

VERIFICATION

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

The undersigned, Christopher M. Jacobi, Director, Regional Financial Forecasting, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data request and that it is true and correct to the best of his knowledge, information and belief.

Chris Jacobi

Christopher M. Jacobi Affiant

Subscribed and sworn to before me by Christopher M. Jacobi on this 17 day of October, 2019.



Jenny P. Attain

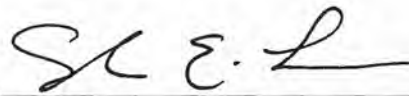
NOTARY PUBLIC

My Commission Expires: 06/08/2020

VERIFICATION

STATE OF OHIO)
) SS:
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 data request 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 11th day of October, 2019.



NOTARY PUBLIC

My Commission Expires: July 8, 2022

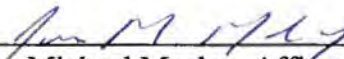


E. MINNA ROLFES-ADKINS
Notary Public, State of Ohio
My Commission Expires
July 8, 2022

VERIFICATION

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

The undersigned, James Michael Mosley, Vice President Midwest Generation, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data request and that it is true and correct to the best of his knowledge, information and belief.



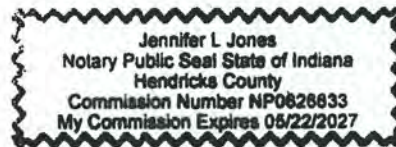
James Michael Mosley, Affiant

Subscribed and sworn to before me by James Michael Mosley on this 16 day of October, 2019.



NOTARY PUBLIC

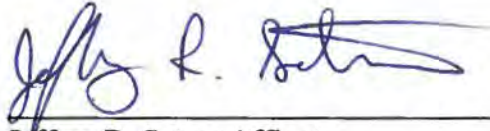
My Commission Expires:



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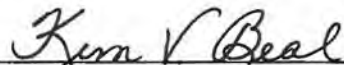
STATE OF NORTH CAROLINA)
) SS:
COUNTY OF MECKLENBURG)

The undersigned, Jeffrey R. Setser, Director of Allocations and Reporting, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data request and that it is true and correct to the best of his knowledge, information and belief.



Jeffrey R. Setser Affiant

Subscribed and sworn to before me by Jeffrey R. Setser on this 27 day of October, 2019.



NOTARY PUBLIC

My Commission Expires: October 27, 2019



VERIFICATION

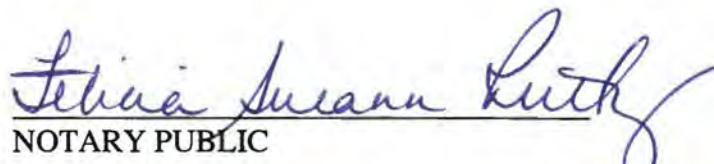
STATE OF NORTH CAROLINA)
) **SS:**
COUNTY OF MECKLENBURG)

The undersigned, Renee Metzler, Managing Director – Retirement and Health and Welfare, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing data request and that it is true and correct to the best of her knowledge, information and belief.



Renee Metzler Affiant

Subscribed and sworn to before me by Renee Metzler on this 16th day of October, 2019.



NOTARY PUBLIC

My Commission Expires:

**FELICIA SUEANN RUTTY
NOTARY PUBLIC
MECKLENBURG COUNTY, NC
My Commission Expires 9-17-2023**

VERIFICATION

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

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

Melissa B. Abernathy
Melissa Brammer Abernathy, Affiant

Subscribed and sworn to before me by Melissa Brammer Abernathy on this 21
day of October, 2019.

Kim V. Beal
NOTARY PUBLIC

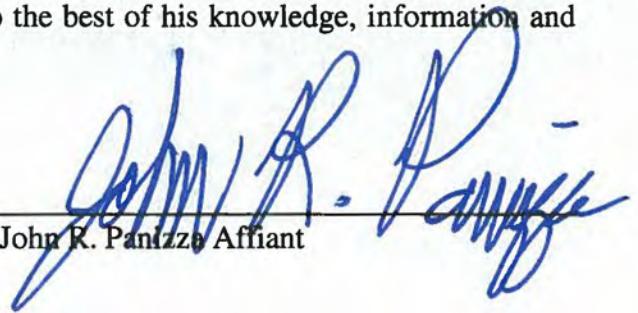


My Commission Expires: October 24, 2019

VERIFICATION

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

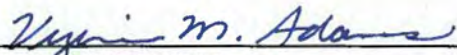
The undersigned, John R. Panizza, Director, Tax Operations, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data request and that it is true and correct to the best of his knowledge, information and belief.



John R. Panizza Affiant

Subscribed and sworn to before me by John R. Panizza on this 16 day of Oct., 2019.





NOTARY PUBLIC

My Commission Expires: 10/2/21

VERIFICATION

STATE OF OHIO)
) SS:
COUNTY OF HAMILTON)

The undersigned, William Don Wathen Jr., Director of Rates & Regulatory Strategy, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data request and that it is true and correct to the best of his knowledge, information and belief.



William Don Wathen Jr., Affiant

Subscribed and sworn to before me by William Don Wathen Jr., on this 28TH day of OCTOBER, 2019.



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



NOTARY PUBLIC

My Commission Expires: 1/5/2024

VERIFICATION

STATE OF OHIO)
)
COUNTY OF HAMILTON) SS:

The undersigned, Jeff L. Kern, Lead Rates & Regulatory Strategy Analyst, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data request and that it is true and correct to the best of his knowledge, information and belief.

Jeff L. Kern
Jeff L. Kern, Affiant

Subscribed and sworn to before me by Jeff L. Kern, on this 21ST day of OCTOBER, 2019.



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

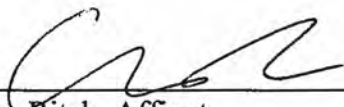
Adele M. Frisch
NOTARY PUBLIC

My Commission Expires: 1/5/2024

VERIFICATION

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

The undersigned, Andrew Ritch, Wholesale Renewable Manager, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data request and that it is true and correct to the best of his knowledge, information and belief.



Andrew Ritch, Affiant

Subscribed and sworn to before me by Andrew Ritch, on this 25th day of October, 2019.



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



NOTARY PUBLIC

My Commission Expires: 1/5/2024

VERIFICATION

STATE OF OHIO)
) SS:
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 data request and that it is true and correct to the best of her knowledge, information and belief.

Amy B. Spiller
Amy B. Spiller, Affiant

Subscribed and sworn to before me by Amy B. Spiller, on this 28TH day of OCTOBER, 2019.



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

Adele M. Frisch
NOTARY PUBLIC

My Commission Expires: 1/5/2024

VERIFICATION

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

The undersigned, Lesley G. Quick, Vice President Revenue Services, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing data request and that it is true and correct to the best of her knowledge, information and belief.

Lesley G. Quick
Lesley G. Quick Affiant

Subscribed and sworn to before me by Lesley G. Quick on this 21 day of October, 2019.

Lori S. Thompson
NOTARY PUBLIC

My Commission Expires:

March 18, 2022



VERIFICATION

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

The undersigned, Benjamin W. B. Passty, Lead Load Forecasting Analyst, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data request and that it is true and correct to the best of his knowledge, information and belief.

Benjamin W B Passty
Benjamin W. B. Passty Affiant

Subscribed and sworn to before me by Benjamin W. B. Passty on this 17 day of October, 2019.

**PATRICIA C. ROSS
NOTARY PUBLIC
Mecklenburg County
North Carolina**

Patricia C Ross
NOTARY PUBLIC

My Commission Expires: 10-17-2019

VERIFICATION

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

The undersigned, Ash M. Norton, Director Distribution Design Engineering 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 data request and that it is true and correct to the best of her knowledge, information and belief.

Ash M. Norton
Ash M. Norton, Affiant

Subscribed and sworn to before me by Ash M. Norton, on this 21st day of October, 2019.

E. Minna Rolfes-Adkins
NOTARY PUBLIC

My Commission Expires: July 8, 2022

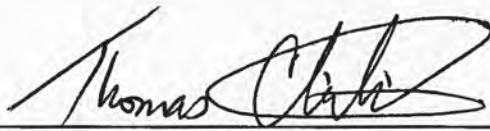


E. MINNA ROLFES-ADKINS
Notary Public, State of Ohio
My Commission Expires
July 8, 2022

VERIFICATION

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

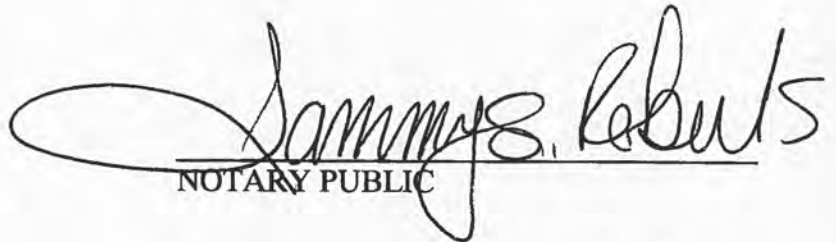
The undersigned, Thomas Christie, Director Distribution Vegetation Management, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data request and that it is true and correct to the best of his knowledge, information and belief.



Thomas Christie, Affiant

Subscribed and sworn to before me by Thomas Christie on this 22nd day of October, 2019.





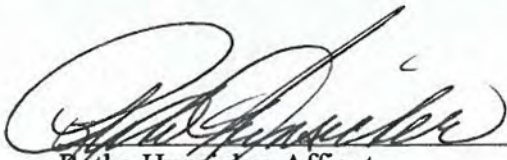
NOTARY PUBLIC

My Commission Expires: 10/7/2022

VERIFICATION

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

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 data request and that it is true and correct to the best of her knowledge, information and belief.



Retha Hunsicker Affiant

Subscribed and sworn to before me by Retha Hunsicker on this 21 day of October, 2019.



NOTARY PUBLIC

Carla Sechrest

My Commission Expires: 9/17/2024



VERIFICATION

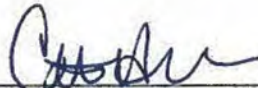
STATE OF FLORIDA)
) **SS:**
COUNTY OF NASSAU)

The undersigned, Dr. Roger A. Morin, Professor of Finance and a Principal in Utility Research International, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests and that the answers contained therein are true and correct to the best of his knowledge, information and belief.



Dr. Roger A. Morin Affiant

Subscribed and sworn to before me by Dr. Roger A. Morin on this 17 day of Oct, 2019.



NOTARY PUBLIC

My Commission Expires:



VERIFICATION

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

The undersigned, Danielle L. Weatherston, Manager Accounting II, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing data request and that it is true and correct to the best of her knowledge, information and belief.

Danielle L. Weatherston
Danielle L. Weatherston, Affiant

Subscribed and sworn to before me by Danielle L. Weatherston on this 18th day of October, 2019.



Georgianna A. Anderson
NOTARY PUBLIC

My Commission Expires: August 18, 2021

VERIFICATION

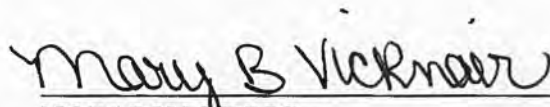
STATE OF NORTH CAROLINA)
)
COUNTY OF MECKLENBURG) **SS:**

The undersigned, John A. Verderame Managing Director, Trading and Dispatch, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data request and that it is true and correct to the best of his knowledge, information and belief.



John A. Verderame Affiant

Subscribed and sworn to before me by John A. Verderame on this 17th day of OCTOBER, 2019.



NOTARY PUBLIC

My Commission Expires:

MARY B VICKNAIR
NOTARY PUBLIC
Davie County
North Carolina
My Commission Expires Sept. 21, 2022

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 data request and that it is true and correct to the best of his knowledge, information and belief.



Zachary Kuznar, Affiant

Subscribed and sworn to before me by Zachary Kuznar, on this 25 day of October, 2019.



NOTARY PUBLIC

My Commission Expires: July 8, 2022




E. MINNA ROLFES-ADKINS
Notary Public, State of Ohio
My Commission Expires
July 8, 2022

VERIFICATION

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

The undersigned, Lang W. Reynolds, Director Electrification Strategy, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data request and that it is true and correct to the best of his knowledge, information and belief.



Lang W. Reynolds Affiant

Subscribed and sworn to before me by Lang W. Reynolds on this 22 day of October, 2019.





NOTARY PUBLIC

My Commission Expires: February 1, 2023

VERIFICATION

COMMONWEALTH OF PENNSYLVANIA)
) SS:
COUNTY OF CUMBERLAND)

The undersigned, John J. Spanos, President, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data request and that it is true and correct to the best of his knowledge, information and belief.


John J. Spanos Affiant

Subscribed and sworn to before me by John J. Spanos on this 17th day of October,
2019.


NOTARY PUBLIC

My Commission Expires: February 20, 2023

Commonwealth of Pennsylvania - Notary Seal
Cheryl Ann Rutter, Notary Public
Cumberland County
My commission expires February 20, 2023
Commission number 1143028
Member, Pennsylvania Association of Notaries

VERIFICATION

STATE OF OHIO)
) SS:
COUNTY OF HAMILTON)


The undersigned, James E. Ziolkowski, Director, Rates & Regulatory Planning, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data request and that it is true and correct to the best of his knowledge, information and belief.


James E. Ziolkowski Affiant

Subscribed and sworn to before me by James E. Ziolkowski on this 23RD day of OCTOBER, 2019.



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


NOTARY PUBLIC

My Commission Expires: 1/5/2024

KyPSC Case No. 2019-00271
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| STAFF-DR-02-135 | Lang Reynolds | 135 |
| STAFF-DR-02-136 | Lang Reynolds | 136 |
| STAFF-DR-02-137 | Lang Reynolds | 137 |
| STAFF-DR-02-138 | Lang Reynolds | 138 |
| STAFF-DR-02-139 | Jeff L. Kern Lang Reynolds | 139 |

| | | |
|-----------------|--|-----|
| STAFF-DR-02-140 | Lang Reynolds | 140 |
| STAFF-DR-02-141 | Lang Reynolds | 141 |
| STAFF-DR-02-142 | Andrew S. Ritch | 142 |
| STAFF-DR-02-143 | Jeffrey R. Setser | 143 |
| STAFF-DR-02-144 | Jeffrey R. Setser | 144 |
| STAFF-DR-02-145 | John J. Spanos | 145 |
| STAFF-DR-02-146 | John J. Spanos | 146 |
| STAFF-DR-02-147 | John J. Spanos | 147 |
| STAFF-DR-02-148 | John Verderame | 148 |
| STAFF-DR-02-149 | John Verderame | 149 |
| STAFF-DR-02-150 | John Verderame | 150 |
| STAFF-DR-02-151 | John Verderame | 151 |
| STAFF-DR-02-152 | John Verderame | 152 |
| STAFF-DR-02-153 | John Verderame | 153 |
| STAFF-DR-02-154 | John Verderame | 154 |
| STAFF-DR-02-155 | John Verderame | 155 |
| STAFF-DR-02-156 | John Panizza Sarah E. Lawler | 156 |
| STAFF-DR-02-157 | William Don Wathen Jr. Jeff L. Kern | 157 |
| STAFF-DR-02-158 | William Don Wathen Jr. | 158 |

| | | |
|-----------------|---|-----|
| STAFF-DR-02-159 | William Don Wathen Jr. | 159 |
| STAFF-DR-02-160 | Sarah E. Lawler | 160 |
| STAFF-DR-02-161 | Danielle Weatherston | 161 |
| STAFF-DR-02-162 | Sarah E. Lawler | 162 |
| STAFF-DR-02-163 | Sarah E. Lawler | 163 |
| STAFF-DR-02-164 | James E. Ziolkowski | 164 |
| STAFF-DR-02-165 | James E. Ziolkowski | 165 |
| STAFF-DR-02-166 | James E. Ziolkowski | 166 |
| STAFF-DR-02-167 | James E. Ziolkowski | 167 |
| STAFF-DR-02-168 | Sarah E. Lawler Jeff L. Kern | 168 |
| STAFF-DR-02-169 | John Panizza | 169 |
| STAFF-DR-02-170 | Sarah E. Lawler | 170 |
| STAFF-DR-02-171 | Jeff L. Kern James E. Ziolkowski | 171 |
| STAFF-DR-02-172 | John Panizza | 172 |

REQUEST:

Refer to the application, Volume 1, Tab 26.

- a. Explain whether the capital expenditures budget reflects both the electric and gas operations of Duke Kentucky. If the budget reflects electric and gas operations, resubmit the capital expenditures budget separating the electric and gas operations.
- b. Explain whether the capital expenditures budget reflects the total project costs or only Duke Kentucky's portion. If the budget reflects the total project costs, resubmit the capital expenditure budget showing only the Duke Kentucky portion of the costs.
- c. Provide a monthly comparison of the projected capital expenditures in Case No. 2017-00321¹ with the actual capital expenditures for April 2018 through to the present. Consider this an ongoing request throughout this proceeding.
- d. Refer to line 1 of the schedule, explain why Duke Kentucky is not proposing to recover project "EB021409 – U2 Lime Injection System" through its environmental surcharge mechanism.

RESPONSE:

¹ Case No. 2017-00321, *Electronic Application of Duke Energy Kentucky, Inc. for: 1) An Adjustment of the Electric Rates; 2) Approval of an Environmental Compliance Plan and Surcharge Mechanism; 3) Approval of New Tariffs; 4) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; and 5) All Other Required Relief* (Ky. PSC Apr. 13, 2018).

- a. The capital expenditures budget only includes electric operations.
- b. The capital expenditures budget reflects Duke Kentucky's portion.
- c. See STAFF-DR-02-001 Attachment.
- d. Because a portion of the costs associated with this project fell within the test period of the Company's last electric base rate case, the Company chose to include the costs in base rates rather than its environmental surcharge mechanism.

PERSON RESPONSIBLE: Christopher M. Jacobi (a, b, c)
Sarah E. Lawler (d)

DEK Electric
 Capital Expenditures Comparison
 Case No. 2017-00321 vs. Actual

| | <u>Apr 2018</u> | <u>May 2018</u> | <u>Jun 2018</u> | <u>Jul 2018</u> | <u>Aug 2018</u> | <u>Sep 2018</u> | <u>Oct 2018</u> | <u>Nov 2018</u> | <u>Dec 2018</u> |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Projected capital expenditures in Case No. 2017-00321 | 18,725,177 | 16,855,361 | 17,318,127 | 17,253,378 | 15,417,859 | 15,281,447 | 14,821,807 | 14,625,690 | 10,060,167 |
| Actual capital expenditures | 22,991,120 | 11,603,210 | 22,660,560 | 8,014,860 | 14,415,510 | 18,272,600 | 13,740,630 | 15,708,100 | 15,499,140 |
| | 4,265,943 | (5,252,151) | 5,342,433 | (9,238,518) | (1,002,349) | 2,991,153 | (1,081,177) | 1,082,410 | 5,438,973 |
| | | | | | | | | | |
| | <u>Jan 2019</u> | <u>Feb 2019</u> | <u>Mar 2019</u> | <u>Apr 2019</u> | <u>May 2019</u> | <u>Jun 2019</u> | <u>Jul 2019</u> | <u>Aug 2019</u> | |
| Projected capital expenditures in Case No. 2017-00321 | 6,570,668 | 6,581,384 | 9,933,541 | 10,815,985 | 5,742,796 | 5,103,641 | 5,127,739 | 5,273,903 | |
| Actual capital expenditures | 10,186,080 | 10,392,000 | 14,675,960 | 15,091,000 | 13,568,030 | 9,780,480 | 11,989,130 | 14,696,490 | |
| | 3,615,412 | 3,810,616 | 4,742,419 | 4,275,015 | 7,825,234 | 4,676,839 | 6,861,391 | 9,422,587 | |

Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019

STAFF-DR-02-002

REQUEST:

Refer to the application, Volume 1, Tab 27, and Case No. 2017-00321, Volume 1, Tab 28.

- a. Explain the large increase in construction work in progress in 2019 between the two schedules. Include in the explanation whether the capital expenditures budget in the instant case reflects both the electric and gas operations of Duke Kentucky. If the budget reflects electric and gas operations, resubmit the capital expenditures budget separately for electric operations.
- b. Provide a monthly comparison of the projected capital expenditures in Case No. 2017-00321 with the actual capital expenditures for April 2018 through the present. Consider this an ongoing request throughout this proceeding.

RESPONSE:

- a. Please note that 2019 construction work in progress is not provided on either schedule referred to in part (a). Comparing 2019 projected electric capital expenditures contained in the referenced schedules in the current case to 2019 projected electric capital expenditures in the prior case, the primary drivers of the increase are expenditures in the distribution investments and at East Bend generating station. The referenced schedules in both cases include the budget for electric operations only – no natural gas operations budget has been included.
- b. Refer to Staff-DR-02-001 Attachment.

PERSON RESPONSIBLE: Christopher Jacobi

REQUEST:

Refer to the application, Volume 1, Tab 28.

- a. Refer to page 1 of 13.
 - 1) Identify the increase in electric revenue in each year associated with new load.
 - 2) Explain the increase in Other Income from 2020 to 2021.
- b. Refer to page 3 of 13. Explain why no dividends are being paid from 2019 through 2021.
- c. Refer to page 6 of 13. Explain the decrease in total generation from 2019 to 2020.

RESPONSE:

- a.
 - 1) The increase in electric revenue from 2019 to 2020 associated with new load is \$1,584,358 and the increase in electric revenue from 2020 to 2021 associated with new load is \$3,220,130.
 - 2) The increase in Other Income from 2020 to 2021 is due to an increase in the equity component of AFUDC.
- b. The Company targets an overall capital structure to ensure strong credit quality, while minimizing its overall cost of capital. The forecast assumes the Company's capital needs are financed in a manner to maintain this balanced capital structure.

The Company's earnings are forecasted to be retained at the Company (versus paying dividends) in 2019 through 2021 in order to maintain the desired

equity component of the capital structure. Infusions from the parent of \$50 million are forecasted for 2020, in addition to the retained earnings.

- c. The decrease in total forecast generation from 2019 to 2020 is primarily driven by the duration of a major planned outage at the East Bend generating station in 2020. The projected duration of the planned outage in 2020 is 52 days, while the projected duration of the planned outage for 2019 outage is 11 days.

PERSON RESPONSIBLE: Christopher M. Jacobi – a., b.
J. Michael Mosley – c.

REQUEST:

Refer to the application, Volume 10, Tab 41. Provide the following information for Duke Energy Business Services LLC (DEBS) and other affiliated entities' costs directly assigned or allocated to Duke Kentucky, as well as other requested information.

a. Reflected in the test-year level of expenses proposed by Duke Kentucky, provide the following as it relates to salaries either directly assigned or allocated to Duke Kentucky by an affiliate.

1) By DEBS Department, the total salary amount along with the number of hours associated with the salary cost and associated incentive pay broken down by each incentive pay program, including any stock option plans in effect during any month of the test year.

2) By any other Duke Energy Corporation (Duke Energy) subsidiary. Provide the name of the subsidiary and the department along with the total salary amount and associated incentive pay, including any stock option plans along with the number of hours associated with the salary, incentive pay, and any stock option plans costs.

b. The DEBS Charge billed to Duke Kentucky for the 12-months periods ending November 2014 through November 2019.

c. The number of DEBS employees for the 12-month periods ending November 2014 through November 2019.

d. Duke Kentucky's peak demand (date and time) for each 12-month period from November 2014 through November 2019.

e. The number of Duke Kentucky employees for each 12-month period from November 2014 through November 2019.

f. Explain whether the costs are allocated based on the number of Duke Kentucky employees, Duke Kentucky kWh sales, or Duke Kentucky's peak demand. If so, identify each.

g. Explain whether Duke Kentucky has made an adjustment to the test-year level of DEBS costs to reflect the most recent three-, five-, or ten-year trend in the number of employees, the kWh sales, and the Duke Kentucky's peak demand. If so, identify each adjustment.

h. If the answer to g. above is no, provide a complete explanation as to why no test-year adjustment was made in Duke Kentucky's proposed test-year level of DEBS Service costs.

i. Identify any changes in the manner any affiliates' costs are allocated to Duke Kentucky since its last rate case.

RESPONSE:

a. See the following two attachments: STAFF-DR-02-004(a) Attachment 1 and STAFF-DR-02-004(a) Attachment 2. Note that number of hours are not available for the test period. The Company does not budget headcount data.

b. See STAFF-DR-02-004(b)(f) Attachment.

c. See below for the number of DEBS employees for the 12-month periods ending November 2014 through November 2019.

| | | | | | |
|------------|------------|------------|------------|------------|------------|
| 11/30/2014 | 11/30/2015 | 11/30/2016 | 11/30/2017 | 11/30/2018 | 11/30/2019 |
| 7,171 | 7,690 | 7,261 | 7,328 | 7,852 | 7,562 |

d. See STAFF-DR-02-004(d) Attachment for detail of Duke Energy Kentucky’s peak demand (date and time) for each 12-month period from November 2014 through September 2019. Peak demand detail is unavailable for October and November 2019 and will not be available until those months conclude.

e. See below for the number of Duke Energy Kentucky employees for each 12-month periods from November 2014 through November 2019.

| | | | | | |
|------------|------------|------------|------------|------------|------------|
| 11/30/2014 | 11/30/2015 | 11/30/2016 | 11/30/2017 | 11/30/2018 | 11/30/2019 |
| 166 | 193 | 190 | 204 | 195 | 175 |

f. See attached file STAFF-DR-02-004(b)(f) Attachment. This file includes all allocation amounts to Kentucky including, number of employees, sales, and peak load.

g. Our detailed process for developing budgets and forecasts is a bottom-up approach driven by projections provided by various responsibility centers. The budgeting process is included in the Company’s application.

h. Cost centers in DEBS develop budgets at the lowest departmental level and represent the Company’s estimate of costs for a future period. Without a reason to doubt the forecast, there is no reason to make an adjustment to the test year level of DEBS expense.

i. There have been no changes.

PERSON RESPONSIBLE:

- Jeffrey Setser – a., b., f., i.
- Renee Metzler – c., e.
- Sarah E. Lawler – d., h.
- Christopher Jacobi – a., g.

Request:

4. Refer to the Application, Volume 10, Tab 41. Provide the following information for any of the Duke Energy Business Services (DEBS) and other affiliated entities' costs directly assigned or allocated to Duke Kentucky, as well as the other requested information: a. Reflected in the test-year level of expenses proposed by Duke Kentucky, provide the following as it relates to salaries either directly assigned or allocated to Duke Kentucky by an affiliate. (1) For the DEBS Department, provide the amount of total salaries and the number of hours allocated along with any associated Incentive pay, listed by each Incentive pay program, including any stock option plans in effect by month for the test year.

Response:

See the below table for salary cost and associated Incentive pay program cost for Duke Energy Business Services (DEBS). Amounts extracted from the company's general ledger system (budget) for the test period. Note, related hours are unavailable in the company's general ledger system.

| Total of Salaries, STI and LTI | | | | | | | | | | | | | |
|--------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| Department | Apr-20 | May-20 | Jun-20 | Jul-20 | Aug-20 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Mar-21 | Total |
| Coal Combustion Products | 31,412 | 31,491 | 31,432 | 31,513 | 31,530 | 31,464 | 31,545 | 31,485 | 31,567 | 31,808 | 31,808 | 31,808 | \$ 378,863 |
| Corporate Groups | 365,698 | 394,135 | 365,476 | 373,081 | 368,040 | 366,808 | 368,959 | 367,960 | 383,865 | 376,396 | 376,396 | 376,396 | 4,483,209 |
| Customer Connect | 86,996 | 86,538 | 88,729 | 84,180 | 86,203 | 99,995 | 96,776 | 97,300 | 98,905 | 92,653 | 92,653 | 92,653 | 1,103,581 |
| Customer Operations | 33,640 | 33,640 | 33,640 | 41,227 | 33,640 | 33,640 | 33,640 | 33,640 | 41,228 | 35,679 | 35,679 | 35,679 | 424,970 |
| Customer Solutions - P&S | 33,744 | 33,738 | 33,736 | 33,737 | 33,851 | 33,736 | 33,738 | 33,737 | 33,739 | 34,088 | 34,088 | 34,088 | 406,020 |
| Distribution Operations | 466,970 | 462,792 | 460,239 | 463,375 | 519,669 | 490,569 | 477,713 | 461,790 | 458,149 | 478,209 | 478,209 | 478,209 | 5,695,893 |
| Fossil Hydro Operations | 502,557 | 502,709 | 501,191 | 503,386 | 503,194 | 501,690 | 503,542 | 503,724 | 502,595 | 507,759 | 507,759 | 507,759 | 6,047,865 |
| Grid Solutions | 148,298 | 105,885 | 159,246 | 112,979 | 161,894 | 120,534 | 170,906 | 128,289 | 135,714 | 139,576 | 139,576 | 139,576 | 1,662,473 |
| Other Departments (Esamann) | 90,890 | 90,890 | 90,890 | 90,890 | 91,486 | 90,890 | 90,890 | 90,890 | 90,890 | 91,866 | 91,866 | 91,866 | 1,094,203 |
| Other Departments (Jamif) | 307,681 | 308,970 | 307,698 | 305,335 | 328,825 | 305,464 | 302,180 | 302,184 | 302,046 | 310,899 | 310,899 | 310,899 | 3,703,080 |
| Other Departments (Yates) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 81 | 81 | 81 | 967 |
| Regulated Utilities Other | 263,046 | 262,782 | 262,735 | 263,398 | 299,161 | 262,740 | 262,754 | 262,743 | 263,407 | 269,644 | 269,644 | 269,644 | 3,211,696 |
| Transmission | 176,128 | 210,807 | 299,061 | 396,052 | 484,373 | 376,973 | 367,147 | 345,251 | 247,081 | 325,767 | 325,767 | 325,767 | 3,880,173 |
| Total | \$ 2,507,139 | \$ 2,524,457 | \$ 2,634,152 | \$ 2,699,234 | \$ 2,941,944 | \$ 2,714,583 | \$ 2,739,871 | \$ 2,659,074 | \$ 2,589,265 | \$ 2,694,424 | \$ 2,694,424 | \$ 2,694,424 | \$ 32,092,993 |

Request:

4. Refer to the Application, Volume 10, Tab 41. Provide the following information for any of the Duke Energy Business Services (DEBS) and other affiliated entities' costs directly assigned or allocated to Duke Kentucky, as well as the other requested information: a. Reflected in the test-year level of expenses proposed by Duke Kentucky, provide the following as it relates to salaries either directly assigned or allocated to Duke Kentucky by an affiliate. (1) For the DEBS Department, provide the amount of total salaries and the number of hours allocated along with any associated incentive pay, listed by each Incentive pay program, including any stock option plans in effect by month for the test year.

Response:

See the below table for salary cost and associated Incentive pay program cost for Duke Energy Business Services (DEBS). Amounts extracted from the company's general ledger system (budget) for the test period. Note, related hours are unavailable in the company's general ledger system.

| Salaries | | | | | | | | | | | | | |
|-----------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| Department | Apr-20 | May-20 | Jun-20 | Jul-20 | Aug-20 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Mar-21 | Total |
| Coal Combustion Products | \$ 19,734 | \$ 19,734 | \$ 19,734 | \$ 19,734 | \$ 19,739 | \$ 19,734 | \$ 19,734 | \$ 19,734 | \$ 19,734 | \$ 19,932 | \$ 19,932 | \$ 19,932 | \$ 237,404 |
| Corporate Groups | 228,497 | 228,431 | 227,907 | 233,483 | 228,792 | 228,617 | 229,283 | 229,326 | 242,318 | 233,047 | 233,047 | 233,047 | 2,775,794 |
| Customer Connect | 76,645 | 76,240 | 78,225 | 74,133 | 75,945 | 88,323 | 85,425 | 85,904 | 87,331 | 81,717 | 81,717 | 81,717 | 973,321 |
| Customer Operations | 30,844 | 30,844 | 30,844 | 37,981 | 30,844 | 30,844 | 30,844 | 30,844 | 37,982 | 32,754 | 32,754 | 32,754 | 390,134 |
| Customer Solutions - P&S | 28,721 | 28,721 | 28,721 | 28,721 | 28,822 | 28,721 | 28,721 | 28,721 | 28,721 | 29,019 | 29,019 | 29,019 | 345,645 |
| Distribution Operations | 426,921 | 423,173 | 420,884 | 423,696 | 478,241 | 448,086 | 436,555 | 422,275 | 419,009 | 437,536 | 437,536 | 437,536 | 5,211,448 |
| Fossil Hydro Operations | 450,746 | 450,883 | 449,521 | 451,490 | 451,318 | 449,969 | 451,630 | 451,793 | 450,780 | 455,413 | 455,413 | 455,413 | 5,424,370 |
| Grid Solutions | 132,228 | 94,187 | 142,046 | 100,549 | 144,418 | 107,326 | 152,500 | 114,280 | 120,937 | 124,395 | 124,395 | 124,395 | 1,481,655 |
| Other Departments (Esamann) | 81,516 | 81,516 | 81,516 | 81,516 | 82,050 | 81,516 | 81,516 | 81,516 | 81,516 | 82,391 | 82,391 | 82,391 | 981,348 |
| Other Departments (Jamill) | 279,660 | 280,824 | 279,679 | 277,559 | 300,181 | 277,675 | 274,728 | 274,739 | 274,609 | 282,761 | 282,761 | 282,761 | 3,367,938 |
| Other Departments (Yates) | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 73 | 73 | 73 | 868 |
| Regulated Utilities Other | 240,308 | 240,308 | 240,308 | 240,938 | 275,658 | 240,308 | 240,308 | 240,308 | 240,938 | 246,819 | 246,819 | 246,819 | 2,939,838 |
| Transmission | 165,438 | 196,575 | 280,280 | 369,088 | 450,397 | 354,701 | 345,893 | 324,437 | 230,918 | 304,989 | 304,989 | 304,989 | 3,632,696 |
| Total | \$ 2,161,328 | \$ 2,151,506 | \$ 2,279,734 | \$ 2,338,960 | \$ 2,566,477 | \$ 2,355,892 | \$ 2,377,208 | \$ 2,303,948 | \$ 2,234,866 | \$ 2,330,846 | \$ 2,330,846 | \$ 2,330,846 | \$ 27,762,459 |

Request:

4. Refer to the Application, Volume 10, Tab 41. Provide the following information for any of the Duke Energy Business Services (DEBS) and other affiliated entities' costs directly assigned or allocated to Duke Kentucky, as well as the other requested information: a. Reflected in the test-year level of expenses proposed by Duke Kentucky, provide the following as it relates to salaries either directly assigned or allocated to Duke Kentucky by an affiliate. (1) For the DEBS Department, provide the amount of total salaries and the number of hours allocated along with any associated incentive pay, listed by each incentive pay program, including any stock option plans in effect by month for the test year.

Response:

See the below table for salary cost and associated incentive pay program cost for Duke Energy Business Services (DEBS). Amounts extracted from the company's general ledger system (budget) for the test period. Note, related hours are unavailable in the company's general ledger system.

| Short-Term Incentives (STI) | | | | | | | | | | | | | |
|-----------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------|
| Department | Apr-20 | May-20 | Jun-20 | Jul-20 | Aug-20 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Mar-21 | Total |
| Coal Combustion Products | \$ 6,179 | \$ 6,179 | \$ 6,179 | \$ 6,179 | \$ 6,180 | \$ 6,179 | \$ 6,179 | \$ 6,179 | \$ 6,179 | \$ 6,241 | \$ 6,241 | \$ 6,241 | \$ 74,333 |
| Corporate Groups | 62,458 | 62,450 | 62,388 | 63,029 | 62,491 | 62,469 | 62,548 | 62,552 | 64,044 | 63,342 | 63,342 | 63,342 | 754,454 |
| Customer Connect | 9,465 | 9,418 | 9,646 | 9,176 | 9,384 | 10,808 | 10,474 | 10,530 | 10,694 | 10,055 | 10,055 | 10,055 | 119,759 |
| Customer Operations | 2,796 | 2,796 | 2,796 | 3,246 | 2,796 | 2,796 | 2,796 | 2,796 | 3,246 | 2,925 | 2,925 | 2,925 | 34,836 |
| Customer Solutions - P&S | 4,801 | 4,801 | 4,801 | 4,801 | 4,813 | 4,801 | 4,801 | 4,801 | 4,801 | 4,851 | 4,851 | 4,851 | 57,776 |
| Distribution Operations | 40,050 | 39,619 | 39,355 | 39,679 | 41,428 | 42,484 | 41,158 | 39,515 | 39,140 | 40,672 | 40,672 | 40,672 | 484,444 |
| Fossil Hydro Operations | 51,810 | 51,826 | 51,669 | 51,896 | 51,876 | 51,721 | 51,912 | 51,931 | 51,814 | 52,347 | 52,347 | 52,347 | 623,495 |
| Grid Solutions | 15,834 | 11,459 | 16,963 | 12,190 | 17,235 | 12,970 | 18,165 | 13,770 | 14,535 | 14,939 | 14,939 | 14,939 | 177,938 |
| Other Departments (Esamann) | 9,374 | 9,374 | 9,374 | 9,374 | 9,436 | 9,374 | 9,374 | 9,374 | 9,374 | 9,475 | 9,475 | 9,475 | 112,855 |
| Other Departments (Jamil) | 28,021 | 28,146 | 28,019 | 27,776 | 28,644 | 27,789 | 27,452 | 27,446 | 27,436 | 28,137 | 28,137 | 28,137 | 335,142 |
| Other Departments (Yates) | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 100 |
| Regulated Utilities Other | 21,811 | 21,811 | 21,811 | 21,830 | 22,872 | 21,811 | 21,811 | 21,811 | 21,830 | 22,153 | 22,153 | 22,153 | 263,859 |
| Transmission | 10,690 | 14,232 | 18,781 | 26,964 | 39,976 | 22,272 | 21,254 | 20,814 | 16,162 | 20,777 | 20,777 | 20,777 | 247,477 |
| Total | \$ 263,297 | \$ 262,120 | \$ 271,793 | \$ 276,149 | \$ 291,139 | \$ 275,483 | \$ 277,933 | \$ 271,527 | \$ 269,264 | \$ 275,921 | \$ 275,921 | \$ 275,921 | \$ 3,286,468 |

Request:

4. Refer to the Application, Volume 10, Tab 41. Provide the following information for any of the Duke Energy Business Services (DEBS) and other affiliated entities' costs directly assigned or allocated to Duke Kentucky, as well as the other requested information: a. Reflected in the test-year level of expenses proposed by Duke Kentucky, provide the following as it relates to salaries either directly assigned or allocated to Duke Kentucky by an affiliate. (1) For the DEBS Department, provide the amount of total salaries and the number of hours allocated along with any associated incentive pay, listed by each incentive pay program, including any stock option plans in effect by month for the test year.

Response:

See the below table for salary cost and associated incentive pay program cost for Duke Energy Business Services (DEBS). Amounts extracted from the company's general ledger system (budget) for the test period. Note, related hours are unavailable in the company's general ledger system.

| Department | Long-Term Incentives (LTI) | | | | | | | | | | | | Total |
|---------------------------|----------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------|
| | Apr-20 | May-20 | Jun-20 | Jul-20 | Aug-20 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Mar-21 | |
| Coal Combustion Products | \$ 5,499 | \$ 5,579 | \$ 5,520 | \$ 5,600 | \$ 5,611 | \$ 5,551 | \$ 5,633 | \$ 5,572 | \$ 5,654 | \$ 5,636 | \$ 5,636 | \$ 5,636 | \$ 67,126 |
| Corporate Groups | 74,743 | 103,254 | 75,181 | 76,569 | 76,757 | 75,721 | 77,129 | 76,082 | 77,503 | 80,008 | 80,008 | 80,008 | 952,961 |
| Customer Connect | 886 | 880 | 858 | 871 | 873 | 863 | 877 | 867 | 880 | 882 | 882 | 882 | 10,501 |
| Customer Solutions - P&S | 222 | 216 | 214 | 215 | 216 | 214 | 216 | 215 | 217 | 218 | 218 | 218 | 2,600 |
| Grid Solutions | 236 | 239 | 237 | 240 | 241 | 238 | 242 | 239 | 243 | 242 | 242 | 242 | 2,880 |
| Regulated Utilities Other | 927 | 663 | 616 | 629 | 631 | 621 | 635 | 624 | 638 | 672 | 672 | 672 | 7,999 |
| Total | \$ 82,513 | \$ 110,831 | \$ 82,625 | \$ 84,125 | \$ 84,328 | \$ 83,209 | \$ 84,730 | \$ 83,599 | \$ 85,135 | \$ 87,656 | \$ 87,656 | \$ 87,656 | \$ 1,044,066 |

Request:

4. Refer to the Application, Volume 10, Tab 41. Provide the following information for any of the Duke Energy Business Services (DEBS) and other affiliated entities' costs directly assigned or allocated to Duke Kentucky, as well as the other requested information: a. Reflected in the test-year level of expenses proposed by Duke Kentucky, provide the following as it relates to salaries either directly assigned or allocated to Duke Kentucky by an affiliate. (2) By any other Duke Energy Corporation (Duke Energy) subsidiary. Provide the name of the subsidiary and the department along with the total salary amount and associated incentive pay, including any stock option plans along with the number of hours associated with the salary, incentive pay, and any stock option plans costs.

Response:

See the below table for salary cost and associated incentive pay program cost for Duke Energy Business Services (DEBS). Amounts extracted from the company's general ledger system (budget) for the test period. Note, related hours are unavailable in the company's general ledger system.

| | | Salaries | | | | | | | | | | | | | |
|---------------------------------------|-----------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------|
| Duke Energy Corporation Subsidiary | Department | Apr-20 | Apr-20 | Apr-20 | Apr-20 | Apr-20 | Apr-20 | Apr-20 | Apr-20 | Apr-20 | Apr-20 | Jan-21 | Jan-21 | Jan-21 | Total |
| DE Carolinas | Coal Combustion Products | \$ 15,363 | \$ 15,363 | \$ 15,363 | \$ 15,363 | \$ 15,374 | \$ 15,363 | \$ 15,376 | \$ 15,376 | \$ 15,376 | \$ 15,376 | \$ 15,545 | \$ 15,545 | \$ 15,545 | \$ 185,150 |
| | Corporate Groups | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Customer Connect | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Customer Operations | 18,842 | 18,842 | 18,842 | 20,897 | 18,951 | 18,842 | 18,842 | 18,842 | 20,897 | 19,504 | 19,504 | 19,504 | 19,504 | 232,310 |
| | Customer Solutions - P&S | 14,175 | 14,175 | 14,175 | 14,182 | 14,179 | 14,175 | 14,175 | 14,175 | 14,182 | 14,319 | 14,319 | 14,319 | 14,319 | 170,549 |
| | Distribution Operations | 28,204 | 28,204 | 28,204 | 28,204 | 28,390 | 28,204 | 28,204 | 28,204 | 28,204 | 28,507 | 28,507 | 28,507 | 28,507 | 339,540 |
| | Fossil Hydro Operations | 11,167 | 11,167 | 11,167 | 11,167 | 11,358 | 11,167 | 11,167 | 11,167 | 11,167 | 11,300 | 11,300 | 11,300 | 11,300 | 134,598 |
| | Grid Solutions | 2,140 | 2,140 | 2,140 | 2,140 | 2,188 | 2,140 | 2,140 | 2,140 | 2,140 | 2,167 | 2,167 | 2,167 | 2,167 | 25,810 |
| | Other Departments (Esamann) | 40,807 | 40,807 | 40,807 | 40,814 | 40,989 | 40,807 | 40,807 | 40,807 | 40,814 | 41,237 | 41,237 | 41,237 | 41,237 | 491,168 |
| | Other Departments (Jamil) | 15,949 | 15,949 | 15,999 | 15,949 | 15,972 | 15,999 | 15,949 | 15,949 | 15,999 | 16,128 | 16,128 | 16,128 | 16,128 | 192,099 |
| | Regulated Utilities Other | 2,629 | 2,629 | 2,629 | 2,629 | 2,629 | 2,629 | 2,629 | 2,629 | 2,629 | 2,655 | 2,655 | 2,655 | 2,655 | 31,623 |
| | Transmission | 1,200 | 1,610 | 1,946 | 8,998 | 3,541 | 10,435 | 1,200 | 1,200 | 1,200 | 3,516 | 3,516 | 3,516 | 3,516 | 41,877 |
| DE Ohio | Customer Operations | 1,119 | 1,119 | 1,119 | 1,119 | 1,119 | 1,119 | 1,119 | 1,119 | 1,119 | 1,130 | 1,130 | 1,130 | 1,130 | 13,457 |
| | Customer Solutions - P&S | 5,603 | 5,603 | 5,603 | 5,603 | 5,603 | 5,603 | 5,603 | 5,603 | 5,603 | 5,659 | 5,659 | 5,659 | 5,659 | 67,407 |
| | Distribution Operations | 8,760 | 8,495 | 7,702 | 11,496 | 9,397 | 19,392 | 14,334 | 15,959 | 11,446 | 12,006 | 12,006 | 12,006 | 12,006 | 142,997 |
| | Other Departments (Esamann) | 15,725 | 15,725 | 15,725 | 15,725 | 15,725 | 15,725 | 15,725 | 15,725 | 15,725 | 15,883 | 15,883 | 15,883 | 15,883 | 189,177 |
| | Regulated Utilities Other | 25,355 | 25,355 | 25,355 | 25,355 | 38,032 | 25,355 | 25,355 | 25,355 | 25,355 | 27,031 | 27,031 | 27,031 | 27,031 | 321,962 |
| DE Indiana | Coal Combustion Products | 79,461 | 79,461 | 79,461 | 79,461 | 79,938 | 79,461 | 79,461 | 79,461 | 79,461 | 80,309 | 80,309 | 80,309 | 80,309 | 956,555 |
| | Customer Operations | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 231 |
| | Customer Solutions - P&S | 1,037 | 1,037 | 1,037 | 1,037 | 1,037 | 1,037 | 1,037 | 1,037 | 1,037 | 1,048 | 1,048 | 1,048 | 1,048 | 12,480 |
| | Distribution Operations | 1,488 | 1,488 | 1,488 | 1,488 | 1,563 | 1,488 | 1,488 | 1,488 | 1,488 | 1,511 | 1,511 | 1,511 | 1,511 | 17,996 |
| | Other Departments (Jamil) | 6,300 | 6,300 | 6,300 | 6,300 | 6,300 | 6,300 | 6,300 | 6,300 | 6,300 | 6,363 | 6,363 | 6,363 | 6,363 | 75,785 |
| DE Progress | Customer Operations | 496 | 496 | 496 | 515 | 496 | 496 | 496 | 496 | 515 | 506 | 506 | 506 | 506 | 6,022 |
| | Customer Solutions - P&S | 5,470 | 5,470 | 5,470 | 5,470 | 5,531 | 5,470 | 5,470 | 5,470 | 5,470 | 5,532 | 5,532 | 5,532 | 5,532 | 65,887 |
| | Distribution Operations | 6,857 | 6,857 | 6,857 | 6,857 | 6,625 | 6,523 | 6,523 | 6,523 | 6,523 | 6,750 | 6,750 | 6,750 | 6,750 | 80,393 |
| | Fossil Hydro Operations | 17,012 | 17,012 | 17,012 | 17,012 | 17,081 | 17,012 | 17,012 | 17,012 | 17,012 | 17,190 | 17,190 | 17,190 | 17,190 | 204,743 |
| | Other Departments (Esamann) | 1,547 | 1,547 | 1,547 | 1,547 | 1,563 | 1,547 | 1,547 | 1,547 | 1,547 | 1,564 | 1,564 | 1,564 | 1,564 | 18,634 |
| | Other Departments (Jamil) | 12,553 | 12,553 | 12,565 | 12,553 | 12,816 | 12,565 | 12,553 | 12,553 | 12,553 | 12,712 | 12,712 | 12,712 | 12,712 | 151,413 |
| | Regulated Utilities Other | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DE Florida | Customer Operations | 185 | 185 | 185 | 185 | 185 | 185 | 185 | 185 | 185 | 187 | 187 | 187 | 187 | 2,223 |
| | Customer Solutions - P&S | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | 1,012 | 1,022 | 1,022 | 1,022 | 1,022 | 12,179 |
| | Distribution Operations | 2,374 | 2,374 | 2,374 | 2,374 | 2,458 | 2,374 | 2,374 | 2,374 | 2,374 | 2,407 | 2,407 | 2,407 | 2,407 | 28,671 |
| | Fossil Hydro Operations | 275 | 275 | 275 | 275 | 275 | 275 | 275 | 275 | 275 | 278 | 278 | 278 | 278 | 3,312 |
| | Other Departments (Esamann) | 744 | 744 | 744 | 744 | 751 | 744 | 744 | 744 | 744 | 753 | 753 | 753 | 753 | 8,964 |
| | Other Departments (Jamil) | 3,184 | 3,184 | 3,184 | 3,184 | 3,184 | 3,184 | 3,184 | 3,184 | 3,184 | 3,216 | 3,216 | 3,216 | 3,216 | 38,300 |
| | Regulated Utilities Other | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Transmission | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Piedmont | Corporate Groups | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (7) |
| | Customer Operations | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| Total | | \$ 347,052 | \$ 347,198 | \$ 346,801 | \$ 359,675 | \$ 364,480 | \$ 366,647 | \$ 352,305 | \$ 353,930 | \$ 351,567 | \$ 357,950 | \$ 357,950 | \$ 357,950 | \$ 357,950 | \$ 4,263,505 |

Request:

4. Refer to the Application, Volume 10, Tab 41. Provide the following information for any of the Duke Energy Business Services (DEBS) and other affiliated entities' costs directly assigned or allocated to Duke Kentucky, as well as the other requested information: a. Reflected in the test-year level of expenses proposed by Duke Kentucky, provide the following as it relates to salaries either directly assigned or allocated to Duke Kentucky by an affiliate. (2) By any other Duke Energy Corporation (Duke Energy) subsidiary. Provide the name of the subsidiary and the department along with the total salary amount and associated incentive pay, including any stock option plans along with the number of hours associated with the salary, incentive pay, and any stock option plans costs.

Response:

There were no Long-Term Incentive (LTI) costs (including stock-option plans) that were either directly assigned or allocated to Duke Kentucky from a Duke Energy subsidiary.

Duke Energy Kentucky
 Analysis of Amounts Allocated and Directly Charged to Duke Energy Kentucky Electric from DEBS
 Summarized by Allocation Basis

| | 12 Months Ended | | | | | |
|--------------------------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|-----------------------|
| | November 30, | | | | | |
| | <u>2014</u> | <u>2015</u> | <u>2016</u> | <u>2017</u> | <u>2018</u> | <u>2019 (1)</u> |
| Direct Charges | \$ 51,407,895 | \$ 53,711,263 | \$ 61,356,874 | \$ 82,821,741 | \$ 87,254,415 | \$ 89,244,736 |
| Allocated Charges: | | | | | | |
| Accounting | 1,351,267 | 629,816 | 647,960 | 611,835 | 652,048 | 873,804 |
| Circuit Miles | 187,337 | 183,460 | 243,925 | 278,831 | 362,381 | 338,848 |
| Circuit Miles and Electric Peak Load | 12,975 | 13,420 | 9,947 | 3,463 | 1,131 | 1,098 |
| Construction | 1,244,971 | 935,488 | 1,178,797 | 2,221,097 | 1,975,945 | 1,398,583 |
| CPU Seconds (MIPS) | 204,236 | 175,205 | 178,219 | 195,534 | 181,324 | 168,729 |
| Customers | 3,436,042 | 3,271,742 | 2,885,663 | 2,928,669 | 4,729,130 | 5,500,687 |
| Customers and Employees | 56,243 | 58,537 | 59,358 | 48,188 | 42,956 | 42,998 |
| Electric Peak Load | 5,610 | 2,654 | 4,629 | 4,128 | 1,520 | 1,289 |
| Employees | 894,971 | 803,088 | 831,951 | 647,606 | 630,851 | 578,937 |
| Generation Capacity | 1,277,556 | 1,073,482 | 1,093,384 | 1,342,015 | 1,218,562 | 1,195,484 |
| Interest | 38,230 | 63,151 | 68,653 | 102,466 | 274,678 | 264,690 |
| Procurement | 373,183 | 502,791 | 767,104 | 649,184 | 726,768 | 1,014,958 |
| Sales | 326,483 | 161,007 | 56,234 | 99,045 | 106,647 | 110,369 |
| Servers | 821,545 | 671,445 | 590,831 | 493,986 | 567,023 | 323,614 |
| Square Footage | 365,411 | 206,207 | 94,482 | 116,466 | 127,137 | 90,618 |
| Three Factor Formula | 7,315,559 | 6,718,326 | 6,041,243 | 6,059,631 | 4,911,048 | 5,497,944 |
| Workstations | 58,406 | 36,860 | 39,425 | 491,776 | 550,516 | 653,750 |
| Total Allocated Charges | 17,970,023 | 15,506,679 | 14,791,806 | 16,293,920 | 17,059,664 | 18,056,399 |
| Total Direct and Allocated Charges | <u>\$ 69,377,918</u> | <u>\$ 69,217,942</u> | <u>\$ 76,148,680</u> | <u>\$ 99,115,661</u> | <u>\$ 104,314,080</u> | <u>\$ 107,301,135</u> |

(1) 10 Months Actuals ended September 2019, Oct/Nov Budget 2019

| Year | Month | MWH | Day | Hour |
|------|-----------|-----------------------------------|-----|------|
| 2014 | November | 680 | 18 | 1900 |
| 2014 | December | 638 | 17 | 1900 |
| 2015 | January | 785 | 8 | 0800 |
| 2015 | February | 799 | 20 | 0800 |
| 2015 | March | 714 | 6 | 0800 |
| 2015 | April | 515 | 13 | 2000 |
| 2015 | May | 683 | 29 | 1700 |
| 2015 | June | 778 | 23 | 1600 |
| 2015 | July | 816 | 29 | 1400 |
| 2015 | August | 746 | 10 | 1600 |
| 2015 | September | 773 | 4 | 1600 |
| 2015 | October | 554 | 8 | 1500 |
| 2015 | November | 588 | 23 | 0800 |
| 2015 | December | 544 | 18 | 1900 |
| 2016 | January | 712 | 19 | 0800 |
| 2016 | February | 679 | 10 | 2000 |
| 2016 | March | 621 | 3 | 2000 |
| 2016 | April | 599 | 26 | 1600 |
| 2016 | May | 717 | 31 | 1600 |
| 2016 | June | 787 | 20 | 1600 |
| 2016 | July | 847 | 25 | 1400 |
| 2016 | August | 844 | 11 | 1500 |
| 2016 | September | 816 | 7 | 1500 |
| 2016 | October | 637 | 6 | 1600 |
| 2016 | November | 557 | 22 | 0800 |
| 2016 | December | 705 | 15 | 0800 |
| 2017 | January | 683 | 6 | 1900 |
| 2017 | February | 623 | 9 | 2000 |
| 2017 | March | 640 | 15 | 0700 |
| 2017 | April | 588 | 26 | 1600 |
| 2017 | May | 698 | 19 | 1400 |
| 2017 | June | 773 | 12 | 1600 |
| 2017 | July | 805 | 19 | 1600 |
| 2017 | August | 805 | 17 | 1400 |
| 2017 | September | 738 | 21 | 1600 |
| 2017 | October | 607 | 4 | 1600 |
| 2017 | November | 566 | 20 | 0800 |
| 2017 | December | 681 | 27 | 2000 |
| 2018 | January | 768 | 5 | 0800 |
| 2018 | February | 634 | 2 | 0800 |
| 2018 | March | 632 | 8 | 2000 |
| 2018 | April | 612 | 17 | 1100 |
| 2018 | May | 734 | 15 | 1700 |
| 2018 | June | 819 | 19 | 1700 |
| 2018 | July | 808 | 10 | 1600 |
| 2018 | August | 787 | 28 | 1700 |
| 2018 | September | 799 | 4 | 1600 |
| 2018 | October | 758 | 8 | 1500 |
| 2018 | November | 632 | 27 | 1900 |
| 2018 | December | 630 | 11 | 0800 |
| 2019 | January | 790 | 31 | 800 |
| 2019 | February | 656 | 1 | 800 |
| 2019 | March | 681 | 5 | 800 |
| 2019 | April | 555 | 1 | 700 |
| 2019 | May | 705 | 28 | 1600 |
| 2019 | June | 765 | 28 | 1600 |
| 2019 | July | 809 | 10 | 1700 |
| 2019 | August | 806 | 19 | 1700 |
| 2019 | September | 794 | 13 | 1500 |
| 2019 | October | Unavailable until month concludes | | |
| 2019 | November | Unavailable until month concludes | | |

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-005

REQUEST:

Refer to the application, Volume 10, Tab 41, page 3 of 10. Explain the decrease in expenses allocated to Duke Kentucky from DEBS from the base period to the forecasted test period.

RESPONSE:

Decreases in expenses are attributable for several reasons. Primarily there is a focus on process improvement and automation to continue to reduce overhead costs and reduce personnel through attrition. This is applicable across the enterprise. The completion of Customer initiative projects and absence of other major projects is also resulting in lower costs in the forecasted period.

PERSON RESPONSIBLE: Jeffrey R. Setser

REQUEST:

Refer to the application, Volume 11, Section B, Schedule B-2.3, pages 1 through 6 of 12.

- a. Explain why such a large portion of the capital additions in the base period are categorized as "Completed Construction Not Classified."
- b. State whether all projected capital additions included in the base period, i.e. capital additions for months that were projected, are categorized as "Completed Construction Not Classified" as shown on line 10 of page 1, line 13 of page 2, line 11 of page 3, line 24 of page 4, line 10 of page 5 and line 10 of page 6.
- c. If all projected capital additions included in the base period are categorized as "Completed Construction Not Classified," explain why they are all categorized in that manner.
- d. Provide an Excel spreadsheet with the monthly breakdown of the additions and retirements in each line of pages 1 through 6 of Schedule B-2.3.

RESPONSE:

- a. Capital additions in the forecasted portion of the base period are categorized as "Completed Construction Not Classified" due to the Company's forecasting methodology. Forecasted additions are the result of projected capital spend, generally within a few categories (project classes) per FERC function, and assumptions for when that capital spend will be placed into service. As a result of

this methodology where capital spend is not projected at the plant account level,
plant additions are not classified to specific plant accounts.

- b. Yes. Also, see response to (a) above.
- c. See response to (a) above.
- d. Please see STAFF-DR-02-006 Attachment.

PERSON RESPONSIBLE: Melissa Abernathy
 Christopher Jacobi

10/10/12

10/10/12

10/10/12

| NAME | TIME | DATE | LOCATION | TYPE | STATUS |
|------|------|------|----------|------|--------|
| ... | ... | ... | ... | ... | ... |

10/10/12

| NAME | TIME | DATE | LOCATION | TYPE | STATUS |
|------|------|------|----------|------|--------|
| ... | ... | ... | ... | ... | ... |

10/10/12

| NAME | TIME | DATE | LOCATION | TYPE | STATUS |
|------|------|------|----------|------|--------|
| ... | ... | ... | ... | ... | ... |

10/10/12

| NAME | TIME | DATE | LOCATION | TYPE | STATUS |
|------|------|------|----------|------|--------|
| ... | ... | ... | ... | ... | ... |

10/10/12

| NAME | TIME | DATE | LOCATION | TYPE | STATUS |
|------|------|------|----------|------|--------|
| ... | ... | ... | ... | ... | ... |

10/10/12

| NAME | TIME | DATE | LOCATION | TYPE | STATUS |
|------|------|------|----------|------|--------|
| ... | ... | ... | ... | ... | ... |

10/10/12

| NAME | TIME | DATE | LOCATION | TYPE | STATUS |
|------|------|------|----------|------|--------|
| ... | ... | ... | ... | ... | ... |

REQUEST:

Refer to the application, Volume 11, Section B, Schedule B-2.3, pages 7 through 12 of 12.

- a. Confirm that all capital additions in the forecasted test year, other than the proposed battery storage project, are categorized as “Completed Construction Not Classified,” and if it is not able to be confirmed, explain why not.
- b. Explain why all of the capital additions in the forecasted test year, other than the proposed battery storage project, are categorized as “Completed Construction Not Classified” as opposed to being categorized based on the expected project.
- c. Provide an Excel spreadsheet with a monthly breakdown of the additions and retirements in each line of pages 7 through 12 of Schedule B-2.3.
- d. Explain how Duke Kentucky projected the additions to “Completed Construction Not Classified” on pages 7 through 12 of Schedule B-2.3.

RESPONSE:

- a. Confirmed.
- b. Capital additions in the forecasted test year, other than the proposed battery storage project, are categorized as “Completed Construction Not Classified” due to the company’s forecasting methodology. Forecasted additions are the result of projected capital spend, generally within a few categories (project classes) per FERC function, and assumptions for when that capital spend will be placed into

service. As a result of this methodology where capital spend is not projected at the plant account level, plant additions are not classified to specific plant accounts.

- c. Please see STAFF-DR-02-007 Attachment.
- d. Capital additions in the forecasted test period are categorized as “Completed Construction Not Classified” due to the company’s forecasting methodology. Forecasted additions are the result of projected capital spend, generally within a few categories (project classes) per FERC function, and assumptions for when that capital spend will be placed into service. As a result of this methodology where capital spend is not projected at the plant account level, plant additions are not classified to specific plant accounts.

PERSON RESPONSIBLE: Christopher M. Jacobi

| Item No. | Description | Unit | Quantity | Price | | Amount |
|----------|-------------|------|----------|------------|-------------|--------|
| | | | | Unit Price | Total Price | |
| 1 | ... | ... | ... | ... | ... | ... |
| 2 | ... | ... | ... | ... | ... | ... |
| 3 | ... | ... | ... | ... | ... | ... |
| 4 | ... | ... | ... | ... | ... | ... |
| 5 | ... | ... | ... | ... | ... | ... |

THE UNIVERSITY OF
 THE STATE OF NEW YORK
 STATE EDUCATION DEPARTMENT

| Item No. | Description | Unit | Quantity | Price | | Amount |
|----------|-------------|------|----------|------------|-------------|--------|
| | | | | Unit Price | Total Price | |
| 1 | ... | ... | ... | ... | ... | ... |
| 2 | ... | ... | ... | ... | ... | ... |
| 3 | ... | ... | ... | ... | ... | ... |
| 4 | ... | ... | ... | ... | ... | ... |
| 5 | ... | ... | ... | ... | ... | ... |

THE UNIVERSITY OF
 THE STATE OF NEW YORK
 STATE EDUCATION DEPARTMENT

| Item No. | Description | Unit | Quantity | Price | | Amount |
|----------|-------------|------|----------|------------|-------------|--------|
| | | | | Unit Price | Total Price | |
| 1 | ... | ... | ... | ... | ... | ... |
| 2 | ... | ... | ... | ... | ... | ... |
| 3 | ... | ... | ... | ... | ... | ... |
| 4 | ... | ... | ... | ... | ... | ... |
| 5 | ... | ... | ... | ... | ... | ... |

THE UNIVERSITY OF
 THE STATE OF NEW YORK
 STATE EDUCATION DEPARTMENT

| Item No. | Description | Unit | Quantity | Price | | Amount |
|----------|-------------|------|----------|------------|-------------|--------|
| | | | | Unit Price | Total Price | |
| 1 | ... | ... | ... | ... | ... | ... |
| 2 | ... | ... | ... | ... | ... | ... |
| 3 | ... | ... | ... | ... | ... | ... |
| 4 | ... | ... | ... | ... | ... | ... |
| 5 | ... | ... | ... | ... | ... | ... |

THE UNIVERSITY OF
 THE STATE OF NEW YORK
 STATE EDUCATION DEPARTMENT

| Item No. | Description | Unit | Quantity | Price | | Amount |
|----------|-------------|------|----------|------------|-------------|--------|
| | | | | Unit Price | Total Price | |
| 1 | ... | ... | ... | ... | ... | ... |
| 2 | ... | ... | ... | ... | ... | ... |
| 3 | ... | ... | ... | ... | ... | ... |
| 4 | ... | ... | ... | ... | ... | ... |
| 5 | ... | ... | ... | ... | ... | ... |

THE UNIVERSITY OF
 THE STATE OF NEW YORK
 STATE EDUCATION DEPARTMENT

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-008

REQUEST:

Refer to the application, Volume 11, Section B, Schedule B-2.3, pages 1 through 12 of 12. Identify all expected projects and capital expenditures that Duke Kentucky contends support the projected additions shown in Schedule B-2.3. Briefly describe the expected projects and capital expenditures, provide the total expected cost of the projects and capital expenditures, provide the date when Duke Kentucky expects work on any projects identified to begin, and the date on which Duke Kentucky expects any project identified to be placed in service.

RESPONSE:

Please see STAFF-DR-02-008 Attachment for details of projected additions shown in Schedule B-2.3.

PERSON RESPONSIBLE: Christopher Jacobi

DE Kentucky Electric
 Plant Additions by Project Class
 Projected Additions per Sch B-2.3

| | Apr - 2020 | May - 2020 | Jun - 2020 | Jul - 2020 | Aug - 2020 | Sep - 2020 | Oct - 2020 | Nov - 2020 | Dec - 2020 | Jan - 2021 | Feb - 2021 | Mar - 2021 |
|---|------------------|-------------------|-------------------|------------------|------------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|
| B4 - Fossil Ash Basin Initiative | 129,748 | 20,009,784 | - | - | - | - | - | - | 1,599,460 | - | - | - |
| BA - Fossil Steam Plants | - | - | 16,420,675 | 1,717,562 | - | - | - | - | 3,297,852 | - | - | - |
| BD - Environmental Fossil Plants | 413,095 | 730,698 | 421,407 | - | 727 | 727 | 727 | 727 | 727 | 82,859 | 82,640 | 82,649 |
| BG - Other Production Plant | - | - | 1,432,585 | - | - | 59,223 | - | - | 26,464 | - | - | 2,063,132 |
| CC - Capital Challenge | - | - | (1,250,000) | - | - | (1,250,000) | - | - | (1,250,000) | - | - | (1,250,000) |
| FF - Transmission Stations | - | - | 688,862 | - | - | 1,451,323 | - | - | 1,852,976 | - | - | 194,064 |
| GG - Transmission Lines | 347,759 | 509,124 | 2,332,912 | 74,960 | 4,958 | 2,243,592 | 26,618 | 6,491 | 1,040,151 | 74,799 | 74,602 | 1,800,448 |
| HB - Distribution Substation | 378,427 | 406,671 | 716,204 | (126,098) | (129,105) | 831,741 | (135,688) | 42,564 | 28,659,008 | 141,762 | 141,762 | (496,177) |
| HW - Distribution Highway Jobs | 144,013 | 136,555 | 130,623 | 186,651 | 152,372 | 340,073 | 252,084 | 272,664 | 186,984 | 192,101 | 192,109 | 192,130 |
| IK - Distrib Lines OH/UG (Line Ext) | 1,775,182 | 1,784,677 | 1,980,352 | 2,171,535 | 2,081,232 | 2,246,432 | 1,867,955 | 2,037,713 | 2,193,735 | 2,182,726 | 2,182,583 | 2,182,643 |
| IO - Distribution Improvements | 864,458 | 687,594 | 428,091 | 414,328 | 270,647 | 224,497 | 313,977 | 299,867 | 8,383,760 | 372,123 | 372,123 | 372,123 |
| OU - Other Utility | - | - | 275,000 | 275,000 | 275,000 | 275,000 | 275,000 | - | 112,440 | - | - | - |
| QQ - Meters, Panel & Panel Troughs | 8,873 | 8,877 | 8,874 | 8,878 | 8,878 | 8,876 | 8,879 | 8,877 | 8,880 | 8,373 | 8,373 | 8,373 |
| RR - Communication | - | - | 2,306,269 | - | - | 2,194,926 | - | - | 2,707,724 | - | - | 1,727,854 |
| TB - Equipment & Tools | 18,590 | 12,669 | 16,535 | 11,205 | 15,358 | (917) | 8,670 | 17,490 | 15,618 | 12,998 | 12,998 | 12,998 |
| TD - Other - Office Equipment | - | - | 133,041 | - | - | 133,055 | - | - | 133,055 | - | - | 83,858 |
| VS - Cust - Intangible Plant - Software | - | - | 2,615 | - | - | 2,644 | - | - | 2,674 | - | - | 2,696 |
| VS - Intangible Plant - Software | - | - | 684,964 | - | - | 577,207 | - | - | 544,196 | - | - | 415,874 |
| Total Additions | 4,080,145 | 24,286,679 | 26,729,009 | 4,734,022 | 2,680,067 | 9,338,399 | 2,618,223 | 2,686,392 | 49,515,704 | 3,067,741 | 3,067,190 | 7,392,666 |

REQUEST:

Refer to the application, Volume 11, Section B, Schedule B-6, page 2 of 2, and line 6, columns 3, 4, and 5 and line 9, column 4.

- a. Explain why the accumulated deferred income taxes (ADIT) generated by the Investment Tax Credits are adjusted to zero for ratemaking purposes.
- b. Provide the calculation of the (\$2,527,989) adjustment to eliminate ADIT for items not included in rate base.

RESPONSE:

- a. Duke Energy Kentucky is not permitted to reduce rate base by any portion of its ITC credit because of the election it made to apply the ratable flow-through method under Former Internal Revenue Code section 46(f)(2), which remains applicable under IRC section 50(d)(2) (Note that all subsequent statutory references in this response to “sections” are to the Internal Revenue Code). The tax normalization rules for ITC allowed taxpayers to adopt one of two methods for how ITC benefits are flowed through to ratepayers over a period of time. Under Former section 46(f)(1), taxpayers were generally permitted to reduce rate base by the amount of the tax benefit obtained by the credit, provided that the rate base reduction is restored, i.e., the reduction is reversed, no slower than over the useful life of the property. Taxpayers that utilize the rate base reduction approach are not permitted

to reduce the cost of service by any amount of the credit. In contrast, Former § 46(f)(2) provides an election under which a taxpayer is permitted to take into account a ratable portion of the ITC for purposes of determining cost of service, but a taxpayer that makes this election is not permitted to reduce rate base by any portion of the credit. Treasury regulations provide that section 46(f)(1) applies to all of a taxpayer's section 46(f) property in the absence of an election under section 46(f)(2). In contrast, if an election is made under section 46(f)(2), then section 46(f)(1) does not apply to any of the taxpayer's section 46(f) property. Treas. Reg. section 1.46-6(h)(ii). Once a taxpayer has adopted one method or approach, that method applies to all the taxpayer's section 46(f) property and they are not able to adopt the other alternative approach for any other property eligible for section 46. Duke Energy Kentucky made an election to apply section 46(f)(2) in the 1970s. As a result, since making that election, Duke Energy Kentucky has applied the ratable flow-through method to all of its section 46(f) property. In short, while some taxpayers are permitted to reduce rate base by the amount of the credit under Former IRC section 46(f)(1), that rate base reduction method is not available to Duke Energy Kentucky and other regulated taxpayers who have elected to apply the ratable flow-through method under Former IRC section 46(f)(2). Instead, Duke Energy Kentucky must flow ITC credits back to ratepayers through its cost of service no quicker than ratably over the useful life of the asset to which the credit relates.

- b. See STAFF-DR-02-009(b) Attachment for the details supporting the adjustment to eliminate ADIT for items not included in rate base. The adjustment has the effect

of increasing the ADITs included in rate base and therefore decreasing rate base because the adjustment is removing a net deferred tax asset. The Company has excluded all deferred tax assets and deferred tax liabilities that do not relate to assets in rate base.

PERSON RESPONSIBLE: John R. Panizza – a.
Sarah E. Lawler – b.

| LINE NO. | ACCOUNT NUMBER | DESCRIPTION | ADJUSTMENT |
|----------|----------------|---|--------------------|
| | 190 | | |
| 1 | | Other Noncurrent After-tax DTA for EPRI Credit | 216,346 |
| 2 | | Other Noncurrent After-Tax DTA for R&D Credit | 922,184 |
| 3 | | Bad Debts - Tax over Book | 70,274 |
| 4 | | Mark to Market - LT | 1,838 |
| 5 | | Accrued Vacation | 450,495 |
| 6 | | SEVERANCE RESERVE - LT | 25,513 |
| 7 | | Deferred Revenue | 104,406 |
| 8 | | Miscellaneous NC Taxable Income Adj - DTA | 476,297 |
| 9 | | Rate Refunds | (121,934) |
| 10 | | Demand Side Management (DSM) Defer | 632,806 |
| 11 | | Emission Allowance Expense | (6,082) |
| 12 | | Operating Lease Obligation | 2,341,678 |
| 13 | | Charitable Contribution Carryover | 30,521 |
| 14 | | Lease Interest Expense | 8,487 |
| 15 | | Retirement Plan Expense - Underfunded | 2,841,332 |
| 16 | | Non-qualified Pension - Accrual | 22,735 |
| 17 | | Environmental Reserve | (17,098) |
| 18 | | ANNUAL INCENTIVE PLAN COMP | 17,620 |
| 19 | | PAYABLE 401 (K) MATCH | 2,840 |
| 20 | | OPEB Expense Accrual | 767,856 |
| 21 | | FAS 112 Medical Expenses Accrual | 248,832 |
| 22 | | | |
| 23 | | <u>Account 190 Total</u> | <u>9,036,946</u> |
| 24 | | | |
| 25 | | | |
| 26 | | Reg Asset/Liab Def Revenue | (790,560) |
| 27 | | Reg Asset - Accr Pension FAS158 - FAS87Qual | 1 |
| 28 | | Reg Liab RSLI & Other Misc Dfd Costs | 143,923 |
| 29 | | Reg Asset Storm Damage Recovery | (714,287) |
| 30 | | Reg Asset-Pension Post Retirement PAA-FAS87Qual | (5,602,082) |
| 31 | | Regulatory Asset - Carbon Management | (290,790) |
| 32 | | Reg Asset-Pension Post Retirement PAA-FAS87NQ ar | (11,415) |
| 33 | | Reg Asset-Pension Post Retirement PAA-FAS 106 anc | (356,782) |
| 34 | | Reg Asset - Accr Pension FAS158 - FAS87NQ | 922,302 |
| 35 | | Reg Asset - Accr Pension FAS158 - FAS 106/112 | 2,850 |
| 36 | | Reg Asset - Transition from MISO to PJM | 3,666,482 |
| 37 | | Reg Asset Opt Out Tariff IT Modifications | (22,856) |
| 38 | | Non-AMI Meters Retired Early - NBV | (1,308,623) |
| 39 | | Reg Asset_Liab - Outage Costs | (600,343) |
| 40 | | Vacation Carryover - Reg Asset | (255,292) |
| 41 | | Operating Lease Deferral | (9,250) |
| 42 | | Retirement Plan Expense - Overfunded | (1,282,235) |
| 43 | | | |
| 44 | | <u>Account 283 Total</u> | <u>(6,508,957)</u> |
| 45 | | | |
| 46 | 190, 283 | Total Deferred Income Taxes Adjustment | <u>2,527,989</u> |

Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019

STAFF-DR-02-010

REQUEST:

Refer to the application, Volume 11, Schedule K, page 4 of 5. Explain why Duke Kentucky projects that its return on equity (ROE) will decline 30 percent between 2018 and the end of the forecast period.

RESPONSE:

The Company's current base rates were approved effective in April 2018. The ROE of 8.99 percent for calendar year 2018 is below the ROE approved in Case No. 2017-00321, in part because new rates were only in effect for part of that calendar year. As discussed in the testimony of William Don Wathen Jr., since the last base rate case, the Company's ROE has and will continue to deteriorate due to a number of factors. Most significantly,

- the Company has continued making significant investment in its electric utility infrastructure;
- accelerated growth in rate base due to the significantly reduced benefit of deferred taxes due to provisions of Tax Cuts and Jobs Act of 2017;
- inflationary pressures on costs; and
- despite increases in customer count, load growth has been stagnant due to customers becoming increasingly energy efficient.

PERSON RESPONSIBLE: William Don Wathen Jr.

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-011

REQUEST:

Refer to the application, Volume 12, Schedule L-1, page 7 of 172. There appears to be missing language on the next to last line of text on this page between “from the termination date” and “in writing.” Confirm that there is language missing, and if so, indicate whether the tariff should be revised to match the language in Duke Kentucky’s Gas Tariff.¹

RESPONSE:

The Company agrees that there is language missing from the tariff in the referenced paragraph. Please see STAFF-DR-02-011 Attachment for a revised Sheet No. 20 page 1 of 2.

PERSON RESPONSIBLE: Jeff L. Kern

¹ Second paragraph of Ky. P.S.C. Gas No. 2, Second Revised Sheet No. 20, Cancelling and Superseding First Revised Sheet No. 20, page 2 of 3.

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

SERVICE REGULATIONS

SECTION I - SERVICE AGREEMENTS

1. Application for Service.

When a prospective customer desires electric service, an oral application may be accepted by the Company. However, a written application may be required in special circumstances (e.g., the necessity of using special apparatus in providing the requested service).

2. Customer's Right to Cancel Service Agreement or to Suspend Service.

Except as otherwise provided in the Service Agreement, Rate Schedules or elsewhere in these Service Regulations, Customer may give Company ten days notice of desire to cancel the Service Agreement whenever he no longer requires any electric service for the purpose mentioned in said Agreement. Company will accept such notice as a cancellation of the Service Agreement upon being satisfied that Customer no longer requires any such service.

3. Company's Right to Cancel Service Agreement or to Suspend Service.

Company, in addition to all other legal remedies, shall terminate the Service Agreement, refuse or discontinue service to an applicant or customer, after proper notice for any of the following reasons:

- (a) Default or breach of these Service Regulations, after having made a reasonable effort to obtain customer compliance.
- (b) Non-payment of bills when due.
- (c) Theft, fraudulent representation or concealment in relation to the use of electricity.
- (d) Use of electricity, by the customer, in a manner detrimental to the service rendered others.
- (e) Upon the basis of a lawful order of the Kentucky Public Service Commission, the State of Kentucky or any governmental subdivision thereof having jurisdiction over the premise.
- (f) When a customer or applicant refuses or neglects to provide reasonable access to the premise.

When a dangerous condition is found to exist on the customer's or applicant's premises, the electric service shall be disconnected without notice, or application for service refused. The Company shall notify the customer or applicant within twenty-four (24) hours of such action, in writing, of the reasons for the discontinuance or refusal of service and the corrective action to be taken by the applicant or customer before service can be restored.

If discontinuance is for non-payment of bills, the customer shall be given at least ten (10) days written notice, separate from the original bill, and cut-off shall be effected not less than twenty-seven (27) days after the mailing date of the original bill unless, prior to discontinuance, a residential customer presents to the utility a written certificate, signed by a physician, registered nurse, or public health officer, that such discontinuance will aggravate an existing illness or infirmity on the affected premises, in which case discontinuance may be effected not less than thirty (30) days from the termination date. The disconnection of service notice shall be in writing, and will include notification of any state and federal programs which may be available to aid in payment of bills and the office to contact for such possible assistance.

Issued by authority of an Order of the Kentucky Public Service
Commission dated _____ in Case No. 2019-00271.

Issued: September 3, 2019

Effective: October 3, 2019

Issued by Amy B. Spiller, President /s/ Amy B. Spiller

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-012

REQUEST:

Refer to the application, Volume 12, Schedule L-1, page 18 of 172. Explain what is meant by the sentence "If bills are rendered electronically then a charge not to exceed \$0.25 per usage may be assessed" and why Duke Kentucky is not proposing to remove the sentence from its tariff as it did in its last gas base rate case, Case No. 2018-00261.¹

RESPONSE:

The referenced sentence enabled the Company to assess a fee of \$0.25 for rendering bills electronically, at its discretion. This sentence should be removed from Sheet No. 25 page 1. Please see STAFF-DR-02-012 Attachment.

PERSON RESPONSIBLE: Jeff L. Kern

¹ Case No. 2018-00261, *Electronic Application of Duke Energy Kentucky, Inc. for Authority to 1) Adjust Natural Gas Rates 2) Approval of a Decoupling Mechanism 3) Approval of New Tariffs 4) and for All Other Required Approvals, Waivers, and Relief* (Ky. PSC Mar. 27, 2019).

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, Kentucky 41018

SECTION VI - BILLING AND PAYMENT

1. Billing Periods - Time and Place for Payment of Bills.

Bills ordinarily are rendered regularly at monthly intervals, but may be rendered more or less frequently at Company's option. Bills may be rendered by hand delivery, mail, electronically, or by any other reasonable means. ~~If bills are rendered electronically then a charge not to exceed \$0.25 per usage may be assessed.~~ Non-receipt of bills by customer does not release or diminish the obligation of Customer with respect to payment thereof.

The word "month" as it pertains to the supply of service shall mean the period of approximately thirty days between meter readings as fixed and made by Company. Meters are ordinarily read at monthly intervals but may be read more or less frequently at Company's option but no less than quarterly. Company shall have the right to establish billing districts for the purpose of reading meters and rendering bills to customers at various dates. A change or revision of any Rate Schedule shall be applicable to all bills on which the initial monthly meter reading was taken on or after the effective date of such change or revision, except as otherwise ordered by the Kentucky Public Service Commission.

Bills are due on the date indicated thereon as being the last date for payment of the net amount, or as otherwise agreed to, and bills are payable only at the Company's offices or authorized agencies for collection. When not so paid, the Gross Monthly Bill, which is the Net Monthly Bill plus 5% is due and payable. If a partial payment is made, the amount will be applied to items of indebtedness in the same order as they have accrued, except that any payment received shall first be applied to the bill for service rendered.

Customers current on their account may participate upon request in the Adjusted Due Date Program. The Adjusted Due Date Program is available to Duke Energy Kentucky electric customers who have an analog meter. This service allows a customer to adjust the due date of the energy bill five-to-ten days forward from the original due date.

The Company may issue interim bills based on average normal usage instead of determining actual usage by reading the meter. Interim bills may also be used when access to Company's meter cannot be obtained or emergency conditions exist.

2. Information on Customer Bills.

Every bill rendered by the Company for metered service will clearly state:

- (a) The beginning and ending meter readings for the billing period and the dates thereof.
- (b) The amount of energy usage.
- (c) The amount due for the energy used, any adjustments, including assessed late payment charges, and the gross amount of the bill.
- (d) The rate code under which the customer is billed.

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Commission dated _____ in Filing No. 2019-00271.

Issued: September 3, 2019

Effective: October 3, 2019

Issued by Amy B. Spiller, President /s/ Amy B. Spiller

Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019

STAFF-DR-02-013

REQUEST:

Refer to the application, Volume 12, Schedule L-1, page 22 of 172. In Case No. 2018-00261, Duke Kentucky agreed, at the Commission Staff's request, to include in its gas tariff the definition of a satisfactory payment record and a statement that residential customers with satisfactory payment records would not be charged an additional deposit unless their classification of service changes or the customer requests that their deposit be recalculated pursuant to 807 KAR 5:006, Section 8(1)(d)(3).¹ State whether Duke Kentucky would be willing to add the same information to its electric tariff.

RESPONSE:

The Company is willing to make the requested additions to Sheet No 26. Please see STAFF-DR-02-013 Attachment.

PERSON RESPONSIBLE: Jeff L. Kern

¹ Case No. 2018-00261, Duke Kentucky's Response to Commission Staff's Third Request for Information, Item 19, and Duke Kentucky's Response to Commission Staff's Fourth Request for Information, Item 4.

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
Third Revised Sheet No. 26
Cancels and Supersedes
Second Revised Sheet No. 26
Page 1 of 2

SECTION VII - DEPOSITS

1. Deposits.

The Company may require a minimum cash deposit or other guaranty to secure payment of bills except for customers qualifying for service reconnection pursuant to 807 KAR 5:006, Section 15, Winter Hardship Reconnection. Service may be refused or discontinued for failure to pay the requested deposit. Interest, as prescribed by KRS 278.460, will be paid annually either by refund or credit to the customer's bill.

The deposit may be waived by the Company upon a customer's showing of satisfactory credit or payment history, and required residential service deposits will be returned after one (1) year if the customer has established a satisfactory payment record for that period; but commercial deposits will be retained during the entire time that the account remains active. A satisfactory payment record is defined as twelve (12) months of service without being disconnected for non-payment and without the occurrence of fraud, theft, or bankruptcy. If a deposit has been waived or returned and the customer fails to maintain a satisfactory payment record, a deposit may then be required. The Company may require a deposit in addition to the initial deposit if the customer's classification of service changes or if there is a substantial change in usage. The Company will not require an additional deposit from a residential customer with a satisfactory payment record unless the customer's classification of service changes or the customer requests recalculation of their deposit pursuant to 807 DAR 5:006, Section 8(1)(d)(3). Upon termination of service, the deposit, any principal amounts, and any interest earned and owing will be credited to the final bill with any remainder refunded to the customer.

In determining whether a deposit will be required or waived, information such as the following may be considered:

1. Previous history with the Company. If the customer has no previous history with the Company, statements from other utilities, banks, etc. may be presented by the customer as evidence of good credit.
2. Whether the customer has filed bankruptcy proceedings within the last seven years.
3. Whether another customer with a good payment history is willing to sign as a guarantor for an amount equal to the required deposit.

A security deposit will be required pursuant to 11 U.S.C. Section 366 in all bankruptcies where the Company is listed as a creditor.

If a deposit is held longer than 18 months, the deposit will be recalculated at the customer's request based on the customer's actual usage. If the deposit on account differs from the recalculated amount by more than \$10.00 for a residential customer or 10 percent for a non-residential customer, the Company may collect any underpayment and shall refund any overpayment by check or credit to the customer's bill. No refund will be made if the customer's bill is delinquent at the time of the recalculation.

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Commission dated _____ in Case No. 2019-00271.

Issued: September 3, 2019

Effective: October 3, 2019

Issued by Amy B. Spiller, President /s/ Amy B. Spiller

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-014

REQUEST:

Refer to the application, Volume 12, Schedule L-1, page 62 through 70 of 172. Provide an explanation for the text changes and new text in Rate LED.

RESPONSE:

The changes to the text of Rate LED are driven by a desire to add clarity and to make the tariff consistent across the multiple jurisdictions within Duke Energy. This will help avoid confusion especially for customers that have facilities in multiple states within Duke Energy's service territory. The changes and additions to the various equipment charges are explained in the Direct Testimony of Jeff Kern on page 11, lines 1 through 16.

PERSON RESPONSIBLE: Jeff L. Kern

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-015

REQUEST:

Refer to the application, Volume 12, Schedule L-1, page 104 of 172. Confirm that the text in (e) is in the current tariff and is not new text.

RESPONSE:

The text in (e) is not new. The "(N)" identifiers were inadvertently left in from the last revision. Please see STAFF-DR-02-157 Attachment for the revised Sheet No. 80.

PERSON RESPONSIBLE: Jeff L. Kern

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-016

REQUEST:

Refer to the application, Volume 12, Schedule L-1, page 105-106 of 172. In the Rider PSM Factor formula, one component is listed as EV; however, in the description of the abbreviations, there is no EV listed. There is an RV listed for Net Revenues from Electric Vehicle Charging Stations. Indicate whether the formula or the description should be revised.

RESPONSE:

The "RV" listed in the descriptions was a typographical error and should have been "EV".
See STAFF-DR-02-016 Attachment.

PERSON RESPONSIBLE: Jeff L. Kern

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
Fifty-Fifth Revised Sheet No 82
Cancels and Supersedes
Fifty-Fourth Revised Sheet No 82
Page 1 of 3

**RIDER PSM
PROFIT SHARING MECHANISM**

APPLICABILITY

Applicable to all retail sales in the Company's electric service area, excluding interdepartmental sales, beginning with the billing month June 2019.

PROFIT SHARING RIDER FACTORS

On a quarterly basis, the applicable energy charges for electric service shall be increased or decreased to the nearest \$0.000001 per kWh to reflect the sharing of net proceeds as outlined in the formula below.

$$\text{Rider PSM Factor} = (((\text{OSS} + \text{NF} + \text{CAP} + \text{REC} + \text{EV}) \times 0.90) + \text{R}) / \text{S} \quad (\text{T})$$

where:

OSS= Net proceeds from off-system power sales.

Includes the non-native portion of fuel-related costs charged to the Company by PJM Interconnection LLC including but not limited to those costs identified in the following Billing Line Items, as may be amended from time to time by PJM Interconnection LLC: Billing Line Items 1210, 2210, 1215, 1218, 2217, 2218, 1230, 1250, 1260, 2260, 1370, 2370, 1375, 2375, 1400, 1410, 1420, 1430, 1478, 1340, 2340, 1460, 1350, 2350, 1360, 2360, 1470, 1377, 2377, 1480, 1378, 2378, 1490, 1500, 2420, 2220, 1200, 1205, 1220, 1225, 2500, 2510, 1930, 2211, 2215, 2415 and 2930.

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Cancels and Supersedes
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Page 2 of 3

PROFIT SHARING RIDER FACTORS Contd.

NF = Net proceeds from non-fuel related Regional Transmission Organization charges and credits not recovered via other mechanisms.

Includes non-fuel related costs charged to the Company by PJM Interconnection LLC including but not limited to those costs identified in the following Billing Line Items, as may amended from time to time by PJM Interconnection LLC: Billing Line Items 1240, 2240, 1241, 2241, 1242, 1243, 1245, 2245, 1330, 2330, 1362, 2362, 1472, 1365, 2365, 1475, 1371, 2371, 1376, 2376, 1380 and 2380.

CAP= Net proceeds from: PJM charges and credits as provided for in the Commission's Order in Case No. 2014-00201, dated December 4, 2014; capacity sales; capacity purchases; capacity performance credits; and capacity performance assessments.

REC= Net proceeds from the sales of renewable energy credits.

REV= Net Revenues from Electric Vehicle Charging Stations

(N)

R = Reconciliation of prior period Rider PSM actual revenue to amount calculated for the period.

S = Current period sales in kWh as used in the Rider FAC calculation.

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KY.P.S.C. Electric No. 2
Fifty-Fifth Revised Sheet No 82
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| <u>Rate Group</u> | <u>Rate</u> (\$/ kWh) |
|---|--------------------------|
| Rate RS, Residential Service | 0.000163 |
| Rate DS, Service at Secondary Distribution Voltage | 0.000163 |
| Rate DP, Service at Primary Distribution Voltage | 0.000163 |
| Rate DT, Time-of-Day Rate for Service at Distribution Voltage | 0.000163 |
| Rate EH, Optional Rate for Electric Space Heating | 0.000163 |
| Rate GS-FL, General Service Rate for Small Fixed Loads | 0.000163 |
| Rate SP, Seasonal Sports Service | 0.000163 |
| Rate SL, Street Lighting Service | 0.000163 |
| Rate TL, Traffic Lighting Service | 0.000163 |
| Rate UOLS, Unmetered Outdoor Lighting | 0.000163 |
| Rate NSU, Street Lighting Service for Non-Standard Units | 0.000163 |
| Rate SC, Street Lighting Service – Customer Owned | 0.000163 |
| Rate SE, Street Lighting Service – Overhead Equivalent | 0.000163 |
| Rate LED, LED Street Lighting Service | 0.000163 |
| Rate TT, Time-of-Day Rate for Service at Transmission Voltage | 0.000163 |
| Other | 0.000163 |

Rider PSM credits, reductions to bills, are shown as positive numbers without parentheses. Rider PSM charges, increases to bills, are shown in parentheses.

SERVICE REGULATIONS

The supplying of, and billing for, service and all conditions applying thereto are subject to the jurisdiction of the Kentucky Public Service Commission, and to the Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission as provided by law.

Issued by authority of an Order of the Kentucky Public Service
Commission dated _____ in Case No. 2019-00271
Issued: September 3, 2019
Effective: October 3, 2019
Issued by: Amy B. Spiller, President /s/ Amy B. Spiller

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-017

REQUEST:

Refer to the application, Volume 12, Schedule L-1, page 113 of 172, regarding the Green Source Advantage Program enrollment window. Explain why eligible customers would not be able to submit an application year-round.

RESPONSE:

The Company does not see a problem with customers applying year-round. The intent of the application window was to ensure, for projects where the customer wants the Company to issue the RFP vs the customer proposing a project, the Company has sufficient customer details to issue relevant RFPs. Customers applying after a cut off would be included in the next RFP process should the Company issue additional RFPs.

PERSON RESPONSIBLE: Andrew S. Ritch

STAFF-DR-02-018

REQUEST:

Refer to the application, Volume 12, Schedule L-1, page 126 of 172. Explain the rationale for possibly requiring customers to take service under Rider Advanced Meter Opt-out in particularly dangerous or repeated instances of tampering.

RESPONSE:

Meter readers must still visit the premises of customers who are served under the Advanced Meter Opt-out program, and they are trained to look out for evidence of meter tampering. Forcing customers with a history of tampering to take service under this rider will assist in early detection of tampering, and may provide a further disincentive for customers who know that a meter reader will be examining the equipment on a monthly basis.

PERSON RESPONSIBLE: Jeff L. Kern / Lesley Quick

REQUEST:

Refer to the application, Volume 12, Schedule M-2.1 for the base period and forecasted test period. Also, refer to the Direct Testimony of Ash M. Norton (Norton Testimony), page 6, Table 1. Given that the projected demand is increasing by 97.4 MW, explain why the total sales are only increasing 4.013 billion kWh to 4.045 billion kWh.

RESPONSE:

Often peak growth rates can diverge from energy growth rates when much of the growth in energy has come from particularly weather-sensitive classes, and indeed Residential energy sales growth has outstripped other classes in recent years. In addition, there is also a timing issue with a new, large industrial customer coming on the system in late 2021. Because the summer peak was expected in August, this customer—which adds significant load to the system at time of peak—will only be adding energy for a few months in that year.

PERSON RESPONSIBLE: Benjamin W. Passty

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-020

REQUEST:

Refer to the application, Volume 113, WPD-2.30a. Provide the number of transactions subject to credit card fees for the preceding five year period.

RESPONSE:

| SpeedPay Transactions Year | DEK Res Electric Only |
|---|----------------------------------|
| 2015 | 151,149 |
| 2016 | 161,495 |
| 2017 | 177,493 |
| 2018 | 213,953 |
| *2019 | 247,526 |

*2019 projected based on YTD May Actuals

PERSON RESPONSIBLE: Lesley Quick

Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019

STAFF-DR-02-021

REQUEST:

Refer to the Direct Testimony of Amy B. Spiller (Spiller Testimony), page 4, lines 19-21. The testimony indicates that Duke Kentucky is increasingly serving customers with underground facilities.

- a. Provide the annual amount of transmission and distribution facilities that Duke Kentucky has transitioned from above to below ground for the past five years.
- b. Provide the amount of transmission and distribution facilities that Duke Kentucky forecasts during the forecast year that will be transitioned from above to below ground.

RESPONSE:

- a. We do not specifically track the miles that are converted from overhead to underground. However, for the past five years the total overhead conductor mileage has continued to decrease, and the total underground conductor mileage has continued to increase.

| Electric Distribution | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------------------------------|----------|----------|----------|----------|----------|
| | Kentucky | Kentucky | Kentucky | Kentucky | Kentucky |
| Overhead Total Miles of Line | 3084.0 | 3075.9 | 3066.4 | 3050.6 | 2981.7 |
| Underground Total Miles of Line | 1460.5 | 1479.7 | 1507.2 | 1522.5 | 1537.1 |

- b. Based on the average over the past five years, we expect that within the forecast year approximately 20 to 25 conductor miles will be transitioned from overhead to underground.

PERSON RESPONSIBLE: Ash Norton

REQUEST:

Refer to the Spiller Testimony, page 7, lines 15-16. For the years 2015 to date, provide Duke Kentucky's economic development initiatives.

RESPONSE:

All of Duke Energy Kentucky's economic development initiatives for the years 2015 to date are included in my testimony beginning on page 8, line 4, through page 10, line 2.

The economic development initiatives discussed are:

- The "Site Readiness" program;
- Collaboration with local, regional, and state economic development professionals;
- Duke Energy Foundation's Urban Revitalization grants;
- Strategic partnerships and board memberships with local and regional economic development efforts;
- Maintaining competitive electric and gas rates; and
- Employees actively serving on boards and committees of organizations in the community that promote economic development.

Duke Energy Kentucky coordinates our "Site Readiness" program through our local economic development partners to perform the initial assessment of industrial sites from the perspective of a top site selection consultant. Once the initial assessment is performed, then a more detailed "buildability" assessment is performed and the conceptual

plans are developed by expert land use site planners. The program has been successful in assisting with the evaluation of 13 existing sites in northern Kentucky.

In 2018, Duke Energy Kentucky partnered with the Kentucky Association of Economic Development (KAED) and the Cabinet for Economic Development on the Commonwealth's new Product Development Initiative. Duke Energy Kentucky collaborates with Tri-ED and REDI Cincinnati, which also serves northern Kentucky in partnership with Tri-ED, to support requests for information on behalf of prospects considering location in our region and large commercial and industrial customers seeking to expand in the area.

The Company supports Local Economic Development Organizations (LEDOS) with programs that further the education for economic development work in our region. In 2018 and 2019, the Company sponsored a program to bring a national expert to the region to provide training for local economic development professionals in our service area and supported a national site consultant forum, educating LEDO's on the latest trends for success in Economic Development recruitment, retention, and expansion.

PERSON RESPONSIBLE: Amy B. Spiller

REQUEST:

Refer to the Spiller Testimony, page 8, lines 15-19, regarding the investments made by Duke Energy towards the Urban Revitalization Initiative.

- a. Describe in detail the Urban Revitalization Initiative.
- b. Of the \$2.4 million spent by Duke Energy since 2011 in the Duke Energy Ohio and Duke Kentucky service areas, provide the specific amount that was spent in Duke Kentucky's service territory.
- c. Of the 72 projects that Duke Energy has invested in the Duke Energy Ohio and Duke Kentucky service areas, provide the number of projects that were located in Duke Kentucky's service territory.

RESPONSE:

- a. The Urban Revitalization Initiative directs Duke Energy Foundation dollars into our urban communities that function as "catalytic grants" for urban core economic development revitalization opportunities. The intent is to impact job growth or retention in our urban local core communities, thereby improving overall local community vitality. Through this initiative, Duke Energy Foundation seeks to identify economic development opportunities in our Ohio and Kentucky service areas that act as a catalyst to spur commercial redevelopment activities. The initiative's objective is to positively affect blight, job creation, building vacancies,

workforce retraining opportunities, business retention or expansion, or other elements of revitalization. Criteria for eligibility also include support from elected officials, inclusion in community strategic plans, and collaboration among economic or urban development organizations. Funding is determined on an individual project basis, and average funding is \$35,000 per project. An independent advisory team of subject matter experts assists with recommendations for funding, based on the submitted projects meeting the criteria of the Urban Revitalization Initiative. Only 501c3 organizations may receive the funding.

- b. Of the \$2.4 million awarded by the Duke Energy Foundation since 2011 in the Duke Energy Ohio and Duke Kentucky service areas, \$1,186,976 of the \$2.4 million was spent in Duke Energy Kentucky service areas.
- c. Of the 72 projects that Duke Energy has invested in the Duke Energy Ohio and Duke Energy Kentucky service areas, 32 of the projects were located in Duke Energy Kentucky service areas. Some examples of projects that have benefited from the Urban Revitalization Initiative in Northern Kentucky include:
 - Hotel Covington - Revitalization of the former Covington city building into a boutique hotel and restaurant;
 - Braxton Brewing, a craft beer distillery that has expanded its footprint from Covington into Ft. Mitchell;
 - Hellman Lumber Mill conversion in Covington, which now houses the Center for Great Neighborhoods headquarters, an organization that works with more than 30 neighborhoods;

- Schott Grocery Building renovation in Covington which now houses the successful Frida's restaurant;
- Carabello Coffee expansion in Newport;
- Second Sight Spirits in Ludlow; and
- Road ID's new 52,000 square foot headquarters in Covington.

PERSON RESPONSIBLE: Amy B. Spiller

REQUEST:

Refer to the Spiller Testimony, page 9, lines 3-6, regarding the economic development efforts of Duke Kentucky since 2006 contributing “to the creation of nearly 29,478 Northern Kentucky jobs and more than \$4.5 billion of capital investment in Northern Kentucky since 2006.” Refer also the application, Tab 8, in which near stagnant load growth is listed as one of the drivers for Duke Kentucky’s requested rate adjustment for its electric operations. Explain the conflicting nature of these two statements, which, on the one hand, states that Duke Kentucky’s economic development efforts since 2006 has resulted in a significant number of jobs created and capital investment made in Northern Kentucky; while, on the other hand, Duke Kentucky is experiencing little to no load growth necessitating the filing of the instant rate application.

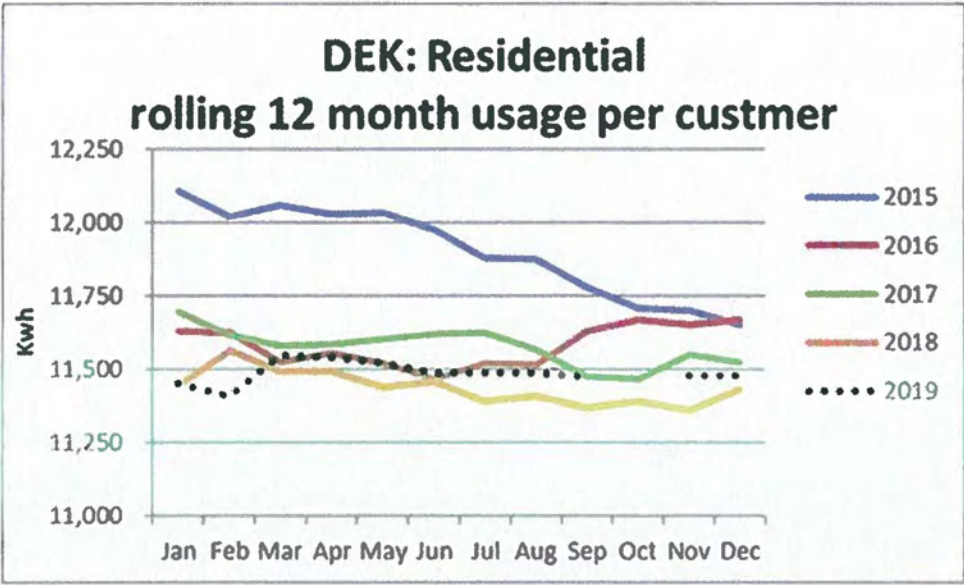
RESPONSE:

From 2006 through the forecasted test period, there has been some growth in total kWh sales and even more in customer count. Comparing sales and customer count from 2006 to the figures for the forecasted test period, the number of residential customers have grown from 117,722 in 2006 to 128,914 in the forecasted test period, which is an approximate average annual growth rate of 0.6% over that period. Because of gains in energy efficiency and changes in customer behavior, residential sales over that time has grown at a much slower rate of approximately 0.3% per year (residential sales were

1,402,220 MWh in 2006 and are projected to be 1,464,635 MWh for the forecast test period).

For non-residential growth, customer count has grown from 14,824 in 2006 to a forecast of 15,681 for the forecast test period. And, non-residential sales have grown from 2,479,593 MWhs in 2006 and 2,580,368 MWhs projected for the forecast test period. The average annual growth rates for non-residential customers is 0.4% in customer count and 0.3% in sales.

Indeed, Duke Energy Kentucky has enthusiastically led the development efforts described, and the economy of Northern Kentucky has grown. However, the gains that would otherwise result from increases in number of customers have been hampered by a per-customer usage that has stagnated, and—in many instances—even been reduced since 2006 (a graph demonstrating this decline in usage for residential class customers during several recent years is below). Growth in economic activity by a variety of measures has been faster than growth in demand for energy, as employers have sought to work more efficiently and as households have utilized new technology for efficiency—this is most true in lighting but also seen in other end uses—as well as programs that create incentives to adopt that technology rapidly.



PERSON RESPONSIBLE: Benjamin W. Passty

REQUEST:

Refer to the Spiller Testimony, page 11, lines 18-20, regarding the Adjusted Due Date program.

- a. Confirm that the Adjusted Due Date program is available to those electric customers who have an analog meter.
- b. Explain whether an eligible electric customer can request to adjust the customer's due date an unlimited number of times or whether there is a limit placed on the number of times that a due date can be adjusted.
- c. Explain why the program is limited only to those customers who have analog meters.
- d. Explain whether there is a similar program that is available to electric customers who have advanced metering infrastructure (AMI) meters.

RESPONSE:

- a. Duke Energy Kentucky customers who have analog meters are able to be on the adjusted due date program.
- b. Duke Energy Kentucky customers are eligible to adjust their due date once each 12 months.
- c. Customers that have AMI meters may be placed on Pick Your Due Date Program.

- d. Yes, Pick Your Due Date Program which allows Duke Energy Kentucky customers to choose what day they want their bill to be due each month.

PERSON RESPONSIBLE: Lesley Quick

REQUEST:

Refer to the Spiller Testimony, page 13, lines 12 through page 14, line 4, regarding the High Bill Alerts and the Usage Alerts programs.

- a. State whether the High Bill Alerts program is set forth in Duke Kentucky's tariff. If so, identify where the High Bill Alerts program is set forth in Duke Kentucky's tariff.
- b. In addition to having a non-AMI meter, provide the other qualifications required for eligibility for the High Bill Alerts program.
- c. Explain how the alerts are communicated to customers that are automatically enrolled in the High Bill Alerts program.
- d. Provide the number of electric customers that are currently participating in the High Bill Alerts program.
- e. With respect to the Usage Alerts program, confirm that this is a voluntary program. If confirmed, explain why Duke Kentucky is proposing to automatically transition "all eligible customers who receive an AMI-MDM certified meter from High Bill Alerts to [Duke Kentucky's] Usage Alerts program" rather than allowing eligible customers the option to be transitioned to the Usage Alerts program.
- f. The testimony also states that "[e]ligible customers who start service at premises with an AMI-MDM certified meter are automatically enrolled in [Duke Kentucky's] Usage Alerts program." To the extent that the Usage Alerts program

is a voluntary program, explain why Duke Kentucky is proposing to automatically enroll these customers in the program rather than allowing such customers to voluntarily choose to enroll in the program.

RESPONSE:

- a. The High Bill Alerts program is not included in Duke Energy Kentucky's tariff.
- b. In addition to not having an AMI meter, all residential customers with an active account that do not have demand, fixed price, or a priced schedule rate are eligible for High Bill Alerts.
- c. Alerts are sent to customers via email.
- d. Approximately 1.68M are enrolled in the High Bill Alert program across all of Duke Energy Corporation's service area. There are 16,913 enrolled in Kentucky.
- e. Usage Alerts is a voluntary program that customers can easily elect to not participate in. Usage Alerts offers additional notifications over the High Bill Alerts program, because it leverages the customer's actual usage data during their billing cycle to provide mid-cycle alerts. High Bill alerts primarily leverages weather data only.
- f. The company views Usage Alerts as a valuable program that provides customers insights into their projected bill totals prior to their bill due date; allowing them to better manage their energy usage and adjust if necessary. Based on detailed insights and potential savings this program provides, the company is moving to automatically enroll customers into the program.

PERSON RESPONSIBLE:

Jeff L. Kern – a.
Lesley Quick – b. through f.

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-027

REQUEST:

Refer to the Spiller Testimony, pages 20-22. State whether the option to install multi-use poles for “smart city” infrastructure planning is located in Duke Kentucky’s lighting tariffs. If so, identify the location of these provisions.

RESPONSE:

The Company’s Rate LED – LED Outdoor Lighting Electric Service (Sheet No. 64) states in the Character of Service section, “This service may include ‘smart’ lighting technologies.” The pole used for the LED lighting services includes multi-use poles capable of supporting “smart” technologies as attachments.

PERSON RESPONSIBLE: Jeff L. Kern

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-028

REQUEST:

Refer to the Direct Testimony of Melissa B. Abernathy, page 2. Refer also to the application, Volume 11, Section B, Schedule B-2.1, pages 5 and 11 of 12. Explain the increase in Completed Construction Not Classified from the base period to the forecasted test year.

RESPONSE:

The majority of the capital additions in the forecasted portion of the base year and the forecasted test year are categorized as "Completed Construction Not Classified" due to the company's forecasting methodology. Forecasted additions are the result of projected capital spend, generally within a few categories (project classes) per FERC function, and assumptions for when that capital spend will be placed into service. As a result of this methodology where capital spend is not projected at the plant account level, forecasted plant additions are not classified to specific plant accounts.

When projects are actually closed to plant in-service they are classified in specific plant accounts. Therefore, since the base period includes the actual plant activity for December 2018 through May 2019 a significant portion of that activity is classified in the plant account lines as opposed to "Completed Construction Not Classified."

PERSON RESPONSIBLE: Christopher Jacobi

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-029

REQUEST:

Refer to the Direct Testimony of Thomas Christie (Christie Testimony), page 9. Explain whether Duke Kentucky has considered or evaluated insourcing its vegetation management program. If not, explain why not. If so, identify and describe any barriers and provide any economic analysis performed.

RESPONSE:

Referencing the February 14, 2018 Rebuttal Testimony of Company's witness, April Edwards (page 5) from the Company's most recent electric base rate case, Case No. 2017-00321, historically, it has been far more cost effective for the Company to outsource this service, than to invest in the equipment, personnel, and ongoing training and certifications to provide this service internally. The Company has not performed an analysis since its last rate case.

PERSON RESPONSIBLE: T.K. Christie

REQUEST:

Refer to the Christie Testimony, page 10.

- a. Describe in detail how Duke Kentucky contracts its vegetation management services.
- b. Provide copies of its vegetation management contracts from 2014 through 2018.
- c. On what basis does Duke Kentucky award its vegetation management contracts (i.e., per hour, per mile, etc.).

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET
(As to Attachments 2 – 11 only)

- a. Please see STAFF-DR-02-030 Attachment 1.
- b. Please see STAFF-DR-02-030 Confidential Attachments 2-11. Lewis Tree was the contractor 2014-2017, NG Gilbert (owned by Townsend Tree) was the contractor in 2017, Asplundh Tree became the contractor in 2018. These confidential attachments will be provided to all parties upon the execution of a Confidentiality Agreement.
- c. Duke Energy Kentucky awards contracts based on unit rates following the competitively bid event.

PERSON RESPONSIBLE: T.K. Christie

Competitive Bidding Process

- Obtain Scope of Work documents from the Business Unit
- Determine with Business Unit the overall project schedule & requirements
- Assess market conditions and develop contract strategy
- Develop with the Business Unit the list of qualified contractors to invite
- If invitees are not already approved to work on the Duke System contractor(s) must be approved to do so by Health & Safety, Commercially (Sourcing), and Technically (Business Unit) to be invited to participate in the RFP event
- Prepare bid event in PowerAdvocate
 - Schedule
 - Invitees
 - Buyers and Buyer Representatives (Business Unit Reps)
 - Upload all required/applicable RFP documents
 - RFP Summary
 - Master Agreement (terms & conditions) template
 - General Specifications
 - Applicable Technical Specifications
 - Scope of Work
 - Circuit Maps
 - Work Descriptions
 - Etc.
 - Upload required/applicable Commercial Documents (Intent to Bid, Exceptions to Terms & Conditions, Exceptions to Specifications/Scope of Work, Proposed Subcontractor List, Minority/Women owned Business Certification (if applicable), Sustainability Questionnaire (if applicable), etc.)
 - Pricing Datasheet or Pricing Spreadsheet
- Release/open RFP to bidders
- Schedule the pre-bid meeting to review the RFP scope, schedule, and requirements with invited contractors
- Conduct pre-bid meeting with all contractors and Business Unit
- Respond to questions from contractors during bidding phase
- Summarize all bid submittal documents and review/evaluate responses with Business Unit
- Determine next steps if necessary:
 - Response clarifications
 - Negotiate responses with selected bidders (short list if applicable)
- Evaluate and determine with Business Unit the proposed successful bidder
- Obtain Business Unit and Supply Chain approvals to award
- Execute award of work with applicable contract documents

2019-00271

STAFF-DR-01-030

CONFIDENTIAL

ATTACHMENTS 2 – 11

ARE BEING FILED

UNDER SEAL

REQUEST:

Refer to the Christie Testimony, page 12, lines 2-3.

- a. Explain whether the vegetation management contract for the Duke Kentucky service area is part of a larger contract or independent of contracts awarded for the Midwest market.
- b. State the term of the contract.

RESPONSE:

- a. A competitive bid event has taken 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 geographical areas identified to receive separate pricing and award work.
- b. 3 years which ends December 31, 2020 with a 2 year extend option.

PERSON RESPONSIBLE: T. K. Christie

STAFF-DR-02-032

REQUEST:

Refer to the Christie Testimony, pages 12-13. Explain whether Duke Kentucky's Hazard Tree Program only targets trees that are outside of its right of way.

RESPONSE:

Duke Energy Kentucky's Hazard Tree program is established to remove trees outside of our easement rights/established right-of-way. We do remove trees inside of our easement rights/established right-of-way but these are captured as O&M removals and not part of our Hazard Tree Program.

PERSON RESPONSIBLE: T. K. Christie

REQUEST:

Refer to the Christie Testimony, page 14. Explain why the Hazard Tree Removal Program is recorded as a capital asset.

RESPONSE:

Per the Duke Energy Capitalization Guidelines, a “danger tree” is defined as any tree along right-of-way corridors, but located outside the actual right-of-way boundary, that is dead, dying, diseased, or severely leaning such that if it fell it could cause damage to poles, circuits, conductors, etc., or any other tree that, due to its proximity, shape, type of size otherwise endangers these assets. As such, capital treatment was approved based on the rationale that future periods benefitted from the removal of the hazard trees. Please see below for an excerpt from the Duke Energy Capitalization Guidelines.

Distribution and Transmission Right of Way Clearing Costs

To properly account for distribution and transmission right-of-way clearing costs in accordance with GAAP and applicable regulatory requirements:

1. Expenditures associated with the initial clearing of a right-of-way, including removal of danger trees and overhang from outside of the actual right-of-way, shall be capitalized.
2. Expenditures associated with the subsequent removal of danger trees shall be capitalized.
3. Expenditures associated with the widening of an existing right-of-way shall be capitalized. Note that there may be specific regulatory orders which must be followed, as is the case with Piedmont North Carolina, where subsequent right of way widening has been deferred to future rate cases.
4. Expenditures associated with the clearing or reclamation of an existing right-of-way, including charges for routine circuit maintenance, customer ticket work, and herbicide programs, shall be expensed.

A "danger tree," for purposes of this policy, is defined as any tree along right-of-way corridors, but located outside the actual right-of-way boundary, that is dead, dying, diseased, or severely leaning such that if it fell it could cause damage to poles, circuits, conductors, etc., or any other tree that, due to its proximity, shape, type or size otherwise endangers these assets.

Sufficient supporting documentation will be maintained by Power Delivery for all capital work performed.

Summary:

| Right-of-Way Work Performed | Capital or Expense |
|---------------------------------|----------------------------------|
| Initial Clearing | Capital |
| Initial Danger Tree Removal | Capital |
| Initial Trimming of Overhang | Capital |
| Subsequent Widening | Capital (PNG NC may be deferred) |
| Subsequent Danger Tree Removal | Capital |
| Subsequent Clearing | Expense |
| Subsequent Trimming of Overhang | Expense |

PERSON RESPONSIBLE: Melissa B. Abernathy

REQUEST:

Refer to the Direct Testimony of Retha Hunsicker (Hunsicker Testimony).

- a. Provide the cost of the proposed customer information system (CIS) by year.
- b. Explain how the cost of the CIS will be allocated among the Duke Energy affiliates, including Duke Kentucky.
- c. State whether the cost allocation is included in the Cost Allocation Manual. If so, identify the relevant provisions.

RESPONSE

- a. The forecasted cost by year, allocated to Duke Energy Kentucky, is shown below, with actual costs for 2016-2018 reflected (\$ in millions).

| Year | Capital | O&M |
|-------------|----------------|----------------|
| 2016 | \$.004 | \$.281 |
| 2017 | \$.714 | \$.141 |
| 2018 | \$.909 | \$.779 |
| 2019 | \$ 2.349 | \$.979 |
| 2020 | \$ 1.968 | \$.947 |
| 2021 | \$.030 | \$.794 |
| 2022 | \$ 1.965 | \$ 3.186 |
| 2023 | \$.029 | \$.515 |

- b. The cost for the Customer Connect program is allocated among Duke Energy's regulated utilities, excluding Piedmont Natural Gas. The allocation is based on the number of customers in each jurisdiction as a percentage of the total number of Duke Energy customers.

c. This is included in Appendix M of the Kentucky Cost Allocation Manual.

PERSON RESPONSIBLE:

Retha Hunsicker – a., b.
Jeffrey R. Setser – c.

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-035

REQUEST:

Refer to the Hunsicker Testimony, page 4-5. Provide examples of "complex billing," beyond net metering, that currently require manual intervention.

RESPONSE:

Currently, manual intervention is required for net metering and any customer served under the Cogeneration and Small Power Production Sale and Purchase Tariff-Greater than 100kW.

PERSON RESPONSIBLE: Retha Hunsicker

REQUEST:

Refer to the Hunsicker Testimony, page 8. Explain how Duke Energy, and in turn Duke Kentucky, chose Customer Connect for its customer service platform.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET

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PERSON RESPONSIBLE: Retha Hunsicker

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-037

REQUEST:

Refer to the Hunsicker Testimony, page 14, line 9, and page 15, lines 12-15. Confirm that Duke Kentucky will not implement a new bill format until its revised tariff, as proposed in this matter, which includes the new bill format, is approved by the Commission.

RESPONSE:

The new bill format will not be implemented until the revised tariff is approved.

PERSON RESPONSIBLE: Retha Hunsicker

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-038

REQUEST:

Refer to the Hunsicker Testimony, page 14, lines 16-18. Provide examples of new rate offerings and advanced billing options that could be provided to customers.

RESPONSE:

The Company is committed to providing customers choices for rates that are meaningful and relevant to today's energy environment, such as advanced pricing structures and billing options, a process that, due to limitations of the existing CIS, is complex, costly and time consuming. Upgrading the CIS will better support these types of designs – the new CIS will be much more configurable, reducing the amount of time needed to test and implement pricing changes and offerings for customers.

PERSON RESPONSIBLE: Retha Hunsicker

REQUEST:

Refer to the Hunsicker Testimony, page 18, line 19 through page 21, line 16. Explain how the new CIS system would be affected if the Commission fails to grant any or all of the requested waivers.

RESPONSE:

If the Commission were to deny the requested waiver the impact would be felt by customers. As discussed throughout my testimony, the goal of the Customer Connect program is to provide simplified, consistent and personalized experiences for customers. The requested waivers will allow the Company to enhance the customer experience by employing their preferred channel of communications, align deposits to each customer's actual consumption, and provide relevant billing for rates that utilize interval-billed data.

PERSON RESPONSIBLE: Retha Hunsicker

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-040

REQUEST:

Refer to the Hunsicker Testimony, page 18, line 19 through page 21, line 16. If the Commission were to grant any of the waivers requested, indicate when Duke Kentucky's tariff would be revised to reflect such waivers.

RESPONSE:

The tariffs would be revised closer to the implementation date for the complete solution (core meter-to-cash), scheduled for the fall of 2022.

PERSON RESPONSIBLE: Retha Hunsicker

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-041

REQUEST:

Refer to the Hunsicker Testimony, page 19. Confirm that Duke Kentucky's proposal, to only bill residential customers if the recalculated deposit is greater than \$50, would also require a waiver of 807 KAR 5:006, Section 8(1)(d)(3)(c). If this cannot be confirmed, explain.

RESPONSE:

Yes, a waiver of 807 KAR 5:006, Section 8(1)(d)(3)(c) will be needed.

PERSON RESPONSIBLE: Retha Hunsicker

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-042

REQUEST:

Refer to the Hunsicker Testimony, page 19, lines 6-8. Pursuant to 807 KAR 5:006, Section 8(1)(d)(3)(a), a customer is allowed to request that their deposit be recalculated every 18 months based on the actual usage of the customer. State whether Duke Kentucky is proposing to make the deposit recalculation automatic instead of at the customer's request.

RESPONSE:

The annual recalculation of the deposit proposed by the Company will be done automatically.

PERSON RESPONSIBLE: Retha Hunsicker

STAFF-DR-02-043

REQUEST:

Refer to the Hunsicker Testimony, page 19, lines 8-11.

- a. Explain how it is in the best interest of the customer to have their deposits recalculated annually.
- b. Provide, by year, for calendar years 2017, 2018, and 2019 to date, the number of customers whose deposit was insufficient to cover the amount owed when they left Duke Kentucky's program.

RESPONSE:

- a. New customer deposits, when required, are based on two-twelfths estimated annual billing for that customer (according to 807 KAR 5:006, Section 8(1)(d)(1)(c)), and that estimate may not accurately reflect the customer's usage pattern. As noted throughout my testimony, the Company wants to personalize experiences for its customers and recalculating the deposit to align with each customer's actual usage provides an opportunity to do that. Additionally, if the customer's actual usage pattern does not support the deposit currently being held, an annual review enables the release of the excess deposit to ensure the account is not over-secured.
- b. This information is not tracked.

PERSON RESPONSIBLE: Retha Hunsicker – a.
Lesley Quick – b.

REQUEST:

Refer to the Hunsicker Testimony, page 19, lines 14-20. Provide the following information by year for calendar years 2017, 2018, and 2019 to date.

- a. The number of residential customers who requested that their deposit be recalculated pursuant to 807 KAR 5:006, Section 8(1)(d)(3)(a).
- b. The number of residential customers who received a refund as a result of their deposit recalculation.
- c. The number of residential customers who had to pay an additional deposit as a result of their deposit recalculation.
- d. The number of residential customers who would have received a refund as a result of their deposit recalculation if the waiver proposed in this case was in place at the time.
- e. The number of residential customers who would have had to pay an additional deposit as a result of their deposit recalculation if the waiver proposed in this case was in place at the time.
- f. The number of non-residential customers who requested that their deposit be recalculated pursuant to 807 KAR 5:006, Section 8(1)(d)(3)(a).
- g. The number of non-residential customers who received a refund as a result of their deposit recalculation.

- h. The number of non-residential customers who had to pay an additional deposit as a result of their deposit recalculation.
- i. The number of non-residential customers who would have received a refund as a result of their deposit recalculation if the waiver proposed in this case was in place at the time.
- j. The number of non-residential customers who would have had to pay an additional deposit as a result of their deposit recalculation if the waiver proposed in this case was in place at the time.

RESPONSE:

The requested information is not tracked.

PERSON RESPONSIBLE: Lesley Quick

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-045

REQUEST:

Refer to the Hunsicker Testimony, page 19, line 21 through page 20, line 20. Confirm that the beginning and ending meter readings are currently being displayed on customer bills for the customers served under the rate schedules listed.

RESPONSE:

Meter readings are displayed on the bill for rates RS, SP and GS-FL. Generally, readings are not displayed on the bill for rates DP, DS, DT, TT, EH, GSS, and RTP-M.

PERSON RESPONSIBLE: Retha Hunsicker

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**


STAFF-DR-02-046

REQUEST:

Refer to the Hunsicker Testimony, page 20, lines 6-20. Provide an example showing how usage that occurs during the relevant bill periods will be displayed on the bills of customers served under the rate schedules listed.

RESPONSE:

An example of how relevant bill information will be displayed on the Company's new bill format is shown below:

| | | |
|--|-------------|--|
| Current electric usage for meter 999999999 for billing period Sep 12 - Oct 11 | |  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. |
| kWh usage | 163,970 kWh | |
| On-peak actual kW | 384.00 kW | |
| Actual kVa | 452.80 kW | |
| Power factor | 84.8% | |
| Metering adjustment | -2,460 kWh | |
| Billed kWh | 161,510 kWh | |
| Billed kW | 407.50 kW | |
| * Billing demand: 407.50 based on 90% of 452.80 kVa | | |

PERSON RESPONSIBLE:

Retha Hunsicker

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-047

REQUEST:

Refer to the Hunsicker Testimony, page 20, line 21 through page 21, line 16. Confirm that Duke Kentucky is currently not offering the Revert to Owner program.

RESPONSE:

Duke Energy Kentucky currently offers a similar program called Automatic Landlord. The Automatic Landlord program allows utility service to be automatically transferred into the name of the property owner, landlord, or property management company when service is taken out of a tenant's name. The Automatic Landlord program does not offer an online portal for landlords/property owners to manage their properties.

PERSON RESPONSIBLE: Retha Hunsicker

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-048

REQUEST:

Refer to the Hunsicker Testimony, page 20, line 21 through page 21, line 16. Indicate how long Duke Kentucky will retain the deposit from owners that enroll in the Revert to Owner program.

RESPONSE:

Since filing direct testimony, the Company has continued to refine the details of this program and no longer plans to charge a deposit for property owners who enroll in the Revert to Owner program. If a deposit is subsequently charged as allowed by 807 KAR 5:006, Section 8(3), the deposit will be retained as outlined in the Company's tariff.

PERSON RESPONSIBLE: Retha Hunsicker

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-049

REQUEST:

Refer to the Hunsicker Testimony, page 20, line 21 through page 21, line 16. State whether interest will be paid for the amount of time the deposit from the owner is retained as required by 807 KAR 5:006, Section 8(6).

RESPONSE:

Yes, interest on deposits collected by the Company will be paid as required by 807 KAR 5:006, Section 8(6). Additionally, please refer to the response to Staff 02-048; the Company no longer plans to charge a deposit for property owners who enroll in the Revert to Owner program.

PERSON RESPONSIBLE: Retha Hunsicker

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-050

REQUEST:

Refer to the Direct Testimony of Christopher M. Jacobi (Jacobi Testimony), pages 5, 7 and 8.

- a. Provide the rating agency reports from both Standard & Poor's (S&P) and Moody's Investors Service (Moody's) for Duke Kentucky for 2018 and 2019.
- b. If not provided in response to part a., provide the S&P report referenced in footnote 1 on page 7.
- c. If not provided in response to part a., provide the Moody's report referenced in footnote 2 on page 8.

RESPONSE:

Please see STAFF-DR-02-050 Attachments 1 through 3.

PERSON RESPONSIBLE: Christopher Jacobi



CREDIT OPINION

29 January 2019

Update

✓ Rate this Research

RATINGS

Duke Energy Kentucky, Inc.

| | |
|------------------|--------------------------------|
| Domicile | Kentucky, United States |
| Long Term Rating | Baa1 |
| Type | Senior Unsecured - Dom Curr |
| Outlook | Stable |

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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Duke Energy Kentucky, Inc.

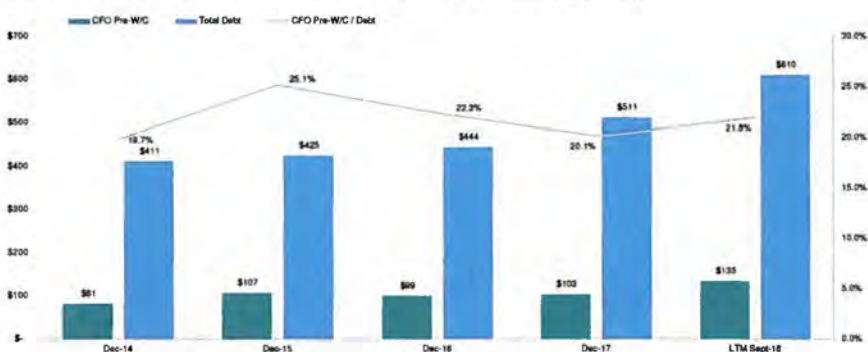
Update to credit analysis

Summary

Duke Energy Kentucky Inc.'s (Duke Kentucky) credit profile reflects a relatively supportive regulatory environment along with strong cash flow and financial coverage ratios. Our view also considers the utility's relatively small stand-alone size, and its position as a subsidiary of Baa1 rated Duke Energy Ohio, Inc. (Duke Ohio) within the Duke Energy Corporation (Duke Energy) family.

Exhibit 1

Historical CFO Pre-WC, Total Debt and CFO Pre-WC to Debt[1] (\$ MM)



[1]CFO pre-WC is defined as cash flow from operations excluding changes in working capital
 Source: Moody's Financial Metrics

Credit strengths

- » Strong financial metrics
- » Generally credit supportive regulation in Kentucky
- » Position within the Duke Energy corporate family

Credit challenges

- » Credit metrics are expected to weaken
- » Small size and position as wholly-owned subsidiary of Duke Ohio
- » Elevated carbon transition risk

Rating outlook

Duke Kentucky's stable rating outlook considers the generally credit supportive regulatory environment in Kentucky, financial metrics that are appropriate for the rating level, and moderating capital expenditures.

Factors that could lead to an upgrade

- » Supportive rate case outcomes that allow the continuation of strong credit metrics
- » Cash from operations excluding working capital changes to debt in the mid-20% range on a sustained basis
- » An upgrade of Duke Ohio from its current Baa1 rating level

Factors that could lead to a downgrade

- » Cash flow from operations excluding working capital changes to debt falling below the high-teens
- » Higher capital expenditures resulting in a material increase in debt levels
- » A decline in the credit supportiveness of the regulatory environment in Kentucky

Key indicators

Exhibit 2

Duke Energy Kentucky, Inc. [1]

| | Dec-14 | Dec-15 | Dec-16 | Dec-17 | LTM Sept-18 |
|-----------------------------------|--------|--------|--------|--------|-------------|
| CFO Pre-W/C + Interest / Interest | 5.7x | 8.0x | 7.2x | 7.2x | 7.8x |
| CFO Pre-W/C / Debt | 19.7% | 25.1% | 22.3% | 20.1% | 21.8% |
| CFO Pre-W/C – Dividends / Debt | 19.7% | 12.1% | 20.1% | 20.1% | 21.8% |
| Debt / Capitalization | 37.6% | 38.0% | 37.3% | 42.4% | 43.7% |

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
 Source: Moody's Financial Metrics

Profile

Duke Kentucky is a wholly owned subsidiary of Duke Ohio and its ultimate parent, Duke Energy Corporation. Duke Kentucky is a combination electric (approximately 75% of capital) and gas utility company that owns and operates approximately 1,100 megawatts (MWs) of regulated generation facilities and provides electricity to around 142,000 electric customers in northern Kentucky (primarily the areas surrounding Cincinnati). The company also provides natural gas services to approximately 100,000 customers in the same area and is regulated primarily by the Kentucky Public Service Commission (KPSC).

Detailed credit considerations

Cash flow coverage ratios remain solid

Duke Kentucky's cash flow and key financial metrics have been strong and appropriate for its credit profile for the last several years even though it operated under base rate freezes from 2012 through 2018. During this period, the utility's ratio of cash from operations excluding changes in working capital (CFO pre-WC) to debt generally remained above 20%, and in 2015 and 2016, moved above 22% before moderating slightly in 2017 and 2018. The 22% threshold is at the lower end of the "A" scoring range for this factor in our Regulated Electric and Gas Utilities rating methodology scorecard.

Through 2017, the strength in Duke Kentucky's metrics was partially due to continued extensions of bonus depreciation and the resulting increase in cash flow from deferred income taxes. Going forward, we expect the combination of increased leverage from environmental compliance spending, and the negative cash flow impacts of federal tax reform, will maintain downward pressure on

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financial ratios. However, due to recent rate activity, we anticipate cash flow metrics will remain supportive of Duke Kentucky's current credit quality; for example, we expect the utility's ratio of CFO pre- WC to debt will remain near 20%.

Generally credit supportive Kentucky regulation

We generally view the Kentucky regulatory environment as credit supportive with utilities in the state benefitting from timely cost recovery mechanisms, including recovery of fuel, purchased power, and environmental compliance costs. Duke Kentucky's most recent rate decision was generally consistent with that view, notwithstanding the fact that it was the company's first base rate case since 2006.

In April 2018, the Kentucky Public Service Commission (KPSC) approved an \$8.4 million increase (\$21 million when including the impact of approved riders) in electric base rates premised on a 9.725% return on equity (ROE) and a 49% equity layer. Importantly, the KPSC approved the expansion of the utility's environmental surcharge mechanism (ESM) to provide recovery of all of Duke Kentucky's environmental costs, including capital costs, costs related to ash and ash disposal, expenditures for environmental reagents and allowances, and additional operating and maintenance expenditures formally covered in base rates. Duke Kentucky estimates the incremental revenue from this rider will be approximately \$13 million on an annualized basis. The KPSC did however deny Duke Kentucky's request to implement riders for certain transmission costs and distribution capital investments. We view the use of riders and trackers as supportive of credit quality as they reduce regulatory lag and increase cash flow predictability.

The 2018 electric base rate decision followed a September 2017 request from Duke Kentucky for an increase of approximately \$48.6 million, which would have raised the average customer's bill by about 15%. The requested increase was based on a 10.3% return on equity (ROE) and a 49% equity layer. In February 2018, Duke Kentucky reduced its requested increase to \$30.1 million primarily to address the impact of the lower federal tax rate, including a return of the unprotected portion of excess deferred taxes over ten years. In addition to the implementation of riders, the case sought to begin recovery of investments the company made in its system over the prior 11 years, including the KPSC approved acquisition of the 31% of the 600 MW East Bend generating station it did not already own, ongoing investment in advanced metering infrastructure, and investments in utility scale solar generating facilities. These capital additions were largely approved, although adjustments to depreciation rates helped to limit the rate impact to customers. The deferral of approximately \$5 million of replacement power and planned outage expense further lessened the immediate impact to customers. As a result, according to the KPSC, the overall rate increase to customers was limited to approximately 3.2%

On the gas side (approximately 25% of capital), in August 2018, Duke Kentucky filed for an approximate \$10.5 million (11.1% average) increase in its base rates. The request is net of savings associated with federal tax reform and is driven by system investments made since its last rate case in 2009. The company is also requesting a weather normalization adjustment mechanism, which would add stability to its cash flow, a credit positive. A hearing in the case is scheduled to begin in early February. In 2016, the KPSC approved a settlement agreement that provided rider recovery for Duke Kentucky's five year accelerated natural gas service line replacement program (ASRP) which is also supportive of credit quality.

Capital expenditures are moderating

Duke Kentucky's capital spending has been elevated in recent years, with a good portion focused on environmental compliance. In 2015, the EPA published rules on the regulation of coal ash or coal combustion residuals (CCR), which caused Duke Kentucky to record additional asset retirement obligations (ARO) for ash basin closure costs and to plan investments for improved ash handling. In 2017, the KPSC approved certificates of public convenience and necessity (CPCN) for the company's plans to convert the East Bend coal fired station to dry bottom ash (at a cost of approximately \$25 million) and to excavate and repurpose the existing East Bend ash pond (approximately \$94 million). Also in 2017, Duke Kentucky received approval for an advanced metering infrastructure project, estimated at \$49 million, that will take two years to complete. These investments were in addition to an uptick in distribution investment to improve reliability.

For the twelve months ending September 2018, Duke Kentucky's capital expenditures were approximately \$264 million versus \$180 million in 2017, around \$100 million in 2016 and \$50-\$60 million in prior years. This heightened capital program has contributed to an increased debt burden for the utility as total reported debt has grown from \$375 million at the end of 2015 to about \$550 million as of September 2018. Going forward, we expect annual investment will moderate somewhat, moving closer to around \$125 million per year, which will relieve some pressure on credit metrics.

Small size and position as wholly-owned subsidiary of Duke Ohio are credit considerations

Duke Kentucky is the smallest utility in the Duke Energy system (under 2% of earnings base) and is wholly owned by a neighboring Duke utility subsidiary, Duke Ohio (Baa1 stable) (about 5% of earnings base), which is a fully regulated electric transmission and distribution company that also operates a natural gas local distribution company. Although Duke Kentucky does not file financial statements with the SEC, it does publish quarterly and audited annual financial statements on its web site. The utility's small size, as well as its position as a wholly owned subsidiary of a Baa1 rated affiliate utility, are both considerations in assessing its credit profile.

Elevated carbon transition risk within the regulated utility sector

Duke Kentucky has elevated carbon transition risk within the US regulated utility sector as its primary generating asset is a coal plant. In 2017, we estimate that virtually all of the energy supplied by Duke Kentucky was generated by coal. This gives it a higher carbon transition risk profile than other vertically integrated utilities; however, local regulatory support for coal remains strong in Kentucky.

Liquidity analysis

Duke Kentucky maintains an adequate liquidity profile. For the twelve months ended September 30, 2018, the utility generated cash from operations (CFO) of about \$88 million, made about \$264 million in capital investments and made no distributions to its parent, resulting in negative free cash flow (FCF) of \$176 million. In 2017, Duke Kentucky generated approximately \$112 million of CFO, invested about \$180 million in capital expenditures and made no distributions to its parent, resulting in a negative FCF of approximately \$68 million. Going forward, given its ongoing but moderating capital needs, we anticipate the utility's cash flow shortfalls will be more modest.

Duke Kentucky's additional liquidity sources include its access to funding from the Duke parent company's commercial paper program through the Duke system money pool, and from direct borrowings from the money pool. As of September 30, 2018, the utility also had \$150 million of borrowing capacity under Duke's \$8 billion master credit facility that matures in March 2023, of which \$52 million was available. Duke has unilateral ability to increase Duke Kentucky's borrowing limit, up to \$175 million, which could provide additional liquidity, if needed.

Duke's master credit facility does not contain a material adverse change clause for new borrowings and has a single financial covenant requiring that Duke and its utility subsidiaries each maintain a consolidated debt to capitalization ratio of no more than 65% (except for Piedmont Natural Gas Company which has a maximum ratio of 70%). As of September 30, 2018, Duke reported that all of the borrowing entities were in compliance with this covenant. Duke Kentucky's next debt maturity is \$100 million of senior unsecured debt due in October 2019, which we expect it will refinance.

Rating methodology and scorecard factors

Exhibit 3

Rating Factors

Duke Energy Kentucky, Inc.

| Regulated Electric and Gas Utilities Industry Grid [1][2] | Current LTM 9/30/2018 | | Moody's 12-18 Month Forward View As of Date Published [3] | |
|---|--------------------------|-------|---|-------|
| | Measure | Score | Measure | Score |
| Factor 1 : Regulatory Framework (25%) | | | | |
| a) Legislative and Judicial Underpinnings of the Regulatory Framework | A | A | A | A |
| b) Consistency and Predictability of Regulation | A | A | A | A |
| Factor 2 : Ability to Recover Costs and Earn Returns (25%) | | | | |
| a) Timeliness of Recovery of Operating and Capital Costs | Baa | Baa | Baa | Baa |
| b) Sufficiency of Rates and Returns | Baa | Baa | Baa | Baa |
| Factor 3 : Diversification (10%) | | | | |
| a) Market Position | Ba | Ba | Ba | Ba |
| b) Generation and Fuel Diversity | B | B | B | B |
| Factor 4 : Financial Strength (40%) | | | | |
| a) CFO pre-WC + Interest / Interest (3 Year Avg) | 7.8x | Aa | 5.7x - 6.1x | A |
| b) CFO pre-WC / Debt (3 Year Avg) | 23.3% | A | 19% - 23% | Baa |
| c) CFO pre-WC – Dividends / Debt (3 Year Avg) | 21.3% | A | 16% - 20% | A |
| d) Debt / Capitalization (3 Year Avg) | 39.1% | A | 42% - 46% | A |
| Rating: | | | | |
| Grid-Indicated Rating Before Notching Adjustment | | A3 | | Baa1 |
| HoldCo Structural Subordination Notching | 0 | 0 | 0 | 0 |
| a) Indicated Rating from Grid | | A3 | | Baa1 |
| b) Actual Rating Assigned | | Baa1 | | Baa1 |

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

[2] As of 9/30/2018 (LTM)

[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.

Source: Moody's Financial Metrics

Appendix

Exhibit 4 Cash Flow and Credit Metrics [1]

| CF Metrics | Dec-14 | Dec-15 | Dec-16 | Dec-17 | LTM Sept-18 |
|----------------------------------|-------------|------------|------------|-------------|--------------|
| As Adjusted | | | | | |
| FFO | 98 | 116 | 107 | 118 | 137 |
| +/- Other | (17) | (10) | (8) | (15) | (3) |
| CFO Pre-WC | 81 | 107 | 99 | 103 | 133 |
| +/- ΔWC | (40) | 14 | 12 | 18 | (43) |
| CFO | 41 | 121 | 112 | 121 | 90 |
| - Div | - | 55 | 10 | - | - |
| - Capex | 58 | 75 | 108 | 188 | 270 |
| FCF | (16) | (9) | (7) | (67) | (180) |
| <hr/> | | | | | |
| (CFO Pre-W/C) / Debt | 19.7% | 25.1% | 22.3% | 20.1% | 21.8% |
| (CFO Pre-W/C - Dividends) / Debt | 19.7% | 12.1% | 20.1% | 20.1% | 21.8% |
| FFO / Debt | 23.9% | 27.4% | 24.0% | 23.0% | 22.4% |
| RCF / Debt | 23.9% | 14.4% | 21.7% | 23.0% | 22.4% |
| <hr/> | | | | | |
| Revenue | 493 | 462 | 436 | 431 | 468 |
| Cost of Good Sold | 230 | 183 | 164 | 155 | 176 |
| Interest Expense | 17 | 15 | 16 | 16 | 20 |
| Net Income | 35 | 44 | 42 | 59 | 74 |
| Total Assets | 1,261 | 1,385 | 1,423 | 1,577 | 1,770 |
| Total Liabilities | 850 | 982 | 987 | 1,068 | 1,183 |
| Total Equity | 411 | 403 | 435 | 509 | 587 |

[1] All figures and ratios are calculated using Moody's estimates and standard adjustments. Periods are Financial Year-End unless indicated. LTM = Last Twelve Months
 Source: Moody's Financial Metrics

Exhibit 5 Peer Comparison Table [1]

| (in US millions) | Duke Energy Kentucky, Inc. | | | Kentucky Power Company | | | Louisville Gas & Electric Company | | | Kentucky Utilities Co. | | |
|--------------------------------|----------------------------|------------|-------------|------------------------|------------|-------------|-----------------------------------|------------|-------------|------------------------|------------|-------------|
| | Baa1 Stable | | | Baa2 Negative | | | A3 Stable | | | A3 Stable | | |
| | FYE Dec-18 | FYE Dec-17 | LTM Sept-18 | FYE Dec-18 | FYE Dec-17 | LTM Sept-18 | FYE Dec-18 | FYE Dec-17 | LTM Sept-18 | FYE Dec-18 | FYE Dec-17 | LTM Sept-18 |
| Revenue | 436 | 431 | 468 | 655 | 643 | 654 | 1,430 | 1,453 | 1,491 | 1,749 | 1,744 | 1,773 |
| CFO Pre-W/C | 99 | 103 | 133 | 110 | 150 | 122 | 518 | 547 | 461 | 616 | 659 | 606 |
| Total Debt | 444 | 511 | 610 | 936 | 934 | 930 | 1,873 | 1,984 | 2,060 | 2,411 | 2,440 | 2,501 |
| CFO Pre-W/C / Debt | 22.3% | 20.1% | 21.8% | 11.7% | 16.1% | 13.1% | 27.6% | 27.6% | 22.4% | 25.6% | 27.0% | 24.2% |
| CFO Pre-W/C - Dividends / Debt | 20.1% | 20.1% | 21.8% | 7.0% | 12.3% | 12.2% | 20.8% | 17.9% | 14.9% | 15.3% | 17.7% | 14.2% |
| Debt / Capitalization | 37.3% | 42.4% | 43.7% | 41.3% | 46.8% | 45.2% | 35.3% | 39.1% | 38.9% | 35.0% | 37.7% | 37.7% |

[1] All figures & ratios calculated using Moody's estimates & standard adjustments. FYE = Financial Year-End, LTM = Last Twelve Months, RUR* = Ratings under Review, where UPG = for upgrade and DNG = for downgrade
 Source: Moody's Financial Metrics

Ratings

| Exhibit 6 | |
|--|----------------|
| Category | Moody's Rating |
| DUKE ENERGY KENTUCKY, INC. | |
| Outlook | Stable |
| Senior Unsecured | Baa1 |
| ULT PARENT: DUKE ENERGY CORPORATION | |
| Outlook | Stable |
| Issuer Rating | Baa1 |
| Sr Unsec Bank Credit Facility | Baa1 |
| Senior Unsecured | Baa1 |
| Jr Subordinate | Baa2 |
| Commercial Paper | P-2 |
| PARENT: DUKE ENERGY OHIO, INC. | |
| Outlook | Stable |
| Issuer Rating | Baa1 |
| First Mortgage Bonds | A2 |
| Senior Secured Shelf | (P)A2 |
| Senior Unsecured | Baa1 |

Source: Moody's Investors Service

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REPORT NUMBER 1156501



CREDIT OPINION

3 January 2018

Update

Rate this Research

RATINGS

Duke Energy Kentucky, Inc.

| | |
|------------------|--------------------------------|
| Domicile | Kentucky, United States |
| Long Term Rating | Baa1 |
| Type | Senior Unsecured - Dom Curr |
| Outlook | Stable |

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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Duke Energy Kentucky, Inc.

Update to credit analysis

Summary

Duke Energy Kentucky Inc.'s (Duke Kentucky) credit profile reflects cash flow and financial coverage ratios that are appropriate for its rating despite base rate freezes that have been in place since 2012, and capital expenditures that are on the rise. Our view considers the utility's relatively small stand-alone size and position as a subsidiary of Baa1 rated Duke Energy Ohio, Inc. (Duke Ohio). Although we have traditionally considered Kentucky to be a credit supportive regulatory environment for investor owned utilities, Duke Kentucky has had a limited regulatory track record with regard to base rate cases in recent years.

Exhibit 1

Historical CFO pre-W/C, total debt, and CFO pre-W/C to debt [1]



[1] CFO pre-W/C is defined as cash from operations excluding changes in working capital
 Source: Moody's Financial Metrics

Credit strengths

- » Solid cash flow coverage ratios
- » Generally credit supportive regulation in Kentucky
- » Position within the Duke Energy corporate family

Credit challenges

- » Base rate freezes in place since 2012
- » Capital expenditures are increasing
- » Limited recent regulatory track record

- » Small size and position as wholly-owned subsidiary of Duke Ohio

Rating outlook

Duke Kentucky's stable rating outlook considers the generally credit supportive regulatory environment in Kentucky, financial metrics that are appropriate for the rating level, and increasing capital expenditures.

Factors that could lead to an upgrade

- » Supportive rate case outcomes that allow the continuation of strong credit metrics
- » Cash from operations excluding working capital changes to debt remains in the mid-20% range on a sustained basis
- » An upgrade of Duke Ohio from its current Baa1 rating level

Factors that could lead to a downgrade

- » Cash flow from operations excluding working capital changes to debt falling below the high-teens
- » Higher capital expenditures resulting in a material increase in debt levels
- » A decline in the credit supportiveness of the regulatory environment in Kentucky

Key indicators

Exhibit 2

KEY INDICATORS [1]

Duke Energy Kentucky, Inc.

| | 12/31/2013 | 12/31/2014 | 12/31/2015 | 12/31/2016 | 9/30/2017(L) |
|----------------------------------|------------|------------|------------|------------|--------------|
| CFO pre-WC + Interest / Interest | 6.1x | 5.7x | 7.8x | 6.9x | 7.0x |
| CFO pre-WC / Debt | 22.9% | 21.0% | 25.7% | 22.5% | 18.9% |
| CFO pre-WC – Dividends / Debt | 12.6% | 21.0% | 11.9% | 20.1% | 16.8% |
| Debt / Capitalization | 37.8% | 36.2% | 36.6% | 35.9% | 37.5% |

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

Source: Moody's Financial Metrics

Profile

Duke Kentucky is a wholly owned subsidiary of Duke Ohio and its ultimate parent, Duke Energy Corporation. Duke Kentucky is a combination electric and gas utility company that owns and operates approximately 1,100 megawatts (MWs) of regulated generation facilities and provides electricity to around 140,000 electric customers in northern Kentucky (primarily the areas surrounding Cincinnati). Duke Kentucky/Ohio also provide natural gas services to approximately 529,000 customers in the same area. The company is regulated primarily by the Kentucky Public Service Commission (KPSC).

Detailed credit considerations

Cash flow coverage ratios remain solid

Duke Kentucky's cash flow and key financial metrics have been appropriate for its credit profile for the last several years even though it has operated under base rate freezes since 2012. The ratio of cash from operations excluding changes in working capital (CFO pre-W/C) to debt remained above 20%, and in 2016 moved above the 22% threshold at the lower end of the "A" scoring range for this factor in our Regulated Electric and Gas Utilities rating methodology scorecard before declining to about 19% for the twelve months ending September 2017. The strength in metrics is due in part to continued extensions of bonus depreciation and the resulting increase in

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deferred income taxes. Going forward, given the impending changes of tax reform and as the company implements its growing capital expenditure program, we expect credit metrics to moderate from previous highs, but to remain appropriate for its Baa1 rating.

Generally credit supportive Kentucky regulation but Duke Kentucky has a limited recent regulatory track record

We generally view the Kentucky regulatory environment as credit supportive, with utilities in the state benefitting from timely cost recovery mechanisms, including recovery of fuel, purchased power, and environmental compliance costs. However, Duke Kentucky just filed its first electric base rate case since 2006, and as such, has a limited recent regulatory track record. In its current rate proceeding, Duke Kentucky is seeking to begin the recovery of expenditures that the Kentucky Public Service Commission (KPSC) previously approved for deferral, to account for higher operating expenses and capital investment, and to implement several new riders. We view the use of riders and trackers as supportive of credit quality as they reduce regulatory lag and increase cash flow predictability.

In September 2017, Duke Kentucky filed with the KPSC requesting an increase in electric base rates of approximately \$48.6 million, which will increase the average customer's bill by about 15%. The requested increase is based on a 10.3% return on equity (ROE) and a 49% equity layer. The filing seeks recovery of investments the company has made in its system over the past 11 years, including the KPSC approved acquisition of the 31% of the East Bend 600 MW generating station it did not already own, its ongoing investment in advanced metering infrastructure, and investments in utility scale solar generating facilities. Duke Kentucky is also seeking to implement an environmental surcharge mechanism (ESM) to recover environmental expenditures not recovered in base rates, including costs related to ash and ash disposal, and to establish riders for the recovery of transmission costs and for specific distribution system investments. Hearings are expected to begin in the first quarter of 2018, and Duke Kentucky anticipates that the new rates will go into effect in April. Supportive treatment in this rate proceeding will be a key to maintaining or improving Duke Kentucky's credit profile.

On the gas side, in February 2016, the KPSC approved a settlement agreement that provided rider recovery for Duke Kentucky's five year accelerated natural gas service line replacement program (ASRP). The utility's first annual ASRP projections and tariffs were filed in July 2016; rates were approved in December 2016, and became effective January 2017.

Base rate freezes have suppressed metrics to some extent

As a result of base rate freezes entered into to facilitate either the utility or its parent company's strategic objectives, in prior years, financial performance at Duke Kentucky was somewhat constrained. For example, as part of a settlement with the KPSC approving the merger of parent company Duke Energy with Progress Energy several years ago, the utility agreed that it would not file an electric or gas base rate case for two years through mid-2013. Although this rate freeze has expired, the utility did not file for any base rate relief despite declining financial metrics at the time (CFO pre-W/C to debt was 23% in 2013 versus 27% in 2011). As part of a 2014 stipulation with the Kentucky attorney general related to the acquisition of a 31% interest in the East Bend coal plant, the utility agreed to a second base rate freeze and agreed not to file for a base rate increase until January 2016. As of December 2016, the company's ratio of CFO pre-W/C to debt was 22.5%, and for the twelve months ending September 2017, the ratio was 18.9%.

Capital expenditures are on the rise

Supportive rate treatment is important as the utility continues a period of higher capital expenditures, and spending for environmental compliance. In 2015, the EPA published rules on the regulation of coal ash or coal combustion residuals (CCR), which caused Duke Kentucky to record additional asset retirement obligations (ARO) for ash basin closure costs and to plan investments for improved ash handling. In 2017, the KPSC approved certificates of public convenience and necessity (CPCN) for the company's plans to convert the East Bend coal fired station to dry bottom ash (cost of approximately \$25 million) and to excavate and repurpose the existing East Bend ash pond (approximately \$94 million). Duke Kentucky will look to recover some or all of these costs through the ESM Rider. Also in 2017, Duke Kentucky received approval for an advanced metering infrastructure project, estimated at \$49 million, that will take two years to complete. These investments are in addition to an uptick in distribution investment to improve reliability. For the twelve months ending September 2017, capital expenditures were approximately \$150 million versus around \$100 million in 2016 and \$50-\$60 million in prior years. Going forward, we expect annual investment will be similar to current levels.

Small size and position as wholly-owned subsidiary of Duke Ohio are credit considerations

Duke Kentucky is the smallest utility in the Duke Energy system (under 2% of earnings base) and is wholly owned by a neighboring Duke utility subsidiary, Duke Ohio (Baa1 positive) (about 5% of earnings base), which is a fully regulated electric transmission and distribution company that also operates a natural gas local distribution company. Although Duke Kentucky does not file financial statements with the SEC, it does publish quarterly and audited annual financial statements on its web site. The utility's small size, as well as its position as a wholly owned subsidiary of a Baa1 rated affiliate utility, are both considerations in assessing its credit profile.

Liquidity analysis

Duke Kentucky maintains an adequate liquidity profile. In 2016, the utility generated cash from operations (CFO) of about \$109 million, made about \$101 million in capital investments and paid dividends of \$10 million to its parent, generating about \$2 million of negative cash flow (FCF). For the last twelve months ending September 2017, Duke Kentucky generated approximately \$118 million of CFO, invested about \$148 million in capital expenditures and paid dividends of \$10 million to its parent, resulting in a negative FCF of approximately \$40 million. Going forward, due to its increasing capital needs, we anticipate the utility will remain cash flow negative; shortfalls are expected to be funded via a combination of debt and equity contributions from Duke Energy.

Duke Kentucky's additional liquidity sources include its access to funding from the Duke parent company's commercial paper program through the Duke system money pool, and from direct borrowings from the money pool. As of 30 September 2017, the utility also has \$150 million of direct borrowing capacity under Duke Energy's five year master credit facility, of which \$125 million was available. In March 2017, Duke Energy extended its master credit facility from January 2020 to March 2022 and increased its capacity from \$7.5 billion to \$8 billion. The facility does not contain a material adverse change clause for new borrowings and has a single financial covenant requiring that Duke and its utility subsidiaries each maintain a consolidated debt to capitalization ratio of no more than 65%, except for local gas distribution subsidiary Piedmont Natural Gas Company, Inc. (Piedmont, A2 stable). The debt to capital covenant for Piedmont is a maximum of 70%. As of 30 September 2017, Duke reported that all of the borrowing entities were in compliance with this covenant.

Duke Kentucky's next large debt maturity is \$100 million of senior unsecured debt due in October 2019. As of 30 September 2017, additional short-term obligations of \$27 million (tax-exempt bonds) and \$25 million (money pool borrowings) were classified as long-term debt and long-term debt payable to affiliated companies, respectively, due to the company's intent and ability to utilize such borrowings as long-term financing. The utility has the ability to refinance these short-term obligations on a long-term basis due to Duke Energy's master credit facility and other bilateral letter of credit agreements that have non-cancelable terms in excess of one year.

Rating methodology and scorecard factors

Exhibit 3

| Rating Factors | | Current LTM 9/30/2017 | Moody's 12-18 Month Forward View As of Date Published [3] | |
|---|----------------|--------------------------|---|--------------|
| Duke Energy Kentucky, Inc. | | | | |
| Regulated Electric and Gas Utilities Industry Grid [1][2] | | | | |
| Factor 1 : Regulatory Framework (25%) | Measure | Score | Measure | Score |
| a) Legislative and Judicial Underpinnings of the Regulatory Framework | A | A | A | A |
| b) Consistency and Predictability of Regulation | A | A | A | A |
| Factor 2 : Ability to Recover Costs and Earn Returns (25%) | | | | |
| a) Timeliness of Recovery of Operating and Capital Costs | Baa | Baa | Baa | Baa |
| b) Sufficiency of Rates and Returns | Baa | Baa | Baa | Baa |
| Factor 3 : Diversification (10%) | | | | |
| a) Market Position | Ba | Ba | Ba | Ba |
| b) Generation and Fuel Diversity | B | B | B | B |
| Factor 4 : Financial Strength (40%) | | | | |
| a) CFO pre-WC + Interest / Interest (3 Year Avg) | 7.5x | Aa | 6.8x - 7.2x | Aa |
| b) CFO pre-WC / Debt (3 Year Avg) | 24.4% | A | 19% - 22% | Baa |
| c) CFO pre-WC – Dividends / Debt (3 Year Avg) | 19.2% | A | 17% - 21% | A |
| d) Debt / Capitalization (3 Year Avg) | 35.5% | A | 35% - 40% | A |
| Rating: | | | | |
| Grid-Indicated Rating Before Notching Adjustment | | A3 | | Baa1 |
| HoldCo Structural Subordination Notching | 0 | 0 | 0 | 0 |
| a) Indicated Rating from Grid | | A3 | | Baa1 |
| b) Actual Rating Assigned | | Baa1 | | Baa1 |

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

[2] As of 9/30/2017(LTM)

[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.

Source: Moody's Financial Metrics

Ratings

Exhibit 4

| Category | Moody's Rating |
|--|----------------|
| DUKE ENERGY KENTUCKY, INC. | |
| Outlook | Stable |
| Senior Unsecured | Baa1 |
| ULT PARENT: DUKE ENERGY CORPORATION | |
| Outlook | Stable |
| Issuer Rating | Baa1 |
| Sr Unsec Bank Credit Facility | Baa1 |
| Senior Unsecured | Baa1 |
| Jr Subordinate | Baa2 |
| Commercial Paper | P-2 |
| PARENT: DUKE ENERGY OHIO, INC. | |
| Outlook | Positive |
| Issuer Rating | Baa1 |
| First Mortgage Bonds | A2 |
| Senior Secured Shelf | (P)A2 |
| Senior Unsecured | Baa1 |

Source: Moody's Investors Service

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REPORT NUMBER 1106779



Research Update:

Duke Energy Corp. And Subs. Outlook Revised To Negative On Coal Ash Risks, Regulatory-Lag, And Project Delays

May 20, 2019

Rating Action Overview

- We expect a weakening of Duke Energy Corp.'s (Duke Energy) financial measures compared to our previous expectations and we no longer expect that Duke's financial measures will be consistently above our downgrade threshold. Specifically, beginning in 2020, we no longer expect that funds from operations (FFO) to debt will consistently be greater than 15%.
- Our expectations for weaker financial measures incorporate recent storm costs, uncertainty regarding certain coal ash recovery in South Carolina, potentially higher coal ash costs in North Carolina, regulatory-lag, and delays to the Atlantic Coast Pipeline (ACP) project with an in-service date that is now pushed back to 2020 for Phase 1 of the project, and 2021 for the remainder of the project.
- We are affirming our ratings on Duke Energy Corp. and all its rated subsidiaries. However, we are revising our rating outlook for Duke Energy and all of its subsidiaries to negative from stable. At the same time we are lowering our stand-alone credit profile for subsidiary Duke Energy Carolinas LLC (DEC) to 'a' from 'a+', reflecting expectations for weaker stand-alone financial measures.
- The negative outlook incorporates our expectation that Duke's financial measures may not be consistently above our downgrade threshold of FFO to debt of greater than 15%. The company is facing several headwinds, including coal ash risks, project delays, regulatory lag, and high capital spending that we expect could pressure and weaken its financial measures over the next 12-24 months.

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Rating Action Rationale

Our outlook revision to negative on Duke Energy and its subsidiaries reflect our expectations for weaker financial measures that we do not expect to be consistently above our downgrade threshold and could result in a ratings downgrade over the next 12-24 months. Specifically, we

Research Update: Duke Energy Corp. And Subs. Outlook Revised To Negative On Coal Ash Risks, Regulatory-Lag, And Project Delays

expect delays and increased costs for the company's ACP project (now expected to cost between \$7 billion and \$7.8 billion) to weaken credit metrics. Duke owns a 47% interest in the ACP project, and its full in-service date has been pushed back to 2021 though the company expects to phase-in portions of the project in 2020. In addition, we expect delays in attaining recovery for 2018 storm costs in North Carolina to result in regulatory-lag. In South Carolina, a recent regulatory directive, which effectively lowers Duke Energy's authorized returns, and disallows recovery of certain coal ash costs, elevates both coal ash and regulatory risks for the company, signaling a potential change in the consistency and predictability of that state's regulatory construct. Furthermore, the recent order by the North Carolina Department of Environmental Quality (NCDEQ), requiring Duke to fully excavate its remaining coal ash basins in the state could significantly raise costs and create regulatory constraints beginning in 2023, resulting in longer-term risks due to its coal exposure. After incorporating the company's robust capital spending, we expect Duke's FFO to debt to weaken to below our our downgrade threshold of 15% for 2020 and 2021. While Duke has historically taken actions to support credit quality, our current base case does not incorporate incremental credit supportive actions. Recently, Duke Energy issued common equity, hybrids, and sold assets to protect credit quality. Given the company's size, it is not inconceivable that similar steps are taken in the future to protect credit quality.

Our assessment of Duke Energy's business risk profile reflects its very large size and low-risk regulated utilities that provide electricity and natural gas to customers in North Carolina, South Carolina, Florida, Indiana, Ohio, Tennessee, and Kentucky. We view Duke's modest nonutility, contracted wind and solar investments as relatively minimal, representing well below 5% of its overall credit profile. Duke recently announced the sale of a 49% minority interest in its commercial renewable investment portfolio to John Hancock.

Duke Energy serves more than 7 million customers across seven states, benefiting from scale, operating, and regulatory diversity. Overall, the regulated utilities operate under generally constructive regulatory frameworks and have consistently demonstrated effective management of regulatory risk. Furthermore, the utilities have consistently demonstrated high levels of reliability, and continue to benefit from modest customer growth despite being tempered by declining per-customer usage trends.

We assess Duke Energy's financial measures against our medial volatility financial benchmarks compared with those used for the typical corporate issuer, reflecting the company's lower-risk, rate-regulated utility assets and effective management of regulatory risk. Under our base-case scenario of robust annual capital spending that averages about \$10 billion annually, dividend of close to \$2.8 billion for 2019, periodic base rate increases and use of riders, modest load growth, proceeds from the pending sale of its minority interest in its commercial renewable portfolio assets, ACP is fully in-service by 2021, annual common equity issuance of approximately \$500 million annually, and about \$1 billion of favorable tax positions utilized over our forecast period, we expect FFO to debt to weaken to about 14.5% for 2020 and 2021.

Outlook

The negative outlook reflects our expectation that Duke Energy's financial measures will weaken to below our downgrade threshold of FFO to debt of 15% for 2020 and 2021. This incorporates potentially higher coal ash risks, ACP project delays, regulatory lag, and robust capital spending.

Downside scenario

We could lower the ratings on Duke Energy by one notch over the next 12 to 24 months if the

Research Update: Duke Energy Corp. And Subs. Outlook Revised To Negative On Coal Ash Risks, Regulatory-Lag, And Project Delays

company's financial measures do not consistently improve, reflecting FFO to debt that is consistently above 15%. We could also lower the ratings if Duke Energy's business risk increases because of additional regulatory lag, more stringent environmental rules related to its coal exposure, if we conclude that the company's regulatory risk management in its key states has weakened, or if the company shifts its strategic focus away from its predominantly lower risk regulated utility operations.

Upside scenario

We could revise the outlook to stable for Duke Energy Corp. and its subsidiaries over the next 12-24 months if the company improves its financial measures such that FFO to debt remains consistently above 15%, without any deterioration in the company's business risk profile.

Company Description

Duke Energy Corp., together with its subsidiaries, operates as an energy company, through three segments: Electric Utilities and Infrastructure, Gas Utilities and Infrastructure, and Commercial Renewables. The Electric Utilities and Infrastructure segment generates, transmits, distributes, and sells electricity in the Carolinas, Florida, and the Midwest; and uses coal, hydroelectric, natural gas, oil, renewable sources, and nuclear fuel to generate electricity. It also engages in the wholesale of electricity to municipalities, electric cooperative utilities, and other load-serving entities. This segment serves approximately 7.7 million retail electric customers in six states in the Southeast and Midwest regions of the U.S. covering a service territory of approximately 95,000 square miles; and owns approximately 50,880 megawatts (MW) of generation capacity. The Gas Utilities and Infrastructure segment distributes natural gas to residential, commercial, industrial, and power generation natural gas customers; and owns, operates, and invests in various pipeline transmission and natural gas storage facilities. It has approximately 1.6 million customers, including 1.1 million customers located in North Carolina, South Carolina, and Tennessee, as well as 531,000 customers located in southwestern Ohio and northern Kentucky. The Commercial Renewables segment acquires, owns, builds, develops, and operates wind and solar renewable generation projects, including nonregulated renewable energy and energy storage services to utilities, electric cooperatives, municipalities, and commercial and industrial customers. This segment has 21 wind and 100 solar facilities and one battery storage facility with a capacity of 2,991 MW across 19 states.

Liquidity

We assess Duke's liquidity as adequate to cover its needs over the next 12 months. We expect the company's liquidity sources to exceed uses by 1.1x or more, and that it will meet our other requirements for such a designation. Duke's liquidity benefits from stable cash flow generation, ample availability under the revolving credit facilities, and manageable debt maturities over the next few years. Importantly, we use maintenance capital spending, recognizing that Duke has the ability to reduce capital spending in times of stress. The company's well-established and solid bank relationships, the ability to absorb high-impact, low-probability events without the need for refinancing, and a satisfactory standing in credit markets also support our liquidity assessment as adequate. Duke also has revolving credit facilities totaling \$8 billion that backstop its commercial paper program. We rate this commercial paper 'A-2', reflecting our ratings on the company.

Principal liquidity sources:

Research Update: Duke Energy Corp. And Subs. Outlook Revised To Negative On Coal Ash Risks, Regulatory-Lag, And Project Delays

- Credit facility of about \$8 billion;
- Cash in hand around \$440 million; and
- Cash FFO of about \$9 billion.

Principal liquidity uses:

- Debt maturities of close to \$7 billion in 2019, including amounts outstanding under the company's commercial paper;
- Estimated maintenance capital spending of about \$2.7 billion; and
- Dividends of about \$2.8 billion.

Environmental, Social, And Governance

Approximately 75% of Duke's total electric generation fleet capacity of almost 51 gigawatts (GW) are fossil fuel-based (30% coal; 45% natural gas), which exposes it to the ongoing cost of operating older units in the face of disruptive technological advances and the potential for changing environmental regulations that may require significant capital investments. Historically, the company has faced significant environmental, social, and financial repercussions from closing its coal ash ponds in North Carolina, but is mitigating this risk through the state's regulatory framework, which allows coal ash remediation costs to be recovered. But, the potential for future regulatory disallowances related to the company's coal ash remediation still poses some risk. In addition, the company's carbon-free nuclear generation portfolio increases its operating risk and exposes it to longer-term nuclear waste storage risks despite the company's long-term track record of achieving safe operational standards of its nuclear fleet.

On the gas side, older assets are susceptible to natural gas leaks, which emits methane. The company also operates its utilities in regions of the U.S. that are prone to frequent hurricanes, which could increase the company's risk exposure because climate change is intensifying the severity and frequency of these natural disasters globally. Overall, we assess Duke's environmental risk as higher than most peers given its environmental exposure, including those related to its coal exposure and hurricanes. Social and governance risk factors are in line with peers. We view Duke's ability to deliver safe and reliable services to customers as a positive social factor. And Duke has independent board of directors, who in our view, are capably engaged in risk oversight on behalf of all stakeholders.

Issue Ratings - Subordination Risk Analysis

Capital structure

Duke's capital structure consists of about \$27 billion of unsecured debt and close to \$30 billion of secured debt at its subsidiaries.

Analytical conclusions

- The unsecured debt issued at the Duke Energy level is rated 'BBB+', one notch below the issuer credit rating, as the priority secured debt at its subsidiaries comprises more than 50% of the

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company's consolidated capital structure.

- The short-term rating is 'A-2' based on our long-term issuer credit rating on the company.
- The junior subordinated notes and preferred stock are rated 'BBB', two notches below the issuer credit rating. We rate these hybrid securities premised on their deferability and subordination.

Ratings Score Snapshot

Issuer Credit Rating: A-/Negative/A-2

Business risk: Excellent

- Country risk: Very low
- Industry risk: Very low
- Competitive position: Excellent

Financial risk: Significant

- Cash flow/Leverage: Significant

Anchor: 'a-'

Modifiers

- Diversification/Portfolio effect: Neutral (no impact)
- Capital structure: Neutral (no impact)
- Financial policy: Neutral (no impact)
- Liquidity: Adequate (no impact)
- Management and governance: Satisfactory (no impact)
- Comparable rating analysis: Neutral (no impact)

Stand-alone credit profile: 'a-'

- Group credit profile: 'a-'

Research Update: Duke Energy Corp. And Subs. Outlook Revised To Negative On Coal Ash Risks, Regulatory-Lag, And Project Delays

Related Criteria

- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Criteria - Corporates - General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria | Corporates | General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria | Corporates | General: Corporate Methodology, Nov. 19, 2013
- Criteria | Corporates | Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Criteria | Corporates | Utilities: Collateral Coverage And Issue Notching Rules For '1+' And '1' Recovery Ratings On Senior Bonds Secured By Utility Real Property, Feb. 14, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009
- Criteria | Insurance | General: Hybrid Capital Handbook: September 2008 Edition, Sept. 15, 2008

Ratings List

Ratings Affirmed; Outlook Action

| | To | From |
|--------------------------------------|-----------------|---------------|
| Duke Energy Corp. | | |
| Piedmont Natural Gas Co. Inc. | | |
| Duke Energy Progress, LLC | | |
| Duke Energy Ohio Inc. | | |
| Duke Energy Kentucky Inc. | | |
| Duke Energy Indiana Inc. | | |
| Duke Energy Florida, LLC | | |
| Duke Energy Carolinas LLC | | |
| Cinergy Corp. | | |
| Issuer Credit Rating | A-/Negative/A-2 | A-/Stable/A-2 |
| Florida Progress Corp. | | |
| Progress Energy Inc. | | |
| Issuer Credit Rating | A-/Negative/-- | A-/Stable/-- |

Research Update: Duke Energy Corp. And Subs. Outlook Revised To Negative On Coal Ash Risks, Regulatory-Lag, And Project Delays

Ratings Affirmed; Recovery Ratings Unchanged

Duke Energy Corp.

| | |
|---------------------|------|
| Senior Unsecured | BBB+ |
| Junior Subordinated | BBB |
| Preferred Stock | BBB |
| Commercial Paper | A-2 |

Duke Energy Carolinas LLC

| | |
|------------------|----|
| Senior Secured | A |
| Recovery Rating | 1+ |
| Senior Unsecured | A- |

Duke Energy Florida, LLC

| | |
|------------------|-----|
| Senior Secured | A |
| Recovery Rating | 1+ |
| Senior Unsecured | A- |
| Preferred Stock | BBB |

Duke Energy Indiana Inc.

| | |
|------------------|----|
| Senior Secured | A |
| Recovery Rating | 1+ |
| Senior Unsecured | A- |

Duke Energy Kentucky Inc.

| | |
|------------------|----|
| Senior Unsecured | A- |
|------------------|----|

Duke Energy Ohio Inc.

| | |
|------------------|----|
| Senior Secured | A |
| Recovery Rating | 1+ |
| Senior Unsecured | A- |

Duke Energy Progress, LLC

| | |
|-----------------|-----|
| Senior Secured | A |
| Recovery Rating | 1+ |
| Preferred Stock | BBB |

Piedmont Natural Gas Co. Inc.

| | |
|------------------|----|
| Senior Unsecured | A- |
|------------------|----|

Progress Energy Inc.

| | |
|------------------|------|
| Senior Unsecured | BBB+ |
|------------------|------|

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

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STAFF-DR-02-051

REQUEST:

Refer to the Jacobi Testimony, page 3, lines 15-21. The testimony refers to the importance of maintaining specific targets that support financial strength and flexibility.

- a. Explain how the current awarded ROE does not support these targets.
- b. In Case No. 2019-00238,¹ the Commission approved Duke Kentucky's request for an increase to its financing authority from \$200 million to \$280 million. In that application, Duke Kentucky stated that the request for the additional \$80 million was because it has been able to obtain very favorable pricing. Duke Kentucky is requesting an increase in its ROE from 9.725 percent, as authorized in Case No. 2017-00321, to 9.800 percent. Provide support as to why an increase of 7.5 basis points is necessary since Duke Kentucky has been able to attract favorable pricing.

RESPONSE:

- a. The Company's existing retail base rates were established using the currently awarded ROE of 9.725 percent. The Company projects that the total retail revenue generated from current base rates will result in an overall return on rate base of 3.098 percent. At a return on rate base of 3.098 percent, the Company is not earning enough to pay the interest on its long-term debt, which is 4.073 percent, as shown

¹ Case No. 2019-00238, *Application of Duke Kentucky, Inc. for an Order Seeking an Amendment to Its Existing Financing Authority Authorizing the Issuance of Unsecured Debt and Long-Term Notes, Execution and Delivery of Long-Term Loan Agreements, and Use of Interest Rate Management Instruments* (Ky. PSC Sept. 9, 2019).

on Schedule J-1, page 2 of 2. The projected revenue at current rates, based on the currently approved ROE, is therefore insufficient to meet the financial targets listed on page 3 of Mr. Jacobi's testimony.

- b. Duke Energy Kentucky's ability to achieve favorable pricing in the debt market was driven by overall market conditions at the time of the offering.

The Company's requested 9.80 percent return on equity is supported by the market conditions for the equity markets and the Company has fully supported its ROE request of 9.80 percent through the testimony of Dr. Roger A. Morin.

PERSON RESPONSIBLE:

William D. Wathen – a.

Christopher M. Jacobi/Roger A. Morin, Ph.D. – b.

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

**PUBLIC STAFF-DR-02-052
(As to Attachment only)**

REQUEST:

Refer to the Jacobi Testimony, page 7, lines 15-16. Provide documentation supporting Mr. Jacobi's statement that financial markets continue to experience periods of volatility.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment only)

Please see STAFF-DR-02-052 Confidential Attachment for a recent slide provided by Scotiabank highlighting the recent market volatility. Though the Federal Reserve has begun easing monetary policy through a series of rate cuts this year, inflation remains below their 2% target and near-term recession concerns continue to persist. The yield curve remains very flat, and is inverted across parts of the curve, signaling investor uncertainty surrounding trade and global economic growth. Strong investment-grade credit ratings are imperative for Duke Energy Kentucky to be able to access the capital markets on reasonable terms and provide efficient, economical financing costs for customers during volatile markets.

PERSON RESPONSIBLE: Christopher Jacobi

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**STAFF-DR-02-052 CONFIDENTIAL
ATTACHMENT**

FILED UNDER SEAL

STAFF-DR-02-053 PUBLIC (As to Attachment)

REQUEST:

Refer to the Jacobi Testimony, page 12, lines 1-12. Refer also to the application, Volume 11, Schedule J-2.

- a. Provide documentation and all calculations for the short-term interest rate for the base and forecast period.
- b. Explain why Duke Kentucky chose a credit spread of 90-basis points.
- c. Provide the spread added to the short-term debt for Duke Kentucky's last two electric base rate cases.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment)

- a. Please see attachment STAFF-DR-02-053a Confidential Attachment 1 for all calculations of the short-term interest rate in the base and forecast periods. This attachment will be provided to all parties upon the execution of a Confidentiality Agreement.
- b. The 90-basis-point credit spread used for the Sale of Accounts Receivables includes an estimate of: (a) the credit spread on the Sale of Accounts Receivables financing, and (b) incremental interest over 1-month LIBOR that the participating banks charge (which was approximately 20 basis points above 1-month LIBOR).

The credit spread on the current Sale of Accounts Receivables agreement is 72.5 basis points. The aforementioned 20 basis points is in addition to this credit spread. See

attachment STAFF-DR-02-053b Attachment 1 for the approximation of the 20 basis point charge above 1-month LIBOR.

- c. The credit spread added to 1-month LIBOR for the forecasted interest rate on the Sale of Accounts Receivables in Case No. 2017-00321 and Case No. 2018-00261 was 75 basis points. The 75 basis point spread included a credit spread of 67.5 basis points in the then current Sale of Accounts Receivables agreement plus a 10-12 basis point of incremental interest over 1-month LIBOR.

PERSON RESPONSIBLE: Christopher Jacobi

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**STAFF-DR-02-053a CONFIDENTIAL
ATTACHMENT 1**

FILED UNDER SEAL

| | 1M LIBOR | Bank A | Bank B | Average Bank CP rate | Difference |
|---------|-----------------|---------------|---------------|-----------------------------|-------------------|
| 2018-6 | 2.0903% | 2.3377% | 2.3309% | 2.3343% | 0.2440% |
| 2018-7 | 2.0768% | 2.3705% | 2.3285% | 2.3495% | 0.2727% |
| 2018-8 | 2.1138% | 2.3720% | 2.3340% | 2.3530% | 0.2393% |
| 2018-9 | 2.2606% | 2.3757% | 2.3042% | 2.3400% | 0.0794% |
| 2018-10 | 2.3069% | 2.4093% | 2.3569% | 2.3831% | 0.0762% |
| 2018-11 | 2.3469% | 2.4931% | 2.5350% | 2.5141% | 0.1671% |
| 2018-12 | 2.5206% | 2.6336% | | 2.6336% | 0.1130% |
| 2019-1 | 2.5138% | 2.7643% | 2.8315% | 2.7979% | 0.2841% |
| 2019-2 | 2.4904% | 2.8034% | 2.8327% | 2.8181% | 0.3277% |
| 2019-3 | 2.4945% | 2.7438% | 2.7522% | 2.7480% | 0.2535% |
| 2019-4 | 2.4805% | 2.6920% | 2.7145% | 2.7033% | 0.2228% |
| 2019-5 | 2.4305% | 2.6605% | 2.6700% | 2.6652% | 0.2347% |
| | | | | | 0.2095% average |

STAFF-DR-02-054

REQUEST:

Refer to the Jacobi Testimony, page 12, lines 13-20. Refer also to the application, Volume 11, Schedule J-3.

- a. Provide documentation and all calculations for the long-term interest cost on the \$25 million of LT Commercial Paper for the base and forecast period.
- b. Explain why Duke Kentucky chose the credit spread to be 25-basis points of the LT Commercial Paper.
- c. Provide documentation and all calculations for the long-term interest cost of the Variable Debt of \$26,720,000 for the base and forecast period.
- d. Provide documentation and all calculations for the long-term interest cost of the September 2020 forecasted debenture.
- e. Explain why Duke Kentucky chose a credit spread of 162-basis point for the September 2020 forecasted debenture.
- f. Provide the spread added to the long-term debt, if any were forecasted, for Duke Kentucky's last two electric base rate cases.

RESPONSE:

- a. Please see the table below for the calculation of interest on long-term commercial paper in the base period and forecast period. Attachments STAFF-DR-02-054a Attachment 1 and STAFF-DR-02-054a Attachment 2 show the 1-month LIBOR forward curve used in the calculation below

| | Long-term Commercial Paper Balance | Forward 1M LIBOR | Forecasted Spread to 1M LIBOR | Forecasted interest rate | Forecasted Interest Cost |
|--------|---|-----------------------------|--|-------------------------------------|---|
| | A | B | C | D=B+C | E=A*D |
| Nov-19 | \$25,000,000 | 1.69% | 0.25% | 1.94% | \$485,790 |
| Mar-20 | \$25,000,000 | 1.60% | 0.25% | 1.85% | \$461,578 |
| Apr-20 | \$25,000,000 | 1.60% | 0.25% | 1.85% | \$461,578 |
| May-20 | \$25,000,000 | 1.56% | 0.25% | 1.81% | \$452,990 |
| Jun-20 | \$25,000,000 | 1.50% | 0.25% | 1.75% | \$438,205 |
| Jul-20 | \$25,000,000 | 1.50% | 0.25% | 1.75% | \$438,205 |
| Aug-20 | \$25,000,000 | 1.48% | 0.25% | 1.73% | \$432,238 |
| Sep-20 | \$25,000,000 | 1.44% | 0.25% | 1.69% | \$422,792 |
| Oct-20 | \$25,000,000 | 1.44% | 0.25% | 1.69% | \$422,792 |
| Nov-20 | \$25,000,000 | 1.44% | 0.25% | 1.69% | \$423,160 |
| Dec-20 | \$25,000,000 | 1.44% | 0.25% | 1.69% | \$423,553 |
| Jan-21 | \$25,000,000 | 1.44% | 0.25% | 1.69% | \$423,553 |
| Feb-21 | \$25,000,000 | 1.43% | 0.25% | 1.68% | \$420,371 |
| Mar-21 | \$25,000,000 | 1.40% | 0.25% | 1.65% | \$413,654 |
| | | | | 13-month average: | \$433,436 |

- b. The 25 basis point credit spread used for the Company's LT Commercial Paper rate is the estimated credit spread over LIBOR for the Company's Commercial Paper borrowings over time. Recent history of the Company's Commercial Paper rate versus 1-month LIBOR supports using a credit spread in this range. See below for some sample dates:

| | Weighted Average Commercial Paper Rate | 1 Month LIBOR | Spread of Commercial Paper Rate over 1M LIBOR |
|----------|---|----------------------|--|
| | A | B | C=A-B |
| 12/31/18 | 2.79% | 2.52% | 0.27% |
| 1/31/19 | 2.77% | 2.51% | 0.26% |
| 2/28/19 | 2.77% | 2.49% | 0.28% |
| 3/31/19 | 2.73% | 2.49% | 0.24% |
| 4/30/19 | 2.69% | 2.48% | 0.21% |
| 5/31/19 | 2.67% | 2.43% | 0.24% |
| 6/30/19 | 2.59% | 2.40% | 0.19% |
| 7/31/19 | 2.52% | 2.22% | 0.29% |
| 8/31/19 | 2.30% | 2.09% | 0.21% |
| 9/30/19 | 2.19% | 2.02% | 0.17% |

- c. The \$26.7 million pollution control bond was swapped to a fixed rate of 3.86% in August 2006.
- d. See attachment STAFF-DR-02-54d Attachment 1 for the forward US Treasury rate curve as of 9/15/2020 for the 5-year, 10-year, and 30-year Treasury rates used in the calculation below.

| | Tenor | Weight | 9/15/2020 UST | Current Spread | Cpn |
|-------------------------|----------------|---------------|----------------------|-----------------------|--------------|
| | 5-yr | 10% | 1.85% | 1.30% | 3.15% |
| | 10-yr | 35% | 2.16% | 1.50% | 3.66% |
| | 30-yr | 55% | 2.62% | 1.75% | 4.37% |
| Weighted Average | 20.5-yr | | 2.38% | 1.62% | 4.00% |

- e. On June 21, Duke Energy Kentucky priced a \$210 million private placement debt issuance split into three tranches: \$95 million, 6-year fixed rate debentures at 3.23%; \$75 million, 10-year fixed rate debentures at 3.56%; and \$40 million, 30-year fixed rate debentures at 4.32%. Duke Energy Kentucky's credit spreads across the 6-year, 10-year, and 30-year tranches were 135 basis points, 150 basis points,

and 175 basis points, respectively. The Company also received a pricing indication on 5-year fixed rate debentures of 130 basis points.

The interest rate on the planned September 2020 debt issuance was estimated using a blended average of Bloomberg's forward curves for the 5-year, 10-year, and 30-year US Treasury yield plus an estimated credit spread for a future debt issuance. In June 2019, forward treasury rates reflected 1.85% for the 5-year, 2.16% for the 10-year, and 2.62% for the 30-year. Since there is no forward curve for credit spreads, we used the then-current credit spreads for Duke Energy Kentucky. Adding the forward treasury rates and credit spreads amounted to rates of 3.15% on the 5-year, 3.66% on the 10-year, and 4.37% on the 30-year. Blending those averages together with a 10% weight given to the 5-year tranche, a 35% weight given to the 10-year tranche, and a 55% weight given to the 30-year tranche resulted in a weighted average credit spread of 162 basis points and a forecasted rate of 4.00%. See table above for the calculation of the forecasted long-term debt rate.

- f. The credit spreads utilized for forecasted long-term debt in Case No. 2018-00261 and Case No. 2017-00321 were 158 and 145 basis points, respectively.

PERSON RESPONSIBLE: Christopher Jacobi

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| Actions ▾ | Modes ▾ | Settings ▾ | Swap Curve Builder | | |
| USD ▾ | 50 - USD (vs. 1M LIBOR) ▾ | Name USD (vs. 1M LIBOR) ▾ | Default | Privilege Global | 06/21/19 |

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|--------------------|---------------------------|------------------|------------------|
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| Curve # | 50 - USD (vs. 1M LIBOR) ▾ | Shift | +0.00 bp |
| Interpolation | Step Forward (Cont) ▾ | OIS DC Stripping | Yes ▾ |
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| Tenors | Coupon | Forwards | | | | | | | | | | |
|--------|--------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | 9/15/2020 | 3Mo | 6Mo | 1Yr | 2Yr | 3Yr | 4Yr | 5Yr | 10Yr | 15Yr | 30Yr |
| 1Mo | 2.1155 | 1.5410 | 1.9621 | 1.7932 | 1.5204 | 1.5828 | 1.8348 | 1.8348 | 2.1954 | 2.8994 | 2.8994 | 2.8997 |
| 2Mo | 2.1215 | 1.5505 | | | | | | | | | | |
| 3Mo | 2.1098 | 1.5430 | 1.9555 | 1.7763 | 1.5391 | 1.6112 | 1.8682 | 1.8681 | 2.2237 | 2.9548 | 2.9548 | 2.9548 |
| 6Mo | 2.0561 | 1.5290 | 1.8648 | 1.7816 | 1.5336 | 1.6054 | 1.8619 | 1.8622 | 2.2177 | 2.9493 | 2.9495 | 2.9489 |
| 1Yr | 1.9230 | 1.5602 | 1.7641 | 1.6581 | 1.5342 | 1.6075 | 1.8571 | 1.8874 | 2.2116 | 2.9414 | 2.9414 | 2.9414 |
| 2Yr | 1.7375 | 1.6138 | 1.6589 | 1.6143 | 1.5705 | 1.7316 | 1.8712 | 2.0478 | 2.2176 | 2.9414 | 2.9454 | 2.9414 |
| 3Yr | 1.6918 | 1.6935 | 1.6634 | 1.6545 | 1.6648 | 1.7817 | 1.9823 | 2.1055 | 2.2762 | 2.9440 | 2.9441 | 2.9440 |
| 5Yr | 1.7566 | 1.8476 | 1.7613 | 1.7727 | 1.8131 | 1.9508 | 2.1090 | 2.2195 | 2.3358 | 2.9430 | 2.9431 | 2.9430 |
| 7Yr | 1.8822 | 1.9799 | 1.8916 | 1.9060 | 1.9477 | 2.0726 | 2.1957 | 2.3478 | 2.4976 | 2.9437 | 2.9437 | 2.9437 |
| 10Yr | 2.0254 | 2.1642 | 2.0502 | 2.0727 | 2.1271 | 2.2659 | 2.4005 | 2.5105 | 2.6191 | 2.9431 | 2.9438 | 2.9431 |
| 30Yr | 2.5576 | 2.6177 | 2.5630 | 2.5722 | 2.5946 | 2.6528 | 2.7097 | 2.7566 | 2.8032 | 2.9433 | 2.9436 | 2.9433 |

Grey values are extrapolated.

Australia 61 2 9777 8600 Brazil 5511 2395 9000 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
 Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2019 Bloomberg Finance L.P.
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**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-055

REQUEST:

Refer to the Jacobi Testimony, page 14.

- a. Provide the income statement for each month included in the base period.
- b. Provide the monthly income statements for the 12-month period ended November 2018.
- c. Describe any difference in the budgeting and forecasting process used in the instant case to those used in Duke Kentucky's prior rate case, Case No. 2017-00321.

RESPONSE:

- a. See response to Staff-DR-01-003.
- b. See Staff-DR-02-055b Attachment.
- c. There are no material differences in the budgeting and forecasting process used in the instant case and those used in Duke Energy Kentucky's prior rate case, Case No. 2017-00321.

PERSON RESPONSIBLE:

Sarah E. Lawler (a,b)
Christopher M. Jacobi (c)

| Account | Description | Code | FERC | Total | Dec-17 | Jan-18 | Feb-18 | Mar-18 | Apr-18 | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 |
|---------|----------------------------------|------|------|-------------|-------------|-------------|-----------|-------------|-------------|-------------|-------------|-----------|-------------|-------------|-----------|-----------|
| 500000 | Suprvsn and Engrg - Steam Oper | PO | 500 | 2,438,801 | 203,046 | 240,621 | 177,864 | 105,677 | 184,999 | 314,951 | 328,848 | 237,133 | 181,070 | 225,802 | 138,499 | 100,291 |
| 501110 | Coal Consumed-Fossil Steam | Fuel | 501 | 54,334,792 | 6,652,532 | 7,496,211 | 6,005,358 | 272,812 | 0 | 2,517,861 | 7,264,512 | 7,012,868 | 5,081,026 | 6,170,882 | 5,859,730 | |
| 501150 | Coal & Other Fuel Handling | PO | 501 | 1,217,494 | 90,429 | 119,260 | 126,034 | 107,478 | 102,135 | 36,604 | 86,469 | 72,973 | 105,274 | 124,444 | 122,404 | 123,990 |
| 501180 | Coal Sampling & Testing | PO | 501 | 5,225 | 0 | 0 | 2,446 | 2,014 | 765 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 501190 | Sale Of Fly Ash-Expenses | PO | 501 | 469,695 | 215,474 | 20,232 | 13,075 | 22,053 | (5,919) | 37,168 | 6,057 | 39,126 | 22,823 | 46,088 | 20,664 | 32,854 |
| 501310 | Oil Consumed-Fossil Steam | Fuel | 501 | 2,163,361 | 219,998 | 92,154 | 153,313 | 118,366 | 0 | 409,004 | 134,363 | 179,851 | 496,138 | 61,797 | 298,377 | |
| 501350 | Oil Handling Expense | PO | 501 | 6,114 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,112 | 3,919 | 0 | 1,083 | |
| 502020 | Ammonia - Qualifying | PO | 502 | 298,741 | 0 | 0 | 0 | 0 | 0 | 33,894 | 49,452 | 50,645 | 39,726 | 66,545 | 58,479 | |
| 502040 | COST OF LIME | PO | 502 | 7,955,342 | 709,326 | 792,379 | 510,674 | 166,028 | 0 | 524,906 | 1,234,136 | 1,227,983 | 722,855 | 1,067,386 | 999,869 | |
| 502100 | Fossil Steam Exp-Other | PO | 502 | 2,730,084 | 291,418 | 269,423 | 230,636 | 310,905 | 108,220 | 149,581 | 270,137 | 189,350 | 232,121 | 239,045 | 212,898 | 226,349 |
| 502410 | Steam Oper-Bottom Ash/Fly Ash | PO | 502 | 916 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 507 | 0 | 59 | 350 | 0 |
| 505000 | Electric Expenses-Steam Oper | PO | 505 | 982,001 | 64,628 | 69,003 | 70,301 | 125,789 | 74,142 | 79,735 | 130,726 | 71,219 | 109,672 | 68,028 | 78,105 | 39,653 |
| 506000 | Misc Fossil Power Expenses | PO | 506 | 2,445,033 | 711,385 | 271,413 | 171,205 | 101,418 | 107,671 | 214,533 | 70,172 | 178,891 | 152,360 | 87,627 | 262,301 | 118,057 |
| 507000 | Steam Power Gen-Op Rents | PO | 507 | 200 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 57 | 0 | 106 | 0 |
| 509030 | SO2 Emission Expense | EA | 509 | 345 | 40 | 82 | 20 | 45 | 4 | (4) | 0 | 26 | 33 | 33 | 30 | 36 |
| 509210 | Seasonal NOx Emission Expense | EA | 509 | 4,456 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 998 | 1,163 | 1,260 | 948 | 31 |
| 509212 | Annual NOx Emission Expense | EA | 509 | 2,923 | 665 | 719 | 280 | 229 | 26 | 34 | (16) | 183 | 214 | 231 | 173 | 185 |
| 510000 | Suprvsn and Engrng-Steam Maint | PM | 510 | 2,131,055 | 130,828 | 140,162 | 147,673 | 149,202 | 146,633 | 160,742 | 192,951 | 216,755 | 208,226 | 227,587 | 209,294 | 202,002 |
| 510100 | Suprvsn & Engrng-Steam Maint R | PM | 510 | 36,489 | 2,427 | 2,158 | 2,370 | 1,892 | 2,529 | 2,155 | 3,046 | 2,869 | 3,387 | 3,166 | 4,199 | 6,291 |
| 511000 | Maint Of Structures-Steam | PM | 511 | 6,866,183 | 426,884 | 421,189 | 360,433 | 349,431 | 692,661 | 814,956 | 329,283 | 514,356 | 879,781 | 581,544 | 852,266 | 643,379 |
| 512100 | Maint Of Boiler Plant-Other | PM | 512 | 11,061,587 | 347,733 | 457,203 | 471,760 | 2,165,628 | 1,995,333 | 1,807,166 | 479,229 | 483,294 | 752,029 | 853,118 | 654,041 | 595,053 |
| 513100 | Maint Of Electric Plant-Other | PM | 513 | 6,056,464 | 74,292 | 114,819 | 81,584 | 788,761 | 1,377,725 | 1,877,193 | 866,091 | (11,874) | 440,133 | (3,634) | 211,832 | 239,542 |
| 514000 | Maintenance - Misc Steam Plant | PM | 514 | 5,373,142 | 154,677 | 101,115 | 120,639 | 2,284,632 | 1,324,490 | 294,849 | 259,006 | (157,021) | (327,697) | 200,120 | 912,758 | 205,574 |
| 514300 | Maintenance - Misc Steam Plant | PM | 514 | 582 | 59 | 67 | 73 | 15 | 37 | 69 | 51 | 53 | 28 | 51 | 49 | 30 |
| 546000 | Suprvsn and Engineering-CT Oper | PO | 546 | 395,257 | 33,615 | 34,959 | 32,772 | 37,765 | 29,456 | 36,302 | 25,780 | 31,691 | 32,109 | 33,394 | 33,526 | 33,888 |
| 547100 | Natural Gas | Fuel | 547 | 8,696,861 | 303,000 | 2,911,200 | (6,931) | 281,995 | 298,000 | 621,966 | 1,180,060 | 1,542,630 | 619,965 | 471,026 | 336,950 | 137,000 |
| 547150 | Natural Gas Handling-CT | PO | 547 | 11,288 | 827 | 856 | 843 | 883 | 1,820 | 820 | 62 | 793 | 688 | 781 | 829 | 2,086 |
| 547701 | Propane Gas | Fuel | 547 | 136,302 | 0 | 0 | 0 | 136,302 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 548100 | Generation Expenses-Other CT | PO | 548 | 4,591 | 546 | 517 | 118 | 862 | 695 | 227 | 288 | 200 | 206 | 0 | 338 | 574 |
| 548200 | Prime Movers - Generators- CT | PO | 548 | 343,527 | 24,176 | 42,093 | 27,261 | 28,656 | 28,765 | 16,533 | 30,178 | 38,293 | 39,443 | 27,624 | 24,890 | 15,613 |
| 549000 | Misc-Power Generation Expenses | PO | 549 | 901,998 | 60,427 | 69,993 | 66,078 | 80,684 | 61,779 | 61,503 | 75,174 | 86,516 | 80,149 | 76,788 | 103,334 | 49,573 |
| 551000 | Suprvsn and Engineering-CT Maint | PM | 551 | 189,279 | 10,621 | 10,043 | 8,690 | 7,891 | 14,097 | 25,948 | 21,619 | 19,419 | 16,503 | 17,038 | 19,692 | 17,718 |
| 552000 | Maintenance Of Structures-CT | PM | 552 | 276,918 | 76,298 | 21,783 | 12,575 | 16,971 | 3,664 | 4,722 | 9,089 | 11,406 | 32,804 | 8,003 | 52,065 | 27,538 |
| 552220 | Solar: Maint of Structures | PM | 552 | 29,166 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,961 | 10,160 | 15,946 |
| 553000 | Maint-Genrg and Elect Equip-CT | PM | 553 | 1,179,008 | 970,205 | 62,403 | 13,016 | 22,578 | (29,302) | 64,190 | 97,328 | (29,296) | 24,437 | 7,080 | (30,169) | 5,657 |
| 553100 | CT Maint of Gen and Plant-Reco | PM | 553 | 8 | 0 | 4 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 554000 | Misc Power Generation Plant-CT | PM | 554 | 312,845 | 16,977 | 19,862 | 28,227 | 25,319 | 24,338 | 14,207 | 26,890 | 21,347 | 28,224 | 34,095 | 33,697 | 39,662 |
| 554220 | Solar: Maint Misc Gen Plt | PM | 554 | 5,974 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5,974 | 0 |
| 555028 | Purch Pwr - Non-native - net | PP | 555 | 245,167 | (15,285) | 0 | 0 | 211,560 | 0 | 0 | 6,883 | 0 | 0 | 42,009 | 0 | 0 |
| 555202 | Purch Power-Fuel Clause | PP | 555 | 76,670,607 | 5,517,081 | 13,979,731 | 2,154,247 | 5,091,821 | 9,672,080 | 12,514,966 | 7,391,136 | 5,250,179 | 4,633,960 | 4,063,036 | 3,054,973 | 3,347,597 |
| 556000 | System Cnts & Load Dispatching | OPS | 556 | 1,521 | 65 | 45 | 159 | 201 | 108 | 128 | 345 | 27 | 269 | 100 | 70 | 4 |
| 557000 | Other Expenses-Oper | OPS | 557 | 4,109,899 | 1,033,460 | 573,576 | 2,326,984 | (452,966) | 368,016 | 108,391 | (1,811,369) | 866,327 | 162,956 | (243,189) | 537,795 | 639,918 |
| 557450 | Commissions/Brokerage Expense | DPS | 557 | 66,785 | 179 | 7,592 | 7,248 | 10,054 | 8,693 | 7,023 | 4,536 | 1,037 | 7,526 | 3,791 | 4,320 | 3,786 |
| 557980 | Retail Deferred Fuel Expenses | Fuel | 557 | (903,286) | 346,206 | (1,467,878) | 299,207 | (2,496,994) | (1,298,964) | (796,577) | 3,299,679 | 1,819,584 | (1,381,860) | (445,184) | 1,474,760 | (255,265) |
| 560000 | Suprvsn and Engrng-Trans Oper | TO | 560 | 2,486 | 166 | 172 | 239 | 190 | 225 | 308 | 203 | 193 | 201 | 215 | 207 | 167 |
| 561100 | Load Dispatch-Reliability | TO | 561 | 78,252 | (7,708) | 7,721 | 7,607 | 7,687 | 7,720 | 7,677 | 8,286 | 8,386 | 6,687 | 7,492 | 7,958 | 8,739 |
| 561200 | Load Dispatch-Monitor&OptTmSys | TO | 561 | 374,498 | (20,242) | 35,254 | 34,541 | 35,801 | 35,280 | 35,144 | 34,970 | 38,307 | 32,951 | 35,275 | 37,214 | 40,003 |
| 561300 | Load Dispatch - TransSvc&Sch | TO | 561 | 50,714 | (3,124) | 4,785 | 4,734 | 4,893 | 4,815 | 4,796 | 4,833 | 5,190 | 4,473 | 4,780 | 5,056 | 5,483 |
| 561400 | Scheduling-Sys Cntrl&Disp Svs | TO | 561 | 3,015,229 | 141,344 | 162,769 | 206,859 | 183,388 | 449,829 | 163,870 | 177,117 | 273,811 | 263,561 | 328,588 | 275,401 | 388,692 |
| 561800 | Reliability-Plan&Stds Dev | TO | 561 | (6,736,034) | (193,522) | (806,488) | 1,374,102 | 271,262 | (1,396) | (3,521,799) | 260,484 | 240,384 | 4,376,146 | (7,885,627) | 143,641 | (993,233) |
| 562000 | Station Expenses | TO | 562 | 148,994 | 6,726 | 6,319 | 8,062 | 11,657 | 18,092 | 8,881 | 10,867 | 7,886 | 13,051 | 26,853 | 21,770 | 8,820 |
| 563000 | Overhead Line Expenses-Trans | TO | 563 | 37,257 | 5,786 | 334 | 849 | 2,357 | 13,897 | 4,626 | 350 | 360 | 7,086 | 473 | 540 | 599 |
| 565000 | Transm Of Elec By Others | TO | 565 | 10,682,630 | (1,826,263) | 2,370,972 | (525,822) | 1,125,832 | 934,056 | 964,921 | 1,368,183 | 1,291,538 | 1,000,784 | 1,488,155 | 1,347,146 | 1,143,148 |
| 566000 | Misc Trans Exp-Other | TO | 566 | 543,382 | 27,189 | 92,401 | 10,919 | 10,925 | 75,136 | 55,272 | 18,067 | 77,735 | 13,847 | 15,294 | 125,861 | 20,736 |
| 568100 | Misc Trans-Trans Lines Related | TO | 568 | 670 | 47 | 276 | 258 | 60 | 56 | 60 | 154 | 0 | 0 | (290) | 74 | (25) |
| 569000 | Maint Of Structures-Trans | TM | 569 | 29,838 | 681 | 0 | 103 | 2,404 | 1,065 | 2,442 | 644 | 3,429 | 4,140 | 4,996 | 871 | 9,063 |
| 569100 | Maint of Computer Hardware | TM | 569 | 1,011 | 0 | 0 | 40 | 163 | 410 | 0 | 0 | 0 | 0 | 6 | 0 | 382 |
| 569200 | Maint Of Computer Software | TM | 569 | 127,091 | 10,684 | 9,075 | 9,169 | 16,702 | 9,680 | 8,771 | 9,959 | 10,694 | 10,361 | 11,094 | 10,366 | 10,536 |
| 570100 | Maint Stat Equip-Other- Trans | TM | 570 | 108,036 | 4,869 | 14,622 | 4,785 | 9,840 | 949 | 8,020 | 7,889 | 2,707 | 15,329 | 29,771 | 5,755 | 2,500 |
| 570200 | Main-Cir Brkr&Trnsf Mtrs-Trans | TM | 570 | 150,517 | 9,404 | 4,786 | 7,050 | 8,404 | 10,577 | 19,646 | 3,431 | 20,671 | 16,126 | 32,979 | 11,923 | 5,520 |
| 571000 | Maint Of Overhead Lnses-Trans | TM | 571 | 485,004 | 37,301 | 46,166 | 105,558 | 138,577 | 77,187 | 57,234 | 24,802 | (112,966) | 18,385 | 34,231 | 18,262 | 40,267 |
| 573000 | Maint Of Misc Transm Plant | TM | 573 | 2,108 | 0 | 1,049 | 1,059 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 575700 | Market Facilitation-Mnt&Comp | RMO | 575 | 2,484,546 | 908,791 | (94,191) | 441,213 | 154,809 | 319,668 | (62,483) | 185,959 | 177,534 | 2 | | | |

| Account | Description | Code | FERC | Total | Dec-17 | Jan-18 | Feb-18 | Mar-18 | Apr-18 | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 |
|---------|---------------------------------|------|------|-----------|-----------|----------|-----------|-----------|----------|----------|----------|----------|----------|-------------|----------|-----------|
| 583200 | Transf Set Rem Reset Test-Dist | DO | 583 | 71,989 | 6,970 | 6,685 | 6,436 | 9,866 | 7,832 | 6,924 | 5,708 | 4,143 | 5,399 | 3,921 | 4,283 | 4,022 |
| 584000 | Underground Line Expenses-Dist | DO | 584 | 370,246 | 55,472 | 21,556 | 81,530 | (52,883) | 59,562 | 26,330 | 15,980 | 14,211 | 23,134 | 21,239 | 48,929 | 75,188 |
| 586000 | Meter Expenses-Dist | DO | 586 | 656,695 | 69,533 | 44,472 | 63,112 | 79,554 | 52,335 | 54,143 | 40,874 | 60,734 | 63,001 | 32,344 | 40,879 | 55,714 |
| 587000 | Cust Install Exp-Other Dist | DO | 587 | 981,583 | 99,418 | 74,722 | 116,755 | 68,885 | 68,186 | 86,100 | 36,295 | 77,319 | 101,680 | 103,819 | 85,933 | 80,471 |
| 588100 | Misc Distribution Exp-Other | DO | 588 | 2,235,359 | 149,956 | 262,144 | 98,131 | 111,467 | 263,056 | 216,572 | 212,486 | 156,399 | 198,420 | 142,056 | 193,567 | 231,105 |
| 589000 | Rents-Dist Oper | DO | 589 | (21,129) | 520 | 1,488 | 1,020 | 840 | (3,869) | (38,232) | 3,268 | 1,400 | (265) | (2,730) | 12,901 | 2,530 |
| 590000 | Supervsn and Engrng-Dist Maint | DM | 590 | 77,943 | 0 | 0 | 0 | 4 | 80 | 5,852 | 41,512 | 8,555 | 7,318 | 4,011 | 5,214 | 5,397 |
| 591000 | Maintenance Of Structures-Dist | DM | 591 | 8,246 | 0 | 2,705 | 424 | 36 | 0 | 0 | 127 | 1,781 | 2,567 | 606 | 0 | 0 |
| 592100 | Maint Station Equip-Other-Dist | DM | 592 | 87,383 | 6,100 | 8,208 | 17,030 | 6,510 | 4,161 | 5,092 | 5,917 | 15,332 | 7,456 | 4,032 | 5,499 | 1,056 |
| 592200 | Cir BrksTrnsf Meters Relay-Dist | DM | 592 | 199,268 | 10,862 | 13,142 | 24,222 | 11,320 | 16,488 | 12,751 | 18,018 | 14,247 | 30,590 | 8,757 | 11,905 | 26,966 |
| 593000 | Maint Overhd Lines-Other-Dist | DM | 593 | 4,998,172 | 1,747,523 | 313,993 | 69,995 | 225,722 | 194,563 | 332,514 | 389,884 | 254,667 | 289,840 | 215,069 | 493,994 | 470,408 |
| 593100 | Flight-Of-Way Maintenance-Dist | DM | 593 | 3,828,547 | 1 | 436,971 | 288,861 | 320,061 | 295,892 | 554,871 | 316,855 | 318,319 | 426,803 | 94,469 | 372,101 | 403,523 |
| 594000 | Maint-Underground Lines-Dist | DM | 594 | 526,411 | 276,551 | 25,013 | 16,653 | 18,839 | 12,761 | 20,253 | 17,339 | 23,209 | 32,944 | 1,080 | 34,282 | 47,487 |
| 595100 | Main Line Transfers-Other-Dist | DM | 595 | 238,295 | 17,291 | 8,924 | 30,840 | 56,029 | 12,918 | 34,843 | 23,662 | 24,730 | 336 | 13,155 | 7,924 | 7,743 |
| 596000 | Maint-StreetLighting/Signl-Dist | DM | 596 | 378,520 | 47,168 | 26,927 | 46,570 | 43,745 | 20,409 | 25,265 | 25,108 | 36,611 | 25,300 | 26,142 | 35,819 | 19,126 |
| 597000 | Maintenance Of Meters-Dist | DM | 597 | 301,817 | 17,416 | 18,268 | 19,000 | 30,358 | 27,981 | 31,142 | 21,820 | 28,049 | 30,444 | 26,498 | 20,706 | 30,134 |
| 598100 | Main Misc Dist Plt-Other-Dist | DM | 598 | 6,589 | 0 | 0 | 0 | 1,937 | 0 | 4,652 | 0 | 0 | 0 | 0 | 0 | 0 |
| 901000 | Supervision-Cust Accts | CO | 901 | 273,997 | 19,456 | 22,756 | 20,861 | 29,933 | 22,466 | 21,142 | 22,679 | 16,883 | 23,091 | 19,403 | 35,102 | 20,225 |
| 902000 | Meter Reading Expense | CO | 902 | 608,936 | 96,932 | 65,919 | 58,588 | 43,397 | 68,588 | 52,271 | 58,082 | 27,546 | 36,488 | 51,334 | 27,249 | 22,542 |
| 903000 | Cust Records & Collection Exp | CO | 903 | 2,931,162 | 157,403 | 405,933 | 127,531 | 303,591 | 298,951 | 287,993 | 219,733 | 248,600 | 249,151 | 120,889 | 258,773 | 252,814 |
| 903100 | Cust Contracts & Orders-Local | CO | 903 | 151,331 | 22,315 | 10,541 | 15,670 | 18,773 | 12,918 | 11,403 | 18,235 | 5,457 | 15,215 | 19,163 | 12,754 | (11,113) |
| 903200 | Cust Billing & Acct | CO | 903 | 985,086 | 77,176 | 85,803 | 192,572 | 94,264 | 72,495 | 88,217 | 59,016 | 82,083 | 73,505 | 66,968 | 67,438 | 25,551 |
| 903300 | Cust Collecting-Local | CO | 903 | 203,625 | 22,738 | 14,744 | 17,849 | 22,723 | 15,578 | 17,189 | 19,843 | 14,244 | 18,640 | 29,596 | 16,662 | (6,179) |
| 903400 | Cust Receiv & Collect Exp-Edp | CO | 903 | 42,674 | 3,521 | 3,291 | 2,971 | 3,168 | 3,802 | 3,529 | 2,542 | 4,471 | 2,755 | 3,281 | 5,846 | 3,499 |
| 903891 | IC Collection Agent Revenue | CO | 903 | (188,003) | (18,121) | (19,030) | (16,294) | (14,716) | (13,765) | (13,445) | (16,397) | (15,818) | (14,836) | (14,453) | (14,506) | (16,822) |
| 904001 | BAD DEBT EXPENSE | CO | 904 | (7,666) | 1,051 | 121 | (797) | (5,096) | (720) | 3,404 | 640 | 1,541 | (7,509) | 1,015 | (287) | (1,029) |
| 905000 | Misc Customer Accts Expenses | CO | 905 | 374 | 33 | 0 | 31 | 55 | 40 | 59 | 40 | 43 | 31 | 37 | 3 | 2 |
| 908000 | Cust Asst Exp-Conservation Pro | CSI | 908 | 26 | 6 | 5 | 0 | 0 | 5 | 9 | 0 | 0 | 0 | 0 | 0 | 1 |
| 908150 | Commer/Indust Assistance Exp | CSI | 908 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 909850 | Misc Advertising Expenses | CSI | 909 | 6,829 | 0 | 928 | 322 | 0 | 0 | 522 | 0 | 1,382 | 535 | 0 | 3,140 | 0 |
| 910000 | Misc Cust Serv/Inform Exp | CSI | 910 | 414,456 | 44,579 | 23,357 | 25,305 | 26,804 | 27,464 | 26,764 | 25,715 | 27,273 | 31,189 | 29,628 | 25,063 | 101,315 |
| 910100 | Exp-Rs Reg Prod/Svces-CstAccts | CSI | 910 | 143,562 | (20,981) | 16,168 | 13,928 | 15,285 | 17,010 | 18,516 | 17,191 | 15,792 | 13,291 | 21,032 | 13,694 | 2,636 |
| 911000 | Supervision | CSI | 911 | 24 | 0 | 0 | 2 | 3 | 4 | 0 | 3 | 2 | 3 | 3 | 4 | 0 |
| 912000 | Demonstrating & Selling Exp | SE | 912 | 1,135,533 | 85,846 | 74,183 | 77,917 | 85,551 | 104,449 | 86,483 | 94,860 | 93,807 | 92,913 | 103,032 | 130,251 | 106,241 |
| 912100 | Demonstration & Sell-Proj Supt | SE | 912 | 144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 144 |
| 913001 | Advertising Expense | SE | 913 | 80,009 | 20,808 | 1,772 | 2,949 | 3,522 | 7,689 | 3,628 | 4,194 | 652 | 7,377 | 3,585 | 1,513 | 2,320 |
| 920000 | A & G Salaries | AGO | 920 | 7,009,507 | 1,151,781 | 530,897 | 504,710 | 393,784 | 542,894 | 506,319 | 773,349 | 509,481 | 545,882 | (17,898) | 508,584 | 1,059,624 |
| 920100 | Salaries & Wages - Proj Supt - | AGO | 920 | 204 | 40 | 0 | 31 | 8 | 22 | 12 | 17 | 44 | 18 | 0 | 12 | 0 |
| 920300 | Project Development Labor | AGO | 920 | 7,655 | 0 | 477 | 625 | 827 | 747 | 897 | 884 | 817 | 1,299 | 1,268 | 14 | 0 |
| 921100 | Employee Expenses | AGO | 921 | 269,179 | (19,789) | 41,115 | 64,414 | 24,190 | 14,516 | 18,315 | 4,763 | 6,587 | 31,237 | 66,875 | 32,498 | (15,542) |
| 921110 | Relocation Expenses | AGO | 921 | 18 | 14 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 921200 | Office Expenses | AGO | 921 | 550,224 | 90,462 | (45,919) | 64,629 | 44,500 | 49,756 | 50,989 | 83,473 | 17,024 | 86,219 | 78,259 | 4,431 | 26,401 |
| 921300 | Telephone And Telegraph Exp | AGO | 921 | 613 | 0 | 101 | 50 | 50 | 51 | 51 | 51 | 101 | 57 | (1) | 102 | 0 |
| 921400 | Computer Services Expenses | AGO | 921 | 365,786 | 113,365 | (4,640) | 22,158 | (3,189) | 8,952 | 109,586 | (33,387) | 3,429 | 229 | 8,973 | 19,500 | 122,780 |
| 921540 | Computer Rent (Go Only) | AGO | 921 | 69,888 | 9,401 | 303,092 | 26,040 | (313,588) | 4,411 | 5,610 | 8,895 | 5,146 | 5,164 | 5,103 | 4,262 | 6,362 |
| 921600 | Other | AGO | 921 | 913 | 15 | 185 | 83 | 269 | 27 | 123 | 9 | 22 | 9 | 66 | 56 | 49 |
| 921980 | Office Supplies & Expenses | AGO | 921 | 1,420,812 | 112,307 | 90,665 | 101,816 | 115,394 | 98,537 | 150,559 | 100,327 | 102,831 | 174,955 | 124,178 | 122,968 | 126,275 |
| 922000 | Admin Exp Transfer | AGO | 922 | 14 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 |
| 923000 | Outside Services Employed | AGO | 923 | 1,544,515 | 123,269 | 347,313 | 379,919 | 292,764 | 229,053 | 203,590 | 317,180 | 138,423 | 285,852 | (1,130,765) | 233,293 | 124,624 |
| 923100 | Outside Svcs Cont -Proj Supt - | AGO | 923 | 95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| 923980 | Outside Services Employee & | AGO | 923 | (37,974) | 1,342 | (2,074) | (1,952) | 4,592 | (4,508) | 3,746 | (809) | (1,331) | (8,833) | (8,741) | (12,055) | (7,353) |
| 924000 | Property Insurance | AGO | 924 | 1,841 | (241) | 57 | 233 | (226) | 139 | 2 | (472) | 2,037 | 233 | (387) | 233 | 233 |
| 924050 | Inter-Co Prop Ins Exp | AGO | 924 | 233,493 | 15,781 | 19,792 | 19,792 | 19,792 | 19,792 | 19,792 | 19,792 | 19,792 | 19,792 | 19,792 | 19,792 | 19,792 |
| 924100 | Admin-EH&S Expense | AGO | 924 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 |
| 924980 | Property Insurance For Corp. | AGO | 924 | 154,276 | 13,553 | 12,793 | 12,793 | 12,793 | 12,793 | 12,793 | 12,793 | 12,793 | 12,793 | 12,793 | 12,793 | 12,793 |
| 925000 | Injuries & Damages | AGO | 925 | 403,748 | 20,732 | 29,346 | 43,786 | 31,028 | 31,436 | 34,085 | 36,688 | 37,262 | 36,881 | 41,123 | 29,840 | 31,561 |
| 925051 | INTER-CO GEN LIAB EXP | AGO | 925 | 292,642 | 60,267 | 21,125 | 21,125 | 21,125 | 21,125 | 21,125 | 21,125 | 21,125 | 21,125 | 21,125 | 21,125 | 21,125 |
| 925200 | Injuries And Damages-Other | AGO | 925 | 7,226 | 502 | 552 | 632 | 543 | 648 | 663 | 570 | 610 | 645 | 677 | 611 | 573 |
| 925980 | Injuries And Damages For Corp. | AGO | 925 | 12,670 | 1,054 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 |
| 926000 | Employee Benefits | AGO | 926 | 5,640,774 | 1,685,450 | 379,618 | 341,549 | 374,271 | 369,980 | 344,127 | 535,923 | 344,408 | 365,431 | 336,382 | 230,556 | 333,078 |
| 926420 | Employees' Tuition Refund | AGO | 926 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38 | 3 | 0 | (38) |
| 926430 | Employees'Recreation Expense | AGO | 926 | 214 | 34 | 0 | 0 | 15 | 1 | 44 | 2 | 48 | 25 | 1 | 23 | 21 |
| 926800 | Employee Benefits-Transferred | AGO | 926 | 2,862,519 | 346,929 | 264,596 | 282,465 | 262,933 | 253,927 | 254,318 | 286,673 | 252,761 | 185,538 | 148,990 | 36,885 | 286,704 |
| 926999 | Non Serv Pension (ASU 2017-07) | AGO | 926 | (748,889) | 0 | 1,530 | (116,833) | (57,651) | (99,368) | (68,081) | (68,081) | (68,081) | (68,081) | (68,081) | (68,081) | (68,081) |
| 928006 | State Reg Comm Proceeding | AGO | 928 | 811,126 | 57,846 | 57,846 | 57,846 | 57,846 | 57 | | | | | | | |

| Account | Description | Code | FERC | Total | Dec-17 | Jan-18 | Feb-18 | Mar-18 | Apr-18 | May-18 | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 |
|--|--------------------------------|------|------|-------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|------------|------------|-------------|------------|------------|
| 930150 | Miscellaneous Advertising Exp | AGO | 930 | 60,781 | 4,076 | (561) | 1,343 | 20,635 | 7,497 | 7,047 | 2,490 | 726 | 4,546 | 5,529 | 4,012 | 3,441 |
| 930200 | Misc General Expenses | AGO | 930 | 254,374 | 31,057 | 79,292 | (8,598) | 51,711 | 47,672 | 23,659 | 97,984 | (70,993) | (187,763) | 93,512 | 35,566 | 61,075 |
| 930210 | Industry Association Dues | AGO | 930 | 36,430 | 0 | 36,400 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 930220 | Exp Of Servicing Securities | AGO | 930 | 41,705 | (67) | (26) | 11,942 | (47) | 4,950 | 7,207 | (45) | (24) | (53) | (52) | (35) | 17,955 |
| 930230 | Dues To Various Organizations | AGO | 930 | 41,851 | 7,957 | 3,094 | 11,825 | 510 | 0 | (237) | 0 | 1,913 | 394 | 0 | 11,643 | 4,552 |
| 930240 | Director'S Expenses | AGO | 930 | 50,983 | 5,783 | 6,003 | 235 | 592 | 4,714 | 22,241 | 32 | 4,656 | 888 | 69 | 5,184 | 588 |
| 930250 | Buy/Sell Transf Employee Homes | AGO | 930 | 13,302 | 1,343 | 1,307 | 385 | 4,276 | 281 | (1,148) | 228 | 65 | 241 | 2,054 | 1,448 | 2,822 |
| 930600 | Leased Circuit Charges-Other | AGO | 930 | 74 | 0 | 0 | 56 | 0 | 11 | 2 | 0 | 5 | 0 | 0 | 0 | 0 |
| 930700 | Research & Development | AGO | 930 | 4,149 | 1,087 | 761 | (814) | 109 | 358 | 273 | 687 | 393 | (211) | 241 | 1,219 | 46 |
| 930940 | General Expenses | AGO | 930 | 1,288 | 254 | 86 | 31 | 161 | 24 | 194 | 174 | 77 | 148 | 63 | 29 | 47 |
| 931001 | Rents-A&G | AGO | 931 | 124,913 | 10,718 | 9,091 | 10,693 | 10,497 | 10,580 | 10,176 | 9,227 | 12,920 | 9,997 | 10,985 | 10,483 | 9,546 |
| 931008 | A&G Rents-IC | AGO | 931 | 895,576 | 61,761 | 85,029 | 61,905 | 73,867 | 75,497 | 74,252 | 74,626 | 77,995 | 77,417 | 76,840 | 78,037 | 78,380 |
| 932000 | Maintenance Of Gen Plant-Gas | AGM | 932 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 935100 | Maint General Plant-Elec | AGM | 935 | 12,971 | 13,601 | (1,543) | (15) | 36 | 5 | 16 | 259 | 7 | 478 | 547 | 25 | (445) |
| 935200 | Cust Infor & Computer Control | AGM | 935 | 94 | 2 | 0 | 4 | 37 | 11 | 6 | 19 | (15) | 3 | 17 | 8 | 2 |
| | | | | 712,626,559 | 60,841,511 | 78,765,286 | 48,719,154 | 38,105,619 | 50,119,808 | 58,328,201 | 71,731,423 | 69,515,801 | 77,180,195 | 41,688,898 | 60,097,466 | 57,533,197 |
| Revenues | | REV | | 383,560,753 | 31,570,873 | 40,882,923 | 25,968,885 | 19,141,306 | 25,011,665 | 31,124,095 | 40,091,987 | 39,216,524 | 42,753,701 | 25,066,664 | 31,550,597 | 31,181,533 |
| Operating Expenses | | | | | | | | | | | | | | | | |
| Fuel Expense | Fuel | | | 64,428,030 | 7,521,736 | 9,031,687 | 6,451,947 | (1,687,519) | (1,000,964) | (174,611) | 7,406,604 | 10,761,089 | 6,430,824 | 5,603,006 | 8,044,389 | 6,039,842 |
| Purchased Power | PP | | | 76,915,974 | 5,501,796 | 13,979,731 | 2,154,247 | 5,303,381 | 9,672,080 | 12,514,966 | 7,398,019 | 5,250,179 | 4,633,960 | 4,105,045 | 3,054,973 | 3,347,597 |
| Other Power Supply | OPS | | | 4,178,205 | 1,033,704 | 581,213 | 2,334,391 | (442,711) | 377,817 | 115,542 | (1,806,488) | 867,391 | 170,751 | (239,298) | 542,185 | 643,708 |
| Emission Allowances | EA | | | 7,700 | 705 | 801 | 300 | 274 | 30 | 30 | 63 | 1,160 | 1,410 | 1,524 | 1,151 | 252 |
| Operation | | | | | | | | | | | | | | | | |
| Production | PO | | | 20,206,307 | 2,405,298 | 1,930,749 | 1,429,307 | 1,090,234 | 694,528 | 977,957 | 1,582,691 | 2,228,317 | 2,235,712 | 1,696,980 | 2,132,175 | 1,802,359 |
| Customer Accounts | CO | | | 4,981,516 | 382,502 | 590,078 | 418,982 | 496,090 | 480,353 | 471,762 | 384,413 | 365,050 | 396,531 | 297,231 | 409,034 | 289,490 |
| Customer Service & Information | CSI | | | 564,898 | 23,604 | 40,458 | 39,557 | 42,093 | 44,478 | 45,807 | 42,918 | 44,449 | 45,018 | 50,863 | 41,901 | 103,952 |
| Sales Expense | SE | | | 1,195,686 | 106,654 | 75,955 | 80,866 | 89,073 | 112,138 | 90,111 | 89,054 | 94,459 | 100,290 | 106,617 | 131,764 | 108,705 |
| Transmission | TO | | | 8,198,068 | (1,869,601) | 1,874,515 | 1,122,348 | 1,654,052 | 1,537,720 | (2,276,244) | 1,883,514 | 1,943,790 | 5,718,769 | (5,978,792) | 1,964,868 | 623,129 |
| Regional Marketing | RMO | | | 2,484,546 | 908,791 | (94,191) | 441,213 | 154,808 | 319,668 | (62,483) | 185,959 | 177,534 | 24,713 | 155,284 | 150,522 | 122,728 |
| Distribution | DO | | | 4,871,948 | 458,516 | 455,932 | 390,197 | 261,923 | 499,365 | 407,889 | 368,043 | 360,677 | 489,899 | 348,228 | 386,867 | 544,612 |
| A&G | AGO | | | 21,472,086 | 3,859,441 | 2,219,837 | 1,861,091 | 1,363,590 | 1,714,380 | 1,857,085 | 2,292,552 | 1,434,707 | 1,570,733 | (320,856) | 1,354,886 | 2,264,642 |
| Other | OTH | | | 5,112,969 | (585,789) | 551,155 | (1,339,571) | 688,773 | (9,336) | 598,150 | 1,777,236 | 37,070 | 751,850 | 1,183,398 | 761,868 | 698,165 |
| Maintenance | | | | | | | | | | | | | | | | |
| Production | PM | | | 33,518,700 | 2,211,001 | 1,350,808 | 1,247,043 | 5,811,320 | 5,552,226 | 5,066,197 | 2,284,583 | 1,071,308 | 2,057,855 | 1,932,109 | 2,935,858 | 1,998,392 |
| Transmission | TM | | | 903,605 | 62,939 | 75,698 | 127,784 | 176,090 | 99,888 | 97,113 | 46,725 | (75,465) | 64,341 | 113,077 | 47,177 | 68,278 |
| Regional Marketing | RMM | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Distribution | DM | | | 10,651,201 | 2,122,912 | 855,051 | 513,595 | 714,561 | 585,253 | 1,027,235 | 860,042 | 725,500 | 853,928 | 393,840 | 987,444 | 1,011,840 |
| A&G | AGM | | | 13,066 | 13,603 | (1,543) | (11) | 73 | 16 | 22 | 278 | (8) | 481 | 564 | 33 | (442) |
| Operation & Maintenance Expense | | | | 114,274,596 | 10,099,871 | 9,924,502 | 6,332,381 | 12,542,680 | 11,630,657 | 8,300,401 | 11,808,008 | 8,407,388 | 14,310,120 | (21,659) | 11,304,397 | 9,635,850 |
| Total Operating Expense | | | | 259,804,505 | 24,157,812 | 33,517,934 | 17,273,266 | 15,716,105 | 20,679,620 | 20,756,328 | 24,806,206 | 25,287,207 | 25,547,065 | 9,448,618 | 22,947,095 | 19,667,249 |
| Depreciation Expense | DEPR | | | 42,216,936 | 3,231,042 | 3,356,167 | 3,371,684 | 3,383,693 | 3,463,561 | 3,505,272 | 3,491,453 | 3,649,423 | 3,673,546 | 3,680,870 | 3,697,084 | 3,713,141 |
| Amortization of Deferred Expenses | AMORT | | | 5,978,190 | 0 | 0 | 0 | 0 | 0 | 2,045,617 | (695,349) | 790,194 | 840,861 | 1,019,797 | 1,011,775 | 965,095 |
| Taxes Other Than Income Taxes | OTHTX | | | 11,237,489 | 991,523 | 1,008,262 | 967,258 | 692,758 | 964,962 | 926,576 | 980,410 | 939,494 | 932,125 | 832,362 | 892,752 | 909,007 |
| Income Taxes | FIT | | | 9,828,686 | 890,261 | 0 | 1,138,061 | (1,028,243) | 0 | (29,887) | 3,056,716 | (367,041) | 3,432,897 | 1,640,587 | (1,837) | 1,097,172 |
| Operating Income | | | | 54,494,947 | 2,300,235 | 3,000,560 | 3,218,616 | 176,993 | (96,478) | 3,919,989 | 8,452,551 | 8,917,247 | 8,327,207 | 8,444,430 | 3,003,728 | 4,829,869 |
| Operating Income - Before income Taxes | | | | 64,323,633 | 3,190,496 | 3,000,560 | 4,356,677 | (851,250) | (96,478) | 3,890,102 | 11,509,267 | 8,550,206 | 11,760,104 | 10,085,017 | 3,001,891 | 5,927,041 |
| Total Expense | | | | 329,065,806 | 29,270,638 | 37,882,363 | 22,750,269 | 18,964,313 | 25,108,143 | 27,204,106 | 31,639,436 | 30,299,277 | 34,426,494 | 16,622,234 | 28,546,869 | 26,351,664 |

STAFF-DR-02-056

REQUEST:

Refer to the Jacobi Testimony, page 17, regarding property taxes.

- a. Identity and explain any changes to the way Duke Kentucky computes Kentucky property taxes for the base period and forecasted test year.
- b. Provide a copy of the 2018 and 2019 Kentucky Public Service Company Property Tax Notices as issued by the Kentucky Department of Revenue.
- c. Provide a copy of the 2018 and 2019 Ohio Real and Personal Property Tax assessments.

RESPONSE:

- a. There are no current changes for the methodology of computing property taxes for the base period and forecast year.
- b. See STAFF-DR-02-056(b) Attachment. Property tax for 2019 is yet to be negotiated (This is normal and estimated to be available Q1 of 2020).
- c. 2018/2019 Personal Property assessment attached. 2018 Real property assessment attached (2019 yet available).

Please see:

STAFF-DR-02-056(c)(1) Attachment: 2018 Ohio Personal Property Assessment

STAFF-DR-02-056(c)(2) Attachment: 2018 Ohio Real Property Assessment

STAFF-DR-02-056(c)(3) Attachment: 2019 Ohio Personal Property Assessment

STAFF-DR-02-056(c)(4) Attachment: 2019 Ohio Real Property Assessment

PERSON RESPONSIBLE: John Panizza

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF REVENUE
OFFICE OF PROPERTY VALUATION
PUBLIC SERVICE BRANCH
STATION 32 4TH FL, 501 HIGH STREET
FRANKFORT, KY 40601-2103
Phone (502) 564-8175 Fax (502) 564-8192

NOTICE OF ASSESSMENT

DUKE ENERGY KENTUCKY INC
DAVID JONES
550 SOUTH TRYON DEC-41B
CHARLOTTE, NC 28202-0000

GNC: 005260
TYPE CO: GEU
TAX TYPE: 035
TAX ID: 310473080

This Notice of Assessment has been amended from the original, it will become final on 04/21/2019, 60 days from the notice date. A corresponding Notice of Tax Due is being sent from the Compliance and Accounts Receivable System based on the Total Assessment shown below. The Notice of Tax Due will provide the state tax liability, any applicable interest and/or filing penalties that may be assessed. Local taxes will be billed separately by the local taxing jurisdictions where your property is located.

If you protest this assessment, see enclosed 61F009 Notification-Protesting your Assessment. You must submit a written protest in accordance with KRS 131.110; and as required by KRS 132.825(10) and KRS 136.180(2), your protest must specify the valuation you claim to be true. Your written protest stating your claimed value and your payment of tax for your claimed value must be submitted to the Department of Revenue on or before 04/21/2019 or no further remedies will be available regarding this assessment per KRS 134.590. Submit your protest and payment to: ATTN: Public Service Branch, Division of State Valuation, KENTUCKY DEPARTMENT OF REVENUE, Sta. 32, 4th Floor, 501 High Street, Frankfort, KY 40601-2103. You may contact the Public Service Branch at Phone (502) 564-8175 and Fax (502) 564-8192.

***AMENDED NOTICE DATE: 04/11/2019 TAX YEAR: 2018 (For Year Ending December 31, 2017)**

ORIGINAL NOTICE DATE: 02/20/2019 * Due date calculated based on Original Notice Date

| PROPERTY CLASS | TAX RATE Per \$100 | ASSESSED VALUE | STATE TAX DUE |
|---------------------------------------|--------------------|-------------------------|-----------------------|
| Subject to State and Local Tax | | | |
| Real Estate | 0.122 | \$346,598,994.00 | \$422,850.77 |
| **Tangible Personal Property | 0.45 | \$217,894,598.00 | \$980,525.69 |
| Business Inventory | 0.05 | \$0.00 | \$0.00 |
| Inventory In Transit | 0.00 | \$0.00 | \$0.00 |
| Subject to State Tax Only | | | |
| Foreign Trade Zone Property | 0.001 | \$0.00 | \$0.00 |
| Recycling Equipment | 0.45 | \$0.00 | \$0.00 |
| Manufacturing Machinery | 0.15 | \$363,952,879.00 | \$545,929.32 |
| Pollution Control Equipment | 0.15 | \$0.00 | \$0.00 |
| Telephonic Equipment | 0.15 | \$0.00 | \$0.00 |
| Business Inventory (MM) | 0.05 | \$21,553,529.00 | \$10,776.76 |
| Intangible NonOp | 0.00 | \$0.00 | \$0.00 |
| Intangible NonOp | 0.00 | \$0.00 | \$0.00 |
| IRB Property | 0.015 | \$0.00 | \$0.00 |
| IRB Property Nontaxable | 0.00 | \$0.00 | \$0.00 |
| TOTALS | | \$950,000,000.00 | \$1,960,082.55 |

** Excludes Motor Vehicles \$1,726,718.00

A 10% penalty is charged for late filed returns per KRS 132.290(3). A 20% penalty is charged for omitted property per KRS 132.290(4). Applicable interest will be applied when late or omitted.

DUKE ENERGY KENTUCKY INC
APPROACH: CORRELATION OF VALUES
TAX YEAR: 2018

PREPARED BY:
DATE:
GNC =

KyPSC Case No. 2019-00271
STAFF DR-02-056(b) Attachment
THOMAS
12-Apr-19
5260
Page 2 of 8
Page 1 Of 2

Taxpayer Representative(s): DAVID JONES
Taxpayer Phone Number: (880) 373-2118
Taxpayer FAX Number: (704) 382-8261

Compliance Statutes and Penalty Statutes: KRS 131.082 KRS 131.130 KRS 131.150 KRS 131.180 KRS 132.290 KRS 136.150 KRS 136.180 KRS 136.990

| | |
|-----------------------------------|----------------------|
| COST APPROACH | |
| TRADITIONAL COST APPROACH - HCLD | 1,347,716,410 |
| INCOME APPROACH | |
| DIRECT CAPITALIZATION | 1,235,700,321 |
| MARKET APPROACH: | |
| STOCK & DEBT | 1,483,242,161 |
| CORRELATED UNIT VALUE | 1,112,308,209 |
| KENTUCKY ALLOCATION FACTOR | 85.5785% |
| KENTUCKY ALLOCATED VALUE | 951,898,681 |

| | |
|--|-----------|
| LESS: Motor Vehicles & Apport Vehicles at KY Assessed Values | 1,728,718 |
| LESS: Commercial Watercraft at KY Assessed Values | 169,983 |
| LESS: Operating Leased Property - Locally Assessed KY Values | 0 |
| LESS: KY IRB Property-(Real/Tangible-Non-taxable) | 0 |

| | |
|--|---|
| TAXABLE KENTUCKY PROPERTY - NonUtility, NonOperating & NonRegulated not in unit | |
| PLUS: Real Estate @ Mkt | 0 |
| PLUS: Tangible Property @ Mkt | 0 |
| PLUS: Man. Mach. Property @ Mkt | 0 |
| PLUS: Business Inventory @ Mkt | 0 |

KENTUCKY ASSESSMENT TO SPREAD **950,000,000**

TOTAL KENTUCKY ASSESSMENT **950,000,000**

KENTUCKY ALLOCATION FACTOR

PROPERTY FACTORS

| | KENTUCKY UNIT | TOTAL SYSTEM | |
|--------------------------------|---------------|---------------|-----------------|
| GROSS BOOK PROPERTY | 1,995,575,903 | 2,352,190,367 | 84.8390% |
| | | | |
| | | | |
| | | | |
| | | | |
| Average Property Factor | | | 84.8390% |

BUSINESS FACTORS

| | KENTUCKY UNIT | TOTAL SYSTEM | |
|--------------------------------|---------------|---------------|-----------------|
| NET BOOK VALUE | 1,139,535,665 | 1,320,162,200 | 86.3179% |
| | | | |
| | | | |
| | | | |
| | | | |
| Average Business Factor | | | 86.3179% |

| | |
|---|-----------------|
| OVERALL KENTUCKY ALLOCATION FACTOR | 85.5785% |
|---|-----------------|

| SYSTEM WIDE PROPERTY | COMPANY BOOK VALUES | |
|---|-------------------------|--|
| Utility Plant | 2,139,843,554 | |
| (107) Construction Work in Progress - REAL | 0 | |
| (107) Construction Work in Progress - PERSONAL | 109,390,337 | |
| (107) Construction Work in Progress - MM | 0 | |
| TOTAL CWIP | 109,390,337 | |
| (101.1) Property Under Capital Leases | 0 | |
| (102) Electric Plant Purchased | 0 | |
| (103 & 103.1) Electric Plant Unclassified | 0 | |
| (105) Electric Plant Held For Future Use | 0 | |
| (105.1) Production Properties Held For Future Use | 0 | |
| (106) Completed Construction Not Classified | 0 | |
| (114) Electric Plant Acquisition Adjustment | 0 | |
| (116) Other Electric Plant Adjustment | 0 | |
| (117.1) Gas Stored - Base Gas - Noncurrent | 0 | |
| (117.2) System Balancing Gas - Noncurrent | 0 | |
| (117.3) Gas Stored in Reservoirs & Pipelines - Noncurrent | 0 | |
| (117.4) Gas Owed to System | 0 | |
| (118) Other Utility Plant | 0 | |
| (121) Non Utility Property | 2,206 | |
| (151) Fuel Stock | 22,251,525 | |
| (152) Fuel Stock Expenses Undistributed | 0 | |
| (153) Residuals & Extracted Products | 0 | |
| (154) Plant Materials & Operating Supplies | 17,614,789 | |
| (155) Merchandise | 0 | |
| (156) Other Materials & Supplies | 0 | |
| (163) Stores Expense Undistributed | 967,360 | |
| (164.1) Gas Stored Underground - Current | 2,958,650 | |
| (164.2 .3) Liquefied Nat Gas Stored & Held for Processing | 0 | |
| (185) Temporary Facilities | 0 | |
| (352.3) NONRECOVERABLE GAS | 0 | |
| Contribution in Aid of Construction | 0 | |
| AFUDC | 0 | |
| Other: Operating Property Not on Books | 0 | |
| IRB Property (real & personal - taxable & non taxable portions) | 0 | |
| Computer Software | 51,361,716 | |
| Operating Lease Real Property @ Mkt | 0 | |
| Operating Lease NonMobile Personal Property @ Mkt | 8,000,000 | |
| Operating Lease Motor Vehicle Property @ Mkt | 0 | |
| Operating Lease Aircraft @ Mkt | 0 | |
| Operating Lease Other / Railcars @ Mkt | 0 | |
| Total Company Operating Hard Assets - GROSS | \$ 2,352,190,367 | |
| LESS: Accumulated Depreciation & Amortization | | |
| Accumulated Depreciation & Amort. | 1,032,028,167 | |
| Misc. Physical Property Amortization | 0 | |
| IRB Propy (real/tangible: taxable & nontaxable portions), Acc. Deprec | 0 | |
| Total Depreciation | \$ 1,032,028,167 | |
| Total Company Operating Hard Assets - NET | \$ 1,320,162,200 | |
| Operating Intangible Assets In Service | | |
| Cash Working Capital (see calculation page) | 26,079,282 | |
| 301) Organization | 0 | |
| 302) Franchises and Consents | 0 | |
| 303) Miscellaneous Intangible Plant | 0 | |
| (175 & 176) Derivative Instrument Assets NET | 1,443,720 | |
| 158.1 & 158.2) Allowance Inventory NET | 31,208 | |
| Permits, Contracts, Copyrights, Licenses, Trademarks, Patents | 0 | |
| Customer Base, Intellectual Property, other intangible assets | 0 | |
| Goodwill | 0 | |
| Total Company Operating Intangible Assets - GROSS | \$ 27,554,210 | |
| Less: Accumulated Depreciation & Amortization | | |
| Organizational Cost Amortization | 0 | |
| Goodwill Amortization | 0 | |
| Other Intangible Amortization | 0 | |
| Total Depreciation | \$ - | |
| Total Company Operating Intangible Assets - NET | \$ 27,554,210 | |
| VALUE AS INDICATED BY COST APPROACH | \$ 1,347,716,410 | |

FORMULA METHOD

| | | |
|---|-----------|--------------------|
| TOTAL OPERATION & MAINTENANCE EXPENSES | \$ | 356,172,461 |
| LESS: Depreciation & Amortization expenses | \$ | 47,666,814 |
| LESS: Inventory Expenses (Fuel, fuel stock, gas, oil, coal, etc.) | \$ | 95,397,473 |
| LESS: Material & Supply Expense | \$ | 2,473,918.00 |
| LESS: Operating Lease Rent Expense | \$ | 2,000,000 |
| TOTAL | \$ | 208,634,256 |

Divided by 1/8 8

Cash Working Capital \$ 26,079,282

Definition of Cash Working Capital

The amount of money that the company must have available to cover day-to-day operations for one and one half months.
This represents the net cash on hand necessary to finance the day-to-day operations of a organization for 45 days (one and one half month's working capital).
The amount represents a taxable asset in the unit cost approach.

DUKE ENERGY KENTUCKY INC
 APPROACH: INCOME
 TAX YEAR: 2018

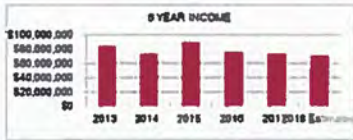
PREPARED BY: THOMAS
 DATE: 12-Apr-19
 GNC = 5260

Page 1 of 2

| | | | |
|---|---------------------|---------------|-------------------------|
| 2018 Estimated Pretax Net Operating Income | (EBIT) | 70,000,000 | |
| | Effective Tax rate | 38.00% | |
| <hr/> | | | |
| Estimated Net Operating Income | (EBI) | 43,400,000 | |
| Plus: Depreciation and Amortization Expense | | 47,666,814 | |
| Plus: Op Lease Rentals After Income Tax | | 1,240,000 | |
| Minus: Preferred Stock Dividends Paid | | 0 | |
| <hr/> | | | |
| Operating Cash Flow from Operations after Taxes | (EBIDA) +OPL | 92,308,814 | |
| | Capitalization Rate | 7.47% | See 2018 Cap Rate Study |
| | Capitalized Value | 1,235,700,321 | |

UNIT VALUE AS INDICATED BY INCOME APPROACH 1,235,700,321

| NORMALIZED PRETAX NET OPERATING INCOME: (EBIT) | AMOUNT | % CHANGE |
|--|---------------|------------------|
| 2013 | \$83,313,442 | |
| 2014 | \$72,090,703 | -13.47% |
| 2015 | \$88,608,218 | 22.91% |
| 2016 | \$74,983,591 | -16.38% |
| 2017 | \$72,899,782 | -2.78% |
| 2018 Estimated | \$ 70,000,000 | -3.98% Projected |



NORMALIZED NOI AFTER INCOME ADJUSTMENTS

| 5 YEARS EARNINGS RECORD YEAR ENDING DECEMBER 31, | REPORTED NOI BEFORE TAX | PLUS ONE-TIME CHARGES BEFORE TAX | PLUS/MINUS MISC OPER INC BEFORE TAX | NORMALIZED PRETAX NOI | % INC/DEC |
|---|----------------------------|--|---|-----------------------------|-----------|
| 2012 Net Operating Income, before taxes & interest (EBIT) : | 61,784,676 | 0 | 0 | 61,784,676 | |
| 2013 Net Operating Income, before taxes & interest (EBIT) : | 83,313,442 | 0 | 0 | 83,313,442 | 34.8400% |
| 2014 Net Operating Income, before taxes & interest (EBIT) : | 72,090,703 | 0 | 0 | 72,090,703 | -13.4700% |
| 2015 Net Operating Income, before taxes & interest (EBIT) : | 88,608,218 | 0 | 0 | 88,608,218 | 22.9100% |
| 2016 Net Operating Income, before taxes & interest (EBIT) : | 74,983,591 | 0 | 0 | 74,983,591 | -16.3800% |
| 2017 Net Operating Income, before taxes & interest (EBIT) : | 72,899,782 | 0 | 0 | 72,899,782 | -2.7800% |
| 3 Year Average | 78,830,530 | 0 | 0 | 78,830,530 | 1.5833% |
| 5 Year Average | 78,379,147 | 0 | 0 | 78,379,147 | 5.2240% |
| 3 Year Weighted Average | 76,212,458 | 0 | 0 | 76,212,458 | -2.6983% |
| 5 Year Weighted Average | 77,183,518 | 0 | 0 | 77,183,518 | 0.0807% |

Projected Normalized Pretax Net Operating Income (EBIT) > \$ 70,000,000

Common shares outstanding (per Annual Report) 700,000,000

Price per share

| | | |
|--------------------------|-------|-------|
| High Price per Year | 91.80 | |
| Low Price per Year | 76.14 | 83.97 |
| High Price per Last Qtr | 91.80 | |
| Low Price per Last Qtr | 83.52 | 87.66 |
| High Price @ December 31 | 0.00 | |
| Low Price @ December 31 | 0.00 | 0.00 |

Common Stock Value of Parent 61,362,000,000

| | Book Value | Market Value |
|--|------------|--------------|
| Mand. Redeem. Preferred Stock Series | 0 | 0 |
| Preferred Stock Series | 0 | 0 |
| Without Mand. Redeem. Preferred Stock Series | 0 | 0 |
| NonControlling Interests | 0 | 0 |
| Minority Interests | 0 | 0 |

Total Stock Value of Parent 61,362,000,000

| Company's Percent of Parent's Capital Stock | COMPANY | PARENT | PERCENT |
|---|---------------|-----------------|---------|
| Gross Income: | 429,072,243 | 21,177,000,000 | 2.03% |
| Operating Net Income before Inc Taxes & Interest: | 72,899,782 | 5,781,000,000 | 1.26% |
| Gross Book (Excluding Op Leased Property) | 2,344,190,367 | 129,365,000,000 | 1.81% |
| Gross Book (Including Op Leased Property) | 2,352,190,367 | 129,373,000,000 | 1.82% |
| Depreciated Book (Excluding Op Leased Property) | 1,312,162,200 | 87,828,000,000 | 1.49% |
| Depreciated Book (Including Op Leased Property) | 1,320,162,200 | 87,844,000,000 | 1.50% |
| Total Assets: | 1,552,943,930 | 137,914,000,000 | 1.13% |
| Average | | | 1.58% |

Company's Percent (if portion of parent company)* 1.58%

Company's Equity 969,519,600

| | BOOK VALUE | MARKET VALUE |
|---|----------------------|--------------------|
| Long Term Debt (plus current LTD portion): | 0 | 0 |
| Other Long Term Debt: | 451,180,000 | 475,973,000 |
| Current Liabilities (Less Current LTD & Acct Payables): | 107,352,498 | 107,352,498 |
| Capital Lease Obligations: | 580,230 | 580,230 |
| Unfunded Pension & Healthcare Liability & Damages: | 17,349,044 | 17,349,044 |
| Restructuring, Legal & Environmental Liabilities: | 4,847,739 | 4,847,739 |
| | Annual Lease Payment | MARKET VALUE |
| Operating Lease Real Property @ Mkt | 0 | 0 |
| Operating Lease NonMobile Personal Property @ Mkt | 2,000,000 | 8,000,000 |
| Operating Lease Motor Vehicle Property @ Mkt | 0 | 0 |
| Operating Lease Aircraft @ Mkt | 0 | 0 |
| Operating Lease Other / Railcars @ Mkt | 0 | 0 |
| Total Company's Debt Obligations: | | 613,902,511 |

Aircraft lease payments are less O & M charges.

COMPANY's GROSS STOCK & DEBT 1,583,422,111

Less: NonOperating Assets 100,179,950

COMPANY's NET STOCK & DEBT 1,483,242,161

DUKE ENERGY KENTUCKY INC
 NONOPERATING ASSETS
 TAX YEAR: 2018

PREPARED BY: THOMAS
 DATE: 12-Apr-19
 GNC = 5260

Page 1 of 1

| | | |
|---|---------------|----------------------|
| TOTAL OPERATING & NONOP SYSTEM ASSETS: | 1,552,943,930 | |
| TOTAL SYSTEM OPERATING LEASED ASSETS: | 8,000,000 | |
| GRAND TOTAL SYSTEM NET ASSETS | | 1,560,943,930 |
| NONOPERATING ASSETS: | | |
| CASH & TEMPORARY CASH INVESTMENTS | 0 | |
| SPECIAL FUNDS | 0 | |
| NONOPERATING PROPERTY | 264,016 | |
| RECEIVABLES FROM AFFILIATED COMPANIES | 3,811,739 | |
| INVESTMENTS & ADVANCES AFFILIATED COMPANIES | 0 | |
| OTHER INVESTMENTS & ADVANCES | 1,500 | |
| ASSETS HELD FOR SALE | 0 | |
| ASSETS FROM DISCONTINUED BUSINESS | 0 | |
| TOTAL | | 4,077,255 |
| Nonoperating Asset %: | | 0.2612% |

| | | |
|--|-------------|-----------------|
| NONOPERATING INCOME PERCENTAGE: | | |
| UTILITY GROSS INCOME | 429,072,243 | |
| NONOPERATING GROSS INCOME | 5,319,606 | 1.2246% |
| TOTAL SYSTEM GROSS INCOME | 434,391,849 | |
| UTILITY NET OPERATING INCOME before income taxes | 72,899,782 | |
| NONOPERATING NET INCOME before income taxes | 22,468,963 | 23.5601% |
| TOTAL SYSTEM NET INCOME before income taxes | 95,368,745 | |
| Nonoperating Asset %: | | 12.3924% |

| | |
|---|----------------|
| AVERAGE NONOPERATING PERCENTAGE= | 6.3268% |
|---|----------------|



Department of
Taxation

Excise & Energy Tax Division
P.O. Box 530
Columbus, Ohio 43216-0530
(855) 466-3921 Fax: (614) 728-1806
tax.ohio.gov eFax: (206) 350-6722

June 20, 2018

CINDY MOBBERLEY
DUKE ENERGY KENTUCKY, INC.
550 S. TRYON ST.
PO BOX 1321 (DEC41B)
CHARLOTTE, NC 28201

Re: Valuation Notice of Taxable Personal Property for Tax Year 2018

Dear: CINDY MOBBERLEY:

I have completed my review of your company's 2018 Annual Report filed with the Ohio Department of Taxation. The enclosed valuation notice reflects the proposed taxable value of your company's personal property. Please review the notice and compare with your own calculations.

If you desire a conference concerning the proposed value, please contact the undersigned within three weeks from the date of this letter.

Sincerely,

A handwritten signature in cursive script that reads "Bryce Oliver".

Bryce Oliver
Tax Examiner
Phone: (614) 466-8762
E-mail: bryce.oliver@tax.state.oh.us

2018 VALUATION NOTICE

dk
6/29/18

NAME: DUKE ENERGY KENTUCKY, INC.
FEIN: 31-0473080
CLASS: ELECTRIC COMPANY

| Taxable Property | True Value |
|---|----------------------|
| Production Plant (Placed in Service on or before 10/4/99) | 123,300,829 |
| Production Plant (Placed in Service after 10/4/99) | |
| Transmission Plant | 2,473,480 |
| Distribution Plant | 37,612 |
| General Plant | 1,337,328 |
| Account 104 - Electric Plant Leased to Others | |
| Account 105 - Electric Plant Held for Future Use | |
| Account 114 - Plant Acquisition Adjustment | |
| Account 116 - Other Electric Plant Adjustments | |
| Account 118 - Other Utility Plant | |
| Account 120.6 - Nuclear Fuel | |
| Account 121 - Nonutility Property | |
| Account 151 - Fuel Stock | |
| Account 154 - Plant Materials and Operating Supplies | 5,842,485 |
| Account 155 - Merchandise | |
| Account 156 - Other Materials and Supplies | |
| Total True Value: | 132,991,734 |
| | True Value |
| True Value of all Production Plant Property | 123,300,829 |
| | Taxable Value |
| True Value of General Plant & Account 104 - 156 Property | 7,179,813 |
| True Value of Transmission & Distribution Plant | 2,511,092 |
| Total General, T & D and all Other Property: | 9,690,905 |
| | 24% |
| Total Taxable Value of Property | 33,449,790 |
| (Penalty if applicable) | Percent: |
| Total Taxable Value / with Penalty | 33,449,790 |

Agent: Bryce Oliver **Date:** 4/6/2018

2018 VALUATION NOTICE By TAXING DISTRICT

DUKE ENERGY KENTUCKY, INC.

FEIN: 31-0473080

550 S. TRYON ST.

CLASS: EL

PO BOX 1321 (DEC41B)

BASE TYPE: ELECTRIC

CHARLOTTE

NC

28201

| | BASE 1 | BASE 2 | BASE 3 | VALUE |
|-------------------------------------|-------------------|--------------------|--------------------|-------------------|
| COUNTY: 9 BUTLER | | | | |
| 0180 MADISON TWP-EDGEWOOD CSD | 17,768,279 | 246,601,658 | 123,300,829 | 33,298,180 |
| BUTLER COUNTY TOTAL: | 17,768,279 | 246,601,658 | 123,300,829 | 33,298,180 |
| COUNTY: 13 CLERMONT | | | | |
| 0420 UNION TWP-WEST CLERMONT LSD | 6,304 | | 0 | 1,310 |
| CLERMONT COUNTY TOTAL: | 6,304 | | 0 | 1,310 |
| COUNTY: 31 HAMILTON | | | | |
| 0560 MIAMI TWP-THREE RIVERS LSD | 0 | 0 | 0 | 0 |
| 1110 CINCINNATI CORP-CINCINNATI CSD | 720,618 | | 0 | 150,300 |
| HAMILTON COUNTY TOTAL: | 720,618 | 0 | 0 | 150,300 |
| GRAND TOTAL: | 18,495,201 | 246,601,658 | 123,300,829 | 33,449,790 |

IF YOU HAVE ANY QUESTIONS CONCERNING THIS VALUATION NOTICE PLEASE CONTACT: Bryce Oliver (614) 466-8762

Clermont County

PARID: 419999U089.
DUKE ENERGY KENTUCKY, INC.

Appraised Value 2018 (100%)

| | |
|----------------|---------|
| Land Value | \$0 |
| Building Value | \$3,740 |
| Total Value | \$3,740 |
| CAUV | |

Assessed Value 2018 (35%)

| | |
|----------------|---------|
| Land Value | \$0 |
| Building Value | \$1,310 |
| Total Value | \$1,310 |
| CAUV | |

Tax Year: 2018

**Tax Detail Report
 Hamilton County**

Report Generated For Property: 444-0009-0050-00

Owner: DUKE ENERGY KENTUCKY INC

Payment Dates:

| Real Property | Prior Delq | Adjust | 1st Half | Adjust | 2nd Half | Adjust |
|--------------------------|---------------|--------|---------------|--------|---------------|--------|
| Charge | | | | | | |
| Credit | | | | | | |
| Non Bus Credit | | | | | | |
| Own Occ Credit | | | | | | |
| Homestead | | | | | | |
| Sales Credit | | | | | | |
| Net Tax | | | | | | |
| Penalty | | | | | | |
| Interest Amt | | | | | | |
| Net Owed | \$0.00 | | \$0.00 | | \$0.00 | |
| Paid | \$0.00 | | \$0.00 | | \$0.00 | |
| Net Due | \$0.00 | | \$0.00 | | \$0.00 | |
| Delinquent Rolled | \$0.00 | | | | | |
| Contract | \$0.00 | | | | | |
| Total Net Owed | \$0.00 | | \$0.00 | | \$0.00 | |
| Total Net Paid | \$0.00 | | \$0.00 | | \$0.00 | |
| Net Balance | \$0.00 | | \$0.00 | | \$0.00 | |

Total Owed \$0.00 Total Paid \$0.00 Net Total Owed \$0.00

Grand Total Owed \$0.00 Grand Total Paid \$0.00 Grand Total Owed \$0.00



Online Property Access: [< First << Prev Next >> Last >] **RETURN TO SEARCH LIST** Property 1 of 2

Parcel ID: 444-0009-0050-00 Address: Index Order: Parcel Number Tax Year: 2018 Payable 2019

| Property Information | | |
|---|---|--|
| Tax District | 221 - MIAMI TWP-3 RIVERS LSD | Images/Sketches No Images found. |
| School District | THREE RIVERS LSD | |
| Appraisal Area 44444 - 444 Prcl Sales | Land Use 880 - P.P. - P.U. - OTHER THN R | |
| Owner Name and Address DUKE ENERGY KENTUCKY INC 550 S TRYON ST P O BOX 1321 (DEC41B) CHARLOTTE NC 28201 <i>(call 946-4015 if incorrect)</i> | Mailing Name and Address DUKE ENERGY KENTUCKY INC 550 S TRYON ST P O BOX 1321 (DEC41B) CHARLOTTE NC 28201 <i>(call 946-4800 if incorrect)</i> | |
| Assessed Value 0 | Effective Tax Rate 0.000000 | Total Tax \$0.00 |
| Property Description 31-0473080 ELECTRIC COMPANY PERSONAL PROPERTY | | |

I Want To...

- Start a New Search
- Email the Auditor
- View the Online Help
- Auditor's Home

View:

- Property Summary
- Appraisal Information
- Levy Information
- Transfer
- Value History
- Board of Revision
- Payment Detail
- Tax Distributions
- Images
- Special Assessment/Payoff
- Tax Lien Certificates
- CAGIS Online Maps
- Aerial Imagery
- Owner Names

Print:

- Current Page
- Property Report

| Appraisal/Sales Summary | |
|-------------------------|-------|
| Year Built | |
| Total Rooms | |
| # Bedrooms | |
| # Full Bathrooms | |
| # Half Bathrooms | |
| Last Sale Date | |
| Last Sale Amount | \$0 |
| Conveyance Number | |
| Deed Type | |
| Deed Number | |
| # of Parcels Sold | |
| Acreage | 0.000 |

| Tax/Credit/Value Summary | |
|--------------------------|--------|
| Board of Revision | No |
| Rental Registration | No |
| Homestead | No |
| Owner Occupancy Credit | No |
| Foreclosure | No |
| Special Assessments | No |
| Market Land Value | 0 |
| CAUV Value | 0 |
| Market Improvement Value | 0 |
| Market Total Value | 0 |
| TIF Value | 0 |
| Abated Value | 0 |
| Exempt Value | 0 |
| Taxes Paid | \$0.00 |
| Tax as % of Total Value | 0.000% |

Tax Year: 2018

**Tax Detail Report
 Hamilton County**

Report Generated For Property: 444-3000-0000-00

Owner: DUKE ENERGY KENTUCKY INC

Payment Dates: 1/28/2019 , 1/28/2019

| Real Property | Prior Delq | Adjust | 1st Half | Adjust | 2nd Half | Adjust |
|--------------------------|---------------|--------|-------------------|--------|-------------------|--------|
| Charge | | | \$8,506.98 | | \$8,506.98 | |
| Credit | | | | | | |
| Non Bus Credit | | | | | | |
| Own Occ Credit | | | | | | |
| Homestead | | | | | | |
| Sales Credit | | | | | | |
| Net Tax | | | \$8,506.98 | | \$8,506.98 | |
| Penalty | | | | | | |
| Interest Amt | | | | | | |
| Net Owed | \$0.00 | | \$8,506.98 | | \$8,506.98 | |
| Paid | \$0.00 | | \$8,506.98 | | \$8,506.98 | |
| Net Due | \$0.00 | | \$0.00 | | \$0.00 | |
| Delinquent Rolled | \$0.00 | | | | | |
| Contract | \$0.00 | | | | | |
| Total Net Owed | \$0.00 | | \$8,506.98 | | \$8,506.98 | |
| Total Net Paid | \$0.00 | | \$8,506.98 | | \$8,506.98 | |
| Net Balance | \$0.00 | | \$0.00 | | \$0.00 | |

Total Owed \$17,013.96 Total Paid \$17,013.96 Net Total Owed \$0.00

Grand Total Owed \$17,013.96 Grand Total Paid \$17,013.96 Grand Total Owed \$0.00



Online Property Access

< First << Prev Next >> Last > |

[RETURN TO SEARCH LIST](#)

Property 2 of 2

Parcel ID: 444-3000-0000-00 Address: Index Order: Parcel Number Tax Year: 2018 Payable 2019

| Property Information | | |
|--|--|--|
| Tax District | 001 - CINTI CORP-CINTI CSD | Images/Sketches No images found. |
| School District | CINCINNATI CSD | |
| Appraisal Area | Land Use | |
| 44444 - 444 Prcl Sales | 881 - P. U. TELECOM P. P. | |
| Owner Name and Address | Mailing Name and Address | |
| DUKE ENERGY KENTUCKY INC 550 S TRYON ST P O BOX 1321 (DEC41B) CHARLOTTE NC 28201 <i>(call 946-4015 if incorrect)</i> | DUKE ENERGY KENTUCKY INC 550 S TRYON ST P O BOX 1321 (DEC41B) CHARLOTTE NC 28201 <i>(call 946-4800 if incorrect)</i> | |
| Assessed Value | Effective Tax Rate | Total Tax |
| 150,300 | 0.000000 | \$17,013.96 |
| Property Description ELECTRIC COMPANY PERSONAL PROPERTY FEIN: 31-0473080 | | |

I Want To...

- Start a New Search
- Email the Auditor
- View the Online Help
- Auditor's Home

View:

- Property Summary**
- Appraisal Information
- Levy Information
- Transfer
- Value History
- Board of Revision
- Payment Detail
- Tax Distributions
- Images
- Special Assessment/Payoff
- Tax Lien Certificates
- CAGIS Online Maps
- Aerial Imagery
- Owner Names

Print:

- Current Page
- Property Report

| Appraisal/Sales Summary | |
|-------------------------|-------|
| Year Built | |
| Total Rooms | |
| # Bedrooms | |
| # Full Bathrooms | |
| # Half Bathrooms | |
| Last Sale Date | |
| Last Sale Amount | \$0 |
| Conveyance Number | |
| Deed Type | |
| Deed Number | |
| # of Parcels Sold | |
| Acreage | 0.000 |

| Tax/Credit/Value Summary | |
|--------------------------|--------------------|
| Board of Revision | No |
| Rental Registration | No |
| Homestead | No |
| Owner Occupancy Credit | No |
| Foreclosure | No |
| Special Assessments | No |
| Market Land Value | 0 |
| CAUV Value | 0 |
| Market Improvement Value | 429,430 |
| Market Total Value | 429,430 |
| TIF Value | 0 |
| Abated Value | 0 |
| Exempt Value | 0 |
| Taxes Paid | \$17,013.96 |
| Tax as % of Total Value | 0.000% |



Nancy Nix, CPA
Butler County Treasurer
 Government Services Center
 315 High Street, 10th Floor
 Hamilton, Ohio 45011

Real Estate Property Tax
 First Half Tax Year 2018
 February 28, 2019

www.butlercountytreasurer.org
 513-887-3181

| DUKE ENERGY KENTUCKY INC 22.60 PROPERTY TAX DIVISION 550 S TRYON ST # DEC41B CHARLOTTE NC 28202-4200 | | Parcel No. E2310-007-000-002 Taxing District MADISON TWP-EDGEWOOD CSD Parcel Location WOODSDALE RD Owner Name UNION LIGHT HEAT & POWER CO Legal Description 4 17 W SIDE | | | | | | | | | | | | | | | | |
|---|---|--|--|--|-------|-------------|------------------------------|------|--------|-------------------------|------|-------|-----------------------------|------|------|--------------------------|-------------|---------------|
| Gross Tax Rate 68.442000 Reduction Factor 0.109697 Effective Tax Rate 60.934151 | Non Business Credit Factor 0.098055 Owner Occupancy Credit Factor 0.024513 | Acres 29.0370 Class C Code 830 | 100% Appraised Value Land 377,010 Bldg/Improv 0 Total 377,010 | | | | | | | | | | | | | | | |
| Calculation of Taxes | | Annual Tax Distribution | | | | | | | | | | | | | | | | |
| Gross Taxes 9,030.96 Reduction Factor -990.68 Subtotal 8,040.28 Current Net Real Estate Taxes 8,040.28 Current Special Assessments 339.62 Current Net Taxes & Asmts(YEAR) 8,379.90 Current Net Taxes & Asmts(HALF) 4,189.95 | | General Fund 253.34 Developmental Disabilities 365.50 Midpointe Library Systems 89.94 Mental Health 164.02 Children Services 243.66 Senior Citizens 158.38 Edgewood Csd 5,766.36 Butler County Jvsd 254.67 Madison Fire District 659.13 Metro Parks Of Butler County 85.28 Assessments 339.62 Total 8,379.90 | | | | | | | | | | | | | | | | |
| Full Year Total 8,379.90 Half Year Total 4,189.95 Payments 0.00 Other Credits 0.00 Half Year Balance Due \$4,189.95 | | Stub No. 204985 To Avoid Penalty Pay On Or Before February 28, 2019 | | | | | | | | | | | | | | | | |
| | | 35% Taxable Value Land 131,950 Bldg/Improv 0 Total 131,950 | | | | | | | | | | | | | | | | |
| | | Special Assessments <table border="1"> <thead> <tr> <th></th> <th>Delq.</th> <th>Current Yr.</th> </tr> </thead> <tbody> <tr> <td>16001-STORMWATER-NPDES PH II</td> <td>0.00</td> <td>325.00</td> </tr> <tr> <td>51900-MIAMI CONSERVANCY</td> <td>0.00</td> <td>11.02</td> </tr> <tr> <td>51902-DAM SAFETY INITIATIVE</td> <td>0.00</td> <td>3.60</td> </tr> <tr> <td>Assessment Totals</td> <td>0.00</td> <td>339.62</td> </tr> </tbody> </table> | | | Delq. | Current Yr. | 16001-STORMWATER-NPDES PH II | 0.00 | 325.00 | 51900-MIAMI CONSERVANCY | 0.00 | 11.02 | 51902-DAM SAFETY INITIATIVE | 0.00 | 3.60 | Assessment Totals | 0.00 | 339.62 |
| | Delq. | Current Yr. | | | | | | | | | | | | | | | | |
| 16001-STORMWATER-NPDES PH II | 0.00 | 325.00 | | | | | | | | | | | | | | | | |
| 51900-MIAMI CONSERVANCY | 0.00 | 11.02 | | | | | | | | | | | | | | | | |
| 51902-DAM SAFETY INITIATIVE | 0.00 | 3.60 | | | | | | | | | | | | | | | | |
| Assessment Totals | 0.00 | 339.62 | | | | | | | | | | | | | | | | |
| | | Homestead Reduction in Value 0 CAUV Value 0 | | | | | | | | | | | | | | | | |
| | | For information on monthly payment plans, please contact the Treasurer's Office at (513) 887-3181. Please save top portion of bill for income tax purposes. | | | | | | | | | | | | | | | | |

2

11401



Nancy Nix, CPA
 Real Estate Property Tax
 First Half Tax Year 2018
 February 28, 2019
 Tax Bill Prepared on 01/15/2019

Parcel No. E2310-007-000-002

Make Checks Payable To:
 Nancy Nix, Butler County Treasurer

Code
 Owner Name UNION LIGHT HEAT & POWER CO
 Parcel Location WOODSDALE RD

Amount Paid \$ _____

DUKE ENERGY KENTUCKY INC
 PROPERTY TAX DIVISION
 550 S TRYON ST # DEC41B
 CHARLOTTE NC 28202

| | |
|----------------------|----------------------|
| Full Year Due | Half Year Due |
| \$8,379.90 | \$4,189.95 |

E2310007000002000004189950000837990NML



Nancy Nix, CPA
Butler County Treasurer
 Government Services Center
 315 High Street, 10th Floor
 Hamilton, Ohio 45011

Real Estate Property Tax
 First Half Tax Year 2018
 February 28, 2019

www.butlercountytreasurer.org
 513-887-3181

| DUKE ENERGY KENTUCKY INC 22 60 PROPERTY TAX DIVISION 550 S TRYON ST # DEC41B CHARLOTTE NC 28202-4200 | | Parcel No. E2310-008-000-015 Taxing District MADISON TWP-EDGEWOOD CSD Parcel Location 2100 WOODSDALE RD Owner Name UNION LIGHT HEAT & POWER CO Legal Description 4 1 18 CTR & NE COR | | | | | | | | | | | | | | | | |
|---|---|---|---|--|-------|-------------|-----------------------------|------|----------|-------------------------|------|--------|-----------------------------|------|-------|--------------------------|-------------|-----------------|
| Gross Tax Rate 68.442000 Reduction Factor 0.109697 Effective Tax Rate 60.934151 | Non Business Credit Factor 0.098055 Owner Occupancy Credit Factor 0.024513 | Acres 192.2210 Class C Code 830 | 100% Appraised Value Land 3,449,030 Bldg/Improv 4,023,700 Total 7,472,730 | | | | | | | | | | | | | | | |
| Calculation of Taxes | | Annual Tax Distribution | | | | | | | | | | | | | | | | |
| Gross Taxes 130,972.68 Reduction Factor -14,367.26 Subtotal 116,605.42 Current Net Real Estate Taxes 116,605.42 Current Special Assessments 3,228.38 Current Net Taxes & Asmts(YEAR) 119,833.80 Current Net Taxes & Asmts(HALF) 59,916.90 | General Fund 3,674.16 Developmental Disabilities 5,300.58 Midpointe Library Systems 1,304.35 Mental Health 2,378.75 Children Services 3,533.73 Senior Citizens 2,296.92 Edgewood Csd 83,627.66 Butler County Jvsd 3,693.36 Madison Fire District 9,559.08 Metro Parks Of Butler County 1,236.83 Assessments 3,228.38 Total 119,833.80 | 35% Taxable Value Land 505,330 Bldg/Improv 1,408,300 Total 1,913,630 | | | | | | | | | | | | | | | | |
| Full Year Total 119,833.80 Half Year Total 59,916.90 Payments 0.00 Other Credits 0.00 | | Stub No. 147343 | Special Assessments <table border="1"> <thead> <tr> <th></th> <th>Delq.</th> <th>Current Yr.</th> </tr> </thead> <tbody> <tr> <td>1601-STORMWATER-NPDES PH II</td> <td>0.00</td> <td>3,081.00</td> </tr> <tr> <td>51900-MIAMI CONSERVANCY</td> <td>0.00</td> <td>111.04</td> </tr> <tr> <td>51902-DAM SAFETY INITIATIVE</td> <td>0.00</td> <td>36.34</td> </tr> <tr> <td>Assessment Totals</td> <td>0.00</td> <td>3,228.38</td> </tr> </tbody> </table> | | Delq. | Current Yr. | 1601-STORMWATER-NPDES PH II | 0.00 | 3,081.00 | 51900-MIAMI CONSERVANCY | 0.00 | 111.04 | 51902-DAM SAFETY INITIATIVE | 0.00 | 36.34 | Assessment Totals | 0.00 | 3,228.38 |
| | Delq. | Current Yr. | | | | | | | | | | | | | | | | |
| 1601-STORMWATER-NPDES PH II | 0.00 | 3,081.00 | | | | | | | | | | | | | | | | |
| 51900-MIAMI CONSERVANCY | 0.00 | 111.04 | | | | | | | | | | | | | | | | |
| 51902-DAM SAFETY INITIATIVE | 0.00 | 36.34 | | | | | | | | | | | | | | | | |
| Assessment Totals | 0.00 | 3,228.38 | | | | | | | | | | | | | | | | |
| Half Year Balance Due \$59,916.90 | | To Avoid Penalty Pay On Or Before February 28, 2019 | Homestead Reduction in Value 0 CAUV Value 1,443,790 For information on monthly payment plans, please contact the Treasurer's Office at (513) 887-3181. Please save top portion of bill for income tax purposes. | | | | | | | | | | | | | | | |

2

11402



Nancy Nix, CPA
Real Estate Property Tax
First Half Tax Year 2018
February 28, 2019
Tax Bill Prepared on 01/15/2019

Parcel No. E2310-008-000-015

Make Checks Payable To:
Nancy Nix, Butler County Treasurer

Code
Owner Name UNION LIGHT HEAT & POWER CO
Parcel Location 2100 WOODSDALE RD

Amount Paid \$ _____

DUKE ENERGY KENTUCKY INC
 PROPERTY TAX DIVISION
 550 S TRYON ST # DEC41B
 CHARLOTTE NC 28202

| | |
|----------------------|----------------------|
| Full Year Due | Half Year Due |
| \$119,833.80 | \$59,916.90 |

E2310008000015000059916900011983380NML



Nancy Nix, CPA
Butler County Treasurer
 Government Services Center
 315 High Street, 10th Floor
 Hamilton, Ohio 45011

Real Estate Property Tax
First Half Tax Year 2018
February 28, 2019

www.butlercountytreasurer.org
 513-887-3181

| | | | |
|---|---|--|--|
| DUKE ENERGY KENTUCKY INC 134 261 PROPERTY TAX DIVISION DEC41B 550 S TRYON ST SUITE 180 CHARLOTTE NC 28202-4209 | | Parcel No. E2310-999-010-400 Taxing District MADISON TWP-EDGEWOOD CSD Parcel Location Owner Name DUKE ENERGY KENTUCKY INC Legal Description FEIN# 31-0473080 P.U.P.P.TANG. ELECTRIC COMPANY | |
| Gross Tax Rate 68.442000 Reduction Factor 0.000000 Effective Tax Rate 68.442000 | Non Business Credit Factor 0.000000 Owner Occupancy Credit Factor 0.000000 | Acres Class U Code 880 | 100% Appraised Value Land 0 Bldg Improv 95,137,660 Total 95,137,660 |
| Calculation of Taxes | | Annual Tax Distribution | |
| Gross Taxes 2,278,994.04 Subtotal 2,278,994.04 Current Net Real Estate Taxes 2,278,994.04 Current Net Taxes & Asmts(YEAR) 2,278,994.04 Current Net Taxes & Asmts(HALF) 1,139,497.02 | General Fund 63,932.52 Developmental Disabilities 99,894.52 Midpointe Library Systems 24,973.22 Mental Health 49,947.25 Children Services 66,596.23 Senior Citizens 43,287.66 Edgewood Csd 1,667,640.21 Butler County Jvsd 64,265.35 Madison Fire District 175,147.53 Metro Parks Of Butler County 23,309.55 Assessments 0.00 Total | 35% Taxable Value Land 0 Bldg Improv 33,298,180 Total 33,298,180 | |
| Full Year Total 2,278,994.04 Half Year Total 1,139,497.02 Payments 0.00 Other Credits 0.00 Half Year Balance Due \$1,139,497.02 | | Stub No. 143641 | Special Assessments Delq. Current Yr. Homestead Reduction in Value 0 CAUV Value 0 |
| | | To Avoid Penalty Pay On Or Before February 28, 2019 | |
| For information on monthly payment plans, please contact the Treasurer's Office at (513) 887-3181. Please save top portion of bill for income tax purposes. | | | |



Nancy Nix, CPA
Real Estate Property Tax
First Half Tax Year 2018
February 28, 2019
 Tax Bill Prepared on 01/15/2019

Parcel No. E2310-999-010-400

Make Checks Payable To:
 Nancy Nix, Butler County Treasurer

Code UTIL
Owner Name DUKE ENERGY KENTUCKY INC
Parcel Location

Amount Paid \$ _____

DUKE ENERGY KENTUCKY INC
 PROPERTY TAX DIVISION DEC41B
 550 S TRYON ST SUITE 180
 CHARLOTTE NC 28202

| | |
|-----------------------|-----------------------|
| Full Year Due | Half Year Due |
| \$2,278,994.04 | \$1,139,497.02 |

E2310999010400001139497020227899404NML



Department of
Taxation

Excise & Energy Tax Division
P.O. Box 530
Columbus, Ohio 43216-0530
(855) 466-3921 Fax: (614) 728-1806
tax.ohio.gov eFax: (206) 350-6722

March 29, 2019

Charles Long
DUKE ENERGY KENTUCKY, INC.
550 S. TRYON ST.
PO BOX 1321 (DEC41B)
CHARLOTTE, NC 28202

Re: Valuation Notice of Taxable Personal Property for Tax Year 2019

Dear: Charles Long:

I have completed my review of your company's 2019 Annual Report filed with the Ohio Department of Taxation. The enclosed valuation notice reflects the proposed taxable value of your company's personal property. Please review the notice and compare with your own calculations.

If you desire a conference concerning the proposed value, please contact the undersigned within three weeks from the date of this letter.

Sincerely,

A handwritten signature in cursive script that reads "Bryce Oliver".

Bryce Oliver
Tax Examiner
Phone: (614) 466-8762
E-mail: bryce.oliver@tax.state.oh.us

2019 VALUATION NOTICE

NAME: DUKE ENERGY KENTUCKY, INC.
FEIN: 31-0473080
CLASS: ELECTRIC COMPANY

| <u>Taxable Property</u> | <u>True Value</u> |
|---|--------------------|
| Production Plant (Placed in Service on or before 10/4/99) | 123,830,932 |
| Production Plant (Placed in Service after 10/4/99) | |
| Transmission Plant | 2,281,738 |
| Distribution Plant | 35,925 |
| General Plant | 1,136,343 |
| Account 104 - Electric Plant Leased to Others | |
| Account 105 - Electric Plant Held for Future Use | |
| Account 114 - Plant Acquisition Adjustment | |
| Account 116 - Other Electric Plant Adjustments | |
| Account 118 - Other Utility Plant | |
| Account 120.6 - Nuclear Fuel | |
| Account 121 - Nonutility Property | |
| Account 151 - Fuel Stock | |
| Account 154 - Plant Materials and Operating Supplies | 5,827,742 |
| Account 155 - Merchandise | |
| Account 156 - Other Materials and Supplies | |
| Total True Value: | 133,112,680 |

| | <u>True Value</u> | | <u>Taxable Value</u> |
|---|-------------------|-----------------------|----------------------|
| True Value of all Production Plant Property | 123,830,932 | 24% | 29,719,420 |
| True Value of General Plant & Account 104 - 156 Property | 6,964,085 | 24% | 1,671,380 |
| True Value of Transmission & Distribution Plant | 2,317,663 | 85% | 1,970,010 |
| Total General, T & D and all Other Property: | 9,281,748 | | 3,641,390 |
| Total Taxable Value of Property | | | 33,360,810 |
| (Penalty if applicable) | | Percent: _____ | |
| Total Taxable Value / with Penalty | | | 33,360,810 |

Agent: Bryce Oliver **Date:** 3/29/2019

2019 VALUATION NOTICE By TAXING DISTRICT

DUKE ENERGY KENTUCKY, INC.

550 S. TRYON ST.
PO BOX 1321 (DEC41B)
CHARLOTTE NC 28201

FEIN: 31-0473080
CLASS: EL
BASE TYPE: ELECTRIC

| | BASE 1 | BASE 2 | BASE 3 | VALUE |
|-------------------------------------|------------|-------------|-------------|------------|
| COUNTY: 9 BUTLER | | | | |
| 0180 MADISON TWP-EDGEWOOD CSD | 17,753,582 | 247,661,864 | 123,830,932 | 33,241,430 |
| BUTLER COUNTY TOTAL: | 17,753,582 | 247,661,864 | 123,830,932 | 33,241,430 |
| COUNTY: 13 CLERMONT | | | | |
| 0420 UNION TWP-WEST CLERMONT LSD | 6,304 | | 0 | 1,250 |
| CLERMONT COUNTY TOTAL: | 6,304 | | 0 | 1,250 |
| COUNTY: 31 HAMILTON | | | | |
| 1110 CINCINNATI CORP-CINCINNATI CSD | 595,477 | | 0 | 118,130 |
| HAMILTON COUNTY TOTAL: | 595,477 | | 0 | 118,130 |
| GRAND TOTAL: | 18,355,363 | 247,661,864 | 123,830,932 | 33,360,810 |

IF YOU HAVE ANY QUESTIONS CONCERNING THIS VALUATION NOTICE PLEASE CONTACT: Bryce Oliver (614) 466-8762



Nancy Nix, CPA
Butler County Treasurer
 Government Services Center
 315 High Street, 10th Floor
 Hamilton, Ohio 45011

Real Estate Property Tax
 First Half Tax Year 2018
 February 28, 2019

www.butlercountytreasurer.org
 513-887-3181

| DUKE ENERGY KENTUCKY INC 22 60 PROPERTY TAX DIVISION 550 S TRYON ST # DEC41B CHARLOTTE NC 28202-4200 | | Parcel No. E2310-007-000-002 Taxing District MADISON TWP-EDGEWOOD CSD Parcel Location WOODSDALE RD Owner Name UNION LIGHT HEAT & POWER CO Legal Description 4 1 17 W SIDE | | | | | | | | | | | | | | | | |
|---|---|--|--|--|-------|-------------|------------------------------|------|--------|-------------------------|------|-------|-----------------------------|------|------|--------------------------|-------------|---------------|
| Gross Tax Rate 68.442000 Reduction Factor 0.109697 Effective Tax Rate 60.934151 | Non Business Credit Factor 0.098055 Owner Occupancy Credit Factor 0.024513 | Acres 29.0370 Class C Code 830 | 100% Appraised Value Land 377,010 Bldg/Improv 0 Total 377,010 | | | | | | | | | | | | | | | |
| Calculation of Taxes | | Annual Tax Distribution | | | | | | | | | | | | | | | | |
| Gross Taxes 9,030.96 Reduction Factor -990.68 Subtotal 8,040.28 Current Net Real Estate Taxes 8,040.28 Current Special Assessments 339.62 Current Net Taxes & Asmts(YEAR) 8,379.90 Current Net Taxes & Asmts(HALF) 4,189.95 | | General Fund 253.34 Developmental Disabilities 365.50 Midpoint Library Systems 89.94 Mental Health 164.02 Children Services 243.66 Senior Citizens 158.38 Edgewood Csd 5,766.36 Butler County Jvsd 254.67 Madison Fire District 659.13 Metro Parks Of Butler County 85.28 Assessments 339.62 Total 8,379.90 | | | | | | | | | | | | | | | | |
| Full Year Total 8,379.90 Half Year Total 4,189.95 Payments 0.00 Other Credits 0.00 | | Stub No. 204985 To Avoid Penalty Pay On Or Before February 28, 2019 | | | | | | | | | | | | | | | | |
| Half Year Balance Due \$4,189.95 | | 35% Taxable Value Land 131,950 Bldg/Improv 0 Total 131,950 | | | | | | | | | | | | | | | | |
| | | Special Assessments <table border="1"> <thead> <tr> <th></th> <th>Delq.</th> <th>Current Yr.</th> </tr> </thead> <tbody> <tr> <td>16001-STORMWATER-NPDES PH II</td> <td>0.00</td> <td>325.00</td> </tr> <tr> <td>51900-MIAMI CONSERVANCY</td> <td>0.00</td> <td>11.02</td> </tr> <tr> <td>51902-DAM SAFETY INITIATIVE</td> <td>0.00</td> <td>3.60</td> </tr> <tr> <td>Assessment Totals</td> <td>0.00</td> <td>339.62</td> </tr> </tbody> </table> | | | Delq. | Current Yr. | 16001-STORMWATER-NPDES PH II | 0.00 | 325.00 | 51900-MIAMI CONSERVANCY | 0.00 | 11.02 | 51902-DAM SAFETY INITIATIVE | 0.00 | 3.60 | Assessment Totals | 0.00 | 339.62 |
| | Delq. | Current Yr. | | | | | | | | | | | | | | | | |
| 16001-STORMWATER-NPDES PH II | 0.00 | 325.00 | | | | | | | | | | | | | | | | |
| 51900-MIAMI CONSERVANCY | 0.00 | 11.02 | | | | | | | | | | | | | | | | |
| 51902-DAM SAFETY INITIATIVE | 0.00 | 3.60 | | | | | | | | | | | | | | | | |
| Assessment Totals | 0.00 | 339.62 | | | | | | | | | | | | | | | | |
| | | Homestead Reduction in Value 0 CAUV Value 0 | | | | | | | | | | | | | | | | |
| | | For information on monthly payment plans, please contact the Treasurer's Office at (513) 887-3181. Please save top portion of bill for income tax purposes. | | | | | | | | | | | | | | | | |

2

11401



Nancy Nix, CPA
 Real Estate Property Tax
 First Half Tax Year 2018
 February 28, 2019
 Tax Bill Prepared on 01/15/2019

Parcel No. E2310-007-000-002

Make Checks Payable To:
 Nancy Nix, Butler County Treasurer

Code
 Owner Name UNION LIGHT HEAT & POWER CO
 Parcel Location WOODSDALE RD

Amount Paid \$ _____

DUKE ENERGY KENTUCKY INC
 PROPERTY TAX DIVISION
 550 S TRYON ST # DEC41B
 CHARLOTTE NC 28202

| | |
|----------------------|----------------------|
| Full Year Due | Half Year Due |
| \$8,379.90 | \$4,189.95 |

E2310007000002000004189950000837990NML



Nancy Nix, CPA
Butler County Treasurer
 Government Services Center
 315 High Street, 10th Floor
 Hamilton, Ohio 45011

Real Estate Property Tax
 First Half Tax Year 2018
 February 28, 2019

www.butlercountytreasurer.org
 513-887-3181

| DUKE ENERGY KENTUCKY INC 22 60 PROPERTY TAX DIVISION 550 S TRYON ST # DEC41B CHARLOTTE NC 28202-4200 | | Parcel No. E2310-008-000-015 Taxing District MADISON TWP-EDGEWOOD CSD Parcel Location 2100 WOODSDALE RD Owner Name UNION LIGHT HEAT & POWER CO Legal Description 4 1 18 CTR & NE COR | | | | | | | | | | | | | | | | |
|---|---|---|--|--|-------|-------------|-----------------------------|------|----------|-------------------------|------|--------|-----------------------------|------|-------|-------------------------|-------------|-----------------|
| Gross Tax Rate 68.442000 Reduction Factor 0.109697 Effective Tax Rate 60.934151 | Non Business Credit Factor 0.098055 Owner Occupancy Credit Factor 0.024513 | Acres 192.2210 Class C Code 830 | 100% Appraised Value Land 3,449,030 Bldg/Improv 4,023,700 Total 7,472,730 | | | | | | | | | | | | | | | |
| Calculation of Taxes | | Annual Tax Distribution | | | | | | | | | | | | | | | | |
| Gross Taxes 130,972.68 Reduction Factor -14,367.26 Subtotal 116,605.42 Current Net Real Estate Taxes 116,605.42 Current Special Assessments 3,228.38 Current Net Taxes & Asmts(YEAR) 119,833.80 Current Net Taxes & Asmts(HALF) 59,916.90 | General Fund 3,674.16 Developmental Disabilities 5,300.58 Midpointe Library Systems 1,304.35 Mental Health 2,378.75 Children Services 3,533.73 Senior Citizens 2,296.92 Edgewood Csd 83,627.66 Butler County Jvsd 3,693.36 Madison Fire District 9,559.08 Metro Parks Of Butler County 1,236.83 Assessments 3,228.38 Total 119,833.80 | | 35% Taxable Value Land 505,330 Bldg/Improv 1,408,300 Total 1,913,630 | | | | | | | | | | | | | | | |
| | | Stub No. 147343 | Special Assessments <table border="1"> <thead> <tr> <th></th> <th>Delq.</th> <th>Current Yr.</th> </tr> </thead> <tbody> <tr> <td>1601-STORMWATER NPDES PH II</td> <td>0.00</td> <td>3,081.00</td> </tr> <tr> <td>51900-MIAMI CONSERVANCY</td> <td>0.00</td> <td>111.04</td> </tr> <tr> <td>51902-DAM SAFETY INITIATIVE</td> <td>0.00</td> <td>36.34</td> </tr> <tr> <td>Assessment Total</td> <td>0.00</td> <td>3,228.38</td> </tr> </tbody> </table> | | Delq. | Current Yr. | 1601-STORMWATER NPDES PH II | 0.00 | 3,081.00 | 51900-MIAMI CONSERVANCY | 0.00 | 111.04 | 51902-DAM SAFETY INITIATIVE | 0.00 | 36.34 | Assessment Total | 0.00 | 3,228.38 |
| | Delq. | Current Yr. | | | | | | | | | | | | | | | | |
| 1601-STORMWATER NPDES PH II | 0.00 | 3,081.00 | | | | | | | | | | | | | | | | |
| 51900-MIAMI CONSERVANCY | 0.00 | 111.04 | | | | | | | | | | | | | | | | |
| 51902-DAM SAFETY INITIATIVE | 0.00 | 36.34 | | | | | | | | | | | | | | | | |
| Assessment Total | 0.00 | 3,228.38 | | | | | | | | | | | | | | | | |
| | | | Homestead Reduction in Value 0 CAUV Value 1,443,790 | | | | | | | | | | | | | | | |
| Full Year Total 119,833.80 Half Year Total 59,916.90 Payments 0.00 Other Credits 0.00 | To Avoid Penalty Pay On Or Before February 28, 2019 | | For information on monthly payment plans, please contact the Treasurer's Office at (513) 887-3181. Please save top portion of bill for income tax purposes. | | | | | | | | | | | | | | | |
| Half Year Balance Due \$59,916.90 | | | | | | | | | | | | | | | | | | |

2

11402



Nancy Nix, CPA
Real Estate Property Tax
First Half Tax Year 2018
February 28, 2019
Tax Bill Prepared on 01/15/2019

Parcel No. E2310-008-000-015

Make Checks Payable To:
Nancy Nix, Butler County Treasurer

Code
Owner Name UNION LIGHT HEAT & POWER CO
Parcel Location 2100 WOODSDALE RD

Amount Paid \$ _____

DUKE ENERGY KENTUCKY INC
PROPERTY TAX DIVISION
550 S TRYON ST # DEC41B
CHARLOTTE NC 28202

| | |
|----------------------|----------------------|
| Full Year Due | Half Year Due |
| \$119,833.80 | \$59,916.90 |

E2310008000015000059916900011983380NML



Nancy Nix, CPA
Butler County Treasurer
 Government Services Center
 315 High Street, 10th Floor
 Hamilton, Ohio 45011

Real Estate Property Tax
First Half Tax Year 2018
February 28, 2019

www.butlercountytreasurer.org
 513-887-3181

| | | | | | |
|---|--|---|--|--|--|
| DUKE ENERGY KENTUCKY INC 134 261 PROPERTY TAX DIVISION DEC41B 550 S TRYON ST SUITE 180 CHARLOTTE NC 28202-4209 | | | Parcel No. E2310-999-010-400 Taxing District MADISON TWP-EDGEWOOD CSD Parcel Location Owner Name DUKE ENERGY KENTUCKY INC Legal Description FEIN# 31-0473080 P.U.P.P.TANG. ELECTRIC COMPANY | | |
| Gross Tax Rate 68.442000 Reduction Factor 0.000000 Effective Tax Rate 68.442000 | Non Business Credit Factor 0.000000 Owner Occupancy Credit Factor 0.000000 | Acres Class Code U 88U | 100% Appraised Value Land 0 Bldg Improv 95,137,660 Total 95,137,660 | | |
| Calculation of Taxes | | Annual Tax Distribution | | | |
| Gross Taxes 2,278,994.04 Subtotal 2,278,994.04 Current Net Real Estate Taxes 2,278,994.04 Current Net Taxes & Asmts(YEAR) 2,278,994.04 Current Net Taxes & Asmts(HALF) 1,139,497.02 | General Fund 63,932.52 Developmental Disabilities 99,894.52 Midpointe Library Systems 24,973.22 Mental Health 49,947.25 Children Services 66,596.23 Senior Citizens 43,287.66 Edgewood Csd 1,667,640.21 Butler County Jvsd 64,265.35 Madison Fire District 175,147.53 Metro Parks Of Butler County 23,309.55 Assessments 0.00 Total | | 35% Taxable Value Land 0 Bldg Improv 33,298,180 Total 33,298,180 | | |
| Full Year Total 2,278,994.04 Half Year Total 1,139,497.02 Payments 0.00 Other Credits 0.00 Half Year Balance Due \$1,139,497.02 | | Stub No. 143641 To Avoid Penalty Pay On Or Before February 28, 2019 | | Special Assessments Delq. Current Yr. Homestead Reduction in Value 0 CAUV Value 0 For information on monthly payment plans, please contact the Treasurer's Office at (513) 887-3181. Please save top portion of bill for income tax purposes. | |



Nancy Nix, CPA
Real Estate Property Tax
First Half Tax Year 2018
February 28, 2019
 Tax Bill Prepared on 01/15/2019

Parcel No. E2310-999-010-400

Make Checks Payable To:
 Nancy Nix, Butler County Treasurer

Code UTIL
Owner Name DUKE ENERGY KENTUCKY INC
Parcel Location

Amount Paid \$ _____

DUKE ENERGY KENTUCKY INC
 PROPERTY TAX DIVISION DEC41B
 550 S TRYON ST SUITE 180
 CHARLOTTE NC 28202

| | |
|-----------------------|-----------------------|
| Full Year Due | Half Year Due |
| \$2,278,994.04 | \$1,139,497.02 |

E2310999010400001139497020227899404NML

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-057

REQUEST:

Refer to the Jacobi Testimony, page 21, regarding non-union labor expense.

- a. Provide the adjustment to non-union labor expense, exclusive of promotions, if wage and salary increases were limited to three percent.
- b. Provide the same adjustment of all labor costs allocated to Duke Kentucky.

RESPONSE:

- a. The company's budget guidance dictates a 3.5% increase including promotions and non-promotion merit increases of 3.0%. Therefore, there would be no adjustment.
- b. Refer to a. above.

PERSON RESPONSIBLE: Christopher Jacobi

STAFF-DR-02-058

REQUEST:

Refer to the Jacobi Testimony, page 21, regarding operations and maintenance (O&M) expense.

- a. Identify the amount, in percentage terms, of the general escalation assumptions, and explain how they were determined.
- b. Identify and explain the escalation assumptions for those expenses that are expected to diverge from general escalation assumptions.

RESPONSE:

- a. 1% escalation is the direction from the corporation for overall O&M growth. This small inflation factor is mostly absorbing labor and contract inflation pressures while challenging the company to continue to become more efficient.
- b. For certain O&M expenses the general escalation assumption of 1% is not reasonable. Examples of expenses that are not forecasted to increase by 1% per year are employee benefits, vegetation management, certain regional transmission expenses, and expenses related to the sale of accounts receivable. For these expenses, amounts are forecasted based on specific factors such as expected employee benefit inflation or expected cost increases or decreases based on market trends in the case of vegetation management. For the purpose of mitigating O&M inflation, the company also budgets for the expected benefit of company-wide efficiency initiatives which vary from year to year.

PERSON RESPONSIBLE: Christopher M. Jacobi

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-059

REQUEST:

Refer to the Jacobi Testimony, page 24. Identify, quantify, and explain all expected productivity and efficiency gains reflected in the forecasted data.

RESPONSE:

The Company does not track the financial benefits associated with productivity and efficiency program; however, the Company continually adapts to new efficiencies in our processes, even where there are not expressly written initiatives or programs. Duke Energy Kentucky routinely files reports with this Commission that describe, among other things, such efficiencies implemented through best practices adopted. These reports are filed with this Commission and publicly available in the post-case correspondence in Case No. 2011-00124, available at:

http://psc.ky.gov/PSC_WebNet/ViewCaseFilings.aspx?case=2011-00124

In addition to the initiatives outlined in the documents referenced above, the following are some examples of cost-saving programs undertaken over the period:

- Operation & Maintenance costs for Duke Energy Kentucky have remained relatively flat, overcoming the cost of inflation, due to several initiatives the Company has executed on in order to minimize costs to customers.
- Corporate cost reductions through elimination of redundant processes and workforce planning, driving reductions in labor and external contract costs.

- Grid modernization efforts, such as advanced metering, have reduced costs and provided a platform for enhanced benefits to customers.
- The Company has made significant investments in its generation equipment related to ash handling and disposal and reducing the potential for capacity performance penalties due to untimely forced outages.

PERSON RESPONSIBLE: Amy B. Spiller

Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019

STAFF-DR-02-060

REQUEST:

Refer to the Jacobi Testimony, page 27. Refer also to the application, Volume 1, Tab 28, and Duke Kentucky's response to Commission Staff's First Request for Information (Staff's First Request), Item 21. Provide Duke Kentucky's actual transmission expense for the five-year period ending December 31, 2018 and the projected transmission expense for years 2019 through 2021.

RESPONSE:

The table below shows actual transmission expense (accounts 560-574) for the years 2014-2018 (actual) and 2019-2021 (projected).

| Year | Amount |
|------|--------------|
| 2014 | \$12,959,072 |
| 2015 | \$15,319,123 |
| 2016 | \$18,436,338 |
| 2017 | \$16,572,761 |
| 2018 | \$11,823,483 |
| 2019 | \$20,539,261 |
| 2020 | \$22,467,382 |
| 2021 | \$24,105,371 |

Note that 2018 included a one-time credit as a result of FERC order 494. This \$7 million credit was for RTEP charges incurred by the Company in prior periods that were never charged to customers in base rates or any riders.

PERSON RESPONSIBLE: Danielle Weatherston – actual periods
Christopher Jacobi – forecast periods

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-061

REQUEST:

Refer to the Jacobi Testimony, page 31, and the application, Volume 11, Section D, Schedule D-2.8. Explain the large increase in customer accounts expense from the base period to the test period.

RESPONSE:

Customer Accounts Expense increased \$522,896 from \$6,587,411 in the base period to 7,110,307 in the unadjusted test period primarily related to an increase in the uncollectible expense account which is eliminated in Schedule D-2.31. As noted on Schedule C-2 Line 17, Customer Accounts Expense in the adjusted test period is \$5,402,526 which is less than the base period.

PERSON RESPONSIBLE: Christopher M. Jacobi
Sarah E. Lawler

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-062

REQUEST:

Refer to the Jacobi Testimony, page 32, and the application, Volume 11, Section D, Schedule D-2.14. Provide a schedule showing a breakdown of state and other taxes for the base period and forecasted test year. Provide any calculations that were used in computing the tax amounts.

RESPONSE:

Please refer to Volume 11, Schedule C2.1 for breakdown of State and Other Taxes for the base period and forecasted test year. Property taxes are calculated based on historical property tax rates, which are applied to forecasted property balances. Please see STAFF-DR-02-062 Attachment for property tax calculations.

Payroll taxes are calculated by applying a rate of 7.65% to forecasted wages.

PERSON RESPONSIBLE: Christopher M. Jacobi
Sarah E. Lawler

Duke Energy: Kentucky Electric Property Tax Calculation

KyPSC Case No. 2019-00271

STAFF-DR-02-062 Attachment

Page 1 of 1

Calculation of blended rate for forecasting purposes:

Based on 2016 property taxes, to be paid in 2017, amounts per bills (\$000s)

| Entity | State | Tax per bill | Net Tangible Plant | 1% Annual Escalation | | | | | |
|---------------------------------|----------|--------------|--------------------|----------------------|------------|------------|------------|------------|------------|
| | | | | 2016 rates | 2017 rates | 2018 rates | 2019 rates | 2020 rates | 2021 rates |
| Duke Energy Kentucky - Electric | Kentucky | \$ 6,474 | | 0.895% | 0.904% | 0.913% | 0.922% | 0.931% | 0.940% |
| Duke Energy Kentucky - Electric | Ohio | \$ 2,428 | | 0.336% | 0.339% | 0.342% | 0.346% | 0.349% | 0.353% |
| | | | \$ 723,700 | | | | | | |

| | <u>04-12/20</u> | <u>01-03/21</u> | <u>Test Period</u> |
|---|---------------------|---------------------|----------------------|
| <u>Kentucky Sited Electric Property:</u> | | | |
| Plant In Service | 1,143,210 | 1,195,492 | |
| Property Tax Rate | 0.931% | 0.940% | |
| Prior Year Plant In Service | 1,040,542 | 1,143,210 | |
| Prior Year Property Tax Rate | 0.922% | 0.931% | |
| Months | 9 | 3 | |
| Annual Property Tax Provision | <u>7,193</u> | <u>2,661</u> | <u>9,853</u> |
| <u>Ohio Sited Electric Property:</u> | | | |
| Plant In Service | 1,143,210 | 1,195,492 | |
| Property Tax Rate | 0.349% | 0.353% | |
| Prior Year Plant In Service | 1,040,542 | 1,143,210 | |
| Prior Year Property Tax Rate | 0.346% | 0.349% | |
| Months | 9 | 3 | |
| Annual Property Tax Provision | <u>2,698</u> | <u>998</u> | <u>3,696</u> |
| Total | <u>9,891</u> | <u>3,658</u> | <u>13,549</u> |

STAFF-DR-02-063

REQUEST:

Refer to the Direct Testimony of Jeff L. Kern (Kern Testimony), page 9, lines 10-13 regarding the proposed rate design objectives.

- a. Explain in detail what is meant by there being “no significant structural changes to the power rates.”
- b. Regarding the decision not to implement any significant rate design changes due to the anticipate future replacement of the billing systems, explain whether Duke Kentucky intends to develop and propose significant rate design changes one the new billing system becomes operational and what those significant rate design changes will be.

RESPONSE:

- a. The only changes to the rates are to the rates themselves, without changing the structure. If a particular rate schedule consisted of a customer charge, a demand charge and stepped usage charges, the proposed rate also has a customer charge, a demand charge and stepped usage charges.
- b. The Company desires to provide customers with choices in rate design to help improve the customer experience related to how customers are charged for electric consumption. The rate design options are not yet determined but could include features of designs described as time-of-use (TOU), dynamic pricing, and/or rates with demand charges.

PERSON RESPONSIBLE: Jeff L. Kern

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-064

REQUEST:

Refer to the Kern Testimony, page 10, lines 6-8. Describe in detail what the “existing structural characteristics of the rate schedules” entail.

RESPONSE:

The existing structural characteristics of the rate schedule are the components that make up that rate schedule, such as the existence of a customer charge, demand charge, stepped usage charges and whether the rates change seasonally or with the time of day. See response to STAFF-DR-02-063a.

PERSON RESPONSIBLE: Jeff L. Kern

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-065

REQUEST:

Refer to the Kern Testimony, page 11, lines 13-16. Explain why the original LED rates did not include the costs for pole foundations, brackets, or wiring equipment.

RESPONSE:

The LED rates as originally contemplated did not include the cost for pole foundation, brackets or wiring since the customers would pay for these upfront. However, since the original filing, the Company has received feedback that customers would prefer to pay a monthly fee for everything rather than an upfront charge for some equipment and a monthly charge for the poles and fixtures.

PERSON RESPONSIBLE: Jeff L. Kern

STAFF-DR-02-066

REQUEST:

Refer to the Kern Testimony, pages 12-13, regarding the proposed revisions to the Cogeneration and Small Power Production Sale and Purchase Tariff – 100 kW or Less (QF Small Tariff) and the Cogeneration and Small Power Production Sale and Purchase – Greater than 100 kW (QF Large Tariff). Explain why the Energy Purchase Rate for the QF Small Tariff is determined differently than the Energy Purchase Rate for the QF Large tariff.

RESPONSE:

For cogeneration facilities of 100 kW or less, a standard contract offer is required. A two-year average PJM RT LMP is used for the longer-run avoided costs over the term. For cogeneration facilities of over 100 kW, no standard offer contract is required. The PJM RT LMP represents the avoided energy cost at the time of delivery.

PERSON RESPONSIBLE: Jeff L. Kern

STAFF-DR-02-067

REQUEST:

Refer to the Kern Testimony, pages 13-14 regarding distribution pole attachment charges, and Attachment JLK-4, Line 11, Taxes (Normalized).

- a. Identify what taxes are included in Line 11.
- b. Provide an example calculation that shows how the percentage was determined.

RESPONSE:

- a. Line 11 includes federal income, fuel, insurance and unemployment taxes; state income, unemployment, property, and sales & use taxes; and local property taxes. It also includes Provision for Deferred Income Taxes and the Investment Tax Credit Adjustment.
- b. See STAFF-DR-02-067b Attachment.

PERSON RESPONSIBLE: Jeff L. Kern

Duke Energy Kentucky
 Calculation of Taxes (Normalized)
 Calendar Year 2018

| | | Source* |
|---|-----------------------|------------------------------|
| 1 Federal Income Tax | (14,264,509) | Page 115, Line 15, Column g. |
| 2 State Income Tax | (2,541,597) | Page 115, Line 16, Column g. |
| 3 Taxes Other than Income | | |
| 4 Fuel Taxes | 1,217 | Page 263, Line 5, Column i. |
| 5 Federal Insurance | 1,867,087 | Page 263, Line 6, Column i. |
| 6 Federal Unemployment | 7,813 | Page 263, Line 7, Column i. |
| 7 State Unemployment | 6,702 | Page 263, Line 13, Column i. |
| 8 State Property | 1,601,742 | Page 263, Line 14, Column i. |
| 9 Sales & Use Taxes | (12,883) | Page 263, Line 15, Column i. |
| 10 Other Property | 7,960,833 | Page 263, Line 22, Column i. |
| 11 Prov. for Deferred Inc. Taxes (Acctg 410.1) | \$60,637,987 | Page 115, Line 17, Column g. |
| 12 (Less) Prov. for Def. Inc. Taxes - Cr. (Acctg 411.1) | (\$35,143,993) | Page 115, Line 18, Column g. |
| 13 Investment Tax Credit Adj. - Net (Acctg 411.4) | <u>(\$11,335)</u> | Page 115, Line 19, Column g. |
| 14 Total | 20,109,064 | Sum of Lines 1 - 13 |
| 15 | | |
| 16 Utility Plant in Service | \$1,769,143,870 | Page 200, Line 8, Column c. |
| 17 Accum. Depr. - Utility Plant in Service | (\$783,462,699) | Page 200, Line 22, Column c. |
| 18 Accumulated Deferred Taxes (Acct. 190) | \$55,886,925 | Pg 234, line 8, column c |
| 19 ADIT - Accelerated Amort. Property (Acctg. 281) | \$0 | Pg 272, Line 8, Column k. |
| 20 ADIT - Other Property (Acctg. 282) | (\$198,573,426) | Pg 274, Line 2, Column k. |
| 21 ADIT - Other (Acctg. 283) | <u>(\$24,318,670)</u> | Pg 276, Line 9, Column k. |
| 22 Total | \$818,676,000 | Sum of Lines 16 - 21 |
| 23 | | |
| 24 Taxes (Normalized) | 2.46% | Line 14 / Line 22 |

* 2018 FERC Form 1

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-068

REQUEST:

Refer to the Kern Testimony, pages 14, lines 4-8, and the Direct Testimony of Sarah E. Lawler (Lawler Testimony), page 17, lines 12-22. Explain whether any margins from the proposed Electric Transit Bus Charging stations will be included in Duke Kentucky's Rider PSM.

RESPONSE:

The only program within the Company's proposed EV Pilot where the Company will take an additional payment from the end user (EV Driver) is the EV Fast Charging Station Program. The Electric Transit Bus Charging Station customer will only pay their normal monthly utility bill. Therefore, there will be no revenues (or margins) being generated to credit through the Rider PSM. The only net revenues expected to be generated from the Company's proposed EV Pilot are those generated through the EV Fast Charging Station Program.

PERSON RESPONSIBLE: Sarah E. Lawler

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-069

REQUEST:

Refer to the Kern Testimony, page 14, lines 16-18. Provide the amount included in miscellaneous charges revenue charges of \$165,980 that represents the fraud/tamper penalty.

RESPONSE:

The tamper penalty fee revenue included in the miscellaneous charges revenue is \$22,400, as shown on Schedule D-2.21.

PERSON RESPONSIBLE: Sarah E. Lawler

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-070

REQUEST:

Refer to the Kern Testimony, page 15, lines 9-12. Explain why separate electric and gas crews are dispatched for reconnections and indicate if this is a change in practice or if Duke Kentucky has always dispatched separate crews.

RESPONSE:

The Company changed its practices and began dispatching separate crews for electric and gas reconnections due to the advent of AMI meters in Kentucky. Since most electric reconnections are handled remotely, it was determined that it was better to allow gas crews to concentrate on natural gas and not be cross trained to reconnect electric when non-remote electric reconnections are rare.

PERSON RESPONSIBLE: Jeff L. Kern

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-071

REQUEST:

Refer to the Kern Testimony, page 15, lines 14-15. Confirm that the incremental charge for reconnection after normal business hours is for both remote and non-remote meters.

RESPONSE:

The incremental charge for reconnection after normal business hours only applies to non-remote reconnections.

PERSON RESPONSIBLE: Jeff L. Kern

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-072

REQUEST:

Refer to the Kern Testimony, page 17, lines 9-11. Explain how the flat fees and gross receipt fees that include caps are passed on to customers.

RESPONSE:

Currently there is only one municipality charging a flat fee, so the Company charges a flat amount per meter to those customers, rather than a percentage. There are currently no gross receipt fees that include a cap, but that would likely be handled in the same manner.

PERSON RESPONSIBLE: Jeff L. Kern

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-073

REQUEST:

Refer to the Kern Testimony, Attachment JLK-4. Explain why Duke Kentucky used a rate of return of 6.83 percent in calculating its pole attachment rates.

RESPONSE:

6.83% is the overall rate of return approved in the Company's most recent rate case, Case No. 2017-00321. This should have been updated to the requested overall rate of return in this case, which is 6.711%. See STAFF-DR-02-073 Attachment for the revised calculation and Sheet No. 92 page 1 of 6.

PERSON RESPONSIBLE: Jeff L. Kern

Duke Energy Kentucky

Case No. 2019-00271

Revised CATV Pole Attachment Formula - Administrative Case No. 251

For Use of Electric Utility Poles

BASED UPON 2018 FERC FORM 1 DATA

| <u>FCC Pole Attachment Rate Formula</u> | | <u>Amount</u> | | | | |
|--|--|----------------------|----------------|----------------|-----------------|-------------------|
| | | 35' | 40' | 45' | Two User | Three User |
| 1 | Gross Pole Investment | \$4,729,952 | \$15,600,971 | \$16,598,071 | \$20,330,923 | \$32,199,042 |
| 2 | Pole Depreciation Reserve | \$2,112,081 | \$6,966,354 | \$7,411,592 | \$9,078,435 | \$14,377,946 |
| 3 | Appurtenance Factor | \$325,714 | \$1,074,315 | \$1,142,978 | \$1,400,030 | \$2,217,293 |
| 4 | Accumulated Deferred Taxes (Poles) | (\$446,442) | (\$1,472,515) | (\$1,566,628) | (\$1,918,957) | (\$3,039,143) |
| 5 | Net Pole Investment | \$2,171,429 | \$7,162,102 | \$7,619,851 | \$9,333,531 | \$14,781,953 |
| 6 | Number of Poles | 6,692 | 16,849 | 10,517 | 23,541 | 27,366 |
| 7 | Net Investment Per Bare Pole | \$275.81 | \$361.31 | \$615.85 | \$337.01 | \$459.13 |
| 8 | Pole Maintenance | | | | | |
| | A. Maintenance of Overhead Lines | \$7,798,853 | \$7,798,853 | \$7,798,853 | \$7,798,853 | \$7,798,853 |
| | B. Total Investment in Poles, Conductors, Services | \$214,069,802 | \$214,069,802 | \$214,069,802 | \$214,069,802 | \$214,069,802 |
| | C. Depreciation Reserve | \$75,841,592 | \$75,841,592 | \$75,841,592 | \$75,841,592 | \$75,841,592 |
| | D. Accumulated Deferred Taxes | (\$20,207,626) | (\$20,207,626) | (\$20,207,626) | (\$20,207,626) | (\$20,207,626) |
| | E. Total Investment in Poles - Net | \$158,435,836 | \$158,435,836 | \$158,435,836 | \$158,435,836 | \$158,435,836 |
| | F. Pole Maintenance Ratio | 4.92% | 4.92% | 4.92% | 4.92% | 4.92% |
| 9 | Depreciation | 4.55% | 4.55% | 4.55% | 4.55% | 4.55% |
| 10 | Administration | 2.47% | 2.47% | 2.47% | 2.47% | 2.47% |
| 11 | Taxes (Normalized) | 2.46% | 2.46% | 2.46% | 2.46% | 2.46% |
| 12 | Rate of Return | 6.711% | 6.711% | 6.711% | 6.711% | 6.711% |
| 13 | Total Carrying Charge | 21.11% | 21.11% | 21.11% | 21.11% | 21.11% |
| 14 | Allocated Space | | | | 12.24% | 7.59% |
| 15 | Maximum Rate Per Attachment | | | | \$8.71 | \$7.36 |

Duke Energy Kentucky, Inc.
1262 Cox Road
Erlanger, Kentucky 41018

KY.P.S.C. Electric No. 2
Third Revised Sheet No. 92
Cancels and Supersedes
Second Revised Sheet No. 92
Page 1 of 6

RATE DPA

DISTRIBUTION POLE ATTACHMENTS

APPLICABILITY

Applicable to the attachment of cable television systems and other qualifying attachments to any distribution pole of the Company by a person (attachee) who makes application on an appropriate Company form with submission of information and documents specified herein and in the application. Attachee must contract with Company. Attachees with active joint use agreements are excluded from this rate. This rate does not expand the rights to attach to the Company's structures beyond rights established by law.

ATTACHMENT CHARGES

The following annual rental rate per foot of pole shall be charged for the use of each of the Company's poles:

| \$8,768.71 per foot for a two-user pole. (I)

| \$7,407.36 per foot for a three-user pole. (I)

A two-user pole is a pole being used, either by actual occupation or by reservation, by the attachee and the Company. A three-user pole is a pole being used, either by actual occupation or by reservation, by the attachee, the Company and a third party.

PAYMENT

Attachee shall pay to the Company for all authorized attachments an annual rental, as set forth above, for the use of each of the Company's pole, any portion of which is occupied by, or reserved at attachee's request for the attachments of attachee, at any time during the initial rental year. The first annual payment of rental for the previous rental year shall be due and payable on the first anniversary date of attachee's application. Subsequent payments of annual rental shall be due and payable on each succeeding anniversary date thereof.

As newly authorized attachments are made after the initial rental year, rentals for such attachments shall be paid for the entire year if made within the six month period after any anniversary date, and for on-half year if made during the following six month period. For any attachments removed by attachee and for which the Company shall have received written notice from attachee, the yearly rental shall be prorated to the date of removal.

All fees, charges and rentals provided for herein not paid when due and payable shall bear interest at the maximum rate permitted by law from the date when due, until paid.

Issued by authority of an Order of the Kentucky Public Service
Commission dated _____ in Case No. 2019-00271.

Issued: September 3, 2019

Effective: October 3, 2019

Issued by Amy B. Spiller, President /s/ Amy B. Spiller

REQUEST:

Refer to the Kern Testimony, Exhibit JLK-5, page 1 of 1, regarding remote reconnection.

- a. Explain what DEMW Base Occupancy means and indicate how Duke Kentucky arrived at the percentage listed.
- b. Explain what Base Shrinkage means and indicate how Duke Kentucky arrived at the percentage listed.
- c. Also, refer to Case No. 2017-00321, Rebuttal Testimony of Bruce L. Sailors, Attachment BLS – Rebuttal 8. Explain why the method of calculating the remote reconnection charge used in the current case differs from what was used in Case No. 2017-00321/

RESPONSE:

- a. DEMW Base Occupancy is the percent of time that a specialist is logged onto the phone and working on a customer's call compared to the total time they are logged onto the phone. The percentage was calculated based on actual tracking data from October 2018 through March 2019.
- b. Base Shrinkage is the percent of time that a specialist is not logged onto the phone during their shift, for example to attend meetings or training. This percentage was also based on actual tracking data from October 2018 through March 2019.
- c. Discussions with Customer Care personnel and further research determined that this revised method of calculating the remote reconnection charge is more accurate

and consistent with the method used in other Duke Energy jurisdictions. For example, the previous method did not account for Base Occupancy or Base Shrinkage.

PERSON RESPONSIBLE: Jeff L. Kern

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-075

REQUEST:

Refer to the Direct Testimony of Zachary Kuznar, PhD (Kuznar Testimony) Testimony, page 3, lines 2-5, and page 4, lines 2-5. Explain whether nonperformance during distribution system outages could result in penalties or charges from PJM.

RESPONSE:

In this situation, if the battery had a Day-Ahead Energy award and/or a Day-Ahead Scheduling Reserves award, then it would be subject to re-purchasing of these awards in the Real-Time market and potentially be assessed a Balancing Operating Reserve charge. However, the Company has not decided if the battery would be offered in the Day-Ahead market (it would participate in the Real-Time market). Thus, if no Day-Ahead award were received, there would be no re-purchasing (two-part settlement) in the Real-Time market. In this situation, the battery would simply lose the opportunity to receive additional revenue in the PJM Energy and Ancillary Services Market.

PERSON RESPONSIBLE: John Verderame
Zachary Kuznar

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-076

REQUEST:

Refer to the Kuznar Testimony, page 4, lines 1-16. Explain how PJM's ancillary service market currently utilizes and compensates distribution battery energy storage systems.

RESPONSE:

Please see responses to AG-DR-01-108 and STAFF-DR-02-159.

PERSON RESPONSIBLE: John Verderame

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-077

REQUEST:

Refer to the Kuznar Testimony, page 5, lines 13-15. State whether any other Duke Kentucky affiliates have implemented battery storage projects. If so, identify the affiliate, provide a general description of the energy storage system(s), and explain how Duke Kentucky's proposed project incorporates lessons learned from those affiliates.

RESPONSE:

Duke Energy Kentucky's affiliates have developed a number of battery storage projects. See ATTACHMENT STAFF-DR-02-077 which includes a fact sheet for a list of projects with their descriptions. Most of the projects identified are under construction or pre-construction at this time. Duke Energy Kentucky will incorporate lessons learned from the technology selection and RFP process. Previous contract negotiation experience will be incorporated into the warranties and guarantees required for Duke Energy Kentucky's proposed system. Any lessons learned during our current construction and interconnection activities will be incorporated into our EPC contract. Additionally, any safety requirements or standards developed for other projects will be incorporated when appropriate.

PERSON RESPONSIBLE: Zachary Kuznar



OUR ENERGY STORAGE VISION

Duke Energy believes energy storage will play a significant role in how we deliver energy to our customers now and into the future. We provide over 7.6 million retail customers safe, reliable energy which requires us to invest prudently and cost-effectively in the latest grid technologies. As part of our broader efforts to modernize the grid, we are strategically placing energy storage on our system where it can deliver the maximum benefits for our customers and the communities we serve.

Our intent is to take advantage of energy storage's declining costs while providing a transparent and reasonable cost structure for our customers. As we invest in energy storage, we will ensure compliance with regulations and standards involving reliability, national security and cybersecurity. The versatility of battery storage systems makes the technology a natural extension of the energy grid and we will apply our years of engineering and operating experience to maximize its full potential.

ENERGY STORAGE BENEFITS

- Operational benefits include improved efficiencies and enhanced reliability, in some cases enabling us to defer future grid investments that otherwise would be required
- Ability to both physically store and dispatch energy at strategic times along the energy grid – providing a variety of benefits for operations and our customers
- Enables increased energy grid flexibility for helping manage the continued growth of intermittent resources on our system – like solar energy
- Energy security and back-up power for our customers who provide critical services to the community - like hospitals, universities, emergency shelters and the military - while also serving to enhance grid operations.

INVESTMENT STRATEGY

Duke Energy has plans for approximately 375-megawatt (MW) of energy storage across our regulated businesses, representing approximately \$600 million of new investment.

While there are various types of storage technologies, in the near term, Duke Energy plans to invest in larger, megawatt-scale electrochemical batteries to modernize its electric system.

OUR ROLE

Duke Energy is the energy grid manager and operator. With a clear line of sight and understanding of how energy storage can be leveraged as both a transmission and distribution resource, we believe the utility is in a good position to deliver value to the broader system and our customers.

- Duke Energy is the sole source for optimal siting to deliver transmission and distribution investment deferral which can be a cost-effective solution for customers.
- The utility is also the only operator with the infrastructure and systems needed to dispatch and operate this sophisticated and dynamic technology. Dispatch and operation of battery systems in this space is accomplished in seconds and fractions of seconds, not minutes.

- As battery systems are deployed, Duke Energy will seek to partner with diverse suppliers who can provide the latest battery technology expertise and resources to make projects successful. Ultimately this will enhance the local economies by developing a robust supply chain in the area for energy storage systems.

STORAGE DEVELOPMENT AND PROJECTS ACROSS OUR REGULATED JURISDICTIONS

FLORIDA

- Investment planned for 50 MW of batteries as part of program approved by the Florida Public Service Commission
 - Evaluating project sites with high customer value and multiple system benefits
 - Customers will experience enhanced reliability and cost savings vs. traditional grid upgrades as well as additional benefits from stacked use cases such as system peak shaving and ancillary services
- **Cape San Blas**
 - 5.5-MW Cape San Blas lithium-based battery facility will be located approximately 40 miles southeast of Panama City in Gulf County
 - Project is an economical alternative to replacing distribution equipment necessary to accommodate local load growth
- **Jennings**
 - 5.5-MW Jennings lithium-based battery facility will be located 1.5 miles south of the Florida-Georgia border in Hamilton County.
 - Project will continue to improve power reliability by providing alternative solution to installing new and more costly distribution equipment
- **Trenton**
 - 11-MW lithium-based battery facility will be located 30 miles west of Gainesville in Gilchrist County
 - Project will continue to improve power reliability by providing alternative solution to installing new and more costly distribution equipment



KENTUCKY

- Anticipating deployment of 2 MW annually beginning in 2019 – this was highlighted in the 2018 Integrated Resource Plan filing with Kentucky Public Service Commission

OHIO

- 10 MW battery energy storage pilot targeting grid reliability and resiliency benefits was approved as part of Duke Energy Ohio's Electric Security Plan (ESP).

INDIANA

- Deploying 10 MW of energy storage at two sites in southern Indiana service area
Each project will deliver multiple benefits to customers and overall grid
- Continuing to evaluate strategic opportunities for additional battery energy storage to deliver customers and grid benefits
- **Camp Atterbury Microgrid**
 - Approved by Indiana Public Utilities Commission in 2017 and currently under construction
 - Tailored customer microgrid solution is a 2-MW solar array + 5-MW battery energy storage onsite
 - Provides grid benefits during normal operations (e.g. frequency regulation, solar firming) and service as micro-grid and backup power during an outage
- **Nabb Battery Project**
 - Approved by Indiana Public Utilities Commission in 2017 and currently under construction
 - Addresses grid reliability needs by deferring traditional upgrades
 - Participating in MISO frequency regulation market



NORTH AND SOUTH CAROLINA

- Investment planned for approximately 300 MW of energy storage in the state at various locations on our Carolinas system and in partnership with areas where it can deliver the most benefits for the grid and the local community:
 - Two projects totaling 13 MWs are under development as part of the Western Carolinas Modernization Plan
 - 95kWh battery installation was deployed with solar to create a micro-grid for the National Park Service (Mt. Sterling, N.C.)
 - Continuing to evaluate energy storage projects that can provide operational and customer benefits. Working with large business customers like the Department of Defense, cities, hospitals and first responders



- Rock Hill Storage Project (Asheville, N.C.)**
 - Part of Western Carolinas Modernization Plan, which calls for investment in energy storage and aims to meet the region's power demand by balancing public input, environmental impacts while providing safe, reliable and affordable energy.
 - 9 MW lithium-ion battery located in City of Asheville at Duke Energy substation in the Rock Hill community (DEP service territory)
 - Battery will be used to help the electric system operate more efficiently
- Hot Springs, N.C. Microgrid Project**
 - Part of Western Carolinas Modernization Plan, located in Madison County (DEP service territory)
 - The microgrid will consist of a 2 MW (AC) solar facility and a 4 MW lithium-based storage facility
 - The project will defer high-cost equipment and maintenance of an existing 10-mile distribution feeder that cuts through remote and rugged mountain terrain to the town of Hot Springs, NC.
 - Provides a safe, cost-effective and reliable grid solution for serving hundreds of customers in the local community and supports services of the overall grid
- Mount Sterling, N.C. Microgrid Project**
 - An innovative 95 kWh zinc-air battery installation paired with 10 kW solar installation
 - Located in Haywood County at National Park Service in the Great Smoky Mountains (DEP service territory)
 - Solar and storage provide continual energy to the National Park Service's communication tower
 - Replaces 5 miles of distribution lines (48 poles) giving Park Service back 13 acres of land to its natural state for hikers and visitors to enjoy
 - Eliminates future distribution system upgrades which would have been required and costlier than a micro-grid solution
- Anderson County, S.C. Civic Center Microgrid Project**
 - 5 MW lithium-ion battery will be a Duke Energy owned and operated grid-tied asset for the Civic Center
 - The battery will provide back-up power at the facility, which serves as a critical shelter for emergency service agencies such as the SC Department of Health and Environment Services, Anderson County School District 5, and the American Red Cross during hurricanes or other natural disasters.
 - The battery will be capable of powering the facility for approximately 25 hours, at average load levels
 - As a grid asset, the battery will also provide benefits to the bulk power system to enhance reliability



COMMERCIAL AND RESEARCH AND DEMONSTRATION PROJECTS

For the last decade, Duke Energy has been developing projects for research and demonstration, in addition to deploying several projects in our commercial business. Our energy storage research and demonstration work includes 15 national projects that demonstrate 10 different grid applications and functions, with 8 different battery chemistries representing more than 40 MW of capacity. Here are just a few examples:

- Beckjord 1 & 2 (Commercial):** Each system is located at the retired W.C. Beckjord Station in New Richmond, Ohio. Beckjord 1 is a 2-MW battery storage system designed to regulate frequency and increase stability within the power grid. Beckjord 2 utilized

the team of Duke Energy, LG Chem and Greensmith for a 2-MW storage project that assists in regulating electric grid frequency for PJM, the transmission organization that powers much of the eastern United States.

- **Notrees Battery Storage (Commercial):** The 36 MW advanced lithium-ion battery technology located in Texas is one of the largest installations in North America. The battery provides frequency regulation for the ERCOT market. It was developed in partnership with the Department of Energy and commissioned in late 2012.
- **Mount Holly (R&D):** State-of-the-art research center in North Carolina, with a focus on operations, customer applications and interoperability. Collaborated with vendors, utilities, research labs and government agencies to develop and commercialize an interoperability framework that enables the integration of distributed resources and demonstrates alternative approaches for microgrid operations.
- **McAlpine Microgrid (R&D):** McAlpine Substation Energy Storage and Microgrid Project in Charlotte was commissioned in late 2012. An exists 200-kW BYD lithium iron phosphate battery and a newly installed 30kW Eos battery is interconnected with a 50-kW solar facility. The battery provides energy shifting and solar smoothing applications. This project is part of a microgrid that is being used to maintain power to a fire station during a grid outage event.
- **University of South Florida - St. Petersburg Microgrid (R&D):** A \$1 million grant from Duke Energy to the University of South Florida St. Petersburg helped fund a solar project on top of one of the university's parking garages that also includes 50-kW DC electric vehicle charging. A 200-kW/400-kWh battery from Tesla is used to help manage the solar output and the EV charging to optimize local peak demand and minimize grid impacts



BUILDING A SMARTER ENERGY FUTURE™

REQUEST:

Refer to the Kuznar Testimony, pages 7-8.

- a. Provide and explain which rider mechanism Duke Kentucky is proposing to use to flow through the net revenues to customers from battery storage functions.
- b. Provide the amount of net revenues that are included in the test year for battery storage operations.
- c. Provide the expected useful life of the battery storage project.

RESPONSE:

- a. As discussed in the direct testimony of Company witness Mr. William Don Wathen on page 19 Lines 15-20, net revenues from battery storage functions will be flowed to customers through Rider FAC and Rider PSM.
- b. Because the Company is proposing that these net revenues would be credited to customers in Rider FAC and Rider PSM, no net revenues are included in the test year for battery storage operations.
- c. The expected useful life of the system is 15 years.

PERSON RESPONSIBLE:

Sarah E. Lawler – a., b.
Zachary Kuznar – c.

**PUBLIC STAFF-DR-02-079
(As to Attachment only)**

REQUEST:

Refer to the Kuznar Testimony, page 8, lines 9-16, and page 9, lines 7-9.

- a. State whether the proposed battery project will provide increased reliability to any Duke Kentucky customer in addition to the hospital. If so, identify that customer.
- b. State whether a cost-benefit analysis was performed for the proposed battery project. If so, provide the analysis.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment only)

- a. Please see response to STAFF-DR-02-080. Subsequent to the filing of its application in this proceeding the location of the proposed battery project had to be changed as the hospital that was partnering with the Company decided not to proceed with the project. As a result, the Company is proposing to relocate the proposed battery project to a new site, the Company's Crittenden Solar Farm. The project will provide storage for the solar facilities on the new circuit and enable the same frequency regulation benefits as was described in the direct testimony of Dr. Kuznar. In addition, this location will allow the Company to study the potential ability to peak shave on the circuit along with dealing with voltage fluctuations caused by solar facilities along a distribution circuit, thereby enhancing reliability.
- b. See STAFF-DR-02-079(b) Confidential Attachment, which is a cost benefit analysis for the Crittenden Storage Project. The attached CBA only includes the benefit provided by PJM's regulation D market for frequency regulation. It does

not include what will eventually come out of FERC Order 841 in PJM once it is finalized. FERC issued its Order 841 on February 15, 2018, in which it directed regional grid operators to remove barriers to the participation of electric storage in wholesale markets. By directing the regional grid operators to establish rules that open capacity, energy, and ancillary services markets to energy storage, the Order affirms that storage resources must be compensated for all of the services provided and moves toward leveling the playing field for storage with other energy resources.

PERSON RESPONSIBLE: Zachary Kuznar

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**STAFF-DR-02-079(b) CONFIDENTIAL
ATTACHMENT**

FILED UNDER SEAL

REQUEST:

Refer to the Kuznar Testimony, page 9, lines 5-12. Describe the process Duke Kentucky used to determine the location of the proposed battery project.

RESPONSE:

The battery storage development team worked with distribution planning to identify potential battery sites. The goal was to identify a location suitable for the battery to provide frequency regulation in the PJM market along with additional benefits for the distribution system. Dr. Kuznar's direct testimony further explains the benefits of battery storage and the frequency regulation market in PJM. The Company explored multiple applications including, improving reliability for critical infrastructure customers and renewable energy integration. The development team identified multiple potential locations for the proposed project. As more fully explained in the Direct Testimony of Dr. Kuznar, the Company began to develop the project on the Thomas More circuit based on our ability to provide frequency regulation at this location combined with the presence of a hospital, who was interested in partnering with the Company and allowing the battery to be located on its property. In addition, the Company had also evaluated locating storage at its existing solar sites in Northern Kentucky.

Subsequent to the Company's filing, circumstances changed such that the initially proposed location is no longer viable. Nonetheless, the benefits of a battery pilot remain

for customers and the Company has since refocused its development efforts to the Crittenden Solar site and will meet the timeline as proposed in Dr. Kuznar's testimony.

Duke Energy Kentucky now plans to site a 3.4MW/6MWH battery storage project at its existing Crittenden Solar Farm. This project's primary application will remain frequency regulation but will also be used to study the integration of battery storage with renewable energy. These potential applications include, solar smoothing, solar shifting and voltage support. This project will enable the Company to study how battery storage can mitigate the impact of distributed generation resources on its distribution system. Among other things, this location will the Company to study the potential ability to peak shave on the circuit along with dealing with voltage fluctuations caused by solar facilities along a distribution circuit, thereby enhancing reliability.

PERSON RESPONSIBLE: Zachary Kuznar

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-081

REQUEST:

Refer to the Kuznar Testimony, page 9, lines 13-18. Confirm that below-average reliability of the circuit would increase the benefit of the proposed battery project. If confirmed, provide the reliability indexes of the subset of Duke Kentucky's system to which it proposes to attach the battery. If this cannot be confirmed, explain why.

RESPONSE:

Please see responses to Staff-DR-02-79 and Staff-DR-02-80. The Company is proposing to change the location for the project to study the impact of storage on solar/distributed generation facilities, which will allow the Company to study the potential ability to peak shave on the circuit along with dealing with voltage fluctuations caused by solar facilities along a distribution circuit, thereby enhancing reliability.

PERSON RESPONSIBLE: Zachary Kuznar

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

**PUBLIC STAFF-DR-02-082
(As to Attachment only)**

REQUEST:

Refer to the Kuznar Testimony, page 10, lines 11-12. Provide an itemized breakdown of the \$8.2 million cost of the battery storage project.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment only)

See STAFF-DR-02-082 Confidential Attachment.

PERSON RESPONSIBLE: Zachary Kuznar

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**STAFF-DR-02-082 CONFIDENTIAL
ATTACHMENT**

FILED UNDER SEAL

Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019

STAFF-DR-02-083

REQUEST:

Refer to the Kuznar Testimony, page 11, lines 3-4. Provide an itemized breakdown of the \$163,000 annual ongoing cost of operation.

RESPONSE:

The estimated \$163,000 was based on an average of the first five years of projected O&M. This number includes equipment warranty, software maintenance of the controller, maintenance of the facility, internal Duke labor, and information technology maintenance and labor.

| Cost Description | Capital/O&M | Estimate |
|---|------------------------|-----------------|
| Equipment Warranty and Guarantee - Battery | O&M | \$32,738 |
| Software Maintenance - Local Controller | O&M | \$18,000 |
| Maintenance - BESS Balance of Plant | O&M | \$47,626 |
| Internal Duke Energy Labor (DEOM) | O&M | \$34,613 |
| Information Technology Maintenance - Software | O&M | \$300 |
| Information Technology - Telecom Charges | O&M | \$15,120 |
| Information Technology Maintenance – Labor (Renewables) | O&M | \$3,823 |
| Information Technology Maintenance – Labor (IT) | O&M | \$10,640 |

PERSON RESPONSIBLE: Zachary Kuznar

REQUEST:

Refer to the Kuznar Testimony, Attachment ZK-1.

- a. Explain in detail the competitive procurement process that Duke Kentucky will implement in identifying potential contractors and evaluating the proposals for the battery storage project.
- b. Refer to pages 3-4 of Attachment ZK-1 regarding the system requirements for the Battery Energy Storage System (BESS).
 - 1) Explain how Duke Kentucky selected 5.5 MW as the appropriate size to be attached to Duke Kentucky's distribution system.
 - 2) Explain how Duke Kentucky selected 8 MWh for 12 years as the optimal energy rating for the BESS.
 - 3) Explain how Duke Kentucky selected Samsung Lithium Ion or comparable technology as the appropriate batter material for the BESS. Include in this explanation a discussion of the safety and quality record of the Samsung Lithium-Ion battery.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment only)

- a. Duke Energy Kentucky will incorporate lessons learned from our previous RFP's in our procurement process. Duke Energy Kentucky will review the market

(including any potential local suppliers) and consider only Duke Energy Kentucky pre-approved or local qualified bidders. Duke Energy Kentucky will then use the standard Duke Energy evaluation process to review suppliers with a cross functional team. Duke Energy Kentucky will then select a vendor based on capabilities, value and price.

b.

1. Duke Energy Kentucky has redesigned the project for its new location at the Crittenden Solar farm on the Crittenden 42 circuit. The 3.4MW was deemed appropriate based on the existing charging capacity on that circuit as well as the ability of the battery to provide frequency regulation while complying with the IEEE 1547 Requirement for voltage changes. See STAFF-DR-02-084 Confidential Attachment, engineering report for additional details.
2. Duke Energy Kentucky has identified 6MWH for 12 years as the optimal size for the Crittenden Solar site in order to have adequate energy to provide PJM Frequency Regulation in the Reg-D market as well as test solar smoothing and shifting for the solar generation at Crittenden. See STAFF-DR-02-084 Confidential Attachment, engineering report for additional details.
3. Duke Energy Kentucky identified Samsung Lithium Ion as our likely technical solution as they have previously been able to comply with our performance guarantees and commercial requirements. We are open to

other solutions if they are able to meet the reliability and safety standards we require at a competitive price.

Safety features we plan to include for the project include:

- 1) Adequate site clearances for fence lines
- 2) Signage and Signals to alert first responders to site content.
- 3) Off-Gas early detection systems to alert of abnormal conditions in the containers.
- 4) Gas ventilation system
- 5) Fire/Smoke Detection and Suppression system
- 6) Deflagration/explosion relief panels
- 7) Emergency Action Plan specific to site
- 8) Yearly communication and updates to Emergency Responders on site safety plans

PERSON RESPONSIBLE: Zachary Kuznar

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**STAFF-DR-02-084 CONFIDENTIAL
ATTACHMENT**

FILED UNDER SEAL

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-085

REQUEST:

Refer to the Lawler Testimony, page 8, regarding rate case expense. Also, refer to the application, Volume 11, Section D, Schedule D-2.17. State whether Duke Kentucky has any amortization of rate case expense from its prior rate case in its forecasted test year. If so, provide amount.

RESPONSE:

As the Company was responding to this discovery, it was discovered that the amortization of rate case expenses from the prior case was inadvertently excluded from the test period. The test period should have included \$131,487 of rate case amortization expenses.

PERSON RESPONSIBLE: Sarah E. Lawler

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-086

REQUEST:

Refer to the Lawler Testimony, page 16, lines 9-11. Provide the calculation of the revenue requirement impact of Duke Kentucky's proposed battery storage project.

RESPONSE:

See Staff-DR-02-086 Attachment.

PERSON RESPONSIBLE: Sarah E. Lawler

Duke Energy Kentucky
 Estimated Revenue Requirement
 Battery Storage Project

| Line | Description | Test Period |
|------|--|---------------------------|
| 1 | Gross Plant ^(a) | \$2,508,971 |
| 2 | Accum Depreciation ^(b) | (83,632) |
| 3 | Net Plant in Service | <u>\$2,425,339</u> |
| 4 | Accum Def Income Taxes on Plant ^(b) | <u>(\$8,781)</u> |
| 5 | Rate Base | <u>\$2,416,558</u> |
| 6 | Return on Rate Base (Pre-Tax %) ^(c) | 8.96% |
| 7 | Return on Rate Base (Pre-Tax) | \$216,451 |
| 8 | Depreciation Expense | 83,632 |
| 9 | Annualized Property Tax Expense ^(d) | <u>46,081</u> |
| 10 | Revenue Requirement (Lines 7 - 9) | <u>\$346,165</u> |

Assumptions:

^(a) Schedule B-2.1 Page 10 of 12, Line 6

^(b) Assumes 15 year book life; 15 year MACRS

^(c) Weighted-Average Cost of Capital from Schedule A in Case No. 2019-00271, with ROE at 9.8%, grossed up for 21% FIT rate.

^(d) Assumes 1.9% of net plant.

Duke Energy Kentucky
 Estimated Revenue Requirement
 Battery Storage Project

| Line | Description | Test Period | | | | | | | | | | | | |
|------|-------------------------------------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|-----------|-----------|-----------|-----------|
| | | Mar-20 | Apr-20 | May-20 | Jun-20 | Jul-20 | Aug-20 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Mar-21 |
| 1 | Placed in Service | - | - | - | - | - | - | - | - | - | 8,154,156 | - | - | - |
| 2 | Culmative Plant In Service | - | - | - | - | - | - | - | - | - | 8,154,156 | 8,154,156 | 8,154,156 | 8,154,156 |
| 3 | 13 Month Average (Average of Ln 2): | <u>2,508,971</u> | | | | | | | | | | | | |

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-087

REQUEST:

Refer to the Lawler Testimony, pages 16-18. Explain the basis for the difference in Duke Kentucky's proposed treatment of margins and O&M expenses generated by the EV Fast Charge Program and Electric Transit Bus Charging Program. If there are no differences, clarify Duke Kentucky's proposed treatment.

RESPONSE:

As discussed in response to STAFF-DR-02-068, the EV Fast Charging Station Program is the only program within the Company's proposed EV Pilot that could generate revenues. Because of that, the Company proposes to offset those revenues with O&M expenses and flow any net revenues back to customers through Rider PSM. The Electric Transit Bus Charging Program is not designed to generate revenues and so therefore the Company is requesting deferral authority for the O&M costs associated with this program.

PERSON RESPONSIBLE: Sarah E. Lawler

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-088

REQUEST:

Refer to the Lawler Testimony, page 17, lines 9-11. Provide the calculation of the revenue requirement impact of Duke Kentucky's proposed electric vehicles pilot programs.

RESPONSE:

See Staff-DR-02-088 Attachment.

PERSON RESPONSIBLE: Sarah E. Lawler

Duke Energy Kentucky
 Estimated Revenue Requirement
 Electric Vehicle Project

| Line | Description | Test Period |
|------|--|-------------------------|
| 1 | Gross Plant ^(a) | \$846,154 |
| 2 | Accumulated Depreciation | <u>(60,440)</u> |
| 3 | Net Plant in Service | \$785,714 |
| 4 | Accum Def Income Taxes on Plant ^(b) | <u>(\$12,700)</u> |
| 5 | Rate Base | <u>\$773,014</u> |
| 6 | Return on Rate Base (Pre-Tax %) ^(c) | 8.96% |
| 7 | Return on Rate Base (Pre-Tax) | \$69,239 |
| 8 | Depreciation Expense | 60,440 |
| 9 | Annualized Property Tax Expense ^(d) | <u>14,929</u> |
| 10 | Revenue Requirement (Lines 7 - 9) | <u>\$144,607</u> |

Assumptions:

^(a) Page 2 Ln 3

^(b) Assumes 7 year book life; 7 year MACRS

^(c) Weighted-Average Cost of Capital from Schedule A in Case No. 2019-00271, with ROE at 9.8%, grossed up for 21% FIT rate.

^(d) Assumes 1.9% of net plant.

Duke Energy Kentucky
 Estimated Revenue Requirement
 Electric Vehicle Project

| Line | Description | Test Period | | | | | | | | | | | | |
|------|-------------------------------------|----------------|--------|--------|---------|---------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | Mar-20 | Apr-20 | May-20 | Jun-20 | Jul-20 | Aug-20 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Mar-21 |
| 1 | Placed in Service | - | - | - | 275,000 | 275,000 | 275,000 | 275,000 | 275,000 | - | - | - | - | - |
| 2 | Culmative Plant In Service | - | - | - | 275,000 | 550,000 | 825,000 | 1,100,000 | 1,375,000 | 1,375,000 | 1,375,000 | 1,375,000 | 1,375,000 | 1,375,000 |
| 3 | 13 Month Average (Average of Ln 2): | <u>846,154</u> | | | | | | | | | | | | |

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-089

REQUEST:

Refer to the Lawler Testimony, page 17, lines 12-14, and to the Direct Testimony of Lang W. Reynolds (Reynolds Testimony), page 9, Table 1. Confirm that Duke Kentucky has not included any estimated O&M expenses related to its Electric Vehicle Transportation Pilot, which total \$1,458,650, in the forecasted test period. If this cannot be confirmed, provide the amounts, location, and associated program for the expenses included in the test year.

RESPONSE:

Confirmed. This O&M is not in the forecasted test period.

PERSON RESPONSIBLE: Sarah E. Lawler

STAFF-DR-02-090

REQUEST:

Refer to the Lawler Testimony, page 17, line 12 through page 18, line 7, where she discusses Duke Kentucky's request for a deferral of O&M expenses associated with the electric vehicle programs.

- a. Identify the revenue that Duke Kentucky would offset against the O&M expenses for the electric vehicle programs if the Commission granted Duke Kentucky's request for a deferral as requested, e.g., the revenue from what, how would the revenue be distinguished from other revenue from same customer, etc., and explain how Duke Kentucky would calculate that revenue.
- b. Explain whether Duke Kentucky is proposing a single deferral for all of the electric vehicle programs or separate deferrals for each program.
- c. Explain how Duke Kentucky would distinguish O&M expenses attributed to each of the electric vehicle programs as compared to general and other O&M expenses for the purpose of establishing the amount to include in the deferral requested or to offset against the revenue when calculating the margin to be returned to customers through Duke Kentucky's Rider PSM.
- d. Provide an estimate of the expenses Duke Kentucky expects to incur for each of the electric vehicle programs in 2020, 2021, and 2022, accounting for the fact that the programs will not be fully implemented during portions of those years, and explain

how Duke Kentucky estimated the expenses it expects to incur for each program in those years.

- e. Provide an estimate of the revenue Duke Kentucky expects to receive from each of the electric vehicle pilot programs in 2020, 2021, and 2022, accounting for the fact that the programs will not be fully implemented during portions of those years, and explain how Duke Kentucky estimated the revenue it expects to earn from each program in those years.

RESPONSE:

- a. As discussed in the testimony of Company witness Mr. Lang Reynolds, a “Fast Charge Fee” will be charged to anyone for public EV Fast Charging of electric vehicles. The revenues that are generated from this Fast Charge Fee are the revenues that Ms. Lawler discusses in her testimony would be offset with O&M expenses associated with the program and included in Rider PSM. Mr. Reynolds also notes in his testimony that “the Fast Charge Fee is composed of the Commission approved tariff Rate DS 3-Phase secondary non-church cap energy charge per kWh plus all applicable riders and adjustments for a proposed charge of \$0.333596 per kWh. The Company will review and update as needed on a quarterly basis as this amount may vary as Duke Energy Kentucky rider values and EV Fast Charge utilization rates change. Updates will be made no more than one time per quarter.” The Fast Charge Fee will be collected by the charging station network vendor who in turn will reimburse the Company. These revenues will be discretely tracked in the Company’s general ledger system.
- b. The Company is proposing a single deferral for all of the electric vehicle programs.

- c. The Company would track O&M expenses separately by EV program in its general ledger system.
- d. Reference STAFF-DR-02-122 Attachment 1 for the estimated expenses for each program by year. Program expenses were estimated based off industry experience in rolling out similar programs and a realistic understanding of progress that can be made in each program by year.
- e. Please see STAFF-DR-02-090 Attachment for the expected annual revenues from the EV Fast Charge Program. Based on customer utilization of proposed incentives, the estimated revenue from the remaining programs will be calculated and reported in the annual Pilot Report.

PERSON RESPONSIBLE:

Sarah E. Lawler – a. through c.
Lang Reynolds – a., d. e.

Estimated Net Revenue from EV Fast Charging

| Summary | DCFC # | 3 Yr Total | 10 Yr Total |
|------------------|--------|------------|--------------|
| DEK Net Revenue | 10 | \$ 78,846 | \$ 1,072,020 |
| DEK MWh Consumed | | 526 | 4,182 |

| Assumptions and Inputs (in Green) | |
|---|-------|
| Utilization = 3% to 5% in years 1-3, 22% increase YOY through year 12 | |
| Hours/Yr available | 8760 |
| Rate Escalator | 3.00% |
| Avg Session Time (hrs) | 0.5 |
| Avg Demand (kW) | 50 |
| Avg Session Energy (kWh) | 25.0 |

| Year | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------------------------------|--------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|
| Utilization | Inputs | 3.0% | 4.0% | 5.0% | 6.1% | 7.4% | 9.1% | 11.0% | 13.5% | 16.4% | 20.0% |
| Hours/Yr/Unit | | 262.8 | 350.4 | 438.0 | 533.9 | 650.9 | 793.4 | 967.1 | 1178.9 | 1437.1 | 1751.9 |
| Avg kWh/Yr/Unit | | 13,140 | 17,520 | 21,900 | 26,696 | 32,543 | 39,669 | 48,357 | 58,947 | 71,857 | 87,593 |
| Total kWh/Yr for 10 units | | 131,400 | 175,200 | 219,000 | 266,961 | 325,425 | 396,694 | 483,570 | 589,471 | 718,565 | 875,931 |
| Avg kWh/Mo per meter (2 units) | | 2,190 | 2,920 | 3,650 | 4,449 | 5,424 | 6,612 | 8,059 | 9,825 | 11,976 | 14,599 |
| Fast Charge Fee (\$/kWh) | | \$ 0.334 | \$ 0.344 | \$ 0.354 | \$ 0.365 | \$ 0.375 | \$ 0.387 | \$ 0.398 | \$ 0.410 | \$ 0.423 | \$ 0.435 |
| Est O&M \$/yr for 10 units | | \$ 17,500 | \$ 17,500 | \$ 17,500 | \$ 17,500 | \$ 17,500 | \$ 17,500 | \$ 17,500 | \$ 17,500 | \$ 17,500 | \$ 17,500 |
| Est O&M \$/kWh | | \$ 0.21 | \$ 0.20 | \$ 0.18 | \$ 0.17 | \$ 0.16 | \$ 0.15 | \$ 0.14 | \$ 0.13 | \$ 0.13 | \$ 0.12 |
| Charging Revenue per year per unit | | \$ 4,383 | \$ 6,020 | \$ 7,751 | \$ 9,732 | \$ 12,219 | \$ 15,341 | \$ 19,262 | \$ 24,185 | \$ 30,366 | \$ 38,126 |
| Operating Costs (\$/Yr) | | \$ 2,709 | \$ 3,555 | \$ 4,006 | \$ 4,500 | \$ 5,102 | \$ 5,836 | \$ 6,731 | \$ 7,822 | \$ 9,151 | \$ 10,772 |
| Net Revenue Per Charger \$/Yr | | \$ 1,674 | \$ 2,465 | \$ 3,745 | \$ 5,232 | \$ 7,117 | \$ 9,505 | \$ 12,531 | \$ 16,363 | \$ 21,215 | \$ 27,354 |
| Total DCFC Net Revenue | | \$ 16,742 | \$ 24,654 | \$ 37,450 | \$ 52,318 | \$ 71,167 | \$ 95,054 | \$ 125,313 | \$ 163,633 | \$ 212,146 | \$ 273,543 |

REQUEST:

Refer to the Lawler Testimony, page 18.

- a. Explain why Duke Kentucky is proposing to pass through any net margins through Rider PSM rather than through base rates.
- b. Explain if the proposal to pass through any net margins through Rider PSM shifts any risk from Duke Kentucky to its customers.

RESPONSE:

- a. Duke Energy Kentucky is proposing to pass through net revenues associated with the Company's proposed EV Charging Station Program portion of the EV Pilot through Rider PSM rather than base rates so that actual revenues, net of expenses, will be shared with the customers. This ensures that customers receive virtually all of the benefits of the program and the 10 percent sharing provision of the PSM provides incentive to the Company to maximize the revenue.
- b. The Company is proposing to credit back to customers any net revenues generated through this program. The concept is analogous to the ratemaking treatment for the Company's investment in generation assets, where the cost of the investment in generation is recovered in base rates but the Company provides 90 percent of the benefit of excess generation to customers. The risk of "estimating" an amount to put in base rates is equally shared by the Company

and the customer inasmuch as there is a potential for over-estimating the benefit, which negatively impacts the Company, and a risk of under-estimating the benefit, which means customers would not be receiving all of the actual benefits from the program.

PERSON RESPONSIBLE: Sarah E. Lawler

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-092

REQUEST:

Refer to the Direct Testimony of Renee H. Metzler, page 37, lines 18-20. Provide the percentage of employee cost if out-of-pocket costs were excluded from the computation.

RESPONSE:

Duke Energy focuses solely on total employee cost share (both premiums and out-of-pocket costs) when designing medical plan options, determining employee cost share and benchmarking. One cannot be considered without the other. A low employee premium cannot be compared to a high employee premium without factoring in the out-of-pocket costs because it does not provide the true picture of employees' total costs. Duke Energy's plans and cost share are designed to encourage good consumer health care choices by providing opportunities for lower employee premiums and higher out-of-pocket costs at the point of service so that the utilizers of health care services are paying for it. Duke Energy employees' total cost of medical coverage (premiums and out-of-pocket costs) for 2019 is projected to be 33.3 percent, compared to employers in general industry (33 percent) and utility industry (29 percent).

PERSON RESPONSIBLE: Renee H. Metzler

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-093

REQUEST:

Refer to the Direct Testimony of Roger A. Morin, PhD (Morin Testimony). Provide all Exhibits in Excel spreadsheet format with all formulas intact and unprotected and with all columns and rows accessible.

RESPONSE:

Please see Attachment STAFF-DR-02-093

PERSON RESPONSIBLE: Roger A. Morin Ph.D.

**Investment-Grade Dividend-Paying Combination Gas and
 Electric Utilities Covered in Value Line's Electric Utility**

| Company | (1) | (2) | (3) | (4) |
|----------------------------|-----|--------|-----|---|
| Company | | Ticker | | Note |
| 1 Alliant Energy | | LNT | | |
| 2 Ameren Corp. | | AEE | | |
| 3 Avista Corp. | | AVA | | Acquisition of Hydro One completed |
| 4 Black Hills | | BKH | | Acquisition of SourceGas completed |
| 5 CenterPoint Energy | | CNP | | Acquisition of Vectren completed |
| 6 Chesapeake Utilities | | CPK | | Acquisition of WildHorse Resource Development completex |
| 7 CMS Energy Corp. | | CMS | | |
| 8 Consol. Edison | | ED | | |
| 9 Dominion Resources | | D | | Merged with Questar, completed 9/16 |
| 10 DTE Energy | | DTE | | |
| 11 Duke Energy | | DUK | | Acquisition of Piedmont Natual Gas completed |
| 12 Empire Dist. Elec. | | EDE | x | Merged with Liberty Utility, completed 1/17 |
| 13 Entergy Corp | | ETR | x | Nuclear exposure, corporate reorganization |
| 14 Eversource Energy | | ES | | |
| 15 Fortis | | FTS | | Owns several US combination gas & elec utilities |
| 16 Exelon Corp | | EXC | | |
| 17 MDU Resource | | MDU | x | Regulated Revenues < 50% |
| 18 MGE Energy | | MGEE | | |
| 19 NorthWestern Corp. | | NWE | | |
| 20 Pepco Holdings | | POM | x | Merged with Exelon |
| 21 PG&E Corp. | | PCG | x | Declared bankruptcy |
| 22 Public Serv. Enterprise | | PEG | | |
| 23 SCANA Corp. | | SCG | x | nuclear exposure, writeoffs, dividend cut |
| 24 Unitil Corp | | UTL | x | Market cap < \$1B; not covered by VL |
| 25 Sempra Energy | | SRE | | Acquisition of Oncor completed |
| 26 TECO Energy | | TE | x | Acquired by Emera |
| 27 Vectren Corp. | | VVC | x | Acquired by CenterPoint |
| 28 WEC Energy Group | | WEC | | |
| 29 Xcel Energy Inc. | | XEL | | |

Source: Value Line Investment Survey 2019

Proxy Group for Duke Energy Ky.

| <u>Company</u> | <u>Ticker</u> |
|----------------------------|---------------|
| 1 Alliant Energy | LNT |
| 2 Ameren Corp. | AEE |
| 3 Avista | AVA |
| 4 Black Hills | BKH |
| 5 CMS Energy Corp. | CMS |
| 6 CenterPoint | CNP |
| 7 Chesapeake Util | CPK |
| 8 Consol. Edison | ED |
| 9 Dominion Resources | D |
| 10 DTE Energy | DTE |
| 11 Duke Energy | DUK |
| 12 Eversource Energy | ES |
| 13 Exelon Corp | EXC |
| 14 Fortis | FTS |
| 15 MGE Energy | MGEE |
| 16 NorthWestern Corp. | NWE |
| 17 Public Serv. Enterprise | PEG |
| 18 Sempra | SRE |
| 19 WEC Energy Group | WEC |
| 20 Xcel Energy Inc. | XEL |

Combination Elec & Gas Utilities
 DCF Analysis Value Line Growth Rates

| Line No. | (1) Company Name | (2) Current Dividend Yield | (3) Projected EPS Growth | (4) % Expected Divid Yield | (5) Cost of Equity | (6) Return on Equity |
|----------|-------------------------|-------------------------------|-----------------------------|-------------------------------|-----------------------|-------------------------|
| 1 | Alliant Energy | 2.9 | 6.5 | 3.06 | 9.56 | 9.72 |
| 2 | Ameren Corp. | 2.6 | 6.5 | 2.76 | 9.26 | 9.40 |
| 3 | Avista | 3.4 | 3.5 | 3.52 | 7.02 | 7.20 |
| 4 | Black Hills | 2.6 | 5.0 | 2.71 | 7.71 | 7.85 |
| 5 | CMS Energy Corp. | 2.6 | 7.0 | 2.82 | 9.82 | 9.97 |
| 6 | CenterPoint | 4.1 | 12.5 | 4.56 | 17.06 | 17.30 |
| 7 | Chesapeake Util | 1.8 | 9.0 | 1.93 | 10.93 | 11.03 |
| 8 | Consol. Edison | 3.0 | 3.0 | 3.09 | 6.09 | 6.25 |
| 9 | Dominion Resources | 3.4 | 6.5 | 3.64 | 10.14 | 10.33 |
| 10 | DTE Energy | 3.0 | 5.5 | 3.12 | 8.62 | 8.79 |
| 11 | Duke Energy | 4.3 | 6.0 | 4.60 | 10.60 | 10.84 |
| 12 | Eversource Energy | 2.8 | 5.5 | 2.95 | 8.45 | 8.61 |
| 13 | Exelon Corp | 3.2 | 10.5 | 3.52 | 14.02 | 14.21 |
| 14 | Fortis | 3.4 | 5.5 | 3.56 | 9.06 | 9.24 |
| 15 | MGE Energy | 1.8 | 9.0 | 2.01 | 11.01 | 11.11 |
| 16 | NorthWestern Corp. | 3.2 | 3.0 | 3.33 | 6.33 | 6.50 |
| 17 | Public Serv. Enterprise | 3.2 | 6.0 | 3.36 | 9.36 | 9.54 |
| 18 | Sempra | 3.0 | 11.0 | 3.35 | 14.35 | 14.53 |
| 19 | WEC Energy Group | 2.8 | 6.0 | 2.92 | 8.92 | 9.07 |
| 20 | Xcel Energy Inc. | 2.7 | 5.5 | 2.83 | 8.33 | 8.48 |
| 22 | AVERAGE | 2.98 | 6.65 | 3.18 | 9.83 | 10.00 |

Notes:

- 25 Column 2: Yahoo Finance 2019
- 26 Column 3: Value Line Investment Reports 2019
- 27 Column 4 = Column 2 times (1 + Column 3/100)
- 28 Column 5 = Column 4 + Column 3
- 28 Column 6 = Column 4/0.95 + Column 3

**Combination Elec & Gas Utilities
 DCF Analysis Analysts' Growth Forecasts**

| Line No. | (1) Company Name | (2) Current Dividend Yield | (3) Analysts' Growth Forecast | (4) % Expected Divid Yield | (5) Cost of Equity | (6) Return on Equity |
|----------|-------------------------|-------------------------------|----------------------------------|-------------------------------|-----------------------|-------------------------|
| 1 | Alliant Energy | 2.9 | 5.0 | 3.01 | 8.01 | 8.17 |
| 2 | Ameren Corp. | 2.6 | 7.6 | 2.79 | 10.39 | 10.53 |
| 3 | Avista | 3.4 | 5.3 | 3.58 | 8.88 | 9.07 |
| 4 | Black Hills | 2.6 | 3.0 | 2.66 | 5.66 | 5.80 |
| 5 | CMS Energy Corp. | 2.6 | 7.1 | 2.83 | 9.95 | 10.10 |
| 6 | CenterPoint | 4.1 | 6.1 | 4.30 | 10.44 | 10.66 |
| 7 | Chesapeake Util | 1.8 | 6.0 | 1.88 | 7.88 | 7.97 |
| 8 | Consol. Edison | 3.0 | 3.0 | 3.09 | 6.13 | 6.29 |
| 9 | Dominion Resources | 3.4 | 3.4 | 3.54 | 6.98 | 7.16 |
| 10 | DTE Energy | 3.0 | 4.3 | 3.09 | 7.37 | 7.53 |
| 11 | Duke Energy | 4.3 | 7.2 | 4.65 | 11.88 | 12.13 |
| 12 | Eversource Energy | 2.8 | 5.6 | 2.96 | 8.53 | 8.68 |
| 13 | Exelon Corp | 3.2 | 10.5 | 3.52 | 14.02 | 14.21 |
| 14 | Fortis | 3.4 | 5.5 | 3.56 | 9.06 | 9.24 |
| 15 | MGE Energy | 1.8 | 4.0 | 1.91 | 5.91 | 6.01 |
| 16 | NorthWestern Corp. | 3.2 | 3.5 | 3.34 | 6.85 | 7.03 |
| 17 | Public Serv. Enterprise | 3.2 | 4.9 | 3.33 | 8.24 | 8.41 |
| 18 | Sempra | 3.0 | 8.0 | 3.26 | 11.26 | 11.43 |
| 19 | WEC Energy Group | 2.8 | 6.0 | 2.91 | 8.86 | 9.02 |
| 20 | Xcel Energy Inc. | 2.7 | 5.8 | 2.84 | 8.64 | 8.78 |
| 22 | AVERAGE | 2.98 | 5.59 | 3.15 | 8.75 | 8.91 |

Notes:

- 25 Column 2, 3: Yahoo Finance 2019
- 26 Column 4 = Column 2 times (1 + Column 3/100)
- 27 Column 5 = Column 4 + Column 3
- 28 Column 6 = Column 4/0.95 + Column 3

Combination Elec & Gas Utilities Beta Estimates

| | (1) | (2) |
|-----------------|---------------------------------|-------------|
| <u>Line No.</u> | <u>Company Name</u> | <u>Beta</u> |
| 1 | Alliant Energy | 0.60 |
| 2 | Ameren Corp. | 0.60 |
| 3 | Avista | 0.60 |
| 4 | Black Hills | 0.75 |
| 5 | CMS Energy Corp. | 0.55 |
| 6 | CenterPoint | 0.80 |
| 7 | Chesapeake Util | 0.65 |
| 8 | Consol. Edison | 0.45 |
| 9 | Dominion Resources | 0.55 |
| 10 | DTE Energy | 0.55 |
| 11 | Duke Energy | 0.50 |
| 12 | Eversource Energy | 0.60 |
| 13 | Exelon Corp | 0.70 |
| 14 | Fortis | 0.65 |
| 15 | MGE Energy | 0.55 |
| 16 | NorthWestern Corp. | 0.60 |
| 17 | Public Serv. Enterprise | 0.65 |
| 18 | Sempra | 0.75 |
| 19 | WEC Energy Group | 0.50 |
| 20 | Xcel Energy Inc. | 0.50 |
| 22 | AVERAGE | 0.61 |
| 24 | Source: Value Line Reports 2019 | |

DCF ANALYSIS S&P 500 STOCKS

| | COMPANY TICKER | EPS GROWTH FCST | DIVIDEND YIELD |
|----|---------------------------|----------------------------|---------------------------|
| 1 | A | 9.5 | 0.83% |
| 17 | AAN | 11.5 | 0.24% |
| 18 | AAP | 14.0 | 0.15% |
| 19 | AB | 6.5 | 8.33% |
| 20 | ABB | 9.5 | 3.90% |
| 21 | ABBV | 10.5 | 5.44% |
| 22 | ABC | 8.5 | 2.02% |
| 23 | ABM | 13.5 | 1.88% |
| 24 | ABT | 10.0 | 1.63% |
| 25 | ACCO | 6.5 | 2.80% |
| 26 | ACN | 9.0 | 1.65% |
| 27 | ADM | 9.5 | 3.21% |
| 28 | ADS | 13.5 | 1.61% |
| 29 | AEE | 6.5 | 2.61% |
| 30 | AEM | 19.0 | 1.22% |
| 31 | AEO | 10.0 | 2.28% |
| 32 | AEP | 4.0 | 3.14% |
| 33 | AFG | 8.5 | 1.55% |
| 34 | AFL | 7.5 | 2.14% |
| 35 | AGCO | 13.5 | 0.86% |
| 36 | AGN | 3.5 | 2.03% |
| 37 | AIN | 17.5 | 0.90% |
| 38 | AIR | 16.0 | 0.89% |
| 39 | AIT | 15.0 | 2.06% |
| 40 | AIZ | 5.5 | 2.54% |
| 41 | AJG | 15.0 | 2.07% |
| 42 | ALB | 5.5 | 1.91% |
| 43 | ALE | 5.0 | 2.86% |
| 44 | ALK | 4.5 | 2.24% |
| 45 | ALL | 11.5 | 2.03% |
| 46 | ALLE | 8.5 | 1.06% |
| 47 | ALLY | 14.5 | 2.27% |
| 48 | ALSN | 18.5 | 1.27% |
| 49 | ALV | 9.0 | 3.15% |
| 50 | AMC | 6.0 | 5.48% |
| 51 | AME | 10.5 | 0.64% |
| 52 | AMG | 10.0 | 1.16% |
| 53 | AMP | 14.0 | 2.62% |
| 54 | AMT | 11.5 | 1.87% |
| 55 | ANDX | 13.0 | 12.01% |
| 56 | ANTM | 17.0 | 1.22% |
| 57 | AON | 9.5 | 0.99% |
| 58 | AOS | 16.5 | 1.64% |
| 59 | APD | 9.5 | 2.21% |
| 60 | APH | 10.5 | 0.92% |
| 61 | APO | 9.0 | 5.72% |
| 62 | APTV | 11.0 | 1.10% |
| 63 | APU | 9.5 | 10.43% |
| 64 | ARMK | 11.0 | 1.41% |
| 65 | ASB | 9.0 | 2.95% |
| 66 | ATO | 7.5 | 2.04% |
| 67 | ATR | 6.5 | 1.27% |
| 68 | ATTO | 19.0 | 9.15% |
| 69 | ATU | 12.5 | 0.16% |
| 70 | AUY | 15.5 | 0.97% |
| 71 | AVA | 3.5 | 3.56% |
| 72 | AVB | 4.0 | 3.01% |

| | | | |
|-----|------|------|-------|
| 73 | AVD | 18.0 | 0.50% |
| 74 | AVX | 16.0 | 2.80% |
| 75 | AVY | 11.5 | 2.08% |
| 76 | AWI | 12.5 | 0.78% |
| 77 | AWK | 9.5 | 1.86% |
| 78 | AWR | 8.0 | 1.54% |
| 79 | AXP | 10.0 | 1.31% |
| 80 | AXS | 19.5 | 2.80% |
| 81 | AYI | 10.5 | 0.36% |
| 82 | AYR | 12.5 | 6.02% |
| 83 | AZN | 15.5 | 3.65% |
| 84 | B | 13.0 | 1.11% |
| 85 | BA | 17.5 | 2.18% |
| 86 | BAC | 10.5 | 1.95% |
| 87 | BAH | 12.0 | 1.54% |
| 88 | BAM | 11.5 | 1.33% |
| 89 | BAX | 12.5 | 0.98% |
| 90 | BBT | 8.0 | 3.18% |
| 91 | BBY | 10.5 | 2.67% |
| 92 | BC | 11.0 | 1.59% |
| 93 | BCC | 14.5 | 1.24% |
| 94 | BCE | 5.0 | 5.32% |
| 95 | BCO | 17.0 | 0.74% |
| 96 | BDC | 14.5 | 0.33% |
| 97 | BDX | 10.0 | 1.30% |
| 98 | BEN | 7.5 | 3.00% |
| 99 | BFB | 13.5 | 1.25% |
| 100 | BG | 17.0 | 3.91% |
| 101 | BGG | 9.0 | 4.47% |
| 102 | BGS | 9.0 | 8.36% |
| 103 | BHE | 8.5 | 2.21% |
| 104 | BIG | 6.0 | 3.20% |
| 105 | BK | 8.5 | 2.24% |
| 106 | BKH | 6.0 | 2.71% |
| 107 | BLK | 10.5 | 2.74% |
| 108 | BLL | 9.5 | 0.98% |
| 109 | BMI | 11.5 | 1.08% |
| 110 | BMS | 8.5 | 2.15% |
| 111 | BMY | 13.5 | 3.37% |
| 112 | BOH | 8.5 | 3.08% |
| 113 | BPL | 2.5 | 8.98% |
| 114 | BR | 11.0 | 1.65% |
| 115 | BRC | 9.5 | 1.70% |
| 116 | BRO | 12.0 | 0.99% |
| 117 | BRSS | 11.5 | 0.83% |
| 118 | BUD | 10.0 | 2.30% |
| 119 | BWA | 8.0 | 1.65% |
| 120 | BWXT | 13.0 | 1.37% |
| 121 | BX | 9.0 | 6.29% |
| 122 | BXP | 4.5 | 2.82% |
| 123 | BXS | 10.0 | 2.21% |
| 124 | BYD | 16.5 | 0.86% |
| 125 | C | 10.0 | 2.55% |
| 126 | CAG | 5.5 | 2.83% |
| 127 | CAH | 10.0 | 3.84% |
| 128 | CAJ | 14.0 | 5.21% |
| 129 | CAL | 9.0 | 1.04% |
| 130 | CAT | 17.0 | 2.96% |
| 131 | CATO | 3.0 | 8.61% |
| 132 | CB | 8.5 | 2.01% |
| 133 | CBS | 9.5 | 1.45% |
| 134 | CBT | 11.0 | 2.81% |
| 135 | CCI | 12.0 | 3.61% |
| 136 | CCL | 10.0 | 3.63% |

| | | | |
|-----|------|------|--------|
| 137 | CE | 11.0 | 2.28% |
| 138 | CFG | 12.0 | 3.48% |
| 139 | CFR | 6.0 | 2.75% |
| 140 | CHD | 8.5 | 1.22% |
| 141 | CHE | 11.5 | 0.36% |
| 142 | CHH | 7.5 | 0.99% |
| 143 | CHL | 7.0 | 4.33% |
| 144 | CI | 18.5 | 0.03% |
| 145 | CIT | 18.0 | 2.62% |
| 146 | CL | 6.0 | 2.39% |
| 147 | CLB | 18.5 | 3.64% |
| 148 | CLX | 6.5 | 2.59% |
| 149 | CMA | 12.0 | 3.43% |
| 150 | CMC | 11.0 | 2.71% |
| 151 | CMD | 14.0 | 0.29% |
| 152 | CMI | 8.0 | 2.70% |
| 153 | CMP | 16.5 | 5.11% |
| 154 | CMS | 7.0 | 2.77% |
| 155 | CNA | 11.5 | 3.06% |
| 156 | CNI | 10.0 | 1.72% |
| 157 | CNK | 12.5 | 3.21% |
| 158 | CNP | 12.5 | 3.69% |
| 159 | COF | 5.5 | 1.70% |
| 160 | COO | 14.5 | 0.02% |
| 161 | COTY | 9.0 | 4.36% |
| 162 | CP | 12.5 | 0.87% |
| 163 | CPA | 17.5 | 3.04% |
| 164 | CPB | 1.0 | 3.66% |
| 165 | CPK | 9.0 | 1.57% |
| 166 | CR | 9.5 | 1.76% |
| 167 | CRDB | 11.0 | 2.21% |
| 168 | CRI | 9.0 | 1.85% |
| 169 | CSL | 12.0 | 1.14% |
| 170 | CSV | 13.0 | 1.64% |
| 171 | CSX | 16.5 | 1.19% |
| 172 | CTB | 7.0 | 1.37% |
| 173 | CTL | 2.5 | 8.56% |
| 174 | CTS | 10.0 | 0.53% |
| 175 | CULP | 4.5 | 1.92% |
| 176 | CVS | 7.5 | 3.53% |
| 177 | CW | 10.5 | 0.52% |
| 178 | CWT | 8.5 | 1.57% |
| 179 | CXW | 1.5 | 8.26% |
| 180 | D | 6.5 | 4.78% |
| 181 | DAL | 9.5 | 2.42% |
| 182 | DAN | 12.5 | 2.20% |
| 183 | DBI | 13.0 | 4.30% |
| 184 | DCI | 11.5 | 1.41% |
| 185 | DCP | 9.5 | 10.13% |
| 186 | DDS | 6.5 | 0.58% |
| 187 | DE | 14.0 | 1.82% |
| 188 | DEO | 9.0 | 2.06% |
| 189 | DFS | 7.5 | 1.95% |
| 190 | DG | 13.0 | 1.03% |
| 191 | DGX | 8.5 | 2.15% |
| 192 | DHI | 5.0 | 1.36% |
| 193 | DHR | 13.0 | 0.51% |
| 194 | DIN | 12.5 | 3.12% |
| 195 | DIS | 6.5 | 1.31% |
| 196 | DKS | 7.0 | 3.02% |
| 197 | DLB | 14.0 | 1.15% |
| 198 | DLR | 5.0 | 3.58% |
| 199 | DLX | 12.0 | 2.72% |
| 200 | DOV | 13.0 | 1.93% |

| | | | |
|-----|------|------|--------|
| 201 | DOX | 9.0 | 2.07% |
| 202 | DPZ | 18.0 | 0.93% |
| 203 | DRE | 7.0 | 2.74% |
| 204 | DRI | 12.0 | 2.55% |
| 205 | DTE | 5.0 | 3.02% |
| 206 | DUK | 5.5 | 4.12% |
| 207 | DXC | 14.5 | 1.21% |
| 208 | EAT | 7.5 | 3.49% |
| 209 | ECL | 9.0 | 1.00% |
| 210 | ED | 3.0 | 3.44% |
| 211 | EE | 4.5 | 2.35% |
| 212 | EFX | 7.5 | 1.26% |
| 213 | EHC | 10.5 | 1.68% |
| 214 | EL | 14.0 | 0.99% |
| 215 | ELY | 15.5 | 0.23% |
| 216 | EME | 9.5 | 0.39% |
| 217 | EMN | 8.0 | 3.12% |
| 218 | EMR | 12.0 | 2.76% |
| 219 | ENBL | 17.0 | 9.23% |
| 220 | ENS | 11.5 | 0.99% |
| 221 | EPD | 11.5 | 6.09% |
| 222 | EQM | 0.5 | 10.39% |
| 223 | ERJ | 8.5 | 0.72% |
| 224 | ES | 5.5 | 2.97% |
| 225 | ESE | 13.5 | 0.42% |
| 226 | ESS | 2.0 | 2.74% |
| 227 | ET | 11.0 | 7.94% |
| 228 | ETH | 12.5 | 3.37% |
| 229 | ETN | 9.0 | 3.43% |
| 230 | EV | 8.5 | 3.34% |
| 231 | EVC | 19.0 | 7.17% |
| 232 | EXC | 7.5 | 2.91% |
| 233 | EXP | 8.5 | 0.44% |
| 234 | EXR | 6.0 | 3.24% |
| 235 | F | 1.0 | 5.76% |
| 236 | FAF | 9.0 | 2.99% |
| 237 | FBHS | 11.5 | 1.58% |
| 238 | FCF | 12.0 | 2.88% |
| 239 | FDS | 12.0 | 0.92% |
| 240 | FDX | 7.5 | 1.38% |
| 241 | FE | 6.5 | 3.58% |
| 242 | FHN | 14.0 | 3.68% |
| 243 | FII | 10.5 | 3.43% |
| 244 | FIS | 7.0 | 1.19% |
| 245 | FL | 12.0 | 2.75% |
| 246 | FLO | 6.0 | 3.33% |
| 247 | FLR | 17.0 | 2.87% |
| 248 | FLS | 13.0 | 1.46% |
| 249 | FMC | 15.0 | 2.06% |
| 250 | FMS | 10.0 | 1.45% |
| 251 | FNF | 10.5 | 3.14% |
| 252 | FNV | 9.0 | 1.36% |
| 253 | FRC | 10.5 | 0.72% |
| 254 | FRT | 4.0 | 3.07% |
| 255 | FSS | 15.5 | 1.17% |
| 256 | FUL | 14.0 | 1.29% |
| 257 | FUN | 10.5 | 6.60% |
| 258 | G | 13.0 | 0.94% |
| 259 | GATX | 4.0 | 2.35% |
| 260 | GBX | 6.0 | 2.77% |
| 261 | GD | 6.0 | 2.31% |
| 262 | GE | 3.5 | 0.38% |
| 263 | GEF | 9.5 | 4.39% |
| 264 | GFF | 16.0 | 1.70% |

| | | | |
|-----|------|------|-------|
| 265 | GGG | 12.5 | 1.22% |
| 266 | GHC | 11.0 | 0.78% |
| 267 | GHL | 19.5 | 0.98% |
| 268 | GIL | 8.5 | 1.43% |
| 269 | GIS | 4.0 | 3.83% |
| 270 | GLOG | 11.5 | 3.82% |
| 271 | GLW | 16.0 | 2.50% |
| 272 | GM | 7.5 | 3.92% |
| 273 | GPC | 8.5 | 2.99% |
| 274 | GPI | 3.5 | 1.33% |
| 275 | GPK | 11.0 | 2.13% |
| 276 | GPN | 17.5 | 0.03% |
| 277 | GPS | 6.0 | 3.73% |
| 278 | GRA | 12.0 | 1.41% |
| 279 | GRC | 13.0 | 1.61% |
| 280 | GS | 8.5 | 1.64% |
| 281 | GSK | 4.0 | 6.33% |
| 282 | GWW | 8.5 | 2.03% |
| 283 | H | 13.5 | 0.98% |
| 284 | HBI | 4.0 | 3.37% |
| 285 | HCA | 12.0 | 1.27% |
| 286 | HD | 11.0 | 2.71% |
| 287 | HE | 4.5 | 3.08% |
| 288 | HEI | 12.0 | 0.13% |
| 289 | HI | 10.5 | 2.02% |
| 290 | HIG | 13.0 | 2.28% |
| 291 | HII | 7.0 | 1.62% |
| 292 | HMC | 6.5 | 3.52% |
| 293 | HNI | 9.5 | 3.15% |
| 294 | HOG | 8.5 | 4.03% |
| 295 | HON | 8.0 | 1.89% |
| 296 | HPT | 13.0 | 8.22% |
| 297 | HR | 20.0 | 3.83% |
| 298 | HRB | 7.0 | 3.75% |
| 299 | HRC | 13.0 | 0.83% |
| 300 | HRL | 9.0 | 2.12% |
| 301 | HRS | 11.5 | 1.54% |
| 302 | HSBC | 16.5 | 5.71% |
| 303 | HST | 4.0 | 4.02% |
| 304 | HSY | 6.0 | 2.37% |
| 305 | HUBB | 7.5 | 2.59% |
| 306 | HUM | 13.5 | 0.88% |
| 307 | HUN | 13.5 | 3.01% |
| 308 | HVT | 8.0 | 3.74% |
| 309 | HXL | 10.0 | 0.84% |
| 310 | HY | 11.0 | 2.12% |
| 311 | IBM | 2.0 | 4.62% |
| 312 | ICE | 10.5 | 1.38% |
| 313 | IDA | 3.5 | 2.51% |
| 314 | IEX | 11.0 | 1.10% |
| 315 | IFF | 8.0 | 2.09% |
| 316 | INFY | 12.0 | 3.08% |
| 317 | INGR | 5.5 | 2.88% |
| 318 | IP | 12.0 | 4.25% |
| 319 | IPG | 11.0 | 4.07% |
| 320 | IR | 12.0 | 1.70% |
| 321 | IRM | 11.5 | 7.73% |
| 322 | ITT | 11.0 | 0.93% |
| 323 | ITW | 9.0 | 2.54% |
| 324 | IVZ | 7.0 | 5.66% |
| 325 | JBL | 14.0 | 1.03% |
| 326 | JBT | 11.5 | 0.35% |
| 327 | JCI | 2.0 | 2.63% |
| 328 | JEC | 12.5 | 0.88% |

| | | | |
|-----|------|------|-------|
| 329 | JHG | 5.0 | 6.39% |
| 330 | JLL | 9.5 | 0.54% |
| 331 | JNJ | 9.0 | 2.68% |
| 332 | JNPR | 5.0 | 2.75% |
| 333 | JPM | 6.0 | 2.76% |
| 334 | JWA | 8.0 | 2.73% |
| 335 | JWN | 6.5 | 3.67% |
| 336 | K | 4.5 | 3.97% |
| 337 | KAI | 13.0 | 1.00% |
| 338 | KAMN | 13.0 | 1.28% |
| 339 | KAR | 15.5 | 2.46% |
| 340 | KBH | 7.0 | 0.38% |
| 341 | KBR | 18.5 | 1.36% |
| 342 | KEY | 10.5 | 3.84% |
| 343 | KFY | 9.0 | 0.84% |
| 344 | KIM | 5.0 | 6.15% |
| 345 | KKR | 11.0 | 2.03% |
| 346 | KMB | 7.0 | 3.23% |
| 347 | KMT | 16.5 | 1.96% |
| 348 | KNL | 10.0 | 2.76% |
| 349 | KO | 6.5 | 3.28% |
| 350 | KR | 4.5 | 2.18% |
| 351 | KSS | 11.0 | 3.87% |
| 352 | KSU | 12.0 | 1.15% |
| 353 | KWR | 18.5 | 0.69% |
| 354 | L | 13.5 | 0.49% |
| 355 | LAD | 7.5 | 1.05% |
| 356 | LAZ | 11.0 | 4.86% |
| 357 | LCII | 14.5 | 2.64% |
| 358 | LDOS | 9.5 | 1.72% |
| 359 | LEA | 7.5 | 2.05% |
| 360 | LEG | 8.0 | 3.77% |
| 361 | LEN | 9.0 | 0.31% |
| 362 | LII | 12.5 | 0.94% |
| 363 | LLL | 7.0 | 1.48% |
| 364 | LLY | 11.5 | 2.21% |
| 365 | LM | 17.5 | 4.00% |
| 366 | LMT | 14.0 | 2.63% |
| 367 | LNC | 9.0 | 2.20% |
| 368 | LNN | 13.5 | 1.41% |
| 369 | LNT | 6.5 | 3.01% |
| 370 | LOW | 12.0 | 1.71% |
| 371 | LPT | 1.0 | 3.31% |
| 372 | LPX | 7.5 | 2.12% |
| 373 | LUV | 11.5 | 1.19% |
| 374 | LVS | 7.5 | 4.50% |
| 375 | LYB | 5.5 | 4.60% |
| 376 | LZB | 10.0 | 1.50% |
| 377 | M | 3.5 | 6.50% |
| 378 | MA | 19.0 | 0.53% |
| 379 | MAC | 3.0 | 7.17% |
| 380 | MAN | 6.0 | 2.10% |
| 381 | MAS | 10.5 | 1.19% |
| 382 | MATX | 9.5 | 2.09% |
| 383 | MCD | 9.5 | 2.35% |
| 384 | MCK | 9.0 | 1.26% |
| 385 | MCO | 11.5 | 1.02% |
| 386 | MCS | 10.0 | 1.67% |
| 387 | MCY | 18.0 | 4.46% |
| 388 | MDC | 10.5 | 3.68% |
| 389 | MDP | 17.0 | 3.83% |
| 390 | MDT | 7.5 | 2.23% |
| 391 | MDU | 14.0 | 3.05% |
| 392 | MEI | 6.5 | 1.45% |

| | | | |
|-----|------|------|--------|
| 393 | MET | 7.5 | 3.67% |
| 394 | MFC | 7.5 | 4.01% |
| 395 | MGA | 10.5 | 2.67% |
| 396 | MKC | 8.5 | 1.50% |
| 397 | MLI | 11.5 | 1.33% |
| 398 | MLM | 10.0 | 0.87% |
| 399 | MMC | 9.0 | 1.77% |
| 400 | MMM | 9.5 | 3.11% |
| 401 | MMP | 8.0 | 6.52% |
| 402 | MMS | 11.0 | 1.35% |
| 403 | MO | 10.5 | 5.95% |
| 404 | MOGA | 13.5 | 1.05% |
| 405 | MOV | 12.5 | 2.16% |
| 406 | MPC | 13.5 | 3.54% |
| 407 | MRK | 8.5 | 2.75% |
| 408 | MS | 10.0 | 2.50% |
| 409 | MSA | 14.0 | 1.35% |
| 410 | MSCI | 19.5 | 1.02% |
| 411 | MSI | 13.0 | 1.59% |
| 412 | MSM | 12.0 | 3.00% |
| 413 | MT | 10.0 | 0.93% |
| 414 | MTB | 9.5 | 2.35% |
| 415 | MTN | 18.0 | 3.04% |
| 416 | MTRN | 13.5 | 0.60% |
| 417 | MTX | 5.5 | 0.32% |
| 418 | MWA | 16.0 | 1.84% |
| 419 | NBL | 0.0 | 1.93% |
| 420 | NCI | 0.5 | 0.86% |
| 421 | NEE | 9.0 | 2.60% |
| 422 | NEM | 2.5 | 1.85% |
| 423 | NEU | 2.0 | 1.65% |
| 424 | NI | 15.0 | 2.87% |
| 425 | NJR | 2.5 | 2.31% |
| 426 | NKE | 15.0 | 1.03% |
| 427 | NLSN | 5.0 | 5.66% |
| 428 | NLY | 2.5 | 12.37% |
| 429 | NOC | 9.5 | 1.64% |
| 430 | NOK | 8.5 | 4.31% |
| 431 | NP | 9.0 | 2.69% |
| 432 | NPK | 8.0 | 0.92% |
| 433 | NPO | 18.0 | 1.49% |
| 434 | NRP | 5.5 | 4.26% |
| 435 | NSC | 13.0 | 1.68% |
| 436 | NSP | 19.5 | 0.99% |
| 437 | NUS | 11.0 | 2.53% |
| 438 | NVO | 6.5 | 2.61% |
| 439 | NVS | 10.5 | 3.43% |
| 440 | NYCB | 5.0 | 5.87% |
| 441 | O | 4.5 | 3.86% |
| 442 | OC | 15.5 | 1.69% |
| 443 | OGE | 6.5 | 3.51% |
| 444 | OI | 6.5 | 1.10% |
| 445 | OKE | 18.5 | 5.17% |
| 446 | OMC | 6.5 | 3.25% |
| 447 | OMI | 1.5 | 0.28% |
| 448 | ORA | 6.0 | 0.75% |
| 449 | ORCL | 10.0 | 1.75% |
| 450 | ORI | 14.5 | 3.58% |
| 451 | OSK | 11.5 | 1.33% |
| 452 | OXM | 8.0 | 1.76% |
| 453 | PAG | 7.0 | 3.30% |
| 454 | PBF | 15.5 | 3.50% |
| 455 | PBI | 4.5 | 3.50% |
| 456 | PCH | 8.5 | 3.96% |

| | | | |
|-----|----------------|-------------|--------------|
| 457 | PEG | 4.5 | 3.17% |
| 458 | PEP | 6.5 | 2.99% |
| | AVERAGE | 10.0 | 2.60% |
| | MEDIAN | 10.0 | 2.21% |

Source: Value Line Screening Software 5/2019

2018 Utility Industry Historical Risk Premium

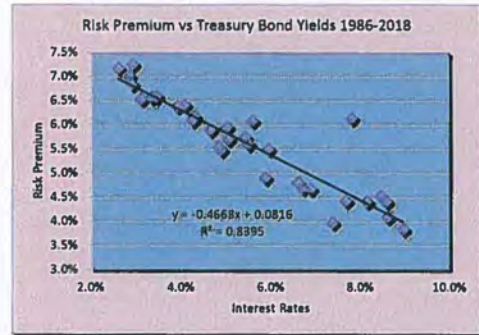
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | | |
|---------|------|--|---|--------------------------------------|-----------|----------|-------------------------|-----------------------------------|---|---|
| Line No | Year | Long-Term Government Bond Yield | Long-Term Government Income Component Bond Yield | 20 year Maturity Bond Value | Gain/Loss | Interest | Bond Total Return | S&P Utility Index Return | Utility Equity Risk Premium Over Bond Returns | Utility Equity Risk Premium Over Bond Return Income Component |
| 1 | 1931 | 4.07% | 3.33% | 1,000.00 | | | | | | |
| 2 | 1932 | 3.15% | 3.69% | 1,135.75 | 135.75 | 40.70 | 17.64% | -0.54% | -18.18% | -4.23% |
| 3 | 1933 | 3.36% | 3.12% | 969.60 | -30.40 | 31.50 | 0.11% | -21.87% | -21.98% | -24.99% |
| 4 | 1934 | 2.93% | 3.18% | 1,064.73 | 64.73 | 33.60 | 9.83% | -20.41% | -30.24% | -23.59% |
| 5 | 1935 | 2.76% | 2.81% | 1,025.99 | 25.99 | 29.30 | 5.53% | 76.63% | 71.10% | 73.82% |
| 6 | 1936 | 2.56% | 2.77% | 1,031.15 | 31.15 | 27.60 | 5.88% | 20.69% | 14.81% | 17.92% |
| 7 | 1937 | 2.73% | 2.66% | 973.93 | -26.07 | 25.60 | -0.05% | -37.04% | -36.99% | -39.70% |
| 8 | 1938 | 2.52% | 2.64% | 1,032.83 | 32.83 | 27.30 | 6.01% | 22.45% | 16.44% | 19.81% |
| 9 | 1939 | 2.26% | 2.40% | 1,041.65 | 41.65 | 25.20 | 6.68% | 11.26% | 4.58% | 8.86% |
| 10 | 1940 | 1.94% | 2.23% | 1,052.84 | 52.84 | 22.60 | 7.54% | -17.15% | -24.69% | -19.38% |
| 11 | 1941 | 2.04% | 1.94% | 983.64 | -16.36 | 19.40 | 0.30% | -31.57% | -31.87% | -33.51% |
| 12 | 1942 | 2.46% | 2.46% | 933.97 | -66.03 | 20.40 | -4.56% | 15.39% | 19.95% | 12.93% |
| 13 | 1943 | 2.48% | 2.44% | 996.86 | -3.14 | 24.60 | 2.15% | 46.07% | 43.92% | 43.63% |
| 14 | 1944 | 2.46% | 2.46% | 1,003.14 | 3.14 | 24.80 | 2.79% | 18.03% | 15.24% | 15.57% |
| 15 | 1945 | 1.99% | 2.34% | 1,077.23 | 77.23 | 24.60 | 10.18% | 53.33% | 43.15% | 50.99% |
| 16 | 1946 | 2.12% | 2.04% | 978.90 | -21.10 | 19.90 | -0.12% | 1.26% | 1.38% | -0.78% |
| 17 | 1947 | 2.43% | 2.13% | 951.13 | -48.87 | 21.20 | -2.77% | -13.16% | -10.39% | -15.29% |
| 18 | 1948 | 2.37% | 2.40% | 1,009.51 | 9.51 | 24.30 | 3.38% | 4.01% | 0.63% | 1.61% |
| 19 | 1949 | 2.09% | 2.25% | 1,045.58 | 45.58 | 23.70 | 6.93% | 31.39% | 24.46% | 29.14% |
| 20 | 1950 | 2.24% | 2.12% | 975.93 | -24.07 | 20.90 | -0.32% | 3.25% | 3.57% | 1.13% |
| 21 | 1951 | 2.69% | 2.38% | 930.75 | -69.25 | 22.40 | -4.69% | 18.63% | 23.32% | 16.25% |
| 22 | 1952 | 2.79% | 2.66% | 984.75 | -15.25 | 26.90 | 1.17% | 19.25% | 18.08% | 16.59% |
| 23 | 1953 | 2.74% | 2.84% | 1,007.66 | 7.66 | 27.90 | 3.56% | 7.85% | 4.29% | 5.01% |
| 24 | 1954 | 2.72% | 2.79% | 1,003.07 | 3.07 | 27.40 | 3.05% | 24.72% | 21.67% | 21.93% |
| 25 | 1955 | 2.95% | 2.75% | 965.44 | -34.56 | 27.20 | -0.74% | 11.26% | 12.00% | 8.51% |
| 26 | 1956 | 3.45% | 2.99% | 928.19 | -71.81 | 29.50 | -4.23% | 5.06% | 9.29% | 2.07% |
| 27 | 1957 | 3.23% | 3.44% | 1,032.23 | 32.23 | 34.50 | 6.67% | 6.36% | -0.31% | 2.92% |
| 28 | 1958 | 3.82% | 3.27% | 918.01 | -81.99 | 32.30 | -4.97% | 40.70% | 45.67% | 37.43% |
| 29 | 1959 | 4.47% | 4.01% | 914.65 | -85.35 | 38.20 | -4.71% | 7.49% | 12.20% | 3.48% |
| 30 | 1960 | 3.80% | 4.26% | 1,093.27 | 93.27 | 44.70 | 13.80% | 20.26% | 6.46% | 16.00% |
| 31 | 1961 | 4.15% | 3.83% | 952.75 | -47.25 | 38.00 | -0.92% | 29.33% | 30.25% | 25.50% |
| 32 | 1962 | 3.95% | 4.00% | 1,027.48 | 27.48 | 41.50 | 6.90% | -2.44% | -9.34% | -6.44% |
| 33 | 1963 | 4.17% | 3.89% | 970.35 | -29.65 | 39.50 | 0.99% | 12.36% | 11.37% | 8.47% |
| 34 | 1964 | 4.23% | 4.15% | 991.96 | -8.04 | 41.70 | 3.37% | 15.91% | 12.54% | 11.76% |
| 35 | 1965 | 4.50% | 4.19% | 964.64 | -35.36 | 42.30 | 0.69% | 4.67% | 3.98% | 0.48% |
| 36 | 1966 | 4.55% | 4.49% | 993.48 | -6.52 | 45.00 | 3.85% | -4.48% | -8.33% | -8.97% |
| 37 | 1967 | 5.56% | 4.59% | 879.01 | -120.99 | 45.50 | -7.55% | -0.63% | 6.92% | -5.22% |
| 38 | 1968 | 5.98% | 5.50% | 951.38 | -48.62 | 55.60 | 0.70% | 10.32% | 9.62% | 4.82% |
| 39 | 1969 | 6.87% | 5.96% | 904.00 | -96.00 | 59.80 | -3.62% | -15.42% | -11.80% | -21.38% |
| 40 | 1970 | 6.48% | 6.74% | 1,043.38 | 43.38 | 68.70 | 11.21% | 16.56% | 5.35% | 9.82% |
| 41 | 1971 | 5.97% | 6.32% | 1,059.09 | 59.09 | 64.80 | 12.39% | 2.41% | -9.98% | -3.91% |
| 42 | 1972 | 5.99% | 5.87% | 997.69 | -2.31 | 59.70 | 5.74% | 8.15% | 2.41% | 2.28% |
| 43 | 1973 | 7.26% | 6.51% | 867.09 | -132.91 | 59.90 | -7.30% | -18.07% | -10.77% | -24.58% |
| 44 | 1974 | 7.60% | 7.27% | 965.33 | -34.67 | 72.60 | 3.79% | -21.55% | -25.34% | -28.82% |
| 45 | 1975 | 8.05% | 7.99% | 955.63 | -44.37 | 76.00 | 3.16% | 44.49% | 41.33% | 36.50% |
| 46 | 1976 | 7.21% | 7.89% | 1,088.25 | 88.25 | 80.50 | 16.87% | 31.81% | 14.94% | 23.92% |
| 47 | 1977 | 8.03% | 7.14% | 919.03 | -80.97 | 72.10 | -0.89% | 8.64% | 9.53% | 1.50% |
| 48 | 1978 | 8.98% | 7.90% | 912.47 | -87.53 | 80.30 | -0.72% | -3.71% | -2.99% | -11.61% |
| 49 | 1979 | 10.12% | 8.86% | 902.99 | -97.01 | 89.80 | -0.72% | 13.58% | 14.30% | 4.72% |
| 50 | 1980 | 11.99% | 9.97% | 859.23 | -140.77 | 101.20 | -3.96% | 15.08% | 19.04% | 5.11% |
| 51 | 1981 | 13.34% | 11.55% | 906.45 | -93.55 | 119.90 | 2.63% | 11.74% | 9.11% | 0.19% |
| 52 | 1982 | 10.95% | 13.50% | 1,192.38 | 192.38 | 133.40 | 32.58% | 26.52% | -6.06% | 13.02% |
| 53 | 1983 | 11.97% | 10.38% | 923.12 | -76.88 | 109.50 | 3.26% | 20.01% | 16.75% | 9.63% |
| 54 | 1984 | 11.70% | 11.74% | 1,020.70 | 20.70 | 119.70 | 14.04% | 26.04% | 12.00% | 14.30% |
| 55 | 1985 | 9.56% | 11.25% | 1,189.27 | 189.27 | 117.00 | 30.63% | 33.05% | 2.42% | 21.80% |
| 56 | 1986 | 7.89% | 8.98% | 1,166.63 | 166.63 | 95.60 | 26.22% | 28.53% | 2.31% | 19.59% |
| 57 | 1987 | 9.20% | 7.92% | 881.17 | -118.83 | 78.90 | -3.99% | -2.92% | 1.07% | -10.84% |
| 58 | 1988 | 9.19% | 8.97% | 1,000.91 | 0.91 | 92.00 | 9.29% | 18.27% | 8.98% | 9.30% |
| 59 | 1989 | 8.16% | 8.81% | 1,100.73 | 100.73 | 91.90 | 19.26% | 47.80% | 28.54% | 38.99% |
| 60 | 1990 | 8.44% | 8.19% | 973.17 | -26.83 | 81.60 | 5.48% | -2.57% | -8.05% | -10.76% |
| 61 | 1991 | 7.30% | 8.22% | 1,118.94 | 118.94 | 84.40 | 20.33% | 14.61% | -5.72% | 6.39% |
| 62 | 1992 | 7.26% | 7.26% | 1,004.19 | 4.19 | 73.00 | 7.72% | 8.10% | 0.38% | 0.84% |
| 63 | 1993 | 6.54% | 7.17% | 1,079.70 | 79.70 | 72.60 | 15.23% | 14.41% | -0.82% | 7.24% |
| 64 | 1994 | 7.99% | 6.59% | 856.40 | -143.60 | 65.40 | -7.82% | -7.94% | -0.12% | -14.53% |
| 65 | 1995 | 6.03% | 7.60% | 1,225.98 | 225.98 | 79.90 | 30.59% | 42.15% | 11.56% | 34.55% |
| 66 | 1996 | 6.73% | 6.18% | 923.67 | -76.33 | 60.30 | -1.60% | 3.14% | 4.74% | -3.04% |
| 67 | 1997 | 6.02% | 6.64% | 1,081.92 | 81.92 | 67.30 | 14.92% | 24.69% | 9.77% | 18.05% |
| 68 | 1998 | 5.42% | 5.83% | 1,072.71 | 72.71 | 60.20 | 13.29% | 14.82% | 1.53% | 8.99% |
| 69 | 1999 | 6.82% | 5.57% | 848.41 | -151.59 | 54.20 | -9.74% | -8.85% | 0.89% | -14.42% |
| 70 | 2000 | 5.58% | 6.50% | 1,148.30 | 148.30 | 68.20 | 21.65% | 59.70% | 38.05% | 53.20% |
| 71 | 2001 | 5.75% | 5.53% | 979.95 | -20.05 | 55.80 | 3.57% | -30.41% | -33.98% | -35.94% |
| 72 | 2002 | 4.84% | 5.59% | 1,115.77 | 115.77 | 57.50 | 17.33% | -30.04% | -47.37% | -35.63% |
| 73 | 2003 | 5.11% | 4.80% | 966.42 | -33.58 | 48.40 | 1.48% | 26.11% | 24.63% | 21.31% |

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | |
|----|-------------|-----------|---------|----------|---------|-------|---------|-------------------|-------------------|---------|
| | Long-Term | Long-Term | 20 year | | | | S&P | Utility Equity | Utility Equity | |
| 74 | 2004 | 4.84% | 5.02% | 1,034.35 | 34.35 | 51.10 | 8.54% | 24.22% | 15.68% | 19.20% |
| 75 | 2005 | 4.61% | 4.69% | 1,029.84 | 29.84 | 48.40 | 7.82% | 16.79% | 8.97% | 12.10% |
| 76 | 2006 | 4.91% | 4.68% | 962.06 | -37.94 | 46.10 | 0.82% | 20.95% | 20.13% | 16.27% |
| 77 | 2007 | 4.50% | 4.86% | 1,053.70 | 53.70 | 49.10 | 10.28% | 19.36% | 9.08% | 14.50% |
| 78 | 2008 | 3.03% | 4.45% | 1,219.28 | 219.28 | 45.00 | 26.43% | -28.99% | -55.42% | -33.44% |
| 79 | 2009 | 4.58% | 3.47% | 798.39 | -201.61 | 30.30 | -17.13% | 11.94% | 29.07% | 8.47% |
| 80 | 2010 | 4.14% | 4.25% | 1,059.45 | 59.45 | 45.80 | 10.52% | 5.49% | -5.03% | 1.24% |
| 81 | 2011 | 2.55% | 3.82% | 1,247.89 | 247.89 | 41.40 | 28.93% | 19.88% | -9.05% | 16.06% |
| 82 | 2012 | 2.46% | 2.46% | 1,014.15 | 14.15 | 25.50 | 3.96% | 1.29% | -2.67% | -1.17% |
| 83 | 2013 | 3.78% | 2.88% | 815.92 | -184.08 | 24.60 | -15.95% | 13.26% | 29.21% | 10.38% |
| 84 | 2014 | 2.46% | 3.41% | 1,207.53 | 207.53 | 37.80 | 24.53% | 28.61% | 4.08% | 25.20% |
| 85 | 2015 | 2.68% | 2.47% | 966.11 | -33.89 | 24.60 | -0.93% | 1.38% | 2.31% | -1.09% |
| 86 | 2016 | 2.72% | 2.30% | 993.86 | -6.14 | 26.80 | 2.07% | 16.27% | 14.20% | 13.97% |
| 87 | 2017 | 2.54% | 2.67% | 972.83 | -27.17 | 27.20 | 0.00% | 12.11% | 12.11% | 9.22% |
| 88 | 2018 | 2.84% | 2.82% | 968.90 | -31.10 | 29.00 | -0.21% | 4.11% | 4.32% | 1.11% |
| 90 | Mean | | | | | | | 5.6% | 6.1% | |

92 Source: Bloomberg Web site: Standard & Poors Utility Stock Index % Annual Change, Jan. to Dec.
 93 Bond yields from Duff & Phelps Classic 2019 Yearbooks Appendices A7 and A9 Long-Term Government Bonds Yields

ALLOWED RISK PREMIUM ANALYSIS

| Line | Date | Treasury Bond Yield ¹ (1) | Authorized Electric Returns ² (2) | Indicated Risk Premium (3) |
|------|---------|---|---|-------------------------------|
| 1 | 1986 | 7.80% | 13.93% | 6.1% |
| 2 | 1987 | 8.58% | 12.99% | 4.4% |
| 3 | 1988 | 8.96% | 12.79% | 3.8% |
| 4 | 1989 | 8.45% | 12.97% | 4.5% |
| 5 | 1990 | 8.61% | 12.70% | 4.1% |
| 6 | 1991 | 8.14% | 12.55% | 4.4% |
| 7 | 1992 | 7.67% | 12.09% | 4.4% |
| 8 | 1993 | 6.60% | 11.41% | 4.8% |
| 9 | 1994 | 7.37% | 11.34% | 4.0% |
| 10 | 1995 | 6.88% | 11.55% | 4.7% |
| 11 | 1996 | 6.70% | 11.39% | 4.7% |
| 12 | 1997 | 6.61% | 11.40% | 4.8% |
| 13 | 1998 | 5.58% | 11.66% | 6.1% |
| 14 | 1999 | 5.87% | 10.77% | 4.9% |
| 15 | 2000 | 5.94% | 11.43% | 5.5% |
| 16 | 2001 | 5.49% | 11.09% | 5.6% |
| 17 | 2002 | 5.42% | 11.16% | 5.7% |
| 18 | 2003 | 5.02% | 10.97% | 6.0% |
| 19 | 2004 | 5.05% | 10.75% | 5.7% |
| 20 | 2005 | 4.65% | 10.54% | 5.9% |
| 21 | 2006 | 4.88% | 10.36% | 5.5% |
| 22 | 2007 | 4.83% | 10.36% | 5.5% |
| 23 | 2008 | 4.28% | 10.46% | 6.2% |
| 24 | 2009 | 4.07% | 10.48% | 6.4% |
| 25 | 2010 | 4.25% | 10.34% | 6.1% |
| 26 | 2011 | 3.91% | 10.29% | 6.4% |
| 27 | 2012 | 2.92% | 10.17% | 7.3% |
| 28 | 2013 | 3.45% | 10.03% | 6.6% |
| 29 | 2014 | 3.34% | 9.91% | 6.6% |
| 30 | 2015 | 2.84% | 9.85% | 7.0% |
| 31 | 2016 | 2.60% | 9.77% | 7.2% |
| 32 | 2017 | 2.90% | 9.74% | 6.8% |
| 33 | 2018 | 3.11% | 9.64% | 6.5% |
| 35 | Average | 5.54% | 11.12% | 5.58% |



- 37 Sources:
 38 1 Fed Reserve Board of Governors H.15 Release, 30-Yr Treasury rate
 39 2 S&P Global Intelligence (Regulatory Research Associates)
 40 Major Rate Case Decisions 1986-2018

IF YIELD = 4.20%
 THEN RP = 6.20%
 Kc = 10.40%

STAFF-DR-02-094

REQUEST:

Refer to the Morin Testimony, page 22. Dr. Morin states that both Yahoo Finance and Zacks Investment Research Inc. (Zacks) publish the systematic compilations of analysts' forecasts. In Duke Kentucky's last rate case, Dr. Morin used Zacks rather than Yahoo Finance, as in the present case.¹

- a. Provide any differences in the earning per share forecasts between Yahoo Finance and Zacks.
- b. Provide a revised Attachment RAM-5 using Zacks EPS forecasts rather than Yahoo Finance.

RESPONSE:

- a. Zacks does not provide historical forecasts going back to the time when Dr. Morin prepared his testimony. Dr. Morin points out that it would be inappropriate to compare growth forecasts made at two different points in time. Nevertheless, in response to this request, the attached spreadsheet displays in Column 1 the Yahoo Finance forecasts as of May 2019 when Dr. Morin prepared his testimony, and the current Zacks growth forecasts as of October 15, 2019 in Column 2. The

¹ See Case No. 2017-00371, *Electronic Application of Duke Energy Kentucky, Inc., for 1) An Adjustment of the Electric Rates; 2) Approval of an Environmental Compliance Plan and Surcharge Mechanism; 3) Approval of New Tariffs; 4) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; and 5) All Other required Approvals and Relief*, Morin Direct Testimony, Attachment RAM-5 (Filed Sept. 1, 2017).

appropriate comparison is to compare contemporaneous forecasts issued in the same time period as shown in Column 2 versus Column 3. The average growth forecasts from the two sources are identical at 5.1%.

b. Please see Attachment DR-02-94.

PERSON RESPONSIBLE: Roger A. Morin Ph.D.

| Company | Ticker | May-19 Yahoo Growth Forecast | Oct-19 Zacks Growth Forecast | Oct-19 Yahoo Growth Forecast |
|-------------------------|--------|---------------------------------------|---------------------------------------|---------------------------------------|
| | | (1) | (2) | (3) |
| Alliant Energy | LNT | 5.0 | 5.5 | 5.1 |
| Ameren Corp. | AEE | 7.6 | 6.4 | 4.7 |
| Avista | AVA | 5.3 | 3.3 | 3.4 |
| Black Hills | BKH | 3.0 | 4.2 | 3.0 |
| CMS Energy Corp. | CMS | 7.1 | 6.4 | 7.2 |
| CenterPoint | CNP | 6.1 | 5.5 | 5.1 |
| Chesapeake Util | CPK | 6.0 | 7.0 | 6.0 |
| Consol. Edison | ED | 3.0 | 2.0 | 3.5 |
| Dominion Resources | D | 3.4 | 4.8 | 4.6 |
| DTE Energy | DTE | 4.3 | 6.0 | 4.5 |
| Duke Energy | DUK | 7.2 | 4.9 | 4.1 |
| Eversource Energy | ES | 5.6 | 5.6 | 5.6 |
| Exelon Corp | EXC | NA | NA | NA |
| Fortis | FTS | NA | NA | NA |
| MGE Energy | MGEE | 4.0 | NA | 4.0 |
| NorthWestern Corp. | NWE | 3.5 | 2.6 | 3.4 |
| Public Serv. Enterprise | PEG | 4.9 | 3.0 | 4.0 |
| Sempra | SRE | 8.0 | 7.5 | 11.9 |
| WEC Energy Group | WEC | 6.0 | 6.2 | 6.1 |
| Xcel Energy Inc. | XEL | 5.8 | 5.4 | 5.1 |
| AVERAGE | | 5.3 | 5.1 | 5.1 |

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-095

REQUEST:

Refer to the Morin Testimony, pages 28-29 and Attachment RAM-2. Information regarding Chesapeake Utilities is not published in the printed version of Value Line. Provide the information for Chesapeake Utilities that would have been provided in the printed version of Value Line.

RESPONSE:

Please see Attachments STAFF-DR-02-095 (a) and (b).

PERSON RESPONSIBLE: Roger A. Morin Ph.D.

| CHESAPEAKE UTIL. NYSE-CPK | | | | | | | | | | RECENT PRICE | P/E RATIO | Trailing: 28.3 Median: 17.0 | RELATIVE P/E RATIO | DIVD YLD | VALUE LINE | | | | |
|--|-------|-----------------|---|-------|-------|--------|-------------|-------------------|--|--------------|-----------|--------------------------------|--------------------|----------|------------|--------------|-------|------------------------|-------|
| TIMELINESS | 2 | Lowered 5/24/19 | High: | 23.2 | 23.3 | 28.1 | 29.7 | 32.6 | 40.8 | 52.7 | 61.1 | 70.0 | 88.4 | 93.4 | 95.6 | Target Price | Range | | |
| SAFETY | 2 | New 5/5/15 | Low: | 14.6 | 14.7 | 18.7 | 24.0 | 26.6 | 30.6 | 37.5 | 44.4 | 52.3 | 63.0 | 66.4 | 77.6 | 2022 | 2023 | | |
| TECHNICAL | 3 | Lowered 5/31/19 | LEGENDS 1.00 x Dividends p sh divided by Interest Rate Relative Price Strength 3-yr-2 split 9/14 Options: Yes Shaded area indicates recession | | | | | | | | | | | | | | | | |
| BETA | .65 | (1.00 = Market) | 2022-24 PROJECTIONS | | | | | | | | | | | | | | | | |
| | | | Price | 140 | Gain | (+50%) | Ann'l Total | 12% | | | | | | | | | | | |
| | | | High | 140 | Low | 100 | Options | 0 0 0 0 0 1 0 0 0 | Insider Decisions J A S O N D J F M to Buy 0 0 0 0 0 1 0 0 0 Options 0 0 0 0 0 0 1 5 0 to Sell 1 0 0 0 1 0 0 0 0 | | | | | | | | | | |
| | | | Institutional Decisions | | | | | | Institutional Decisions 2020:18 10445 2021:18 10589 2022:18 10581 Percent shares traded 15 10 5 | | | | | | | | | | |
| % TOT. RETURN 4/19 THIS STOCK VS. S&P 500 INDEX 1 yr. 24.0 5.6 3 yr. 64.2 37.6 5 yr. 142.3 44.9 | | | | | | | | | | | | | | | | | | | |
| 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | VALUE LINE PUBL. LLC | 22-24 |
| 19.11 | 20.70 | 26.02 | 23.05 | 25.41 | 28.46 | 19.07 | 29.93 | 29.13 | 27.26 | 30.73 | 34.19 | 30.07 | 30.60 | 37.79 | 43.81 | 42.65 | 45.70 | Revenues per sh | 63.75 |
| 2.42 | 2.26 | 2.35 | 2.18 | 2.52 | 2.50 | 2.15 | 3.50 | 3.69 | 3.95 | 4.35 | 4.73 | 5.05 | 5.16 | 5.42 | 6.47 | 6.55 | 7.05 | "Cash Flow" per sh | 9.00 |
| 1.17 | 1.09 | 1.18 | 1.15 | 1.29 | 1.39 | 1.43 | 1.82 | 1.91 | 1.99 | 2.26 | 2.47 | 2.68 | 2.66 | 2.68 | 3.45 | 3.45 | 3.70 | Earnings per sh ^ | 5.00 |
| .73 | .75 | .76 | .77 | .78 | .81 | .83 | .87 | .91 | .96 | 1.01 | 1.07 | 1.12 | 1.19 | 1.26 | 1.39 | 1.55 | 1.68 | Div'ds Decl'd per sh % | 2.15 |
| 1.39 | 2.07 | 3.74 | 4.87 | 3.08 | 3.00 | 1.89 | 3.18 | 3.28 | 5.00 | 6.72 | 6.66 | 9.47 | 10.42 | 10.73 | 16.47 | 9.90 | 10.30 | Cap'l Spending per sh | 11.80 |
| 8.59 | 9.07 | 9.60 | 11.08 | 11.76 | 12.02 | 14.89 | 15.84 | 16.78 | 17.82 | 19.28 | 20.59 | 23.45 | 27.36 | 29.75 | 31.65 | 35.55 | 37.00 | Book Value per sh | 49.00 |
| 8.49 | 8.60 | 8.82 | 10.03 | 10.17 | 10.24 | 14.09 | 14.29 | 14.35 | 14.40 | 14.46 | 14.59 | 15.27 | 16.30 | 16.34 | 16.38 | 17.00 | 17.50 | Common Shs Outst'g ^ | 28.00 |
| 12.7 | 15.0 | 16.8 | 17.9 | 16.7 | 14.2 | 14.2 | 12.2 | 14.2 | 14.8 | 15.6 | 17.7 | 19.1 | 21.8 | 27.8 | 22.9 | 21.8 | 21.8 | Relative P/E Ratio | 24.0 |
| .72 | .79 | .89 | .97 | .89 | .85 | .95 | .78 | .89 | .94 | .88 | .93 | .96 | 1.14 | 1.40 | 1.24 | 1.24 | 1.24 | Avg Ann'l Div'd Yield | 1.8% |
| 4.9% | 4.6% | 3.8% | 3.8% | 3.8% | 4.1% | 4.1% | 3.9% | 3.4% | 3.3% | 2.9% | 2.4% | 2.2% | 1.9% | 1.7% | 1.8% | 1.8% | 1.8% | | |
| CAPITAL STRUCTURE as of 3/31/19 | | | | | | | | | | | | | | | | | | | |
| Total Debt \$633.9 mill. Due in 6 Yrs \$410.0 mill. | | | | | | | | | | | | | | | | | | | |
| LT Debt \$286.0 mill. LT Interest \$15.0 mill. | | | | | | | | | | | | | | | | | | | |
| (LT Interest earned: 5.7x; total interest coverage: 5.7x) (34% of Cap'l) | | | | | | | | | | | | | | | | | | | |
| Leases, Uncapitalized Annual rentals \$2.4 mill. | | | | | | | | | | | | | | | | | | | |
| Pfd Stock None | | | | | | | | | | | | | | | | | | | |
| Pension Assets-12/18 \$52.3 mill. | | | | | | | | | | | | | | | | | | | |
| Oblig. \$70.1 mill. | | | | | | | | | | | | | | | | | | | |
| Common Stock 16,397,017 shs. | | | | | | | | | | | | | | | | | | | |
| as of 4/30/19 | | | | | | | | | | | | | | | | | | | |
| MARKET CAP: \$1.6 billion (Mid Cap) | | | | | | | | | | | | | | | | | | | |
| CURRENT POSITION (MILL.) | | | | | | | | | | | | | | | | | | | |
| 2017 2018 3/31/19 | | | | | | | | | | | | | | | | | | | |
| Cash Assets 5.6 6.1 8.0 | | | | | | | | | | | | | | | | | | | |
| Other 173.0 185.4 145.6 | | | | | | | | | | | | | | | | | | | |
| Current Assets 178.6 191.5 153.6 | | | | | | | | | | | | | | | | | | | |
| Accts Payable 74.7 129.8 75.3 | | | | | | | | | | | | | | | | | | | |
| Debt Due 260.4 306.4 347.9 | | | | | | | | | | | | | | | | | | | |
| Other 77.9 92.0 85.4 | | | | | | | | | | | | | | | | | | | |
| Current Liab. 413.0 528.2 508.6 | | | | | | | | | | | | | | | | | | | |
| Fix. Chg. Cov. 749% 636% 645% | | | | | | | | | | | | | | | | | | | |
| ANNUAL RATES Past 10 Yrs. Past 5 Yrs. Est'd '16-'18 of change (per sh) | | | | | | | | | | | | | | | | | | | |
| Revenues 4.0% 5.0% 9.5% | | | | | | | | | | | | | | | | | | | |
| "Cash Flow" 9.0% 7.5% 8.0% | | | | | | | | | | | | | | | | | | | |
| Earnings 9.0% 8.0% 9.0% | | | | | | | | | | | | | | | | | | | |
| Dividends 5.0% 8.0% 9.0% | | | | | | | | | | | | | | | | | | | |
| Book Value 10.0% 10.5% 9.0% | | | | | | | | | | | | | | | | | | | |
| Cal-endar | | | | | | | | | | | | | | | | | | | |
| QUARTERLY REVENUES (\$ mill.) | | | | | | | | | | | | | | | | | | | |
| Mar.31 Jun.30 Sep.30 Dec.31 Full Year | | | | | | | | | | | | | | | | | | | |
| 2016 146.3 102.3 108.3 142.0 498.9 | | | | | | | | | | | | | | | | | | | |
| 2017 185.2 125.1 128.9 180.4 617.6 | | | | | | | | | | | | | | | | | | | |
| 2018 239.4 136.7 140.3 201.1 717.5 | | | | | | | | | | | | | | | | | | | |
| 2019 227.6 145 155 197.4 725 | | | | | | | | | | | | | | | | | | | |
| 2020 252 165 173 210 800 | | | | | | | | | | | | | | | | | | | |
| Cal-endar | | | | | | | | | | | | | | | | | | | |
| EARNINGS PER SHARE ^ | | | | | | | | | | | | | | | | | | | |
| Mar.31 Jun.30 Sep.30 Dec.31 Full Year | | | | | | | | | | | | | | | | | | | |
| 2016 1.33 .52 .29 .73 2.86 | | | | | | | | | | | | | | | | | | | |
| 2017 1.17 .37 .42 .72 2.68 | | | | | | | | | | | | | | | | | | | |
| 2018 1.64 .39 .34 1.08 3.45 | | | | | | | | | | | | | | | | | | | |
| 2019 1.74 .47 .45 .79 3.45 | | | | | | | | | | | | | | | | | | | |
| 2020 1.85 .53 .51 .81 3.70 | | | | | | | | | | | | | | | | | | | |
| Cal-endar | | | | | | | | | | | | | | | | | | | |
| QUARTERLY DIVIDENDS PAID % | | | | | | | | | | | | | | | | | | | |
| Mar.31 Jun.30 Sep.30 Dec.31 Full Year | | | | | | | | | | | | | | | | | | | |
| 2015 .27 .27 .288 .288 1.12 | | | | | | | | | | | | | | | | | | | |
| 2016 .288 .288 .305 .305 1.19 | | | | | | | | | | | | | | | | | | | |
| 2017 .305 .305 .325 .325 1.26 | | | | | | | | | | | | | | | | | | | |
| 2018 .325 .325 .37 .37 1.39 | | | | | | | | | | | | | | | | | | | |
| 2019 .37 .37 .405 .405 1.51 | | | | | | | | | | | | | | | | | | | |
| BUSINESS: Chesapeake Utilities Corporation consists of two units: Regulated Energy and Unregulated Energy. The Regulated Energy segment (45% of 2018 revenues) distributes natural gas in Delaware, Maryland, and Florida; distributes electricity in Florida; and transmits natural gas on the Delmarva Peninsula and in Florida. The Unregulated Energy operation (55% of 2018 revenues) wholesales and distributes propane; markets natural gas; and provides other unregulated energy services, including midstream services in Ohio. Officers and directors own 4.2% of common stock; T. Rowe Price, 13.7%; BlackRock, 9.2% (4/19 Proxy). CEO: Jeffrey M. Householder, Inc., Delaware. Address: 909 Silver Lake Boulevard, Dover, DE 19904. Tel: (302) 734-6799. Internet: www.chpct.com. | | | | | | | | | | | | | | | | | | | |
| Chesapeake Utilities Corp. got off to a decent start in 2019. In fact, first-quarter earnings advanced about 6%, to \$1.74 a share, versus last year's figure of \$1.64. This was brought about by improved performances from both the Regulated Energy unit and Unregulated Energy division. Another plus was a lower effective income tax rate. Still, given the difficult fourth-quarter comparison, it seems that the bottom line may come in flat, at \$3.45 a share, for the entire year. But supported partly by incremental benefits from earlier acquisitions, 2020 share net stands to grow some 7%, to \$3.70. | | | | | | | | | | | | | | | | | | | |
| Capital expenditures for this year are anticipated to be approximately \$168.2 million. (That's nearly 38% lower than 2018's level of \$269.8 million.) Roughly 80% of the budget is dedicated to the Regulated Energy operation, with a focus on the natural gas distribution and transmission businesses. Chesapeake's balance sheet (more detail below) appears quite adequate to support those and other initiatives. | | | | | | | | | | | | | | | | | | | |
| Finances are in solid shape. At the end of the first quarter, cash on hand stood at \$8 million. Long-term debt was just 34% of total capital, and short-term obligations did not appear to be a big obstacle. The energy firm also possesses five unsecured bank credit facilities totaling \$220 million. Lastly, it has access to \$150 million of short-term debt under a revolver that's available until October, 2020. | | | | | | | | | | | | | | | | | | | |
| The quarterly dividend was raised 9.5%, to \$0.405 a share. That reflects the company's confidence in its earnings prospects. Indeed, our projections out to 2022-2024 indicate that additional steady increases in the distribution will take place. The payout ratio over that span ought to be in the neighborhood of 43%, which is quite reasonable. However, the dividend yield is not exciting when stacked against those of other equities in Value Line's Natural Gas Utility Industry. | | | | | | | | | | | | | | | | | | | |
| Chesapeake stock has been riding high over the past few months. It seems that the decent first-quarter profits are a factor behind that move. Consequently, the Timeliness rank resides at 2 (Above Average). But long-term capital gains potential now looks unappealing. | | | | | | | | | | | | | | | | | | | |
| Frederick L. Harris, III May 31, 2019 | | | | | | | | | | | | | | | | | | | |

(A) Diluted shrs. Excludes nonrecurring items: '08, d7¢; '15, 6¢; '17, 87¢. Excludes discontinued operations: '03, d9¢; '04, d1¢. Next earnings report due early Aug.
 (B) Dividends historically paid in early January, April, July, and October. * Dividend reinvestment plan. Direct stock purchase plan available.
 (C) In millions, adjusted for split.

Company's Financial Strength A
 Stock's Price Stability 75
 Price Growth Persistence 90
 Earnings Per Share Stability 90

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| CHESAPEAKE UTIL. NYSE-CPK | | | | | | | | | | RECENT PRICE | P/E RATIO | | Trailing: 23.8 Median: 17.0 | | RELATIVE P/E RATIO | DIVD YLD | VALUE LINE |
|---|-----|-----------------|--|------|------|------|------|------|------|--------------|-----------|------|--------------------------------|------|--------------------|----------|------------|
| TIMELINESS | 3 | Lowered 6/28/19 | High: 23.2 | 23.3 | 28.1 | 29.7 | 32.6 | 40.8 | 52.7 | 61.1 | 70.0 | 88.4 | 93.4 | 96.3 | Target Price | Range | |
| SAFETY | 2 | New 6/5/15 | Low: 14.6 | 14.7 | 18.7 | 24.0 | 26.6 | 30.6 | 37.5 | 44.4 | 52.3 | 63.0 | 66.4 | 77.6 | 2022 | 2023 | 2024 |
| TECHNICAL | 2 | Lowered 8/16/19 | LEGENDS — 1.00 x Dividends p sh divided by Interest Rate Relative Price Strength 3-for-2 split 9/14 Options: Yes Shaded area indicates recession | | | | | | | | | | | | | | |
| BETA | .65 | (1.00 = Market) | 2022-24 PROJECTIONS Price Gain Ann'l Total High 140 (+50%) 12% Low 100 (+5%) 4% | | | | | | | | | | | | | | |
| Insider Decisions | | | O N D J F M A M J to Buy 0 0 1 0 0 0 0 0 0 to Sell 0 0 0 1 5 0 0 0 0 Options 0 1 0 0 0 0 0 0 0 | | | | | | | | | | | | | | |
| Institutional Decisions | | | 3Q2019 4Q2019 1Q2019 to Buy 66 87 81 to Sell 87 94 92 Net Buy/Sell 10589 10581 10679 Percent shares traded 15 10 5 | | | | | | | | | | | | | | |
| CAPITAL STRUCTURE as of 6/30/19 | | | Total Debt \$652.7 mill. Due in 5 Yrs \$410.0 mill. LT Debt \$275.9 mill. LT Interest \$15.0 mill. (LT interest earned: 5.7%; total interest coverage: 5.7x) (34% of Cap'l) Leases, Uncapitalized Annual rentals \$2.4 mill. Pfd Stock None Pension Assets-12/18 \$52.3 mill. Oblig. \$70.1 mill. Common Stock 16,403,776 shs. as of 7/31/19 | | | | | | | | | | | | | | |
| MARKET CAP: \$1.6 billion (Mid Cap) | | | 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 | | | | | | | | | | | | | | |
| CURRENT POSITION (MILL.) | | | 2017 2018 6/30/19 Cash Assets 5.6 6.1 7.3 Other 173.0 185.4 116.9 Current Assets 178.6 191.5 124.2 Accts Payable 74.7 129.8 50.6 Debt Due 260.4 306.4 376.8 Other 77.9 92.0 85.0 Current Liab. 413.0 528.2 512.4 Fix. Chg. Cov. 749% 636% 640% | | | | | | | | | | | | | | |
| ANNUAL RATES | | | Past Past Est'd '16-'18 of change (per sh) 10 Yrs 5 Yrs to '22-'24 Revenues 4.0% 5.0% 9.5% "Cash Flow" 9.0% 7.5% 8.0% Earnings 9.0% 8.0% 9.0% Dividends 5.0% 6.0% 9.0% Book Value 10.0% 10.5% 9.0% | | | | | | | | | | | | | | |
| QUARTERLY REVENUES (\$ MILL.) | | | Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2016 148.3 102.3 108.3 142.0 498.9 2017 185.2 125.1 126.9 180.4 617.6 2018 239.4 136.7 140.3 201.1 717.5 2019 227.8 130.9 135 198.5 690 2020 242 145 153 210 750 | | | | | | | | | | | | | | |
| QUARTERLY EARNINGS PER SHARE ^ | | | Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2016 1.33 .52 .29 .73 2.86 2017 1.17 .37 .42 .72 2.68 2018 1.64 .39 .34 1.08 3.45 2019 1.74 .50 .45 .81 3.50 2020 1.85 .55 .51 .84 3.75 | | | | | | | | | | | | | | |
| QUARTERLY DIVIDENDS PAID ^ | | | Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2015 .27 .27 .288 .288 1.12 2016 .288 .288 .305 .305 1.19 2017 .305 .305 .325 .325 1.26 2018 .325 .325 .37 .37 1.39 2019 .37 .37 .405 | | | | | | | | | | | | | | |
| BUSINESS: | | | Chesapeake Utilities Corporation consists of two units: Regulated Energy and Unregulated Energy. The Regulated Energy segment (45% of 2018 revenues) distributes natural gas in Delaware, Maryland, and Florida; distributes electricity in Florida; and transmits natural gas on the Delmarva Peninsula and in Florida. The Unregulated Energy operation (55% of 2018 revenues) wholesales and distributes propane; markets natural gas; and provides other unregulated energy services, including midstream services in Ohio. Officers and directors own 4.2% of common stock; T. Rowe Price, 13.7%; BlackRock, 9.2% (4/19 Proxy). CEO: Jeffrey M. Householder, Inc.: Delaware. Address: 909 Silver Lake Boulevard, Dover, DE 19904. Tel.: (302) 734-6799. Internet: www.chpk.com. | | | | | | | | | | | | | | |
| Chesapeake Utilities Corp. performed nicely, from an earnings standpoint, during the first half of 2019. Indeed, share net of \$2.24 was around 10% higher than the prior-year total of \$2.03. This was mainly because of the Regulated Energy segment, driven by such factors as the Eastern Shore and Peninsula Pipeline service expansions and organic growth within the natural gas distribution business. Another positive was a diminished effective income tax rate. But the Unregulated Energy division was held back, to a certain extent, by lower results at the PESCO unit. Chesapeake's interest charges climbed substantially during the period, too. We anticipate an underwhelming showing for the full year, however. Although the company seems headed for a good third quarter, the 2018 December-period figure of \$1.08 a share will be quite difficult to surpass. Thus, the bottom line may end up at around \$3.50, not much higher than last year's \$3.45-a-share tally. But regarding 2020, profits in the neighborhood of \$3.75 (a 7% advance) appear possible, aided partly by incremental bene- | | | | | | | | | | | | | | | | | |
| fits from prior acquisitions. Generally favorable weather conditions would be another plus. Our 2022-2024 projections show that steady dividend increases will occur. Furthermore, the equity's payout ratio over that span ought to be roughly 45%, which should not place a major financial burden on Chesapeake. It's important to mention, though, that the current dividend yield of 1.7% is nothing to write home about when measured against those of other stocks in Value Line's Natural Gas Utility Industry. These shares are hovering not very far from their all-time high reached earlier this year. We believe this can be traced, to a large degree, to the company's solid earnings thus far in 2019. Note, also, the 2 (Above Average) Safety rank, lower-than-market Beta coefficient, and relatively high Price Stability score. Nevertheless, the price movement has resulted in subpar long-term capital appreciation potential. Furthermore, CPK stock is only an Average (3) selection for Timeliness. | | | | | | | | | | | | | | | | | |
| Frederick L. Harris, III August 30, 2019 | | | % TOT. RETURN 7/19 1 yr. 13.3 3 yr. 53.8 5 yr. 137.2 | | | | | | | | | | | | | | |
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| To subscribe call 1-800-VALUELINE | | | | | | | | | | | | | | | | | |

REQUEST:

Refer to the Morin Testimony, pages 32-37. If securities markets are efficient, prices should adjust rapidly to a wide array of information, and the then-current price of a security should reflect its market value. Therefore, when purchasing a 30-year treasury bond, the price investors are willing to pay, and the yield received necessarily embody investors' current expectations of the future. Explain why it is incorrect to use the current 30-year long-term bond rate as opposed to the forecasted rate as the risk-free rate in the CAPM analysis.

RESPONSE:

It is incorrect to use the current long-term bond rate as opposed to the forecast rate as the risk-free rate in the CAPM for three reasons. First, given that this proceeding is to provide ROE estimates for future proceedings, forecast interest rates are far more relevant. Second, Dr. Morin relied on projected long-term Treasury interest rates for the simple reason that investors price securities on the basis of long-term expectations, including interest rates. Cost of capital models, including the CAPM, are prospective (i.e. forward-looking) in nature and must take into account current market expectations for the future because investors price securities on the basis of long-term expectations, including interest rates. Stock prices are based on investor expectations. Dr. Morin notes that projections of other financial variables are used routinely in DCF analyses. Third, the use of current

interest rates in a CAPM analysis produces highly unreasonable cost of equity results that are barely above the cost of debt.

PERSON RESPONSIBLE: Roger A. Morin, Ph.D.

STAFF-DR-02-097

REQUEST:

Refer to the Morin Testimony, Attachment RAM-7. The attachment appears to be missing multiple observations, including multiple electric utilities in the Duke Kentucky proxy group.

- a. Provide an updated Attachment RAM-7 that includes all the observations and data listed that were used in the analysis.
- b. Provide an updated Attachment RAM-7 using earnings per share growth forecasts from Yahoo Finance rather than Value Line in the analysis.

RESPONSE:

- a. See Attachment STAFF-DR-02-097 for all the 500 companies in the S&P 500 index. Attachment RAM-7 simply limited the sample to those companies paying dividends so as to enable the implementation of the DCF model on the index. was drawn directly from the Value Line online database, and the observations shown.
- b. Dr. Morin did not rely on such information in his analysis, and nor does Yahoo Finance provide such forecasts in a readily accessible electronic fashion for 500 companies.

PERSON RESPONSIBLE: Roger A. Morin, Ph.D.

| | COMPANY TICKER | EPS GROWTH FCST | DIVIDEND YIELD |
|----|-------------------|--------------------|-------------------|
| 1 | A | 9.5 | 0.83% |
| 17 | NBL | 0.0 | 1.93% |
| 18 | EQM | 0.5 | 10.39% |
| 19 | NCI | 0.5 | 0.86% |
| 20 | CPB | 1.0 | 3.66% |
| 21 | F | 1.0 | 5.76% |
| 22 | LPT | 1.0 | 3.31% |
| 23 | CXW | 1.5 | 8.26% |
| 24 | OMI | 1.5 | 0.28% |
| 25 | ESS | 2.0 | 2.74% |
| 26 | IBM | 2.0 | 4.62% |
| 27 | JCI | 2.0 | 2.63% |
| 28 | NEU | 2.0 | 1.65% |
| 29 | BPL | 2.5 | 8.98% |
| 30 | CTL | 2.5 | 8.56% |
| 31 | NEM | 2.5 | 1.85% |
| 32 | NJR | 2.5 | 2.31% |
| 33 | NLY | 2.5 | 12.37% |
| 34 | CATO | 3.0 | 8.61% |
| 35 | ED | 3.0 | 3.44% |
| 36 | MAC | 3.0 | 7.17% |
| 37 | AGN | 3.5 | 2.03% |
| 38 | AVA | 3.5 | 3.56% |
| 39 | GE | 3.5 | 0.38% |
| 40 | GPI | 3.5 | 1.33% |
| 41 | IDA | 3.5 | 2.51% |
| 42 | M | 3.5 | 6.50% |
| 43 | AEP | 4.0 | 3.14% |
| 44 | AVB | 4.0 | 3.01% |
| 45 | FRT | 4.0 | 3.07% |
| 46 | GATX | 4.0 | 2.35% |
| 47 | GIS | 4.0 | 3.83% |
| 48 | GSK | 4.0 | 6.33% |
| 49 | HBI | 4.0 | 3.37% |
| 50 | HST | 4.0 | 4.02% |
| 51 | ALK | 4.5 | 2.24% |
| 52 | BXP | 4.5 | 2.82% |
| 53 | CULP | 4.5 | 1.92% |
| 54 | EE | 4.5 | 2.35% |
| 55 | HE | 4.5 | 3.08% |
| 56 | K | 4.5 | 3.97% |
| 57 | KR | 4.5 | 2.18% |
| 58 | O | 4.5 | 3.86% |
| 59 | PBI | 4.5 | 3.50% |
| 60 | PEG | 4.5 | 3.17% |
| 61 | ALE | 5.0 | 2.86% |
| 62 | BCE | 5.0 | 5.32% |

| | | | |
|-----|------|-----|-------|
| 63 | DHI | 5.0 | 1.36% |
| 64 | DLR | 5.0 | 3.58% |
| 65 | DTE | 5.0 | 3.02% |
| 66 | JHG | 5.0 | 6.39% |
| 67 | JNPR | 5.0 | 2.75% |
| 68 | KIM | 5.0 | 6.15% |
| 69 | NLSN | 5.0 | 5.66% |
| 70 | NYCB | 5.0 | 5.87% |
| 71 | AIZ | 5.5 | 2.54% |
| 72 | ALB | 5.5 | 1.91% |
| 73 | CAG | 5.5 | 2.83% |
| 74 | COF | 5.5 | 1.70% |
| 75 | DUK | 5.5 | 4.12% |
| 76 | ES | 5.5 | 2.97% |
| 77 | INGR | 5.5 | 2.88% |
| 78 | LYB | 5.5 | 4.60% |
| 79 | MTX | 5.5 | 0.32% |
| 80 | NRP | 5.5 | 4.26% |
| 81 | AMC | 6.0 | 5.48% |
| 82 | BIG | 6.0 | 3.20% |
| 83 | BKH | 6.0 | 2.71% |
| 84 | CFR | 6.0 | 2.75% |
| 85 | CL | 6.0 | 2.39% |
| 86 | EXR | 6.0 | 3.24% |
| 87 | FLO | 6.0 | 3.33% |
| 88 | GBX | 6.0 | 2.77% |
| 89 | GD | 6.0 | 2.31% |
| 90 | GPS | 6.0 | 3.73% |
| 91 | HSY | 6.0 | 2.37% |
| 92 | JPM | 6.0 | 2.76% |
| 93 | MAN | 6.0 | 2.10% |
| 94 | ORA | 6.0 | 0.75% |
| 95 | AB | 6.5 | 8.33% |
| 96 | ACCO | 6.5 | 2.80% |
| 97 | AEE | 6.5 | 2.61% |
| 98 | ATR | 6.5 | 1.27% |
| 99 | CLX | 6.5 | 2.59% |
| 100 | D | 6.5 | 4.78% |
| 101 | DDS | 6.5 | 0.58% |
| 102 | DIS | 6.5 | 1.31% |
| 103 | FE | 6.5 | 3.58% |
| 104 | HMC | 6.5 | 3.52% |
| 105 | JWN | 6.5 | 3.67% |
| 106 | KO | 6.5 | 3.28% |
| 107 | LNT | 6.5 | 3.01% |
| 108 | MEI | 6.5 | 1.45% |
| 109 | NVO | 6.5 | 2.61% |
| 110 | OGE | 6.5 | 3.51% |
| 111 | OI | 6.5 | 1.10% |
| 112 | OMC | 6.5 | 3.25% |
| 113 | PEP | 6.5 | 2.99% |

| | | | |
|-----|------|-----|-------|
| 114 | CHL | 7.0 | 4.33% |
| 115 | CMS | 7.0 | 2.77% |
| 116 | CTB | 7.0 | 1.37% |
| 117 | DKS | 7.0 | 3.02% |
| 118 | DRE | 7.0 | 2.74% |
| 119 | FIS | 7.0 | 1.19% |
| 120 | HII | 7.0 | 1.62% |
| 121 | HRB | 7.0 | 3.75% |
| 122 | IVZ | 7.0 | 5.66% |
| 123 | KBH | 7.0 | 0.38% |
| 124 | KMB | 7.0 | 3.23% |
| 125 | LLL | 7.0 | 1.48% |
| 126 | PAG | 7.0 | 3.30% |
| 127 | AFL | 7.5 | 2.14% |
| 128 | ATO | 7.5 | 2.04% |
| 129 | BEN | 7.5 | 3.00% |
| 130 | CHH | 7.5 | 0.99% |
| 131 | CVS | 7.5 | 3.53% |
| 132 | DFS | 7.5 | 1.95% |
| 133 | EAT | 7.5 | 3.49% |
| 134 | EFX | 7.5 | 1.26% |
| 135 | EXC | 7.5 | 2.91% |
| 136 | FDX | 7.5 | 1.38% |
| 137 | GM | 7.5 | 3.92% |
| 138 | HUBB | 7.5 | 2.59% |
| 139 | LAD | 7.5 | 1.05% |
| 140 | LEA | 7.5 | 2.05% |
| 141 | LPX | 7.5 | 2.12% |
| 142 | LVS | 7.5 | 4.50% |
| 143 | MDT | 7.5 | 2.23% |
| 144 | MET | 7.5 | 3.67% |
| 145 | MFC | 7.5 | 4.01% |
| 146 | AWR | 8.0 | 1.54% |
| 147 | BBT | 8.0 | 3.18% |
| 148 | BWA | 8.0 | 1.65% |
| 149 | CMI | 8.0 | 2.70% |
| 150 | EMN | 8.0 | 3.12% |
| 151 | HON | 8.0 | 1.89% |
| 152 | HVT | 8.0 | 3.74% |
| 153 | IFF | 8.0 | 2.09% |
| 154 | JWA | 8.0 | 2.73% |
| 155 | LEG | 8.0 | 3.77% |
| 156 | MMP | 8.0 | 6.52% |
| 157 | NPK | 8.0 | 0.92% |
| 158 | OXM | 8.0 | 1.76% |
| 159 | ABC | 8.5 | 2.02% |
| 160 | AFG | 8.5 | 1.55% |
| 161 | ALLE | 8.5 | 1.06% |
| 162 | BHE | 8.5 | 2.21% |
| 163 | BK | 8.5 | 2.24% |
| 164 | BMS | 8.5 | 2.15% |

| | | | |
|-----|------|-----|--------|
| 165 | BOH | 8.5 | 3.08% |
| 166 | CB | 8.5 | 2.01% |
| 167 | CHD | 8.5 | 1.22% |
| 168 | CWT | 8.5 | 1.57% |
| 169 | DGX | 8.5 | 2.15% |
| 170 | ERJ | 8.5 | 0.72% |
| 171 | EV | 8.5 | 3.34% |
| 172 | EXP | 8.5 | 0.44% |
| 173 | GIL | 8.5 | 1.43% |
| 174 | GPC | 8.5 | 2.99% |
| 175 | GS | 8.5 | 1.64% |
| 176 | GWW | 8.5 | 2.03% |
| 177 | HOG | 8.5 | 4.03% |
| 178 | MKC | 8.5 | 1.50% |
| 179 | MRK | 8.5 | 2.75% |
| 180 | NOK | 8.5 | 4.31% |
| 181 | PCH | 8.5 | 3.96% |
| 182 | ACN | 9.0 | 1.65% |
| 183 | ALV | 9.0 | 3.15% |
| 184 | APO | 9.0 | 5.72% |
| 185 | ASB | 9.0 | 2.95% |
| 186 | BGG | 9.0 | 4.47% |
| 187 | BGS | 9.0 | 8.36% |
| 188 | BX | 9.0 | 6.29% |
| 189 | CAL | 9.0 | 1.04% |
| 190 | COTY | 9.0 | 4.36% |
| 191 | CPK | 9.0 | 1.57% |
| 192 | CRI | 9.0 | 1.85% |
| 193 | DEO | 9.0 | 2.06% |
| 194 | DOX | 9.0 | 2.07% |
| 195 | ECL | 9.0 | 1.00% |
| 196 | ETN | 9.0 | 3.43% |
| 197 | FAF | 9.0 | 2.99% |
| 198 | FNV | 9.0 | 1.36% |
| 199 | HRL | 9.0 | 2.12% |
| 200 | ITW | 9.0 | 2.54% |
| 201 | JNJ | 9.0 | 2.68% |
| 202 | KFY | 9.0 | 0.84% |
| 203 | LEN | 9.0 | 0.31% |
| 204 | LNC | 9.0 | 2.20% |
| 205 | MCK | 9.0 | 1.26% |
| 206 | MMC | 9.0 | 1.77% |
| 207 | NEE | 9.0 | 2.60% |
| 208 | NP | 9.0 | 2.69% |
| 209 | ABB | 9.5 | 3.90% |
| 210 | ADM | 9.5 | 3.21% |
| 211 | AON | 9.5 | 0.99% |
| 212 | APD | 9.5 | 2.21% |
| 213 | APU | 9.5 | 10.43% |
| 214 | AWK | 9.5 | 1.86% |
| 215 | BLL | 9.5 | 0.98% |

| | | | |
|-----|------|------|--------|
| 216 | BRC | 9.5 | 1.70% |
| 217 | CBS | 9.5 | 1.45% |
| 218 | CR | 9.5 | 1.76% |
| 219 | DAL | 9.5 | 2.42% |
| 220 | DCP | 9.5 | 10.13% |
| 221 | EME | 9.5 | 0.39% |
| 222 | GEF | 9.5 | 4.39% |
| 223 | HNI | 9.5 | 3.15% |
| 224 | JLL | 9.5 | 0.54% |
| 225 | LDOS | 9.5 | 1.72% |
| 226 | MATX | 9.5 | 2.09% |
| 227 | MCD | 9.5 | 2.35% |
| 228 | MMM | 9.5 | 3.11% |
| 229 | MTB | 9.5 | 2.35% |
| 230 | NOC | 9.5 | 1.64% |
| 231 | ABT | 10.0 | 1.63% |
| 232 | AEO | 10.0 | 2.28% |
| 233 | AMG | 10.0 | 1.16% |
| 234 | AXP | 10.0 | 1.31% |
| 235 | BDX | 10.0 | 1.30% |
| 236 | BUD | 10.0 | 2.30% |
| 237 | BXS | 10.0 | 2.21% |
| 238 | C | 10.0 | 2.55% |
| 239 | CAH | 10.0 | 3.84% |
| 240 | CCL | 10.0 | 3.63% |
| 241 | CNI | 10.0 | 1.72% |
| 242 | CTS | 10.0 | 0.53% |
| 243 | FMS | 10.0 | 1.45% |
| 244 | HXL | 10.0 | 0.84% |
| 245 | KNL | 10.0 | 2.76% |
| 246 | LZB | 10.0 | 1.50% |
| 247 | MCS | 10.0 | 1.67% |
| 248 | MLM | 10.0 | 0.87% |
| 249 | MS | 10.0 | 2.50% |
| 250 | MT | 10.0 | 0.93% |
| 251 | ORCL | 10.0 | 1.75% |
| 252 | ABBV | 10.5 | 5.44% |
| 253 | AME | 10.5 | 0.64% |
| 254 | APH | 10.5 | 0.92% |
| 255 | AYI | 10.5 | 0.36% |
| 256 | BAC | 10.5 | 1.95% |
| 257 | BBY | 10.5 | 2.67% |
| 258 | BLK | 10.5 | 2.74% |
| 259 | CW | 10.5 | 0.52% |
| 260 | EHC | 10.5 | 1.68% |
| 261 | FII | 10.5 | 3.43% |
| 262 | FNF | 10.5 | 3.14% |
| 263 | FRC | 10.5 | 0.72% |
| 264 | FUN | 10.5 | 6.60% |
| 265 | HI | 10.5 | 2.02% |
| 266 | ICE | 10.5 | 1.38% |

| | | | |
|-----|------|------|-------|
| 267 | KEY | 10.5 | 3.84% |
| 268 | MAS | 10.5 | 1.19% |
| 269 | MDC | 10.5 | 3.68% |
| 270 | MGA | 10.5 | 2.67% |
| 271 | MO | 10.5 | 5.95% |
| 272 | NVS | 10.5 | 3.43% |
| 273 | APTV | 11.0 | 1.10% |
| 274 | ARMK | 11.0 | 1.41% |
| 275 | BC | 11.0 | 1.59% |
| 276 | BR | 11.0 | 1.65% |
| 277 | CBT | 11.0 | 2.81% |
| 278 | CE | 11.0 | 2.28% |
| 279 | CMC | 11.0 | 2.71% |
| 280 | CRDB | 11.0 | 2.21% |
| 281 | ET | 11.0 | 7.94% |
| 282 | GHC | 11.0 | 0.78% |
| 283 | GPK | 11.0 | 2.13% |
| 284 | HD | 11.0 | 2.71% |
| 285 | HY | 11.0 | 2.12% |
| 286 | IEX | 11.0 | 1.10% |
| 287 | IPG | 11.0 | 4.07% |
| 288 | ITT | 11.0 | 0.93% |
| 289 | KKR | 11.0 | 2.03% |
| 290 | KSS | 11.0 | 3.87% |
| 291 | LAZ | 11.0 | 4.86% |
| 292 | MMS | 11.0 | 1.35% |
| 293 | NUS | 11.0 | 2.53% |
| 294 | AAN | 11.5 | 0.24% |
| 295 | ALL | 11.5 | 2.03% |
| 296 | AMT | 11.5 | 1.87% |
| 297 | AVY | 11.5 | 2.08% |
| 298 | BAM | 11.5 | 1.33% |
| 299 | BMI | 11.5 | 1.08% |
| 300 | BRSS | 11.5 | 0.83% |
| 301 | CHE | 11.5 | 0.36% |
| 302 | CNA | 11.5 | 3.06% |
| 303 | DCI | 11.5 | 1.41% |
| 304 | ENS | 11.5 | 0.99% |
| 305 | EPD | 11.5 | 6.09% |
| 306 | FBHS | 11.5 | 1.58% |
| 307 | GLOG | 11.5 | 3.82% |
| 308 | HRS | 11.5 | 1.54% |
| 309 | IRM | 11.5 | 7.73% |
| 310 | JBT | 11.5 | 0.35% |
| 311 | LLY | 11.5 | 2.21% |
| 312 | LUV | 11.5 | 1.19% |
| 313 | MCO | 11.5 | 1.02% |
| 314 | MLI | 11.5 | 1.33% |
| 315 | OSK | 11.5 | 1.33% |
| 316 | BAH | 12.0 | 1.54% |
| 317 | BRO | 12.0 | 0.99% |

| | | | |
|-----|------|------|--------|
| 318 | CCI | 12.0 | 3.61% |
| 319 | CFG | 12.0 | 3.48% |
| 320 | CMA | 12.0 | 3.43% |
| 321 | CSL | 12.0 | 1.14% |
| 322 | DLX | 12.0 | 2.72% |
| 323 | DRI | 12.0 | 2.55% |
| 324 | EMR | 12.0 | 2.76% |
| 325 | FCF | 12.0 | 2.88% |
| 326 | FDS | 12.0 | 0.92% |
| 327 | FL | 12.0 | 2.75% |
| 328 | GRA | 12.0 | 1.41% |
| 329 | HCA | 12.0 | 1.27% |
| 330 | HEI | 12.0 | 0.13% |
| 331 | INFY | 12.0 | 3.08% |
| 332 | IP | 12.0 | 4.25% |
| 333 | IR | 12.0 | 1.70% |
| 334 | KSU | 12.0 | 1.15% |
| 335 | LOW | 12.0 | 1.71% |
| 336 | MSM | 12.0 | 3.00% |
| 337 | ATU | 12.5 | 0.16% |
| 338 | AWI | 12.5 | 0.78% |
| 339 | AYR | 12.5 | 6.02% |
| 340 | BAX | 12.5 | 0.98% |
| 341 | CNK | 12.5 | 3.21% |
| 342 | CNP | 12.5 | 3.69% |
| 343 | CP | 12.5 | 0.87% |
| 344 | DAN | 12.5 | 2.20% |
| 345 | DIN | 12.5 | 3.12% |
| 346 | ETH | 12.5 | 3.37% |
| 347 | GGG | 12.5 | 1.22% |
| 348 | JEC | 12.5 | 0.88% |
| 349 | LII | 12.5 | 0.94% |
| 350 | MOV | 12.5 | 2.16% |
| 351 | ANDX | 13.0 | 12.01% |
| 352 | B | 13.0 | 1.11% |
| 353 | BWXT | 13.0 | 1.37% |
| 354 | CSV | 13.0 | 1.64% |
| 355 | DBI | 13.0 | 4.30% |
| 356 | DG | 13.0 | 1.03% |
| 357 | DHR | 13.0 | 0.51% |
| 358 | DOV | 13.0 | 1.93% |
| 359 | FLS | 13.0 | 1.46% |
| 360 | G | 13.0 | 0.94% |
| 361 | GRC | 13.0 | 1.61% |
| 362 | HIG | 13.0 | 2.28% |
| 363 | HPT | 13.0 | 8.22% |
| 364 | HRC | 13.0 | 0.83% |
| 365 | KAI | 13.0 | 1.00% |
| 366 | KAMN | 13.0 | 1.28% |
| 367 | MSI | 13.0 | 1.59% |
| 368 | NSC | 13.0 | 1.68% |

| | | | |
|-----|------|------|-------|
| 369 | ABM | 13.5 | 1.88% |
| 370 | ADS | 13.5 | 1.61% |
| 371 | AGCO | 13.5 | 0.86% |
| 372 | BFB | 13.5 | 1.25% |
| 373 | BMV | 13.5 | 3.37% |
| 374 | ESE | 13.5 | 0.42% |
| 375 | H | 13.5 | 0.98% |
| 376 | HUM | 13.5 | 0.88% |
| 377 | HUN | 13.5 | 3.01% |
| 378 | L | 13.5 | 0.49% |
| 379 | LNN | 13.5 | 1.41% |
| 380 | MOGA | 13.5 | 1.05% |
| 381 | MPC | 13.5 | 3.54% |
| 382 | MTRN | 13.5 | 0.60% |
| 383 | AAP | 14.0 | 0.15% |
| 384 | AMP | 14.0 | 2.62% |
| 385 | CAJ | 14.0 | 5.21% |
| 386 | CMD | 14.0 | 0.29% |
| 387 | DE | 14.0 | 1.82% |
| 388 | DLB | 14.0 | 1.15% |
| 389 | EL | 14.0 | 0.99% |
| 390 | FHN | 14.0 | 3.68% |
| 391 | FUL | 14.0 | 1.29% |
| 392 | JBL | 14.0 | 1.03% |
| 393 | LMT | 14.0 | 2.63% |
| 394 | MDU | 14.0 | 3.05% |
| 395 | MSA | 14.0 | 1.35% |
| 396 | ALLY | 14.5 | 2.27% |
| 397 | BCC | 14.5 | 1.24% |
| 398 | BDC | 14.5 | 0.33% |
| 399 | COO | 14.5 | 0.02% |
| 400 | DXC | 14.5 | 1.21% |
| 401 | LCII | 14.5 | 2.64% |
| 402 | ORI | 14.5 | 3.58% |
| 403 | AIT | 15.0 | 2.06% |
| 404 | AJG | 15.0 | 2.07% |
| 405 | FMC | 15.0 | 2.06% |
| 406 | NI | 15.0 | 2.87% |
| 407 | NKE | 15.0 | 1.03% |
| 408 | AUY | 15.5 | 0.97% |
| 409 | AZN | 15.5 | 3.65% |
| 410 | ELY | 15.5 | 0.23% |
| 411 | FSS | 15.5 | 1.17% |
| 412 | KAR | 15.5 | 2.46% |
| 413 | OC | 15.5 | 1.69% |
| 414 | PBF | 15.5 | 3.50% |
| 415 | AIR | 16.0 | 0.89% |
| 416 | AVX | 16.0 | 2.80% |
| 417 | GFF | 16.0 | 1.70% |
| 418 | GLW | 16.0 | 2.50% |
| 419 | MWA | 16.0 | 1.84% |

| | | | | |
|-----|----------------|-------------|--------------|--------------|
| 420 | AOS | 16.5 | 1.64% | |
| 421 | BYD | 16.5 | 0.86% | |
| 422 | CMP | 16.5 | 5.11% | |
| 423 | CSX | 16.5 | 1.19% | |
| 424 | HSBC | 16.5 | 5.71% | |
| 425 | KMT | 16.5 | 1.96% | |
| 426 | ANTM | 17.0 | 1.22% | |
| 427 | BCO | 17.0 | 0.74% | |
| 428 | BG | 17.0 | 3.91% | |
| 429 | CAT | 17.0 | 2.96% | |
| 430 | ENBL | 17.0 | 9.23% | |
| 431 | FLR | 17.0 | 2.87% | |
| 432 | MDP | 17.0 | 3.83% | |
| 433 | AIN | 17.5 | 0.90% | |
| 434 | BA | 17.5 | 2.18% | |
| 435 | CPA | 17.5 | 3.04% | |
| 436 | GPN | 17.5 | 0.03% | |
| 437 | LM | 17.5 | 4.00% | |
| 438 | AVD | 18.0 | 0.50% | |
| 439 | CIT | 18.0 | 2.62% | |
| 440 | DPZ | 18.0 | 0.93% | |
| 441 | MCY | 18.0 | 4.46% | |
| 442 | MTN | 18.0 | 3.04% | |
| 443 | NPO | 18.0 | 1.49% | |
| 444 | ALSN | 18.5 | 1.27% | |
| 445 | CI | 18.5 | 0.03% | |
| 446 | CLB | 18.5 | 3.64% | |
| 447 | KBR | 18.5 | 1.36% | |
| 448 | KWR | 18.5 | 0.69% | |
| 449 | OKE | 18.5 | 5.17% | |
| 450 | AEM | 19.0 | 1.22% | |
| 451 | ATTO | 19.0 | 9.15% | |
| 452 | EVC | 19.0 | 7.17% | |
| 453 | MA | 19.0 | 0.53% | |
| 454 | AXS | 19.5 | 2.80% | |
| 455 | GHL | 19.5 | 0.98% | |
| 456 | MSCI | 19.5 | 1.02% | |
| 457 | NSP | 19.5 | 0.99% | |
| 458 | HR | 20.0 | 3.83% | |
| | AVERAGE | 10.0 | 2.60% | 12.7% |
| | MEDIAN | 10.0 | 2.21% | 12.2% |

Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019

STAFF-DR-02-098

REQUEST:

Refer to the Morin Testimony, page 51. Provide the most recently awarded returns on equity and the date of each award for each of Duke Kentucky's affiliate regulated sister companies as well as each company in the proxy group.

RESPONSE:

| Company | ROE | Date |
|----------------------------|--------------|----------|
| Duke Energy Ohio, Inc | 9.84 percent | 12/18/18 |
| Duke Energy Indiana, LLC | 10.5 percent | 2004 |
| Duke Energy Carolinas (NC) | 9.9 percent | 6/22/18 |
| Duke Energy Progress (NC) | 9.9 percent | 2/23/18 |
| Duke Energy Florida | 10.5 percent | 11/20/17 |
| Duke Energy Carolinas (SC) | 9.5 percent | 5/21/19 |
| Duke Energy Progress (SC) | 9.5 percent | 5/21/19 |

The allowed returns for each company in Dr. Morin's peer group are available from the Value Line reports for each company.

PERSON RESPONSIBLE: Roger A. Morin Ph.D.

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-099

REQUEST:

Refer to the Morin Testimony, page 53. Confirm that the equation in the graph should match the equation on page 52.

RESPONSE:

Confirmed.

PERSON RESPONSIBLE: Roger A. Morin Ph.D.

REQUEST:

Refer to the Morin Testimony, page 61. Dr. Morin discusses Duke Kentucky's \$914 million construction program over the next few years and the regulatory risks including approval risk, lags and delays, potential rate base exclusions, and potential disallowances faced by Duke Kentucky.

- a. Provide a list of Duke Kentucky's anticipated construction projects that make up the \$914 million program, the nature of the projects, whether they are required to conform to federal or state regulations, which projects will require a CPCN from this Commission, and the anticipated date of any required CPCN filing.
- b. Provide any construction project for which the company requested approval has been denied or excluded from rate base when Duke Kentucky requested rate base inclusion or project costs disallowed by this Commission. If so, provide the relevant case number and the reason for each denial, exclusion, or disallowance.
- c. Provide any construction projects that have been delayed by this Commission beyond the usual regulatory CPCN schedule and for which Duke Kentucky has requested timely approval for which Dr. Morin is aware. Provide the relevant case number and an explanation of the nature of the lag or delay.
- d. Explain if Dr. Morin or Duke Kentucky is aware of whether the market has reacted negatively toward Duke Kentucky because of the regulatory framework in

Kentucky within which the company must work. If so, explain how Duke Kentucky has been negatively affected.

RESPONSE:

- a. Please see STAFF-DR-02-100 Attachment for Duke Kentucky's planned construction spend for 2019-2023. Included in this capital plan is spend for certain projects for which the company has or plans to file a CPCN:
 - Oakbrook to Aero Transmission Project; Case 2019-00251, filed August 23rd, 2019
 - Woodspoint to Aero Transmission Project, Case 2019-00361, expected to be filed November 1st, 2019
 - Gas Pipeline Project, expected to be filed November 1st, 2019.
- b. The Company has no construction projects for which approval has been requested and has been denied or excluded from rate base when Duke Kentucky requested rate base inclusion or project costs disallowed by this Commission.
- c. An order involving the settlement of Duke Energy Kentucky's Application for a certificate of public convenience and necessity in Case No. 2016-00152 for construction of an Advanced Metering Infrastructure was unexpectedly delayed which resulted in delayed deployment from what was contemplated in the Company's application and cost benefit analysis. The Company filed its Application on April 25, 2016, and a Stipulation resolving all issues with intervening parties was filed on December 6, 2016, with an evidentiary hearing on December 8, 2016. The Commission issued its Order approving the Stipulation on May 25, 2017.

d. Duke Energy Kentucky is not aware of any negative sentiment from the market due to the regulatory framework in Kentucky. In their January 29, 2019 Credit Opinion, Moody's Investors Service cites "generally credit supportive regulation in Kentucky" as a credit strength. However, Moody's also notes "a decline in the credit supportiveness of the regulatory environment in Kentucky" as a factor that could lead to a downgrade.

PERSON RESPONSIBLE:

Christopher Jacobi (a,d)
William Don Wathen Jr., (b,c)

Duke Energy Kentucky
 Electric & Gas Operations
 Construction Costs by Project Class
 2019-2023

| | 2019 | 2020 | 2021 | 2022 | 2023 | 5 Yr Total |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <u>DE Kentucky Electric</u> | | | | | | |
| B1 - Fossil Env Compliance Air | 9,929 | - | - | - | - | 9,929 |
| B4 - Fossil Ash Basin Initiative | 27,977 | 4,391 | - | - | - | 32,368 |
| BA - Fossil Steam Plants | 8,737 | 21,355 | 10,853 | 11,978 | 16,703 | 69,626 |
| BD - Environmental Fossil Plants | 4,058 | 2,622 | 1,008 | 2,070 | 3,706 | 13,464 |
| BG - Other Production Plant | 27,328 | 19,162 | 65,225 | 49,441 | 13,113 | 174,269 |
| BY - Solar Energy Production | - | 8,018 | 34,090 | 19,051 | 19,051 | 80,209 |
| CC - Capital Challenge | (5,000) | (5,000) | (5,000) | (5,000) | (5,000) | (25,000) |
| FF - Transmission Stations | 2,610 | 4,516 | 639 | 2,602 | (1,116) | 9,252 |
| GG - Transmission Lines | 4,071 | 8,740 | 11,011 | 7,465 | 6,537 | 37,824 |
| HB - Distribution Substation | 16,262 | 23,939 | (1,060) | 994 | 6,928 | 47,064 |
| HW - Distribution Highway Jobs | 2,387 | 2,249 | 2,342 | 2,365 | 2,389 | 11,731 |
| IK - Distrib Lines OH/UG (Line Ext) | 48,270 | 23,057 | 26,630 | 29,644 | 29,893 | 157,494 |
| IO - Distribution Improvements | 5,145 | 6,852 | 4,557 | 4,600 | 4,643 | 25,797 |
| OU - Other Utility | 137 | 110 | 109 | 112 | 112 | 580 |
| QQ - Meters, Panel & Panel Troughs | 239 | 106 | 100 | - | - | 446 |
| RR - Communication | 8,698 | 8,449 | 6,905 | 5,270 | 8,545 | 37,867 |
| TB - Equipment & Tools | 167 | 158 | 159 | 161 | 162 | 806 |
| TD - Other - Office Equipment | 10,835 | 532 | 331 | 348 | 384 | 12,430 |
| VS - Intangible Plant - Software | 4,554 | 4,606 | 1,716 | 3,424 | 1,092 | 15,392 |
| | 176,404 | 133,859 | 159,616 | 134,526 | 107,142 | 711,547 |
| <u>DE Kentucky Gas</u> | | | | | | |
| RR - Communication | 217 | 40 | 239 | 305 | 589 | 1,390 |
| VS - Intangible Plant - Software | 1,763 | 1,486 | 1,241 | 1,101 | 480 | 6,071 |
| ZB - Midwest Gas Delivery | - | 4,299 | 10,873 | 23,096 | 10,726 | 48,993 |
| ZG - Gas Special Projects | 17,171 | 5,720 | 3,048 | 3,106 | 2,051 | 31,096 |
| ZH - Gas Distribution | 30,158 | 47,575 | 12,616 | 12,188 | 12,257 | 114,795 |
| | 49,310 | 59,119 | 28,018 | 39,796 | 26,103 | 202,346 |
| Total DE Kentucky | 225,713 | 192,979 | 187,634 | 174,322 | 133,245 | 913,893 |

REQUEST:

Refer to the Morin Testimony, page 62. Dr. Morin states that Duke Kentucky's very small size and asset base relative both in absolute terms and to the other electric utilities in the proxy group increases its investment risk.

- a. Provide an explanation of whether each of the companies listed in the proxy group are holding companies operating in one or more states and which states each affiliate operates, the percentage of regulated (both electric and gas) and unregulated revenues, and how the holding company state affiliates obtain the financing necessary to carry on operations and fund capital projects.
- b. Explain if Dr. Morin or Duke Kentucky aware of whether or not Duke Kentucky's parent, Duke Energy, or the markets, in any way restricts Duke Kentucky's access to capital because of its size relative to its other state affiliate companies. If so, describe the nature of the restrictions and a specific instance when this has occurred.

RESPONSE:

- a. Dr. Morin does not possess such information and nor did he rely on this information in developing his recommendation other than the percentage of regulated revenues for the companies in the peer group as shown on Attachment STAFF-DR-02-101.
- b. A company's cost of capital has nothing to do with the source of that capital nor with the specifics sources of that capital. Cost of capital has to do with the use of

funds and not with the source of funds. The appropriate return on any investment is dictated by the risk of that investment and not by the manner in which that investment is financed. Regardless of the identity of the investor, the proper return for that investment must be reflective of that investment's risk, regardless of the source of funding.

PERSON RESPONSIBLE: Roger A. Morin Ph.D.

ELECTRIC COMPANIES

| COMPANY | % REG |
|---|-------|
| 1 ALLETE, Inc. (NYSE-ALE) | 65 |
| 2 American Electric Power Co. (NYSE-AEP) | 81 |
| 3 Edison International (NYSE-EIX) | 100 |
| 4 El Paso Electric Company (NYSE-EE) | 100 |
| 5 FirstEnergy Corporation (ASE-FE) | 71 |
| 6 Great Plains Energy Incorporated (NYSE-GXP) | 100 |
| 7 Hawaiian Electric Industries, Inc. (NYSE-HE) | 89 |
| 8 IDACORP, Inc. (NYSE-IDA) | 100 |
| 9 Nextera Energy (NYSE-NEE) | 66 |
| 10 OGE Energy Corp. (NYSE-OGE) | 100 |
| 11 Otter Tail Corporation (NDQ-OTTR) | 52 |
| 12 Pinnacle West Capital Corp. (NYSE-PNW) | 100 |
| 13 PNM Resources, Inc. (NYSE-PNM) | 100 |
| 14 Portland General Electric Company (NYSE-POR) | 100 |
| 15 PPL Corporation (NYSE-PPL) | 60 |
| 16 Southern Company (NYSE-SO) | 94 |
| 17 Westar Energy, Inc. (NYSE-WR) | 100 |
| AVERAGE | 87 |

COMBINATION ELECTRIC & GAS COMPANIES

| COMPANY | % Elec | % Gas | % Total Reg |
|---|-----------|-----------|----------------|
| 1 Alliant Energy Corporation (NYSE-LNT) | 87 | 10 | 97 |
| 2 Ameren Corporation (NYSE-AEE) | 86 | 19 | 105 |
| 3 Black Hills Corporation (NYSE-BKH) | 53 | 41 | 94 |
| 4 CMS Energy Corporation (NYSE-CMS) | 69 | 27 | 96 |
| 5 Consolidated Edison, Inc. (NYSE-ED) | 71 | 14 | 85 |
| 6 Dominion Resources, Inc. (NYSE-D) | 64 | 1 | 65 |
| 7 DTE Energy Company (NYSE-DTE) | 49 | 13 | 62 |
| 8 Duke Energy Corporation (NYSE-DUK) | 91 | 2 | 93 |
| 9 Eversource Energy (NYSE-ES) | 89 | 11 | 100 |
| 10 Exelon Corporation (NYSE-EXC) | 40 | 10 | 50 |
| 11 Fortis (FTS) | 81 | 16 | 97 |
| 12 MGE Energy, Inc. (NYSE-MGEE) | 75 | 24 | 99 |
| 13 NorthWestern Corporation (NYSE-NWE) | 79 | 21 | 100 |
| 14 Public Service Enterprise Group (NYSE-PEG) | 44 | 20 | 64 |
| 15 Sempra (SRA) | 55 | 45 | 86 |
| 16 Wisconsin Energy Corporation (NYSE-WEC) | 64 | 25 | 89 |
| 17 Xcel Energy Inc. (NYSE-XEL) | 85 | 14 | 99 |
| AVERAGE | 70 | 18 | 87 |

Source: AUS Reports

Note: Sempra & Fortis estimates from 10K

Exelon estimate from Value Line, Fortis estimate from annual report

Source: AUS Utility Reports

Note: NJR, UGI, and ONE Gas estimates from 10K

AUS MONTHLY REPORT

| COMPOSITE INDEX | | | | | | | |
|--------------------|------|-----------------------|--------------------------------|---|------|-----------------------|--------------------------------|
| ELECTRIC COMPANIES | | | | NATURAL GAS DISTRIBUTION TRANSM. & INTEGRATED COMPANIES | | | |
| | | <u>DIVIDEND YIELD</u> | <u>PRICE EARNINGS MULTIPLE</u> | | | <u>DIVIDEND YIELD</u> | <u>PRICE EARNINGS MULTIPLE</u> |
| YEAR | 2006 | 3.8 | 20.8 | YEAR | 2006 | 3.1 | 17.2 |
| YEAR | 2007 | 3.4 | 18.5 | YEAR | 2007 | 2.9 | 19.5 |
| YEAR | 2008 | 3.9 | 16.1 | YEAR | 2008 | 13.1 | 17.4 |
| YEAR | 2009 | 4.8 | 14.1 | YEAR | 2009 | 3.8 | 14.4 |
| YEAR | 2010 | 4.3 | 18.1 | YEAR | 2010 | 3.2 | 18.6 |
| YEAR | 2011 | 4.2 | 18.1 | YEAR | 2011 | 3.0 | 20.2 |
| YEAR | 2012 | 4.0 | 17.8 | YEAR | 2012 | 3.3 | 28.8 |
| YEAR | 2013 | 3.8 | 17.5 | YEAR | 2013 | 3.3 | 20.5 |
| YEAR | 2014 | 3.7 | 18.9 | YEAR | 2014 | 3.2 | 21.1 |
| YEAR | 2015 | 3.7 | 18.6 | YEAR | 2015 | 3.4 | 20.2 |
| YEAR TO DATE | 2016 | 3.7 | 19.6 | YEAR TO DATE | 2016 | 3.2 | 23.3 |
| SEPTEMBER | 2015 | 3.6 | 19.0 | SEPTEMBER | 2015 | 3.6 | 20.1 |
| OCTOBER | 2015 | 3.8 | 17.7 | OCTOBER | 2015 | 3.7 | 19.5 |
| NOVEMBER | 2015 | 3.6 | 18.3 | NOVEMBER | 2015 | 3.4 | 21.0 |
| DECEMBER | 2015 | 3.8 | 17.9 | DECEMBER | 2015 | 3.6 | 21.0 |
| JANUARY | 2016 | 3.8 | 18.1 | JANUARY | 2016 | 3.7 | 20.1 |
| FEBRUARY | 2016 | 3.8 | 18.0 | FEBRUARY | 2016 | 3.6 | 20.5 |
| MARCH | 2016 | 3.6 | 18.8 | MARCH | 2016 | 3.4 | 23.0 |
| APRIL | 2016 | 3.4 | 20.2 | APRIL | 2016 | 3.3 | 23.1 |
| MAY | 2016 | 3.5 | 20.1 | MAY | 2016 | 2.9 | 23.7 |
| JUNE | 2016 | 3.5 | 20.3 | JUNE | 2016 | 3.1 | 24.4 |
| JULY | 2016 | 4.0 | 20.2 | JULY | 2016 | 3.0 | 25.0 |
| AUGUST | 2016 | 3.9 | 20.9 | AUGUST | 2016 | 2.9 | 26.6 |

COMBINED ELECTRIC & GAS
 DISTRIBUTION COMPANIES

| | | <u>DIVIDEND YIELD</u> | <u>PRICE EARNINGS MULTIPLE</u> |
|--------------|------|---------------------------|--|
| YEAR | 2006 | 3.2 | 18.7 |
| YEAR | 2007 | 3.3 | 18.3 |
| YEAR | 2008 | 4.0 | 15.7 |
| YEAR | 2009 | 5.2 | 12.8 |
| YEAR | 2010 | 4.5 | 16.2 |
| YEAR | 2011 | 4.4 | 17.9 |
| YEAR | 2012 | 4.2 | 18.2 |
| YEAR | 2013 | 4.0 | 19.1 |
| YEAR | 2014 | 3.7 | 19.3 |
| YEAR | 2015 | 3.6 | 19.1 |
| YEAR TO DATE | 2016 | 3.5 | 21.6 |
| SEPTEMBER | 2015 | 3.6 | 18.2 |
| OCTOBER | 2015 | 3.9 | 17.0 |
| NOVEMBER | 2015 | 3.6 | 19.1 |
| DECEMBER | 2015 | 3.8 | 19.7 |
| JANUARY | 2016 | 3.7 | 19.9 |
| FEBRUARY | 2016 | 3.8 | 19.9 |
| MARCH | 2016 | 3.6 | 21.3 |
| APRIL | 2016 | 3.4 | 21.7 |
| MAY | 2016 | 3.4 | 21.4 |
| JUNE | 2016 | 3.4 | 22.2 |
| JULY | 2016 | 3.3 | 23.2 |
| AUGUST | 2016 | 3.2 | 23.6 |

WATER COMPANIES

| | | <u>DIVIDEND YIELD</u> | <u>PRICE EARNINGS MULTIPLE</u> |
|--------------|------|---------------------------|--|
| YEAR | 2006 | 2.8 | 30.9 |
| YEAR | 2007 | 2.8 | 28.1 |
| YEAR | 2008 | 3.1 | 23.1 |
| YEAR | 2009 | 3.5 | 21.3 |
| YEAR | 2010 | 3.4 | 23.7 |
| YEAR | 2011 | 3.3 | 21.7 |
| YEAR | 2012 | 3.3 | 21.2 |
| YEAR | 2013 | 3.0 | 21.0 |
| YEAR | 2014 | 3.0 | 22.2 |
| YEAR | 2015 | 2.8 | 20.7 |
| YEAR TO DATE | 2016 | 2.4 | 25.4 |
| SEPTEMBER | 2015 | 2.9 | 19.6 |
| OCTOBER | 2015 | 2.9 | 20.0 |
| NOVEMBER | 2015 | 2.6 | 21.2 |
| DECEMBER | 2015 | 2.8 | 21.6 |
| JANUARY | 2016 | 2.7 | 22.3 |
| FEBRUARY | 2016 | 2.7 | 22.4 |
| MARCH | 2016 | 2.5 | 24.7 |
| APRIL | 2016 | 2.5 | 24.8 |
| MAY | 2016 | 2.4 | 26.0 |
| JUNE | 2016 | 2.4 | 25.6 |
| JULY | 2016 | 2.2 | 28.2 |
| AUGUST | 2016 | 2.1 | 29.3 |

AUS MONTHLY REPORT

AUGUST 2016

AUS INDUSTRY RANKINGS

ELECTRIC COMPANIES

DIVIDEND YIELD

| HIGH | | LOW | |
|--|------|--|-----|
| Nextera Energy (NYSE-NEE) | 14.0 | Edison International (NYSE-EIX) | 2.5 |
| Southern Company (NYSE-SO) | 4.2 | IDACORP, Inc. (NYSE-IDA) | 2.5 |
| PPL Corporation (NYSE-PPL) | 4.1 | PNM Resources, Inc. (NYSE-PNM) | 2.6 |
| FirstEnergy Corporation (ASE-FE) | 4.0 | El Paso Electric Company (NYSE-EE) | 2.6 |
| Hawaiian Electric Industries, Inc. (NYSE-HE) | 3.8 | Westar Energy, Inc. (NYSE-WR) | 2.7 |
| Otter Tail Corporation (NDQ-OTTR) | 3.7 | Portland General Electric Company (NYSE-POR) | 2.9 |
| OGE Energy Corp. (NYSE-OGE) | 3.5 | Pinnacle West Capital Corp. (NYSE-PNW) | 3.1 |
| Great Plains Energy Incorporated (NYSE-GXP) | 3.4 | American Electric Power Co. (NYSE-AEP) | 3.2 |
| ALLETE, Inc. (NYSE-ALE) | 3.3 | ALLETE, Inc. (NYSE-ALE) | 3.3 |
| American Electric Power Co. (NYSE-AEP) | 3.2 | Great Plains Energy Incorporated (NYSE-GXP) | 3.4 |

MARKET/BOOK RATIO

| HIGH | | LOW | |
|--|-----|--|-----|
| PPL Corporation (NYSE-PPL) | 257 | Nextera Energy (NYSE-NEE) | 50 |
| Southern Company (NYSE-SO) | 230 | FirstEnergy Corporation (ASE-FE) | 123 |
| Edison International (NYSE-EIX) | 220 | Great Plains Energy Incorporated (NYSE-GXP) | 128 |
| Westar Energy, Inc. (NYSE-WR) | 217 | PNM Resources, Inc. (NYSE-PNM) | 166 |
| Otter Tail Corporation (NDQ-OTTR) | 210 | ALLETE, Inc. (NYSE-ALE) | 170 |
| IDACORP, Inc. (NYSE-IDA) | 197 | Portland General Electric Company (NYSE-POR) | 170 |
| OGE Energy Corp. (NYSE-OGE) | 194 | Hawaiian Electric Industries, Inc. (NYSE-HE) | 180 |
| Pinnacle West Capital Corp. (NYSE-PNW) | 192 | American Electric Power Co. (NYSE-AEP) | 189 |
| El Paso Electric Company (NYSE-EE) | 192 | El Paso Electric Company (NYSE-EE) | 192 |
| American Electric Power Co. (NYSE-AEP) | 189 | Pinnacle West Capital Corp. (NYSE-PNW) | 192 |

PRICE/EARNINGS MULTIPLE

| HIGH | | LOW | |
|--|------|--|------|
| El Paso Electric Company (NYSE-EE) | 26.4 | Nextera Energy (NYSE-NEE) | 4.2 |
| Westar Energy, Inc. (NYSE-WR) | 26.0 | PPL Corporation (NYSE-PPL) | 16.4 |
| Edison International (NYSE-EIX) | 25.6 | American Electric Power Co. (NYSE-AEP) | 17.8 |
| OGE Energy Corp. (NYSE-OGE) | 25.2 | IDACORP, Inc. (NYSE-IDA) | 20.6 |
| Otter Tail Corporation (NDQ-OTTR) | 22.9 | Pinnacle West Capital Corp. (NYSE-PNW) | 20.9 |
| FirstEnergy Corporation (ASE-FE) | 22.5 | Southern Company (NYSE-SO) | 20.9 |
| Hawaiian Electric Industries, Inc. (NYSE-HE) | 21.8 | Portland General Electric Company (NYSE-POR) | 21.0 |
| ALLETE, Inc. (NYSE-ALE) | 21.3 | Great Plains Energy Incorporated (NYSE-GXP) | 21.3 |
| Great Plains Energy Incorporated (NYSE-GXP) | 21.3 | ALLETE, Inc. (NYSE-ALE) | 21.3 |
| Portland General Electric Company (NYSE-POR) | 21.0 | Hawaiian Electric Industries, Inc. (NYSE-HE) | 21.8 |

RETURN ON BOOK VALUE OF COMMON EQUITY

| HIGH | | LOW | |
|--|------|--|-----|
| Nextera Energy (NYSE-NEE) | 12.7 | PNM Resources, Inc. (NYSE-PNM) | 0.7 |
| Southern Company (NYSE-SO) | 11.1 | PPL Corporation (NYSE-PPL) | 4.3 |
| American Electric Power Co. (NYSE-AEP) | 10.9 | FirstEnergy Corporation (ASE-FE) | 5.5 |
| IDACORP, Inc. (NYSE-IDA) | 9.8 | Great Plains Energy Incorporated (NYSE-GXP) | 6.1 |
| Pinnacle West Capital Corp. (NYSE-PNW) | 9.5 | El Paso Electric Company (NYSE-EE) | 7.4 |
| Otter Tail Corporation (NDQ-OTTR) | 9.3 | OGE Energy Corp. (NYSE-OGE) | 7.7 |
| Edison International (NYSE-EIX) | 8.8 | ALLETE, Inc. (NYSE-ALE) | 8.1 |
| Westar Energy, Inc. (NYSE-WR) | 8.8 | Hawaiian Electric Industries, Inc. (NYSE-HE) | 8.4 |
| Portland General Electric Company (NYSE-POR) | 8.7 | Portland General Electric Company (NYSE-POR) | 8.7 |
| Hawaiian Electric Industries, Inc. (NYSE-HE) | 8.4 | Westar Energy, Inc. (NYSE-WR) | 8.8 |

COMBINATION ELECTRIC & GAS COMPANIES

| DIVIDEND YIELD | | | |
|--|-----|---|-----|
| HIGH | | LOW | |
| CenterPoint Energy (NYSE-CNP) | 4.3 | Chesapeake Utilities Corporation (NYSE-CPK) | 1.9 |
| Entergy Corporation (NYSE-ETR) | 4.2 | MGE Energy, Inc. (NYSE-MGEE) | 2.1 |
| Duke Energy Corporation (NYSE-DUK) | 4.1 | NiSource Inc. (NYSE-NI) | 2.6 |
| Dominion Resources, Inc. (NYSE-D) | 3.6 | Black Hills Corporation (NYSE-BKH) | 2.7 |
| Public Service Enterprise Group (NYSE-PEG) | 3.6 | CMS Energy Corporation (NYSE-CMS) | 2.8 |
| Exelon Corporation (NYSE-EXC) | 3.5 | Alliant Energy Corporation (NYSE-LNT) | 2.9 |
| Consolidated Edison, Inc. (NYSE-ED) | 3.4 | PG&E Corporation (NYSE-PCG) | 3.0 |
| Ameren Corporation (NYSE-AEE) | 3.3 | Eversource Energy (NYSE-ES) | 3.0 |
| NorthWestern Corporation (NYSE-NWE) | 3.3 | Empire District Electric Co. (NYSE-EDE) | 3.1 |
| Unitil Corporation (ASE-UTL) | 3.2 | Vectren Corporation (NYSE-VVC) | 3.1 |

| MARKET/BOOK RATIO | | | |
|---|-----|--|-----|
| HIGH | | LOW | |
| Dominion Resources, Inc. (NYSE-D) | 359 | Alliant Energy Corporation (NYSE-LNT) | 113 |
| CMS Energy Corporation (NYSE-CMS) | 305 | Exelon Corporation (NYSE-EXC) | 125 |
| CenterPoint Energy (NYSE-CNP) | 296 | Duke Energy Corporation (NYSE-DUK) | 147 |
| MGE Energy, Inc. (NYSE-MGEE) | 280 | Entergy Corporation (NYSE-ETR) | 153 |
| Chesapeake Utilities Corporation (NYSE-CPK) | 273 | Avista Corporation (NYSE-AVA) | 173 |
| Vectren Corporation (NYSE-VVC) | 252 | Public Service Enterprise Group (NYSE-PEG) | 174 |
| Wisconsin Energy Corporation (NYSE-WEC) | 228 | Eversource Energy (NYSE-ES) | 176 |
| Black Hills Corporation (NYSE-BKH) | 218 | Consolidated Edison, Inc. (NYSE-ED) | 176 |
| NiSource Inc. (NYSE-NI) | 217 | Empire District Electric Co. (NYSE-EDE) | 185 |
| Unitil Corporation (ASE-UTL) | 212 | Ameren Corporation (NYSE-AEE) | 186 |

| PRICE/EARNINGS MULTIPLE | | | |
|---|------|--|------|
| HIGH | | LOW | |
| NiSource Inc. (NYSE-NI) | 41.4 | Alliant Energy Corporation (NYSE-LNT) | 11.8 |
| PG&E Corporation (NYSE-PCG) | 33.3 | Public Service Enterprise Group (NYSE-PEG) | 14.9 |
| MGE Energy, Inc. (NYSE-MGEE) | 27.7 | SCANA Corporation (NYSE-SCG) | 20.1 |
| Empire District Electric Co. (NYSE-EDE) | 26.8 | Avista Corporation (NYSE-AVA) | 20.6 |
| Unitil Corporation (ASE-UTL) | 25.9 | Consolidated Edison, Inc. (NYSE-ED) | 20.7 |
| CMS Energy Corporation (NYSE-CMS) | 25.6 | Xcel Energy Inc. (NYSE-XEL) | 20.7 |
| Chesapeake Utilities Corporation (NYSE-CPK) | 25.3 | Ameren Corporation (NYSE-AEE) | 20.8 |
| DTE Energy Company (NYSE-DTE) | 25.1 | Exelon Corporation (NYSE-EXC) | 20.9 |
| Wisconsin Energy Corporation (NYSE-WEC) | 24.8 | Eversource Energy (NYSE-ES) | 21.2 |
| Dominion Resources, Inc. (NYSE-D) | 24.4 | NorthWestern Corporation (NYSE-NWE) | 21.3 |

| RETURN ON BOOK VALUE OF COMMON EQUITY | | | |
|---|------|---|-----|
| HIGH | | LOW | |
| Dominion Resources, Inc. (NYSE-D) | 15.2 | NiSource Inc. (NYSE-NI) | 3.8 |
| CMS Energy Corporation (NYSE-CMS) | 12.3 | PG&E Corporation (NYSE-PCG) | 5.9 |
| Public Service Enterprise Group (NYSE-PEG) | 12.1 | Duke Energy Corporation (NYSE-DUK) | 6.5 |
| Wisconsin Energy Corporation (NYSE-WEC) | 11.8 | Empire District Electric Co. (NYSE-EDE) | 7.0 |
| Chesapeake Utilities Corporation (NYSE-CPK) | 11.7 | Exelon Corporation (NYSE-EXC) | 7.1 |
| Vectren Corporation (NYSE-VVC) | 11.3 | DTE Energy Company (NYSE-DTE) | 8.0 |
| Xcel Energy Inc. (NYSE-XEL) | 10.3 | Unitil Corporation (ASE-UTL) | 8.2 |
| MGE Energy, Inc. (NYSE-MGEE) | 10.3 | Eversource Energy (NYSE-ES) | 8.5 |
| Alliant Energy Corporation (NYSE-LNT) | 9.7 | Avista Corporation (NYSE-AVA) | 8.6 |
| SCANA Corporation (NYSE-SCG) | 9.6 | Consolidated Edison, Inc. (NYSE-ED) | 8.7 |

NATURAL GAS DISTRIBUTION, TRANSMISSION AND INTEGRATED NATURAL GAS COMPANIES

DIVIDEND YIELD

| HIGH | | LOW | |
|--|-----|---|-----|
| Gas Natural, Inc. (NDQ-EGAS) | 4.5 | Atmos Energy Corporation (NYSE-ATO) | 2.1 |
| Questar Corporation (NYSE-STR) | 3.5 | UGI Corporation (NYSE-UGI) | 2.1 |
| South Jersey Industries, Inc. (NYSE-SJI) | 3.3 | Piedmont Natural Gas Co., Inc. (NYSE-PNY) | 2.3 |
| RGC Resources, Inc. (NDQ-RGCO) | 3.2 | Southwest Gas Corporation (NYSE-SWX) | 2.3 |
| Delta Natural Gas Company (NDQ-DGAS) | 3.0 | New Jersey Resources Corp. (NYSE-NJR) | 2.5 |
| National Fuel Gas Company (NYSE-NFG) | 2.9 | WGL Holdings, Inc. (NYSE-WGL) | 2.8 |
| Northwest Natural Gas Co. (NYSE-NWN) | 2.9 | Spire, Inc. (NYSE-SR) | 2.9 |
| Spire, Inc. (NYSE-SR) | 2.9 | Northwest Natural Gas Co. (NYSE-NWN) | 2.9 |
| WGL Holdings, Inc. (NYSE-WGL) | 2.8 | National Fuel Gas Company (NYSE-NFG) | 2.9 |
| New Jersey Resources Corp. (NYSE-NJR) | 2.5 | Delta Natural Gas Company (NDQ-DGAS) | 3.0 |

MARKET/BOOK RATIO

| HIGH | | LOW | |
|---|-------|--|-----|
| WGL Holdings, Inc. (NYSE-WGL) | 2,383 | Gas Natural, Inc. (NDQ-EGAS) | 77 |
| Questar Corporation (NYSE-STR) | 325 | Spire, Inc. (NYSE-SR) | 174 |
| Piedmont Natural Gas Co., Inc. (NYSE-PNY) | 313 | South Jersey Industries, Inc. (NYSE-SJI) | 204 |
| National Fuel Gas Company (NYSE-NFG) | 295 | RGC Resources, Inc. (NDQ-RGCO) | 209 |
| New Jersey Resources Corp. (NYSE-NJR) | 268 | Northwest Natural Gas Co. (NYSE-NWN) | 221 |
| UGI Corporation (NYSE-UGI) | 266 | Southwest Gas Corporation (NYSE-SWX) | 224 |
| Atmos Energy Corporation (NYSE-ATO) | 245 | Delta Natural Gas Company (NDQ-DGAS) | 238 |
| Delta Natural Gas Company (NDQ-DGAS) | 238 | Atmos Energy Corporation (NYSE-ATO) | 245 |
| Southwest Gas Corporation (NYSE-SWX) | 224 | UGI Corporation (NYSE-UGI) | 266 |
| Northwest Natural Gas Co. (NYSE-NWN) | 221 | New Jersey Resources Corp. (NYSE-NJR) | 268 |

PRICE/EARNINGS MULTIPLE

| HIGH | | LOW | |
|---|------|--|------|
| Delta Natural Gas Company (NDQ-DGAS) | 36.2 | South Jersey Industries, Inc. (NYSE-SJI) | 18.1 |
| Piedmont Natural Gas Co., Inc. (NYSE-PNY) | 35.2 | Questar Corporation (NYSE-STR) | 21.9 |
| Gas Natural, Inc. (NDQ-EGAS) | 29.9 | RGC Resources, Inc. (NDQ-RGCO) | 22.0 |
| Spire, Inc. (NYSE-SR) | 29.4 | WGL Holdings, Inc. (NYSE-WGL) | 22.4 |
| Northwest Natural Gas Co. (NYSE-NWN) | 28.9 | UGI Corporation (NYSE-UGI) | 22.7 |
| New Jersey Resources Corp. (NYSE-NJR) | 27.7 | Atmos Energy Corporation (NYSE-ATO) | 25.3 |
| Southwest Gas Corporation (NYSE-SWX) | 26.3 | Southwest Gas Corporation (NYSE-SWX) | 26.3 |
| Atmos Energy Corporation (NYSE-ATO) | 25.3 | New Jersey Resources Corp. (NYSE-NJR) | 27.7 |
| UGI Corporation (NYSE-UGI) | 22.7 | Northwest Natural Gas Co. (NYSE-NWN) | 28.9 |
| WGL Holdings, Inc. (NYSE-WGL) | 22.4 | Spire, Inc. (NYSE-SR) | 29.4 |

RETURN ON BOOK VALUE OF COMMON EQUITY

| HIGH | | LOW | |
|---|------|---|------|
| Questar Corporation (NYSE-STR) | 15.2 | Gas Natural, Inc. (NDQ-EGAS) | 2.5 |
| UGI Corporation (NYSE-UGI) | 12.1 | Delta Natural Gas Company (NDQ-DGAS) | 6.7 |
| Spire, Inc. (NYSE-SR) | 12.0 | Northwest Natural Gas Co. (NYSE-NWN) | 7.8 |
| WGL Holdings, Inc. (NYSE-WGL) | 11.9 | Southwest Gas Corporation (NYSE-SWX) | 8.8 |
| South Jersey Industries, Inc. (NYSE-SJI) | 11.6 | Piedmont Natural Gas Co., Inc. (NYSE-PNY) | 9.3 |
| New Jersey Resources Corp. (NYSE-NJR) | 10.1 | RGC Resources, Inc. (NDQ-RGCO) | 9.7 |
| Atmos Energy Corporation (NYSE-ATO) | 10.0 | Atmos Energy Corporation (NYSE-ATO) | 10.0 |
| RGC Resources, Inc. (NDQ-RGCO) | 9.7 | New Jersey Resources Corp. (NYSE-NJR) | 10.1 |
| Piedmont Natural Gas Co., Inc. (NYSE-PNY) | 9.3 | South Jersey Industries, Inc. (NYSE-SJI) | 11.6 |
| Southwest Gas Corporation (NYSE-SWX) | 8.8 | WGL Holdings, Inc. (NYSE-WGL) | 11.9 |

WATER COMPANIES

DIVIDEND YIELD

| HIGH | | LOW | |
|--|-----|---|-----|
| Artesian Resources Corp. (NDQ-ARTNA) | 2.7 | American Water Works Co., Inc. (NYSE-AWK) | 1.9 |
| Connecticut Water Service, Inc. (NDQ-CTWS) | 2.2 | Middlesex Water Company (NDQ-MSEX) | 1.9 |
| Aqua America, Inc. (NYSE-WTR) | 2.1 | American States Water Co. (NYSE-AWR) | 2.0 |
| California Water Service Group (NYSE-CWT) | 2.1 | SJW Corporation (NYSE-SJW) | 2.0 |

MARKET/BOOK RATIO

| HIGH | | LOW | |
|--------------------------------------|-----|--|-----|
| York Water Company (NDQ-YORW) | 364 | Artesian Resources Corp. (NDQ-ARTNA) | 200 |
| Aqua America, Inc. (NYSE-WTR) | 343 | SJW Corporation (NYSE-SJW) | 209 |
| American States Water Co. (NYSE-AWR) | 340 | California Water Service Group (NYSE-CWT) | 250 |
| Middlesex Water Company (NDQ-MSEX) | 323 | Connecticut Water Service, Inc. (NDQ-CTWS) | 257 |

PRICE/EARNINGS MULTIPLE

| HIGH | | LOW | |
|---|------|--|------|
| California Water Service Group (NYSE-CWT) | 37.1 | SJW Corporation (NYSE-SJW) | 22.2 |
| York Water Company (NDQ-YORW) | 32.6 | Connecticut Water Service, Inc. (NDQ-CTWS) | 25.5 |
| Middlesex Water Company (NDQ-MSEX) | 32.5 | Artesian Resources Corp. (NDQ-ARTNA) | 25.5 |
| American Water Works Co., Inc. (NYSE-AWK) | 30.8 | American States Water Co. (NYSE-AWR) | 27.8 |

RETURN ON BOOK VALUE OF COMMON EQUITY

| HIGH | | LOW | |
|--|------|---|-----|
| American States Water Co. (NYSE-AWR) | 12.1 | California Water Service Group (NYSE-CWT) | 6.8 |
| Aqua America, Inc. (NYSE-WTR) | 11.9 | Artesian Resources Corp. (NDQ-ARTNA) | 9.0 |
| York Water Company (NDQ-YORW) | 11.5 | American Water Works Co., Inc. (NYSE-AWK) | 9.5 |
| Connecticut Water Service, Inc. (NDQ-CTWS) | 10.4 | SJW Corporation (NYSE-SJW) | 9.8 |

REQUEST:

Refer to the Morin Testimony, page 63. Duke Kentucky is a Fixed Resource Requirement designated member of PJM. Even though its generation needs are met with its own generation, there is ample excess capacity available should Duke be unable to meet its needs as required by PJM. Provide further explanation as to how Duke Kentucky's generation mix affects its required ROE.

RESPONSE:

The question does not accurately reflect the Company's status in PJM. Duke Energy Kentucky is an FRR entity and does not procure capacity in the PJM base residual auction. The Company must have unit specific capacity to meet its FRR compliance plan and must submit its capacity plan to PJM in advance of the relevant delivery year. Unit-specific capacity is not a product that is procurable in the BRA. Therefore, to acquire unit specific capacity, the Company is limited to bilaterally contracting for capacity that has not otherwise cleared the BRA, engaging in multiple transactions swapping capacity that has cleared the BRA with other capacity so that it can become unit-specific capacity, or building additional capacity. To the extent the Company must procure additional capacity in PJM to satisfy its FRR obligation, it must both, comply with PJM's capacity performance, and be available unit-specific capacity (not be committed in the BRA). Additionally, to the extent the Duke Energy Kentucky delivery zone separates from the

rest of the RTO, as occurred for the 2020/2021 delivery year, the Company's ability to procure capacity is further limited to resources that meet the requirements of a constrained Local Balancing Authority (LBA). All of these present limitations to the Company's ability to procure capacity in the wholesale market and thus present risk.

A diversified generation mix (coal, oil, gas, purchased power, hydro, etc.) as opposed to reliance on one potentially volatile resource mix reduces business risk and therefore ROE.

PERSON RESPONSIBLE: John Verderame
Roger A. Morin Ph.D.

REQUEST:

Refer to the Direct Testimony of James Michael Mosley (Mosley Testimony), page 7, regarding planned outages.

- a. Provide the amount of the planned outage expense for East Bend and Woodsdale for the base period and forecasted test year and how was it determined.
- b. Provide the amount of planned outage expenses for East Bend and Woodsdale for the four years ending December 31, 2018, and the projected planned outage expense for the four years ending December 31, 2022.
- c. Provide a history of the date and cost of generator overhauls by account number for each unit by year since 2008. Provide a schedule of future generator overhauls by account number through 2027.
- d. Provide a history of the date and cost of turbine overhauls by account number since 2008.
- e. Provide a schedule showing the date and cost of future turbine overhauls by account number through 2027.

RESPONSE:

- a. See STAFF-DR-02-103 Attachment.
- b. See STAFF-DR-02-103 Attachment.

- c. There have been no generator overhauls since 2008. Through 2023, there is one generator overhaul planned at East Bend for the spring of 2021. Forecasting is completed for a five-year period, and as such, forecasted data is not available beyond 2023. Projected O&M for the 2021 generator overhaul is \$323,067 (Account 513).
- d. There were turbine overhauls in both Spring 2008 and Spring 2018 at East Bend Unit 2, and the O&M costs were as follows:

| | Acct 512 | Acct 513 | Acct 514 |
|------|-----------------|-----------------|-----------------|
| 2007 | | \$653,175 | |
| 2008 | | \$883,224 | |
| 2017 | | \$2,360 | \$173,103 |
| 2018 | \$580,345 | \$2,177,684 | \$1,417,198 |

- e. Through 2023, there are no turbine overhauls planned for East Bend. Forecasting is completed for a five-year period, and as such, forecasted data is not available beyond 2023.

PERSON RESPONSIBLE:

Christopher M. Jacobi – a., b., c., e.
 Danielle Weatherston – b., c., d.

DUKE ENERGY KENTUCKY
 ELECTRIC DEPARTMENT
 NORMALIZATION OF PLANNED OUTAGE O&M

| Year | Description | East Bend | Woodsdale | Total | CPI 2017= 100 (A) | Total |
|---|--------------------|------------|-----------|---------------------|-------------------------|---------------------|
| 2015 | Planned Outage O&M | 2,868,053 | 0 | 2,868,053 | 92.0% | 3,117,449 |
| 2016 | Planned Outage O&M | 8,897,520 | 2,271,112 | 11,168,632 | 94.0% | 11,881,523 |
| 2017 | Planned Outage O&M | 1,311,909 | 1,925,645 | 3,237,554 | 96.0% | 3,372,452 |
| 2018 | Planned Outage O&M | 15,414,462 | 83,104 | 15,497,567 | 98.0% | 15,813,843 |
| 2019 | Planned Outage O&M | 4,240,600 | 1,801,432 | 6,042,032 | 100.0% | 6,042,032 |
| 2020 | Planned Outage O&M | 9,255,383 | 220,732 | 9,476,115 | 100.0% | 9,476,115 |
| 2021 | Planned Outage O&M | 1,722,913 | 4,650,000 | 6,372,913 | 100.0% | 6,372,913 |
| 2022 | Planned Outage O&M | 7,934,310 | 425,000 | 8,359,310 | 100.0% | 8,359,310 |
| 8 Year Average | | | | <u>\$ 7,877,772</u> | | <u>\$ 8,054,455</u> |
| Total Normalized Planned Outage O&M | | | | | | \$ 8,054,455 |
| Less Test Year Planned Outage O&M | | | | | | <u>7,177,425</u> |
| Difference between Test Year and Normalized Planned Outage O&M | | | | | | <u>\$ 877,030 A</u> |
| A. Propose no change to test period expense in 2019 case. Not materially different. | | | | | | |
| Base Period Planned Outage O&M | | | | | | \$ 6,352,477 |

REQUEST:

Refer to the Mosley Testimony, page 14.

- a. Provide the amount of decommissioning expense and other expenses for Miami Fort Unit 6 for the base period and forecasted test year.
- b. Provide the amount of decommissioning expense and other expenses for the years 2017 through 2018 and the projected expenses through 2022.
- c. Provide when Miami Fort Unit 6 is expected to be fully decommissioned.

RESPONSE:

- a. See STAFF-DR-02-104 Attachment.
- b. See STAFF-DR-02-104 Attachment.
- c. Because of some interconnectivity, there are portions of Miami Fort Unit 6 that can't be safely demolished before the site owner, Dynegy, demolishes its station assets. Therefore, when the unit will be fully decommissioned is unknown at this time.

PERSON RESPONSIBLE:

Danielle Weatherston/Christopher M. Jacobi – a., b.
J. Michael Mosely – c.

DUKE ENERGY KENTUCKY, INC.
CASE NO. 2019-00271
Miami Fort Decommissioning Costs & Forecast
Coal Combustion Products

| | | | Actuals | | Projected Expense | | |
|--------------|-----------------|---------------|---------------|-----------------|-------------------|---------------|---------------|
| | <u>Base</u> | <u>Test</u> | <u>2017</u> | <u>2018</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> |
| Total | \$ 3,718,914.53 | \$ 659,517.60 | \$ 252,790.65 | \$ 3,612,907.19 | \$ 660,194.78 | \$ 200,246.80 | \$ 200,284.73 |

REQUEST:

Refer to the Norton Testimony, page 6, Table 1.

- a. Provide a list of the companies listed in Table 1 currently receiving service and under what tariff they are served.
- b. Provide when each of the companies is expected to take service, and over what time frame they will achieve the projected demand.
- c. Explain how the projected increased demand has been reflected in the base period and the forecasted test period.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET

- a. The following is the companies and tariff information for those referenced in Table 1 that are currently receiving service.
 - Amazon and Marydale Business Park are not yet receiving service
 - Erlanger Commerce Center is mostly constructed and is receiving service. The companies that are receiving service and their associated tariffs are:



- b. The following is when each company is expected to take service, and over what time frame they will achieve the projected demand.
 - **Amazon:**

- Construction Service [REDACTED] in 2019
 - Startup/Testing [REDACTED] in 2020
 - Service [REDACTED] in 2021
 - Expansion: Average [REDACTED]
 - **Marydale Business Park:**
 - Projected 6.0 MVA in 2020
 - Additional projected 6.0 MVA in 2022
 - **Erlanger Commerce Center:**
 - 4.0 MVA in 2019
 - Additional projected 1.4 MVA in 2020
- [REDACTED]

c. The peak forecast is adjusted explicitly only for exceptionally large customers, typically those who represent much more than 2% of demand. In this case, only the Amazon air hub relationship is anticipated to be that large. The majority of the activity ramps up after the base period and test period conclude. See also response to KROGER-DR-01-003e.

PERSON RESPONSIBLE: Ash Norton – a., b.
Benjamin W. Passty – c.

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-106

REQUEST:

Refer to the Norton Testimony, page 16. Explain the large increases in the total capital expenditures from 2017 through 2021.

RESPONSE:

The increase in total capital expenditures from 2017 through 2021 is primarily due to projects to expand the capacity of the grid. There is also an increase in work related to system hardening and resiliency.

PERSON RESPONSIBLE: Ash Norton
Christopher Jacobi

STAFF-DR-02-107

REQUEST:

Refer to the Direct Testimony of John R. Panizza, page 7. Provide the workpapers utilized to calculate the property tax expense for the base period and forecasted test period in Excel format with all formulas intact.

RESPONSE:

See STAFF-DR-02-062 Attachment for calculation of the forecasted period property tax expense. Property tax expense in the base period is calculated similarly to the forecasted period by applying estimated property tax rates to actual plant balances. The base period can include certain one-time adjustments as actual property tax bills are received.

PERSON RESPONSIBLE:

Christopher M. Jacobi
John Panizza

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-108

REQUEST:

Refer to the Direct Testimony of Benjamin Walter Bohdan Passty, Ph.D. (Passty Testimony), page 4. Provide a comparison of the actual number of customers versus the projected number of customers for the base period and forecasted test period in Case No. 2017-00321.

RESPONSE:

| | Projected | Actual |
|-------------------------------|-----------|---------|
| Total, Base Period | 140,997 | 141,164 |
| Total, Forecast Period | 141,912 | 142,586 |
| Residential, Base Period | 125,180 | 125,649 |
| Residential, Forecast Period | 125,993 | 127,177 |
| Commercial, Base Period | 14,032 | 13,747 |
| Commercial, Forecast Period | 14,122 | 13,653 |
| Industrial, Base Period | 368 | 365 |
| Industrial, Forecast Period | 365 | 358 |
| Governmental, Base Period | 969 | 957 |
| Governmental, Forecast Period | 984 | 944 |
| SL, Base Period | 447 | 447 |
| SL, Forecast Period | 448 | 454 |

PERSON RESPONSIBLE: Benjamin W. Passty

Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019

STAFF-DR-02-109

REQUEST:

Refer to the Passty Testimony, page 5, regarding the factors that affect the forecasting of energy usage. Provide a schedule summarizing the data assumed for each of the factors identified as affecting energy usage for the residential, commercial, industrial, governmental, and street lighting classes.

RESPONSE:

| Model | Named Factor | Part of an SAE term | Source |
|--------------------------------|------------------------------------|----------------------------|----------------------------------|
| Residential Usage Per Customer | Weather | Y | NOAA, as recorded at CVG airport |
| Residential Usage Per Customer | Real Median Income (per capital) | Y | Moody's Analytics |
| Residential Usage Per Customer | End-Use Residential Intensity Data | Y | EIA via ITRON |
| Residential Households | Population (in Households) | -- | Moody's |
| Commercial Sales | Weather | Y | NOAA |
| Commercial Sales | Employment (less MFG employment) | Y | Moody's |
| Commercial Sales | Income | Y | Moody's |
| Commercial Sales | End-Use Commercial Intensity Data | Y | EIA via ITRON |
| Governmental Sales | Real GDP Government | -- | Moody's |
| Governmental Sales | Weather (Heating Degree Days) | -- | NOAA |

| | | | |
|------------------|---|--------------------|--|
| Industrial Sales | Manufacturing GDP | -- | Moody's |
| Industrial Sales | Manufacturing Employment | -- | Moody's |
| Industrial Sales | Weather | -- | NOAA |
| Street Lighting | Output of Residential customer modeling | -- | DEK Load Forecasting |
| Street Lighting | Residential Lighting Intensity | -- | EIA/Itron SAE projections |
| All | Real Energy Prices | When part of model | Calculated per unit of energy provided by Financial Forecasting team |

PERSON RESPONSIBLE: Benjamin W. Passty

REQUEST:

Refer to the Passty Testimony, page 6, regarding adjustments made to the load forecast.

- a. Explain how Duke Kentucky projects the growth associated with behind the meter distributed generation and electric vehicle usage. Provide the kWh impact modeled.
- b. Explain why Duke Kentucky did not make any adjustments to the 2019 Load Forecast for new customer loads or expansion of an existing customer's load.
- c. Provide any new energy efficiency programs modeled.

RESPONSE:

- a. Two separate answers are required because these adjustments come from two separate sources:
 - i. Regarding the forecast for electric vehicle usage, which is provided to us from the DET Forecasting team: the EV forecast is primarily built from EPRI's long term EV adoption forecast, and adjusted based on observed registration data (again, provided by EPRI) and EV market conditions (which we discern from conversations with our internal Transportation Electrification group as well as EPRI's subject matter experts). Once we have forecasted the number of electric vehicles in operation, we can

multiply that by hourly per-vehicle charging profiles provided by EPRI or taken from Tesla supercharger stations in our service territories.

- ii. The PV forecast starts by examining the relationship between payback and adoption rates, deriving a regression equation based on historical adoptions and payback. Forward payback curves are developed using projections of solar system costs, system size, retail electric rates, incentives and capacity factors. We estimate a model that predicts monthly adoptions as a function of these payback projections. Based on system size projections and capacity factors, estimates of capacity and energy are then derived from the forecasted adoptions. A chart giving annual impacts for the forecast is printed below
- b. Duke Energy Kentucky typically makes explicit adjustments for customers whose energy requirements exceed a very large threshold, often 10 MW or more. In accounting for the new loads or customers using less than that, experience shows that the economic predictors in our models have ample predictive power; intuitively, the same economic conditions that these measure are known to the individuals who are opening/closing new businesses in the area.
- c. No energy efficiency programs beyond what are already described in Mr. Passty's testimony were modeled.

The annual impacts to forecast mWh are provided in the following table (note that PV constitutes a *reduction* to expected energy):

| Year | EV Impact (MWH) | PV Impact (MWH) to forecast |
|-------------|------------------------|------------------------------------|
| 2019 | 273 | 740 |
| 2020 | 1051 | 2,024 |
| 2021 | 2,236 | 3,298 |
| 2022 | 3,938 | 4,567 |
| 2023 | 6,258 | 5,830 |
| 2024 | 9,263 | 7,102 |
| 2025 | 13,033 | 8,339 |
| 2026 | 17,630 | 9,604 |
| 2027 | 22,881 | 10,927 |
| 2028 | 28,916 | 12,287 |
| 2029 | 35,586 | 13,590 |
| 2030 | 43,219 | 14,912 |

PERSON RESPONSIBLE: Benjamin W. Passty

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-111

REQUEST:

Refer to the Passty Testimony, page 10, lines 20-23, regarding a very large customer committing to do business within Duke Kentucky's service territory. Identify this customer and the projected load.

RESPONSE:

For a table of large customers, please see Ash Norton's testimony page 6, which lists Amazon Air Hub and two others. Of the three projects listed in that table, I was directed only to modify the forecast explicitly for the Amazon Air Hub using the numbers supplied in the Norton testimony.

PERSON RESPONSIBLE: Benjamin W. Passty

REQUEST:

Refer to the Passty Testimony, page 12, lines 15-16.

- a. Explain whether Duke Kentucky analyzed the impact of periods other than 30 years to calculate the Normal Weather in its electric load forecast. If so, provide this impact. If not, explain why no other weather periods were considered.
- b. Explain whether any Duke Kentucky affiliate makes forecasts using a period other than 30 years and using a different normal weather calculation methodology. If so, explain the other Duke Kentucky affiliate normal weather methodologies.
- c. Provide a list and summary of any of Duke Kentucky's affiliates who use periods other than 30 years for weather normalization.

RESPONSE:

- a. Duke Energy Kentucky only prepares a forecast for the 30-year weather normal. While we are aware that some other utilities use shorter normal periods—the ten-year normal is popular—we have concerns about the extent to which normal weather can vary year-by-year as old years are rolled off and replaced by new years. Having a three-times larger sample size means that the standard errors of estimates for weather are reduced by approximately 70%.
- b. No other Duke Energy Kentucky affiliates use a period different than the 30-year period.

c. N/A.

PERSON RESPONSIBLE: Benjamin W. Passty

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-113

REQUEST:

Refer to the Passty Testimony, Attachment BWP-2.

- a. Provide a comparison of Duke Kentucky's service area energy forecast with the service area energy forecast from Duke Kentucky's most recent IRP filing, Case No. 2018-00195.¹
- b. Provide a comparison of Duke Kentucky's service area energy forecast with the service area energy forecast from Duke Kentucky's last base rate case.

RESPONSE:

Please see STAFF-DR-02-113 Attachment that presents tables from these filings and provides a comparison of the twenty-year growth rate from 2017-2037.

PERSON RESPONSIBLE: Benjamin W. Passty

¹ Case No. 2018-00195, *Electronic 2018 Integrated Resource Plan of Duke Energy Kentucky, Inc.* (Application filed June 21, 2018).

Comparison of 20-year growth rate for years 2017-2037 across several annual filings

| | RESIDENTIAL | COMMERCIAL | INDUSTRIA | Streetlighting | OPA | TOTAL CONSUMPTION |
|------------------------|-------------|------------|-----------|----------------|--------|-------------------|
| 2017 Base Rate Case: | 1.04% | 0.27% | 0.08% | 0.09% | -1.13% | 0.44% |
| 2018 IRP Filing: | 1.14% | 0.50% | -0.57% | -0.52% | 0.47% | 0.54% |
| 2019 rate case filing: | 1.07% | 0.43% | 1.85% | -0.47% | 0.37% | 0.97% |

DUKE ENERGY KENTUCKY
 SERVICE AREA ENERGY FORECAST (MEGAWATT HOURS) (a)

| | 20-year GR | 1.07% | 0.43% | 1.85% | -0.47% | 0.37% | | 0.97% |
|------|-------------|------------|------------|---------------|---------|---------|-------------------|---------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (1+2+3+4+5+6) |
| YEAR | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | STREET-LIGHTS | HEATING | OTHER | TOTAL CONSUMPTION | |
| -5 | 2014 | 1,489,005 | 1,469,671 | 828,328 | 16,228 | 291,990 | 804 | 4,096,026 |
| -4 | 2015 | 1,432,815 | 1,477,124 | 812,690 | 15,924 | 291,085 | 757 | 4,030,395 |
| -3 | 2016 | 1,450,727 | 1,483,496 | 807,422 | 16,021 | 292,100 | 716 | 4,050,482 |
| -2 | 2017 | 1,449,551 | 1,462,040 | 803,532 | 16,213 | 279,085 | 1,136 | 4,011,557 |
| -1 | 2018 | 1,451,822 | 1,451,337 | 806,064 | 15,007 | 279,580 | 726 | 4,004,535 |
| 0 | 2019 | 1,457,669 | 1,436,730 | 813,219 | 14,960 | 278,420 | 715 | 4,001,713 |
| 1 | 2020 | 1,465,953 | 1,448,900 | 815,469 | 14,901 | 279,845 | 717 | 4,025,786 |
| 2 | 2021 | 1,466,896 | 1,458,281 | 897,224 | 14,868 | 278,122 | 715 | 4,116,106 |
| 3 | 2022 | 1,473,531 | 1,465,081 | 1,056,481 | 14,871 | 279,172 | 715 | 4,289,852 |
| 4 | 2023 | 1,483,281 | 1,468,640 | 1,075,610 | 14,887 | 280,639 | 715 | 4,323,772 |
| 5 | 2024 | 1,493,303 | 1,474,308 | 1,095,956 | 14,916 | 282,008 | 717 | 4,361,207 |
| 6 | 2025 | 1,508,411 | 1,483,852 | 1,123,130 | 14,949 | 283,572 | 715 | 4,414,629 |
| 7 | 2026 | 1,523,175 | 1,489,073 | 1,149,166 | 14,974 | 285,614 | 715 | 4,462,717 |
| 8 | 2027 | 1,544,607 | 1,503,236 | 1,182,365 | 15,000 | 287,940 | 715 | 4,533,863 |
| 9 | 2028 | 1,564,676 | 1,516,280 | 1,207,871 | 15,019 | 290,187 | 717 | 4,594,750 |
| 10 | 2029 | 1,586,475 | 1,529,727 | 1,204,530 | 15,037 | 292,085 | 715 | 4,628,570 |
| 11 | 2030 | 1,613,124 | 1,537,441 | 1,201,054 | 14,991 | 293,570 | 715 | 4,660,895 |
| 12 | 2031 | 1,634,201 | 1,541,035 | 1,197,236 | 14,948 | 294,723 | 715 | 4,682,859 |
| 13 | 2032 | 1,654,747 | 1,545,544 | 1,192,916 | 14,909 | 295,742 | 717 | 4,704,576 |
| 14 | 2033 | 1,680,916 | 1,554,136 | 1,188,093 | 14,874 | 296,725 | 715 | 4,735,459 |
| 15 | 2034 | 1,707,434 | 1,561,956 | 1,182,629 | 14,847 | 297,728 | 715 | 4,765,310 |
| 16 | 2035 | 1,737,241 | 1,573,264 | 1,176,430 | 14,822 | 298,726 | 715 | 4,801,198 |
| 17 | 2036 | 1,764,395 | 1,583,030 | 1,170,271 | 14,799 | 299,553 | 717 | 4,832,765 |
| 18 | 2037 | 1,794,807 | 1,594,077 | 1,163,996 | 14,773 | 300,384 | 715 | 4,868,753 |
| 19 | 2038 | 1,824,893 | 1,605,668 | 1,157,207 | 14,745 | 301,151 | 715 | 4,904,379 |
| 20 | 2039 | 1,854,155 | 1,616,840 | 1,149,894 | 14,717 | 301,910 | 715 | 4,938,231 |

(a) Figures in years -5 through -1 reflect the impact of historical demand side programs

History is billed; forecast is calendar

20-year GR 1.14% 0.50% -0.57% 0.47% -0.52% 0.54%

****Spring 2018 Forecast, including UEE achievements**

| | Res | Com | Ind | OPA | SL | ID | TOTAL | CU | Total w CU | |
|----|------|-----------|-----------|---------|---------|--------|-------|-----------|------------|-----------|
| -5 | 2013 | 1,465,361 | 1,454,627 | 808,831 | 289,425 | 15,362 | 873 | 4,034,478 | 720 | 4,035,198 |
| -4 | 2014 | 1,479,746 | 1,459,944 | 827,408 | 289,831 | 15,274 | 954 | 4,073,158 | 551 | 4,073,709 |
| -3 | 2015 | 1,445,887 | 1,477,900 | 812,522 | 290,988 | 15,120 | 804 | 4,043,222 | 736 | 4,043,958 |
| -2 | 2016 | 1,451,682 | 1,494,014 | 810,977 | 292,467 | 15,264 | 757 | 4,065,161 | 694 | 4,065,855 |
| -1 | 2017 | 1,395,234 | 1,450,924 | 800,034 | 276,772 | 15,077 | 1,136 | 3,939,177 | 684 | 3,939,861 |
| 0 | 2018 | 1,450,624 | 1,468,653 | 795,884 | 281,035 | 15,212 | 726 | 4,012,134 | 611 | 4,012,745 |
| 1 | 2019 | 1,442,414 | 1,473,227 | 796,034 | 278,254 | 15,115 | 715 | 4,005,760 | 579 | 4,006,339 |
| 2 | 2020 | 1,448,312 | 1,477,896 | 785,650 | 275,803 | 15,051 | 717 | 4,003,429 | 579 | 4,004,008 |
| 3 | 2021 | 1,449,674 | 1,479,157 | 775,681 | 276,811 | 14,991 | 715 | 3,997,030 | 579 | 3,997,609 |
| 4 | 2022 | 1,457,067 | 1,481,959 | 761,314 | 277,625 | 14,936 | 715 | 3,993,615 | 579 | 3,994,195 |
| 5 | 2023 | 1,468,887 | 1,484,980 | 751,420 | 278,380 | 14,866 | 715 | 3,999,248 | 579 | 3,999,827 |
| 6 | 2024 | 1,489,100 | 1,490,496 | 743,120 | 279,238 | 14,784 | 717 | 4,017,456 | 579 | 4,018,035 |
| 7 | 2025 | 1,498,480 | 1,491,517 | 734,746 | 279,761 | 14,725 | 715 | 4,019,943 | 579 | 4,020,522 |
| 8 | 2026 | 1,515,504 | 1,497,187 | 729,007 | 280,705 | 14,659 | 715 | 4,037,776 | 579 | 4,038,355 |
| 9 | 2027 | 1,535,076 | 1,505,335 | 718,363 | 282,060 | 14,583 | 715 | 4,056,132 | 579 | 4,056,712 |
| 10 | 2028 | 1,560,805 | 1,517,769 | 709,877 | 284,012 | 14,499 | 717 | 4,087,679 | 578 | 4,088,257 |
| 11 | 2029 | 1,577,882 | 1,526,710 | 699,954 | 285,698 | 14,406 | 715 | 4,105,366 | 577 | 4,105,943 |
| 12 | 2030 | 1,593,042 | 1,532,672 | 690,874 | 286,999 | 14,332 | 715 | 4,118,634 | 579 | 4,119,213 |
| 13 | 2031 | 1,612,262 | 1,539,462 | 685,438 | 288,523 | 14,247 | 715 | 4,140,648 | 579 | 4,141,228 |
| 14 | 2032 | 1,640,733 | 1,550,588 | 682,372 | 290,634 | 14,153 | 717 | 4,179,198 | 579 | 4,179,776 |
| 15 | 2033 | 1,660,000 | 1,558,338 | 686,701 | 293,186 | 14,051 | 715 | 4,212,993 | 579 | 4,213,572 |
| 16 | 2034 | 1,683,452 | 1,569,094 | 693,274 | 296,115 | 13,945 | 715 | 4,256,595 | 579 | 4,257,175 |
| 17 | 2035 | 1,706,980 | 1,580,529 | 699,370 | 299,002 | 13,836 | 715 | 4,300,433 | 580 | 4,301,013 |
| 18 | 2036 | 1,733,803 | 1,593,629 | 706,050 | 301,557 | 13,722 | 717 | 4,349,478 | 578 | 4,350,056 |
| 19 | 2037 | 1,751,492 | 1,602,520 | 713,980 | 304,003 | 13,600 | 715 | 4,386,310 | 579 | 4,386,890 |
| 20 | 2038 | 1,773,671 | 1,613,601 | 722,201 | 306,385 | 13,472 | 715 | 4,430,045 | 579 | 4,430,625 |

20-year GR 1.04% 0.27% 0.08% 0.09% -1.13% 0.44%

DUKE ENERGY KENTUCKY
 SERVICE AREA ENERGY FORECAST (MEGAWATT HOURS) (a)

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) (1+2+3+4+5 +6) TOTAL CONSUMPTI ON |
|---------|-------------|------------|------------|----------------------------|---------|-------|--|
| YEAR | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | STREET- HWY LIGHTING | OPA | OTHER | |
| -5 2012 | 1,460,789 | 1,444,273 | 779,644 | 15,006 | 297,176 | 855 | 3,997,744 |
| -4 2013 | 1,457,588 | 1,440,598 | 803,623 | 15,362 | 289,351 | 873 | 4,007,395 |
| -3 2014 | 1,480,911 | 1,460,552 | 827,629 | 15,274 | 289,992 | 954 | 4,075,313 |
| -2 2015 | 1,433,316 | 1,478,984 | 813,519 | 15,120 | 291,546 | 804 | 4,033,289 |
| -1 2016 | 1,472,994 | 1,500,730 | 815,042 | 15,264 | 294,412 | 757 | 4,099,199 |
| 0 2017 | 1,452,266 | 1,482,752 | 815,925 | 15,397 | 289,613 | 716 | 4,056,669 |
| 1 2018 | 1,465,693 | 1,489,720 | 820,174 | 15,436 | 286,072 | 716 | 4,077,811 |
| 2 2019 | 1,477,779 | 1,495,511 | 816,918 | 15,458 | 281,099 | 716 | 4,087,481 |
| 3 2020 | 1,477,387 | 1,498,209 | 810,672 | 15,479 | 278,801 | 718 | 4,081,266 |
| 4 2021 | 1,477,125 | 1,486,723 | 807,415 | 15,498 | 276,453 | 716 | 4,063,929 |
| 5 2022 | 1,488,081 | 1,481,930 | 804,130 | 15,516 | 275,121 | 716 | 4,065,494 |
| 6 2023 | 1,505,842 | 1,485,618 | 808,898 | 15,534 | 274,146 | 716 | 4,090,754 |
| 7 2024 | 1,529,949 | 1,497,048 | 811,741 | 15,550 | 273,595 | 718 | 4,128,601 |
| 8 2025 | 1,540,195 | 1,497,126 | 812,221 | 15,565 | 272,031 | 716 | 4,137,855 |
| 9 2026 | 1,555,294 | 1,502,750 | 809,552 | 15,579 | 270,362 | 716 | 4,154,252 |
| 10 2027 | 1,571,565 | 1,510,598 | 810,113 | 15,592 | 268,960 | 716 | 4,177,544 |
| 11 2028 | 1,591,275 | 1,522,858 | 815,925 | 15,604 | 266,083 | 718 | 4,212,463 |
| 12 2029 | 1,601,963 | 1,523,718 | 817,767 | 15,616 | 260,336 | 716 | 4,220,114 |
| 13 2030 | 1,615,451 | 1,519,004 | 814,848 | 15,626 | 253,993 | 716 | 4,219,636 |
| 14 2031 | 1,631,032 | 1,516,254 | 811,633 | 15,635 | 247,105 | 716 | 4,222,374 |
| 15 2032 | 1,657,426 | 1,524,096 | 808,893 | 15,643 | 243,598 | 718 | 4,250,374 |
| 16 2033 | 1,676,185 | 1,525,149 | 810,683 | 15,650 | 239,963 | 716 | 4,268,346 |
| 17 2034 | 1,702,972 | 1,533,587 | 814,365 | 15,657 | 237,636 | 716 | 4,304,932 |
| 18 2035 | 1,730,571 | 1,542,646 | 818,562 | 15,662 | 235,089 | 716 | 4,343,246 |
| 19 2036 | 1,763,270 | 1,557,602 | 823,006 | 15,667 | 232,971 | 718 | 4,393,233 |
| 20 2037 | 1,786,842 | 1,565,763 | 828,428 | 15,670 | 230,879 | 716 | 4,428,297 |

(a) Figures in years -5 through -1 reflect the impact of historical demand side programs

REQUEST:

Refer to the Passty Testimony, Attachment BWP-2.

- a. Provide a comparison of Duke Kentucky's system seasonal peak load forecast with the seasonal peak load forecast from Duke Kentucky's most recent IRP filing, Case No. 2018-00195
- b. Provide a comparison of Duke Kentucky's system seasonal peak load forecast with the seasonal peak load forecast from Duke Kentucky's last base rate case, Case No. 2017-00321.

RESPONSE:

The comparisons are displayed in STAFF-DR-02-114 Attachment.

PERSON RESPONSIBLE: Benjamin W. Passty

| | 2017 Peak | 2037 Peak | CAGR |
|---------------|-----------|-----------|-------|
| 2019 Forecast | 841 | 1027 | 1.00% |
| 2018 Forecast | 841 | 941 | 0.56% |
| 2017 Forecast | 845 | 919 | 0.42% |

Duke Energy Kentucky
 SYSTEM SEASONAL PEAK LOAD FORECAST (MEGAWATTS) (a,b)

| | YEAR | LOAD | SUMMER | | WINTER (e) | | |
|----|------|------|---------------|--------------------------|-------------|---------------|--------------------------|
| | | | CHANGE (c) | PERCENT CHANGE (d) | LOAD | CHANGE (c) | PERCENT CHANGE (d) |
| -5 | 2012 | 895 | | | 710 | | |
| -4 | 2013 | 869 | -26 | -2.9% | 860 | 150 | 21.1% |
| -3 | 2014 | 837 | -32 | -3.7% | 799 | -61 | -7.0% |
| -2 | 2015 | 814 | -23 | -2.7% | 739 | -60 | -7.5% |
| -1 | 2016 | 877 | 63 | 7.8% | 741 | 2 | 0.2% |
| 0 | 2017 | 845 | -32 | -3.7% | 744 | 4 | 0.5% |
| 1 | 2018 | 842 | -3 | -0.4% | 749 | 4 | 0.6% |
| 2 | 2019 | 843 | 2 | 0.2% | 746 | -3 | -0.4% |
| 3 | 2020 | 843 | 0 | 0.0% | 741 | -4 | -0.6% |
| 4 | 2021 | 842 | -2 | -0.2% | 704 | -37 | -5.0% |
| 5 | 2022 | 841 | -1 | -0.1% | 703 | -1 | -0.2% |
| 6 | 2023 | 845 | 4 | 0.4% | 706 | 3 | 0.4% |
| 7 | 2024 | 850 | 6 | 0.7% | 684 | -21 | -3.0% |
| 8 | 2025 | 851 | 1 | 0.1% | 723 | 38 | 5.4% |
| 9 | 2026 | 855 | 4 | 0.4% | 728 | 6 | 0.8% |
| 10 | 2027 | 860 | 5 | 0.6% | 729 | 1 | 0.1% |
| 11 | 2028 | 867 | 7 | 0.9% | 723 | -6 | -0.9% |
| 12 | 2029 | 871 | 3 | 0.4% | 694 | -29 | -3.9% |
| 13 | 2030 | 873 | 2 | 0.3% | 696 | 1 | 0.2% |
| 14 | 2031 | 876 | 3 | 0.3% | 735 | 39 | 5.7% |
| 15 | 2032 | 881 | 6 | 0.7% | 738 | 3 | 0.4% |
| 16 | 2033 | 887 | 5 | 0.6% | 736 | -1 | -0.2% |
| 17 | 2034 | 894 | 7 | 0.8% | 740 | 4 | 0.5% |
| 18 | 2035 | 902 | 8 | 0.9% | 716 | -23 | -3.2% |
| 19 | 2036 | 911 | 9 | 1.0% | 763 | 47 | 6.3% |
| 20 | 2037 | 919 | 8 | 0.9% | 774 | 10 | 1.4% |

(a) Figures in years -5 through -1—which are not weather-normalized—reflect the impact of historical demand side programs.

(b) Includes interruptible and demand response load.

(c) Difference between reportin gyear and previous year.

(d) Difference expressed as a percent of previous year.

(e) Winter load reference is to peak loads which occure in the following winter.

FIGURE B-4
 DUKE ENERGY KENTUCKY SYSTEM
 SEASONAL PEAK LOAD FORECAST (MEGAWATTS)^a
 AFTER EE
 INTERNAL LOAD^b

| | YEAR | SUMMER | | | WINTER ^d | | |
|----|------|--------|---------------------|-----------------------------|---------------------|---------------------|-----------------------------|
| | | LOAD | CHANGE ^b | PERCENT CHANGE ^c | LOAD | CHANGE ^b | PERCENT CHANGE ^c |
| -5 | 2013 | 869 | | | 860 | | |
| -4 | 2014 | 837 | (32) | -3.7% | 799 | (61) | -7.1% |
| -3 | 2015 | 814 | (23) | -2.7% | 739 | (60) | -7.5% |
| -2 | 2016 | 877 | 63 | 7.7% | 733 | (6) | -0.8% |
| -1 | 2017 | 841 | (36) | -4.1% | 706 | (27) | -3.7% |
| 0 | 2018 | 845 | 4 | 0.5% | 727 | 21 | 3.0% |
| 1 | 2019 | 846 | 1 | 0.1% | 729 | 1 | 0.2% |
| 2 | 2020 | 847 | 1 | 0.1% | 728 | (1) | -0.2% |
| 3 | 2021 | 848 | 1 | 0.1% | 728 | 1 | 0.1% |
| 4 | 2022 | 848 | 0 | 0.0% | 729 | 1 | 0.1% |
| 5 | 2023 | 850 | 2 | 0.2% | 734 | 5 | 0.7% |
| 6 | 2024 | 854 | 3 | 0.4% | 735 | 1 | 0.1% |
| 7 | 2025 | 856 | 3 | 0.3% | 739 | 4 | 0.6% |
| 8 | 2026 | 862 | 6 | 0.7% | 745 | 5 | 0.7% |
| 9 | 2027 | 867 | 5 | 0.5% | 752 | 8 | 1.0% |
| 10 | 2028 | 874 | 7 | 0.8% | 756 | 4 | 0.6% |
| 11 | 2029 | 879 | 5 | 0.6% | 760 | 3 | 0.5% |
| 12 | 2030 | 883 | 4 | 0.5% | 764 | 4 | 0.6% |
| 13 | 2031 | 889 | 6 | 0.7% | 772 | 8 | 1.0% |
| 14 | 2032 | 898 | 9 | 1.0% | 776 | 5 | 0.6% |
| 15 | 2033 | 906 | 8 | 0.9% | 783 | 7 | 0.9% |
| 16 | 2034 | 915 | 9 | 1.0% | 790 | 7 | 0.9% |
| 17 | 2035 | 924 | 9 | 1.0% | 799 | 8 | 1.1% |
| 18 | 2036 | 933 | 9 | 1.0% | 804 | 5 | 0.6% |
| 19 | 2037 | 941 | 9 | 0.9% | 811 | 7 | 0.9% |
| 20 | 2038 | 950 | 9 | 0.9% | 818 | 7 | 0.9% |

NOTES

2009-2010 winter peaks hard-coded from KY 2011 IRP

- (a) Includes EE impacts
- (b) Excludes controllable load.
- (c) Difference between reporting year and previous year.
- (d) Winter load reference is to peak loads which occur in the following winter.

0.6%

0.6%

Duke Energy Kentucky
 SYSTEM SEASONAL PEAK LOAD FORECAST (MEGAWATTS) (a,b)

| | YEAR | LOAD | SUMMER | | WINTER (e) | | |
|----|------|------|--------|----------------|-------------|--------|----------------|
| | | | CHANGE | PERCENT CHANGE | LOAD | CHANGE | PERCENT CHANGE |
| | | | (c) | (d) | | (c) | (d) |
| -5 | 2014 | 837 | | | 860 | | |
| -4 | 2015 | 814 | -23 | -2.7% | 799 | -61 | -7.0% |
| -3 | 2016 | 877 | 63 | 7.8% | 739 | -60 | -7.5% |
| -2 | 2017 | 841 | -36 | -4.1% | 733 | -6 | -0.8% |
| -1 | 2018 | 847 | 6 | 0.7% | 797 | 64 | 8.7% |
| 0 | 2019 | 846 | -1 | -0.1% | 714 | -83 | -10.5% |
| 1 | 2020 | 849 | 3 | 0.4% | 727 | 13 | 1.8% |
| 2 | 2021 | 858 | 8 | 1.0% | 744 | 17 | 2.3% |
| 3 | 2022 | 886 | 29 | 3.4% | 767 | 23 | 3.2% |
| 4 | 2023 | 893 | 6 | 0.7% | 770 | 4 | 0.5% |
| 5 | 2024 | 901 | 8 | 0.9% | 773 | 3 | 0.3% |
| 6 | 2025 | 911 | 10 | 1.1% | 782 | 9 | 1.2% |
| 7 | 2026 | 920 | 9 | 1.0% | 788 | 6 | 0.8% |
| 8 | 2027 | 934 | 14 | 1.5% | 798 | 11 | 1.4% |
| 9 | 2028 | 947 | 13 | 1.4% | 805 | 7 | 0.9% |
| 10 | 2029 | 956 | 9 | 1.0% | 813 | 8 | 1.0% |
| 11 | 2030 | 964 | 8 | 0.9% | 819 | 6 | 0.7% |
| 12 | 2031 | 971 | 7 | 0.7% | 822 | 3 | 0.4% |
| 13 | 2032 | 979 | 7 | 0.8% | 823 | 1 | 0.2% |
| 14 | 2033 | 987 | 9 | 0.9% | 831 | 8 | 0.9% |
| 15 | 2034 | 996 | 9 | 0.9% | 836 | 5 | 0.6% |
| 16 | 2035 | 1007 | 11 | 1.1% | 843 | 7 | 0.8% |
| 17 | 2036 | 1016 | 10 | 1.0% | 846 | 3 | 0.4% |
| 18 | 2037 | 1027 | 11 | 1.1% | 855 | 9 | 1.1% |
| 19 | 2038 | 1038 | 10 | 1.0% | 862 | 7 | 0.8% |
| 20 | 2039 | 1048 | 10 | 1.0% | 869 | 7 | 0.8% |

- (a) Figures in years -5 through -1—which are not weather-normalized—reflect the impact of historical demand side programs.
- (b) Includes interruptible and demand response load.
- (c) Difference between reportin year and previous year.
- (d) Difference expressed as a percent of previous year.
- (e) Winter load reference is to peak loads which occure in the following winter.

STAFF-DR-02-115

REQUEST:

Refer to the Direct Testimony of Lesley G. Quick (Quick Testimony), page 8, line 22, through page 9, line 3. Explain whether the convenience fee charged for payments made by credit card, debit card, or electronic check goes directly to Speedpay, the third-party vendor, or whether Duke Kentucky collects the convenience fee and then remits it to Speedway.

RESPONSE:

The convenience fee goes directly to SpeedPay, the third-party vendor. The Company neither receives nor collects any portion of this fee.

PERSON RESPONSIBLE: Lesley Quick

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-116

REQUEST:

Refer to the Quick Testimony at 9, lines 9-12. Explain the basis for Duke Kentucky's expectation that the growth rate will double once fees are removed. Provide any relied upon external or internal studies, reports, or surveys.

RESPONSE:

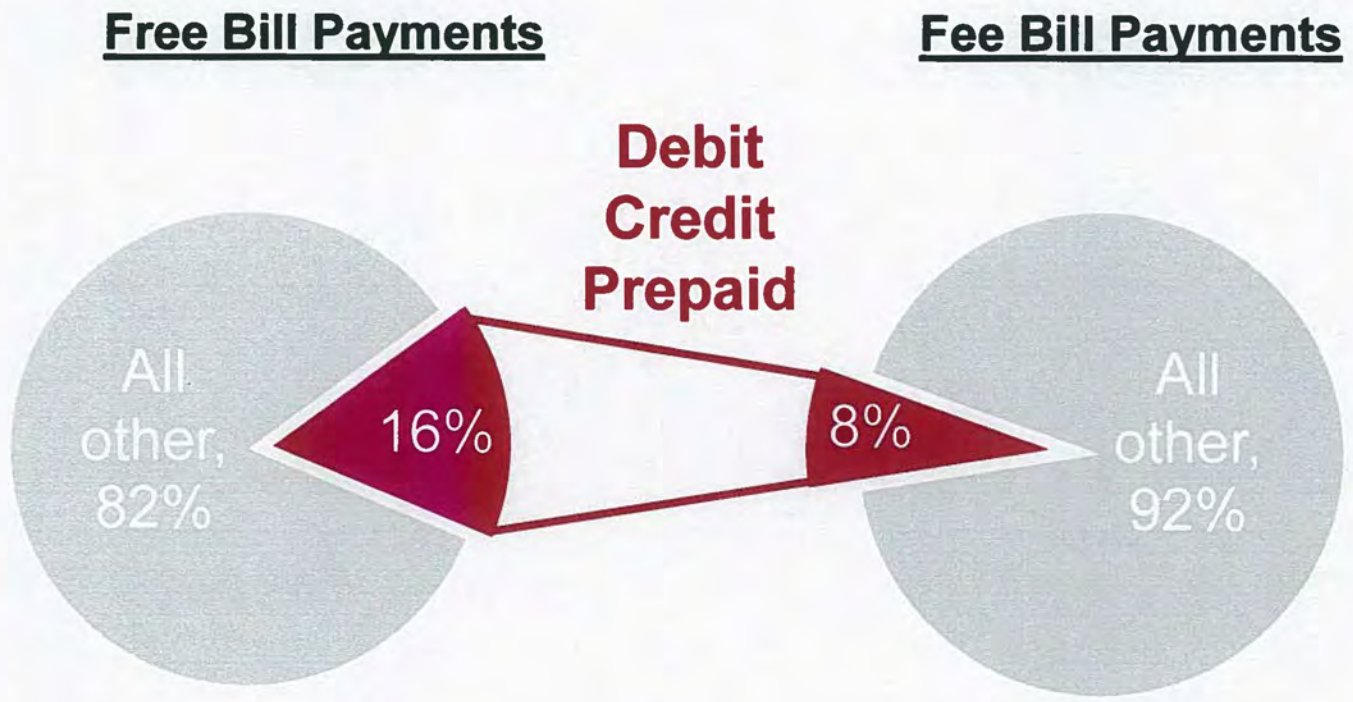
Fiserv Inc., 2015 study "Navigating the New Bill Payments Landscape" provides a peer to peer biller analysis showing double usage of Free card payment channels when compared to fee channels. See STAFF-DR-02-116 Attachment.

PERSON RESPONSIBLE: Lesley Quick



Free vs Fee Biller Transactional Research Study and Modeling

A Peer-to-Peer Transaction Analysis Finds Billers With Free Card Payments Have Double Card Usage



N = 12 similar utility and insurance companies who offer free and fee card payments

Source: Navigating the New Bill Payments Landscape, Fiserv Inc., 2015



REQUEST:

Refer to the Quick Testimony, page 12, line 15, through page 13, line 6.

- a. Explain whether, and if so, how, Duke Kentucky encourages customers dissatisfied with convenience fees when using a credit card, debit card, or electronic check to enroll in its fee-free "Payment Advantage" program.
- b. Provide any cost-benefit analysis Duke Kentucky performed in consideration for its fee-free program.

RESPONSE:

- a. N/A. Duke Energy Kentucky does not have a "Payment Advantage" program.
- b. Duke Energy Kentucky is presently unaware of and unable to quantify internal cost savings associated with the fee-free program. The benefit of the program is based on direct customer feedback and dissatisfaction with paying a convenience fee. Customers are accustomed to paying other billers online with these payment methods with no additional fees; therefore, driving dissatisfaction in the payments process.

PERSON RESPONSIBLE: Lesley Quick

REQUEST:

Refer to the Quick Testimony, page 14, line 7-9.

- a. Indicate the provisions in the current tariff that allow Duke Kentucky to charge a field personnel investigation charge and for equipment damage caused by the customer.
- b. Indicate any additional expenses incurred by Duke Kentucky when a customer tampers with equipment.

RESPONSE:

- a. Paragraph C under the "Charge" Section of the Charge for Reconnection of Service tariff (Sheet No. 91) states, "If service is discontinued because of fraudulent use thereof, the Company may charge and collect in addition to the reconnection charge ...the expense incurred by the Company by reason of such fraudulent use, plus an estimated bill for electricity used, prior to the reconnection of service."
- b. Duke Energy Kentucky incurs additional expenses when a customer tampers with equipment for back office support related to calculating the charges, billing the charges and assisting in the investigations.

PERSON RESPONSIBLE: Jeff L. Kern – a.
Lesley Quick – b.

Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019

STAFF-DR-02-119

REQUEST:

Refer to the Quick Testimony, page 15, lines 2-4. Explain how Duke Kentucky calculated the proposed tampering fee for residential and non-residential customers. Also, provide the cost support for this calculation.

RESPONSE:

Duke Energy benchmarked against another peer utility, Florida Power and Light. They have these existing deterrent fees. This is approximately two times the average monthly electric bill.

| | 2019 | | 2018 | | Change |
|---|------------------|--|------------------|--|------------------|
| <u>Average Bill Calculations</u> | | | | | |
| Residential Revenues | \$ 12,261,118 | | \$ 12,716,657 | | \$ (455,539) |
| Residential Customers | 128,061 | | 126,765 | | 1,296 |
| Residential Avg. Bill | \$ 95.74 | | \$ 100.32 | | \$ (4.57) |
| General Service Revenues | \$ 12,715,233 | | \$ 12,770,835 | | \$ (55,602) |
| General Service Customers | 14,497 | | 14,596 | | (99) |
| General Service Avg. Bill | \$ 877.09 | | \$ 874.95 | | \$ 2.14 |

PERSON RESPONSIBLE: Lesley Quick

STAFF-DR-02-120

REQUEST:

Refer to the Reynolds Testimony, page 6, lines 16-17. Explain why Duke Kentucky chose the term of the pilot program to be 36 months.

RESPONSE:

The pilot length of 36 months protects ratepayers by limiting the timeline and scope of the project. In our experience with installing electric vehicle charging stations, this pilot length also provides adequate time for customer acquisition, site development, and data collection.

PERSON RESPONSIBLE: Lang Reynolds

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

**PUBLIC STAFF-DR-02-121
(As to Attachment 1 only)**

REQUEST:

Refer to the Reynolds Testimony, page 7, line 16-20. Provide copies of any interim or annual EV program reports operated by Duke Kentucky affiliate companies that have been provided to other state regulatory Commissions.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment 1 only)

Please see STAFF-DR-02-121 Attachment 2, Florida ET Pilot Interim Report to Florida PSC. Please also reference STAFF-DR-02-121 Confidential Attachment 1, Project Plug-IN Final Learnings report from Duke Energy Indiana's Project Plug-IN. Note that this report was not submitted to the Indiana Utility Regulatory Commission.

PERSON RESPONSIBLE: Lang Reynolds

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**STAFF-DR-02-121 CONFIDENTIAL
ATTACHMENT 1**

FILED UNDER SEAL



Matthew R. Bernier
ASSOCIATE GENERAL COUNSEL

December 17, 2018

Ms. Claudia Stauffer, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: *Duke Energy Florida, LLC's Application for limited proceeding to approve 2017 second revised and restated settlement agreement, including certain rate adjustments; Docket No. 20170183-EI*

Dear Ms. Stauffer:

Please find enclosed for filing Duke Energy Florida, LLC's 2018 Annual Electric Vehicle Charging Station Pilot Program Report. The Report is being filed pursuant to Paragraph 17(f)i., of the 2017 Second Revised and Restated Stipulation and Settlement Agreement, approved by the Commission in Order No. PSC-2017-0451-AS-EU.

Thank you for your assistance in this matter. Please feel free to call me at (850) 521-1428 should you have any questions concerning this filing.

Sincerely,

/s/ Matthew R. Bernier

Matthew R. Bernier

MRB/cm
Enclosure

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished via electronic mail to the following this 17th day of December, 2018.

/s/ Matthew R. Bernier
Attorney

| | |
|--|---|
| <p>Kyesha Mapp Margo DuVal Suzanne S. Brownless Office of the General Counsel Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee, FL 32399-0850 kmapp@psc.state.fl.us mduval@psc.state.fl.us sbrownle@psc.state.fl.us</p> <p>Jon C. Moyle, Jr. Moyle Law Firm, P.A. 118 North Gadsden Street Tallahassee, FL 32301 jmoyle@moylelaw.com</p> <p>George Cavros 120 E. Oakland Park Boulevard, Ste. 105 Fort Lauderdale, FL 33334 george@cavros-law.com</p> | <p>J.R. Kelly Charles J. Rehwinkel Office of Public Counsel c/o The Florida Legislature 111 West Madison Street, Rm. 812 Tallahassee, FL 32399 kelly.jr@leg.state.fl.us rehwinkel.charles@leg.state.fl.us</p> <p>Robert Scheffel Wright / John T. LaVia III Gardner Law Firm 1300 Thomaswood Drive Tallahassee, FL 32308 schef@gbwlegal.com jlavia@gbwlegal.com</p> <p>James W. Brew / Laura A. Wynn Stone Law Firm 1025 Thomas Jefferson Street, N.W., Ste. 800 Washington, DC 20007 jbrew@smxblaw.com law@smxblaw.com</p> |
|--|---|

**Duke Energy Report to the Florida Public Service Commission
Electric Vehicle Charging Station Pilot Program
December 2018**



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Introduction

On November 20, 2017 the Florida Public Service Commission approved the Second Revised and Restated Settlement Agreement with Duke Energy Florida (DEF) that included a provision to allow DEF to initiate a Pilot Program to install, own and operate electric vehicle service equipment (EVSE) infrastructure within its service territory (EVSE Pilot). The Company will strategically install a foundational level of EV infrastructure in order to gather information about DEF customer charging behavior and grid impacts of increasing EV adoption within the five (5) year EVSE Pilot through December 2022. The EVSE Pilot Program prescribes installation of equipment across segments and equipment type as shown in table 1 below:

Table 1

| Segment | Multi-unit dwellings (MUD) | Workplaces (WPC) | "Long dwell time" public locations | Highway corridors |
|---|---|--|---|--|
| EVSE Technology | Level 2 | Level 2 | Level 2 | DC Fast Charging (DC FC) |
| Minimum ports to be deployed | 325 ports | 100 ports | 75 ports | 90 Units ¹ |
| Explanation/Locations | Apartments Condos Dormitories Installed in "Commons Areas" | small, medium and large sized businesses | Grocery, Restaurant Public Parking Museums | Interstate (I-4) Secondary (US19, US27) |
| <ul style="list-style-type: none"> • 10% of total ports will be installed into income qualified areas defined by FL Statute Section 288.9913(3) • DEF shall coordinate with transit agencies to expand awareness of zero emission buses | | | | |

The EVSE Pilot Program has been named Park & Plug (P&P). This first annual report from Park & Plug to the FPSC will provide program costs incurred and information on the utility's efforts to build the program.

The bulk of year one for the EVSE Pilot has been the initial stage of the program or "start-up" phase. This phase is resource intensive as the program develops processes with key company stakeholders. In many cases EV charging infrastructure is a new concept for these stakeholders and traditional Company processes have to be adapted to the P&P program. The project team has developed the program processes from initial application through installation with all of the customer communications required along that installation path.

A limited set of charge session type metrics such as energy dispensed from equipment is included in this first FPSC program report. This charge session data is limited due to timing; the first installations were completed in September 2018 with few charge sessions recorded at the time of this report. Significant charging and grid related data will be captured and reported in 2019 as the number of network connected installed units rise.

¹ The DC Fast units will have two connectors, Chademo & CCS Combo, to accommodate all fast charge capable vehicles.

2018 P&P Milestone Activities

- January/February 2018 – Select Equipment and Network provider via RFP process
- May 2018 - Contract negotiations and final agreement with NovaCharge and Greenlots
- April through July 2018- Program mechanics i.e. application process, craft Site Host Agreement, establish accounting processes, establish field engineering processes
- June 2018 - Launch of program, Applications of potential site hosts accepted
- September 2018 - First installation completed

Near Term Outlook for Installations

Launch of P&P program has been met with widespread interest among DEF customers; this interest correlates to recent market growth of and the increased public interest in EVs for personal transportation. P&P application activity shows the Public Level 2 ports are expected to be fully subscribed in the first half of 2019 followed by the WPC segment. While there has been strong interest in MUD, mostly from condominiums, that segment will require additional outreach effort to meet the minimum allotment of 325 ports. We anticipate the DC Fast charge segment will be the last segment completed as DC Fast charge units require higher power connections that are not as widespread as those required for Level 2 charging.

We forecast completed installations to climb rapidly through the first and second quarter of 2019.

Application Highlights

Municipality applications received - P&P is processing applications for multiple L2 and DC FC port installations from the following local governments: City of St Petersburg, City of Largo, City of Apalachicola, City of Perry, City of Deltona, City of Tarpon Springs, City of New Port Richey, Pinellas County Board of Commissioners, City of Clearwater, and City of Oviedo.

P&P has conducted outreach with several municipalities for applicants for the income qualified requirement for installations. There will also be applications that naturally fall into income qualified census tracts.

Conversations have been held with housing authorities from Pinellas county and some of the types of installations recommended include recreation centers, community centers and schools.

Summary of Installation Statistics/Costs Through December 7, 2018

Table 2 - Program Costs

| | MUD | | WPC | | Public L2 | | DCFC | | Total* |
|-----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|------------------|
| | MUD | Per Port | Workplace | Per Port | Public L2 | Per Port | DCFC | Per Unit | |
| Capital Expenses | \$26,933 | \$4,489 | \$17,032 | \$4,258 | \$33,680 | \$4,210 | \$61,058 | \$30,529 | \$138,703 |
| O&M Expenses | \$33,894 | \$5,649 | \$31,014 | \$7,754 | \$30,504 | \$3,813 | \$26,934 | \$13,467 | \$122,346 |
| Total Expenses | \$60,827 | \$10,138 | \$48,046 | \$12,012 | \$64,184 | \$8,023 | \$87,992 | \$43,996 | \$261,049 |

* Extended totals for each segment, not per port

Table 3 -Charging Session Metrics

| Segment | Ports Installed | Ports Requested | # Sessions | kWh Dispensed |
|------------------|-----------------|-----------------|------------|----------------|
| MUD | 6 | 85 | 5 | 40.89 |
| WPC | 4 | 36 | 24 | 148.12 |
| Public L2 | 8 | 82 | 63 | 354.1 |
| DCFC | 2 | 9 | 15 | 779 |
| Income Qualified | 0 | 6 | | |
| Totals | 20 | 218 | 107 | 1322.11 |

Park & Plug Pilot - Overview of Program

Objective

The objective of the EV Charging Station Pilot Program is to install a foundational level of EV infrastructure within the DEF service territory in order to gather information about DEF customer charging behavior and grid impacts of increasing EV adoption.

DEF will annually report program metrics to the FPSC and initiate proceeding with FPSC in 2021 to determine if the program can become a permanent DEF program offer or to withdraw the program.

Program Approach

Equipment Deployed and Approach for Installation

Park & Plug will install and operate "Smart Chargers" installed across the Duke Energy Florida service territory in the quantities shown in table 1. These Smart Chargers are units networked with cellular connections capable of remote operation that comply with open communications protocol OCPP 1.6. This communications protocol ensures interoperability between the charging station hardware and network management systems in order to mitigate the risk of stranded assets. All EVSE procured by P&P will also comply with the Open ADR standard. The Smart Chargers capture individual charge session

data² that is aggregated to the communications network, Greenlots.³ DEF has 24/7 access to the Greenlots web portal to view unit status and download session data as needed.

DEF Contractor - Through an open RFP process, DEF conducted a competitive bid to secure a turn-key installation contractor for duration of the EVSE Pilot period. DEF chose NovaCharge,⁴ a minority owned, Florida based company to provide equipment, installation services, communication network, and customer service support -

- NovaCharge represents various manufacturers of EVSE
- NovaCharge will be responsible for electrical work via Florida based-licensed electrical contractors
- NovaCharge will utilize the Greenlots network management web-based platform
- DEF will maintain a network agreement with Greenlots to access the program on-line portal for installed base of EVSE.
- Novacharge will provide manufacturer's extended warranties EVSE through at least the pilot period.
- Novacharge and Greenlots will provide 24-hour customer support to both DEF, DEF charging station customers and site hosts

Network Communications - All EVSE deployed will be connected to Greenlots communications network via cellular nodes within each EVSE. The communications network allows data collection, over-air management of units i.e. price configurations and ability to "push" unit software upgrades directly to the units. The Greenlots database captures data across the network at both individual unit level and across the entire P&P system to include but not limited to:

- Energy usage
- Revenue
- Number of driver sessions
- Charge sessions by time of day
- Total Charging time for charging sessions
- Number of unique user ID's

Park & Plug will make monthly reports available to site hosts so that they can monitor utilization and have data to inform their decisions to offer charging to drivers as an amenity or at cost to the EV driver.⁵

EV drivers will connect to the network via the Greenlots phone app, this phone app will allow users to:

- Find available units to charge
- Pay for sessions
- Have visibility into charging activity for their vehicle

² No personally identifiable information is captured by Duke Energy.

³ For more information <https://greenlots.com/>

⁴ For more information on NovaCharge www.novacharge.net

⁵ The Greenlots network does not share Personally Identifiable Information.

Other phone apps available that will show the P&P stations are Plugshare.com and the Alternative Fuel finder on the website for the Department of Energy.

Site Host Acquisition

The DEF service territory is widespread and non-contiguous. DEF will attempt to acquire site hosts that represent cross-sections of its service territory.

Our initial approach to build program awareness is to leverage present resources and supplement with targeted communications as necessitated by application need to fulfill PSC requirements within each segment. DEF has leveraged the following existing resources to build program awareness:

- Large Account Managers
- Small/Medium Business Managers
- Community Relations Managers
- Economic Development Managers
- Municipalities - Referrals for Low Income sites

GIS Map Tool - DEF GS services has created a GIS map with overlays that combines visibility into several key program data layers on one GIS map. Visibility of these layers provides the project team and DEF management at a glance views of the progress of the pilot study. Some of the layers on the GIS map include:

- Duke Energy Service Territory
- Low Income Census Tracts that meet FL Statute 2889913(3) for FLPSC settlement agreement
- Applied for locations across DEF service territory
- Existing charging stations
- Pilot program applied for sites
- Evacuation Routes

Transit Agency Coordination - Zero Emission Buses

DEF has engaged the Pinellas Suncoast Transit Authority (PSTA) to align with PSTA's path forward to grow electric transit buses within their fleet. DEF and PSTA will work together to advance E Buses through direct investment and through strategic planning discussions that align PSTA's load requirements for additional E buses with DEF system planning.

Through a grant in 2018 PSTA received two fully electric BYD buses. To support charging these two E buses PSTA purchased two BYD 80KW DC Fast units that are installed at the main PSTA bus depot at 3201 Scherer Dr in St Petersburg, FL. The BYD chargers are proprietary units⁶, to place them into the Park & Plug program DEF and PSTA negotiated an agreement that requires PSTA to provide DEF with charging data on the two BYD depot units to characterize charging loads for the E Buses.

⁶ For all other installations of DC Fast, Park & Plug will use DC Fast chargers that have the industry standard connectors, Chademo and CCs Combo.

This is a partnership that DEF and PSTA can leverage to proactively prepare the system for the growth of additional E bus assets.

Education and Outreach

P&P has developed a framework for outreach and education across multiple media types. The primary focus of the outreach/education will be overall awareness of the benefits of electric drive as a reliable, safe and economical method of personal transportation. It is consensus opinion in the market and has been since 2011 that Education/Awareness is still the number one barrier to EV adoption.

A recent survey found that what's stopping car buyers from choosing electric vehicles is the perceived lack of charging stations, something 85% of respondents mentioned, followed by the high costs (83%), and concerns over the range (74%).

That's unsurprising, but what is more surprising is that those are not actually the main issue slowing down electric vehicle adoption. According to the same survey, 60% of the more than 2,500 American drivers surveyed said they were "unaware of electric cars". Source: Electrek.com, Jan 2017

P&P will craft the creative messages to begin in 2019 and below is the initial draft budget that is heavier in spend over 2019 through 2020. This budget is subject to adjustment based on market feedback from the creative outreach/education efforts.

| P&P Media Budget | | | |
|----------------------------------|-------------------|------------------|------------------|
| Communication Method | 2019 | 2020 | 2021 |
| Streaming Audio | \$ 57,991 | \$21,000 | \$ 23,000 |
| Out of Home (Digital Billboards) | 64,534 | 29,000 | 25,000 |
| Paid Social Media | 75,000 | 15,000 | 18,700 |
| Paid search and YouTube | 37,000 | 12,000 | 10,000 |
| Community Events | 5,000 | 4,000 | 3,000 |
| Totals | \$ 239,525 | \$ 81,000 | \$ 79,700 |

Appendix A - Terms & Conditions of Participation

General Terms & Conditions

- Duke Energy will provide the equipment, installation, warranty and network connection services free of charge through December 2022 of the pilot program
- Site hosts will be responsible for the cost of electricity used by the charging station
- Site hosts can provide stations under two options:
 - Option 1: As an amenity to drivers
 - Option 2: Charge a fee to the driver enabled by a smartphone or RFID card

To participate as a Park & Plug site host, you must:

- Be a current Duke Energy customer in Florida
- Agree to participate in the program through December 2022
- Site hosts agreement required
- If required, agree to establish a separate account, meter, and be responsible for ongoing tariff charges (Duke Energy will install the new meter at no cost)
- Meet site location requirements
- Safe, well-lit area
- Paved
- Adequate ingress/egress
- Adequate power in close proximity to chosen site
- Provide one parking space per charging port
- Provide non-discriminatory access to EV charging spots

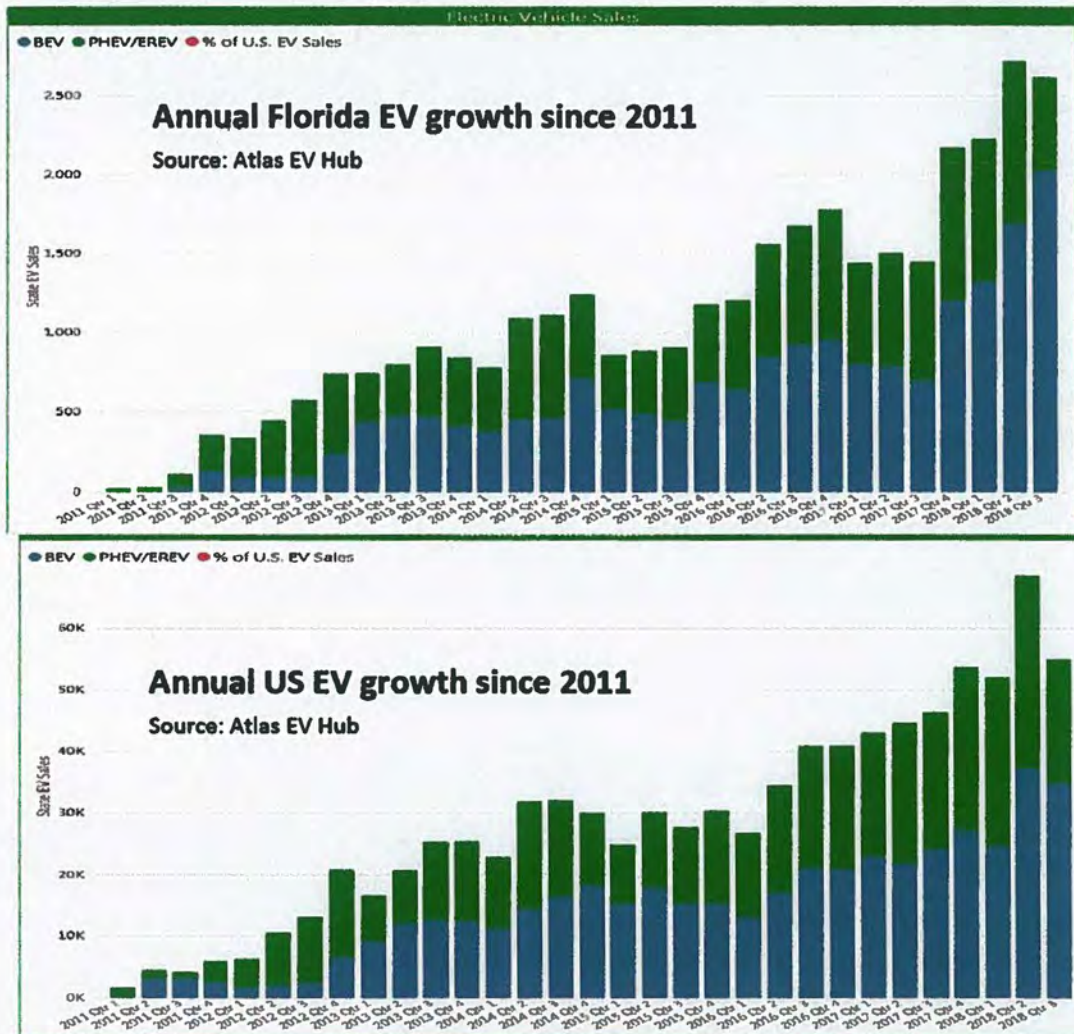
Duke Energy will evaluate applications for site hosts that meet minimum participation requirements, along with additional qualitative factors, including:

- Potential for high utilization
- 10% of charging stations will be installed in income-qualified communities, as defined by Florida statute
- For public installation, proximity to amenities for the EV driver will be given preference

Duke Energy reserves the right to refuse applications that may not meet the intent of the pilot program

Appendix B - The EV Market in Florida and United States

- Number of EVs⁷ registered in DEF service territory 2017 = 1,212
- Number of EVs registered in DEF service territory through August 2018 = 2208 (82% increase over 2017)
- Number of registered EVs in Florida = 34,352



⁷ EVs include both plug-in hybrid and all electric.

REQUEST:

Refer to the Reynolds Testimony, page 9, Table 1 "Duke Energy Kentucky Electric Transportation Pilot Summary."

- a. The Total Budget for the EV Fast Charging Program is \$1,000,000 in capital expenses and \$17,500 in O&M expenses. Provide an itemized breakdown of the \$1,000,000 capital expenses and the \$17,500 O&M expenses.
- b. The Total Budget for the Electric Transit Bus Charging Program is \$375,000 in capital expenses and \$17,500 in O&M expenses. Provide an itemized breakdown of the \$375,000 capital expenses and the \$17,500 O&M expenses.
- c. The Total Budget for the Non-Road Electrification Program is \$310,000 in O&M expenses. Provide an itemized breakdown of the \$310,000 O&M expenses.
- d. The Total Budget for the Residential EV Charging Program is \$318,900 in O&M expenses. Provide an itemized breakdown of the \$318,900 O&M expense.
- e. The Total Budget for the Commercial EV Charging Program is \$400,000 in O&M expenses. Provide an itemized breakdown of the \$400,000 in O&M expenses.
- f. The Total Budget for the Education, Outreach, Marketing and Project Management Program is \$394,750 in O&M expenses. Provide an itemized breakdown of the \$394,750 O&M expenses.

RESPONSE:

Please reference STAFF-DR-02-122-ATTACHMENT 1 for a summary of the proposed financial budget.

- a. Five (5) EV Fast Charge locations budgeted at an estimated \$200,000 per location. Each location will include at least two (2) charging stations capable of charging two (2) cars at the same time. The \$17,500 in O&M is broken down into \$1,000 per location over 3.5 years (mid 2020 through 2023). The \$1,000 per station has been estimated to cover warranty, networking, and maintenance. The \$200,000 has been estimated as follows:
 - EV Fast Charge Station Hardware: \$75,000 each (2/location)
 - Installation: \$25,000 per location
 - Duke Energy Distribution Upgrades: \$25,000 per location
- b. Five (5) Transit Bus Charging locations budgeted at an estimated \$75,000 per location. Each location will include one charging station capable of charging one transit bust at 50kW. The \$17,500 in O&M is broken down into \$1,000 per location over 3.5 years (mid 2020 through 2023). The \$1,000 per station will help cover warranty and maintenance. The \$75,000 has been estimated as follows:
 - Transit Bus Charging Hardware: \$35,000 each
 - Installation: \$25,000 per location
 - Duke Energy Distribution Upgrades: \$15,000 per location
- c. Please reference Direct Testimony of Lang Reynolds, Page 16, lines 8-10.
- d. Please reference Direct Testimony of Lang Reynolds, Page 18, lines 11-17.
- e. Please reference Direct Testimony of Lang Reynolds, Page 212, lines 3-8.

f. Please reference Attachment LWR-4 for an itemized Marketing expense breakdown. Note that \$87,500 was budgeted for Marketing instead of the \$85,970 shown in Attachment LWR-4. In addition, \$245,000 has been allocated for Project Management and \$62,250 has been allocated for network fees associated with the Residential, Transit Bus, and EV Fast Charging programs. All costs are spread out over the length of the pilot.

PERSON RESPONSIBLE: Lang Reynolds

Duke Energy Kentucky Electric Transportation Budget

| Program Summary | | | | | | |
|--------------------------|----------------|-------|------------|---------------|------------|--------------|
| Segment | Residential L2 | Blank | Transit | Commercial L2 | DCFC | Non-Road |
| Structure | Rebate | | Own&Op | Rebate | Own&Op | Rebate |
| Units | 300 | - | 5 | 160 | 5 | 200 |
| Unit Cost (installed) | \$ 563 | \$ - | \$ 75,000 | \$ 2,500 | \$ 200,000 | \$ 1,550 |
| Annual O&M | \$ 50,000 | \$ - | \$ 1,000 | \$ - | \$ 1,000 | \$ - |
| Depreciation Rate | 15% | | | | | |
| Network Fees Per Station | 60 | \$ - | \$ 50 | \$ - | \$ 500 | \$ - |
| Network Fees | \$ 18,000 | \$ - | \$ 250 | \$ - | \$ 2,500 | \$ - |
| Annual Depreciation | \$ 206,250 | \$ - | \$ 56,250 | \$ - | \$ 150,000 | \$ - |
| Total Stations | 670 | | | | | |
| Segment Capital Cost | | | \$ 375,000 | | | \$ 1,000,000 |
| Segment O&M Cost | \$ 188,900 | | | \$ 400,000 | \$ 310,000 | |
| Total Capital | | | \$ 375,000 | | | \$ 1,375,000 |
| Total O&M | | | \$ 56,250 | | | \$ 1,458,650 |
| Total Program Cost | | | \$ 431,250 | | | \$ 2,833,650 |

| | 2019 | 2020 | 2021 | 2022 | 2023 | | |
|-------------------|------------|------------|------------|-----------|-----------|-----------|-----------------|
| G&A | | | | | | | |
| Project Mgmt + DR | \$ 350,000 | \$ 17,500 | \$ 87,500 | \$ 70,000 | \$ 52,500 | \$ 17,500 | |
| Factor | 5% | 25% | 20% | 15% | 5% | | |
| Marketing | \$ 50,000 | \$ - | \$ 50,000 | \$ 25,000 | \$ 12,500 | \$ - | \$ 87,500 3.09% |
| Factor | 0% | 100% | 50% | 25% | 0% | | |
| Network Fees | \$ - | \$ 20,750 | \$ 20,750 | \$ 20,750 | \$ - | \$ - | |
| Total | \$ 17,500 | \$ 158,250 | \$ 115,750 | \$ 85,750 | \$ 17,500 | | |

| Annual Financials | | 2019 | 2020 | 2021 | 2022 | 2023 | Program Totals |
|-------------------|------------------|-----------|--------------|------------|------------|-----------|----------------|
| Residential L2 | Capital | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| | O&M | \$ - | \$ 218,900 | \$ 50,000 | \$ 50,000 | \$ - | \$ 318,900 |
| Transit | Capital | \$ - | \$ 375,000 | \$ - | \$ - | \$ - | \$ 375,000 |
| | O&M | \$ - | \$ 2,500 | \$ 5,000 | \$ 5,000 | \$ 5,000 | \$ 17,500 |
| Commercial L2 | Capital | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| | O&M | \$ - | \$ 200,000 | \$ 200,000 | \$ - | \$ - | \$ 400,000 |
| DCFC | Capital | \$ - | \$ 1,000,000 | \$ - | \$ - | \$ - | \$ 1,000,000 |
| | non deferred O&M | \$ - | \$ 2,500 | \$ 5,000 | \$ 5,000 | \$ 5,000 | \$ 17,500 |
| Non-Road | Capital | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| | O&M | \$ - | \$ 155,000 | \$ 155,000 | \$ - | \$ - | \$ 310,000 |
| G&A | O&M | \$ 17,500 | \$ 158,250 | \$ 115,750 | \$ 85,750 | \$ 17,500 | \$ 394,750 |
| | | 2019 | 2020 | 2021 | 2022 | 2023 | |
| Capital | | \$ - | \$ 1,375,000 | \$ - | \$ - | \$ - | \$ 1,375,000 |
| O&M | | \$ 17,500 | \$ 737,150 | \$ 530,750 | \$ 145,750 | \$ 27,500 | \$ 1,458,650 |
| | | | | | | | \$ 2,833,650 |

REQUEST:

Refer to the Reynolds Testimony, page 10, lines 13-16.

- a. Indicate where the Fast Charge Fee is explained in the Direct Testimony of Jeff L. Kern.
- b. Explain the reasoning for basing the Fast Charge Fee on the Commission approved tariff Rate DS 3-Phase secondary non-church cap energy change per kWh.
- c. Provide the calculation showing how the amount of \$0.333596 per kWh was determined.
- d. Provide a detailed comparison of the calculation of the proposed charge fee of \$0.333596 per kWh to the calculations of other EV program charge fees in other Duke Kentucky affiliate EV programs.

RESPONSE:

- a. The Fast Charge Fee is explained in the testimony of Mr. Reynolds on page 10, lines 13-16 but not in the testimony of Mr. Kern. This is a fee that will be charged to EV drivers for their use of the charging station. (See further discussion in response to STAFF-DR-02-90a) As Mr. Reynolds discusses on Lines 3-7, the electric usage that the charging station generates will be billed under the charging station customer's existing commercial rate - those rates are discussed by Mr. Kern.

- b. Rate DS 3-Phase secondary non-church was selected to establish a fair market price for EV Fast Charging as this rate would be the same rate that 3rd Party EV Fast Charge providers (Duke Energy Kentucky customers) would be subject to. In this case, the proposed Fast Charge Fee would be the minimum a 3rd Party provider would need to charge an EV driver in order to break even. Rate DS 3-Phase Secondary non-church is also the only commercial 3 phase rate available to customers under a monthly demand average of 500 kW. Our proposed locations in this pilot will be under 500kW peak monthly demand.
- c. Please reference STAFF-DR-02-123 Attachment 1, DEK EV Fast Charge Fee.
- d. The only Duke Energy Kentucky affiliate with an approved EV program is currently the Park & Plug Pilot in Duke Energy Florida. In this program, the DCFC station site hosts pay the electricity bill for all EV charging to Duke Energy Florida. Site hosts then have the option of charging end-use EV drivers either the GS-1 non-demand flat rate (currently \$0.1227/kWh) plus a small service fee to cover transaction costs, or providing the service for free as an amenity. This approach was mandated by the settlement agreement which created the Pilot program.

Duke Energy Kentucky believes the proposed approach is superior in order to protect development of a sustainable competitive market by charging end-use EV drivers a flat rate that does not undercut the cost of electricity faced by 3rd party providers.

PERSON RESPONSIBLE: Lang Reynolds

EV Fast Charge Fee Calculation

Total Price at Pump for DCFC Customers in KY EV Pilot - Estimated using rates and riders in the rate case filing

| | DS | |
|------------------|-----------|---|
| Cap Rate | 0.269521 | |
| Base Fuel | 0.023837 | |
| Riders | | |
| DSMR | 0.005091 | |
| FAC | 0.000681 | |
| PSM | -0.000163 | |
| ESM | 18.16% | |
| ESM | 0.044616 | |
| Customer Charge | 30 | |
| kWh / Month | 2,167 | Estimated utilization for 2 stations per location or meter. |
| CC Adder | 0.01385 | |
| EV \$/kWh Charge | 0.333596 | |

Also Note that Rider values would change at specified intervals. We will update the price at station quarterly.

**Duke Energy Kentucky
Case No. 2019-00271
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Date Received: October 11, 2019**

STAFF-DR-02-124

REQUEST:

Refer to the Reynolds Testimony, page 10, lines 17-19. For those quarters when the fee is updated, explain if and how Duke Kentucky will notify the Commission of the revised rate.

RESPONSE:

Duke Energy Kentucky will notify the Commission in writing thirty days prior to the start of the quarter when the EV Fast Charge fee is updated. The Company could provide such notice through a letter filing similar to the tariff process. The EV Fast Charge rate can be instantly updated at the EV Fast Charge stations through the network platform.

PERSON RESPONSIBLE: Lang Reynolds

**Duke Energy Kentucky
Case No. 2019-00271
Staff's Second Set Data Requests
Date Received: October 11, 2019**

STAFF-DR-02-125

REQUEST:

Refer to the Reynolds Testimony, page 11, lines 5-9.

- a. Explain what will happen if operational costs exceed revenues.
- b. Explain whether the net revenues received through the EV Fast Charge Program will be the only component of the EV Pilot that will be flowed through Rider PSM.

RESPONSE:

- a. This program is not expected to generate net O&M costs but if this were to happen, the Company would evaluate these net costs along with other factors to determine whether to propose them for recovery in a future rate case. It is not the Company's intent to include net costs as a result of this program in Rider PSM.
- b. Yes. Only net revenues received through the EV Fast Charge program will be flowed through Rider PSM. Please reference Lawler response STAFF-DR-02-068.

PERSON RESPONSIBLE: Lang Reynolds

REQUEST:

Refer to the Reynolds Testimony, pages 13-15. State whether Duke Kentucky performed a cost-benefit analysis for the proposed Electric Transit Bus Charging Program. If so, provide the analysis.

RESPONSE:

Duke Energy Kentucky did not perform a cost-benefit analysis for the proposed Electric Transit Bus Charging Program. Instead, this pilot has been established to gather necessary data to perform future studies, including cost-benefit analyses.

PERSON RESPONSIBLE: Lang Reynolds

REQUEST:

Refer to the Reynolds Testimony, page 13, lines 20-22, through Page 14, line 1, and page 15, lines 1-2. Clarify whether Duke Kentucky proposes to own the Electric Transit Bus Charging units for the life of each unit or for the term of the pilot program.

RESPONSE:

Duke Energy Kentucky proposes to own the Electric Transit Bus Charging units for the life of each unit.

PERSON RESPONSIBLE: Lang Reynolds

REQUEST:

Refer to the Reynolds Testimony, page 14, lines 3-7.

- a. Indicate where the discussion regarding the billings for the Electric Transit Bus Charge Program is in the Direct Testimony of Jeff L. Kern.
- b. Indicate whether the customers will receive a separate bill for the usage from the Electric Vehicle Supply Equipment or if the billing information will just be included in the customer's regular bill.

RESPONSE:

- a. The reference on page 14, lines 3-7 of Lang Reynold's Testimony is meant to explain that an Electric Transit Bus Charge Program owner would be billed under existing rates DS, DP, DT and TT being discussed in Jeff L. Kern's Testimony. Those rates are discussed on page 9, lines 7-13 in the Direct Testimony of Jeff L. Kern.
- b. Customers will receive a separate bill for the usage from the Electric Vehicle Supply Equipment.

PERSON RESPONSIBLE:

Jeff L. Kern
Lang Reynolds

STAFF-DR-02-129

REQUEST:

Refer to the Reynolds Testimony, page 15, lines 2-5. Explain whether participants in the Electric Transit Bus Charging Program will contract for service for the term of the pilot program or the useful life of the charging units. If the contract term is less than the estimated useful life of the charging unit, explain how Duke Kentucky would recover the undepreciated value of the charging unit at the time that service is terminated.

RESPONSE:

As noted in response to STAFF-DR-02-127, the intent is for the participants to contract for service for the useful life of the charging units. Therefore it is not the Company's intent for the contract term to be less than the estimated useful life of the charging unit and there would be no undepreciated value to recover.

PERSON RESPONSIBLE: Lang Reynolds

**Duke Energy Kentucky
Case No. 2019-00271
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Date Received: October 11, 2019**

**PUBLIC STAFF-DR-02-130
(As to Attachment only)**

REQUEST:

Refer to the Reynolds Testimony, pages 16-18. State whether Duke Kentucky performed a cost-benefit analysis for the proposed Non-Road Electrification Incentive Program. If so, provide the analysis.

RESPONSE:

CONFIDENTIAL PROPRIETARY TRADE SECRET (As to Attachment only)

Yes. Duke Energy Kentucky performed a cost-benefit analysis for the proposed Non-Road Incentive Program. Please see STAFF-DR-02-130 Confidential Attachment.

PERSON RESPONSIBLE: Lang Reynolds

**CONFIDENTIAL PROPRIETARY TRADE
SECRET**

**STAFF-DR-02-130 CONFIDENTIAL
ATTACHMENT**

FILED UNDER SEAL

**Duke Energy Kentucky
Case No. 2019-00271
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Date Received: October 11, 2019**

STAFF-DR-02-131

REQUEST:

Refer to the Reynolds Testimony, page 16, lines 6-10. Explain how the program incentives were determined. Provide any relevant supporting calculations or workpapers.

RESPONSE:

Please see response to STAFF-DR-02-130. Medium level incentives were targeted as they provide the highest rate impact measure (RIM) scores.

PERSON RESPONSIBLE: Lang Reynolds

REQUEST:

Refer to the Reynolds Testimony, pages 18-20. State whether Duke Kentucky performed a cost-benefit analysis for the proposed Residential EV Charging Incentive Program. If so, provide the analysis.

RESPONSE:

The Company did not perform a cost-benefit analysis specific to the Residential EV Charging Incentive Program. The Pilot is designed to gather the specific data from Duke Energy Kentucky customers in order to perform cost-benefit analyses for future programs. The Company did perform a cost-benefit analysis for EV adoption for the state of Kentucky overall which shows the significant potential benefits of EV adoption. Please reference Attachment LWR-1 found in the Direct Testimony of Lang Reynolds for this analysis.

PERSON RESPONSIBLE: Lang Reynolds

STAFF-DR-02-133

REQUEST:

Refer to the Reynolds Testimony, page 18, lines 9-17. Explain how the program incentives were determined. Provide any relevant supporting calculations or workpapers.

RESPONSE:

Program incentives were established by utilizing industry experience in the installation of residential level two home charging stations. Please reference STAFF-DR-02-121 Attachment 1, page 1 where the average residential level two charging station installation cost was at \$1,400. This was realized in Duke Energy Indiana's 2011-2013 Project Plug-In where 85 residential charging stations were installed. The total possible incentive of \$1,000 was designed to partially offset the cost of purchase and installation of a new residential level two charging station.

PERSON RESPONSIBLE: Lang Reynolds

**Duke Energy Kentucky
Case No. 2019-00271
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Date Received: October 11, 2019**

STAFF-DR-02-134

REQUEST:

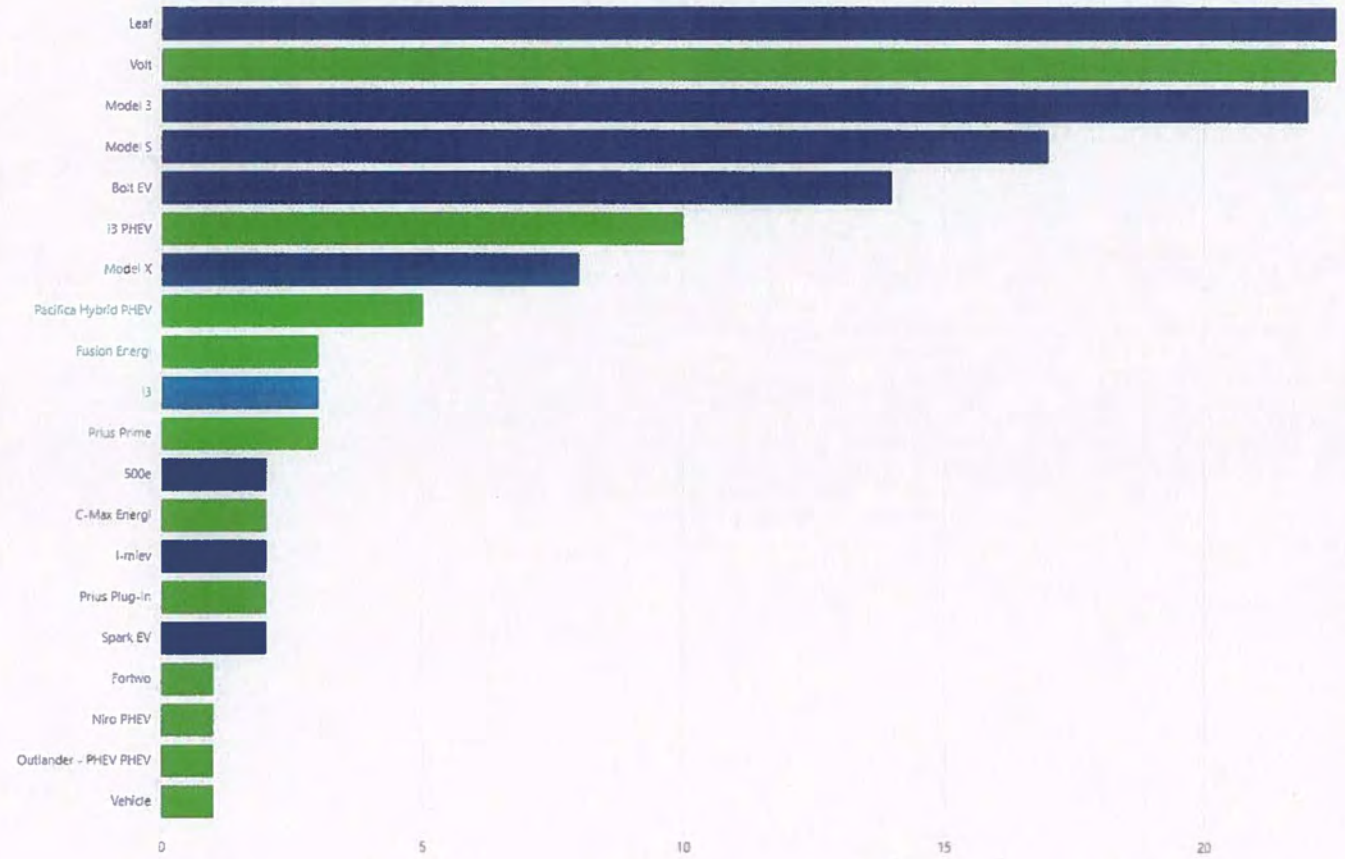
Refer to the Reynolds Testimony, page 18, lines 9-10, and page 19, lines 12-14. Confirm the proposed number of eligible residential customers for the Residential EV Charging Program. Explain how the number of eligible residential customers was determined. Provide any relevant supporting calculations or workpapers.

RESPONSE:

Duke Energy Kentucky's affiliate Duke Energy Florida's Charge Florida program has found that offering under 200 residential incentives does allow for enough EV model diversity as found in STAFF-DR-02-134 Attachment. This graph shows that three model types make up over half the program participants. In order to gather a larger sample size, the number of eligible participants was increased to 300. The Company expects a total of over 600 registered light-duty EVs in the territory by early 2020, so the program will seek to sample roughly half of the existing customers with EVs.

PERSON RESPONSIBLE: Lang Reynolds

Vehicle Model (groups) ● Electric ● PHEV



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STAFF-DR-02-135

REQUEST:

Refer to the Reynolds Testimony, page 18, lines 18-20. Identify the third-party vendor Duke Kentucky will contract with. Provide an explanation as to how the third-party vendor will collect usage characteristics of EV charging behavior.

RESPONSE:

The third-party vendor has not yet been selected. The Company will conduct an RFP process to select an appropriate vendor. Duke Energy Kentucky is evaluating several methods of how residential EV usage can be collected as residential EV Charging data collection technologies are constantly improving. Potential methods are networked level two charging stations, AMI data collection, and on-board telematics.

PERSON RESPONSIBLE: Lang Reynolds

REQUEST:

Refer to the Reynolds Testimony, pages 21-23. State whether Duke Kentucky performed a cost-benefit analysis for the proposed Commercial EV Charging Incentive Program. If so, provide the analysis.

RESPONSE:

The Company did not perform a cost-benefit analysis specific to the Commercial EV Charging Incentive Program. The Pilot is designed to gather the specific data from Duke Energy Kentucky customers in order to perform cost-benefit analyses for future programs. The Company did perform a cost-benefit analysis for EV adoption for the state of Kentucky overall which shows the significant potential benefits of EV adoption. Please reference Attachment LWR-1 found in the Direct Testimony of Lang Reynolds for this analysis.

PERSON RESPONSIBLE: Lang Reynolds

REQUEST:

Refer to the Reynolds Testimony, page 21, line 3-8. Explain how the program incentives were determined. Provide any relevant supporting calculations or workpapers.

RESPONSE:

Duke Energy Kentucky utilized industry experience in determining the incentive amount. The incentive amount was designed to partially offset, but not fully cover, the cost for a customer to install a level two charging station. In Project Plug-IN, referenced on page 1 in STAFF-DR-02-121 Confidential Attachment 1, the average commercial level two installation cost for 45 units was \$3,663 in 2013. The current Duke Energy Florida Park & Plug Pilot has installed 284 networked level two charging stations at an average cost of \$7,300 each.

PERSON RESPONSIBLE: Lang Reynolds

REQUEST:

Refer to the Reynolds Testimony, page 21, lines 13-16.

- a. Indicate which rate schedules the statement "Customer must select one of the following rates listed above ... " is referring to.
- b. Provide an explanation as to why current Duke Kentucky commercial electric customers would not be billed under their existing rates.

RESPONSE:

- a. Please reference Reynolds Testimony page 14, line 4 and page 16, line 16 for the rate schedules a customer may select in the Commercial EV Charging Incentive Program.
- b. Commercial customers may choose to be billed under their existing rate.

PERSON RESPONSIBLE: Lang Reynolds

REQUEST:

Refer to the Reynolds Testimony, page 24, lines 3-6.

- a. Explain why Duke Kentucky has not proposed a change to the Rate DS rate schedule to reference the Fast Charging Fee.
- b. Explain why Duke Kentucky has not proposed any revisions to its tariff to reflect the availability and provisions of the five programs of the Electric Transportation Pilot Program.

RESPONSE:

- a. The Company requests approval to use the Rate DS 3-Phase secondary non-church cap energy charge as the DCFC Fast Charging Fee. The Company does not anticipate a need to revise the Rate DS tariff sheet. As discussed in response to STAFF-DR-02-90a, the Fast Charging Fee is composed of the Commission approved tariff Rate DS 3-Phase secondary non-church cap energy charge per kWh plus all applicable riders and adjustments for a proposed charge of \$0.333596 per kWh. The Fast Charging Fee is what will be charged to drivers for public EV Fast Charging of their electric vehicle.
- b. Since the pilot programs will be served under existing rates, it was determined that no changes to the tariffs would be required.

PERSON RESPONSIBLE:

Jeff L. Kern
Lang Reynolds

**Duke Energy Kentucky
Case No. 2019-00271
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Date Received: October 11, 2019**

STAFF-DR-02-140

REQUEST:

Refer to the Reynolds Testimony, Attachment LWR-1, page 11 of 27. State whether Duke Kentucky will utilize a managed charging program. If so, identify and describe the managed charging program.

RESPONSE:

Duke Energy Kentucky will utilize a managed charging program for the Residential EV Charging program as described in Mr. Reynolds' testimony, page 18, lines 14-22 and on page 19, lines 1-5.

PERSON RESPONSIBLE: Lang Reynolds

**Duke Energy Kentucky
Case No. 2019-00271
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Date Received: October 11, 2019**

STAFF-DR-02-141

REQUEST:

Refer to the Reynolds Testimony, Attachment LWR-4. Confirm that references to "DEO" should be "DEK." If this cannot be confirmed, state whether this program will be jointly administered between Duke Energy Ohio and Duke Kentucky and explain how costs will be allocated to each entity.

RESPONSE:

The two references to "DEO" should be "DEK" in the description column found in Reynolds Testimony, Attachment LWR-4. The Duke Energy Kentucky pilot will be independently administered.

PERSON RESPONSIBLE: Lang Reynolds

**Duke Energy Kentucky
Case No. 2019-00271
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Date Received: October 11, 2019**

STAFF-DR-02-142

REQUEST:

Refer to the Direct Testimony of Andrew S. Ritch, page 9, lines 3-9.

- a. Explain how Duke Kentucky calculated the \$2,000 non-refundable application fee.
Provide the cost support for this calculation.
- b. Explain how Duke Kentucky calculated the \$375 monthly administration fee.
Provide the cost support for this calculation.

RESPONSE:

- a. The basis for the fee calculation is as follows:

| Application Fees | Customers | Hours | Rate | Total |
|--------------------------|-----------|-------|-------|--------------|
| Platform Set-up | | | 15 \$ | 300 \$ 4,500 |
| Marketing | | | 15 \$ | 300 \$ 4,500 |
| Application Review | | | 2 \$ | 200 \$ 4,000 |
| Contracting | | | 35 \$ | 200 \$ 7,000 |
| | | | | \$ 20,000 |
| Application Fee/Customer | 10 | | | \$ 2,000 |

- b. The basis for this fee calculation is as follows:

| Admin Fees | Customers | Hours | Rate | Total |
|---------------------|-----------|-------|------|--------------|
| REC Retirement | 10 | | 0.5 | 195 \$ 975 |
| Billing | 10 | | 1.5 | 185 \$ 2,775 |
| | 10 | | | \$ 3,750 |
| Monthly \$/Customer | | | | \$ 375 |

See also STAFF-DR-02-142 Attachment.

PERSON RESPONSIBLE: Andrew S. Ritch

| Utility | State | Program | Terms | Application Fee | Admin Fee | Reservation Fee | RECs |
|----------------------|-------|---------------------|------------------------|-----------------|----------------------------|-----------------|--|
| XCEL | CO | Suscription | Monthly, 5 yrs, 10 yrs | | Bundled with COS | | Xcel retires or transfers to WREGIS |
| Kentucky Power | KY | Sleeve | | | | | |
| Consumers Energy | MI | Subscription or MBR | | | Only if utility sells RECs | | Utility retires or transfers to customer |
| XCEL | MN | Suscription | Monthly, 5 yrs, 10 yrs | | \$0.001-\$0.0055/kWh | | Utility retires |
| Public Service NM | NM | Sleeve | | | none | | Utility registers |
| Rocky Mountain Power | UT | Sleeve | Negotiated by customer | \$5,000 | \$150/mo per delivery | | Supplier provides to customer |
| Appalachian Power | VA | Suscription | 1 year + | | none | | Utility retains or retires |
| Dominion Energy | VA | Sleeve | | | \$500/mo per delivery | | |
| Dominion Energy | VA | Market-Based Rate | Min 3 years | | \$/kWh | | |
| Dominion Energy | VA | CRG (like CFD) | | \$2,000 | Varies | | Utility retires |
| Puget Sound Energy | WA | Subscription | 10, 15, 20 years | | Included in COS | | Utility retires |
| Georgia Power | GA | Subscription | 10-30 years | \$5,000 | \$0.00105/kWh | | |

| | GA Power | XCEL MN |
|---------------------------|------------|------------|
| Typical project size (kW) | 5,000 | 5000 |
| Hours / Month | 500 | 500 |
| Admin \$/kWh | \$ 0.00105 | \$ 0.00100 |
| Monthly Admin Fee | \$ 2,625 | \$ 2,500 |

| Application Fees | Customers | Hours | Rate | Total |
|------------------|-----------|-------|------|-------|
|------------------|-----------|-------|------|-------|

| | | | | | | |
|--------------------------|-----------|-------|-------|--------|--------|---|
| Platform Set-up | | | 15 \$ | 300 \$ | 4,500 | have all docs there, user portal for webinars, all apps date-stamped, review for completeness, be able to tell me they got all this stuff done, when was application approved, would cover first 3 line items and still hit the \$2,000 (Cost significantly lower do to work and framework already established by other Duke jurisdictions) |
| Marketing | | | 15 \$ | 300 \$ | 4,500 | eligibility - we'd verify customer eligibility; navigant would tell us who applied and how much they applied for (Cost significantly lower do to work and framework already established by other Duke jurisdictions) |
| Application Review | | | 2 \$ | 200 \$ | 4,000 | customer would have access to all standard contracts. Would be able to upload documents |
| Contracting | | | 35 \$ | 200 \$ | 7,000 | customer would be making payments online |
| Application Fee/Customer | 10 | | | | 20,000 | have a running enrollment to show how much program capacity is available |
| | | | | | 2,000 | Application Cost Recovery |
| | | | | | | upon submission of customer application, customer would have 30 days to submit completed GSA Services Agreement; for standard offer |
| | | | | | | In the SS, have to submit completed Term sheet within 30 days |
| Admin Fees | Customers | Hours | Rate | Total | | Duke would execute PPA with the Supplier 60 days after the GSA Services Agreement is received |
| EC Retirement | 10 | | 0.5 | 195 \$ | 975 | GSA Bill Credit will be established before the enrollment period starts |
| Billing | 10 | | 1.5 | 185 \$ | 2,775 | Matching up of Supply and Demand for STD offer, they have fees to cover that - bid fees cover those costs (1/A) |
| Monthly \$/Customer | | 10 | | | 3,750 | Allocation of generation based on customer capacity of overall facility |
| | | | | | | we need admin fee to recover costs to get the output of the projects and take that customer's percentage of the portfolio and you'll give them their % of bill credit and RECs; if you had 100 MW in PJM customer allocation |

you can recover that amount of procurement but need to think through what we're going to do with the recs; if duke is holding the recs for some period of time, is there a cost to that and who's going to manage it.

| | | |
|----|------|------|
| 30 | 15 | 15 |
| 75 | 37.5 | 37.5 |
| 48 | 24 | 24 |
| 27 | 13.5 | 13.5 |

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STAFF-DR-02-143

REQUEST:

Refer to the Direct Testimony of Jeffrey R. Setser (Setser Testimony), page 21, lines 18-22, regarding the most recent internal audit of DEBS' cost allocations occurring on June 20, 2017. Provide when the next internal audit of DEBS' cost allocations will be completed.

RESPONSE:

There is not a regular interval for audit to review cost allocations. Internal Audit prepares the audit plan for the coming year during the later parts of the current year. Internal Audit does not currently have one scheduled on the audit plan.

PERSON RESPONSIBLE: Jeffrey R. Setser