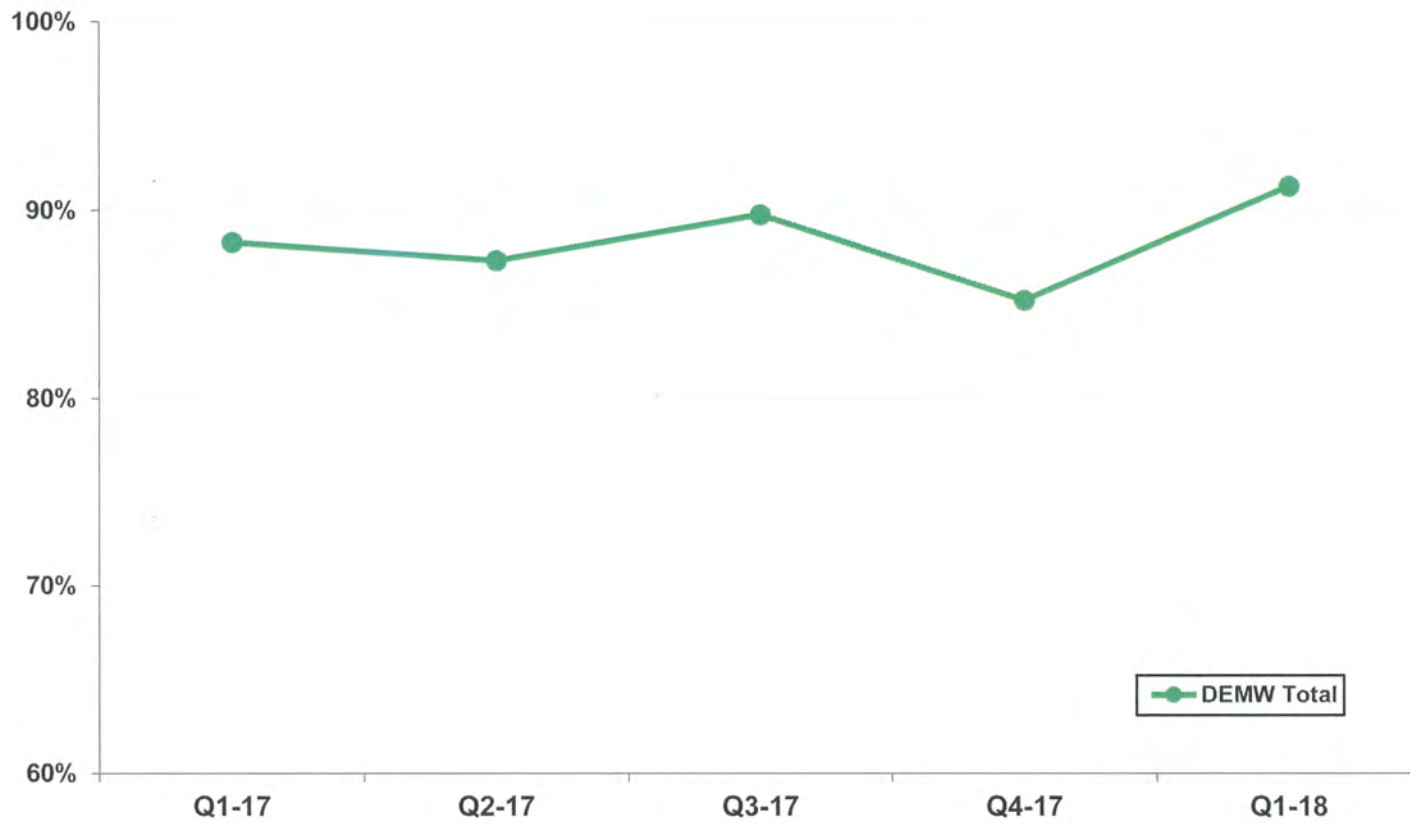
# Midwest Fastrack

## *Service Initiation (Gas) Module*

Q1-18



## Service Initiation (Gas) DE-MW Score Trends



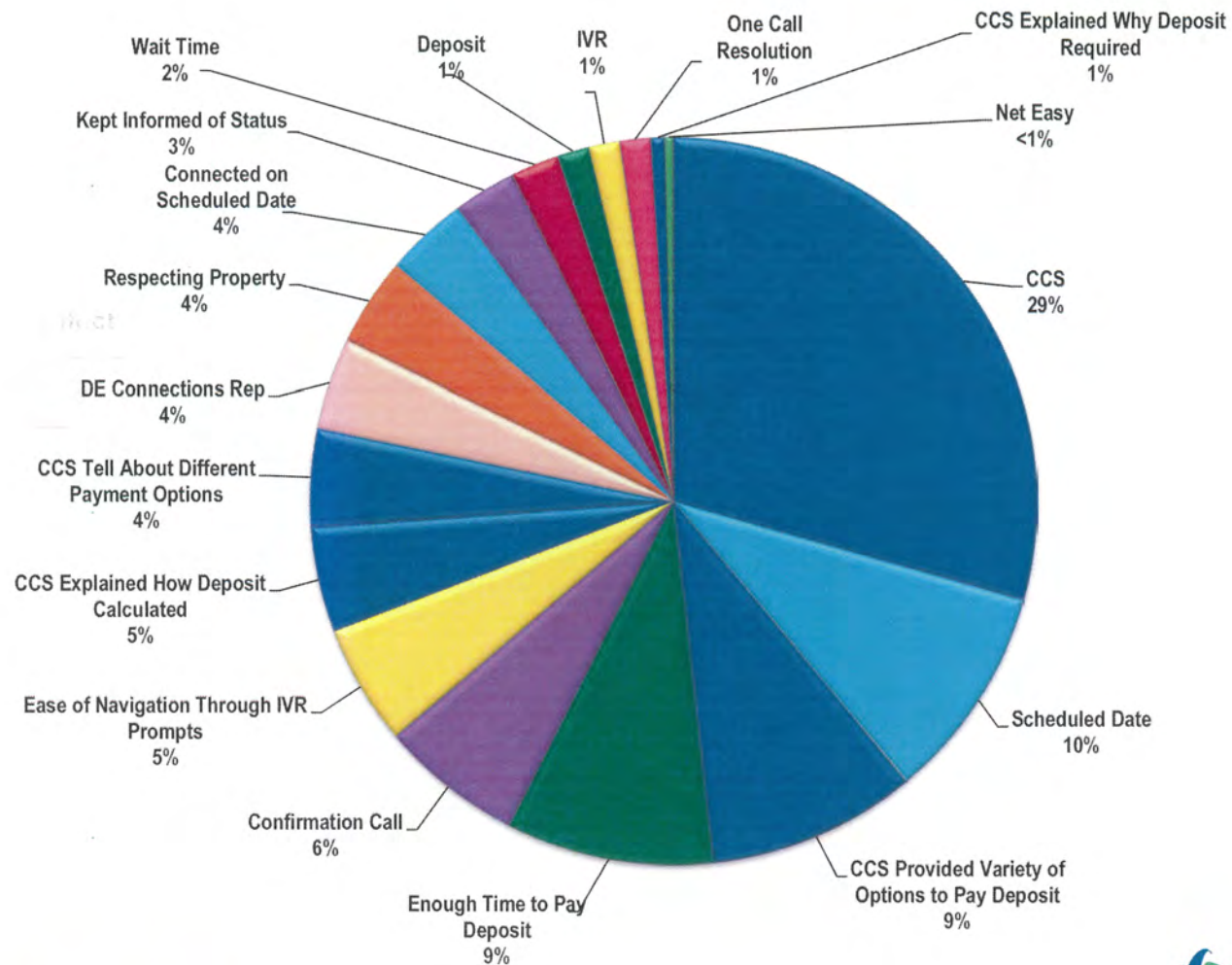
## Service Initiation (Gas) Impact on Overall Satisfaction

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Overall Satisfaction with Duke Energy's overall performance as your electric supplier	90	92				92
	2	2				2
<i>Would you say that your recent service experience has had a positive, negative, or no effect on your overall satisfaction with Duke Energy?</i>						
<b>Net Effect<sup>1</sup></b>	<b>58</b>	<b>62</b>				<b>62</b>
<i>A positive effect</i>	<b>63</b>	<b>65</b>				<b>65</b>
<i>A negative effect</i>	<b>5</b>	<b>3</b>				<b>3</b>
<i>No effect</i>	<b>32</b>	<b>32</b>				<b>32</b>

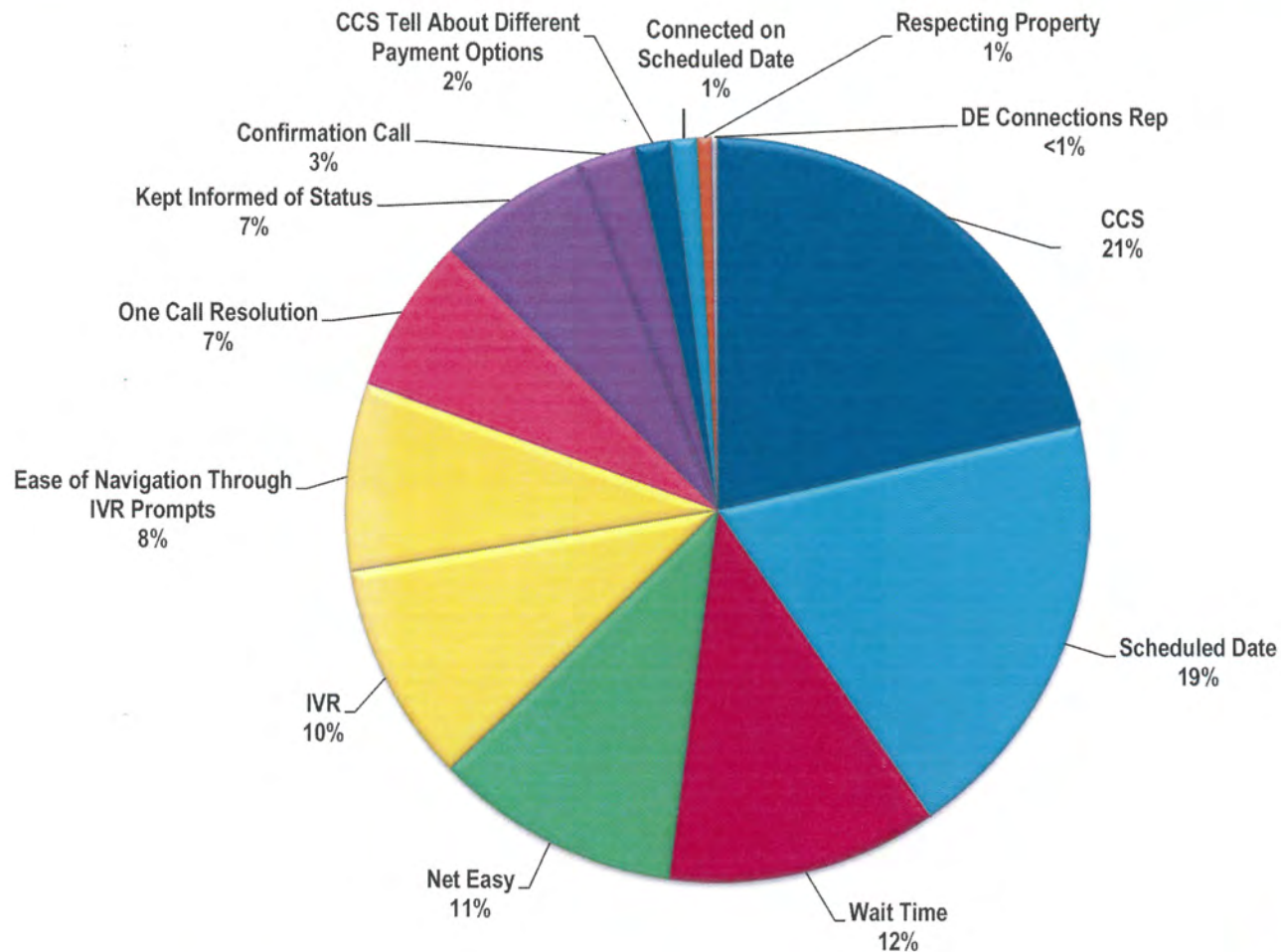
## Impact on Overall Satisfaction DE-MW Fastrack Modules

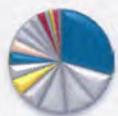
	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<i>Would you say that this recent service experience has had a positive, negative, or no effect on your overall satisfaction with Duke Energy?</i>						
<b>Net Effect<sup>1</sup></b>						
<i>Service Initiation</i>	65	64				64
<i>Service Initiation (Gas)</i>	58	62				62
<i>Outdoor Lighting</i>	43	45				45
<i>Billing (Internal)</i>	46	43				43
<i>Billing (Outsource)</i>	41	38				38
<i>Outage</i>	34	37				37

## Service Initiation (Gas) – Deposit Required DEMW Q1-18 Opportunity Score



## Service Initiation (Gas) – Deposit NOT Required DEMW Q1-18 Opportunity Score





No Deposit

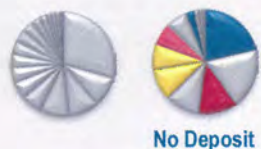
## Service Initiation (Gas) Call Center Metrics – Deposit Required

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Overall Satisfaction with IVR	76	77				77
	9	6				6
Ease of navigation through the phone menu prompts	83	83				83
	5	4				4
Amount of time you waited to be transferred to CCS	89	93				93
	3	2				2
Overall Satisfaction with Customer Care Specialist	93	100				100
	4	0				0
<i>Payment options explained (% Yes)</i>	75	79				79
<i>One call resolution (% Yes)</i>	80	92				92
Overall Satisfaction with Duke Energy Connections Representative	86	81				81
	9	14				14

Rating Scale (0 - 10):

% (8-10)
% (0-4)





## Service Initiation (Gas) Call Center Metrics – Deposit NOT Required

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Overall Satisfaction with IVR	74 8	73 7				73 7
Ease of navigation through the phone menu prompts	79 6	81 5				81 5
Amount of time you waited to be transferred to CCS	88 2	87 2				87 2
Overall Satisfaction with Customer Care Specialist	91 2	94 2				94 2
<i>Payment options explained (% Yes)</i>	63	72				72
<i>One call resolution (% Yes)</i>	87	87				87
Overall Satisfaction with Duke Energy Connections Representative	82 7	87 9				87 9

Rating Scale (0 - 10):

% (8-10)
% (0-4)



No Deposit

## Service Initiation (Gas) Deposit

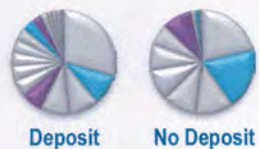
	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Required to Pay Deposit (% Yes)</b>	<b>25</b>	<b>26</b>				<b>26</b>
<i>Deposit affected overall satisfaction</i>	<b>44</b>	<b>45</b>				<b>45</b>
<i>SOME effect on overall satisfaction</i>	<b>23</b>	<b>30</b>				<b>30</b>
<i>BIG effect on overall satisfaction</i>	<b>13</b>	<b>9</b>				<b>9</b>
<i>BIGGER impact on overall satisfaction than anything else</i>	<b>8</b>	<b>6</b>				<b>6</b>
<i>CCS explained why the deposit was required (% Yes)</i>	<b>72</b>	<b>65</b>				<b>65</b>
<i>CCS explained how the deposit was calculated (% Yes)</i>	<b>58</b>	<b>55</b>				<b>55</b>
<i>CCS provided a variety of options to pay or satisfy the deposit (% Yes)</i>	<b>82</b>	<b>92</b>				<b>92</b>
<i>Overall satisfaction with providing enough time to pay the deposit</i>	<b>84</b>	<b>87</b>				<b>87</b>
	<b>4</b>	<b>2</b>				<b>2</b>

Rating Scale (0 - 10):

% (8-10)
% (0-4)

## Service Initiation (Gas) Appointment

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Appointment*</b>						
<i>Did CCS inform you someone had to be home? (% Yes)</i>	96	99				99
<i>Were you able to schedule the time window you wanted? (% Yes)</i>	87	88				88



## Service Initiation (Gas) Scheduled Date & Performance

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Scheduled Date &amp; Performance</b>						
Satisfaction with scheduled connection date	93	96				96
	3	1				1
<i>Service connected on scheduled date (%Yes)</i>	96	97				97
<i>Received confirmation call or phone message (% Yes)</i>	50	62				62
<i>Kept Informed About Status of Request (% Yes)</i>	83	84				84

% (8-10)
-----
% (0-4)



No Deposit

## Service Initiation (Gas) Field Service Technician

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
Respecting your property	98	96				96
	1	2				2
<i>Talked with field service technician DURING visit (% Yes)</i>	27	18				18
<b>Overall Satisfaction with service provided by Field Service Technician at your property</b>	96	94				94
	1	0				0



## Service Initiation (Gas) Net Easy – Connected on Scheduled Date

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Net Easy*</b>	88	93				93
Easy	93	96				96
Neither easy nor difficult	2	1				1
Difficult	5	3				3
<b>% Indicating Connected on Scheduled Date</b>	96	97				97
Easy	94	97				97
Neither easy nor difficult	1	1				1
Difficult	4	3				3
<b>% Indicating NOT Connected on Scheduled Date</b>	4	3				3
Easy	61	77				77
Neither easy nor difficult	8	6				6
Difficult	31	18				18



## Service Initiation (Gas) Net Easy – Deposit Required

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<b>Net Easy*</b>	88	93				93
Easy	93	96				96
Neither easy nor difficult	2	1				1
Difficult	5	3				3
<b>% Indicating Required to Pay Deposit</b>	25	26				26
Easy	93	99				99
Neither easy nor difficult	1	1				1
Difficult	6	0				0
<b>% Indicating NOT Required to Pay Deposit</b>	75	74				74
Easy	93	95				95
Neither easy nor difficult	2	1				1
Difficult	5	4				4

## Net Easy DE-MW Fastrack Modules

	YTD-17	Q1-18	Q2-18	Q3-18	Q4-18	YTD-18
<i>All things considered, would you say it was easy - or difficult - for you to get your request resolved?</i>						
<b>Net Easy*</b>						
<i>Service Initiation</i>	93	94				94
<i>Service Initiation (Gas)</i>	88	93				93
<i>Outage</i>	76	79				79
<i>Billing (Internal)</i>	84	77				77
<i>Billing (Outsource)</i>	69	76				76
<i>Outdoor Lighting</i>	51	61				61







1DF – Midwest  
Fastrack

June 2018 Update



# 1DF – Midwest Fastrack

## Table of Contents

## Fastrack Description The Process

Customer requests a service from Duke Energy:

- Service Initiation
- Outage
- Outdoor Lighting
- Billing

All Fastrack service interactions are pulled on a DAILY basis & sent to Bellomy Research

Bellomy Research calls customer & conducts interview

Bellomy Research compiles & sends CSAT results via customized reports

Customer Satisfaction Team publishes:

- Monthly: Score Updates, Verbatims, KPI reports
- Quarterly: Detailed Analytic Reports, Improvement Priorities

## Fastrack Description The Score Question

0 1 2 3 4 5 6 7 8 9 10

Highly Dissatisfied= % '0-4'

Highly Satisfied= % '8,9,10'

$$\text{Fastrack Score} = \frac{\text{\# of customers rating the score question '8, 9, 10'}}{\text{TOTAL customers interviewed}}$$

### Example

If there are 10 total interviews:

- ❖ 1 rated the score question '5'
- ❖ 3 rated the score question '8'
- ❖ 2 rated the score question '9'
- ❖ 4 rated the score question '10'

$$\text{The Fastrack Score would} = \frac{(3+2+4)}{10} = 90$$













# 1DF – Midwest Fastrack

## *DEMW Results*

June 2018






## 1DF – Midwest Fastrack Goal Update – June 2018

	June Score	2018 YTD	2018 Goal	Goal Status
<b>Midwest Fastrack</b>	<b>85</b>	<b>84</b>	<b>83</b>	
Service Initiation	88	90	90	
Outage	75	81	79	
Outdoor Lighting	92	80	80	
<b>Indiana Fastrack</b>	<b>88</b>	<b>85</b>	<b>85</b>	
Service Initiation	85	90	90	
Outage	88	85	84	
Outdoor Lighting	90	78	80	
<b>Ohio/Kentucky Fastrack</b>	<b>82</b>	<b>83</b>	<b>82</b>	
Service Initiation	91	90	91	
Outage	62	77	76	
Outdoor Lighting	93	81	80	

## 1DF – Midwest Fastrack




### Total Goal Module Performance by Zone – June 2018

	June Score	2018 YTD	2018 Goal	Goal Status
<b>Duke Energy Midwest</b>	<b>85</b>	<b>84</b>	<b>83</b>	
Indiana	88	85	85	
Ohio/Kentucky	82	83	82	






## 1DF – Midwest Fastrack

### ‘Service Initiation’ Performance by Zone – June 2018




	June Score	2018 YTD	2018 Goal	Goal Status
<b>Duke Energy Midwest</b>	<b>88</b>	<b>90</b>	<b>90</b>	
Indiana	85	90	90	
Ohio/Kentucky	91	90	91	

## 1DF – Midwest Fastrack 'Outage' Performance by Zone – June 2018

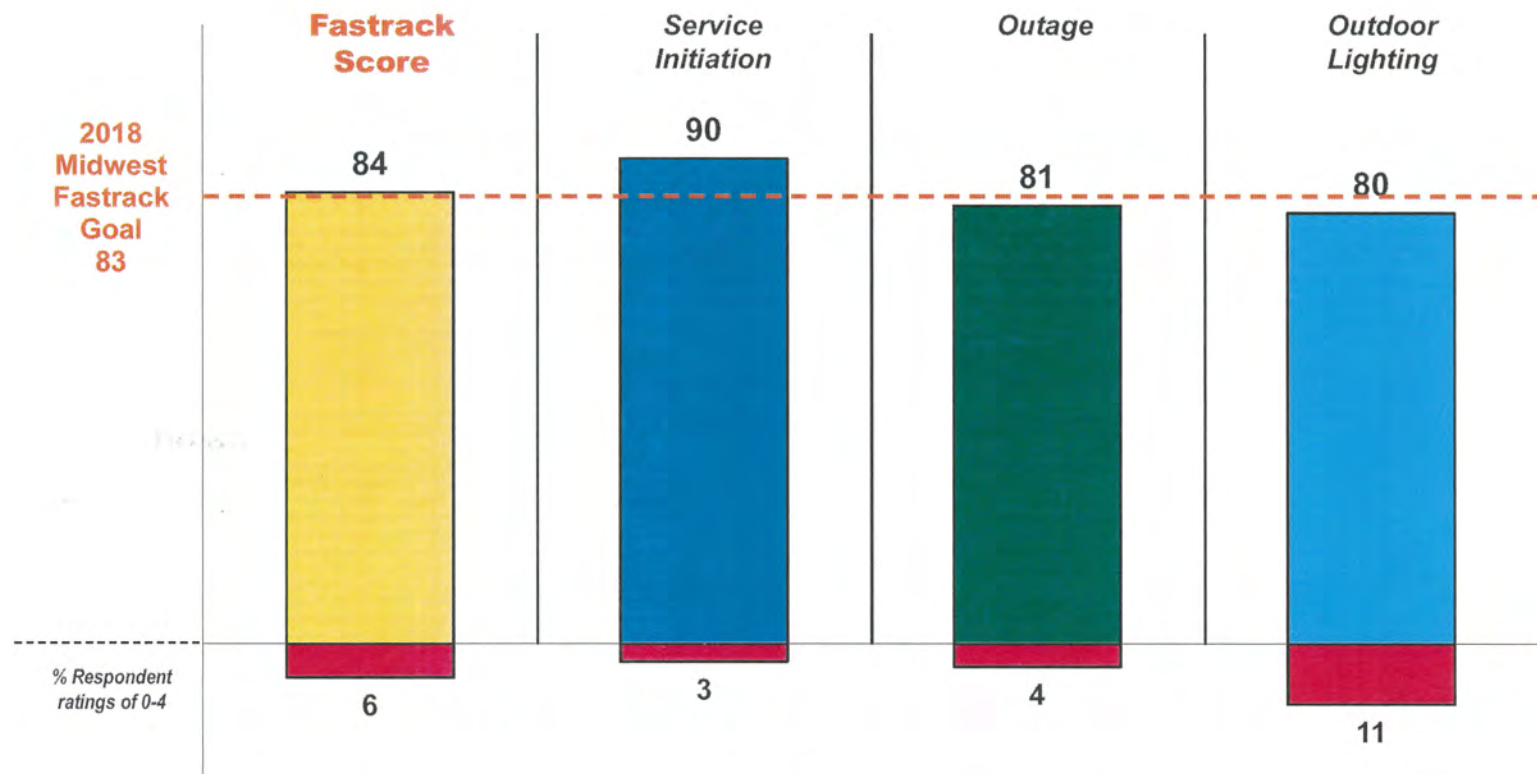
	June Score	2018 YTD	2018 Goal	Goal Status
<b>Duke Energy Midwest</b>	<b>75</b>	<b>81</b>	<b>79</b>	
Indiana	88	85	84	
Ohio/Kentucky	62	77	76	

## 1DF – Midwest Fastrack

### ‘Outdoor Lighting’ Performance by Zone – June 2018

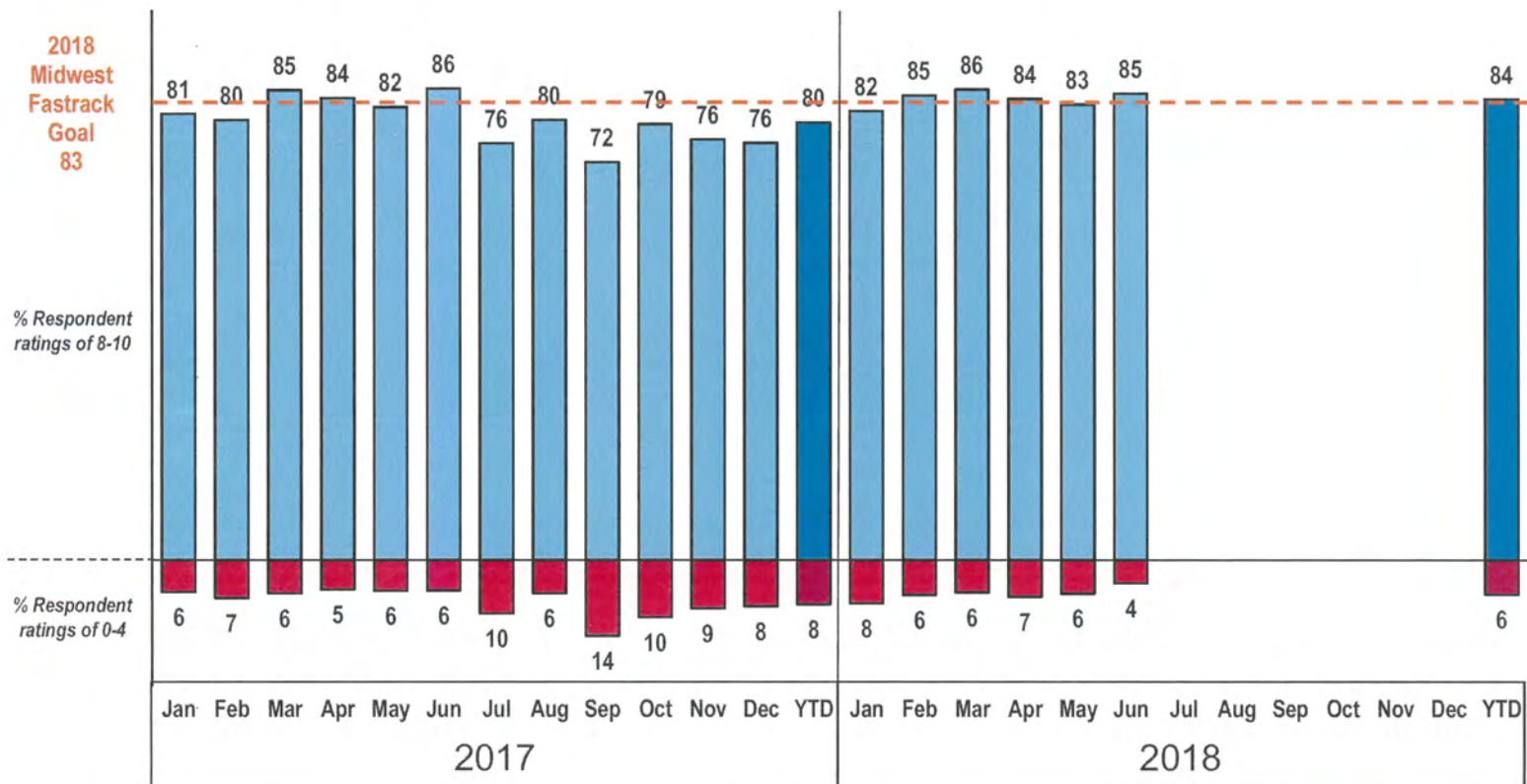
	June Score	2018 YTD	2018 Goal	Goal Status
<b>Duke Energy Midwest</b>	<b>92</b>	<b>80</b>	<b>80</b>	
Ohio/Kentucky	93	81	80	
Indiana	90	78	80	

## 1DF – Midwest Fastrack Fastrack Scores – June 2018 YTD



Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')

## 1DF – Midwest Fastrack Monthly Fastrack Score Trend

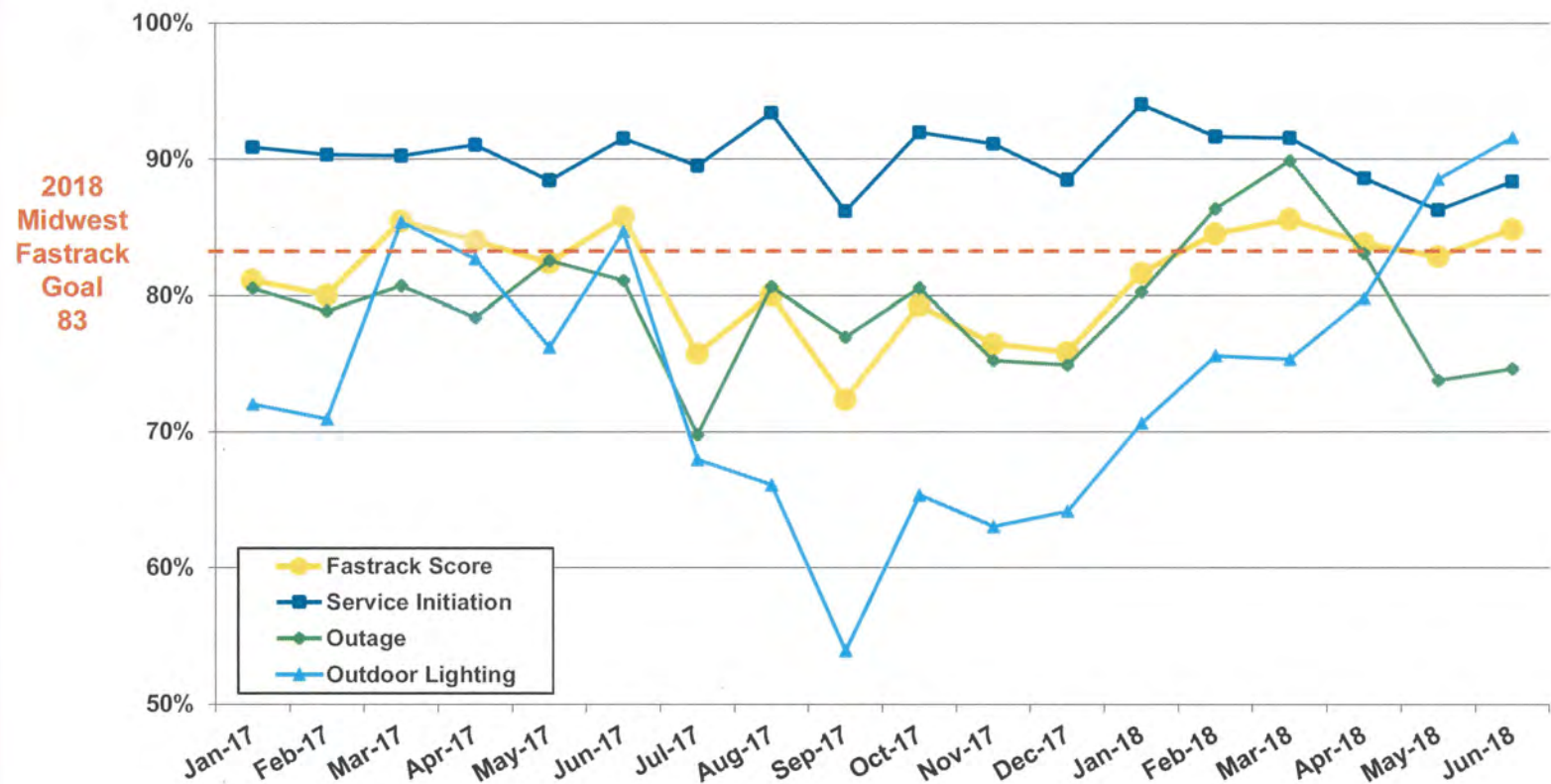


## 1DF – Midwest Fastrack Monthly Fastrack Scores by Module

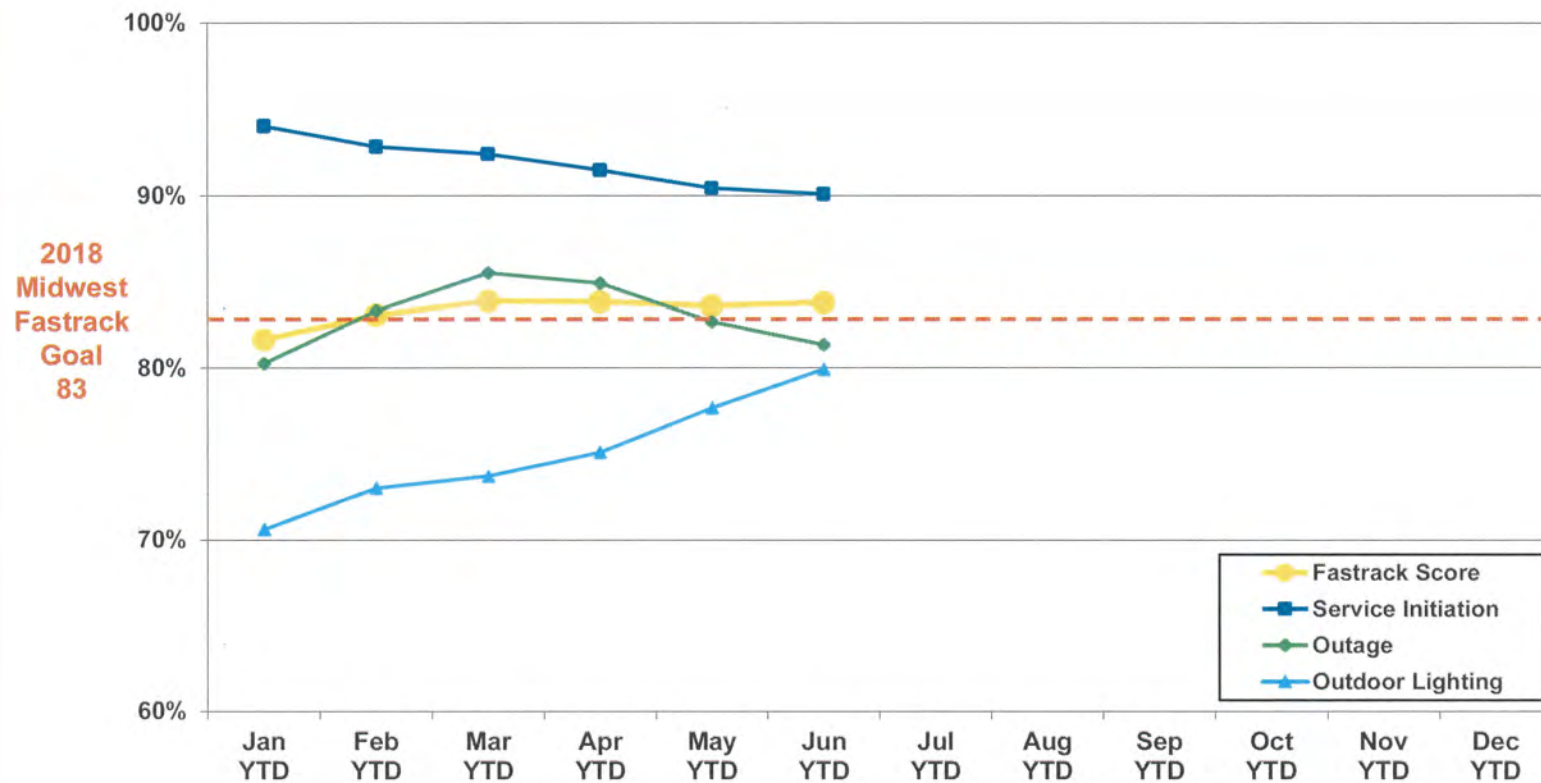
	2018												<u>YTD</u>
	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	
<b>Goal Modules</b>	82	85	86	84	83	85							84
Service Initiation	94	92	92	89	86	88							90
Outage	80	86	90	83	74	75							81
Outdoor Lighting	71	76	75	80	89	92							80
<b>Non-Goal Modules</b>													
Gas Service Initiation	92	92	89	90	90	86							90
Total Billing	77	85	74	75	76	84							79

*Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')  
'New Construction' Fastrack Module is reported on a quarterly basis.*

# 1DF – Midwest Fastrack Monthly Fastrack Scores



# 1DF – Midwest Fastrack 2018 YTD Fastrack Scores





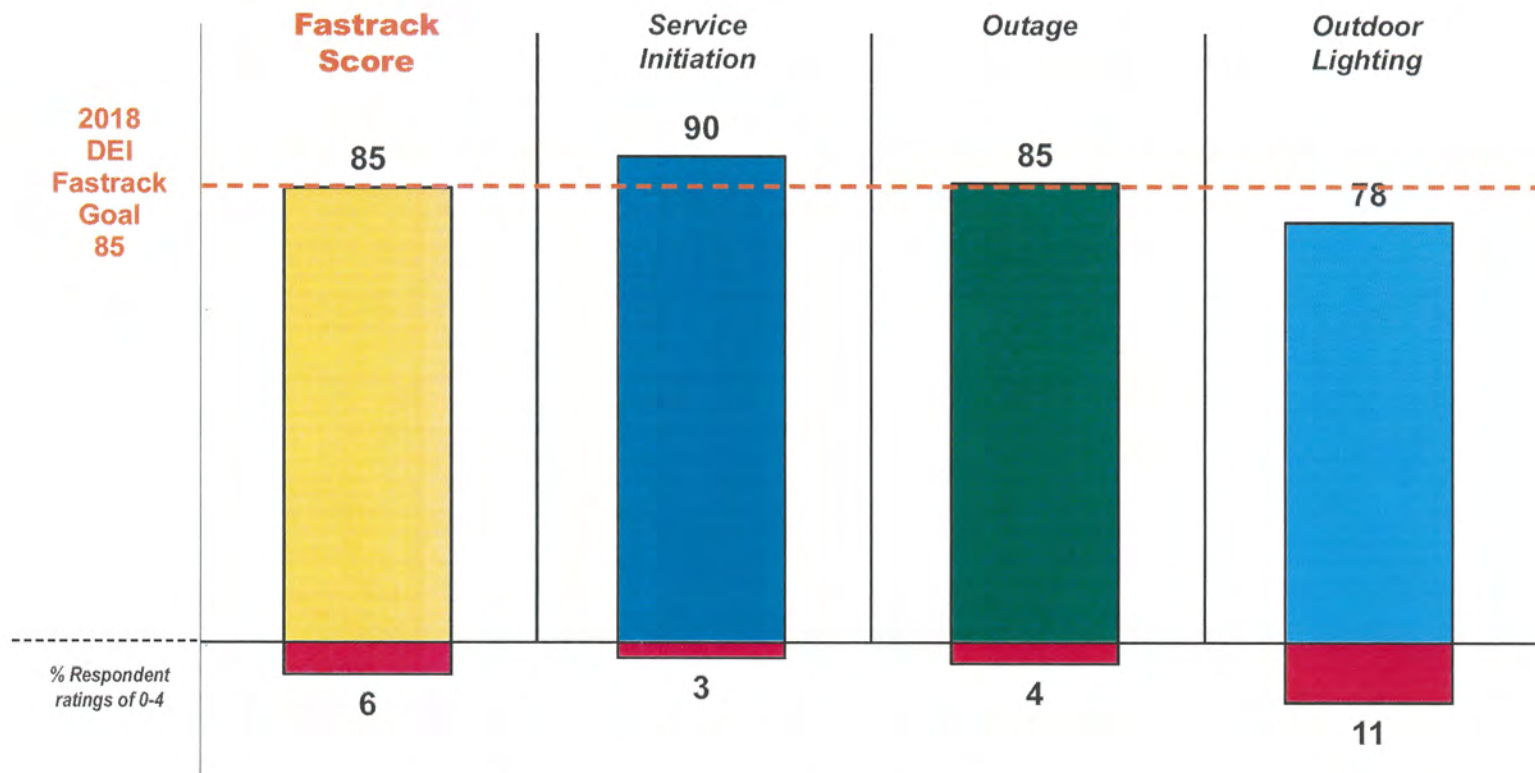
# 1DF – Midwest Fastrack

## *DEI Results*

June 2018

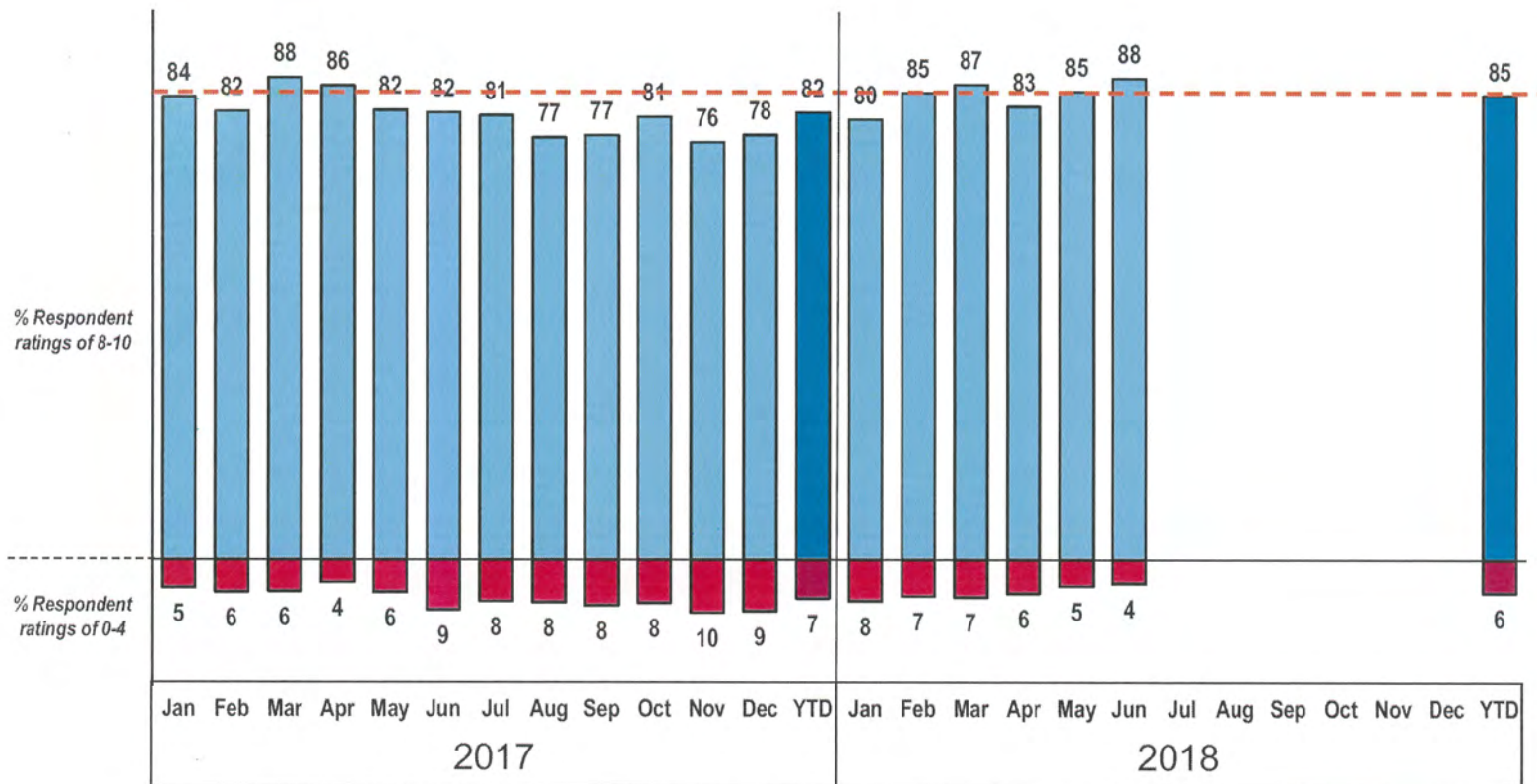


## DEI Fastrack Fastrack Scores – June 2018 YTD



Fastrack score is the average of three modules ("Service Initiation", "Outage", and "Outdoor Lighting")

## DEI Fastrack Monthly Score Trend



Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')

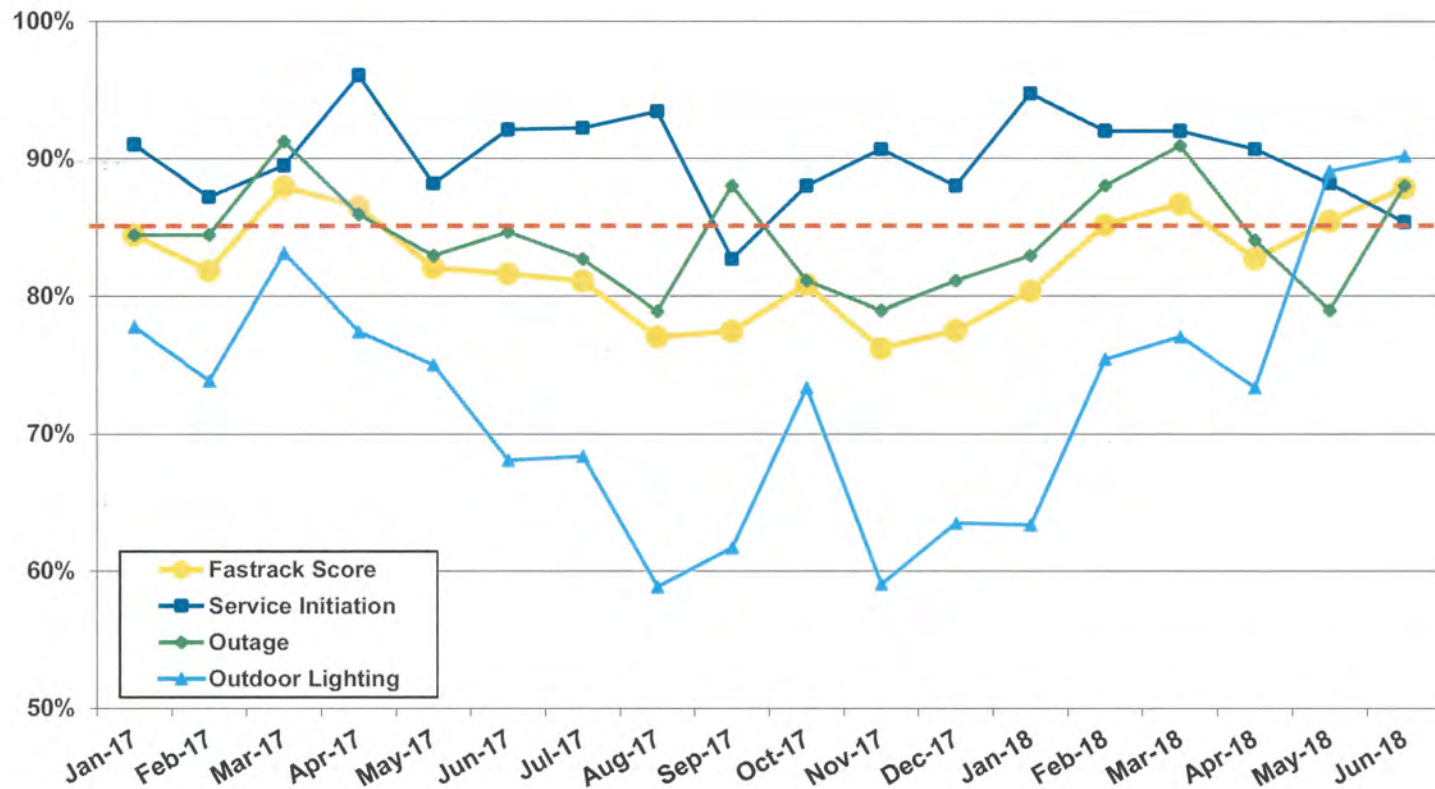


## DEI Fastrack Monthly Fastrack Scores by Module

	2018												<u>YTD</u>
	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	
<b>Goal Modules</b>	<b>80</b>	<b>85</b>	<b>87</b>	<b>83</b>	<b>85</b>	<b>88</b>							<b>85</b>
Service Initiation	95	92	92	91	88	85							90
Outage	83	88	91	84	79	88							85
Outdoor Lighting	63	75	77	73	89	90							78
<b>Non-Goal Modules</b>													
Total Billing	70	85	74	79	77	87							79

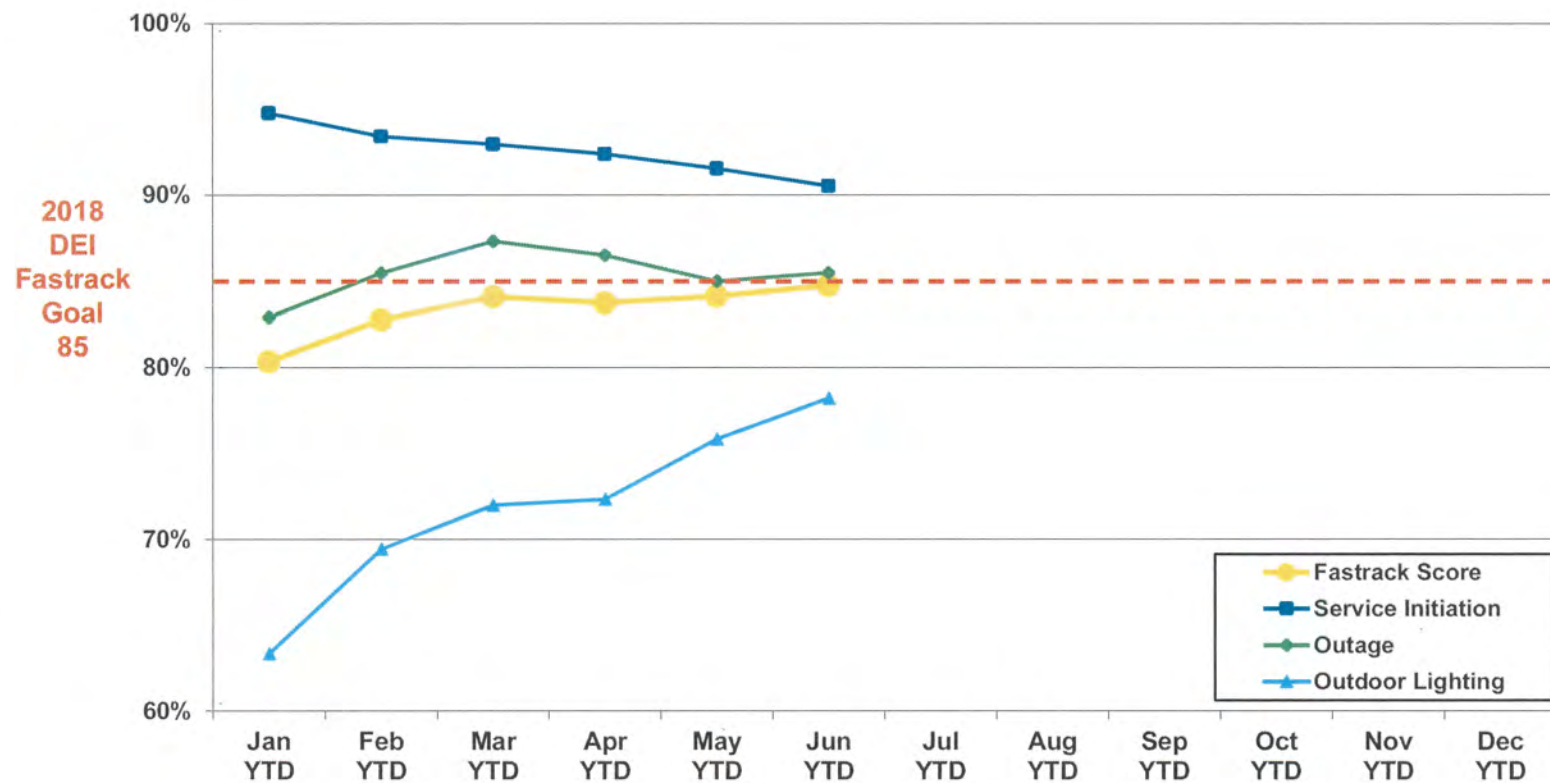
*Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')  
'New Construction' Fastrack Module is reported on a quarterly basis.*

## DEI Fastrack Monthly Fastrack Scores



Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')

## DEI Fastrack 2018 YTD Fastrack Scores



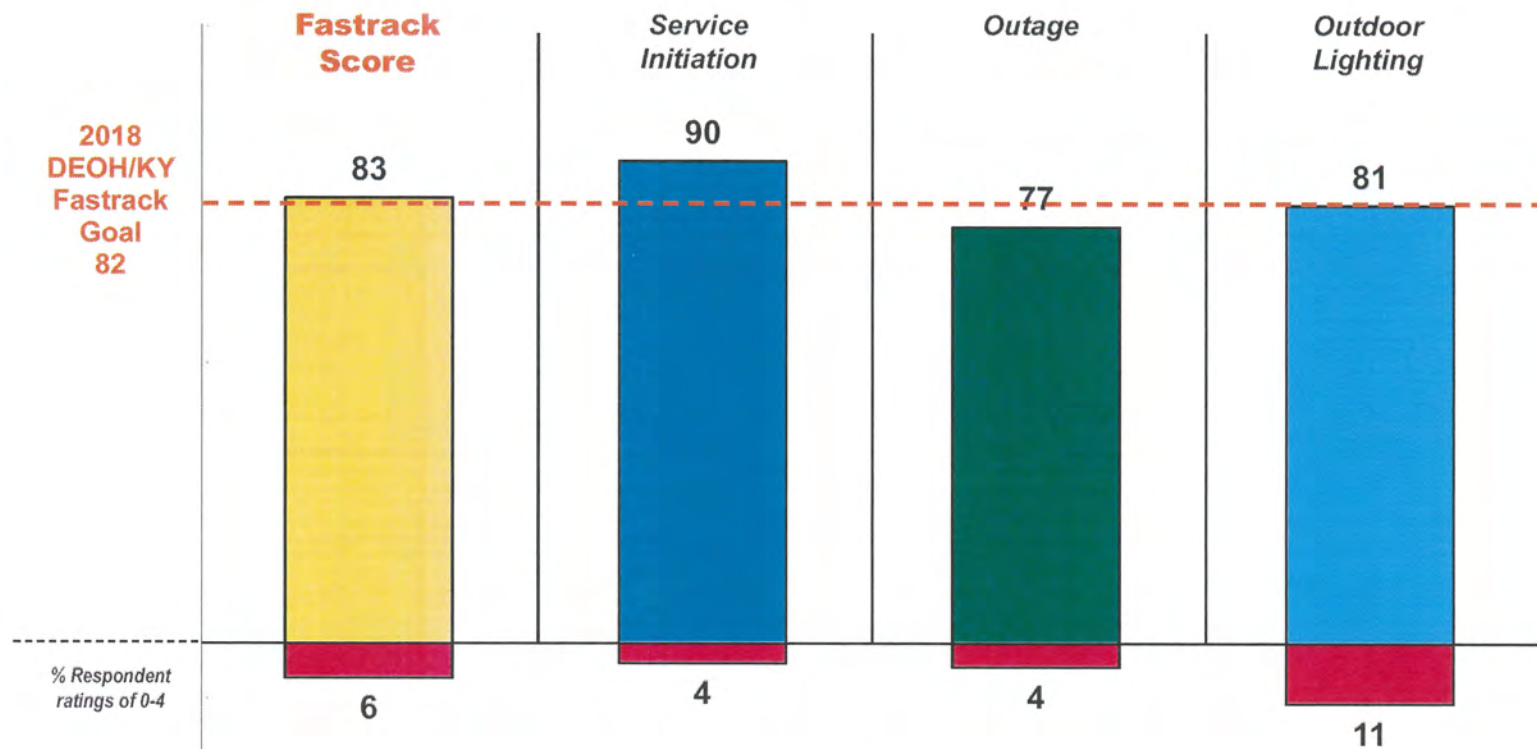
# 1DF – Midwest Fastrack

## *DEOH/KY Results*

June 2018



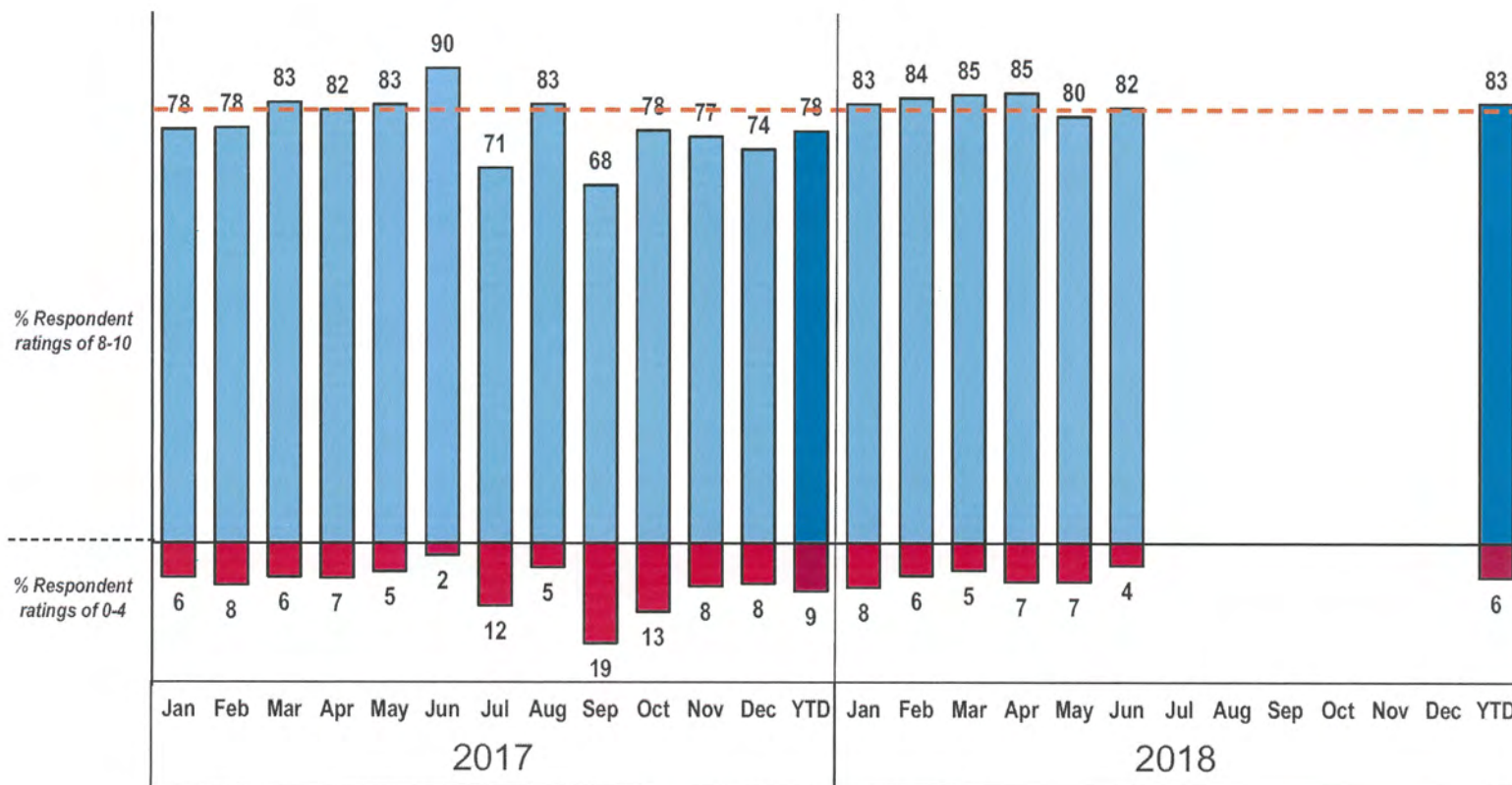
## DEOH/KY Fastrack Fastrack Scores – June 2018 YTD



Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')



## DEOH/KY Fastrack Monthly Score Trend



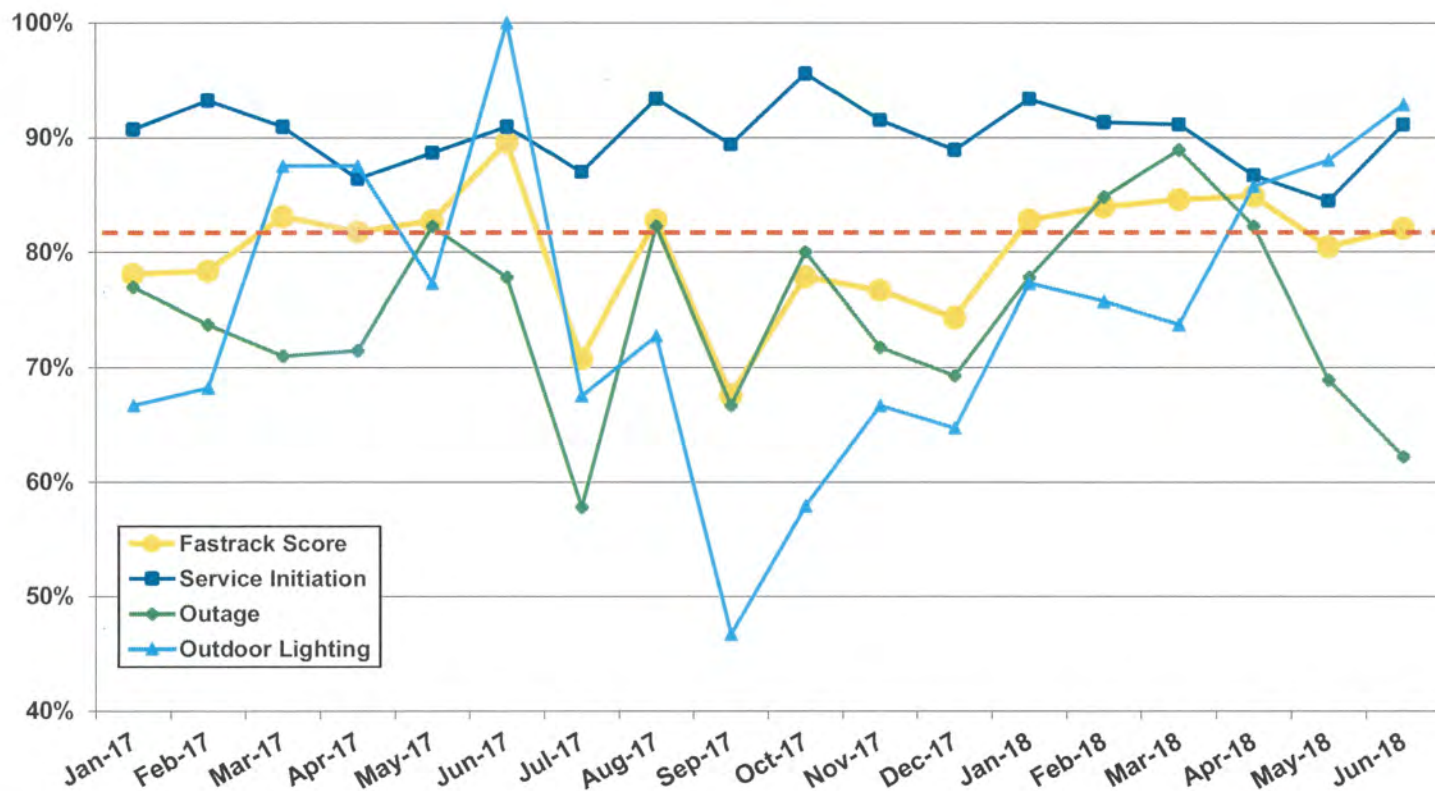
Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')

## DEOH/KY Fastrack Monthly Fastrack Scores by Module

	2018												<u>YTD</u>
	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	
<b>Goal Modules</b>	<b>83</b>	<b>84</b>	<b>85</b>	<b>85</b>	<b>80</b>	<b>82</b>							<b>83</b>
Service Initiation	93	91	91	87	84	91							90
Outage	78	85	89	82	69	62							77
Outdoor Lighting	77	76	74	86	88	93							81
<b>Non-Goal Modules</b>													
Total Billing	84	85	75	72	76	82							79
Gas Service Initiation	92	92	89	90	90	86							90

*Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')  
'New Construction' Fastrack Module is reported on a quarterly basis.*

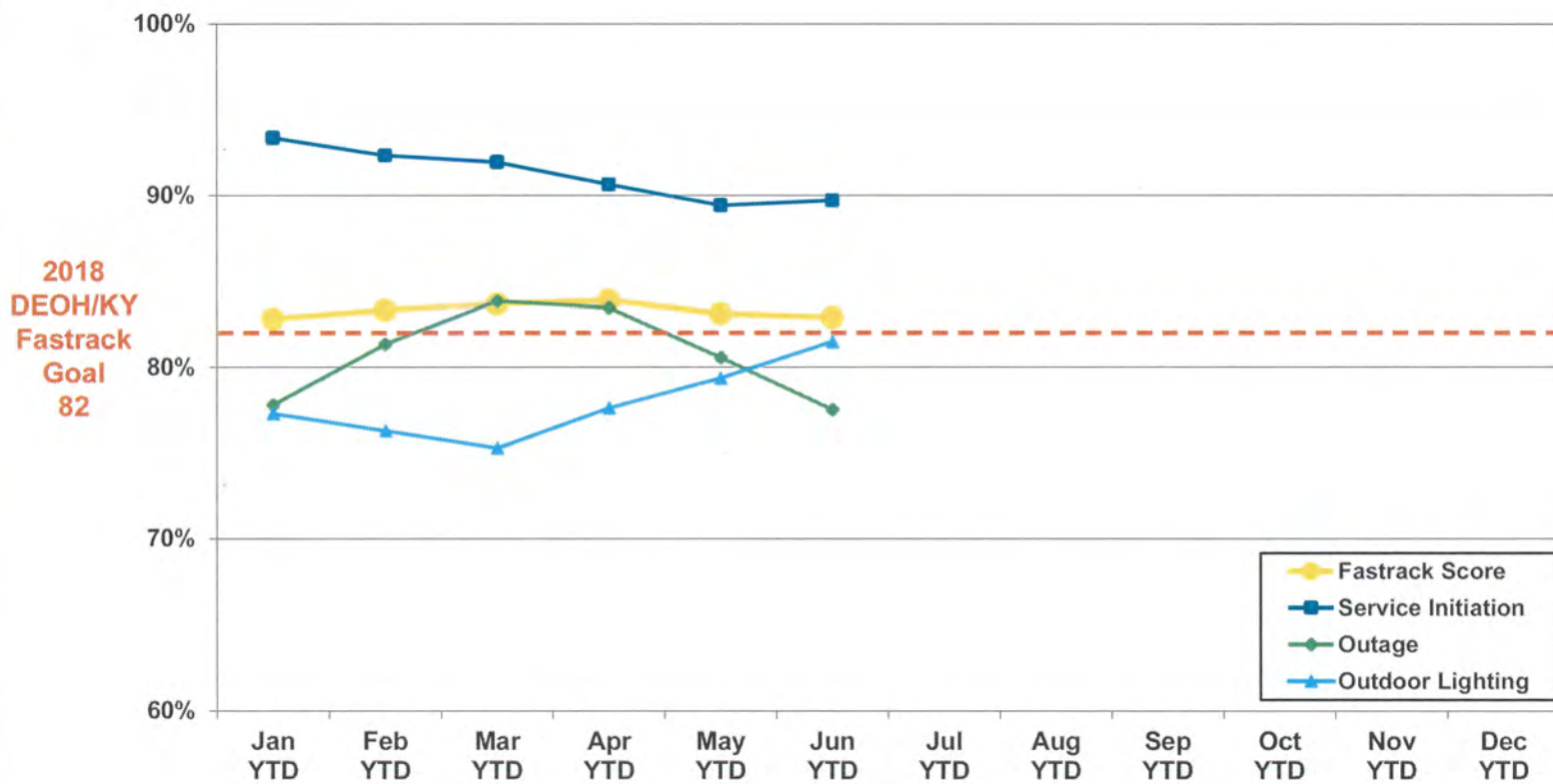
## DEOH/KY Fastrack Monthly Fastrack Scores



Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')



## DEOH/KY Fastrack 2018 YTD Fastrack Scores



26  
25

27  
26



27  
28

# 1DF – Midwest Fastrack

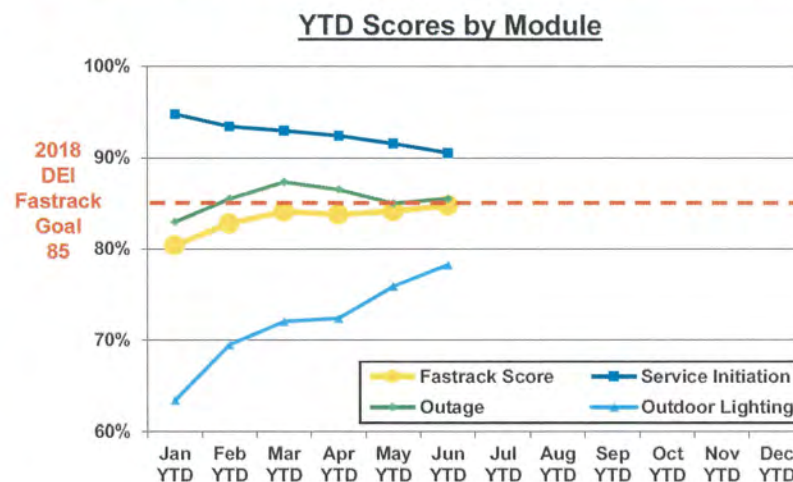
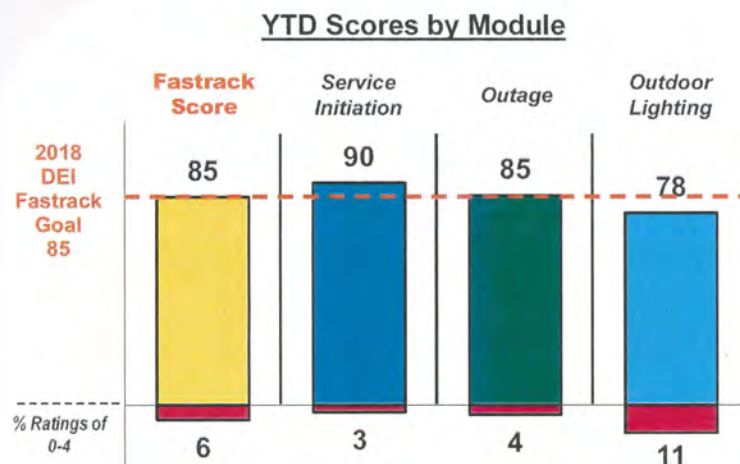
## *Zone/Area Results*

June 2018



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## MW – Indiana Zone Fastrack Scores – June 2018 YTD



	2018												YTD	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Goal Modules	80	85	87	83	85	88								85
Service Initiation	95	92	92	91	88	85								90
Outage	83	88	91	84	79	88								85
Outdoor Lighting	63	75	77	73	89	90								78

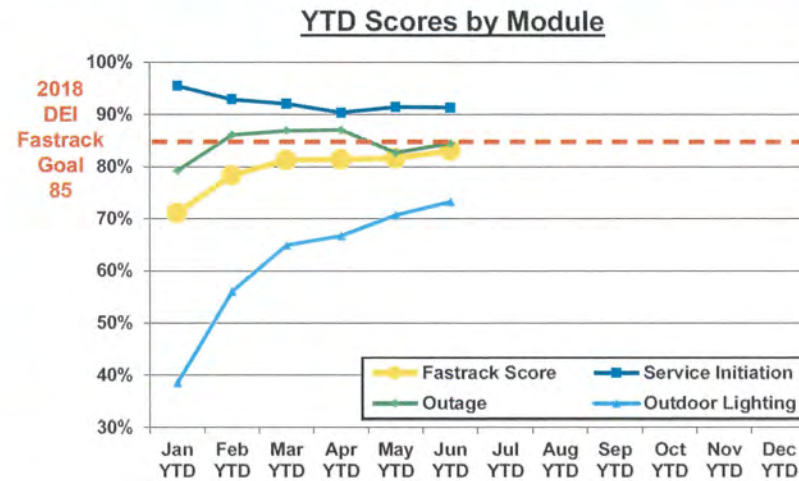
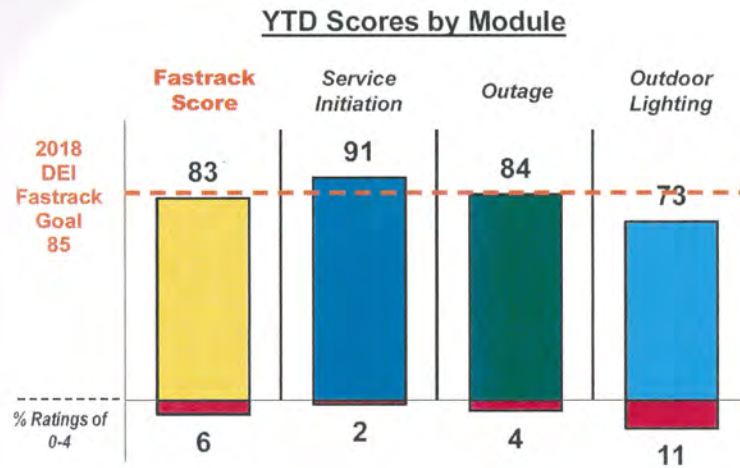
Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')

\*Caution – small sample size at the Area level

**2018 DEI Fastrack Goal = 85**



## MW – Indiana – Central Area Fastrack Scores – June 2018 YTD



	2018												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
Goal Modules	71	87	88	81	87	90							83
Service Initiation	95	90	90	85	95	91							91
Outage	79	95	89	88	67	94							84
Outdoor Lighting	38	75	83	71	100	85							73

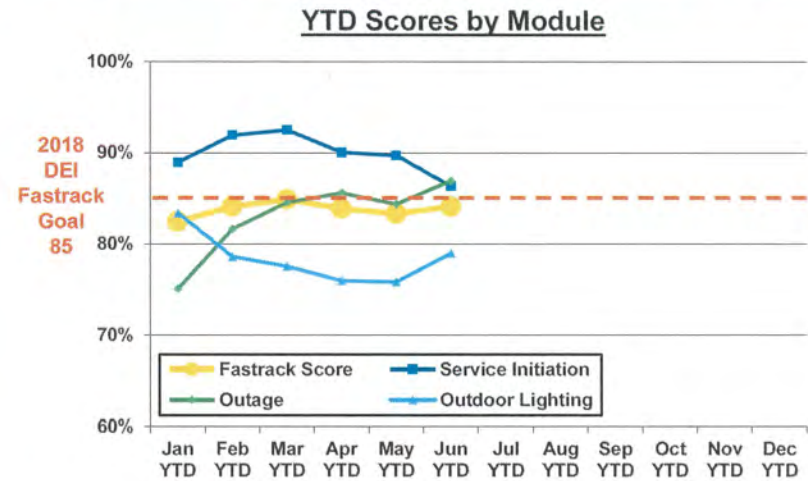
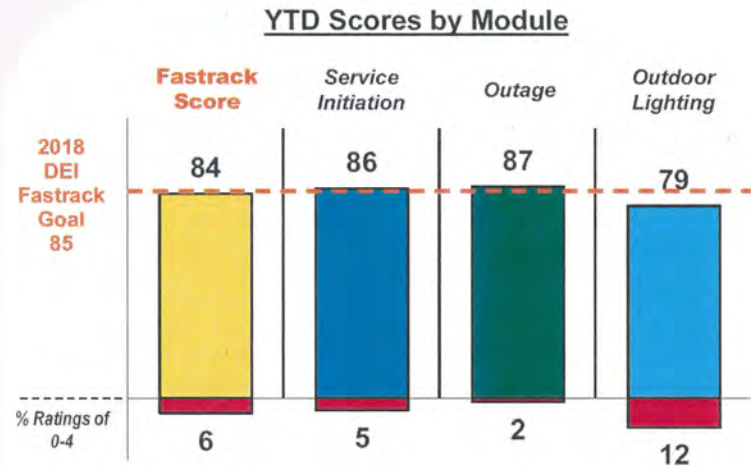
Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')

\*Caution – small sample size at the Area level

**2018 DEI Fastrack Goal = 85**



## MW – Indiana – North Area Fastrack Scores – June 2018 YTD



	2018												YTD	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Goal Modules	82	85	86	81	81	87								84
Service Initiation	89	95	94	82	88	67								86
Outage	75	86	90	88	79	100								87
Outdoor Lighting	83	75	75	71	75	93								79

Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')

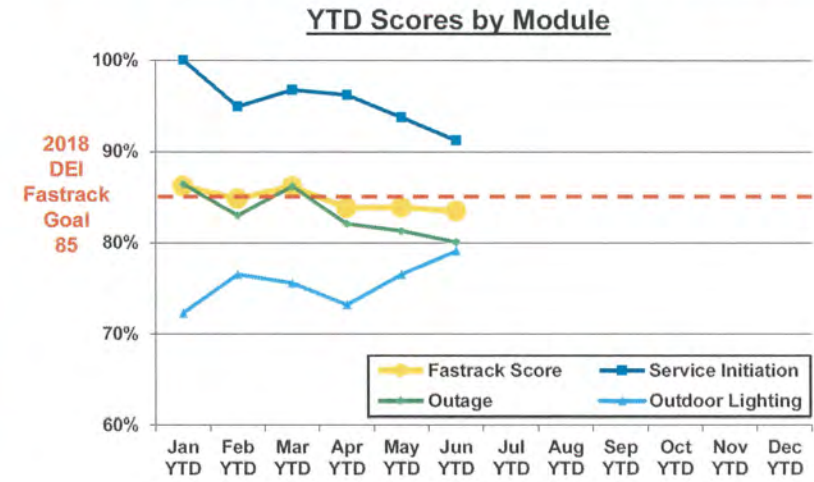
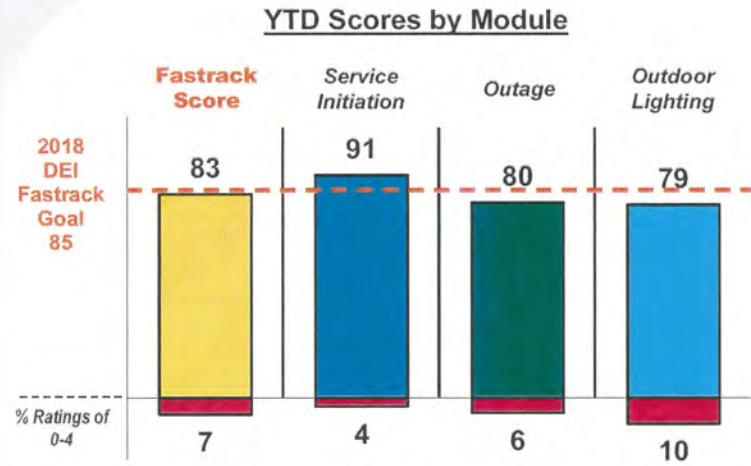
\*Caution – small sample size at the Area level

**2018 DEI Fastrack Goal = 85**





## MW – Indiana – Southeast Area Fastrack Scores – June 2018 YTD



	2018												YTD	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Goal Modules	86	83	88	75	83	80								83
Service Initiation	100	89	100	94	82	78								91
Outage	86	79	90	65	78	72								80
Outdoor Lighting	72	81	73	67	89	90								79

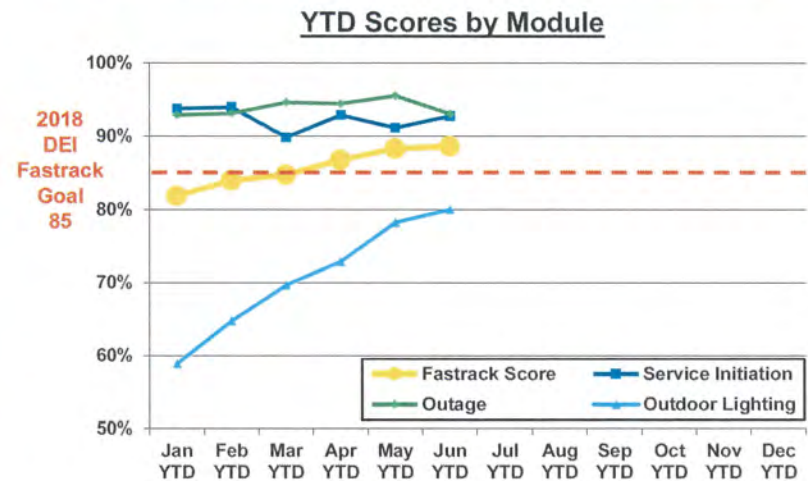
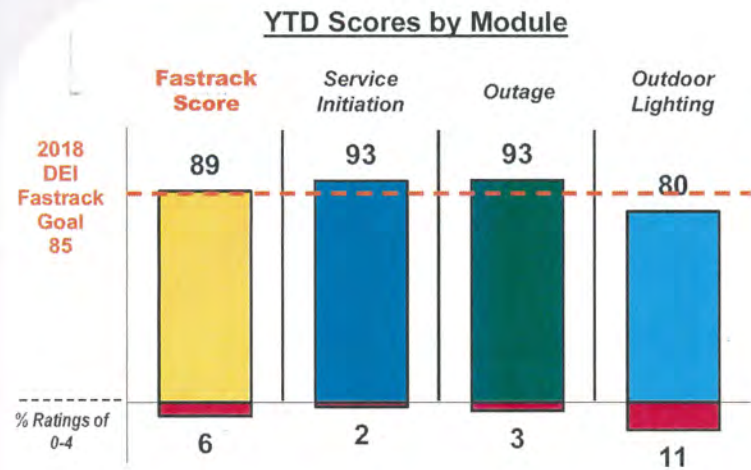
Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')

\*Caution – small sample size at the Area level

**2018 DEI Fastrack Goal = 85**



## MW – Indiana – Southwest Area Fastrack Scores – June 2018 YTD



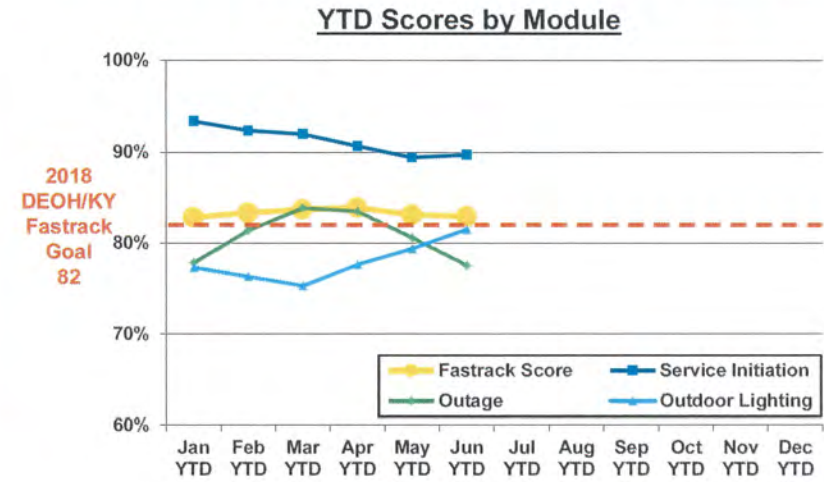
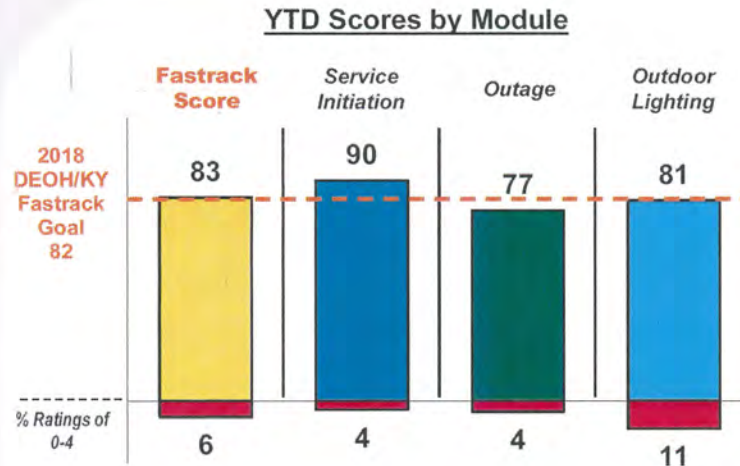
	2018												YTD	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Goal Modules	82	86	86	93	92	92								89
Service Initiation	94	94	81	100	85	100								93
Outage	93	93	100	94	100	84								93
Outdoor Lighting	59	71	77	86	90	93								80

Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')  
\*Caution – small sample size at the Area level

**2018 DEI Fastrack Goal = 85**



## MW – Ohio/Kentucky Zone Fastrack Scores – June 2018 YTD



	2018												YTD	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Goal Modules	83	84	85	85	80	82								83
Service Initiation	93	91	91	87	84	91								90
Outage	78	85	89	82	69	62								77
Outdoor Lighting	77	76	74	86	88	93								81

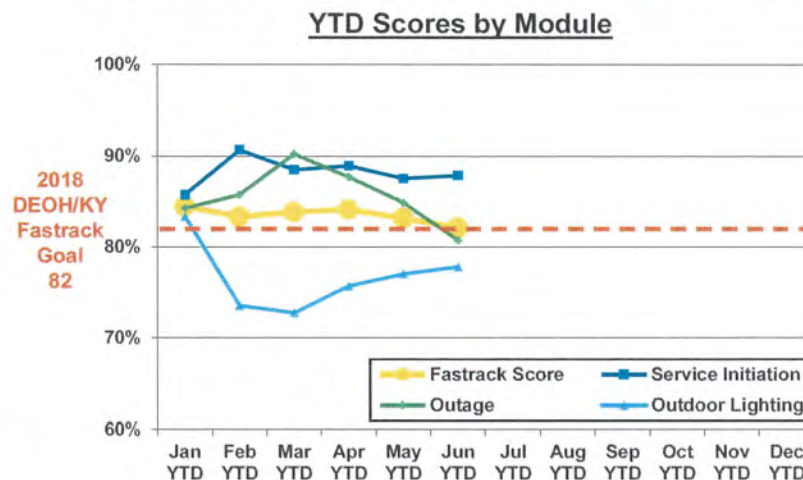
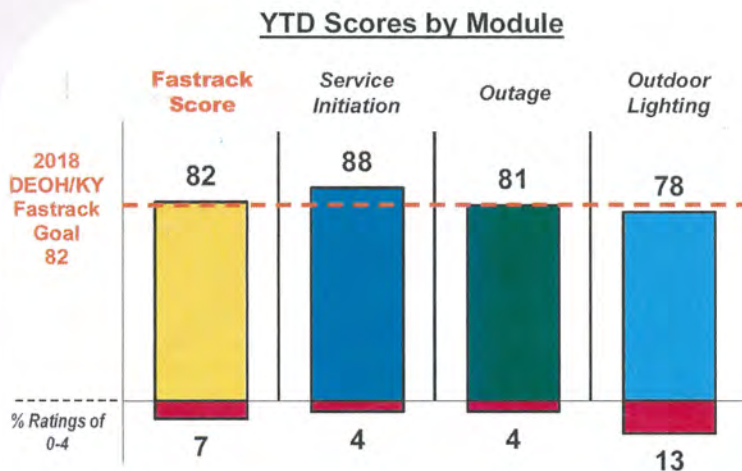
Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')

\*Caution – small sample size at the Area level

**2018 DEOH/KY Fastrack Goal = 82**



## MW – Ohio/Kentucky – North Area Fastrack Scores – June 2018 YTD



	2018												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
Goal Modules	84	83	85	85	82	78							82
Service Initiation	86	94	85	90	83	89							88
Outage	84	88	100	82	77	60							81
Outdoor Lighting	83	68	71	84	85	83							78

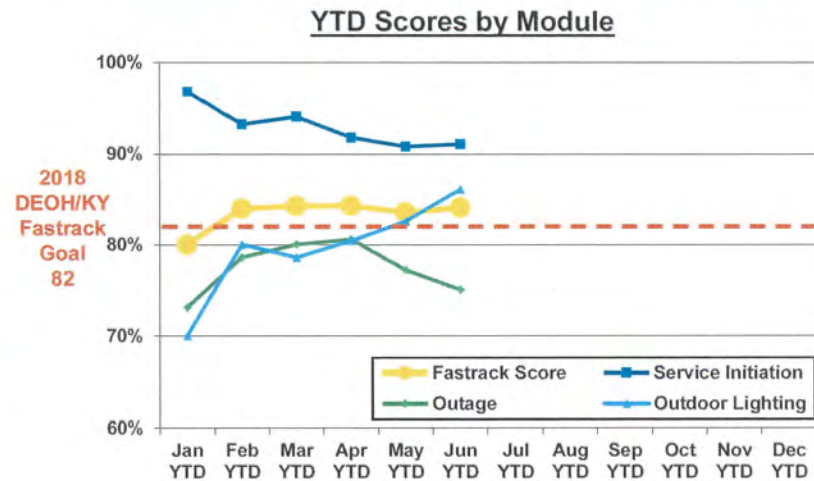
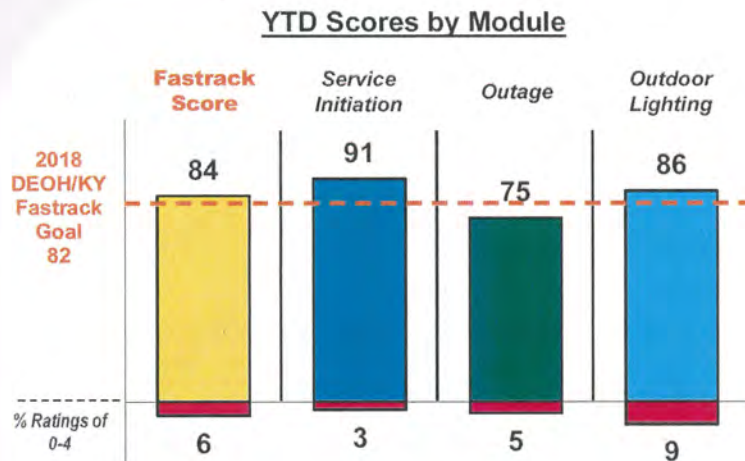
Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')

\*Caution – small sample size at the Area level

**2018 DEOH/KY Fastrack Goal = 82**



## MW – Ohio/Kentucky – South Area Fastrack Scores – June 2018 YTD



	2018												YTD	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Goal Modules	80	86	85	85	78	85								84
Service Initiation	97	89	96	84	86	92								91
Outage	73	83	83	83	58	64								75
Outdoor Lighting	70	87	76	89	92	100								86

Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting')

\*Caution – small sample size at the Area level

**2018 DEOH/KY Fastrack Goal = 82**



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# 1DF – Midwest Fastrack

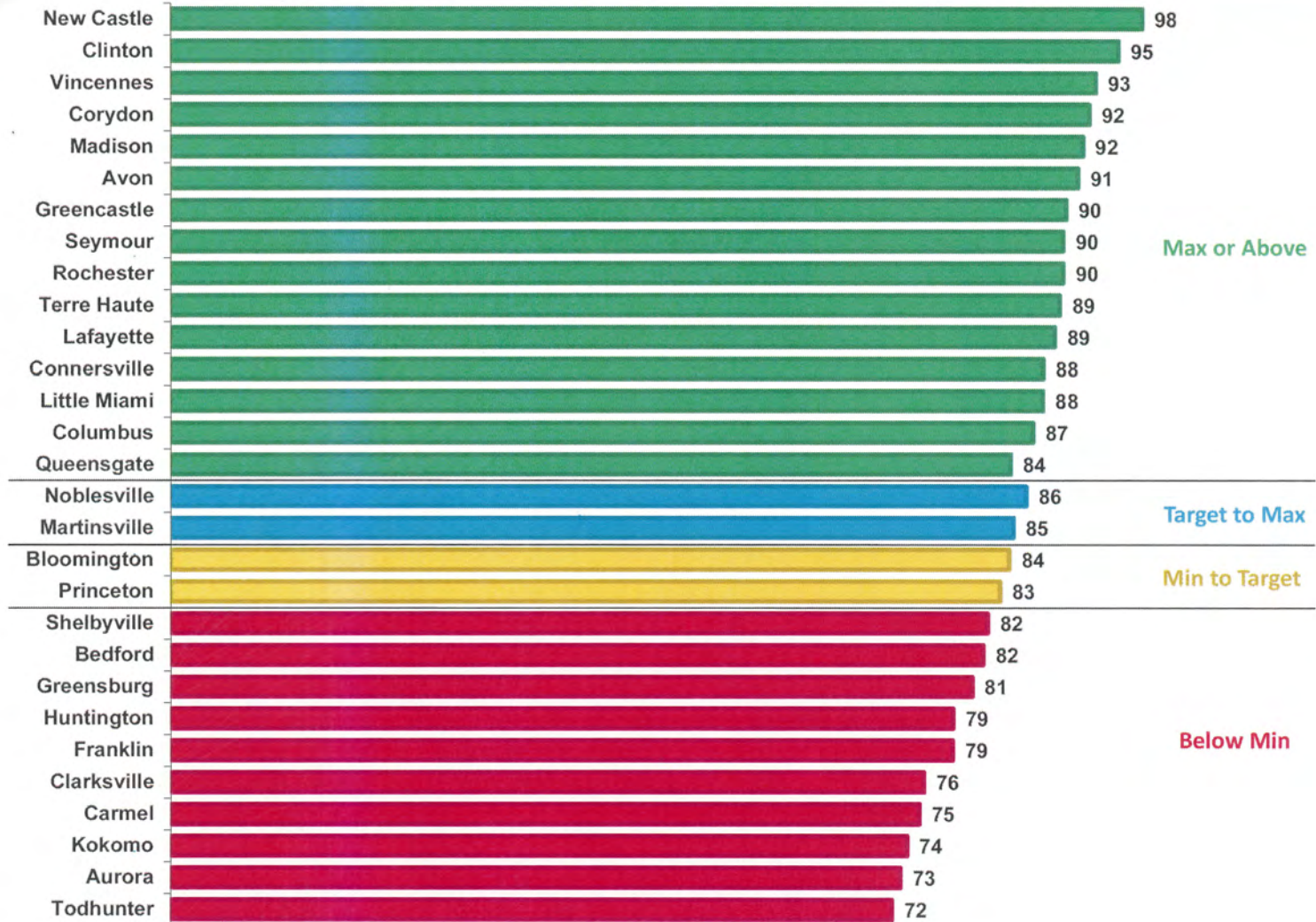
## *Ops Center Level Results*

June 2018



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## Midwest Fastrack June 2018 YTD – Scores by Ops Center\*



## Midwest Fastrack Goal Module Scores by Zone & Ops Center\*

June 2018 YTD						
Zone	Ops Center	Service Initiation	Outage	Outdoor Lighting	Ops Center Fastrack Score	Zone Fastrack Score
<b>Indiana</b>	Aurora	60	100	60	73	<b>85</b>
	Avon	89	85	100	91	
	Bedford	89	85	71	82	
	Bloomfield	100	-	100	N/A	
	Bloomington	96	90	67	84	
	Carmel	92	74	60	75	
	Clarksville	84	76	67	76	
	Clinton	86	100	100	95	
	Columbus	94	93	72	87	
	Connersville	100	71	92	88	
	Corydon	100	77	100	92	
	Franklin	94	86	56	79	
	Greencastle	95	93	82	90	
	Greensburg	83	83	75	81	
	Huntington	83	89	64	79	
	Kokomo	75	75	72	74	
	Lafayette	96	89	81	89	
	Madison	100	75	100	92	
	Martinsville	86	93	75	85	
	New Castle	93	100	100	98	
Noblesville	94	88	76	86		
Princeton	100	100	50	83		
Rochester	86	83	100	90		
Salem	-	-	-	N/A		
Seymour	100	86	83	90		
Shelbyville	89	82	75	82		
Terre Haute	88	95	85	89		
Vincennes	89	100	90	93		
<b>Ohio/Kentucky</b>	Brecon	-	78	83	N/A	<b>83</b>
	Erlanger	95	76	-	N/A	
	Fairfield	-	-	88	N/A	
	Hamlet	-	78	88	N/A	
	Hartwell	-	70	90	N/A	
	Little Miami	87	82	93	88	
	Queensgate	89	80	85	84	
Todhunter	89	83	46	72		



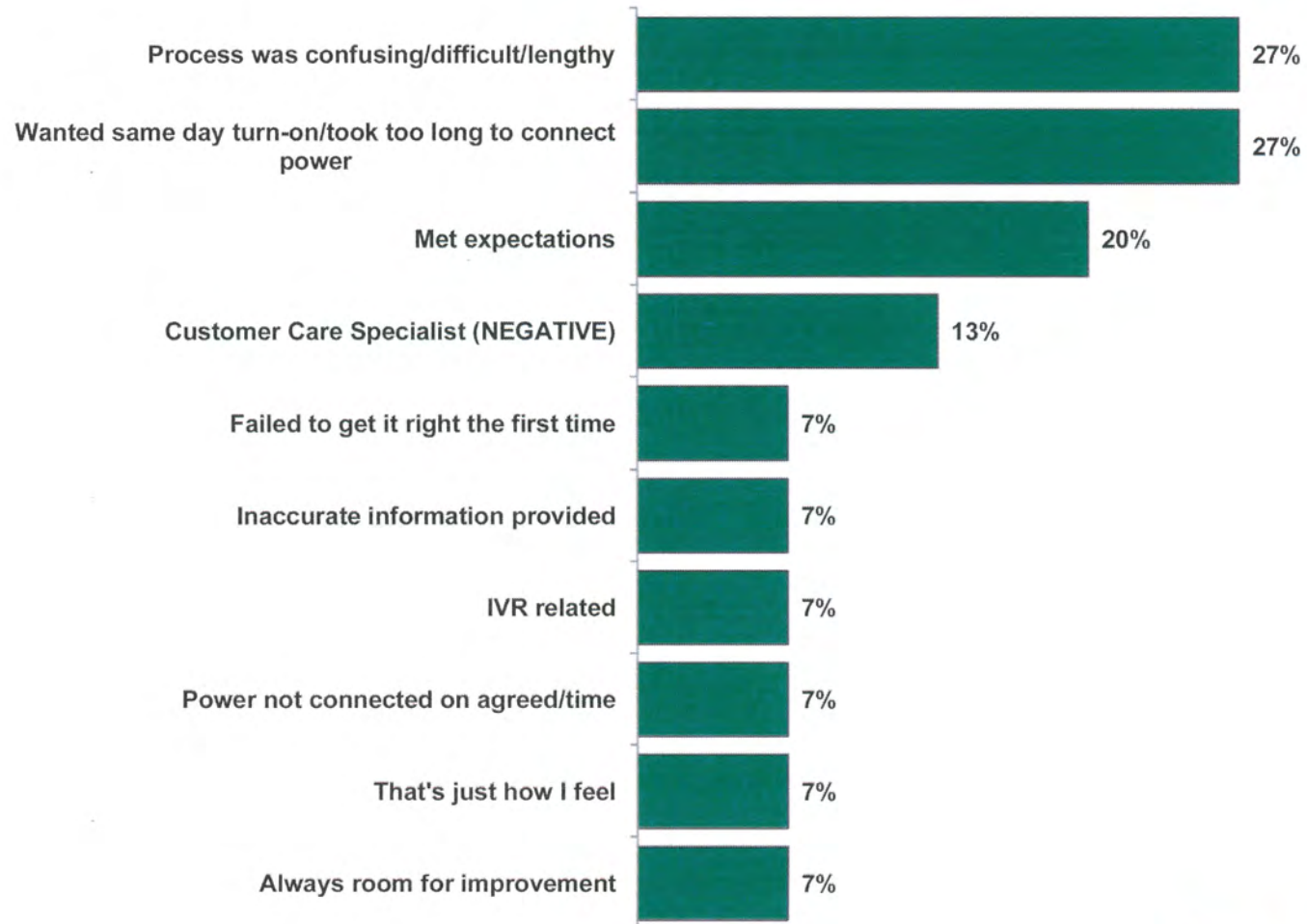
# Midwest Fastrack

## *Reasons for 0-7 OSAT Ratings*

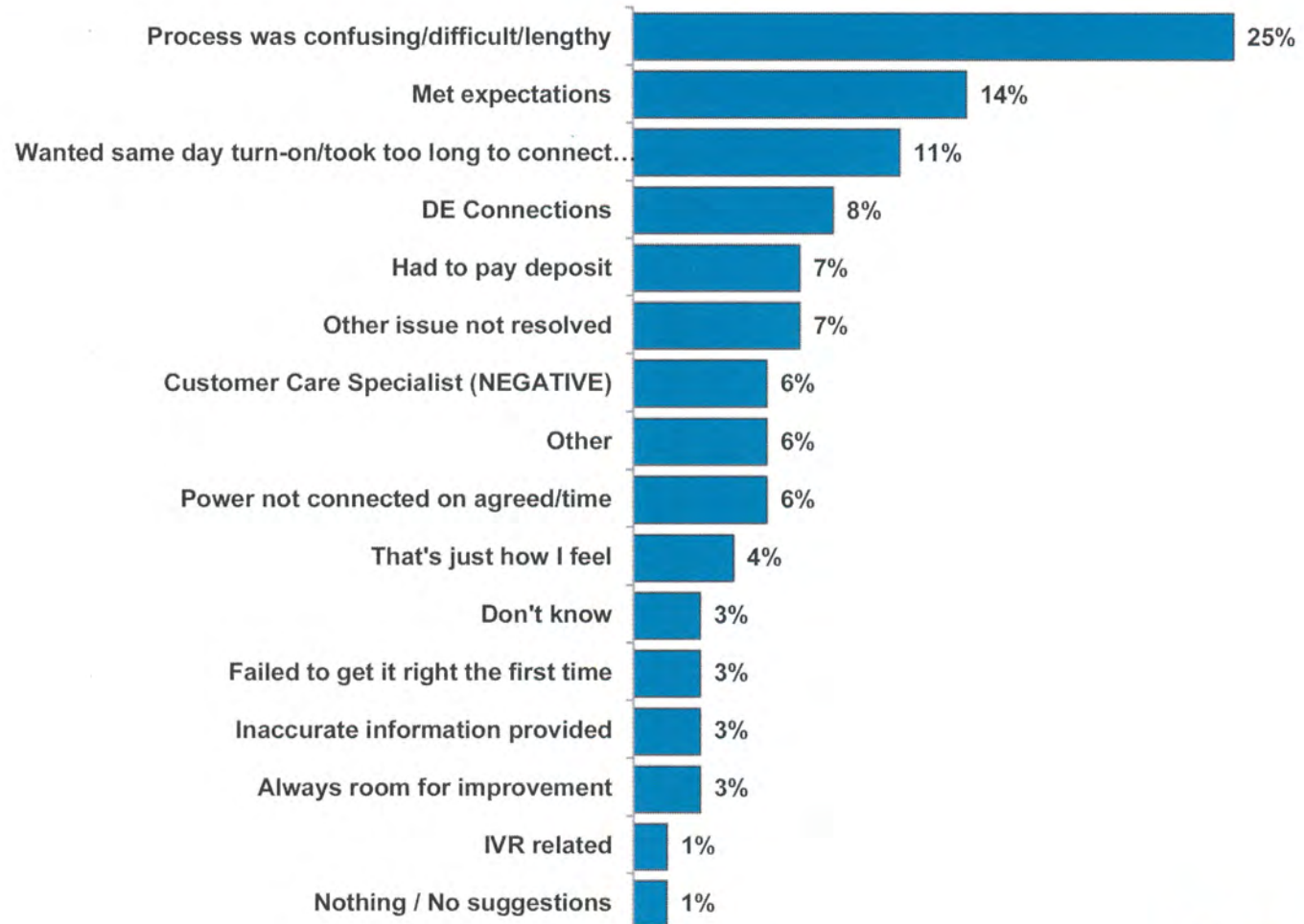
June 2018



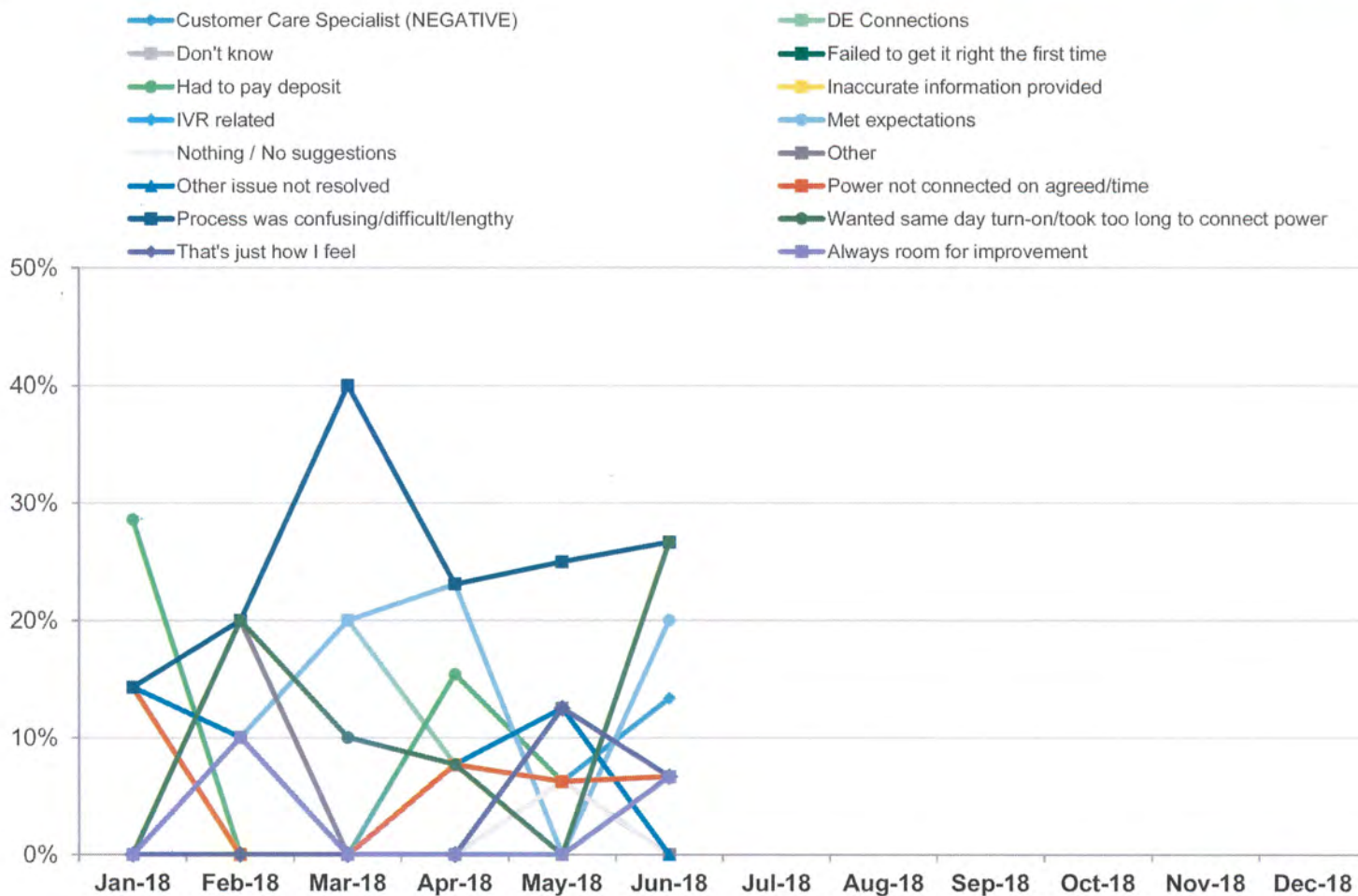
## DEMW Service Initiation Reason for 0-7 OSAT Rating – June 2018



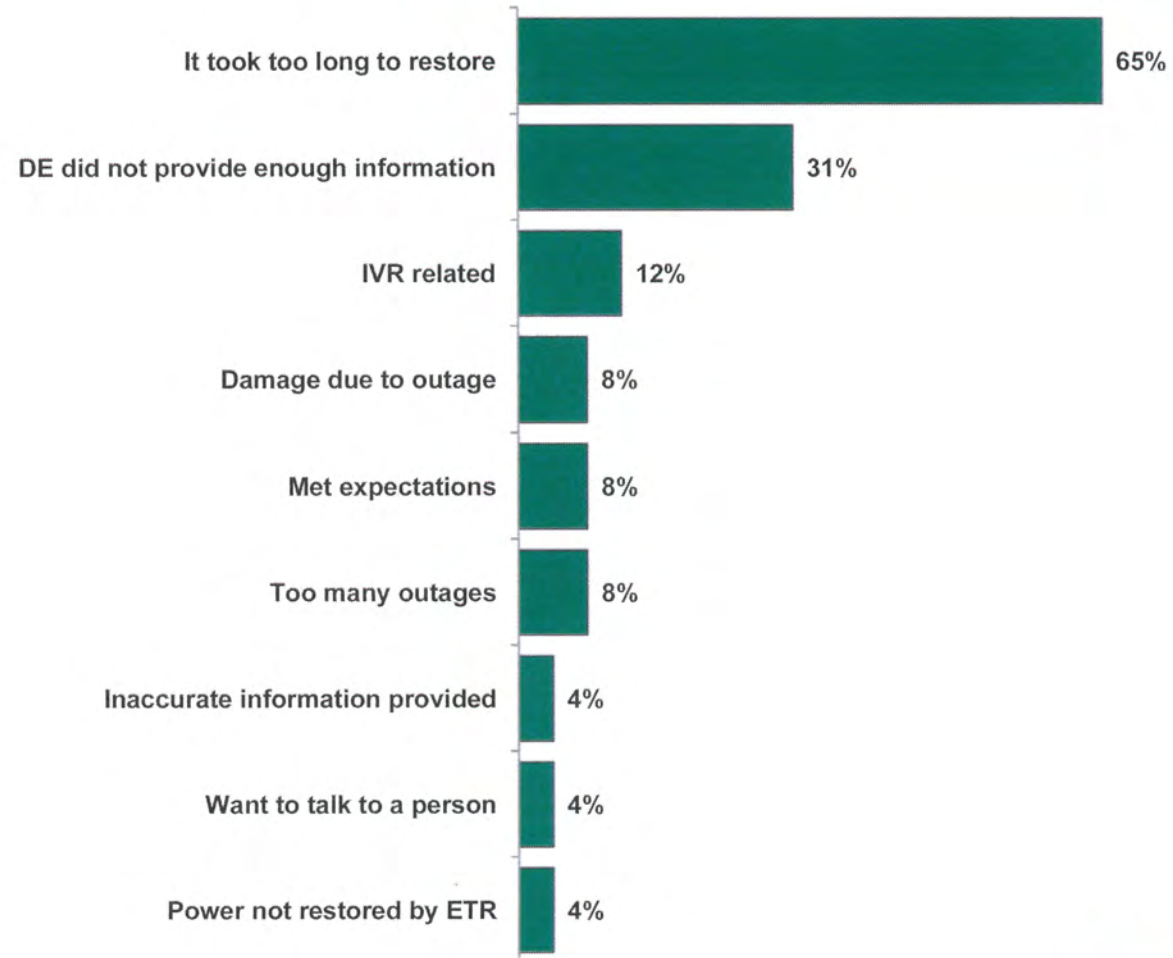
## DEMW Service Initiation Reason for 0-7 OSAT Rating – YTD



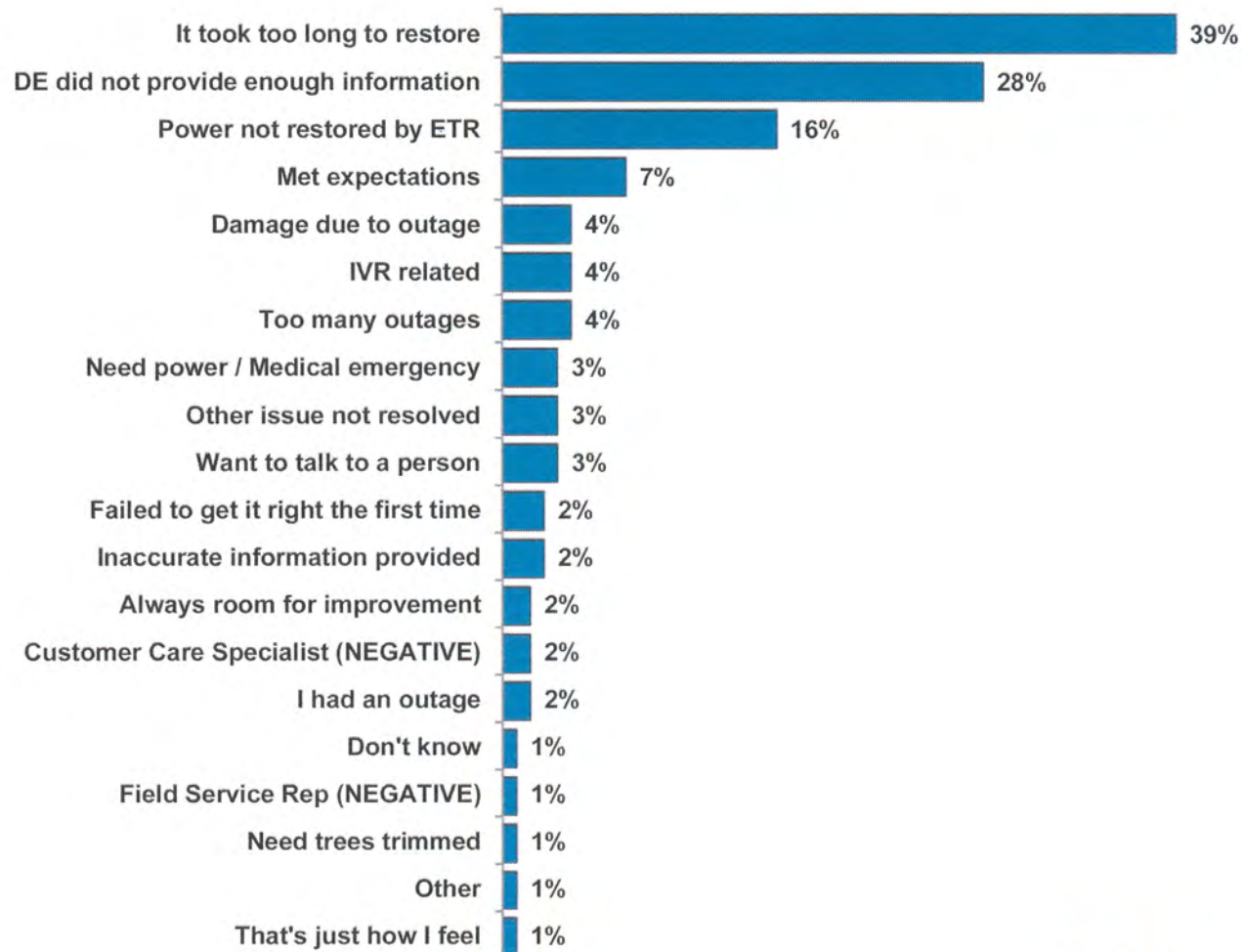
## DEMW Service Initiation Reason for 0-7 OSAT Rating



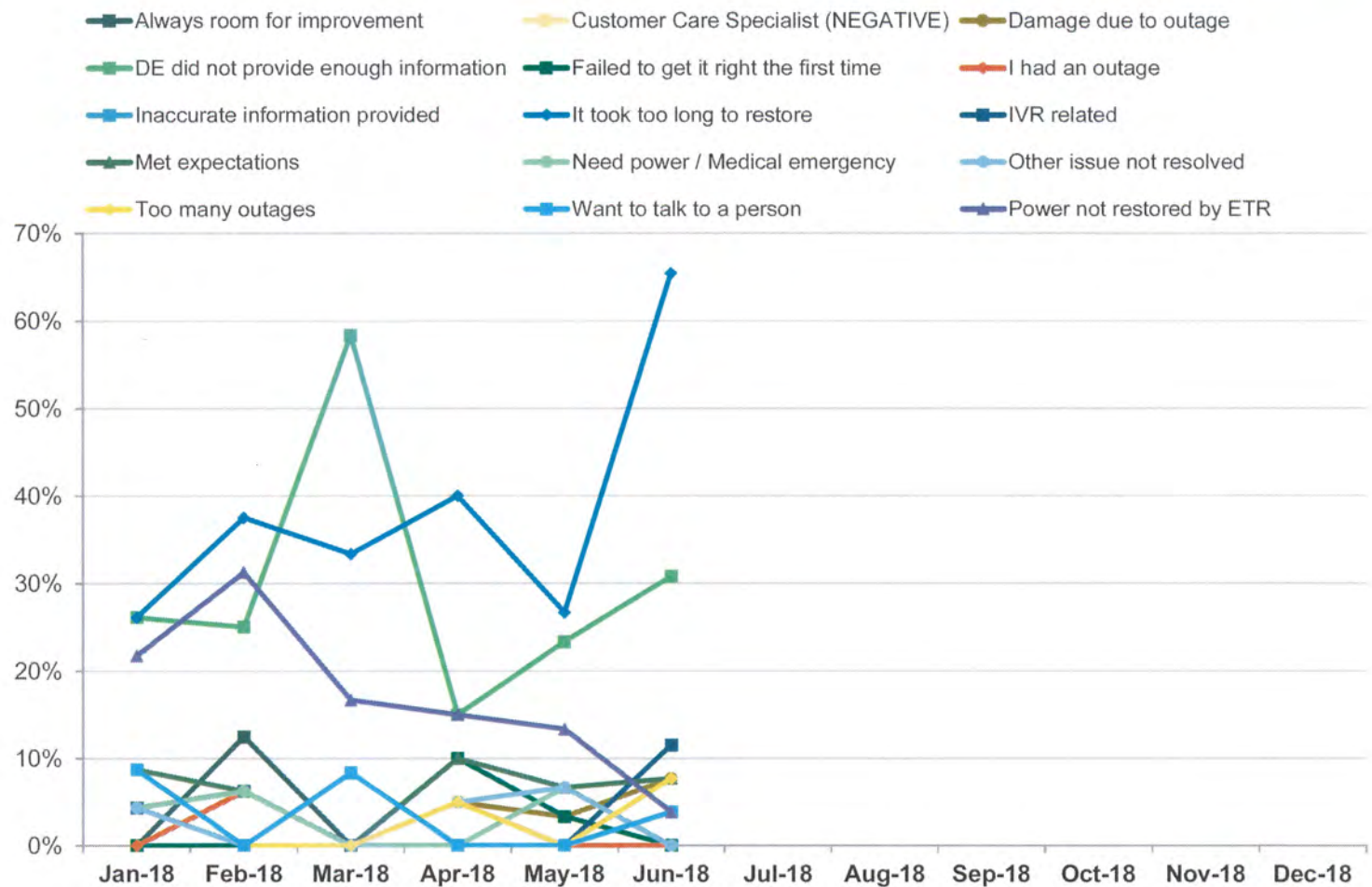
## DEMW Outage Reason for 0-7 OSAT Rating – June 2018



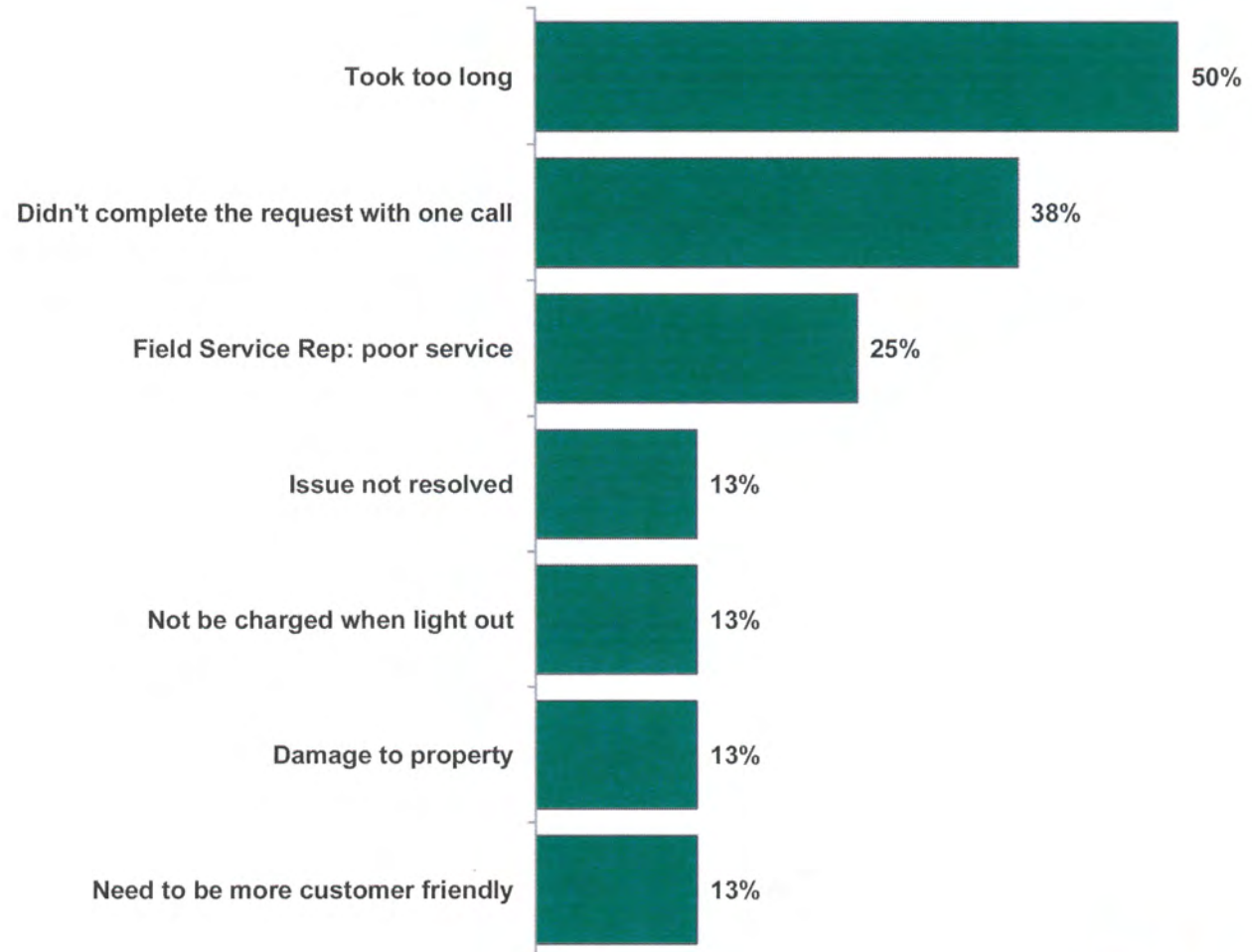
## DEMW Outage Reason for 0-7 OSAT Rating – YTD



## DEMW Outage Reason for 0-7 OSAT Rating

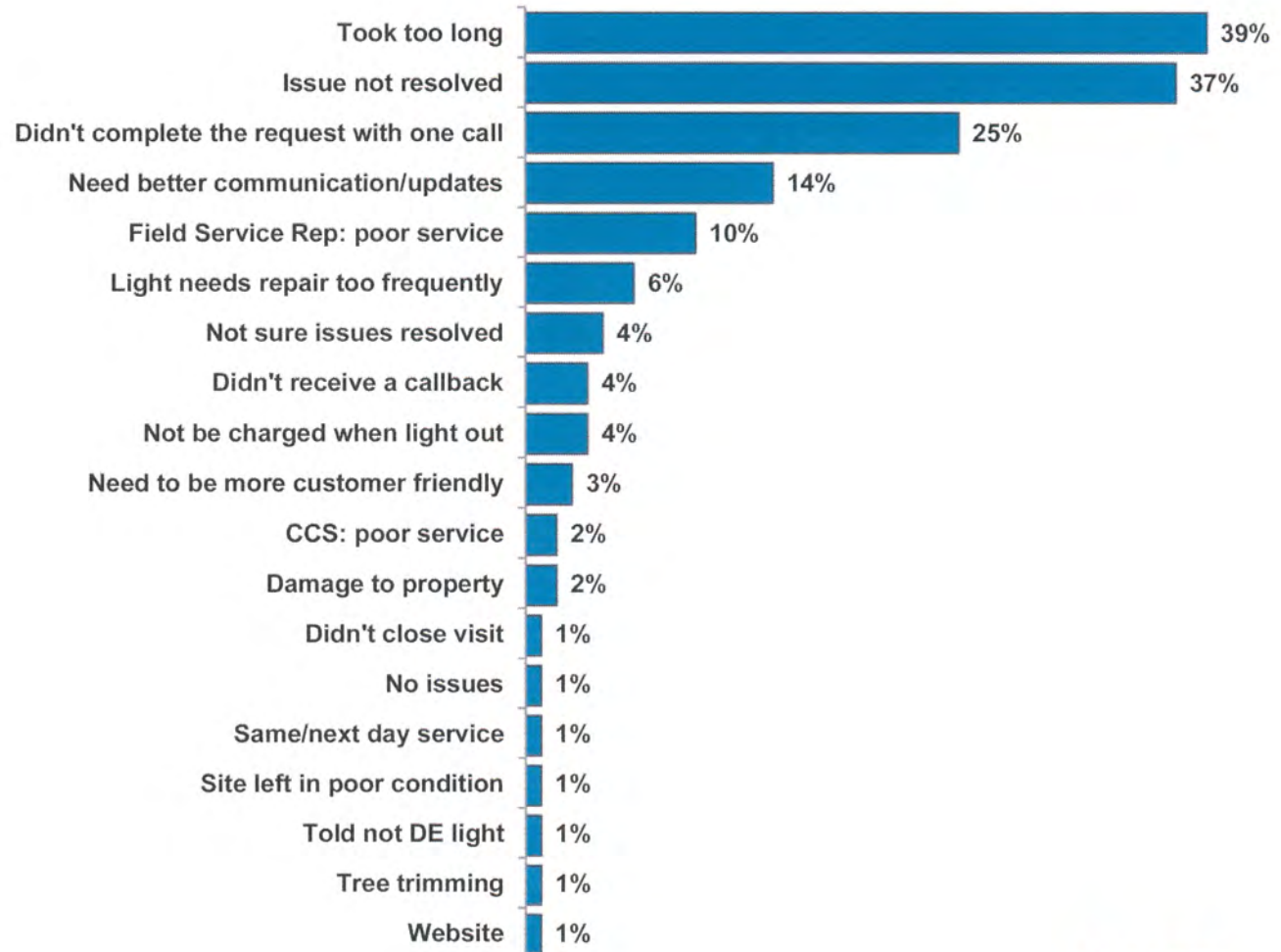


## DEMW Outdoor Lighting Reason for 0-7 OSAT Rating – June 2018

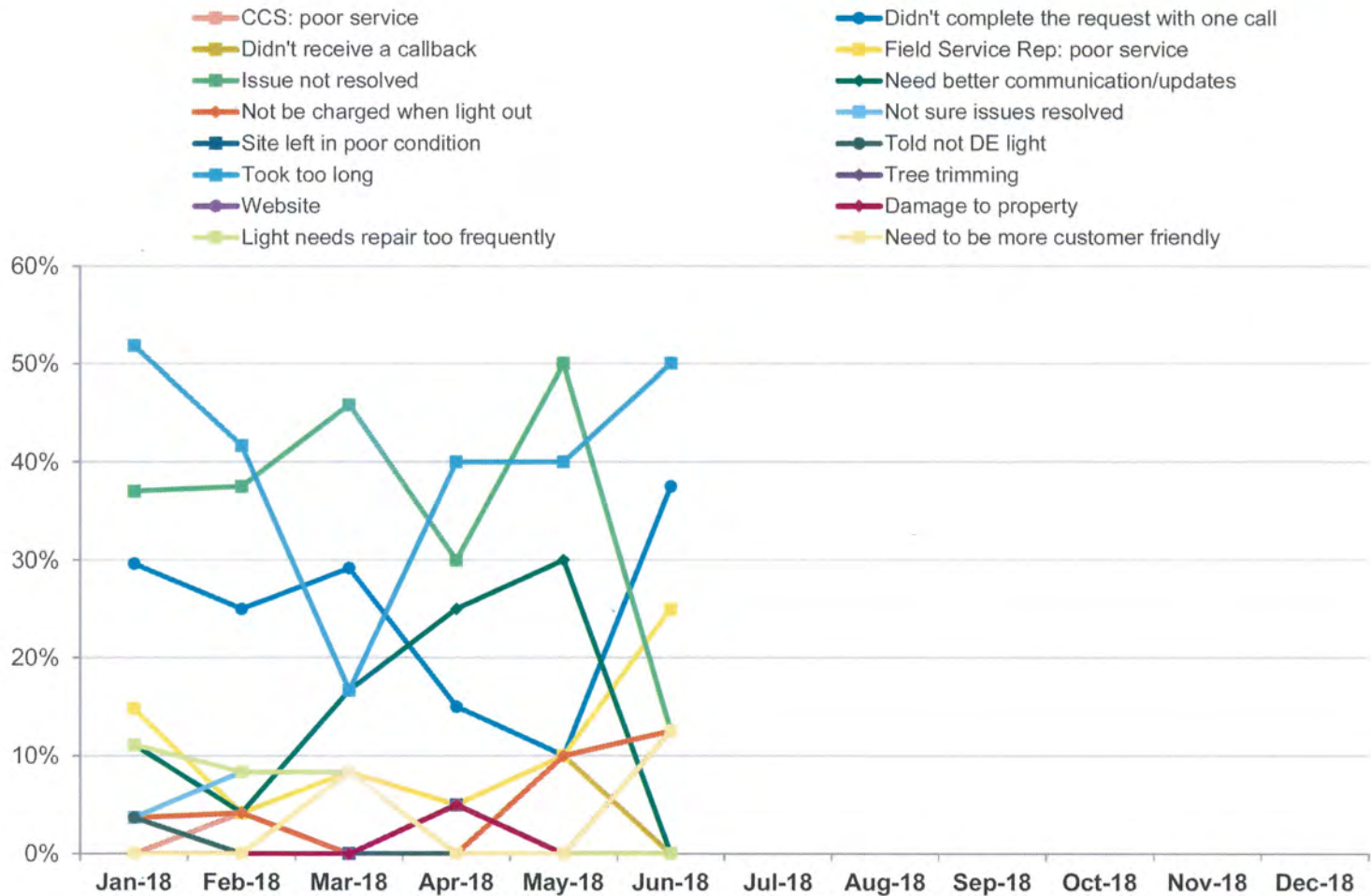




## DEMW Outdoor Lighting Reason for 0-7 OSAT Rating – YTD



## DEMW Outdoor Lighting Reason for 0-7 OSAT Rating




# Midwest Fastrack

## *Service Initiation Gas*

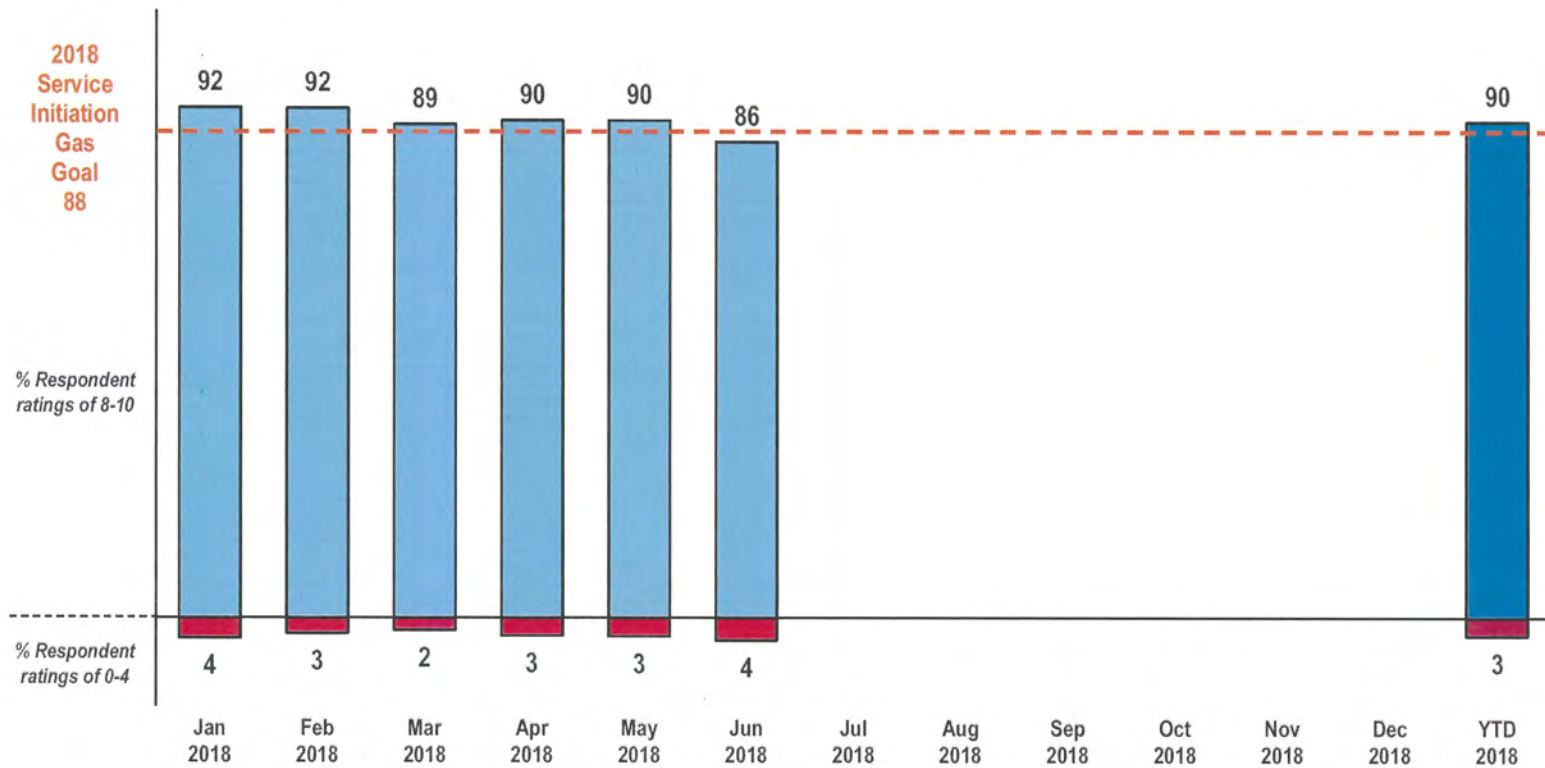
June 2018



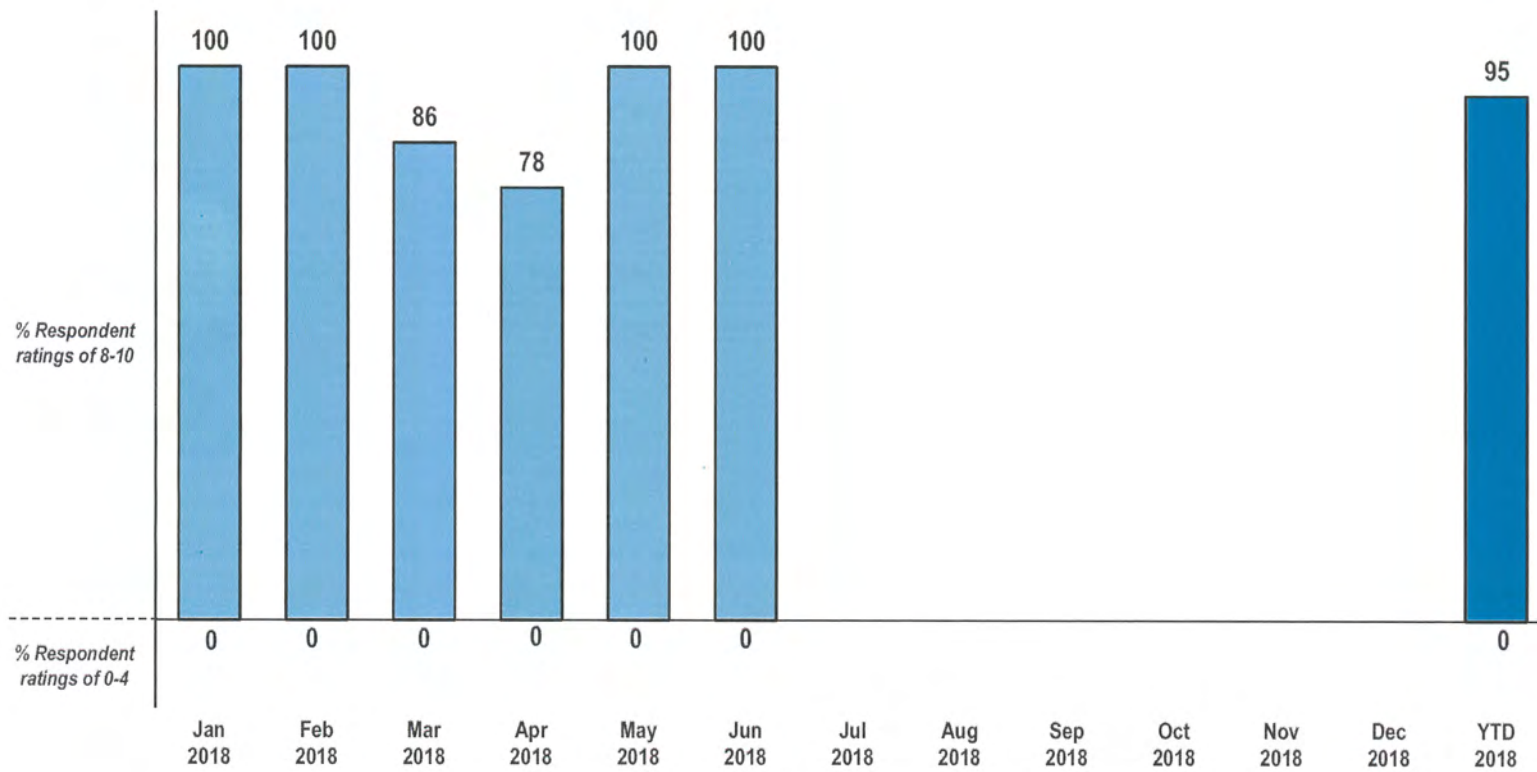
## Service Initiation Gas Goal Update – June 2018

	June Score	2018 YTD	2018 Goal	Goal Status
<b>Service Initiation Gas</b>	<b>86</b>	<b>90</b>	<b>88</b>	
Field Service Technician	100	95		

## Service Initiation Gas Monthly Fastrack Score Trend



## Field Service Gas Technician Monthly Gas FST Score Trend



## Service Initiation Gas Monthly Fastrack Scores by Module

	2018												<u>YTD</u>
	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	
<b>Service Initiation Gas</b>	92	92	89	90	90	86							90
Field Service Technician	100	100	86	78	100	100							95

*Scores = % Customers rating their overall satisfaction an '8, 9 or 10' on a '0-10' scale*

## Service Initiation Gas Field Service Technician 2018

	Jan	Feb	Mar	Q1	Apr	May	Jun	Q2	Jul	Aug	Sep	Q3	Oct	Nov	Dec	Q4	YTD
Overall Satisfaction with service provided by FST at your property	100	100	86	94	78	100	100	95									95
	0	0	0	0	0	0	0	0									0
Respecting your property	98	96	94	96	99	99	100	99									98
	2	<1	3	2	1	0	0	<1									1
Talked with FST DURING visit (% Yes)	16	16	22	18	10	20	20	17									18

% (8-10)
-----
% (0-4)



## Service Initiation Gas Agreed Date & Performance 2018

	Jan	Feb	Mar	Q1	Apr	May	Jun	Q2	Jul	Aug	Sep	Q3	Oct	Nov	Dec	Q4	YTD
<b>Agreed Date &amp; Performance</b>																	
Satisfaction with scheduled date	96	93	97	96	93	98	95	95									95
	1	<1	1	1	3	1	2	2									2
Service connected on scheduled date (% Yes)	98	100	95	97	96	100	96	97									97
Received confirmation call or phone message (% Yes)	59	62	65	62	67	64	58	63									63

% (8-10)
-----
% (0-4)

## Service Initiation Gas Kept Informed 2018

	Jan	Feb	Mar	Q1	Apr	May	Jun	Q2	Jul	Aug	Sep	Q3	Oct	Nov	Dec	Q4	YTD
<i>Kept Informed About Status of Request (% Yes)</i>	87	83	82	84	88	81	83	84									84



**COMMONWEALTH OF KENTUCKY**

**BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

The Electronic Application of Duke )  
Energy Kentucky, Inc., for: 1) An )  
Adjustment of the Electric Rates; 2) ) Case No. 2019-00271  
Approval of New Tariffs; 3) Approval of )  
Accounting Practices to Establish )  
Regulatory Assets and Liabilities; and 4) )  
All Other Required Approvals and Relief. )

---

**DIRECT TESTIMONY OF**

**MELISSA B. ABERNATHY**

**ON BEHALF OF**

**DUKE ENERGY KENTUCKY, INC**

---

September 3, 2019

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**I. INTRODUCTION AND PURPOSE**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Melissa Brammer Abernathy and my business address is 550 South  
3 Tryon Street, Charlotte, North Carolina 28202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Business Services LLC (DEBS), as Manager  
6 Accounting II, Asset Accounting. DEBS provides various administrative and other  
7 services to Duke Energy Kentucky, Inc., (Duke Energy Kentucky or Company) and  
8 other affiliated companies of Duke Energy Corporation (Duke Energy).

9 **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND PROFESSIONAL**  
10 **EXPERIENCE.**

11 A. I am a graduate of the University of North Carolina at Chapel Hill, with a Bachelor of  
12 Science degree in Business Administration, and a Master of Accountancy degree. I  
13 am a Certified Public Accountant in the State of North Carolina. I began my  
14 employment with Duke Energy in 2009 in the Corporate Audit Services Department  
15 and transitioned to my current position within Asset Accounting in March 2015. My  
16 work experience prior to Duke Energy was with Deloitte and Touche, LLP as an Audit  
17 Manager primarily serving clients in the energy industry.

18 **Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS MANAGER**  
19 **ACCOUNTING II, ASSET ACCOUNTING.**

20 A. As Manager II, Asset Accounting, I have responsibility for accounting and  
21 reporting activities within Duke Energy's Electric and Gas Utilities and  
22 Infrastructure segment related to fixed assets, including electric plant in service,

1 construction work in progress, depreciation and asset retirement obligations.

2 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**  
3 **PUBLIC SERVICE COMMISSION?**

4 A. No.

5 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**  
6 **PROCEEDING?**

7 A. I am responsible for actual net plant in service and construction work in progress  
8 contained in rate base and other actual plant-related items that Duke Energy  
9 Kentucky witness, Mr. Christopher Jacobi uses in his testimony. I sponsor the  
10 following Schedules in satisfaction of Filing Requirements (FR) 16(8)(b): B-2, B-  
11 2.1, B-2.2, B-2.3, B-2.4, B-2.5, B-2.6, B-2.7, B-3, B-3.1, B-3.2, and B-4. I sponsor  
12 Schedule D-2.24 in satisfaction of FR 16(6)(b) and FR 16(8)(d), as well as the  
13 actual plant data on Schedule K page 1, and the composite depreciation rates on  
14 Schedule K, both being in response to FR 16(8)(k). The source and sponsor of the  
15 budgeted and projected data as shown on these schedules is Mr. Jacobi. The source  
16 and sponsor of the proposed depreciation and amortization accrual rates used in  
17 these schedules, including the supporting depreciation study, is Company witness  
18 John J. Spanos.

**II. SCHEDULES SPONSORED BY WITNESS**

19 **Q. PLEASE DESCRIBE THE INFORMATION CONTAINED IN THE**  
20 **SECTION B SCHEDULES.**

21 A. The Section B schedules develop the Jurisdictional Net Plant in Service. The  
22 schedules are based on the Company's budget records as of the end of the base period

1 (November 30, 2019) and the end of the forecast period (March 31, 2021).

2 **Q. PLEASE DESCRIBE SCHEDULE B-2.**

3 A. Schedule B-2 shows the plant in service including allocated common plant by major  
4 property grouping for the base period and the 13-month average as of the plant  
5 valuation date of March 31, 2021. The amount shown in the column labeled “Adjusted  
6 Jurisdiction” on page 1 of 2, and “13-Month Average Adjusted Jurisdiction” on page  
7 2 of 2, represents plant in service that is deemed used and useful in providing electric  
8 service to our Kentucky jurisdictional customers.

9 **Q. PLEASE DESCRIBE SCHEDULE B-2.1.**

10 A. Schedule B-2.1 consists of a further breakdown of Schedule B-2 by the Federal  
11 Energy Regulatory Commission (FERC) and Company Account for each major  
12 property grouping for the base period and the forecast period. The plant in service  
13 investment shown in the column labeled “Adjusted Jurisdiction” on pages 1 through  
14 6, and “13-Month Average Adjusted Jurisdiction” on pages 7 through 12, represents  
15 electric plant in service including allocated common plant that is deemed used and  
16 useful in providing electric service to the Company’s Kentucky jurisdictional  
17 customers.

18 **Q. PLEASE DESCRIBE SCHEDULE B-2.2.**

19 A. Schedule B-2.2 shows proposed adjustments to plant in service for the base period  
20 and the forecast period. The adjustments shown on this schedule are related to ARO  
21 Balances, street lighting balances, assets recovered through the Environmental  
22 Surcharge Mechanism (ESM) rider, and deferred depreciation related to the purchase  
23 of the DP&L share of East Bend. The adjustment for ARO is made to remove the



1 ARO balances out of rate base for separate recovery. The lighting adjustments remove  
2 customer lighting balances that are recovered through separate tariffs from rate base.  
3 The adjustment related to Structures and Improvements are the specific capital assets  
4 that are recovered under the ESM rider and not base rates. Finally, the adjustment for  
5 the deferred depreciation related to the acquisition of DP&L's share of East Bend is  
6 related to the regulatory asset approved in Case 2015-120. This adjustment adds this  
7 regulatory asset to rate base consistent with treatment approved in the Company's last  
8 base rate case (Case 2017-00321). Each of these adjustments is shown as of the base  
9 period and is projected for the forecast period.

10 **Q. PLEASE DESCRIBE SCHEDULE B-2.3.**

11 A. Schedule B-2.3 shows beginning and ending balances, as well as gross additions,  
12 retirements and transfers by FERC and Company Account for each major property  
13 grouping for the base period and the forecast period.

14 **Q. PLEASE DESCRIBE SCHEDULE B-2.4.**

15 A. Schedule B-2.4 is entitled "Property Merged or Acquired" for the base period and  
16 the forecast period. Duke Energy Kentucky projects that no property will be merged  
17 or acquired during the base period or forecast period, so no items appear in this  
18 schedule.

19 **Q. PLEASE DESCRIBE SCHEDULE B-2.5.**

20 A. Schedule B-2.5 is entitled "Leased Property" and provides data for the base period  
21 and the forecast period. The Company does not project to have any assets under capital  
22 leases as of the base period or forecast period.

1 **Q. PLEASE DESCRIBE SCHEDULE B-2.6.**

2 A. Schedule B-2.6 shows the property held for future use included in rate base for the  
3 base period and forecast period. The Company has not included any property held for  
4 future use in rate base.

5 **Q. PLEASE DESCRIBE SCHEDULE B-2.7.**

6 A. Schedule B-2.7 contains data on utility property excluded from rate base for the base  
7 period and forecast period. There are no exclusions of utility property from rate base.

8 **Q. PLEASE DESCRIBE SCHEDULE B-3.**

9 A. Schedule B-3 shows the total plant investment and Reserve for Accumulated  
10 Depreciation and Amortization by FERC and Company Account grouping for the  
11 base period and the forecast period. The amounts for the forecast period on pages 7  
12 through 12 are 13-month averages. The adjusted jurisdictional reserve in the last  
13 column is applicable to the jurisdictional plant shown on Schedule B-2, “Adjusted  
14 Jurisdiction” and “13-Month Average Adjusted Jurisdiction.”

15 **Q. PLEASE DESCRIBE SCHEDULE B-3.1.**

16 A. Schedule B-3.1 shows adjustments to Accumulated Depreciation and Amortization  
17 for the base period and the forecast period. The adjustments shown on this schedule  
18 are the related accumulated depreciation balances for the adjustments to Plant in  
19 Service shown on Schedule B-2.2, which are described above.

20 **Q. PLEASE DESCRIBE SCHEDULE B-3.2.**

21 A. Schedule B-3.2 lists the 13-month average jurisdictional plant investment and reserve  
22 balance as of March 31, 2021 for each FERC and Company Account within each  
23 major property grouping. It also shows the proposed depreciation and amortization

1           accrual rate, calculated annual depreciation and amortization expense, percentage of  
2           net salvage value, average service life and curve form, as applicable for each account.  
3           The calculated annual depreciation and amortization was determined by multiplying  
4           the 13-month average adjusted jurisdictional plant investment for the forecast period  
5           by the proposed depreciation and amortization accrual rates.

6           With this filing, the Company filed with the Commission proposed  
7           depreciation and amortization accrual rates prepared in 2019 and sponsored by Mr.  
8           Spanos of Gannett Fleming, Inc., who prepared the depreciation study. The account  
9           numbers referred to in the depreciation study were those in effect in 2019 for Duke  
10          Energy Kentucky. The Company requests that the Commission approve these new  
11          depreciation and amortization accrual rates included in this filing and that the  
12          depreciation and amortization accrual rates be effective April 1, 2020, corresponding  
13          with the effective date of the electric rates established in this case.

14          The amortization of the regulatory asset related to deferred depreciation for  
15          the Acquisition of DP&L's share of East Bend is the annual amortization amount  
16          approved in the Company's last base rate case (Case No. 2017-00321).

17   **Q.   PLEASE DESCRIBE SCHEDULE B-4.**

18   A.   Schedule B-4 is a list of construction work in progress by major property grouping.  
19          Construction Work in Progress (CWIP) is broken down by amounts subject to  
20          Allowance for Funds Used During Construction (AFUDC) and amounts not subject  
21          to AFUDC. The Company is not requesting to include recovery of CWIP in base  
22          rates.

1 **Q. PLEASE DESCRIBE SCHEDULE D-2.24.**

2 A. Schedule D-2.24 reflects the adjustment to the forecasted period depreciation expense  
3 to reflect annualized depreciation expense as calculated on Schedule B-3.2. Schedule  
4 B-3.2 shows annual depreciation on 13-month average plant balance at March 31,  
5 2021, using the new proposed depreciation rates.

6 **Q. PLEASE DESCRIBE THE INFORMATION YOU SPONSOR IN SCHEDULE**  
7 **K.**

8 A. I sponsor the actual plant data submitted on page 1 of Schedule K. This information  
9 includes Plant in Service by major property grouping and Reserve for Accumulated  
10 Depreciation and Amortization by utility service for the 13-month average forecast  
11 period, for the base period and as of December 31 for each of the last ten years. Plant  
12 held for future use and construction work in progress have also been provided for the  
13 same periods. I also sponsor the composite depreciation rates shown on Schedule K.

14 **Q. PLEASE DESCRIBE ANY AROS WITH POTENTIAL SETTLEMENT IN**  
15 **THE FUTURE.**

16 A. Duke Energy Kentucky has AROs related to legal obligations for the following items:  
17 closure of the coal ash basin at East Bend, removal of asbestos at Miami Fort 6,  
18 removal of company-owned telecommunications assets from towers, and closure of  
19 the East and West landfills at East Bend. Closure of the coal ash basin at East Bend is  
20 ongoing and costs are being recovered through the ESM rider. The removal of  
21 asbestos at Miami Fort 6 has begun and completion is expected in 2019. The costs for  
22 asbestos removal are currently included in Duke Energy Kentucky's Fossil  
23 Dismantlement study performed by Burns and McDonnell submitted in the

1 Company's last electric base rate case, Case No. 2017-00321, and are already  
2 collected through rates; therefore, they are not included separately for recovery in this  
3 case. The removal of the company-owned telecommunications assets from leased  
4 towers will begin no earlier than 2023. The timing of final closure of the East Bend  
5 landfills is expected to occur in 2021-2022 for the East Landfill and 2040 for the West  
6 Landfill to correspond with the respective anticipated end of life for each landfill.

7 The total of the four AROs excluding the coal ash basin closure at East Bend  
8 is \$4.3 million at June 30, 2019, and is supported by underlying cash flows of \$34.6  
9 million (\$31.4 million for landfills, \$2.9 million for asbestos and \$0.3 million to  
10 remove telecommunication assets.)

### 11 **III. INFORMATION PROVIDED TO OTHER WITNESSES**

12 **Q. DID YOU SUPPLY ANY INFORMATION TO OTHER WITNESSES FOR  
13 THEIR USE IN THIS PROCEEDING?**

14 A. Yes, I provided Mr. Jacobi with the actual net book value for the existing gas,  
15 electric and common plant for the period ending May 31, 2019, for his use in  
calculating the forecasted financial data.

**IV. CONCLUSION**

1 **Q. WERE SCHEDULES B-2, B-2.1, B-2.2, B-2.3, B-2.4, B-2.5, B-2.6, B-2.7, B-3,**  
2 **B-3.1, B-3.2, B-4, AND D-2.24, THE INFORMATION YOU PROVIDED ON**  
3 **SCHEDULE K, AND THE INFORMATION YOU PROVIDED TO MR.**  
4 **JACOBI, (EXCLUDING THE BUDGET AND FORECAST NUMBERS**  
5 **PREPARED BY MR. JACOBI AND THE PROPOSED DEPRECIATION**  
6 **AND AMORTIZATION ACCRUAL RATES AND SUPPORTING**  
7 **DEPRECIATION STUDY PREPARED BY MR. SPANOS) PREPARED BY**  
8 **YOU OR UNDER YOUR DIRECTION AND SUPERVISION?**

9 **A. Yes.**

10 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

11 **A. Yes.**

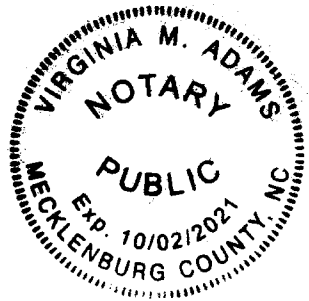
VERIFICATION

STATE OF NORTH CAROLINA )  
 ) SS:  
COUNTY OF MECKLENBURG )

The undersigned, Melissa Brammer Abernathy, Manager Accounting II, Asset Accounting being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of her knowledge, information and belief.

Melissa B. Abernathy  
Melissa Brammer Abernathy, Affiant

Subscribed and sworn to before me by Melissa Brammer Abernathy on this 13  
day of August, 2019.



Virginia M. Adams  
NOTARY PUBLIC

My Commission Expires: 10/2/21

**COMMONWEALTH OF KENTUCKY**

**BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

The Electronic Application of Duke )  
Energy Kentucky, Inc., for: 1) An )  
Adjustment of the Electric Rates; 2) ) Case No. 2019-00271  
Approval of New Tariffs; 3) Approval of )  
Accounting Practices to Establish )  
Regulatory Assets and Liabilities; and 4) )  
All Other Required Approvals and Relief. )

---

**DIRECT TESTIMONY OF**

**THOMAS CHRISTIE**

**ON BEHALF OF**

**DUKE ENERGY KENTUCKY, INC**

---

September 3, 2019



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**I. INTRODUCTION AND PURPOSE**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Thomas (TK) Christie, and my business address is 1000 East Main  
3 Street, Plainfield, Indiana.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed as Director Distribution Vegetation Management by Duke Energy  
6 Business Services, LLC, a service company subsidiary of Duke Energy  
7 Corporation, and a non-utility affiliate of Duke Energy Kentucky (Duke Energy  
8 Kentucky, or Company).

9 **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL AND**  
10 **PROFESSIONAL BACKGROUND.**

11 A. I am a graduate of the University of South Florida with a Bachelor of Science in  
12 Industrial Engineering and a graduate of Webster University with a Master's in  
13 Business Administration. I have been in the electric utility industry for 23 years.

14 **Q. PLEASE DESCRIBE YOUR DUTIES AND RESPONSIBILITIES AS**  
15 **DIRECTOR DISTRIBUTION VEGETATION MANAGEMENT.**

16 A. As Director Distribution Vegetation Management, I am responsible for overseeing  
17 Duke Energy's Midwest distribution vegetation management activities for more  
18 than 34,000 miles of electric distribution lines across our service territories in  
19 Kentucky, Indiana, and Ohio. In this capacity, I manage a staff of 14 employees, 8  
20 of whom are International Society of Arboriculture (ISA) certified arborists and  
21 have primary responsibility for distribution vegetation management in Duke  
22 Energy Kentucky's service territory. I also serve as the primary jurisdictional leader

1 responsible for overseeing our contractors who are performing distribution  
2 vegetation management. I ensure adherence to the contract strategy, terms and work  
3 plan execution to the Company's standards. I develop and monitor performance  
4 metrics and objectives in collaboration with contractors to ensure that our  
5 distribution vegetation management program is performed in accordance with  
6 Commission rules and regulations. I analyze budget and work plan status to ensure  
7 performance goals are on target. I also ensure consistent implementation of policies  
8 and procedures.

9 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**  
10 **PROCEEDING?**

11 A. I will describe Duke Energy Kentucky's current distribution vegetation  
12 management program, which focuses on both maintaining our existing rights-of-  
13 way and on hazard tree identification and removal outside of our rights-of-way. I  
14 will provide support for the Company's request for increased operating and  
15 maintenance expense to perform vegetation management on the Company's  
16 distribution system on an average of a five-year trim cycle. For purposes of my  
17 testimony, I will be discussing the vegetation management program for our  
18 distribution system.

**II. DUKE ENERGY KENTUCKY'S CURRENT VEGETATION**  
**MANAGEMENT PROGRAM**

19 **Q. PLEASE PROVIDE AN OVERVIEW OF DUKE ENERGY KENTUCKY'S**  
20 **VEGETATION MANAGEMENT PROGRAM.**

21 A. Duke Energy Kentucky's electric service territory covers six counties in northern  
22 Kentucky. Duke Energy Kentucky supplies electric service to approximately

1 142,900 residential, commercial and industrial customers over approximately 2,900  
2 miles of distribution lines.

3 Duke Energy Kentucky's vegetation management program is a plan for  
4 maintaining and clearing all of the Company's distribution circuits every 5 years as  
5 was approved in the Company's last base electric distribution rate case. Consistent  
6 with the Kentucky Public Service Commission's Order in Case No. 2006-00494,  
7 the Company developed a vegetation management plan that is on file with the  
8 Commission. The current full-system maintenance inspection and trim cycle is  
9 1,441 miles of distribution overhead lines. A 5-year trim cycle is approximately  
10 288 miles per year. The Company's vegetation management plan includes a  
11 description of the Company's tree care standards, and trimming specifications that  
12 include minimum clearances, brush and wood removal and customer notifications.  
13 The Company provides the Commission with an annual progress report of its  
14 vegetation management plan in accordance with the Commission's Order in Case  
15 No. 2011-00450.<sup>1</sup> The last progress report was filed on or about May 1, 2019.

16 Duke Energy Kentucky works consistently to balance aesthetics with our  
17 goal to provide safe, reliable power to the households and businesses that depend  
18 on us. It is our responsibility to ensure power lines are free of trees and other  
19 obstructions that could disrupt electric service. Trees that are close to power lines  
20 must be trimmed or cut down to ensure they do not cause power outages, and Duke  
21 Energy Kentucky does much of this work proactively. The necessary crews use a

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<sup>1</sup> *In the Matter of An Investigation of the Reliability Measures of Kentucky's Jurisdictional Electric Distribution Utilities*, Case No. 2011-00450. (Ky. P.S.C. May 30, 2013).

1 variety of methods to manage vegetation growth along distribution circuits and  
2 transmission power line rights of way, including vegetation pruning, felling (cutting  
3 down) and herbicides. These methods are based on widely accepted standards  
4 developed by the tree care industry. All work is performed in conformance with  
5 Duke Energy Kentucky's vegetation management requirements, OSHA  
6 regulations, American National Standards Institute (ANSI) A300, ANSI Z133, Tree  
7 Care Industry Association's (formerly the National Arborist Association)  
8 standards, Dr. Shigo's *Field Guide for Qualified Line Clearance Tree Workers*,  
9 National Electrical Safety Code (NESC), International Society of Arboriculture  
10 Best Management Practices, and all federal, state, county, and municipal laws,  
11 statutes, ordinances and regulations applicable to said work.

12 **Q. WHAT IS THE COMPANY'S PHILOSOPHY TOWARDS VEGETATION**  
13 **MANAGEMENT?**

14 A. The Company's approach towards vegetation management is to focus on customer  
15 safety and reliability in a cost-effective manner while utilizing industry best  
16 management practices. Duke Energy Kentucky takes a proactive approach to its  
17 vegetation management program, which means we try to trim or remove trees and  
18 other vegetation that may cause problems before service is affected. Duke Energy  
19 Kentucky's primary focus is to control the growth of incompatible vegetation along  
20 its electric lines. To control the growth around our distribution lines, we hire  
21 qualified personnel to monitor the condition of vegetation over, under and adjacent  
22 to our electric facilities. The Company also utilizes various vegetation control  
23 practices to reduce, manage or eliminate incompatible growth, such as the use of

1 herbicides and mowing. Vegetation along distribution lines, if not properly  
2 maintained, can create serious risks to reliability as well as potential safety  
3 concerns. Duke Energy Kentucky knows that a strong vegetation management  
4 program is a key component to meet system reliability.

5 **Q. BEYOND ROUTINE VEGETATION MANAGEMENT, WHAT OTHER**  
6 **ACTIVITIES IS DUKE ENERGY KENTUCKY ENGAGED IN TO ENSURE**  
7 **SYSTEM RELIABILITY?**

8 A. To maintain safety and reliability, Duke Energy Kentucky is engaged in a Hazard  
9 Tree Removal Program that is designed to remove trees that pose a potential danger  
10 to our distribution system. This program seeks to remove living and dead trees  
11 outside of the Company's right-of-way that pose a risk to our distribution system,  
12 including Ash trees, to counter the effects of the Emerald Ash Borer infestation.

13 **Q. AS PART OF ITS ROUTINE MAINTENANCE SCHEDULE, DESCRIBE**  
14 **THE RELIABILITY, SAFETY, AND OTHER CRITERIA USED IN**  
15 **DETERMINING WHETHER TREES AND VEGETATION REQUIRE**  
16 **TRIMMING.**

17 A. Duke Energy Kentucky has an integrated vegetation management program and uses  
18 data analytics to prioritize annual trim plans. This analysis takes into account, age  
19 since previous pruning, customer satisfaction data, and vegetation related outages  
20 since the previous pruning. The Company uses foresters who are certified by the  
21 International Society of Arboriculture (ISA) to provide guidance and oversight to  
22 contractors who are pruning trees and clearing brush growth around, over and under  
23 power lines. In addition to the routine trim cycle, we perform periodic visual

1 inspections to determine whether the Company's targeted 10 feet of clearance is  
2 maintained or requires additional attention in advance of the schedule. During  
3 routine vegetation maintenance, our employees and contractors are also identifying  
4 hazard trees that pose a risk and remove the affected trees once permissions are  
5 received. Our Hazard Tree Removal Program is another component of our  
6 integrated vegetation management plan.

7 **Q. PLEASE DESCRIBE WHO PERFORMS THE COMPANY'S**  
8 **VEGETATION MANAGEMENT WORK?**

9 A. This service is performed almost exclusively by outside contractors. While Duke  
10 Energy Kentucky manages this process, the Company does not employ internal  
11 tree-trimmers and does not maintain the necessary vehicles and equipment to  
12 provide this service internally.

13 **Q. DO EMPLOYEES AND CONTRACTORS HAVE SPECIFIC**  
14 **QUALIFICATIONS TO ENGAGE IN VEGETATION MANAGEMENT**  
15 **ACTIVITIES?**

16 A. Yes. Activities related to vegetation management, or tree trimming, occur in close  
17 proximity to energized power lines. As such, individuals, whether they are  
18 employees or contractors, must be properly trained and qualified in order to engage  
19 in such activities.

20 **Q. HOW DOES THE COMPANY SOURCE ITS VEGETATION**  
21 **MANAGEMENT FUNCTIONS?**

22 A. Duke Energy sourcing specialists engage in a Request For Proposal (RFP) process  
23 to seek out companies that can provide the best service at the least cost. The

1 Company looks for contractors that have the expertise, resources and safety record  
2 to support the work needed. Then the Company monitors the ongoing work to  
3 ensure that it meets Company specifications and requirements.

4 **Q. DOES DUKE ENERGY KENTUCKY CONTINUE TO EXPERIENCE**  
5 **RESOURCE CHALLENGES IN MEETING ITS VEGETATION**  
6 **MANAGEMENT GOALS?**

7 A. Yes. The market for resources eligible to properly engage in vegetation  
8 management activities has become constricted and extremely competitive for  
9 limited qualified resources. The scarcity of the resource locally and the need to  
10 bring in qualified contractors from outside the Kentucky territory has combined to  
11 result in higher prices for critically important compliance activities. Indeed, current,  
12 competitively bid prices for vegetation management resources are significantly  
13 higher than in years past.

14 **Q. HAS DUKE ENERGY KENTUCKY KEPT THE COMMISSION**  
15 **INFORMED OF THESE RESOURCE CHALLENGES?**

16 A. Yes. The issue of contractor resources was discussed as part of the Company's most  
17 recent electric distribution rate case filed in 2017 and which went to hearing in early  
18 2018. The Company has continued to provide updates regarding its resources as  
19 part of its annual reliability and vegetation report filed with the Commission.  
20 Currently, the Company has sufficient crew coverage to meet its 2019 trimming  
21 requirements. However, the Company continues to experience rising cost pressures  
22 in securing adequate resources to meet its vegetation cycle requirements.



1 **Q. HAVE THESE HIGHER COSTS PROMPTED DUKE ENERGY**  
2 **KENTUCKY TO ALTER ITS VEGETATION MANAGEMENT**  
3 **ACTIVITIES?**

4 A. Yes. Duke Energy Kentucky is intent on adhering to Commission regulation and is  
5 committed to the completion of vegetation clearing activities so as to provide  
6 customers with safe and reliable service. But to realize these intentions, Duke  
7 Energy Kentucky must be permitted to timely recover the actual and reasonable  
8 costs of its vegetation management program. The Company continues to believe a  
9 five-year trim cycle is reasonable and is not proposing to change that cycle.

10 **Q. HOW MUCH IS CURRENTLY EMBEDDED IN RATES FOR**  
11 **DISTRIBUTION VEGETATION MANAGEMENT?**

12 A. As approved in the Company's most recent electric distribution rate case, Duke  
13 Energy Kentucky currently has approximately \$4.3 million in operation and  
14 maintenance (O&M) costs per year through its base rates for both distribution and  
15 transmission vegetation management. The distribution portion is approximately  
16 \$3.8 million. In addition to this amount, which represents routine vegetation  
17 management, the Company has been spending additional dollars associated with its  
18 Hazard Tree Removal Program.

1 **Q. PLEASE SUMMARIZE THE AMOUNTS SPENT FOR DUKE ENERGY**  
 2 **KENTUCKY VEGETATION MANAGEMENT PROGRAM FOR THE**  
 3 **PAST FIVE YEARS AND THE MILES TRIMMED FOR EACH OF THOSE**  
 4 **YEARS.**

5 A. The table below shows the amount of spend and miles trimmed on the distribution  
 6 system for the Company's routine distribution vegetation management activities  
 7 from 2014-2018 and what is planned for 2019-2021:

**Table 1:**

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
	<b>Actuals</b>	<b>Actuals</b>	<b>Actuals</b>	<b>Actuals</b>	<b>Actuals</b>	<b>Forecast</b>	<b>Forecast</b>	<b>Forecast</b>
Miles	385	366	273	231	241	320	291	288
O&M Total Spend in Millions	\$2.10	\$1.98	\$1.81	\$4.34	\$4.35	\$5.73	\$5.52	\$5.67
Total Cost Per Mile	\$5,455	\$5,410	\$6,630	\$18,788	\$18,050	\$17,906	\$18,969	\$19,688

8 It is important to note that vegetation maintenance is only one part of our  
 9 vegetation strategy. As discussed in more detail below, although we trimmed less  
 10 miles in the last couple of years, we have turned our focus to the hazard tree  
 11 program to remove dead and dying trees that also impact reliability of the system.

1 **Q. PLEASE FURTHER EXPLAIN THE CHALLENGES THAT DUKE**  
2 **ENERGY KENTUCKY HAS ENCOUNTERED WITH CONTRACTORS**  
3 **OVER THE PAST FEW YEARS.**

4 A. Duke Energy Kentucky continues to experience a shortage of qualified vegetation  
5 management professionals across its service territory. Furthermore, contractors had  
6 difficulty attracting and retaining skilled workers, in a highly competitive labor  
7 market, resulting in increasingly higher contractor rates. As a result of the  
8 tightening labor market and qualified tree trimming professionals leaving the  
9 Midwest for higher wage states, Duke Energy Kentucky has had difficulty  
10 attracting and retaining contractor crews.

11 **Q. PLEASE EXPLAIN THE IMPACT OF THE CONTRACTOR SHORTAGE**  
12 **ON THE COMPANY'S VEGETATION MANAGEMENT PLAN.**

13 A. Because the market for qualified contractor resources has become very competitive,  
14 Duke Energy Kentucky has had to look outside the local region to meet our resource  
15 needs. The scarcity of the resources locally and the need to bring in qualified  
16 contractors from outside the territory has combined to result in significantly higher  
17 prices for critically important activities. Indeed, current, competitively bid prices  
18 for vegetation management resources are significantly higher than in years past.  
19 For example, the cost per mile for vegetation management activities in the Duke  
20 Energy Kentucky service territory has risen from \$5,455 in 2014 to \$18,050 in 2018  
21 (see table above) and is forecasted to increase in 2020 and beyond.

1 **Q. WHAT STEPS HAS DUKE ENERGY KENTUCKY UNDERTAKEN TO**  
2 **MITIGATE THE IMPACTS OF THE CONTRACTOR SHORTAGE?**

3 A. In the past two to three years, Duke Energy Kentucky has worked to improve the  
4 partnership with our suppliers. We also meet with our contractors regularly to  
5 discuss their ability to retain qualified employees.

6 **Q. PLEASE DESCRIBE WHAT MEASURES THE COMPANY HAS TAKEN**  
7 **TO TRY TO CONTROL ITS RISING VEGETATION MANAGEMENT**  
8 **EXPENSE?**

9 A. Duke Energy Kentucky performed a competitive bid event for all vegetation  
10 trimming activities and continues to work with tree trimming contractors on ways  
11 to perform work most efficiently.

12 **Q. IN ITS ORDER IN CASE NO. 2017-172, THE COMMISSION DIRECTED**  
13 **THE COMPANY SHOULD BID THE NEXT MASTER AGREEMENT FOR**  
14 **VEGETATION MANAGEMENT SERVICE FOR THE MIDWEST**  
15 **MARKET THAT INCLUDES KENTUCKY, INDIANA, AND OHIO AND**  
16 **FOR A SMALLER GEOGRAPHIC AREA LIMITED TO DUKE**  
17 **KENTUCKY'S SERVICE TERRITORY. HAS THE COMPANY**  
18 **COMPLIED WITH THIS DIRECTIVE?**

19 A. A competitive bid event took place to award work in the Midwest market. Multiple  
20 vendors were given the opportunity to provide pricing on various types of  
21 vegetation work. During this event, the Duke Energy Kentucky service area was  
22 one of multiple small geographic areas identified to receive separate pricing and  
23 work.

1 **Q. WHAT WERE THE RESULTS?**

2 A. A single vendor was selected to provide vegetation management trimming and  
3 hazard tree removal services in the Duke Energy Kentucky service area.

4 **Q. ARE THERE OTHER FACTORS UNIQUE TO DUKE ENERGY**  
5 **KENTUCKY THAT HAVE COMPOUNDED THE RESOURCE**  
6 **CHALLENGES?**

7 A. In addition to the contractor shortage, Duke Energy Kentucky has encountered been  
8 impacted by the Emerald Ash Borer (EAB) infestation, that has required us to be  
9 more aggressive in our efforts to be proactive on our vegetation management  
10 activities.

### **III. THE HAZARD TREE REMOVAL PROGRAM**

11 **Q. PLEASE DESCRIBE THE HAZARD TREE REMOVAL PROGRAMS.**

12 A. Because about 23 percent of all distribution-related outages, including major event  
13 days, were due to vegetation interference in 2018, Duke Energy Kentucky has  
14 continued its program to remove all hazard trees that are likely to cause a problem  
15 with Duke Energy Kentucky's distribution system from outside the Company's  
16 right of way. The Company is in the process of addressing living trees that are  
17 diseased as well as dead trees that have the potential to impact Duke Energy  
18 Kentucky's assets. As mentioned above, Duke Energy Kentucky is also removing  
19 all Ash trees that are within 45 feet of the centerline of our overhead distribution  
20 lines.

21 Company personnel worked with contractors to prioritize removal of hazard  
22 and Ash trees by potential customer impact and highest threats to reliability. During

1 2019 and 2020, Duke Energy Kentucky is targeting approximately 2,400 trees each  
2 year that are outside of our right of way. This work will continue for the foreseeable  
3 future.

4 There are two components to the Hazard Tree Program. First, when our  
5 contractors are performing routine maintenance, they are instructed to look outside  
6 the ten-foot clearance zone. If they identify trees that are infested with the Emerald  
7 Ash Borer or otherwise are a threat to our distribution lines, we will work with our  
8 customers to remove the tree.

9 The second component of this initiative occurs outside the normal trim  
10 cycle. The Company has retained “Hazard Tree Identifiers” or contractor foresters  
11 whose role is to conduct visual inspections and identify hazard trees in our service  
12 territory. Our contractor will then work with our customers to obtain permission to  
13 remove these trees before they have a chance to damage our system.

14 **Q. WILL THIS BE AN ONGOING COMPONENT OF DUKE ENERGY**  
15 **KENTUCKY’S VEGETATION MANAGEMENT PROGRAM?**

16 A. Yes, hazard tree identification and removal have been and will continue to be a  
17 component of our integrated vegetation management program.

**IV. DUKE ENERGY KENTUCKY’S VEGETATION MANAGEMENT**  
**PROGRAM GOING FORWARD**

18 **Q. PLEASE SUMMARIZE DUKE ENERGY KENTUCKY’S APPROACH TO**  
19 **VEGETATION MANAGEMENT FROM 2019-2021.**

20 A. Duke Energy Kentucky will continue to operate under its approved five-year  
21 trimming cycle. The Company will continue to use its best efforts to mitigate cost  
22 increases and use competitive bidding strategies to procure resources.

1 **Q. WHAT IS DUKE ENERGY KENTUCKY'S REQUEST IN TERMS OF**  
2 **DOLLARS TO MEET A FIVE-YEAR TRIM CYCLE?**

3 A. Currently, the Company is expecting to spend approximately \$6 million in 2019 in  
4 routine distribution vegetation maintenance which the Company records as O&M  
5 expense and approximately \$0.74 million for the Hazard Tree Removal Program  
6 which the Company records as a capital asset. For the test year, Duke Energy  
7 Kentucky plans to spend \$5.5 million in O&M costs for routine vegetation  
8 maintenance. See the table below for a summary of our overall vegetation program.

**Table 2:**

<b>(\$ in Millions)</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Routine Maintenance (O&M)	\$4.35	\$6.00	\$5.52	\$5.67
Hazard Tree Removal (Capital)	\$0.63	\$0.74	\$0.76	\$0.79

9 **Q. IF THE COMMISSION APPROVES \$5.5 MILLION IN O&M COSTS FOR**  
10 **ROUTINE VEGETATION MAINTENANCE GOING FORWARD, DO YOU**  
11 **BELIEVE THAT DUKE ENERGY KENTUCKY WILL BE ABLE TO**  
12 **MAINTAIN ITS FIVE-YEAR CYCLE, WHILE MAINTAINING SAFETY**  
13 **AND RELIABILITY?**

14 A. Yes. Although it is difficult to predict future events, I believe that \$5.5 million in  
15 O&M costs is necessary to sustain a five-year maintenance trim cycle while  
16 maintaining safe and reliable service to customers.

1                   With the recent realignment of our contractor oversight model and increased  
2 partnership with vegetation suppliers, the Company has increased productivity.  
3 Additionally, the focus on hazard tree removal will help ensure safe and reliable  
4 service.

**V.    CONCLUSION**

5   **Q.   DO YOU BELIEVE THAT DUKE ENERGY KENTUCKY PROPOSAL AS**  
6       **OUTLINED IN YOUR TESTIMONY WILL ALLOW THE COMPANY TO**  
7       **CONTINUE TO PROVIDE SAFE AND RELIABLE SERVICE?**

8   A.   Yes.

9   **Q.   DOES THIS CONCLUDE YOUR PREFILED DIRECT TESTIMONY?**


10 A.   Yes, it does.



**VERIFICATION**

**STATE OF INDIANA** )  
 ) **SS:**  
**COUNTY OF HENDRICKS** )

The undersigned, Thomas Christie, Director Distribution Vegetation Management, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of his knowledge, information and belief.

  
Thomas Christie, Affiant

Subscribed and sworn to before me by Thomas Christie on this 14 day of August, 2019.

  
NOTARY PUBLIC

My Commission Expires: 10/9/2025

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

The Electronic Application of Duke )  
Energy Kentucky, Inc., for: 1) An )  
Adjustment of the Electric Rates; 2) ) Case No. 2019-00271  
Approval of New Tariffs; 3) Approval of )  
Accounting Practices to Establish )  
Regulatory Assets and Liabilities; and 4) )  
All Other Required Approvals and Relief. )

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**DIRECT TESTIMONY OF**  
**RETHA HUNSICKER**  
**ON BEHALF OF**  
**DUKE ENERGY KENTUCKY, INC.**

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September 3, 2019

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**ATTACHMENT:**

Attachment RH-1 Example of Bill Format

**I. INTRODUCTION**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Retha Hunsicker and my business address is 400 South Tryon Street,  
3 Charlotte, North Carolina, 28202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Business Services LLC (DEBS), as Vice-  
6 President Customer Connect-Solutions. DEBS provide various administrative and  
7 other services to Duke Energy Kentucky, Inc., (Duke Energy Kentucky or  
8 Company) and other affiliated companies of Duke Energy Corporation (Duke  
9 Energy).

10 **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND**  
11 **PROFESSIONAL EXPERIENCE.**

12 A. I hold a Bachelor of Science degree in Business Administration from Indiana  
13 Wesleyan University. Since 1981, I have been employed by, and worked for,  
14 companies under what is now Duke Energy. I began my career with Public  
15 Service Indiana, the predecessor to Duke Energy Indiana, LLC, (Duke Energy  
16 Indiana) as an accounting assistant. Since then, I have held positions with  
17 increasing levels of responsibility. More recently, the roles I've held include  
18 Director, Business Standards and Integration, and General Manager, Smart  
19 Energy Systems & Processes. In 2012, I took the position of Regional Director,  
20 Customer Services, leading our Midwest contact centers, before promoting to  
21 Vice President, Customer Contact Operations in 2013. I assumed my current role  
22 as Vice President, Customer Connect-Solutions in 2015.

1 **Q. PLEASE DESCRIBE YOUR DUTIES AS VICE-PRESIDENT,**  
2 **CUSTOMER CONNECT-SOLUTIONS.**

3 A. I have executive management oversight for the customer information system  
4 (CIS) consolidation project known as Customer Connect. Through this program,  
5 Duke Energy will complete the successful deployment of a new customer  
6 platform that will enable the functional capabilities needed to meet our strategic  
7 purpose of powering the lives of our customers by modernizing how we serve  
8 them.

9 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**  
10 **PUBLIC SERVICE COMMISSION?**

11 A. No.

12 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THESE**  
13 **PROCEEDINGS?**

14 A. The purpose of my testimony is to discuss the Company's current CIS and explain  
15 why it is necessary to convert that CIS into a modern customer service platform. I  
16 discuss the new enhancements that will be available to customers, as well as the  
17 implementation of a more customer friendly bill format. I also discuss certain  
18 waivers the Company is requesting as part of its new platform to streamline  
19 processes for Duke Energy Kentucky's customers.

## II. DISCUSSION

20 **Q. PLEASE EXPLAIN THE PURPOSE OF A CIS.**

21 A. A CIS manages the billing, accounts receivable, and rates for the Company and is  
22 the central repository for all customer information. A CIS also manages customer

1 profiles and integration of data to provide a holistic view of the customer and  
2 should enable expected customer capabilities.

3 **Q. PLEASE DESCRIBE DUKE ENERGY KENTUCKY'S CURRENT CIS.**

4 A. The CIS currently used by Duke Energy Kentucky was developed more than  
5 thirty years ago, beginning in 1987, and it was put in service in 1993. This CIS  
6 supports Duke Energy Kentucky, its parent, Duke Energy Ohio, Inc. and its sister  
7 utility, Duke Energy Indiana, LLC. The current CIS was designed as a premise-  
8 based system. That is, it was developed to communicate with a meter attached to a  
9 premise, without regard to who may be consuming the services provided through  
10 that meter or how they may be consuming those services. For example, while this  
11 technology is useful for the Company to understand usage at that specific  
12 premises, it was not capable of allowing that data to be transportable with the  
13 customer as they moved from home to home within our service territory.  
14 Similarly, the Company's business processes have not kept up with customers'  
15 changing needs and expectations; they are inefficient and outdated.

16 Although state-of-the-art nearly thirty years ago, the current CIS was not  
17 designed to efficiently support new capabilities, including personalized  
18 experiences for customers, advanced pricing structures and billing options, and  
19 tools for customers to better manage their energy consumption. The Company has  
20 added functions and new technologies to the legacy system to try to meet the  
21 evolving customer needs and expectations. This is limited in current state due to  
22 technical and regulatory constraints. This adds complexity to the current system,

1           thereby leading to more CIS disruptions and longer time to recover from outages.  
2           Moreover, certain functions are not compatible with the current CIS.

3                       The CIS has been modified over the years, with the first such modification  
4           occurring shortly after it was put in service, in 1999. And subsequent changes  
5           have been necessary in order to allow the Company to continue to adapt and serve  
6           our customer's growing expectations and needs.

7   **Q.   HOW HAS DUKE ENERGY KENTUCKY MODIFIED THE CURRENT**  
8   **SYSTEM?**

9   A.   The Company has continued to add functions to the legacy system to try to meet  
10   business needs. But as we add newer technologies to the legacy system, the  
11   complexity continues to increase, thereby leading to more system disruptions and  
12   longer time to recover from outages. In some cases, the business has started  
13   looking for other options to meet needs, resulting in disjointed solutions and  
14   causing us to leverage multiple vendors. Moreover, certain functions are not  
15   compatible with the current CIS as further discussed below.

16 **Q.   IS THE CURRENT SYSTEM A FULLY AUTOMATED SYSTEM?**

17 A.   No. There are inherent design limitations in this decades-old system and it is not  
18   possible to incorporate modifications that enable the automation of certain  
19   functions, such as complex billing.

20 **Q.   PLEASE EXPLAIN HOW THE COMPANY HANDLES COMPLEX**  
21 **BILLING WITH THE CURRENT CIS.**

22 A.   Because of the existing limitations with the current CIS, the Company's  
23   employees must perform complex billing functions manually. Additionally, the

1 system is not designed to enable automated billing for customers having  
2 distributed generation with net metering. Our current systems were not designed  
3 to produce a credit bill, so these customers receive bills containing charges that  
4 are calculated manually. These manual interventions are not desirable for a  
5 variety of reasons. Among such reasons is inefficiency. Additionally, as the  
6 number of customers having these billing arrangements increases, there is an  
7 understandable impact on the Company's ability to provide timely and accurate  
8 bills. And it must be accepted that injecting manual intervention into what should  
9 be an entirely automated process creates an opportunity for unintended  
10 consequences.

11 **Q. ASIDE FROM THOSE RELATED TO COMPLEX BILLING, DOES THE**  
12 **CURRENT CIS HAVE OTHER LIMITATIONS?**

13 A. Yes, as I mentioned above, the current CIS is a premises-based system. Such a  
14 restrictive system prevents Duke Energy Kentucky from interacting with  
15 customers in a meaningful and continually relevant manner. For example, the  
16 current CIS does not enable the Company to identify a customer's preferred  
17 method of communication. Thus, a customer who consistently opts out of the  
18 interactive voice response (IVR) in order to speak directly with a customer service  
19 representative must navigate through a menu of options to obtain answers or  
20 information related to their utility service. Integrating Customer Connect's  
21 advanced analytics capabilities with the Company's new automated telephone  
22 system (IVR) will streamline this process based on the predicted intent of the  
23 customer. Additionally, much of our customer base favors more modern



1 communication channels, where information is almost immediately available. The  
2 current CIS does not enable these customers to employ their preferred methods of  
3 communication.

4 Further, the current CIS does not enable ready access to account histories  
5 that can be important in non-pay situations or when a customer is seeking to  
6 relocate within the Duke Energy jurisdictions. Consequently, a long-standing  
7 customer with a history of consistently paying bills on time and in full could be  
8 required to pay a security deposit as a condition of receiving service in a new  
9 home; a situation that could be avoided with improved access to account histories.

10 **Q. CAN DUKE ENERGY KENTUCKY SIMPLY CONTINUE TO MODIFY**  
11 **THE EXISTING CIS?**

12 A. No. As a practical matter, the current limitations discussed above cannot be  
13 remedied with modifications. Continued investment to modify an antiquated  
14 technology platform is not practical or sustainable. CISs, like any other software  
15 solution, are subject to obsolescence. Upgrades cannot remedy the problems  
16 encountered with obsolescence and, like other technology and software, must be  
17 made periodically to meet customer expectations. Moreover, Duke Energy  
18 Kentucky's current CIS does not interact with the CISs in use by Duke Energy's  
19 other regulated utilities, which creates additional inefficiencies.

20 **Q. PLEASE DISCUSS THESE ADDITIONAL INEFFICIENCIES.**

21 A. As I discussed previously, the CIS currently in use by Duke Energy Kentucky  
22 also supports Duke Energy Ohio and Duke Energy Indiana. But since the  
23 inception of the existing CIS decades ago, there have been a series of mergers and

1           acquisitions creating the current Duke Energy family, which now also includes  
2           public utilities in North Carolina, South Carolina, and Florida. These other  
3           utilities understandably had their own CIS and they continue to rely upon them.  
4           But these different systems are not compatible with each other. Data and  
5           information is not transferrable or accessible between these systems. This is  
6           especially frustrating to a long-standing Duke Energy customer who has a  
7           payment history in one jurisdiction, but relocates to another jurisdiction where  
8           Duke Energy is their utility, but the new utility cannot obtain any information  
9           regarding the customer's payment history, consumption or account information.  
10          To enable this functionality, the customer data must be consolidated into one CIS.

11                 Each of these systems varies in age, technological capability, cost to  
12           operate, upgradability, and scalability. None of these existing systems is  
13           considered to possess the ability to meet growing customer needs or their  
14           increasingly desired levels of service across and throughout Duke Energy Corp.'s  
15           footprint. Maintaining multiple existing CIS is not a viable, cost-effective, or  
16           prudent solution.

17                 Customer Care Operations is currently experiencing system downtime and  
18           the vast majority is due to one of the four CISs or CIS interfaces or processes. It is  
19           expected that consolidating into a single or modern platform will significantly  
20           reduce this system downtime. The program will retire the mainframe and  
21           rationalize the support structure that supports the current CISs.

22                 The need to evolve to meet customer expectations will continue beyond  
23           the program and it is expected that a consolidated modern platform will greatly

1           simplify these efforts. In the current CIS, the system changes that are required to  
2           introduce a new rate structure, for example, tend to be complex and are usually  
3           completed four times, once for each CIS used by Duke Energy’s regulated  
4           utilities. A single and modern platform will reduce the complexity, timeline, and  
5           the number of changes required.

6   **Q.   PLEASE EXPLAIN HOW DUKE ENERGY KENTUCKY HAS MODIFIED**  
7   **THE WAY IT INTERACTS WITH CUSTOMERS IN RECENT YEARS.**

8   A.   Duke Energy Kentucky has made incremental improvements as described below;  
9           however, the Company is limited in the design, build and execution of new  
10          programs and offerings given the constraints of the current CIS, Commission  
11          rules, and associated processes. For example, where Advanced Metering  
12          Infrastructure (AMI) meters are available, the Company provides usage alerts to  
13          customers during the month so they can better track their energy usage in  
14          comparison to historical consumption. Customers with AMI meters also have the  
15          ability to choose a billing due date that meets their needs. Additionally, the  
16          Company is utilizing technology to provide more notice to customers facing  
17          disconnection using phone and text messaging. These changes, while positive for  
18          customers, are limited in nature and the ability to truly transform the customer  
19          experience is not possible without a new, modern customer service platform –  
20          Customer Connect.

1    **Q.    PLEASE DISCUSS HOW A MODERN CIS WILL BENEFIT DUKE**  
2    **ENERGY KENTUCKY’S CUSTOMERS.**

3    A.    The Customer Connect program is foundational to transforming the customer  
4    experience. Many of the customer benefits from a modernized grid require new  
5    customer platform capabilities that do not exist today, and the rapid pace and  
6    complexity of changes make it impossible to keep up by incremental modification  
7    of the existing CIS. Much of the capabilities required to transform the customer  
8    experience are only possible with a new CIS platform.

9           Customer Connect is Duke Energy’s enterprise-wide initiative that will  
10   transform the way the Company interacts with and serves customers, ensuring a  
11   universal, simple and consistent experience across channels. Its billing and  
12   receivables system will be aligned with the current market to enable efficient  
13   billing for net metering and other complex billing customers that did not exist  
14   when the legacy customer information systems were built. And its integrated  
15   operational and analytics platform will aggregate and understand customer  
16   preferences and behaviors, and leverage that understanding to personalize  
17   customer experiences and serve our customers as individuals. It is the  
18   modernization we need and the simplification customers deserve.

19           By consolidating the older CISs into a new CIS, Duke Energy and, in turn,  
20   Duke Energy Kentucky, will be able to deliver a simpler and more efficient  
21   customer experience. Key customer benefits include the following:

- 22           • Modern, Configurable Billing Engine – With the Company’s existing  
23           CIS, many new rates are very time consuming and burdensome to

1                   implement due to the antiquated architecture of the system and the  
2                   complexity of coding and testing the rates. In contrast, in the modern  
3                   CIS, new rates will be configurable and much simpler to implement,  
4                   improving the Company’s responsiveness to regulatory or market  
5                   changes. Also, many modern rate structures e.g. net metering, time-of-  
6                   use, etc.) are pre-built into the system because the software is  
7                   leveraged in European and other markets, where the use of these more  
8                   modern rate structures is far more advanced.

9                   • Customer-Centric Data Model –Customer Connect will have a  
10                  customer-centric data model to enable a “one customer” view across  
11                  Duke Energy. The Company will thus know the customer better and  
12                  provide a more streamlined, personalized experience.

13                  • Holistic Customer Profile – In the current CIS, systems merely store  
14                  basic customer information – name, phone, address, premise and  
15                  historical usage, billing and payment information – preventing us from  
16                  knowing customers beyond these basic attributes. Customer Connect  
17                  will store all of that same information and more. The new platform  
18                  will gather all of the relevant touchpoints that customers have with  
19                  Duke Energy in real time – web visits, phone calls, power outages,  
20                  outbound communications, product and service participation, etc. – to  
21                  build out a holistic view of customers that can be leveraged to better  
22                  serve them and personalize their experiences.

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- Integrated Analytics – The integrated analytics capabilities of the new platform will then leverage this customer profile data to personalize experiences and better serve customers through every channel. For example, the new platform will predict the intent of customers when they call Duke Energy, thereby improving their experience in the IVR and routing them to the customer care specialist best suited to meet their needs. This same capability will be leveraged to prioritize what information is conveyed to the customer and convey that information in the medium preferred by the customer, whether it is via web, email or other channels, to ensure it is timely, relevant and valuable to him or her. These are just two examples of the multiple opportunities to leverage real-time analytics to improve our customers’ everyday experiences with Duke Energy.
  - Multi-Company – In the current CIS, customers exist as separate entities across jurisdictions. When a customer moves from one jurisdiction to another, all information about that customer is lost – account numbers, communication preferences, payment and credit history, product and service participation, *etc.* Customers do not understand why this happens and are frustrated by the experience. In the future, these types of account attributes will follow the customers throughout their experience with Duke Energy as they move between locations and jurisdictions.

1 **Q. WILL THE NEW SYSTEM ALLOW FOR MORE FLEXIBLE RATE**  
2 **DESIGN AND OTHER RATE OFFERINGS?**

3 A. Yes, as mentioned above, the current CIS requires significant coding to  
4 implement new rates and pricing. New, modern CISs are much more  
5 configurable, reducing the amount of time to test and implement pricing changes  
6 and offerings.

7 **Q. WILL CUSTOMERS SEE ANY BENEFITS PRIOR TO FULL**  
8 **DEPLOYMENT FOR DUKE ENERGY KENTUCKY?**

9 A. Yes, the Company began deploying new capabilities in 2018 and will continue  
10 every year leading up to full deployment in 2022. With this phased deployment  
11 approach, the Company will have system functionalities in-service and beneficial  
12 to customers at tiered stages throughout the implementation of the complete  
13 system.

14 **Q. PLEASE EXPLAIN WHAT HAS BEEN ACCOMPLISHED SO FAR AND**  
15 **WHAT CUSTOMERS CAN EXPECT AS THE NEW SYSTEM IS**  
16 **DEPLOYED.**

17 A. In June 2018, the first deliverable of the Customer Connect Program was  
18 successfully deployed, which provided the capabilities to begin to gather, store  
19 and analyze customer insights to create more satisfying interactions. Specifically,  
20 the Company began gathering all relevant touchpoints that customers are having  
21 with Duke Energy in real-time such as web visits, phone calls, power outages,  
22 outbound communications, and product and service participation. As described  
23 throughout my testimony, the Company is working to better understand its

1 customers so that we can serve them in the manner in which they have become  
2 accustomed, and this deliverable is the first step in doing that. The Company also  
3 delivered enhanced communication capabilities which provide more personalized  
4 service with automated and targeted campaigns. These capabilities automate  
5 processes, increase effectiveness and provide metrics to gauge success.

6 The integrated analytics platform will be used to provide real-time  
7 learnings to enhance the customer experience. One example of this is how the  
8 Company can use this newly available information to enhance operations during  
9 significant storm events. With this new platform, data can be visualized in new  
10 ways to uncover insights into experiences customers are having across the  
11 Company's phone, web and social media channels. The Company can also use the  
12 automated, targeted marketing campaigns to increase effectiveness of  
13 communication campaigns during major storm events and for other operational  
14 needs.

15 In February 2019, leveraging insights from the holistic customer profile,  
16 the Company began using the new platform to predict the intent of customers  
17 when they call. This and other information has been made more readily available  
18 to customer care specialists, who are using it for context into why a customer may  
19 be calling and having more informed and productive conversations with  
20 customers.

21 In May 2019, the Program implemented a new capability to better  
22 communicate with customers during major storms. The Company is now able to  
23 create targeted customer communication lists by leveraging attributes that are



1 particularly relevant during major storms, such as the substation or operations  
2 center a customer is served by, or whether the customer or nearby customers are  
3 experiencing an outage. These lists will be used to send more specific  
4 communications about the specific storm-related circumstances near the  
5 customer's home or business. Additionally, in September 2019, these capabilities  
6 will be expanded to include the ability to automate these email campaigns from  
7 the Customer Connect solution and allow them to be configured in advance and  
8 quickly executed in desired circumstances.

9 In early 2020, the Company will introduce a universal bill format to help  
10 customers more easily view and understand their bill and energy usage.  
11 Positioning this release prior to full deployment not only delivers benefits to  
12 customers sooner, but also allows the Company to more efficiently respond to  
13 increased call volume that will likely result as customers become more familiar  
14 with the new bill format.

15 In 2021, the Company will begin deploying the final components of the  
16 complete billing and receivables solution. In addition to all billing and payment  
17 processes, the Company will begin providing customers with additional self-  
18 service capabilities and portals, new rate offerings and advanced billing options.  
19 Finally, using the customer data, the Company will be able to prioritize the types  
20 of information the customer prefers to receive and the methods of communication  
21 by which they wish to receive the information, including via web, email and other  
22 channels to ensure it is timely, relevant and valuable to them.

1 **Q. PLEASE ELABORATE ON THE NEW BILL FORMAT BEING**  
2 **IMPLEMENTED NEXT YEAR AND THE BENEFITS FOR CUSTOMERS.**

3 A. As I discussed earlier, the Company will introduce a universal bill format as part  
4 of the Customer Connect Program that is easier for customers to read and  
5 understand. The Company's new bill format removes confusing content,  
6 simplifies information and makes the bill more digestible. Examples of new  
7 features include an easy-to-understand usage graph, explanations of commonly  
8 used abbreviations and terms (kWh, riders, *etc.*), and easier to read contact  
9 information.

10 **Q. DOES THE NEW BILL FORMAT COMPLY WITH ALL KENTUCKY**  
11 **PSC REGULATIONS?**

12 A. Yes, the design of the new bill format complies with all regulations in 807 KAR  
13 5:006 Section 7(1)(a). An example of the new, more customer friendly, bill  
14 format is attached as Attachment RH-1. To the extent approval of the new bill  
15 format is necessary, the Company is seeking approval in this case.

16 **Q. PLEASE EXPLAIN HOW CUSTOMER EXPECTATIONS HAVE**  
17 **OUTPACED DUKE ENERGY KENTUCKY'S PRACTICES AND**  
18 **OBLIGATIONS UNDER COMMISSION RULES.**

19 A. A key objective for Customer Connect is to simplify experiences for customers.  
20 To do that, the Company needed to better understand the challenges customers  
21 experience when interacting with Duke Energy. The program team researched  
22 customer survey data and verbatims, and conducted a thorough review of the  
23 Company's business processes and associated Commission rules. This research

1 and analysis, combined with industry best practices, expected customer journeys,  
2 and capabilities of the new system determined how the Company needed to  
3 interact with its customers moving forward. A number of opportunities to improve  
4 the customer experience have been identified, many of which will be easily  
5 implemented when the new system is fully deployed in late 2022 for Duke Energy  
6 Kentucky, while others will require Commission approval before all customer  
7 benefits can be realized. For example, customers want to employ their preferred  
8 method of communication when interacting with Duke Energy. Customer  
9 Connect will allow customers to choose how and when they want to receive  
10 communications; however, existing Commission rules do not allow for such a  
11 personalized experience. An update is needed, as customers have come to expect  
12 communications tailored to their specific desires, such as modern forms of  
13 communication, like text messages and email. This is just one example of how  
14 customer expectations have outpaced the regulatory construct.

15 **Q. PLEASE DESCRIBE HOW THE COMPANY IS INCORPORATING**  
16 **CUSTOMER NEEDS AND EXPECTATIONS THROUGHOUT THE**  
17 **DESIGN AND IMPLEMENTATION OF CUSTOMER CONNECT.**

18 A. Based on its cumulative experiences with the current CIS, the Company knew the  
19 selected platform would need to meet the following core needs:  
20 (1) configurability; (2) adaptability; and (3) a customer-centric platform. A simple  
21 meter-to-cash replacement would not suffice. After conducting an extensive and  
22 rigorous procurement process, the Company is confident the selected suite of  
23 programs meets these core needs. The platform has been implemented by more

1 than 760 utilities globally, including utilities that have already implemented  
2 things such as renewable generation and advanced metering infrastructure (AMI),  
3 and therefore fully taking advantage of the platform's capabilities. By selecting  
4 this platform, the Company and its customers will get the benefit of the proven  
5 technology as well as the ability to leverage best practices from these other  
6 utilities to keep pace with the needs and expectations of customers. Further,  
7 because this platform is being used globally by utilities and retailers, it is  
8 constantly evolving and being updated to accommodate the latest technologies  
9 and user interfaces to help ensure that customers continue to derive benefits from  
10 the system.

11 The Company has completed the Analysis and "design" phase of the  
12 Customer Connect Program and have leveraged industry research to better  
13 understand customer expectations and will leverage these insights as input to the  
14 functional and technical design. The Company firmly believes this platform  
15 provides an opportunity to further shape its future for the benefit of customers.

16 Industry research confirms that customer expectations are changing; they  
17 are more fluid and customers benchmark us against other service companies such  
18 as Amazon and FedEx, where there is transparency and awareness in their  
19 processes. For example, customers have come to expect the capability to track  
20 packages and see, at any given moment, where the package is and when it is  
21 expected to be at their home. Duke Energy Kentucky understands its customers  
22 have come to expect the same thing from all service providers, including their  
23 utility, and is confident the solution selected gives the Company the technology it

1 needs to meet this expectation. To that end, during the "design" phase, the  
2 Company took the opportunity to redesign outdated business processes that have  
3 been in place for more than 20 years. For example, the Company's current CIS  
4 requires customer care specialists to obtain information such as directions to a  
5 customer's home and the location of the meter when completing a request to start  
6 or stop service. With the deployment of AMI meters, as well as common  
7 technologies, like GPS, obtaining this information is no longer necessary.  
8 Although this information is no longer needed for service orders, the Company's  
9 system and internal process have not evolved to allow for these efficiencies.

10 Finally, the Company has and will continue to survey customers to  
11 understand the value they are receiving from the new system. For example, the  
12 Company has performed consumer testing to gather customer feedback on the  
13 design of the Company's new bill format that will be implemented as part of the  
14 Customer Connect Program.

15 **Q. WILL IMPLEMENTING THE NEW CIS SYSTEM REQUIRE ANY**  
16 **WAIVERS FROM CURRENT COMMISSION REGULATIONS?**

17 A. Yes. Duke Energy Kentucky respectfully request the following waivers in order to  
18 streamline services consistency across the new CIS:

- 19 • A waiver of rule 807 KAR 5:006 Section 14(5) is needed to allow the  
20 Company to enable all customers' preferred method of communication  
21 as it relates to their energy bill. Specifically, the Company is  
22 requesting to employ customers' preferred channel of communication  
23 as it relates to the 10-day disconnect notice for those customers who

1 request the Company communicate with them in more modern ways  
2 such as email, phone call or text message. By continuing to provide  
3 this information in a format other than the customers' preferred  
4 method of communication, there is an increased risk for the notice to  
5 go unseen.

- 6 • A waiver of rule 807 KAR 5:006 Section 8(1)(d)(3)(a) is needed to  
7 allow the Company to recalculate customer deposits retained for  
8 twelve (12) months or more. The Company believes it is in the best  
9 interest of its customers to recalculate residential and small-medium  
10 business customer deposits annually to ensure the deposit aligns with  
11 the customer's usage history. Furthermore, upon recalculation of the  
12 deposit, the Company intends to refund any excess amount to the  
13 customer if the recalculated amount is less than what is currently being  
14 held on the account. Residential customers will not be billed an  
15 incremental deposit unless the recalculated amount is \$50 dollars or  
16 greater.

17 Additionally, a waiver of rule 807 KAR 5:006 Section  
18 8(1)(d)(3)(c) is needed to ensure an incremental deposit is billed to  
19 small-medium business customers upon recalculation only if the  
20 difference is \$100 dollars or greater.

- 21 • The manner in which usage is displayed on a customer's bill requires a  
22 waiver of rule 807 KAR 5:006 Section 7(a)(3) as it relates to providing  
23 the beginning and ending meter reading for certain interval-billed rates

1 to allow the Company to provide usage information only on the  
2 monthly bill. The inclusion of meter readings was more meaningful  
3 under traditional rate structures; however, with interval usage data  
4 comes more dynamic pricing structures; therefore, the beginning and  
5 ending meter readings are no longer relevant to the customer bills  
6 under those structures. The customer bills will continue to provide  
7 information regarding usage that occurred during relevant bill periods  
8 such as on/off-peak, shoulder and demand. Furthermore, as a result of  
9 the Company's deployment of its new Advanced Metering  
10 Infrastructure (AMI), customers have even greater access to actual  
11 usage information in near real-time via the Company's website.  
12 Therefore, even though the Company is proposing not to include this  
13 information on the bill going forward, customers who desire that  
14 information will have the mean to access it themselves upon demand.  
15 The waiver would apply to the following Company rates: Service at  
16 Primary Distribution Voltage (DP), Service at Distribution Voltage  
17 (DS), Time-of-Day Rate for Service at Distribution Voltage (DT),  
18 Time-of-Day for Service at Transmission Voltage (TT), and Optional  
19 Rate for Electric Space Heating (EH), as well as any future proposed  
20 rate that utilizes AMI usage data for billing purposes.

- 21 • A waiver of rule 807 KAR 5:006 Section 8 is needed specifically for  
22 landlords or property owners who enroll in the Revert to Owner  
23 program. The Revert to Owner program is a voluntary service for

1 landlords/property owners that enables service to automatically  
2 transfer back into a landlord/property owner's name without service  
3 disconnection between tenants. For these customers, the Company is  
4 proposing to hold a standard \$50-dollar deposit per unit or property  
5 owned, as this aligns to the minimum average bill incurred when  
6 service is in the landlord's name between tenants. There are a number  
7 of benefits for property owners to enroll in the new Revert to Owner  
8 program that will be implemented in Duke Energy Kentucky in 2022;  
9 it will allow these customers to easily manage their properties via a  
10 new digital portal. Landlords will be able to see all properties in their  
11 name, the service status, and administer billing/payment for one or  
12 multiple properties conveniently from the site. Additionally, the move  
13 in/move out process will be simplified and will eliminate repetitive  
14 credit checks and other deposit-related activities that would be  
15 traditionally experienced when applying for or disconnecting electric  
16 service at a location.

17 **Q. WHY IS DUKE ENERGY KENTUCKY SEEKING WAIVERS FOR**  
18 **CUSTOMER CONNECT WHEN IT WILL NOT BE FULLY DEPLOYED**  
19 **UNTIL 2022?**

20 A. The Customer Connect Program is unique in that the Company is completing a  
21 universal design for all of Duke Energy's regulated utilities, and have  
22 incorporated many of the out-of-the-box and modern capabilities the vendor's  
23 (SAP) system provides. To ensure the new system and associated business



1 process comply with Commission rules, it is necessary to request these waivers  
2 well in advance of the implementation to allow sufficient time to complete the  
3 “build” phase of the Program and complete robust testing prior to the first  
4 deployment in early 2021.

5 **Q. HOW LONG WILL IT TAKE TO FULLY IMPLEMENT THE SYSTEM**  
6 **FOR DUKE ENERGY KENTUCKY?**

7 A. The Customer Connect Program is projected to be fully implemented for Duke  
8 Energy Kentucky in the fall of 2022.

### **III. CONCLUSION**

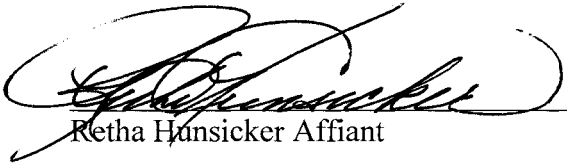
9 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

10 A. Yes.

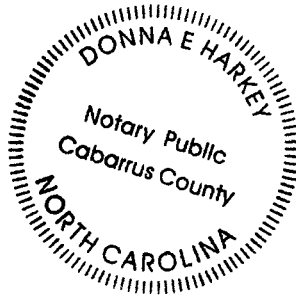
VERIFICATION

STATE OF NORTH CAROLINA        )  
  )        SS:  
COUNTY OF MECKLENBURG        )

The undersigned, Retha Hunsicker, VP Customer Connect-Solutions, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of her knowledge, information and belief.

  
Retha Hunsicker Affiant

Subscribed and sworn to before me by Retha Hunsicker on this 8<sup>th</sup> day of August, 2019.



  
NOTARY PUBLIC

My Commission Expires: 03-01-24



## Kentucky Regulatory Requirements Reference Sheet

807 KAR 5:006 General Rules	
Section 7 (1)(a) Each bill for utility service issued periodically by a utility shall clearly show:	
1	The date the bill was issued
2	Class of service
3	Present and last preceding meter readings
4	Date of the present reading
5	Number of units consumed
6	Meter constant, if applicable
7	Net amount of service rendered
8	All taxes
9	Adjustments, if applicable
10	The gross amount of the bill
11	The date after which a penalty may apply to the gross amount
12	If the bill is estimated or calculated



duke-energy.com  
800.544.6900

## Your Energy Bill

**Service address**  
11500 US Rt 24/27  
Alexandria KY 41001

**1** Bill date Apr 4, 2018  
For service Mar 2 – Apr 3  
32 days

Account number **999 999 999**

### Billing summary

Previous amount due	\$ 54.23	
Payment received Mar 14	- 54.23	
Current electric charges	58.16	<b>7</b>
Taxes	1.74	<b>8</b>
<b>Total amount due Apr 26</b>	<b>\$ 59.90</b>	<b>10</b>



Thank you for your on-time payment.

Your current delivery rate with Duke Energy is *Residential Service (RS)*. **2**

For a complete listing of all Kentucky residential rates and riders, visit [duke-energy.com/home/billing/rates](http://duke-energy.com/home/billing/rates).

### Your usage snapshot



	Current Month	Apr 2017	12-Month Usage	Average Monthly Usage
Electric	682	690	7,127	

12-Month usage based on most recent history

**Current usage for meter number 999999999**

Actual reading on Apr 3	11255	<b>3</b>
Previous reading on Mar 2	-	<b>4</b>
<b>Energy used</b>	<b>682 kWh</b>	<b>5</b>



A kilowatt-hour (kWh) is a measure of the energy used by a 1,000-watt appliance in one hour. A 10-watt LED lightbulb would take 100 hours to use 1 kWh.

**Mail your payment at least 7 days before the due date** or pay instantly at [duke-energy.com/billing](http://duke-energy.com/billing). Late payments are subject to a 5% late charge.

Please return this portion with your payment. Thank you for your business.



P.O. Box 70516  
Charlotte NC 28272-0516

Account number **999 999 999**

### Amount due

**\$ 59.90**  
by Apr 26 **10**

After Apr 26, the amount due will increase to \$62.81. **11**

To help others with a contribution to WinterCare, add here.

\$ \_\_\_\_\_ Amount enclosed

000549 0000024295



**Sally Sample**  
P.O. Box ABC  
Alexandria KY 41001-0214

P.O. Box 1326  
Charlotte, NC 28201-1326





duke-energy.com  
800.544.6900

page 2 of 2

Account number 999 999 999

## We're here for you

### Report an emergency

Electric/Gas outage		duke-energy.com/outages
Call	Electric	800.543.5599
	Gas	800.634.4300

### Convenient ways to pay your bill

Online	duke-energy.com/billing
Automatically from your bank account	duke-energy.com/autodraft
Speedpay (fee applies)	800.544.6900
By mail	P.O. Box 1326 Charlotte, NC 28201-1326
In person	duke-energy.com/locations

### Help managing your account

Register for free paperless billing	duke-energy.com/paperless
Update your account information	duke-energy.com/my-account
Mobile website	duke-energy.com/my-account

### Correspond with Duke Energy

P.O. Box 1326  
Charlotte, NC 28201

### Contact Duke Energy

Online	duke-energy.com
Call (7 a.m. to 7 p.m.)	800.544.6900
For hearing impaired TDD/TTY	800.544.7500

### Request the condensed or mailed bill format

Online	duke-energy.com/xxxx
Call (8 a.m. to 5 p.m.)	800.544.6900

### Important to know

#### Your next meter reading: May 2

Please be sure we can safely access your meter for actual readings. Don't worry if your digital meter flashes eights from time to time. That's a normal part of the energy measuring process.

#### Your electric service may be disconnected if your payment is past due

If payment for your electric service is past due, we may begin disconnection procedures. If your service is disconnected because of a missed payment, you must pay your past due balance in full, plus a reconnection fee, before your service will be reconnected. The reconnection fee is \$75 for electric and \$88 for gas. A security deposit may also be required.

#### When you pay by check

We may process the payment as a regular check or convert it into a one-time electronic check payment.



## Your Energy Bill

**Service address**  
123 Mount Olive Rd  
Florence KY 41042

**1** Bill date Dec 13, 2018  
For service Nov 9 – Dec 12  
33 days

Account number **999 999 999**

### Billing summary

Previous amount due	\$ 93.40	
Payment received Nov 26	- 93.40	
Current electric charges	50.31	7
Current gas charges	105.22	8
Taxes	4.67	10
<b>Total amount due Jan 4</b>	<b>\$ 160.20</b>	<b>10</b>

### Your usage snapshot



	Current Month	Dec 2017	12-Month Usage	Average Monthly Usage
Electric	473	516	7,830	653

12-Month usage based on most recent history



	Current Month	Dec 2017	12-Month Usage	Average Monthly Usage
Gas	111	89	950	79

12-Month usage based on most recent history

**Mail your payment at least 7 days before the due date** or pay instantly at [duke-energy.com/billing](http://duke-energy.com/billing).  
Late payments are subject to a 5% late charge.

Please return this portion with your payment to thank you for our business.



P.O. Box 1326  
Charlotte NC 28201-1326

Account number **999 999 999**

### Amount due

**\$ 160.20**  
on Jan 4 **10**

After Jan 4, the amount due will increase to \$167.98. **11**

To help others with a contribution to WinterCare, add here.

\$ \_\_\_\_\_ Amount enclosed

000549 0000024295



**Sally Sample**  
123 Mount Olive Rd  
Florence KY 41042-3141

P.O. Box 1326  
Charlotte, NC 28201-1326



09880389 0 9752709 1 000011588 6 000011588 6 000011588 6



## We're here for you

### Report an emergency

Electric/Gas outage		duke-energy.com/outages
Call	Electric	800.543.5599
	Gas	800.634.4300

### Convenient ways to pay your bill

Online		duke-energy.com/billing
Automatically from your bank account		duke-energy.com/autodraft
Speedpay (fee applies)		800.544.6900
By mail		P.O. Box 1326 Charlotte, NC 28201-1326
In person		duke-energy.com/locations

### Help managing your account

Register for free paperless billing		duke-energy.com/paperless
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Mobile website		duke-energy.com/my-account

### Correspond with Duke Energy

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### Contact Duke Energy

Online		duke-energy.com
Call (7 a.m. to 7 p.m.)		800.544.6900
For hearing impaired TDD/TTY		800.544.7500

### Request the condensed or detailed bill format

Online		duke-energy.com/xxxx
Call (8 a.m. to 5 p.m.)		800.544.6900

### Important to know

#### Your next meter reading: Jan 15

Please be sure we can safely access your meter for actual readings. Don't worry if your digital meter flashes lights from time to time. That's a normal part of the energy measuring process.

#### Your electric service may be disconnected if your payment is past due

If payment for your electric service is past due, we may begin disconnection procedures. If your service is disconnected because of a missed payment, you must pay your past due balance in full, plus a reconnection fee, before your service will be reconnected. The reconnection fee is \$75 for electric and \$88 for gas. A security deposit may also be required.

#### When you pay by check

You may process the payment as a regular check or convert it into a one-time electronic check payment.



duke-energy.com  
800.544.6900

## Your usage snapshot - continued

### Current electric usage for meter number 999999999

Actual reading on Dec 12	4	6323	3
Previous reading on Nov 9		- 5850	
		<b>473 kWh</b>	<b>5</b>



A kilowatt-hour (kWh) is a measure of the energy used by a 1,000-watt appliance in one hour. A 10-watt LED lightbulb would take 100 hours to use 1 kWh.

### Current gas usage for meter number 999999999

Actual reading on Dec 12	4	253	3
Previous reading on Nov 9		- 142	
Energy used		<b>111 CCF</b>	<b>5</b>



One centum cubic foot (CCF) is the amount of gas in a 100-cubic-foot space. If you have a standard oven, it would take about 20 hours to use 1 CCF of gas.

## Billing details – Electric

### Duke Energy delivery

Monthly service charge		\$11.10	
Energy charge			
473 kWh @ \$0.07165000		33.89	
<i>Riders</i>			
Electric DSM rider			
473 kWh @ \$0.00303500		1.44	
Rider PSM			
473 kWh @ - \$0.00140700		- 0.66	
Electric fuel adjustment			
473 kWh @ \$0.00085100		0.40	
Rider ESM			
		0.53	
<b>Current electric charges</b>			<b>\$50.31</b> 7

Your current rate is Residential Service (RS). 2

Riders are costs to cover investments in improving the energy infrastructure or other additional expenses.

For a complete listing of all Kentucky residential rates and riders, visit [duke-energy.com/home/billing/rates](http://duke-energy.com/home/billing/rates).

## Billing details – Gas

### Duke Energy delivery

Monthly service charge		\$16.10	
Service delivery			
111 CCF @ \$0.37213000		41.31	
DSM rider			
111 CCF @ - \$0.04085600		- 4.54	
Gas cost recovery			
111 CCF @ \$0.49970000		55.47	
Service replacement rider			
		1.80	
Tax cuts job act rider			
111 CCF @ - \$0.04430000		- 4.92	
<b>Current gas charges</b>			<b>\$105.22</b> 7

Your current rate is Residential Service (RS). 2

For a complete listing of all Kentucky residential rates and riders, visit [duke-energy.com/home/billing/rates](http://duke-energy.com/home/billing/rates).





## Billing details – Taxes

Explanation of taxes	
Rate increase for school tax	4.67
<b>Total taxes</b>	<b>\$4.67</b> <span style="background-color: yellow; border-radius: 50%; padding: 2px;">8</span>

SAMPLE

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

In the Matter of:

The Electronic Application of Duke )  
Energy Kentucky, Inc., for: 1) An )  
Adjustment of the Electric Rates; 2) ) Case No. 2019-00271  
Approval of New Tariffs; 3) Approval of )  
Accounting Practices to Establish )  
Regulatory Assets and Liabilities; and 4) )  
All Other Required Approvals and Relief. )

---

**DIRECT TESTIMONY OF**  
**CHRISTOPHER M. JACOBI**  
**ON BEHALF OF**  
**DUKE ENERGY KENTUCKY, INC.**

---

September 3, 2019

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**I. INTRODUCTION AND PURPOSE**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Christopher M. Jacobi, and my business address is 550 South Tryon  
3 Street, Charlotte, North Carolina 28202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Business Services LLC (DEBS) as Director,  
6 Regional Financial Forecasting. DEBS provides various administrative and other  
7 services to Duke Energy Kentucky, Inc., (Duke Energy Kentucky or Company) and  
8 other affiliated companies of Duke Energy Corporation (Duke Energy).

9 **Q. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATIONAL**  
10 **BACKGROUND AND PROFESSIONAL EXPERIENCE.**

11 A. I have a Bachelor of Arts degree in History and Political Science from Wake  
12 Forest University and a Master of Business Administration degree from Wake  
13 Forest University. In 2007, I joined Duke Energy's MBA rotation program as a  
14 Commercial Associate. In 2008, I became a manager in the Energy Efficiency  
15 group. Subsequently, I held various positions of increasing responsibility within  
16 the Retail Customer and Products and Services department. In 2015, I became  
17 Treasury Director, within the Corporate Finance group of the Treasury  
18 Department. In February 2019, I became Director, Regional Financial  
19 Forecasting within the Financial Planning and Analysis Department.

20 **Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AS DIRECTOR,**  
21 **REGIONAL FINANCIAL FORECASTING.**

22 A. I am responsible for preparing the budgets and forecasts as well as performing

1 financial analysis for Duke Energy's Midwest electric utilities, including Duke  
2 Energy Kentucky, Duke Energy Indiana, and Duke Energy Ohio, in addition to  
3 Duke Energy's gas utilities and ventures.

4 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**  
5 **PUBLIC SERVICE COMMISSION?**

6 A. No.

7 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THESE**  
8 **PROCEEDINGS?**

9 A. My testimony will address Duke Energy Kentucky's financial objectives, capital  
10 structure, and cost of capital. I will also discuss the current credit ratings and  
11 forecasted capital needs of Duke Energy Kentucky. Throughout my testimony, I  
12 will emphasize the importance of Duke Energy Kentucky's continued ability to  
13 meet its financial objectives and maintain strong credit quality. I will then  
14 describe the budgeting and forecasting process underlying the projected data for  
15 the test year proposed in this Application. I also discuss the budget variance  
16 reports, which provide the variance analysis for the test period. I sponsor and  
17 support the forecasted operating revenues and expenses prior to proforma  
18 adjustments and the long-term financial forecast that were prepared under my  
19 direction and control. I sponsor Filing Requirements (FR) 16(6)(a), 16(6)(d),  
20 16(6)(e), 16(7)(b), 16(7)(c), 16(7)(d), 16(7)(f), 16(7)(g), 16(7)(h), 16(7)(j),  
21 16(7)(l), 16(7)(o), and 16(7)(r). In response to FR 16(8)(b), I sponsor certain  
22 information contained in Schedules B-2, B-2.1, B-2.2, B-2.3, B-2.4, B-2.5, B-2.6,  
23 B-2.7, B-3, B-3.1, B-3.2, and B-4 that are supported by Duke Energy Kentucky

1 witness Ms. Melissa Abernathy. I sponsor the information contained in B-5 and  
2 B-5.1 and certain information contained in Schedule B-8 that is supported by  
3 Duke Energy Kentucky witness Mr. Danielle Weatherston. In response to FR  
4 16(6)(a), 16(6)(b) and 16(8)(d), I sponsor Schedules D-2.1 through D-2.16. I also  
5 sponsor the forecasted data on Schedules I-1 through I-5 in response to FR  
6 16(8)(i), and Schedule K in response to FR 16(8)(k). I sponsor Schedules J-1  
7 through J-4 in response to Filing Requirement (FR) 16(8)(j). I also sponsor FR  
8 12(2)(a), FR 12(2)(b), FR 12(2)(c), FR 12(2)(d), FR 12(2)(e), FR 12(2)(f), FR  
9 12(2)(g), FR 12(2)(h), FR 16(7)(j), FR 16(7)(l) and FR 16(7)(r).

## **II. DUKE ENERGY KENTUCKY'S FINANCIAL OBJECTIVES**

### **Q. WHAT ARE DUKE ENERGY KENTUCKY'S FINANCIAL OBJECTIVES?**

11 A. Financial strength and access to capital are necessary for Duke Energy Kentucky to  
12 provide cost-effective, safe, environmentally-compliant, and reliable service to its  
13 customers. The Company seeks to maintain its financial strength and flexibility,  
14 including its strong investment-grade credit ratings, ensuring reliable access to  
15 capital on reasonable terms. Specific targets that support financial strength and  
16 flexibility include: 1) maintaining an equity component of the capital structure that is  
17 within the rating agencies' guidelines for Duke Energy Kentucky's credit rating; 2)  
18 maintaining strong credit quality; 3) ensuring timely recovery of prudently incurred  
19 costs; 4) maintaining sufficient cash flows to meet obligations; and 5) maintaining a  
20 sufficient return on equity to fairly compensate shareholders for their invested  
21 capital. The ability to attract capital (both debt and equity) on reasonable terms is  
22 vitally important to the Company and its customers, and each of these targets help

1 the Company meet its overall financial objectives.

2 **Q. PLEASE EXPLAIN HOW DUKE ENERGY KENTUCKY'S CUSTOMERS**  
3 **WILL BENEFIT FROM DUKE ENERGY KENTUCKY ACHIEVING ITS**  
4 **CREDIT RATING OBJECTIVES.**

5 A. There are many reasons why our customers will benefit from the credit rating  
6 objectives that we have established. These benefits include lower overall financing  
7 costs and greater access to the capital markets, thus improving Duke Energy  
8 Kentucky's ability to maintain a safe, reliable, and low-cost level of customer  
9 service.

10 **Q. WHAT RATEMAKING TREATMENT IS BEING REQUESTED IN THIS**  
11 **PROCEEDING AND HOW WILL THE COMPANY'S FINANCIAL**  
12 **OBJECTIVES BE IMPACTED?**

13 As explained by Duke Energy Kentucky witness Amy B. Spiller, Duke Energy  
14 Kentucky is requesting an overall increase of \$45.6 million, equating to an  
15 approximate 12.5 percent increase in overall rates. As part of this request,  
16 supported by the analysis and testimony of Duke Energy Kentucky witness Dr.  
17 Roger Morin, the Company is requesting an allowed return on equity (ROE) of  
18 9.80 percent. The proposed capitalization in this request is comprised of 51.8  
19 percent debt and 48.2 percent equity. Approval of the Company's request in this  
20 case will support its financial objectives by ensuring timely cash recovery of its  
21 prudently incurred costs.

### **III. CREDIT QUALITY & CREDIT RATINGS**

1 **Q. PLEASE EXPLAIN CREDIT QUALITY AND CREDIT RATINGS, AND**  
2 **HOW THEY ARE DETERMINED.**

3 A. Credit quality (or creditworthiness) is a term used to describe a company's overall  
4 financial health and its willingness and ability to repay all financial obligations in  
5 full and on time. An assessment of Duke Energy Kentucky's creditworthiness is  
6 performed by Standard & Poor's (S&P) and Moody's Investors Service (Moody's),  
7 and results in Duke Energy Kentucky's credit ratings and outlook.

8 Many qualitative and quantitative factors go into this assessment. Qualitative  
9 aspects may include Duke Energy Kentucky's regulatory climate, its track record for  
10 delivering on its commitments, the strength of its management team, corporate  
11 governance, its operating performance, and its service territory. Quantitative  
12 measures are primarily based on operating cash flow and focus on Duke Energy  
13 Kentucky's ability to meet its fixed obligations (interest expense in particular) on the  
14 basis of internally generated cash and the level at which Duke Energy Kentucky  
15 maintains debt balances. The percentage of debt to total capital is another example  
16 of a quantitative measure. Creditors and credit rating agencies view both qualitative  
17 and quantitative factors in the aggregate when assessing the credit quality of a  
18 company.

19 **Q. WHAT IS THE ROLE OF REGULATION IN THE DETERMINATION OF**  
20 **THE FINANCIAL STRENGTH OF A UTILITY COMPANY?**

21 A. Investors, investment analysts and credit rating agencies regard the regulatory  
22 environment as one of the most important factors in assessing a utility company's



1 financial strength. The regulatory environment is comprised of two important  
2 factors, the regulatory framework and the predictability and consistency of  
3 decision-making. These stakeholders want to be confident that the Company  
4 operates in a stable regulatory environment that will allow the Company to  
5 recover prudently incurred costs and earn a reasonable return on investments  
6 necessary to meet the demand, reliability, service, and environmental  
7 requirements of its customers and service area.

8 Important considerations of a strong regulatory framework include the  
9 allowed rate of return, the cash quality of earnings, the timely recovery of capital  
10 investments, the stability of earnings, and the strength of its capital structure.  
11 Positive consideration is also given for utilities operating in states where the  
12 regulatory process is streamlined, the time lag in capital investment recovery is  
13 minimized through cost recovery mechanisms such as riders and trackers, and  
14 outcomes are equitably balanced between customers and investors. Further  
15 considerations that demonstrate a strong regulatory environment include the track  
16 record of regulatory decisions in terms of consistency, predictability and  
17 supportiveness.

18 **Q. HOW ARE DUKE ENERGY KENTUCKY'S OUTSTANDING SECURITIES**  
19 **CURRENTLY RATED BY THE CREDIT RATING AGENCIES?**

20 A. As of the date of this testimony, S&P and Moody's rated Duke Energy Kentucky's  
21 outstanding debt as follows:

<b>Rating Agency</b>	<b>S&amp;P</b>	<b>Moody's</b>
Senior Unsecured Rating	A-	Baa1
Outlook	Negative	Stable

1 **Q. WHEN WERE DUKE ENERGY KENTUCKY'S CURRENT CREDIT**  
2 **RATINGS ESTABLISHED?**

3 A. Duke Energy Kentucky's current senior unsecured credit ratings were established by  
4 Moody's in November 1995 and by Standard & Poor's in April 2015. Moody's  
5 affirmed its ratings on Duke Energy Kentucky in January 2019. S&P affirmed its  
6 ratings and revised its outlook to negative from stable on Duke Energy Corp. and all  
7 subsidiaries in May 2019.<sup>1</sup>

8 **Q. WHY IS IT IMPORTANT FOR DUKE ENERGY KENTUCKY TO HAVE**  
9 **STRONG INVESTMENT-GRADE CREDIT RATINGS?**

10 A. To assure reliable and cost-effective service, and to fulfill its obligations to serve  
11 customers, the Company must continuously plan and execute major capital projects.  
12 This is the nature of regulated capital-intensive industries like electric and gas  
13 utilities. The Company must be able to operate and maintain its business without  
14 interruption and refinance maturing debt on time, regardless of financial market  
15 conditions. The financial markets continue to experience periods of volatility, most  
16 recently driven by the uncertainty surrounding fiscal, monetary and foreign policy.  
17 Duke Energy Kentucky must be able to finance its needs throughout such periods  
18 and strong investment-grade credit ratings provide the Company with greater  
19 assurance of continued access to the capital markets on reasonable terms during  
20 periods of volatility.

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<sup>1</sup> See S&P Global Ratings, Research Update, "Duke Energy Corp. And Subs. Outlook Revised To Negative on Coal Ash Risks, Regulatory-Lag, and Project Delays," May 20, 2019 ("May 2019 Duke Energy Report").

1 **Q. WHAT STRENGTHS AND WEAKNESSES HAVE THE CREDIT RATING**  
2 **AGENCIES IDENTIFIED WITH RESPECT TO DUKE ENERGY**  
3 **KENTUCKY?**

4 A. The rating agencies believe Duke Energy Kentucky operates in a generally  
5 supportive regulatory framework that supports long-term credit quality with timely  
6 and sufficient recovery of prudently incurred costs and expenses. In January 2019,  
7 Moody's identified the following strengths and challenges when assessing the credit  
8 quality of Duke Energy Kentucky<sup>2</sup>:

9 Credit Strengths:

- 10 • Financial metrics commensurate with its current ratings and stable  
11 outlook;
- 12 • Credit supportive regulatory environment in Kentucky; and
- 13 • Support from the Duke Energy corporate family.

14 Credit Challenges:

- 15 • Elevated capital expenditures over recent years, partly for environmental  
16 compliance, are moderating but expected to place downward pressure on  
17 credit metrics;
- 18 • Relatively small size compared to other integrated utilities; and
- 19 • Elevated carbon transition risk: Moody's also points to Duke Energy  
20 Kentucky's elevated carbon transition risk within the regulated utility  
21 sector because its primary generating asset is a coal plant.

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<sup>2</sup> See Moody's Investors Service, Credit Opinion, "Duke Energy Kentucky, Inc." January 29, 2019 ("January 2019 DE Kentucky Report").

#### **IV. CAPITAL STRUCTURE AND COST OF CAPITAL**

1 **Q. WHAT IS DUKE ENERGY KENTUCKY'S PROPOSED CAPITAL**  
2 **STRUCTURE?**

3 A. As mentioned earlier in my testimony, Duke Energy Kentucky's proposed capital  
4 structure is comprised of 51.8 percent debt and 48.2 percent equity, after making  
5 adjustments for purchase accounting and other items. The Company believes this  
6 proposed capital structure is the appropriate capital structure for Duke Energy  
7 Kentucky, as it introduces an appropriate amount of risk due to leverage and  
8 minimizes the weighted average cost of capital to customers. Approval of the  
9 proposed capital structure will help Duke Energy Kentucky maintain its credit  
10 quality to meet its ongoing business objectives. This level is also consistent with the  
11 Company's target credit ratings.

12 **Q. WHAT IS DUKE ENERGY KENTUCKY'S COST OF EQUITY?**

13 A. Duke Energy Kentucky witness Dr. Roger Morin recommends in his testimony that  
14 the Commission approve a ROE of 9.80 percent.

15 **Q. WHAT ROLE DO EQUITY INVESTORS PLAY IN THE FINANCING OF**  
16 **DUKE ENERGY KENTUCKY, AND HOW WILL THE OUTCOME OF**  
17 **THIS CASE IMPACT THESE INVESTORS?**

18 A. Equity investors provide the foundation of a company's capitalization by  
19 providing significant amounts of capital, for which an appropriate economic  
20 return is required. Duke Energy Kentucky compensates equity investors for the  
21 risk of their investment by targeting fair and adequate returns, a stable dividend,  
22 and earnings growth - these are all necessary to preserve access to equity capital.

1 Returns to equity investors are realized only after all operating expenses and fixed  
2 payment obligations (including debt principal and interest) of the business have  
3 been paid. Because equity investors are the last to receive surplus earnings and  
4 cash flows, their investment involves significantly more risk. For this reason,  
5 equity investors require a higher return for their investment. Equity investors  
6 expect utilities like Duke Energy Kentucky to recover their prudently incurred  
7 costs and earn a fair and reasonable return for their investors. The Company's  
8 proposal in this proceeding supports this investor requirement.

9 **Q. WHAT EFFECT DOES CAPITAL STRUCTURE AND RETURN ON**  
10 **EQUITY HAVE ON CREDIT QUALITY?**

11 A. Capital structure and return on equity are important components of credit quality.  
12 The greater the equity component of capitalization, the safer the returns are to  
13 debt investors, which translates into higher credit quality and lower borrowing  
14 costs. In addition, the allowed return on equity is a key component in the  
15 generation of earnings and cash flows. An adequate return on equity helps ensure  
16 equity investors receive fair compensation for their investment while also helping  
17 to protect the interests of debt investors. A strong capital structure and an  
18 adequate return on equity provide balance sheet protection and cash flow  
19 generation to support high credit quality. High credit quality creates financial  
20 flexibility by providing more readily available access to the capital markets on  
21 reasonable terms, and ultimately lower debt financing costs.

1 **Q. DO YOU BELIEVE THAT DUKE ENERGY KENTUCKY'S CAPITAL**  
2 **STRUCTURE HAS AN ADEQUATE EQUITY COMPONENT TO ENABLE**  
3 **DUKE ENERGY KENTUCKY TO ACHIEVE THE COMPANY'S**  
4 **FINANCIAL STRENGTH AND CREDIT QUALITY OBJECTIVES?**

5 A. Yes. Duke Energy Kentucky's equity component, as reflected in this case, will  
6 support the Company's healthy credit profile and maintain financial strength and  
7 flexibility. This level of equity will enable the Company to tolerate different  
8 business cycles while also providing a cushion to the Company's lenders and  
9 bondholders. Like many utilities, Duke Energy Kentucky is in a period of  
10 significant capital investment necessary to provide cost-effective, safe,  
11 environmentally-compliant, and reliable service to its customers in a time of  
12 rising costs, lower load growth and evolving state and federal requirements. The  
13 magnitude of its capital requirements dictates the need for a strong equity  
14 component of the Company's capital structure to assure access to capital funding  
15 at reasonable terms.

16 **Q. PLEASE SUMMARIZE THE COMPANY'S AVERAGE COST OF SHORT-**  
17 **TERM AND LONG-TERM DEBT FOR THE BASE PERIOD AND THE**  
18 **FORECAST PERIOD AND THE KEY ASSUMPTIONS AND**  
19 **METHODOLOGY USED IN CALCULATING COST OF DEBT FOR SUCH**  
20 **PERIODS?**

21 A. The table below presents the average cost of short-term and long-term debt for the  
22 Base and Forecast periods:

	<b>Base Period</b> (at November 2019)	<b>Forecast Period</b> (Avg of Mar 2020 thru Mar 2021)
Short-Term Debt (Schedule J-2)	2.294 percent	1.937 percent
Long-Term Debt (Schedule J-3)	4.032 percent	4.073 percent

1 For Schedule J-2, which calculates cost of short-term debt, the assumed  
2 Amount Outstanding for Sale of Accounts Receivables, for both the base and  
3 forecast period, was the average of the actual monthly balances for Duke Energy  
4 Kentucky's Sale of Account Receivables during the trailing twelve months as of  
5 May 2019. The assumed interest rate on this debt for the base and forecast period  
6 was derived using Bloomberg's implied forward curve for one-month London  
7 Interbank Offered Rate (LIBOR) as of June 2019 plus a 90-basis point credit  
8 spread. The Amount Outstanding for the Notes Payable to Associated Companies  
9 in the forecasted short-term debt schedule is the thirteen-month average of Duke  
10 Energy Kentucky's monthly money pool borrowing balance from current  
11 company projections. The Interest rate on this debt was derived using  
12 Bloomberg's implied forward curve for one-month LIBOR as of June 2019.

13 For Schedule J-3, which calculates the cost of long-term debt, the interest  
14 rate on \$25 million of LT Commercial Paper for the base and forecast period was  
15 derived using Bloomberg's Implied forward curve for one-month LIBOR as of June  
16 2019 plus a 25-basis point credit spread. A long-term debt issuance of \$50 million is  
17 forecasted for September 2020 based on company projections. The interest rate on  
18 this future issuance was estimated using a blended average of Bloomberg's forward  
19 curves for the 5-year, 10-year and 30-year US Treasury yield as of June 2019 plus a  
20 162-basis point credit spread.

1 **Q. DID DUKE ENERGY COMPANY TAKE ANY STEPS SINCE ITS LAST**  
2 **ELECTRIC BASE RATE CASE IN 2017 TO MANAGE ITS FINANCING**  
3 **COSTS, THUS MITIGATING THE RATE INCREASE PROPOSED IN THIS**  
4 **CASE?**

5 A. Yes. Duke Energy Kentucky has effectively managed its financing costs since the  
6 last electric base rate case in 2017. In that rate case, the average cost of long-term  
7 debt for both the base and forecasted periods was expected to exceed 4.20 percent.  
8 In this rate case, the average cost of long-term debt in both periods is expected to be  
9 approximately 4.05 percent. Since 2017, Duke Energy Kentucky issued \$140  
10 million of long-term debt through the traditional private placement market. In Q2  
11 2019, the Company priced \$170 million of long-term debt, which is expected to  
12 close in Q3 2019, also through the traditional private placement market. Once the  
13 remaining \$170 million of debt is issued, Duke Energy Kentucky will have  
14 efficiently priced \$310 million of long-term debt across six series of debentures at a  
15 weighted-average cost of approximately 3.79 percent and a weighted-average life of  
16 13 years.

**V. DUKE ENERGY KENTUCKY'S CAPITAL REQUIREMENTS**

17 **Q. WHAT ARE DUKE ENERGY KENTUCKY'S CAPITAL REQUIREMENTS**  
18 **DURING THE 2019-2021 TIME PERIOD?**

19 A. Duke Energy Kentucky faces substantial capital needs over the next several years to  
20 satisfy debt maturities and invest in our electric generation and delivery system. The  
21 Company's capital requirement for the regulated business of Duke Energy Kentucky  
22 is projected to be approximately \$700 million during the period 2019-2021. This



1 amount consists of approximately \$600 million in projected capital expenditures and  
2 approximately \$100 million in debt maturities.

3 **Q. HOW WILL DUKE ENERGY KENTUCKY'S CAPITAL REQUIREMENTS**  
4 **BE FUNDED?**

5 A. Duke Energy Kentucky's capital requirements are expected to be funded from  
6 internal cash generation, the issuance of debt, and equity contributions. It is  
7 important to remember that Duke Energy also has dividend obligations to its  
8 shareholders. Duke Energy's corporate dividend policy targets an approximate 70  
9 percent payout ratio, based on adjusted diluted earnings per share, and its operating  
10 subsidiaries are expected to mirror this policy over time.

**VI. THE BUDGETING AND FORECASTING PROCESS**

11 **Q. DESCRIBE THE SOURCE OF THE FORECASTED FINANCIAL DATA**  
12 **USED IN THESE PROCEEDINGS.**

13 A. The forecasted data used in these proceedings is based on Duke Energy  
14 Kentucky's 2018 and 2019 actual data and its 2019 annual budget. This is because  
15 the Company is using a base period that spans two calendar years and is  
16 comprised of actual data for 2018 and both actual and budgeted data for 2019.  
17 The Company is also using a fully forecasted test period that, for this proceeding,  
18 spans the twelve-month period ending March 31, 2021. The budget and forecast  
19 were reviewed and approved by Duke Energy Kentucky's executive management  
20 and Duke Energy's Board of Directors.

1 **Q. HOW DID YOU USE THE 2019 ANNUAL BUDGET RESULTS FOR THE**  
2 **BASE AND FORECASTED PERIODS IN THIS PROCEEDING?**

3 A. The base period is the twelve months ending November 30, 2019, and consists of  
4 six months of actual data through May 2019 and the remaining six months of  
5 budgeted data. The forecasted test period is the twelve months ending March 31,  
6 2021. The Company's 2018 actual data and 2019 budget was the starting point for  
7 the preparation of both the base and forecasted periods. A simplistic high-level  
8 summary of that approach is as follows. First, I revised the 2019 Annual Budget  
9 for a limited number of updated assumptions, as I describe in detail later in my  
10 testimony. Next, I extended the revised 2019 budget to March 2021 using the  
11 Company's standard forecasting methodology, which I also describe later in my  
12 testimony when I explain how I prepared the financial forecasts. Finally, I  
13 updated the revised budget and the forecasted test period with actual data through  
14 May 2019.

15 **Q. DESCRIBE THE BUDGETING AND FORECASTING PROCESS THAT**  
16 **YOU USED TO DEVELOP THE TEST PERIOD IN THESE**  
17 **PROCEEDINGS.**

18 A. Each entity (or group) that performs work throughout the organization is assigned  
19 a responsibility center, which is specific to a single payroll company. The  
20 responsibility centers use guidelines provided by Duke Energy's Budgeting and  
21 Business Support organization within the Financial Planning and Analysis  
22 Department. The responsibility centers represent detailed responsibility budgets

1 consisting of expense items, certain types of revenues, and construction budgets  
2 for capital projects. The information is consolidated, along with sales and revenue  
3 data, into a corporate budget and is reviewed by various levels of management.  
4 One or more iterations of the annual budget are typically required before final  
5 approval by executive management and the Board of Directors. This “bottom-up”  
6 approach is reasonable and has been an effective process for managing costs.

7 **Q. DESCRIBE THE GUIDELINES PROVIDED BY THE BUDGETING AND**  
8 **BUSINESS SUPPORT ORGANIZATION IN DEVELOPING DUKE**  
9 **ENERGY KENTUCKY’S ANNUAL RESPONSIBILITY (OPERATING**  
10 **AND MAINTENANCE) CENTER BUDGET.**

11 A. The guidelines provided by the business support organization are a detailed set of  
12 instructions for creating a responsibility center budget. For example, there are  
13 detailed instructions for budgeting employee labor data, such as the escalation  
14 rates for non-union labor expenses and indirect labor and fringe benefit loading  
15 rates, and how to handle staff additions or deletions. Individual employees and  
16 certain associated costs of the employees are included or excluded in any given  
17 center’s budget according to the expected future reporting assignment for that  
18 employee. Detailed instructions for non-labor related expenses, such as  
19 transportation and information technology expenses, are included. There are  
20 instructions for handling contract labor and supplies, and guidelines for  
21 identifying a capital versus expense item. Budget coordinators are required to use  
22 these assumptions and/or instructions in projecting their future departmental  
23 expenses. These operating and maintenance (O&M) budgeting guidelines are

1 reflected in the budgets and forecasts that are submitted to Duke Energy  
2 Kentucky's executive management and Duke Energy's Board of Directors for  
3 approval and are also reflected in the forecasted financial data in these  
4 proceedings.

5 **Q. WHAT OTHER STEPS ARE INVOLVED IN DEVELOPING THE**  
6 **CORPORATE BUDGET?**

7 A. In addition to the O&M expenses and capital data provided by the budgeting  
8 process, other forecasted information is required as follows:

- 9 1. Operating revenues;
- 10 2. Projected fuel, purchased power, emission allowance, other production  
11 costs and off-system sales;
- 12 3. Depreciation;
- 13 4. Property taxes;
- 14 5. Other Income and Expense, primarily allowance for funds used during  
15 construction (AFUDC);
- 16 6. Financing assumptions, including short- and long-term debt rates,  
17 dividend policy, issuances and redemptions, accounts receivable sales  
18 and capital leases; and
- 19 7. Tax rates and tax depreciation.

## **VII. METHODOLOGY FOR THE FORECASTED DATA**

20 **Q. PLEASE DESCRIBE HOW THIS FORECASTED INFORMATION WAS**  
21 **USED FOR THE CORPORATE BUDGET AND LATER REVISED**  
22 **AND/OR EXTENDED THROUGH THE BASE AND FORECAST**  
23 **PERIODS.**

24 A. I will do so by describing the three primary financial statements beginning with  
25 the income statement.

**A. INCOME STATEMENT**

1 **Q. PLEASE DESCRIBE HOW THE OPERATING REVENUES WERE**  
2 **FORECASTED.**

3 A. The first step in preparing the operating revenues for the 2019 annual budget was  
4 to obtain a forecast of the projected gas sales on a thousand cubic feet basis  
5 (MCF) and electric kilowatt per hour (kWh) sales from Duke Energy Kentucky  
6 witness Benjamin Walter Bohdan Passty, Ph.D., Lead Load Forecasting Analyst,  
7 who prepared the load forecasts on a monthly basis. The forecasts are updated at  
8 least annually. The Load Forecasting and Fundamentals organization also  
9 provides the number of customers for each customer class. The projected  
10 revenues for the annual budget and the long-range forecast for MCF and kWh  
11 sales were calculated by applying the tariff charges to these sales forecast  
12 numbers for all electric and gas residential customers. The projected revenue for  
13 electric and gas non-residential customers was calculated by applying average  
14 realizations to their respective kWh sales forecasts.

15 **Q. ARE THE REVENUE PROJECTIONS BASED ON WEATHER**  
16 **NORMALIZED LOAD FORECASTS?**

17 A. Yes. As described by Dr. Passty, a thirty-year (30) period was used as the basis  
18 for calculating normal weather. This is the same methodology that management  
19 relies on for preparing its budgets and forecasts, and for financial presentations to  
20 the Board of Directors, credit rating agencies, and the investment community.

21 **Q. HOW WERE OTHER REVENUES PROJECTED?**

22 A. Other revenue categories, such as PJM reactive revenues, reconnection charges,

1 late payment fees, *etc.*, for Duke Energy Kentucky's 2019 and 2020 annual  
2 budgets are projected based on historical trends or are provided by the individual  
3 budget centers. Additionally, Duke Energy Kentucky witness, John Verderame  
4 from Duke Energy's Fuels and Systems Optimization Organization, used the  
5 GenTrader Model to provide me with forecasts of the power production costs,  
6 such as fuel, emission allowances and purchase power costs, and revenues, such  
7 as off-system sales, after applying the Company's off-system sales sharing  
8 mechanism (Rider PSM).

9 **Q. HOW WERE PRODUCTION COSTS SUCH AS FUEL, EMISSION**  
10 **ALLOWANCES, PURCHASED POWER, AND REVENUES SUCH AS**  
11 **OFF-SYSTEM SALES PROJECTED?**

12 A. As more fully described by Mr. Verderame, the Company utilizes a commercially  
13 available production cost model (GenTrader) to develop the forecast utilized in  
14 the Company's annual budgets as well as its routine Fuel Adjustment Clause  
15 (FAC) filings. All of the Company's generating units are represented in the model  
16 with their key characteristics, such as capacity, fuel type, heat rate, and emission  
17 rates. Outputs from this model are utilized to project the associated revenues and  
18 production costs.

19 **Q. DESCRIBE HOW DEPRECIATION EXPENSE IS INCLUDED IN THE**  
20 **FORECAST.**

21 A. The forecasted depreciation for existing and projected gas and electric plant is  
22 calculated by multiplying the depreciable plant by appropriate composite  
23 depreciation rates. These composite rates for transmission, distribution, common

1 and general plant are based on rates currently in effect and established in the  
2 Company's last base electric rate case, Case No. 2017-00321.

3 The projected gas and electric capital budget data was prepared by the  
4 responsibility centers for a five-year period at the time of the 2019 Annual Budget  
5 preparation per Duke Energy's capital budgeting process, which I discussed  
6 earlier. The electric capital budget data was obtained from Duke Energy's  
7 distribution, transmission and fossil/hydro generation organizations, respectively.  
8 These numbers were revised to reflect the latest cost estimates and timing of  
9 capital expenditures for various projects designed to maintain or enhance  
10 reliability and service to customers including several construction projects at the  
11 East Bend and Woodsdale stations for various compliance initiatives, as well as  
12 the Company's distribution system. These projects are described in the direct  
13 testimonies of Mr. James Michael Mosley and Ms. Ash Norton, respectively.

14 **Q. DESCRIBE HOW OPERATION AND MAINTENANCE EXPENSES ARE**  
15 **INCLUDED IN THE FORECAST.**

16 A. The O&M expenses, including benefits and payroll taxes, were obtained from the  
17 2019 Annual Budget by the various responsibility centers, using the bottom-up  
18 approach that I described above. Duke Energy Kentucky's proportionate share of  
19 the shared services expenses and the corporate center O&M expenses are assigned  
20 and/or allocated from the service company to Duke Energy Kentucky and are also  
21 derived using the same bottom-up approach. The allocated share is derived by the  
22 application of appropriate allocations based on the service company allocation  
23 factors, and in accordance with various Commission-approved service agreements

1 as discussed in the direct testimony of Duke Energy Kentucky witness, Mr. Jeff  
2 Setser. For labor-related expenses, I used the projected annual labor cost rate  
3 increases provided by Duke Energy Kentucky witness Ms. Renee Metzler to  
4 budget 2019 and 2020 union and non-union employee labor expense. Union labor  
5 cost increases were assumed to be between 1 percent and 3 percent, depending on  
6 the agreements, while non-union labor cost increases were assumed to be 3.5  
7 percent (including both merit increases of 3 percent and an allowance for salary  
8 increases for promotions of 0.5 percent). I also used the fringe benefit loading  
9 rates (19.38 percent for 2019 and 2020) and payroll tax (7.65 percent in each  
10 year) loadings. Non-labor expenses for 2019 and 2020 were forecasted by the  
11 responsibility centers based on their knowledge and expectations for various  
12 costs.

13 **Q. HOW WAS THE O&M REVISED AND EXTENDED THROUGH THE**  
14 **FORECASTED PERIOD?**

15 A. As mentioned above, O&M budgets were supplied by the responsibility centers  
16 for 2019 and 2020 per the company's Budget Guidelines. The basis for the 2021  
17 budget is the 2020 budget adjusted for various O&M expenses that are expected  
18 to diverge from general escalation assumptions. Apart from these adjustments,  
19 O&M expense is assumed to escalate one percent in 2021 from projected 2020  
20 levels.

21 In certain instances, new or revised information emerged which supported  
22 the need for revisions to previously supplied O&M budgets and projections. An  
23 example includes vegetation management expenses, which were revised based on



1 updated projections from the responsibility center.

2 **Q. HOW DID YOU OBTAIN THE PROPERTY TAX EXPENSE?**

3 A. The property tax expense was obtained from the 2019 Annual Budget and was  
4 prepared as described by Duke Energy's Tax Department. Duke Energy Kentucky  
5 witness Mr. John Panizza supplied the property tax expenses for the forecasted  
6 financial test period data, based on the capital projections.

7 **Q. HOW DID YOU OBTAIN THE "OTHER INCOME AND EXPENSE"?**

8 A. The "other income and expense" is a below-the-line item, and is derived from a  
9 combination of sources. The amount of funds for the AFUDC was derived from  
10 the gas and electric capital forecasts prepared for the 2019 annual budget. These  
11 capital forecasts were supplied by Duke Energy Kentucky's transmission and  
12 distribution businesses and generating stations.

13 **Q. HOW DID YOU OBTAIN THE INCOME TAX EXPENSE?**

14 A. Mr. Panizza provided the appropriate income tax rates and the amortization of  
15 investment tax credit (ITC). The income tax expense was derived using Utilities  
16 International (UI) Planner or "proprietary forecasting" software for each month of  
17 the revised 2019 annual budget period and the 2020 and 2021 forecasts, by  
18 applying statutory income tax rates to applicable taxable book income and  
19 adjusting the resulting applicable income taxes by the ITC amortization amounts.

**B. BALANCE SHEET STATEMENT**

20 **Q. HOW WERE INITIAL BALANCES ESTABLISHED FOR THE BALANCE**  
21 **SHEET?**

22 A. The final month of actual data for the base period was the May 2019 balances.

1 Duke Energy Kentucky witness, Ms. Abernathy supplied the net book value for  
2 the existing gas, electric and common plant and construction work in progress for  
3 the period ending May 2019. I used the proprietary forecasting software to  
4 calculate the depreciation expense and net gas, electric, and common plant and  
5 construction work in progress balances for the forecasted period.

6 **Q. WHAT OTHER INFORMATION WAS USED TO ESTABLISH THE**  
7 **BASE AND FORECASTED BALANCE SHEETS?**

8 A. Ms. Norton and Mr. Mosley provided the capital expenditures for the forecasted  
9 portion of the base period and for the forecasted test period. All of the forecasted  
10 capital data was prepared for the 2019 Annual Budget and was completed for a  
11 five-year period as typically done.

12 In addition, Duke Energy Kentucky witness Ms. Weatherston supplied the  
13 Plant inventories for emission allowances, coal, oil and gas and materials and  
14 supplies.

**C. CASH FLOW STATEMENT**

15 **Q. HOW DID YOU PREPARE THE CASH FLOW STATEMENT FOR THE**  
16 **2019 ANNUAL BUDGET?**

17 A. The cash flow statement is generated by Duke Energy's proprietary forecasting  
18 software tools. It is derived from corresponding inputs from the income statement  
19 and changes in the balance sheet.

**VIII. REASONABLENESS OF THE  
FORECASTED TEST PERIOD DATA**

1   **Q.   DO YOU HAVE AN OPINION AS TO WHETHER THE FORECASTED**  
2       **TEST PERIOD FINANCIAL DATA IS REASONABLE, RELIABLE,**  
3       **MADE IN GOOD FAITH, AND THAT ALL BASIC ASSUMPTIONS USED**  
4       **IN THE FORECAST HAVE BEEN IDENTIFIED AND JUSTIFIED?**

5   **A.**   Yes, the forecasted test period financial data is reasonable, reliable and made in  
6       good faith, based on all the information available as of the time of this filing. In  
7       my opinion, as Director, Regional Financial Forecasting, the budgeting and  
8       forecasting processes are adequate, reasonable, and reliable. My testimony has  
9       identified all the basic assumptions in the forecast. These assumptions are  
10      justified by my testimony and the testimony of the other witnesses I have  
11      identified.

12   **Q.   DOES THE FORECAST CONTAIN THE SAME ASSUMPTIONS AND**  
13      **METHODOLOGIES USED IN FORECASTED DATA PREPARED FOR**  
14      **USE BY MANAGEMENT?**

15   **A.**   Yes.

16   **Q.   DOES THE FORECASTED TEST PERIOD REFLECT ANY EXPECTED**  
17      **PRODUCTIVITY AND EFFICIENCY GAINS?**

18   **A.**   Yes. The forecasted data reflects all expected productivity and efficiency gains.

**IX. SCHEDULES AND FILING REQUIREMENTS  
SPONSORED BY WITNESS**

19   **Q.   PLEASE DESCRIBE FR 12(2)(a).**

20   **A.**   FR 12(2)(a) provides the amount and kinds of stock authorized.

1 **Q. PLEASE DESCRIBE FR 12(2)(b).**

2 A. FR 12(2)(b) provides the amount and kinds of stock issued and outstanding as of  
3 June 30, 2019.

4 **Q. PLEASE DESCRIBE FR 12(2)(c).**

5 A. FR 12(2)(c) is a requirement to provide certain terms and conditions for any  
6 preferred stock. Since Duke Energy Kentucky has no preferred stock, there is no  
7 information to provide.

8 **Q. PLEASE DESCRIBE FR 12(2)(d).**

9 A. FR 12(2)(d) provides a description of certain terms and conditions for any  
10 mortgages. Since Duke Energy Kentucky has no mortgages, there is no information  
11 to provide.

12 **Q. PLEASE DESCRIBE FR 12(2)(e).**

13 A. FR 12(2)(e) provides certain terms and conditions for any bonds authorized and  
14 issued.

15 **Q. PLEASE DESCRIBE FR 12(2)(f).**

16 A. FR 12(2)(f) provides certain terms and conditions for any notes issued. Duke Energy  
17 Kentucky had other notes outstanding beyond those summarized in 12(2)(e) and  
18 12(2)(g).

19 **Q. PLEASE DESCRIBE FR 12(2)(g).**

20 A. FR 12(2)(g) provides certain terms and conditions for other indebtedness, including  
21 information on two outstanding series of Pollution Control Bonds, three capital  
22 leases and information on money pool borrowings.

- 1 **Q. PLEASE DESCRIBE FR 12(2)(h).**
- 2 A. FR 12(2)(h) provides certain information regarding dividend payments by Duke  
3 Energy Kentucky during the past five years.
- 4 **Q. PLEASE DESCRIBE FR 16(6)(a).**
- 5 A. FR 16(6)(a) is the forecasted period in the form of pro forma adjustments to the  
6 base period. Our assumptions and methodologies have been described in my  
7 testimony as well as other witnesses in this case.
- 8 **Q. PLEASE DESCRIBE FR 16(6)(b).**
- 9 A. FR 16(6)(b) requires that the forecasted adjustments are limited to the twelve  
10 months immediately following the suspension period.
- 11 **Q. PLEASE DESCRIBE FR 16(6)(d).**
- 12 A. FR 16(6)(d) requires that there be no revisions to the forecast after filing. The  
13 Company will comply with this requirement.
- 14 **Q. PLEASE DESCRIBE FR 16(6)(e).**
- 15 A. FR 16(6)(e) provides that the Commission may require the utility to prepare an  
16 alternative forecast based upon a reasonable number of changes in the variables,  
17 assumptions and other factors used as the basis for the utility's forecast. The  
18 Company will comply with this if requested.
- 19 **Q. PLEASE DESCRIBE FR 16(7)(b).**
- 20 A. FR 16(7)(b) consists of the Company's most recent capital construction budget  
21 containing a minimum three (3) year forecast of construction expenditures.
- 22 **Q. PLEASE DESCRIBE FR 16(7)(c).**
- 23 A. FR 16(7)(c) is a summary of the assumptions used to prepare the forecasted test

1 period data. Our assumptions and methodologies have also been described in my  
2 testimony and the testimony of other witnesses I identified earlier.

3 **Q. PLEASE DESCRIBE FR 16(7)(d).**

4 A. FR 16(7)(d) is Duke Energy Kentucky's annual and monthly budget for the  
5 twelve-months preceding the filing date, the base period and forecasted period.

6 **Q. PLEASE DESCRIBE FR 16(7)(f).**

7 A. FR 16(7)(f) includes specific information for each major construction project that  
8 constitutes five (5) percent or more of the annual construction budget within the  
9 three (3) year forecast. This information includes the date the project was or is  
10 estimated to be started, the estimated completion date, and the total estimated cost  
11 of construction by year exclusive and inclusive of AFUDC or interest during  
12 construction credit, and the most recent available total costs incurred exclusive  
13 and inclusive of AFUDC.

14 **Q. PLEASE DESCRIBE FR 16(7)(g).**

15 A. FR 16(7)(g) includes an aggregate of the information included in FR 16(7)(f) for  
16 all construction projects that constitute less than five (5) percent of the annual  
17 construction budget within three (3) years of the forecast.

18 **Q. PLEASE DESCRIBE FR 16(7)(h).**

19 A. FR 16(7)(h) is Duke Energy Kentucky's financial forecast corresponding to the  
20 three-year capital budget. This includes an income statement, a balance sheet, a  
21 statement of cash flow, and certain other required financial and statistical  
22 information.

1 **Q. PLEASE DESCRIBE FR 16(7)(j).**

2 A. FR 16(7)(j) is a requirement to provide copies of the prospectuses of the most recent  
3 stock or bond offerings.

4 **Q. PLEASE DESCRIBE FR 16(7)(l).**

5 A. FR 16(7)(l) is a requirement to provide copies of the consolidated annual report to  
6 shareholders and statistical supplements for the last five years.

7 **Q. PLEASE DESCRIBE FR 16(7)(o).**

8 A. FR 16(7)(o) consists of management's monthly variance reports for the twelve  
9 months prior to the base period, each month of the base period and subsequent  
10 months as available. These reports are self-explanatory and include explanations  
11 on the variances.

12 **Q. PLEASE DESCRIBE FR 16(7)(r).**

13 A. FR 16(7)(r) is a requirement to provide copies of the quarterly reports to  
14 shareholders.

15 **Q. PLEASE DESCRIBE THE INFORMATION YOU SUPPORT IN**  
16 **SCHEDULES B-2, B-2.1, B-2.2, B-2.3, B-2.4, B-2.5, B-2.6, B-2.7, B-3, B-3.1,**  
17 **B-3.2, AND B-4.**

18 A. I provided Ms. Abernathy with the forecasted data contained in those schedules.

19 **Q. PLEASE DESCRIBE SCHEDULE B-5.**

20 A. Schedule B-5 is a summary of the jurisdictional working capital calculation based on  
21 the Commission's traditional methodology. The calculation includes a cash element  
22 of working capital, material and supplies inventory, fuel inventory, and emission  
23 allowance inventory.

1 **Q. PLEASE DESCRIBE SCHEDULE B-5.1.**

2 A. Schedule B-5.1 reflects the itemized miscellaneous working capital items for both  
3 the base and forecasted periods.

4 **Q. PLEASE EXPLAIN THE MATERIALS AND SUPPLIES INVENTORY ON**  
5 **SCHEDULE B-5.1.**

6 A. The materials and supplies shown on Schedule B-5.1 represent the 13-month  
7 average for the forecasted period and the end of period balance for the base period.  
8 These supplies consist primarily of supplies kept on hand in the Company's  
9 storerooms. These investments assure that adequate supplies are available to provide  
10 reliable service to customers. The 13-month average of material and supplies  
11 included in electric working capital for the forecasted test period is \$18,759,249.

12 **Q. PLEASE EXPLAIN THE FUEL AND EMISSION ALLOWANCE**  
13 **INVENTORIES ON SCHEDULE B-5.1.**

14 A. The fuel and emission allowance inventories shown on Schedule B-5.1 represent the  
15 13-month average for the forecasted period and the end of period balance for the  
16 base period. The 13-month average balances of fuel and emission allowance  
17 inventories included in electric working capital for the forecasted test period are  
18 \$19,518,014 and \$0, respectively. Emission allowance balances have been removed  
19 from the forecasted test period since emission allowances are included for recovery  
20 in Rider ESM.

21 **Q. PLEASE EXPLAIN THE CASH WORKING CAPITAL COMPUTATION**  
22 **ON SCHEDULE B-5.1.**

23 A. Cash working capital was computed for both the base and forecasted periods. It



1 represents the financing incurred to bridge the gap between the time when  
2 expenditures are incurred to provide service and the time when payment is received  
3 for that service. The cash working capital computation is based upon the traditional  
4 methodology used by this Commission, which is one-eighth of O&M expense, as  
5 adjusted, excluding fuel and purchased power costs. For the base period, the  
6 resulting jurisdictional cash working capital is \$17,650,833 and for the forecasted  
7 period cash working capital is \$14,965,228.

8 **Q. PLEASE DESCRIBE SCHEDULE D-2.1.**

9 A. Schedule D-2.1 adjusts base period revenue to the level included in the forecasted  
10 test period. The adjustment results in a net revenue decrease of \$7,311,191.

11 **Q. PLEASE DESCRIBE SCHEDULE D-2.2.**

12 A. Schedule D-2.2 adjusts base period purchased power expenses to the level  
13 included in the forecasted test period. The effect of the adjustment on Duke  
14 Energy Kentucky's electric operations is a decrease in pre-tax operating expenses  
15 of \$7,265,494.

16 **Q. PLEASE DESCRIBE SCHEDULE D-2.3.**

17 A. Schedule D-2.3 adjusts base period other production expenses to the level  
18 included in the forecasted test period. The effect of the adjustment on electric  
19 operations is an increase in pre-tax operating expenses of \$428,767.

20 **Q. PLEASE DESCRIBE SCHEDULE D-2.4.**

21 A. Schedule D-2.4 was not used in this filing.

22 **Q. PLEASE DESCRIBE SCHEDULE D-2.5.**

23 A. Schedule D-2.5 adjusts base period transmission expenses to the level included in

1 the forecasted test period. The effect of the adjustment on electric operations is an  
2 increase in pre-tax operating expenses of \$2,839,215.

3 **Q. PLEASE DESCRIBE SCHEDULE D-2.6.**

4 A. Schedule D-2.6 adjusts base period regional market expenses to the level included  
5 in the forecasted test period. The effect of the adjustment on electric operations is  
6 an increase in pre-tax operating expenses of \$58,917.

7 **Q. PLEASE DESCRIBE SCHEDULE D-2.7.**

8 A. Schedule D-2.7 adjusts base period electric distribution expenses to the level  
9 included in the forecasted test period. The effect of the adjustment on electric  
10 operations is an increase in pre-tax operating expenses of \$1,888,872.

11 **Q. PLEASE DESCRIBE SCHEDULE D-2.8.**

12 A. Schedule D-2.8 adjusts base period customer accounts expenses to the level  
13 included in the forecasted test period. The effect of the adjustment on electric  
14 operations is an increase in pre-tax operating expenses of \$522,896.

15 **Q. PLEASE DESCRIBE SCHEDULE D-2.9.**

16 A. Schedule D-2.9 adjusts base period customer service and information expenses to  
17 the level included in the forecasted test period. The effect of the adjustment on  
18 electric operations is an increase in pre-tax operating expenses of \$38,160.

19 **Q. PLEASE DESCRIBE SCHEDULE D-2.10.**

20 A. Schedule D-2.10 adjusts base period sales expense to the level included in the  
21 forecasted test period. The effect of the adjustment on electric operations is an  
22 increase in pre-tax operating expenses of \$111,757.

1 **Q. PLEASE DESCRIBE SCHEDULE D-2.11.**

2 A. Schedule D-2.11 adjusts base period administrative and general expenses to the  
3 level included in the forecasted test period. The effect of the adjustment on  
4 electric operations is a decrease in pre-tax operating expenses of \$2,985,442.

5 **Q. PLEASE DESCRIBE SCHEDULE D-2.12.**

6 A. Schedule D-2.12 adjusts base period other operating expenses to the level  
7 included in the forecasted test period. The effect of the adjustment on electric  
8 operations is a decrease of pre-tax operating expenses of \$198,332.

9 **Q. PLEASE DESCRIBE SCHEDULE D-2.13.**

10 A. Schedule D-2.13 adjusts base period depreciation expense to the level included in  
11 the forecasted test period. The effect of the adjustment on electric operations is an  
12 increase in pre-tax operating expenses of \$7,084,471.

13 **Q. PLEASE DESCRIBE SCHEDULE D-2.14.**

14 A. Schedule D-2.14 adjusts base period taxes other than income taxes to the level  
15 included in the forecasted test period. The effect of the adjustment on electric  
16 operations is an increase in pre-tax operating expenses of \$2,940,431.

17 **Q. PLEASE DESCRIBE SCHEDULE D-2.15.**

18 A. Schedule D-2.15 adjusts base period income taxes to the level included in the  
19 forecasted test period. The effect of the adjustment on electric operations is a  
20 decrease in income tax expense of \$1,206,538.

21 **Q. PLEASE DESCRIBE SCHEDULE D-2.16.**

22 A. Schedule D-2.16 is an adjustment to annualize revenue and fuel expense in the  
23 forecasted test period. The overall effect of the adjustment on electric operations

1 is to decrease revenues in the forecasted test year by \$48,382 and increase fuel  
2 expense by \$96,415.

3 **Q. PLEASE DESCRIBE SCHEDULES I-1 THROUGH I-5.**

4 A. Schedule I-1 contains comparative income statements for the Company.  
5 Schedules I-2.1 through I-5 contains comparative revenue and sales statistical  
6 information as required by the Commission's filing requirements.

7 **Q. PLEASE DESCRIBE SCHEDULES J-1.**

8 A. These J schedules are embodied in FR 16(8)(j). Specifically, Schedule J-1,  
9 entitled "Cost of Capital Summary" sets forth the projected capital structure and  
10 capitalization ratios of Duke Energy Kentucky at November 30, 2019, and the  
11 average of the projected balances and rates for the thirteen-month period ending  
12 March 31, 2021. The weighted cost of the various capital components is  
13 computed by multiplying the respective capitalization ratio by the computed  
14 annualized cost rate. The overall weighted cost of capital is reflected in the rate of  
15 return requested for the thirteen-month period ending March 31, 2021.

16 **Q. PLEASE DESCRIBE SCHEDULES J-2 AND J-3.**

17 A. Schedule J-2, entitled "Embedded Cost of Short-Term Debt," and Schedule J-3,  
18 entitled "Embedded Cost of Long-Term Debt," set forth the calculations of the  
19 cost of short-term debt and long-term debt, respectively, of Duke Energy  
20 Kentucky. The information on page 1 of these schedules was computed at the date  
21 of the base period, November 30, 2019. On page 2, the balances and interest rates  
22 are based on the average of the projected balances and rates for the thirteen-month  
23 period ending March 31, 2021.

1 **Q. WHY IS SCHEDULE J-4 NOT INCLUDED?**

2 A. Schedule J-4 is designed to provide the embedded cost of preferred stock for  
3 Duke Energy Kentucky. Since Duke Energy Kentucky has no preferred stock, this  
4 schedule has not been filed.

5 **Q. PLEASE DESCRIBE SCHEDULE K.**

6 A. Schedule K contains comparative financial and statistical information, as required  
7 by the Commission's filing requirements. I provided the condensed income  
8 statement, on page 2, and the mix of sales and fuel on page 5, for the base period  
9 and the forecasted test period.

**X. CONCLUSION**

10 **Q. WAS THE INFORMATION YOU SPONSOR IN FR 12(2)(a), 12(2)(b),**  
11 **12(2)(c), 12(2)(d), 12(2)(e), 12(2)(f), 12(2)(g), 12(2)(h), 16(6)(a), 16(6)(b),**  
12 **16(6)(d), 16(6)(e), 16(7)(b), 16(7)(c), 16(7)(d), 16(7)(f), 16(7)(g), 16(7)(h),**  
13 **16(7)(j), 16(7)(l), 16(7)(o), 16(7)(r), 16(8)(b), 16(8)(d), 16(8)(i), AND 16(8)(k),**  
14 **THE INFORMATION YOU PROVIDED TO MS. ABERNATHY FOR**  
15 **SCHEDULES B-2, B-2.1, B-2.2, B-2.3, B-2.4, B-2.5, B-2.6, B-2.7, B-3, B-3.1,**  
16 **B-3.2, B-4, SCHEDULES B-5 AND B-5.1, D-2.1 THRU D-2.16, , AS WELL**  
17 **AS SCHEDULES I-1 THROUGH I-5, SCHEDULES J-1 THROUGH J-3,**  
18 **AND SCHEDULE K PREPARED BY OR SPONSORED AND**  
19 **SUPPORTED BY YOU?**

20 A. Yes.

1 **Q. IS THE INFORMATION CONTAINED IN THOSE SCHEDULES**  
2 **ACCURATE TO THE BEST OF YOUR KNOWLEDGE AND BELIEF?**

3 A. Yes.

4 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

5 A. Yes.

VERIFICATION

STATE OF NORTH CAROLINA        )  
  )        SS:  
COUNTY OF MECKLENBURG        )

The undersigned, Christopher M. Jacobi, Director, Regional Financial Forecasting, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of his knowledge, information and belief.

  
\_\_\_\_\_  
Christopher M. Jacobi Affiant

Subscribed and sworn to before me by Christopher M. Jacobi on this 8<sup>th</sup> day of August, 2019.



  
\_\_\_\_\_  
NOTARY PUBLIC

My Commission Expires: 1/9/2023

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

In the Matter of:

The Electronic Application of Duke )  
Energy Kentucky, Inc., for: 1) An )  
Adjustment of the Electric Rates; 2) ) Case No. 2019-00271  
Approval of New Tariffs; 3) Approval of )  
Accounting Practices to Establish )  
Regulatory Assets and Liabilities; and 4) )  
All Other Required Approvals and Relief. )

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**DIRECT TESTIMONY OF**

**JEFF L. KERN**

**ON BEHALF OF**

**DUKE ENERGY KENTUCKY, INC.**

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September 3, 2019



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**ATTACHMENTS:**

- Attachment JLK-1 Newspaper Notice
- Attachment JLK-2 Customer Charge Analysis
- Attachment JLK-3 Avoided Cost for Cogeneration
- Attachment JLK-4 Pole Attachment Calculation
- Attachment JLK-5 Reconnection Charge Calculation

**I. INTRODUCTION AND PURPOSE**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Jeff L. Kern. My business address is 139 East Fourth Street, Cincinnati,  
3 Ohio 45202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Business Services LLC (DEBS) as Lead Rates and  
6 Regulatory Strategy Analyst. DEBS provides various administrative and other  
7 services to Duke Energy Kentucky, Inc., (Duke Energy Kentucky or Company) and  
8 other affiliated companies of Duke Energy Corporation (Duke Energy).

9 **Q. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATIONAL**  
10 **BACKGROUND AND PROFESSIONAL EXPERIENCE.**

11 A. I have a Bachelor's Degree in Quantitative Analysis from the University of  
12 Cincinnati. I began my career with the Cincinnati Gas & Electric Company  
13 (CG&E) as a rate analyst in 1988. I was employed by New York State Electric &  
14 Gas Company between 1993 and 1997, returning to CG&E in 1997 as a Senior Rate  
15 Analyst. In 1998, I became an administrator in Gas Operations. Since that time, I  
16 have held positions of increasing responsibility in Gas Operations, having  
17 responsibility for assuring adequate supply of gas for the retail customers of Duke  
18 Energy Kentucky and Duke Energy Ohio, Inc. In 2018, I left the gas operations  
19 business unit and assumed my current role as Lead Rates and Regulatory Strategy  
20 Analyst.

1 **Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AS LEAD RATES**  
2 **AND REGULATORY STRATEGY ANALYST.**

3 A. I am responsible for performing analyses and studies to support new or revised  
4 rates, providing oral and written testimony before regulatory agencies and other  
5 regulatory support, meeting with commission staff members in support of filings,  
6 rate changes, or tariff administration issues, assisting in administration of rates and  
7 programs, preparing or coordinating preparation of required regulatory compliance  
8 filings, and leading projects related to new or revised rates.

9 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**  
10 **PUBLIC SERVICE COMMISSION?**

11 A. No.

12 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE ANY OTHER**  
13 **REGULATORY AGENCIES?**

14 A. I have testified before the Public Utilities Commission of Ohio and have submitted  
15 written testimony before the Federal Energy Regulatory Commission.

16 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**  
17 **PROCEEDING?**

18 A. I am responsible for Duke Energy Kentucky's proposed electric rate design. My  
19 testimony will demonstrate that the rates Duke Energy Kentucky proposes are just  
20 and reasonable, that they reflect appropriate rate making principles, and that they  
21 result in an equitable basis for recovery of Duke Energy Kentucky's revenue  
22 requirements across its various customer classes and rate schedules. I describe  
23 changes that have been made to the Company's retail electric rate schedules, riders,

1 and electric Service Regulations and quantify the effect of these changes to our  
2 retail electric customers. I sponsor Schedules L, L-1, L-2.1, L-2.2, M, M-2.1 through  
3 M-2.3 and N. I also sponsor Filing Requirements (FR) FR 16(1)(b)(3), FR  
4 16(1)(b)(4), FR 16(8)(l), FR 16(8)(m) and FR 16(8)(n). The “L” series of schedules  
5 satisfy FR 16(1)(b)(3), FR 16(1)(b)(4), and FR 16(8)(l). The “M” series of schedules  
6 satisfies FR 16(8)(m), and the “N” schedule satisfies FR 16(8)(n). Finally, I sponsor  
7 the content required in the Company’s publication notice under 807 KAR 5:001  
8 Section 17, as reflected in FR 17(4).

**II. SCHEDULES AND FILING REQUIREMENTS**  
**SPONSORED BY WITNESS**

9 **Q. PLEASE DESCRIBE SCHEDULE L.**

10 A. Schedule L has four parts. The first part, identified as Schedule L, is my “Narrative  
11 Rationale for Tariff Changes.” This schedule describes the changes to Duke Energy  
12 Kentucky’s current tariffs and the reasons for those changes.

13 **Q. PLEASE DESCRIBE SCHEDULE L-1.**

14 A. Schedule L-1 shows the rate schedules that Duke Energy Kentucky proposes to  
15 implement. Please note that schedules related to the Company’s Demand Side  
16 Management (DSM) programs, which are expected to be filed in November are not  
17 presented here. No changes to these schedules are proposed with this filing.

18 **Q. PLEASE DESCRIBE SCHEDULE L-2.1.**

19 A. Schedule L-2.1 contains Duke Energy Kentucky's current rate schedules indicating  
20 through underlining and coding where changes occur in the proposed rate schedules.  
21 Note that the following schedule sheet numbers only receive an update to the  
22 Company’s address, the Company President’s name and/or the schedule’s filing and

1 effective date. There are no substantive changes to these tariff schedules which include  
2 sheet numbers 20, 21, 22, 23, 24, 26, 27, 63, 70, 71, 72, 73, 74, 76, 77, 79, 80, 82, 88,  
3 89, 90, 95, 96, 97, 98, 100 and 101. Similar to Schedule L-1, DSM related rate  
4 schedules are not presented.

5 **Q. PLEASE DESCRIBE SCHEDULE L-2.2.**

6 A. Schedule L-2.2 contains Duke Energy Kentucky's proposed rate schedules, showing  
7 the revisions that Duke Energy Kentucky proposes in this filing. Proposed changes  
8 are crossed out and underscored and coded by letter in the right-hand margin. Similar  
9 to Schedule L-1, DSM related rate schedules are not presented.

10 **Q. PLEASE DESCRIBE SCHEDULE M.**

11 A. Schedule M is a one page, side-by-side comparison of Duke Energy Kentucky's  
12 test period revenues at current and proposed rates; noting that the current fuel  
13 adjustment clause (FAC) value is calculated to match fuel revenues in the  
14 Company's test period revenue requirement in order to remove any revenue  
15 variations sourced from fuel cost. Schedule M shows that Duke Energy Kentucky  
16 is proposing a 16.3 percent increase in the Residential service class, a 10.3 percent  
17 increase in the Distribution Voltage service class, a 7.5 percent increase in the  
18 Transmission Voltage service class, and a 10.7 percent increase in the Lighting  
19 Service class. These average class level increases are based upon base rates which  
20 include the fuel cost adjustment expense and applicable riders.

21 **Q. PLEASE DESCRIBE SCHEDULE M-2.1.**

22 A. Schedule M-2.1 shows test period base revenue dollars at current rates with the  
23 calculated FAC value and the percentage distribution among the various rate

1 classes, as well as a breakdown of total revenue. Schedule M-2.1 also shows the  
2 actual base revenue average rates per kilowatt-hour (kWh) for each rate class.

3 **Q. PLEASE DESCRIBE SCHEDULES M-2.2 AND M-2.3.**

4 A. Schedule M-2.2, page 1, shows the test period bills in summary form, base revenues  
5 under current rates, current total revenues, and proposed base revenue increases, all  
6 broken down by rate and revenue class. The billing determinants used on these  
7 schedules is normalized sales for the twelve months ended March 31, 2021.  
8 Schedule M-2.2, pages 2 through 22, contains a detailed calculation of test period  
9 numbers using current rates as well as the proposed revenue increase, by rate and  
10 revenue class, as summarized on Schedule M-2.2, page 1. Schedule M-2.3 is almost  
11 identical to M-2.2, page 1, except that it shows the revenue summary and detailed  
12 data calculated at the rates proposed in this case.

13 **Q. PLEASE DESCRIBE SCHEDULE N.**

14 A. Schedule N shows monthly bill comparisons for various consumption levels under  
15 each of Duke Energy Kentucky's primary tariff schedules, Rates RS, DS, DT, DP,  
16 and TT. This schedule allows comparisons and assessment of how these changes  
17 impact customers' bills.

18 **Q. PLEASE DESCRIBE FR 16(1)(b)(3).**

19 A. FR 16(1)(b)(3) shows the proposed tariffs in a form complying with 807 KAR  
20 5:011 Section 6. The effective dates of these tariffs are not less than 30 days from  
21 the date of the filing of the application in the present case. This filing requirement  
22 is met by the L series of schedules I previously described.

1 **Q. PLEASE DESCRIBE FR 16(1)(b)(4).**

2 A. FR 16(1)(b)(4) consists of Duke Energy Kentucky's current tariffs in a comparative  
3 form showing proposed changes. The changes are reflected by underscoring  
4 additions and striking over deletions. This filing requirement is also met by the L  
5 series of schedules I previously described.

6 **Q. PLEASE DESCRIBE FR16(8)(l).**

7 A. FR16(8)(l) includes a narrative description and explanation of all proposed tariff  
8 changes. This filing requirement is also met by the L series of schedules I  
9 previously described.

10 **Q. PLEASE DESCRIBE FR 16(8)(m).**

11 A. FR 16(8)(m) shows the revenue summary for both the base period and the  
12 forecasted period with supporting schedules that provide detailed billing analysis  
13 for all customer classes. These schedules show the amount of change requested in  
14 dollars and the resulting percentage increase for each customer classification and  
15 by each rate classification to which the change will apply. In the present case, Duke  
16 Energy Kentucky proposes an overall revenue increase including riders of 12.54  
17 percent, which breaks down as previously described. This filing requirement is met  
18 by the M series of schedules.

19 **Q. PLEASE DESCRIBE FR 16(8)(n).**

20 A. FR 16(8)(n) shows the typical bill comparison under present and proposed rates for  
21 customer classes, current and proposed rates for each customer class, and the rate  
22 schedule to which the change would apply. This filing requirement is met by the N  
23 schedules previously described.

1 **Q. PLEASE DESCRIBE FR 17(4)(a).**

2 A. FR 17(4)(a) shows the proposed effective date and the date the proposed rates are  
3 expected to be filed with the Commission. In this case the effective date is October  
4 3, 2019 and the dates the proposed rates are expected to be filed are September 3,  
5 2019.

6 **Q. PLEASE DESCRIBE FR 17(4)(b).**

7 A. FR 17(4)(b) shows the present rates and proposed rates for each customer  
8 classification to which the proposed rates will apply.

9 **Q. PLEASE DESCRIBE FR 17(4)(c).**

10 A. FR 17(4)(c) shows the amount of the change requested in both dollar amounts and  
11 percentage change for each customer classification to which the proposed rates will  
12 apply.

13 **Q. PLEASE DESCRIBE FR 17(4)(d).**

14 A. FR17(4)(d) shows the amount of the average usage and the effect on the average  
15 bill for each customer classification to which the proposed rates will apply.

16 **Q. PLEASE DESCRIBE FR 17(4)(e) THROUGH (j).**

17 A. FR17(4)(e) through (j) are statements required for inclusion in the Company's  
18 notice to customers, including that customers may examine the Company's  
19 application at its offices, at the Commission's offices, or on its website. The  
20 statements include instructions for submittal of comments to the Commission and  
21 that the rates are only proposed and could be changed by the Commission, as well  
22 as instructions for intervention. As evidenced by the Company's Notice,  
23 Attachment JLK-1, these various statements are included.



**III. RETAIL ELECTRIC RATE SCHEDULES AND RIDERS**

**A. RATE DESIGN AND MAJOR RETAIL ELECTRIC RATE SCHEDULES**

1 **Q. HOW DID YOU DESIGN THE VARIOUS RATE SCHEDULES IN THIS**  
2 **CASE?**

3 A. I used the cost of service information provided by Duke Energy Kentucky witness  
4 James E. Ziolkowski as a basis for the rate design. As more fully described in his  
5 testimony, the cost of service information provided for the allocation of costs to the  
6 various classes, separation of customer and demand components of cost, and further  
7 reduced subsidy/excess revenue by 5 percent.

8 **Q. PLEASE DESCRIBE ANY OTHER CONSIDERATIONS THAT GUIDED**  
9 **YOUR RATE DESIGN.**

10 A. First, Duke Energy Kentucky supports the general concept that rates charged to core  
11 markets, which includes customers in the residential, commercial, industrial and other  
12 public authority classes, should approximate the cost of providing these customers  
13 with service. This is because it is intrinsically fair that customers should pay rates that  
14 reflect the cost that the utility incurs to provide the service. Duke Energy Kentucky's  
15 proposed rates in this case make reasonable movement toward reflecting the cost of  
16 service developed and sponsored by Mr. Ziolkowski.

17 **Q. WHAT ARE THE COMPANY'S MAJOR RETAIL ELECTRIC RATE**  
18 **SCHEDULES?**

19 A. The Company's major retail electric rate schedules include: Rate RS - Residential  
20 Service (Rate RS); Rate DS – Service at Secondary Distribution Voltage (Rate DS);  
21 Rate DP – Service at Primary Distribution Voltage (Rate DP); Rate DT - Time of

1 Day Rate for Service at Distribution Voltage (Rate DT); and Rate TT – Time of  
2 Day Rate for Service at Transmission Voltage (Rate TT). Together, these rate  
3 schedules comprise a substantial portion of the Company’s retail electric revenue  
4 requirement.

5 **Q. PLEASE DESCRIBE THE COMPANY’S RATE DESIGN OBJECTIVES**  
6 **FOR RATES RS, DS, DP, DT, AND TT.**

7 A. Given the overall percentage increase in this case, our rate design objectives for  
8 these rate schedules (hereinafter referred to as “power rate schedules” or “power  
9 rates”) are to first, generally increase the rates to maintain a similar structure that  
10 minimizes impacts to the class of customers. Aside from this, there are no  
11 significant structural changes to the power rates. Due to the anticipated future  
12 replacement of the Company’s billing system, we have chosen to not seek  
13 implementation of any significant rate design changes in this case.

14 **Q. WHAT ARE THE PROPOSED CUSTOMER CHARGES?**

15 A. The proposed customer charge for each power rate is as follows: for Rate RS,  
16 \$14.00; for Rate DS single phase service, \$15.00; for Rate DS three phase service,  
17 \$30.00; for Rate DP, \$117.00; for Rate DT single phase service, \$65.00; for Rate  
18 DT three phase service, \$130.00; for Rate DT primary service, \$138.00; and for  
19 Rate TT, \$500.00. WP FR-16(7)(v) sets forth the customer-related costs of  
20 providing service to the various customer classes. This information was obtained  
21 from the functional cost of service study provided by Mr. Ziolkowski. Attachment  
22 JLK-2 shows the Company’s proposed residential customer charge in comparison  
23 to other Kentucky utility residential customer charges. The Company proposes to

1 move toward the customer charges computed from the functional cost of service  
2 study while leaving the Rate DP and Rate TT customer charges unchanged. This  
3 movement better aligns the recovery of customer related costs with the fixed nature  
4 of these costs resulting in a better price signal to customers.

5 **Q. HAVE YOU PREPARED RATE SCHEDULES FOR THE POWER RATES?**

6 A. Yes. Again, there are no significant structural changes. The design objective of the  
7 power rates was to collect the revenue requirement while maintaining the existing  
8 structural characteristics of the rate schedules. More information can be found on  
9 Schedule L.

**B. LIGHTING RATES**

10 **Q. WHAT CHANGES TO THE COMPANY'S STREET LIGHTING RATES**  
11 **ARE BEING REQUESTED AS PART OF THIS PROCEEDING?**

12 A. Duke Energy Kentucky is proposing an increase in street lighting rates to recover  
13 revenues allocated by the cost of service study. In addition, the Company is  
14 proposing significant changes to Rate LED such that the rate will be based on the  
15 sum of various components including new components not previously included in  
16 Rate LED costs.

17 **Q. PLEASE DESCRIBE DUKE ENERGY KENTUCKY'S CHANGES TO**  
18 **EXISTING STREET LIGHTING RATES.**

19 A. Duke Energy Kentucky proposes to increase the current street lighting rates by the  
20 overall percent increase allocated to street lighting customers.

1 **Q. PLEASE DESCRIBE DUKE ENERGY KENTUCKY'S PROPOSED**  
2 **CHANGES TO THE LED STREET LIGHTING TARIFF.**

3 A. Rate LED provides customers with a variety of LED street and area lighting  
4 options. The charges for these existing options received the same overall percent  
5 increase as the other street lighting rates. Since LED lighting options are rapidly  
6 changing, the current list of options will be expanded to provide customers with  
7 desired fixtures and poles. In addition, new categories of charges for the type of  
8 pole foundation, brackets and wiring equipment are added. This will allow for  
9 thousands of options as customers can combine the components in a wide variety  
10 of ways.

11 **Q. WERE THE COSTS FOR THESE NEW OPTIONS INCLUDED IN THE**  
12 **ORIGINAL FIXTURE AND POLE RATES FOR RATE LED?**

13 A. No. The original rates did not include the costs for pole foundations, brackets or  
14 wiring equipment, such that these costs would not be recovered, nor could the  
15 Company offer new options not provided through the rate schedule absent the  
16 proposed changes to Rate LED.

**C. NEW TARIFFS**

17 **Q. PLEASE DESCRIBE DUKE ENERGY KENTUCKY'S PROPOSED GREEN**  
18 **SOURCE ADVANTAGE TARIFF.**

19 A. As more fully explained by Duke Energy Kentucky witness Andrew S. Ritch, the  
20 Green Source Advantage Tariff will allow customers to contribute to the  
21 development of a specific renewable resource. The Company will enter into  
22 purchased power agreements (PPA) with renewable energy project developers.

1 Participating customers will then enter into a service contract with Duke Energy  
2 Kentucky for the same terms/conditions as the PPA, with the customer receiving  
3 the benefits and costs, including the value of any RECS created under their program  
4 contract.

#### IV. OTHER TARIFF CHANGES

5 **Q. WHAT OTHER TARIFF CHANGES IS THE COMPANY PROPOSING IN**  
6 **THIS CASE?**

7 A. Duke Energy Kentucky is proposing several changes to its various tariffs, including  
8 changes to its cogeneration tariffs for qualifying facilities less than or equal to 100  
9 kW and qualifying facilities greater than 100 kW, Distribution Pole Attachments  
10 (Rate DPA), Profit Sharing Mechanism (Rider PSM) and Real Time Pricing (Rate  
11 RTP).

12 **Q. PLEASE DESCRIBE THE CHANGES THE COMPANY IS PROPOSING**  
13 **TO ITS COGENERATION AND SMALL POWER PRODUCTION**  
14 **SALE AND PURCHASE - 100 KW OR LESS TARIFF.**

15 A. The Company is revising the Cogeneration and Small Power Production Sale and  
16 Purchase Tariff– 100 kW or Less tariff schedule (referred to as the QF Small Tariff)  
17 to be consistent with 807 KAR 5:054 and to comply with 807 KAR 5:054, Section  
18 5 to provide avoided cost data every two years. Attachment JLK-3 shows the  
19 derivation of the avoided costs for both energy and demand. More specifically, the  
20 Company revises the Energy Purchase Rate for all kWh delivered. This rate  
21 represents avoided energy cost equal to a two-year average PJM Locational  
22 Marginal Price (LMP) at the Duke Energy Kentucky node. The Company was given

1 permission to recover these required energy purchases through the FAC as an  
2 economy energy purchase in Case No. 2017-00321. In addition, the Company is  
3 updating the Capacity Purchase Rate to the QF Small Tariff. The new Capacity  
4 Purchase Rate is based on the Company's avoided capacity cost calculated using  
5 data from the Company's 2018 Integrated Resource Plan (IRP).

6 **Q. PLEASE DESCRIBE THE CHANGES THE COMPANY IS PROPOSING**  
7 **TO ITS COGENERATION AND SMALL POWER PRODUCTION**  
8 **SALE AND PURCHASE – GREATER THAN 100 KW TARIFF.**

9 A. The Company is revising the Cogeneration and Small Power Production Sale and  
10 Purchase Tariff – Greater Than 100 kW (referred to as the QF Large Tariff) to be  
11 consistent with 807 KAR 5:054 and to comply with 807 KAR 5:054, Section 5 as  
12 described above. More specifically, the Company maintains the Energy Purchase  
13 Rate to be the PJM Real-Time LMP at the Duke Energy Kentucky Aggregate price  
14 node for all kWh delivered. The Company was given permission to recover  
15 revenues for these energy purchases through the FAC in Case No. 2017-00321. In  
16 addition, the Company is updating the Capacity Purchase Rate to the QF Large  
17 Tariff. The new Capacity Purchase Rate is based on the Company's avoided  
18 capacity cost calculated using data from the Company's 2018 IRP.

19 **Q. PLEASE DESCRIBE THE CHANGES DUKE ENERGY KENTUCKY IS**  
20 **PROPOSING TO ITS DPA RATE.**

21 A. The Company is revising the per foot charge in the DPA rate using the  
22 Commission-designated calculation process set forth on September 17, 1982 in  
23 Administrative Case No. 251. Calculations for the new per foot pole attachment

1 charges are presented in attachment JLK-4.

2 **Q. PLEASE DESCRIBE THE CHANGES DUKE ENERGY KENTUCKY IS**  
3 **PROPOSING TO RIDER PSM.**

4 A. Duke Energy Kentucky is proposing Electric Vehicle/Transportation Pilot  
5 Programs, as explained in detail by Company witness Lang Reynolds. In order to  
6 include the net revenues from these pilot programs in Rider PSM as described by  
7 Company witness Sarah E. Lawler the formula in Rider PSM will be revised to  
8 include Net Revenues from EV Charging Stations.

9 **Q. WHAT CHANGES IS DUKE ENERGY KENTUCKY PROPOSING WITH**  
10 **RESPECT TO ITS RATE RTP?**

11 A. Duke Energy Kentucky is not proposing structural changes to Rate RTP. The  
12 Energy Delivery Charge rates are updated using the Company's cost of service  
13 study.

#### V. MISCELLANEOUS CHARGES

14 **Q. IS THE COMPANY PROPOSING TO ADD ANY MISCELLANEOUS**  
15 **CHARGES?**

16 A. Yes. The Company proposes to add a fraud/tamper penalty charge for tampering  
17 with Company equipment. Duke Energy Kentucky Witness Lesley G. Quick  
18 supports this proposal in her direct testimony.

1 **Q. WHAT CHANGES ARE MADE TO THE COMPANY'S CHARGE FOR**  
2 **RECONNECTION OF SERVICE?**

3 A. Duke Energy Kentucky proposes revision to the charges for reconnection of service  
4 as follows.

5 (1) Charges for reconnections that can be accomplished remotely will be  
6 \$5.88.

7 (2) Charges for reconnections that cannot be accomplished remotely will be  
8 \$60.

9 (3) The charge for combined reconnection of gas and electric service will  
10 be eliminated, since there is no cost savings for simultaneous  
11 reconnection of gas and electric service. Separate gas and electric crews  
12 are dispatched for each reconnection.

13 (4) The charge for reconnection at the pole will remain \$125.

14 (5) The incremental charge for reconnection after normal business hours  
15 will be an additional \$40.

16 **Q. WILL ELIMINATING THE CHARGE FOR COMBINED**  
17 **RECONNECTION OF GAS AND ELECTRIC SERVICE AFFECT THE**  
18 **GAS TARIFF AS WELL?**

19 A. Yes. The Company is proposing to delete the provisions regarding combined  
20 reconnection of gas and electric service from KY.P.S.C Gas No. 2, Sheet No. 81.



1 **Q. WHAT INFORMATION IS USED TO SUPPORT THE SERVICE**  
2 **RECONNECTION COSTS?**

3 A. Attachment JLK-5 shows the calculation of the hourly labor rate and management  
4 estimates of processing time.

5 **Q. DESCRIBE THE INFORMATION PRESENTED IN ATTACHMENT JLK-**  
6 **5, CALCULATION OF RECONNECTION FEES.**

7 A. The reconnection fee calculations use a fully loaded labor rate for craft labor and  
8 estimated labor hours to complete reconnection service for non-remote  
9 reconnections when a crew must visit the site. The estimated completion times are  
10 estimated by management based on previous experience. For remote reconnections  
11 the charge is based on the labor for call center personnel who handle the  
12 reconnection remotely and actual average handling times.

13 **Q. ARE YOU PROPOSING TO MAKE A SIMILAR CHANGE TO THE**  
14 **RECONNECTION FEE ASSOCIATED WITH RATE SP?**

15 A. To avoid confusion and possible oversight, the SP tariff will be revised to refer to  
16 the Charge for Reconnection of Service (Sheet No. 91) rather than specifying the  
17 reconnection charge separately.

18 **Q. WHAT CHANGES ARE MADE TO THE COMPANY'S RIDER FOR**  
19 **GENERATION SUPPORT SERVICE (RIDER GSS)?**

20 A. Duke Energy Kentucky is not proposing structural changes to Rider GSS. The  
21 Monthly Distribution Reservation Charge and Monthly Transmission Reservation  
22 Charge are being updated using the Company's cost of service study.

1 **Q. PLEASE EXPLAIN THE CHANGE TO THE COMPANY'S FRANCHISE**  
2 **FEE TARIFF.**

3 A. The change is textual in nature to clarify. The tariff currently contemplates  
4 inclusion of any fee that a local government may impose on the company, not just  
5 a franchise fee. The change is to clarify the title to apply to any local government  
6 fee, and removes the language referring to fees based upon gross receipts as it  
7 relates to franchises. The Company currently has several different fee  
8 arrangements charged by municipalities beyond just those based upon gross  
9 receipts. There are flat fees, pure gross receipts fees, and gross receipt fees that  
10 include caps at a particular dollar amount. The textual change is intended to ensure  
11 there is flexibility for local governments in how they structure the fees they impose.

## VI. CONCLUSION

12 **Q. HOW DOES THE COMPANY PROPOSE THAT ITS TARIFFS,**  
13 **INCLUDING THE PREVIOUSLY DISCUSSED RATES AND CHARGES,**  
14 **BE IMPLEMENTED?**

15 A. We propose that the revised tariff, including the rates and charges complying with  
16 the Commission's order in this Case, be established effective October 3, 2019, for  
17 all customers.

1 Q. WERE SCHEDULES L, L-1, L-2, M, M-2.1 THROUGH M-2.3 AND N AS  
2 WELL AS, FR 16(1)(b)(3), FR 16(1)(b)(4), FR 16(8)(l), FR 16(8)(m) AND FR  
3 16(8)(n), FR 17(4), WP FR-16(7)(V) AND ATTACHMENTS JLK-1, JLK-2,  
4 JLK-3, JLK-4 AND JLK-5, PREPARED BY YOU OR UNDER YOUR  
5 SUPERVISION?

6 A. Yes.

7 Q. IS THE INFORMATION CONTAINED IN THOSE SCHEDULES AND  
8 FILING REQUIREMENTS ACCURATE TO THE BEST OF YOUR  
9 KNOWLEDGE AND BELIEF?

10 A. Yes.

11 Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

12 A. Yes.


VERIFICATION

STATE OF OHIO                    )  
  )  
COUNTY OF HAMILTON        )        SS:

The undersigned, Jeff L. Kern, Lead Rates & Regulatory Strategy Analyst, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of his knowledge, information and belief.

  
\_\_\_\_\_  
Jeff L. Kern, Affiant

Subscribed and sworn to before me by Jeff L. Kern, on this 30<sup>th</sup> day of August, 2019.

  
\_\_\_\_\_  
NOTARY PUBLIC



ADELE M. FRISCH  
Notary Public, State of Ohio  
My Commission Expires 01-05-2024

My Commission Expires: 1/5/2024

**NOTICE**

Duke Energy Kentucky, Inc. ("Duke Energy Kentucky" or "Company") hereby gives notice that, in an application to be filed no sooner than September 3, 2019, Duke Energy Kentucky will be seeking approval by the Public Service Commission, Frankfort, Kentucky of an adjustment of electric rates and charges proposed to become effective on and after October 3, 2019. The Commission has docketed this proceeding as Case No. 2019-00271.

The proposed electric rates are applicable to the following communities:

Alexandria	Elsmere	Ludlow
Bellevue	Erlanger	Melbourne
Boone County	Fairview	Newport
Bromley	Florence	Park Hills
Campbell County	Fort Mitchell	Pendleton County
Cold Spring	Fort Thomas	Ryland Heights
Covington	Fort Wright	Silver Grove
Crescent Park	Grant County	Southgate
Crescent Springs	Highland Heights	Taylor Mill
Crestview	Independence	Union
Crestview Hills	Kenton County	Villa Hills
Crittenden	Kenton Vale	Walton
Dayton	Lakeside Park	Wilder
Dry Ridge	Latonia Lakes	Woodlawn
Edgewood		

**DUKE ENERGY KENTUCKY CURRENT AND PROPOSED ELECTRIC RATES**

**Residential Service - Rate RS**  
**(Electric Tariff Sheet No. 30)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Customer Charge per month	\$11.00	\$14.00
Energy Charge per kWh		
All kWh	7.1650¢	8.4272¢

**Service at Secondary Distribution Voltage-Rate DS**  
**(Electric Tariff Sheet No. 40)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Customer Charge per month		
Single Phase Service	\$17.14	\$15.00
Three Phase Service	\$34.28	\$30.00
Demand Charge per kW		
First 15 kW	\$0.00	\$0.00
Additional kilowatts	\$8.25	\$9.38
Energy Charge per kWh		
First 6,000 kWh	8.0200¢	9.1238¢
Next 300 kWh/kW	4.9232¢	5.6008¢
Additional kWh	4.0317¢	4.5866¢
Non-Church Cap Rate per kWh	23.6915¢	26.9521¢
Church Cap Rate per kWh	14.5445¢	16.5461¢

**Time-of-Day Rate for Service at Distribution Voltage-Rate DT**  
**(Electric Tariff Sheet No. 41)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Customer Charge per month		
Single Phase Service	\$63.50	\$65.00
Three Phase Service	\$127.00	\$130.00
Primary Voltage Service	\$138.00	\$138.00
Demand Charge per kW		
Summer On Peak kW	\$13.78	\$15.45
Summer Off Peak kW	\$1.24	\$1.39
Winter On Peak kW	\$13.04	\$14.62
Winter Off Peak kW	\$1.24	\$1.39
Energy Charge per kWh		
Summer On Peak kWh	4.3450¢	4.8712¢
Summer Off Peak kWh	3.5582¢	3.9890¢
Winter On Peak kWh	4.1479¢	4.6499¢
Winter Off Peak kWh	3.5582¢	3.9890¢
Metering per kW		
First 1,000 kW On Peak	(\$0.70)	(\$0.78)
Additional kW On Peak	(\$0.54)	(\$0.61)

**Optional Rate for Electric Space Heating-Rate EH**  
**(Electric Tariff Sheet No. 42)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Winter Period		
Customer Charge per month		
Single Phase Service	\$17.14	\$15.00
Three Phase Service	\$34.28	\$30.00
Primary Voltage Service	\$117.00	\$117.00
Energy Charge per kWh		
All kWh	6.2202¢	7.0482¢

**Seasonal Sports Service-Rate SP**  
**(Electric Tariff Sheet No. 43)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Customer Charge per month	\$17.14	\$15.00
Energy Charge per kWh	9.6130¢	11.1052¢

**Optional Unmetered General Service Rate**  
**For Small Fixed Loans - Rate GS-FL**  
**(Electric Tariff Sheet No. 44)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
For loads based on a range of 540 to 720 hours use per month of the rated capacity of the connected equipment (per kWh)	8.2708¢	9.3089¢
For loads of less than 540 hours use per month of the rated capacity of the connected equipment (per kWh)	9.5240¢	10.7269¢
Minimum per month	\$2.98	\$3.36

**Service at Primary Distribution Voltage Applicability-Rate DP**  
**(Electric Tariff Sheet No. 45)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Customer Charge per month		
Primary Voltage Service	\$117.00	\$117.00
Demand Charge per kW		
All kW	\$7.92	\$9.02
Energy Charge per kWh		
First 300 kWh/kW	5.1092¢	5.8203¢
Additional kWh	4.3219¢	4.9212¢
Maximum monthly rate per kWh	24.1312¢	27.4836¢
	(excluding the customer charge, electric fuel component charges and DSM Charge)	(excluding the customer charge and all applicable riders).

**Time-of-Day Rate for Service at Transmission Voltage-Rate TT**  
**(Electric Tariff Sheet No. 51)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Customer Charge per month	\$500.00	\$500.00
Demand Charge per kW		
Summer On Peak kW	\$8.07	\$8.75
Summer Off Peak kW	\$1.22	\$1.32
Winter On Peak kW	\$6.62	\$7.18
Winter Off Peak kW	\$1.22	\$1.32
Energy Charge per kWh		
Summer On Peak kWh	4.9051¢	5.3207¢
Summer Off Peak kWh	4.0168¢	4.3571¢
Winter On Peak kWh	4.6826¢	5.0794¢
Winter Off Peak kWh	4.0168¢	4.3571¢

**Rider GSS – Generation Support Service  
(Electric Tariff Sheet No. 58)**

	<u>Current Rate</u>	<u>Proposed Rate</u>
Administrative Charge per month (plus the appropriate Customer Charge)	\$50.00	\$50.00
Monthly Transmission and Distribution Reservation Charge (per kW)		
Rate DS Secondary Distribution	\$4.7126	\$5.6950
Rate DT Distribution Service	\$5.8517	\$7.2281
Rate DP Primary Distribution	\$5.9794	\$7.7448
Rate TT Transmission Service	\$2.6391	\$3.1192

**Street Lighting Service-Rate SL  
(Electric Tariff Sheet No. 60)**

<u>Overhead Distribution Area</u>	<u>Lamp Watts</u>	<u>kW/Unit</u>	<u>Annual kWh</u>	<u>Current Rate/Unit</u>	<u>Proposed Rate/Unit</u>
Standard Fixture (Cobra Head)					
Mercury Vapor					
7,000 lumen	175	0.193	803	\$7.27	\$8.16
7,000 lumen (Open Refractor)	175	0.205	853	\$6.07	\$6.81
10,000 lumen	250	0.275	1,144	\$8.39	\$9.42
21,000 lumen	400	0.430	1,789	\$11.23	\$12.61
Metal Halide					
14,000 lumen	175	0.193	803	\$7.27	\$8.16
20,500 lumen	250	0.275	1,144	\$8.39	\$9.42
36,000 lumen	400	0.430	1,789	\$11.23	\$12.61
Sodium Vapor					
9,500 lumen	100	0.117	487	\$8.04	\$9.03
9,500 lumen (Open Refractor)	100	0.117	487	\$6.04	\$6.78
16,000 lumen	150	0.171	711	\$8.77	\$9.85
22,000 lumen	200	0.228	948	\$11.37	\$12.76
27,500 lumen	250	0.275	948	\$11.37	\$12.76
50,000 lumen	400	0.471	1,959	\$15.28	\$17.15
Decorative Fixtures					
Sodium Vapor					
9,500 lumen (Rectilinear)	100	0.117	487	\$10.00	\$11.23
22,000 lumen (Rectilinear)	200	0.246	1,023	\$12.36	\$13.88
50,000 lumen (Rectilinear)	400	0.471	1,959	\$16.35	\$18.36
50,000 lumen (Setback)	400	0.471	1,959	\$24.31	\$27.29
Spans of Secondary Wiring (per month for each increment of 50 feet of secondary wiring beyond the first 150 feet from the pole)				\$0.53	\$0.60



<u>Underground Distribution Area</u>	<u>Lamp Watts</u>	<u>kW/Unit</u>	<u>Annual kWh</u>	<u>Current Rate/Unit</u>	<u>Proposed Rate/Unit</u>
<b>Standard Fixture (Cobra Head)</b>					
<b>Mercury Vapor</b>					
7,000 lumen	175	0.210	874	\$7.40	\$8.31
7,000 lumen (Open Refractor)	175	0.205	853	\$6.07	\$6.81
10,000 lumen	250	0.292	1,215	\$8.54	\$9.59
21,000 lumen	400	0.460	1,914	\$11.50	\$12.91
<b>Metal Halide</b>					
14,000 lumen	175	0.210	874	\$7.40	\$8.31
20,500 lumen	250	0.292	1,215	\$8.54	\$9.59
36,000 lumen	400	0.460	1,914	\$11.50	\$12.91
<b>Sodium Vapor</b>					
9,500 lumen	100	0.117	487	\$8.04	\$9.03
9,500 lumen (Open Refractor)	100	0.117	487	\$6.12	\$6.87
16,000 lumen	150	0.171	711	\$8.74	\$9.81
22,000 lumen	200	0.228	948	\$11.37	\$12.76
50,000 lumen	400	0.471	1,959	\$15.28	\$17.15
<b>Decorative Fixtures</b>					
<b>Mercury Vapor</b>					
7,000 lumen (Town & Country)	175	0.205	853	\$7.65	\$8.59
7,000 lumen (Holophane)	175	0.210	874	\$9.61	\$10.79
7,000 lumen (Gas Replica)	175	0.210	874	\$21.96	\$24.65
7,000 lumen (Granville)	175	0.205	853	\$7.73	\$8.68
7,000 lumen (Aspen)	175	0.210	874	\$13.91	\$15.62
<b>Metal Halide</b>					
14,000 lumen (Traditionaire)	175	0.205	853	\$7.64	\$8.58
14,000 lumen (Granville Acorn)	175	0.210	874	\$13.91	\$15.62
14,000 lumen (Gas Replica)	175	0.210	874	\$22.04	\$24.74
<b>Sodium Vapor</b>					
9,500 lumen (Town & Country)	100	0.117	487	\$11.17	\$12.54
9,500 lumen (Holophane)	100	0.128	532	\$12.10	\$13.58
9,500 lumen (Rectilinear)	100	0.117	487	\$9.02	\$10.13
9,500 lumen (Gas Replica)	100	0.128	532	\$22.75	\$25.54
9,500 lumen (Aspen)	100	0.128	532	\$14.09	\$15.82
9,500 lumen (Traditionaire)	100	0.117	487	\$11.17	\$12.54
9,500 lumen (Granville Acorn)	100	0.128	532	\$14.09	\$15.82
22,000 lumen (Rectilinear)	200	0.246	1,023	\$12.42	\$13.94
50,000 lumen (Rectilinear)	400	0.471	1,959	\$16.41	\$18.42
50,000 lumen (Setback)	400	0.471	1,959	\$24.31	\$27.29

<u>Pole Charges</u>	<u>Pole Type</u>	<u>Current Rate/Pole</u>	<u>Proposed Rate/Pole</u>
Wood			
17 foot (Wood laminated)	W17	\$4.50	\$5.05
30 foot	W30	\$4.44	\$4.98
35 foot	W35	\$4.50	\$5.05
40 foot	W40	\$5.39	\$6.05
Aluminum			
12 foot (decorative)	A12	\$12.23	\$13.73
28 foot	A28	\$7.09	\$7.96
28 foot (heavy duty)	A28H	\$7.16	\$8.04
30 foot (anchor base)	A30	\$14.16	\$15.90
Fiberglass			
17 foot	F17	\$4.50	\$5.05
12 foot (decorative)	F12	\$13.15	\$14.76
30 foot (bronze)	F30	\$8.56	\$9.61
35 foot (bronze)	F35	\$8.79	\$9.87
Steel			
27 foot (11 gauge)	S27	\$11.56	\$12.98
27 foot (3 gauge)	S27H	\$17.43	\$19.57
Spans of Secondary Wiring (per month for each increment of 25 feet of secondary wiring beyond the first 25 feet from the pole		\$0.77	\$0.86

**Traffic Lighting Service -Rate TL**  
**(Electric Tariff Sheet No. 61)**

	<u>Current Rate</u>	<u>Proposed Rate</u>
Where the Company supplies energy only (per kWh)	3.8903¢	4.3675¢
Where the Company supplies energy from a separately metered source and the Company has agreed to provide limited maintenance for traffic signal equipment (per kWh)	2.1543¢	2.4185¢
Where the Company supplies energy and has agreed to provide limited maintenance for traffic signal equipment (per kWh)	6.0446¢	6.7860¢

**Unmetered Outdoor Lighting Electric Service-Rate UOLS**  
**(Electric Tariff Sheet No. 62)**

	<u>Current Rate</u>	<u>Proposed Rate</u>
Energy Charge per kWh All kWh	3.8305¢	4.3003¢

**LED Outdoor Lighting Electric Service- Rate LED  
(Electric Tariff Sheet No. 64)**

	<u>Current Rate</u>	<u>Proposed Rate</u>
Energy Charge per kWh		
All kWh	3.8305¢	4.3003¢

**Current Rates (Per Unit Per Month)**

<u>Fixtures</u>	<u>Description</u>	<u>Initial Lumens</u>	<u>Lamp Wattage</u>	<u>Monthly kWh</u>	<u>Current Charge</u>		<u>Proposed Charge</u>	
					<u>Fixture</u>	<u>Maint.</u>	<u>Fixture</u>	<u>Maint.</u>
50W Standard LED-BLACK		4,521	50	17	\$4.93	\$4.24	\$5.53	\$4.76
70W Standard LED-BLACK		6,261	70	24	\$4.92	\$4.24	\$5.52	\$4.76
110W Standard LED-BLACK		9,336	110	38	\$5.58	\$4.24	\$6.26	\$4.76
150W Standard LED-BLACK		12,642	150	52	\$7.39	\$4.24	\$8.30	\$4.76
220W Standard LED-BLACK		18,641	220	76	\$8.38	\$5.17	\$9.41	\$5.80
280W Standard LED-BLACK		24,191	280	97	\$10.31	\$5.17	\$11.57	\$5.80
50W Deluxe Acorn LED-BLACK		5,147	50	17	\$14.38	\$4.24	\$16.14	\$4.76
50W Acorn LED-BLACK		5,147	50	17	\$12.96	\$4.24	\$14.55	\$4.76
50W Mini Bell LED-BLACK		4,500	50	17	\$12.22	\$4.24	\$13.72	\$4.76
70W Bell LED-BLACK		5,508	70	24	\$15.56	\$4.24	\$17.47	\$4.76
50W Traditional LED-BLACK		3,230	50	17	\$9.39	\$4.24	\$10.54	\$4.76
50W Open Traditional LED-BLACK		3,230	50	17	\$9.39	\$4.24	\$10.54	\$4.76
50W Enterprise LED-BLACK		3,880	50	17	\$12.62	\$4.24	\$14.17	\$4.76
70W LED Open Deluxe Acorn		6,500	70	24	\$14.02	\$4.24	\$15.74	\$4.76
150W LED Teardrop		12,500	150	52	\$18.83	\$4.24	\$21.14	\$4.76
50W LED Teardrop Pedestrian		4,500	50	17	\$15.28	\$4.24	\$17.15	\$4.76
220W LED Shoebox		18,500	220	76	\$13.04	\$5.17	\$14.64	\$5.80
LED 50W 4521 LUMENS STANDARD LED BLACK TYPE III 4000K		4,521	50	17	\$4.93	\$4.24	Discontinued	
LED 70W 6261 LUMENS STANDARD LED BLACK TYPE III 4000K		6,261	70	24	\$4.92	\$4.24	Discontinued	
LED 110W 9336 LUMENS STNDRD LED BLACK TYPE III 4000K		9,336	110	38	\$5.58	\$4.24	Discontinued	
LED 150W 12642 LUMENS STNDRD LED BLACK TYPE III 4000K		12,642	150	52	\$7.39	\$4.24	Discontinued	
LED 150W 13156 LUMENS STNDRD LED TYPE IV BLACK 4000K		13,156	150	52	\$7.39	\$4.24	Discontinued	
LED 220W 18642 LUMENS STNDRD LED BLACK TYPE III 4000K		18,642	220	76	\$8.38	\$5.17	Discontinued	
LED 280W 24191 LUMENS STNDRD LED BLACK TYPE III 4000K		24,191	280	97	\$10.31	\$5.17	Discontinued	
LED 50W DELUXE ACORN BLACK TYPE III 4000K		5,147	50	17	\$14.38	\$4.24	Discontinued	
LED 70W OPEN DELUXE ACORN BLACK TYPE III 4000K		6,500	70	24	\$14.02	\$4.24	Discontinued	
LED 50W ACORN BLACK TYPE III 4000K		5,147	50	17	\$12.96	\$4.24	Discontinued	
LED 50W MINI BELL LED BLACK TYPE III 4000K MIDWEST		4,500	50	17	\$12.22	\$4.24	Discontinued	
LED 70W 5508 LUMENS SANIBELL BLACK TYPE III 4000K		5,508	70	24	\$15.56	\$4.24	Discontinued	
LED 50W TRADITIONAL BLACK TYPE III 4000K		3,303	50	17	\$9.39	\$4.24	Discontinued	
LED 50W OPEN TRADITIONAL BLACK TYPE III 4000K		3,230	50	17	\$9.39	\$4.24	Discontinued	
LED 50W ENTERPRISE BLACK TYPE III 4000K		3,880	50	17	\$12.62	\$4.24	Discontinued	
LED 150W LARGE TEARDROP BLACK TYPE III 4000K		12,500	150	52	\$18.83	\$4.24	Discontinued	
LED 50W TEARDROP PEDESTRIAN BLACK TYPE III 4000K		4,500	50	17	\$15.28	\$4.24	Discontinued	
LED 220W SHOEBBOX BLACK TYPE IV 4000K		18,500	220	76	\$13.04	\$5.17	Discontinued	
150W Sanibel		39,000	150	52	\$15.56	\$4.24	\$17.47	\$4.76
420W LED Shoebox		39,078	420	146	\$19.46	\$5.17	\$21.85	\$5.80
50W Neighborhood		5,000	50	17	\$4.01	\$4.24	\$4.50	\$4.76
50W Neighborhood with Lens		5,000	50	17	\$4.18	\$4.24	\$4.69	\$4.76
530W LED Shoebox		57,000	530	184	N/A	N/A	\$26.55	\$5.80
150W Clermont LED		12,500	150	52	N/A	N/A	\$25.19	\$4.76
130W Flood LED		14,715	130	45	N/A	N/A	\$8.65	\$4.76
260W Flood LED		32,779	260	90	N/A	N/A	\$13.61	\$4.76
50W Monticello LED		4,157	50	17	N/A	N/A	\$16.82	\$4.76
50W Mitchell Finial		5,678	50	17	N/A	N/A	\$15.95	\$4.76
50W Mitchell Ribs, Bands, and Medallions LED		5,678	50	17	N/A	N/A	\$17.57	\$4.76
50W Mitchell Top Hat LED		5,678	50	17	N/A	N/A	\$15.95	\$4.76
50W Mitchell Top Hat with Ribs, Bands, & Medallions LED		5,678	50	17	N/A	N/A	\$17.57	\$5.80
50W Open Monticello LED		4,157	50	17	N/A	N/A	\$16.75	\$5.80

<u>Poles</u>	<u>Description</u>	<u>Current Charge</u>	<u>Proposed Charge</u>
	12' C-Post Top- Anchor Base-Black	\$9.30	\$10.44
	25' C-Davit Bracket- Anchor Base-Black	\$24.46	\$27.46
	25' C-Boston Harbor Bracket- Anchor Base-Black	\$24.73	\$27.76
	12' E-AL - Anchor Base-Black	\$9.30	\$10.44
	35' AL-Side Mounted-Direct Buried Pole	\$15.74	\$17.67
	30' AL-Side Mounted-Anchor Base	\$12.13	\$13.62
	35' AL-Side Mounted-Anchor Base	\$11.80	\$13.25
	40' AL-Side Mounted-Anchor Base	\$14.59	\$16.38
	30' Class 7 Wood Pole	\$5.77	\$6.48
	35' Class 5 Wood Pole	\$6.27	\$7.04
	40' Class 4 Wood Pole	\$9.44	\$10.60
	45' Class 4 Wood Pole	\$9.79	\$10.99
	20' Galleria Anchor Based Pole	\$8.32	Discontinued
	30' Galleria Anchor Based Pole	\$9.84	Discontinued
	35' Galleria Anchor Based Pole	\$28.29	Discontinued
	MW-Light Pole-12' MH- Style A-Aluminum-Anchor Base-Top Tenon-Black	\$5.64	\$6.33
	MW-Light Pole-Post Top-12' MH- Style A-Alum-Direct Buried-Top Tenon-Black	\$4.83	\$5.42
	Light Pole-15' MH-Style A-Aluminum-Anchor Base-Top Tenon-Black	\$5.80	\$6.51
	Light Pole-15' MH-Style A-Aluminum-Direct Buried-Top Tenon-Black	\$5.02	\$5.64
	Light Pole-20' MH-Style A-Aluminum-Anchor Base-Top Tenon-Black	\$6.08	\$6.83
	Light Pole-20' MH-Style A-Aluminum-Direct Buried-Top Tenon-Black	\$9.32	\$10.46
	Light Pole-25' MH-Style A-Aluminum-Anchor Base-Top Tenon-Black	\$7.21	\$8.09
	Light Pole-25' MH-Style A-Aluminum-Direct Buried-Top Tenon-Black	\$10.39	\$11.66
	Light Pole-30' MH-Style A-Aluminum-Anchor Base-Top Tenon-Black	\$8.52	\$9.56
	Light Pole-30' MH-Style A-Aluminum-Direct Buried-Top Tenon-Black	\$11.56	\$12.98
	Light Pole-35' MH-Style A-Aluminum-Anchor Base-Top Tenon-Black	\$9.84	\$11.05
	Light Pole-35' MH-Style A-Aluminum-Direct Buried-Top Tenon-Black	\$12.49	\$14.02
	MW-Light Pole-12' MH- Style B Aluminum Anchor Base-Top Tenon Black Pri	\$6.87	\$7.71
	MW-Light Pole-12' MH-Style C-Post Top-Alum-Anchor Base-TT-Black Pri	\$9.30	\$10.44
	MW-LT Pole-16' MH-Style C-Davit Bracket-Alum-Anchor Base-TT-Black	\$12.45	Discontinued
	MW-Light Pole-25' MH-Style C-Davit Bracket-Alum-Anchor Base-TT-Black Pri	\$24.46	Discontinued
	MW-LT Pole-16' MH-Style C-Boston Harbor Bracket-AL-AB-TT-Black Pri	\$9.97	\$11.19
	MW-LT Pole-25' MH-Style C-Boston Harbor Bracket-AL-AB-TT-Black Pri	\$24.73	Discontinued
	MW-LT Pole 12 Ft MH Style D Alum Breakaway Anchor Base TT Black Pri	\$9.21	\$10.34
	MW-Light Pole-12' MH-Style E-Alum-Anchor Base-Top Tenon-Black	\$9.30	Discontinued
	MW-Light Pole-12' MH-Style F-Alum-Anchor Base-Top Tenon-Black Pri	\$9.96	\$11.18
	MW-15210-Galleria Anchor Base-20FT Bronze Steel-OLE	\$8.32	Discontinued
	MW-15210-Galleria Anchor Base-30FT Bronze Steel-OLE	\$9.84	Discontinued
	MW-15210-Galleria Anchor Base-35FT Bronze Steel-OLE	\$28.29	Discontinued
	MW-15310-35FT MH Aluminum Direct Embedded Pole-OLE	\$15.74	Discontinued
	MW-15320-30FT Mounting Height Aluminum Achor Base Pole-OLE	\$12.13	Discontinued
	MW-15320-35FT Mounting Height Aluminum Achor Base Pole-OLE	\$11.80	Discontinued
	MW-15320-40FT Mounting Height Aluminum Achor Base Pole-OLE	\$14.59	Discontinued
	MW-POLE-30-7	\$5.77	Discontinued
	MW-POLE-35-5	\$6.27	Discontinued
	MW-POLE-40-4	\$9.44	Discontinued
	MW-POLE-45-4	\$9.79	Discontinued
	15' Style A - Fluted - for Shroud - Aluminum Direct Buried Pole	N/A	\$5.08
	20' Style A - Fluted - for Shroud - Aluminum Direct Buried Pole	N/A	\$5.66
	15' Style A - Smooth - for Shroud - Aluminum Direct Buried Pole	N/A	\$3.35
	20' Style A - Smooth - for Shroud - Aluminum Direct Buried Pole	N/A	\$5.22
	Shroud - Standard Style for anchor base poles	N/A	\$2.45
	Shroud - Style B Pole for smooth and fluted poles	N/A	\$2.30
	Shroud - Style C Pole for smooth and fluted poles	N/A	\$2.21
	Shroud - Style D Pole for smooth and fluted poles	N/A	\$2.38

**Pole Foundation**

<u>Description</u>	<u>Current Charge</u>	<u>Proposed Charge</u>
Flush - Pre-fabricated - Style A Pole	N/A	\$10.33
Flush - Pre-fabricated - Style B Pole	N/A	\$9.31
Flush - Pre-fabricated - Style C Pole	N/A	\$10.94
Flush - Pre-fabricated - Style E Pole	N/A	\$10.33
Flush - Pre-fabricated - Style F Pole	N/A	\$9.31
Flush - Pre-fabricated - Style D Pole	N/A	\$9.07
Reveal - Pre-fabricated - Style A Pole	N/A	\$10.97
Reveal - Pre-fabricated - Style B Pole	N/A	\$11.73
Reveal - Pre-fabricated - Style C Pole	N/A	\$11.72
Reveal - Pre-fabricated - Style D Pole	N/A	\$11.72
Reveal - Pre-fabricated - Style E Pole	N/A	\$11.72
Reveal - Pre-fabricated - Style F Pole	N/A	\$10.25
Screw-in Foundation	N/A	\$5.76

**Brackets**

<u>Description</u>	<u>Current Charge</u>	<u>Proposed Charge</u>
14 inch bracket - wood pole - side mount	N/A	\$1.37
4 foot bracket - wood pole - side mount	N/A	\$1.48
6 foot bracket - wood pole - side mount	N/A	\$1.36
8 foot bracket - wood pole - side mount	N/A	\$2.19
10 foot bracket - wood pole - side mount	N/A	\$4.53
12 foot bracket - wood pole - side mount	N/A	\$3.59
15 foot bracket - wood pole - side mount	N/A	\$4.37
4 foot bracket - metal pole - side mount	N/A	\$5.28
6 foot bracket - metal pole - side mount	N/A	\$5.64
8 foot bracket - metal pole - side mount	N/A	\$5.67
10 foot bracket - metal pole - side mount	N/A	\$5.98
12 foot bracket - metal pole - side mount	N/A	\$6.80
15 foot bracket - metal pole - side mount	N/A	\$6.95
18 inch bracket - metal pole - double Flood Mount - top mount	N/A	\$2.26
14 inch bracket - metal pole - single mount - top tenon	N/A	\$1.62
14 inch bracket - metal pole - double mount - top tenon	N/A	\$2.01
14 inch bracket - metal pole - triple mount - top tenon	N/A	\$2.48
14 inch bracket - metal pole - quad mount - top tenon	N/A	\$2.32
6 foot - metal pole - single - top tenon	N/A	\$2.44
6 foot - metal pole - double - top tenon	N/A	\$3.90
4 foot - Boston Harbor - top tenon	N/A	\$7.94
6 foot - Boston Harbor - top tenon	N/A	\$8.69
12 foot - Boston Harbor Style C pole double mount - top tenon	N/A	\$15.66
4 foot - Davit arm - top tenon	N/A	\$8.44
18 inch - Cobrahead fixture for wood pole	N/A	\$1.20
18 inch - Flood light for wood pole	N/A	\$1.35

**Wiring Equipment**

<u>Description</u>	<u>Current Charge</u>	<u>Proposed Charge</u>
Secondary Pedestal (cost per unit)	N/A	\$2.07
Handhole (cost per unit)	N/A	\$1.72
6AL DUPLEX and Trench (cost per foot)	N/A	\$0.92
6AL DUPLEX and Trench with conduit (cost per foot)	N/A	\$0.96
6AL DUPLEX with existing conduit (cost per foot)	N/A	\$0.89
6AL DUPLEX and Bore with conduit (cost per foot)	N/A	\$1.10
6AL DUPLEX OH wire (cost per foot)	N/A	\$0.88

**Street Lighting Service for Non-Standard Units -Rate NSU**  
**(Electric Tariff Sheet No. 66)**

<b><u>Company Owned</u></b>	<b><u>Lamp Watts</u></b>	<b><u>kW/ Unit</u></b>	<b><u>Annual kW/unit</u></b>	<b><u>Current Rate/Unit</u></b>	<b><u>Proposed Rate/Unit</u></b>
Boulevard units served underground					
a. 2,500 lumen Incandescent – Series	148	0.148	616	\$9.42	\$10.58
b. 2,500 lumen Incandescent – Multiple	189	0.189	786	\$7.32	\$8.22
Holphane Decorative Fixture on 17 foot fiberglass pole served underground with direct buried cable					
a. 10,000 lumen Mercury Vapor	250	0.292	1,215	\$17.16	\$19.26
Each increment of 25 feet of secondary wiring beyond the first 25 feet from the pole base (added to Rate/unit charge)				\$0.77	\$0.86
Street light units served overhead distribution					
a. 2,500 lumen Incandescent	189	0.189	786	\$7.26	\$8.15
b. 2,500 lumen Mercury Vapor	100	0.109	453	\$6.87	\$7.71
c. 21,000 lumen Mercury Vapor	400	0.460	1,914	\$10.89	\$12.23

**Customer Owned**

Steel boulevard units served underground with limited maintenance by Company					
a. 2,500 lumen Incandescent – Series	148	0.148	616	\$5.56	\$6.24
b. 2,500 lumen Incandescent – Multiple	189	0.189	786	\$7.07	\$7.94

**Street Lighting Service-Customer Owned - Rate SC**  
**(Electric Tariff Sheet No. 68)**

<b>Base Rate</b>	<b><u>Lamp Watts</u></b>	<b><u>kW/Unit</u></b>	<b><u>Annual kWh</u></b>	<b><u>Current Rate/Unit</u></b>	<b><u>Proposed Rate/Unit</u></b>
Fixture Description					
Standard Fixture (Cobra Head)					
Mercury Vapor					
7,000 lumen	175	0.193	803	\$4.28	\$4.80
10,000 lumen	250	0.275	1,144	\$5.45	\$6.12
21,000 lumen	400	0.430	1,789	\$7.56	\$8.49
Metal Halide					
14,000 lumen	175	0.193	803	\$4.28	\$4.80
20,500 lumen	250	0.275	1,144	\$5.45	\$6.12
36,000 lumen	400	0.430	1,789	\$7.56	\$8.49
Sodium Vapor					
9,500 lumen	100	0.117	487	\$5.15	\$5.78
16,000 lumen	150	0.171	711	\$5.74	\$6.44
22,000 lumen	200	0.228	948	\$6.31	\$7.08
27,500 lumen	250	0.228	948	\$6.31	\$7.08
50,000 lumen	400	0.471	1,959	\$8.54	\$9.59
Decorative Fixture					
Mercury Vapor					
7,000 lumen (Holophane)	175	0.210	874	\$5.44	\$6.11
7,000 lumen (Town & Country)	175	0.205	853	\$5.39	\$6.05
7,000 lumen (Gas Replica)	175	0.210	874	\$5.44	\$6.11
7,000 lumen (Aspen)	175	0.210	874	\$5.44	\$6.11
Metal Halide					
14,000 lumen (Traditionaire)	175	0.205	853	\$5.39	\$6.05
14,000 lumen (Granville Acorn)	175	0.210	874	\$5.44	\$6.11
14,000 lumen (Gas Replica)	175	0.210	874	\$5.44	\$6.11

Sodium Vapor					
9,500 lumen (Town & Country)	100	0.117	487	\$5.07	\$5.69
9,500 lumen (Traditionaire)	100	0.117	487	\$5.07	\$5.69
9,500 lumen (Granville Acorn)	100	0.128	532	\$5.29	\$5.94
9,500 lumen (Rectilinear)	100	0.117	487	\$5.07	\$5.69
9,500 lumen (Aspen)	100	0.128	532	\$5.29	\$5.94
9,500 lumen (Holophane)	100	0.128	532	\$5.29	\$5.94
9,500 lumen (Gas Replica)	100	0.128	532	\$5.29	\$5.94
22,000 lumen (Rectilinear)	200	0.246	1,023	\$6.68	\$7.50
50,000 lumen (Rectilinear)	400	0.471	1,959	\$8.84	\$9.92

<u>Pole Description</u>	<u>Pole Type</u>	<u>Current Rate/Pole</u>	<u>Proposed Rate/Pole</u>
Wood			
30 foot	W30	\$ 4.44	\$4.98
35 foot	W35	\$ 4.50	\$5.05
40 foot	W40	\$ 5.39	\$6.05

Customer Owned and Maintained Units

Current    Proposed  
per kWh    per kWh

The monthly kilowatt-hour usage will be mutually agreed upon between the Company and the customer. Where the average monthly usage is less than 150 kWh per point of delivery, the customer shall pay the Company, in addition to the monthly charge, the cost of providing electric service on the basis of time and material plus overhead charges. An estimate of the cost will be submitted for approval before work is carried out.

3.8305¢    4.3003¢

**Street-lighting Service-Overhead Equivalent-Rate SE**  
**(Electric Tariff Sheet No. 69)**

<u>Fixture Description</u>	<u>Lamp Watt</u>	<u>kW/Unit</u>	<u>Annual kWh</u>	<u>Current Rate/Unit</u>	<u>Proposed Rate/Unit</u>
<u>Decorative Fixtures</u>					
<u>Mercury Vapor</u>					
7,000 lumen (Town & Country)	175	0.205	853	\$ 7.45	\$8.36
7,000 lumen (Holophane)	175	0.210	874	\$ 7.48	\$8.40
7,000 lumen (Gas Replica)	175	0.210	874	\$ 7.48	\$8.40
7,000 lumen (Aspen)	175	0.210	874	\$ 7.48	\$8.40
<u>Metal Halide</u>					
14,000 lumen (Traditionaire)	175	0.205	853	\$ 7.45	\$8.36
14,000 lumen (Granville Acorn)	175	0.210	874	\$ 7.48	\$8.40
14,000 lumen (Gas Replica)	175	0.210	874	\$ 7.48	\$8.40
<u>Sodium Vapor</u>					
9,500 lumen (Town & Country)	100	0.117	487	\$ 8.12	\$9.12
9,500 lumen (Holophane)	100	0.128	532	\$ 8.23	\$9.24
9,500 lumen (Rectilinear)	100	0.117	487	\$ 8.12	\$9.12
9,500 lumen (Gas Replica)	100	0.128	532	\$ 8.22	\$9.23
9,500 lumen (Aspen)	100	0.128	532	\$ 8.22	\$9.23
9,500 lumen (Traditionaire)	100	0.117	487	\$ 8.12	\$9.12
9,500 lumen (Granville Acorn)	100	0.128	532	\$ 8.22	\$9.23
22,000 lumen (Rectilinear)	200	0.246	1,023	\$11.67	\$13.10
50,000 lumen (Rectilinear)	400	0.471	1,959	\$15.44	\$17.33
50,000 lumen (Setback)	400	0.471	1,959	\$15.44	\$17.33

**Rider PPS – Premier Power Service Rider**  
**(Electric Tariff Sheet No. 70)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Monthly Service Payment	Estimated Levelized Capacity Cost + Estimated Expenses	No Proposed Rate Changes to this Rider

**Rider TS – Temporary Service Rider**  
**(Electric Tariff Sheet No. 71)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
In addition to charges for service furnished under the applicable standard rate:	Estimated unit cost of each service with supporting data to be filed with the Commission and updated annually by the utility	No Proposed Rate Changes to this Rider

**Rider X – Line Extension Policy Rider**  
**(Electric Tariff Sheet No. 72)**

**Current Rate:**

When the estimated cost of extending the distribution lines to reach the customer's premise equals or is less than three (3) times the estimated gross annual revenue the Company will make the extension without additional guarantee by the customer over that applicable in the rate, provided the customer establishes credit in a manner satisfactory to the Company.

When the estimated cost of extending the distribution lines to reach the customer's premise exceeds three (3) times the estimated gross annual revenue, the customer may be required to guarantee, for a period of five (5) years, a monthly bill of one (1) percent of the line extension cost for residential service and two (2) percent for non-residential service.

When the term of service or credit have not been established in a manner satisfactory to the Company, the customer may be required to advance the estimated cost of the line extension in either of the above situations. When such advance is made the Company will refund, at the end of each year, for four (4) years, twenty-five (25) percent of the revenues received in any one year up to twenty-five (25) percent of the advance.

**Proposed Rate:**

There are no proposed rate changes to this rider.

**Rider LM – Load Management Rider**  
**(Electric Tariff Sheet No. 73)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Additional customer charge per installed time-of-use or interval data recorder meter	\$5.00	No Proposed Rate Changes to this Rider

**Rider AMO – Advanced Meter Opt-Out (AMO) - Residential**  
**(Electric Tariff Sheet No. 74)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
One-time fee	\$100.00	No Proposed Rate
Ongoing fee per month	\$25.00	Changes to this Rider



**Rider ESM – Environmental Surcharge Mechanism Rider**  
**(Electric Tariff Sheet No. 76)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Environmental Surcharge Billing Factor (percent applied to total bill)	Adjusted jurisdictional environmental compliance plan revenue requirement / average total monthly revenue	No Proposed Rate Changes to this Rider

**Rider DSMR – Demand Side Management Rate**  
**(Electric Tariff Sheet No. 78)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Home Energy Assistance Program (Residential) per month	\$0.10	
Residential DSMR per kWh	0.7967¢	No Proposed Rate
Non-Residential distribution service DSMR per kWh	0.2576¢	Changes to this Rider
Non-Residential transmission service DSMR per kWh	0.0183¢	

**Rider BDP – Backup Delivery Point Capacity Rider**  
**(Electric Tariff Sheet No. 79)**

**Current Rate:**

1. Connection Fee  
The Connection Fee applies only if an additional metering point is required and will be based on customer's most applicable rate schedule.
2. Monthly charges will be based on the unbundled distribution and/or transmission rates of the customer's most applicable rate schedule and the contracted amount of backup delivery point capacity.
3. The Customer shall also be responsible for the acceleration of costs, if any, that would not have otherwise been incurred by Company absent such request for additional delivery points. The terms of payment may be made initially or over a pre-determined term mutually agreeable to Company and Customers that shall not exceed the minimum term. In each request for service under this Rider, Company engineers will conduct a thorough review of the customer's request and the circuits affected by the request. The customer's capacity needs will be weighed against the capacity available on the circuit, anticipated load growth on the circuit, and any future construction plans that may be advanced by the request.

**Proposed Rate:**

There are no proposed rate changes to this rider.

**Fuel Adjustment Clause - Rider FAC**  
**(Electric Tariff Sheet No. 80)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Fuel Adjustment Clause per kWh	Expense of fuel in second preceding month / sales in the second preceding month - \$0.023837	No Proposed Rate Changes to this Rider

**Rider PSM – Off-System Power Sales and Emission Allowance Sales Profit Sharing Mechanism**  
**(Electric Tariff Sheet No. 82)**

**Current Rate:**

<b><u>Rate Group</u></b>	<b><u>Current Rate</u></b> <b><u>(\$/ kWh)</u></b>	<b><u>Proposed Rate</u></b> <b><u>(\$/kWh)</u></b>
Rate RS, Residential Service	0.000163	
Rate DS, Service at Secondary Distribution Voltage	0.000163	
Rate DP, Service at Primary Distribution Voltage	0.000163	
Rate DT, Time-of-Day Rate for Service at Distribution Voltage	0.000163	
Rate EH, Optional Rate for Electric Space Heating	0.000163	
Rate GS-FL, General Service Rate for Small Fixed Loads	0.000163	No
Rate SP, Seasonal Sports Service	0.000163	Proposed
Rate SL, Street Lighting Service	0.000163	Rate
Rate TL, Traffic Lighting Service	0.000163	Changes
Rate UOLS, Unmetered Outdoor Lighting	0.000163	to this
Rate NSU, Street Lighting Service for Non-Standard Units	0.000163	Rider
Rate SC, Street Lighting Service – Customer Owned	0.000163	
Rate SE, Street Lighting Service – Overhead Equivalent	0.000163	
Rate LED, LED Street Lighting Service	0.000163	
Rate TT, Time-of-Day Rate for Service at Transmission Voltage	0.000163	
Other	0.000163	

**Rider BR - Brown Field Development Rider**  
**(Electric Tariff Sheet No. 85)**

	<b><u>Current Discount</u></b>	<b><u>Proposed Discount</u></b>
Discount to Demand Charge		
First 12 month period	50%	No Proposed Rate
Second 12 month period	40%	Changes to this
Third 12 month period	30%	Rider
Fourth 12 month period	20%	
Fifth 12 month period	10%	

**Rider DIR - Development Incentive Rider**  
**(Electric Tariff Sheet No. 86)**

	<b><u>Current Discount</u></b>	<b><u>Proposed Discount</u></b>
Discount to Total Bill excluding riders	Up to 50% for 1 year	No Proposed Rate Changes to this Rider.

**Rider GP – Duke Energy’s GoGREEN Kentucky**  
**Green Power / Carbon Offset Rider**  
**(Electric Tariff Sheet No. 88)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Green Power rate per 100 kWh block	\$1.00	No Proposed Rate Changes to this Rider

**Rider NM – Net Metering**  
**(Electric Tariff Sheet No. 89)**

**Current Rate:**

AVAILABILITY

Net Metering is available to eligible customer-generators in the Company's service territory, upon request, and on a first-come, first-served basis up to a cumulative capacity of 1% of the Company's single hour peak load in Kentucky during the previous year.

**Proposed Rate:**

There are no proposed rate changes to this rider.

**Bad Check Charge**  
**(Electric Tariff Sheet No. 90)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Bad Check Fee	\$11.00	No Proposed Rate Changes to this Rider

**Charge for Reconnection of Service**  
**(Electric Tariff Sheet No. 91)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Reconnections that can be accomplished remotely	\$3.45	\$5.88
Reconnections that cannot be accomplished remotely	\$75	\$60
Equipment tampering penalty (Residential)	Estimated Energy Used	\$200 + Estimated Energy Used
Equipment tampering penalty (Non-Residential)	Estimated Energy Used	\$1,000 + Estimated Energy Used
Reconnect Gas & Electric at same time	\$88	Discontinued
Reconnection at the pole	\$125	\$125
Reconnection at the pole at same time as Gas Service	\$150	Discontinued
After hours charge	\$25	\$40
Field visit collection charge	\$50	\$60

**Charge for Reconnection of Service**  
**(Gas Tariff Sheet No. 81)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Equipment tampering penalty (Residential)	Estimated Gas Used	\$200 + Estimated Gas Used
Equipment tampering penalty (Non-Residential)	Estimated Gas Used	\$1,000 + Estimated Gas Used
Reconnect Gas & Electric at same time	\$88	Discontinued
Reconnection at the pole at same time as Gas Service	\$150	Discontinued

**Distribution Pole Attachments - Rate DPA**  
**(Electric Tariff Sheet No. 92)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Two-user pole annual rental per foot	\$5.92	\$8.76
Three-user pole annual rental per foot	\$4.95	\$7.40

**Cogeneration and Small Power Production Sale and Purchase – 100 kW or less**  
**(Electric Tariff Sheet No. 93)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Energy Purchase Rate per kWh	2.7645¢	3.2038¢
Capacity Purchase Rate per kW per month	\$3.47	\$4.00

**Cogeneration and Small Power Production Sale and Purchase – Greater than 100 kW**  
**(Electric Tariff Sheet No. 94)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Energy Purchase Rate per kWh	PJM Real-Time Locational Marginal Price	PJM Real-Time Locational Marginal Price
Capacity Purchase Rate per kW per month	\$3.47	\$4.00

**Real Time Pricing Program- Rate RTP**  
**(Electric Tariff Sheet No. 99)**

	<b><u>Current Rate</u></b>	<b><u>Proposed Rate</u></b>
Energy Delivery Charge (Credit) per kWh from Customer Base Load		
Secondary Service	0.9104¢	1.8391¢
Primary Service	0.7850¢	1.5184¢
Transmission Service	0.3576¢	0.6602¢
Program Charge per billing period	\$183.00	\$183.00

Duke Energy Kentucky proposes the following new rate schedule, Rate GSA, Green Source Advantage.

**Rider GSA – Green Source Advantage**  
**(Electric Tariff Sheet No. 87)**

**Proposed Rate:**

An amount computed under the GSA Customer's(s') primary rate schedule including applicable riders plus the sum of (1) the GSA Product Charge, (2) the GSA Bill Credit, and (3) the GSA Administrative Charge.

1. GSA Product Charge – The GSA Product Charge shall be equal to the negotiated price (\$/kWh). The monthly GSA Product Charge shall be determined by multiplying the Negotiated Price times the energy produced by the GSA Facility during the billing period. These funds will be collected by Company and distributed to the renewable energy facility owner.
2. GSA Bill Credit – The GSA Bill Credit is the sum of all PJM credits and charges received by the GSA Facility owner.
3. GSA Monthly Administrative Charge – will be \$375 per bill.

The foregoing rates reflect a proposed increase in electric revenues of approximately \$45,634,448 or 12.54% over current total electric revenues to Duke Energy Kentucky. The estimated amount of increase per customer class is as follows:

	Total Increase (\$)	Total Increase (%)
Rate RS – Residential Service:	\$23,311,832	16.3%
Rate DS – Service at Distribution Voltage	\$11,262,263	10.5%
Rate DT-Time of Day Rate for Service at Distribution Voltage	\$9,171,824	10.1%
Rate EH – Optional Rate for Electric Space Heating	\$75,363	10.6%
Rate SP – Seasonal Sports Service	\$3,757	10.6%
Rate GS-FL – General Service Rate for Small Fixed Loads	\$72,368	10.6%
Rate DP – Service at Primary Distribution Voltage	\$185,391	11.5%
Rate TT, Time-of-Day Rate for Service at Transmission Voltage	\$1,126,489	7.5%
Rate SL – Street Lighting Service	\$164,202	10.7%
Rate TL – Traffic Lighting Service	\$8,903	11.1%
Rate UOLS – Unmetered Outdoor Lighting Electric Service	\$22,269	11.3%
Rate NSU – Street Lighting Service for Non-Standard Units	\$8,450	10.6%
Rate SC – Street Lighting Service – Customer Owned	\$459	11.3%
Rate SE – Street Lighting Service – Overhead Equivalent	\$24,124	10.6%
Rate RTP – Experimental Real Time Pricing Program	\$66,330	10.2%
Interdepartmental	\$7,377	12.5%
Special Contracts	\$2,113	12.5%
Reconnection Charges	\$16,138	35.4%
Rate DPA - Pole and Line Attachments	\$104,796	48.7%

The average monthly bill for each customer class to which the proposed rates will apply will increase approximately as follows:

	Average kWh/Bill	Monthly Increase (\$)	Percent Increase (%)
Rate RS – Residential Service:	941	\$14.88	16.3%
Rate DS – Service at Distribution Voltage	6,963	\$85.43	10.3%
Rate DT-Time of Day Rate for Service at Distribution Voltage	502,259	\$3,511.02	9.9%
Rate EH – Optional Rate for Electric Space Heating	19,383	\$156.21	10.4%
Rate SP – Seasonal Sports Service	1,542	\$20.87	10.1%
Rate GS-FL – General Service Rate for Small Fixed Loads	544	\$6.54	10.1%
Rate DP – Service at Primary Distribution Voltage	164,677	\$2,051.02	11.4%
Rate TT, Time-of-Day Rate for Service at Transmission Voltage	1,478,731	\$8,006.64	7.5%
Rate SL – Street Lighting Service *	78	\$1.21	10.6%
Rate TL – Traffic Lighting Service *	15	\$0.09	10.7%
Rate UOLS – Unmetered Outdoor Lighting Electric Service *	53	\$0.25	11.4%
Rate NSU – Street Lighting Service for Non-Standard Units*	49	\$0.92	10.6%
Rate SC – Street Lighting Service – Customer Owned *	47	\$0.23	11.7%
Rate SE – Street Lighting Service – Overhead Equivalent *	60	\$0.97	10.7%
Rate RTP – Experimental Real Time Pricing Program	201,362	\$1,658.65	8.4%
Interdepartmental	N/A	\$614.75	12.5%
Special Contracts	2,667	\$16.01	12.5%
Reconnection Charges	N/A	\$0.00	0.0%
Rate DPA - Pole and Line Attachments (per attachment)	N/A	\$0.22	48.7%

\*For lighting schedules, values represent average monthly kWh usage per fixture.

The rates contained in this notice are the rates proposed by Duke Energy Kentucky; however, the Kentucky Public Service Commission may order rates to be charged that differ from the proposed rates contained in this notice. Such action may result in rates for consumers other than the rates in this notice.

Any corporation, association, body politic or person with a substantial interest in the matter may, by written request within thirty (30) days after publication of this notice of the proposed rate changes, request leave to intervene; intervention may be granted beyond the thirty (30) day period for good cause shown. Such motion shall be submitted to the Kentucky Public Service Commission, P. O. Box 615, 211 Sower Boulevard, Frankfort, Kentucky 40602-0615, and shall set forth the grounds for the request including the status and interest of the party. If the Commission does not receive a written request for intervention within thirty (30) days of the initial publication the Commission may take final action on the application.

Intervenors may obtain copies of the application and other filings made by the Company by requesting same through email at [DEKInquiries@duke-energy.com](mailto:DEKInquiries@duke-energy.com) or by telephone at (513) 287-4366. A copy of the application and other filings made by the Company is available for public inspection through the Commission's website at <http://psc.ky.gov>, at the Commission's office at 211 Sower Boulevard, Frankfort, Kentucky, Monday through Friday, 8:00 am. To 4:30 p.m., and at the following Company offices: 1262 Cox Road, Erlanger, Kentucky 41018. Comments regarding the application may be submitted to the Public Service Commission through its website, or by mail at the following Commission address.

For further information contact:

PUBLIC SERVICE COMMISSION  
COMMONWEALTH OF KENTUCKY  
P. O. BOX 615  
211 SOWER BOULEVARD  
FRANKFORT, KENTUCKY 40602-0615  
(502) 564-3940

DUKE ENERGY KENTUCKY  
1262 COX ROAD  
ERLANGER, KENTUCKY 41018  
(513) 287-4366

Duke Energy Kentucky  
Residential Customer Charge Comparison  
As of August 2019

	Current Monthly Customer Charge
Jackson Energy Coop	\$24.00
Big Sandy RECC	\$21.25
Grayson Rural Electric Coop	\$21.25
Owen Electric Cooperative	\$20.00
Kenergy	\$18.20
Meade County Rural Electric Coop*	\$17.40
Jackson Purchase Energy Corp	\$16.40
Kentucky Utilities *	\$16.12
Inter-County Energy	\$15.20
Fleming-Mason Energy Coop	\$15.00
Shelby Energy Cooperative Inc.	\$15.00
Farmers Rural Electric	\$14.00
Licking Valley Rural Electric	\$14.00
Kentucky Power	\$14.00
<b>Duke Energy Kentucky - Proposed</b>	<b>\$14.00</b>
Blue Grass RECC	\$13.85
LG&E *	\$13.69
Nolin RECC	\$13.50
South Kentucky RECC	\$12.82
Clark Energy Cooperative	\$12.43
Cumberland Valley Electric	\$12.00
<b>Duke Energy Kentucky - Current</b>	<b>\$11.00</b>
Taylor County Rural Electric Coop Corp	\$9.82
Salt River Electric	\$8.84

Source: KYPSC Website [www.psc.ky.gov](http://www.psc.ky.gov).

\* Daily rate converted to monthly by multiplying by 365 and dividing by 12.

Duke Energy Kentucky  
Cogeneration Avoided Energy Cost  
June 2017 through May 2019

	2017								2018				
	June	July	August	September	October	November	December	January	February	March	April	May	
1	\$26.25	\$30.20	\$26.69	\$20.35	\$20.21	\$30.79	\$26.93	\$71.46	\$22.87	\$28.17	\$22.24	\$27.78	
2	\$29.05	\$32.26	\$25.64	\$19.01	\$25.37	\$30.20	\$27.55	\$92.40	\$32.33	\$33.45	\$32.88	\$32.38	
3	\$24.62	\$30.40	\$30.48	\$19.06	\$32.97	\$27.77	\$22.86	\$108.39	\$26.25	\$27.55	\$37.67	\$33.36	
4	\$22.80	\$28.53	\$23.55	\$16.73	\$28.59	\$21.78	\$22.59	\$88.84	\$23.54	\$26.98	\$74.99	\$27.07	
5	\$22.64	\$29.47	\$21.64	\$22.95	\$33.01	\$20.98	\$24.98	\$108.83	\$27.33	\$31.14	\$43.94	\$25.95	
6	\$22.13	\$27.91	\$20.05	\$20.55	\$32.15	\$32.66	\$30.53	\$161.02	\$33.62	\$32.51	\$34.17	\$25.50	
7	\$21.44	\$25.95	\$22.38	\$20.00	\$28.72	\$31.65	\$33.04	\$98.37	\$27.90	\$32.82	\$37.54	\$40.45	
8	\$23.37	\$24.86	\$23.47	\$21.88	\$26.47	\$32.11	\$32.30	\$123.52	\$28.18	\$40.72	\$33.81	\$36.01	
9	\$25.71	\$22.25	\$27.09	\$21.18	\$32.74	\$27.37	\$27.83	\$40.97	\$26.12	\$36.01	\$39.87	\$39.09	
10	\$22.59	\$30.35	\$24.39	\$21.42	\$29.38	\$31.09	\$24.92	\$27.95	\$22.83	\$27.03	\$32.38	\$36.59	
11	\$18.94	\$26.62	\$24.56	\$23.49	\$26.66	\$33.55	\$24.60	\$22.17	\$22.33	\$26.47	\$29.85	\$38.48	
12	\$32.67	\$26.93	\$29.72	\$26.52	\$28.43	\$29.74	\$28.70	\$24.78	\$25.61	\$50.42	\$28.61	\$28.50	
13	\$28.96	\$28.50	\$25.04	\$28.24	\$26.81	\$34.71	\$50.80	\$42.61	\$22.80	\$34.94	\$29.81	\$28.43	
14	\$29.35	\$29.08	\$26.03	\$28.69	\$31.11	\$29.41	\$39.68	\$108.24	\$20.85	\$38.78	\$33.89	\$73.45	
15	\$28.29	\$25.25	\$31.11	\$29.95	\$30.24	\$32.23	\$55.54	\$109.48	\$20.98	\$31.50	\$32.45	\$72.82	
16	\$30.60	\$26.54	\$28.30	\$32.82	\$27.51	\$29.66	\$51.14	\$113.70	\$22.71	\$28.45	\$39.49	\$36.39	
17	\$27.12	\$34.33	\$30.45	\$31.20	\$25.27	\$26.82	\$27.91	\$128.56	\$27.66	\$36.41	\$41.05	\$40.81	
18	\$27.86	\$39.15	\$31.15	\$35.16	\$26.10	\$25.06	\$23.26	\$76.56	\$21.76	\$28.14	\$41.47	\$27.18	
19	\$29.34	\$66.40	\$29.48	\$37.47	\$23.96	\$23.17	\$21.98	\$43.28	\$26.13	\$30.93	\$36.68	\$31.35	
20	\$22.26	\$59.67	\$30.71	\$72.99	\$23.35	\$25.26	\$25.08	\$24.08	\$24.01	\$49.72	\$35.41	\$44.11	
21	\$24.93	\$42.13	\$30.87	\$124.22	\$22.44	\$26.62	\$26.83	\$21.47	\$25.57	\$44.93	\$35.64	\$35.97	
22	\$27.49	\$30.83	\$30.82	\$45.91	\$23.29	\$25.18	\$25.54	\$19.52	\$24.27	\$31.61	\$24.68	\$34.33	
23	\$27.57	\$28.37	\$25.20	\$46.34	\$27.80	\$22.98	\$22.82	\$22.69	\$23.12	\$26.69	\$32.13	\$36.89	
24	\$23.30	\$26.71	\$23.18	\$42.41	\$27.56	\$21.39	\$21.05	\$32.09	\$25.25	\$24.79	\$36.36	\$48.70	
25	\$19.49	\$29.89	\$25.26	\$60.92	\$26.54	\$20.16	\$21.77	\$40.78	\$22.03	\$22.46	\$30.75	\$60.28	
26	\$20.88	\$37.50	\$21.39	\$52.52	\$26.45	\$23.29	\$32.14	\$29.47	\$25.86	\$27.94	\$28.21	\$24.68	
27	\$22.10	\$36.51	\$21.59	\$45.05	\$25.80	\$25.19	\$53.87	\$27.03	\$25.62	\$38.19	\$21.93	\$30.65	
28	\$18.39	\$27.58	\$22.28	\$27.44	\$25.86	\$24.89	\$64.29	\$24.28	\$23.17	\$31.81	\$24.63	\$38.34	
29	\$26.88	\$22.76	\$22.34	\$22.62	\$25.39	\$24.00	\$33.76	\$28.69		\$22.05	\$30.10	\$80.63	
30	\$27.15	\$32.90	\$26.82	\$22.56	\$28.29	\$23.93	\$30.30	\$37.52		\$21.80	\$48.87	\$47.90	
31		\$33.10	\$23.55		\$34.49		\$38.77	\$42.53		\$22.78		\$88.34	
Average	\$25.14	\$32.03	\$25.98	\$34.66	\$27.52	\$27.12	\$32.04	\$62.62	\$25.02	\$31.85	\$35.05	\$41.05	

	2018								2019				
	June	July	August	September	October	November	December	January	February	March	April	May	
1	\$45.34	\$38.53	\$32.14	\$24.51	\$37.99	\$31.61	\$34.83	\$19.32	\$42.15	\$29.85	\$38.98	\$25.84	
2	\$102.45	\$46.22	\$32.35	\$27.81	\$34.50	\$33.19	\$31.98	\$25.13	\$33.67	\$27.25	\$27.90	\$24.43	
3	\$73.04	\$41.20	\$33.20	\$31.05	\$36.80	\$23.36	\$37.53	\$21.75	\$20.16	\$26.68	\$31.56	\$25.80	
4	\$34.01	\$36.83	\$30.70	\$35.47	\$34.14	\$20.81	\$42.45	\$23.84	\$21.11	\$35.98	\$26.41	\$23.31	
5	\$34.98	\$53.76	\$27.83	\$30.35	\$37.33	\$30.77	\$42.04	\$21.77	\$22.75	\$37.14	\$34.76	\$20.41	
6	\$27.56	\$27.15	\$28.16	\$28.83	\$41.54	\$30.81	\$36.20	\$19.73	\$23.10	\$42.26	\$24.97	\$21.89	
7	\$51.95	\$21.49	\$30.10	\$27.69	\$37.13	\$32.64	\$40.57	\$24.88	\$23.85	\$39.41	\$22.19	\$21.94	
8	\$35.99	\$24.91	\$32.24	\$24.15	\$64.83	\$33.57	\$36.27	\$19.93	\$33.03	\$30.48	\$55.97	\$20.97	
9	\$33.25	\$34.41	\$32.22	\$19.47	\$34.27	\$26.75	\$38.82	\$26.67	\$27.56	\$27.81	\$24.86	\$26.99	
10	\$24.10	\$38.30	\$30.46	\$23.72	\$29.90	\$34.23	\$43.59	\$30.91	\$25.88	\$27.44	\$23.28	\$25.73	
11	\$19.19	\$34.19	\$30.62	\$26.72	\$27.26	\$30.98	\$35.37	\$28.93	\$25.95	\$27.98	\$24.50	\$20.69	
12	\$23.90	\$29.75	\$29.22	\$40.07	\$22.53	\$43.52	\$33.05	\$24.76	\$30.36	\$38.96	\$23.32	\$21.68	
13	\$33.59	\$32.65	\$31.31	\$47.51	\$25.13	\$37.40	\$31.00	\$26.14	\$28.08	\$22.69	\$23.25	\$25.11	
14	\$32.73	\$33.23	\$30.22	\$40.77	\$24.77	\$44.34	\$37.02	\$30.33	\$25.57	\$21.17	\$21.98	\$23.09	
15	\$30.49	\$28.71	\$30.63	\$45.63	\$28.27	\$47.88	\$31.42	\$29.52	\$22.85	\$22.90	\$26.95	\$24.98	
16	\$24.40	\$31.42	\$31.01	\$36.61	\$25.06	\$50.78	\$34.43	\$36.15	\$23.66	\$28.18	\$23.58	\$23.46	
17	\$30.28	\$32.89	\$31.33	\$45.53	\$27.58	\$32.54	\$34.18	\$31.80	\$23.27	\$28.41	\$23.72	\$22.66	
18	\$42.74	\$28.06	\$28.40	\$49.08	\$28.50	\$28.79	\$30.20	\$26.65	\$29.81	\$32.17	\$21.02	\$28.21	
19	\$31.29	\$32.46	\$24.66	\$60.96	\$25.50	\$30.33	\$34.70	\$20.65	\$29.02	\$34.10	\$19.41	\$17.68	
20	\$40.97	\$25.83	\$31.62	\$57.21	\$25.61	\$33.16	\$27.49	\$24.59	\$27.81	\$30.24	\$22.56	\$21.89	
21	\$25.66	\$22.52	\$28.59	\$46.83	\$28.07	\$35.23	\$24.35	\$48.75	\$25.51	\$29.82	\$19.08	\$19.19	
22	\$26.60	\$22.96	\$24.77	\$24.74	\$37.73	\$31.14	\$26.01	\$30.98	\$25.44	\$26.46	\$23.60	\$20.35	
23	\$24.95	\$34.41	\$23.98	\$23.57	\$28.60	\$33.31	\$26.01	\$26.82	\$24.81	\$24.59	\$32.01	\$33.02	
24	\$26.19	\$32.86	\$26.53	\$28.57	\$29.58	\$31.42	\$22.77	\$24.17	\$24.95	\$21.30	\$25.41	\$26.06	
25	\$26.53	\$29.35	\$26.51	\$30.71	\$37.38	\$27.42	\$23.24	\$27.42	\$41.05	\$23.66	\$25.31	\$23.57	
26	\$24.19	\$30.88	\$36.83	\$33.47	\$32.54	\$36.55	\$26.74	\$26.66	\$25.34	\$25.62	\$20.57	\$19.47	
27	\$32.62	\$24.10	\$44.41	\$26.05	\$33.78	\$49.09	\$21.65	\$24.51	\$30.61	\$25.35	\$23.22	\$19.62	
28	\$31.92	\$25.09	\$80.15	\$28.12	\$25.71	\$48.03	\$21.15	\$27.58	\$31.68	\$24.70	\$22.74	\$27.82	
29	\$37.70	\$23.13	\$33.30	\$26.80	\$33.35	\$43.61	\$22.34	\$28.39		\$24.88	\$29.39	\$24.95	
30	\$82.72	\$25.12	\$29.81	\$31.64	\$32.58	\$27.37	\$21.08	\$52.02		\$21.96	\$25.72	\$24.74	
31		\$28.36	\$43.37		\$30.57		\$20.60	\$51.10		\$26.42		\$31.31	
Average	\$37.04	\$31.32	\$32.47	\$34.12	\$32.21	\$34.69	\$31.26	\$28.45	\$27.47	\$28.58	\$26.27	\$23.77	

2 Year Average (\$/mWh)	\$32.038
<b>2 Year Average (\$/kWh)</b>	<b>\$0.032038</b>

Source: Average hourly Locational Marginal Price for the aggregate load buses in the Duke Energy Kentucky service territory published by PJM



**Duke Energy Kentucky  
Avoiced Capacity Cost  
2018 IRP basis**

IRP Base year	<b>2018</b>
Current year	<b>2019</b>

**858 MW CT 7FA (4 unit site)**

Real Discount Rate	<b>5.18%</b>
After-Tax WACC	<b>6.52%</b>
Inflation (Escalation) Rate	<b>2.50%</b>
Nominal LFCR (EOY Convention)	<b>8.47%</b>
Real LFCR (EOY Convention)	<b>7.23%</b>
2018 CT Direct + AFUDC Costs (\$/kW)	<b>\$614.2</b>
2018 Real Annualized Capital Cost (\$/kW-Yr)	<b>\$44.42</b>
2018 Fixed O&M (\$/kW-Yr)	<b>\$3.59</b>

**Total Avoiced Cost (\$/kW-Yr)**

2018	<b>\$48.02</b>
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**Total Avoiced Cost (\$/kW-Mo)**

2018	<b>\$4.00</b>
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**Duke Energy Kentucky**  
Case No. 2019-00271  
CATV Pole Attachment Formula - Administrative Case No. 251  
For Use of Electric Utility Poles  
BASED UPON 2018 FERC FORM 1 DATA

<u>FCC Pole Attachment Rate Formula</u>		<u>Amount</u>				
		35'	40'	45'	Two User	Three User
1	Gross Pole Investment	\$4,729,952	\$15,600,971	\$16,598,071	\$20,330,923	\$32,199,042
2	Pole Depreciation Reserve	\$2,112,081	\$6,966,354	\$7,411,592	\$9,078,435	\$14,377,946
3	Appurtenance Factor	\$325,714	\$1,074,315	\$1,142,978	\$1,400,030	\$2,217,293
4	Accumulated Deferred Taxes (Poles)	(\$446,442)	(\$1,472,515)	(\$1,566,628)	(\$1,918,957)	(\$3,039,143)
5	Net Pole Investment	\$2,171,429	\$7,162,102	\$7,619,851	\$9,333,531	\$14,781,953
6	Number of Poles	6,692	16,849	10,517	23,541	27,366
7	Net Investment Per Bare Pole	\$275.81	\$361.31	\$615.85	\$337.01	\$459.13
8	Pole Maintenance					
	A. Maintenance of Overhead Lines	\$7,798,853	\$7,798,853	\$7,798,853	\$7,798,853	\$7,798,853
	B. Total Investment in Poles, Conductors, Services	\$214,069,802	\$214,069,802	\$214,069,802	\$214,069,802	\$214,069,802
	C. Depreciation Reserve	\$75,841,592	\$75,841,592	\$75,841,592	\$75,841,592	\$75,841,592
	D. Accumulated Deferred Taxes	(\$20,207,626)	(\$20,207,626)	(\$20,207,626)	(\$20,207,626)	(\$20,207,626)
	E. Total Investment in Poles - Net	\$158,435,836	\$158,435,836	\$158,435,836	\$158,435,836	\$158,435,836
	F. Pole Maintenance Ratio	4.92%	4.92%	4.92%	4.92%	4.92%
9	Depreciation	4.55%	4.55%	4.55%	4.55%	4.55%
10	Administration	2.47%	2.47%	2.47%	2.47%	2.47%
11	Taxes (Normalized)	2.46%	2.46%	2.46%	2.46%	2.46%
12	Rate of Return	6.83%	6.83%	6.83%	6.83%	6.83%
13	Total Carrying Charge	21.23%	21.23%	21.23%	21.23%	21.23%
14	Allocated Space				12.24%	7.59%
15	Maximum Rate Per Attachment				<b>\$8.76</b>	<b>\$7.40</b>

Duke Energy Kentucky  
Calculation of Reconnection Fees

Non Remote Reconnection			
Base Labor		\$36.86	
Unproductive	30.0%	\$11.06	Loads on Base - direct labor
Incentives	<u>3.0%</u>	<u>\$1.44</u>	Loads on Base plus Unprod
Subtotal		\$12.50	
Fringes	27.0%		
Payroll Tax	<u>7.7%</u>		
Subtotal	34.6%	\$17.09	Loads on Base plus Unprod plus Incentive
Fleet	27.9%	\$10.27	Loads on Base - direct labor
Loaded Labor w/ Fleet		\$76.72	
Indirects	40.0%	\$30.69	Load on Loaded Labor
Site Supervision			
Engineering	20.9%	\$16.03	Load on Loaded Labor
Setup	0.0%	\$0.00	Load on Loaded Labor
	60.9%		
Total Cost Per Hour		\$123.44	

	Approximate Hours	Cost		Propose
Non-Remote Electric Reconnection	0.50	\$61.72		\$60.00
Pole Reconnection	1.10	\$135.78	Single person crew	\$125.00
Non-Remote After Hours	0.85	\$104.92		\$100.00
Pole Reconnection After Hours	1.70	\$209.84	Two person crew	\$165.00
Collection Charge (Field Visit)	0.50	\$61.72		\$60.00

Remote Reconnection			
Base Labor		\$16.82	
Incentives	4.00%	\$0.67	
Subtotal		\$17.49	
Loadings	41.25%	\$7.22	
Subtotal		\$24.71	
Supervision, Team Leads, Training	22.00%	5.44	
Total Cost per Hour		\$30.15	
Total Cost per Day (8 hours)		241.23	
Paid hours per day	8		
DEMW Base Occupancy	<u>90.67%</u>		
	7.25		
Base Shrinkage	<u>35.34%</u>		
	2.56		
Hours per day handling calls	4.69		
Seconds per hour	3,600		
Seconds per day handling calls	16,884		
Average Handling Time for DNP	403		
Calls per day handled		41	
Total Cost per Call		\$5.88	

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

In the Matter of:

The Electronic Application of Duke )  
Energy Kentucky, Inc., for: 1) An )  
Adjustment of the Electric Rates; 2) ) Case No. 2019-00271  
Approval of New Tariffs; 3) Approval of )  
Accounting Practices to Establish )  
Regulatory Assets and Liabilities; and 4) )  
All Other Required Approvals and Relief. )

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**DIRECT TESTIMONY OF**  
**ZACHARY KUZNAR, PhD**  
**ON BEHALF OF**  
**DUKE ENERGY KENTUCKY, INC.**

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September 3, 2019

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**III. CONCLUSION .....12**

**ATTACHMENT:**

Attachment ZK-1 Work Specifications

## **I. INTRODUCTION AND PURPOSE**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Zachary Kuznar and my business address is 139 East Fourth Street,  
3 Cincinnati, Ohio 45202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Carolinas, LLC (DEC) as Managing Director  
6 Combined Heat & Power (CHP) Microgrid and Energy Storage Development.  
7 DEC is a subsidiary of Duke Energy Corporation (Duke Energy) which provides  
8 various services to Duke Energy Kentucky, Inc. (Duke Energy Kentucky or  
9 Company) and other affiliated companies of Duke Energy.

10 **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND**  
11 **PROFESSIONAL EXPERIENCE.**

12 A. I received a bachelor's degree in Chemical Engineering from Purdue University  
13 in 1999, a Master's Degree in Engineering and Applied Science from Yale  
14 University in 2001 and a PhD in Chemical and Environmental Engineering from  
15 Yale University in 2005. I began my career with GE in 2005, and started with  
16 Duke Energy in 2008. Previous roles at Duke Energy include various roles within  
17 Duke Energy's Fossil/Hydro Generation group, Emerging Technology  
18 Organization and Business Development in the Distributed Generation Group.

1 **Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS MANAGING**  
2 **DIRECTOR CHP MICROGRID AND ENERGY STORAGE**  
3 **DEVELOPMENT.**

4 A. As Managing Director of CHP, Energy Storage and Microgrid Development, my  
5 primary responsibility is to develop and execute business strategies to add  
6 distributed resources to the asset mix within Duke Energy's six regulated,  
7 franchised businesses located in Ohio, Kentucky, Indiana, North Carolina, South  
8 Carolina and Florida.

9 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**  
10 **PUBLIC SERVICE COMMISSION?**

11 A. No.

12 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**  
13 **PROCEEDING?**

14 A. The purpose of my testimony is to discuss the Company's proposal for a battery  
15 storage pilot program on its distribution system in the service territory.

## II. DISCUSSION

16 **Q. PLEASE IDENTIFY THE PROPOSED DISTRIBUTION BATTERY**  
17 **ENERGY STORAGE SYSTEM.**

18 A. Duke Energy Kentucky is proposing an approximate 5.5-Megawatt (MW)  
19 distribution battery energy storage system to be attached to the Company's  
20 distribution system in Edgewood, Kentucky that will provide ancillary services  
21 that will benefit all customers through the PJM Interconnection LLC. (PJM)  
22 frequency regulation market which is the primary application for the deployment

1 of the system. Additionally, the project will be located in an area that is ideal for  
2 enhanced reliability due to the presence of a major hospital. If an outage occurs  
3 on the distribution circuit, the battery will be unable to participate in PJM but will  
4 be able to provide enhanced reliability by operating in island mode, maintaining  
5 power to customers for a period of time. As such, this will not result in any  
6 duplication of facilities or waste. Because this new technology will be attached to  
7 the Company's own distribution system, it will not conflict with or interfere with  
8 any other utility operations. The estimated project cost, as explained below, does  
9 not involve a sufficient capital outlay to materially affect the financial condition  
10 of Duke Energy Kentucky. Therefore, the Company believes that a project such as  
11 this, given its limited size and scope, would constitute an ordinary extension of  
12 the Company's distribution system in the ordinary course.

13 **Q. PLEASE DESCRIBE THE DISTRIBUTION BATTERY TECHNOLOGY**  
14 **INCORPORATED INTO THE COMPANY'S PROPOSAL.**

15 A. This system will incorporate lithium ion batteries, which is the preferred  
16 technology. Specifically, lithium ion batteries are recognized as being reliable,  
17 robust technology suitable for islanding and microgrid applications while also  
18 providing significant generation value in the wholesale electric markets. During  
19 normal grid-tied operation, the system will be used to provide bulk system  
20 benefits in PJM such as frequency regulation. During an outage event, this system  
21 is anticipated to provide approximately 3 hours of backup service to the facilities  
22 on the islanded portion of the distribution circuit.



1 **Q. WHAT IS FREQUENCY REGULATION?**

2 A. Frequency regulation is an ancillary service in the PJM market. Resources  
3 participating in this market are required to adjust their load or generation in  
4 response to a signal provided by PJM in order to maintain the required Area  
5 Control Error (ACE). Per PJM<sup>1</sup>, frequency regulation helps match load to  
6 generation and keep the grid functioning normally by:

- 7 • Maintaining a system frequency of 60 Hertz;
- 8 • Tracking moment-to-moment fluctuations in customer electricity use;
- 9 • Correcting for unintended fluctuations in generation (such as a large  
10 generating unit disconnecting from the system); and
- 11 • Managing differences between forecasted or scheduled power flow  
12 and actual power flow on the system.

13 Once installed, this project is expected to follow PJM's REG D signal that is  
14 designed for fast response resources like the battery storage being proposed,  
15 thereby helping to stabilize the electric grid in a manner that is more efficient than  
16 traditional resources, such as fossil generation.

17 **Q. WHAT IS THE PURPOSE OF AND NEED FOR THIS PROJECT?**

18 A. Energy storage is expected to play an increasingly important role in the electric  
19 system of the future. As more intermittent generation resources are connected to  
20 the grid, the need for ancillary services capable of being provided by battery  
21 storage is expected to increase. This project will give Duke Energy Kentucky

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<sup>1</sup> <https://learn.pjm.com/three-priorities/buying-and-selling-energy/ancillary-services-market/regulation-market.aspx>

1 valuable insight on how to incorporate energy storage into its existing operation to  
2 provide these bulk system benefits to its customers.

3 Battery storage projects can also provide significant value to the  
4 distribution grid through distribution upgrade deferrals, renewables integration,  
5 power quality improvements, and increased reliability for critical loads. To  
6 maximize the value of battery storage projects, they should be located optimally  
7 on the distribution grid to capture additional values. This project will be located  
8 near a major hospital in Edgewood, Kentucky, in order to increase reliability on  
9 that circuit.

10 As costs continue to decline for battery storage projects, Duke Energy  
11 Kentucky anticipates energy storage could be deployed as a routine solution in the  
12 future for Transmission or Distribution upgrades. Now is the time to gain the  
13 operational knowledge necessary to own and operate energy storage assets. The  
14 lessons learned from this project will enable the successful implementation of  
15 future projects.

16 **Q. IS THE COMPANY'S PROPOSED BATTERY STORAGE PROJECT**  
17 **CONSISTENT WITH THE COMPANY'S MOST RECENT INTEGRATED**  
18 **RESOURCE PLAN?**

19 A. Yes. In its most recent Integrated Resource Plan (IRP) filed in Case No. 2018-  
20 00195, the Company discussed the installation of approximately 2 MWs of  
21 battery storage per year beginning in 2019. This project is consistent with the  
22 2018 IRP given that the proposed project, if approved, would be installed in 2020,  
23 which spans the test year in this proceeding.

1 **Q. PLEASE DESCRIBE HOW THE COMPANY WILL CONSTRUCT THE**  
2 **BATTERY STORAGE PROJECT.**

3 A. The project will involve developing, designing, procuring, constructing and  
4 ultimately operating a 5.5 MW battery storage project. After a competitive  
5 procurement process, Duke Energy Kentucky intends on contracting with a  
6 reputable engineering, procurement, and construction firm and procuring the  
7 battery equipment directly from suppliers. Duke Energy Kentucky will oversee  
8 project execution and provide project management, construction oversight, and  
9 environmental health and safety due diligence necessary to dispatch the battery.  
10 Attachment ZK-1 is a copy of the work specifications that will be used in  
11 construction.

12 **Q. HOW WILL DUKE ENERGY KENTUCKY ENGAGE WITH THE**  
13 **LOCAL COMMUNITY RELATED TO THE INSTALLATION OF THIS**  
14 **PROJECT?**

15 A. As with any project, Duke Energy Kentucky regularly meets with local  
16 community leaders, including city managers and/or engineers in advance of  
17 construction work being performed. Duke Energy Kentucky would follow this  
18 same process with this project.

19 **Q. HAS THE COMPANY COMPLETED INITIAL ENGINEERING FOR THE**  
20 **BATTERY STORAGE PROJECT?**

21 A. No. Duke Energy Kentucky's distribution planners and engineering group are  
22 currently working with the hospital to determine the optimal distribution system  
23 location and project size which is expected to be approximately 5.5 MWs and

1 configuration for the battery storage site. Once this is complete, a request for  
2 proposal (RFP) process will be used to ensure construction costs are reasonable.

3 **Q. WILL THE COMPANY NEED ANY SPECIFIC PERMITS FOR**  
4 **CONSTRUCTION OF THE BATTERY STORAGE PROJECT?**

5 A. The Company does not anticipate needing any specific permitting except for local  
6 construction permits that may be required. This project will be directly tied into  
7 the Company's own distribution system at a substation. As I previously stated, the  
8 construction will occur on a Company circuit and within the Company's service  
9 territory. Therefore, it will not impact any other service provided by any other  
10 utility. This project will interconnect to the grid using the standard Duke Energy  
11 Kentucky interconnection process. The project will also require a Wholesale  
12 Market Participation Agreement with PJM in order to participate in the wholesale  
13 markets.

14 **Q. YOU PREVIOUSLY REFERENCED THE PJM MARKET FOR**  
15 **ANCILLARY SERVICES. WILL DUKE ENERGY KENTUCKY'S**  
16 **CUSTOMERS BENEFIT FROM PARTICIPATION IN THAT MARKET?**

17 A. Revenues, if any, realized by Duke Energy Kentucky would offset the costs of the  
18 project in base rates by passing the revenues back to customers through the  
19 Company's rider mechanisms.

20 **Q. WHAT IS THE ESTIMATED ANNUAL VALUE OF BENEFITS FOR THE**  
21 **FREQUENCY REGULATION SERVICES AT PJM?**

22 A. Currently the PJM regulation D market is approximately \$20 per MW each hour.  
23 Using this figure, the estimated annual revenues from the PJM Reg D market for

1 this project would be approximately \$800,000. Actual net revenues will flow  
2 through the Company's rider mechanisms to customers.

3 **Q. HAS THE COMPANY SELECTED AN EXACT LOCATION FOR THE**  
4 **INSTALLATION OF THE DISTRIBUTION BATTERY TECHNOLOGY?**

5 A. Duke Energy Kentucky plans to install the battery on the Thomas More  
6 distribution circuit that connects to the nearby hospital. Duke Energy Kentucky  
7 and the hospital are evaluating various locations, owned by either party, in order  
8 to determine the optimal placement of this project.

9 **Q. PLEASE IDENTIFY THE ANTICIPATED BENEFITS FOR CUSTOMERS**  
10 **WITH THIS PROJECT INSTALLATION.**

11 A. As discussed above, the battery will provide necessary ancillary services to the  
12 PJM market. In the event of a distribution outage and the battery is unable to  
13 participate in PJM, customers will benefit from increased reliability at the  
14 hospital, which is one of the largest healthcare facilities in the region.  
15 Additionally, customers will benefit from the lessons learned from this project  
16 that will enable future deployments of energy storage projects.

17 **Q. HOW WILL THE BATTERY PROJECT BENEFIT THE HOSPITAL AND**  
18 **OTHER CUSTOMERS?**

19 A. In the event of an outage the battery will enable the hospital to continue to receive  
20 power from the grid and maintain normal operations. The hospital does have  
21 existing back-up generation but, in practice, modifies its normal operations when  
22 not receiving power from the grid and it is relying upon its generation. This  
23 project will provide additional support for the hospital to enable the hospital's

1 normal operations from being interrupted or suspended by outages thereby  
2 benefitting all customers. As I previously mentioned, all customers will be  
3 benefitting from the additional revenues available through the PJM regulation D  
4 market.

5 **Q. WHAT FACTORS WERE RELEVANT TO THE SELECTION OF THIS**  
6 **LOCATION?**

7 A. Distributed assets such as energy storage will be used primarily to provide system  
8 benefits. However, during grid outages, storage can also provide benefits to  
9 certain customers in the form of backup power. The intended location of the  
10 project is such that it enables the hospital to continue operation during circuit  
11 outages and the patients it serves to benefit from the enhanced reliability provided  
12 by the storage project.

13 **Q. WILL THE RELIABILITY OF THIS CIRCUIT BE A FACTOR IN ITS**  
14 **SELECTION FOR THE INITIAL BATTERY STORAGE**  
15 **INSTALLATION?**

16 A. Yes. In order to maximize the opportunity for potential learnings, the Company is  
17 evaluating a number of factors to provide the greatest possible benefit to  
18 customers. The reliability of circuits is a key factor being considered.

19 **Q. PLEASE DISCUSS THE INFORMATION THAT DUKE ENERGY**  
20 **KENTUCKY WILL OBTAIN UNDER THE PILOT.**

21 A. The benefits of this project will give Duke Energy Kentucky critical insight going  
22 forward with regard to energy storage. As technology continues to evolve in the  
23 energy space, as assets continue to become more distributed, and as costs continue

1 to decline for technologies such as energy storage, quantifying the values it can  
2 provide are important for the Company. This pilot project will allow Duke Energy  
3 Kentucky to confirm certain values to the electrical distribution system, such as  
4 distribution asset deferral, resiliency, frequency regulation, integration of  
5 renewables, and voltage support to name a few. It will also allow Duke Energy  
6 Kentucky to gain operational knowledge for these types of systems. The  
7 operational experience and information obtained will be invaluable to future  
8 energy storage deployments and economic modeling.

9 **Q. WHAT IS THE ESTIMATED COST OF THE PROPOSED**  
10 **DISTRIBUTION BATTERY ENERGY STORAGE SYSTEM?**

11 A. The Company's forecast supporting the test period currently assumes that the  
12 proposed battery energy storage facility will cost approximately \$8.2 million and  
13 will be in-service as of December 31, 2020. As Company witness Ms. Sarah E.  
14 Lawler discusses in her testimony, this results in approximately \$2.4 million of  
15 net plant included in rate base on a 13-month average being included in this  
16 instant case.

17 **Q. IF THE ESTIMATED TOTAL COST OF THE PROJECT IS \$8.2**  
18 **MILLION, WHAT IS THE IMPACT TO THE COMPANY'S TEST YEAR**  
19 **REVENUE REQUIREMENT?**

20 A. As more fully described by Ms. Lawler, the impact to the Company's base  
21 revenue requirement for the forecasted test year in this case associated with the  
22 return on rate base of this project is approximately \$350,000.

1 **Q. WHAT IS THE ESTIMATED ONGOING ANNUAL COST OF**  
2 **OPERATION OF THE BATTERY STORAGE SYSTEM?**

3 A. The estimated annual ongoing cost of operation is approximately \$163,000 per  
4 year. As Ms. Lawler notes in her testimony, these costs have not been included in  
5 the forecasted test period.

6 **Q. IS THE COMPANY REQUESTING APPROVAL OF A CERTIFICATE OF**  
7 **PUBLIC CONVENIENCE AND NECESSITY (CPCN) FOR THIS**  
8 **PROJECT?**

9 A. As I previously mentioned, the Company believes that the project should qualify  
10 as an ordinary extension of the existing system in the ordinary course of business.  
11 The Company has reached this conclusion given the project's size, cost, location  
12 and purpose. The project will not create a wasteful duplication of plant,  
13 equipment or facilities. Battery storage is an emerging technology and its  
14 deployment on the distribution grid for resiliency and enhanced reliability is new  
15 to the current way utilities distribute energy. Because the project will be  
16 connected to Duke Energy Kentucky's own distribution system, it will not  
17 conflict with existing certificates or service of other utilities in the general or  
18 contiguous area. Finally, due to the project's relative size and cost, it does not  
19 involve sufficient capital outlay to materially affect the existing financial  
20 condition of the Company. Nonetheless, if the Commission determines a CPCN is  
21 necessary, then the Company requests the Commission grant CPCN approval with  
22 its application in this case.



1 **Q. WILL DUKE ENERGY KENTUCKY PROVIDE THE COMMISSION**  
2 **WITH ANY ONGOING REPORTING ON THE LEARNINGS GAINED AS**  
3 **PART OF THIS PILOT PROGRAM?**

4 A. Yes. Duke Energy Kentucky will provide the Commission with annual reporting  
5 including but not limited to the following:

- 6 • A summary of all instances in which the battery operated in island  
7 mode providing back up power to the hospital in response to an outage  
8 on the distribution line or otherwise;
- 9 • A quantification of the total ancillary services provided to the grid by  
10 the battery (in both capacity and energy), including what types of  
11 services were provided (spinning reserve, regulation up or down, etc.);
- 12 • A summary of how the battery enhanced economic operations and how  
13 it was beneficial to Duke Energy Kentucky's operational knowledge;  
14 and
- 15 • Operations and maintenance costs.

### III. CONCLUSION

16 **Q. WAS ATTACHMENT ZK-1 PREPARED BY YOU OR AT YOUR**  
17 **DIRECTION AND UNDER YOUR CONTROL?**

18 A. Yes.

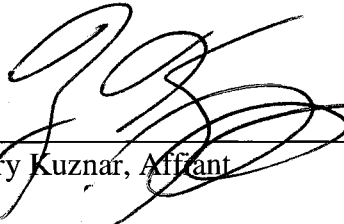
19 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

20 A. Yes.


**VERIFICATION**

STATE OF OHIO                    )  
  )  
COUNTY OF HAMILTON         )     **SS:**

The undersigned, Zachary Kuznar, Managing Director CHP Microgrid & Engineer Storage Development, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of his knowledge, information and belief.

  
\_\_\_\_\_  
Zachary Kuznar, Affiant

Subscribed and sworn to before me by Zachary Kuznar, on this 12 day of August, 2019.

  
\_\_\_\_\_  
NOTARY PUBLIC

My Commission Expires:



**ROCCO O. D'ASCENZO**  
**ATTORNEY AT LAW**  
Notary Public, State of Ohio  
My Commission Has No Expiration  
Section 147.03 R.C.

## **Project Description**

**Project:** Duke Energy Kentucky Battery Energy Storage System Project

**Location:** Kenton County, Kentucky

### **General Notes:**

- This Battery Energy Storage System Engineering, Procurement & Construction Scope is intended to support a project to be built by Duke Energy, as “Owner,” in Kentucky.
- The Battery Energy Storage System will be required to provide service in the state of Kentucky. All labor, materials and equipment provided must meet all federal, state, and local laws and regulations. The Battery Energy Storage System must also be able to meet all applicable Duke Energy operating requirements.
- If approved by the KY PSC Duke Energy will initiate a Request for Proposals (RFP) from qualified contractors to engineer, procure and construct (EPC) a Battery Energy Storage System (BESS). The BESS should have an end-of-life capacity at point-of-interconnection of approximately 5.5 MW / 8 MWH.
- Duke Energy encourages prime suppliers to subcontract with local and diverse suppliers as appropriate. Suppliers are welcome to include in your bid any potential areas local or diverse subs may be used.
- Upon selection of the Contractor, Duke Energy will negotiate the terms and conditions of a Project EPC Agreement that will govern how the Contractor will fulfill the Scope of Work.

❖ **Project Description**

- The project’s preliminary location is near Horsebranch Rd, Edgewood, KY 41017 (Figure 1), additional analysis needs to occur before finalizing this site.
- Duke Energy will seek a fixed purchase for a “turn-key” system that will be fully operational upon commissioning. Duke Energy may also request an optional, multi-year BESS Long Term Service Agreement for the Battery Energy Storage System.



*Figure 1 – Preliminary Interconnection Location*



Figure 2 – Preliminary Site Plan

❖ **Interconnection Facilities**

- Substation Name: Thomas More 134 kV
- Feeder Number: H9321340041
- Point of Interconnection (POI): 39°00'55.9"N 84°33'31.3"W
- Nominal Voltage: 12.47 kV

**System Requirements:**

❖ **Battery Energy Storage System**

- **Power Rating:** 5.5 MW. The system contemplated produces a total of 5.5 MW at the inverter output. The power rating here is approximate and might change based on the final design.
- **Energy Rating:** 8 MWh. The energy rating of the system should be 8 MWh at the POI for 12 years. Contractor is requested to provide the optimal system that meets this requirement with the constraints referenced in the equipment section below. The contractor is requested to provide a beginning of life capacity (BOL Capacity) capable of maintaining a usable capacity of 8 MWh at the POI of the project for 12 years without a need for augmentation.

- **Battery Materials:** Samsung Lithium Ion or comparable technology.
- **PCS Rating:** 5.5 MVA total inverter capacity using two (2) 2.75 MVA SMA SCS 2750EV-US Outdoor rated inverters units or comparable technology
- **PCS Transformer:** to be determined in final design
- **Interconnection Voltage:** 12.47 kV
- **Application:** The primary application is to provide frequency regulation to the PJM market. The secondary application is to serve the St. Elizabeth Medical Center during an outage.

❖ **Switchgear**

- **Pad Mounted Switchgear:** Switchgear shall be sized according to combined equipment ratings of BESS and Solar PV per the final system One Line Diagram.
- **Main Breaker:** Provide voltage sensing on both sides of primary AC breaker. Must be remotely operable.
- **Secondary Breakers:** Provide controllable AC breakers with overcurrent protection and relay-grade metering. Must be remotely operable.
- **Site SCADA Interface:** Provide site SCADA interface for remote monitoring and control of breakers and monitoring of all metered and protection equipment.
- **Interconnection Voltage:** 12.47 kV
- **Load Break Switching and Overcurrent Protection:** Required on all ways.

❖ **Auxiliary Power UPS Systems**

- **UPS Equipment:** All UPS systems needed to power BESS auxiliary loads, communication and control systems, PCS inverters, switchgear operation and Site Control Center equipment shall be included. UPS system duration shall be a minimum of 4 hours. Owner shall not accept an architecture where only one ES inverter satisfies the 4-hour UPS requirement. All ES inverters to have this capability.

❖ **Full System**

- **Warranty Services:** Duke Energy requires that all equipment be warrantied for 2 years. The warranty shall include parts and labor to maintain the system for failure of any piece of equipment supplied by the contractor other than by negligence of the owner or through vandalism. Contractor shall provide the cost of this warranty as part of their proposal.

- **Islanding:** Duke Energy requires that the EPC contractor construct the BESS with Black Start Capability such that the BESS system can successfully island and black start the medium voltage section of the connected circuit.
  
- **SCADA & Site Control:**
  - Owner shall provide local Duke Energy Battery Energy Storage System Controller Hardware and Software necessary for remote operation and control of the Battery Energy Storage System via the Duke Energy Storage Site Controller or “DESC” Subcontractor.
  
  - It is the intention of Duke Energy that a Duke Energy Storage Site Controller (DESC) be the only controller necessary for the operation of the Battery Energy Storage System. Separate contractor-provided controllers will not be acceptable.
  
  - The EPC shall be responsible for installing the fiber optic communication infrastructure between system equipment and Site Control Center.
  
  - DESC Subcontractor shall be responsible for integrating all BESS devices on a common network and shall be responsible for providing complete monitoring and operation of the Battery Energy Storage System including:
    - Controlling active and reactive power setpoint signals in grid connected mode
  
    - Islanding and black start sequence of operation
  
  - The selected EPC and DESC Subcontractor shall collaborate to integrate the system.
  
- **Site Control Center:** A Site Control Center shall be provided by contractor to house all site control equipment.

**COMMONWEALTH OF KENTUCKY**

**BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

The Electronic Application of Duke )  
Energy Kentucky, Inc., for: 1) An )  
Adjustment of the Electric Rates; 2) ) Case No. 2019-00271  
Approval of New Tariffs; 3) Approval of )  
Accounting Practices to Establish )  
Regulatory Assets and Liabilities; and 4) )  
All Other Required Approvals and Relief. )

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**DIRECT TESTIMONY OF**

**SARAH E. LAWLER**

**ON BEHALF OF**

**DUKE ENERGY KENTUCKY, INC.**

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September 3, 2019



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**ATTACHMENT:**

Attachment SEL-1 Rider PSM Template

**I. INTRODUCTION AND PURPOSE**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Sarah E. Lawler, and my business address is 139 East Fourth Street,  
3 Cincinnati, Ohio 45202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Business Services LLC (DEBS) as Director Rates  
6 & Regulatory Planning. DEBS provides various administrative and other services  
7 to Duke Energy Kentucky, Inc., (Duke Energy Kentucky or Company) and other  
8 affiliated companies of Duke Energy Corporation (Duke Energy).

9 **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND**  
10 **PROFESSIONAL EXPERIENCE.**

11 A. I earned a Bachelor of Science in Accountancy from Miami University, Oxford,  
12 Ohio in 1993. I am also a Certified Public Accountant.

13 I began my career in September 1993 with Coopers & Lybrand, L.L.P., as  
14 an audit associate and progressed to a senior audit associate. In August 1997, I  
15 moved to Kendle International Inc., where I held various positions in the  
16 accounting department, ultimately being promoted to Corporate Controller. In  
17 August 2003, I began working for Cinergy Corp., as External Reporting Manager,  
18 where I was responsible for the company's Securities & Exchange Commission  
19 (SEC) filings. In August 2005, I then moved into the role of Manager, Budgets &  
20 Forecasts. In June 2006, following the merger between Cinergy Corp. and Duke  
21 Energy, I became Manager, Financial Forecasting. In February 2015, I was

1 promoted to Utility Strategy Director, Midwest. In December 2017 I began in my  
2 current role as Director, Rates and Regulatory Planning.

3 **Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS DIRECTOR,**  
4 **RATES AND REGULATORY PLANNING.**

5 A. I am responsible for the preparation of financial and accounting data used in retail  
6 rate filings and various other rate recovery mechanisms for Duke Energy Kentucky  
7 and Duke Energy Ohio, Inc.

8 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**  
9 **PUBLIC SERVICE COMMISSION?**

10 A. Yes.

11 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**  
12 **PROCEEDING?**

13 A. I support the revenue requirement proposed by Duke Energy Kentucky. Toward that  
14 end, I support various adjustments to the projected data for the forecasted test period  
15 provided by Duke Energy Kentucky witness, Mr. Christopher Jacobi. I also sponsor  
16 Filing Requirements (FR) 16(6)(b), 16(6)(c), 16(6)(f) and 16(7)(t). I also sponsor the  
17 following schedules: Schedule A in satisfaction of FR 16(8)(a) and Schedule B-1, in  
18 response to FR 16(8)(b); Schedules C-1 through C-2.1 in compliance with FR  
19 16(8)(c); Schedules D-1, D-2.17 through D-2.23, and D-2.25 through D-2.31, in  
20 compliance with FR 16(8)(d); Schedules F-1 through F-7 in compliance with FR  
21 16(8)(f); and Schedules G-1 and H in response to FR 16(8)(g) and FR16((8)(h),  
22 respectively. In addition, I sponsor Attachment SEL-1 attached to my testimony. I  
23 also provide information regarding the proposed rate recovery of the Company's

1 proposed battery storage project and Electric Vehicle (EV) Pilot Program.

**II. TEST PERIOD AND RATE BASE**

2 **Q. WHAT IS THE TEST PERIOD IN THIS PROCEEDING?**

3 A. The Company has elected to use a forecasted test period in this proceeding. The  
4 forecasted test period reflects the twelve months ending March 31, 2021, adjusted  
5 for known and measurable changes, and a base period of twelve months ending  
6 November 30, 2019. The base period consists of six months of actual data,  
7 through May 31, 2019, and the remaining six months consist of forecasted data.

8 **Q. HOW WERE THE RATE BASE AND CAPITALIZATION DETERMINED**  
9 **IN THIS PROCEEDING?**

10 A. The Company determined rate base and capitalization using a thirteen-month  
11 average for the forecasted test period ending March 31, 2021. The base period  
12 rate base and capitalization represent end-of-period balances.

13 **Q. DID THE COMPANY FOLLOW THE COMMISSION'S GUIDELINES IN**  
14 **DEVELOPING THE BASE AND FORECASTED TEST PERIOD DATA?**

15 A. Yes. Per the Commission's rules, 807 KAR 5:001, Section 16(7)(e)(2), "the forecast  
16 contains the same assumptions and methodologies as used in the forecast period for  
17 use by management." As described by Mr. Jacobi, the base and forecasted test  
18 periods were developed using the same methods applied in the Company's annual  
19 budgeting process. The first six months of the base period are actual results and are  
20 taken from the Company's books and records.

**III. FILING REQUIREMENTS SPONSORED BY WITNESS**

1 **Q. PLEASE DESCRIBE FR 16(6)(b).**

2 A. FR 16(6)(b) requires that the forecasted adjustments are limited to the twelve months  
3 immediately following the suspension period.

4 **Q. PLEASE DESCRIBE FR 16(6)(c).**

5 A. FR 16(6)(c) requires that capitalization and net investment rate base are based on  
6 a thirteen-month average for the forecasted test period, in this case, the twelve  
7 months ending March 31, 2021.

8 **Q. PLEASE DESCRIBE FR 16(6)(f)**

9 A. FR 16(6)(f) contains a reconciliation of the capital and rate base used to determine  
10 the revenue requirement in this case.

11 **Q. PLEASE DESCRIBE FR 16(7)(t)**

12 A. FR 16(7)(t) contains a list of all commercially available or in-house developed  
13 computer software, programs, and models used in the development of the schedules  
14 and workpapers associated with the filing of the utility's application.

15 **Q. PLEASE DESCRIBE SCHEDULE A.**

16 A. Schedule A is the overall financial summary for both the base period and the  
17 forecasted period at present rates. Based on the filing in this proceeding, as adjusted,  
18 the Company's electric operations are projected to earn a return on rate base of 3.098  
19 percent for the forecasted test period, which is considerably less than the 6.711  
20 percent return requested in this proceeding. In order to achieve the appropriate return  
21 on rate base, Duke Energy Kentucky's base electric revenues must increase  
22 \$45,634,448 as shown in Schedule A.

1    **Q.    PLEASE DESCRIBE SCHEDULE B-1.**

2    A.    Schedule B-1 is the jurisdictional rate base summary for both the base and  
3        forecasted periods and is supported by various schedules in Section B of the  
4        Company's filing. The plant in service, and reserve for accumulated depreciation  
5        and amortization for the base and forecasted periods were summarized from  
6        Schedules B-2, B-3, and B-3.2 as supported by Company witnesses Ms. Melissa  
7        Abernathy and Mr. Jacobi. The working capital component was summarized from  
8        Schedule B-5, as supported by Mr. Jacobi, and other items of rate base were  
9        obtained from Schedule B-6, as supported by Mr. John R. Panizza and Workpaper  
10       WPF-6a. The jurisdictional electric rate base for the forecast period as contained  
11       in Schedule B-1 is \$946,427,820.

12   **Q.    PLEASE DESCRIBE SCHEDULE C-1.**

13   A.    Schedule C-1 is a jurisdictional operating income summary for the forecasted period  
14        ended March 31, 2021. This schedule includes the operating income summary at  
15        both current and proposed rates. It assumes that the Commission allows the total  
16        amount of the requested electric base revenue increase of \$45,634,448. The adjusted  
17        operating results at current rates were summarized from Schedule C-2 and the  
18        proposed increase was obtained from Schedule M. The revenue at proposed rates  
19        was developed by adding the revenue increase to the operating revenues at current  
20        rates. The related expenses and taxes on the proposed increase were added to the  
21        current adjusted operating results to determine the jurisdictional *pro forma* amounts  
22        and the corresponding rate of return. The rate base as shown on this schedule is  
23        calculated on Schedule B-1.

1 **Q. PLEASE DESCRIBE SCHEDULE C-2.**

2 A. Schedule C-2 is a jurisdictional operating income statement to be used for  
3 ratemaking purposes. In order to develop the forecasted test period that is  
4 appropriate for ratemaking, a two-step process was required. First, as required by  
5 807 KAR 5:001, Section 16(6)(a), it was necessary to show the adjustments  
6 necessary to transform the financial data for the base period into the forecasted  
7 period. Second, it was necessary to adjust the forecasted period data to reflect any  
8 adjustments required to ensure that the revenues and expenses to be recovered in  
9 rates are representative of the expected costs to serve Duke Energy Kentucky  
10 electric customers on an ongoing basis.

11 Schedule C-2 starts with the unadjusted base period and shows the  
12 adjustments required to extend the Company's income statement from the base  
13 period to the forecasted period. The next column on the schedule summarizes the  
14 adjustments to the unadjusted forecasted test period. These adjustments are  
15 described below. Generally, they relate to costs that were not reflected in the  
16 Company's forecasted data, or were reflected in the forecasted data but not allocable  
17 to Duke Energy Kentucky's electric customers, or were made to reflect traditional  
18 ratemaking methodology. The unadjusted operating results are summarized from  
19 Schedule C-2.1. The adjusted amounts include the effects of the adjustments  
20 summarized on Schedule D-1.

1 **Q. PLEASE DESCRIBE SCHEDULE C-2.1.**

2 A. Schedule C-2.1 sets forth the detail of total Company operating results for both the  
3 base and forecasted periods. The operating results as shown in this Schedule C-2.1  
4 are listed by account and are summarized on Schedule C-2.

5 **Q. PLEASE DESCRIBE SCHEDULE D-1.**

6 A. Schedule D-1 is a summary of the detailed adjustments to test period operating  
7 revenues and operating expenses as set forth in Schedules D-2.1 through D-2.31.

8 **Q. WHY ARE ADJUSTMENTS TO THE BASE AND FORECASTED**  
9 **PERIOD INFORMATION NECESSARY?**

10 A. The adjustments shown in Schedules D-2.1 through D-2.15 reflect the normal  
11 budgetary changes that are expected to occur from the base period through the  
12 forecasted period. Schedules D-2.1 through D-2.15, are sponsored by Mr. Jacobi.  
13 The remaining adjustments, shown in Schedules D-2.16 through D-2.31, present  
14 adjustments to the forecasted period data needed to ensure that the correct level of  
15 revenue and expense is included in rates at the proper ongoing level. Some costs,  
16 although reflected in the normal forecasting process, are not recoverable from Duke  
17 Energy Kentucky's electric customers. Other adjustments were made to reflect  
18 traditional ratemaking methodology (*e.g.*, amortizing a regulatory asset to reflect the  
19 Commission's prior orders). The reflection of a proper cost level is necessary to  
20 ensure that customers are not paying for more than the cost of providing service and  
21 to give the Company a reasonable opportunity to earn its authorized return. Ignoring  
22 appropriate adjustments to the test period used for setting rates puts customers at risk  
23 for overpaying for service and puts the Company at risk for potentially under-



1 recovering its ongoing costs. Schedule D-2.16 is sponsored by Mr. Jacobi. Schedule  
2 D-2.24 is sponsored by Ms. Abernathy. Schedules D-2.17 through D-2.23 and D-  
3 2.25 through 2.31 are discussed in my testimony below.

4 **Q. HOW ARE THE TAX EFFECTS OF THESE ADJUSTMENTS SHOWN ON**  
5 **YOUR SCHEDULES?**

6 A. All applicable adjustments to taxes, including taxes other than income taxes and  
7 state and federal income taxes resulting from the adjustments, described below, are  
8 shown for each individual adjustment on Schedule D-1.

9 **Q. PLEASE DESCRIBE SCHEDULE D-2.17.**

10 A. The adjustment in Schedule D-2.17 is to amortize the projected cost of presenting  
11 the instant case. Duke Energy Kentucky proposes to amortize these costs over  
12 five years, which increases test period operating expenses by \$135,335.

13 **Q. PLEASE DESCRIBE SCHEDULE D-2.18.**

14 A. Schedule D-2.18 is an adjustment required to eliminate from base rates, both  
15 revenue and expenses recovered in the Environmental Surcharge Mechanism  
16 (Rider ESM). The effect of the adjustment on electric operations is a decrease in  
17 electric operating revenue of \$30,684,956, a decrease in pre-tax operating  
18 expenses of \$20,751,435 and a decrease in taxes other than income taxes of  
19 \$1,001,304.

20 **Q. PLEASE DESCRIBE SCHEDULE D-2.19.**

21 A. Interest synchronization is used to ensure that the revenue requirement reflects the  
22 appropriate income tax effects for interest expense determined in the weighted-  
23 average cost of capital. Schedule D-2.19 presents the calculation of the state and

1 federal income taxes on the interest cost included in the cost of capital. The  
2 adjustment is calculated by first determining the debt portion of total electric rate  
3 base. The rate base allocated to electric is multiplied by the long-term and short-  
4 term debt percentage of total capital structure.

5 The result is then multiplied by the average cost of long-term and short-  
6 term debt. The sum of these results represents the annualized electric interest cost  
7 deductible for income tax purposes. From this annualized total, we subtract the  
8 forecasted test period electric book interest to determine the electric interest  
9 expense adjustment for income tax purposes. The effect of this adjustment on  
10 electric operations is to increase test period federal income taxes by \$400,342 and  
11 to increase test period state income taxes by \$99,671.

12 **Q. PLEASE DESCRIBE SCHEDULE D-2.20.**

13 A. Revenue and expenses associated with off-system sales are included in the budget  
14 and, consequently, in the forecasted test period. Schedule D-2.20 is intended to  
15 completely exclude all revenue and costs that will flow through the Company's  
16 Profit Sharing Mechanism (Rider PSM) from the calculation of the base rate  
17 revenue requirement. Base Revenue is increased by \$1,442,006 and Other  
18 Revenue is reduced by \$8,241,730 for the revenue flowing through Rider PSM.  
19 Operating expenses are reduced by \$5,961,159 for related expenses flowing  
20 through Rider PSM. Related expenses include fuel, purchased power, reactive  
21 power expense, allocated emission allowance expenses, and other variable  
22 expenses.

1 **Q. PLEASE DESCRIBE SCHEDULE D-2.21.**

2 A. Schedule D-2.21 is an adjustment to add revenue to the forecasted period to  
3 reflect incremental revenue projected to be recovered as a result of the Company's  
4 fraud and meter tampering deterrent proposal as explained in the direct testimony  
5 of Company witness Lesley G. Quick. The effect of the adjustment on electric  
6 operations is an increase in test period operating revenue of \$22,400.

7 **Q. PLEASE DESCRIBE SCHEDULE D-2.22.**

8 A. The adjustment in Schedule D-2.22 eliminates from the forecasted test year  
9 revenue requirement the impact of Demand Side Management (DSM) revenue of  
10 \$8,615,815 and DSM expense of \$7,109,253. The adjustment recognizes that  
11 revenue and expenses associated with the Company's energy efficiency programs  
12 are addressed in its existing Rider DSM.

13 **Q. PLEASE DESCRIBE SCHEDULE D-2.23.**

14 A. Schedule D-2.23 is an adjustment to eliminate miscellaneous expenses such as  
15 community relations, advertising, donations, employee recognition, governmental  
16 affairs, club dues and miscellaneous events expenses from the forecasted test  
17 period. These adjustments were made to comply with the Commission's orders in  
18 prior rate proceedings. The effect of the adjustment on electric operations is a  
19 decrease in pre-tax operating expenses of \$610,544.

20 **Q. PLEASE DESCRIBE SCHEDULE D-2.25.**

21 A. Schedule D-2.25 is an adjustment to eliminate unbilled revenue from the  
22 forecasted test period. The adjustment increases revenue in the forecasted test  
23 period by \$84,858.

1 **Q. PLEASE DESCRIBE SCHEDULE D-2.26.**

2 A. Schedule D-2.26 is an adjustment to reduce operating expense included in the test  
3 period to reflect the amortization of the federal income taxes deferral related to  
4 the Tax Cuts and Jobs Act of 2017, as approved in the Company's most recent  
5 electric base rate case, in Case No. 2017-00321. The adjustment decreases electric  
6 operating expenses in the forecasted test period by \$110,762.

7 **Q. PLEASE DESCRIBE SCHEDULE D-2.27.**

8 A. Schedule D-2.27 is an adjustment to include in the forecasted test period,  
9 amortization of the regulatory asset related to the November 2018 ice storm, for  
10 which the Company was granted deferral authority in Case No. 2018-00416. The  
11 adjustment increases electric operating expense in the forecasted test period by  
12 \$210,211.

13 **Q. PLEASE DESCRIBE SCHEDULE D-2.28.**

14 A. Schedule D-2.28 is an adjustment to eliminate incentive compensation from the  
15 forecasted test period to eliminate a portion of incentive compensation expense  
16 included in the test period related to the achievement of financial goals. The  
17 adjustment removes long-term and short-term incentive compensation included in  
18 the forecasted test period tied to the achievement of financial goals of the  
19 Company. The adjustment also eliminates compensation for Restricted Stock  
20 Units (RSUs), which the Commission has eliminated in the Company's last  
21 electric and gas base rate cases in Cases No. 2017-00321 and 2018-00261. The  
22 RSU component of employee compensation is a fixed percentage of the  
23 employee's salary and, therefore, it is not related to the achievement of the

1 Company's financial goals. Nevertheless, the Company eliminated this expense to  
2 recognize that the Commission has disallowed this expense in prior cases. The  
3 adjustment decreases incentive compensation expense in the forecasted test period  
4 by \$1,580,476.

5 **Q. PLEASE DESCRIBE SCHEDULE D-2.29.**

6 A. Schedule D-2.29 is an adjustment to eliminate pension expense related to  
7 employees who participate in both a defined benefit pension program and a 401K  
8 company match program. This is made to be consistent with Commission rulings  
9 in recent cases, Case No. 2017-00321 and 2018-00261. The adjustment decreases  
10 operating expense in the forecasted test period by \$567,560.

11 **Q. PLEASE DESCRIBE SCHEDULE D-2.30.**

12 A. Schedule D-2.30 is an adjustment to increase test year expense to reflect the fee-  
13 free credit/debit card payment program the Company proposes to offer residential  
14 customers to eliminate convenience fees for credit or debit card payments made  
15 by our customers to our third party pay vendor. This program is discussed in the  
16 direct testimony of Company witness Quick. The effect of the adjustment on  
17 electric operations is an increase in test period operating expenses of \$492,981.

18 **Q. PLEASE DESCRIBE SCHEDULE D-2.31.**

19 A. Schedule D-2.31 is an adjustment for uncollectible expenses. The Company sells  
20 its accounts receivable to an affiliate, Cinergy Receivables, L.L.C. (Cinergy  
21 Receivables) at a discount. The discount is based on a formula that compensates  
22 the purchasing company for the time value of money and reflects Duke Energy  
23 Kentucky's net bad debt expense.

1            Since the short-term debt component of the Company's weighted-average  
2            cost of capital calculation in Schedule J-1 includes the average balance of  
3            receivables at the interest rate being paid to Cinergy Receivables, the adjustment  
4            shown in Schedule D-2.31 ensures that there is no double recovery of the time  
5            value of money in the uncollectible expense. Consequently, the time value of  
6            money component of the discount being charged to Uncollectible Expense  
7            (Account 904) is eliminated from the forecasted test period expenses. The  
8            adjustment reduces test period expenses by \$2,199,572.

9    **Q.    PLEASE DESCRIBE SCHEDULE F-1.**

10   A.    Schedule F-1 sets forth the detail, by account, of Social and Service Club Dues for  
11        both the base and unadjusted forecasted test periods. All amounts are either charged  
12        below the line or have been removed from operating expenses on Schedule D-2.23  
13        and, thus, not included in the forecasted test period revenue requirement.

14   **Q.    PLEASE DESCRIBE SCHEDULE F-2.1.**

15   A.    Schedule F-2.1 sets forth the detail, by account, of Charitable Contributions for both  
16        the base period and unadjusted forecasted test periods. All amounts are charged  
17        below the line and, thus, not included in the forecasted test period revenue  
18        requirement.

19   **Q.    PLEASE DESCRIBE SCHEDULE F-2.2.**

20   A.    Schedule F-2.2 indicates that the Initiation Fees and Country Club expenses for the  
21        base and forecasted test periods are included on Schedule F-1.

22   **Q.    PLEASE DESCRIBE SCHEDULE F-2.3.**

23   A.    Schedule F-2.3 sets forth the detail, by account of Employee Party, Outing, & Gift

1 Expense for both the base and forecasted test periods.

2 **Q. PLEASE DESCRIBE SCHEDULE F-3.**

3 A. Schedule F-3 sets forth the detail, by account, of Customer Service and  
4 Informational Expense, Sales Expense and General Advertising Expense for both  
5 the base and unadjusted forecasted test periods. Advertising costs included in  
6 Account 913 and 930150 have been removed from operating expenses on Schedule  
7 D-2.23 and, thus, not included in the forecasted test period revenue requirement.

8 **Q. PLEASE DESCRIBE SCHEDULE F-4.**

9 A. Schedule F-4 sets forth additional details supporting advertising costs for both the  
10 base and unadjusted forecasted test periods. As noted above, these costs are not  
11 included in the forecasted test period revenue requirement.

12 **Q. PLEASE DESCRIBE SCHEDULE F-5.**

13 A. Schedule F-5 sets forth the detail of Professional Services Expenses for both the  
14 base and forecasted test periods.

15 **Q. PLEASE DESCRIBE SCHEDULE F-6.**

16 A. Schedule F-6, entitled "Rate Case Expense," indicates the estimated expense of  
17 presenting this case. The top half of this schedule details the estimated expense of  
18 this proceeding. Also included is a comparison to the rate case expense in the  
19 Company's last two rate case proceedings. The bottom half of this schedule shows  
20 the amortization over a five-year period. This amount is included in expense through  
21 the adjustment contained in Schedule D-2.17.

22 **Q. PLEASE DESCRIBE SCHEDULE F-7.**

23 A. Schedule F-7 sets forth Civic, Political and Related Expense for both the base and

1 unadjusted forecasted test periods. All amounts are charged below the line and, thus,  
2 not included in the forecasted test period revenue requirement.

3 **Q. PLEASE DESCRIBE SCHEDULE G-1.**

4 A. Schedule G-1 contains a summary of all payroll costs and related benefits and taxes  
5 included in electric Operations & Maintenance (O&M) expense for both the base  
6 and forecasted test periods.

7 **Q. PLEASE DESCRIBE SCHEDULE H.**

8 A. Schedule H, entitled "Computation of Gross Revenue Conversion Factor," (GRCF)  
9 sets forth the calculation of the GRCF. This is the factor, or multiplier, used to gross-  
10 up the operating income deficiency to a revenue deficiency amount. It includes the  
11 Kentucky Public Service Commission assessment, and state and federal income  
12 taxes. The GRCF is included on Schedule A and is used to compute the calculated  
13 revenue deficiency.

**IV. PROPOSED RATE RECOVERY OF BATTERY STORAGE AND  
EV PROJECTS**

14 **Q. HAS THE COMPANY INCLUDED COSTS ASSOCIATED WITH THE  
15 PROPOSED BATTERY STORAGE PROJECT IN THE TEST YEAR  
16 REVENUE REQUIREMENT?**

17 A. As explained in Company witness Zachary Kuznar's testimony, Duke Energy  
18 Kentucky is proposing a battery storage project with total estimated capital costs  
19 of approximately \$8.2 million. Ongoing O&M expenses are expected to be  
20 \$163,000 per year once the asset is in-service.



1 **Q. IF THE ESTIMATED TOTAL CAPITAL COST OF THE PROJECT IS**  
2 **\$8.2 MILLION, WHAT IS THE IMPACT TO THE COMPANY'S TEST**  
3 **YEAR REVENUE REQUIREMENT?**

4 A. The project has been included in the test period of this instant rate case with an  
5 assumed in-service date of December 31, 2020. As I explained earlier, the  
6 Company determined rate base by using a 13-month average for the forecasted  
7 test period ending March 31, 2021. The 13-month average balance of net plant  
8 associated with this project included in rate base is approximately \$2.4 million.  
9 The revenue requirement associated with the return on the 13-month average rate  
10 base and recovery of associated depreciation and property taxes is approximately  
11 \$350,000.

12 **Q. HAS THE COMPANY INCLUDED THE ONGOING O&M EXPENSES IN**  
13 **THE TEST YEAR REVENUE REQUIREMENT?**

14 A. No. Because the Company is not expected to incur these costs until after the test  
15 period in this case, no expenses were included in the forecasted test year.

16 **Q. HAS THE COMPANY INCLUDED COSTS ASSOCIATED WITH THE**  
17 **PROPOSED ELECTRIC VEHICLE (EV) PILOT PROGRAMS IN THE**  
18 **TEST YEAR REVENUE REQUIREMENT?**

19 A. Yes. As explained in Company witness Lang Reynolds' testimony, Duke Energy  
20 Kentucky is proposing EV pilot programs consisting of an EV Fast Charge  
21 Program, Electric Transit Bus Charging Program and three Incentive Programs.  
22 Total capital costs for these programs are projected to be \$1,375,000. Total O&M  
23 costs are expected to be approximately \$1,458,650.

1 **Q. WHAT IS THE IMPACT TO THE COMPANY'S TEST YEAR REVENUE**  
2 **REQUIREMENT OF THIS PILOT PROGRAM?**

3 A. The test period of this instant rate case assumes that each of the five EV Fast  
4 Charging stations and each of the five Electric Transit Bus Charging stations are  
5 placed in-service one per month beginning in June 2020 with all five being placed  
6 in-service by October 2020. As I explained earlier, the Company determined rate  
7 base by using a 13-month average for the forecasted test period ending March 31,  
8 2021. The 13-month average balance of net plant included in rate base is  
9 approximately \$786,000. The revenue requirement associated with the return on  
10 the 13-month average rate base and recovery of associated depreciation and  
11 property taxes is approximately \$145,000.

12 The Company is requesting a deferral for the incremental O&M expenses  
13 associated with the Incentive Programs, the Electric Transit Bus Charging  
14 Program and education and outreach discussed in Mr. Reynolds' testimony. O&M  
15 expenses associated with the Company's EV Fast Charging stations will be  
16 subtracted from any revenues generated at these stations and any net revenues will  
17 be refunded to customers as I discuss below. Therefore, these O&M expenses  
18 have not been included in the forecasted test year revenue requirement in this  
19 case. The Company has not proposed any rate recovery for these incremental  
20 O&M expenses in this case but, assuming the Commission grants the deferral  
21 request, it will seek recovery of any deferred actual incurred costs in a subsequent  
22 rate case.

1 Q. HOW IS THE COMPANY PROPOSING TO TREAT INCREMENTAL  
2 REVENUES ASSOCIATED WITH THE EV CHARGING STATION  
3 PORTION OF THE PILOT?

4 A. As discussed in Mr. Lang's testimony, any margins (revenues less operating  
5 expenses) resulting from the pilot will be included in the Company's Rider PSM  
6 and credited back to customers through that mechanism as shown on SEL-1  
7 Attachment.

V. CONCLUSION

8 Q. WERE FR 16(6)(b), FR 16(6)(c), FR 16(6)(f), AND FR 16(7)(t),  
9 SCHEDULES A, B-1, C-1 THROUGH C-2.1, D-1, D-2.17 THROUGH D-  
10 2.23 AND D-2.25 THROUGH D-2.31, F-1 THROUGH F-7, G-1, H AND  
11 SEL-1 ATTACHMENT PREPARED BY YOU OR UNDER YOUR  
12 DIRECTION AND SUPERVISION?

13 A. Yes.

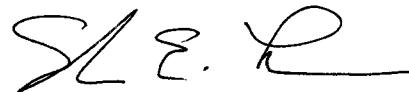
14 Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

15 A. Yes.

**VERIFICATION**

STATE OF OHIO                    )  
  )  
COUNTY OF HAMILTON        )        SS:

The undersigned, Sarah E. Lawler, Director Rates & Regulatory Planning, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of her knowledge, information and belief.



\_\_\_\_\_  
Sarah E. Lawler Affiant

Subscribed and sworn to before me by Sarah E. Lawler on this 30<sup>th</sup> day of August, 2019.



\_\_\_\_\_  
NOTARY PUBLIC

My Commission Expires: July 08, 2022



**E. MINNA ROLFES-ADKINS**  
Notary Public, State of Ohio  
My Commission Expires  
July 8, 2022

Schedule 1

DUKE ENERGY KENTUCKY  
CALCULATION OF RIDER PSM CREDIT FOR XXX - XXX BILLING

Line No.	Description	Total
1	Off-System Sales Margin (Schedule 2, Line 17)	(+) \$ -
2	Non-Fuel Related RTO Costs and Credits (Schedule 3, Line 13)	(+) -
3	Net Capacity Revenue (Expense) (Schedule 4, Line 11)	(+) -
4	Net Proceeds from the Sale of Renewable Energy Credits	(+) -
5	Net Revenues from EV Charging Stations	(+) <u>-</u>
5	Total Amount of Credits Owed to Customers	\$ -
6	Percentage Allocated to Customers (90% of net margin) <sup>(b)</sup>	<u>90.00%</u>
7	Total Allocated to Customers (Line 5 x Line 6)	(+) \$ -
8	Remaining PSM Credit Due to (From) Customers at 12/31/XX (Schedule 5, Line 12)	(+) <u>-</u>
9	Total Amount of Credits due to (from) Customers	(+) \$ -
10	Actual Amount Credited to Customers	(-) <u>-</u>
11	Net Refund due to (from) Customers	\$ -
12	Sales (kWh) from FAC Filing for the current quarter (FAC Schedule 3, Line C)	+ 0
13	Profit Sharing Mechanism Credit Rate (\$/kWh) <sup>(a)</sup>	<u>0.000000</u>

Note:

- (a) Rider PSM credits, reductions to bills, are shown as positive numbers without parentheses. Rider PSM charges, increases to bills, are shown in parentheses.
- (b) Per Commission Order dated April 13, 2018 in Case No. 2017-00321.

Effective Date for Billing: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title: \_\_\_\_\_

Date Submitted: \_\_\_\_\_