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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<td>KRS 278.180</td>
<td>30 days' notice of rates to PSC.</td>
<td>Amy B. Spiller</td>
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<td>1</td>
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<td>807 KAR 5:001 Section 7(1)</td>
<td>The original and 10 copies of application plus copy for anyone named as interested party.</td>
<td>Amy B. Spiller</td>
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| 1      | 3     | 807 KAR 5:001 Section 12(2) | (a) Amount and kinds of stock authorized.
(b) Amount and kinds of stock issued and outstanding.
(c) Terms of preference of preferred stock whether cumulative or participating, or on dividends or assets or otherwise.
(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.
(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.
(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.
(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.
(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.
(i) Detailed income statement and balance sheet. | Christopher M. Jacobi Danielle L. Weatherston |
<p>| 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 |</p>
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<td><strong>807 KAR 5:001</strong>&lt;br&gt;Section 14(3)</td>
<td>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.</td>
<td>Amy B. Spiller</td>
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<td>1</td>
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<td><strong>807 KAR 5:001</strong>&lt;br&gt;Section 14(4)</td>
<td>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.</td>
<td>Amy B. Spiller</td>
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<td><strong>807 KAR 5:001</strong>&lt;br&gt;Section 16 (1)(b)(1)</td>
<td>Reason adjustment is required.</td>
<td>Amy B. Spiller</td>
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<td><strong>807 KAR 5:001</strong>&lt;br&gt;Section 16 (1)(b)(2)</td>
<td>Certified copy of certificate of assumed name required by KRS 365.015 or statement that certificate not necessary.</td>
<td>Amy B. Spiller</td>
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<td>1</td>
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<td><strong>807 KAR 5:001</strong>&lt;br&gt;Section 16 (1)(b)(3)</td>
<td>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.</td>
<td>Jeff L. Kern</td>
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<td>1</td>
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<td><strong>807 KAR 5:001</strong>&lt;br&gt;Section 16 (1)(b)(4)</td>
<td>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.</td>
<td>Jeff L. Kern</td>
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<td>1</td>
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<td><strong>807 KAR 5:001</strong>&lt;br&gt;Section 16 (1)(b)(5)</td>
<td>A statement that notice has been given in compliance with Section 17 of this administrative regulation with a copy of the notice.</td>
<td>Amy B. Spiller</td>
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<td><strong>807 KAR 5:001</strong>&lt;br&gt;Section 16(2)</td>
<td>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.</td>
<td>Amy B. Spiller</td>
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<td><strong>807 KAR 5:001</strong>&lt;br&gt;Section 16(3)</td>
<td>Notice given pursuant to Section 17 of this administrative regulation shall satisfy the requirements of 807 KAR 5:051, Section 2.</td>
<td>Amy B. Spiller</td>
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<td>1</td>
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<td><strong>807 KAR 5:001</strong>&lt;br&gt;Section 16(6)(a)</td>
<td>The financial data for the forecasted period shall be presented in the form of pro forma adjustments to the base period.</td>
<td>Christopher M. Jacobi</td>
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<td><strong>807 KAR 5:001</strong>&lt;br&gt;Section 16(6)(b)</td>
<td>Forecasted adjustments shall be limited to the twelve (12) months immediately following the suspension period.</td>
<td>Sarah E. Lawler, Melissa B. Abernathy, Christopher M. Jacobi</td>
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<td>1</td>
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<td><strong>807 KAR 5:001</strong>&lt;br&gt;Section 16(6)(c)</td>
<td>Capitalization and net investment rate base shall be based on a thirteen (13) month average for the forecasted period.</td>
<td>Sarah E. Lawler</td>
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<td>1</td>
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<td><strong>807 KAR 5:001</strong>&lt;br&gt;Section 16(6)(d)</td>
<td>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.</td>
<td>Christopher M. Jacobi</td>
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<td>807 KAR 5:001 Section 16(6)(e)</td>
<td>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.</td>
<td>Christopher M. Jacobi</td>
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<td>807 KAR 5:001 Section 16(6)(f)</td>
<td>The utility shall provide a reconciliation of the rate base and capital used to determine its revenue requirements.</td>
<td>Sarah E. Lawler</td>
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<td>1</td>
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<td>807 KAR 5:001 Section 16(7)(a)</td>
<td>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.</td>
<td>All Witnesses</td>
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<td>807 KAR 5:001 Section 16(7)(b)</td>
<td>Most recent capital construction budget containing at minimum 3 year forecast of construction expenditures.</td>
<td>Christopher M. Jacobi, James Michael Mosley, Ash M. Norton</td>
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<td>1</td>
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<td>807 KAR 5:001 Section 16(7)(c)</td>
<td>Complete description, which may be in prefilled 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.</td>
<td>Christopher M. Jacobi</td>
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<tr>
<td>1</td>
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<td>807 KAR 5:001 Section 16(7)(d)</td>
<td>Annual and monthly budget for the 12 months preceding filing date, base period and forecasted period.</td>
<td>Christopher M. Jacobi</td>
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<td>1</td>
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<td>807 KAR 5:001 Section 16(7)(e)</td>
<td>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.</td>
<td>Amy B. Spiller</td>
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<td>1</td>
<td>26</td>
<td>807 KAR 5:001 Section 16(7)(f)</td>
<td>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.</td>
<td>Christopher M. Jacobi, James Michael Mosley, Ash M. Norton</td>
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<td>1</td>
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<td>807 KAR 5:001 Section 16(7)(g)</td>
<td>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.</td>
<td>Christopher M. Jacobi, James Michael Mosley, Ash M. Norton</td>
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<td>807 KAR 5:001 Section 16(7)(h)</td>
<td>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.</td>
<td>Christopher M. Jacobi John A. Verderame Benjamin W. B. Passty</td>
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<td>807 KAR 5:001 Section 16(7)(i)</td>
<td>Most recent FERC or FCC audit reports.</td>
<td>Danielle L. Weatherston</td>
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<td>Christopher M. Jacobi</td>
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<td>Most recent FERC Form 1 (electric), FERC Form 2 (gas), or PSC Form T (telephone).</td>
<td>Danielle L. Weatherston</td>
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<td>2</td>
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<td>807 KAR 5:001 Section 16(7)(l)</td>
<td>Annual report to shareholders or members and statistical supplements for the most recent 2 years prior to application filing date.</td>
<td>Christopher M. Jacobi</td>
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<td>Current chart of accounts if more detailed than Uniform System of Accounts charts.</td>
<td>Danielle L. Weatherston</td>
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<td>Latest 12 months of the monthly managerial reports providing financial results of operations in comparison to forecast.</td>
<td>Danielle L. Weatherston</td>
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<td>807 KAR 5:001 Section 16(7)(o)</td>
<td>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.</td>
<td>Danielle L. Weatherston Christopher M. Jacobi</td>
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<td>807 KAR 5:001 Section 16(7)(p)</td>
<td>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.</td>
<td>Danielle L. Weatherston</td>
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<td>807 KAR 5:001 Section 16(7)(q)</td>
<td>Independent auditor’s annual opinion report, with any written communication which indicates the existence of a material weakness in internal controls.</td>
<td>Danielle L. Weatherston</td>
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<td>807 KAR 5:001</td>
<td>Section 16(7)(s)</td>
<td>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.</td>
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<td>807 KAR 5:001</td>
<td>Section 16(7)(t)</td>
<td>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.</td>
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<td>807 KAR 5:001</td>
<td>Section 16(7)(u)</td>
<td>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.</td>
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<td>807 KAR 5:001</td>
<td>Section 16(7)(v)</td>
<td>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.</td>
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<td>807 KAR 5:001</td>
<td>Section 16(7)(w)</td>
<td>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.</td>
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<td>807 KAR 5:001</td>
<td>Section 16(8)(a)</td>
<td>Jurisdictional financial summary for both base and forecasted periods detailing how utility derived amount of requested revenue increase.</td>
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<td>Jurisdictional rate base summary for both base and forecasted periods with supporting schedules which include detailed analyses of each component of the rate base.</td>
<td>Sarah E. Lawler, Melissa B. Abernathy, Christopher M. Jacobi, John R. Panizza, James E. Ziolkowski, Danielle L. Weatherston</td>
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<td>Jurisdictional operating income summary for both base and forecasted periods with supporting schedules which provide breakdowns by major account group and by individual account.</td>
<td>Sarah E. Lawler</td>
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<td>16(8)(d)</td>
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<td>Sarah E. Lawler, Melissa B. Abernathy, Christopher M. Jacobi, James E. Ziolkowski</td>
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<td>16(8)(e)</td>
<td>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.</td>
<td>John R. Panizza</td>
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<td>16(8)(f)</td>
<td>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.</td>
<td>Sarah E. Lawler</td>
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<td>16(8)(g)</td>
<td>Analyses of payroll costs including schedules for wages and salaries, employee benefits, payroll taxes, straight time and overtime hours, and executive compensation by title.</td>
<td>Sarah E. Lawler, Renee H. Metzler</td>
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<td>16(8)(h)</td>
<td>Computation of gross revenue conversion factor for forecasted period.</td>
<td>Sarah E. Lawler</td>
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<td>16(8)(i)</td>
<td>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.</td>
<td>Danielle L. Weatherston, Christopher M. Jacobi</td>
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<td>16(8)(j)</td>
<td>Cost of capital summary for both base and forecasted periods with supporting schedules providing details on each component of the capital structure.</td>
<td>Christopher M. Jacobi</td>
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<td>16(8)(k)</td>
<td>Comparative financial data and earnings measures for the 10 most recent calendar years, base period, and forecast period.</td>
<td>Melissa B. Abernathy, Christopher M. Jacobi, Danielle L. Weatherston</td>
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<td>16(8)(n)</td>
<td>Typical bill comparison under present and proposed rates for all customer classes.</td>
<td>Jeff L. Kern</td>
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<td>16(9)</td>
<td>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.</td>
<td>William Don Wathen, Jr.</td>
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<td>60</td>
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<td>807 KAR 5:001 Section 16(10)</td>
<td>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.</td>
</tr>
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| 60   | 10   | 60     | 807 KAR 5:001 Section (17)(1) | (1) Public postings.  
   (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.  
   (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:  
   1. A copy of the public notice; and  
   2. A hyperlink to the location on the commission’s Web site where the case documents are available.  
   (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. |
| 60   | 10   | 61     | 807 KAR 5:001 Section 17(2) | (2) Customer Notice.  
   (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.  
   (b) If a utility has more than twenty (20) customers, it shall provide notice by:  
   1. Including notice with customer bills mailed no later than the date the application is submitted to the commission;  
   2. Mailing a written notice to each customer no later than the date the application is submitted to the commission;  
   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  
   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.  
   (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. |
(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:

(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;

(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

(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.
## Section 17(4)

(4) **Notice Content.** Each notice issued in accordance with this section shall contain:

(a) The proposed effective date and the date the proposed rates are expected to be filed with the commission;

(b) The present rates and proposed rates for each customer classification to which the proposed rates will apply;

(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;

(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;

(e) A statement that a person may examine this application at the offices of (utility name) located at (utility address);

(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 http://psc.ky.gov;

(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;

(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;

(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

(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.

## 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.
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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) Approval of New Tariffs; 3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; and 4) All Other Required Approvals and Relief.

Case No. 2019-00271

______________________________
DIRECT TESTIMONY OF

AMY B. SPILLER

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

______________________________

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**

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

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

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


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

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

I joined Cinergy Corp., (Cinergy) in 2003 as an associate general counsel, focusing on litigation matters. In 2008, following the 2006 merger between Cinergy and Duke Energy, I was promoted to deputy general counsel, assuming responsibility relative to Duke Energy’s strategic planning in Ohio and Kentucky.

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

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

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

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

A. Yes. I have previously testified before the Commission.
Q. **WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THESE PROCEEDINGS?**

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

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

I sponsor several Filing Requirements (FR), including those mandated under 807 KAR 5:001: FR 7(1), FR 14(1) through FR 14(4), FR 16(1)(b)(1), FR
16(1)(b)(2), FR 16(1)(b)(5), FR 16(2), and FR 16(3). I discuss the existing programs to achieve improvements in efficiency and productivity and the purpose of each program, as required by FR 16(7)(a). I provide the management statement of attestation, required by FR 16(7)(e), concerning the forecasted financial data. Additionally, I sponsor the affidavit in support of the notice requirements under FR 17(1) through (3). Finally, I sponsor the pre-filing notice as required by KRS 278.180.

II. OVERVIEW OF KENTUCKY OPERATIONS

A. COMPANY OVERVIEW

Q. PLEASE DESCRIBE DUKE ENERGY KENTUCKY’S UTILITY OPERATIONS IN NORTHERN KENTUCKY.

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

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

- Cincinnati, Ohio – the headquarters for Duke Energy Kentucky;
- Rabbit Hash, Kentucky – the East Bend Generating Station;
- Trenton, Ohio – the Woodsdale Generating Station;
- Erlanger, Kentucky – Duke Energy Kentucky’s construction and maintenance facility; and
- Covington, Kentucky – Duke Energy Kentucky’s meter reading facility.

From these locations, Duke Energy Kentucky generates electricity; provides for the construction, operation, and maintenance of our electric delivery system; and conducts its business operations.

Q. PLEASE PROVIDE AN OVERVIEW OF THE DUKE ENERGY CORPORATE AND BUSINESS STRUCTURE.

A. Duke Energy is one of the largest utility companies in the United States. Through a series of mergers and acquisitions, including the 2006 merger with Cinergy, the 2012 merger with Progress Energy, and the more recent merger with Piedmont Natural Gas Company, Duke Energy now serves approximately 7.4 million electric customers and over 1.5 million natural gas customers, representing a population of over 24 million in seven states, comprising Kentucky, Ohio, Indiana, Florida, North Carolina, South Carolina, and Tennessee.

Duke Energy Kentucky is a wholly owned subsidiary of Duke Energy Ohio. Duke Energy Ohio is a wholly owned subsidiary of Cinergy, which is wholly owned by Duke Energy.
Q. PLEASE DESCRIBE HOW BEING A PART OF THE DUKE ENERGY FAMILY OF COMPANIES ASSISTS DUKE ENERGY KENTUCKY IN PROVIDING ADEQUATE, EFFICIENT, AND REASONABLE SERVICE AT A FAIR, JUST, AND REASONABLE RATE FOR ITS KENTUCKY CUSTOMERS.

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

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

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

B. COMMUNITY ENGAGEMENT

Q. PLEASE GIVE AN OVERVIEW OF DUKE ENERGY KENTUCKY’S ECONOMIC DEVELOPMENT ACTIVITIES.

A. Duke Energy Kentucky embraces our responsibility to promote economic development in the communities in which we do business. We appreciate that access to affordable, reliable utility service is a critical factor in a company’s decision about where to locate or expand its facilities. Duke Energy Kentucky is well positioned to meet our customers’ energy needs and attract job-creating industries and capital investment to our service territory. However, business clients need more than reliable utility service. They also need readily available building sites, access to state and local incentives, flexible workforce training
programs, and proximity to a community of customers and business partners. Duke Energy Kentucky assists in meeting these needs through partnerships with our local communities and the Commonwealth of Kentucky.

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

Duke Energy Kentucky’s strategic partnerships and board memberships with local and regional economic development efforts such as the Regional Economic Development Initiative (REDI) Cincinnati and Northern Kentucky Tri-
ED, combined with Duke Energy Kentucky's competitive rates, have resulted in a number of economic development successes in Northern Kentucky.

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

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

- Catalytic Funding Corp. of Northern Kentucky;
- Cincinnati Business Committee;
- Cincinnati Center City Development Corporation;
- Cincinnati USA Regional Chamber of Commerce;
- Cintrifuse;
- Gateway Community & Technical College;
- GROW NKY;
- Horizon Community Funds of Northern Kentucky;
- Kentucky Association of Economic Development;
- Kentucky Chamber of Commerce;
- NKY Regional Alliance;
- NKY Workforce Investment Board;
- Northern Kentucky Chamber of Commerce;
Northern Kentucky Tri-ED; and

• REDI.

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

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

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

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

• Automated Phone Service;

• Business and Industry Service Center at our Call Center;
• Contact Centers;
• Duke Energy Mobile App;
• Enhanced Web Functionality for Online Services;
• Focus Groups for small/medium businesses; and
• Third-Party Pay Agents.

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

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

• Budget Billing: This program provides customers with predictable monthly payments and better control over their energy spending, which eases planning and budgeting. Customers who sign up for the free Budget Billing program may choose from two plans that adjust periodically based on actual energy usage. The Annual Plan provides 11 months of equal payments with a settle-up on the 12th month, while the Quarterly Plan provides a quarterly review and adjustment of the budget billing amount, preventing a settle-up month.

• Adjusted Due Date: This program offers customers more control over when they pay their energy bill by adjusting their due date forward by up to 10 business days from their original due date at no charge.

• Pick Your Due Date: Residential and non-residential customers with Advanced Metering Infrastructure (AMI) (meter data management-managed only) meters are eligible for the Pick Your Due Date
program. These customers may have their billing cycle changed to align with their desired due date free of charge.

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

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

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

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

- Home Energy Assistance (HEA): This program provides another source of relief for customers in need. The program is managed by the
Northern Kentucky Community Action Commission using federal low-income guidelines, as well as true need, to determine program eligibility. Customers at or below 150% of the Federal Poverty Level may be eligible to receive up to $300 in assistance per program year. HEA program funds are available to income-qualifying customers once other low-income program funds have been depleted for the customer.\(^2\)

- Duke Energy Mobile App: Duke Energy has a new mobile app for iPhone and Android devices through which Customers can manage their account, pay bills, report outages, and take advantage of products and services offered by Duke Energy.

- High Bill and Usage Alerts: Duke Energy Kentucky auto-enrolls all eligible non-AMI metered customers in our High Bill Alert program. These customers are alerted at mid-cycle when their bill is projected to be 30 percent and $30 higher than the previous month based on weather and 12 months of historical usage. Duke Energy transitions all eligible customers who receive an AMI-MDM certified meter from High Bill Alerts to our Usage Alerts program, which uses interval data to calculate their electricity cost. These customers automatically receive an email at the midpoint of their billing cycle with their current electricity cost broken down by appliance and projected cost. Usage

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

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

- Online and Mobile App payments via Speedpay: Customers may make a one-time, same-day payment online or by phone using a credit card, debit card or electronic check, which applies the payment to the account immediately. Currently, a fee of $1.50 for residential accounts and $8.50 per non-residential account transaction up to $10,000 applies to each payment. For payments more than $10,000, the convenience fee is 2.75 percent of the amount paid. The fees cover the processing cost associated with handling credit card and electronic debit payments.

- Paperless Billing: Customers may enroll in a Paperless Billing option, allowing them to receive and, if they choose to pay, their bill online at no cost.

- Auto Pay: The Auto Pay function is a free service for customers enrolled in Paperless Billing and provides online access to either make a one-time payment or cancel or edit any scheduled future payments.
• Email Bill Delivery: Residential and non-residential customers who enroll in Email Bill Delivery are provided with a secure PDF copy of their bill via email. Once enrolled, the customer receives their bill as an offline email attachment, which can be accessed and paid through any electronic device, including mobile devices. Customers do not have to be enrolled in Paperless Billing to be eligible for this program.

• Automatic Bank Draft; and This program allows customers to have their monthly charges auto drafted from their personal checking or savings account at no cost.

• Pay Agent Network: Duke Energy offers over 60 locations in the Duke Energy Kentucky service area for customers to make cash, check, or money order payments. These locations are found in areas where customers do other business, such as grocery stores, pharmacies, convenience stores, and larger retailers.

C. CUSTOMER SATISFACTION

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

A. Duke Energy Kentucky strives to consistently provide high quality customer service. We currently measure customer satisfaction performance through three primary tools: the Customer Experience Monitor (CX Monitor) survey; the annual J.D. Power Electric Utility Residential Customer Satisfaction Study (J.D. Power Study); and Duke Energy’s proprietary transaction survey – Fastrack.
Q. PLEASE DESCRIBE THE CX MONITOR SURVEY AND DUKE ENERGY KENTUCKY’S PERFORMANCE IN THIS STUDY.

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

Q. PLEASE DESCRIBE THE J.D. POWER STUDIES AND DUKE ENERGY KENTUCKY’S PERFORMANCE UNDER THOSE STUDIES.

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

The J.D. Power Study calculates overall customer satisfaction based on six performance areas: (1) power quality and reliability; (2) billing and payment; (3) price and value; (4) corporate citizenship; (5) communications; and (6) customer service. J.D. Power published the final results of its 2019 Customer Satisfaction
Study on June 25, 2019. Attachment ABS-1 is an excerpt from this recent publication that provides a relevant summary of residential customer satisfaction for Midwest utilities.

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

Q. PLEASE DESCRIBE FASTRACK AND THE COMPANY’S FASTRACK PERFORMANCE.

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

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

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

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

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

- **Service Initiation (Electric):** 91 percent of Duke Energy Kentucky
  residential customers were highly satisfied with their overall service
  initiation experience; and

- **Billing Questions/Requests/Complaints:** 84 percent of Duke Energy
  Kentucky residential customers were highly satisfied with their overall
  billing experience.

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

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

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

A. Duke Energy Kentucky continues to make prudent operational decisions and
investments in our electric generation and delivery system. Following the 2017
Rate Case, Duke Energy Kentucky completed our deployment of an AMI. The
Company has also completed construction of our Woodsdale Generating Station’s
dual fuel system that provides emergency fuel and enables the station to meet
capacity performance requirements implemented by PJM Interconnection L.L.C. (PJM).

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

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

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

Additionally, Duke Energy Kentucky continues to work with local communities to guarantee that our energy delivery system can support key
initiatives for these communities. One such example is the capability for our municipal customers to deploy a digital electric delivery infrastructure through our lighting tariffs, as a framework for supporting local municipal “smart city” planning.

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

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

- Cameras;
- Pedestrian counters;
- Traffic control;
- Environmental sensors (e.g., air quality, temperature, hazardous gases);
- Waste management sensors;
- Gunshot detection sensors;
- Parking space monitoring;
- Digital banners;
- Wi-Fi networks; and
- Small cell wireless.
Duke Energy Kentucky's lighting tariffs include offerings for customers, including municipalities, to install multi-use poles that to support these technologies.

III. OVERVIEW OF DUKE ENERGY KENTUCKY'S RATE CASE

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

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

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

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

• Transaction Fee-Free Payment Option for Residential Customers: In an effort to enhance convenience and satisfaction for customers who desire to pay their electric bill with a credit or debit card, the Company is proposing to remove the point of sale transaction fee that is charged by vendors and incorporating those costs into base rates.
- 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.
Through this premium and voluntary tariff, Duke Energy Kentucky will continue to serve the customer under our normal tariffed rates, but customer can elect to have the Company, on the customer’s behalf, contract with a third party in PJM, that will construct a renewable resource to the customer’s sizing specifications whose output would then be sold directly into the market. The customer, through a long-term, lease-like arrangement, will be responsible for all costs of the asset over its life and will receive any revenues received from the energy and capacity (if any) obtained in the wholesale markets. Such revenues, to the extent they would exceed the sunk costs of the asset, can be used by the customer as an offset to its Duke Energy bill. If the resource’s output revenues do not exceed the costs of the asset, the resource would result in a net charge on the customer’s bill.

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

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

AMY B. SPILLER DIRECT

24
approximately 12.5 percent across all customer classes. This rate increase is necessary to allow Duke Energy Kentucky to recover our costs for providing reliable electric service, and have the opportunity to earn a fair return on our shareholders’ investment in electric generation and local transmission and distribution facilities.

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

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

Q. PLEASE BRIEFLY DESCRIBE THE COMPANY’S PROPOSAL TO USE THE RATE BASE METHOD TO ESTABLISH RATES.

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

Q. PLEASE FURTHER DESCRIBE THE COMPANY’S PROPOSAL TO
IMPLEMENT A STORM DEFERRAL MECHANISM.

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

IV. INTRODUCTION OF WITNESSES

Q. PLEASE INTRODUCE THE OTHER WITNESSES IN THESE
PROCEEDINGS.

A. I identify below the other individuals who will present testimony on behalf of
Duke Energy Kentucky, as well as the subject matters of their respective
testimony:
• 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.
- Renee Metzler, Managing Director Retirement, supports the Company’s compensation and benefits programs.

- Roger A. Morin, PhD, Principal, Utility Research International, offers testimony on Duke Energy Kentucky’s requested rate of return.

- J. Michael Mosley, Vice President Midwest Generation, discusses the Company’s Generation Portfolio.

- Ash M. Norton, Director Distribution Design Engineering, discusses the Company’s distribution system and how it provides safe, adequate, efficient, and reasonable service.

- John Panizza, Director, Tax Operations, addresses the Company’s tax expense in the test period revenue requirement.

- Benjamin Walter Bohdan Passty, PhD, Lead Load Forecasting Analyst, performed and supports the Company’s electric load forecast.

- Lesley G. Quick, Vice President Revenue Services discusses the Company’s proposal to create a transaction fee-free payment option for residential customers wishing to pay their bill with a credit or debit card and proposed deterrents for fraud and meter tampering.

- Lang W. Reynolds, Director of Electrification Strategy, discusses the Company’s proposal for an EV Pilot.

- Andrew S. Ritch, Wholesale Renewable Manager, discusses the Company’s proposed Green Source Tariff.

- Jeffrey R. Setser, Director of Allocations and Reporting, supports the Company’s various service agreements and associated allocations.

*AMY B. SPILLER DIRECT*
• John J. Spanos, Gannet Fleming Valuation and Rate Consultants, LLC, provides testimony on Duke Energy Kentucky's latest depreciation study.

• John A. Verderame, Managing Director Power Trading and Dispatch, discusses the Company's participation in the wholesale electric markets.

• Danielle L. Weatherston, Manager Accounting II, offers testimony on Duke Energy Kentucky's capital accounting processes and sponsors certain accounting information used for the test period financial data.

• William Don Wathen Jr., Director, Rates and Regulatory Strategy, Ohio and Kentucky, provides a more detailed overview of the filing including support for the Company's Storm Deferral and use of a rate base methodology to calculate the revenue requirement.

• James E. Ziolkowski, Director, Rates and Regulatory Planning, provides testimony regarding Duke Energy Kentucky's cost of service study.

V. ATTACHMENTS SPONSORED BY WITNESS

Q. PLEASE DESCRIBE FR 7(1).

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

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

A. These filing requirements provide for the Company to seek proposed new rates through a written Application addressing various matters, including the full name,
address, and electronic mail address of the Company and set forth the facts upon
which the Application is based, with a request for the order, authorization,
permission, or certificate desired and a reference to the particular law requiring or
providing the same. FR 14(2) applies to Duke Energy Kentucky because it is a
corporation, registered to do business, and is in good standing in the
Commonwealth of Kentucky. The Application submitted in these proceedings
includes this information and was prepared at my direction. FR 14(3) and FR
14(4) are not applicable to Duke Energy Kentucky because it is neither a limited
liability company nor a limited partnership.

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

Q. PLEASE DESCRIBE FR 16(1)(b)(2).
A. FR 16(1)(b)(2) is the certificate of assumed name. Duke Energy Kentucky’s
actual legal name is “Duke Energy Kentucky, Inc.” The Company has filed for
the assumed name of "Duke Energy." The certificate of assumed name is provided with our filing.

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

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

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

Q. PLEASE DESCRIBE FR 16(7)(a).
A. FR 16(7)(a) is a statement of attestation from me, the utility’s 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 each program. The efficiency and productivity benefits that have resulted from these programs have occurred over time and thus are reflected in the Company’s budgets included in the forecasted test period in these proceedings. These programs are described below:

AMY B. SPILLER DIRECT
• 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.
• Plant maintenance and pollution control improvements: Mr. Mosley discusses various maintenance programs and capital improvement programs to install pollution control equipment, which are designed to enhance the efficiency and productivity of the Plants.

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

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

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

Q. PLEASE DESCRIBE FR 17(1)

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

Q. PLEASE DESCRIBE FR 17(2).

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

Q. PLEASE DESCRIBE FR 17(3).

A. FR 17(3) includes the method of notice. Duke Energy Kentucky has published notice in newspapers of general circulation. Company witness Kern supports FR
17(4), which describes required content of the notice. Duke Energy Kentucky has included all content listed in FR 17(4) in its notice.

Q. PLEASE DESCRIBE FR KRS 278.180.
A. FR KRS 278.180 is the pre-filing notice.

VI. CONCLUSION

A. Yes.

Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?
A. Yes.
STATE OF OHIO
COUNTY OF HAMILTON

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 3rd day of September, 2019.

Adele M. Frisch
NOTARY PUBLIC

My Commission Expires: 11/5/2024
J.D. POWER

2019 Electric Residential Customer Satisfaction Study℠

Final Results Preview

June 26, 2019
2019 J.D. Power Electric Utility Residential Study
Study Overview & Key Index Factors

50,500+
TOTAL RESPONSES NATIONALLY

21ST
YEAR OF THE STUDY

142 BRANDS
WITH 100,000+
RESIDENTIAL CUSTOMERS

KEY INDEX FACTORS

POWER QUALITY AND RELIABILITY: 28%
BILLING AND PAYMENT: 19%
PRICE: 19%
CORPORATE CITIZENSHIP: 16%
COMMUNICATIONS: 14%
CUSTOMER SERVICE: 5%

WHEN INTERACTION IS PRESENT: 20%

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2019 Final Overall CSI: South Large Segment

<table>
<thead>
<tr>
<th>Utility</th>
<th>CSI 2019</th>
<th>CSI Change vs. 2018 EUR Study</th>
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</thead>
<tbody>
<tr>
<td>Georgia Power</td>
<td>766</td>
<td>+11</td>
</tr>
<tr>
<td>Florida Power &amp; Light</td>
<td>764</td>
<td>+17</td>
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<tr>
<td>OG&amp;E</td>
<td>762</td>
<td>+16</td>
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<tr>
<td>Alabama Power</td>
<td>751</td>
<td>+7</td>
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<td>CPS Energy</td>
<td>749</td>
<td>+3</td>
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<td>Entergy Louisiana</td>
<td>747</td>
<td>+1</td>
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<tr>
<td>South Large</td>
<td>742</td>
<td>+9</td>
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<tr>
<td>Entergy Arkansas</td>
<td>735</td>
<td>DESC: 738 (-6)</td>
</tr>
<tr>
<td>Dominion Energy</td>
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<td>-6</td>
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<td>Duke Energy Progress</td>
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<td>+7</td>
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<td>Duke Energy Carolinas</td>
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<td>+7</td>
</tr>
<tr>
<td>Tampa Electric</td>
<td>725</td>
<td>+7</td>
</tr>
<tr>
<td>Duke Energy Florida</td>
<td>715</td>
<td>DENC: 723 (+10)</td>
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<tr>
<td>South Carolina Electric &amp; Gas</td>
<td>687</td>
<td>+26</td>
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### 2019 Final Overall CSI: Midwest Large Segment

#### Midwest Large Region – Final Result

<table>
<thead>
<tr>
<th>Utility</th>
<th>CSI Change vs. 2018 EUR Study</th>
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<tbody>
<tr>
<td>Top Quartile Cutoff – Large Utilities Nationally</td>
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<tr>
<td>MidAmerican Energy</td>
<td>760</td>
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<tr>
<td>Xcel Energy-Midwest</td>
<td>751 DE: 746 (+15)</td>
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<tr>
<td>DTE Energy</td>
<td>745</td>
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<tr>
<td>Consumers Energy</td>
<td>742</td>
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<tr>
<td>Duke Energy-Midwest</td>
<td>742 +25</td>
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<tr>
<td>AEP Ohio</td>
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<td>Ameren Illinois</td>
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<tr>
<td>Midwest Large</td>
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<td>Ameren Missouri</td>
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<td>ComEd</td>
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<td>Indiana Michigan Power</td>
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<tr>
<td>Alliant Energy</td>
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<td>The Illuminating Company</td>
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<tr>
<td>Westar Energy</td>
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<tr>
<td>KCP&amp;L</td>
<td>695 -25</td>
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‘Duke Energy Utilities’ Rank Among Large Utilities Nationally

Rank among Large National Utilities
'Duke Energy Parent' Rank Among Large Parent Utilities Nationally

<table>
<thead>
<tr>
<th>Year</th>
<th>Rank among 38 Large Parent Utilities</th>
<th>Top Q.</th>
<th>Duke Energy Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>652</td>
<td>684</td>
<td>670</td>
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<td>2016</td>
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<td>698</td>
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<td>2018</td>
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<td>739</td>
<td>711</td>
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<tr>
<td>2019</td>
<td></td>
<td>745</td>
<td>727</td>
</tr>
</tbody>
</table>
Duke Energy Parent – Gap to Top Quartile Threshold

Gap to Large Utility Top Quartile Threshold by Factor

- **CSI**
  - 2019 Model Weight
  - PQR: 28%
  - Price: 19%

- **PQR**
  - B&P: 19%
  - Citizen: 16%

- **Price**
  - Comm: 14%
  - Cust Serv: 5-20%

Index gap to top quartile threshold score among large utilities
## Overall CSI and Factor Performance – Quartile Rankings

### Duke Energy Parent and Brands – 2019 J.D. Power Residential Study

<table>
<thead>
<tr>
<th>2019 JDP EUR Study Final</th>
<th>CSI</th>
<th>PQR</th>
<th>Price</th>
<th>B&amp;P</th>
<th>Citz</th>
<th>Comm</th>
<th>Customer Service</th>
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<tr>
<td>Duke Parent</td>
<td>727</td>
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<td>664</td>
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<td>660</td>
<td>789</td>
<td>652</td>
<td>688</td>
<td>784</td>
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<td>DE-NC</td>
<td>723</td>
<td>775</td>
<td>660</td>
<td>783</td>
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<td>DE-SC</td>
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<td>668</td>
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<td>DEF</td>
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<td>DEI</td>
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<td>DE-OHKY</td>
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<td>785</td>
<td>678</td>
<td>790</td>
<td>681</td>
<td>688</td>
<td>801</td>
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</table>

Legend:
- **1st Quartile**
- **2nd Quartile**
- **3rd Quartile**
- **4th Quartile**
Overall CSI and Factor Performance – Quartile Rankings
Duke Energy Operating Utilities – Overall CSI Score Trends

Top Quartile
Large Utilities

DEI
DEOHKY
DEP
DEC
DEF

Overall Customer Satisfaction index


575 587 598
600 610
611
612
615
619
587
622
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745
746
## Comparing JDP CSI & CXM NPS – 2018 YE & 2019 YTD

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<th>DEC</th>
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<th>DEF</th>
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<th>DEOH/KY</th>
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<td><strong>JDP CSI (2018)</strong></td>
<td>718</td>
<td>720</td>
<td>713</td>
<td>744</td>
<td>689</td>
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<td><strong>JDP CSI (2019)</strong></td>
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<td>738</td>
<td>715</td>
<td>746</td>
<td>737</td>
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<td><strong>JDP CSI Trend</strong></td>
<td>= 1.01%↑</td>
<td>= 1.01%↑</td>
<td>= 1.01%↑</td>
<td>= 1.0%↓</td>
<td>= 1.04%↑</td>
<td>= 1.02%↑</td>
<td>= 1.04%↑</td>
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<table>
<thead>
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<th>DEF</th>
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<tr>
<td><strong>CXM NPS (2018)</strong></td>
<td>33.9</td>
<td>27.1</td>
<td>29.5</td>
<td>39.9</td>
<td>34.2</td>
<td>31.9</td>
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<td><strong>CXM NPS (2019 YTD)</strong></td>
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<td>32.1</td>
<td>35.1</td>
<td>36.1</td>
<td>41.1</td>
<td>38.8</td>
<td>33.4</td>
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<tr>
<td><strong>CXM NPS Trend</strong></td>
<td>= 1.1%↑</td>
<td>= 1.2%↑</td>
<td>= 1.2%↑</td>
<td>= 0.9%↓</td>
<td>= 1.2%↑</td>
<td>= 1.2%↑</td>
<td>= 1.5%↑</td>
</tr>
</tbody>
</table>
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

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'

The Fastrack Score would = \[ \frac{(3+2+4)}{10} = 90 \]
## 1DF – Midwest Fastrack
### Goal Update – March 2018

<table>
<thead>
<tr>
<th></th>
<th>March Score</th>
<th>2018 YTD</th>
<th>2018 Goal</th>
<th>Goal Status</th>
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<tbody>
<tr>
<td><strong>Midwest Fastrack</strong></td>
<td></td>
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<tr>
<td>Service Initiation</td>
<td>92</td>
<td>92</td>
<td>90</td>
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<tr>
<td>Outage</td>
<td>90</td>
<td>85</td>
<td>79</td>
<td></td>
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<tr>
<td>Outdoor Lighting</td>
<td>75</td>
<td>74</td>
<td>80</td>
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<tr>
<td><strong>Indiana Fastrack</strong></td>
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<td></td>
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<tr>
<td>Service Initiation</td>
<td>92</td>
<td>93</td>
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<td>Outage</td>
<td>91</td>
<td>87</td>
<td>84</td>
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</tr>
<tr>
<td>Outdoor Lighting</td>
<td>77</td>
<td>72</td>
<td>80</td>
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<tr>
<td><strong>Ohio/Kentucky Fastrack</strong></td>
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<td>84</td>
<td>82</td>
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<tr>
<td>Service Initiation</td>
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<td>Outage</td>
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# 1DF – Midwest Fastrack
Total Goal Module Performance by Zone – March 2018

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<th>Goal Status</th>
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<td>Duke Energy Midwest</td>
<td>86</td>
<td>84</td>
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<tr>
<td>Indiana</td>
<td>87</td>
<td>84</td>
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<tr>
<td>Ohio/Kentucky</td>
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<td>84</td>
<td>82</td>
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</table>
**1DF – Midwest Fastrack**  
*‘Service Initiation’ Performance by Zone – March 2018*

<table>
<thead>
<tr>
<th></th>
<th>March Score</th>
<th>2018 YTD</th>
<th>2018 Goal</th>
<th>Goal Status</th>
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</thead>
<tbody>
<tr>
<td><strong>Duke Energy Midwest</strong></td>
<td>92</td>
<td>92</td>
<td>90</td>
<td>[Green]</td>
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<tr>
<td>Indiana</td>
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<td>93</td>
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<td>[Green]</td>
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<tr>
<td>Ohio/Kentucky</td>
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</table>
# 1DF – Midwest Fastrack

'Outage' Performance by Zone – March 2018

<table>
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<th>2018 YTD</th>
<th>2018 Goal</th>
<th>Goal Status</th>
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</thead>
<tbody>
<tr>
<td><strong>Duke Energy Midwest</strong></td>
<td>90</td>
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<td></td>
</tr>
<tr>
<td>Indiana</td>
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<tr>
<td>Ohio/Kentucky</td>
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<td>84</td>
<td>76</td>
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</table>
# 1DF – Midwest Fastrack

‘Outdoor Lighting’ Performance by Zone – March 2018

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<th>March Score</th>
<th>2018 YTD</th>
<th>2018 Goal</th>
<th>Goal Status</th>
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<tbody>
<tr>
<td><strong>Duke Energy Midwest</strong></td>
<td>75</td>
<td>74</td>
<td>80</td>
</tr>
<tr>
<td><strong>Ohio/Kentucky</strong></td>
<td>74</td>
<td>75</td>
<td>80</td>
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<tr>
<td><strong>Indiana</strong></td>
<td>77</td>
<td>72</td>
<td>80</td>
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</tbody>
</table>
2018 Midwest Fastrack Goal 83

Fastrack Score = Avg. of 'Service Initiation,' 'Outage,' and 'Outdoor Lighting' module scores
Service Initiation – Electric
DE-MW Score Trends

- DEMW Total
- Indiana Zone
- Ohio/Kentucky Zone

Q1-17, Q2-17, Q3-17, Q4-17, Q1-18
## Service Initiation

### Impact on Overall Satisfaction

<table>
<thead>
<tr>
<th>Overall Satisfaction with Duke Energy’s overall performance as your electric supplier</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
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<tr>
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<td>2</td>
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</table>

Would you say that this recent service experience has had a positive, negative, or no effect on your overall satisfaction with Duke Energy?

<table>
<thead>
<tr>
<th>Net Effect</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
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</thead>
<tbody>
<tr>
<td>A positive effect</td>
<td>68</td>
<td>68</td>
<td></td>
<td></td>
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<tr>
<td>A negative effect</td>
<td>2</td>
<td>4</td>
<td></td>
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<td></td>
<td>4</td>
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<tr>
<td>No effect</td>
<td>30</td>
<td>28</td>
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<td></td>
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<td>28</td>
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</tbody>
</table>
### Impact on Overall Satisfaction

**DE-MW Fastrack Modules**

Would you say that this recent service experience has had a positive, negative, or no effect on your overall satisfaction with Duke Energy?

<table>
<thead>
<tr>
<th>Net Effect</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
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<tbody>
<tr>
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<td>65</td>
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<td>Service Initiation (Gas)</td>
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<tr>
<td>Outdoor Lighting</td>
<td>43</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>Billing (Internal)</td>
<td>46</td>
<td>43</td>
<td></td>
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<td></td>
<td>43</td>
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<tr>
<td>Billing (Outsource)</td>
<td>41</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
<td>38</td>
</tr>
<tr>
<td>Outage</td>
<td>34</td>
<td>37</td>
<td></td>
<td></td>
<td></td>
<td>37</td>
</tr>
</tbody>
</table>
Service Initiation – Deposit Required
DEMW Q1-18 Opportunity Score

- **DE Connections Rep**: 2%
- **Connected on Scheduled Date**: 1%
- **Kept Informed of Status**: 1%
- **Respecting Property**: 1%
- **Confirmation Call**: <1%
- **Scheduled Date**: 17%
- **CCS**: 17%
- **CCS Provided Variety of Options to Pay Deposit**: 7%
- **Deposit**: 8%
- **Enough Time to Pay Deposit**: 7%
- **One Call Resolution**: 5%
- **CCS Explained Why Deposit Required**: 5%
- **CCS Explained How Deposit Calculated**: 5%
- **CCS Tell About Different Payment Options**: 4%
- **Wait Time**: 4%
- **IVR**: 3%
- **Midwest Fastrack Report**: 15

**DUK Energy**
Service Initiation – Deposit NOT Required
DEMW Q1-18 Opportunity Score

- CCS Tell About Different Payment Options: 4%
- Respecting Property: 2%
- Scheduled Date: 7%
- IVR: 7%
- Net Easy: 7%
- Connected on Scheduled Date: 1%
- Confirmation Call: 1%
- CCS: 22%
- Wait Time: 13%
- DE Connections Rep: 13%
- One Call Resolution: 13%
- Kept Informed of Status: 11%
### Service Initiation

#### Call Center Metrics – Deposit Required

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

**Notes:**
- % (8-10)
- % (0-4)
### Service Initiation

**Call Center Metrics – Deposit NOT Required**

<table>
<thead>
<tr>
<th>Metric</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
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<tbody>
<tr>
<td>Overall Satisfaction with IVR</td>
<td>76</td>
<td>73</td>
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</tr>
<tr>
<td></td>
<td>8</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Amount of time you waited to be transferred to CCS</td>
<td>90</td>
<td>87</td>
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<td>87</td>
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<tr>
<td></td>
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<tr>
<td>Overall Satisfaction with Customer Care Specialist</td>
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<td>Payment options explained (% Yes)</td>
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<td>One call resolution (% Yes)</td>
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<td>Representative</td>
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<td>8</td>
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**Midwest Fastrack Report**
## Service Initiation Deposit

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<th>Q4-18</th>
<th>YTD-18</th>
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</thead>
<tbody>
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<td><strong>Required to Pay Deposit (% Yes)</strong></td>
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<td>26</td>
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<tr>
<td><strong>Deposit affected overall satisfaction</strong></td>
<td>52</td>
<td>46</td>
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<td></td>
<td>46</td>
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<tr>
<td><strong>SOME effect on overall satisfaction</strong></td>
<td>30</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td>20</td>
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<tr>
<td><strong>BIG effect on overall satisfaction</strong></td>
<td>14</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td>18</td>
</tr>
<tr>
<td><strong>BIGGER impact on overall satisfaction than anything else</strong></td>
<td>8</td>
<td>8</td>
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<tr>
<td><strong>CCS explained why the deposit was required (% Yes)</strong></td>
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<td>73</td>
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<tr>
<td><strong>CCS explained how the deposit was calculated (% Yes)</strong></td>
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<td>57</td>
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<tr>
<td><strong>CCS provided a variety of options to pay or satisfy the deposit (% Yes)</strong></td>
<td>75</td>
<td>78</td>
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<tr>
<td><strong>Overall satisfaction with providing enough time to pay the deposit</strong></td>
<td>80</td>
<td>83</td>
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<td>83</td>
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<td>6</td>
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Service Initiation
Scheduled Date & Performance – Q1-18

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<th>Total Midwest</th>
<th>Indiana Zone</th>
<th>Ohio/Kentucky Zone</th>
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<tbody>
<tr>
<td>Satisfaction With Scheduled Date (%) 8-10</td>
<td>95</td>
<td>97</td>
<td>93</td>
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<tr>
<td>Satisfaction With Scheduled Date (%) 0-4</td>
<td>99</td>
<td>98</td>
<td>100</td>
</tr>
<tr>
<td>Service Connected On Scheduled Date (%) Yes</td>
<td>1</td>
<td>2</td>
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Midwest Fastrack Report
## Service Initiation
### Scheduled Date & Performance

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<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
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<tr>
<td>Satisfaction with scheduled connection date</td>
<td>96</td>
<td>95</td>
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<tr>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Service connected on scheduled date (%Yes)</td>
<td>98</td>
<td>99</td>
<td></td>
<td></td>
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<td>99</td>
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<tr>
<td>Received confirmation call or phone message (% Yes)</td>
<td>65</td>
<td>70</td>
<td></td>
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<td></td>
<td>70</td>
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<tr>
<td>Kept Informed About Status of Request (% Yes)</td>
<td>85</td>
<td>87</td>
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</table>

% (8-10) | % (0-4)
## Service Initiation
### Field Service Technician

<table>
<thead>
<tr>
<th>Service Initiation</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respecting your property</td>
<td>98</td>
<td>98</td>
<td></td>
<td></td>
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<td>98</td>
</tr>
<tr>
<td>Talked with field service technician DURING visit (% Yes)</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Overall Satisfaction with service provided by Field Service Technician at your property</td>
<td>7</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
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<tr>
<td></td>
<td>97</td>
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## Service Initiation
### Field Service Technician

<table>
<thead>
<tr>
<th></th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
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<tbody>
<tr>
<td>Respecting your property</td>
<td>98</td>
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<td>1</td>
<td></td>
<td>1</td>
<td>98</td>
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<tr>
<td>Talked with field service technician DURING visit (% Yes)</td>
<td>7</td>
<td></td>
<td>5</td>
<td></td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Overall Satisfaction with service provided by Field Service Technician at your property</td>
<td>96</td>
<td></td>
<td>100</td>
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</table>
## Service Initiation
### Field Service Technician

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

## Net Easy – Connected on Scheduled Date

<table>
<thead>
<tr>
<th></th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Easy</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Easy</td>
<td>93</td>
<td>94</td>
<td></td>
<td></td>
<td></td>
<td>94</td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Difficult</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><strong>% Indicating Connected on Scheduled Date</strong></td>
<td>98</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
<td>99</td>
</tr>
<tr>
<td>Easy</td>
<td>97</td>
<td>97</td>
<td></td>
<td></td>
<td></td>
<td>97</td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Difficult</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><strong>% Indicating NOT Connected on Scheduled Date</strong></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Easy</td>
<td>58</td>
<td>67</td>
<td></td>
<td></td>
<td></td>
<td>67</td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>9</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>Difficult</td>
<td>33</td>
<td>0</td>
<td></td>
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<td>0</td>
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</tbody>
</table>
## Service Initiation
### Net Easy – Deposit Required

<table>
<thead>
<tr>
<th></th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Easy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy</td>
<td>93</td>
<td>94</td>
<td></td>
<td></td>
<td>94</td>
<td></td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Difficult</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>% Indicating Required to Pay Deposit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy</td>
<td>95</td>
<td>95</td>
<td></td>
<td></td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Difficult</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>% Indicating NOT Required to Pay Deposit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy</td>
<td>96</td>
<td>97</td>
<td></td>
<td></td>
<td>97</td>
<td></td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Difficult</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

---

Midwest Fastrack Report
All things considered, would you say it was easy - or difficult - for you to get your request resolved?

<table>
<thead>
<tr>
<th>Service</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Initiation</td>
<td>93</td>
<td>94</td>
<td></td>
<td></td>
<td></td>
<td>94</td>
</tr>
<tr>
<td>Service Initiation (Gas)</td>
<td>88</td>
<td>93</td>
<td></td>
<td></td>
<td></td>
<td>93</td>
</tr>
<tr>
<td>Outage</td>
<td>76</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
<td>79</td>
</tr>
<tr>
<td>Billing (Internal)</td>
<td>84</td>
<td>77</td>
<td></td>
<td></td>
<td></td>
<td>77</td>
</tr>
<tr>
<td>Billing (Outsource)</td>
<td>69</td>
<td>76</td>
<td></td>
<td></td>
<td></td>
<td>76</td>
</tr>
<tr>
<td>Outdoor Lighting</td>
<td>51</td>
<td>61</td>
<td></td>
<td></td>
<td></td>
<td>61</td>
</tr>
</tbody>
</table>
## Net Easy
### Service Initiation – 2018

<table>
<thead>
<tr>
<th></th>
<th>Carolinas East</th>
<th>Carolinas West</th>
<th>Florida</th>
<th>Midwest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
</tr>
<tr>
<td><strong>Net Easy</strong>*</td>
<td>89</td>
<td>89</td>
<td>85</td>
<td>85</td>
</tr>
<tr>
<td><strong>Easy</strong></td>
<td>93</td>
<td>93</td>
<td>92</td>
<td>92</td>
</tr>
<tr>
<td><strong>Neither easy nor</strong></td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Difficult</strong></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

*Net Easy score = Easy - Difficult

---

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

**Midwest Fastrack Report**
Net Easy
Service Initiation By Zone – Q1-18

Indiana Zone: 96%
Total Midwest: 94%
FL - Coastal Zone: 93%
Ohio/Kentucky Zone: 93%
CE - Triangle Zone: 91%
Total Florida: 90%
CE - Triad Zone: 90%
Total Carolinas East: 89%
CW - Palmetto Zone: 88%
FL - Central Zone: 87%
CE - Coastal Zone: 86%
Total Carolinas West: 85%
CW - Mountains Zone: 85%
CW - Central Zone: 83%
Midwest Fastrack

Outage Module

Q1-18
## Outage
### Impact on Overall Satisfaction

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

**DE-MW Fastrack Modules**

Would you say that this recent service experience has had a positive, negative, or no effect on your overall satisfaction with Duke Energy?

### Net Effect

<table>
<thead>
<tr>
<th>Service</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Initiation</td>
<td>65</td>
<td>64</td>
<td></td>
<td></td>
<td></td>
<td>64</td>
</tr>
<tr>
<td>Service Initiation (Gas)</td>
<td>58</td>
<td>62</td>
<td></td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td>Outdoor Lighting</td>
<td>43</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>Billing (Internal)</td>
<td>46</td>
<td>43</td>
<td></td>
<td></td>
<td></td>
<td>43</td>
</tr>
<tr>
<td>Billing (Outsource)</td>
<td>41</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
<td>38</td>
</tr>
<tr>
<td>Outage</td>
<td>34</td>
<td>37</td>
<td></td>
<td></td>
<td></td>
<td>37</td>
</tr>
</tbody>
</table>
Outage (IVR Only)
DEMW Q1-18 Opportunity Score

- Restored Within Estimate: 7%
- Information from IVR: 8%
- Offering a variety of ways to get info about outage: 9%
- Delivering info about outage in a timely manner: 9%
- Restored Reasonable Time: 47%
- Net Easy: 7%
- Enough Info from DE: 10%
- Call Backs: <1%
- Respecting Property: <1%
- IVR: 4%

Midwest Fastrack Report
Outage (IVR & CCS)
DEMW Q1-18 Opportunity Score

- Delivering info about outage in a timely manner: 9%
- Offering a variety of ways to get info about outage: 10%
- Information from IVR: 12%
- Restored Within Estimate: 3%
- IVR: 7%
- Respecting your property: <1%
- Call Backs: <1%
- Wait Time: <1%
- CCS: <1%
- Restored Reasonable Time: 26%
- Enough Information from DE: 15%
- Net Easy: 16%
- Respecting your Call Backs properly: <1%
- Wait Time: <1%
## Outage

### Call Center Metrics

<table>
<thead>
<tr>
<th></th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Satisfaction with IVR (IVR Only)</td>
<td>81</td>
<td>81</td>
<td></td>
<td></td>
<td></td>
<td>81</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Overall Satisfaction with IVR (IVR &amp; CCS)</td>
<td>73</td>
<td>73</td>
<td></td>
<td></td>
<td></td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Amount of time you waited to be transferred to CCS</td>
<td>90</td>
<td>86</td>
<td></td>
<td></td>
<td></td>
<td>86</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Overall Satisfaction with Customer Care Specialist</td>
<td>90</td>
<td>93</td>
<td></td>
<td></td>
<td></td>
<td>93</td>
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<tr>
<td></td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>% (8-10)</th>
<th>% (0-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
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</tbody>
</table>

Midwest Fastrack Report
### Outage

**Outage Info Provided by Duke Energy**

<table>
<thead>
<tr>
<th>Service Provided</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>IVR providing you with the outage information you needed</td>
<td>82</td>
<td>86</td>
<td></td>
<td></td>
<td></td>
<td>86</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Offering a variety of ways to get information about your outage</td>
<td>79</td>
<td>82</td>
<td></td>
<td></td>
<td></td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Providing you with enough information about your outage</td>
<td>77</td>
<td>83</td>
<td></td>
<td></td>
<td></td>
<td>83</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Delivering information about your outage in a timely manner</td>
<td>78</td>
<td>84</td>
<td></td>
<td></td>
<td></td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>

### Did Duke Energy Provide The Following Information? (%) Yes

<table>
<thead>
<tr>
<th>Information Provided</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>The cause of the outage</td>
<td>42</td>
<td>36</td>
<td></td>
<td></td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>The number of customers affected</td>
<td>76</td>
<td>77</td>
<td></td>
<td></td>
<td></td>
<td>77</td>
</tr>
<tr>
<td>Whether a crew was dispatched</td>
<td>64</td>
<td>69</td>
<td></td>
<td></td>
<td></td>
<td>69</td>
</tr>
<tr>
<td>The time the outage began</td>
<td>63</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
<td>65</td>
</tr>
<tr>
<td>Duke Energy was aware of the outage</td>
<td>79</td>
<td>78</td>
<td></td>
<td></td>
<td></td>
<td>78</td>
</tr>
<tr>
<td>Estimated time of restoration</td>
<td>85</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td>90</td>
</tr>
<tr>
<td>The time the outage was restored</td>
<td>70</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td>70</td>
</tr>
<tr>
<td>No information provided</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>
Duke Energy Total Fastrack
2018 YTD – % Received Cause of Outage*

- CE - Coastal Zone: 84, 64%
- CW - Palmetto Zone: 85, 55%
- FL - Coastal Zone: 86, 53%
- Total Florida: 84, 52%
- FL - Central Zone: 82, 51%
- CW - Mountains Zone: 89, 50%
- Total Carolinas West: 84, 50%
- Total Carolinas East: 89, 50%
- CE - Triangle Zone: 92, 48%
- CW - Central Zone: 79, 45%
- CE - Triad Zone: 92, 40%
- Ohio/Kentucky Zone: 86, 37%
- Total Midwest: 87, 36%
- Indiana Zone: 89, 36%

*Score inside bar represents % 8-10 OSAT score when Received Cause of Outage, score outside bar represents % of customers who Received Cause of Outage.
Outage
Satisfaction by Outage Info Source – Q1-18

% 8-10 OSAT when Received Info from Source

<table>
<thead>
<tr>
<th>Source</th>
<th>% Received Info from Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE Emails</td>
<td>100</td>
</tr>
<tr>
<td>DE Social Media</td>
<td>100</td>
</tr>
<tr>
<td>DE CCS</td>
<td>92</td>
</tr>
<tr>
<td>Radio or Television</td>
<td>90</td>
</tr>
<tr>
<td>None</td>
<td>90</td>
</tr>
<tr>
<td>Text Message</td>
<td>89</td>
</tr>
<tr>
<td>DE Work Crews</td>
<td>86</td>
</tr>
<tr>
<td>Friends or Neighbors</td>
<td>84</td>
</tr>
<tr>
<td>DE Automated Answering System</td>
<td>84</td>
</tr>
<tr>
<td>DE Automated Callbacks</td>
<td>83</td>
</tr>
<tr>
<td>DE Website</td>
<td>81</td>
</tr>
</tbody>
</table>

5% | 1% | 19% | 2% | 6% | 49% | 8% | 16% | 64% | 41% | 10%
## Outage

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

<table>
<thead>
<tr>
<th>Category</th>
<th>% Info NOT Received</th>
<th>% Info Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Outage Restored</td>
<td>77%</td>
<td>30%</td>
</tr>
<tr>
<td>Cause of Outage</td>
<td>89%</td>
<td>70%</td>
</tr>
<tr>
<td>Time Outage Began</td>
<td>84%</td>
<td>64%</td>
</tr>
<tr>
<td>Work Crews Dispatched</td>
<td>87%</td>
<td>36%</td>
</tr>
<tr>
<td>ETR</td>
<td>83%</td>
<td>35%</td>
</tr>
<tr>
<td>DE Aware of Outage</td>
<td>85%</td>
<td>65%</td>
</tr>
<tr>
<td>Number of Customers Affected</td>
<td>92%</td>
<td>31%</td>
</tr>
<tr>
<td></td>
<td>88%</td>
<td>69%</td>
</tr>
<tr>
<td></td>
<td>85%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>85%</td>
<td>90%</td>
</tr>
<tr>
<td></td>
<td>89%</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>84%</td>
<td>78%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>77%</td>
</tr>
</tbody>
</table>

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

- Midwest Total
- Indiana Zone
- Ohio/Kentucky Zone

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

- CE - Coastal Zone: 5.3
- FL - Coastal Zone: 5.1
- FL - Central Zone: 5.1
- CE - Triangle Zone: 5.1
- CW - Central Zone: 5.0
- CW - Palmetto Zone: 5.0
- Ohio/Kentucky Zone: 4.9
- CW - Mountains Zone: 4.9
- Indiana Zone: 4.8
- CE - Triad Zone: 4.6

* Out of 7 possible information points. Includes information received during initial call and any other subsequent points of contact.
### Outage ETRs & Restoration

#### Estimated Time of Restoration

<table>
<thead>
<tr>
<th></th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received estimated time of restoration (% Yes)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVR Only</td>
<td>89</td>
<td>94</td>
<td></td>
<td></td>
<td></td>
<td>94</td>
</tr>
<tr>
<td>IVR+CCS</td>
<td>78</td>
<td>83</td>
<td></td>
<td></td>
<td>83</td>
<td></td>
</tr>
<tr>
<td>Restored within estimated time (% Yes)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVR Only</td>
<td>82</td>
<td>77</td>
<td></td>
<td></td>
<td></td>
<td>77</td>
</tr>
<tr>
<td>IVR+CCS</td>
<td>87</td>
<td>87</td>
<td></td>
<td></td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>Restored within a reasonable time (% 8-10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVR Only</td>
<td>79</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td>80</td>
</tr>
<tr>
<td>IVR+CCS</td>
<td>82</td>
<td>90</td>
<td></td>
<td></td>
<td>90</td>
<td></td>
</tr>
<tr>
<td></td>
<td>YTD-17</td>
<td>Q1-18</td>
<td>Q2-18</td>
<td>Q3-18</td>
<td>Q4-18</td>
<td>YTD-18</td>
</tr>
<tr>
<td>------------------------------</td>
<td>--------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>--------</td>
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<tr>
<td>Received estimated time of restoration (% Yes)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVR Only</td>
<td>89</td>
<td>94</td>
<td></td>
<td></td>
<td></td>
<td>94</td>
</tr>
<tr>
<td>IVR+CCS</td>
<td>76</td>
<td>82</td>
<td></td>
<td></td>
<td></td>
<td>82</td>
</tr>
<tr>
<td>Restored within estimated time (% Yes)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>IVR Only</td>
<td>85</td>
<td>81</td>
<td></td>
<td></td>
<td></td>
<td>81</td>
</tr>
<tr>
<td>IVR+CCS</td>
<td>86</td>
<td>88</td>
<td></td>
<td></td>
<td></td>
<td>88</td>
</tr>
<tr>
<td>Restored within a reasonable time (% 8-10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IVR Only</td>
<td>86</td>
<td>84</td>
<td></td>
<td></td>
<td></td>
<td>84</td>
</tr>
<tr>
<td>IVR+CCS</td>
<td>86</td>
<td>92</td>
<td></td>
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</table>
## Outage
### ETRs & Restoration

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

Power was Restored After ETR

<table>
<thead>
<tr>
<th></th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>YTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEMW Total</td>
<td>20%</td>
<td></td>
<td></td>
<td></td>
<td>20%</td>
</tr>
<tr>
<td>Indiana Zone</td>
<td>17%</td>
<td></td>
<td></td>
<td></td>
<td>17%</td>
</tr>
<tr>
<td>Ohio/Kentucky Zone</td>
<td>22%</td>
<td></td>
<td></td>
<td></td>
<td>22%</td>
</tr>
</tbody>
</table>
Outage Restoration Time vs. Estimate – Q1-18

Was Power Restored When Promised?

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Before ETR</th>
<th>After ETR</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 2 hours</td>
<td>10%</td>
<td>6%</td>
</tr>
<tr>
<td>61 to 120 mins</td>
<td>17%</td>
<td>3%</td>
</tr>
<tr>
<td>31 to 60 mins</td>
<td>19%</td>
<td>7%</td>
</tr>
<tr>
<td>21 to 30 mins</td>
<td>8%</td>
<td>6%</td>
</tr>
<tr>
<td>11 to 20 mins</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>10 mins or less</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>On Time</td>
<td>86%</td>
<td>20%</td>
</tr>
<tr>
<td>10 mins or less</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>11 to 20 mins</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>21 to 30 mins</td>
<td>1%</td>
<td>-</td>
</tr>
<tr>
<td>31 to 60 mins</td>
<td>6%</td>
<td>-</td>
</tr>
<tr>
<td>61 to 120 mins</td>
<td>3%</td>
<td>-</td>
</tr>
<tr>
<td>More than 2 hours</td>
<td>7%</td>
<td>-</td>
</tr>
</tbody>
</table>

20% restored after ETR
Outage
Restoration Time vs. Estimate – Q1-18

Was Power Restored When Promised?
Indiana Zone

<table>
<thead>
<tr>
<th>Time Range</th>
<th>Before ETR</th>
<th>After ETR</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 2 hours</td>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>61 to 120 mins</td>
<td>17%</td>
<td>4%</td>
</tr>
<tr>
<td>31 to 60 mins</td>
<td>25%</td>
<td>6%</td>
</tr>
<tr>
<td>21 to 30 mins</td>
<td>13%</td>
<td>2%</td>
</tr>
<tr>
<td>11 to 20 mins</td>
<td>5%</td>
<td>2%</td>
</tr>
<tr>
<td>10 mins or less</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>On Time</td>
<td>88%</td>
<td>5%</td>
</tr>
<tr>
<td>10 mins or less</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>11 to 20 mins</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>21 to 30 mins</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>31 to 60 mins</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>61 to 120 mins</td>
<td>6%</td>
<td>6%</td>
</tr>
</tbody>
</table>

17% restored after ETR

Midwest Fastrack Report
Outage
Restoration Time vs. Estimate – Q1-18

Was Power Restored When Promised?
Ohio/Kentucky Zone

Before ETR

After ETR
### Outage Quality of Field Service

<table>
<thead>
<tr>
<th></th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respecting your property</td>
<td>96</td>
<td>95</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>95</td>
</tr>
<tr>
<td>Touched with field service technician DURING visit (% Yes)</td>
<td>12</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Overall Satisfaction with service provided by Field Service Technician at your property</td>
<td>93</td>
<td>96</td>
<td>98</td>
<td>0</td>
<td>0</td>
<td>98</td>
</tr>
</tbody>
</table>
### Outage

**ETR Call-backs**

<table>
<thead>
<tr>
<th>Did you request a call-back or text message to confirm power restoration or receive an updated estimate? (%) Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Requested call-back</strong></td>
</tr>
<tr>
<td>Received call-back (Total)</td>
</tr>
<tr>
<td>Received call-back (IVR Only)</td>
</tr>
<tr>
<td>Received call-back (IVR &amp; CCS)</td>
</tr>
<tr>
<td><strong>Requested text message</strong></td>
</tr>
<tr>
<td>Received text message (Total)</td>
</tr>
<tr>
<td>Received text message (IVR Only)</td>
</tr>
<tr>
<td>Received text message (IVR &amp; CCS)</td>
</tr>
<tr>
<td><strong>Requested email</strong></td>
</tr>
<tr>
<td>Received email (Total)</td>
</tr>
<tr>
<td>Received email (IVR Only)</td>
</tr>
<tr>
<td>Received email (IVR &amp; CCS)</td>
</tr>
</tbody>
</table>
### Outage Net Easy

<table>
<thead>
<tr>
<th></th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Easy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Easy</strong></td>
<td>86</td>
<td>87</td>
<td></td>
<td></td>
<td></td>
<td>87</td>
</tr>
<tr>
<td><strong>Neither easy nor difficult</strong></td>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td><strong>Difficult</strong></td>
<td>10</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>
All things considered, would you say it was easy - or difficult - for you to get your request resolved?

<table>
<thead>
<tr>
<th>Service</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Initiation</td>
<td>93</td>
<td>94</td>
<td></td>
<td></td>
<td></td>
<td>94</td>
</tr>
<tr>
<td>Service Initiation (Gas)</td>
<td>88</td>
<td>93</td>
<td></td>
<td></td>
<td></td>
<td>93</td>
</tr>
<tr>
<td>Outage</td>
<td>76</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
<td>79</td>
</tr>
<tr>
<td>Billing (Internal)</td>
<td>84</td>
<td>77</td>
<td></td>
<td></td>
<td></td>
<td>77</td>
</tr>
<tr>
<td>Billing (Outsource)</td>
<td>69</td>
<td>76</td>
<td></td>
<td></td>
<td></td>
<td>76</td>
</tr>
<tr>
<td>Outdoor Lighting</td>
<td>51</td>
<td>61</td>
<td></td>
<td></td>
<td></td>
<td>61</td>
</tr>
</tbody>
</table>
## Net Easy Outage – 2018

<table>
<thead>
<tr>
<th></th>
<th>Carolinas East</th>
<th>Carolinas West</th>
<th>Florida</th>
<th>Midwest</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Easy</strong></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
</tr>
<tr>
<td>Easy</td>
<td>91</td>
<td>91</td>
<td>88</td>
<td>88</td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Difficult</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

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

- FL - Central Zone: 89%
- CE - Triangle Zone: 88%
- Total Florida: 86%
- FL - Coastal Zone: 84%
- Total Carolinas East: 83%
- CE - Coastal Zone: 82%
- CW - Central Zone: 82%
- CW - Mountains Zone: 81%
- Indiana Zone: 81%
- Total Carolinas West: 79%
- Total Midwest: 79%
- CE - Triad Zone: 77%
- Ohio/Kentucky Zone: 76%
- CW - Palmetto Zone: 76%
Midwest Fastrack

Outdoor Lighting Module

Q1-18

Midwest Fastrack Report
Outdoor Lighting
DE-MW Score Trends

Q1-17 Q2-17 Q3-17 Q4-17 Q1-18

Midwest Fastrack Report
## Outdoor Lighting

### Impact on Overall Satisfaction

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

**DE-MW Fastrack Modules**

Would you say that this recent service experience has had a positive, negative, or no effect on your overall satisfaction with Duke Energy?

<table>
<thead>
<tr>
<th>Net Effect</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Initiation</td>
<td>65</td>
<td>64</td>
<td></td>
<td></td>
<td></td>
<td>64</td>
</tr>
<tr>
<td>Service Initiation (Gas)</td>
<td>58</td>
<td>62</td>
<td></td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td><strong>Outdoor Lighting</strong></td>
<td>43</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
<td><strong>45</strong></td>
</tr>
<tr>
<td>Billing (Internal)</td>
<td>46</td>
<td>43</td>
<td></td>
<td></td>
<td></td>
<td>43</td>
</tr>
<tr>
<td>Billing (Outsource)</td>
<td>41</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
<td>38</td>
</tr>
<tr>
<td>Outage</td>
<td>34</td>
<td>37</td>
<td></td>
<td></td>
<td></td>
<td>37</td>
</tr>
</tbody>
</table>
Outdoor Lighting (Reported by Phone)
DEMW Q1-18 Opportunity Score

- Resolution Timeliness: 39%
- Net Easy: 28%
- Kept Informed: 13%
- One Call Resolution: 13%
- CCS: 2%
- IVR Confirmation: 2%
- Wait Time: <1%
- Respecting Property: <1%
### Outdoor Lighting

#### IVR Ratings

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

**Rating Scale (0 - 10):**

- % (0-4)
- % (8-10)
## Website Evaluation

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

Rating Scale (0 - 10): 

- % (0-10)
- % (0-4)
Outdoor Lighting Request Resolution

- Timeliness of resolving outdoor lighting request (% 8-10)
- One Call Resolution - Phone (% Yes)
- One Contact Resolution - Web (% Yes)

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Timeliness</th>
<th>One Call Resolution - Phone</th>
<th>One Contact Resolution - Web</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1-17</td>
<td>71%</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Q2-17</td>
<td>74%</td>
<td>79</td>
<td></td>
</tr>
<tr>
<td>Q3-17</td>
<td>67%</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>Q4-17</td>
<td>66%</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>Q1-18</td>
<td>94%</td>
<td>75</td>
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</table>
## Outdoor Lighting Kept Informed

<table>
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<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kept informed throughout the process of your request (% Yes)</td>
<td>56</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td>60</td>
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<tr>
<td>Informed that your outdoor lighting request had been resolved (% Yes)</td>
<td>44</td>
<td>49</td>
<td></td>
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<td>49</td>
</tr>
</tbody>
</table>
### Outdoor Lighting Quality of Field Service

<table>
<thead>
<tr>
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<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did you speak with the Field Service Technician who repaired your light? (% Yes)</td>
<td>18</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>Overall Satisfaction with service provided by Field Service Technician at your property</td>
<td>92</td>
<td>96</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>96</td>
</tr>
<tr>
<td>Was the outdoor light located on your property? (% Yes)</td>
<td>39</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
<td>39</td>
</tr>
<tr>
<td>Respecting your property</td>
<td>96</td>
<td>93</td>
<td>2</td>
<td>2</td>
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<td>93</td>
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</tbody>
</table>
### Outdoor Lighting

**Net Easy**

<table>
<thead>
<tr>
<th></th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Easy</strong>*</td>
<td>51</td>
<td>61</td>
<td>61</td>
<td>61</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>Easy</td>
<td>74</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
<td>79</td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Difficult</td>
<td>23</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>
All things considered, would you say it was easy - or difficult - for you to get your request resolved?

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

Midwest Fastrack Report
Billing Score Trends

- Billing (Internal)
- Billing (Outsource)

Q1-17 to Q1-18

Midwest Fastrack Report
Midwest Fastrack

Billing (Internal) Module

Q1-18
Billing (Internal)
Reason for Call* - Q1-18

Pay bill / Make a payment: 62%
Ask about bill amount: 14%
High bill: 10%
Ask for extension / Ask for payment arrangements: 7%
Discuss fixed payment plan/EPP/budget billing: 2%
I did not receive my bill / Get copy of bill: 2%
Confirm payment was received: 2%
Clarify/change personal information on the bill: 1%
Deposit / Question about deposit: 1%
Change address: <1%
Discuss eBill or electronic payment options: <1%
### Billing (Internal)

#### Impact on Overall Satisfaction

<table>
<thead>
<tr>
<th>Overall Satisfaction with Duke Energy's overall performance as your electric supplier</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>87</td>
<td>79</td>
<td>3</td>
<td>3</td>
<td>79</td>
<td>3</td>
</tr>
</tbody>
</table>

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Would you say that this recent service experience has had a positive, negative, or no effect on this overall satisfaction with Duke Energy?

<table>
<thead>
<tr>
<th>Net Effect</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>A positive effect</td>
<td>52</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td>48</td>
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<tr>
<td>A negative effect</td>
<td>6</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
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<tr>
<td>No effect</td>
<td>43</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td>48</td>
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</tbody>
</table>
Would you say that this recent service experience has had a positive, negative, or no effect on your overall satisfaction with Duke Energy?

<table>
<thead>
<tr>
<th>Net Effect</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Initiation</td>
<td>65</td>
<td>64</td>
<td></td>
<td></td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Service Initiation (Gas)</td>
<td>58</td>
<td>62</td>
<td></td>
<td></td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Outdoor Lighting</td>
<td>43</td>
<td>45</td>
<td></td>
<td></td>
<td>45</td>
<td></td>
</tr>
<tr>
<td><strong>Billing (Internal)</strong></td>
<td><strong>46</strong></td>
<td><strong>43</strong></td>
<td></td>
<td></td>
<td><strong>43</strong></td>
<td></td>
</tr>
<tr>
<td>Billing (Outsource)</td>
<td>41</td>
<td>38</td>
<td></td>
<td></td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>Outage</td>
<td>34</td>
<td>37</td>
<td></td>
<td></td>
<td>37</td>
<td></td>
</tr>
</tbody>
</table>
Billing (Internal) - IVR Only
DEM W Q1-18 Opportunity Score

- Resolution/Timeliness: 45%
- IVR: 18%
- Ease of navigation through the phone menu prompts: 19%
- Net Easy: 13%
- One Call Resolution: 6%
Billing (Internal) - IVR & CCS
DEMW Q1-18 Opportunity Score

- Resolution/Timeliness: 31%
- Net Easy: 28%
- CCS: 21%
- One Call Resolution: 11%
- Wait Time: 3%
- IVR: 3%
- Ease of navigation through the phone menu prompts: 2%
Billing (Internal)
IVR Ratings

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

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<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have requests or questions been resolved? (% Yes)</td>
<td>89</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td>90</td>
</tr>
<tr>
<td>One call resolution (% Yes)</td>
<td>92</td>
<td>90</td>
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<td>90</td>
</tr>
<tr>
<td>Timeliness of resolving request</td>
<td>95</td>
<td>91</td>
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<td></td>
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</tbody>
</table>

1 2

2
### Billing (Internal) Net Easy

<table>
<thead>
<tr>
<th></th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Easy</strong></td>
<td>84</td>
<td>77</td>
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<td>77</td>
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<tr>
<td>Easy</td>
<td>91</td>
<td>87</td>
<td></td>
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<td></td>
<td>87</td>
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<tr>
<td>Neither easy nor difficult</td>
<td>2</td>
<td>4</td>
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<td>4</td>
</tr>
<tr>
<td>Difficult</td>
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<tr>
<td><strong>% Indicating Request Resolved</strong></td>
<td>89</td>
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</tr>
<tr>
<td>Easy</td>
<td>96</td>
<td>92</td>
<td></td>
<td></td>
<td></td>
<td>92</td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Difficult</td>
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<td>4</td>
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<tr>
<td><strong>% Indicating Request NOT Resolved</strong></td>
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<td>50</td>
<td>43</td>
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<tr>
<td>Neither easy nor difficult</td>
<td>6</td>
<td>4</td>
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<td></td>
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<tr>
<td>Difficult</td>
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<td>52</td>
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</tbody>
</table>
All things considered, would you say it was easy - or difficult - for you to get your request resolved?

<table>
<thead>
<tr>
<th>Service</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Initiation</td>
<td>93</td>
<td>94</td>
<td></td>
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<td>94</td>
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<tr>
<td>Service Initiation (Gas)</td>
<td>88</td>
<td>93</td>
<td></td>
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</tr>
<tr>
<td>Outage</td>
<td>76</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
<td>79</td>
</tr>
<tr>
<td>Billing (Internal)</td>
<td>84</td>
<td>77</td>
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<tr>
<td>Billing (Outsource)</td>
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<td>76</td>
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<td></td>
<td>76</td>
</tr>
<tr>
<td>Outdoor Lighting</td>
<td>51</td>
<td>61</td>
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<td>61</td>
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</tbody>
</table>
Net Easy
Billing (Internal) – 2018

<table>
<thead>
<tr>
<th></th>
<th>Carolinas East</th>
<th>Carolinas West</th>
<th>Florida</th>
<th>Midwest</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
</tr>
<tr>
<td><strong>Net Easy</strong>*</td>
<td>73</td>
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<td>73</td>
<td></td>
</tr>
<tr>
<td>Easy</td>
<td>85</td>
<td>85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficult</td>
<td>12</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Net Easy score = Easy - Difficult

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

Midwest Fastrack Report
Billing (Outsource)
Reason for Call* — Q1-18

- Ask for extension / Ask for payment arrangements: 23%
- Ask about bill amount: 21%
- Pay bill / Make a payment: 15%
- High bill: 12%
- Discuss fixed payment plan/EPP/budget billing: 8%
- Confirm payment was received: 6%
- Request assistance in paying bill: 3%
- Ask about due date: 3%
- I did not receive my bill / Get copy of bill: 2%
- Change address: 1%
- Clarify/change personal information on the bill: 1%
- Discuss eBill or electronic payment options: 1%
- Ask about a particular charge on the bill: 1%
- Ask for meter reading / Check meter: 1%
- Deposit / Question about deposit: 1%
- Connect, Transfer, Reconnect or stop service: <1%
- Determine if paid too much or paid twice: <1%
- Discuss an estimated bill: <1%
- Provide meter reading / Missed meter read: <1%
# Billing (Outsource)
## Impact on Overall Satisfaction

<table>
<thead>
<tr>
<th>Overall Satisfaction with Duke Energy's overall performance as your electric supplier</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>81</td>
<td>78</td>
<td></td>
<td></td>
<td></td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>6</td>
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</table>

Would you say that this recent service experience has had a positive, negative, or no effect on this overall satisfaction with Duke Energy?

<table>
<thead>
<tr>
<th>Net Effect</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>A positive effect</td>
<td>54</td>
<td>49</td>
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<tr>
<td>A negative effect</td>
<td>12</td>
<td>11</td>
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<td>11</td>
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<tr>
<td>No effect</td>
<td>34</td>
<td>39</td>
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</tbody>
</table>
## Impact on Overall Satisfaction

DE-MW Fastrack Modules

Would you say that this recent service experience has had a positive, negative, or no effect on your overall satisfaction with Duke Energy?

<table>
<thead>
<tr>
<th>Net Effect</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Initiation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Initiation (Gas)</td>
<td>65</td>
<td>64</td>
<td></td>
<td></td>
<td></td>
<td>64</td>
</tr>
<tr>
<td>Outdoor Lighting</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Billing (Internal)</td>
<td>46</td>
<td>43</td>
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<td>43</td>
</tr>
<tr>
<td>Billing (Outsource)</td>
<td>41</td>
<td>38</td>
<td></td>
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<td></td>
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<tr>
<td>Outage</td>
<td>34</td>
<td>37</td>
<td></td>
<td></td>
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<td>37</td>
</tr>
</tbody>
</table>
Billing (Outsource)
DEMW Q1-18 Opportunity Score

Ease of navigation through the phone menu prompts
- IVR: 3%

Resolution/Timeliness
- 36%

Net Easy
- 18%

One Call Resolution
- 17%

CCS
- 14%

Wait Time
- 6%

Billing (Outsource)
DEMW Q1-18 Opportunity Score

Ease of navigation through the phone menu prompts
- IVR: 3%

Resolution/Timeliness
- 36%

Net Easy
- 18%

One Call Resolution
- 17%

CCS
- 14%

Wait Time
- 6%
### Billing (Outsource) IVR Ratings

<table>
<thead>
<tr>
<th></th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
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<td>Overall Satisfaction with IVR</td>
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<td>61</td>
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<td>13</td>
<td>14</td>
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<tr>
<td>Ease of navigation through the phone menu prompts</td>
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<td>10</td>
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<td>Amount of time you waited to be transferred to CCS</td>
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<tr>
<td>Overall Satisfaction with Customer Care Specialist</td>
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<td></td>
<td>7</td>
<td>4</td>
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</table>

- % (8-10)
- % (0-4)
## Billing (Outsource)

### Request Resolution

<table>
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<tr>
<th></th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Have requests or questions been resolved? (% Yes)</strong></td>
<td>78</td>
<td>79</td>
<td></td>
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<td></td>
<td>79</td>
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<tr>
<td><strong>One call resolution (% Yes)</strong></td>
<td>83</td>
<td>84</td>
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<td></td>
<td>84</td>
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<tr>
<td><strong>Timeliness of resolving request</strong></td>
<td>93</td>
<td>91</td>
<td></td>
<td></td>
<td></td>
<td>91</td>
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<tr>
<td></td>
<td>YTD-17</td>
<td>Q1-18</td>
<td>Q2-18</td>
<td>Q3-18</td>
<td>Q4-18</td>
<td>YTD-18</td>
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<td>--------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>--------</td>
</tr>
<tr>
<td><strong>Net Easy</strong></td>
<td>69</td>
<td>76</td>
<td></td>
<td></td>
<td></td>
<td>76</td>
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<tr>
<td>Easy</td>
<td>83</td>
<td>87</td>
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<td></td>
<td></td>
<td>87</td>
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<tr>
<td>Neither easy nor difficult</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Difficult</td>
<td>14</td>
<td>11</td>
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<td></td>
<td></td>
<td>11</td>
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<tr>
<td><strong>% Indicating Request Resolved</strong></td>
<td>78</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
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<td>94</td>
<td>98</td>
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<td></td>
<td></td>
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<tr>
<td>Neither easy nor difficult</td>
<td>2</td>
<td>1</td>
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<td></td>
<td></td>
<td>1</td>
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<tr>
<td>Difficult</td>
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<td>2</td>
<td></td>
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<tr>
<td><strong>% Indicating Request NOT Resolved</strong></td>
<td>7</td>
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<td>Easy</td>
<td>44</td>
<td>44</td>
<td></td>
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<tr>
<td>Neither easy nor difficult</td>
<td>9</td>
<td>8</td>
<td></td>
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<tr>
<td>Difficult</td>
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<td>48</td>
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</table>
All things considered, would you say it was easy - or difficult - for you to get your request resolved?

<table>
<thead>
<tr>
<th>Net Easy*</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
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</thead>
<tbody>
<tr>
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<td>93</td>
<td>94</td>
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</tr>
<tr>
<td>Service Initiation (Gas)</td>
<td>88</td>
<td>93</td>
<td></td>
<td></td>
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<tr>
<td>Outage</td>
<td>76</td>
<td>79</td>
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<td></td>
<td>79</td>
</tr>
<tr>
<td>Billing (Internal)</td>
<td>84</td>
<td>77</td>
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<td>77</td>
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<tr>
<td><strong>Billing (Outsource)</strong></td>
<td><strong>69</strong></td>
<td><strong>76</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>76</strong></td>
</tr>
<tr>
<td>Outdoor Lighting</td>
<td>51</td>
<td>61</td>
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</table>
Net Easy
Billing (Outsource) – 2018

<table>
<thead>
<tr>
<th></th>
<th>Carolinas East</th>
<th>Carolinas West</th>
<th>Florida</th>
<th>Midwest</th>
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<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
</tr>
<tr>
<td>Net Easy*</td>
<td>58</td>
<td>58</td>
<td>61</td>
<td>61</td>
</tr>
<tr>
<td>Easy</td>
<td>76</td>
<td>76</td>
<td>78</td>
<td>78</td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>5</td>
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<tr>
<td>Difficult</td>
<td>18</td>
<td>18</td>
<td>17</td>
<td>17</td>
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</tbody>
</table>

*Net Easy score = Easy - Difficult

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

Midwest Fastrack Report
Net Easy
Billing (Outsource) By Zone – Q1-18

- Ohio/Kentucky Zone: 77%
- Total Midwest: 76%
- Indiana Zone: 74%
- FL - Central Zone: 67%
- CE - Coastal Zone: 65%
- CW - Central Zone: 63%
- CW - Palmetto Zone: 63%
- Total Carolinas West: 61%
- Total Carolinas East: 58%
- Total Florida: 58%
- CW - Mountains Zone: 57%
- CE - Triangle Zone: 56%
- CE - Triad Zone: 54%
- FL - Coastal Zone: 50%
Midwest Fastrack

Service Initiation (Gas) Module

Q1-18
Service Initiation (Gas)
DE-MW Score Trends

Q1-17  Q2-17  Q3-17  Q4-17  Q1-18

60%  70%  80%  90%  100%
## Service Initiation (Gas)
### Impact on Overall Satisfaction

<table>
<thead>
<tr>
<th>Overall Satisfaction with Duke Energy's overall performance as your electric supplier</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>90</td>
<td>92</td>
<td></td>
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<td></td>
<td>92</td>
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<td>2</td>
<td>2</td>
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</tbody>
</table>

Would you say that your recent service experience has had a positive, negative, or no effect on your overall satisfaction with Duke Energy?

<table>
<thead>
<tr>
<th>Net Effect</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>A positive effect</td>
<td>63</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
<td>65</td>
</tr>
<tr>
<td>A negative effect</td>
<td>5</td>
<td>3</td>
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<tr>
<td>No effect</td>
<td>32</td>
<td>32</td>
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</table>
### Impact on Overall Satisfaction

#### DE-MW Fastrack Modules

<table>
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<tr>
<th>Net Effect</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
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<tbody>
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<td>65</td>
<td>64</td>
<td></td>
<td></td>
<td>64</td>
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<tr>
<td><em>Service Initiation (Gas)</em></td>
<td>58</td>
<td>62</td>
<td></td>
<td></td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Outdoor Lighting</td>
<td>43</td>
<td>45</td>
<td></td>
<td></td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Billing (Internal)</td>
<td>46</td>
<td>43</td>
<td></td>
<td></td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Billing (Outsource)</td>
<td>41</td>
<td>38</td>
<td></td>
<td></td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>Outage</td>
<td>34</td>
<td>37</td>
<td></td>
<td></td>
<td>37</td>
<td></td>
</tr>
</tbody>
</table>

Would you say that this recent service experience has had a positive, negative, or no effect on your overall satisfaction with Duke Energy?
Service Initiation (Gas) – Deposit Required
DEMW Q1-18 Opportunity Score

Wait Time
2%

Kept Informed of Status
3%
Connected on Scheduled Date
4%

Respecting Property
4%

DE Connections Rep
4%

CCS Tell About Different Payment Options
4%

CCS Explained How Deposit Calculated
5%

Ease of Navigation Through IVR
5%

Confirmation Call
6%

Enough Time to Pay Deposit
9%

One Call Resolution
1%

Information About Deposit Required
1%

Net Easy
<1%

Scheduled Date
10%

CCS Provided Variety of Options to Pay Deposit
9%

CCS Explained Why Deposit Required
1%

Deposit
19%

IVR
1%
Service Initiation (Gas) – Deposit NOT Required

DEMW Q1-18 Opportunity Score

- CCS Tell About Different Payment Options: 2%
- Confirmation Call: 3%
- Kept Informed of Status: 7%
- One Call Resolution: 7%
- Ease of Navigation Through IVR Prompts: 8%
- IVR: 10%
- Net Easy: 11%
- Wait Time: 12%
- Scheduled Date: 19%
- CCS: 21%
- Connected on Scheduled Date: 1%
- Respecting Property: 1%
- DE Connections Rep: <1%
- Midwestern Fastrack Report
## Service Initiation (Gas)
### Call Center Metrics – Deposit Required

<table>
<thead>
<tr>
<th>Metric</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Satisfaction with IVR</td>
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<td>6</td>
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<tr>
<td>Ease of navigation through the phone menu prompts</td>
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<tr>
<td>Amount of time you waited to be transferred to CCS</td>
<td>89</td>
<td>93</td>
<td>3</td>
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<td></td>
<td>93</td>
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<tr>
<td>Overall Satisfaction with Customer Care Specialist</td>
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<td>4</td>
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<td>100</td>
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<td>Payment options explained (% Yes)</td>
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<td>One call resolution (% Yes)</td>
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<tr>
<td>Overall Satisfaction with Duke Energy Connections Representative</td>
<td>86</td>
<td>81</td>
<td>9</td>
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<td>81</td>
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</table>

**Rating Scale (0 - 10):**

- **% (8-10):**
- **% (0-4):**
Service Initiation (Gas)
Call Center Metrics – Deposit NOT Required

<table>
<thead>
<tr>
<th></th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
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<tbody>
<tr>
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<td>74</td>
<td>73</td>
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<td>Ease of navigation through the phone menu prompts</td>
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<td>81</td>
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<tr>
<td>Amount of time you waited to be transferred to CCS</td>
<td>88</td>
<td>87</td>
<td></td>
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<td></td>
<td>87</td>
</tr>
<tr>
<td>Overall Satisfaction with Customer Care Specialist</td>
<td>91</td>
<td>94</td>
<td></td>
<td></td>
<td></td>
<td>94</td>
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<tr>
<td><em>Payment options explained (% Yes)</em></td>
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<td>72</td>
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<td>72</td>
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<td><em>One call resolution (% Yes)</em></td>
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<td>87</td>
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<tr>
<td>Overall Satisfaction with Duke Energy Connections Representative</td>
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<td>87</td>
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</tbody>
</table>

Rating Scale (0 - 10):

% (0-4)
% (0-10)
## Service Initiation (Gas)

### Deposit

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

*Rating Scale (0 - 10): % (8-10) % (0-4)*
**Service Initiation (Gas) Appointment**

<table>
<thead>
<tr>
<th>Appointment*</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did CCS inform you someone had to be home? (% Yes)</td>
<td>96</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
<td>99</td>
</tr>
<tr>
<td>Were you able to schedule the time window you wanted? (% Yes)</td>
<td>87</td>
<td>88</td>
<td></td>
<td></td>
<td></td>
<td>88</td>
</tr>
</tbody>
</table>
## Service Initiation (Gas)
### Scheduled Date & Performance

<table>
<thead>
<tr>
<th></th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with scheduled connection date</td>
<td>93</td>
<td>96</td>
<td></td>
<td></td>
<td></td>
<td>96</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Service connected on scheduled date (%Yes)</td>
<td>96</td>
<td>97</td>
<td></td>
<td></td>
<td></td>
<td>97</td>
</tr>
<tr>
<td>Received confirmation call or phone message (% Yes)</td>
<td>50</td>
<td>62</td>
<td></td>
<td></td>
<td></td>
<td>62</td>
</tr>
<tr>
<td>Kept Informed About Status of Request (% Yes)</td>
<td>83</td>
<td>84</td>
<td></td>
<td></td>
<td></td>
<td>84</td>
</tr>
</tbody>
</table>
## Service Initiation (Gas)
### Field Service Technician

<table>
<thead>
<tr>
<th></th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respecting your property</td>
<td>98</td>
<td>96</td>
<td>2</td>
<td>1</td>
<td>96</td>
<td>2</td>
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<tr>
<td>Talked with field service technician DURING visit (% Yes)</td>
<td>27</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>Overall Satisfaction with service provided by Field Service Technician at your property</td>
<td>96</td>
<td>94</td>
<td></td>
<td></td>
<td></td>
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</table>
## Service Initiation (Gas)

### Net Easy – Connected on Scheduled Date

<table>
<thead>
<tr>
<th></th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Easy</strong>*</td>
<td>88</td>
<td>93</td>
<td></td>
<td></td>
<td></td>
<td>93</td>
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<tr>
<td>Easy</td>
<td>93</td>
<td>96</td>
<td></td>
<td></td>
<td></td>
<td>96</td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Difficult</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>% Indicating Connected on Scheduled Date</strong></td>
<td>96</td>
<td>97</td>
<td></td>
<td></td>
<td></td>
<td>97</td>
</tr>
<tr>
<td>Easy</td>
<td>94</td>
<td>97</td>
<td></td>
<td></td>
<td></td>
<td>97</td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>1</td>
<td>1</td>
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<td>Difficult</td>
<td>4</td>
<td>3</td>
<td></td>
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<td>3</td>
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<tr>
<td><strong>% Indicating NOT Connected on Scheduled Date</strong></td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
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<td>3</td>
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<tr>
<td>Easy</td>
<td>61</td>
<td>77</td>
<td></td>
<td></td>
<td></td>
<td>77</td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>8</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Difficult</td>
<td>31</td>
<td>18</td>
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<td>18</td>
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</table>
### Service Initiation (Gas)

**Net Easy – Deposit Required**

<table>
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<tr>
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<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Easy</strong></td>
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<td></td>
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<tr>
<td>Easy</td>
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<td>96</td>
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<tr>
<td>Neither easy nor difficult</td>
<td>2</td>
<td>1</td>
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<tr>
<td>Difficult</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
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<td>3</td>
</tr>
<tr>
<td><strong>% Indicating Required to Pay Deposit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy</td>
<td>93</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
<td>99</td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Difficult</td>
<td>6</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td><strong>% Indicating NOT Required to Pay Deposit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy</td>
<td>93</td>
<td>95</td>
<td></td>
<td></td>
<td></td>
<td>95</td>
</tr>
<tr>
<td>Neither easy nor difficult</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Difficult</td>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>
All things considered, would you say it was easy - or difficult - for you to get your request resolved?

<table>
<thead>
<tr>
<th>Net Easy*</th>
<th>YTD-17</th>
<th>Q1-18</th>
<th>Q2-18</th>
<th>Q3-18</th>
<th>Q4-18</th>
<th>YTD-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Initiation</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Service Initiation (Gas)</td>
<td>93</td>
<td>94</td>
<td></td>
<td></td>
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<td>94</td>
</tr>
<tr>
<td>Outage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Billing (Internal)</td>
<td>76</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
<td>79</td>
</tr>
<tr>
<td>Billing (Outsource)</td>
<td>84</td>
<td>77</td>
<td></td>
<td></td>
<td></td>
<td>77</td>
</tr>
<tr>
<td>Outdoor Lighting</td>
<td>69</td>
<td>76</td>
<td></td>
<td></td>
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<td>76</td>
</tr>
<tr>
<td></td>
<td>51</td>
<td>61</td>
<td></td>
<td></td>
<td></td>
<td>61</td>
</tr>
</tbody>
</table>
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

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'

The Fastrack Score would = \frac{3+2+4}{10} = 90
1DF – Midwest Fastrack

DEMW Results

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

<table>
<thead>
<tr>
<th></th>
<th>June Score</th>
<th>2018 YTD</th>
<th>2018 Goal</th>
<th>Goal Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Midwest Fastrack</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Initiation</td>
<td>88</td>
<td>90</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Outage</td>
<td>75</td>
<td>81</td>
<td>79</td>
<td></td>
</tr>
<tr>
<td>Outdoor Lighting</td>
<td>92</td>
<td>80</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td><strong>Indiana Fastrack</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Initiation</td>
<td>85</td>
<td>90</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Outage</td>
<td>88</td>
<td>85</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td>Outdoor Lighting</td>
<td>90</td>
<td>78</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td><strong>Ohio/Kentucky Fastrack</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Initiation</td>
<td>91</td>
<td>90</td>
<td>91</td>
<td></td>
</tr>
<tr>
<td>Outage</td>
<td>62</td>
<td>77</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>Outdoor Lighting</td>
<td>93</td>
<td>81</td>
<td>80</td>
<td></td>
</tr>
</tbody>
</table>
# 1DF – Midwest Fastrack

## Total Goal Module Performance by Zone – June 2018

<table>
<thead>
<tr>
<th>Zone</th>
<th>June Score</th>
<th>2018 YTD</th>
<th>2018 Goal</th>
<th>Goal Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duke Energy Midwest</td>
<td>85</td>
<td>84</td>
<td>83</td>
<td>Green</td>
</tr>
<tr>
<td>Indiana</td>
<td>88</td>
<td>85</td>
<td>85</td>
<td>Green</td>
</tr>
<tr>
<td>Ohio/Kentucky</td>
<td>82</td>
<td>83</td>
<td>82</td>
<td>Green</td>
</tr>
</tbody>
</table>
### 1DF – Midwest Fastrack

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

<table>
<thead>
<tr>
<th>Zone</th>
<th>June Score</th>
<th>2018 YTD</th>
<th>2018 Goal</th>
<th>Goal Status</th>
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</thead>
<tbody>
<tr>
<td>Duke Energy Midwest</td>
<td>88</td>
<td>90</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Indiana</td>
<td>85</td>
<td>90</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Ohio/Kentucky</td>
<td>91</td>
<td>90</td>
<td>91</td>
<td></td>
</tr>
</tbody>
</table>
# 1DF – Midwest Fastrack

## ‘Outage’ Performance by Zone – June 2018

<table>
<thead>
<tr>
<th>Zone</th>
<th>June Score</th>
<th>2018 YTD</th>
<th>2018 Goal</th>
<th>Goal Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duke Energy Midwest</td>
<td>75</td>
<td>81</td>
<td>79</td>
<td></td>
</tr>
<tr>
<td>Indiana</td>
<td>88</td>
<td>85</td>
<td>84</td>
<td>🟢</td>
</tr>
<tr>
<td>Ohio/Kentucky</td>
<td>62</td>
<td>77</td>
<td>76</td>
<td>🟢</td>
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</tbody>
</table>
# 1DF – Midwest Fastrack

‘Outdoor Lighting’ Performance by Zone – June 2018

<table>
<thead>
<tr>
<th></th>
<th>June Score</th>
<th>2018 YTD</th>
<th>2018 Goal</th>
<th>Goal Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duke Energy Midwest</td>
<td>92</td>
<td>80</td>
<td>80</td>
<td>Green</td>
</tr>
<tr>
<td>Ohio/Kentucky</td>
<td>93</td>
<td>81</td>
<td>80</td>
<td>Green</td>
</tr>
<tr>
<td>Indiana</td>
<td>90</td>
<td>78</td>
<td>80</td>
<td>Yellow</td>
</tr>
</tbody>
</table>
Fastrack score is the average of three modules ('Service Initiation', 'Outage', and 'Outdoor Lighting').

Fastrack Score

- 2018 Midwest Fastrack Goal: 83
- Service Initiation: 90
- Outage: 81
- Outdoor Lighting: 80

% Respondent ratings of 0-4:
- Fastrack Score: 6
- Service Initiation: 3
- Outage: 4
- Outdoor Lighting: 11

1DF – Midwest Fastrack
Fastrack Scores – June 2018 YTD
### 1DF – Midwest Fastrack
#### Monthly Fastrack Score Trend

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>YTD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2018 Midwest Fastrack Goal</strong></td>
<td>83</td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td><strong>% Respondent ratings of 8-10</strong></td>
<td>85</td>
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<table>
<thead>
<tr>
<th></th>
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<th>Feb</th>
<th>Mar</th>
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<th>May</th>
<th>Jun</th>
<th>Jul</th>
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<th>Oct</th>
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**DUKE ENERGY**
## 1DF – Midwest Fastrack
### Monthly Fastrack Scores by Module

<table>
<thead>
<tr>
<th>Goal Modules</th>
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<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
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<th>Oct</th>
<th>Nov</th>
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<td>Service Initiation</td>
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<td>81</td>
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<tr>
<td>Outdoor Lighting</td>
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<td>80</td>
<td>89</td>
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<tr>
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</table>

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

2018 Midwest Fastrack Goal 83

- Fastrack Score
- Service Initiation
- Outage
- Outdoor Lighting
1DF – Midwest Fastrack
2018 YTD Fastrack Scores

2018 Midwest Fastrack Goal

83

[Graph showing 2018 Midwest Fastrack scores for various months from January to December, with metrics for Fastrack Score, Service Initiation, Outage, and Outdoor Lighting.]
1DF – Midwest Fastrack

DEI Results

June 2018
DEI Fastrack
Fastrack Scores – June 2018 YTD

<table>
<thead>
<tr>
<th>2018 DEI Fastrack Goal 85</th>
<th>Fastrack Score</th>
<th>Service Initiation</th>
<th>Outage</th>
<th>Outdoor Lighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td></td>
<td>90</td>
<td>85</td>
<td>78</td>
</tr>
</tbody>
</table>

% Respondent ratings of 0-4

- 6
- 3
- 4
- 11

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

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>YTD</th>
</tr>
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<tbody>
<tr>
<td><strong>Goal Modules</strong></td>
<td></td>
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<td></td>
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</tr>
<tr>
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</tr>
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<td>Outage</td>
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<tr>
<td>Outdoor Lighting</td>
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<td>79</td>
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</tr>
<tr>
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<td>79</td>
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</tbody>
</table>

**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

2018
DEI
Fastrack
Goal
85

100%
90%
80%
70%
60%

Jan YTD  Feb YTD  Mar YTD  Apr YTD  May YTD  Jun YTD  Jul YTD  Aug YTD  Sep YTD  Oct YTD  Nov YTD  Dec YTD

- Service Score
- Outage Initiation
- Outage
- Outdoor Lighting
1DF – Midwest Fastrack

DEOH/KY Results

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

<table>
<thead>
<tr>
<th>Module</th>
<th>2018 DEOH/KY Fastrack Score Goal</th>
<th>2018 DEOH/KY Fastrack Score</th>
<th>Service Initiation</th>
<th>Outage</th>
<th>Outdoor Lighting</th>
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<td>Outdoor Lighting</td>
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<td>4</td>
<td>11</td>
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<td></td>
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</table>

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

% Respondent ratings of 0-4

6 | 4 | 4 | 11
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**

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<th>Day</th>
<th>2018</th>
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<td></td>
<td>Jan</td>
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<td>-----</td>
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<tr>
<td>Gas Service Initiation</td>
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*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
1DF – Midwest Fastrack

Zone/Area Results

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

### YTD Scores by Module

<table>
<thead>
<tr>
<th>Module</th>
<th>Jan</th>
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<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
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<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
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<tr>
<td>Outdoor Lighting</td>
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</table>

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
## YTD Scores by Module

<table>
<thead>
<tr>
<th>Module</th>
<th>2018 DEI Fastrack Goal</th>
<th>2018 Fastrack Score</th>
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<th>Outage</th>
<th>Outdoor Lighting</th>
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</table>

### YTD Scores by Module

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<th>Jul</th>
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<td>Outdoor Lighting</td>
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<td>89</td>
<td>88</td>
<td>67</td>
<td>94</td>
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<td>84</td>
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<tr>
<td>Outdoor Lighting</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>73</td>
</tr>
</tbody>
</table>

*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

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**

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**YTD Scores by Module**

<table>
<thead>
<tr>
<th>Module</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>YTD</th>
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<tr>
<td><strong>Goal Modules</strong></td>
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<td></td>
<td>91</td>
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<tr>
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<td>90</td>
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<td>78</td>
<td>72</td>
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<td>80</td>
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</table>

_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**

**YTD Scores by Module**

<table>
<thead>
<tr>
<th>2018 DEI Fastrack Goal 85</th>
<th>Fastrack Score</th>
<th>Service Initiation</th>
<th>Outage</th>
<th>Outdoor Lighting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>89</td>
<td>93</td>
<td>93</td>
<td>80</td>
</tr>
</tbody>
</table>

% Ratings of 0-4

| 2018 DEI Fastrack Goal 85 | 6 | 2 | 3 | 11 |

**2018 DEI Fastrack Goal = 85**

---

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

*Caution – small sample size at the Area level*
**MW – Ohio/Kentucky Zone**

**Fastrack Scores – June 2018 YTD**

<table>
<thead>
<tr>
<th>Goal Modules</th>
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<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
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<td>82</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Outage</td>
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</tr>
<tr>
<td>Outdoor Lighting</td>
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<td></td>
<td></td>
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</tbody>
</table>
| 2018 DEOH/KY Fastrack Goal = 82

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

*Caution - small sample size at the Area level*
MW – Ohio/Kentucky – North Area
Fastrack Scores – June 2018 YTD

YTD Scores by Module

<table>
<thead>
<tr>
<th>Fastrack Score</th>
<th>Service Initiation</th>
<th>Outage</th>
<th>Outdoor Lighting</th>
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<td>2018 DEOH/KY Fastrack Goal 82</td>
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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
**2018 DEOH/KY Fastrack Goal = 82**
1DF – Midwest Fastrack

Ops Center Level Results

June 2018
Midwest Fastrack
June 2018 YTD – Scores by Ops Center*
## Midwest Fastrack
### Goal Module Scores by Zone & Ops Center*

<table>
<thead>
<tr>
<th>Zone</th>
<th>Ops Center</th>
<th>Service Initiation</th>
<th>Outage</th>
<th>Outdoor Lighting</th>
<th>Ops Center Fastrack Score</th>
<th>Zone Fastrack Score</th>
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Midwest Fastrack

Reasons for 0-7 OSAT Ratings

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

- Process was confusing/difficult/lengthy: 27%
- Wanted same day turn-on/took too long to connect power: 27%
- Met expectations: 20%
- Customer Care Specialist (NEGATIVE): 13%
- Failed to get it right the first time: 7%
- Inaccurate information provided: 7%
- IVR related: 7%
- Power not connected on agreed/time: 7%
- That's just how I feel: 7%
- Always room for improvement: 7%
### DEMW Service Initiation

#### Reason for 0-7 OSAT Rating – YTD

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process was confusing/difficult/lengthy</td>
<td>25%</td>
</tr>
<tr>
<td>Met expectations</td>
<td>14%</td>
</tr>
<tr>
<td>Wanted same day turn-on/took too long to connect...</td>
<td>11%</td>
</tr>
<tr>
<td>DE Connections</td>
<td>8%</td>
</tr>
<tr>
<td>Had to pay deposit</td>
<td>7%</td>
</tr>
<tr>
<td>Other issue not resolved</td>
<td>7%</td>
</tr>
<tr>
<td>Customer Care Specialist (NEGATIVE)</td>
<td>6%</td>
</tr>
<tr>
<td>Other</td>
<td>6%</td>
</tr>
<tr>
<td>Power not connected on agreed/time</td>
<td>6%</td>
</tr>
<tr>
<td>That's just how I feel</td>
<td>4%</td>
</tr>
<tr>
<td>Don't know</td>
<td>3%</td>
</tr>
<tr>
<td>Failed to get it right the first time</td>
<td>3%</td>
</tr>
<tr>
<td>Inaccurate information provided</td>
<td>3%</td>
</tr>
<tr>
<td>Always room for improvement</td>
<td>3%</td>
</tr>
<tr>
<td>IVR related</td>
<td>1%</td>
</tr>
<tr>
<td>Nothing / No suggestions</td>
<td>1%</td>
</tr>
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</table>
DEMW Service Initiation
Reason for 0-7 OSAT Rating

- Customer Care Specialist (NEGATIVE)
- Don't know
- Had to pay deposit
- IVR related
- Nothing / No suggestions
- Other issue not resolved
- Process was confusing/difficult/lengthy
- That's just how I feel
- DE Connections
- Failed to get it right the first time
- Inaccurate information provided
- Met expectations
- Other
- Power not connected on agreed/time
- Wanted same day turn-on/took too long to connect power
- Always room for improvement
DEMW Outage
Reason for 0-7 OSAT Rating – June 2018

- It took too long to restore: 65%
- DE did not provide enough information: 31%
- IVR related: 12%
- Damage due to outage: 8%
- Met expectations: 8%
- Too many outages: 8%
- Inaccurate information provided: 4%
- Want to talk to a person: 4%
- Power not restored by ETR: 4%
### DEMW Outage

**Reason for 0-7 OSAT Rating – YTD**

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<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
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<tbody>
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<td>It took too long to restore</td>
<td>39%</td>
</tr>
<tr>
<td>DE did not provide enough information</td>
<td>28%</td>
</tr>
<tr>
<td>Power not restored by ETR</td>
<td>16%</td>
</tr>
<tr>
<td>Met expectations</td>
<td>7%</td>
</tr>
<tr>
<td>Damage due to outage</td>
<td>4%</td>
</tr>
<tr>
<td>IVR related</td>
<td>4%</td>
</tr>
<tr>
<td>Too many outages</td>
<td>4%</td>
</tr>
<tr>
<td>Need power/ Medical emergency</td>
<td>3%</td>
</tr>
<tr>
<td>Other issue not resolved</td>
<td>3%</td>
</tr>
<tr>
<td>Want to talk to a person</td>
<td>3%</td>
</tr>
<tr>
<td>Failed to get it right the first time</td>
<td>2%</td>
</tr>
<tr>
<td>Inaccurate information provided</td>
<td>2%</td>
</tr>
<tr>
<td>Always room for improvement</td>
<td>2%</td>
</tr>
<tr>
<td>Customer Care Specialist (NEGATIVE)</td>
<td>2%</td>
</tr>
<tr>
<td>I had an outage</td>
<td>2%</td>
</tr>
<tr>
<td>Don't know</td>
<td>1%</td>
</tr>
<tr>
<td>Field Service Rep (NEGATIVE)</td>
<td>1%</td>
</tr>
<tr>
<td>Need trees trimmed</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
</tr>
<tr>
<td>That's just how I feel</td>
<td>1%</td>
</tr>
</tbody>
</table>
DEMW Outage
Reason for 0-7 OSAT Rating

- Always room for improvement
- Customer Care Specialist (NEGATIVE)
- Damage due to outage
- DE did not provide enough information
- Failed to get it right the first time
- I had an outage
- Inaccurate information provided
- It took too long to restore
- IVR related
- Met expectations
- Need power / Medical emergency
- Other issue not resolved
- Power not restored by ETR
- Too many outages
- Want to talk to a person

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

- Took too long: 50%
- Didn't complete the request with one call: 38%
- Field Service Rep: poor service: 25%
- Issue not resolved: 13%
- Not be charged when light out: 13%
- Damage to property: 13%
- Need to be more customer friendly: 13%
<table>
<thead>
<tr>
<th>Reason</th>
<th>Rating</th>
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</thead>
<tbody>
<tr>
<td>Took too long</td>
<td>39%</td>
</tr>
<tr>
<td>Issue not resolved</td>
<td>37%</td>
</tr>
<tr>
<td>Didn't complete the request with one call</td>
<td>25%</td>
</tr>
<tr>
<td>Need better communication/updates</td>
<td>14%</td>
</tr>
<tr>
<td>Field Service Rep: poor service</td>
<td>10%</td>
</tr>
<tr>
<td>Light needs repair too frequently</td>
<td>6%</td>
</tr>
<tr>
<td>Not sure issues resolved</td>
<td>4%</td>
</tr>
<tr>
<td>Didn't receive a callback</td>
<td>4%</td>
</tr>
<tr>
<td>Not be charged when light out</td>
<td>4%</td>
</tr>
<tr>
<td>Need to be more customer friendly</td>
<td>3%</td>
</tr>
<tr>
<td>CCS: poor service</td>
<td>2%</td>
</tr>
<tr>
<td>Damage to property</td>
<td>2%</td>
</tr>
<tr>
<td>Didn't close visit</td>
<td>1%</td>
</tr>
<tr>
<td>No issues</td>
<td>1%</td>
</tr>
<tr>
<td>Same/next day service</td>
<td>1%</td>
</tr>
<tr>
<td>Site left in poor condition</td>
<td>1%</td>
</tr>
<tr>
<td>Told not DE light</td>
<td>1%</td>
</tr>
<tr>
<td>Tree trimming</td>
<td>1%</td>
</tr>
<tr>
<td>Website</td>
<td>1%</td>
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</tbody>
</table>
DEMW Outdoor Lighting
Reason for 0-7 OSAT Rating

- CCS: poor service
- Didn't receive a callback
- Issue not resolved
- Not be charged when light out
- Site left in poor condition
- Took too long
- Website
- Light needs repair too frequently
- Didn't complete the request with one call
- Field Service Rep: poor service
- Need better communication/updates
- Not sure issues resolved
- Told not DE light
- Tree trimming
- Damage to property
- Need to be more customer friendly
# Service Initiation Gas
## Goal Update – June 2018

<table>
<thead>
<tr>
<th>Service Initiation Gas</th>
<th>June Score</th>
<th>2018 YTD</th>
<th>2018 Goal</th>
<th>Goal Status</th>
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<tbody>
<tr>
<td>Field Service Technician</td>
<td>100</td>
<td>95</td>
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Service Initiation Gas
Monthly Fastrack Score Trend

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<tbody>
<tr>
<td>% Responder ratings of 8-10</td>
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<td>3</td>
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<td>4</td>
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<td>2</td>
<td>3</td>
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<td>4</td>
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Field Service Gas Technician
Monthly Gas FST Score Trend

% Respondent ratings of 0-4

% Respondent ratings of 8-10

## Service Initiation Gas

### Monthly Fastrack Scores by Module

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<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
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*Scores = % Customers rating their overall satisfaction an '8, 9 or 10' on a '0-10' scale*
# Service Initiation Gas

## Field Service Technician 2018

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<th>Feb</th>
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<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Q2</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
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<th>Nov</th>
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</table>

- % (0-4)
- % (8-10)
Service Initiation Gas
Agreed Date & Performance 2018

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<th>Q1</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
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<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Q4</th>
<th>YTD</th>
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<tbody>
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Satisfaction with scheduled date

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<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Q2</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Q3</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Q4</th>
<th>YTD</th>
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<tbody>
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</table>

Service connected on scheduled date (% Yes)

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<th>Mar</th>
<th>Q1</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Q2</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
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<tr>
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</tbody>
</table>

Received confirmation call or phone message (% Yes)

<table>
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<tr>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Q1</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Q2</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
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<tr>
<td>59</td>
<td>62</td>
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<td>67</td>
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<td>63</td>
</tr>
<tr>
<td>Kept Informed About Status of Request (% Yes)</td>
<td>Jan</td>
<td>Feb</td>
<td>Mar</td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
<td>Q2</td>
<td>Jul</td>
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<td>Q3</td>
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<td>Nov</td>
<td>Dec</td>
<td>Q4</td>
<td>YTD</td>
</tr>
<tr>
<td>---------------------------------------------</td>
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Service Initiation Gas
Kept Informed 2018
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) 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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II. SCHEDULES SPONSORED BY WITNESS .................................................. 2
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IV. CONCLUSION .......................................................................................... 9
I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
A. My name is Melissa Brammer Abernathy and my business address is 550 South Tryon Street, Charlotte, North Carolina 28202.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?
A. I am employed by Duke Energy Business Services LLC (DEBS), as Manager Accounting II, Asset Accounting. DEBS provides various administrative and other services to Duke Energy Kentucky, Inc., (Duke Energy Kentucky or Company) and other affiliated companies of Duke Energy Corporation (Duke Energy).

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

Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS MANAGER ACCOUNTING II, ASSET ACCOUNTING.
A. As Manager II, Asset Accounting, I have responsibility for accounting and reporting activities within Duke Energy’s Electric and Gas Utilities and 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.

19 II. SCHEDULES SPONSORED BY WITNESS

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

22 A. The Section B schedules develop the Jurisdictional Net Plant in Service. The
23 schedules are based on the Company’s budget records as of the end of the base period
(November 30, 2019) and the end of the forecast period (March 31, 2021).

Q. PLEASE DESCRIBE SCHEDULE B-2.

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

Q. PLEASE DESCRIBE SCHEDULE B-2.1.

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

Q. PLEASE DESCRIBE SCHEDULE B-2.2.

A. Schedule B-2.2 shows proposed adjustments to plant in service for the base period and the forecast period. The adjustments shown on this schedule are related to ARO Balances, street lighting balances, assets recovered through the Environmental Surcharge Mechanism (ESM) rider, and deferred depreciation related to the purchase of the DP&L share of East Bend. The adjustment for ARO is made to remove the
ARO balances out of rate base for separate recovery. The lighting adjustments remove
customer lighting balances that are recovered through separate tariffs from rate base.
The adjustment related to Structures and Improvements are the specific capital assets
that are recovered under the ESM rider and not base rates. Finally, the adjustment for
the deferred depreciation related to the acquisition of DP&L’s share of East Bend is
related to the regulatory asset approved in Case 2015-120. This adjustment adds this
regulatory asset to rate base consistent with treatment approved in the Company’s last
base rate case (Case 2017-00321). Each of these adjustments is shown as of the base
period and is projected for the forecast period.

Q. PLEASE DESCRIBE SCHEDULE B-2.3.

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

Q. PLEASE DESCRIBE SCHEDULE B-2.4.

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

Q. PLEASE DESCRIBE SCHEDULE B-2.5.

A. Schedule B-2.5 is entitled “Leased Property” and provides data for the base period
and the forecast period. The Company does not project to have any assets under capital
leases as of the base period or forecast period.
Q. PLEASE DESCRIBE SCHEDULE B-2.6.
A. Schedule B-2.6 shows the property held for future use included in rate base for the base period and forecast period. The Company has not included any property held for future use in rate base.

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

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

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

Q. PLEASE DESCRIBE SCHEDULE B-3.2.
A. Schedule B-3.2 lists the 13-month average jurisdictional plant investment and reserve balance as of March 31, 2021 for each FERC and Company Account within each major property grouping. It also shows the proposed depreciation and amortization
accrual rate, calculated annual depreciation and amortization expense, percentage of net salvage value, average service life and curve form, as applicable for each account. The calculated annual depreciation and amortization was determined by multiplying the 13-month average adjusted jurisdictional plant investment for the forecast period by the proposed depreciation and amortization accrual rates.

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

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

Q. PLEASE DESCRIBE SCHEDULE B-4.

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

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

Q. PLEASE DESCRIBE THE INFORMATION YOU SPONSOR IN SCHEDULE K.

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

Q. PLEASE DESCRIBE ANY ARoS WITH POTENTIAL SETTLEMENT IN THE FUTURE.

A. Duke Energy Kentucky has AROs related to legal obligations for the following items: closure of the coal ash basin at East Bend, removal of asbestos at Miami Fort 6, removal of company-owned telecommunications assets from towers, and closure of the East and West landfills at East Bend. Closure of the coal ash basin at East Bend is ongoing and costs are being recovered through the ESM rider. The removal of asbestos at Miami Fort 6 has begun and completion is expected in 2019. The costs for asbestos removal are currently included in Duke Energy Kentucky’s Fossil Dismantlement study performed by Burns and McDonnell submitted in the
Company's last electric base rate case, Case No. 2017-00321, and are already collected through rates; therefore, they are not included separately for recovery in this case. The removal of the company-owned telecommunications assets from leased towers will begin no earlier than 2023. The timing of final closure of the East Bend landfills is expected to occur in 2021-2022 for the East Landfill and 2040 for the West Landfill to correspond with the respective anticipated end of life for each landfill.

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

III. INFORMATION PROVIDED TO OTHER WITNESSES

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

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

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, B-3.1, B-3.2, B-4, AND D-2.24, THE INFORMATION YOU PROVIDED ON SCHEDULE K, AND THE INFORMATION YOU PROVIDED TO MR. JACOBI, (EXCLUDING THE BUDGET AND FORECAST NUMBERS PREPARED BY MR. JACOBI AND THE PROPOSED DEPRECIATION AND AMORTIZATION ACCRUAL RATES AND SUPPORTING DEPRECIATION STUDY PREPARED BY MR. SPANOS) PREPARED BY YOU OR UNDER YOUR DIRECTION AND SUPERVISION?

A. Yes.

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

A. Yes.
VERIFICATION

STATE OF NORTH CAROLINA )
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 Brammer Abernathy, Affiant

Subscribed and sworn to before me by Melissa Brammer Abernathy on this 13th 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) 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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IV. DUKE ENERGY KENTUCKY’S VEGETATION MANAGEMENT .......... 13
V. CONCLUSION .......................................................................................... 15
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 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 Business Services, LLC, a service company subsidiary of Duke Energy Corporation, and a non-utility affiliate of Duke Energy Kentucky (Duke Energy Kentucky, or Company).

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

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

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

16 A. As Director Distribution Vegetation Management, I am responsible for overseeing Duke Energy’s Midwest distribution vegetation management activities for more than 34,000 miles of electric distribution lines across our service territories in Kentucky, Indiana, and Ohio. In this capacity, I manage a staff of 14 employees, 8 of whom are International Society of Arboriculture (ISA) certified arborists and have primary responsibility for distribution vegetation management in Duke Energy Kentucky’s service territory. I also serve as the primary jurisdictional leader for...
responsible for overseeing our contractors who are performing distribution vegetation management. I ensure adherence to the contract strategy, terms and work plan execution to the Company’s standards. I develop and monitor performance metrics and objectives in collaboration with contractors to ensure that our distribution vegetation management program is performed in accordance with Commission rules and regulations. I analyze budget and work plan status to ensure performance goals are on target. I also ensure consistent implementation of policies and procedures.

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

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

II. DUKE ENERGY KENTUCKY’S CURRENT VEGETATION MANAGEMENT PROGRAM

Q. PLEASE PROVIDE AN OVERVIEW OF DUKE ENERGY KENTUCKY’S VEGETATION MANAGEMENT PROGRAM.

A. Duke Energy Kentucky’s electric service territory covers six counties in northern Kentucky. Duke Energy Kentucky supplies electric service to approximately
142,900 residential, commercial and industrial customers over approximately 2,900 miles of distribution lines.

Duke Energy Kentucky’s vegetation management program is a plan for maintaining and clearing all of the Company’s distribution circuits every 5 years as was approved in the Company’s last base electric distribution rate case. Consistent with the Kentucky Public Service Commission’s Order in Case No. 2006-00494, the Company developed a vegetation management plan that is on file with the Commission. The current full-system maintenance inspection and trim cycle is 1,441 miles of distribution overhead lines. A 5-year trim cycle is approximately 288 miles per year. The Company’s vegetation management plan includes a description of the Company’s tree care standards, and trimming specifications that include minimum clearances, brush and wood removal and customer notifications. The Company provides the Commission with an annual progress report of its vegetation management plan in accordance with the Commission’s Order in Case No. 2011-00450.¹ The last progress report was filed on or about May 1, 2019.

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


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

Q. **WHAT IS THE COMPANY’S PHILOSOPHY TOWARDS VEGETATION
MANAGEMENT?**

A. The Company’s approach towards vegetation management is to focus on customer
safety and reliability in a cost-effective manner while utilizing industry best
management practices. Duke Energy Kentucky takes a proactive approach to its
vegetation management program, which means we try to trim or remove trees and
other vegetation that may cause problems before service is affected. Duke Energy
Kentucky’s primary focus is to control the growth of incompatible vegetation along
its electric lines. To control the growth around our distribution lines, we hire
qualified personnel to monitor the condition of vegetation over, under and adjacent
to our electric facilities. The Company also utilizes various vegetation control
practices to reduce, manage or eliminate incompatible growth, such as the use of
herbicides and mowing. Vegetation along distribution lines, if not properly maintained, can create serious risks to reliability as well as potential safety concerns. Duke Energy Kentucky knows that a strong vegetation management program is a key component to meet system reliability.

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

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

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

A. Duke Energy Kentucky has an integrated vegetation management program and uses data analytics to prioritize annual trim plans. This analysis takes into account, age since previous pruning, customer satisfaction data, and vegetation related outages since the previous pruning. The Company uses foresters who are certified by the International Society of Arboriculture (ISA) to provide guidance and oversight to contractors who are pruning trees and clearing brush growth around, over and under power lines. In addition to the routine trim cycle, we perform periodic visual
inspections to determine whether the Company's targeted 10 feet of clearance is
maintained or requires additional attention in advance of the schedule. During
routine vegetation maintenance, our employees and contractors are also identifying
hazard trees that pose a risk and remove the affected trees once permissions are
received. Our Hazard Tree Removal Program is another component of our
integrated vegetation management plan.

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

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

DO EMPLOYEES AND CONTRACTORS HAVE SPECIFIC
QUALIFICATIONS TO ENGAGE IN VEGETATION MANAGEMENT
ACTIVITIES?

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

HOW DOES THE COMPANY SOURCE ITS VEGETATION
MANAGEMENT FUNCTIONS?

A. Duke Energy sourcing specialists engage in a Request For Proposal (RFP) process
to seek out companies that can provide the best service at the least cost. The
Company looks for contractors that have the expertise, resources and safety record to support the work needed. Then the Company monitors the ongoing work to ensure that it meets Company specifications and requirements.

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

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

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

A. Yes. The issue of contractor resources was discussed as part of the Company's most recent electric distribution rate case filed in 2017 and which went to hearing in early 2018. The Company has continued to provide updates regarding its resources as part of its annual reliability and vegetation report filed with the Commission. Currently, the Company has sufficient crew coverage to meet its 2019 trimming requirements. However, the Company continues to experience rising cost pressures in securing adequate resources to meet its vegetation cycle requirements.
Q. HAVE THESE HIGHER COSTS PROMPTED DUKE ENERGY KENTUCKY TO ALTER ITS VEGETATION MANAGEMENT ACTIVITIES?

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

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

A. As approved in the Company’s most recent electric distribution rate case, Duke Energy Kentucky currently has approximately $4.3 million in operation and maintenance (O&M) costs per year through its base rates for both distribution and transmission vegetation management. The distribution portion is approximately $3.8 million. In addition to this amount, which represents routine vegetation management, the Company has been spending additional dollars associated with its Hazard Tree Removal Program.
Q. PLEASE SUMMARIZE THE AMOUNTS SPENT FOR DUKE ENERGY KENTUCKY VEGETATION MANAGEMENT PROGRAM FOR THE PAST FIVE YEARS AND THE MILES TRIMMED FOR EACH OF THOSE YEARS.

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

Table 1:

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<tr>
<td>Miles</td>
<td>385</td>
<td>366</td>
<td>273</td>
<td>231</td>
<td>241</td>
<td>320</td>
<td>291</td>
<td>288</td>
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<tr>
<td>O&amp;M Total Spend in Millions</td>
<td>$2.10</td>
<td>$1.98</td>
<td>$1.81</td>
<td>$4.34</td>
<td>$4.35</td>
<td>$5.73</td>
<td>$5.52</td>
<td>$5.67</td>
</tr>
<tr>
<td>Total Cost Per Mile</td>
<td>$5,455</td>
<td>$5,410</td>
<td>$6,630</td>
<td>$18,788</td>
<td>$18,050</td>
<td>$17,906</td>
<td>$18,969</td>
<td>$19,688</td>
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It is important to note that vegetation maintenance is only one part of our vegetation strategy. As discussed in more detail below, although we trimmed less miles in the last couple of years, we have turned our focus to the hazard tree program to remove dead and dying trees that also impact reliability of the system.
Q. PLEASE FURTHER EXPLAIN THE CHALLENGES THAT DUKE ENERGY KENTUCKY HAS ENCOUNTERED WITH CONTRACTORS OVER THE PAST FEW YEARS.

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

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

A. Because the market for qualified contractor resources has become very competitive, Duke Energy Kentucky has had to look outside the local region to meet our resource needs. The scarcity of the resources locally and the need to bring in qualified contractors from outside the territory has combined to result in significantly higher prices for critically important activities. Indeed, current, competitively bid prices for vegetation management resources are significantly higher than in years past. For example, the cost per mile for vegetation management activities in the Duke Energy Kentucky service territory has risen from $5,455 in 2014 to $18,050 in 2018 (see table above) and is forecasted to increase in 2020 and beyond.
Q. WHAT STEPS HAS DUKE ENERGY KENTUCKY UNDERTAKEN TO MITIGATE THE IMPACTS OF THE CONTRACTOR SHORTAGE?

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

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

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

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

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

THOMAS CHRISTIE DIRECT
Q. WHAT WERE THE RESULTS?

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

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

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

III. THE HAZARD TREE REMOVAL PROGRAM

Q. PLEASE DESCRIBE THE HAZARD TREE REMOVAL PROGRAMS.

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

Company personnel worked with contractors to prioritize removal of hazard and Ash trees by potential customer impact and highest threats to reliability. During
2019 and 2020, Duke Energy Kentucky is targeting approximately 2,400 trees each year that are outside of our right of way. This work will continue for the foreseeable future.

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

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

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

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

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

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

**A.** Duke Energy Kentucky will continue to operate under its approved five-year trimming cycle. The Company will continue to use its best efforts to mitigate cost increases and use competitive bidding strategies to procure resources.
Q. WHAT IS DUKE ENERGY KENTUCKY'S REQUEST IN TERMS OF DOLLARS TO MEET A FIVE-YEAR TRIM CYCLE?

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

Table 2:

<table>
<thead>
<tr>
<th>($ in Millions)</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine Maintenance (O&amp;M)</td>
<td>$4.35</td>
<td>$6.00</td>
<td>$5.52</td>
<td>$5.67</td>
</tr>
<tr>
<td>Hazard Tree Removal (Capital)</td>
<td>$0.63</td>
<td>$0.74</td>
<td>$0.76</td>
<td>$0.79</td>
</tr>
</tbody>
</table>

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

A. Yes. Although it is difficult to predict future events, I believe that $5.5 million in O&M costs is necessary to sustain a five-year maintenance trim cycle while maintaining safe and reliable service to customers.
With the recent realignment of our contractor oversight model and increased partnership with vegetation suppliers, the Company has increased productivity. Additionally, the focus on hazard tree removal will help ensure safe and reliable service.

V. CONCLUSION

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

A. Yes.

Q. DOES THIS CONCLUDE YOUR PREFILED DIRECT TESTIMONY?

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.

Judy K. Faussey
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) 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

RETHA HUNSICKER

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

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, Charlotte, North Carolina, 28202.

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

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

5. **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND PROFESSIONAL EXPERIENCE.**

6. **A.** I hold a Bachelor of Science degree in Business Administration from Indiana Wesleyan University. Since 1981, I have been employed by, and worked for, companies under what is now Duke Energy. I began my career with Public Service Indiana, the predecessor to Duke Energy Indiana, LLC, (Duke Energy Indiana) as an accounting assistant. Since then, I have held positions with increasing levels of responsibility. More recently, the roles I’ve held include Director, Business Standards and Integration, and General Manager, Smart Energy Systems & Processes. In 2012, I took the position of Regional Director, Customer Services, leading our Midwest contact centers, before promoting to Vice President, Customer Contact Operations in 2013. I assumed my current role as Vice President, Customer Connect-Solutions in 2015.
Q. PLEASE DESCRIBE YOUR DUTIES AS VICE-PRESIDENT, CUSTOMER CONNECT-SOLUTIONS.

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

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

A. No.

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

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

II. DISCUSSION

Q. PLEASE EXPLAIN THE PURPOSE OF A CIS.

A. A CIS manages the billing, accounts receivable, and rates for the Company and is the central repository for all customer information. A CIS also manages customer
profiles and integration of data to provide a holistic view of the customer and should enable expected customer capabilities.

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

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

Although state-of-the-art nearly thirty years ago, the current CIS was not designed to efficiently support new capabilities, including personalized experiences for customers, advanced pricing structures and billing options, and tools for customers to better manage their energy consumption. The Company has added functions and new technologies to the legacy system to try to meet the evolving customer needs and expectations. This is limited in current state due to technical and regulatory constraints. This adds complexity to the current system,
thereby leading to more CIS disruptions and longer time to recover from outages. Moreover, certain functions are not compatible with the current CIS.

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

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

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

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

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

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

A. Because of the existing limitations with the current CIS, the Company’s employees must perform complex billing functions manually. Additionally, the
system is not designed to enable automated billing for customers having distributed generation with net metering. Our current systems were not designed to produce a credit bill, so these customers receive bills containing charges that are calculated manually. These manual interventions are not desirable for a variety of reasons. Among such reasons is inefficiency. Additionally, as the number of customers having these billing arrangements increases, there is an understandable impact on the Company’s ability to provide timely and accurate bills. And it must be accepted that injecting manual intervention into what should be an entirely automated process creates an opportunity for unintended consequences.

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

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

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

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

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

Q. PLEASE DISCUSS THESE ADDITIONAL INEFFICIENCIES.

A. As I discussed previously, the CIS currently in use by Duke Energy Kentucky also supports Duke Energy Ohio and Duke Energy Indiana. But since the inception of the existing CIS decades ago, there have been a series of mergers and
acquisitions creating the current Duke Energy family, which now also includes public utilities in North Carolina, South Carolina, and Florida. These other utilities understandably had their own CIS and they continue to rely upon them. But these different systems are not compatible with each other. Data and information is not transferrable or accessible between these systems. This is especially frustrating to a long-standing Duke Energy customer who has a payment history in one jurisdiction, but relocates to another jurisdiction where Duke Energy is their utility, but the new utility cannot obtain any information regarding the customer's payment history, consumption or account information. To enable this functionality, the customer data must be consolidated into one CIS.

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

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

The need to evolve to meet customer expectations will continue beyond the program and it is expected that a consolidated modern platform will greatly
simplify these efforts. In the current CIS, the system changes that are required to introduce a new rate structure, for example, tend to be complex and are usually completed four times, once for each CIS used by Duke Energy’s regulated utilities. A single and modern platform will reduce the complexity, timeline, and the number of changes required.

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

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

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

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

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

- Modern, Configurable Billing Engine – With the Company’s existing CIS, many new rates are very time consuming and burdensome to
implement due to the antiquated architecture of the system and the complexity of coding and testing the rates. In contrast, in the modern CIS, new rates will be configurable and much simpler to implement, improving the Company's responsiveness to regulatory or market changes. Also, many modern rate structures e.g. net metering, time-of-use, etc.) are pre-built into the system because the software is leveraged in European and other markets, where the use of these more modern rate structures is far more advanced.

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

- Holistic Customer Profile – In the current CIS, systems merely store basic customer information – name, phone, address, premise and historical usage, billing and payment information – preventing us from knowing customers beyond these basic attributes. Customer Connect will store all of that same information and more. The new platform will gather all of the relevant touchpoints that customers have with Duke Energy in real time – web visits, phone calls, power outages, outbound communications, product and service participation, etc. – to build out a holistic view of customers that can be leveraged to better serve them and personalize their experiences.
• 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.
Q. WILL THE NEW SYSTEM ALLOW FOR MORE FLEXIBLE RATE DESIGN AND OTHER RATE OFFERINGS?
A. Yes, as mentioned above, the current CIS requires significant coding to implement new rates and pricing. New, modern CISs are much more configurable, reducing the amount of time to test and implement pricing changes and offerings.

Q. WILL CUSTOMERS SEE ANY BENEFITS PRIOR TO FULL DEPLOYMENT FOR DUKE ENERGY KENTUCKY?
A. Yes, the Company began deploying new capabilities in 2018 and will continue every year leading up to full deployment in 2022. With this phased deployment approach, the Company will have system functionalities in-service and beneficial to customers at tiered stages throughout the implementation of the complete system.

Q. PLEASE EXPLAIN WHAT HAS BEEN ACCOMPLISHED SO FAR AND WHAT CUSTOMERS CAN EXPECT AS THE NEW SYSTEM IS DEPLOYED.
A. In June 2018, the first deliverable of the Customer Connect Program was successfully deployed, which provided the capabilities to begin to gather, store and analyze customer insights to create more satisfying interactions. Specifically, the Company began gathering all relevant touchpoints that customers are having with Duke Energy in real-time such as web visits, phone calls, power outages, outbound communications, and product and service participation. As described throughout my testimony, the Company is working to better understand its
customers so that we can serve them in the manner in which they have become
accustomed, and this deliverable is the first step in doing that. The Company also
delivered enhanced communication capabilities which provide more personalized
service with automated and targeted campaigns. These capabilities automate
processes, increase effectiveness and provide metrics to gauge success.

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

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

In May 2019, the Program implemented a new capability to better
communicate with customers during major storms. The Company is now able to
create targeted customer communication lists by leveraging attributes that are
particularly relevant during major storms, such as the substation or operations
center a customer is served by, or whether the customer or nearby customers are
experiencing an outage. These lists will be used to send more specific
communications about the specific storm-related circumstances near the
customer’s home or business. Additionally, in September 2019, these capabilities
will be expanded to include the ability to automate these email campaigns from
the Customer Connect solution and allow them to be configured in advance and
quickly executed in desired circumstances.

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

In 2021, the Company will begin deploying the final components of the
complete billing and receivables solution. In addition to all billing and payment
processes, the Company will begin providing customers with additional self-
service capabilities and portals, new rate offerings and advanced billing options.
Finally, using the customer data, the Company will be able to prioritize the types
of information the customer prefers to receive and the methods of communication
by which they wish to receive the information, including via web, email and other
channels to ensure it is timely, relevant and valuable to them.
Q. PLEASE ELABORATE ON THE NEW BILL FORMAT BEING IMPLEMENTED NEXT YEAR AND THE BENEFITS FOR CUSTOMERS.

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

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

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

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

A. A key objective for Customer Connect is to simplify experiences for customers. To do that, the Company needed to better understand the challenges customers experience when interacting with Duke Energy. The program team researched customer survey data and verbatims, and conducted a thorough review of the Company's business processes and associated Commission rules. This research
and analysis, combined with industry best practices, expected customer journeys, and capabilities of the new system determined how the Company needed to interact with its customers moving forward. A number of opportunities to improve the customer experience have been identified, many of which will be easily implemented when the new system is fully deployed in late 2022 for Duke Energy Kentucky, while others will require Commission approval before all customer benefits can be realized. For example, customers want to employ their preferred method of communication when interacting with Duke Energy. Customer Connect will allow customers to choose how and when they want to receive communications; however, existing Commission rules do not allow for such a personalized experience. An update is needed, as customers have come to expect communications tailored to their specific desires, such as modern forms of communication, like text messages and email. This is just one example of how customer expectations have outpaced the regulatory construct.

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

A. Based on its cumulative experiences with the current CIS, the Company knew the selected platform would need to meet the following core needs: (1) configurability; (2) adaptability; and (3) a customer-centric platform. A simple meter-to-cash replacement would not suffice. After conducting an extensive and rigorous procurement process, the Company is confident the selected suite of programs meets these core needs. The platform has been implemented by more
than 760 utilities globally, including utilities that have already implemented things such as renewable generation and advanced metering infrastructure (AMI), and therefore fully taking advantage of the platform’s capabilities. By selecting this platform, the Company and its customers will get the benefit of the proven technology as well as the ability to leverage best practices from these other utilities to keep pace with the needs and expectations of customers. Further, because this platform is being used globally by utilities and retailers, it is constantly evolving and being updated to accommodate the latest technologies and user interfaces to help ensure that customers continue to derive benefits from the system.

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

Industry research confirms that customer expectations are changing; they are more fluid and customers benchmark us against other service companies such as Amazon and FedEx, where there is transparency and awareness in their processes. For example, customers have come to expect the capability to track packages and see, at any given moment, where the package is and when it is expected to be at their home. Duke Energy Kentucky understands its customers have come to expect the same thing from all service providers, including their utility, and is confident the solution selected gives the Company the technology it
needs to meet this expectation. To that end, during the "design" phase, the
Company took the opportunity to redesign outdated business processes that have
been in place for more than 20 years. For example, the Company's current CIS
requires customer care specialists to obtain information such as directions to a
customer's home and the location of the meter when completing a request to start
or stop service. With the deployment of AMI meters, as well as common
technologies, like GPS, obtaining this information is no longer necessary.
Although this information is no longer needed for service orders, the Company's
system and internal process have not evolved to allow for these efficiencies.

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

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

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

   • A waiver of rule 807 KAR 5:006 Section 14(5) is needed to allow the
     Company to enable all customers' preferred method of communication
     as it relates to their energy bill. Specifically, the Company is
     requesting to employ customers' preferred channel of communication
     as it relates to the 10-day disconnect notice for those customers who
request the Company communicate with them in more modern ways such as email, phone call or text message. By continuing to provide this information in a format other than the customers’ preferred method of communication, there is an increased risk for the notice to go unseen.

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

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

- The manner in which usage is displayed on a customer’s bill requires a waiver of rule 807 KAR 5:006 Section 7(a)(3) as it relates to providing the beginning and ending meter reading for certain interval-billed rates
to allow the Company to provide usage information only on the monthly bill. The inclusion of meter readings was more meaningful under traditional rate structures; however, with interval usage data comes more dynamic pricing structures; therefore, the beginning and ending meter readings are no longer relevant to the customer bills under those structures. The customer bills will continue to provide information regarding usage that occurred during relevant bill periods such as on/off-peak, shoulder and demand. Furthermore, as a result of the Company's deployment of its new Advanced Metering Infrastructure (AMI), customers have even greater access to actual usage information in near real-time via the Company's website. Therefore, even though the Company is proposing not to include this information on the bill going forward, customers who desire that information will have the mean to access it themselves upon demand.

The waiver would apply to the following Company rates: Service at Primary Distribution Voltage (DP), Service at Distribution Voltage (DS), Time-of-Day Rate for Service at Distribution Voltage (DT), Time-of-Day for Service at Transmission Voltage (TT), and Optional Rate for Electric Space Heating (EH), as well as any future proposed rate that utilizes AMI usage data for billing purposes.

• A waiver of rule 807 KAR 5:006 Section 8 is needed specifically for landlords or property owners who enroll in the Revert to Owner program. The Revert to Owner program is a voluntary service for
landlords/property owners that enables service to automatically transfer back into a landlord/property owner's name without service disconnection between tenants. For these customers, the Company is proposing to hold a standard $50-dollar deposit per unit or property owned, as this aligns to the minimum average bill incurred when service is in the landlord’s name between tenants. There are a number of benefits for property owners to enroll in the new Revert to Owner program that will be implemented in Duke Energy Kentucky in 2022; it will allow these customers to easily manage their properties via a new digital portal. Landlords will be able to see all properties in their name, the service status, and administer billing/payment for one or multiple properties conveniently from the site. Additionally, the move in/move out process will be simplified and will eliminate repetitive credit checks and other deposit-related activities that would be traditionally experienced when applying for or disconnecting electric service at a location.

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

A. The Customer Connect Program is unique in that the Company is completing a universal design for all of Duke Energy's regulated utilities, and have incorporated many of the out-of-the-box and modern capabilities the vendor’s (SAP) system provides. To ensure the new system and associated business
process comply with Commission rules, it is necessary to request these waivers well in advance of the implementation to allow sufficient time to complete the “build” phase of the Program and complete robust testing prior to the first deployment in early 2021.

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

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

**III. CONCLUSION**

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

A. Yes.
VERIFICATION

STATE OF NORTH CAROLINA )  SS:
COUNTY OF MECKLEBURG )

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.

[Signature]
Retha Hunsicker Affiant

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

[Signature]
DONNA E. HARKEY
Notary Public
Cabarrus County
NORTH CAROLINA

My Commission Expires: 03-01-24
Kentucky Regulatory Requirements Reference Sheet

<table>
<thead>
<tr>
<th>807 KAR 5:006 General Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 7 (1)(a) Each bill for utility service issued periodically by a utility shall clearly show:</td>
</tr>
</tbody>
</table>

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
Billing summary

| Previous amount due | $54.23 |
| Current electric charges | 58.16 |
| Taxes | 1.74 |
| **Total amount due Apr 26** | **$59.90** |

Thank you for your on-time payment.

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

For a complete listing of all Kentucky residential rates and riders, visit duke-energy.com/home/billing/rates.

Current usage for meter number 9999999999

| Actual reading on Apr 3 | 662 kWh |
| Previous reading on Mar 2 | 690 kWh |
| **Energy used** | **882 kWh** |

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. Late payments are subject to a 5% late charge.

**Amount due**

$59.90 by Apr 26

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

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

$__________ Amount enclosed
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) 800.543.6900
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

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, $25 for gas and $88 for both. A security deposit may also be required.

When you write a check
We may process the payment as a regular check or convert it into a one-time electronic check payment.
Billing summary

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous amount due</td>
<td>$93.40</td>
</tr>
<tr>
<td>Payment received Nov 26</td>
<td>-93.40</td>
</tr>
<tr>
<td>Current electric charges</td>
<td>50.31</td>
</tr>
<tr>
<td>Current gas charges</td>
<td>105.22</td>
</tr>
<tr>
<td>Taxes</td>
<td>4.67</td>
</tr>
<tr>
<td><strong>Total amount due Jan 4</strong></td>
<td><strong>$160.20</strong></td>
</tr>
</tbody>
</table>

Your usage snapshot

Electric usage history

<table>
<thead>
<tr>
<th>Month</th>
<th>kWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 2017</td>
<td>516</td>
</tr>
<tr>
<td>12-Month</td>
<td>7,830</td>
</tr>
</tbody>
</table>

Gas usage history

<table>
<thead>
<tr>
<th>Month</th>
<th>CCF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 2017</td>
<td>89</td>
</tr>
<tr>
<td>12-Month</td>
<td>954</td>
</tr>
</tbody>
</table>

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

Amount due

<table>
<thead>
<tr>
<th>On Jan 4</th>
<th>$160.20</th>
</tr>
</thead>
<tbody>
<tr>
<td>After Jan 4</td>
<td>increased to $167.98.</td>
</tr>
</tbody>
</table>

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

$ Amount enclosed

Account number 999 999 999

Sally Sample
123 Mount Olive Rd
Florence KY 41042-3141

09880389 0 9752709 1 0000011588 6 0000011588 6 0000011588 6
We're here for you

Report an emergency
Electric/Gas outage: duke-energy.com/outages
Call Electric: 800.543.5599
Call 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 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 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 $25 for gas and $88 for both. A security deposit may also be required.

When you pay a check
We may process the payment as a regular check or convert it into a one-time electronic check payment.
Your usage snapshot - continued

Current electric usage for meter number 999999999
- Actual reading on Dec 12 46323
- Previous reading on Nov 9 -5850
- 473 kWh

Current gas usage for meter number 999999999
- Actual reading on Dec 12 253
- Previous reading on Nov 9 -142
- Energy used 111 CCF

Billing details – Electric

Duke Energy delivery
- Monthly service charge $11.10
- Energy charge 473 kWh @ $0.07165000 33.89
- Riders
  - Electric DSM rider 473 kWh @ $0.00303500 1.45
  - Rider PSM 473 kWh @ - $0.00140700 0.67
  - Electric fuel adjustment 473 kWh @ $0.00085100 0.40
  - Rider ESM 5.53
- Current electric charges $50.31

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
- Current gas charges $105.22
**Billing details – Taxes**

<table>
<thead>
<tr>
<th>Explanation of taxes</th>
<th>Total taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate increase for school tax</td>
<td>$4.67</td>
</tr>
</tbody>
</table>

Account number: 999 999 999
COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:


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

4 Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?
A. I am employed by Duke Energy Business Services LLC (DEBS) as Director, Regional Financial Forecasting. DEBS provides various administrative and other services to Duke Energy Kentucky, Inc., (Duke Energy Kentucky or Company) and other affiliated companies of Duke Energy Corporation (Duke Energy).

9 Q. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.
A. I have a Bachelor of Arts degree in History and Political Science from Wake Forest University and a Master of Business Administration degree from Wake Forest University. In 2007, I joined Duke Energy’s MBA rotation program as a Commercial Associate. In 2008, I became a manager in the Energy Efficiency group. Subsequently, I held various positions of increasing responsibility within the Retail Customer and Products and Services department. In 2015, I became Treasury Director, within the Corporate Finance group of the Treasury Department. In February 2019, I became Director, Regional Financial Forecasting within the Financial Planning and Analysis Department.

20 Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AS DIRECTOR, REGIONAL FINANCIAL FORECASTING.
A. I am responsible for preparing the budgets and forecasts as well as performing
financial analysis for Duke Energy’s Midwest electric utilities, including Duke
Energy Kentucky, Duke Energy Indiana, and Duke Energy Ohio, in addition to
Duke Energy’s gas utilities and ventures.

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

A. No.

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

A. My testimony will address Duke Energy Kentucky’s financial objectives, capital
structure, and cost of capital. I will also discuss the current credit ratings and
forecasted capital needs of Duke Energy Kentucky. Throughout my testimony, I
will emphasize the importance of Duke Energy Kentucky’s continued ability to
meet its financial objectives and maintain strong credit quality. I will then
describe the budgeting and forecasting process underlying the projected data for
the test year proposed in this Application. I also discuss the budget variance
reports, which provide the variance analysis for the test period. I sponsor and
support the forecasted operating revenues and expenses prior to proforma
adjustments and the long-term financial forecast that were prepared under my
direction and control. I sponsor Filing Requirements (FR) 16(6)(a), 16(6)(d),
16(6)(e), 16(7)(b), 16(7)(c), 16(7)(d), 16(7)(f), 16(7)(g), 16(7)(h), 16(7)(i),
16(7)(l), 16(7)(o), and 16(7)(r). In response to FR 16(8)(b), I sponsor certain
information contained in 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, B-3.2, and B-4 that are supported by Duke Energy Kentucky
witness Ms. Melissa Abernathy. I sponsor the information contained in B-5 and B-5.1 and certain information contained in Schedule B-8 that is supported by Duke Energy Kentucky witness Mr. Danielle Weatherston. In response to FR 16(6)(a), 16(6)(b) and 16(8)(d), I sponsor Schedules D-2.1 through D-2.16. I also sponsor the forecasted data on Schedules I-1 through I-5 in response to FR 16(8)(i), and Schedule K in response to FR 16(8)(k). I sponsor Schedules J-1 through J-4 in response to Filing Requirement (FR) 16(8)(j). I also sponsor FR 12(2)(a), FR 12(2)(b), FR 12(2)(c), FR 12(2)(d), FR 12(2)(e), FR 12(2)(f), FR 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?

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

Q. **PLEASE EXPLAIN HOW DUKE ENERGY KENTUCKY’S CUSTOMERS WILL BENEFIT FROM DUKE ENERGY KENTUCKY ACHIEVING ITS CREDIT RATING OBJECTIVES.**

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

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

As explained by Duke Energy Kentucky witness Amy B. Spiller, Duke Energy Kentucky is requesting an overall increase of $45.6 million, equating to an approximate 12.5 percent increase in overall rates. As part of this request, supported by the analysis and testimony of Duke Energy Kentucky witness Dr. Roger Morin, the Company is requesting an allowed return on equity (ROE) of 9.80 percent. The proposed capitalization in this request is comprised of 51.8 percent debt and 48.2 percent equity. Approval of the Company’s request in this case will support its financial objectives by ensuring timely cash recovery of its prudently incurred costs.
Q. PLEASE EXPLAIN CREDIT QUALITY AND CREDIT RATINGS, AND HOW THEY ARE DETERMINED.

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

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

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

A. Investors, investment analysts and credit rating agencies regard the regulatory environment as one of the most important factors in assessing a utility company’s...
financial strength. The regulatory environment is comprised of two important factors, the regulatory framework and the predictability and consistency of decision-making. These stakeholders want to be confident that the Company operates in a stable regulatory environment that will allow the Company to recover prudently incurred costs and earn a reasonable return on investments necessary to meet the demand, reliability, service, and environmental requirements of its customers and service area.

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

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

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

<table>
<thead>
<tr>
<th>Rating Agency</th>
<th>S&amp;P</th>
<th>Moody’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Unsecured Rating</td>
<td>A-</td>
<td>Baa1</td>
</tr>
<tr>
<td>Outlook</td>
<td>Negative</td>
<td>Stable</td>
</tr>
</tbody>
</table>

CHRISTOPHER M. JACOBI DIRECT
Q. WHEN WERE DUKE ENERGY KENTUCKY’S CURRENT CREDIT RATINGS ESTABLISHED?

A. Duke Energy Kentucky’s current senior unsecured credit ratings were established by Moody’s in November 1995 and by Standard & Poor’s in April 2015. Moody’s affirmed its ratings on Duke Energy Kentucky in January 2019. S&P affirmed its ratings and revised its outlook to negative from stable on Duke Energy Corp. and all subsidiaries in May 2019.¹

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

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

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

A. The rating agencies believe Duke Energy Kentucky operates in a generally supportive regulatory framework that supports long-term credit quality with timely and sufficient recovery of prudently incurred costs and expenses. In January 2019, Moody’s identified the following strengths and challenges when assessing the credit quality of Duke Energy Kentucky:

Credit Strengths:

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

Credit Challenges:

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

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CHRISTOPHER M. JACOBI DIRECT 8
IV. CAPITAL STRUCTURE AND COST OF CAPITAL

Q. WHAT IS DUKE ENERGY KENTUCKY’S PROPOSED CAPITAL STRUCTURE?

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

Q. WHAT IS DUKE ENERGY KENTUCKY’S COST OF EQUITY?

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

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

A. Equity investors provide the foundation of a company’s capitalization by providing significant amounts of capital, for which an appropriate economic return is required. Duke Energy Kentucky compensates equity investors for the risk of their investment by targeting fair and adequate returns, a stable dividend, and earnings growth - these are all necessary to preserve access to equity capital.
Returns to equity investors are realized only after all operating expenses and fixed payment obligations (including debt principal and interest) of the business have been paid. Because equity investors are the last to receive surplus earnings and cash flows, their investment involves significantly more risk. For this reason, equity investors require a higher return for their investment. Equity investors expect utilities like Duke Energy Kentucky to recover their prudently incurred costs and earn a fair and reasonable return for their investors. The Company’s proposal in this proceeding supports this investor requirement.

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

A. Capital structure and return on equity are important components of credit quality. The greater the equity component of capitalization, the safer the returns are to debt investors, which translates into higher credit quality and lower borrowing costs. In addition, the allowed return on equity is a key component in the generation of earnings and cash flows. An adequate return on equity helps ensure equity investors receive fair compensation for their investment while also helping to protect the interests of debt investors. A strong capital structure and an adequate return on equity provide balance sheet protection and cash flow generation to support high credit quality. High credit quality creates financial flexibility by providing more readily available access to the capital markets on reasonable terms, and ultimately lower debt financing costs.
Q. DO YOU BELIEVE THAT DUKE ENERGY KENTUCKY’S CAPITAL STRUCTURE HAS AN ADEQUATE EQUITY COMPONENT TO ENABLE DUKE ENERGY KENTUCKY TO ACHIEVE THE COMPANY’S FINANCIAL STRENGTH AND CREDIT QUALITY OBJECTIVES?

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

Q. PLEASE SUMMARIZE THE COMPANY’S AVERAGE COST OF SHORT-TERM AND LONG-TERM DEBT FOR THE BASE PERIOD AND THE FORECAST PERIOD AND THE KEY ASSUMPTIONS AND METHODOLOGY USED IN CALCULATING COST OF DEBT FOR SUCH PERIODS?

A. The table below presents the average cost of short-term and long-term debt for the Base and Forecast periods:
<table>
<thead>
<tr>
<th></th>
<th><strong>Base Period</strong></th>
<th><strong>Forecast Period</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-Term Debt (Schedule J-2)</td>
<td>2.294 percent</td>
<td>1.937 percent</td>
</tr>
<tr>
<td>Long-Term Debt (Schedule J-3)</td>
<td>4.032 percent</td>
<td>4.073 percent</td>
</tr>
</tbody>
</table>

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

For Schedule J-3, which calculates the cost of long-term debt, the interest rate on $25 million of LT Commercial Paper for the base and forecast period was derived using Bloomberg’s Implied forward curve for one-month LIBOR as of June 2019 plus a 25-basis point credit spread. A long-term debt issuance of $50 million is forecasted for September 2020 based on company projections. The interest rate on this future issuance was estimated using a blended average of Bloomberg’s forward curves for the 5-year, 10-year and 30-year US Treasury yield as of June 2019 plus a 162-basis point credit spread.
Q. DID DUKE ENERGY COMPANY TAKE ANY STEPS SINCE ITS LAST ELECTRIC BASE RATE CASE IN 2017 TO MANAGE ITS FINANCING COSTS, THUS MITIGATING THE RATE INCREASE PROPOSED IN THIS CASE?

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

V. DUKE ENERGY KENTUCKY’S CAPITAL REQUIREMENTS

Q. WHAT ARE DUKE ENERGY KENTUCKY’S CAPITAL REQUIREMENTS DURING THE 2019-2021 TIME PERIOD?

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

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

Q. **HOW WILL DUKE ENERGY KENTUCKY’S CAPITAL REQUIREMENTS BE FUNDED?**

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

VI. **THE BUDGETING AND FORECASTING PROCESS**

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

A. The forecasted data used in these proceedings is based on Duke Energy Kentucky’s 2018 and 2019 actual data and its 2019 annual budget. This is because the Company is using a base period that spans two calendar years and is comprised of actual data for 2018 and both actual and budgeted data for 2019. The Company is also using a fully forecasted test period that, for this proceeding, spans the twelve-month period ending March 31, 2021. The budget and forecast were reviewed and approved by Duke Energy Kentucky’s executive management and Duke Energy’s Board of Directors.
HOW DID YOU USE THE 2019 ANNUAL BUDGET RESULTS FOR THE
BASE AND FORECASTED PERIODS IN THIS PROCEEDING?

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

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

A. Each entity (or group) that performs work throughout the organization is assigned
a responsibility center, which is specific to a single payroll company. The
responsibility centers use guidelines provided by Duke Energy's Budgeting and
Business Support organization within the Financial Planning and Analysis
Department. The responsibility centers represent detailed responsibility budgets
consisting of expense items, certain types of revenues, and construction budgets for capital projects. The information is consolidated, along with sales and revenue data, into a corporate budget and is reviewed by various levels of management. One or more iterations of the annual budget are typically required before final approval by executive management and the Board of Directors. This “bottom-up” approach is reasonable and has been an effective process for managing costs.

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

A. The guidelines provided by the business support organization are a detailed set of instructions for creating a responsibility center budget. For example, there are detailed instructions for budgeting employee labor data, such as the escalation rates for non-union labor expenses and indirect labor and fringe benefit loading rates, and how to handle staff additions or deletions. Individual employees and certain associated costs of the employees are included or excluded in any given center’s budget according to the expected future reporting assignment for that employee. Detailed instructions for non-labor related expenses, such as transportation and information technology expenses, are included. There are instructions for handling contract labor and supplies, and guidelines for identifying a capital versus expense item. Budget coordinators are required to use these assumptions and/or instructions in projecting their future departmental expenses. These operating and maintenance (O&M) budgeting guidelines are
reflected in the budgets and forecasts that are submitted to Duke Energy Kentucky’s executive management and Duke Energy’s Board of Directors for approval and are also reflected in the forecasted financial data in these proceedings.

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

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

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

**VII. METHODOLOGY FOR THE FORECASTED DATA**

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

**A.** I will do so by describing the three primary financial statements beginning with the income statement.
A. INCOME STATEMENT

Q. PLEASE DESCRIBE HOW THE OPERATING REVENUES WERE FORECASTED.

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

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

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

Q. HOW WERE OTHER REVENUES PROJECTED?

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

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

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

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

**A.** The forecasted depreciation for existing and projected gas and electric plant is calculated by multiplying the depreciable plant by appropriate composite depreciation rates. These composite rates for transmission, distribution, common
and general plant are based on rates currently in effect and established in the
Company’s last base electric rate case, Case No. 2017-00321.

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

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

A. The O&M expenses, including benefits and payroll taxes, were obtained from the
2019 Annual Budget by the various responsibility centers, using the bottom-up
approach that I described above. Duke Energy Kentucky’s proportionate share of
the shared services expenses and the corporate center O&M expenses are assigned
and/or allocated from the service company to Duke Energy Kentucky and are also
derived using the same bottom-up approach. The allocated share is derived by the
application of appropriate allocations based on the service company allocation
factors, and in accordance with various Commission-approved service agreements
as discussed in the direct testimony of Duke Energy Kentucky witness, Mr. Jeff
Setser. For labor-related expenses, I used the projected annual labor cost rate
increases provided by Duke Energy Kentucky witness Ms. Renee Metzler to
budget 2019 and 2020 union and non-union employee labor expense. Union labor
cost increases were assumed to be between 1 percent and 3 percent, depending on
the agreements, while non-union labor cost increases were assumed to be 3.5
percent (including both merit increases of 3 percent and an allowance for salary
increases for promotions of 0.5 percent). I also used the fringe benefit loading
rates (19.38 percent for 2019 and 2020) and payroll tax (7.65 percent in each
year) loadings. Non-labor expenses for 2019 and 2020 were forecasted by the
responsibility centers based on their knowledge and expectations for various
costs.

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

A.   As mentioned above, O&M budgets were supplied by the responsibility centers
     for 2019 and 2020 per the company’s Budget Guidelines. The basis for the 2021
     budget is the 2020 budget adjusted for various O&M expenses that are expected
to diverge from general escalation assumptions. Apart from these adjustments,
O&M expense is assumed to escalate one percent in 2021 from projected 2020
levels.

     In certain instances, new or revised information emerged which supported
the need for revisions to previously supplied O&M budgets and projections. An
example includes vegetation management expenses, which were revised based on
updated projections from the responsibility center.

Q. HOW DID YOU OBTAIN THE PROPERTY TAX EXPENSE?
A. The property tax expense was obtained from the 2019 Annual Budget and was prepared as described by Duke Energy’s Tax Department. Duke Energy Kentucky witness Mr. John Panizza supplied the property tax expenses for the forecasted financial test period data, based on the capital projections.

Q. HOW DID YOU OBTAIN THE “OTHER INCOME AND EXPENSE”?
A. The “other income and expense” is a below-the-line item, and is derived from a combination of sources. The amount of funds for the AFUDC was derived from the gas and electric capital forecasts prepared for the 2019 annual budget. These capital forecasts were supplied by Duke Energy Kentucky’s transmission and distribution businesses and generating stations.

Q. HOW DID YOU OBTAIN THE INCOME TAX EXPENSE?
A. Mr. Panizza provided the appropriate income tax rates and the amortization of investment tax credit (ITC). The income tax expense was derived using Utilities International (UI) Planner or “proprietary forecasting” software for each month of the revised 2019 annual budget period and the 2020 and 2021 forecasts, by applying statutory income tax rates to applicable taxable book income and adjusting the resulting applicable income taxes by the ITC amortization amounts.

B. BALANCE SHEET STATEMENT

Q. HOW WERE INITIAL BALANCES ESTABLISHED FOR THE BALANCE SHEET?
A. The final month of actual data for the base period was the May 2019 balances.
Duke Energy Kentucky witness, Ms. Abernathy supplied the net book value for the existing gas, electric and common plant and construction work in progress for the period ending May 2019. I used the proprietary forecasting software to calculate the depreciation expense and net gas, electric, and common plant and construction work in progress balances for the forecasted period.

Q. WHAT OTHER INFORMATION WAS USED TO ESTABLISH THE BASE AND FORECASTED BALANCE SHEETS?

A. Ms. Norton and Mr. Mosley provided the capital expenditures for the forecasted portion of the base period and for the forecasted test period. All of the forecasted capital data was prepared for the 2019 Annual Budget and was completed for a five-year period as typically done.

In addition, Duke Energy Kentucky witness Ms. Weatherston supplied the Plant inventories for emission allowances, coal, oil and gas and materials and supplies.

C. CASH FLOW STATEMENT

Q. HOW DID YOU PREPARE THE CASH FLOW STATEMENT FOR THE 2019 ANNUAL BUDGET?

A. The cash flow statement is generated by Duke Energy’s proprietary forecasting software tools. It is derived from corresponding inputs from the income statement and changes in the balance sheet.
VIII. REASONABLENESS OF THE FORECASTED TEST PERIOD DATA

Q. DO YOU HAVE AN OPINION AS TO WHETHER THE FORECASTED TEST PERIOD FINANCIAL DATA IS REASONABLE, RELIABLE, MADE IN GOOD FAITH, AND THAT ALL BASIC ASSUMPTIONS USED IN THE FORECAST HAVE BEEN IDENTIFIED AND JUSTIFIED?

A. Yes, the forecasted test period financial data is reasonable, reliable and made in good faith, based on all the information available as of the time of this filing. In my opinion, as Director, Regional Financial Forecasting, the budgeting and forecasting processes are adequate, reasonable, and reliable. My testimony has identified all the basic assumptions in the forecast. These assumptions are justified by my testimony and the testimony of the other witnesses I have identified.

Q. DOES THE FORECAST CONTAIN THE SAME ASSUMPTIONS AND METHODOLOGIES USED IN FORECASTED DATA PREPARED FOR USE BY MANAGEMENT?

A. Yes.

Q. DOES THE FORECASTED TEST PERIOD REFLECT ANY EXPECTED PRODUCTIVITY AND EFFICIENCY GAINS?

A. Yes. The forecasted data reflects all expected productivity and efficiency gains.

IX. SCHEDULES AND FILING REQUIREMENTS SPONSORED BY WITNESS

Q. PLEASE DESCRIBE FR 12(2)(a).

A. FR 12(2)(a) provides the amount and kinds of stock authorized.
PLEASE DESCRIBE FR 12(2)(b).

FR 12(2)(b) provides the amount and kinds of stock issued and outstanding as of June 30, 2019.

PLEASE DESCRIBE FR 12(2)(c).

FR 12(2)(c) is a requirement to provide certain terms and conditions for any preferred stock. Since Duke Energy Kentucky has no preferred stock, there is no information to provide.

PLEASE DESCRIBE FR 12(2)(d).

FR 12(2)(d) provides a description of certain terms and conditions for any mortgages. Since Duke Energy Kentucky has no mortgages, there is no information to provide.

PLEASE DESCRIBE FR 12(2)(e).

FR 12(2)(e) provides certain terms and conditions for any bonds authorized and issued.

PLEASE DESCRIBE FR 12(2)(f).

FR 12(2)(f) provides certain terms and conditions for any notes issued. Duke Energy Kentucky had other notes outstanding beyond those summarized in 12(2)(e) and 12(2)(g).

PLEASE DESCRIBE FR 12(2)(g).

FR 12(2)(g) provides certain terms and conditions for other indebtedness, including information on two outstanding series of Pollution Control Bonds, three capital leases and information on money pool borrowings.
Q. PLEASE DESCRIBE FR 12(2)(h).
A. FR 12(2)(h) provides certain information regarding dividend payments by Duke Energy Kentucky during the past five years.

Q. PLEASE DESCRIBE FR 16(6)(a).
A. FR 16(6)(a) is the forecasted period in the form of pro forma adjustments to the base period. Our assumptions and methodologies have been described in my testimony as well as other witnesses in this case.

Q. PLEASE DESCRIBE FR 16(6)(b).
A. FR 16(6)(b) requires that the forecasted adjustments are limited to the twelve months immediately following the suspension period.

Q. PLEASE DESCRIBE FR 16(6)(d).
A. FR 16(6)(d) requires that there be no revisions to the forecast after filing. The Company will comply with this requirement.

Q. PLEASE DESCRIBE FR 16(6)(e).
A. FR 16(6)(e) provides that the Commission may require the utility to prepare an alternative forecast based upon a reasonable number of changes in the variables, assumptions and other factors used as the basis for the utility’s forecast. The Company will comply with this if requested.

Q. PLEASE DESCRIBE FR 16(7)(b).
A. FR 16(7)(b) consists of the Company’s most recent capital construction budget containing a minimum three (3) year forecast of construction expenditures.

Q. PLEASE DESCRIBE FR 16(7)(c).
A. FR 16(7)(c) is a summary of the assumptions used to prepare the forecasted test
period data. Our assumptions and methodologies have also been described in my testimony and the testimony of other witnesses I identified earlier.

Q. PLEASE DESCRIBE FR 16(7)(d).

A. FR 16(7)(d) is Duke Energy Kentucky's annual and monthly budget for the twelve-months preceding the filing date, the base period and forecasted period.

Q. PLEASE DESCRIBE FR 16(7)(f).

A. FR 16(7)(f) includes specific information for each major construction project that constitutes five (5) percent or more of the annual construction budget within the three (3) year forecast. This information includes the date the project was or is estimated to be started, the estimated completion date, and the total estimated cost of construction by year exclusive and inclusive of AFUDC or interest during construction credit, and the most recent available total costs incurred exclusive and inclusive of AFUDC.

Q. PLEASE DESCRIBE FR 16(7)(g).

A. FR 16(7)(g) includes an aggregate of the information included in FR 16(7)(f) for all construction projects that constitute less than five (5) percent of the annual construction budget within three (3) years of the forecast.

Q. PLEASE DESCRIBE FR 16(7)(h).

A. FR 16(7)(h) is Duke Energy Kentucky's financial forecast corresponding to the three-year capital budget. This includes an income statement, a balance sheet, a statement of cash flow, and certain other required financial and statistical information.
Q. PLEASE DESCRIBE FR 16(7)(j).
A. FR 16(7)(j) is a requirement to provide copies of the prospectuses of the most recent stock or bond offerings.

Q. PLEASE DESCRIBE FR 16(7)(l).
A. FR 16(7)(l) is a requirement to provide copies of the consolidated annual report to shareholders and statistical supplements for the last five years.

Q. PLEASE DESCRIBE FR 16(7)(o).
A. FR 16(7)(o) consists of management’s monthly variance reports for the twelve months prior to the base period, each month of the base period and subsequent months as available. These reports are self-explanatory and include explanations on the variances.

Q. PLEASE DESCRIBE FR 16(7)(r).
A. FR 16(7)(r) is a requirement to provide copies of the quarterly reports to shareholders.

A. I provided Ms. Abernathy with the forecasted data contained in those schedules.

Q. PLEASE DESCRIBE SCHEDULE B-5.
A. Schedule B-5 is a summary of the jurisdictional working capital calculation based on the Commission's traditional methodology. The calculation includes a cash element of working capital, material and supplies inventory, fuel inventory, and emission allowance inventory.
Q. PLEASE DESCRIBE SCHEDULE B-5.1.
A. Schedule B-5.1 reflects the itemized miscellaneous working capital items for both the base and forecasted periods.

Q. PLEASE EXPLAIN THE MATERIALS AND SUPPLIES INVENTORY ON SCHEDULE B-5.1.
A. The materials and supplies shown on Schedule B-5.1 represent the 13-month average for the forecasted period and the end of period balance for the base period. These supplies consist primarily of supplies kept on hand in the Company's storerooms. These investments assure that adequate supplies are available to provide reliable service to customers. The 13-month average of material and supplies included in electric working capital for the forecasted test period is $18,759,249.

Q. PLEASE EXPLAIN THE FUEL AND EMISSION ALLOWANCE INVENTORIES ON SCHEDULE B-5.1.
A. The fuel and emission allowance inventories shown on Schedule B-5.1 represent the 13-month average for the forecasted period and the end of period balance for the base period. The 13-month average balances of fuel and emission allowance inventories included in electric working capital for the forecasted test period are $19,518,014 and $0, respectively. Emission allowance balances have been removed from the forecasted test period since emission allowances are included for recovery in Rider ESM.

Q. PLEASE EXPLAIN THE CASH WORKING CAPITAL COMPUTATION ON SCHEDULE B-5.1.
A. Cash working capital was computed for both the base and forecasted periods. It
represents the financing incurred to bridge the gap between the time when expenditures are incurred to provide service and the time when payment is received for that service. The cash working capital computation is based upon the traditional methodology used by this Commission, which is one-eighth of O&M expense, as adjusted, excluding fuel and purchased power costs. For the base period, the resulting jurisdictional cash working capital is $17,650,833 and for the forecasted period cash working capital is $14,965,228.

Q. PLEASE DESCRIBE SCHEDULE D-2.1.
A. Schedule D-2.1 adjusts base period revenue to the level included in the forecasted test period. The adjustment results in a net revenue decrease of $7,311,191.

Q. PLEASE DESCRIBE SCHEDULE D-2.2.
A. Schedule D-2.2 adjusts base period purchased power expenses to the level included in the forecasted test period. The effect of the adjustment on Duke Energy Kentucky's electric operations is a decrease in pre-tax operating expenses of $7,265,494.

Q. PLEASE DESCRIBE SCHEDULE D-2.3.
A. Schedule D-2.3 adjusts base period other production expenses to the level included in the forecasted test period. The effect of the adjustment on electric operations is an increase in pre-tax operating expenses of $428,767.

Q. PLEASE DESCRIBE SCHEDULE D-2.4.
A. Schedule D-2.4 was not used in this filing.

Q. PLEASE DESCRIBE SCHEDULE D-2.5.
A. Schedule D-2.5 adjusts base period transmission expenses to the level included in
the forecasted test period. The effect of the adjustment on electric operations is an increase in pre-tax operating expenses of $2,839,215.

Q. PLEASE DESCRIBE SCHEDULE D-2.6.
A. Schedule D-2.6 adjusts base period regional market expenses to the level included in the forecasted test period. The effect of the adjustment on electric operations is an increase in pre-tax operating expenses of $58,917.

Q. PLEASE DESCRIBE SCHEDULE D-2.7.
A. Schedule D-2.7 adjusts base period electric distribution expenses to the level included in the forecasted test period. The effect of the adjustment on electric operations is an increase in pre-tax operating expenses of $1,888,872.

Q. PLEASE DESCRIBE SCHEDULE D-2.8.
A. Schedule D-2.8 adjusts base period customer accounts expenses to the level included in the forecasted test period. The effect of the adjustment on electric operations is an increase in pre-tax operating expenses of $522,896.

Q. PLEASE DESCRIBE SCHEDULE D-2.9.
A. Schedule D-2.9 adjusts base period customer service and information expenses to the level included in the forecasted test period. The effect of the adjustment on electric operations is an increase in pre-tax operating expenses of $38,160.

Q. PLEASE DESCRIBE SCHEDULE D-2.10.
A. Schedule D-2.10 adjusts base period sales expense to the level included in the forecasted test period. The effect of the adjustment on electric operations is an increase in pre-tax operating expenses of $111,757.
Q. PLEASE DESCRIBE SCHEDULE D-2.11.
A. Schedule D-2.11 adjusts base period administrative and general expenses to the level included in the forecasted test period. The effect of the adjustment on electric operations is a decrease in pre-tax operating expenses of $2,985,442.

Q. PLEASE DESCRIBE SCHEDULE D-2.12.
A. Schedule D-2.12 adjusts base period other operating expenses to the level included in the forecasted test period. The effect of the adjustment on electric operations is a decrease of pre-tax operating expenses of $198,332.

Q. PLEASE DESCRIBE SCHEDULE D-2.13.
A. Schedule D-2.13 adjusts base period depreciation expense to the level included in the forecasted test period. The effect of the adjustment on electric operations is an increase in pre-tax operating expenses of $7,084,471.

A. Schedule D-2.14 adjusts base period taxes other than income taxes to the level included in the forecasted test period. The effect of the adjustment on electric operations is an increase in pre-tax operating expenses of $2,940,431.

Q. PLEASE DESCRIBE SCHEDULE D-2.15.
A. Schedule D-2.15 adjusts base period income taxes to the level included in the forecasted test period. The effect of the adjustment on electric operations is a decrease in income tax expense of $1,206,538.

Q. PLEASE DESCRIBE SCHEDULE D-2.16.
A. Schedule D-2.16 is an adjustment to annualize revenue and fuel expense in the forecasted test period. The overall effect of the adjustment on electric operations

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is to decrease revenues in the forecasted test year by $48,382 and increase fuel
expense by $96,415.

Q. PLEASE DESCRIBE SCHEDULES I-1 THROUGH I-5.

A. Schedule I-1 contains comparative income statements for the Company. Schedules I-2.1 through I-5 contains comparative revenue and sales statistical information as required by the Commission’s filing requirements.

Q. PLEASE DESCRIBE SCHEDULES J-1.

A. These J schedules are embodied in FR 16(8)(j). Specifically, Schedule J-1, entitled “Cost of Capital Summary” sets forth the projected capital structure and capitalization ratios of Duke Energy Kentucky at November 30, 2019, and the average of the projected balances and rates for the thirteen-month period ending March 31, 2021. The weighted cost of the various capital components is computed by multiplying the respective capitalization ratio by the computed annualized cost rate. The overall weighted cost of capital is reflected in the rate of return requested for the thirteen-month period ending March 31, 2021.

Q. PLEASE DESCRIBE SCHEDULES J-2 AND J-3.

A. Schedule J-2, entitled “Embedded Cost of Short-Term Debt,” and Schedule J-3, entitled “Embedded Cost of Long-Term Debt,” set forth the calculations of the cost of short-term debt and long-term debt, respectively, of Duke Energy Kentucky. The information on page 1 of these schedules was computed at the date of the base period, November 30, 2019. On page 2, the balances and interest rates are based on the average of the projected balances and rates for the thirteen-month period ending March 31, 2021.
Q. WHY IS SCHEDULE J-4 NOT INCLUDED?

A. Schedule J-4 is designed to provide the embedded cost of preferred stock for Duke Energy Kentucky. Since Duke Energy Kentucky has no preferred stock, this schedule has not been filed.

Q. PLEASE DESCRIBE SCHEDULE K.

A. Schedule K contains comparative financial and statistical information, as required by the Commission’s filing requirements. I provided the condensed income statement, on page 2, and the mix of sales and fuel on page 5, for the base period and the forecasted test period.

X. CONCLUSION

Q. WAS THE INFORMATION YOU SPONSOR IN FR 12(2)(a), 12(2)(b), 12(2)(c), 12(2)(d), 12(2)(e), 12(2)(f), 12(2)(g), 12(2)(h), 16(6)(a), 16(6)(b), 16(6)(d), 16(6)(e), 16(7)(b), 16(7)(c), 16(7)(d), 16(7)(f), 16(7)(g), 16(7)(h), 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), THE INFORMATION YOU PROVIDED TO MS. ABERNATHY FOR 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, B-3.2, B-4, SCHEDULES B-5 AND B-5.1, D-2.1 THRU D-2.16, AS WELL AS SCHEDULES I-1 THROUGH I-5, SCHEDULES J-1 THROUGH J-3, AND SCHEDULE K PREPARED BY OR SPONSORED AND SUPPORTED BY YOU?

A. Yes.
Q. IS THE INFORMATION CONTAINED IN THOSE SCHEDULES ACCURATE TO THE BEST OF YOUR KNOWLEDGE AND BELIEF?
A. Yes.

Q. DOES THIS CONCLUDE YOUR PREFILED DIRECT TESTIMONY?
A. Yes.
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 8th day of August, 2019.

NOTARY PUBLIC

My Commission Expires: 11/9/2023
COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:


DIRECT TESTIMONY OF

JEFF L. KERN

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.
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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

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
A. My name is Jeff L. Kern. My business address is 139 East Fourth Street, Cincinnati, Ohio 45202.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?
A. I am employed by Duke Energy Business Services LLC (DEBS) as Lead Rates and Regulatory Strategy Analyst. DEBS provides various administrative and other services to Duke Energy Kentucky, Inc., (Duke Energy Kentucky or Company) and other affiliated companies of Duke Energy Corporation (Duke Energy).

Q. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.
A. I have a Bachelor's Degree in Quantitative Analysis from the University of Cincinnati. I began my career with the Cincinnati Gas & Electric Company (CG&E) as a rate analyst in 1988. I was employed by New York State Electric & Gas Company between 1993 and 1997, returning to CG&E in 1997 as a Senior Rate Analyst. In 1998, I became an administrator in Gas Operations. Since that time, I have held positions of increasing responsibility in Gas Operations, having responsibility for assuring adequate supply of gas for the retail customers of Duke Energy Kentucky and Duke Energy Ohio, Inc. In 2018, I left the gas operations business unit and assumed my current role as Lead Rates and Regulatory Strategy Analyst.
Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AS LEAD RATES AND REGULATORY STRATEGY ANALYST.

A. I am responsible for performing analyses and studies to support new or revised rates, providing oral and written testimony before regulatory agencies and other regulatory support, meeting with commission staff members in support of filings, rate changes, or tariff administration issues, assisting in administration of rates and programs, preparing or coordinating preparation of required regulatory compliance filings, and leading projects related to new or revised rates.

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

A. No.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE ANY OTHER REGULATORY AGENCIES?

A. I have testified before the Public Utilities Commission of Ohio and have submitted written testimony before the Federal Energy Regulatory Commission.

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

A. I am responsible for Duke Energy Kentucky's proposed electric rate design. My testimony will demonstrate that the rates Duke Energy Kentucky proposes are just and reasonable, that they reflect appropriate rate making principles, and that they result in an equitable basis for recovery of Duke Energy Kentucky's revenue requirements across its various customer classes and rate schedules. I describe changes that have been made to the Company's retail electric rate schedules, riders,
and electric Service Regulations and quantify the effect of these changes to our retail electric customers. I sponsor Schedules L, L-1, L-2.1, L-2.2, M, M-2.1 through M-2.3 and N. I also sponsor Filing Requirements (FR) FR 16(1)(b)(3), FR 16(1)(b)(4), FR 16(8)(l), FR 16(8)(m) and FR 16(8)(n). The “L” series of schedules satisfy FR 16(1)(b)(3), FR 16(1)(b)(4), and FR 16(8)(l). The “M” series of schedules satisfies FR 16(8)(m), and the “N” schedule satisfies FR 16(8)(n). Finally, I sponsor the content required in the Company’s publication notice under 807 KAR 5:001 Section 17, as reflected in FR 17(4).

II. SCHEDULES AND FILING REQUIREMENTS SPONSORED BY WITNESS

Q. PLEASE DESCRIBE SCHEDULE L.

A. Schedule L has four parts. The first part, identified as Schedule L, is my “Narrative Rationale for Tariff Changes.” This schedule describes the changes to Duke Energy Kentucky’s current tariffs and the reasons for those changes.

Q. PLEASE DESCRIBE SCHEDULE L-1.

A. Schedule L-1 shows the rate schedules that Duke Energy Kentucky proposes to implement. Please note that schedules related to the Company’s Demand Side Management (DSM) programs, which are expected to be filed in November are not presented here. No changes to these schedules are proposed with this filing.

Q. PLEASE DESCRIBE SCHEDULE L-2.1.

A. Schedule L-2.1 contains Duke Energy Kentucky's current rate schedules indicating through underlining and coding where changes occur in the proposed rate schedules. Note that the following schedule sheet numbers only receive an update to the Company’s address, the Company President’s name and/or the schedule’s filing and

JEFF L. KERN DIRECT
effective date. There are no substantive changes to these tariff schedules which include sheet numbers 20, 21, 22, 23, 24, 26, 27, 63, 70, 71, 72, 73, 74, 76, 77, 79, 80, 82, 88, 89, 90, 95, 96, 97, 98, 100 and 101. Similar to Schedule L-1, DSM related rate schedules are not presented.

Q. PLEASE DESCRIBE SCHEDULE L-2.2.

A. Schedule L-2.2 contains Duke Energy Kentucky's proposed rate schedules, showing the revisions that Duke Energy Kentucky proposes in this filing. Proposed changes are crossed out and underscored and coded by letter in the right-hand margin. Similar to Schedule L-1, DSM related rate schedules are not presented.

Q. PLEASE DESCRIBE SCHEDULE M.

A. Schedule M is a one page, side-by-side comparison of Duke Energy Kentucky's test period revenues at current and proposed rates; noting that the current fuel adjustment clause (FAC) value is calculated to match fuel revenues in the Company's test period revenue requirement in order to remove any revenue variations sourced from fuel cost. Schedule M shows that Duke Energy Kentucky is proposing a 16.3 percent increase in the Residential service class, a 10.3 percent increase in the Distribution Voltage service class, a 7.5 percent increase in the Transmission Voltage service class, and a 10.7 percent increase in the Lighting Service class. These average class level increases are based upon base rates which include the fuel cost adjustment expense and applicable riders.

Q. PLEASE DESCRIBE SCHEDULE M-2.1.

A. Schedule M-2.1 shows test period base revenue dollars at current rates with the calculated FAC value and the percentage distribution among the various rate
classes, as well as a breakdown of total revenue. Schedule M-2.1 also shows the actual base revenue average rates per kilowatt-hour (kWh) for each rate class.

Q. **PLEASE DESCRIBE SCHEDULES M-2.2 AND M-2.3.**

A. Schedule M-2.2, page 1, shows the test period bills in summary form, base revenues under current rates, current total revenues, and proposed base revenue increases, all broken down by rate and revenue class. The billing determinants used on these schedules is normalized sales for the twelve months ended March 31, 2021. Schedule M-2.2, pages 2 through 22, contains a detailed calculation of test period numbers using current rates as well as the proposed revenue increase, by rate and revenue class, as summarized on Schedule M-2.2, page 1. Schedule M-2.3 is almost identical to M-2.2, page 1, except that it shows the revenue summary and detailed data calculated at the rates proposed in this case.

Q. **PLEASE DESCRIBE SCHEDULE N.**

A. Schedule N shows monthly bill comparisons for various consumption levels under each of Duke Energy Kentucky’s primary tariff schedules, Rates RS, DS, DT, DP, and TT. This schedule allows comparisons and assessment of how these changes impact customers’ bills.

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

A. FR 16(1)(b)(3) shows the proposed tariffs in a form complying with 807 KAR 5:011 Section 6. The effective dates of these tariffs are not less than 30 days from the date of the filing of the application in the present case. This filing requirement is met by the L series of schedules I previously described.
Q. PLEASE DESCRIBE FR 16(1)(b)(4).

A. FR 16(1)(b)(4) consists of Duke Energy Kentucky’s current tariffs in a comparative form showing proposed changes. The changes are reflected by underscoring additions and striking over deletions. This filing requirement is also met by the L series of schedules I previously described.

Q. PLEASE DESCRIBE FR 16(8)(I).

A. FR 16(8)(I) includes a narrative description and explanation of all proposed tariff changes. This filing requirement is also met by the L series of schedules I previously described.

Q. PLEASE DESCRIBE FR 16(8)(m).

A. FR 16(8)(m) shows the revenue summary for both the base period and the forecasted period with supporting schedules that provide detailed billing analysis for all customer classes. These schedules show the amount of change requested in dollars and the resulting percentage increase for each customer classification and by each rate classification to which the change will apply. In the present case, Duke Energy Kentucky proposes an overall revenue increase including riders of 12.54 percent, which breaks down as previously described. This filing requirement is met by the M series of schedules.

Q. PLEASE DESCRIBE FR 16(8)(n).

A. FR 16(8)(n) shows the typical bill comparison under present and proposed rates for customer classes, current and proposed rates for each customer class, and the rate schedule to which the change would apply. This filing requirement is met by the N schedules previously described.
Q. PLEASE DESCRIBE FR 17(4)(a).
A. FR 17(4)(a) shows the proposed effective date and the date the proposed rates are expected to be filed with the Commission. In this case the effective date is October 3, 2019 and the dates the proposed rates are expected to be filed are September 3, 2019.

Q. PLEASE DESCRIBE FR 17(4)(b).
A. FR 17(4)(b) shows the present rates and proposed rates for each customer classification to which the proposed rates will apply.

Q. PLEASE DESCRIBE FR 17(4)(c).
A. FR 17(4)(c) shows the amount of the change requested in both dollar amounts and percentage change for each customer classification to which the proposed rates will apply.

Q. PLEASE DESCRIBE FR 17(4)(d).
A. FR 17(4)(d) shows the amount of the average usage and the effect on the average bill for each customer classification to which the proposed rates will apply.

Q. PLEASE DESCRIBE FR 17(4)(e) THROUGH (j).
A. FR 17(4)(e) through (j) are statements required for inclusion in the Company’s notice to customers, including that customers may examine the Company’s application at its offices, at the Commission’s offices, or on its website. The statements include instructions for submittal of comments to the Commission and that the rates are only proposed and could be changed by the Commission, as well as instructions for intervention. As evidenced by the Company’s Notice, Attachment JLK-1, these various statements are included.
III. RETAIL ELECTRIC RATE SCHEDULES AND RIDERS

A. RATE DESIGN AND MAJOR RETAIL ELECTRIC RATE SCHEDULES

Q. HOW DID YOU DESIGN THE VARIOUS RATE SCHEDULES IN THIS CASE?
A. I used the cost of service information provided by Duke Energy Kentucky witness James E. Ziolkowski as a basis for the rate design. As more fully described in his testimony, the cost of service information provided for the allocation of costs to the various classes, separation of customer and demand components of cost, and further reduced subsidy/excess revenue by 5 percent.

Q. PLEASE DESCRIBE ANY OTHER CONSIDERATIONS THAT GUIDED YOUR RATE DESIGN.
A. First, Duke Energy Kentucky supports the general concept that rates charged to core markets, which includes customers in the residential, commercial, industrial and other public authority classes, should approximate the cost of providing these customers with service. This is because it is intrinsically fair that customers should pay rates that reflect the cost that the utility incurs to provide the service. Duke Energy Kentucky’s proposed rates in this case make reasonable movement toward reflecting the cost of service developed and sponsored by Mr. Ziolkowski.

Q. WHAT ARE THE COMPANY’S MAJOR RETAIL ELECTRIC RATE SCHEDULES?
A. The Company’s major retail electric rate schedules include: Rate RS - Residential Service (Rate RS); Rate DS – Service at Secondary Distribution Voltage (Rate DS); Rate DP – Service at Primary Distribution Voltage (Rate DP); Rate DT - Time of
Day Rate for Service at Distribution Voltage (Rate DT); and Rate TT – Time of Day Rate for Service at Transmission Voltage (Rate TT). Together, these rate schedules comprise a substantial portion of the Company’s retail electric revenue requirement.

Q. PLEASE DESCRIBE THE COMPANY’S RATE DESIGN OBJECTIVES FOR RATES RS, DS, DP, DT, AND TT.

A. Given the overall percentage increase in this case, our rate design objectives for these rate schedules (hereinafter referred to as “power rate schedules” or “power rates”) are to first, generally increase the rates to maintain a similar structure that minimizes impacts to the class of customers. Aside from this, there are no significant structural changes to the power rates. Due to the anticipated future replacement of the Company’s billing system, we have chosen to not seek implementation of any significant rate design changes in this case.

Q. WHAT ARE THE PROPOSED CUSTOMER CHARGES?

A. The proposed customer charge for each power rate is as follows: for Rate RS, $14.00; for Rate DS single phase service, $15.00; for Rate DS three phase service, $30.00; for Rate DP, $117.00; for Rate DT single phase service, $65.00; for Rate DT three phase service, $130.00; for Rate DT primary service, $138.00; and for Rate TT, $500.00. WP FR-16(7)(v) sets forth the customer-related costs of providing service to the various customer classes. This information was obtained from the functional cost of service study provided by Mr. Ziolkowski. Attachment JLK-2 shows the Company’s proposed residential customer charge in comparison to other Kentucky utility residential customer charges. The Company proposes to
move toward the customer charges computed from the functional cost of service study while leaving the Rate DP and Rate TT customer charges unchanged. This movement better aligns the recovery of customer related costs with the fixed nature of these costs resulting in a better price signal to customers.

Q. HAVE YOU PREPARED RATE SCHEDULES FOR THE POWER RATES?

A. Yes. Again, there are no significant structural changes. The design objective of the power rates was to collect the revenue requirement while maintaining the existing structural characteristics of the rate schedules. More information can be found on Schedule L.

B. LIGHTING RATES

Q. WHAT CHANGES TO THE COMPANY’S STREET LIGHTING RATES ARE BEING REQUESTED AS PART OF THIS PROCEEDING?

A. Duke Energy Kentucky is proposing an increase in street lighting rates to recover revenues allocated by the cost of service study. In addition, the Company is proposing significant changes to Rate LED such that the rate will be based on the sum of various components including new components not previously included in Rate LED costs.

Q. PLEASE DESCRIBE DUKE ENERGY KENTUCKY’S CHANGES TO EXISTING STREET LIGHTING RATES.

A. Duke Energy Kentucky proposes to increase the current street lighting rates by the 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.

17 C. NEW TARIFFS
18 Q. PLEASE DESCRIBE DUKE ENERGY KENTUCKY'S PROPOSED GREEN
19 SOURCE ADVANTAGE TARIFF.
20 A. As more fully explained by Duke Energy Kentucky witness Andrew S. Ritch, the
21 Green Source Advantage Tariff will allow customers to contribute to the
22 development of a specific renewable resource. The Company will enter into
23 purchased power agreements (PPA) with renewable energy project developers.
Participating customers will then enter into a service contract with Duke Energy Kentucky for the same terms/conditions as the PPA, with the customer receiving the benefits and costs, including the value of any RECS created under their program contract.

IV. OTHER TARIFF CHANGES

Q. WHAT OTHER TARIFF CHANGES IS THE COMPANY PROPOSING IN THIS CASE?

A. Duke Energy Kentucky is proposing several changes to its various tariffs, including changes to its cogeneration tariffs for qualifying facilities less than or equal to 100 kW and qualifying facilities greater than 100 kW, Distribution Pole Attachments (Rate DPA), Profit Sharing Mechanism (Rider PSM) and Real Time Pricing (Rate RTP).

Q. PLEASE DESCRIBE THE CHANGES THE COMPANY IS PROPOSING TO ITS COGENERATION AND SMALL POWER PRODUCTION SALE AND PURCHASE - 100 KW OR LESS TARIFF.

A. The Company is revising the Cogeneration and Small Power Production Sale and Purchase Tariff - 100 kW or Less tariff schedule (referred to as the QF Small Tariff) to be consistent with 807 KAR 5:054 and to comply with 807 KAR 5:054, Section 5 to provide avoided cost data every two years. Attachment JLK-3 shows the derivation of the avoided costs for both energy and demand. More specifically, the Company revises the Energy Purchase Rate for all kWh delivered. This rate represents avoided energy cost equal to a two-year average PJM Locational Marginal Price (LMP) at the Duke Energy Kentucky node. The Company was given
permission to recover these required energy purchases through the FAC as an economy energy purchase in Case No. 2017-00321. In addition, the Company is updating the Capacity Purchase Rate to the QF Small Tariff. The new Capacity Purchase Rate is based on the Company’s avoided capacity cost calculated using data from the Company’s 2018 Integrated Resource Plan (IRP).

Q. PLEASE DESCRIBE THE CHANGES THE COMPANY IS PROPOSING TO ITS COGENERATION AND SMALL POWER PRODUCTION SALE AND PURCHASE – GREATER THAN 100 KW TARIFF.

A. The Company is revising the Cogeneration and Small Power Production Sale and Purchase Tariff – Greater Than 100 kW (referred to as the QF Large Tariff) to be consistent with 807 KAR 5:054 and to comply with 807 KAR 5:054, Section 5 as described above. More specifically, the Company maintains the Energy Purchase Rate to be the PJM Real-Time LMP at the Duke Energy Kentucky Aggregate price node for all kWh delivered. The Company was given permission to recover revenues for these energy purchases through the FAC in Case No. 2017-00321. In addition, the Company is updating the Capacity Purchase Rate to the QF Large Tariff. The new Capacity Purchase Rate is based on the Company’s avoided capacity cost calculated using data from the Company’s 2018 IRP.

Q. PLEASE DESCRIBE THE CHANGES DUKE ENERGY KENTUCKY IS PROPOSING TO ITS DPA RATE.

A. The Company is revising the per foot charge in the DPA rate using the Commission-designated calculation process set forth on September 17, 1982 in 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.
Q. WHAT CHANGES ARE MADE TO THE COMPANY'S CHARGE FOR RECONNECTION OF SERVICE?

A. Duke Energy Kentucky proposes revision to the charges for reconnection of service as follows.

1. Charges for reconnections that can be accomplished remotely will be $5.88.
2. Charges for reconnections that cannot be accomplished remotely will be $60.
3. The charge for combined reconnection of gas and electric service will be eliminated, since there is no cost savings for simultaneous reconnection of gas and electric service. Separate gas and electric crews are dispatched for each reconnection.
4. The charge for reconnection at the pole will remain $125.
5. The incremental charge for reconnection after normal business hours will be an additional $40.

Q. WILL ELIMINATING THE CHARGE FOR COMBINED RECONNECTION OF GAS AND ELECTRIC SERVICE AFFECT THE GAS TARIFF AS WELL?

A. Yes. The Company is proposing to delete the provisions regarding combined reconnection of gas and electric service from KY.P.S.C Gas No. 2, Sheet No. 81.
Q. **WHAT INFORMATION IS USED TO SUPPORT THE SERVICE RECONNECTION COSTS?**

A. Attachment JLK-5 shows the calculation of the hourly labor rate and management estimates of processing time.

Q. **DESCRIBE THE INFORMATION PRESENTED IN ATTACHMENT JLK-5, CALCULATION OF RECONNECTION FEES.**

A. The reconnection fee calculations use a fully loaded labor rate for craft labor and estimated labor hours to complete reconnection service for non-remote reconnections when a crew must visit the site. The estimated completion times are estimated by management based on previous experience. For remote reconnections the charge is based on the labor for call center personnel who handle the reconnection remotely and actual average handling times.

Q. **ARE YOU PROPOSING TO MAKE A SIMILAR CHANGE TO THE RECONNECTION FEE ASSOCIATED WITH RATE SP?**

A. To avoid confusion and possible oversight, the SP tariff will be revised to refer to the Charge for Reconnection of Service (Sheet No. 91) rather than specifying the reconnection charge separately.

Q. **WHAT CHANGES ARE MADE TO THE COMPANY’S RIDER FOR GENERATION SUPPORT SERVICE (RIDER GSS)?**

A. Duke Energy Kentucky is not proposing structural changes to Rider GSS. The Monthly Distribution Reservation Charge and Monthly Transmission Reservation Charge are being updated using the Company’s cost of service study.
Q. PLEASE EXPLAIN THE CHANGE TO THE COMPANY’S FRANCHISE FEE TARIFF.

A. The change is textual in nature to clarify. The tariff currently contemplates inclusion of any fee that a local government may impose on the company, not just a franchise fee. The change is to clarify the title to apply to any local government fee, and removes the language referring to fees based upon gross receipts as it relates to franchises. The Company currently has several different fee arrangements charged by municipalities beyond just those based upon gross receipts. There are flat fees, pure gross receipts fees, and gross receipt fees that include caps at a particular dollar amount. The textual change is intended to ensure there is flexibility for local governments in how they structure the fees they impose.

VI. CONCLUSION

Q. HOW DOES THE COMPANY PROPOSE THAT ITS TARIFFS, INCLUDING THE PREVIOUSLY DISCUSSED RATES AND CHARGES, BE IMPLEMENTED?

A. We propose that the revised tariff, including the rates and charges complying with the Commission’s order in this Case, be established effective October 3, 2019, for all customers.
Q. WERE SCHEDULES L, L-1, L-2, M, M-2.1 THROUGH M-2.3 AND N AS
   WELL AS, FR 16(1)(b)(3), FR 16(1)(b)(4), FR 16(8)(l), FR 16(8)(m) AND FR
   16(8)(n), FR 17(4), WP FR-16(7)(V) AND ATTACHMENTS JLK-1, JLK-2,
   JLK-3, JLK-4 AND JLK-5, PREPARED BY YOU OR UNDER YOUR
   SUPERVISION?

A. Yes.

Q. IS THE INFORMATION CONTAINED IN THOSE SCHEDULES AND
   FILING REQUIREMENTS ACCURATE TO THE BEST OF YOUR
   KNOWLEDGE AND BELIEF?

A. Yes.

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

A. Yes.
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 30th day of August, 2019.

ADELE M. FRISCH
NOTARY PUBLIC

My Commission Expires: 11/5/2024
DUKE ENERGY KENTUCKY CURRENT AND PROPOSED ELECTRIC RATES

Residential Service - Rate RS
(Electric Tariff Sheet No. 30)

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<tr>
<th></th>
<th>Current Rate</th>
<th>Proposed Rate</th>
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<tr>
<td>Customer Charge per month</td>
<td>$11.00</td>
<td>$14.00</td>
</tr>
<tr>
<td>Energy Charge per kWh</td>
<td>$7.1650¢</td>
<td>$8.4272¢</td>
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<tr>
<td>All kWh</td>
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Service at Secondary Distribution Voltage-Rate DS
(Electric Tariff Sheet No. 40)

<table>
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<th>Current Rate</th>
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<tr>
<td>Customer Charge per month</td>
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</tr>
<tr>
<td>Single Phase Service</td>
<td>$17.14</td>
<td>$15.00</td>
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<tr>
<td>Three Phase Service</td>
<td>$34.28</td>
<td>$30.00</td>
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<tr>
<td>Demand Charge per kW</td>
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<td></td>
</tr>
<tr>
<td>First 15 kW</td>
<td>$0.00</td>
<td>$0.00</td>
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<tr>
<td>Additional kilowatts</td>
<td>$8.25</td>
<td>$9.38</td>
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<tr>
<td>Energy Charge per kWh</td>
<td></td>
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<tr>
<td>First 6,000 kWh</td>
<td>$8.0200¢</td>
<td>$9.1238¢</td>
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<td>Next 300 kWh/kWh</td>
<td>$4.9232¢</td>
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<td>Additional kWh</td>
<td>$4.0317¢</td>
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<td>Non-Church Cap Rate per kWh</td>
<td>23.6915¢</td>
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<td>Church Cap Rate per kWh</td>
<td>14.5445¢</td>
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### Time-of-Day Rate for Service at Distribution Voltage-Rate DT

**Electric Tariff Sheet No. 41**

<table>
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<tr>
<th>Customer Charge per month</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
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<tr>
<td>Single Phase Service</td>
<td>$63.50</td>
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<tr>
<td>Three Phase Service</td>
<td>$127.00</td>
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<td>Primary Voltage Service</td>
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<td>$138.00</td>
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<tr>
<th>Demand Charge per kW</th>
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<tr>
<td>Summer On Peak kW</td>
<td>$13.78</td>
<td>$15.45</td>
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<td>Summer Off Peak kW</td>
<td>$1.24</td>
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<td>Winter On Peak kW</td>
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<th>Energy Charge per kWh</th>
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<tr>
<td>Summer On Peak kWh</td>
<td>4.3450¢</td>
<td>4.8712¢</td>
</tr>
<tr>
<td>Summer Off Peak kWh</td>
<td>3.5582¢</td>
<td>3.9890¢</td>
</tr>
<tr>
<td>Winter On Peak kWh</td>
<td>4.1479¢</td>
<td>4.6499¢</td>
</tr>
<tr>
<td>Winter Off Peak kWh</td>
<td>3.5582¢</td>
<td>3.9890¢</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Metering per kW</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>First 1,000 kW On Peak</td>
<td>($0.70)</td>
<td>($0.78)</td>
</tr>
<tr>
<td>Additional kW On Peak</td>
<td>($0.54)</td>
<td>($0.61)</td>
</tr>
</tbody>
</table>

### Optional Rate for Electric Space Heating-Rate EH

**Electric Tariff Sheet No. 42**

<table>
<thead>
<tr>
<th>Winter Period</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Charge per month</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Phase Service</td>
<td>$17.14</td>
<td>$15.00</td>
</tr>
<tr>
<td>Three Phase Service</td>
<td>$34.28</td>
<td>$30.00</td>
</tr>
<tr>
<td>Primary Voltage Service</td>
<td>$117.00</td>
<td>$117.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Energy Charge per kWh</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All kWh</td>
<td>6.2202¢</td>
<td>7.0482¢</td>
</tr>
</tbody>
</table>

### Seasonal Sports Service-Rate SP

**Electric Tariff Sheet No. 43**

<table>
<thead>
<tr>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Charge per month</td>
<td>$17.14</td>
</tr>
<tr>
<td>Energy Charge per kWh</td>
<td>9.6130¢</td>
</tr>
</tbody>
</table>
### Optional Unmetered General Service Rate
**For Small Fixed Loans - Rate GS-FL**
(Electric Tariff Sheet No. 44)

<table>
<thead>
<tr>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>$8.2708¢</td>
<td>9.3089¢</td>
</tr>
<tr>
<td>$9.5240¢</td>
<td>10.7269¢</td>
</tr>
</tbody>
</table>

Minimum per month:
- $2.98
- $3.36

### Service at Primary Distribution Voltage Applicability-Rate DP
(Electric Tariff Sheet No. 45)

<table>
<thead>
<tr>
<th>Customer Charge per month</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Voltage Service</td>
<td>$117.00</td>
<td>$117.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Demand Charge per kW All kW</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>$7.92</td>
<td>$9.02</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Energy Charge per kWh</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 300 kWh/kW</td>
<td>$5.1092¢</td>
<td>$5.8203¢</td>
</tr>
<tr>
<td>Additional kWh</td>
<td>$4.3219¢</td>
<td>$4.9212¢</td>
</tr>
<tr>
<td>Maximum monthly rate per kWh</td>
<td>$24.1312¢</td>
<td>$27.4836¢</td>
</tr>
</tbody>
</table>

(excluding the customer charge, electric fuel component charges and DSM Charge).

### Time-of-Day Rate for Service at Transmission Voltage-Rate TT
(Electric Tariff Sheet No. 51)

<table>
<thead>
<tr>
<th>Customer Charge per month</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>$500.00</td>
<td>$500.00</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Demand Charge per kW</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer On Peak kW</td>
<td>$8.07</td>
<td>$8.75</td>
</tr>
<tr>
<td>Summer Off Peak kW</td>
<td>$1.22</td>
<td>$1.32</td>
</tr>
<tr>
<td>Winter On Peak kW</td>
<td>$6.62</td>
<td>$7.18</td>
</tr>
<tr>
<td>Winter Off Peak kW</td>
<td>$1.22</td>
<td>$1.32</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Energy Charge per kWh</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer On Peak kWh</td>
<td>$4.9051¢</td>
<td>$5.3207¢</td>
</tr>
<tr>
<td>Summer Off Peak kWh</td>
<td>$4.0168¢</td>
<td>$4.3571¢</td>
</tr>
<tr>
<td>Winter On Peak kWh</td>
<td>$4.6826¢</td>
<td>$5.0794¢</td>
</tr>
<tr>
<td>Winter Off Peak kWh</td>
<td>$4.0168¢</td>
<td>$4.3571¢</td>
</tr>
</tbody>
</table>
Rider GSS – Generation Support Service  
(Electric Tariff Sheet No. 58)

<table>
<thead>
<tr>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Charge per month (plus the appropriate Customer Charge)</td>
<td>$50.00</td>
</tr>
<tr>
<td>Monthly Transmission and Distribution Reservation Charge (per kW)</td>
<td></td>
</tr>
<tr>
<td>Rate DS Secondary Distribution</td>
<td>$4.7126</td>
</tr>
<tr>
<td>Rate DT Distribution Service</td>
<td>$5.8517</td>
</tr>
<tr>
<td>Rate DP Primary Distribution</td>
<td>$5.9794</td>
</tr>
<tr>
<td>Rate TT Transmission Service</td>
<td>$2.6391</td>
</tr>
</tbody>
</table>

Street Lighting Service - Rate SL  
(Electric Tariff Sheet No. 60)

<table>
<thead>
<tr>
<th>Overhead Distribution Area</th>
<th>Lamp Watts</th>
<th>Annual kWh</th>
<th>Current Rate/Unit</th>
<th>Proposed Rate/Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Fixture (Cobra Head)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury Vapor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7,000 lumen</td>
<td>175</td>
<td>0.193</td>
<td>803</td>
<td>$7.27</td>
</tr>
<tr>
<td>7,000 lumen (Open Refractor)</td>
<td>175</td>
<td>0.205</td>
<td>853</td>
<td>$6.07</td>
</tr>
<tr>
<td>10,000 lumen</td>
<td>250</td>
<td>0.275</td>
<td>1,144</td>
<td>$8.39</td>
</tr>
<tr>
<td>21,000 lumen</td>
<td>400</td>
<td>0.430</td>
<td>1,789</td>
<td>$11.23</td>
</tr>
<tr>
<td>Metal Halide</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14,000 lumen</td>
<td>175</td>
<td>0.193</td>
<td>803</td>
<td>$7.27</td>
</tr>
<tr>
<td>20,500 lumen</td>
<td>250</td>
<td>0.275</td>
<td>1,144</td>
<td>$8.39</td>
</tr>
<tr>
<td>36,000 lumen</td>
<td>400</td>
<td>0.430</td>
<td>1,789</td>
<td>$11.23</td>
</tr>
<tr>
<td>Sodium Vapor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9,500 lumen</td>
<td>100</td>
<td>0.117</td>
<td>487</td>
<td>$8.04</td>
</tr>
<tr>
<td>9,500 lumen (Open Refractor)</td>
<td>100</td>
<td>0.117</td>
<td>487</td>
<td>$6.04</td>
</tr>
<tr>
<td>16,000 lumen</td>
<td>150</td>
<td>0.171</td>
<td>711</td>
<td>$8.77</td>
</tr>
<tr>
<td>22,000 lumen</td>
<td>200</td>
<td>0.228</td>
<td>948</td>
<td>$11.37</td>
</tr>
<tr>
<td>27,500 lumen</td>
<td>250</td>
<td>0.275</td>
<td>948</td>
<td>$11.37</td>
</tr>
<tr>
<td>50,000 lumen</td>
<td>400</td>
<td>0.471</td>
<td>1,959</td>
<td>$15.28</td>
</tr>
<tr>
<td>Decorative Fixtures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium Vapor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9,500 lumen (Rectilinear)</td>
<td>100</td>
<td>0.117</td>
<td>487</td>
<td>$10.00</td>
</tr>
<tr>
<td>22,000 lumen (Rectilinear)</td>
<td>200</td>
<td>0.246</td>
<td>1,023</td>
<td>$12.36</td>
</tr>
<tr>
<td>50,000 lumen (Rectilinear)</td>
<td>400</td>
<td>0.471</td>
<td>1,959</td>
<td>$16.35</td>
</tr>
<tr>
<td>50,000 lumen (Setback)</td>
<td>400</td>
<td>0.471</td>
<td>1,959</td>
<td>$24.31</td>
</tr>
</tbody>
</table>

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 |
<table>
<thead>
<tr>
<th>Underground Distribution Area</th>
<th>Lamp Watts</th>
<th>kW/Unit</th>
<th>Annual kWh</th>
<th>Current Rate/Unit</th>
<th>Proposed Rate/Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard Fixture (Cobra Head)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury Vapor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7,000 lumen</td>
<td>175</td>
<td>0.210</td>
<td>874</td>
<td>$7.40</td>
<td>$8.31</td>
</tr>
<tr>
<td>7,000 lumen (Open Refractor)</td>
<td>175</td>
<td>0.205</td>
<td>853</td>
<td>$6.07</td>
<td>$6.81</td>
</tr>
<tr>
<td>10,000 lumen</td>
<td>250</td>
<td>0.292</td>
<td>1,215</td>
<td>$8.54</td>
<td>$9.59</td>
</tr>
<tr>
<td>21,000 lumen</td>
<td>400</td>
<td>0.460</td>
<td>1,914</td>
<td>$11.50</td>
<td>$12.91</td>
</tr>
<tr>
<td>Metal Halide</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14,000 lumen</td>
<td>175</td>
<td>0.210</td>
<td>874</td>
<td>$7.40</td>
<td>$8.31</td>
</tr>
<tr>
<td>20,500 lumen</td>
<td>250</td>
<td>0.292</td>
<td>1,215</td>
<td>$8.54</td>
<td>$9.59</td>
</tr>
<tr>
<td>36,000 lumen</td>
<td>400</td>
<td>0.460</td>
<td>1,914</td>
<td>$11.50</td>
<td>$12.91</td>
</tr>
<tr>
<td>Sodium Vapor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9,500 lumen</td>
<td>100</td>
<td>0.117</td>
<td>487</td>
<td>$8.04</td>
<td>$9.03</td>
</tr>
<tr>
<td>9,500 lumen (Open Refractor)</td>
<td>100</td>
<td>0.117</td>
<td>487</td>
<td>$6.12</td>
<td>$6.87</td>
</tr>
<tr>
<td>16,000 lumen</td>
<td>150</td>
<td>0.171</td>
<td>711</td>
<td>$8.74</td>
<td>$9.81</td>
</tr>
<tr>
<td>22,000 lumen</td>
<td>200</td>
<td>0.228</td>
<td>948</td>
<td>$11.37</td>
<td>$12.76</td>
</tr>
<tr>
<td>50,000 lumen</td>
<td>400</td>
<td>0.471</td>
<td>1,959</td>
<td>$15.28</td>
<td>$17.15</td>
</tr>
<tr>
<td><strong>Decorative Fixtures</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury Vapor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7,000 lumen (Town &amp; Country)</td>
<td>175</td>
<td>0.205</td>
<td>853</td>
<td>$7.65</td>
<td>$8.59</td>
</tr>
<tr>
<td>7,000 lumen (Holophane)</td>
<td>175</td>
<td>0.210</td>
<td>874</td>
<td>$9.61</td>
<td>$10.79</td>
</tr>
<tr>
<td>7,000 lumen (Gas Replica)</td>
<td>175</td>
<td>0.210</td>
<td>874</td>
<td>$21.96</td>
<td>$24.65</td>
</tr>
<tr>
<td>7,000 lumen (Granville)</td>
<td>175</td>
<td>0.205</td>
<td>853</td>
<td>$7.73</td>
<td>$8.68</td>
</tr>
<tr>
<td>7,000 lumen (Aspen)</td>
<td>175</td>
<td>0.210</td>
<td>874</td>
<td>$13.91</td>
<td>$15.62</td>
</tr>
<tr>
<td>Metal Halide</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14,000 lumen (Traditionaire)</td>
<td>175</td>
<td>0.205</td>
<td>853</td>
<td>$7.64</td>
<td>$8.58</td>
</tr>
<tr>
<td>14,000 lumen (Granville Acorn)</td>
<td>175</td>
<td>0.210</td>
<td>874</td>
<td>$13.91</td>
<td>$15.62</td>
</tr>
<tr>
<td>14,000 lumen (Gas Replica)</td>
<td>175</td>
<td>0.210</td>
<td>874</td>
<td>$22.04</td>
<td>$24.74</td>
</tr>
<tr>
<td>Sodium Vapor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9,500 lumen (Town &amp; Country)</td>
<td>100</td>
<td>0.117</td>
<td>487</td>
<td>$11.17</td>
<td>$12.54</td>
</tr>
<tr>
<td>9,500 lumen (Holophane)</td>
<td>100</td>
<td>0.128</td>
<td>532</td>
<td>$12.10</td>
<td>$13.58</td>
</tr>
<tr>
<td>9,500 lumen (Rectilinear)</td>
<td>100</td>
<td>0.117</td>
<td>487</td>
<td>$9.02</td>
<td>$10.13</td>
</tr>
<tr>
<td>9,500 lumen (Gas Replica)</td>
<td>100</td>
<td>0.128</td>
<td>532</td>
<td>$22.75</td>
<td>$25.54</td>
</tr>
<tr>
<td>9,500 lumen (Aspen)</td>
<td>100</td>
<td>0.128</td>
<td>532</td>
<td>$14.09</td>
<td>$15.82</td>
</tr>
<tr>
<td>9,500 lumen (Traditionaire)</td>
<td>100</td>
<td>0.117</td>
<td>487</td>
<td>$11.17</td>
<td>$12.54</td>
</tr>
<tr>
<td>9,500 lumen (Granville Acorn)</td>
<td>100</td>
<td>0.128</td>
<td>532</td>
<td>$14.09</td>
<td>$15.82</td>
</tr>
<tr>
<td>22,000 lumen (Rectilinear)</td>
<td>200</td>
<td>0.246</td>
<td>1,023</td>
<td>$12.42</td>
<td>$13.94</td>
</tr>
<tr>
<td>50,000 lumen (Rectilinear)</td>
<td>400</td>
<td>0.471</td>
<td>1,959</td>
<td>$16.41</td>
<td>$18.42</td>
</tr>
<tr>
<td>50,000 lumen (Setback)</td>
<td>400</td>
<td>0.471</td>
<td>1,959</td>
<td>$24.31</td>
<td>$27.29</td>
</tr>
</tbody>
</table>
### Pole Charges

<table>
<thead>
<tr>
<th>Pole Type</th>
<th>Current Rate/Pole</th>
<th>Proposed Rate/Pole</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wood</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 foot (Wood laminated)</td>
<td>$4.50</td>
<td>$5.05</td>
</tr>
<tr>
<td>30 foot</td>
<td>$4.44</td>
<td>$4.98</td>
</tr>
<tr>
<td>35 foot</td>
<td>$4.50</td>
<td>$5.05</td>
</tr>
<tr>
<td>40 foot</td>
<td>$5.39</td>
<td>$6.05</td>
</tr>
<tr>
<td><strong>Aluminum</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 foot (decorative)</td>
<td>$12.23</td>
<td>$13.73</td>
</tr>
<tr>
<td>28 foot</td>
<td>$7.09</td>
<td>$7.96</td>
</tr>
<tr>
<td>28 foot (heavy duty)</td>
<td>$7.16</td>
<td>$8.04</td>
</tr>
<tr>
<td>30 foot (anchor base)</td>
<td>$14.16</td>
<td>$15.90</td>
</tr>
<tr>
<td><strong>Fiberglass</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 foot</td>
<td>$4.50</td>
<td>$5.05</td>
</tr>
<tr>
<td>12 foot (decorative)</td>
<td>$13.15</td>
<td>$14.76</td>
</tr>
<tr>
<td>30 foot (bronze)</td>
<td>$8.56</td>
<td>$9.61</td>
</tr>
<tr>
<td>35 foot (bronze)</td>
<td>$8.79</td>
<td>$9.87</td>
</tr>
<tr>
<td><strong>Steel</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27 foot (11 gauge)</td>
<td>$11.56</td>
<td>$12.98</td>
</tr>
<tr>
<td>27 foot (3 gauge)</td>
<td>$17.43</td>
<td>$19.57</td>
</tr>
<tr>
<td><strong>Spans of Secondary Wiring</strong> (per month for each increment of 25 feet of secondary wiring beyond the first 25 feet from the pole)</td>
<td>$0.77</td>
<td>$0.86</td>
</tr>
</tbody>
</table>

### Traffic Lighting Service - Rate TL

*(Electric Tariff Sheet No. 61)*

<table>
<thead>
<tr>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.8903¢</td>
<td>4.3675¢</td>
</tr>
<tr>
<td>2.1543¢</td>
<td>2.4185¢</td>
</tr>
<tr>
<td>6.0446¢</td>
<td>6.7860¢</td>
</tr>
</tbody>
</table>

### Unmetered Outdoor Lighting Electric Service - Rate UOLS

*(Electric Tariff Sheet No. 62)*

<table>
<thead>
<tr>
<th>Energy Charge per kWh</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
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<tbody>
<tr>
<td>All kWh</td>
<td>3.8305¢</td>
<td>4.3003¢</td>
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### LED Outdoor Lighting Electric Service - Rate LED

**Electric Tariff Sheet No. 64**

#### Energy Charge per kWh

<table>
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<tr>
<th>All kWh</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
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<tbody>
<tr>
<td>3.8305¢</td>
<td>4.3003¢</td>
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#### Current Rates (Per Unit Per Month)

<table>
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<tr>
<th>Fixtures</th>
<th>Description</th>
<th>Initial Lumens</th>
<th>Lamp Wattage</th>
<th>Monthly kWh</th>
<th>Current Charge</th>
<th>Proposed Charge</th>
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<tr>
<td>12' C-Post Top- Anchor Base-Black</td>
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<td>$10.44</td>
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<td>25' C-Davit Bracket- Anchor Base-Black</td>
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<td>35' AL-Side Mounted-Direct Buried Pole</td>
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<td>MW-15320-35FT Mounting Height Aluminum Anchor Base Pole-OLE</td>
<td>$11.80</td>
<td>$11.80</td>
<td>Discontinued</td>
<td></td>
<td></td>
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<tr>
<td>MW-15320-40FT Mounting Height Aluminum Anchor Base Pole-OLE</td>
<td>$14.59</td>
<td>$14.59</td>
<td>Discontinued</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>MW-POLE-30-7</td>
<td>$5.77</td>
<td>$5.77</td>
<td>Discontinued</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MW-POLE-35-5</td>
<td>$6.27</td>
<td>$6.27</td>
<td>Discontinued</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>MW-POLE-40-4</td>
<td>$9.44</td>
<td>$9.44</td>
<td>Discontinued</td>
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<tr>
<td>MW-POLE-45-4</td>
<td>$9.79</td>
<td>$9.79</td>
<td>Discontinued</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15' Style A - Fluted - for Shroud - Aluminum Direct Buried Pole</td>
<td></td>
<td>N/A</td>
<td>$5.08</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20' Style A - Fluted - for Shroud - Aluminum Direct Buried Pole</td>
<td></td>
<td>N/A</td>
<td>$5.66</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15' Style A - Smooth - for Shroud - Aluminum Direct Buried Pole</td>
<td></td>
<td>N/A</td>
<td>$3.35</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20' Style A - Smooth - for Shroud - Aluminum Direct Buried Pole</td>
<td></td>
<td>N/A</td>
<td>$5.22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shroud - Standard Style for anchor base poles</td>
<td></td>
<td>N/A</td>
<td>$2.45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shroud - Style B Pole for smooth and fluted poles</td>
<td></td>
<td>N/A</td>
<td>$2.30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shroud - Style C Pole for smooth and fluted poles</td>
<td></td>
<td>N/A</td>
<td>$2.21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shroud - Style D Pole for smooth and fluted poles</td>
<td></td>
<td>N/A</td>
<td>$2.38</td>
<td></td>
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### Pole Foundation

<table>
<thead>
<tr>
<th>Description</th>
<th>Current Charge</th>
<th>Proposed Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flush - Pre-fabricated - Style A Pole</td>
<td>N/A</td>
<td>$10.33</td>
</tr>
<tr>
<td>Flush - Pre-fabricated - Style B Pole</td>
<td>N/A</td>
<td>$9.31</td>
</tr>
<tr>
<td>Flush - Pre-fabricated - Style C Pole</td>
<td>N/A</td>
<td>$10.94</td>
</tr>
<tr>
<td>Flush - Pre-fabricated - Style E Pole</td>
<td>N/A</td>
<td>$10.33</td>
</tr>
<tr>
<td>Flush - Pre-fabricated - Style F Pole</td>
<td>N/A</td>
<td>$9.31</td>
</tr>
<tr>
<td>Flush - Pre-fabricated - Style D Pole</td>
<td>N/A</td>
<td>$9.07</td>
</tr>
<tr>
<td>Reveal - Pre-fabricated - Style A Pole</td>
<td>N/A</td>
<td>$10.97</td>
</tr>
<tr>
<td>Reveal - Pre-fabricated - Style B Pole</td>
<td>N/A</td>
<td>$11.73</td>
</tr>
<tr>
<td>Reveal - Pre-fabricated - Style C Pole</td>
<td>N/A</td>
<td>$11.72</td>
</tr>
<tr>
<td>Reveal - Pre-fabricated - Style D Pole</td>
<td>N/A</td>
<td>$11.72</td>
</tr>
<tr>
<td>Reveal - Pre-fabricated - Style E Pole</td>
<td>N/A</td>
<td>$11.72</td>
</tr>
<tr>
<td>Reveal - Pre-fabricated - Style F Pole</td>
<td>N/A</td>
<td>$10.25</td>
</tr>
<tr>
<td>Screw-in Foundation</td>
<td>N/A</td>
<td>$5.76</td>
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### Brackets

<table>
<thead>
<tr>
<th>Description</th>
<th>Current Charge</th>
<th>Proposed Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 inch bracket - wood pole - side mount</td>
<td>N/A</td>
<td>$1.37</td>
</tr>
<tr>
<td>4 foot bracket - wood pole - side mount</td>
<td>N/A</td>
<td>$1.48</td>
</tr>
<tr>
<td>6 foot bracket - wood pole - side mount</td>
<td>N/A</td>
<td>$1.36</td>
</tr>
<tr>
<td>8 foot bracket - wood pole - side mount</td>
<td>N/A</td>
<td>$2.19</td>
</tr>
<tr>
<td>10 foot bracket - wood pole - side mount</td>
<td>N/A</td>
<td>$4.53</td>
</tr>
<tr>
<td>12 foot bracket - wood pole - side mount</td>
<td>N/A</td>
<td>$3.59</td>
</tr>
<tr>
<td>15 foot bracket - wood pole - side mount</td>
<td>N/A</td>
<td>$4.37</td>
</tr>
<tr>
<td>4 foot bracket - metal pole - side mount</td>
<td>N/A</td>
<td>$5.28</td>
</tr>
<tr>
<td>6 foot bracket - metal pole - side mount</td>
<td>N/A</td>
<td>$5.64</td>
</tr>
<tr>
<td>8 foot bracket - metal pole - side mount</td>
<td>N/A</td>
<td>$5.67</td>
</tr>
<tr>
<td>10 foot bracket - metal pole - side mount</td>
<td>N/A</td>
<td>$5.98</td>
</tr>
<tr>
<td>12 foot bracket - metal pole - side mount</td>
<td>N/A</td>
<td>$6.80</td>
</tr>
<tr>
<td>15 foot bracket - metal pole - side mount</td>
<td>N/A</td>
<td>$6.95</td>
</tr>
<tr>
<td>18 inch bracket - metal pole - double Flood Mount - top mount</td>
<td>N/A</td>
<td>$2.26</td>
</tr>
<tr>
<td>14 inch bracket - metal pole - single mount - top tenon</td>
<td>N/A</td>
<td>$1.62</td>
</tr>
<tr>
<td>14 inch bracket - metal pole - double mount - top tenon</td>
<td>N/A</td>
<td>$2.19</td>
</tr>
<tr>
<td>14 inch bracket - metal pole - triple mount - top tenon</td>
<td>N/A</td>
<td>$2.48</td>
</tr>
<tr>
<td>14 inch bracket - metal pole - quad mount - top tenon</td>
<td>N/A</td>
<td>$2.32</td>
</tr>
<tr>
<td>6 foot - metal pole - single - top tenon</td>
<td>N/A</td>
<td>$2.44</td>
</tr>
<tr>
<td>6 foot - metal pole - double - top tenon</td>
<td>N/A</td>
<td>$3.90</td>
</tr>
<tr>
<td>4 foot - Boston Harbor - top tenon</td>
<td>N/A</td>
<td>$7.94</td>
</tr>
<tr>
<td>6 foot - Boston Harbor - top tenon</td>
<td>N/A</td>
<td>$8.69</td>
</tr>
<tr>
<td>12 foot - Boston Harbor Style C pole double mount - top tenon</td>
<td>N/A</td>
<td>$15.66</td>
</tr>
<tr>
<td>4 foot - Davit arm - top tenon</td>
<td>N/A</td>
<td>$8.44</td>
</tr>
<tr>
<td>18 inch - Cobrahead fixture for wood pole</td>
<td>N/A</td>
<td>$1.20</td>
</tr>
<tr>
<td>18 inch - Flood light for wood pole</td>
<td>N/A</td>
<td>$1.35</td>
</tr>
</tbody>
</table>

### Wiring Equipment

<table>
<thead>
<tr>
<th>Description</th>
<th>Current Charge</th>
<th>Proposed Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary Pedestal (cost per unit)</td>
<td>N/A</td>
<td>$2.07</td>
</tr>
<tr>
<td>Handhole (cost per unit)</td>
<td>N/A</td>
<td>$1.72</td>
</tr>
<tr>
<td>6AL DUPLEX and Trench (cost per foot)</td>
<td>N/A</td>
<td>$0.92</td>
</tr>
<tr>
<td>6AL DUPLEX and Trench with conduit (cost per foot)</td>
<td>N/A</td>
<td>$0.96</td>
</tr>
<tr>
<td>6AL DUPLEX with existing conduit (cost per foot)</td>
<td>N/A</td>
<td>$0.89</td>
</tr>
<tr>
<td>6AL DUPLEX and Bore with conduit (cost per foot)</td>
<td>N/A</td>
<td>$1.10</td>
</tr>
<tr>
<td>6AL DUPLEX OH wire (cost per foot)</td>
<td>N/A</td>
<td>$0.88</td>
</tr>
</tbody>
</table>
Street Lighting Service for Non-Standard Units - Rate NSU
(Electric Tariff Sheet No. 66)

<table>
<thead>
<tr>
<th>Company Owned</th>
<th>Lamp Watts</th>
<th>kW/Unit</th>
<th>Annual Current kW/unit</th>
<th>Proposed Rate/Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boulevard units served underground</td>
<td>2,500 lumen</td>
<td>148</td>
<td>0.148</td>
<td>616</td>
</tr>
<tr>
<td>Holophane Decorative Fixture on 17 foot fiberglass pole served underground with direct buried cable</td>
<td>10,000 lumen</td>
<td>250</td>
<td>0.292</td>
<td>1,215</td>
</tr>
<tr>
<td>Each increment of 25 feet of secondary wiring beyond the first 25 feet from the pole base (added to Rate/unit charge)</td>
<td>2,500 lumen</td>
<td>189</td>
<td>0.189</td>
<td>786</td>
</tr>
<tr>
<td>Street light units served overhead distribution</td>
<td>2,500 lumen</td>
<td>189</td>
<td>0.189</td>
<td>786</td>
</tr>
<tr>
<td>Customer Owned</td>
<td>Steel boulevard units served underground with limited maintenance by Company</td>
<td>2,500 lumen</td>
<td>148</td>
<td>0.148</td>
</tr>
<tr>
<td></td>
<td>Standard Fixture (Cobra Head)</td>
<td>Mercury Vapor</td>
<td>7,000 lumen</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10,000 lumen</td>
<td>250</td>
<td>0.275</td>
</tr>
<tr>
<td></td>
<td></td>
<td>21,000 lumen</td>
<td>400</td>
<td>0.430</td>
</tr>
<tr>
<td></td>
<td>Metal Halide</td>
<td>14,000 lumen</td>
<td>175</td>
<td>0.193</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20,500 lumen</td>
<td>250</td>
<td>0.275</td>
</tr>
<tr>
<td></td>
<td></td>
<td>36,000 lumen</td>
<td>400</td>
<td>0.430</td>
</tr>
<tr>
<td></td>
<td>Sodium Vapor</td>
<td>9,500 lumen</td>
<td>100</td>
<td>0.117</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16,000 lumen</td>
<td>150</td>
<td>0.171</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22,000 lumen</td>
<td>200</td>
<td>0.228</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27,500 lumen</td>
<td>250</td>
<td>0.228</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50,000 lumen</td>
<td>400</td>
<td>0.471</td>
</tr>
<tr>
<td></td>
<td>Decorative Fixture</td>
<td>Mercury Vapor</td>
<td>7,000 lumen</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7,000 lumen (Town &amp; Country)</td>
<td>175</td>
<td>0.205</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7,000 lumen (Gas Replica)</td>
<td>175</td>
<td>0.210</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7,000 lumen (Aspen)</td>
<td>175</td>
<td>0.210</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Metal Halide</td>
<td>14,000 lumen (Traditionaire)</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>14,000 lumen (Granville Acom)</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>14,000 lumen (Gas Replica)</td>
<td>175</td>
</tr>
</tbody>
</table>
### Sodium Vapor

<table>
<thead>
<tr>
<th>Lumen</th>
<th>Watt</th>
<th>Lumen</th>
<th>Watt</th>
<th>Rate/Pole</th>
<th>Rate/Pole</th>
</tr>
</thead>
<tbody>
<tr>
<td>9,500 (Town &amp; Country)</td>
<td>100</td>
<td>0.117</td>
<td>487</td>
<td>$5.07</td>
<td>$5.69</td>
</tr>
<tr>
<td>9,500 (Traditionaire)</td>
<td>100</td>
<td>0.117</td>
<td>487</td>
<td>$5.07</td>
<td>$5.69</td>
</tr>
<tr>
<td>9,500 (Granville Acorn)</td>
<td>100</td>
<td>0.128</td>
<td>532</td>
<td>$5.29</td>
<td>$5.94</td>
</tr>
<tr>
<td>9,500 (Rectilinear)</td>
<td>100</td>
<td>0.117</td>
<td>487</td>
<td>$5.07</td>
<td>$5.69</td>
</tr>
<tr>
<td>9,500 (Aspen)</td>
<td>100</td>
<td>0.128</td>
<td>532</td>
<td>$5.29</td>
<td>$5.94</td>
</tr>
<tr>
<td>9,500 (Holophane)</td>
<td>100</td>
<td>0.128</td>
<td>532</td>
<td>$5.29</td>
<td>$5.94</td>
</tr>
<tr>
<td>9,500 (Gas Replica)</td>
<td>100</td>
<td>0.128</td>
<td>532</td>
<td>$5.29</td>
<td>$5.94</td>
</tr>
<tr>
<td>22,000 (Rectilinear)</td>
<td>200</td>
<td>0.246</td>
<td>1,023</td>
<td>$6.68</td>
<td>$7.50</td>
</tr>
<tr>
<td>50,000 (Rectilinear)</td>
<td>400</td>
<td>0.471</td>
<td>1,959</td>
<td>$8.84</td>
<td>$9.92</td>
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</table>

### Pole Description

<table>
<thead>
<tr>
<th>Pole Type</th>
<th>Current Rate/Pole</th>
<th>Proposed Rate/Pole</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 foot</td>
<td>$4.44</td>
<td>$4.98</td>
</tr>
<tr>
<td>35 foot</td>
<td>$4.50</td>
<td>$5.05</td>
</tr>
<tr>
<td>40 foot</td>
<td>$5.39</td>
<td>$6.05</td>
</tr>
</tbody>
</table>

### Customer Owned and Maintained Units

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.

### Street-lighting Service-Overhead Equivalent-Rate SE

(Electric Tariff Sheet No. 69)

<table>
<thead>
<tr>
<th>Fixture Description</th>
<th>Lamp Watt</th>
<th>kW/Unit</th>
<th>Annual kWh</th>
<th>Current Rate/Unit</th>
<th>Proposed Rate/Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decorative Fixtures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury Vapor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7,000 lumen (Town &amp; Country)</td>
<td>175</td>
<td>0.205</td>
<td>853</td>
<td>$7.45</td>
<td>$8.36</td>
</tr>
<tr>
<td>7,000 lumen (Holophane)</td>
<td>175</td>
<td>0.210</td>
<td>874</td>
<td>$7.48</td>
<td>$8.40</td>
</tr>
<tr>
<td>7,000 lumen (Gas Replica)</td>
<td>175</td>
<td>0.210</td>
<td>874</td>
<td>$7.48</td>
<td>$8.40</td>
</tr>
<tr>
<td>7,000 lumen (Aspen)</td>
<td>175</td>
<td>0.210</td>
<td>874</td>
<td>$7.48</td>
<td>$8.40</td>
</tr>
<tr>
<td>Metal Halide</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14,000 lumen (Traditionaire)</td>
<td>175</td>
<td>0.205</td>
<td>853</td>
<td>$7.45</td>
<td>$8.36</td>
</tr>
<tr>
<td>14,000 lumen (Granville Acorn)</td>
<td>175</td>
<td>0.210</td>
<td>874</td>
<td>$7.48</td>
<td>$8.40</td>
</tr>
<tr>
<td>14,000 lumen (Gas Replica)</td>
<td>175</td>
<td>0.210</td>
<td>874</td>
<td>$7.48</td>
<td>$8.40</td>
</tr>
<tr>
<td>Sodium Vapor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9,500 lumen (Town &amp; Country)</td>
<td>100</td>
<td>0.117</td>
<td>487</td>
<td>$8.12</td>
<td>$9.12</td>
</tr>
<tr>
<td>9,500 lumen (Holophane)</td>
<td>100</td>
<td>0.128</td>
<td>532</td>
<td>$8.23</td>
<td>$9.24</td>
</tr>
<tr>
<td>9,500 lumen (Rectilinear)</td>
<td>100</td>
<td>0.117</td>
<td>487</td>
<td>$8.12</td>
<td>$9.12</td>
</tr>
<tr>
<td>9,500 lumen (Gas Replica)</td>
<td>100</td>
<td>0.128</td>
<td>532</td>
<td>$8.22</td>
<td>$9.23</td>
</tr>
<tr>
<td>9,500 lumen (Aspen)</td>
<td>100</td>
<td>0.128</td>
<td>532</td>
<td>$8.22</td>
<td>$9.23</td>
</tr>
<tr>
<td>9,500 lumen (Traditionaire)</td>
<td>100</td>
<td>0.117</td>
<td>487</td>
<td>$8.12</td>
<td>$9.12</td>
</tr>
<tr>
<td>9,500 lumen (Granville Acorn)</td>
<td>100</td>
<td>0.128</td>
<td>532</td>
<td>$8.22</td>
<td>$9.23</td>
</tr>
<tr>
<td>22,000 lumen (Rectilinear)</td>
<td>200</td>
<td>0.246</td>
<td>1,023</td>
<td>$11.67</td>
<td>$13.10</td>
</tr>
<tr>
<td>50,000 lumen (Rectilinear)</td>
<td>400</td>
<td>0.471</td>
<td>1,959</td>
<td>$15.44</td>
<td>$17.33</td>
</tr>
<tr>
<td>50,000 lumen (Setback)</td>
<td>400</td>
<td>0.471</td>
<td>1,959</td>
<td>$15.44</td>
<td>$17.33</td>
</tr>
</tbody>
</table>
Rider PPS – Premier Power Service Rider  
(Electric Tariff Sheet No. 70)

<table>
<thead>
<tr>
<th>Monthly Service Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Rate</td>
</tr>
<tr>
<td>Estimated Levelized Capacity Cost + Estimated Expenses</td>
</tr>
</tbody>
</table>

Rider TS – Temporary Service Rider  
(Electric Tariff Sheet No. 71)

In addition to charges for service furnished under the applicable standard rate:

<table>
<thead>
<tr>
<th>Current Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated unit cost of each service with supporting data to be filed with the Commission and updated annually by the utility</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Additional customer charge per installed time-of-use or interval data recorder meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Rate</td>
</tr>
<tr>
<td>$5.00</td>
</tr>
</tbody>
</table>

Rider AMO – Advanced Meter Opt-Out (AMO) - Residential  
(Electric Tariff Sheet No. 74)

<table>
<thead>
<tr>
<th>One-time fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Rate</td>
</tr>
<tr>
<td>$100.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ongoing fee per month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Rate</td>
</tr>
<tr>
<td>$25.00</td>
</tr>
</tbody>
</table>
Rider ESM – Environmental Surcharge Mechanism Rider
(Electric Tariff Sheet No. 76)

Environmental Surcharge Billing Factor (percent applied to total bill)

<table>
<thead>
<tr>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted jurisdictional environmental compliance plan revenue requirement / average total monthly revenue</td>
<td>No Proposed Rate</td>
</tr>
</tbody>
</table>

Rider DSMR – Demand Side Management Rate
(Electric Tariff Sheet No. 78)

<table>
<thead>
<tr>
<th>Home Energy Assistance Program (Residential) per month</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential DSMR per kWh</td>
<td>$0.10</td>
<td>No Proposed Rate</td>
</tr>
<tr>
<td>Non-Residential distribution service DSMR per kWh</td>
<td>0.7967¢</td>
<td>Changes to this Rider</td>
</tr>
<tr>
<td>Non-Residential transmission service DSMR per kWh</td>
<td>0.2576¢</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0183¢</td>
<td></td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Fuel Adjustment Clause per kWh</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Expense of fuel in second preceding month / sales in the second preceding month - $0.023837</td>
<td>No Proposed Rate</td>
</tr>
</tbody>
</table>
### Rider PSM – Off-System Power Sales and Emission Allowance Sales Profit Sharing Mechanism

*(Electric Tariff Sheet No. 82)*

#### Current Rate:

<table>
<thead>
<tr>
<th>Rate Group</th>
<th>Current Rate ($/kWh)</th>
<th>Proposed Rate ($/kWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate RS, Residential Service</td>
<td>0.000163</td>
<td></td>
</tr>
<tr>
<td>Rate DS, Service at Secondary Distribution Voltage</td>
<td>0.000163</td>
<td></td>
</tr>
<tr>
<td>Rate DP, Service at Primary Distribution Voltage</td>
<td>0.000163</td>
<td></td>
</tr>
<tr>
<td>Rate DT, Time-of-Day Rate for Service at Distribution Voltage</td>
<td>0.000163</td>
<td></td>
</tr>
<tr>
<td>Rate EH, Optional Rate for Electric Space Heating</td>
<td>0.000163</td>
<td></td>
</tr>
<tr>
<td>Rate GS-FL, General Service Rate for Small Fixed Loads</td>
<td>0.000163</td>
<td></td>
</tr>
<tr>
<td>Rate SP, Seasonal Sports Service</td>
<td>0.000163</td>
<td></td>
</tr>
<tr>
<td>Rate SL, Street Lighting Service</td>
<td>0.000163</td>
<td></td>
</tr>
<tr>
<td>Rate TL, Traffic Lighting Service</td>
<td>0.000163</td>
<td></td>
</tr>
<tr>
<td>Rate UOLS, Unmetered Outdoor Lighting</td>
<td>0.000163</td>
<td></td>
</tr>
<tr>
<td>Rate NSU, Street Lighting Service for Non-Standard Units</td>
<td>0.000163</td>
<td></td>
</tr>
<tr>
<td>Rate SC, Street Lighting Service – Customer Owned</td>
<td>0.000163</td>
<td></td>
</tr>
<tr>
<td>Rate SE, Street Lighting Service – Overhead Equivalent</td>
<td>0.000163</td>
<td></td>
</tr>
<tr>
<td>Rate LED, LED Street Lighting Service</td>
<td>0.000163</td>
<td></td>
</tr>
<tr>
<td>Rate TT, Time-of-Day Rate for Service at Transmission Voltage</td>
<td>0.000163</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0.000163</td>
<td></td>
</tr>
</tbody>
</table>

#### Rider BR - Brown Field Development Rider

*(Electric Tariff Sheet No. 85)*

<table>
<thead>
<tr>
<th>Discount to Demand Charge</th>
<th>Current Discount</th>
<th>Proposed Discount</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 12 month period</td>
<td>50%</td>
<td>No Proposed Rate</td>
</tr>
<tr>
<td>Second 12 month period</td>
<td>40%</td>
<td>Changes to this Rider</td>
</tr>
<tr>
<td>Third 12 month period</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>Fourth 12 month period</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Fifth 12 month period</td>
<td>10%</td>
<td></td>
</tr>
</tbody>
</table>

#### Rider DIR - Development Incentive Rider

*(Electric Tariff Sheet No. 86)*

<table>
<thead>
<tr>
<th>Discount to Total Bill excluding riders</th>
<th>Current Discount</th>
<th>Proposed Discount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Up to 50% for 1 year</td>
<td>No Proposed Rate Changes to this Rider.</td>
</tr>
</tbody>
</table>


*(Electric Tariff Sheet No. 88)*

<table>
<thead>
<tr>
<th>Green Power rate per 100 kWh block</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$1.00</td>
<td>No Proposed Rate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Changes to this Rider.</td>
</tr>
</tbody>
</table>
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)

<table>
<thead>
<tr>
<th>Description</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad Check Fee</td>
<td>$11.00</td>
<td>No Proposed Rate</td>
</tr>
</tbody>
</table>

---

**Charge for Reconnection of Service**  
(Electric Tariff Sheet No. 91)

<table>
<thead>
<tr>
<th>Description</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reconnections that can be accomplished remotely</td>
<td>$3.45</td>
<td>$5.88</td>
</tr>
<tr>
<td>Reconnections that cannot be accomplished remotely</td>
<td>$75</td>
<td>$60</td>
</tr>
<tr>
<td>Equipment tampering penalty (Residential)</td>
<td>Estimated</td>
<td>$200 + Estimated</td>
</tr>
<tr>
<td>Equipment tampering penalty (Non-Residential)</td>
<td>Estimated</td>
<td>$1,000 + Estimated</td>
</tr>
<tr>
<td>Reconnect Gas &amp; Electric at same time</td>
<td>$88</td>
<td>Discontinued</td>
</tr>
<tr>
<td>Reconnection at the pole</td>
<td>$125</td>
<td>$125</td>
</tr>
<tr>
<td>Reconnection at the pole at same time as Gas Service</td>
<td>$150</td>
<td>Discontinued</td>
</tr>
<tr>
<td>After hours charge</td>
<td>$25</td>
<td>$40</td>
</tr>
<tr>
<td>Field visit collection charge</td>
<td>$50</td>
<td>$60</td>
</tr>
</tbody>
</table>

---

**Charge for Reconnection of Service**  
(Gas Tariff Sheet No. 91)

<table>
<thead>
<tr>
<th>Description</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment tampering penalty (Residential)</td>
<td>Estimated</td>
<td>$200 + Estimated</td>
</tr>
<tr>
<td>Equipment tampering penalty (Non-Residential)</td>
<td>Estimated</td>
<td>$1,000 + Estimated</td>
</tr>
<tr>
<td>Reconnect Gas &amp; Electric at same time</td>
<td>$88</td>
<td>Discontinued</td>
</tr>
<tr>
<td>Reconnection at the pole at same time as Gas Service</td>
<td>$150</td>
<td>Discontinued</td>
</tr>
</tbody>
</table>

---

**Distribution Pole Attachments - Rate DPA**  
(Electric Tariff Sheet No. 92)

<table>
<thead>
<tr>
<th>Description</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-user pole annual rental per foot</td>
<td>$5.92</td>
<td>$8.76</td>
</tr>
<tr>
<td>Three-user pole annual rental per foot</td>
<td>$4.95</td>
<td>$7.40</td>
</tr>
</tbody>
</table>
Cogeneration and Small Power Production Sale and Purchase – 100 kW or less
(Electric Tariff Sheet No. 93)

<table>
<thead>
<tr>
<th>Energy Purchase Rate per kWh</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.7645¢</td>
<td>3.2038¢</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capacity Purchase Rate per kW per month</th>
<th>Current Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$3.47</td>
<td>$4.00</td>
</tr>
</tbody>
</table>

Cogeneration and Small Power Production Sale and Purchase – Greater than 100 kW
(Electric Tariff Sheet No. 94)

<table>
<thead>
<tr>
<th>Energy Purchase Rate per kWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Rate</td>
</tr>
<tr>
<td>PJM Real-Time Locational Marginal Price</td>
</tr>
<tr>
<td>Proposed Rate</td>
</tr>
<tr>
<td>PJM Real-Time Locational Marginal Price</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capacity Purchase Rate per kW per month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Rate</td>
</tr>
<tr>
<td>$3.47</td>
</tr>
<tr>
<td>Proposed Rate</td>
</tr>
<tr>
<td>$4.00</td>
</tr>
</tbody>
</table>

Real Time Pricing Program- Rate RTP
(Electric Tariff Sheet No. 99)

<table>
<thead>
<tr>
<th>Energy Delivery Charge (Credit) per kWh from Customer Base Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary Service</td>
</tr>
<tr>
<td>Primary Service</td>
</tr>
<tr>
<td>Transmission Service</td>
</tr>
<tr>
<td>Program Charge per billing period</td>
</tr>
<tr>
<td>Current Rate</td>
</tr>
<tr>
<td>0.9104¢</td>
</tr>
<tr>
<td>0.7850¢</td>
</tr>
<tr>
<td>0.3576¢</td>
</tr>
<tr>
<td>$183.00</td>
</tr>
<tr>
<td>Proposed Rate</td>
</tr>
<tr>
<td>1.8391¢</td>
</tr>
<tr>
<td>1.5184¢</td>
</tr>
<tr>
<td>0.6602¢</td>
</tr>
<tr>
<td>$183.00</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Rate Description</th>
<th>Total Increase ($)</th>
<th>Total Increase (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate RS – Residential Service:</td>
<td>$23,311,832</td>
<td>16.3%</td>
</tr>
<tr>
<td>Rate DS – Service at Distribution Voltage</td>
<td>$11,262,263</td>
<td>10.5%</td>
</tr>
<tr>
<td>Rate DT - Time of Day Rate for Service at Distribution Voltage</td>
<td>$9,171,824</td>
<td>10.1%</td>
</tr>
<tr>
<td>Rate EH – Optional Rate for Electric Space Heating</td>
<td>$75,363</td>
<td>10.6%</td>
</tr>
<tr>
<td>Rate SP – Seasonal Sports Service</td>
<td>$3,757</td>
<td>10.6%</td>
</tr>
<tr>
<td>Rate GS-FL – General Service Rate for Small Fixed Loads</td>
<td>$72,368</td>
<td>10.6%</td>
</tr>
<tr>
<td>Rate DP – Service at Primary Distribution Voltage</td>
<td>$185,391</td>
<td>11.5%</td>
</tr>
<tr>
<td>Rate TT, Time-of-Day Rate for Service at Transmission Voltage</td>
<td>$1,126,489</td>
<td>7.5%</td>
</tr>
<tr>
<td>Rate SL – Street Lighting Service</td>
<td>$164,202</td>
<td>10.7%</td>
</tr>
<tr>
<td>Rate TL – Traffic Lighting Service</td>
<td>$8,903</td>
<td>11.1%</td>
</tr>
<tr>
<td>Rate UOLS – Unmetered Outdoor Lighting Electric Service</td>
<td>$22,269</td>
<td>11.3%</td>
</tr>
<tr>
<td>Rate NSU – Street Lighting Service for Non-Standard Units</td>
<td>$8,450</td>
<td>10.6%</td>
</tr>
<tr>
<td>Rate SC – Street Lighting Service – Customer Owned</td>
<td>$459</td>
<td>11.3%</td>
</tr>
<tr>
<td>Rate SE – Street Lighting Service – Overhead Equivalent</td>
<td>$24,124</td>
<td>10.6%</td>
</tr>
<tr>
<td>Rate RTP – Experimental Real Time Pricing Program</td>
<td>$66,330</td>
<td>10.2%</td>
</tr>
<tr>
<td>Interdepartmental</td>
<td>$7,777</td>
<td>12.5%</td>
</tr>
<tr>
<td>Special Contracts</td>
<td>$2,113</td>
<td>12.5%</td>
</tr>
<tr>
<td>Reconnection Charges</td>
<td>$16,138</td>
<td>35.4%</td>
</tr>
<tr>
<td>Rate DPA - Pole and Line Attachments</td>
<td>$104,796</td>
<td>48.7%</td>
</tr>
</tbody>
</table>

The average monthly bill for each customer class to which the proposed rates will apply will increase approximately as follows:

<table>
<thead>
<tr>
<th>Rate Description</th>
<th>Average kWh/Bill</th>
<th>Monthly Increase ($)</th>
<th>Percent Increase (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate RS – Residential Service:</td>
<td>941</td>
<td>$14.88</td>
<td>16.3%</td>
</tr>
<tr>
<td>Rate DS – Service at Distribution Voltage</td>
<td>6,963</td>
<td>$85.43</td>
<td>10.3%</td>
</tr>
<tr>
<td>Rate DT - Time of Day Rate for Service at Distribution Voltage</td>
<td>502,259</td>
<td>$3,511.02</td>
<td>9.9%</td>
</tr>
<tr>
<td>Rate EH – Optional Rate for Electric Space Heating</td>
<td>19,383</td>
<td>$156.21</td>
<td>10.4%</td>
</tr>
<tr>
<td>Rate SP – Seasonal Sports Service</td>
<td>1,542</td>
<td>$20.87</td>
<td>10.1%</td>
</tr>
<tr>
<td>Rate GS-FL – General Service Rate for Small Fixed Loads</td>
<td>544</td>
<td>$6.54</td>
<td>10.1%</td>
</tr>
<tr>
<td>Rate DP – Service at Primary Distribution Voltage</td>
<td>164,677</td>
<td>$2,051.02</td>
<td>11.4%</td>
</tr>
<tr>
<td>Rate TT, Time-of-Day Rate for Service at Transmission Voltage</td>
<td>1,478,731</td>
<td>$8,006.64</td>
<td>7.5%</td>
</tr>
<tr>
<td>Rate SL – Street Lighting Service *</td>
<td>78</td>
<td>$1.21</td>
<td>10.6%</td>
</tr>
<tr>
<td>Rate TL – Traffic Lighting Service *</td>
<td>15</td>
<td>$0.09</td>
<td>10.7%</td>
</tr>
<tr>
<td>Rate UOLS – Unmetered Outdoor Lighting Electric Service *</td>
<td>53</td>
<td>$0.25</td>
<td>11.4%</td>
</tr>
<tr>
<td>Rate NSU – Street Lighting Service for Non-Standard Units*</td>
<td>49</td>
<td>$0.92</td>
<td>10.6%</td>
</tr>
<tr>
<td>Rate SC – Street Lighting Service – Customer Owned *</td>
<td>47</td>
<td>$0.23</td>
<td>11.7%</td>
</tr>
<tr>
<td>Rate SE – Street Lighting Service – Overhead Equivalent *</td>
<td>60</td>
<td>$0.97</td>
<td>10.7%</td>
</tr>
<tr>
<td>Rate RTP – Experimental Real Time Pricing Program</td>
<td>201,362</td>
<td>$1,658.65</td>
<td>8.4%</td>
</tr>
<tr>
<td>Interdepartmental</td>
<td>N/A</td>
<td>$614.75</td>
<td>12.5%</td>
</tr>
<tr>
<td>Special Contracts</td>
<td>2,667</td>
<td>$16.01</td>
<td>12.5%</td>
</tr>
<tr>
<td>Reconnection Charges</td>
<td>N/A</td>
<td>$0.00</td>
<td>0.0%</td>
</tr>
<tr>
<td>Rate DPA - Pole and Line Attachments (per attachment)</td>
<td>N/A</td>
<td>$0.22</td>
<td>48.7%</td>
</tr>
</tbody>
</table>

*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 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

<table>
<thead>
<tr>
<th>Company</th>
<th>Current Monthly Customer Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jackson Energy Coop</td>
<td>$24.00</td>
</tr>
<tr>
<td>Big Sandy RECC</td>
<td>$21.25</td>
</tr>
<tr>
<td>Grayson Rural Electric Coop</td>
<td>$21.25</td>
</tr>
<tr>
<td>Owen Electric Cooperative</td>
<td>$20.00</td>
</tr>
<tr>
<td>Kenergy</td>
<td>$18.20</td>
</tr>
<tr>
<td>Meade County Rural Electric Coop*</td>
<td>$17.40</td>
</tr>
<tr>
<td>Jackson Purchase Energy Corp</td>
<td>$16.40</td>
</tr>
<tr>
<td>Kentucky Utilities *</td>
<td>$16.12</td>
</tr>
<tr>
<td>Inter-County Energy</td>
<td>$15.20</td>
</tr>
<tr>
<td>Fleming-Mason Energy Coop</td>
<td>$15.00</td>
</tr>
<tr>
<td>Shelby Energy Cooperative Inc.</td>
<td>$15.00</td>
</tr>
<tr>
<td>Farmers Rural Electric</td>
<td>$14.00</td>
</tr>
<tr>
<td>Licking Valley Rural Electric</td>
<td>$14.00</td>
</tr>
<tr>
<td>Kentucky Power</td>
<td>$14.00</td>
</tr>
<tr>
<td><strong>Duke Energy Kentucky - Proposed</strong></td>
<td><strong>$14.00</strong></td>
</tr>
<tr>
<td>Blue Grass RECC</td>
<td>$13.85</td>
</tr>
<tr>
<td>LG&amp;E *</td>
<td>$13.69</td>
</tr>
<tr>
<td>Nolin RECC</td>
<td>$13.50</td>
</tr>
<tr>
<td>South Kentucky RECC</td>
<td>$12.82</td>
</tr>
<tr>
<td>Clark Energy Cooperative</td>
<td>$12.43</td>
</tr>
<tr>
<td>Cumberland Valley Electric</td>
<td>$12.00</td>
</tr>
<tr>
<td><strong>Duke Energy Kentucky - Current</strong></td>
<td><strong>$11.00</strong></td>
</tr>
<tr>
<td>Taylor County Rural Electric Coop Corp</td>
<td>$9.82</td>
</tr>
<tr>
<td>Salt River Electric</td>
<td>$8.84</td>
</tr>
</tbody>
</table>

Source: KYPSC Website www.psc.ky.gov.

* Daily rate converted to monthly by multiplying by 365 and dividing by 12.
### Duke Energy Kentucky

**Cogeneration Avoided Cost**

June 2017 through May 2019

<table>
<thead>
<tr>
<th>Source: Average hourly Locational Marginal Price for the aggregate load buses in the Duke Energy Kentucky service territory published by PJM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average ($/kWh)</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Average</strong></td>
</tr>
</tbody>
</table>

| **2 Year Average ($/kWh)** | $32.038 |
| **2 Year Average ($/kWh)** | $33.2038 |

*Source: Average hourly Locational Marginal Price for the aggregate load buses in the Duke Energy Kentucky service territory published by PJM*
### Duke Energy Kentucky  
**Avoided Capacity Cost**  
2018 IRP basis

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRP Base year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current year</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 858 MW CT 7FA (4 unit site)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Discount Rate</td>
<td>5.18%</td>
</tr>
<tr>
<td>After-Tax WACC</td>
<td>6.52%</td>
</tr>
<tr>
<td>Inflation (Escalation) Rate</td>
<td>2.50%</td>
</tr>
<tr>
<td>Nominal LFCR (EOY Convention)</td>
<td>8.47%</td>
</tr>
<tr>
<td>Real LFCR (EOY Convention)</td>
<td>7.23%</td>
</tr>
<tr>
<td>2018 CT Direct + AFUDC Costs ($/kW)</td>
<td>$614.2</td>
</tr>
<tr>
<td>2018 Real Annualized Capital Cost ($/kW-Yr)</td>
<td>$44.42</td>
</tr>
<tr>
<td>2018 Fixed O&amp;M ($/kW-Yr)</td>
<td>$3.59</td>
</tr>
</tbody>
</table>

#### Total Avoided Cost ($/kW-Yr)

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>$48.02</td>
</tr>
</tbody>
</table>

#### Total Avoided Cost ($/kW-Mo)

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>$4.00</td>
</tr>
</tbody>
</table>
## 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**

### FCC Pole Attachment Rate Formula

<table>
<thead>
<tr>
<th>Amount</th>
<th>35'</th>
<th>40'</th>
<th>45'</th>
<th>Two User</th>
<th>Three User</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gross Pole Investment</td>
<td>$4,729,952</td>
<td>$15,600,971</td>
<td>$16,598,071</td>
<td>$20,330,923</td>
<td>$32,199,042</td>
</tr>
<tr>
<td>2. Pole Depreciation Reserve</td>
<td>$2,112,081</td>
<td>$6,965,354</td>
<td>$7,411,592</td>
<td>$9,078,435</td>
<td>$14,377,946</td>
</tr>
<tr>
<td>3. Appurtenance Factor</td>
<td>$328,714</td>
<td>$1,074,315</td>
<td>$1,142,978</td>
<td>$1,400,030</td>
<td>$2,217,293</td>
</tr>
<tr>
<td>4. Accumulated Deferred Taxes (Poles)</td>
<td>$(446,442)</td>
<td>$(1,472,515)</td>
<td>$(1,556,529)</td>
<td>$(1,918,857)</td>
<td>$(3,039,143)</td>
</tr>
<tr>
<td>5. Net Pole Investment</td>
<td>$2,171,429</td>
<td>$7,162,102</td>
<td>$7,619,851</td>
<td>$9,333,531</td>
<td>$14,781,953</td>
</tr>
<tr>
<td>6. Number of Poles</td>
<td>6,692</td>
<td>16,849</td>
<td>10,517</td>
<td>25,541</td>
<td>27,366</td>
</tr>
<tr>
<td>7. Net Investment Per Bare Pole</td>
<td>$275.81</td>
<td>$361.31</td>
<td>$615.85</td>
<td>$963.93</td>
<td>$1,173.85</td>
</tr>
</tbody>
</table>

### Pole Maintenance

<table>
<thead>
<tr>
<th>Amount</th>
<th>35'</th>
<th>40'</th>
<th>45'</th>
<th>Two User</th>
<th>Three User</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Maintenance of Overhead Lines</td>
<td>$7,798,853</td>
<td>$7,798,853</td>
<td>$7,798,853</td>
<td>$7,798,853</td>
<td>$7,798,853</td>
</tr>
<tr>
<td>B. Total Investment in Poles, Conductors, Services</td>
<td>$214,069,802</td>
<td>$214,069,802</td>
<td>$214,069,802</td>
<td>$214,069,802</td>
<td>$214,069,802</td>
</tr>
<tr>
<td>C. Depreciation Reserve</td>
<td>$75,841,592</td>
<td>$75,841,592</td>
<td>$75,841,592</td>
<td>$75,841,592</td>
<td>$75,841,592</td>
</tr>
<tr>
<td>D. Accumulated Deferred Taxes</td>
<td>$(20,207,626)</td>
<td>$(20,207,626)</td>
<td>$(20,207,626)</td>
<td>$(20,207,626)</td>
<td>$(20,207,626)</td>
</tr>
</tbody>
</table>

### Rate of Return

<table>
<thead>
<tr>
<th>Amount</th>
<th>35'</th>
<th>40'</th>
<th>45'</th>
<th>Two User</th>
<th>Three User</th>
</tr>
</thead>
<tbody>
<tr>
<td>F. Pole Maintenance Ratio</td>
<td>4.92%</td>
<td>4.92%</td>
<td>4.92%</td>
<td>4.92%</td>
<td>4.92%</td>
</tr>
<tr>
<td>G. Depreciation</td>
<td>4.55%</td>
<td>4.55%</td>
<td>4.55%</td>
<td>4.55%</td>
<td>4.55%</td>
</tr>
<tr>
<td>H. Administration</td>
<td>2.47%</td>
<td>2.47%</td>
<td>2.47%</td>
<td>2.47%</td>
<td>2.47%</td>
</tr>
<tr>
<td>I. Taxes (Normalized)</td>
<td>2.49%</td>
<td>2.49%</td>
<td>2.49%</td>
<td>2.49%</td>
<td>2.49%</td>
</tr>
<tr>
<td>J. Rate of Return</td>
<td>6.93%</td>
<td>6.93%</td>
<td>6.93%</td>
<td>6.93%</td>
<td>6.93%</td>
</tr>
</tbody>
</table>

### Total Carrying Charges

<table>
<thead>
<tr>
<th>Amount</th>
<th>35'</th>
<th>40'</th>
<th>45'</th>
<th>Two User</th>
<th>Three User</th>
</tr>
</thead>
<tbody>
<tr>
<td>K. Total Carrying Charge</td>
<td>21.23%</td>
<td>21.23%</td>
<td>21.23%</td>
<td>21.23%</td>
<td>21.23%</td>
</tr>
</tbody>
</table>

### Allocated Space

<table>
<thead>
<tr>
<th>Amount</th>
<th>35'</th>
<th>40'</th>
<th>45'</th>
<th>Two User</th>
<th>Three User</th>
</tr>
</thead>
<tbody>
<tr>
<td>L. Allocated Space</td>
<td>12.24%</td>
<td>7.59%</td>
<td>9.39%</td>
<td>12.24%</td>
<td>7.59%</td>
</tr>
</tbody>
</table>

### Maximum Rate Per Attachment

<table>
<thead>
<tr>
<th>Amount</th>
<th>35'</th>
<th>40'</th>
<th>45'</th>
<th>Two User</th>
<th>Three User</th>
</tr>
</thead>
<tbody>
<tr>
<td>M. Maximum Rate Per Attachment</td>
<td>$8.76</td>
<td>$7.40</td>
<td>$7.40</td>
<td>$7.40</td>
<td>$7.40</td>
</tr>
</tbody>
</table>
**Duke Energy Kentucky**  
**Calculation of Reconnection Fees**

### Non Remote Reconnection

<table>
<thead>
<tr>
<th>Item</th>
<th>Approximate Hours</th>
<th>Cost</th>
<th>Propose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Remote Electric Reconnection</td>
<td>0.50</td>
<td>$61.72</td>
<td>$60.00</td>
</tr>
<tr>
<td>Pole Reconnection</td>
<td>1.10</td>
<td>$135.78</td>
<td>Single person crew $125.00</td>
</tr>
<tr>
<td>Non-Remote After Hours</td>
<td>0.85</td>
<td>$104.92</td>
<td>$100.00</td>
</tr>
<tr>
<td>Pole Reconnection After Hours</td>
<td>1.70</td>
<td>$209.84</td>
<td>Two person crew $165.00</td>
</tr>
<tr>
<td>Collection Charge (Field Visit)</td>
<td>0.50</td>
<td>$61.72</td>
<td></td>
</tr>
</tbody>
</table>

### Remote Reconnection

<table>
<thead>
<tr>
<th>Item</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Labor</td>
<td>$36.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incentives</td>
<td>4.00%</td>
<td>$0.67</td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td>$17.49</td>
<td></td>
</tr>
<tr>
<td>Loadings</td>
<td>41.25%</td>
<td>$7.22</td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td>$24.71</td>
<td></td>
</tr>
<tr>
<td>Supervision, Team Leads, Training</td>
<td>22.00%</td>
<td>5.44</td>
<td></td>
</tr>
<tr>
<td>Total Cost per Hour</td>
<td></td>
<td>$30.15</td>
<td></td>
</tr>
<tr>
<td>Total Cost per Day (8 hours)</td>
<td></td>
<td>241.23</td>
<td></td>
</tr>
<tr>
<td>Paid hours per day</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEMW Base Occupancy</td>
<td>90.67%</td>
<td>7.75</td>
<td></td>
</tr>
<tr>
<td>Base Shrinkage</td>
<td>35.34%</td>
<td>2.56</td>
<td></td>
</tr>
<tr>
<td>Hours per day handling calls</td>
<td>4.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seconds per hour</td>
<td>3,600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seconds per day handling calls</td>
<td>16,884</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Handling Time for DNP</td>
<td>403</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calls per day handled</td>
<td></td>
<td>41</td>
<td></td>
</tr>
</tbody>
</table>

**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) Approval of New Tariffs; 3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; and 4) All Other Required Approvals and Relief.

Case No. 2019-00271

DIRECT TESTIMONY OF
ZACHARY KUZNAR, PhD
ON BEHALF OF
DUKE ENERGY KENTUCKY, INC.

September 3, 2019
# TABLE OF CONTENTS

| I.    | INTRODUCTION AND PURPOSE                          | 1 |
| II.   | DISCUSSION                                        | 2 |
| 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, 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 Combined Heat & Power (CHP) Microgrid and Energy Storage Development. DEC is a subsidiary of Duke Energy Corporation (Duke Energy) which provides various services to Duke Energy Kentucky, Inc. (Duke Energy Kentucky or Company) and other affiliated companies of Duke Energy.

10 Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND PROFESSIONAL EXPERIENCE.
12 A. I received a bachelor's degree in Chemical Engineering from Purdue University in 1999, a Master's Degree in Engineering and Applied Science from Yale University in 2001 and a PhD in Chemical and Environmental Engineering from Yale University in 2005. I began my career with GE in 2005, and started with Duke Energy in 2008. Previous roles at Duke Energy include various roles within Duke Energy's Fossil/Hydro Generation group, Emerging Technology Organization and Business Development in the Distributed Generation Group.
Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS MANAGING DIRECTOR CHP MICROGRID AND ENERGY STORAGE DEVELOPMENT.

A. As Managing Director of CHP, Energy Storage and Microgrid Development, my primary responsibility is to develop and execute business strategies to add distributed resources to the asset mix within Duke Energy's six regulated, franchised businesses located in Ohio, Kentucky, Indiana, North Carolina, South Carolina and Florida.

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

A. No.

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

A. The purpose of my testimony is to discuss the Company's proposal for a battery storage pilot program on its distribution system in the service territory.

II. DISCUSSION

Q. PLEASE IDENTIFY THE PROPOSED DISTRIBUTION BATTERY ENERGY STORAGE SYSTEM.

A. Duke Energy Kentucky is proposing an approximate 5.5-Megawatt (MW) distribution battery energy storage system to be attached to the Company's distribution system in Edgewood, Kentucky that will provide ancillary services that will benefit all customers through the PJM Interconnection LLC. (PJM) frequency regulation market which is the primary application for the deployment
of the system. Additionally, the project will be located in an area that is ideal for enhanced reliability due to the presence of a major hospital. If an outage occurs on the distribution circuit, the battery will be unable to participate in PJM but will be able to provide enhanced reliability by operating in island mode, maintaining power to customers for a period of time. As such, this will not result in any duplication of facilities or waste. Because this new technology will be attached to the Company’s own distribution system, it will not conflict with or interfere with any other utility operations. The estimated project cost, as explained below, does not involve a sufficient capital outlay to materially affect the financial condition of Duke Energy Kentucky. Therefore, the Company believes that a project such as this, given its limited size and scope, would constitute an ordinary extension of the Company’s distribution system in the ordinary course.

Q. PLEASE DESCRIBE THE DISTRIBUTION BATTERY TECHNOLOGY INCORPORATED INTO THE COMPANY’S PROPOSAL.

A. This system will incorporate lithium ion batteries, which is the preferred technology. Specifically, lithium ion batteries are recognized as being reliable, robust technology suitable for islanding and microgrid applications while also providing significant generation value in the wholesale electric markets. During normal grid-tied operation, the system will be used to provide bulk system benefits in PJM such as frequency regulation. During an outage event, this system is anticipated to provide approximately 3 hours of backup service to the facilities on the islanded portion of the distribution circuit.

ZACHARY KUZNAR PhD, DIRECT
WHAT IS FREQUENCY REGULATION?

Frequency regulation is an ancillary service in the PJM market. Resources participating in this market are required to adjust their load or generation in response to a signal provided by PJM in order to maintain the required Area Control Error (ACE). Per PJM\(^1\), frequency regulation helps match load to generation and keep the grid functioning normally by:

- Maintaining a system frequency of 60 Hertz;
- Tracking moment-to-moment fluctuations in customer electricity use;
- Correcting for unintended fluctuations in generation (such as a large generating unit disconnecting from the system); and
- Managing differences between forecasted or scheduled power flow and actual power flow on the system.

Once installed, this project is expected to follow PJM’s REG D signal that is designed for fast response resources like the battery storage being proposed, thereby helping to stabilize the electric grid in a manner that is more efficient than traditional resources, such as fossil generation.

WHAT IS THE PURPOSE OF AND NEED FOR THIS PROJECT?

Energy storage is expected to play an increasingly important role in the electric system of the future. As more intermittent generation resources are connected to the grid, the need for ancillary services capable of being provided by battery storage is expected to increase. This project will give Duke Energy Kentucky

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ZACHARY KUZNAR PhD, DIRECT
valuable insight on how to incorporate energy storage into its existing operation to provide these bulk system benefits to its customers.

Battery storage projects can also provide significant value to the distribution grid through distribution upgrade deferrals, renewables integration, power quality improvements, and increased reliability for critical loads. To maximize the value of battery storage projects, they should be located optimally on the distribution grid to capture additional values. This project will be located near a major hospital in Edgewood, Kentucky, in order to increase reliability on that circuit.

As costs continue to decline for battery storage projects, Duke Energy Kentucky anticipates energy storage could be deployed as a routine solution in the future for Transmission or Distribution upgrades. Now is the time to gain the operational knowledge necessary to own and operate energy storage assets. The lessons learned from this project will enable the successful implementation of future projects.

Q. IS THE COMPANY'S PROPOSED BATTERY STORAGE PROJECT CONSISTENT WITH THE COMPANY'S MOST RECENT INTEGRATED RESOURCE PLAN?

A. Yes. In its most recent Integrated Resource Plan (IRP) filed in Case No. 2018-00195, the Company discussed the installation of approximately 2 MWs of battery storage per year beginning in 2019. This project is consistent with the 2018 IRP given that the proposed project, if approved, would be installed in 2020, which spans the test year in this proceeding.
Q. PLEASE DESCRIBE HOW THE COMPANY WILL CONSTRUCT THE BATTERY STORAGE PROJECT.

A. The project will involve developing, designing, procuring, constructing and ultimately operating a 5.5 MW battery storage project. After a competitive procurement process, Duke Energy Kentucky intends on contracting with a reputable engineering, procurement, and construction firm and procuring the battery equipment directly from suppliers. Duke Energy Kentucky will oversee project execution and provide project management, construction oversight, and environmental health and safety due diligence necessary to dispatch the battery. Attachment ZK-1 is a copy of the work specifications that will be used in construction.

Q. HOW WILL DUKE ENERGY KENTUCKY ENGAGE WITH THE LOCAL COMMUNITY RELATED TO THE INSTALLATION OF THIS PROJECT?

A. As with any project, Duke Energy Kentucky regularly meets with local community leaders, including city managers and/or engineers in advance of construction work being performed. Duke Energy Kentucky would follow this same process with this project.

Q. HAS THE COMPANY COMPLETED INITIAL ENGINEERING FOR THE BATTERY STORAGE PROJECT?

A. No. Duke Energy Kentucky’s distribution planners and engineering group are currently working with the hospital to determine the optimal distribution system location and project size which is expected to be approximately 5.5 MWs and

ZACHARY KUZNAR PhD, DIRECT
configuration for the battery storage site. Once this is complete, a request for proposal (RFP) process will be used to ensure construction costs are reasonable.

Q. WILL THE COMPANY NEED ANY SPECIFIC PERMITS FOR CONSTRUCTION OF THE BATTERY STORAGE PROJECT?

A. The Company does not anticipate needing any specific permitting except for local construction permits that may be required. This project will be directly tied into the Company's own distribution system at a substation. As I previously stated, the construction will occur on a Company circuit and within the Company's service territory. Therefore, it will not impact any other service provided by any other utility. This project will interconnect to the grid using the standard Duke Energy Kentucky interconnection process. The project will also require a Wholesale Market Participation Agreement with PJM in order to participate in the wholesale markets.

Q. YOU PREVIOUSLY REFERENCED THE PJM MARKET FOR ANCILLARY SERVICES. WILL DUKE ENERGY KENTUCKY'S CUSTOMERS BENEFIT FROM PARTICIPATION IN THAT MARKET?

A. Revenues, if any, realized by Duke Energy Kentucky would offset the costs of the project in base rates by passing the revenues back to customers through the Company's rider mechanisms.

Q. WHAT IS THE ESTIMATED ANNUAL VALUE OF BENEFITS FOR THE FREQUENCY REGULATION SERVICES AT PJM?

A. Currently the PJM regulation D market is approximately $20 per MW each hour. Using this figure, the estimated annual revenues from the PJM Reg D market for
this project would be approximately $800,000. Actual net revenues will flow through the Company’s rider mechanisms to customers.

Q. **HAS THE COMPANY SELECTED AN EXACT LOCATION FOR THE INSTALLATION OF THE DISTRIBUTION BATTERY TECHNOLOGY?**

A. Duke Energy Kentucky plans to install the battery on the Thomas More distribution circuit that connects to the nearby hospital. Duke Energy Kentucky and the hospital are evaluating various locations, owned by either party, in order to determine the optimal placement of this project.

Q. **PLEASE IDENTIFY THE ANTICIPATED BENEFITS FOR CUSTOMERS WITH THIS PROJECT INSTALLATION.**

A. As discussed above, the battery will provide necessary ancillary services to the PJM market. In the event of a distribution outage and the battery is unable to participate in PJM, customers will benefit from increased reliability at the hospital, which is one of the largest healthcare facilities in the region. Additionally, customers will benefit from the lessons learned from this project that will enable future deployments of energy storage projects.

Q. **HOW WILL THE BATTERY PROJECT BENEFIT THE HOSPITAL AND OTHER CUSTOMERS?**

A. In the event of an outage the battery will enable the hospital to continue to receive power from the grid and maintain normal operations. The hospital does have existing back-up generation but, in practice, modifies its normal operations when not receiving power from the grid and it is relying upon its generation. This project will provide additional support for the hospital to enable the hospital’s
normal operations from being interrupted or suspended by outages thereby benefitting all customers. As I previously mentioned, all customers will be benefitting from the additional revenues available through the PJM regulation D market.

Q. WHAT FACTORS WERE RELEVANT TO THE SELECTION OF THIS LOCATION?

A. Distributed assets such as energy storage will be used primarily to provide system benefits. However, during grid outages, storage can also provide benefits to certain customers in the form of backup power. The intended location of the project is such that it enables the hospital to continue operation during circuit outages and the patients it serves to benefit from the enhanced reliability provided by the storage project.

Q. WILL THE RELIABILITY OF THIS CIRCUIT BE A FACTOR IN ITS SELECTION FOR THE INITIAL BATTERY STORAGE INSTALLATION?

A. Yes. In order to maximize the opportunity for potential learnings, the Company is evaluating a number of factors to provide the greatest possible benefit to customers. The reliability of circuits is a key factor being considered.

Q. PLEASE DISCUSS THE INFORMATION THAT DUKE ENERGY KENTUCKY WILL OBTAIN UNDER THE PILOT.

A. The benefits of this project will give Duke Energy Kentucky critical insight going forward with regard to energy storage. As technology continues to evolve in the energy space, as assets continue to become more distributed, and as costs continue
to decline for technologies such as energy storage, quantifying the values it can provide are important for the Company. This pilot project will allow Duke Energy Kentucky to confirm certain values to the electrical distribution system, such as distribution asset deferral, resiliency, frequency regulation, integration of renewables, and voltage support to name a few. It will also allow Duke Energy Kentucky to gain operational knowledge for these types of systems. The operational experience and information obtained will be invaluable to future energy storage deployments and economic modeling.

Q. WHAT IS THE ESTIMATED COST OF THE PROPOSED DISTRIBUTION BATTERY ENERGY STORAGE SYSTEM?

A. The Company’s forecast supporting the test period currently assumes that the proposed battery energy storage facility will cost approximately $8.2 million and will be in-service as of December 31, 2020. As Company witness Ms. Sarah E. Lawler discusses in her testimony, this results in approximately $2.4 million of net plant included in rate base on a 13-month average being included in this instant case.

Q. IF THE ESTIMATED TOTAL COST OF THE PROJECT IS $8.2 MILLION, WHAT IS THE IMPACT TO THE COMPANY’S TEST YEAR REVENUE REQUIREMENT?

A. As more fully described by Ms. Lawler, the impact to the Company’s base revenue requirement for the forecasted test year in this case associated with the return on rate base of this project is approximately $350,000.
Q. **WHAT IS THE ESTIMATED ONGOING ANNUAL COST OF OPERATION OF THE BATTERY STORAGE SYSTEM?**

A. The estimated annual ongoing cost of operation is approximately $163,000 per year. As Ms. Lawler notes in her testimony, these costs have not been included in the forecasted test period.

Q. **IS THE COMPANY REQUESTING APPROVAL OF A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY (CPCN) FOR THIS PROJECT?**

A. As I previously mentioned, the Company believes that the project should qualify as an ordinary extension of the existing system in the ordinary course of business. The Company has reached this conclusion given the project’s size, cost, location and purpose. The project will not create a wasteful duplication of plant, equipment or facilities. Battery storage is an emerging technology and its deployment on the distribution grid for resiliency and enhanced reliability is new to the current way utilities distribute energy. Because the project will be connected to Duke Energy Kentucky’s own distribution system, it will not conflict with existing certificates or service of other utilities in the general or contiguous area. Finally, due to the project’s relative size and cost, it does not involve sufficient capital outlay to materially affect the existing financial condition of the Company. Nonetheless, if the Commission determines a CPCN is necessary, then the Company requests the Commission grant CPCN approval with its application in this case.

ZACHARY KUZNAR PhD, DIRECT
Q. WILL DUKE ENERGY KENTUCKY PROVIDE THE COMMISSION WITH ANY ONGOING REPORTING ON THE LEARNINGS GAINED AS PART OF THIS PILOT PROGRAM?
A. Yes. Duke Energy Kentucky will provide the Commission with annual reporting including but not limited to the following:

- A summary of all instances in which the battery operated in island mode providing back up power to the hospital in response to an outage on the distribution line or otherwise;
- A quantification of the total ancillary services provided to the grid by the battery (in both capacity and energy), including what types of services were provided (spinning reserve, regulation up or down, etc.);
- A summary of how the battery enhanced economic operations and how it was beneficial to Duke Energy Kentucky’s operational knowledge; and
- Operations and maintenance costs.

III. CONCLUSION

Q. WAS ATTACHMENT ZK-1 PREPARED BY YOU OR AT YOUR DIRECTION AND UNDER YOUR CONTROL?
A. Yes.

Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?
A. Yes.
VERIFICATION

STATE OF OHIO   )     SS:
COUNTY OF HAMILTON     )

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.

[Signature]
Zachary Kuznar, Affiant

Subscribed and sworn to before me by Zachary Kuznar, on this 12th day of August, 2019.

[Signature]
NOTARY PUBLIC

My Commission Expires:
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) Approval of New Tariffs; 3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; and 4) All Other Required Approvals and Relief.

Case No. 2019-00271

DIRECT TESTIMONY OF

SARAH E. LAWLER

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

September 3, 2019
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**ATTACHMENT:**

Attachment SEL-1 Rider PSM Template
I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
A. My name is Sarah E. Lawler, and my business address is 139 East Fourth Street, Cincinnati, Ohio 45202.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?
A. I am employed by Duke Energy Business Services LLC (DEBS) as Director Rates & Regulatory Planning. DEBS provides various administrative and other services to Duke Energy Kentucky, Inc., (Duke Energy Kentucky or Company) and other affiliated companies of Duke Energy Corporation (Duke Energy).

Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND PROFESSIONAL EXPERIENCE.
A. I earned a Bachelor of Science in Accountancy from Miami University, Oxford, Ohio in 1993. I am also a Certified Public Accountant.

I began my career in September 1993 with Coopers & Lybrand, L.L.P., as an audit associate and progressed to a senior audit associate. In August 1997, I moved to Kendle International Inc., where I held various positions in the accounting department, ultimately being promoted to Corporate Controller. In August 2003, I began working for Cinergy Corp., as External Reporting Manager, where I was responsible for the company’s Securities & Exchange Commission (SEC) filings. In August 2005, I then moved into the role of Manager, Budgets & Forecasts. In June 2006, following the merger between Cinergy Corp. and Duke Energy, I became Manager, Financial Forecasting. In February 2015, I was
promoted to Utility Strategy Director, Midwest. In December 2017 I began in my current role as Director, Rates and Regulatory Planning.

Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS DIRECTOR, RATES AND REGULATORY PLANNING.

A. I am responsible for the preparation of financial and accounting data used in retail rate filings and various other rate recovery mechanisms for Duke Energy Kentucky and Duke Energy Ohio, Inc.

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

A. Yes.

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

A. I support the revenue requirement proposed by Duke Energy Kentucky. Toward that end, I support various adjustments to the projected data for the forecasted test period provided by Duke Energy Kentucky witness, Mr. Christopher Jacobi. I also sponsor Filing Requirements (FR) 16(6)(b), 16(6)(c), 16(6)(f) and 16(7)(t). I also sponsor the following schedules: Schedule A in satisfaction of FR 16(8)(a) and Schedule B-1, in response to FR 16(8)(b); Schedules C-1 through C-2.1 in compliance with FR 16(8)(c); Schedules D-1, D-2.17 through D-2.23, and D-2.25 through D-2.31, in compliance with FR 16(8)(d); Schedules F-1 through F-7 in compliance with FR 16(8)(f); and Schedules G-1 and H in response to FR 16(8)(g) and FR16((8)(h), respectively. In addition, I sponsor Attachment SEL-1 attached to my testimony. I also provide information regarding the proposed rate recovery of the Company’s

SARAH E. LAWLER DIRECT
proposed battery storage project and Electric Vehicle (EV) Pilot Program.

II. TEST PERIOD AND RATE BASE

Q. WHAT IS THE TEST PERIOD IN THIS PROCEEDING?
A. The Company has elected to use a forecasted test period in this proceeding. The forecasted test period reflects the twelve months ending March 31, 2021, adjusted for known and measurable changes, and a base period of twelve months ending November 30, 2019. The base period consists of six months of actual data, through May 31, 2019, and the remaining six months consist of forecasted data.

Q. HOW WERE THE RATE BASE AND CAPITALIZATION DETERMINED IN THIS PROCEEDING?
A. The Company determined rate base and capitalization using a thirteen-month average for the forecasted test period ending March 31, 2021. The base period rate base and capitalization represent end-of-period balances.

Q. DID THE COMPANY FOLLOW THE COMMISSION'S GUIDELINES IN DEVELOPING THE BASE AND FORECASTED TEST PERIOD DATA?
A. Yes. Per the Commission's rules, 807 KAR 5:001, Section 16(7)(e)(2), “the forecast contains the same assumptions and methodologies as used in the forecast period for use by management.” As described by Mr. Jacobi, the base and forecasted test periods were developed using the same methods applied in the Company’s annual budgeting process. The first six months of the base period are actual results and are taken from the Company’s books and records.
III.  FILING REQUIREMENTS SPONSORED BY WITNESS

Q.  PLEASE DESCRIBE FR 16(6)(b).
A.  FR 16(6)(b) requires that the forecasted adjustments are limited to the twelve months immediately following the suspension period.

Q.  PLEASE DESCRIBE FR 16(6)(c).
A.  FR 16(6)(c) requires that capitalization and net investment rate base are based on a thirteen-month average for the forecasted test period, in this case, the twelve months ending March 31, 2021.

Q.  PLEASE DESCRIBE FR 16(6)(f).
A.  FR 16(6)(f) contains a reconciliation of the capital and rate base used to determine the revenue requirement in this case.

Q.  PLEASE DESCRIBE FR 16(7)(t).
A.  FR 16(7)(t) contains a list of all commercially available or in-house developed computer software, programs, and models used in the development of the schedules and workpapers associated with the filing of the utility's application.

Q.  PLEASE DESCRIBE SCHEDULE A.
A.  Schedule A is the overall financial summary for both the base period and the forecasted period at present rates. Based on the filing in this proceeding, as adjusted, the Company's electric operations are projected to earn a return on rate base of 3.098 percent for the forecasted test period, which is considerably less than the 6.711 percent return requested in this proceeding. In order to achieve the appropriate return on rate base, Duke Energy Kentucky's base electric revenues must increase $45,634,448 as shown in Schedule A.

SARAH E. LAWLER DIRECT
Q. PLEASE DESCRIBE SCHEDULE B-1.

A. Schedule B-1 is the jurisdictional rate base summary for both the base and forecasted periods and is supported by various schedules in Section B of the Company's filing. The plant in service, and reserve for accumulated depreciation and amortization for the base and forecasted periods were summarized from Schedules B-2, B-3, and B-3.2 as supported by Company witnesses Ms. Melissa Abernathy and Mr. Jacobi. The working capital component was summarized from Schedule B-5, as supported by Mr. Jacobi, and other items of rate base were obtained from Schedule B-6, as supported by Mr. John R. Panizza and Workpaper WPF-6a. The jurisdictional electric rate base for the forecast period as contained in Schedule B-1 is $946,427,820.

Q. PLEASE DESCRIBE SCHEDULE C-1.

A. Schedule C-1 is a jurisdictional operating income summary for the forecasted period ended March 31, 2021. This schedule includes the operating income summary at both current and proposed rates. It assumes that the Commission allows the total amount of the requested electric base revenue increase of $45,634,448. The adjusted operating results at current rates were summarized from Schedule C-2 and the proposed increase was obtained from Schedule M. The revenue at proposed rates was developed by adding the revenue increase to the operating revenues at current rates. The related expenses and taxes on the proposed increase were added to the current adjusted operating results to determine the jurisdictional pro forma amounts and the corresponding rate of return. The rate base as shown on this schedule is calculated on Schedule B-1.
Q. PLEASE DESCRIBE SCHEDULE C-2.

A. Schedule C-2 is a jurisdictional operating income statement to be used for ratemaking purposes. In order to develop the forecasted test period that is appropriate for ratemaking, a two-step process was required. First, as required by 807 KAR 5:001, Section 16(6)(a), it was necessary to show the adjustments necessary to transform the financial data for the base period into the forecasted period. Second, it was necessary to adjust the forecasted period data to reflect any adjustments required to ensure that the revenues and expenses to be recovered in rates are representative of the expected costs to serve Duke Energy Kentucky electric customers on an ongoing basis.

Schedule C-2 starts with the unadjusted base period and shows the adjustments required to extend the Company’s income statement from the base period to the forecasted period. The next column on the schedule summarizes the adjustments to the unadjusted forecasted test period. These adjustments are described below. Generally, they relate to costs that were not reflected in the Company’s forecasted data, or were reflected in the forecasted data but not allocable to Duke Energy Kentucky’s electric customers, or were made to reflect traditional ratemaking methodology. The unadjusted operating results are summarized from Schedule C-2.1. The adjusted amounts include the effects of the adjustments summarized on Schedule D-1.
Q. PLEASE DESCRIBE SCHEDULE C-2.1.

A. Schedule C-2.1 sets forth the detail of total Company operating results for both the base and forecasted periods. The operating results as shown in this Schedule C-2.1 are listed by account and are summarized on Schedule C-2.

Q. PLEASE DESCRIBE SCHEDULE D-1.

A. Schedule D-1 is a summary of the detailed adjustments to test period operating revenues and operating expenses as set forth in Schedules D-2.1 through D-2.31.

Q. WHY ARE ADJUSTMENTS TO THE BASE AND FORECASTED PERIOD INFORMATION NECESSARY?

A. The adjustments shown in Schedules D-2.1 through D-2.15 reflect the normal budgetary changes that are expected to occur from the base period through the forecasted period. Schedules D-2.1 through D-2.15, are sponsored by Mr. Jacobi. The remaining adjustments, shown in Schedules D-2.16 through D-2.31, present adjustments to the forecasted period data needed to ensure that the correct level of revenue and expense is included in rates at the proper ongoing level. Some costs, although reflected in the normal forecasting process, are not recoverable from Duke Energy Kentucky’s electric customers. Other adjustments were made to reflect traditional ratemaking methodology (e.g., amortizing a regulatory asset to reflect the Commission’s prior orders). The reflection of a proper cost level is necessary to ensure that customers are not paying for more than the cost of providing service and to give the Company a reasonable opportunity to earn its authorized return. Ignoring appropriate adjustments to the test period used for setting rates puts customers at risk for overpaying for service and puts the Company at risk for potentially under-
recovering its ongoing costs. Schedule D-2.16 is sponsored by Mr. Jacobi. Schedule D-2.24 is sponsored by Ms. Abernathy. Schedules D-2.17 through D-2.23 and D-2.25 through 2.31 are discussed in my testimony below.

Q. HOW ARE THE TAX EFFECTS OF THESE ADJUSTMENTS SHOWN ON YOUR SCHEDULES?

A. All applicable adjustments to taxes, including taxes other than income taxes and state and federal income taxes resulting from the adjustments, described below, are shown for each individual adjustment on Schedule D-1.

Q. PLEASE DESCRIBE SCHEDULE D-2.17.

A. The adjustment in Schedule D-2.17 is to amortize the projected cost of presenting the instant case. Duke Energy Kentucky proposes to amortize these costs over five years, which increases test period operating expenses by $135,335.

Q. PLEASE DESCRIBE SCHEDULE D-2.18.

A. Schedule D-2.18 is an adjustment required to eliminate from base rates, both revenue and expenses recovered in the Environmental Surcharge Mechanism (Rider ESM). The effect of the adjustment on electric operations is a decrease in electric operating revenue of $30,684,956, a decrease in pre-tax operating expenses of $20,751,435 and a decrease in taxes other than income taxes of $1,001,304.

Q. PLEASE DESCRIBE SCHEDULE D-2.19.

A. Interest synchronization is used to ensure that the revenue requirement reflects the appropriate income tax effects for interest expense determined in the weighted-average cost of capital. Schedule D-2.19 presents the calculation of the state and
federal income taxes on the interest cost included in the cost of capital. The adjustment is calculated by first determining the debt portion of total electric rate base. The rate base allocated to electric is multiplied by the long-term and short-term debt percentage of total capital structure.

The result is then multiplied by the average cost of long-term and short-term debt. The sum of these results represents the annualized electric interest cost deductible for income tax purposes. From this annualized total, we subtract the forecasted test period electric book interest to determine the electric interest expense adjustment for income tax purposes. The effect of this adjustment on electric operations is to increase test period federal income taxes by $400,342 and to increase test period state income taxes by $99,671.

Q. PLEASE DESCRIBE SCHEDULE D-2.20.

A. Revenue and expenses associated with off-system sales are included in the budget and, consequently, in the forecasted test period. Schedule D-2.20 is intended to completely exclude all revenue and costs that will flow through the Company's Profit Sharing Mechanism (Rider PSM) from the calculation of the base rate revenue requirement. Base Revenue is increased by $1,442,006 and Other Revenue is reduced by $8,241,730 for the revenue flowing through Rider PSM. Operating expenses are reduced by $5,961,159 for related expenses flowing through Rider PSM. Related expenses include fuel, purchased power, reactive power expense, allocated emission allowance expenses, and other variable expenses.
Q. PLEASE DESCRIBE SCHEDULE D-2.21.

A. Schedule D-2.21 is an adjustment to add revenue to the forecasted period to reflect incremental revenue projected to be recovered as a result of the Company’s fraud and meter tampering deterrent proposal as explained in the direct testimony of Company witness Lesley G. Quick. The effect of the adjustment on electric operations is an increase in test period operating revenue of $22,400.

Q. PLEASE DESCRIBE SCHEDULE D-2.22.

A. The adjustment in Schedule D-2.22 eliminates from the forecasted test year revenue requirement the impact of Demand Side Management (DSM) revenue of $8,615,815 and DSM expense of $7,109,253. The adjustment recognizes that revenue and expenses associated with the Company’s energy efficiency programs are addressed in its existing Rider DSM.

Q. PLEASE DESCRIBE SCHEDULE D-2.23.

A. Schedule D-2.23 is an adjustment to eliminate miscellaneous expenses such as community relations, advertising, donations, employee recognition, governmental affairs, club dues and miscellaneous events expenses from the forecasted test period. These adjustments were made to comply with the Commission’s orders in prior rate proceedings. The effect of the adjustment on electric operations is a decrease in pre-tax operating expenses of $610,544.

Q. PLEASE DESCRIBE SCHEDULE D-2.25.

A. Schedule D-2.25 is an adjustment to eliminate unbilled revenue from the forecasted test period. The adjustment increases revenue in the forecasted test period by $84,858.
Q. **PLEASE DESCRIBE SCHEDULE D-2.26.**

A. Schedule D-2.26 is an adjustment to reduce operating expense included in the test period to reflect the amortization of the federal income taxes deferral related to the Tax Cuts and Jobs Act of 2017, as approved in the Company’s most recent electric base rate case, in Case No. 2017-00321. The adjustment decreases electric operating expenses in the forecasted test period by $110,762.

Q. **PLEASE DESCRIBE SCHEDULE D-2.27.**

A. Schedule D-2.27 is an adjustment to include in the forecasted test period, amortization of the regulatory asset related to the November 2018 ice storm, for which the Company was granted deferral authority in Case No. 2018-00416. The adjustment increases electric operating expense in the forecasted test period by $210,211.

Q. **PLEASE DESCRIBE SCHEDULE D-2.28.**

A. Schedule D-2.28 is an adjustment to eliminate incentive compensation from the forecasted test period to eliminate a portion of incentive compensation expense included in the test period related to the achievement of financial goals. The adjustment removes long-term and short-term incentive compensation included in the forecasted test period tied to the achievement of financial goals of the Company. The adjustment also eliminates compensation for Restricted Stock Units (RSUs), which the Commission has eliminated in the Company’s last electric and gas base rate cases in Cases No. 2017-00321 and 2018-00261. The RSU component of employee compensation is a fixed percentage of the employee’s salary and, therefore, it is not related to the achievement of the
Company’s financial goals. Nevertheless, the Company eliminated this expense to recognize that the Commission has disallowed this expense in prior cases. The adjustment decreases incentive compensation expense in the forecasted test period by $1,580,476.

Q. PLEASE DESCRIBE SCHEDULE D-2.29.

A. Schedule D-2.29 is an adjustment to eliminate pension expense related to employees who participate in both a defined benefit pension program and a 401K company match program. This is made to be consistent with Commission rulings in recent cases, Case No. 2017-00321 and 2018-00261. The adjustment decreases operating expense in the forecasted test period by $567,560.

Q. PLEASE DESCRIBE SCHEDULE D-2.30.

A. Schedule D-2.30 is an adjustment to increase test year expense to reflect the fee-free credit/debit card payment program the Company proposes to offer residential customers to eliminate convenience fees for credit or debit card payments made by our customers to our third party pay vendor. This program is discussed in the direct testimony of Company witness Quick. The effect of the adjustment on electric operations is an increase in test period operating expenses of $492,981.

Q. PLEASE DESCRIBE SCHEDULE D-2.31.

A. Schedule D-2.31 is an adjustment for uncollectible expenses. The Company sells its accounts receivable to an affiliate, Cinergy Receivables, L.L.C. (Cinergy Receivables) at a discount. The discount is based on a formula that compensates the purchasing company for the time value of money and reflects Duke Energy Kentucky’s net bad debt expense.
Since the short-term debt component of the Company's weighted-average cost of capital calculation in Schedule J-1 includes the average balance of receivables at the interest rate being paid to Cinergy Receivables, the adjustment shown in Schedule D-2.31 ensures that there is no double recovery of the time value of money in the uncollectible expense. Consequently, the time value of money component of the discount being charged to Uncollectible Expense (Account 904) is eliminated from the forecasted test period expenses. The adjustment reduces test period expenses by $2,199,572.

Q. PLEASE DESCRIBE SCHEDULE F-1.
A. Schedule F-1 sets forth the detail, by account, of Social and Service Club Dues for both the base and unadjusted forecasted test periods. All amounts are either charged below the line or have been removed from operating expenses on Schedule D-2.23 and, thus, not included in the forecasted test period revenue requirement.

Q. PLEASE DESCRIBE SCHEDULE F-2.1.
A. Schedule F-2.1 sets forth the detail, by account, of Charitable Contributions for both the base period and unadjusted forecasted test periods. All amounts are charged below the line and, thus, not included in the forecasted test period revenue requirement.

Q. PLEASE DESCRIBE SCHEDULE F-2.2.
A. Schedule F-2.2 indicates that the Initiation Fees and Country Club expenses for the base and forecasted test periods are included on Schedule F-1.

Q. PLEASE DESCRIBE SCHEDULE F-2.3.
A. Schedule F-2.3 sets forth the detail, by account of Employee Party, Outing, & Gift
Expense for both the base and forecasted test periods.

Q. PLEASE DESCRIBE SCHEDULE F-3.

A. Schedule F-3 sets forth the detail, by account, of Customer Service and Informational Expense, Sales Expense and General Advertising Expense for both the base and unadjusted forecasted test periods. Advertising costs included in Account 913 and 930150 have been removed from operating expenses on Schedule D-2.23 and, thus, not included in the forecasted test period revenue requirement.

Q. PLEASE DESCRIBE SCHEDULE F-4.

A. Schedule F-4 sets forth additional details supporting advertising costs for both the base and unadjusted forecasted test periods. As noted above, these costs are not included in the forecasted test period revenue requirement.

Q. PLEASE DESCRIBE SCHEDULE F-5.

A. Schedule F-5 sets forth the detail of Professional Services Expenses for both the base and forecasted test periods.

Q. PLEASE DESCRIBE SCHEDULE F-6.

A. Schedule F-6, entitled “Rate Case Expense,” indicates the estimated expense of presenting this case. The top half of this schedule details the estimated expense of this proceeding. Also included is a comparison to the rate case expense in the Company’s last two rate case proceedings. The bottom half of this schedule shows the amortization over a five-year period. This amount is included in expense through the adjustment contained in Schedule D-2.17.

Q. PLEASE DESCRIBE SCHEDULE F-7.

A. Schedule F-7 sets forth Civic, Political and Related Expense for both the base and
unadjusted forecasted test periods. All amounts are charged below the line and, thus,
not included in the forecasted test period revenue requirement.

Q. PLEASE DESCRIBE SCHEDULE G-1.
A. Schedule G-1 contains a summary of all payroll costs and related benefits and taxes
included in electric Operations & Maintenance (O&M) expense for both the base
and forecasted test periods.

Q. PLEASE DESCRIBE SCHEDULE H.
A. Schedule H, entitled "Computation of Gross Revenue Conversion Factor," (GRCF)
sets forth the calculation of the GRCF. This is the factor, or multiplier, used to gross-
up the operating income deficiency to a revenue deficiency amount. It includes the
Kentucky Public Service Commission assessment, and state and federal income
taxes. The GRCF is included on Schedule A and is used to compute the calculated
revenue deficiency.

IV. PROPOSED RATE RECOVERY OF BATTERY STORAGE AND
EV PROJECTS

Q. HAS THE COMPANY INCLUDED COSTS ASSOCIATED WITH THE
PROPOSED BATTERY STORAGE PROJECT IN THE TEST YEAR
REVENUE REQUIREMENT?
A. As explained in Company witness Zachary Kuznar’s testimony, Duke Energy
Kentucky is proposing a battery storage project with total estimated capital costs
of approximately $8.2 million. Ongoing O&M expenses are expected to be
$163,000 per year once the asset is in-service.
Q. IF THE ESTIMATED TOTAL CAPITAL COST OF THE PROJECT IS $8.2 MILLION, WHAT IS THE IMPACT TO THE COMPANY’S TEST YEAR REVENUE REQUIREMENT?

A. The project has been included in the test period of this instant rate case with an assumed in-service date of December 31, 2020. As I explained earlier, the Company determined rate base by using a 13-month average for the forecasted test period ending March 31, 2021. The 13-month average balance of net plant associated with this project included in rate base is approximately $2.4 million. The revenue requirement associated with the return on the 13-month average rate base and recovery of associated depreciation and property taxes is approximately $350,000.

Q. HAS THE COMPANY INCLUDED THE ONGOING O&M EXPENSES IN THE TEST YEAR REVENUE REQUIREMENT?

A. No. Because the Company is not expected to incur these costs until after the test period in this case, no expenses were included in the forecasted test year.

Q. HAS THE COMPANY INCLUDED COSTS ASSOCIATED WITH THE PROPOSED ELECTRIC VEHICLE (EV) PILOT PROGRAMS IN THE TEST YEAR REVENUE REQUIREMENT?

A. Yes. As explained in Company witness Lang Reynolds' testimony, Duke Energy Kentucky is proposing EV pilot programs consisting of an EV Fast Charge Program, Electric Transit Bus Charging Program and three Incentive Programs. Total capital costs for these programs are projected to be $1,375,000. Total O&M costs are expected to be approximately $1,458,650.
Q. WHAT IS THE IMPACT TO THE COMPANY'S TEST YEAR REVENUE REQUIREMENT OF THIS PILOT PROGRAM?

A. The test period of this instant rate case assumes that each of the five EV Fast Charging stations and each of the five Electric Transit Bus Charging stations are placed in-service one per month beginning in June 2020 with all five being placed in-service by October 2020. As I explained earlier, the Company determined rate base by using a 13-month average for the forecasted test period ending March 31, 2021. The 13-month average balance of net plant included in rate base is approximately $786,000. The revenue requirement associated with the return on the 13-month average rate base and recovery of associated depreciation and property taxes is approximately $145,000.

The Company is requesting a deferral for the incremental O&M expenses associated with the Incentive Programs, the Electric Transit Bus Charging Program and education and outreach discussed in Mr. Reynolds’ testimony. O&M expenses associated with the Company’s EV Fast Charging stations will be subtracted from any revenues generated at these stations and any net revenues will be refunded to customers as I discuss below. Therefore, these O&M expenses have not been included in the forecasted test year revenue requirement in this case. The Company has not proposed any rate recovery for these incremental O&M expenses in this case but, assuming the Commission grants the deferral request, it will seek recovery of any deferred actual incurred costs in a subsequent rate case.
Q. HOW IS THE COMPANY PROPOSING TO TREAT INCREMENTAL REVENUES ASSOCIATED WITH THE EV CHARGING STATION PORTION OF THE PILOT?

A. As discussed in Mr. Lang’s testimony, any margins (revenues less operating expenses) resulting from the pilot will be included in the Company’s Rider PSM and credited back to customers through that mechanism as shown on SEL-1 Attachment.

V. CONCLUSION

Q. WERE FR 16(6)(b), FR 16(6)(c), FR 16(6)(f), AND FR 16(7)(t), SCHEDULES A, B-1, C-1 THROUGH C-2.1, D-1, D-2.17 THROUGH D-2.23 AND D-2.25 THROUGH D-2.31, F-1 THROUGH F-7, G-1, H AND SEL-1 ATTACHMENT PREPARED BY YOU OR UNDER YOUR DIRECTION AND SUPERVISION?

A. Yes.

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

A. Yes.
STATE OF OHIO
)
)
)
COUNTY OF HAMILTON
)
)

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 30th day of
August, 2019.

E. Minna Rolfes-Adkins
NOTARY PUBLIC

My Commission Expires: July 08, 2022
## Schedule 1

### Duke Energy Kentucky

**Calculation of Rider PSM Credit for XXX - XXX Billing**

<table>
<thead>
<tr>
<th>Line No.</th>
<th>Description</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Off-System Sales Margin</td>
<td>(+) $</td>
</tr>
<tr>
<td></td>
<td>(Schedule 2, Line 17)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Non-Fuel Related RTO Costs and Credits</td>
<td>(+)</td>
</tr>
<tr>
<td></td>
<td>(Schedule 3, Line 13)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Net Capacity Revenue (Expense)</td>
<td>(+)</td>
</tr>
<tr>
<td></td>
<td>(Schedule 4, Line 11)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Net Proceeds from the Sale of Renewable Energy Credits</td>
<td>(+)</td>
</tr>
<tr>
<td>5</td>
<td>Net Revenues from EV Charging Stations</td>
<td>(+)</td>
</tr>
<tr>
<td>6</td>
<td>Total Amount of Credits Owed to Customers</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Percentage Allocated to Customers (90% of net margin)</td>
<td>90.00%</td>
</tr>
<tr>
<td>8</td>
<td>Total Allocated to Customers (Line 5 x Line 6)</td>
<td>(+) $</td>
</tr>
<tr>
<td>9</td>
<td>Remaining PSM Credit Due to (From) Customers at 12/31/XX</td>
<td>(+)</td>
</tr>
<tr>
<td></td>
<td>(Schedule 5, Line 12)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Total Amount of Credits due to (from) Customers</td>
<td>(+) $</td>
</tr>
<tr>
<td>11</td>
<td>Actual Amount Credited to Customers</td>
<td>(-)</td>
</tr>
<tr>
<td>12</td>
<td>Net Refund due to (from) Customers</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Sales (kWh) from FAC Filing for the current quarter</td>
<td>(+)</td>
</tr>
<tr>
<td></td>
<td>(FAC Schedule 3, Line C)</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Profit Sharing Mechanism Credit Rate ($/kWh)</td>
<td>(+)</td>
</tr>
</tbody>
</table>

**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: ________________________________