COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF DUKE ENERGY KENTUCKY, INC. FOR 1) AN ADJUSTMENT OF THE ELECTRIC RATES; 2) APPROVAL OF NEW TARIFFS; 3) APPROVAL OF ACCOUNTING PRACTICES TO ESTABLISH REGULATORY ASSETS AND LIABILITIES; AND 4) ALL OTHER REQUIRED APPROVALS AND RELIEF	)))))))	CASE NO. 2019-00271

O R D E R

Duke Energy Kentucky, Inc. (Duke Kentucky) is a jurisdictional electric utility that generates, transmits, distributes, and sells electricity to approximately 142,900 consumers in Boone, Campbell, Grant, Kenton, and Pendleton counties.[1] Duke Kentucky also is a utility engaged in purchasing, selling, storing, and transporting natural gas to approximately 100,000 customers in Boone, Bracken, Campbell, Gallatin, Grant, Kenton, and Pendleton counties.[2] Its most recent general rate increase for its electric operations was granted in Case No. 2017-00321.[3]

BACKGROUND

On August 1, 2019, Duke Kentucky filed a notice of its intent to file an application for approval of increases in its electric rates supported by a fully forecasted test period

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[1] Direct Testimony of Amy P. Spiller (Spiller Testimony) at 4.

[2] *Id.*

[3] Application at 4. 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 Approvals and Relief* (Ky. PSC April 13, 2018).

consisting of the twelve months ending March 31, 2021.[4] On September 3, 2019, Duke Kentucky filed an application requesting authorization to increase its electric base rate revenue, including fuel, to a new total of $356.910 million, which reflects an increase from its current rates of approximately $45.634 million.[5] The monthly residential electric bill increase due to the proposed electric base rates would be 16.20 percent, or approximately $15.62, for a typical residential customer using 1,000 kWh of electricity per month.[6] Duke Kentucky subsequently revised its proposed revenue increase to $44.223 million.[7]

Duke Kentucky states that the primary reason for the requested increase is that Duke Kentucky's earned rate of return on capitalization obtained from its current electric operations is 3.10 percent, which, according to Duke Kentucky, is inadequate to enable it to continue providing safe, reasonable, and reliable service to its customers and is insufficient to afford Duke Kentucky a reasonable opportunity to earn a fair return on its investment property that is used to provide such service while attracting necessary capital at reasonable rates.[8] Duke Kentucky's application also proposes new rates and charges as well as changes in terms, conditions, and tariffs for electric service, all to be effective October 3, 2019.[9] In particular, Duke Kentucky seeks authorization to implement an

[4] Application at 1, 3.

[5] Application at 5.

[6] *Id.* This increase includes riders. Without the riders, the increase for a residential customer using 1,000 kWh per month is 18.98 percent.

[7] Rebuttal Testimony of Sarah E. Lawler (Lawler Rebuttal) at 27.

[8] Application at 6.

[9] Application at 4.

electric vehicle pilot program, a 3.4 MW distribution system battery storage pilot project, and a new Green-Source Tariff program for non-residential customers.[10] Duke Kentucky's application also requests authorization to create deferral mechanisms associated with its proposal to track actual costs of restoration for major storms incremental to amounts included in base rates and in connection with its proposed electric vehicle pilot program.[11]

In an Order issued on September 13, 2019, the Commission suspended Duke Kentucky's proposed rates for six months, up to and including April 2, 2020. The September 13, 2019 Order also established a procedural schedule for the processing of this matter, which provided for a deadline for requesting intervention, two rounds of discovery upon Duke Kentucky's application; a deadline for the filing of intervenor testimony, one round of discovery upon any intervenor testimony, and an opportunity for Duke Kentucky to file rebuttal testimony.

The following parties were granted intervention in this proceeding: the Attorney General of the Commonwealth of Kentucky, by and through the Office of Rate Intervention (Attorney General); Kroger Company (Kroger); and Northern Kentucky University (NKU).

The Commission held an information session and public meeting for the purpose of taking public comments on February 13, 2020, in Edgewood, Kentucky, at Gateway Community and Technical College. A formal hearing was held at the Commission's offices on February 19–20, 2020. Duke Kentucky filed responses to post-hearing data requests on March 6, 2020. All of the parties filed simultaneous post-hearing briefs on

[10] Application at 12–13.

[11] Application at 13–14.

March 16, 2020. Duke Kentucky also filed a reply brief on March 20, 2020. The matter now stands submitted for a decision.

On March 16, 2020, Duke Kentucky filed a letter notifying the Commission that due to events surrounding the COVID-19 pandemic, although the suspension period ends on April 2, 2020, Duke Kentucky will not implement the proposed rates prior to May 1, 2020. Duke Kentucky further states that its goal is to avoid placing any additional strain on the Commission and its customers who are affected by the current circumstances. The Commission expresses its appreciation to Duke Kentucky's delay in placing the new electric rates into effect in light of the widespread impact created by the COVID-19 pandemic.

TEST PERIOD

Duke Kentucky proposed the 12 months ending March 31, 2021, as its forecasted test period to determine the reasonableness of its proposed rates.[12] Duke Kentucky stated that the base period is the 12 months ending November 30, 2019, and consists of 6 months of actual data through May 2019, and the remaining 6 months of budgeted data.[13] Duke Kentucky further stated that its 2018 actual data and 2019 budget, revised for a limited number of updated assumptions, were the starting point for the preparation of both the base and forecasted periods. It described the review and approval process to which its budgets are subjected, including the Duke Kentucky's executive management and Duke Energy Corporation's (Duke Energy) Board of Directors.[14]

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[12] Application at 1.

[13] Direct Testimony of Christopher M. Jacobi (Jacobi Testimony) at 15.

[14] *Id.* at 14.

No intervenor objected to the proposed test period or suggested an alternative test period; however, the Attorney General did criticize Duke Kentucky's development of certain items contained in the forecasted test period and the Commission takes exception to certain items of Duke Kentucky's proposed forecasts, in both the base and forecasted test periods, as discussed herein. The Commission otherwise finds Duke Kentucky's forecasted test period to be consistent with the provisions of KRS 278.192 and KAR 5:001, Sections 16(6), (7), and (8). Therefore, we will accept the forecasted test period proposed by Duke Kentucky for use in this proceeding.

REVENUE REQUIREMENT ADJUSTMENTS

The Attorney General was the only intervenor to recommend adjustments to Duke Kentucky's proposed revenue requirement. The Attorney General's revenue requirement witness, Lane Kollen, proposes an increase in revenues of $25.984 million, based upon a rate base of $924.148 million.[15] The Attorney General recommends that the Commission accept Kollen's proposed adjustments as follows.

Rate Base Adjustments

Solar ITC ADIT – Kollen proposes an adjustment to Duke Kentucky's rate base to reflect that an asset component of accumulated deferred income taxes (ADIT) related to Solar Investment Tax Credits, in the amount of $3.017 million, should not have been included in rate base because the underlying temporary difference was removed from

[15] Direct Testimony of Lane Kollen (Kollen Testimony) at 5.

rate base.[16] Duke Kentucky accepts this adjustment.[17] The Attorney General recommends that the Commission accept this adjustment.[18]

The Commission finds that this adjustment should be accepted, which results in a $0.250 million revenue requirement reduction.

Cash Working Capital. Duke Kentucky proposes to include cash working capital as a component of rate base based on the 1/8th method, in the amount of $14.965 million.[19] Kollen argues that the 1/8th method for estimating cash working capital is outdated and inaccurate and further argues that rate base inclusion of positive cash working capital is inappropriate due to Duke Kentucky's practice to sell its receivables to a specialty affiliate "created to accelerate the conversion of receivables into cash and to reduce the cost of financing customer receivables."[20] Kollen states that other Duke Energy affiliates use a $0 cash working capital allowance in other jurisdictions and that this is a case of first impression for the Commission regarding Duke Kentucky, as its previous rate cases were based on capitalization or settled. Duke Kentucky, ignoring the impact of the sale of its receivables, argues that the Commission does not require a lead/lag study and is not bound by the decisions of other jurisdictions.[21] The Attorney General recommends that the Commission accept this adjustment.[22]

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[16] Kollen Testimony at 6.

[17] Lawler Rebuttal at 23.

[18] Attorney General's Post-Hearing Brief at 13.

[19] Application, Schedule B-1, page 1 of 1.

[20] Kollen Testimony at 16, footnote 16.

[21] Lawler Rebuttal at 5–11.

[22] Attorney General's Post-Hearing Brief at 17.

The fact that Duke Kentucky's lag days for its receivables is grossly lower than the lead days of its payables makes it undeniable that Duke Kentucky's shareholders do not finance cash working capital on behalf of its customers. As such, shareholders should not be compensated for capital they do not invest. The Commission finds that the Attorney General's proposed adjustment is reasonable, resulting in a revenue requirement reduction of $1.242 million.

Rate Case Regulatory Asset. Duke Kentucky requests that its estimated deferred rate case expenses of $0.677 million from the instant filing be included in rate base and that a five-year amortization period be utilized for ratemaking purposes. In addition, Duke Kentucky proposes to include the unamortized balance in rate case expense from Case No. 2017-00321 of $0.384 million in rate base and to amortize the balance over the remainder of the five-year amortization period established in that case, amounting to an annual amortization expense of $0.131 million. Kollen proposes an adjustment to remove these regulatory assets from Duke Kentucky's rate base, net of ADIT, to reduce rate base by $0.712 million.[23] The Attorney General recommends that the Commission accept this adjustment.[24]

The Commission agrees that rate case expense regulatory assets should not be included in rate base, as that would allow a return on the unamortized balance of the expense. The Commission has historically excluded this item from rate base to share the

[23] Kollen Testimony at 19.

[24] Attorney General's Post-Hearing Brief at 18.

cost of rate proceedings between the stockholders and ratepayers.[25] The revenue requirement reduction is $0.059 million.

Depreciation Expense. Duke Kentucky submitted a new depreciation study in conjunction with this case, even though its last depreciation study was approved by the Commission less than two years ago. Duke Kentucky requests an increase in depreciation expense of $7.431 million related solely to the change in depreciation rates.[26] Kollen proposes an adjustment to deny the increase in depreciation expense stating that the increases in depreciation rates only two years after the prior rates were approved are unnecessary and unduly aggressive.[27] The Attorney General recommends that the Commission accept this adjustment.[28] Duke Kentucky argues that an increase in capital expenditures at its generating facilities is the main driver of the requested increase, as it accounts for $4.694 million of the requested increase.[29]

The Commission agrees that the requested 15 percent increase in depreciation expense is not justified because there have been no significant known changes in the depreciation parameters, or assumptions, for plant at the depreciation study date in this case, December 31, 2018, and parameters for plant at the depreciation study in Case No. 2017-00321, December 31, 2016. Duke Kentucky should continue to use its current

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[25] Case No. 2004-00103, *Adjustment of the Rates of Kentucky-American Water Company* (Ky. PSC Feb. 28, 2005) at 35.

[26] Duke Kentucky's response to the Attorney General's First Request, Item 33, Attachment, page 5 of 5.

[27] Kollen Testimony at 48.

[28] Attorney General's Post-Hearing Brief at 30.

[29] Duke Kentucky's response to the Attorney General's First Request, Item 33, Attachment, page 1 of 5 and Duke Kentucky's response to Commission Staff's Post-Hearing Request for Information (Staff's Post-Hearing Request), Item 2.

deprecation rates, as approved in Case No. 2017-00321. This will result in a revenue requirement increase of $0.155 million to account for the $1.863 million reduction in depreciation rates on Accumulated Depreciation and ADIT included in rate base.[30]

Excessive Plant Additions. Pursuant to 807 KAR 5:001, Section 16(7)(b), Duke Kentucky filed a table with its application and represented that it contained Duke Kentucky's most recent capital expenditures budget for the years 2019, 2020, and 2021 as well as construction work in progress (CWIP) as of December 31, 2018.[31] That table indicates that Duke Kentucky had CWIP of $76.349 million as of December 31, 2018, and projected capital expenditures of $151.578 million and $133.885 million in 2019 and 2020, respectively. Because plant will always be placed in service no sooner than capital expenditures for that plant accrue, the sum of CWIP as of December 31, 2018, and the projected expenditures in 2019 and 2020, $361.812 million, represents the maximum amount of plant that could possibly be placed in service through December 31, 2020, based on Duke Kentucky's own methodology.[32] However, Duke Kentucky has acknowledged that not all of the plant on which that spending is projected will be placed in service by the end December 2020.

First, Duke Kentucky admitted that approximately $17.226 million in projected spending in 2020 on "Woodsdale—New Generation" is for plant that will not be placed in

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[30] Duke Kentucky's response to the Attorney General's First Request, Item 33, Attachment, page 5 of 5. *See also* Kollen Testimony at 5.

[31] Application at Tab 22; *see* February 19, 2020 H.V.T. 16:17:00-16:20:00 and 16:21:30-16:22:30.

[32] *See* February 19, 2020 H.V.T. at 15:54:10-15:57:34 (acknowledging that the capital expenditures budget included in the table at Tab 22 of the application served as Duke Kentucky's basis for projecting plant additions); *see also* February 19, 2020 H.V.T., at 16:07:50-16:09:40 and 16:18:50-16:19:30 (acknowledging that the capital expenditures budget is based on dates on which spending is expected to accrue).

service before the end of the forecasted test period, so it should not be reflected as plant in service as of December 31, 2018 (or at any time during the forecasted test period).[33] Second, Duke Kentucky's own projections indicate that a portion of Duke Kentucky's spending on "Normal Recurring Construction" in 2019 and 2020 would not be in service as of December 31, 2020, and, therefore, should not be reflected as plant in service.

Specifically, Duke Kentucky had a CWIP balance of $37.148 million for Normal Recurring Construction as of December 31, 2018,[34] and given the consistent nature of "Normal Recurring Construction," it would be logical to assume, absent evidence to the contrary, that the CWIP balance for that construction would remain relatively consistent on average. In fact, there is little need to assume here because Duke Kentucky projected that it would accrue $1.558 million, $1.393 million, and $1.780 million in Allowance for Funds Used During Construction (AFUDC) for Normal Recurring Construction in 2019, 2020, and 2021, respectively,[35] which indicates that Duke Kentucky projected that, on average, a significant portion of work on Normal Recurring Construction would be reflected as CWIP in each of those years. Based on the formula FERC generally uses to calculate AFUDC, the average CWIP for Normal Recurring Construction that would result in the AFUDC Duke Kentucky projected in 2020 and 2021 would be about $35.080 million

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[33] February 19, 2020 H.V.T., at 16:33:00-16:33:50; *see also* Application at Tab 26 (showing an in service date for the "Woodsdale—New Generation" project after the after the end of the forecasted test period).

[34] Application at Tab 22.

[35] Application at Tab 27 (showing the projected capital expenditures for Normal Recurring Construction in 2019, 2020, and 2021 with and without AFUDC in each year).

and $34.401 million, respectively.[36] Given those estimated average CWIP balances and the consistent actual CWIP balance at the end of 2020, the Commission finds that the most reasonable estimate of the CWIP balance for the test period is $35.080 million and, therefore, finds that the maximum amount of plant that could have been placed in service in 2019 and 2020 was $309.506 million.[37]

Duke Kentucky provided the projected capital additions and retirements by month for the base period and the forecasted test period. Based on those monthly breakdowns, the sum of the additions to plant in service from January 2019 through November 2019 is $175.596 million and the sum of the additions to plant in service from April 2020 through December 2020 is $126.669 million.[38] Further, the difference between the plant in service at the end of the base period and the plant in service at the beginning of the forecasted test period, $73.566 million, provides a reasonable estimate of the additions in that period.[39] Thus, Duke Kentucky's proposed rates are based on total plant additions of

[36] FERC calculates AFUDC by multiplying the average CWIP in a year by the AFUDC rate. The AFUDC rate prescribed by FERC is a weighted average of the utility's short term debt rate and WACC rate in a given year in which the short term debt rate is provided weight to the extent of the average short term debt in a year and the WACC rate is provided weight to the extent that the average CWIP exceeds average short term debt in a year pursuant to the following formula: AFUDC Rate = (Short Term Debt Rate x (Short Term Debt/CWIP)) + (WACC x (1-(Short Term Debt/CWIP). Using that formula and the short term debt and WACC rates for the forecasted test period, the average short term debt in the forecasted test period, and the AFUDC at Tab 26 and 27 of the application, it is possible to estimate the AFUDC rate used by Duke Kentucky as follows: (0.01937 x ($1,640,012/$2,857,337)) + (0.06711 x (1 – ($1,640,012/$2,857,337))) = 0.04. By applying that rate to the AFUDC for Normal Recurring Construction in 2020, the average CWIP may be estimated as follows: $1,557,752 / 0.04 = $35,080,053. If you perform the same calculation using the AFUDC Duke Kentucky projected would accrue in 2021, the AFUDC rate for 2021 is 5% and the CWIP arising from Normal Recurring Construction is $34,400,572.07.

[37] $361,812,064 - $17,225,732 - $35,080,053 = $309,506,208.

[38] Duke Kentucky's response to Commission Staff's Second Request for Information (Staff's Second Request), Item 6 (d), STAFF-DR-02-006 Attachment; and Duke Kentucky's response to Staff's Second Request, Item 7(c), STAFF-DR-02-007 Attachment.

[39] *See* Schedule B 2.3 (showing annual changes to plant in service during the base and forecasted periods calculated in that way); Duke Kentucky's response to Staff's Second Request, Item 6(d), STAFF-

$375.830 million in 2019 and 2020 and, therefore, the Commission finds that Duke Kentucky's projected plant additions in 2020 should be reduced by $66.324 million,[40] which represents the extent to which those additions exceed the total capital expenditures that could possibly be placed in service through December 2020.

However, to determine the rate effect of the reduction to plant additions, it is necessary to determine when the projected additions to plant in service should be reduced. The most favorable adjustment to Duke Kentucky would be to assume that all of the excess additions occurred at the end of 2020, but that assumption would be unrealistic because it would effectively mean that Duke Kentucky had no additions to plant in service between August 2020 and December 2020.[41] Rather, since Duke Kentucky could not tie most of the projected capital additions to a specific project,[42] the Commission finds that the most reasonable way to reflect the adjustment to plant additions would be to reduce all additions to "Completed Construction Not Classified" in January 2020 through December 2020 that cannot be tied to a specific project on a proportional basis.

DR-02-006 Attachment and Item 7(c), STAFF-DR-02-007 Attachment (showing monthly changes to plant in service during the base and forecasted periods calculated in that way); *see also* February 19, 2020 H.V.T., at 16:28:00-16:30:10 (in which Duke Kentucky's witness responsible for the projections acknowledged that the plant additions in that period would at least be equal to the difference in those numbers).

[40] $375,830,340 - $309,506,208 = $66,324,130.

[41] The total addition to plant in service in those months was $66,838,785, so assuming that all of the additions in excess of budgeted amounts occurred in that period, there were no additions in those periods. *See* Duke Kentucky's response to Staff's Second Request, Item 7(c), STAFF-DR-02-007 Attachment (showing the additions in that period).

[42] *See* Duke Kentucky's response to Staff's Second Request, Item 8 (where Duke Kentucky was unable to identify specific projects tied to much of the projected capital expenditures).

The result would be a reduction of $53.347 million in the 13-month average of Duke Kentucky's plant in service in the forecasted test year.[43]

The reduction in plant additions and depreciation expense would result in a reduction in ADIT and accumulated depreciation, which would increase rate base. The change in accumulated depreciation may be estimated by taking the change in the depreciation expense during the forecasted test period and dividing it by two to obtain the 13-month average of the change.[44] The change in ADIT is somewhat more difficult to estimate because Duke Kentucky did not provide any spreadsheet showing how it calculated its monthly changes in ADIT from the tax and book timing differences.

However, Duke Kentucky's revenue model does reflect the net monthly changes to Duke Kentucky's ADIT in FERC Account 282,[45] which includes Duke Kentucky's plant related ADIT.[46] Further, Duke Kentucky provided a monthly breakdown of the components of the changes to Account 282 for the forecasted test period.[47] That breakdown indicates that the monthly tax and book depreciation roughly offset each other and that the bulk of the ADIT change arises from the expensing of plant additions for tax

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[43] *See* Appendix A to this Order for the as-filed and reduced monthly ending plant balances by plant category.

[44] *See* Schedule B-3.2. It would likely be more accurate to calculate the depreciation expense in each month and then reflect that change as an actual 13-month average during the forecasted test period. However, Duke Kentucky determined its depreciation expense on plant additions by placing the additions in 1 of 6 broad categories and then applying a weighted depreciation rate for those categories to the 13 month average of the plant in those categories. The Commission calculated the reduction in the depreciation expense in the same way to remain consistent, so the change in the depreciation expense is not reflected in each month.

[45] *See* STAFF-DR-01-054_Attachment_-_KPSC_Elec_SFRs_-_2019 at Tab WPB-6's.

[46] Response to Staff's Second Request, Item 168(b) and (c).

[47] Response to Staff's Third Request, Item 70 and STAFF-DR-03-070_Attachment.

purposes.[48] Reductions in plant additions that are projected to be expensed as a repair for tax purposes will have nearly a directly proportional effect on timing difference attributable to that plant addition. Thus, the Commission will reduce the net increases in ADIT in each month in which plant additions were reduced in proportion with the reduction in plant additions in those months and, therefore, will reduce the extent to which ADIT is offsetting rate base in the forecasted test period by $7.070 million by applying the pro-rata method to those monthly changes.[49]

The net rate effect of adjustment to plant additions and the corresponding adjustments discussed above, as well as the reduction in depreciation expense discussed below, is a reduction in the revenue requirement in the amount of $5.518 million as shown in the following table:

Gross Plant Reduction	53,347,271
Accumulated Depreciation Reduction	(873,630)
ADIT Reduction	(7,069,799)
Rate Base Reduction	45,403,842
WACC	8.297%
Revenue Requirement Reduction	3,766,979
Depreciation Expense Reduction	1,747,260
GRCF	1.00195983
Revenue Requirement Reduction	1,750,684
Total Revenue Requirement Reduction	5,517,663

Battery Storage Pilot Program. As discussed below, the Commission finds that Duke Kentucky's Battery Storage Pilot Program should be denied. This results in a

[48] *Id.*

[49] *See* Appendix B for a summary of ADIT calculations.

revenue requirement reduction of $0.200 million related to the decrease in test-year rate base of $2.417 million.

Electric Vehicle Pilot Program. As discussed below, the Commission finds that Duke Kentucky's Electric Vehicle Pilot Program should be denied. This results in a revenue requirement reduction of $0.064 million related to the decrease in test-year rate base of $0.773 million.

Operating Income Adjustments

Rate Case Amortization. The Commission finds that Duke Kentucky's estimated rate case expense should be adjusted to the actual expenses of $0.339 million.[50] This reduces test-year expenses by $0.050 million, a revenue requirement reduction of $0.051. The Commission will also adjust the amortization period of the regulatory asset from Case No. 2017-00321 to be fully amortized over the same five-year period. This reduces test-year expenses by $0.068 million, a revenue requirement reduction of $0.068. The total revenue requirement reduction is $0.118 million.

Depreciation Expense Reduction. As noted above, the Commission finds that Duke Kentucky should continue to utilize the depreciation rates approved in Case No. 2017-00321. This results in a revenue requirement reduction of $7.446 million related to the depreciation expense reduction of $7.431 million.

Payroll Expense. Duke Kentucky included $26.964 million in payroll expense in the test period.[51] Kollen takes a critical stance of Duke Kentucky's forecasting of payroll

[50] Duke Kentucky's Sixth Supplemental Response to Commission Staff's First Request for Information (Staff's First Request) (filed Mar. 11, 2020).

[51] Duke Kentucky's Response to Staff's First Request, Schedule G-1, page 1 of 1.

and associated payroll tax expense, labeling it a "hodge-podge of budget/forecast methodologies."[52] Kollen instead recommends that payroll expense be forecasted by escalating Duke Kentucky's most recent actual yearly payroll expense by 3.00 percent, reflecting the yearly raise percentage for non-union employees,[53] instead of the 9.18 percent increase included in Duke Kentucky's forecasted test year, to reflect year-over-year raises to union and non-union full-time employees. Kollen recommends reducing Duke Kentucky's payroll expense by $1.125 million,[54] resulting in a reduction to the revenue requirement of $1.127 million as well as reducing associated payroll tax by $0.086 million, a revenue requirement reduction of $0.086 million.[55] The Attorney General recommends that the Commission accept this adjustment.[56]

Duke Kentucky offers that although actual payroll expenses as of September 2019 are lower than its budgeted amounts, contractor O&M expenses are over-budgeted amounts and that Duke Kentucky is not seeking to recover those increased costs which could justify an increase to Duke Kentucky's contractor expense of $7.135 million.[57] Duke Kentucky contends that the company forecasts payroll expenses based on budgets by

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[52] *Id.* at 22.

[53] *Id.* at 24.

[54] Kollen's proposed adjustment to Duke Kentucky's payroll expense removes Customer Connect labor totaling $0.207 million before calculating the proposed reduction. As explained below, the Commission rejects the proposed deferral of the Customer Connect expenses, and therefore, the Commission's adjustment to payroll and payroll taxes does not remove the Customer Connect related labor.

[55] Kollen Testimony at 24.

[56] Attorney General's Post-Hearing Brief at 19–20.

[57] Rebuttal Testimony of Christopher M. Jacobi (Jacobi Rebuttal) at 3 and Attachment CMJ-Rebuttal-1, page 1 of 1.

managers and supervisors throughout the company and that total labor force (payroll and contractors) is a more meaningful metric than actual payroll expense.[58] Duke Kentucky asserts that by only taking a portion of its overall labor force into account, the overall payroll expense is not represented.[59]

The Commission is in partial agreement with the Attorney General and finds that whenever no concrete method of forecasting payroll expense is present, an escalation of the most recent actuals is appropriate. Additionally, Duke Kentucky has asserted that it does not forecast or budget labor hours, but does not expect to deviate materially from 2018.[60] However, the Commission finds that using a composite 3.50 percent is reasonable because this escalation level accounts for both yearly raises as well as upward movement of employees within the company resulting in higher salary amounts for non-union employees.[61] The use of a 3.50 percent escalation results in a reduction to payroll expense of $1.175 million[62] and a reduction in associated payroll tax expense of $0.090 million. This results in a revenue requirement reduction of $1.267 million.

Retirement Expense. Duke Kentucky forecasted $0.568 million of test-year retirement plan expense related to its employees or its affiliates' employees who were

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[58] Duke Kentucky Post-Hearing Brief at 22–23.

[59] *Id.*

[60] Application, Schedule G-2, page 1 of 1.

[61] Jacobi Testimony at 21.

[62] As discussed above, Kollen's proposed adjustment to Duke Kentucky's payroll expense removes Customer Connect labor totaling $0.207 million before calculating the proposed reduction, based on the recommended deferral of the Customer Connect labor. Therefore, while the Commission is allowing a higher escalation factor, our adjustment is a larger revenue requirement decrease because it is applied to a larger payroll amount.

covered by both a defined benefit pension plan as well as a 401(k) match defined contribution plan.[63] Based on the concern expressed by the Commission in Case No. 2017-00321, Duke Kentucky made pro forma adjustments to remove the pension cost for employees who also receive a 401(k) match.[64]

Kollen recommends that, in addition to the pro forma adjustment already made by Duke Kentucky, the Commission exclude expenses associated with Duke Kentucky's Supplemental Executive Retirement Plan (SERP) of $0.122 million. Kollen recommends this on the grounds that the expenses are incurred to provide certain highly compensated executives retirement benefits in addition to the benefits otherwise available through the Duke Energy pension and other postretirement benefits plans.[65] The Attorney General recommends that the Commission accept this adjustment.[66] Duke Kentucky states that it accepts the adjustment to remove the SERP expense.[67]

The Commission finds that this adjustment should be accepted and Duke Kentucky's revenue requirement reduced by $0.122 million.

Incentive Compensation. Based on Commission's findings in Duke Kentucky's most recent general rate case, Case No. 2017-00321, Duke Kentucky made pro forma adjustments to exclude the recovery of incentive compensation related to financial performance. Kollen asserts that in addition to the adjustments made to incentive

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[63] Application, Schedule D-2.29, page 1 of 1.

[64] Direct Testimony of Renee H. Metzler (Metzler Testimony) at 45.

[65] Kollen Testimony at 34.

[66] Attorney General's Post-Hearing Brief at 24.

[67] Lawler Rebuttal at 25.

compensation, payroll tax expense should be reduced by the amount associated with short-term incentive compensation, $0.065 million.[68] Duke Kentucky states it accepts this adjustment and modifies its revenue requirement, reducing it by $0.066 million.[69]

Duke Kentucky also included $0.856 million of non-executive incentive compensation, $0.223 million of executive incentive compensation, and $0.502 million of director's stock expense in its test year.[70] A portion of these incentive payments would only be paid out in the event that a predetermined "circuit breaker" Earnings per Share (EPS) value is met in the fiscal year.[71] Duke Kentucky states that if EPS is less than the circuit breaker value, then test-year expenses that would not be paid out equals $0.661 million.[72]

The Commission agrees with the adjustment to payroll taxes associated with incentive compensation and finds that Duke Kentucky's payroll tax expense should be reduced by $0.065 million, a revenue requirement reduction of $0.066 million. Additionally, the Commission finds that Duke Kentucky's incentive compensation that is directly tied to EPS of $0.661 million should be removed from the test-year expenses, a revenue requirement reduction of $0.663 million.

<u>Credit/Debit Card Convenience Fees</u>. Duke Kentucky's customers currently pay a $1.50 per transaction convenience fee to utilize credit cards, debit cards, or electronic

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[68] Kollen Testimony at 31.

[69] Lawler Rebuttal at 23.

[70] Application, Schedule D-2.28, page 1 of 1.

[71] Metzler Testimony at 33.

[72] Duke Kentucky's response to Commission Staff's Third Request for Information (Staff's Third Request), Item 8.b.

checks, which is collected by the third party payment processing company, SpeedPay. Duke Kentucky does not receive any portion of the fees. Duke Kentucky proposes to remove these convenience fees from the transaction and include them in base rates. Duke Kentucky escalated the number of transactions actually experienced in 2018 to project the test-year expense of $0.493 million. Kollen proposes a $0.494 million revenue requirement decrease to remove the fees in their entirety because Duke Kentucky refused to forecast the decrease in expenses that will occur if its proposal is accepted.[73] Kollen believes that uncollectible accounts expense will decrease with more convenient payment methods and that, as more customers transition from other payment methods to credit/debit card payments, Duke Kentucky's operating expenses for processing those payments will likewise decrease.[74] The Attorney General recommends that the Commission accept this adjustment.[75] Duke Kentucky argues that the decrease in operating expenses is not "known and measurable" so no adjustment should be made;[76] however, the threshold for adjustments to a forecasted test period is not "known and measurable" but a reasonable forecast. Additionally, Duke Kentucky states that the average expense to process other payment methods is less than $0.15.[77]

The Commission finds that Duke Kentucky's request to include convenience fees in base rates should be denied, a revenue requirement decrease of $0.494 million. Duke Kentucky may cease the practice of passing the convenience fees onto customers and

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[73] Kollen Testimony at 28.

[74] *Id.*

[75] Attorney General's Post-Hearing Brief at 23.

[76] Rebuttal Testimony of Lesly G. Quick at 3.

[77] February 19, 2020 H.V.T. at 12:05:19

absorb the expense if it so chooses, but asking all customers to share the cost for payments methods that are at least ten times more expensive than the alternatives is unreasonable. Duke Kentucky offers multiple fee free payment methods and should offer those alternatives to customers that take issue with the convenience fees.

Cost of Capital Included in DEBS Expenses. Duke Kentucky Energy Business Services (DEBS), Duke Kentucky's shared service company, includes a cost of capital component in its charges to Duke Kentucky that the Kollen characterizes as excessive and incongruent with Duke Kentucky's rate base and cost of capital calculations with the Commission.[78] Kollen proposes to reduce the cost of capital component to DEBS actual cost, which he states is the cost of short-term intercompany financing under the Money Pool Agreement, a proposed revenue requirement decrease of $0.679 million.[79] Duke Kentucky argues that the DEBS costs are reasonable and included in the Cost Allocation Manual (CAM), but that an inadvertent error in preparing the test year resulted in the entire return on DEBS assets being excluded from the revenue requirement.[80] The Attorney General recommends that the Commission disregard Kollen's recommended adjustment since it is rendered moot and unnecessary as a result of Duke Kentucky's error in failing to include the expense in its filing.[81]

Despite Duke Kentucky's contentions otherwise, when asked to provide the return component included in rates, it calculated $0.751 million in expense as opposed to the

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[78] Kollen Testimony at 40.

[79] *Id.*

[80] Rebuttal Testimony of Jeffery R. Setser (Setser Rebuttal) at 3.

[81] Attorney General's Post-Hearing Brief at 26.

$0.915 million inadvertently excluded from Account 931008 in the test period.[82] The return component used to calculate the return was based on Duke Kentucky's currently approved pre-tax weighted average cost of capital (WACC) and not the WACC proposed in this case.[83] The Commission concludes that if the entirety of Duke Kentucky's DEBS cost of capital expense was excluded from the test year, then the maximum amount necessary to correct the exclusion is $0.736 million, Duke Kentucky's calculation corrected to use the WACC it proposed in this proceeding. Accordingly, the Commission will include a revenue requirement increase of $0.738 million. Duke Kentucky also inadvertently excluded credits for the loss on sale of accounts receivable, in the amount of $1.242 million, from income accounts in the forecasted test period, which Duke Kentucky believes would be proper to include in the revenue requirement as long as it is offset by the amount of the return on DEBS assets that was also inadvertently excluded.[84] Correcting that error is a reduction of $1.244 million.

DEBS EDIT. Kollen proposes an adjustment to amortize excess deferral income taxes (EDIT) that were created by the Tax Cuts and Jobs Act, recorded as a reduction to DEBS's deferred tax expense in 2017, and not refunded or credited to Duke Kentucky or any other Duke Energy affiliate.[85] Kollen recommends allocating the DEBS EDIT to Duke Kentucky in the same manner that the DEBS depreciation expense is allocated and then

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[82] Duke Kentucky's response to the Attorney General's First Request, Item 50(c), Attachment and Duke Kentucky's response to Staff's Post-Hearing Request, Item 15.

[83] Duke Kentucky's response to Staff's Post-Hearing Request, Item 16.

[84] Duke Kentucky's response to Staff's Post-Hearing Request, Item 1.

[85] Kollen Testimony at 42.

refunding the EDIT to customers as a one-time $0.214 million refund or credit effectuated through a specific surcredit or as a credit through another rider.[86] Duke Kentucky argues that the income taxes it is charged from DEBS does not include deferred tax expense so that Duke Kentucky's customers have not been required to pay deferred taxes at the DEBS level and are not entitled to a refund on that basis.[87] Duke Kentucky further argues that it is improper to refund the DEBS EDIT amount because a prior deferred tax asset treatment that favored Duke Kentucky at DEBS's expense.[88] In the event that the Commission accepts this adjustment, Duke Kentucky requests that a minimum amortization period of five years be employed.[89]

Duke Kentucky pays a cost of capital component on allocated DEBS plant, reduced for ADIT and straight-line book depreciation, and it uses a pre-tax WACC that includes the statutory tax rate.[90] Duke Energy's prior treatment of deferred tax assets on DEBS books has no bearing on this adjustment. The Commission finds that DEBS EDIT should be returned to Duke Kentucky. However, the Attorney General's proposal to include the entire reversal as a one-time adjustment through a rider is overly complicated to implement. Accordingly, the Commission will amortize the DEBS EDIT over five years for a revenue requirement reduction of $0.043 million.

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[86] Kollen Testimony at 44 and the Attorney General's response to Staff's First Request, Item 7.

[87] Setser Rebuttal at 5.

[88] *Id.*

[89] Duke Kentucky's Reply Brief at 6.

[90] Duke Kentucky's response to the Attorney General's First Request, Item 50(e), Setser Rebuttal at 5, and Duke Kentucky's response to Staff's Post-Hearing Request, Item 17.

Inventory Tax Credit for State Tax Expense. The inventory tax credit is a nonrefundable and nontransferable credit that may be applied against income taxes imposed by KRS 141.040 for any taxpayer that, on or after January 1, 2018, timely pays ad valorem taxes on inventory to a taxing jurisdiction in Kentucky. The credit will be phased in over four years, beginning in 2018 with a 25 percent phase-in increasing each year until 2021, when the full amount of ad valorem taxes timely paid are deductible for state income tax purposes. A corporation may apply the inventory tax credit against income tax on its Kentucky Corporation Income Tax Return. Duke Kentucky did not reflect this deduction in its forecasted test year. Duke Kentucky's fuel inventory for the forecasted teat year is $19.518 million, for a test-year deduction of $0.008 million.[91] The revenue requirement reduction is $0.008 million.

Tamper Fee Revenues. As discussed below, the Commission is rejecting Duke Kentucky's proposal to include a Tamper Fee penalty in its tariffed rates. This will result in a revenue requirement increase of $0.022 million because Duke Kentucky included estimated revenues of $0.022 million from these fees in the forecasted test period.[92]

Excessive Plant Additions. As discussed above, the Commission will reduce Duke Kentucky's forecasted plant additions for amounts in excess of Duke Kentucky's capital budgets, which results in a $1.750 million reduction in depreciation expense, shown below:

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[91] The 2020 credit is 75 percent and the 2021 credit is 100 percent of timely-paid inventory taxes. The Kentucky inventory property tax rate is $0.05 per $100 of inventory value.

[92] Application, Schedule D-2.21, page 1 of 1.

	Current Accrual Rate	13-month Average Reduction	Expense Reduction
Total Steam Production Plant	2.33%	20,253,210	471,900
Total Other Production Plant	3.23%	2,962,176	95,678
Total Transmission Plant	2.24%	(5,192,808)	(116,319)
Total Distribution Plant	2.11%	28,283,150	596,774
Total General Plant	9.90%	7,078,177	700,739
Total Allocated Common Plant	4.13%	(36,634)	(1,513)
Total Electric Plant		53,347,271	1,747,260

This results in a revenue requirement reduction of $1.751 million related to decreased depreciation expense.

Battery Storage Pilot Program. As discussed below, the Commission finds that Duke Kentucky's Battery Storage Pilot Program should be denied. This results in a revenue requirement reduction of $0.130 million related to the decrease in test-year operating expenses of $0.130 million.

Electric Vehicle Pilot Program. As discussed below, the Commission finds that Duke Kentucky's Electric Vehicle Pilot Program should be denied. This results in a revenue requirement reduction of $0.076 million related to the decrease in test-year operating expenses of $0.075 million.

Other Revenue Requirement Adjustments

Inventories Financed by Vendors. Kollen proposes a revenue requirement reduction of $0.187 million to exclude from rate base fuel inventories that he argues are financed by Duke Kentucky's vendors.[93] In the event that the Commission denies its recommendation to exclude cash working capital from Duke Kentucky's rate base, Kollen further proposes a reduction of $1.478 million to exclude materials and supplies

[93] Kollen Testimony at 9. Kollen's recommendation does not reflect a reduction in rate base related to the materials and supplies inventories accounts payable because Duke Kentucky could not quantify the materials and supplies inventories accounts payable.

inventories from Duke Kentucky's rate base.[94] The Attorney General recommends that the Commission accept this adjustment.[95] Duke Kentucky contends that Kollen's proposed adjustment is not symmetrical, in that no consideration was given to its receivables, and conflates two rate base items, cash working capital and inventories.[96] As discussed above, Duke Kentucky sells its receivables to an affiliate. Because the Commission agrees with the recommendation to adjust cash working capital to zero, this adjustment is moot as it is a duplication of the working capital adjustment discussed above.

<u>Rate Case Expenses for New Depreciation Study</u>. Duke Kentucky filed a new depreciation study with its application in this case.[97] Because Duke Kentucky's last rate case in 2017 also contained a depreciation study, Kollen takes issue with the short interval and precipitous increase in depreciation expense between the studies and therefore recommends that the Commission deny recovery of rate case expense for the depreciation study, a revenue requirement reduction of $0.012 million.[98] The Attorney General recommends that the Commission accept this adjustment.[99]

While there was a shorter than average period between depreciation studies, Duke Kentucky has historically filed a new study with every rate case and there are no standard rules of the Commission for the minimum period between depreciation studies. The

[94] Kollen Testimony at 10–11.

[95] Attorney General's Post-Hearing Brief at 14–15.

[96] Lawler Rebuttal at 4.

[97] Application, Attachment JJS-1.

[98] Kollen Testimony at 20–21.

[99] Attorney General's Post-Hearing Brief at 18.

Commission finds that the cost of the depreciation study should be allowed as a rate case expense, even though we agree with the denial of any increased depreciation expense resulting from the proposed depreciation rates as discussed above.

Customer Connect System. Kollen recommends the removal of the development and implementation operating and maintenance (O&M) expenses associated with Duke Kentucky's Customer Connect Program and suggests that Duke Kentucky should defer these expenses as a regulatory asset. Duke Kentucky is willing to accept this recommendation if regulatory asset authority is granted by the Commission to allow Duke Kentucky to accumulate all actual O&M expenses, including carrying costs, associated with the Customer Connect program into a regulatory asset. Duke Kentucky states that once the total costs for the project are incurred and the actual amount of the regulatory asset are known, Duke Kentucky will request recovery in a subsequent rate proceeding. This adjustment would lower the revenue requirement by $0.911 million. The Attorney General opposes Duke Kentucky's request to include carrying costs in the proposed regulatory asset but otherwise recommends that the Commission accept this adjustment.[100]

The Commission finds that this adjustment is unnecessary and therefore, will reject this adjustment. There is no compelling argument for deferring these costs in the instant proceeding, especially considering Duke Kentucky's proposal to include carrying costs in a regulatory asset, which would be included in rate base.[101] Duke Kentucky's test-year

[100] Attorney General's Post-Hearing Brief at 21.

[101] Regulatory assets that will be included in rate base should not include carrying costs. Regulatory assets that will not be included in rate base can appropriately include carrying costs, if the utility requests such treatment and if the intent of exclusion form rate base is unrelated to sharing costs between shareholders and ratepayers.

expenses excludes costs that are appropriate for capitalization, and the Commission sees no reason to depart from the standard capitalization versus expense requirements for software development. Duke Kentucky's Customer Connect Program will not be operational until 2022 and at that time all properly capitalized costs will be eligible for rate base inclusion.

Regional Transmission Expansion Plan (RTEP) Refunds. Duke Kentucky recorded two refunds in 2018 summing to $8.000 million as credits to transmission O&M expense after the Federal Energy Regulatory Commission (FERC) approved a settlement agreement entered into by most of the PJM Interconnection, LLC (PJM) transmission owners, including Duke Kentucky, and the state regulatory commissions that are located in the PJM footprint. The refunds were due to overcharges to western PJM transmission owners, including Duke Kentucky, for RTEP projects built in the east.[102] Duke Kentucky did not include RTEP expenses in its base rates until the rates approved in Case No. 2017-00321, beginning May 2018. Kollen proposes a $1.603 million revenue requirement decrease to return the entirety of the RTEP refunds to customers on the basis that Duke Kentucky's electric rates were set in Case No. 2006-00172[103] while it was a Midcontinent Independent System Operator (MISO) member and since it exited MISO and joined PJM in 2012, Duke Kentucky has over-recovered annual transmission O&M expenses.[104] The Attorney General recommends that the Commission accept this adjustment.[105] Duke

[102] Kollen Testimony at 34.

[103] Case No. 2006-00172, *An Adjustment of the Electric Rates of the Union Light, Heat and Power Company d/b/a Duke Energy Kentucky, Inc.* (Ky. PSC Dec. 21, 2006).

[104] Kollen Testimony at 37.

[105] Attorney General's Post-Hearing Brief at 25.

Kentucky admits an inadvertent error to return refunded amounts recovered in May – June 2018 in base rates but argues that only those amounts should be returned; it proposes a revenue requirement decrease of $0.052 million to return the refunds over a five year period.[106]

The Commission disagrees with both proposed adjustments. Had Duke Kentucky not filed a base rates case so soon after the refund, Kollen would not have proposed the adjustment. Duke Kentucky did not err in not including a refund from a period outside the base and forecasted test periods in this case. To the extent that Duke Kentucky collected RTEP expenses through a rider mechanism, namely the Fuel Adjustment Clause or the Profit Sharing Mechanism, the refund should be reflected in those mechanisms; however, base rates are not subject to true-ups for refunds, additional expenses, or over- and under-recovery under normal circumstances and the Commission sees no reason to deviate from the norm.

Cost of Capital Adjustments

Updating Duke Kentucky's cost of capital to include the short-term and long-term debt issuances for the most current forward curve long-term and short-term interest rates as of February 26, 2020,[107] will result in a revenue requirement reduction of $0.301 million. Using the 9.25 percent return on equity (ROE), found reasonable below, will reduce Duke Kentucky's revenue requirement by $3.116 million.[108]

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[106] Lawler Rebuttal at 25.

[107] Duke Kentucky's response to Staff's Post-Hearing Request, Item 9.

[108] *See* Appendix C to this Order for a summary of cost of capital adjustments.

Amortization of Excess ADIT

Duke Kentucky projected that as of March 31, 2020, its excess protected ADIT balance would be $46.828 million and that it would amortize at a rate of about $0.037 million dollars per month during the forecasted test period.[109] It determined that amortization rate by calculating the rate allowed by the Adjustable Rate Adjustment Method (ARAM) in 2018 and then simply carried that rate forward to the forecasted test period.[110] Duke Kentucky asserted that it carried the 2018 rate forward "due to the complexity of getting precise estimates in PowerTax," which is the program it uses to calculate ARAM amortization.[111]

However, Duke Kentucky acknowledged that ARAM amortization is dynamic and is likely to change as the timing differences that gave rise to the excess ADIT begin reversing.[112] In fact, while Duke Kentucky would or could not calculate the ARAM amortization in the forecasted test period,[113] the evidence indicates that it is likely to increase in the near term.[114] Further, if the amortization rate reflected in rates is lower

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[109] *See* STAFF-DR-01-054_Attachment_-_KPSC_Elec_SFRs_-_2019 at Tab WPB-6's.

[110] Response to Staff's Second Request, Item 172(d).

[111] *Id*.

[112] Response to Staff's Second Request, Item 172(c).

[113] *See* Response to Staff's Third Request, Item 74 (where Duke Kentucky did not calculate the ARAM amortization rate for protected excess ADIT for 2020 and 2021 pursuant to Commission Staff's request for the same).

[114] With the amortization rate projected by Duke Kentucky, it would take over 100 years for its excess protected ADIT balance to be fully amortized—$46,828,044/$438,961=106.68. However, Duke Kentucky's plant in service has a weighted average remaining useful life much lower than 100 years, so the rate of amortization of excess ADIT must increase if it is to be exhausted when the assets that generated it are fully depreciated in Duke Kentucky's books as anticipated by ARAM. *See* Application at Attachment JJS-1 (showing the remaining useful lives used for Duke Kentucky's depreciation study and indicating that the longest remaining useful lives for pre-2018 property is less the 70 years such that the weighted average would be below that). Further, Duke Kentucky provided a breakdown of its excess protected ADIT by the

than the actual ARAM amortization in the forecasted test period, then the difference, or a portion thereof, may be lost to ratepayers.[115] Thus, Duke Kentucky's use of the 2018 amortization rate to estimate the ARAM amortization for the forecasted test period—which includes 9 months of 2020 and 3 months of 2021—is not consistent with the Commission's position of passing the full reduction in tax expense arising from the reduced tax rate on to ratepayers.[116]

Ideally, Duke Kentucky would have calculated the ARAM amortization for forecasted test period based on the same estimates and projections it used to calculate rates. However, since Duke Kentucky did not do so, the Commission could ensure that the protected excess ADIT is amortized to the maximum extent allowed by law by treating the amortization of protected and unprotected excess ADIT collectively for the purpose of establishing rates. This means the Commission would accept Duke Kentucky's total amortization of federal protected and unprotected excess ADIT as proposed for the purpose of establishing rates. This would require Duke Kentucky to record that amount as the amortization of protected excess ADIT until its next rate case to the extent permitted by ARAM in the forecasted test year to be calculated once Duke Kentucky has

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assets that generated it, and that breakdown indicates that there is a significant amount of excess deferred tax liabilities that were not being amortized in 2018, because the timing differences that generated them were not currently reversing. *See* STAFF-DR-02-172(f)_Attachment.

[115] *See* IRS Chief Counsel Advice 200641005, 2006 WL 2925869 (issued Oct. 13, 2006) (in which the IRS gave a non-binding opinion that ADIT and excess ADIT attributable to property that is retired ceases to exist and therefore may not be amortized to reduce rates); *see also* February 19, 2020 H.V.T., at 14:57:36-15:00:09 (in which Duke Kentucky could not state what would happen to excess ADIT that could have been used to reduce rates using ARAM amortization but was not used because the ARAM rate was lower than it should have been).

[116] *See* Case No. 2017-00477, *Kentucky Industrial Utility Customers, Inc. v. Duke Energy Kentucky, Inc.* (Ky. PSC Dec. 27, 2017) ("Since ratepayers are required to pay through their rates the tax expenses of a utility, any reduction in tax rates must be timely passed through to ratepayers.").

the information for 2020 and 2021 that it used to calculate the 2018 ARAM amortization.[117] There would be no rate effect to this requirement, but assuming ARAM amortization for the test year is higher than the rate in 2018, as appears likely, the result would be that the remaining balance of the unprotected excess ADIT would be higher when Duke Kentucky returns for its next rate case.

Duke Kentucky was asked about a similar method of accounting for the amortization of excess ADIT and claimed that it would violate federal normalization rules, stating:

> It would violate federal normalization rules for the Commission to true-up estimated ARAM amortization with actual ARAM amortization and not make corresponding true-up for book depreciation, tax expense, and accumulated deferred income taxes. This can be described as the "consistency principal" from IRC Sec. 168(i)(9)(B).[118]

The "consistency principal" that Duke Kentucky refers to prohibits:

> any procedure or adjustment for ratemaking purposes which uses an estimate or projection of the taxpayer's tax expense, depreciation expense, or reserve for deferred taxes . . . unless such estimate or projection is also used, for ratemaking purposes, with respect to the other 2 such items and with respect to the rate base.[119]

As indicated by the plain language of the statute, the emphasis is on the use of consistent estimates and projections of tax expense, depreciation expense, ADIT, and rate base when setting rates. The idea is that changes in the estimate or projection of one of those

[117] The forecasted test period would have 9 months of amortization from 2020 and 3 months of amortization from 2021.

[118] Response to Staff's Post Hearing Data Request, Item 25.

[119] 26 U.S.C.A. § 168(i)(9)(B)(ii).

items may affect one or more of the other items such that if an estimate or projection of one item is changed for ratemaking purposes, in a manner that triggers the normalization rules, then the effect of that change should be reflected in others.[120]

Changing the amortization rate of excess ADIT will affect rates in two ways: (1) it will change tax expense in the forecasted test period because the amortization of excess ADIT is used to reduce tax expense when setting rates; and (2) it will change the ADIT offset against rate base because the amortization of excess ADIT reduces that offset. However, if the amortization of unprotected excess ADIT is adjusted in proportion to any adjustment to the amortization of protected excess ADIT, then there were would be no rate effect. Any decrease in tax expense in rates arising from the increased amortization of protected excess ADIT would be offset from a corresponding increase in tax expense in rates arising from a decrease in the amortization of unprotected excess ADIT. Similarly, any decrease in the rate base offset arising from the increased amortization of protected excess ADIT would be offset from a corresponding increase in the rate base offset arising from a decrease in the amortization of unprotected excess ADIT. Thus, requiring Duke Kentucky to attribute the amortization of excess ADIT in base rates to protected excess ADIT to the extent allowed by ARAM in the forecasted test period when Duke Kentucky is able to calculate ARAM amortization for the forecasted test period would not violate the "consistency principal" because there would be no inconsistent treatment for ratemaking purposes.

[120] *See, e.g.,* Private Letter Ruling 9552007, 1995 WL 764845 (issued Dec. 29, 1995) ("[T]hose consistency rules would be violated if, as the Intervenor proposes, the federal income tax component of cost of service reflects depreciation of the Plant's disallowed costs but those costs are not included in rate base or the depreciation component of cost of service.").

Calculating the ARAM amortization for the forecasted test period in the future based on actual information may result in slightly different ARAM amortization than if it had been calculated based on the estimates and assumptions used by Duke Kentucky to establish rates in the forecasted test year. However, information used to calculate ARAM amortization is not "estimates or projections" used in a "procedure or adjustment for ratemaking purposes" because the ARAM amortization simply establishes an upper limit imposed by federal law on the extent to which protected excess ADIT may be amortized, whereas the actual amortization of protected excess ADIT is set by the Commission pursuant to state law ratemaking procedures and rules. In fact, if the use of different estimates and projections to calculate the ARAM amortization violated the "consistency principal," then Duke Kentucky's methodology for calculating ARAM amortization in the forecasted test period would also violate the consistency rule because it is based on the depreciation expense, timing differences, and tax expense, among other information, from 2018 as opposed to the estimates and projections from the forecasted test period used to establish the other components of base rates. Thus, the Commission finds that requiring Duke Kentucky to attribute the amortization of excess ADIT in base rates to protected excess ADIT to the extent allowed by ARAM in the forecasted test period, to be calculated when Duke Kentucky has the information to do so, does not violate the federal normalization rules and further finds that the amortization of excess ADIT in base rates should be allocated to the amortization of protected excess ADIT in that manner with any remainder allocated to unprotected excess ADIT.

Total Revenue Requirement

The effect of the Commission's adjustments on Duke Kentucky's requested revenue increase of $45.634 million is a decrease of $21.510 million, for a total revenue requirement increase of $24.124 million.[121]

VALUATION

Rate Base. Duke Kentucky proposed a net investment rate base for its forecasted test period of $946.428 million, based on the 13-month average for that period.[122] In response to errors identified in discovery, Duke Kentucky revised this amount to $943.411 million.[123]

The Attorney General proposed to reduce Duke Kentucky's rate base to $924.148 million.[124] The Attorney General proposed to (1) remove asset ADIT related to Solar Investment Tax Credits (Solar ITC);[125] (2) reduce fuel and materials and supplies inventories for amounts financed by vendors;[126] (3) adjust accumulated depreciation and ADIT to reflect the Attorney General's proposal to reject the depreciation rates proposed

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[121] *See* Appendix D to this Order for a summary of adjustments.

[122] Application, Schedule A, page 1 of 1.

[123] Duke Kentucky's responses to the Attorney General's Second Request for Information, Item 5 and the Attorney General's First Request for Information (Attorney General's First Request), Item 14(b). *See also* Lawler Rebuttal at 23.

[124] Kollen Testimony, Attachment Duke_Energy_KY_Rev_Req_-_AG_Recommendation.xlsx, Tab Rate Base.

[125] Kollen Testimony at 6. Duke Kentucky accepts this adjustment. *See* Lawler Rebuttal at 23.

[126] Kollen Testimony at 7.

by Duke Kentucky; (4) remove regulatory assets for deferred rate case expenses;[127] and (5) reduce cash working capital to zero.[128]

As discussed above, the Commission has determined that Duke Kentucky's net investment rate base is $881.003 million, as shown below:

	Amount (in millions)
Rate Base per Duke Kentcky's filing	$ 946.428
Adjustments:	
Remove Asset ADIT for Solar ITC	(3.017)
Reflect Cash Working Capital of Zero In Lieu of 1/8th O&M Methodology	(14.965)
Remove Regulatory Asset for Deferred Rate Case Expenses	(0.712)
Reflect Changes in Acc.Dep. and ADIT Due to Lower Depreciation Expense	1.863
Reduce Plant for Additions in Excess of Budgets, including Acc. Dep. and ADIT Offsets	(45.404)
Removal of Battery Storage Project	(2.417)
Removal of EV Projects	(0.773)
Net Change in Rate Base	(65.425)
Adjusted Rate Base	$ 881.003

Capitalization. Duke Kentucky is a wholly owned subsidiary of Duke Energy Ohio, Inc. (Duke Ohio), which is a wholly owned subsidiary of Cinergy Corp., which is wholly owned by Duke Energy.[129] All equity funding is issued by Duke Energy and each subsidiary issues its own debt. Duke Kentucky proposes a total capitalization for the forecasted test period of $1,449.897 million, which reflects financing activities through

[127] *Id.* at 19.

[128] *Id.* at 17.

[129] Spiller Testimony at 5.

March 2021.[130] The Commission accepts Duke Kentucky's proposed capitalization amount.

RATE OF RETURN

Capital Structure and Cost of Debt

Duke Kentucky proposed a test-year-end capital structure consisting of 45.93 percent long-term debt at a cost of 4.07 percent; 5.84 percent short-term debt at a cost of 1.94 percent; and 48.23 percent common equity with a proposed return of 9.80 percent.[131] The proposed capital structure reflects a long-term debt issuance of $50.000 million in September 2020 with an interest rate estimated to be 4.00 percent based upon the blended average of Bloomberg's forward curves for the 5-year, 10-year, and 30-year U.S. Treasury yield as of June 2019 plus a 162-basis point credit spread.[132]

The Attorney General's witness, Lane Kollen, disputes this interest rate, stating that it is excessive based on current rates and recommends that the Commission update this rate with the most recent and current Treasury yields.[133] Duke Kentucky disagrees with this recommendation maintaining that the forecasted rate is reasonable and argues that Duke Kentucky is not permitted to update all the elements of its revenue requirement to reflect actual results and singling out one component is unfair and unreasonable.[134]

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[130] Application, Schedule J-1, page 2 of 2.

[131] Application, Schedule J-1, page 2.

[132] Jacobi Testimony at 12.

[133] Kollen at 58.

[134] Jacobi Rebuttal at 4.

Duke further noted that Kollen's recommendation was not representative of a future issuance and failed to consider the forward curve, and thus underestimated the cost of debt.[135] The Attorney General counters that the Commission can make changes to the test year if the Commission believes they are appropriate and reasonable and states that current rates are a better proxy than forecasted rates. The Attorney General further noted that since Kollen's direct testimony was filed, 30-year Treasury yields have further declined, which is additional evidence that the forecasted interest rates for the September 2020 debt issues is high.[136]

The Commission agrees that the long-term interest rates, as proposed by Duke Kentucky, are not representative of the current economic environment. Duke Kentucky provided an update to the capital structure that reflects the most current forward curve long-term and short-term interest rates as of February 26, 2020. Although things have shifted further since this update, the Commission will apply the most recent filed short-term and long-term rates of 1.71 and 4.03 percent to the capital structure.[137]

<u>Return on Equity</u>

In its application, Duke Kentucky's expert witness, Roger A. Morin, PhD, proposed a ROE using the discounted cash flow model (DCF), the capital asset pricing model (CAPM), the empirical CAPM (ECAPM), and risk premium (RP) models. Duke Kentucky's ROE estimates ranged from 8.9 percent to 10.5 percent, adjusted for flotation costs. Based upon the range of estimates, Dr. Morin proposed a 9.8 percent ROE as the

[135] *Id*. at 5–6. *See also* Duke Kentucky's Post-Hearing Brief at 32–34.

[136] Attorney General's Post Hearing Brief at 35.

[137] *See*, for example, Case No. 2018-00281 *Electronic Application of Atmos Energy Corporation for an Adjustment in Rates* (Ky. PSC May 7, 2019).

appropriate return. Dr. Morin argued that awarding an ROE of 9.8 percent is both reasonable and fair, and that such an award is the minimum necessary for it to attract capital on reasonable terms, maintain financial integrity, and earn a return commensurate with returns on comparable risk investments.[138] Dr. Morin further stated his assertion that a 9.8 percent ROE is considered to be the minimum required by the company taking into account its relative small size, large financing requirements, and concentrated generation portfolio.[139]

The table below summarizes the range of Duke Kentucky's ROE estimates.[140]

METHODOLOGY	**ROE**
DCF – Value Line Growth	10.0%
DCF – Analyst Growth	8.9%
CAPM	8.9%
ECAPM	9.1%
Historical Risk Premium	10.5%
Allowed Risk Premium	10.4%

The Attorney General's witness, Richard A. Baudino, provided testimony and analysis regarding ROE. Baudino's analysis used both the DCF and CAPM models, though his recommended ROE of 9.0 percent is based upon the DCF results.[141] Baudino uses the CAPM model results to serve as confirmation of the reasonableness of the DCF results. In addition, Baudino examines recent allowed ROEs from other jurisdictions and reviews and revises the ROE estimates presented by Dr. Morin.[142]

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[138] Direct Testimony of Roger A. Morin, PhD at 4.

[139] *Id.* at 5.

[140] *Id.* at 60.

[141] Direct Testimony of Richard A. Baudino at 17.

[142] *Id.*

For his DCF analysis, Baudino adopts the same 20 companies that Dr. Morin used in his proxy group. Baudino calculates DCF estimates using both average growth rates (Method 1) and median growth rates (Method 2). Method 1 ROE estimates range from 8.00 to 9.45 percent (8.53 average). Method 2 ROE estimates range from 7.75 to 9.09 percent (8.48 average).[143]

For his CAPM ROE estimates, Baudino employs two approaches. The first approach uses the forecasted market return and the second uses a historical risk premium based upon stock and bond returns from 1926 to 2018.[144] Baudino utilizes a normalized risk free rate and adopted Dr. Morin's Value Line company beta values. The forward-looking CAPM ROE estimates range from 7.73 to 8.01 percent.[145] For the historical risk premium CAPM model, Baudino uses historical market returns to calculate a historical market risk premium and inputs the current return on 30-year treasury bonds and the normalized 30-year return as the risk free rate resulting in CAPM ROE estimates of 6.42 percent and 7.11, respectively. A further adjustment was made to these calculations to account for the effect of an increase in price/earnings ratios. With that final adjustment, Baudino calculates historical CAPM ROE estimates of 5.97 percent and 7.11 respectively.[146]

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[143] *Id.* at 22 and Exhibit No._(RAB-4).

[144] *Id.* at 25.

[145] *Id.* at 26 and Exhibit No._(RAB-5).

[146] *Id.* at 27-29 and Exhibit No._(RAB-6).

As a check on the reasonableness of his estimates, Baudino reviewed Dr. Morin's analysis of average ROEs awarded from 2016 to 2018, which ranged from 9.64 to 9.77 percent. He argues that 30-year Treasury bond yields are much lower presently and that the allowed returns for electric companies should follow suit.[147] In addition, he cites two recent decisions in other jurisdictions of 9.35 percent and 9.20 percent.[148] Based upon his analysis, Baudino recommends an ROE of 9.00 percent for Duke Kentucky.[149] The following table summarizes Baudino's results.[150]

SUMMARY OF ROE ESTIMATES

DCF Methodology	
Average Growth Rates	
High	9.45%
Low	8.00%
Average	8.53%
Median Growth Rates	
High	9.09%
Low	7.75%
Average	8.48%
CAPM Methodology	
Forward-looking Market Return:	7.73%
Current 30-Year Treasury	
D&P Normalized Risk-free Rate	8.01%
Historical Risk Premium:	
Current 30-Year Treasury	5.97% - 6.42%
D&P Normalized Risk-free Rate	6.65% - 7.11%

[147] *Id.* at 30.

[148] *Id.* at 31 (referring to the City Council of New Orleans Resolution No. R-19-457 involving Entergy New Orleans and the Vermont Public Utility Commission's Order on October 23, 2019 involving Vermont Gas Systems, Inc.).

[149] *Id.*

[150] *Id.* at 30.

Regarding Dr. Morin's proposal, Baudino takes issue with multiple assumptions used in Dr. Morin's ROE calculations. For the DCF model, Baudino argues that in addition to Dr. Morin's use of forecasted earnings growth rates, the use of forecasted dividend growth rates is also appropriate and that Dr. Morin's use of (1+g) rather than (1+0.5g) overstates the expected dividend yield.[151] Regarding the CAPM and ECAPM models, Baudino argues that financial markets are efficient and that current interest rates are indicative of investor expectations of future interest rate movements.[152] Further, he argues that using forecasted Treasury bond yields is inappropriate and often results in inflated estimates since current interest rates and bond yields embody all relevant market data and expectations.[153] Baudino rejects the use of ECAPM and specifically disagrees with using an adjustment to correct CAPM results for companies with betas less than 1.0 stating that such an adjustment implied that the published beta values were incorrect.[154] Regarding Dr. Morin's Historical RP estimates, Baudino claims that it is too imprecise and that using current Treasury yields is better than using forecasted Treasury yields.[155] Similarly for Dr. Morin's Allowed RP estimate, Baudino echoes his argument that the use of forecasted Treasury yields was inappropriate.[156] Furthermore, Baudino maintains that

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[151] *Id.* at 35-36.

[152] *Id.* at 11-12 and 38.

[153] *Id.* at 36 and 38.

[154] *Id.* at 39.

[155] *Id.* at 38 and 40.

[156] *Id.* at 40-41.

the addition of flotation costs to the estimates was inappropriate, overinflated the results, and notes that by simply removing flotation costs from Dr. Morin's ROE estimates, the range decreased to 8.75–9.83 percent.[157]

Finally, Baudino argues that it is not necessary to give any additional weight to the ROE estimates beyond his recommendations or to consider Dr. Morin's ROE recommendation as a minimum estimate, noting that Duke Kentucky's credit ratings are in line with the industry credit ratings.[158] He further contends that since Duke Kentucky files forecasted test year rate cases, which aid in the recovery of construction capital costs, the company does not suffer from any additional risk associated with its size or asset concentration.[159]

Dr. Morin rebuts that Baudino's ROE recommendation is outside the zone of currently authorized electric utility ROEs and that it is the result of a single methodology, which is out of line with current analyst practices.[160] Dr. Morin disagrees with the use of various assumptions and methodologies claiming that they inappropriately lowered the ROE estimate by at least 62 basis points and such an award would be among the lowest awards in the country.[161] Specifically, Dr. Morin disputes Baudino's ROE analysis for the following reasons:[162]

- An understated dividend yield component in the DCF model;

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[157] *Id.* at 34-35.

[158] *Id.* at 15, 41, and 43.

[159] *Id.* at 41–43.

[160] Rebuttal Testimony of Roger A. Morin, PhD, at 35.

[161] *Id.* at 5–8 and 33.

[162] *Id*. at 5–6.

- The absence of a flotation cost adjustment;
- The risk-free proxy in the CAPM;
- Part of his market risk premium estimate in the CAPM;
- The failure to employ the empirical version of the CAPM; and
- Failure to account for Duke Kentucky's high relative risks.

Dr. Morin advocates approving an ROE of 9.8 percent stating it will provide measurable benefits to Duke Kentucky's customers, allow the company to remain financially viable, and is in the interest of both customers and shareholders.[163]

Dr. Morin presents a revision of his ROE estimates to account for more up-to-date data and capital market conditions. This revision slightly lowers his ROE estimate range to 8.4 – 10.2 percent with average ROE of 9.7 percent. The table below summarizes the range of Dr. Morin's revised ROE estimates, which include flotation costs.[164]

METHODOLOGY	**ROE**
DCF – Value Line Growth	9.5%
DCF – Analyst Growth	8.4%
CAPM	8.7%
ECAPM	9.7%
Historical Risk Premium	10.2%
Allowed Risk Premium	10.2%

Duke Kentucky maintains that the proposed ROE of 9.8 percent is reasonable and emphasizes that is a minimum recommendation based upon Duke Kentucky's relatively small size, a five-year company plan, which includes the need of further financing, regulatory lag, and Duke Kentucky's concentrated generation mix.[165] Duke Kentucky

[163] *Id*. at 4.

[164] *Id*. at 35.

[165] Duke Kentucky's Post-Hearing Brief at 36–37.

further notes that Dr. Morin even lowered his required “bare bones” return to a recommendation of 9.7 percent.[166] Duke Kentucky argues that the Attorney General’s proposed ROE is unreasonable and states that Baudino’s analysis is less comprehensive, as it relies almost exclusively upon the DCF model, and is further underestimated as it excludes flotation costs.[167] Duke Kentucky argues that Dr. Morin’s analysis is more credible than Baudino’s given the average ROE for all electric utilities in the United States in 2019 are just a few basis points higher than Dr. Morin’s recommendation and that ROEs for utilities rose in the latter half of 2019 even while interest rates fell.[168]

The Attorney General supports Baudino’s recommendation of an awarded ROE of 9.0 percent. The Attorney General notes that this recommendation accurately reflects the low-interest rate environment of the current market, is based upon calculations using current interest rates, and is without flotation costs.[169] The Attorney General further argues that due to disagreements regarding the use of the CAPM model and its accuracy in estimating expected returns, Baudino’s reliance on the DCF model is justified and the use of the DCF model has been consistently accepted by the Commission.[170] The Attorney General further disagrees with Duke Kentucky’s characterization that Duke Kentucky displays a higher risk profile, noting that it is in a low risk regulated industry,

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[166] *Id*. at 37.

[167] *Id*. at 37 and 39.

[168] *Id*. at 40.

[169] Attorney’s General Post-Hearing Brief at 12.

[170] *Id*. at 5–6.

able to mitigate regulatory lag by filing for forecasted test years, and risk associated with Duke Kentucky's generation mix would have been factored into the current credit ratings, which are A-/Baa1.[171]

Regarding the proposed models, the Commission agrees with Duke Kentucky that it is appropriate to present multiple methodologies to estimate ROEs, and it is the Commission's role to analyze the various approaches as presented by the two parties. In regards to flotation costs, the Commission has historically rejected, and continues to reject, the notion that flotation costs should be included in ROE estimates and notes removal of just the flotation costs will lower Dr. Morin's recommended ROE from 9.7 percent to 9.5 percent.

The evaluation of an ROE, as with any investment, considers, among other factors, opportunity costs, and there have been sustained downward adjustments of both the short-term and long-term interest rates, which signal past-awarded ROEs may have been not truly reflective of alternative investments rates. Therefore, balancing the needs of Duke Kentucky and their customers, and reviewing the record in its entirety in this proceeding, the Commission finds that a ROE of 9.25 percent is fair, just, and reasonable. The approved ROE falls within Duke Kentucky's proposed range of ROEs less flotation costs and is above the Attorney General's recommendation. The Commission agrees with the Attorney General that Duke Kentucky participates in a relatively low-risk regulatory industry, is able to mitigate regulatory lag by filing for forecasted test years, and risk associated with Duke Kentucky's generation mix is factored into the current credit ratings, which are A-/Baa1.

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[171] *Id.* at 7.

Rate-of-Return Summary

Applying the rates of 1.71 percent for short-term debt, 4.03 percent for long-term debt, and 9.25 percent for common equity to the proposed capital structure consisting of 5.84 percent, 45.93 percent, and 48.23 percent, respectively, produces an overall cost of capital of 6.41 percent.

REVENUE ALLOCATION AND RATE DESIGN

Cost-of-Service Study (COSS) and Revenue Allocation

Duke Kentucky performed three COSSs that differ in the methodology used to develop the allocation factor for the demand component of production-related costs. The three are the average of the 12 Coincident Peaks (12-CP) method, the Average and Excess method, and the Production Stacking method. Duke Kentucky recommends using the average 12-CP methodology stating that (1) the 12-CP method is the generally accepted method and was approved in Case No. 2017-00321; (2) the 12-CP method recognizes that Duke Kentucky's current generating facilities are in place to meet the monthly maximum peak loads; and (3) Duke Kentucky believes the 12-CP method is an appropriate means to align capacity costs with the customer classes imposing such costs.[172] Kroger's witness, Justin D. Bieber, recommends approval of the COSS based upon the 12-CP method and NKU's witness, Brian C. Collins, did not object to the methodology. The witness for the Attorney General, Glenn A. Watkins, did not comment whether he approved or disapproved of the proposed 12-CP COSS.

The results of the COSS illustrate the amount of cross-subsidization between the rate classes. Duke Kentucky's proposed rate design is based upon its recommended

[172] Direct Testimony of James E. Ziolkowski (Ziolkowski Testimony) at 6.

COSS while also reducing the class subsidies by 5 percent. The proposed rate increase is allocated to each rate class based upon the percent of each class's contribution to rate base plus the 5 percent inter-class subsidization reduction. In Case No. 2017-00321, Duke Kentucky recommended a 10 percent reduction in inter-class subsidies. Duke Kentucky states that it lowered the subsidy reduction in this case to keep the total residential rate increase below 20 percent. The proposed rate increases are as follows:

	Proposed Increase	Percent Increase		Current ROR	Proposed ROR
Rate RS	$ 23,433,302	18.82%		0.33%	4.09%
Rate DS	$ 11,107,314	12.30%		6.72%	10.15%
Rate GS-FL	$ 49,602	8.60%		13.18%	16.29%
Rate EH	$ 264,505	44.02%		-9.18%	-4.95%
Rate SP	$ 3,118	10.41%		10.41%	13.67%
Rate DT - Secondary	$ 5,475,034	11.67%		5.70%	9.19%
Rate DT-Primary	$ 3,711,397	12.39%		3.86%	7.44%
Rate DP	$ 185,640	13.64%		2.37%	6.03%
Rate TT	$ 1,170,405	8.32%		6.95%	10.37%
Lighting	$ 228,277	12.17%		2.47%	6.12%
Other - Water Pumping	$ 5,861	34.79%		-9.81%	-5.55%
Total	$ 45,634,456	14.70%		3.09%	6.71%

Kroger's witness, Bieber, does not recommend any changes to the proposed revenue allocation; however, he does recommend that if the awarded revenue requirement is less than that proposed by Duke Kentucky then the Commission should use 50 percent of the difference to reduce the revenue increase for all rate classes based on the percent of each class's contribution to rate base and apply the remaining 50 percent proportionally based upon the subsidization.[173] He believes that the 5 percent proposed subsidy reduction, although a move in the right direction, does not make reasonable progress towards reducing class disparities and aligning rates with cost

[173] Direct Testimony of Justin D. Bieber at 3 and 10.

causation.[174] NKU's witness, Collins, does not object to the class revenue allocation[175] and the Attorney General's witness, Watkins, does not comment.

For its COSS, Duke Kentucky applied the minimum size method for poles, conductors, and transformers.[176] While use of the minimum sized method is not uncommon, typically it is defaulted to when the zero-intercept method results in statistically unreliable results. Duke Kentucky states that it did not perform the zero-intercept method.[177] Duke Kentucky defends this decision by stating that the minimum size method is easy to understand, requires less data, was used in the last two base rate case filings, and the zero-intercept method produced unreliable results.[178] Upon asking for support that the method produced unreliable results, Duke Kentucky states that it does not have sufficient data in the proper form and detail to prepare the zero-intercept models.[179] The Commission believes that such modeling should be performed first and finds that Duke Kentucky should support the assertions that the zero-intercept method would produce unreliable results and should perform a zero-intercept study in its next base rate case.

The Commission accepts Duke Kentucky's proposal to use the 12-CP method as a guide to determining revenue allocation. Additionally, the Commission agrees moving towards removing the inter-class subsidies is warranted but, in light of the recent

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[174] *Id*. at 9–10.

[175] Direct Testimony of Brian C. Collins at 6.

[176] Ziolkowski Testimony at 19.

[177] Duke Kentucky's response to Staff's Second Request, Item 166.

[178] *Id*.

[179] Duke Kentucky's response to Staff's Third Request, Item 69.

economic conditions resulting from the impact of COVID-19, as discussed previously, the Commission will not apply a subsidy reduction to the proposed revenue allocation. Allocating the Commission's revenue increase as proposed and reducing the inter-class subsidization to zero percent results in a 9.54 percent increase for the residential class.

Rate Design

Regarding the residential customer charge, Duke Kentucky is proposing to increase the current charge of $11.00 to $14.00, a 27.27 percent increase. In Case No. 2017-00321, the approved COSS resulted in a customer charge of $11.31 and Duke Kentucky was awarded a customer charge that represented almost the full COSS. The filed COSS in the instant case suggests a customer charge of $14.29,[180] which represents a 27.36 percent increase between the two rate cases. Duke Kentucky states that the increase in residential customer costs were from an increase in operating expenses, mostly customer accounting, and the return on customer-related rate base, specifically from Completed Construction Not Classified plant.[181] Regarding the increase in customer accounting expense, Duke Kentucky explains that a portion of the increase was due to a change regarding the treatment of credits related to Loss on Sale of Accounts Receivable.[182] In the COSS, Duke Kentucky moved these credits, a total of $1.242 million, from an expense account to a revenue account, as in the Case No. 2017-00321 COSS.[183] This movement results in the credits not being included in the expenses and

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[180] Duke Kentucky's response to Staff's First Request, Item 55, STAFF-DR-055_Attachment_-_DEK_Electric_COSS_-_2019_Macros_Disabled.slsx, Customer Charge tab.

[181] Duke Kentucky's response to Staff's Third Request, Item 27.

[182] Duke Kentucky's response to the Attorney General's First Request, Item 81.

[183] Duke Kentucky's response to Staff's Post-Hearing Request, Item 1.

thus not included in the COSS customer charge calculation. Additionally, Duke Kentucky notes that this adjustment was not accounted for in the calculation of the revenue requirement.[184] Duke Kentucky filed a revised COSS with the credit expensed and the revised residential customer charge decreased to $13.58.[185]

The Attorney General's witness, Watkins, states that the increase, prior to Case No. 2017-00321, from $4.50 to $14.00 illustrates rate shock when compared to inflation, is against gradualism, and adversely impacts low-income customers.[186] He disagrees with how sunk or fixed distribution costs are allocated across the customer classes and presents a marginal costs analysis that produces a customer charge, adjusted for Kollen's proposed rate of return, of $4.44.[187] He recommended maintaining continuity and keeping the customer charge at the current rate of $11.00.[188]

In rebuttal, Duke Kentucky states that the proposed charge is supported by the filed COSS, is currently the third lowest in the Commonwealth, and, if approved, will still be under the median and the ninth lowest in the state.[189] Duke Kentucky notes that the "rate shock" Watkins claims is not credible, as a customer with no consumption would only see a $3 per month increase.[190] Duke Kentucky contends that Watkins's calculated

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[184] *Id*.

[185] *Id*., STAFF-PH-DR-01-001_Attachement.xlsx, CustomerCharge tab.

[186] Direct Testimony of Glenn A. Watkins at 2–3.

[187] *Id*. at 16.

[188] *Id*. at 17.

[189] Rebuttal Testimony of Jeff L. Kern at 5 and Duke Kentucky's Post Hearing Brief at 43.

[190] Duke Kentucky's Post Hearing Brief at 44.

customer charge is absurd because much of the utility's distribution system is not accounted for and notes that Watkins affirmed that he was generally uninformed as to how the Commission traditionally treats such costs.[191] Duke Kentucky claims that Watkins was unable to provide support for his opinion and questions Mr. Watkins's authority on the subject.[192] Duke Kentucky supports its proposed customer charge and believes it is reasonable and should be approved.[193]

The Attorney General recommends that the Commission adopt Watkins's recommendation and maintain the $11.00 customer charge.[194] The Attorney General notes that Duke Kentucky presented several examples in which a fixed amount is charged rather than a volumetric charge, such as cable television, cellular telephone, and automobile rental, but points out that these examples are from largely unregulated industries in which competition exists and by increasing the customer charge some control over the customer's electric bill is removed.[195] The Attorney General further argues that Duke Kentucky's contention that the proposed customer charge would still be one of the lowest in Kentucky and places Duke Kentucky near the medium is not a valid reason because many of the utilities in Kentucky are rural distribution cooperatives and

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[191] *Id*.

[192] *Id*. at 45.

[193] *Id*. at 46.

[194] Attorney General's Post Hearing Brief at 46.

[195] *Id*. at 45.

any comparison between a cooperative and a vertically integrated investor-owned utility like Duke Kentucky is flawed and should not be given any weight.[196]

In establishing customer charges, the Commission uses the filed COSS as a guide and the Commission believes that the revised COSS, in which the treatment of the Loss on Sale of Accounts Receivable credits are a reduction to expenses, like in Case No. 2017-00321, should be the guide. The Commission has supported movement towards cost-based rates, in a measured and reasonable manner. However, this movement should be supported by a COSS that reflects the expenses, rate base, and WACC that the Commission approves, especially with a COSS that is based upon a forecasted test year. Updating these in the revised COSS results in an estimated residential customer charge of $12.63. Therefore, the Commission finds a residential customer charge of $12.60 to be reasonable. The increase for the residential class results in an increase of 9.57 percent, or approximately $7.91, for a typical residential customer using 1,000 kWh of electricity in a month.[197]

Duke Kentucky is also proposing to reduce the current customer charge for Rate DS Secondary Distribution (Small Commercial), Rate EH (Electric Space Heating), and Rate SP (Seasonal Sports Service). When asked, Duke Kentucky responded that the revised rate is based upon the weighted average of the single phase and triple phase for Rate DS. Duke Kentucky noted that the weighted average is $22.91, supporting the COSS customer charge of $22.10.[198] Duke stated that that Rates EH and SP traditionally

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[196] *Id*. at 46.

[197] Riders are excluded in the average bill impact calculation.

[198] Duke Kentucky's Response to Staff's Second Request for Information, Item 171.

are the same as Rate DS and thus revised accordingly. On the other hand, for Rate DT (Time-of-Day Commercial), the COSS supports a customer charge of $57.50; however the current customer charge is higher than the COSS results and Duke Kentucky is proposing to increase the customer charges for this rate class. Duke Kentucky stated that due to few customers on this rate schedule, the COSS results can vary significantly from one study to another, and the intention was to increase the rate by the overall percentage increase for that rate class but noted an error and the increase was only 2.4 percent rather than 11.8 percent.[199] The Commission believes that Duke Kentucky is supporting two different opinions. Therefore, the Commission will accept the proposed decrease in the customer charge for Rate DS, but will maintain the current customer charges for Rate DT. The Commission will also accept Duke Kentucky's proposed customer charges and demand charges for the non-residential rate classes.[200]

PROPOSED TARIFF CHANGES

Bill Format. As a result of the new Customer Information System, Duke Kentucky is proposing to modernize its bill format. The revisions to the bill format are mainly cosmetic in nature. The proposed full detailed bill format includes all of the information required by 807 KAR 5:006, Section 7(1)(a). Customers are able to request a condensed bill format online or by contacting Duke Kentucky via telephone. The Commission finds the revisions to the bill format to be reasonable and that they should be approved.

[199] *Id.*

[200] Due to the fixed allocations to non-residential classes being less than 15 percent in total, the impact of adjusting the rate base, expenses, and WACC are minimal; therefore, no adjustments to the customer charge were applied.

Rate SP, Seasonal Sports Service (Rate SP). Duke Kentucky proposes to revise the reconnection charge language in Rate SP to reference Sheet No. 91, Charge for Reconnection of Service instead of listing the reconnection fee. The Commission finds this revision to be reasonable and that it should be approved.

Rate LED, LED Outdoor Lighting Service. Duke Kentucky is proposing to add a provision to Rate LED for customers who require additional facilities for street or area lighting to either pay the entire cost of the additional facilities investment upfront or on a monthly basis with the monthly payments equal to 1.0117 percent of the total cost of the additional investment. Duke Kentucky states that the customer who chooses to pay the monthly amount would pay it in perpetuity or until the equipment is taken out of service. Duke Kentucky would continue to own, maintain, repair and replace such facilities in the same manner as other similar distribution facilities. Duke Kentucky also states that the monthly payment option was not intended as a way for customers to purchase the additional facilities on the installment plan. [201] However, the proposed tariff states, "Where suitable distribution facilities do not exist, it will be the customer's responsibility to pay for necessary additional facilities either at cost upfront or monthly as described below."[202] Based upon the evidence of record, the Commission is concerned that a customer who elects to pay the proposed monthly charge could be charged more than if that customer elected to pay the additional facilities cost upfront based upon the proposed language that customers who elect to pay on a monthly basis will make such payments in perpetuity or until the equipment is taken out of service. Therefore, the Commission denies the

[201] Duke Kentucky's response to Staff's Post-Hearing Request, Item 23(b).

[202] Application, Schedule L-1, page 69 of 172, paragraph 11.

proposed change to Rate LED without prejudice. Duke Kentucky can refile for approval of the proposed change to Rate LED through the Commission's electronic Tariff Filing System; such filing should address the concerns of the Commission listed above.

Rider PSM, Profit Sharing Mechanism (Rider PSM). Duke Kentucky proposes to revise Rider PSM to reflect the addition of net revenues received by Duke Kentucky through the Fast Charge Fee from the Electric Vehicle Fast Charging Program. As discussed below, the Commission is denying the Electric Vehicle Pilot Program in its entirety, therefore the proposed revision to Rider PSM is also denied.

Rate GSA, Green Source Advantage (Rate GSA). Duke Kentucky is proposing to implement a new Green Source Advantage Program. The new program would allow customers to request that Duke Kentucky procure renewable energy resources on behalf of the customer, with the cost and any net revenues of those commitments captured and billed to the customer through Rate GSA. Duke Kentucky states that several large commercial and industrial customers have expressed an interest in procuring renewable energy resources and partnering with Duke Kentucky to meet their individual corporate sustainability goals.[203]

Under the proposed program, Duke Kentucky will enter into a Purchase Power Agreement (PPA) with a developer to construct a defined number of MW of renewable capacity through one or more facilities located in the footprint of PJM's market. Participating customers would then enter into a service contract with Duke Kentucky for the same term of years and terms and conditions of the PPA. In order to qualify for Rate GSA, non-residential customers must have a minimum Maximum Annual Demand of

[203] Direct Testimony of Andrew S. Ritch at 3.

1,000 kW or a minimum aggregated Maximum Annual Demand at multiple service locations in Duke Kentucky's service territory of 5,000 kW. All environmental attributes affiliated with the customer's purchased amount will be transferred to the customer for the life of the service agreement. Participating customers would pay a non-refundable $2,000 application fee. The customer's monthly bill would consist of an amount computed under their primary rate schedule, including applicable riders, plus the sum of the (1) GSA Product Charge, which would be equal to the negotiated price multiplied by the energy produced from the facility; (2) GSA Bill Credit, which would be the sum of all PJM credits and charges received by the facility owner; and (3) GSA Administrative Charge of $375.

The Commission finds Rate GSA to be reasonable and that it should be approved.

Reconnection of Service. Duke Kentucky is proposing to revise its reconnection fees as follows:

Charge	Current Charge	Proposed Charge
Remote Reconnection	$3.45	$5.88
Reconnection (Nonremote, Electric Only)	$75.00	$60.00
Reconnection After Hours (Nonremote Only)	$25.00	$40.00
Collection Fee	$50.00	$60.00

Duke Kentucky filed cost support for its proposed reconnection charges.[204] The Commission finds that the proposed charges in the table above are reasonable and should be approved.

Duke Kentucky is also proposing to eliminate the charge for combined reconnection of gas and electric service due to the fact that separate crews are

[204] Direct Testimony of Jeff L. Kern, Attachment JLK-5.

dispatched for gas and electric reconnection. The Commission finds this revision to be reasonable and that it should be approved.

Tampering. Duke Kentucky is proposing to add tampering penalties in the amount of $200 for residential customers and $1,000 for non-residential customers. Currently, when a customer tampers with equipment, they are responsible for any usage, a field investigation charge, and equipment damage. Duke Kentucky indicated that the tampering fees were not cost-based and were intended to be a deterrent.[205] When asked what Kentucky law or regulation allowed them to charge a fee as a deterrent, Duke Kentucky pointed to the Supreme Court of Kentucky affirming that an economic development rate, under which customers receive a discount to cost-based rates, was both reasonable and lawful (*Public Service Comm'n of Kentucky v. Com. of Kentucky,* 320 S.W.3d 660 (Ky. 2010)). Duke Kentucky argues that there is no legal distinction between an economic development rate and the tampering fees as long as the tampering fees are reasonable.[206] The Commission finds that the tampering penalties are more akin to non-recurring charges, which must yield only enough revenue to pay for the expenses incurred. Because customers who tamper with equipment are responsible for un-billed usage, a field investigation charge, and equipment damage, they will already be paying for the expenses incurred. Therefore, the Commission denies Duke Kentucky's proposal to add tampering penalties to its tariff.

Duke Kentucky is also proposing to revise its tariff to give it the option to transition customers with particularly dangerous or repeated instances of tampering to Rider AMO,

[205] Duke Kentucky's response to the Attorney General's First Request for Information, Item 106.

[206] Duke Kentucky's response to Staff's Third Request, Item 81.

Advanced Meter Opt-Out (AMO) – Residential, and subjecting them to the charges associated with that Rider. The proposed tariff does not explain how or if such a customer could transition off of Rider AMO. In response to Commission Staff's Post-Hearing Request, Item 20(b), Duke Kentucky indicated that if there are no additional instances of tampering after twelve months of being transferred to Rider AMO, a customer could request that they be removed from Rider AMO. The Commission finds the proposal to be reasonable and that it should be approved with the additional language added to the tariff explaining how affected customers can transition off of Rider AMO.

Franchise Fee Tariff. Duke Kentucky proposes to revise its Franchise Fee Tariff to clarify that it applies to any local government fee and to remove language referring to fees based on gross receipts as it relates to franchises. The Commission finds these revisions to be reasonable and that they should be approved.

Waiver of 807 KAR 5:006, Section 14(5). Duke Kentucky requests a deviation from 807 KAR 5:006, Section 14(5) to allow it to give customers the option of having disconnection notices sent to the customers' preferred method of communication. No tariff revisions were filed related to this request, but Duke Kentucky did indicate that it would revise the tariff closer to the implementation date of the Customer Information System, which is scheduled for the fall of 2022.[207] The Commission finds the request for deviation from 807 KAR 5:006, Section 14(5) to be reasonable and that it should be approved. The Commission also finds that Duke Kentucky should revise its tariff to reflect this deviation no later than thirty (30) days prior to implementing this policy.

[207] Duke Kentucky's response to Staff's Second Request, Item 40.

Waiver of 807 KAR 5:006, Section 8(1)(d)3.a. and 807 KAR 5:006, Section 8(1)(d)3.c. Duke Kentucky requests a deviation from 807 KAR 5:006, Section 8(1)(d)3.a. and 807 KAR 5:006, Section 8(1)(d)3.c. to allow it to recalculate deposits annually automatically instead of after 18 months at the customer's request. Under the proposal, Duke Kentucky would refund any excess amount to the customer if the recalculated amount is less than what is currently held on account. If the recalculated amount is more than what is currently held on account, Duke Kentucky would collect an additional deposit from residential customers if the difference was $50 or more and would only collect an additional deposit from small-medium business customers if the difference was $100 or more. Under the regulation, if the deposit on account differs by more than $10 for residential customers or by more than 10 percent for non-residential customers, utilities are required to refund any excess amount and may collect any underpayment. The Commission requested certain information regarding deposits; however, Duke Kentucky indicated that the information requested was not tracked.[208] Therefore, the Commission finds that good cause has not been shown to justify granting deviations from 807 KAR 5:006, Section 8(1)(d)3.a, and 807 KAR 5:006, Section 8(1)(d)3.c, and they are therefore denied.

Waiver of 807 KAR 5:006, Section 7(1)(a)3. Duke Kentucky requests a deviation from 807 KAR 5:006, Section 7(1)(a)3 to allow it to not include beginning and ending meter readings for certain interval-billed rates. Duke Kentucky argues that beginning and ending meter readings are not relevant to customer bills under dynamic pricing structures.

[208] Duke Kentucky's response to Staff's First Request, Items 43(b) and 44.

Duke Kentucky states that customers served under such schedules have access to actual usage information in near real-time via Duke Kentucky's website.[209] The deviation would apply to the following rate schedules: Rate DP, Service at Primary Distribution Voltage, Rate DS, Service at Distribution Voltage, Rate DT, Time-of-Day Rate for Service at Distribution Voltage, Rate TT, Time-of-Day Service at Transmission Voltage, and Rate EH, Optional Rate for Electric Space Heating, as well as any future proposed rates that utilize AMI usage data for billing purposes.

The Commission finds the request for deviation from 807 KAR 5:006, Section 7(1)(a)3 to be reasonable, in part, and that it should be approved for the specific rate schedules listed in Duke Kentucky's application; however, the Commission will not approve the deviation request for any future proposed rates that utilize AMI usage data for billing purposes. Duke Kentucky will need to request a separate deviation from 807 KAR 5:006, Section 7(1)(a)3 for any future proposed rates that utilize AMI usage for billing purposes.

Revert to Owner Program. Duke Kentucky is proposing to implement a program that would allow property owners to request that utility service be automatically transferred back to their name between tenants. The program would not be applicable in situations where service to a tenant has been discontinued for non-payment or where Duke Kentucky has been notified of a safety issue that warrants termination of service. Property owners would be able to sign up for the program via Duke Kentucky's website or by contacting Duke Energy Customer Care.[210] Duke Kentucky intends to implement

[209] Direct Testimony of Retha Hunsicker at 20.

[210] Duke Kentucky's response to Staff's Post-Hearing Request, Item 3.

this program, known as the Revert to Owner Program, in late 2022.[211] Duke Kentucky provided proposed tariff language for this program in response to Commission Staff's Post-Hearing Request, Item 3. Duke Kentucky also provided the final design of the Revert to Owner Program in response to Commission Staff's Post-Hearing Request, Item 3. There were terms in the final design that were not included in the proposed tariff language and that raised some questions about the program.[212] Based upon the evidence of record, the Commission still has some questions about the Revert to Owner Program. Therefore, the Commission denies the proposed Revert to Owner Program without prejudice. Duke Kentucky can refile for approval of the proposed program through the Commission's electronic Tariff Filing System.

Waiver of 807 KAR 5:006, Section 8. Duke Kentucky initially requested a waiver from 807 KAR 5:006, Section 8, to allow it to hold a standard $50 deposit per unit or property-owned for property owners that enrolled in the Revert to Owner Program.[213] Duke Kentucky later indicated that it no longer planned to charge a deposit for property owners enrolled in the Revert to Owner Program.[214] Subsequently, Duke Kentucky indicated that the waiver from 807 KAR 5:006, Section 8, was no longer needed.[215] However, in its Post Hearing Brief, Duke Kentucky included this waiver in the list of

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[211] Duke Kentucky's response to Staff's Third Request, Item 39.

[212] The Commission has questions concerning certain of the Revert to Owner Program details that were subject to Duke Kentucky's petition for confidential treatment filed on March 6, 2020.

[213] Direct Testimony of Retha Hunsicker at 20-21.

[214] Duke Kentucky's response to Staff's Second Request, Item 48.

[215] Duke Kentucky's response to Staff's Third Request, Item 39.

waivers it requested be approved.[216] Seeing as the Commission denied the Revert to Owner Program without prejudice, the request for waiver from 807 KAR 5:006, Section 8 is considered moot. If Duke Kentucky still wants a deviation from 807 KAR 5:006, Section 8, for the Revert to Owner Program, it can request the waiver when it refiles for approval of the Revert to Owner Program through the Commission's electronic Tariff Filing System.

Rider FAC, Fuel Adjustment Clause. Duke Kentucky proposes a revision to its Fuel Adjustment Clause Rider (FAC) changing the FAC rate calculation from a monthly basis to a rolling twelve-month average. Duke Kentucky states that the change to a rolling twelve-month average will help to mitigate volatility in the FAC rate for its ratepayers. 807 KAR 5:056, Section 1, states that the monthly FAC rate will be based upon the most recent actual monthly cost and sales and does not have a deviation clause. Therefore, the Commission denies Duke Kentucky's proposed revisions to the FAC rate calculation.

Adjusted Due Date Program. The Adjusted Due Date Program allows Duke Kentucky electric customers with analog meters to adjust their due date 5-10 days forward from the original due date. Duke Kentucky's tariff currently does not indicate whether there is a limit placed on the number of times that a due date can be adjusted. Duke Kentucky indicated that customers who are eligible for the Adjusted Due Date Program can adjust their due date once each 12 months.[217] The Commission finds that Duke Kentucky should include language in its tariff indicating how often customers can adjust their due date under the Adjusted Due Date Program.

[216] Duke Kentucky's Post-Hearing Brief at 68.

[217] Duke Kentucky's response to Staff's Second Request, Item 25.

Automatic Landlord Program. The Automatic Landlord Program is a current program offered by Duke Kentucky that is not currently included in its tariff. The program allows property owners to enter into an agreement with Duke Kentucky whereby utility service would be automatically transferred to the name of the property owner when a tenant requests service be taken out of their name. The automatic transfer would not occur if the service in the tenant's name has been disconnected for non-payment.[218] In response to Commission Staff's Post-Hearing Request, Item 4, Duke Kentucky provided tariff language it would include in its tariff if directed to do so by the Commission. The Commission finds that the proposed tariff language should be added to Duke Kentucky's tariff.

Usage and Outage Alerts and Pick Your Own Due Date Programs. Duke Kentucky's current tariff contains a Usage Alerts, Outage Alerts, and Pick Your Own Due Date Program. However, the tariff states that customers should contact Duke Kentucky for current details and eligibility of the programs. Duke Kentucky provided revised tariff language for these programs.[219] The Commission finds that this language should be included in Duke Kentucky's tariff.

High Bill Alerts Program. The High Bill Alerts Program provides customers with a mid-cycle alert when their bill is projected to be 30 percent and $30 higher than the previous month. All residential customers with a non-AMI meter, a minimum of 12 month's history, a registered e-mail address, and who are not signed up for budget billing are automatically enrolled in the High Bill Alerts Program. Duke Kentucky's tariff

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[218] Duke Kentucky's response to Staff's Third Request, Item 38.

[219] Duke Kentucky's response to Staff's Post-Hearing Request, Item 19.

does not currently include a description of the High Bill Alerts Program. Duke Kentucky provided proposed language to include in the tariff.[220] The Commission finds that this language should be included in Duke Kentucky's tariff.

Miscellaneous Tariff Revisions. Through discovery, Duke Kentucky proposed the following tariff revisions: (1) Revision to Section 1 – Service Agreements, Company's Right to Cancel Service Agreement or to Suspend Service, to add in missing language;[221] (2) Revisions to remove language in Section VI – Billing and Payment, Billing Periods – Time and Place for Payment of Bills, pertaining to a charge for having a bill electronically delivered;[222] and (3) Revisions to Section VII – Deposits to define satisfactory payment record and to clarify when an additional deposit will be required from a residential customer.[223] The Commission finds these tariff revisions to be reasonable and that they should be approved.

Duke Kentucky also proposed various minor text changes to its tariff. Unless otherwise stated in this Order, the Commission finds that the proposed changes are reasonable and that they should be approved.

Underground Cost Differential. Electric utilities are required to file annually with the Commission supporting data used to determine the estimated average cost differential between providing underground facilities and providing overhead facilities.[224]

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[220] Duke Kentucky's response to Staff's Third Request, Item 33(a).

[221] Duke Kentucky's response to Staff's Second Request, Item 11.

[222] Duke Kentucky's response to Staff's Second Request, Item 12.

[223] Duke Kentucky's response to Staff's Second Request, Item 13.

[224] 807 KAR 5:041, Section 21(5)(c).

Through discovery, it was determined that Duke Kentucky has not been filing the required annual update of its underground cost differential. Duke Kentucky did point out that the calculation of its tariffed rate had not changed, but indicated that it would begin filing the annual update even if the calculation does not change.[225] Duke Kentucky should file its current supporting data to determine the estimated average cost differential between providing underground facilities and providing overhead facilities within 20 days of the date of entry of this Order and annually thereafter.

ELECTRIC VEHICLE PILOT PROGRAM; BATTERY STORAGE PILOT; DEFERRAL MECHANISMS; AND HEDGING FOR FORCED GENERATION OUTAGES

Electric Vehicle Pilot Program. Duke Kentucky proposes to offer an electric vehicle (EV) pilot program that includes Duke Kentucky's ownership of a limited number of fast charging stations and incentives offered to residential and non-residential customers who invest in electric vehicle infrastructure.[226] Duke Kentucky also proposes to revise the Rider PSM to include revenues associated with the Duke Kentucky owned residential electric vehicle charging stations.[227] Further, Duke Kentucky requests authorization to establish a deferral account associated with incentive payments that will encourage residential and non-residential customers, including schools and metro-transportation customers, to invest in electric vehicle infrastructure in Duke Kentucky's service territory.[228] Duke Kentucky states that the total cost of the proposed pilot is $2.834 million,

[225] Duke Kentucky's response to Staff's Post-Hearing Request, Item 24.

[226] Application at 13.

[227] *Id*. at 12–13.

[228] *Id*. at 14.

including $1.375 million in capital costs and $1.459 million in O&M costs.[229] Duke Kentucky seeks to recover a portion of the capital costs and a deferral of O&M costs.[230]

Duke Kentucky proposes a 36-month Electric Transportation Pilot Program that consists of the following five programs as well as marketing, education, outreach and project management in relation to the same: (1) EV Fast Charge Program; (2) Electric Transit Bus Charging Program; (3) Non-Road Electrification Incentive Program; (4) Residential EV Charging Incentive Program; and (5) Commercial EV Charging Incentive Program.[231]

In relation to the EV Fast Charge Program, Duke Kentucky proposes to install, own, and operate a network of up to five EV Fast Charging locations totaling 10 charging stations.[232] Charging services at the stations will be available for public charging for a "Fast Charge Fee" developed by Duke Kentucky.[233] Duke Kentucky proposes to include the Fast Charge Fee under Rate DS 3-phase service.[234] According to Duke Kentucky, the Fast Charge Fee is intended to recover, at a minimum, the cost of electric service, transaction and network service costs, and operational maintenance costs.[235] Duke Kentucky proposes that any net revenue received by Duke Kentucky through the Fast

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[229] Direct Testimony of Lang W. Reynolds (Reynolds Testimony) at 24–25.

[230] *Id*.

[231] Reynolds Testimony at 6–7 and 23.

[232] *Id*. at 10.

[233] *Id*.

[234] *Id*. at 24.

[235] *Id*. at 10–11.

Charge Fee from the EV Fast Charging Program be credited to customers through Duke Kentucky's Rider PSM, with the net revenues calculated by taking the Fast Charge Fee revenues paid by electric vehicle drivers less station operation costs.[236] Duke Kentucky currently projects a 10-year useful life for the EV Fast Charging infrastructure, and proposes to operate the DC Fast Charging units for the life of each unit.[237]

In relation to the Electric Transit Bus Charging Program, Duke Kentucky is proposing five EV transit bus charging infrastructure installations necessary to power EV transit buses.[238] Duke Kentucky proposes to retain ownership and perform maintenance on the electric vehicle support equipment (EVSE) for the duration of the pilot program.[239] EV Transit bus operators will be responsible for proper operation of the EVSE according to the manufacturer's guidelines.[240] Upon request by a customer, Duke Kentucky will install the EVSE on the customer's side of Duke Kentucky's meter.[241] Any usage by the customer will be billed under the customer's existing commercial rate and other riders, if applicable, for the billing demand and kilowatt-hours registered or computed by or from Duke Kentucky's metering facilities during the current month.[242] Duke Kentucky sponsored infrastructure support is available for no more than five total charging

[236] *Id*. at 11.

[237] *Id*.

[238] *Id*. at 13.

[239] *Id*. at 14.

[240] *Id*.

[241] *Id*.

[242] *Id*.

stations.[243] Duke Kentucky currently projects a 10-year useful life for the Transit Bus Charging hardware.[244] Duke Kentucky proposes to continue operating the Transit Bus Charging units for the life of each unit.[245]

In relation to the Non-Road Electrification Incentive Program, Duke Kentucky proposes to deploy non-road electrified forklifts, electric truck refrigeration standby units, airport ground service equipment, and airport ground power unit equipment to collect utilization data and other load characteristics to understand potential grid and utility impacts.[246] The customer must either install a new meter or a data collection device for the charging infrastructure for the electric vehicle charging station that will serve the incentivized equipment.[247] If a customer installs a new meter, the customer must select one of the following commercial rates: Rates DS, DP, DT, or TT.[248] Any usage by the customer will be billed thereunder, with other applicable riders, for the Billing Demand and kilowatt-hours registered or computed by or from Duke Kentucky's metering facilities during the current month.[249] Duke Kentucky proposes that the Non-Road Electrification Incentive Program end 36 months after the initial effective date of the program, unless renewed or extended by Duke Kentucky.[250]

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[243] *Id*.

[244] *Id*. at 14–15.

[245] *Id*. at 15.

[246] *Id*. at 16.

[247] *Id*.

[248] *Id*.

[249] *Id*.

[250] *Id*. at 17.

Duke Kentucky proposes the Residential EV Charging Incentive Program to identify and manage residential electric vehicle charging behaviors for eligible residential customers.[251] Customers will receive a $500 incentive from Duke Kentucky, upon verification of installation, for purchasing and installing a Level II EVSE of their choice.[252] Customers will be able to receive up to an additional $500 utility EV load-managed incentive, in the form of quarterly payments of $41.66 over the course of three years, in exchange for participating in load management events.[253] Usage will be billed under the customer's residential rate.[254] The Residential EV Charging Incentive Program will be available to up to 300 customers with only one incentive available per residence.[255]

Duke Kentucky proposes the Commercial EV Charging Incentive Program to identify commercial electric vehicle charging behaviors for up to 160 eligible commercial customers.[256] Customers will receive a one-time $2,500 incentive[257] upon verification of installation for purchasing and installing a Level II electric vehicle charging station of their choice.[258] The charging stations will be installed on the customer's side of the meter and will separately measure EVSE usage.[259] A customer must select one of the following

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[251] *Id*. at 18.

[252] *Id*.

[253] *Id*.

[254] *Id*.

[255] *Id*. at 19.

[256] *Id*. at 21.

[257] *Id*.

[258] *Id*.

commercial rates: Rates DS, DP, DT, or TT.[260] Any usage by the customer will be billed thereunder with other applicable riders, for the Billing Demand and kilowatt-hours registered or computed by or from Duke Kentucky's metering facilities during the current month.[261] Duke Kentucky proposes that the Commercial EV Charging Incentive Program end 36 months after the initial effective date of the program, unless renewed or extended by Duke Kentucky.[262]

The Attorney General witness, Lane Kollen, states the following reasons why the Commission should not approve the Electric Vehicle Pilot Program: (1) these programs are not necessary for the provision of electric service;[263] (2) the programs will not benefit all customers;[264] (3) the pilot programs are not economic;[265] (4) Duke Kentucky is only proposing pilot programs which serve as a down payment on additional investments and other costs that will be premised on the "success" of the pilot programs;[266] (5) the pilot programs will be managed by another Duke Energy affiliate and not Duke Kentucky;[267] (6) the Commission should look to private industry to develop this infrastructure to

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[259] *Id*.

[260] *Id*.

[261] *Id*.

[262] *Id*. 21–22.

[263] Kollen Testimony at 64.

[264] *Id*.

[265] *Id*.

[266] *Id*. at 65.

[267] *Id*.

assume the risks and incur the costs;[268] and (7) there is potential for Duke Kentucky customers to have to pay for both the Electric Vehicle Pilot Program's costs up front and for capacity on the back end if more is needed, with little or no substantial benefit to customers.[269]

The Attorney General notes that Duke Kentucky stated that the driving force behind the Electric Vehicle Pilot Program is that private industry is not deploying charging infrastructure at the scale necessary to support advanced EV market growth.[270] The Attorney General states that Duke Kentucky's Electric Vehicle Pilot Program puts unnecessary risk on ratepayers and asks them to pay for a project that could easily be addressed by private industry if and when the market dictates such investment is prudent.[271] The Attorney General argues that Duke Kentucky has not provided sufficient evidence to convince the Commission to require ratepayer investment for such a pilot project.[272] The Attorney General recommends, pursuant to the recommendation of witness Lane Kollen, that the Commission reject the Electric Vehicle Pilot Project since it is discretionary, unnecessary, and not economic.[273] The effect of this adjustment is a reduction to the revenue requirement of $0.149 million, and the Attorney General recommends the Commission accept this adjustment.[274]

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[268] *Id*.

[269] *Id*. at 66.

[270] Attorney General's Post-Hearing Brief at 39.

[271] *Id*. at 41.

[272] *Id*.

[273] *Id*.

[274] *Id*.

NKU states that Duke Kentucky's proposal falls short of promoting energy sustainability and, therefore, NKU cannot support Duke Kentucky's proposed Electric Vehicle Pilot Program.[275] NKU goes on to argue that the Electric Vehicle Pilot Program should be denied given the risk that ratepayers are almost certain to be saddled with additional costs.[276] NKU states that given Duke Kentucky's officers' fiduciary duty to maximize profits for the shareholders, it would seem clear the pilot program should be undertaken by an unregulated affiliate.[277]

In response to Kollen's recommendation that the Commission not approve the Electric Vehicle Pilot Program, Duke Kentucky states that it operates many programs that are not strictly necessary for the provision of electric service, but do provide other economic or electric system benefits.[278] Duke Kentucky states that electric transportation is no different from its other programs which drive electric system and economic benefits, and are available to all Duke Kentucky customers.[279] Duke Kentucky states that it hopes that through a successful Electric Vehicle Pilot Program it can plan to scale future EV programs in order to secure the potential future benefits of EV growth.[280] Further, Duke Kentucky states that, at the conclusion of the Electric Vehicle Pilot Program, it will have the requisite data to determine the costs and benefits of EV charging, and can adjust

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[275] NKU's Post-Hearing Brief at 23 and 26.

[276] *Id*. at 30.

[277] *Id*.

[278] Rebuttal Testimony of Lang W. Reynolds at 9.

[279] *Id*.

[280] *Id*.

incentive levels and programmatic features to ensure future programs are cost-effective and justified on their own merits.[281]

Duke Kentucky states that Kollen's assertion that the Electric Vehicle Pilot Program will be managed by another Duke Energy affiliate as opposed to Duke Kentucky is not accurate.[282] Duke Kentucky states that the Electric Vehicle Pilot Program will be owned and operated by Duke Kentucky, like any other utility asset.[283] Further, services provided by employees of DEBS or employees of another affiliate pursuant to a Commission approved service agreement does not change the fact that the asset itself is owned and operated by Duke Kentucky.[284] Duke Kentucky asserts that to utilize DEBS employees or employees of a utility affiliate is an efficient use of resources insofar as it allows Duke Kentucky to incur an allocated portion of the costs of such personnel instead of hiring a separate and independent staff.[285]

As to the benefit of the Electric Vehicle Pilot Program to Duke Kentucky customers, Duke Kentucky asserts that all its customers will benefit from the Electric Vehicle Pilot Program.[286] Duke Kentucky states that, while the benefit to its customers would be less than the statewide total, there is clear reason to believe significant benefits to all its customers can be accrued by increasing EV growth and managing charging.[287]

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[281] *Id*.

[282] *Id*. at 10.

[283] *Id*.

[284] *Id*.

[285] *Id*.

[286] *Id*.

[287] *Id*. at 11.

Duke Kentucky states that the Electric Vehicle Pilot Program is necessary to gather relevant data and prove programmatic features to address charging different types of EVs. [288] Duke Kentucky states that this information is crucial for it to develop permanent programs to secure the potential benefits for all customers of increasing EV growth.[289]

As to Kollen's criticisms that EV charging could potentially have a significant impact on system capacity, Duke Kentucky states that this argument is short-sighted and fails to consider the risk of inaction in the face of a growing source of new load.[290] Duke Kentucky states that it already accounts for forecasted EV growth through 2040 in the Integrated Resource Planning process and, therefore, already accounts for EV load in its capacity position through the term of the Electric Vehicle Pilot Program.[291] Duke Kentucky asserts that the Electric Vehicle Pilot Program is necessary because it must gather data to develop future programs which will manage EV charging load and mitigate peak load impacts.[292]

The Commission finds that the Electric Vehicle Pilot Program should be denied. The Commission stresses that the denial of the Electric Vehicle Pilot Program is based on the way in which the pilot program was proposed by Duke Kentucky. Duke Kentucky repeatedly stated that the purpose of the pilot program was to collect data in relation to

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[288] *Id*.

[289] *Id*.

[290] *Id*.

[291] *Id*.

[292] *Id*. at 11–12.

the electric vehicle market in Duke Kentucky's service territory; however, the program as proposed would not provide information sufficient to accurately determine the effects of managed charging incentives.[293] The alleged benefits to all of Duke Kentucky's customers accordingly are difficult to assess given the limited number of electric vehicles that currently exist in Duke Kentucky's service territory and because Duke Kentucky was unable to provide any utilization data as to those charging stations that currently exist in the service territories of Duke Kentucky's affiliates. Private industry has already provided 15 Level II charging stations and one DCFC charging station for customers in Duke Kentucky's service territory. Duke Kentucky provided no evidence that Duke Kentucky has attempted to gain utilization data from the private industries that own these charging stations. It is simply not clear from the record that the Electric Vehicle Pilot Program is needed. Given the small number of electric vehicles that currently exist in Duke Kentucky's service territory and without utilization data to determine not only the use of the charging stations but the impact the charging stations have had on the electric vehicle market, the Electric Vehicle Pilot Program does not appear beneficial to Duke Kentucky ratepayers. This results in a revenue requirement reduction of $0.140 million.[294]

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[293] Duke Kentucky's response to Staff's Third Request, Item 20. Duke Kentucky proposes to perform unmanaged charging in year one of the pilot and then perform managed charging in years two and three because of concerns that customers would not self-select into an unmanaged charging control group based on the incentive payments for managed charging. Isolating the effects of managed charging incentive payments between the first year and subsequent years of the pilot program would be more difficult and less statistically robust than if Duke Kentucky randomly assigned participants to an unmanaged control group and a managed charging study group.

[294] The difference between the Commission's adjustment and the Attorney General's adjustment is related to the application of the Gross Revenue Conversion Factor in the WACC. *See* Duke Kentucky's response to Staff's Second Request, Item 88, Attachment and Appendix D.

Battery Storage Pilot. Duke Kentucky initially proposed in its Application a single circuit 5.5 MW distribution battery energy storage system to be attached to Duke Kentucky's distribution system in Edgewood, Kentucky, to study the benefits and potential reliability benefits for distribution-connected battery storage technologies.[295] Duke Kentucky states that estimated capital costs of the project would be $8.154 million and the estimated annual revenues from the PJM Regulation D market for this project would be approximately $0.800 million.[296] Duke Kentucky stated that the project would be located in an ideal area for enhanced reliability due to the presence of a major hospital.[297]

Duke Kentucky later advised that, subsequent to the filing of the Application, the location and size of the proposed Battery Storage Pilot had to be changed as the hospital decided not to proceed with the project.[298] Duke Kentucky now proposes to locate the 3.4MW/6MWh Battery Storage Project at Duke Kentucky's Crittenden Solar Farm.[299] The Battery Storage Project will incorporate lithium ion batteries.[300]

Duke Kentucky states that the project will provide storage for the solar facilities on the new circuit and enable the same frequency regulation benefits as originally proposed.[301] In addition, Duke Kentucky states that the new location will allow it to study

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[295] Application at 13.

[296] Direct Testimony of Zachary Kuznar, PhD (Kuznar Testimony) at 7–8 and 10. See *also* Schedule B-2.3, page 10 of 12.

[297] *Id.* at 8.

[298] Duke Kentucky's response to Staff's Second Request, Item 79.

[299] Duke Kentucky's response to Staff's Second Request, Item 80.

[300] Kuznar Testimony at 3.

[301] *Id.*

the potential ability to reduce the peak demand on the circuit along with dealing with voltage fluctuations caused by solar facilities along a distribution circuit, thereby enhancing reliability.[302]

Duke Kentucky asserts that as costs continue to decline for battery storage projects, it anticipates energy storage could be deployed as a routine solution in the future for transmission or distribution upgrades.[303] Duke Kentucky states that now is the time to gain the operational knowledge necessary to own and operate energy storage assets and that the lessons learned from the Battery Storage Pilot will enable the successful implementation of future projects.[304]

Duke Kentucky states that the project will require a Wholesale Market Participation Agreement with PJM in order to participate in the wholesale markets.[305] Duke Kentucky states that any revenues realized would offset the costs of the project in base rates by passing the revenues back to customers through Duke Kentucky's PSM and FAC rider mechanisms.[306]

The Attorney General's witness, Lane Kollen, recommends that the Commission reject the Battery Storage Pilot and the related cost recovery.[307] Kollen asserts that it does not make sense for Duke Kentucky to implement the Battery Storage Pilot at this

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[302] *Id*.

[303] *Id*. at 5.

[304] *Id*.

[305] *Id*. at 7.

[306] *Id*. at 7–8.

[307] Kollen Testimony at 62.

time as it is not necessary for reliability; the project is not economic; and the program will be managed by another Duke Energy affiliate or DEBS, not Duke Kentucky and, therefore, should be allocated to the larger Duke Energy utilities.[308] Kollen also argues that the Battery Storage Project is a net economic loser on an annual basis of approximately $0.747 million between future base rates and the Rider PSM, composed of $1.384 million annual revenue requirement in base rates less $0.637 million annual credit in Rider PSM.[309]

The Attorney General recommends that the Commission deny the Battery Storage Pilot as proposed and reduce the revenue requirement by $0.346 million.[310] The Attorney General states that he disagrees with Duke Kentucky's proposal that requires Duke Kentucky ratepayers to both fund the entirety of the Battery Storage Pilot and bear the risk if the estimated revenues fail to materialize, or if the other benefits are not fully realized.[311] The Attorney General states that with the uncertainty remaining over FERC Order 841 regarding storage and final rules still to come from PJM, Duke Kentucky ratepayers should not be required to fund a pilot project with such benefits as "valuable insight on how to incorporate energy storage into an existing operation."[312] The Attorney General asserts that if such benefits are indeed valuable to Duke Kentucky then

[308] *Id.*

[309] *Id.*

[310] Kollen Testimony at 61 and Attorney General's Post-Hearing Brief at 38. The Attorney General's Post-Hearing Brief rounds this reduction to $0.350 million.

[311] *Id.*

[312] *Id.*; *See also* Kuznar Testimony at 5.

shareholders should fund the Battery Storage Pilot and report back to the Commission with a cost-benefit analysis showing clear returns for ratepayers before asking them to fund further battery storage.[313]

NKU asserts that the Commission should deny the Battery Storage Pilot.[314] NKU bases its assertion on the argument that the program is an attempt by Duke Kentucky to engage in a project involving the feasibility of technology new to Kentucky for a learning experience for Duke Kentucky's shareholders, at the expense of Duke Kentucky's ratepayers who will never be repaid.[315]

Duke Kentucky argues that gaining familiarity with the operation of a distribution battery storage system within PJM will provide significant value to Duke Kentucky while its customers benefit from the battery's participation in the PJM market.[316] Duke Kentucky states that the battery is expected to follow PJM's REG D signal that is designed for fast response resources and helps to stabilize the electric grid in a manner that is more efficient than traditional resources.[317] Duke Kentucky asserts that, due to the complexity of how the battery will operate in a regulated market such as PJM, gaining operational knowledge now is critical.[318]

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[313] *Id*.

[314] NKU's Post-Hearing Brief at 22.

[315] *Id*. at 12–13.

[316] Duke Kentucky's Post-Hearing Brief at 52.

[317] *Id*. 52–53.

[318] *Id*. at 53.

Duke Kentucky asserts that most, if not all, new technologies are non-economic in their earliest iterations and that FERC Order 841 is changing the costs and market rules applicable to energy storage and could profoundly improve the underlying economics.[319] Duke Kentucky also states that all signs point to energy storage being a critical path to the utility systems of the not so far ahead future.[320] Duke Kentucky asserts that reliability is not a touchstone by which all utility investments must be made.[321] Duke Kentucky states that the proposed energy storage will have some reliability value as it helps with frequency regulation in PJM's REG D market; however, the primary benefits arise from renewable integration testing.[322]

Finally, Duke Kentucky asserts that the concern that the project will be managed by a Duke Kentucky affiliate is unfounded.[323] Duke Kentucky states that Dr. Kuznar manages all of Duke Energy's battery storage projects and will be directly involved with Duke Kentucky's leadership through the pilot.[324] Further, the battery itself will be owned and operated by Duke Kentucky.[325] Duke Kentucky concludes by stating that the Commission has a long-standing history of encouraging utilities to engage in and support reasonable experimentation associated with advancing the art and science of the

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[319] *Id*. at 54.

[320] *Id*.

[321] *Id*.

[322] *Id*.

[323] *Id*.

[324] *Id*.

[325] *Id*.

industry.[326] Duke Kentucky asserts that the Battery Storage Pilot is consistent with those efforts and should be approved.[327]

The Commission finds that the Battery Storage Pilot should be denied. The revised proposal for the Battery Storage Pilot does not materially impact the estimated capital or operating costs of the original proposal, while it greatly reduces the potential revenues. The Battery Storage Pilot is a learning opportunity only insofar as Duke Kentucky's participation in the PJM ancillary markets with a battery, and ratepayers will be required to pay for this program for which estimated expenses greatly exceed expected revenues. Further, Order 841 is currently being litigated and the prospective benefits may not materialize as assumed by Duke Kentucky and presented to the Commission. This results in a revenue requirement reduction of $0.330 million.[328]

Major Storm Deferral. Duke Kentucky proposes to create a major storm deferral mechanism for the difference between the amounts recovered in base rates and actual amounts that are symmetrical, resulting in either a regulatory asset or liability, and includes a carrying cost of Duke Kentucky's long-term debt rate. [329] NKU's witness, Brian Collins, recommends that Duke Kentucky's request be denied because Duke Kentucky already has the ability to ask for a regulatory asset in the event that storm restoration

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[326] *Id*. at 55.

[327] *Id*.

[328] The difference between the Commission's adjustment and the Attorney General's adjustment is related to the application of the Gross Revenue Conversion Factor in the WACC. *See* Duke Kentucky's response to Staff's Second Request, Item 86, Attachment and Appendix D.

[329] Application at 14.

costs materially affect its financial position.[330] In the alternative, Collins suggests that Duke Kentucky utilize a reserve account for storm expenses, stating that Duke Kentucky failed to demonstrate a need for a major storm tracker.[331] Duke Kentucky states that requesting the deferral of major storm restoration expenses creates an unnecessary burden on the Commission and Duke Kentucky.[332]

The Commission finds that Duke Kentucky's request does not meet the traditional criteria for regulatory asset approval, and the Commission will not arbitrarily accept costs as a regulatory asset without review and substantiation of the costs associated therewith. The Commission, therefore, will deny Duke Kentucky's request to establish a major storm deferral mechanism. Duke Kentucky has the ability to request deferral in the event that storm restoration costs have a material impact on its financial position.

<u>Hedging for Forced Outages</u>. Duke Kentucky requests authorization to perform hedging for forced generation outages in order to expand risk mitigation.[333] Duke Kentucky currently performs hedging during periods of scheduled generation outages to manage market price exposure.[334] Duke Kentucky proposes to use the same financial instruments for forced outages used in hedging scheduled outages, such as daily, weekly, or monthly financial future contracts to mitigate price exposure depending on the expected length of the outage.[335] Due to the unexpected nature of forced outages, Duke

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[330] Collins Testimony at 12–13.
[331] *Id*. at 13.

[332] Lawler Rebuttal at 22.

[333] Direct Testimony of John A. Verderame at 6.

[334] *Id.*

[335] *Id.* at 6–7.

Kentucky states that as soon as a forced outage occurs or becomes imminent, it can purchase traded financial future contracts to hedge replacement power cost volatility and mitigate market price exposure.[336] Duke Kentucky also proposes to treat the gains or losses from hedging forced generation outages that are not recoverable through the fuel adjustment clause the same as credits and charges resulting from hedging for scheduled outages.[337] The Commission finds that Duke Kentucky's proposed hedging for forced generation outages is not reasonable and should be denied. The Commission makes this decision on the basis that the proposed hedging is an unnecessary expense. The Commission believes that the downside risk does not warrant such energy hedging, and Duke Kentucky has expended significant monies to hedge similar capacity risk including hedges and capital investments.

IT IS HEREBY ORDERED that:

1. The rates and charges proposed by Duke Kentucky are denied.

2. The rates and charges, as set forth in Appendix E to this Order, are approved as fair, just, and reasonable rates for Duke Kentucky, and these rates and charges are approved for service rendered on and after the date of entry of this Order subject to Duke Kentucky's commitment to not implement the approved rates no earlier than May 1, 2020.

3. Duke Kentucky's proposed depreciation rates are denied.

4. Duke Kentucky request to amortize the November 2018 Ice Storm regulatory asset over five years is approved.

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[336] *Id.* at 7.

[337] *Id.*

5. Duke Kentucky proposal for a deferral mechanism for storm restoration expense is denied.

6. Duke Kentucky's request to revise Rate LED as discussed herein is denied without prejudice.

7. Duke Kentucky's request to revise Rider PSM is denied.

8. Duke Kentucky's request to implement tampering penalties of $200 for residential customers and $1,000 for non-residential customers is denied.

9. Duke Kentucky's request to move customers with particularly dangerous or repeated instances of tampering to Rider AMO is approved as modified herein.

10. Duke Kentucky's request for approval of the Revert to Owner program is denied without prejudice.

11. Duke Kentucky's request to revise Rider FAC is denied.

12. Duke Kentucky shall include language in its tariff indicating how often customers can adjust their due date under the Adjusted Due Date Program.

13. Duke Kentucky shall include the language in its response Commission Staff's Post-Hearing Request for Information, Item 4, regarding the Automatic Landlord Program, in its tariff.

14. Duke Kentucky shall include the language in its response to Commission Staff's Post-Hearing Request for Information, Item 19, regarding its Usage and Outage Alerts, Pick Your Due Date, and High Bill Alerts Programs in its tariff.

15. Except for the tariffs that have been modified herein or denied, Duke Kentucky's proposed tariff is approved as filed.

16. Within 20 days of the date of this Order, Duke Kentucky shall file with the Commission, using the Commission's electronic Tariff Filing System, new tariff sheets setting forth the rates, charges, and modifications approved or as required herein and reflecting their effective date and that they were authorized by this Order.

17. Duke Kentucky shall file its current supporting data to determine the estimated average cost differential between providing underground facilities and providing overhead facilities within 20 days of the date of entry of this Order.

18. Duke Kentucky's request for a waiver from 807 KAR 5:006, Section 14(5), is approved. No later than 30 days prior to implementing this waiver, Duke Kentucky shall revise its tariff to reflect the waiver.

19. Duke Kentucky's request for a waiver from 807 KAR 5:006, Section 8(1)(d)3.a, is denied.

20. Duke Kentucky's request for a waiver from 807 KAR 5:006, Section 8(1)(d)3.c, is denied.

21. Duke Kentucky's request for a waiver from 807 KAR 5:006, Section 7(1)(a)3., is approved as modified herein.

22. Duke Kentucky's request for a waiver from 807 KAR 5:006, Section 8, in connection with the Revert to Owner Program is denied without prejudice.

23. Duke Kentucky's request to approve the Electric Vehicle Pilot Program is denied.

24. Duke Kentucky's request to approve the Battery Storage Pilot Program is denied.

25. Duke Kentucky’s request to perform hedging for forced generation outages is denied.

26. This case is closed and removed from the Commission's docket.

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By the Commission

ENTERED

APR 27 2020 rcs

KENTUCKY PUBLIC SERVICE COMMISSION

ATTEST:

Acting General Counsel

APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2019-00271 DATED APR 27 2020

	As filed													
	Mar. 2020	April 2020	May 2020	June 2020	July 2020	August 2020	September 2020	October 2020	November 2020	December 2020	January 2021	February 2021	March 2021	13-month average
	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	
Total Steam Production Plant	930,926,886	930,419,313	950,107,716	964,646,053	965,308,202	964,251,845	961,943,814	960,884,107	959,822,721	962,406,965	961,426,029	960,444,873	958,213,729	956,215,558
Total Other Production Plant	373,194,072	373,021,242	372,848,138	374,107,345	373,933,693	373,759,766	373,644,786	373,470,308	373,295,553	373,146,985	372,971,954	372,796,923	374,685,023	373,451,984
Total Transmission Plant	67,125,598	67,457,665	67,951,073	70,406,159	70,465,352	70,454,518	73,495,201	73,505,977	73,496,601	76,373,836	76,432,743	76,491,453	77,175,954	72,371,702
Total Distribution Plant	555,649,708	557,985,251	560,167,019	563,749,644	565,833,230	567,648,391	571,684,616	573,413,651	575,229,671	614,258,261	616,307,316	618,356,236	621,270,905	581,657,992
Total General Plant	52,083,559	52,084,916	52,086,228	54,881,774	54,882,988	54,884,154	57,460,464	57,461,533	57,462,549	60,518,532	60,516,057	60,513,582	62,531,901	56,720,634
Total Allocated Common Plant	32,394,182	32,373,563	32,352,911	32,332,226	32,311,509	32,290,758	32,269,975	32,249,159	32,228,310	32,207,428	32,186,546	32,165,664	32,144,782	32,269,770
Total Electric Plant	2,011,374,005	2,013,341,950	2,035,513,085	2,060,123,201	2,062,734,974	2,063,289,432	2,070,498,857	2,070,984,734	2,071,535,405	2,118,912,006	2,119,840,644	2,120,768,731	2,126,022,294	2,072,687,640

	Reduced													
	Mar. 2020	April 2020	May 2020	June 2020	July 2020	August 2020	September 2020	October 2020	November 2020	December 2020	January 2021	February 2021	March 2021	13-month average
	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	Ending Blance	
Total Steam Production Plant	926,276,257	925,501,370	934,976,439	941,836,693	941,653,054	940,596,339	938,903,494	937,843,428	936,781,684	937,569,507	936,588,571	935,607,416	933,376,271	935,962,348
Total Other Production Plant	370,794,267	370,621,437	370,448,333	371,002,085	370,828,433	370,654,506	370,510,363	370,335,884	370,161,130	369,999,530	369,824,499	369,649,468	371,537,568	370,489,808
Total Transmission Plant	74,589,524	74,750,342	74,993,039	76,231,403	76,253,683	76,240,408	77,775,964	77,773,633	77,761,060	80,247,732	80,306,639	80,365,349	81,049,850	77,564,510
Total Distribution Plant	536,116,612	536,897,384	537,599,464	539,011,929	539,662,892	540,176,967	541,817,732	542,286,802	542,799,376	581,086,029	583,135,084	585,184,004	588,098,673	553,374,842
Total General Plant	47,297,475	47,282,962	47,268,401	48,672,073	48,657,415	48,642,708	49,935,030	49,920,225	49,905,370	51,441,084	51,438,609	51,436,135	53,454,454	49,642,457
Total Allocated Common Plant	32,430,816	32,410,197	32,389,545	32,368,860	32,348,143	32,327,392	32,306,609	32,285,793	32,264,944	32,244,062	32,223,180	32,202,298	32,181,416	32,306,404
Total Electric Plant	2,011,374,005	2,011,332,745	2,021,544,275	2,032,992,098	2,033,272,674	2,032,507,374	2,035,118,247	2,034,314,820	2,033,542,618	2,076,456,999	2,077,385,637	2,078,313,724	2,083,567,287	2,043,209,423

APPENDIX B

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2019-00271 DATED APR 27 2020

	Jan-20	**Feb-20**	**Mar-20**	
Reduction allocation	7,956,351	7,956,351	7,956,351	
Spend As filed	16,157,169	16,157,169	16,157,169	
Reduction Percentage	49.24%	49.24%	49.24%	
ADIT Change (1)	(1,757,771)	(1,697,433)	(1,742,457)	
	(865,588)	(835,875)	(858,046)	(2,559,509)

TEST PERIOD

	Apr-20	**May-20**	**Jun-20**	**Jul-20**	**Aug-20**	**Sep-20**	**Oct-20**	**Nov-20**	**Dec-20**	**Jan-21**	**Feb-21**	**Mar-21**	
Reduction allocation	2,009,205	11,959,605	13,162,293	2,331,197	1,319,758	4,598,552	1,289,304	1,322,873	4,462,221				
Spend As filed	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				
Reduction Percentage	49.24%	49.24%	49.24%	49.24%	49.24%	49.24%	49.24%	49.24%	9.01%				
Total ADIT Change (2)	(1,810,233)	(1,814,730)	(1,830,688)	(1,837,889)	(1,802,993)	(1,775,828)	(1,784,781)	(1,787,357)	(1,868,755)	(1,817,542)	(1,814,183)	(1,809,625)	
Allocated change	(891,422)	(893,636)	(901,494)	(905,040)	(887,857)	(874,479)	(878,888)	(880,157)	(168,407)	-	-	-	
Pro rata days	336	305	275	244	213	183	152	122	91	60	32	1	
Prorated ADIT Change	(820,597)	(746,737)	(679,208)	(605,013)	(518,119)	(438,438)	(366,003)	(294,189)	(41,986)	-	-	-	(4,510,290)
												Total ADIT Reduction	(7,069,799)

(1) See WPB-6a.

(2) See Duke Kentucky's response to Staff's Third Request, Item 70, Attachment STAFF-DR-03-070_Attachment

APPENDIX C

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2019-00271 DATED APR 27 2020

I. Duke Kentucky Cost of Capital Per Filing

	Capital Amount	Capital Ratio	Component Costs	Weighted Avg Cost	Grossed Up Cost
Short Term Debt	84.798	5.84%	1.94%	0.11%	0.11322%
Long Term Debt	667.510	45.93%	4.07%	1.87%	1.87467%
Common Equity	700.989	48.23%	9.80%	4.73%	6.30872%
Total Capital	1,453.298	100.0%		6.71%	8.29661%

II. Cost of Capital Adjusted to Reflect Updated Debt Rates

	Capital Amount	Capital Ratio	Component Costs	Weighted Avg Cost	Grossed Up Cost
Short Term Debt	84.798	5.84%	1.71%	0.10%	0.10020%
Long Term Debt	667.510	45.93%	4.03%	1.85%	1.85363%
Common Equity	700.989	48.23%	9.80%	4.73%	6.30872%
Total Capital	1,453.298	100.0%		6.68%	8.26254%

Change in Grossed Up Weighted Avg Cost of Capital	-0.03%
Rate Base Calculated by Commission	881.003
Revenue Requirement Effect of Adjustment	(0.300)

II. Cost of Capital Adjusted to Reflect Lower ROE

	Capital Amount	Capital Ratio	Component Costs	Weighted Avg Cost	Grossed Up Cost
Short Term Debt	84.798	5.84%	1.71%	0.10%	0.10020%
Long Term Debt	667.510	45.93%	4.03%	1.85%	1.85363%
Common Equity	700.989	48.23%	9.25%	4.46%	5.95505%
Total Capital	1,453.298	100.0%		6.41%	7.90887%

Change in Grossed Up Weighted Avg Cost of Capital	-0.35%
Rate Base Calculated by Commission	881.003
Revenue Requirement Effect of Adjustment	(3.116)

*All dollar amounts are shown in millions.

APPENDIX D

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2019-00271 DATED APR 27 2020

Duke Energy Kentucky, Inc.
Case No. 2019-00271
Base Revenue Requirement
Summary of Adjustments
For the Test Year Ended March 31, 2021

	Adjustment Amount		
Original Increase Requested by Duke Kentucky	45,634,456		
Rate Base Adjustments		**Rate Base Change**	**WACC**
Remove Asset ADIT for Solar ITC	(250,334)	(3,017,307)	8.29661%
Cash Working Capital Adjustments	(1,241,606)	(14,965,228)	8.29661%
Remove Regulatory Asset for Deferred Rate Case Expenses	(59,091)	(712,226)	8.29661%
Reflect Changes in Accumulated Depreciation and ADIT Due to Lower Depreciation Expense	154,597	1,863,376	8.29661%
Reduce Net Plant for Increases above Budget (Net of Decrease in Acc. Dep. and ADIT)	(3,766,979)	(45,403,842)	8.29661%
Removal of Battery Storage Project	(200,492)	(2,416,558)	8.29661%
Removal of EV Projects	(64,134)	(773,014)	8.29661%
Operating Income Adjustments		**Expense Amount**	**GRCF**
Reflect Actual Rate Case Expense from Instant Case (5-year Amortization)	(50,501)	(50,402)	1.0019598
Reflect 5-Year Amortization of Remaining 2017-00321 Rate Case Expense Regulatory Asset	(67,634)	(67,501)	1.0019598
Reject Increase to Depreciation Expense Due to Changes in Depreciation Rates	(7,445,807)	(7,431,243)	1.0019598
Reduce Payroll Expense	(1,177,386)	(1,175,083)	1.0019598
Reduce Payroll Taxes Associated with Reduction in Payroll Expense	(90,070)	(89,894)	1.0019598
Remove SERP Costs	(121,759)	(121,521)	1.0019598
Reduce Payroll Taxes Associated with Reduction in Short Term Incentive Compensation	(65,602)	(65,474)	1.0019598
Remove Incentive Compensation tied to Earnings per Share	(662,631)	(661,335)	1.0019598
Eliminate Credit/Debit Card Convenience Fees	(493,947)	(492,981)	1.0019598
Correct Error Regarding DEBS Cost of Capital	737,619	736,176	1.0019598
Correct Error Regarding Loss on Sales of Accounts Receivable	(1,244,230)	(1,241,796)	1.0019598
Refund of DEBS EDIT (5-year Amortization)	(42,828)	(32,153)	1.3320034
Reflect Inventory Tax Credit for State Income Taxes	(7,945)	(7,929)	1.0019598
Remove Tamper Fee Revenues	22,400	22,400	1.0000000
Remove Depreciation Expense for Plant for Increases above Budget	(1,750,684)	(1,747,260)	1.0019598
Remove Revenue Requirement Effects of New Battery Storage Project	(129,968)	(129,713)	1.0019598
Remove Revenue Requirement Effects of Electric Vehicle Charging Pilot Program	(75,516)	(75,368)	1.0019598
Rate of Return Adjustments			
Update Long-Term and Short-Term Debt Rates	(300,128)		
Reduce Return on Equity from 9.8% to 9.25%	(3,115,867)		
Total Adjustments to Duke Kentucky's Request	(21,510,523)		
Base Rate Increase After Adjustments	24,123,933		

APPENDIX E

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2019-00271 DATED APR 27 2020

The following rates and charges are prescribed for the customers in the area served by Duke Energy Kentucky, Inc. All other rates and charges not specifically mentioned herein shall remain the same as those in effect under the authority of the Commission prior to the effective date of this Order.

RATE RS
RESIDENTIAL SERVICE

Customer Charge per month	$ 12.60
Energy Charge per kWh:	
All kWh per month	$ 0.077960

RATE DS
SERVICE AT SECONDARY DISTRIBUTION VOLTAGE

Customer Charge per month:	
Single Phase Service	$ 15.00
Three Phase Service	$ 30.00
Demand Charge per kW:	
First 15 kW	$ 0.00
Additional kW	$ 8.90
Energy Charge per kWh:	
First 6,000 kWh	$ 0.086513
Next 300 kWh/kW	$ 0.053107
Additional kWh	$ 0.043491
Non-Church Cap Rate per kWh	$ 0.255564
Church Cap Rate per kWh	$ 0.156895

RATE DT
TIME-OF-DAY RATE FOR SERVICE AT DISTRIBUTION VOLTAGE

Customer Charge per month:	
Single Phase	$ 63.50
Three Phase	$ 127.00
Primary Voltage Service	$ 138.00

Demand Charge per kW:		
Summer on-peak	$	14.68
Winter on-peak	$	13.90
Off-peak	$	1.32
Energy Charge per kWh:		
Summer on-peak	$	0.046307
Winter on-peak	$	0.044204
Off-peak	$	0.037922
Primary Service Discount:		
Metering of on-peak billing demand per kW:		
First 1,000 kW	$	(0.75)
Additional kW	$	(0.58)

RATE EH
OPTIONAL RATE FOR ELECTRIC SPACE HEATING

Winter Period		
Customer Charge per month:		
Single Phase Service	$	15.00
Three Phase Service	$	30.00
Primary Voltage Service	$	117.00
Energy Charge per kWh:		
All kWh per month	$	0.066893

RATE SP
SEASONAL SPORTS SERVICE

Customer Charge per month:	$	15.00
Energy Charge per kWh:		
All kWh per month	$	0.105043

RATE GS-FL
OPTIONAL UNMETERED GENERAL SERVICE RATE FOR SMALL FIXED LOADS

Base Rate per kWh:		
Load range of 540 to 720 hours per month	$	0.088481
Loads less than 540 hours per month	$	0.101929
Minimum per Fixed Load Location per month:	$	3.19

RATE DP
SERVICE AT PRIMARY DISTRIBUTION VOLTAGE

Customer Charge per month:		
Primary Voltage Service (12.5 or 34.5 kV)	$	117.00
Demand Charge per kW:		
All kW	$	8.50
Energy Charge per kWh:		
First 300 kWh/kW	$	0.054813
Additional kWh	$	0.046345

The maximum monthly rate, excluding the customer charge and all applicable riders shall not exceed $0.258826 per kWh.

RATE TT
TIME-OF-DAY RATE FOR SERVICE AT TRANSMISSION VOLTAGE

Customer Charge per month:	$	500.00
Demand Charge per kW:		
Summer on-peak	$	8.44
Winter on-peak	$	6.92
Off-peak	$	1.28
Energy Charge per kWh:		
Summer on-peak	$	0.051305
Winter on-peak	$	0.048977
Off-peak	$	0.042013

RIDER GSS
GENERATION SUPPORT SERVICE

Administrative Charge:	$	50.00
Monthly Transmission and Distribution Reservation Charge:		
Rate DS – Secondary Distribution Service	$	5.6112
Rate DT – Distribution Service	$	7.1198
Rate DP – Primary Distribution Service	$	7.6293
Rate TT – Transmission Service	$	3.1067

RATE SL
STREET LIGHTING SERVICE

Base Rate per Unit per Month:

OVERHEAD DISTRIBUTION AREA

Standard Fixture (Cobra Head)	
Mercury Vapor:	
7,000 Lumen	$ 7.74
7,000 Lumen (Open Refractor)	$ 6.46
10,000 Lumen	$ 8.93
21,000 Lumen	$ 11.96
Metal Halide:	
14,000 Lumen	$ 7.74
20,500 Lumen	$ 8.93
36,000 Lumen	$ 11.96
Sodium Vapor:	
9,500 Lumen	$ 8.56
9,500 Lumen (Open Refractor)	$ 6.43
16,000 Lumen	$ 9.34
22,000 Lumen	$ 12.11
27,500 Lumen	$ 12.11
50,000 Lumen	$ 16.27
Decorative Fixtures	
Sodium Vapor:	
9,500 Lumen (Rectilinear)	$ 10.65
22,000 Lumen (Rectilinear)	$ 13.16
50,000 Lumen (Rectilinear)	$ 17.41
50,000 Lumen (Setback)	$ 25.88

Spans of Secondary Wiring: For each increment of 50 feet of secondary wiring beyond the first 150 feet from the pole, the following price per month shall be added to the price per month per street lighting unit: $ 0.56

UNDERGROUND DISTRIBUTION AREA

Standard Fixture (Cobra Head)	
Mercury Vapor:	
7,000 Lumen	$ 7.88
7,000 Lumen (Open Refractor)	$ 6.46
10,000 Lumen	$ 9.09
21,000 Lumen	$ 12.24

Metal Halide:	
14,000 Lumen	$ 7.88
20,500 Lumen	$ 9.09
36,000 Lumen	$ 12.24
Sodium Vapor:	
9,500 Lumen	$ 8.56
9,500 Lumen (Open Refractor)	$ 6.52
16,000 Lumen	$ 9.31
22,000 Lumen	$ 12.11
27,500 Lumen	$ 12.11
50,000 Lumen	$ 16.27
Decorative Fixture:	
Mercury Vapor:	
7,000 Lumen (Town & Country)	$ 8.15
7,000 Lumen (Holophane)	$ 10.23
7,000 Lumen (Gas Replica)	$ 23.38
7,000 Lumen (Granville)	$ 8.23
7,000 Lumen (Aspen)	$ 14.81
Metal Halide:	
14,000 Lumen (Traditionaire)	$ 8.13
14,000 Lumen (Granville Acorn)	$ 14.81
14,000/14,500 Lumen (Gas Replica)[1]	$ 23.47
Sodium Vapor:	
9,500 Lumen (Town & Country)	$ 11.89
9,500 Lumen (Holophane)	$ 12.88
9,500 Lumen (Rectilinear)	$ 9.60
9,500 Lumen (Gas Replica)	$ 24.23
9,500 Lumen (Aspen)	$ 15.00
9,500 Lumen (Traditionaire)	$ 11.89
9,500 Lumen (Granville Acorn)	$ 15.00
22,000 Lumen (Rectilinear)	$ 13.22
50,000 Lumen (Rectilinear)	$ 17.47
50,000 Lumen (Setback)	$ 25.88

[1] Duke Kentucky's billing analysis lists both 14,000 and 14,500 Lumen Gas Replica lights at the same rate.

POLE CHARGES

Pole Description:

Wood:		
17 Foot (Wood Laminated)	$	4.79
30 Foot	$	4.73
35 Foot	$	4.79
40 Foot	$	5.74
Aluminum:		
12 Foot (Decorative)	$	13.02
28 Foot	$	7.55
28 Foot (Heavy Duty)	$	7.62
30 Foot (Anchor Base)	$	15.08
Fiberglass:		
17 Foot	$	4.79
12 Foot (Decorative)	$	14.00
30 Foot (Bronze)	$	9.11
35 Foot (Bronze)	$	9.36
Steel:		
27 Foot (11 gauge)	$	12.31
27 Foot (3 gauge)	$	18.56

Spans of Secondary Wiring: For each increment of 25 feet of secondary wiring beyond the first 25 feet from the pole, the following price per month shall be added to the price per month per street lighting unit: $ 0.82

RATE TL
TRAFFIC LIGHTING SERVICE

Base Rate per kWh:		
Energy only	$	0.041422
Energy from separately metered source w/maintenance	$	0.022938
Energy w/maintenance	$	0.064360

RATE UOLS
UNMETERED OUTDOOR LIGHTING ELECTRIC SERVICE

Base Rate per kWh:		
All kWh per month	$	0.040785

RATE LED
LED OUTDOOR LIGHTING ELECTRIC SERVICE

Base Rate per kWh:

All kWh per month	$	0.040785

Monthly Maintenance and Fixture Charge Per Unit Per Month
Fixtures:

	Fixture	Maintenance
50W Neighborhood	$ 4.27	$ 4.51
50W Neighborhood with Lens	$ 4.45	$ 4.51
50W Standard LED	$ 5.25	$ 4.51
70W Standard LED	$ 5.24	$ 4.51
110W Standard LED	$ 5.94	$ 4.51
150W Standard LED	$ 7.87	$ 4.51
220W Standard LED	$ 8.92	$ 5.50
280W Standard LED	$ 10.98	$ 5.50
50W Acorn LED	$ 13.80	$ 4.51
50W Deluxe Acorn LED	$ 15.31	$ 4.51
70W LED Open Deluxe Acorn	$ 14.93	$ 4.51
50W Traditional LED	$ 10.00	$ 4.51
50W Open Traditional LED	$ 10.00	$ 4.51
50W Mini Bell LED	$ 13.01	$ 4.51
50W Enterprise LED	$ 13.44	$ 4.51
70W Sanibel LED	$ 16.57	$ 4.51
150W Sanibel LED	$ 16.57	$ 4.51
150W LED Teardrop	$ 20.05	$ 4.51
50W LED Teardrop Pedestrian	$ 16.27	$ 4.51
220W LED Shoebox	$ 13.88	$ 5.50
420W LED Shoebox	$ 20.72	$ 5.50
530W LED Shoebox	$ 26.55	$ 5.50
150W Clermont LED	$ 25.19	$ 4.51
130W Flood LED	$ 8.65	$ 4.51
260W Flood LED	$ 13.61	$ 4.51
50W Monticello LED	$ 16.82	$ 4.51
50W Mitchell Finial	$ 15.95	$ 4.51
50W Mitchell Ribs, Bands, and Medallions LED	$ 17.57	$ 4.51
50W Mitchell Top Hat LED	$ 15.95	$ 4.51
50W Mitchell Top Hat with Ribs, Bands, and Medallions LED	$ 17.57	$ 5.50
50W Open Monticello LED	$ 16.75	$ 5.50

Monthly Pole Charges Per Unit Per Month:

Style A 12 Ft Long Anchor Base Top Tenon Aluminum	$ 6.01
Style A 15 Ft Long Direct Buried Top Tenon Aluminum	$ 5.14
Style A 15 Ft Long Anchor Base Top Tenon Aluminum	$ 6.18
Style A 18 Ft Long Direct Buried Top Tenon Aluminum	$ 5.35
Style A 17 Ft Long Anchor Base Top Tenon Aluminum	$ 6.47
Style A 25 Ft Long Direct Buried Top Tenon Aluminum	$ 9.92
Style A 22 Ft Long Anchor Base Top Tenon Aluminum	$ 7.68
Style A 30 Ft Long Direct Buried Top Tenon Aluminum	$ 11.06
Style A 27 Ft Long Anchor Base Top Tenon Aluminum	$ 9.07
Style A 35 Ft Long Direct Buried Top Tenon Aluminum	$ 12.31
Style A 32 Ft Long Anchor Base Top Tenon Aluminum	$ 10.48
Style A 41 Ft Long Direct Buried Top Tenon Aluminum	$ 13.30
Style B 12 Ft Long Anchor Base Post Top Aluminum	$ 7.31
Style C 12 Ft Long Anchor Base Post Top Aluminum	$ 9.90
Style C 12 Ft Long Anchor Base Davit Steel	$ 9.90
Style C 14 Ft Long Anchor Base Top Tenon Steel	$ 10.62
Style C 21 Ft Long Anchor Base Davit Steel	$ 26.04
Style C 23 Ft Long Anchor Base Boston Harbor Steel	$ 26.33
Style D 12 Ft Long Anchor Base Breakaway Aluminum	$ 9.81
Style E 12 Ft Long Anchor Base Post Top Aluminum	$ 9.90
Style F 12 Ft Long Anchor Base Post Top Aluminum	$ 10.60
Legacy Style 39 Ft Direct Buried Single or Twin Side Mount Aluminum Satin Finish	$ 16.76
Legacy Style 27 Ft Long Anchor Base Side Mount Aluminum Pole Satin Finish Breakaway	$ 12.92
Legacy Style 33 Ft Long Anchor Base Side Mount Aluminum Pole Satin Finish Breakaway	$ 12.56
Legacy Style 37 Ft Long Anchor Base Side Mount Aluminum Pole Satin Finish	$ 15.53
30' Class 7 Wood Pole	$ 6.14
35' Class 5 Wood Pole	$ 6.68
40' Class 4 Wood Pole	$ 10.05
45' Class 4 Wood Pole	$ 10.42
15’ Style A - Fluted - for Shroud - Aluminum Direct Buried Pole	$ 5.08
20’ Style A - Fluted - for Shroud - Aluminum Direct Buried Pole	$ 5.66
15’ Style A - Smooth - for Shroud - Aluminum Direct Buried Pole	$ 3.35
20’ Style A - Smooth - for Shroud - Aluminum Direct Buried Pole	$ 5.22
Shroud – Standard Style for anchor base poles	$ 2.45
Shroud – Style B Pole for smooth and fluted poles	$ 2.30
Shroud – Style C Pole for smooth and fluted poles	$ 2.21
Shroud – Style D Pole for smooth and fluted poles	$ 2.38

Pole Foundation Per Month Per Unit:

Flush – Pre-fabricated – Style A Pole	$	10.33
Flush – Pre-fabricated – Style B Pole	$	9.31
Flush – Pre-fabricated – Style C Pole	$	10.94
Flush – Pre-fabricated – Style E Pole	$	10.33
Flush – Pre-fabricated – Style F Pole	$	9.31
Flush – Pre-fabricated – Style D Pole	$	9.07
Reveal – Pre-fabricated – Style A Pole	$	10.97
Reveal – Pre-fabricated – Style B Pole	$	11.73
Reveal – Pre-fabricated – Style C Pole	$	11.72
Reveal – Pre-fabricated – Style D Pole	$	11.72
Reveal – Pre-fabricated – Style E Pole	$	11.72
Reveal – Pre-fabricated – Style F Pole	$	10.25
Screw-in Foundation	$	5.76

Brackets Per Month Per Unit:

14 inch bracket – wood pole – side mount	$	1.37
4 foot bracket – wood pole – side mount	$	1.48
6 foot bracket – wood pole – side mount	$	1.36
8 foot bracket – wood pole – side mount	$	2.19
10 foot bracket – wood pole – side mount	$	4.53
12 foot bracket – wood pole – side mount	$	3.59
15 foot bracket – wood pole – side mount	$	4.37
4 foot bracket – metal pole – side mount	$	5.28
6 foot bracket – metal pole – side mount	$	5.64
8 foot bracket – metal pole – side mount	$	5.67
10 foot bracket – metal pole – side mount	$	5.98
12 foot bracket – metal pole – side mount	$	6.80
15 foot bracket – metal pole – side mount	$	6.95
18 inch bracket – metal pole – double flood mount –top mount	$	2.26
14 inch bracket – metal pole – single mount – top tenon	$	1.62
14 inch bracket – metal pole – double mount – top tenon	$	2.01
14 inch bracket – metal pole – triple mount – top tenon	$	2.48
14 inch bracket – metal pole – quad mount – top tenon	$	2.32
6 foot – metal pole – single – top tenon	$	2.44
6 foot – metal pole – double – top tenon	$	3.90
4 foot – Boston Harbor – top tenon	$	7.94
6 foot – Boston Harbor – top tenon	$	8.69
12 foot – Boston Harbor Style C pole double mount – top tenon	$	15.66

4 foot – Davit arm – top tenon	$	8.44
18 inch – Cobra head fixture for wood pole	$	1.20
18 inch – Flood light for wood pole	$	1.35

Wiring Equipment Per Month Per Unit:

Secondary Pedestal (cost per unit)	$	2.07
Handhole (cost per unit)	$	1.72
6AL DUPLEX and Trench (cost per foot)	$	0.92
6AL DUPLEX and Trench and conduit (cost per foot)	$	0.96
6AL DUPLEX with existing conduit (cost per foot)	$	0.89
6AL DUPLEX and Bore with conduit (cost per foot)	$	1.10
6AL DUPLEX OH wire (cost per foot)	$	0.88

RATE NSU
STREET LIGHTING SERVICE - NONSTANDARD UNITS

Rate per Unit per Month:

Company Owned

Boulevard Units Served Underground:

2,500 Lumen Incandescent - Series	$	10.03
2,500 Lumen Incandescent - Multiple	$	7.79

Holophane Decorative Served Underground:

10,000 Lumen Mercury Vapor on Fiberglass Pole	$	18.27

The cable span charge of $0.82 per each increment of 25 feet of secondary wiring shall be added to the rate/unit charge for each increment of secondary wiring beyond the first 25 feet from the pole base.

Street Lighting Served Overhead:

2,500 Lumen Incandescent	$	7.73
2,500 Lumen Mercury Vapor	$	7.31
21,000 Lumen Mercury Vapor	$	11.60

Customer Owned

Steel Boulevard Units Served Underground:

2,500 Lumen Incandescent - Series	$	5.92
2,500 Lumens Incandescent - Multiple	$	7.53

RATE SC
STREET LIGHTING SERVICE – CUSTOMER OWNED

Base Rate per Unit per Month:

Standard Fixture (Cobra Head):		
Mercury Vapor:		
7,000 Lumen	$	4.56
10,000 Lumen	$	5.80
21,000 Lumen	$	8.05
Metal Halide:		
14,000 Lumen	$	4.56
20,500 Lumen	$	5.80
36,000 Lumen	$	8.05
Sodium Vapor:		
9,500 Lumen	$	5.48
16,000 Lumen	$	6.11
22,000 Lumen	$	6.72
27,500 Lumen	$	6.72
50,000 Lumen	$	9.09
Decorative Fixture:		
Mercury Vapor:		
7,000 Lumen (Holophane)	$	5.79
7,000 Lumen (Town & Country)	$	5.74
7,000 Lumen (Gas Replica)	$	5.79
7,000 Lumen (Aspen)	$	5.79
Metal Halide:		
14,000 Lumen (Traditionaire)	$	5.74
14,000 Lumen (Granville Acorn)	$	5.79
14,000 Lumen (Gas Replica)	$	5.79
Sodium Vapor:		
9,500 Lumen (Town & Country)	$	5.40
9,500 Lumen (Traditionaire)	$	5.40
9,500 Lumen (Granville Acorn)	$	5.63
9,500 Lumen (Rectilinear)	$	5.40
9,500 Lumen (Aspen)	$	5.63
9,500 Lumen (Holophane)	$	5.63
9,500 Lumen (Gas Replica)	$	5.63
22,000 Lumen (Rectilinear)	$	7.11
50,000 Lumen (Rectilinear)	$	9.41

Pole Description:

Wood:

30 Foot	$	4.73
35 Foot	$	4.79
40 Foot	$	5.74

Customer Owned and Maintained Units per kWh	$	0.040785

RATE SE
STREET LIGHTING SERVICE – OVERHEAD EQUIVALENT

Base Rate per Unit per Month:

Decorative Fixtures:

Mercury Vapor:

7,000 Lumen (Town & Country)	$	7.93
7,000 Lumen (Holophane)	$	7.96
7,000 Lumen (Gas Replica)	$	7.96
7,000 Lumen (Aspen)	$	7.96

Metal Halide:

14,000 Lumen (Traditionaire)	$	7.93
14,000 Lumen (Granville Acorn)	$	7.96
14,000 Lumen (Gas Replica)	$	7.96

Sodium Vapor:

9,500 Lumen (Town & Country)	$	8.65
9,500 Lumen (Holophane)	$	8.76
9,500 Lumen (Rectilinear)	$	8.65
9,500 Lumen (Gas Replica)	$	8.75
9,500 Lumen (Aspen)	$	8.75
9,500 Lumen (Traditionaire)	$	8.65
9,500 Lumen (Granville Acorn)	$	8.75
22,000 Lumen (Rectilinear)	$	12.43
50,000 Lumen (Rectilinear)	$	16.44
50,000 Lumen (Setback)	$	16.44

RATE DPA
DISTRIBUTION POLE ATTACHMENTS

Annual rental per pole per foot:

Two-User pole	$	8.59
Three-User pole	$	7.26

COGENERATION AND SMALL POWER
PRODUCTION SALE AND PURCHASE TARIFF-100 kW OR LESS

Rates for Purchases from Qualifying Facilities

Energy Purchase Rate per kWh	$	0.032038
Capacity Purchase Rate per kW-month	$	3.98[1]

COGENERATION AND SMALL POWER PRODUCTION SALE AND PURCHASE TARIFF-GREATER THAN 100 kW

Rates for Purchases from Qualifying Facilities

The Energy Purchase Rate for all kWh delivered shall be the PJM Real-Time Locational Marginal Price for power at the DEK Aggregate price node, inclusive of the energy, congestion and losses charges, for each hour of the billing month.

Capacity Purchase Rate per kW-month	$	3.98[2]

SCHEDULE RTP REAL-TIME PRICING PROGRAM

Energy Delivery Charge (Credit) per kW per hour from CBL		
Secondary Service	$	0.018119
Primary Service	$	0.014956
Transmission Service	$	0.006575

NON-RECURRING CHARGES

Remote Reconnection	$	5.88
Reconnection – Non-remote	$	60.00
After-Hours Charge	$	40.00
Collection Charge	$	60.00

[1] The Total Avoided Cost Weighted Average Cost of Capital components were updated based upon the approved WACC in the instant case.

[2] *Id*.

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