

BEFORE

THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of	)	
Duke Energy Ohio, Inc. for an	)	Case No. 17-0032-EL-AIR
Increase in Electric Distribution Rates	)	

In the Matter of the Application of	)	
Duke Energy Ohio, Inc. for Tariff	)	Case No. 17-0033-EL-ATA
Approval	)	

In the Matter of the Application of	)	
Duke Energy Ohio, Inc. for Approval	)	Case No. 17-0034-EL-AAM
to Change Accounting Methods	)	

Asim Z. Haque, Chairman  
M. Beth Trombold, Commissioner  
Thomas W. Johnson, Commissioner  
Lawrence K. Friedeman, Commissioner  
Daniel R. Conway, Commissioner

To the Honorable Commission:

In accordance with the provisions of the Ohio Revised Code Section 4909.19, the Staff of the Public Utilities Commission of Ohio (Staff) has conducted its investigation in the above matter and hereby submits its findings to the Commissioners of the PUCO (Commission) in this Staff Report.

The Staff Report has been jointly prepared by the Staff's Rates & Analysis Department and Service Monitoring and Enforcement Department.

Copies of the Staff Report have been filed with the Docketing Division of the Public Utilities Commission of Ohio (PUCO) and served by certified mail upon the mayors of all affected municipalities and other public officials deemed representative of the service area affected by the application. A copy of this report has also been served upon the utility or its authorized representative. Interested parties are advised that written objections to any portion of the Staff Report must be filed within 30 days of the date of

the filing of this report, after which time the Commission will promptly set this matter for public hearing. Written notice of the time, place, and date of such hearing will be served upon all parties to the proceeding.

The Staff Report is intended to present for the Commission's consideration the results of the Staff's investigation. It does not purport to reflect the views of the Commission nor should any party to the proceeding consider the Commission as bound in any manner by the representations or recommendations. The Staff Report, however, is legally cognizable evidence upon which the Commission may rely in reaching its decision in this matter. (See *Lindsey v. Pub. Util. Comm.*, 111 Ohio St. 6 (1924)).

Respectfully submitted,

PUCO Rates and Analysis Department

A handwritten signature in black ink, appearing to read "P. Donlon", with a long horizontal flourish extending to the right.

Patrick Donlon  
Director

PUCO Service Monitoring and Enforcement Department

A handwritten signature in black ink, appearing to read "John Williams", with a long horizontal flourish extending to the right.

John Williams  
Director

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## **BACKGROUND**

The applicant, Duke Energy Ohio, Inc. (DEO, the Applicant, or the Company), renders electric or gas service, or both, in nine counties in southwestern Ohio. The Applicant is a public utility engaged in the business of generation, transmission, distribution, and sale of electricity to approximately 700,000 consumers.

On January 31, 2017, in Case No. 17-0032-EL-AIR, the Applicant filed a notice of intent to file an application for an increase in its electric distribution rates applicable in its entire service area subject to the jurisdiction of the Public Utilities Commission of Ohio (PUCO or Commission). The Applicant requested that its test period begin April 1, 2016 and end March 31, 2017, and that the date certain for property valuation be June 30, 2016.

By its Entry of February 23, 2017, the Commission approved the requested test period and date certain.

On March 2, 2017, the Applicant filed its application to increase electric distribution rates. By entry dated April 26, 2017, the Commission ordered that the application be accepted as of March 2, 2017.

The rates proposed by the Applicant for increase, when applied to test year sales volumes, would generate approximately \$15,400,000 of additional retail base rate revenues. The total revenue increase over test year operating revenues is approximately three percent.

### **Summary of Staff's Recommendations**

As shown on Schedule A-1, the Staff of the PUCO (Staff) recommends a revenue decrease in the range of \$(18,357,786) to \$(28,932,684). This represents a decrease of -3.77 percent to -5.94 percent over test year operating revenue. This determination is based on Staff's examination of the accounts and records of the Applicant for the 12 months ending March 31, 2017, as summarized in this report, including schedules which incorporate Staff's recommended rate of return, rate base, and adjusted operating income.

## **OPERATING INCOME AND RATE BASE**

### **Scope of Investigation**

The scope of the investigation was to determine if the Applicant's filed exhibits concerning test year operating income, rate base and other data are reasonable for ratemaking purposes, and if the financial and statistical records supporting the data can be relied upon. Staff interviewed the Applicant's key management personnel and reviewed both internal and published financial reports to assure understanding of the Applicant's operations and organization. Staff's investigation of test year operating income and date certain rate base included a review of the Applicant's budgeting and forecasting techniques, verification of the operating revenue computation, and an examination of the Applicant's continuing property records. In addition, Staff verified the existence and used and useful nature of the assets through physical inspections. Staff performed other independent analyses it considered necessary.

The Applicant proposed various adjustments to operating income and rate base, as summarized on the Applicant's Schedules. Staff reviewed and analyzed the Applicant's proposed adjustments to operating income and rate base and traced them to supporting workpapers and source data. As a result of its review and analysis, Staff accepted some of the proposed adjustments, changed some of the Applicant's proposed adjustments using alternative approaches, and/or proposed new adjustments. Staff's adjustments make the test year operating income and date certain rate base consistent with sound regulatory accounting practices, more representative of normal operations and appropriate for ratemaking purposes.

The purpose of Staff's investigation was to develop financial data for ratemaking purposes; it was not intended to provide a basis for expressing an opinion on the financial statements of the Company as a whole. The following sections of this report summarize the results of Staff investigation, which Staff believes are relevant to the determination of test year operating income and rate base. Staff presents these sections in the general order in which the schedules are presented at the end of this document.

### **Revenue Requirements**

Schedule A-1 presents Staff's determination of the Applicant's revenue requirements. Staff's recommended revenue increase is shown on Staff's Schedule A-1. This determination is based on the examination of the accounts and records of the Applicant for the twelve months ending March 31, 2017, the test year in this proceeding. The results of Staff's examination are summarized in this report, and the schedules that incorporate Staff's recommended rate of return, rate base, and adjusted test year operating income.

Staff removed PUCO and OCC assessment fees from the gross revenue conversion factor, as calculated on Staff's Schedule A-2. There is no direct, causal relationship between the revenues collected by a company and the amount that company is assessed. Additionally, the Company already has PUCO and OCC assessment fees embedded in its test year expenses.

## **RATE BASE**

The rate base represents the Applicant's net investment in plant and other assets as of the date certain, June 30, 2016, which were used and useful in providing electric utility service to its customers and upon which its investors are entitled to the opportunity to receive a fair and reasonable rate of return.

Staff's analysis of the rate base is divided into Plant In Service, Delivery Capital Investment (DCI) Rider, Depreciation, Construction Work in Progress, Working Capital, and Other Rate Base Items. A comparison of rate base submitted by the Applicant and Staff's recommendation is shown on Schedule B-1. Schedules B-2 through B-7, provide additional support for Staff's rate base findings.

### **Plant In Service**

The plant in service, as presented by the Applicant, is the surviving original cost of the plant that is used and useful, or projected to be used and useful as of the date certain, in providing electric utility service to its customers. As a result of Staff's investigation and review of the application, Staff recommends that adjustments be made to the Applicant's date certain plant investment for ratemaking purposes. These adjustments are identified below, summarized on Schedule B-2.2, and reflected in the calculation of jurisdiction plant in service figures on Schedule B-2.1.

#### Columbia Substation Land

As of June 30, 2016, the Applicant had \$631,853 recorded in FERC Account 360 – Land, which was allocated for construction of the Columbia Substation. The construction of this substation will not begin until 2018. Therefore, the substation is currently not used and useful in providing utility service. The Applicant has agreed to move this amount to FERC Account 105 – Plant Held for Future Use. Staff's reduction of \$631,853 from FERC Account 360 is shown on Schedule B-2.2a.

#### St. Clair Substation

The St. Clair Substation was de-energized in May 2015 and the related assets retired. However, \$852,781 remained in FERC Account 362 – Station Equipment for the St. Clair Substation as of June 30, 2016. Therefore, Staff reduced \$852,781 from FERC Account 362, as shown on Schedule B-2.2b.

#### ESO Control Center Land

The ESO Control Center project (OHLS1401M) has \$4,084,826 recorded in FERC Account 389 – Land as of June 30, 2016. Construction has not begun at this site and the ESO Control Center project is currently not used and useful in providing utility service. The Applicant has agreed to move this project to FERC Account 105 – Plant Held for Future Use. Staff reduced \$4,084,826 from FERC Account 389, as shown on Schedule B-2.2c.

#### Leasehold Improvements

During its investigation, Staff discovered the Company was moving its employees out of the Fourth & Walnut (Clipay) building and would not be renewing its lease, which expires on September 30, 2017. The lease for Holiday Park also expires on September 30, 2017 and the current corporate budget does not include plans for a renewal of the lease, but a final decision has not been made. Since the status of these leaseholds are both known and measurable, Staff believes they should be removed from the rate base. Staff's adjustment to Company Account 190 – Structures & Improvements includes a reduction of \$5,272,245 for Fourth & Walnut (Clipay) and \$303,876 for Holiday Park. Staff's adjustments are shown on Schedule B-2.2d.



### Hartwell Recreation Facility

Assets related to the Hartwell Recreation Facility and the Hartwell Golf Course were adjusted out of plant in service in Case No. 12-1682-EL-AIR. These assets were transferred to FERC Account 121 – Non-Utility Property or retired. However, \$16,549 remain in Company Account 194 – Tools, Shop & Garage Equipment for the Hartwell Recreation Facility. Staff reduced \$16,549 from FERC Account 121, as shown on Schedule B-2.2e.

### Indiana, Kentucky, and Transmission Assets

During its field investigation, Staff discovered \$589,478 in several Company accounts related to Indiana and Kentucky assets included in rate base for Ohio customers as of June 30, 2016. Staff also found transmission items totaling \$11,395 that were initially charged to distribution accounts, but due to the timing of the unitization process, were not or have not yet been reclassified to the appropriate transmission accounts. Therefore, Staff reduced \$600,873 from various accounts, as shown on Schedule B-2.2f.

### Miscellaneous Adjustments

During its plant review, Staff identified the following catering events: an ice cream social and a mezzanine coffee social. The supporting documentation included charges for ice cream, toppings, water dispensers, fresh fruit kabob trays, table linens, an attendant service and cases of coffee K-Cups. There was also a restoration fee for termination of a lease for property that the Applicant is no longer occupying. These charges do not benefit Ohio customers and therefore Staff reduced various accounts by \$202,861, as shown on Schedule B-2.2g.

## **Delivery Capital Investment (DCI) Rider**

Included within the Applicant's filing is a request for several major modifications to the current DCI mechanism; namely, that all General, Intangible and Common Plant be included within the DCI recovery mechanism. Another requested modification is that, no matter what account battery storage costs might be properly recorded in, the capital costs associated with their recovery be permitted in the DCI. The Applicant further requests that, if all the capital costs associated with smart grid activity is not allowed to be recovered in the DCI, they either be recovered in the Regulatory Mandates Rider, a Power Forward Rider, or in an Infrastructure Modernization Phase II type of rider. Staff recommends the Commission reject the Applicant's proposed modifications to the DCI Rider. The proposed modifications are unnecessary and not germane to a distribution investment rider as has been adopted by the Commission in non-stipulated, previously contested cases in which it rendered a decision on each of the merits of such requests.

Aside from the more global recommendations above, DEO requests that the DCI continue as it exists now. The Applicant does not provide for specific caps or a termination date for the DCI. Staff believes it is important for the Commission to address these matters. With respect to the termination date for the DCI, Staff recommends that the DCI end on May 31, 2024, provided that the Applicant files for a rate case by May 31, 2023. If the Applicant fails to file an application for a rate case by May 31, 2023 the DCI rate should default to \$0 on June 1, 2023. Additionally, Staff recommends the following revenue caps for the DCI Rider: \$14 million for 2018 (full year), \$28 million for 2019, \$42 million for 2020, \$56 million for 2021, \$69 million for 2022, \$83 million for 2023, and \$41 million through May 31, 2024 (five months

of 2024). Staff's methodology is consistent with the methodology adopted by the Commission in Case No. 13-2385-EL-SSO.<sup>1</sup>

## **Depreciation**

Depreciation is the process which distributes the original cost of depreciable assets, adjusted for net salvage, over the normal life of the property in a systematic and rational manner. Staff's investigation of depreciation is segregated into two areas: (1) Depreciation Reserve, and (2) Depreciation Accrual Rates and Depreciation Expense. Each of these areas is discussed in detail in the following sections.

### Depreciation Reserve

The Applicant maintains its depreciation reserve, by account, on a total company basis. In order to determine if the Applicant's booked reserve for depreciation is proper and adequate, Staff compared the Applicant's book reserve with a calculated theoretical reserve, as a guide to whether past accrual rate calculations have been appropriate. Staff compared the Applicant's booked reserve level with a calculated theoretical reserve, based on the accrual rates discussed below, and the Applicant's June 30, 2016 plant balances. Staff determined that the level of the overall booked reserve is in close agreement with the theoretical reserve calculation.

Staff adjusted the reserve to exclude the reserve associated with adjustments in the Plant in Service section, as discussed above. Staff also made a reserve adjustment to Retirement Work In Progress eliminating that which was already recorded in Company Account 3702. These adjustments are shown on Schedule B-3.1.

Staff recommends that the actual jurisdictional reserve for depreciation, as adjusted by Staff and shown on Schedule B-3, is proper and adequate and should be used for the purposes of this proceeding.

### Depreciation Accrual Rates and Depreciation Expense

The Applicant's current depreciation accrual rates were prescribed by this Commission in Case No. 12-1682-EL-AIR for the electric distribution plant and common plant.<sup>2</sup> The Applicant filed a depreciation study performed by its consultant, Gannett Fleming Valuation and Rate Consultants, Inc. The Applicant's accrual rates, for most electric accounts, were developed using the straight line whole life depreciation method. As for certain General Plant and Common Plant accounts, the annual depreciation was based on amortization accounting. For the Structures and Improvements – Major Structures and Improvements – Leaseholds account, a lifespan analysis was used. Staff used the 10-year amortization that was ordered by the Commission in Case No. 08-709-EL-AIR for Company Account 370.0 Meters and Account 370.1 Meters Leased.<sup>3</sup> The assets in Account 370.2 Meters Utility of the Future were studied including forecasting the retirements of Echelon meters through December 31, 2022. Accounts 197.0 Communication Equipment and 397.0 Communication Equipment were segregated into two groups. The

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<sup>1</sup> See *In the Matter of the Application of Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to R.C. 4928.143, in the Form of an Electric Security Plan*, Case No. 13-2385-EL-SSO, et al., Fourth Entry on Rehearing at page 51 (Nov. 3, 2016).

<sup>2</sup> See *In the Matter of the Application of Duke Energy Ohio, Inc., for an Increase in its Electric Distribution Rates*, Case No. 12-1682-EL-AIR, et al., Opinion and Order (May 1, 2013).

<sup>3</sup> See *In the Matter of the Application of Duke Energy Ohio, Inc., for an Increase in Electric Rates*, Case No. 08-709-EL-AIR, et al., Opinion and Order (June 8, 2009), adopting the March 31, 2009 Stipulation in its entirety by which Duke would implement the depreciation rates consistent with the Jan. 27, 2009 Staff Report.

first group is the standard Communication Equipment which maintained a 15-year average service life and the second group represented Communication Equipment-Nodes being replaced by December 31, 2022, in which a life span analysis was used.

Staff conducted an independent analysis of the depreciation study provided by the Applicant. Staff finds itself in general agreement with the service life, projected retirement dispersion and net salvage parameters with the exception of Meters and Communication Equipment. Staff agrees that the Account 370.2 Utility of Future Meters should maintain the 15-year average service life. However, Staff recommends that Account 370.2 Echelon AMI Meters, Account 397.0, and Account 197.0 Communication Equipment-Nodes replaced, be treated as dying accounts and the unrecovered investment be amortized over a 10-year period. This recommendation is consistent with the treatment of dying accounts authorized in Case No. 08-709-EL-AIR for the dying Accounts 370.0 Meters and 370.1 Leased Meters.<sup>4</sup> Staff recommends the Applicant use the accrual rates and amortizations shown in Schedule B-3.2 for book depreciation purposes.

Staff has long maintained that accrual rates should be thoroughly reviewed every three to five years. Staff, therefore, recommends that within five years the Applicant submit a current depreciation study for all electric distribution accounts.

Staff's calculation of depreciation expense is based on the adjusted jurisdictional plant in service balances at date certain and the accrual rates discussed above, is shown on Schedule B-3.2.

### **Construction Work In Progress (CWIP)**

The Applicant did not request an allowance for CWIP in its filing and Staff, as shown on Schedule B-4, did not recommend an allowance.

### **Working Capital**

Working capital has been generally defined as the average amount of capital provided by investors in the Company, over and above the investments in plant and other specifically identified rate base items, to bridge the gap between the time that expenditures are required to provide service and the time collections are received for the service. The Applicant requested \$29,819,070 working capital allowance based on a thirteen-month average balance for materials and supplies. The Applicant did not prepare a lead lag study for this case; therefore, Staff cannot recommend a working capital allowance, which is consistent with Staff's treatment in prior cases.<sup>5</sup> Moreover, the Ohio Supreme Court has upheld the Commission's use of a lead/lag study to compute a utility's working capital requirement.<sup>6</sup>

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<sup>4</sup> *Id.*

<sup>5</sup> See, e.g., *In the Matter of the Application of the Cincinnati Gas and Electric Co. for an increase in Electric Rates in its Service Area*, Case No. 91-410-EL-AIR, Opinion and Order at 32 (May 12, 1992); see also *In the Matter of the Application of Ohio Edison Co. for Authority to Change Certain of its Filed Schedules Fixing Rates and Charges for Electric Service*, Case No. 89-1001-EL-AIR, Opinion and Order at 23 (Aug. 16, 1990); see also *In the Matter of the Application of Ohio Edison Co. for Authority to Change Certain of its Filed Schedules Fixing Rates and Charges for Electric Service*, Case No. 87-689-EL-AIR, Opinion and Order at 22 (Jan. 26, 1988).

<sup>6</sup> *Cincinnati Gas & Elec. Co. v. Pub. Util. Comm'n of Ohio*, 67 Ohio St. 3d 517, 519-520, 620 N.E.2d 821, 823 (1993).

## **Other Rate Base Items**

Staff reduced the rate base for the date certain balances of recovered but unfunded post retirement benefits, investment tax credits, and deferred taxes. The rate base has also been reduced by a thirteen-month average balance of customer deposits. Additionally, the rate base has been reduced for the date certain balances of unclaimed funds. Staff's summary of these and other rate base items is presented on Schedule B-6.

## **Allocations**

Based on the Commission's findings regarding Duke's cost allocation methods in Case No. 09-495-EL-UNC, Staff finds that the same allocation methods proposed by the Applicant in the present proceeding are appropriate and reasonable for the purposes of this proceeding.<sup>7</sup>

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<sup>7</sup> See *In the Matter of the Application of Duke Energy Ohio for Approval of the Second Amended Corporate Separation Plan Under R.C. 4928.17 and Ohio Administrative Code Chapter 4901:1-37*, Case No. 09-495-EL-UNC, Opinion and Order at (April 5, 2011), adopting audit recommendations, including the examination and testing of allocation methods and factors that are used to assign costs to the Company.

## OPERATING INCOME

The Applicant's test year operating income combined eight months of actual data for the period of April 1, 2016 through December 31, 2016, with four months of forecast data for the period of January 1, 2017 through March 31, 2017. As described in the subsequent section on Current Adjustments, Staff adjusted the Applicant's test year operating income as required to render it an appropriate basis for setting rates.

Staff's pro forma operating income is Staff's adjusted test year operating income modified to reflect the Applicant's proposed increase in revenues and the associated increases in uncollectible accounts expense, commercial activities taxes, state and municipal taxes, and federal income taxes. Staff's pro forma operating income also includes the Applicant's proposed increase in other revenues related to reconnection charges.

Schedules C-1 and C-2 present Staff's determination of operating income. The calculations, methodologies, and rationale used to develop Staff's adjusted pro forma operating income are detailed on Schedules A1.1, C-1, C-3.1 through C-3.26, and C-4.

### Pro Forma Adjustments

Schedule C-1 sets forth the Applicant's proposed increase in operating revenues and affected expenses that include uncollectible accounts expense, commercial activities taxes, state and municipal taxes, and federal income taxes. The increase in revenues is the combined result of the increase in base revenues created by the Applicant's proposed tariffs, and an increase for reconnection charges.

### Current Adjustments

#### Base Revenue

Both Staff and the Applicant adjusted base revenues to eliminate unbilled revenue and all rider revenue in order to conform to standard practices of removing rider revenues and expenses from rate base. Staff and the Applicant also adjusted test year base revenues to the amounts calculated on Schedule E-4. In addition, Staff adjusted test year revenue to reflect all actual billing determinants for the months of the test year, April 1, 2016 through March 31, 2017. This methodology results in a higher current operating income than the Applicant proposed in the filing, yet still lower than the three-year average current operating income experienced by the Company for the past three years. Staff's adjustment is presented on Schedule C-3.1

#### Rate Case Expense

Staff adjusted the rate case expense to reflect both a five-year amortization period and the exclusion of Electric Security Plan (ESP) costs. Additionally, Staff finds that the costs associated with the litigation of the current ESP case<sup>8</sup> are not appropriate to include for ratemaking purposes. However, the combination of all Staff adjustments yields an increase in the test year expenses by \$85,310, as shown on Schedule C-3.3.

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<sup>8</sup> See *In the Matter of the Application of Duke Energy Ohio, Inc., for Authority to Establish a Standard Service Offer Pursuant to R.C. 4928.143, in the Form of an Electric Security Plan, Accounting Modifications and Tariffs for Generation Service*, Case No. 17-1263-EL-SSO, et al., Application (June 1, 2017).

#### Depreciation Expense

Staff adjusted the depreciation expense to reflect Staff's recommended depreciable plant in service as of the date certain. Staff's adjustment reduces the test year expenses by \$7,318,060 and is presented on Schedule C-3.4 with the supporting calculations shown on Schedule B-3.2. Further discussion on depreciation can be found in the Rate Base Section of this report.

#### Interest on Customer Service Deposits

Consistent with the treatment of customers' deposits as an offset to the Applicant's rate base, Staff reclassified the associated interest expenses as operating expenses. Staff's adjustment increases test year expenses by \$556,071, as shown on Schedule C-3.5.

#### Property Taxes

Staff adjusted the property tax expense to reflect the latest rates and valuation percentages, then applied those to plant in service as of June 30, 2016. Staff's adjustment increases the test year expenses by \$7,410,307, as presented on Schedule C-3.6.

#### Interest Expense

Staff accepted the Company's methodology to compute adjusted operating income to reflect the interest expense deductible for federal income tax purposes. The Company's adjustment reflects the federal income tax at 35 percent on the interest cost included in the cost of capital. The interest expense deduction is based on the embedded weighted cost of long-term debt of 2.54 percent, as presented in the application. The adjustment also eliminates interest-related Internal Revenue Service Schedule M items and deferred taxes. Due to other adjustments proposed by the Company and Staff, this flow through adjustment increases test year expenses by \$959,818, as reflected on Schedule C-3.7.

#### Major Storm Expenses

The Applicant has included approximately \$6.2 million in major storm repairs. Staff recommends that the amount be the Company's five-year average (2012-2016), which is slightly more than \$4.3 million. Staff's adjustment reduces the test year expenses by \$1,921,812 as shown on Schedule C-3.8.

Staff also recommends that the Company file for refund or recovery of major storm expenses associated with its Distribution Storm Rider over the recommended \$4.3 million baseline on a yearly basis and not wait until the deferred asset or liability reaches five million dollars. For the amount of the liability that has accumulated for 2015 and 2016, Staff recommends that the Company file for refund to its customers.

#### Ohio Excise Tax Rider

Staff accepted the Company's methodology to compute adjusted test year operating income to eliminate base revenues and the corresponding expenses for the Ohio Excise Tax Rider in order to conform to standard practices of removing rider revenues and expenses from rate base. Due to other adjustments proposed by the Company and Staff, this flow through adjustment reduces test year expenses by \$69,698,967, as shown on Schedule C-3.9.

#### Uncollectible Expense

Staff adjusted test year uncollectible accounts expense to reflect Staff's annualized revenue. Staff's adjustment reduces the test year expenses by \$1,866,649, as shown on Schedule C-3.12.

#### Commercial Activity Tax (CAT)

Staff adjusted the Company's Commercial Activity Tax (CAT) to reflect the annualized amount based on the annualized revenue. Staff's adjustment reduces test year expenses by \$78,558, as shown on Schedule C-3.13.

#### Labor

The Applicant adjusted operating income to reflect the annualized operations and maintenance (O&M) labor expense as of March 2017. Staff adjusted operating income by annualizing direct labor expenses based on average hourly rates for the pay periods in March 2017 using actual employee levels for exempt, non-exempt, and union employees. All union and non-union raises were in effect at this date. Staff used a three-year average for both overtime pay and the O&M labor to calculate total labor percentages. Staff added energy efficiency test year O&M labor expenses. For Duke Energy Business Services, Staff included actual test year O&M labor expense as of March 31, 2017. Staff's adjustment reduces the test year expenses by \$1,998,482, as reflected on Schedule C-3.14a.

#### Pension and Benefits

The Applicant and Staff annualized O&M pension and benefit expense to reflect annualized O&M labor expense. The annualized O&M pension and benefits expense was derived by applying loading rates to Staff's annualized O&M labor expense. Staff added energy efficiency test year O&M labor expenses to the calculation. The loading rates were updated to the latest known actual rates. Staff's adjustment increases the test year expenses by \$213,990, as presented on Schedule C-3.14b.

#### Bonus pay

Staff adjusted test year O&M bonus pay expense for programs applicable to operational goals. Staff added energy efficiency test year O&M bonus pay expenses to the calculation. Staff's adjustment reduces the test year expenses by \$4,129,284, as reflected on Schedule C-3.14c. Staff recommends that, starting at the date certain in this case of June 30, 2016 and going forward, the Company follow the O&M bonus pay expense accounting for all capitalized bonus pay.

#### Payroll Tax

Staff adjusted test year operating income by annualizing payroll taxes based on annualized salaries and wages. The payroll tax rate was updated to the latest known average annual rate. Staff added energy efficiency test year O&M labor expenses to the calculation. Staff's adjustment reduces the test year expenses by \$154,496, as presented on Schedule C-3.14d.

#### Energy Efficiency Labor

Staff recommends that the Company include all energy efficiency labor expenses as part of rate base rather than include these expenses in the energy efficiency rider. As such, Staff adjusted labor, pension and benefits, payroll tax, and bonus pay to include all energy efficiency labor-related test year O&M expenses into rate base. All of these adjustments are reflected on Schedule C-3.14e.

#### Merger Costs

Staff accepted the Company's adjustment to test year operating income to eliminate \$987,585 in merger expenses related to Progress Energy included in the test year. This adjustment is presented on Schedule C-3.15.

#### CRES Logo Amortization

Staff adjusted the Competitive Retail Electric Service (CRES) Logo Amortization expense to reflect a five-year amortization period. Staff's adjustments reduces the Applicant's test year expenses to \$117,654, as shown on Schedule C-3.16.

#### Ohio Electric Choice Supplier Site Amortization

Staff adjusted the Ohio Electric Choice Supplier Site Amortization expense to reflect a five-year amortization period. Staff's adjustment increases the test year expenses by \$70,625, as shown on Schedule C-3.17.

#### Smart Grid PISCC Amortization

Staff accepted the Company's adjusted operating expenses to reflect the annualized amortization of post in-service carrying costs on the Smart Grid investment. This adjustment increases test year expenses by \$88,204, as shown on Schedule C-3.18.

#### Public Service Advertising and Customer Education

Staff adjusted the test year operating expenses to remove costs associated with Public Service Advertising and Customer Education. Through its investigation, Staff discovered that no part of the customer education initiative was implemented during the test year period. Staff reduced the test year expenses by \$1,999,610, as shown on Schedule C-3.19.

#### Street Light Audits

Staff adjusted the test year operating expenses to remove costs associated with Street Light Audits. Through its investigation, Staff discovered that no work related to the street light audits was performed during the test year period. Staff reduced the test year expenses by \$200,566, as shown on Schedule C-3.20.

#### Infrastructure Modernization Rider Amortization

Staff accepted the Company's adjusted test year operating income to eliminate approximately \$29.5 million of deferred depreciation and prior period Smart Grid costs that will be collected in Rider DR-IM. This adjustment is shown on Schedule C-3.21.

#### Advanced Meter Opt-Out

Staff adjusted operating expenses to reflect a five-year amortization of the Advanced Meter Opt-Out deferral. Staff's adjustment increases the test year expenses by \$48,624, as shown on Schedule C-3.22.

#### Customer Billing System

Staff adjusted the test year operating expenses to remove costs associated with the Customer Service Billing System. Specifically, through its investigation, Staff discovered that no new system capabilities



were deployed during the test year period. Therefore, Staff reduced the test year expenses by \$3,694,000, as shown on Schedule C-3.23.

#### Overhead Lines

Staff adjusted FERC Account 583-Overhead Lines to show an amount that more accurately reflects an appropriate level of expense to include for ratemaking purposes. Staff's adjustment reduced the test year expenses by \$1,979,826, as shown on Schedule C-3.24.

#### Projected Expenses

Staff adjusted the test year operating expenses to account for discrepancies found between the approved corporate budget for 2017 and the projected months of 2017 that are in the test year. Staff's adjustment reduces the test year expenses by \$81,399, as shown on Schedule C-3.25.

#### Net Metering

Staff adjusted the test year operating expenses to reflect the addition of net metering expenses. Staff's adjustment increases the test year expenses by \$67,787, as shown on Schedule C-3.26.

#### Income Taxes

Staff computed test year federal, state, and municipal income taxes to reflect the recommended adjustments to operating income and rate base. Staff's federal income tax computation reflects inter-period interest allocation and normalization of tax accelerated depreciation and other tax-to-book timing differences. Staff's federal income tax calculation is presented on Schedule C-4.

## RATE OF RETURN

Staff recommends a rate of return in the range of 7.20 percent to 7.74 percent. Staff developed the recommended rate of return using a cost of capital approach, which reflects a market-derived cost of equity and the Applicant's embedded cost of long-term debt.

### Capital Structure

The Applicant is a wholly-owned subsidiary of Duke Energy Corporation, which is a publicly traded public utility holding company. Staff used the capital structure of the Applicant, which is 49.25 percent debt and 50.75 percent equity. Staff recommends that in this case using the Applicant's capital structure is appropriate based on the financial environment.

### Cost of Long-Term Debt

Staff used the embedded cost of long-term debt of the Applicant after pollution control notes were removed, as of June 30, 2016, from the Applicant's Schedule D-3A. The pollution control notes were removed because they are primarily generation related and therefore not part of the distribution function. The embedded cost of long-term debt is 5.16 percent.

### Cost of Common Equity

Staff used the peer analysis tool of SNL Financial to create a group of utilities to use for the purpose of the cost of equity estimation. SNL Financial utilizes a method in which multiple financial metrics are used to create a peer group based on statistical analysis. SNL Financial peer analysis tool selected the following six companies. However, NextEra Energy was removed from the calculation due to a merger/acquisition during the review period.

#### Company Name

Exelon Corp (EXC)  
Southern Co (SO)  
NextEra Energy (NEE)  
PG&E (PCG)  
American Electric Power (AEP)  
Edison International (EIX)

Staff generated a cost of equity estimate for the comparable group companies that used the capital asset pricing model (CAPM) and the discounted cash flow (DCF) derived estimates. In calculating its CAPM cost of common equity estimate, Staff employed the average of the Value Line betas, being .633 and the Ibbotson<sup>9</sup> derived spread of arithmetic mean total returns between large company stocks (12.1 percent) and long-term government bonds (i.e., "risk free return"; 5.1 percent). Staff used these figures in the CAPM formulation with the forecasted long-term yield on 30-year treasury bonds of the Congressional Budget Office (4.1 percent) and the Bureau of Labor Statistics (4.8 percent). This was

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<sup>9</sup> Ibbotson Associates 2015 Yearbook: Stocks, Bonds, Bills and Inflation: Valuation Edition

added to the average product of the beta .633 and the seven percent spread, and resulted in a CAPM cost of equity estimate of 8.88 percent.<sup>10</sup>

In calculating its DCF cost of common equity estimate, for each comparable company, Staff employed the annual average stock price, the sum of the last four quarterly dividends, and estimates of the expected rate of growth of earnings. The stock price employed is the average daily closing price for the period from May 2, 2016 through May 1, 2017. The DCF model assumes that earnings growth and dividends growth are the same. Staff averaged analysts' earnings growth per share estimates from Yahoo, Reuters and Value Line to get DCF growth estimates for each company." The Value Line average incorporates both the explicit long-range earnings estimate shown in the boxed area of investor sheets and the implicit continuous growth rate calculated from the estimates of earnings per share.<sup>11</sup>

For Staff's determination of the DCF cost of common equity, Staff assumed a non-constant DCF growth rate. For the first five years, Staff assumed dividends to grow at a rate derived from financial analysts' growth estimates (i.e., long-term growth rate). Staff's DCF growth estimates were used for the first five years, as they are averages of estimates from various investor news services. From the twenty-fifth year on, Staff assumed the growth rate equal to the long-term growth rate in Gross National Product (GNP). For the sixth through twenty-fourth years, Staff assumed dividends to grow at a rate that varied between the two rates in a linear fashion. The long-term growth rate in GNP was the average annual change in GNP from the U.S. Department of Commerce for 1929 through 2016.<sup>12</sup>

Staff calculated a stream of annual dividends based on long-term GNP growth, the respective Company DCF growth estimate and dividend. Staff used the internal rate of return derived from the dividend stream and the stock price for Staff's non-constant growth DCF cost of equity estimate.

The comparable group non-constant DCF cost of equity estimates average 9.77 percent. Due to the relatively low beta value of the comparable companies, Staff multiplied the 8.88 percent CAPM estimate by 25 percent and the DCF cost of equity estimate by 75 percent, resulting in a return of 9.55 percent. Using a one hundred basis point range of uncertainty, the cost of equity estimate becomes 9.05 percent to 10.05 percent. To provide for this return, an allowance must be made for issuance and other costs, as shown on Schedule D-1.1. This issuance factor was the number Staff recommended in the Applicant's 2008 filing.<sup>13</sup> This issuance factor was used due to the fact that the Applicant currently has negative retained earnings and would result in a negative issuance cost, which is not possible. Therefore, Staff applied an adjustment factor of 1.019 to the baseline cost of common equity, resulting in Staff's recommendation of to 9.22 percent to 10.24 percent for the return on equity.

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<sup>10</sup> See Staff Schedule D-1.4

<sup>11</sup> See Staff Schedule D-1.4

<sup>12</sup> See Staff Schedule D-1.9

<sup>13</sup> See *In the Matter of the Application of Duke Energy Ohio, Inc. for an Increase in Electric Distribution Rates*, Case No. 08-709-EL-AIR, *et al.*, Staff's Report of Investigation at 14-16 (Jan. 27, 2009).

## **RATES AND TARIFFS**

By its application in Case 17-0032-EL-AIR, the Applicant requests authority to modify its electric distribution rates and charges.

Staff has investigated the rate and tariff matters proposed by the Applicant. The results of the investigation by Staff are herein reported. It is the intent of Staff to provide analysis with regard to the acceptability and reasonableness of the revenue recovery mechanisms contained in the proposed tariffs. Staff developed the recommended rates and charges in this section to generate Staff's proposed revenue requirement. The proposals made by Staff may require adjustments in order to generate the revenue requirement authorized by the Commission. Typical bills are presented at the end of the Report, in Schedule E-5.

### **Tariff Analysis**

The Applicant is proposing several changes, additions and deletions to its tariffs. Staff divided the proposals into three categories:

- a. Changes to Electric Service Regulations;
- b. Tariff additions, deletions and combinations; and
- c. Changes specific to individual rate schedules.

The Applicant is proposing various textual changes to its tariffs. Unless noted, Staff recommends approval of these changes as proposed by the Applicant.

### **Changes to Electric Service Regulations**

#### Sheet No. 23 – Section IV – Customer's and Company's Installations

The Applicant is proposing additional language in the special customer services section that would permit it to offer market based services. On June 14, 2017, the Commission denied the Company's request to amend its corporate separation plan.<sup>14</sup> Consistent with this recent Commission decision, Staff recommends the Commission direct the Applicant to withdraw, or at least indefinitely suspend, this section of its tariff and cease offering these services to its customers. Staff also recommends that the Applicant file a revised corporate separation plan to conform to the Commission's Order.

The Applicant is also seeking to continue its offering of Special Customer Services. In light of the Commission's Order in 14-689-EL-UNC, Staff recommends the Commission direct the Applicant to withdraw, or at least indefinitely suspend, this section of its tariff and cease offering these services to its customers. Staff also recommends that the Company file a revised corporate separation plan to conform to the Commission's Order.

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<sup>14</sup> *In the Matter of the Application of Duke Energy Ohio, Inc. for Approval of its Fourth Amended Corporate Separation Plan Under R.C. 4938.17 and Ohio Adm.Code 4901:1-37, Case No. 14-689-EL-UNC, et al., Order on Remand at 4 (June 14, 2017).*

## **Tariff additions, deletions and combinations**

### Rate TD – Optional Time-of-Day Rate

The Company has proposed to eliminate its Rate TD – Optional Time-of-Day Rate for residential customers. Staff is aware that the number of residential subscribers has dropped from the Company's original offerings for time-of-day rates. However, Staff does not recommend that the Company eliminate all of its Time-of-Day rates for residential customers. In order for the Company's residential customers to fully realize the benefits from their smart meters, they must have ability to shift consumption from higher priced time periods to lower cost time periods with the ability to subscribe to such offerings. Thus far, Staff is not aware that any marketer is offering a time-of-day rate that reflects PJM wholesale electricity prices in the Company's service territory. Therefore, consistent with the Finding and Order in Case No. 12-3151-EL-COI, the Staff recommends that the Company continue to offer a time-differentiated rate to residential customers until such time the Commission has made a determination that time-of-day rates are available to customers in the retail marketplace.<sup>15</sup>

### Sheet, No. 69 LED Outdoor Lighting Electric Service

The Applicant is proposing to add LED technology lighting fixtures as part of its distribution service offering. Staff recommends Commission approval.

## **Riders**

### Sheet No. 47, Net Metering Rider – Hospitals (Rider NM-H) and Sheet No. 48, Net Metering Rider (Rider NM)

The Company proposes to add language that would permit recovery of net-metering credit expenses from all ratepayers through the Uncollectible Expense – Electric Generation Rider (Rider UE-GEN). The Company also proposes to modify current language to establish that the excess generation credit shall be calculated using the kWh charge as determined by Rider RE, Retail Energy only. Currently, the excess generation credit is calculated using the retail energy and retail capacity riders. In the course of Staff's investigation, the Company withdrew its proposal to provide excess generation credits only to customers that receive generation service through the Company's Standard Service Offer.

In Case No. 12-2050-EL-ORD, the Commission determined that net metering service is a noncompetitive distribution service and that the electric distribution utilities should make a net metering tariff available to all customers, whether shopping or not. The Commission also found that EDUs should credit customer-generators for electricity at the SSO rate, which includes energy and capacity. Based on the Commission's decision, it is inappropriate for the Company at this time to recover net-metering credit expenses through the proposed generation riders or to calculate the excess generation credit using the Rider RE only. Staff has proposed net-metering expenses be collected through base rates as discussed in Schedule C-3.26.

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<sup>15</sup> See *In the Matter of the Commission's Investigation of Ohio's Retail Electric Service Market*, Case No. 12-3151-EL-COI, Finding and Order at 38 (March 26, 2014), wherein the Commission found that EDUs should offer time-differentiated rates only for so long as it takes for the market to develop and for a reasonable number of CRES providers to begin offering this service in each service territory.

#### Sheet No. 77, Regulatory Mandate Rider

The Company is requesting approval of the Regulatory Mandate Rider to allow the Company to recover any incremental costs associated with changes in federal, state, or local regulations or laws, including directives from the Commission, that potentially are not being recovered in base rates. Staff does not recommend approval of the proposed Regulatory Mandate Rider.

#### Sheet No. 101, Distribution Storm Rider

Staff recommends that the Company file for refund or recovery of major storm expenses associated with its Distribution Storm Rider over Staff's recommended \$4.3 million baseline on a yearly basis, and not wait until the deferred asset or liability reaches five million dollars. For the amount of the liability that has accumulated for 2015 and 2016, Staff recommends that the Company file for refund to its customers.

#### Rider DR-IM, Sheet No. 104

Staff agrees with the Company<sup>16</sup> that Rider DR-IM should be discontinued on the date that the base rates resulting from this case become effective. Since the costs of the smart grid project have been included in the determination of the revenue requirement in this case, the base rates resulting from this case will include the costs of the smart grid, thereby enabling Rider DR-IM to be discontinued.

### **Miscellaneous Charges**

#### Charge for Reconnection Service, Sheet No. 92

The Applicant has proposed the following charges to reconnect service in the Company's entire service area where electric service has been disconnected due to the enforcement of the Company's Electric Service Regulations Sheet No. 20, Paragraph 3, Company's Right to Refuse or to Disconnect Service:

Remote Reconnect (AMI) - \$25.00

Non-Remote Reconnection (Electric Only) - \$75.00

Non-Remote Reconnection (Gas & Electric) - \$88.00

Pole Reconnection - \$125.00

Non-Remote After-Hours - \$100.00

Pole Reconnection After-Hours - \$200.00

Staff analyzed the proposed charges, and is recommending that a time adjustment be made to each of these charges. For each of the reconnection activities, the Applicant states that it takes 15 minutes to reconnect a customer, even remote reconnects. Staff believes this activity takes only about five minutes instead of the 15 minutes the Applicant alleges. Based on this time adjustment, the following are Staff's recommended charges for these reconnection activities:

Remote Reconnect (AMI) - \$10.00

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<sup>16</sup> *In re Application of Duke Energy Ohio, Inc. for an Increase in Electric Distribution Rates*, Case No. 17-0032-EL-AIR, et al., Direct Testimony Vol. 2, Direct Testimony of William Don Wathen, Jr. at 3 (March 16, 2017).

Non-Remote Reconnection (Gas & Electric and Electric Only) - \$69.00

Pole Reconnection - \$110.00

Non-Remote After-Hours - \$81.00

Pole Reconnection After-Hours - \$161.00

## **Rate and Revenue Analysis**

Staff reviews an applicant's proposed rate schedules and designs for consistency with important ratemaking principles. The applicable schedules should provide the utility with the opportunity to recover an authorized revenue. The various schedules should represent a reasonable distribution of revenue between and among various customer classes. The schedules should be equitable and reasonable. The Schedules should provide for customer understanding, continuity of rates, and minimal customer impact.

Rate design criteria are to be viewed as a package, in that they are interrelated. Although each ratemaking principal can be separately identified and applied to rate schedule determinations, no single standard is overriding in the determination of a proper rate design. The rate schedules which comprise a particular utility's tariff should provide for recovery of expenses found proper in the course of a regulatory proceeding. If the rate schedule is designed on the basis of cost causation, it will provide for expense recovery in the long-term, given changes in customer consumption characteristics. Normally, and to the extent sufficient information is available, cost of service studies and related expense analyses are necessary to determine the appropriate level of revenue to be generated and the appropriate recovery of such revenue.

The rate schedules should be designed to be equitable and reasonable to the customers served, pursuant to their applicability. This criterion involves several considerations. The rate schedules should, to the extent practicable, be predicated upon the cost associated with a particular service rendered. Customers receiving like services should experience the same charges and provisions. Also, differences in applicable charges should represent differences in costs.

From a practical rate design standpoint, absolute equality between costs and revenues may be difficult to achieve in the short term. While it may be viewed as equitable to set rates at costs, if there is a substantial divergence in the current rates, the resulting impact on individual customers may be viewed as unreasonable. While Staff supports cost-based charges, Staff considers such items as resulting typical customer bill impacts and resulting revenue increases which would necessarily occur. While it is Staff's position that rates reflect costs, Staff also considers continuity associated with the current and proposed pricing structures. This may result in movement toward aligning revenues with costs, rather than an absolute match at a particular time period.

When employing these standards to develop and design rates, the results should be understandable to all the customers billed under the tariff.

## **Cost of Service Analysis**

Cost of service studies are used to approximate the costs incurred by a utility company in providing service and identify the cause of the costs. These approximations are determined by assigning the costs

to the customer class relative to what impact each class imposes on the system. There are several steps involved, as listed below:

- Functionalization: The separation of the total costs of services into categories of production, transmission, and distribution functions;
- Classification: The distribution of functionalized costs into the cost categories of customer, demand, or energy related costs. Customer costs are independent of customer usage characteristics and are costs associated with customer service connections to the system which vary with the number of customers served. Demand costs are those expenses which vary with the rate in which the service is used, such as the cost of meeting peak demand. Energy costs are the costs which vary according to the volume of energy consumed, or the customer's kWh consumption; and
- Allocation: The assignment of cost responsibility to each customer class. This is determined by a combination of the number of customers, class demands, and energy usage.

The Cost of Service Study (COSS) filed by the Applicant is an embedded and fully-allocated cost of service study by rate class for the test period ending March 31, 2017, as adjusted. The COSS classifies electric distribution-related cost items such as plant investment, operating expenses and taxes as either demand or customer-related, and then allocates the same items to the various customer classes while calculating the revenue responsibility of each class. Finally, the COSS calculates the revenue responsibility of each class required to generate the recommended rate of return.

The Applicant based its allocations on the cost causation guidelines established in the NARUC "Electric Utility Cost Allocation Manual." The Applicant used the maximum non-coincident peak or average class group peak methodologies to allocate demand costs. Customer-related costs are allocated to rate classes based upon the appropriate customer related allocator. The Applicant developed the maximum non-coincident peak and average class group peak kW demand values using load research data and kWh sales levels for the twelve months ending December 31, 2015. Staff accepts the COSS as filed, and finds it to be a reasonable indicator of costs and cost responsibility.

COSS results are presented on Tables 1 and 2. Table 1 provides the Current, Applicant-proposed and Staff-proposed distribution related Rates of Return and Indexes for the customer classes. Table 2 provides the Current, Applicant-proposed and Staff-proposed allocation of total distribution related revenue based on the current total distribution revenue and the Applicant's proposed increase in total distribution revenue.



**Table 1**

**Cost of Service Results  
Rates of Return**

	<b>Current</b>		<b>Applicant Proposed</b>		<b>Staff Proposed</b>	
	%	Index	%	Index	%	Index
RS	5.1282	0.7239	6.24	0.7976	5.21	0.7355
Secondary Large	10.1145	1.4278	10.27	1.3138	10.285	1.4519
Secondary Large (EH)	5.2856	0.7461	6.37	0.8146	5.256	0.7420
Secondary Small (DM)	12.5285	1.7686	12.22	1.5624	12.79	1.8055
Secondary Small (GSFL)	7.4372	1.0499	8.11	1.0370	7.551	1.0659
Primary	11.4274	1.6131	11.33	1.4495	11.63	1.6417
Transmission	28.2913	3.9937	28.28	3.6169	29.098	4.1076
Lighting	<u>7.9347</u>	<u>1.1201</u>	<u>8.51</u>	<u>1.0884</u>	<u>8.07</u>	<u>1.1392</u>
<b>Total Distribution</b>	7.084	1.0000	7.82	1.0000	7.084	1.0000

**Table 2**

**Cost of Service Results  
Revenue Distribution Percentage**

	<b>Current Revenue</b>	<b>Applicant Proposed Revenue</b>	<b>Staff Proposed Revenue</b>
	%	%	%
RS	60.9228	61.99648	60.92
Secondary Large	26.0178	25.3695	26.02
Secondary Large (EH)	0.2759	0.28299	0.28
Secondary Small (DM)	5.6809	5.44175	5.68
Secondary Small (GSFL)	0.1452	0.14509	0.15
Primary	5.0169	4.8401	5.02
Transmission	0.0144	0.01398	0.01
Lighting	<u>1.9259</u>	<u>1.91008</u>	<u>1.93</u>
<b>Total Distribution</b>	100.00	100.00	100.00

**Distribution of Proposed Revenue Increase/Decrease**

The Applicant is proposing a total increase in distribution base revenues of approximately \$15.4 million. The proposed increase is based on a two-step process to distribute the proposed revenue increase/decrease. The first step eliminates 19.15 percent of the subsidy/excess revenues between customer classes based on present revenues. The second step allocates the rate increase to customer classes based on electric distribution original cost depreciated (OCD) rate base.

The Staff has analyzed the COSS utilized by the Applicant in this filing and finds it to be a reasonable indicator of costs and cost responsibility between classes. However, Staff is recommends a reduction in the current total Company revenue recovery. Staff is adjusting the revenue proportionally to each class according to the current class revenue distribution. Tables 3 and 4 provide the Applicant's and Staff's proposed distribution of revenue and revenue increase/decrease for each class of customer, as well as each class's percentage of total revenues received. Tables 5 and 6 provide the Applicant's and Staff's proposed distribution revenue increase/decrease based on total Company revenues. Table 7 should be utilized to allocate the final Commission authorized increase/decrease.

**Table 3**

**Revenue Distribution and Increase  
Applicant Proposed**

	Current		Applicant Proposed		Increase	
	\$	% of Total	\$	% of Total	\$	%
RS	286,004,948	60.92	300,595,959	62.00	14,591,011	5.1017
Secondary Large	122,142,194	26.02	123,006,614	25.37	864,420	0.7077
Secondary Large (EH)	1,295,486	0.28	1,372,114	0.28	76,628	5.9150
Secondary Small (DM)	26,669,323	5.68	26,384,874	5.44	(284,449)	-1.0666
Secondary Small (GSFL)	681,603	0.15	703,493	0.15	21,890	3.2115
Primary	23,552,112	5.02	23,467,658	4.84	(84,454)	-0.3586
Transmission	67,800	0.01	67,800	0.01	0	0.00
Lighting	<u>9,041,014</u>	<u>1.93</u>	<u>9,261,187</u>	<u>1.91</u>	<u>220,173</u>	<u>2.4353</u>
<b>Total Distribution</b>	469,454,480	100.00	484,859,699	100.00	15,405,219	3.2815

**Table 4**

**Revenue Distribution and Increase  
Staff Proposed**

	Current		Staff Proposed		Increase	
	\$	% of Total	\$	% of Total	\$	%
RS	286,004,948	60.92	272,718,313	60.92	(13,286,635)	-2.8302
Secondary Large	122,142,194	26.02	116,470,605	26.02	(5,671,589)	-1.2081
Secondary Large (EH)	1,295,486	0.28	1,235,331	0.28	(60,155)	-0.0128
Secondary Small (DM)	26,669,323	5.68	25,430,954	5.68	(1,238,369)	-0.2638
Secondary Small (GSFL)	681,603	0.15	651,268	0.15	(30,335)	-0.0065
Primary	23,552,112	5.02	22,458,486	5.02	(1,093,626)	-0.2330
Transmission	67,800	0.01	67,800	0.02	0	0.00
Lighting	<u>9,041,014</u>	<u>1.93</u>	<u>8,622,929</u>	<u>1.93</u>	<u>(418,085)</u>	<u>-0.0891</u>
<b>Total Distribution</b>	469,454,480	100.00	447,655,686	100.00	(21,798,796)	-4.6434

**Table 5**

**Revenue Distribution and Increase  
Applicant Proposed**

	<b>Current</b>		<b>Applicant Proposed</b>		<b>Increase</b>	
	\$	% of Total	\$	% of Total	\$	%
RS	843,237,865	63.00	857,828,876	64.09	14,591,011	1.7304
Secondary Large	341,519,501	25.52	342,383,921	25.58	864,420	0.2531
Secondary Large (EH)	4,551,072	0.34	4,627,700	0.35	76,628	1.6837
Secondary Small (DM)	60,302,103	4.51	60,017,654	4.48	(284,449)	-0.4717
Secondary Small (GSFL)	2,092,085	0.16	2,113,975	0.16	21,890	1.0463
Primary	62,176,138	4.65	62,091,684	4.64	(84,454)	-0.1358
Transmission	113,452	0.01	113,452	0.01	0	0.00
Lighting	<u>24,492,870</u>	<u>1.83</u>	<u>24,713,043</u>	<u>1.85</u>	<u>220,173</u>	<u>0.8989</u>
<b>Total Distribution</b>	1,338,485,086	100.00	1,353,890,305	100.00	15,405,219	1.1509

**TABLE 6**

**Revenue Distribution and Increase  
Staff Proposed**

	<b>Current</b>		<b>Staff Proposed</b>		<b>Increase</b>	
	\$	% of Total	\$	% of Total	\$	%
RS	843,237,865	63.00	829,957,422	62.01	(13,280,443)	-1.5749
Secondary Large	341,519,501	25.52	335,847,912	25.09	(5,671,589)	-1.6607
Secondary Large (EH)	4,551,072	0.34	4,490,917	0.34	(60,155)	-1.3218
Secondary Small (DM)	60,302,103	4.51	59,063,731	4.41	(1,238,372)	-2.0536
Secondary Small (GSFL)	2,092,085	0.16	2,060,435	0.15	(31,650)	-1.5128
Primary	62,176,138	4.65	61,082,512	4.56	(1,093,626)	-1.7589
Transmission	113,452	0.01	110,304	0.01	(3,148)	-2.7747
Lighting	<u>24,492,870</u>	<u>1.83</u>	<u>24,073,057</u>	<u>1.80</u>	<u>(419,813)</u>	<u>-1.7140</u>
<b>Total Distribution</b>	1,338,485,086	100.00	1,316,686,290	100.00	(21,798,796)	-1.6286

**TABLE 7**

**Distribution of Proposed Revenue Increase/Decrease  
Applicant Proposed and Staff Proposed**

	<b>Applicant Proposed</b>		<b>Staff Proposed</b>	
	\$	% of Total	\$	% of Total
RS	14,591,011	94.71	(13,286,635)	60.95
Secondary Large	864,420	5.61	(5,671,589)	26.02
Secondary Large (EH)	76,628	0.50	(60,155)	0.28
Secondary Small (DM)	(284,449)	-1.85	(1,238,369)	5.68
Secondary Small (GSFL)	21,890	0.14	(30,335)	0.14
Primary	(84,454)	-0.55	(1,093,626)	5.02
Transmission	0	0.00	0	0.00
Lighting	<u>220,173</u>	<u>1.43</u>	<u>(418,085)</u>	<u>1.92</u>
<b>Total Distribution</b>	15,405,219	100.00	(21,798,794)	100.00



### **Revenue and Rate Adjustment Recommendation**

Staff recommends that the Commission grant the decrease in revenue generated by rates as proposed by Staff in Table 7. In order to maintain the minimally compensatory principal, Staff's proposed customer charges should not be adjusted to a lower level given a lower authorized rate of revenue requirement. Staff's proposed adjustments to energy and demand charges should only be adjusted to maintain proportionality as recommended by Staff.

### **Residential Customer Charge and Straight Fixed Variable (SFV) Rate Design**

On December 29, 2010, the Commission requested public comments on whether modifications to Ohio's electric distribution utilities' rate structures should be modified and provided specific inquiries as to include decoupling rate designs.<sup>17</sup> On August 21, 2013, the Commission stated that it believed that, given the comments filed in the proceeding, the rate structure that may best accomplish policy goals is the straight-fixed variable (SFV) rate design.<sup>18</sup> The Commission encouraged electric utilities to file their next base rate case utilizing the SFV rate design.<sup>19</sup>

Staff's position on SFV rate design will not reiterate arguments already presented in Case No. 10-3126-EL-UNC, but rather will discuss whether this is the right time to move forward in implementing the SFV rate design, given steps that are being taken in the smart grid initiative in Ohio, particularly for the Applicant.

In most cases, it is agreed that distribution system costs are fixed costs and classified as demand and customer related. In generally accepted ratemaking practices, fixed costs are recovered by an electric utility in two ways: customer charges and demand charges. The customer charge recovers some of the fixed costs that are directly attributable to serving an individual customer. These fixed costs are recovered through a flat charge per customer. The customer charge provides a price signal to the customer that there are costs associated with serving him or her, independent of the customer's demand for consumption of energy. The demand charge and/or energy charge recovers the remainder of the capital operating costs the company incurs while providing sufficient operating capacity to meet that customer's maximum demand as needed. The size of a distribution system does not depend on the highest coincident-peak demand on a utility's system; but rather its size depends on the non-coincident peak of the customers it serves.

In evaluating rate design related to fixed costs, Staff must analyze: (1) how fixed costs that are not recovered through customer charges are to be recovered; and (2) what a reasonable proxy for demand charges would be when the demand is unknown. Historically, Ohio electric utilities have recovered the demand component of fixed costs through a volumetric rate. Staff has utilized a minimally compensatory approach which requires little or no judgement with respect to customer related expenses. In this case, the Applicant has proposed to shift a significant portion of the fixed demand costs into the customer charge and away from the volumetric charge that currently serves as a proxy for demand charges. However, the Applicant is planning to deploy meters in the future that are capable of

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<sup>17</sup> *In the Matter of Aligning Electric Distribution Utility Rate Structure with Ohio's Public Policies to Promote Competition, Energy Efficiency, and Distributed Generation*, Case No. 10-3126-EL-UNC, Entry at 7 (Dec. 29, 2010).

<sup>18</sup> *In the Matter of Aligning Electric Distribution Utility Rate Structure with Ohio's Public Policies to Promote Competition, Energy Efficiency, and Distributed Generation*, Case No. 10-3126-EL-UNC, Finding and Order at 19 (Aug. 21, 2013).

<sup>19</sup> *Id.* at 20.

measuring an individual customer's monthly demands, and once that occurs, a proxy for demand charges may no longer be necessary. Staff recommends that the current rate-design methodology be maintained until sufficient customer demand data is available and collected from the new metering capability. Once the data is collected and evaluated, Staff believes an appropriate rate design should be developed based on this data. This approach would avoid unnecessary cost shifting and result in a rate design that not only incorporates the valuable data collected, but will also be able to incorporate any additional rate design considerations produced from the current Power Forward/smart grid initiatives.

## Rate Design

Staff's proposed demand (Kilowatt/kVa) and volumetric (Kilowatt-hour) rates are impacted by current DCI and DR-IM riders being moved into rate base. However, typical bills should reflect Staff's proposed overall revenue requirement.

### Rate RS - Residential Service

This rate is available for private residences, single occupancy apartments and separately metered common use areas of multi-occupancy buildings. The Applicant is maintaining the same block structure. The Applicant is proposing to increase the customer charge from \$6.00 to \$22.77. Staff recommends maintaining the customer charge of \$6.00. To achieve Staff's proposed revenue, Staff is proposing an energy charge of \$.031243/kWh, as shown in Table 8.

**Table 8 - Rate RS**

	Current	Applicant		Staff	
		Proposed	Increase	Proposed	Increase
	\$	\$	%	\$	%
Customer Charge	6.00	22.77	279.50	6.00	0.00
<u>Energy Charge:</u> All kWh	.025342	.017061	-32.68	.031243	23.29

### Rate RS3P - Residential Three-Phase Service

This rate is available for private residences and single occupancy apartments and separately metered common use areas of multi-occupancy buildings where three-phase service is required. The distribution rates are similar to Rate RS except a higher customer charge is necessary to reflect the required three-phase meter. The Applicant is proposing to increase the customer charge from \$8.50 to \$25.27 and recommends the same energy rates as proposed for Rate RS. Staff recommends maintaining the current \$8.50 customer charge and recommends the same energy charges as Staff proposed for Rate RS.

**Rate ORH - Optional Residential Service with Electric Space Heating**

This service is available to customers in private residences and single occupancy apartments where electric heating is used as the primary source of heating. The Applicant is proposing to increase the customer charge from \$6.00 to \$22.77 and decrease the energy charges, similar to rate RS. Staff recommends maintaining the current \$6.00 customer charge with adjustments to the energy blocks to reflect Staff's proposed revenue, as provided in Table 9 below:

**Table 9 - Rate ORH**

	<b>Current</b>	<b>Applicant</b>		<b>Staff</b>	
		<b>Proposed</b>	<b>Increase</b>	<b>Proposed</b>	<b>Increase</b>
	\$	\$	%	\$	%
Customer Charge	6.00	22.77	279.50	6.00	0.00
Energy Charges: <u>Summer</u>					
First 1000 kWh	.025342	.017061	-32.68	.031243	23.29
Additional kWh	.025342	.017061	-32.68	.031243	23.29
Excess of 150 Times Demand	.025342	.017061	-32.68	.031243	23.29
<u>Winter</u>					
First 1000 kWh	.028949	.030411	5.05	.032410	11.96
Additional kWh	.015990	.016798	5.05	.017902	11.96
Excess of 150 Times Demand	.010779	.011324	5.06	.012068	11.96

**Rate TD - Optional Time-Of-Day Rate for Residential Service**

This service is available to customers in private residences and single occupancy apartments that have programmable time-of-day meters. The Applicant is proposing to eliminate this tariff and move the time-of-day customers to the standard residential tariff. The proposed changes would increase the customer charge from \$15.50 to \$22.77 per month and replace the On-Peak and Off-Peak energy charges with the single energy rate of \$.01761. Based upon the recommendation to keep this tariff in effect, Staff recommends maintaining the current \$15.50 customer charge with adjustments to the energy blocks to reflect Staff's proposed revenue, as provided in Table 10 below:

**Table 10 - Rate TD**

	Current	Applicant Proposed	Increase	Staff Proposed	Increase
	\$	\$	%	\$	%
Customer Charge	15.50	22.77	46.90	15.50	0.00
Energy Charge: <u>Summer</u>					
On Peak kWh	.051494	N/A	-	.058741	14.07
Off Peak kWh	.008983	N/A	-	.010265	13.98
<u>Energy Charges:</u> All kWh	N/A	.017061	-	N/A	N/A
<u>Winter</u>					
On Peak kWh	.040919	N/A	-	.046690	14.10
Off Peak kWh	.008976	N/A	-	.010247	14.17
<u>Energy Charge:</u> All kWh	N/A	.017061	-	N/A	N/A

**Rate CUR - Common Use Residential Service**

This rate schedule is applicable to electric service other than three-phase service for separately metered common use areas of multi-occupancy buildings. The common use residential rates are currently identical to Rate RS rates. The Applicant is proposing the same increases to the customer charge and energy blocks as it proposed for Rate RS. Staff is recommending the same customer charge and energy rates as it proposed for Rate RS.

**Rate RSLI - Residential Service - Low Income**

This rate schedule is applicable to customers who are at or below 200 percent of the federal poverty level and who do not participate in the Percentage of Income Payment Plan (PIPP). The service is applicable to electric service other than three-phase service, for all domestic purposes in private residences and single occupancy apartments and separately metered common use areas of multi-occupancy buildings. The Applicant is proposing to increase the customer charge from \$2.00 to \$18.77 and recommends the same energy rates as proposed for Rate RS. Staff recommends maintaining the current customer charge of \$2.00 and recommends the same energy charges as Staff proposed for Rate RS as shown in Table 11 below:

**Table 11 - Rate RSLI**

	Current	Applicant		Staff	
		Proposed	Increase	Proposed	Increase
	\$	\$	%	\$	%
Customer Charge	2.00	18.77	838.50	2.00	0.00
<u>Energy Charge:</u> All kWh	.025342	.017061	-32.68	.031243	23.29

**Rate DS-Service at Secondary Distribution Voltage**

This rate schedule is applicable to customers who have load requirements at the secondary system voltage level and average monthly demand greater than 15 kW. The Applicant is proposing to increase the customer charge from \$22.97 to \$25.31 for single-phase service, from \$45.95 to \$50.64 for single and/or three-phase service, and increase the per kW charge from \$5.3815 to \$5.9307. Staff recommends maintaining the current customer charges and adjusting the per kW rate to reflect Staff's proposed revenue as shown in Table 12 below:

**Table 12 - Rate DS**

	Current	Applicant		Staff	
		Proposed	Increase	Proposed	Increase
	\$	\$	%	\$	%
<u>Customer Charges:</u>					
Single-Phase	22.97	25.31	10.19	22.97	0.00
Single/Three-Phase	45.95	50.64	10.21	45.95	0.00
<u>Demand Charge:</u>					
All Kilowatts	5.3815/kW	5.9307/kW	10.21	5.635853	4.73

**Rate GS-FL - Optional Unmetered General Service Rate for Small Fixed Loads**

This rate schedule is available to customers where secondary distribution lines exist for any fixed load that can be served by a standard service drop from the Company's existing distribution system.

Although this schedule does not have a customer charge, it does have a minimum charge of \$5.64 per month per fixed load location. The Applicant is proposing to increase this charge from \$5.64 to \$6.29.

Staff recommends maintaining the current minimum charge and adjusting the volumetric rate to reflect Staff's proposed revenue as shown in Table 13 below:

**Table 13 - Rate GS-FL**

	Current	Applicant		Staff	
		Proposed	Increase	Proposed	Increase
	\$	\$	%	\$	%
Fixed Charge	5.64	6.29	11.52	5.64	0.00
<u>Distribution Charges:</u>					
(A) For loads based on a range of 540 to 720 hours use per month of the rated capacity of the connected equipment					
	.020721	.023092	11.44	.021405	3.30
(B) For loads of less than 520 hours per month of the rated capacity of the connected equipment					
	.023764	.026482	11.44	.024548	3.30

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

The Optional Electric Space Heating schedule is available to any public school, parochial school, private school, or church whose primary source of heating is electric energy where such energy can be furnished at one point of delivery and metered separately. The Applicant is proposing to increase the customer charge for single-phase service from \$23.00 to \$26.97 and three-phase service from \$46.00 to \$53.94, while maintaining the primary service customer charge at \$200.00. The Applicant also proposes to increase the energy charge from \$.0164780 to \$.019321. Staff recommends maintaining the current minimum charge and adjusting the volumetric rate to reflect Staff's proposed revenue as shown in Table 14 below:

**Table 14 - Rate EH**

	Current	Applicant		Staff	
		Proposed	Increase	Proposed	Increase
	\$	\$	%	\$	%
<u>Customer Charges:</u>					
Single-Phase	23.00	26.97	17.26	23.00	0.00
Three-Phase	46.00	53.94	17.26	46.00	0.00
Primary	200.00	200.00	0.00	200.00	0.00
<u>Energy Charge:</u> All kWh	.016478	.019321	17.25	.017539	6.44



**Rate DM - Secondary Distribution—Small**

This service is available to customers who have loads of 15 kW or less and is also available for recreation facilities which are promoted, operated and maintained by non-profit organizations where such service is separately metered. The Applicant has proposed to increase the customer charge for single-phase service from \$8.07 to \$9.96 and three-phase service from \$16.14 to \$19.92. Staff proposes maintaining the customer charge of \$8.07 for single service and \$16.14 for three-phase service with adjustments to the volumetric rates to reflect the proposed revenue as shown in Table 15 below:

**Table 15 - Rate DM**

	Current	Applicant		Staff	
		Proposed	Increase	Proposed	Increase
	\$	\$	%	\$	%
<u>Customer Charge:</u>					
Single-Phase	8.07	9.96	23.42	8.07	0.00
Three-Phase	16.14	19.92	23.42	16.14	0.00
<u>Energy Charges:</u>					
<u>Summer</u>					
First 2,800 kWh	.041988	.042456	1.11	.052458	24.94
Next 3,200 kWh	.003493	.003768	7.87	.004364	24.94
Additional kWh	.001482	.003768	154.25	.003403	129.62
<u>Winter</u>					
First 2,800 kWh	.030141	.042456	40.86	.037657	24.94
Next 3,200 kWh	.003493	.003768	7.87	.004364	24.94
Additional kWh	.001482	.003768	154.25	.003403	129.60

**Rate DP - Service at Primary Distribution Voltage**

This service is available to customers who have load requirements at nominal primary distribution system voltages of 12,500 volts or 34,500 volts. The Applicant is proposing to increase the customer charge from \$229.92 to \$247.62, as well as increase the demand charge. Staff is proposing maintaining the current customer charge and adjusting the kW charge to reflect Staff's proposed revenue as shown in Table 16 below:

**Table 16 - Rate DP**

	Current	Applicant		Staff	
		Proposed	Increase	Proposed	Increase
	\$	\$	%	\$	%
Customer Charge	229.92	247.62	7.70	229.92	0.00
<u>Demand Charge:</u> All Kilowatts	4.3340/kW	4.6676/kW	7.70	4.470835/kW	3.16

**Rate TS - Service at Transmission Voltage**

This service is available to customers with load requirements at a nominal transmission system voltage of 69 kilovolts (kV) or higher. The Applicant is proposing maintaining the current customer charge to reflect the fixed costs of serving transmission customers. Staff agrees with maintaining the current customer charge. The Applicant proposes to maintain the existing rate design proposing no demand charge, since transmission voltage customers do not utilize the distribution system below 69 kV. Staff agrees as shown in Table 17 below:

**Table 17 - Rate TS**

	Current	Applicant		Staff	
		Proposed	Increase	Proposed	Increase
	\$	\$	%	\$	%
Customer Charge	200.00	200.00	0.00	200.00	0.00
<u>Demand Charge:</u> All Kilovolt-Amperes	0.000/kVa	0.000/kVa	0.00	0.000/kVa	0.00

**Rate RTP - Real Time Pricing Program (Distribution)**

The hourly Energy Delivery Charge is a charge for using the distribution system to deliver energy to the customer. The Applicant and Staff proposals are shown in Table 18 below:

Charge (Credit) For Each kW per Hour from the CBL (Customer Base Load):

**Table 18 - Rate RTP**

	Current	Applicant		Staff	
		Proposed	Increase	Proposed	Increase
	\$	\$	%	\$	%
<u>Rate DS</u>					
Per kW per Hour	.022245	.016766	-24.63	.015635	-29.71
<u>Rate DP</u>					
Per kW per Hour	.024466	.024376	-0.37	.02330	-4.77
<u>Rate DP</u>					
Per kW per Hour	.00000	.00000	0.00	.00000	0.00

The Applicant is proposing maintaining the current \$325.00 customer charge. Staff agrees.

**Street Lighting, Traffic Lighting, Outdoor Lighting Services**

The Applicant proposes an increase of 2.4 percent for all lighting schedules to reflect the cost of service results of all lighting classes combined. Staff recommends an across the board decrease to reflect the Staff's proposed revenue.

**Load Management Rider, Rider LM**

The Company is proposing increasing the monthly charge from \$7.50 to \$8.27 for each installed time of use (TOU) meter. Staff recommends maintaining the current monthly charge to reflect Staff's proposed overall revenue.

**Typical Customer Bill Tables**

See Schedule E-5 at the end of this report for typical bills, which include riders, for various customer classes and customer usages.

## SERVICE MONITORING AND ENFORCEMENT

The Service Monitoring and Enforcement Department (SMED), Facilities and Operations Field Division (FOFD), is charged with inspecting utility facilities and auditing plant operating practices to ensure regulated utility service providers can deliver safe, reliable and quality service. The Service Monitoring and Enforcement Department, Reliability and Service Analysis Division, is charged with ensuring regulated utilities are providing reliable service and are meeting the requirements of Ohio Adm.Code 4901:1-10. The Service Monitoring and Enforcement Department, Consumer Services Division, is charged with receiving and investigating consumer inquiries to the Commission and conducting Customer Service Audits.

### **Electric Plant Maintenance Program Review**

Staff routinely conducts investigations (corporate office audits and field staff site inspections) of the Company's distribution system, administrative operations, and specific physical facilities. The primary purpose of the audits is to assess the compliance of the Company's programs to maintain system safety and service reliability in accordance with Ohio Adm.Code 4901:1-10-27. The following review reflects Staff's activity and findings relative to the Company's compliance with Ohio Adm.Code 4901:1-10-04, 05, 06, 11, and 27 from January 2013 through June 2017.

### **Ohio Adm.Code 4901:1-10-27(E)(1)**

#### **Distribution Inspection, Maintenance, Repair, and Replacement Programs**

Ohio Adm.Code 4901:1-10-27(E)(1) requires each electric utility and transmission owner to establish programs, policies, procedures and schedules for the inspection, maintenance, repair and replacement of transmission and distributions circuits and equipment. Staff reviewed each of the inspection programs listed below.

#### *a) Poles and towers*

Staff conducted corporate office audits in 2013 and 2015 of the Company's poles and towers inspection program. The purpose of these audits is to verify the Applicant is documenting the inspection and results of inspection the program. The Company is required to inspect approximately 10 percent of its distribution wood poles each year, with the Company inspecting all distribution wooden poles at least once every ten years. Depending on the age and condition of the pole, the inspections by the Company consist of all or part the following: visual assessment, hammer sounding, boring and excavation. Staff also conducted 14 routine field inspections of poles and towers from January 2013 through June 2017.

#### Findings

Staff's audits and field inspections confirmed the Company's compliance with its Poles and Towers Inspection and Maintenance Programs.

#### *b) Circuit and Line Inspections*

Staff conducted corporate office audits in 2014 and 2016 of the Company's Circuit and Line Inspection Program. The purpose of these audits is to verify that the Company is documenting the inspection and results as required by its program. Examples of equipment the Company visually inspects during circuit

inspections include: cross arms, lightning arresters, insulators, conductors, poles, guys, pad-mount transformers, pedestals, grounds, risers, bushings, gang operated air brakes, vegetation encroachment, pole tags and conductor sag. Staff conducted 15 routine field inspections for this requirement from January 2013 through June 2017.

#### Findings

During the 2014 corporate office audit, Staff determined that the Company had failed to complete 1,518 work orders in the timeframe established by the Circuit and Line Inspection Program Policy. Staff issued a Letter of Probable Non-compliance on November 25, 2014 related to the missed inspection repair intervals. The Company determined that many of the work orders were associated with poles awaiting removal and that it should have better prioritized these items to allow more time for removal since the Company must wait for third parties to remove their facilities prior to removing the actual poles. The Company did create and complete a corrective action plan and corrected the issue. Staff found no issues during the 2016 corporate office audit, Staff verified during subsequent, ongoing field inspections that the Company is compliant with its inspection program and specifically with its requirement to inspect all distribution circuits and equipment at least once every five years.

#### *c) Primary Enclosures (e.g., pad-mounted transformers and pad-mounted switch gear) and secondary enclosures (e.g., pedestals and handholes)*

Staff conducted corporate office audits in 2014 and 2016 of the Company's Primary and Secondary Enclosures Inspection Program. The Company is required to inspect primary and secondary enclosures for the following: Unit Identification, Locking Mechanism, Bolt Type, Cabinet Condition (Rust), Door Hinges (Condition), Pad Foundation, Tank Leakage, Accessibility, and Physical Damage. Staff conducted 15 routine field inspections for this requirement from January 2013 through June 2017.

#### Findings

The audits and field inspections confirmed the Company's compliance with its Primary and Secondary Enclosures Inspection Program.

#### *d) Line re-closers*

Staff conducted corporate office audits in 2014 and 2016 to determine how the Company implements the requirements of Ohio Adm.Code 4901:1-10-27(E)(1)(d). The Company must visually inspect line re-closers annually and record counter operations on each device. Staff conducted two routine field inspections for this requirement from January 2013 through June 2017.

#### Findings

As determined through the corporate office audits, the Company conducts and documents line re-closer inspections in accordance with its program.

#### *e) Line capacitors*

Staff conducted corporate office audits in 2014 and 2016 to determine how the Company implements the requirements of Ohio Adm.Code 4901:1-10-27(E)(1)(e). The Company must inspect line capacitors annually, either on-site or remotely. The Company remotely monitors line capacitors that are a part of

the Company's Smart Grid configuration and completes a visual inspection on the remaining line capacitors. Staff also conducted nine routine field inspections for this requirement from January 2013 through June 2016.

#### Findings

As determined by field and office audits, the Company conducts and documents line capacitor inspections in accordance with its program.

#### *f) Right-of-way vegetation control*

Staff conducted corporate office audits in 2013 and 2015 to determine how the Company implements the requirements of Ohio Adm.Code 4901:1-10-27(E)(1)(f). Staff also reviewed reports submitted to Staff by the Company. The purpose of these audits was to check documentation of circuit work and ensure the Company had indeed trimmed vegetation around the chosen circuits pursuant to the Company's approved program. The Company is required to conduct vegetation management on each distribution circuit once every four years. Staff conducted 35 routine inspections for this requirement from January 2013 through June 2016.

#### Findings

As reported by the Applicant in its 2016 Annual System Improvement Plan Report (Case No. 17-999-EL-ESS), the Applicant did not complete the required vegetation clearing of circuits and circuit mileage as scheduled in 2016. On August 14, 2017, Staff issued a Letter of Probable Noncompliance to the Company with an action plan to bring the Company back in to compliance by the end of 2018.

#### *g) Substations*

Staff conducted corporate office audits in 2013 and 2015 of the Company's Substation Maintenance and Inspection Program. During the corporate office audit, Staff reviewed the Company's substation records and documents for compliance with Ohio Adm.Code 4901:1-10-27(E)(1)(g). The Company's program requires the Company to inspect and test substation equipment. The equipment in question includes but is not limited to: circuit breakers, transformers, voltage regulators, capacitor banks, relays, perimeter fencing and grounding. Staff also conducted 19 routine field verification audits for monthly substation inspections from January 2013 through June 2016.

#### Findings

The corporate office audit and field inspections confirmed the Company's compliance with the requirement to conduct monthly transmission and distribution substation and equipment inspections.

### **Ohio Adm.Code 4901:1-10-04(A)**

#### **Equipment for Voltage Measurements**

Ohio Adm.Code 4901:1-10-04(A) requires that all portable indicating instruments (e.g., electro-mechanical indicating, electronic indicating, and electronic indicating and recording) used to test or record service voltage at the customer's premises in response to a customer inquiry or complaint be checked for accuracy against a recognized standard. For transmission facilities within the Commission's jurisdiction, the voltage measuring equipment accuracy and testing requirements shall comply with the

requirements of the transmission system operator. The Company must conduct all accuracy checks as recommended by the manufacturer, or annually if the manufacturer does not specify a period. The Company must keep the most recent accuracy test record with each such instrument, or at a central location for the electric utility.

Staff audited the Company to ensure that the Company has a methodology (calibration program) that meets the requirements for assuring that its equipment used for voltage measurement is accurate. Staff performed an office review at the Applicant's Queensgate testing facility in 2013, 2014, 2015, and 2016.

#### Findings

Staff found that the Company's voltage measuring equipment is returned to the equipment manufacturer on a scheduled basis to ensure compliance with the National Institute of Standards and Technology. Staff did not note any discrepancies.

### **Ohio Adm.Code 4901:1-10-05(B)**

#### **Metering**

Ohio Adm.Code 4901:1-10-05(B) requires the Company to use meters that are "commercially acceptable measuring devices that comply with 'American National Standards Institute' (ANSI) standards." The rule states that meter accuracy shall comply with the 2008 ANSI C12.1 standards, and that no metering device shall be placed in service or knowingly allowed to remain in service if it does not comply with these standards.

Staff observed lab meter testing at the Applicant's Queensgate testing facility in 2013, 2014, 2015 and 2016.

#### Findings

Staff found that the Company had calibrated the meters and other equipment that Staff examined with laboratory standard instruments/calibrators in compliance with the National Institute of Standards and Technology (NIST) as required by ANSI. Staff did not note any discrepancies.

### **Ohio Adm.Code 4901:1-10-06**

#### **National Electrical Safety Code**

Ohio Adm.Code 4901:1-10-06 requires that the Company "comply with the 2012 edition of the 'American National Standard Institute's,' 'National Electrical Safety Code' approved by the 'American National Standards Institute' and adopted by the 'Institute of Electric and Electronics Engineers.'"

Staff conducted various inspections of the Company's facilities for compliance with the National Electrical Safety Code (NESC) requirements from January 2013 through June 2017. A total of 354 inspections evaluated compliance with Ohio Adm.Code 4901:1-10-06 requirements for substations, pad-mounted transformers, switch gear, and overhead/other (pole or vegetation Issue) topics.

### Findings

As a result of Staff's routine NESC field inspections from January 2013 through June 2017, Staff submitted the following list and number of recommended corrective actions to the Company.

<u>Topic</u>	<u>Recommended Corrective Actions</u>
Substations	5
Vegetation	5
Pad-Mount Transformers	185
Overhead	270
Poles	60
<b><u>Total</u></b>	<b><u>525</u></b>

Each of the above recommended corrective actions were corrected in a timely manner and Staff does not recommend any further action.

### **Ohio Adm.Code 4901:1-10-11**

#### **Distribution Circuit Performance**

Ohio Adm.Code 4901:1-10-11(C) requires, among other things, that each EDU "submit, no later than ninety calendar days after the end of its reporting period, a report to the director of the service monitoring and enforcement department that identifies the worst performing eight percent of the electric utility's distribution circuits during the previous twelve-month reporting period." The Company's plans for improving reliability on those circuits are also required in the report.

Staff reviews the Company's annual reports, which identify the lowest performing eight percent of distribution circuits for the previous twelve-month reporting period and conducts audits of the remedial work the Company conducted to ensure compliance. From January 2013 through June 2017, Staff conducted 22 inspections in order to verify that the Applicant had met its corrective and/or preventative action commitments.

### Findings

Staff noted no discrepancies during these inspections.

### **Ohio Adm.Code 4901:1-10-10(C)**

Ohio Adm.Code 4901:1-10-10(C) requires that each electric utility submit an annual report of the utility's performance and supporting data for service reliability indices System Average Interruption Frequency Index (SAIFI) and Customer Average Interruption Duration Index (CAIDI). The Company's SAIFI and CAIDI standards for 2016 were set at 1.05 and 122.81, respectively. Staff reviewed the Company's performance data and found that the Company met its SAIFI standard with an index of 1.05, but missed its CAIDI standard with an index of 136.42. Although not a rule requirement, Staff calculated the



Company's System Average Interruption Duration Index (SAIDI) performance and found that the Company's SAIDI performance has also been declining.

Pursuant to Ohio Adm.Code 4901:1-10-10(D), the Company is required to submit an action plan addressing the missed CAIDI standard by March 31st of the year following the year when the Company missed the standard. The Company submitted its action plan to staff on April 28, 2017. The Company offered the following actions to improve CAIDI performance:

1. Continue sectionalizing strategy.
2. Leverage two-way communication technology to pinpoint trouble and to restore power more quickly.
3. Continue to review and correct outage events data by:
  - a. Ensuring events are modeled to reflect the actual customers associated with an outage with less than 500 customers.
  - b. Ensure outage restoration time is entered to more accurately reflect the actual time customer service is restored.
4. Begin "Switch Before Fix" program: an initiative that will identify opportunities to restore power to as many customers as possible, as quickly as possible, through switching and fault isolation before beginning repairs that take a longer duration.
5. Resource Response Time Performance – develop metrics to track and measure the time to get a first responder to the outage location to drive operational improvement.

Staff will continue to monitor the Company's reliability performance and the impact of its action plan on CAIDI performance.

### **Customer Service Audit**

In February 2017, Staff completed an audit of the customer service performance, practices, and procedures of the Company. As a result of the audit, Staff determined that the overall customer service practices and policies of the Applicant, as reviewed and observed by the team, comply with the applicable rules and regulations set forth by the Commission.

### **Customer Service Assessment**

Staff reviewed the 1,712 customer contacts to the PUCO's call center for the period January 1, 2016 through December 31, 2016 that were related to the Company's electrical services. Customer concerns about disconnection issues or payment arrangements constituted the largest number of contacts, with 398 contacts for the period. Most customers were seeking information about pending disconnections, medical certificates, available payment arrangements and/or issues related to the Commission's winter reconnect order.

Three hundred customers contacted the Consumer Services Division before calling the Company. Most of these customers sought account information and Staff directed these contacts back to the Company in order to allow the Company the first opportunity to respond to its customers. The next largest

category of contacts was billing issues, with 246 contacts. This category includes contacts regarding high bill concerns, back billing, or final/initial billing questions. Contacts regarding PIPP Plus and assistance programs were the fourth largest category, with 214 contacts. The Commission modified the PIPP Plus rules in November 2015, which may have contributed to the quantity of contacts.

One hundred fifty-six customers had service issues or inquiries, including 26 customers who voiced concerns about the quality of the Company's customer service. One hundred forty customers called with questions regarding retail service providers. Seventy-six contacts were customers commenting on actions or decisions made by the Commission as it relates to the Company's cases. Staff received 45 contacts regarding rates and tariffs during the time period reviewed.

The remaining contacts included miscellaneous items, such as questions or concerns regarding deposits, Company policies, or non-jurisdictional matters.

## **MANAGEMENT AND OPERATIONS REVIEW**

Ohio Revised Code 4909.154 states that the Commission shall consider the management policies, practices, and organization of public utilities in fixing the just, reasonable, and compensatory rates, joint rates, tolls, classification, charges, or rentals to be observed and charged for service by any public utility.

Ohio Adm.Code 4901-7-01, Appendix A requires medium and large utilities to include in their rate filings a concisely written summary of their management policies, practices, and organization. Among other things, the summary is to include a discussion of policy and goal setting, strategic and long range planning, organization structure, decision making and controlling, and communications for the Company's executive management process (Schedule S-4.1) as well as for functional areas common to most electric utility companies (Schedule S-4.2).

Staff routinely reviews Schedule S-4.1 and Schedule S-4.2, applicant performance, and various events relating to the Applicant's management. As a result of these review activities, Staff selects certain management topics for rate case reporting. In the current rate case, Staff reports on the processes used by the Company regarding the Company's purchase of receivables, uncollectible rider, and debt collection process.

### **Purchase of Receivables, Uncollectible Rider, and Debt Collection Process**

The Company purchases certified supplier's receivables at a zero discount. The Company assumes responsibility for collection of the revenues. Uncollected supplier charges are recovered by the Company in the Rider UE-GEN.

Rider UE-GEN enables the Company to recover uncollectible accounts expense related to generation service. Rider UE-GEN is non-bypassable except for those accounts designated as not participating in the Purchase of Receivables program.

The Company's bad debt process begins when customers do not pay their bills in a timely manner and the bill becomes delinquent. Delinquent bills move down the credit timeline toward disconnections of service and ultimately collection agency assignment and charge off.

### **Purchase of Receivable Process**

CRES suppliers may opt to participate in the Company's Purchase of Accounts Receivable (PAR) program. The CRES supplier must sign an Account Receivable Purchase Agreement as well as a Sale and Assignment Agreement. CRES suppliers can utilize either the consolidated bill ready or rate ready billing to submit their charges. After all payment notifications are sent to the CRES supplier for a given month, payment is transferred no later than the 20<sup>th</sup> day of the month following the month in which payment notifications occurred. The receivables purchased from the CRES supplier are to be competitive retail electric service, which is defined in the Company Certified Supplier Tariff as any service involved in supplying or arranging for the supply of electric energy to end-use customers that has been declared competitive pursuant to the Ohio Revised Code or an order of the Commission.

**Uncollectible Rider**

Rider UE-GEN recovers the bad debt associated with the Standard Service Offer (SSO) service and the PAR program. The rider is generally non-bypassable. Rider UE-GEN, however, is bypassable by dual-billed customer's accounts and customer accounts designated by CRES providers as not part of the PAR program. Rider UE-GEN uncollectible accounts expense includes loss of sale of account receivable, charge offs, collection cost, and the time value of money.

**Debt Collection Process**

In order to enter the debt collection process, a customer must first receive a final bill. The final bill is mailed to the customer only after the customer has been disconnected for non-payment.

The debt collection process begins 39 days after the final bill is mailed, when the account is sent to a collection agency. On day 111, the account is charged off. The account can be actively collected for seven years after the charge-off date. Debt recovered through the debt collection process is credited to the Rider UE-GEN or Distribution Uncollectible Rider (UE-ED), depending on whether the debt is generation or distribution related.

**Management Practices and Policy**

The Company's Internal Controls Group and Accounting Department presented a broad summary of their respective policies, goals, practices, and responsibilities as part of the Company's application. The Internal Audit Controls group is responsible for internal control matters, including execution of Sections 302 and 404 of the Sarbanes-Oxley Act ensuring that activities associated with documenting, testing, and evaluating the effectiveness of the Company's internal controls over financial reporting are successfully performed by the organization. The Company's Accounting Department sets policies to comply with Financial Accounting Standards Board (FASB), Securities Exchange Commission (SEC), Public Company Accounting Oversight Board (PCAOB), and Federal Energy Regulatory Commission (FERC) requirements. The Electric Utility and Infrastructure group is primarily responsible for the books and records of the Company's electric utility operations. The responsibilities of the Electric Utilities and Infrastructure group include ensuring the integrity of the electric utilities' accounting books and records, providing accounting-related information to support the Company's regulatory initiatives and assure that the organization's reporting documents are in compliance with generally accepted accounting principles and practices.

The purchase of receivable and debt collection processes all have several financial controls to ensure the financial statement assertions, such as existence, completeness, valuation, rights and obligations as well as presentation and disclosure.

The PAR program utilizes several agreements (including the Account Receivables Purchase Agreement, the Company Supplier Retail Tariff, and the Sale and Assignment Agreement) to provide the rules, procedures, and controls of the program. The PAR program also requires Commission certification to participate. The Account Receivables Purchase Agreement specifically requires a CRES supplier to keep records and books, be open to inspection of said books and records, and furnish a letter from its independent public accounting firm regarding the annual audit of its accounts receivable records, and review financial statements for accuracy of transactions. In addition, the Company may require periodic reconciliation, financial statements detailing payment terms and aging methodology, receivable

concertation, marking and segregation of receivables, disclosure of CRES internal audit reports, and external auditor management letters.

The debt collection process relies heavily on the PAR program and the Company's internal accounting practices and controls for the completeness, existence, and accuracy of the debt to be collected. The Company utilizes an accounts receivable performer as a liaison between the various collection agencies and the customer regarding any request for account information. In addition, the Company can recall an account from the collection agency when fraud or bankruptcy are involved. The Company has an effective discount rate (combination of collection cost and time value of money) of 0.4749 percent for its uncollectible rider expense.

### **Findings**

In order to examine the Company's PAR program, Uncollectible Rider, and debt collection process, Staff reviewed the various summaries of management policies, practices, and organization as well as the specific response to this functional area included within the application. In addition, Staff reviewed the Company's retail supplier tariff and Rider UE-GEN tariff. Staff also requested several data requests regarding the various controls and practices, which the submitted documents relied on.

As a result of Staff's review and request for data, Staff has found that the Company relies heavily on signed agreements, computer applications (math checks), collateral levels and credit ratings of CRES providers in the PAR program. The Company, however, does not actively use common auditing, testing, and sampling tools specifically in regards to the purchase of receivable program. Furthermore, the Company does not perform analytical procedures, consider fraud, or incorporate business risk into its PAR program internal controls.

Although the Company is permitted to audit and inspect supplier receivables, no audits were conducted for years 2014, 2015, 2016, or 2017. The Company is also able to receive CRES internal audit reports regarding the receivables, yet the Company did not perform such reports for years 2014, 2015, 2016, and 2017. Furthermore, the Company has not received any external auditor management letters regarding CRES receivables for years 2014, 2015, 2016, and 2017. Finally, the Company has not discovered any errors in supplier receivables for the years 2014, 2015, 2016, or 2017. The Company is relying solely on a math check for rate ready billing as the control to verify amounts on customer bills. Bill ready billing has no such math check.

### **Recommendations**

The Company needs to incorporate credit and business risk into the PAR program. Without credit and business risk incorporated into the PAR program, ratepayer revenues mitigate these risks. The lack of a discount rate for CRES suppliers prevents CRES suppliers from performing their due diligence regarding their customers' credit. Likewise, the Rider UE-GEN insulates the revenues of the Company from both its customers and the CRES customers' credit. The Company recovers a 0.4729 percent discount rate in the Rider UE-GEN. The credit and business risk of CRES suppliers should not be the responsibility of the Company's ratepayers. Therefore, Staff recommends a discount rate for the PAR program.

Internal controls are important tools for management in the creation of financial statements to ensure that management's presentation is accurate and free from fraud. The Company has within its

agreements with CRES providers multiple opportunities to ensure that the terms of the agreements are fulfilled and that the errors or fraud are discovered or avoided. Furthermore, although the Company's shareholders may have no financial concern regarding the PAR program, ratepayers might. Staff recommends that the Company utilize the existing controls and reviews permitted within the PAR program including: auditing and inspecting CRES supplier receivables and books for errors, compliance, and/or fraud, reviewing CRES supplier internal and external audit reports and management letters for discovered problems, randomly sampling bills for excluded charges, and performing analytical procedures. The Company has not discovered any errors in supplier receivables for the years 2014, 2015, 2016, and 2017 and likely will not without looking.

Staff recommends that during the Company's next annual review of Rider UE-GEN, the Company perform a comprehensive audit of the PAR program, particularly sampling CRES charges for excluded receivables.

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Overall Financial Summary**  
**For the Twelve Months Ended March 31, 2017**

**Schedule A-1**

**Page 1 of 1**

**Work Paper Reference No(s): See Below**

Line No.	Description	Supporting Schedule Reference	Company Proposed Test Year	Staff	
				Lower Bound	Upper Bound
1	Rate Base	B-1	\$ 1,338,485,086	\$ 1,302,465,298	\$ 1,302,465,298
2	Current Operating Income	C-1	94,817,898	112,568,277	112,568,277
3	Earned Rate of Return (Line 2 / Line 1)		7.08%	8.64%	8.64%
4	Rate of Return Recommended	D-1A	7.82%	7.22%	7.74%
5	Required Operating Income (Line 1 x Line 4)		104,669,534	94,037,995	100,810,814
6	Operating Income Deficiency (Line 5 - Line 2)		9,851,636	(18,530,282)	(11,757,463)
7	Gross Revenue Conversion Factor	A-2	1.5613731	1.5613731	1.5613731
8	Revenue Deficiency (Line 6 x Line 7)		15,382,079	(28,932,684)	(18,357,786)
9	Revenue Increase Requested	E-4	15,405,219	(28,932,684)	(18,357,786)
10	Adjusted Operating Revenues	C-1	485,106,414	486,952,854	486,952,854
11	Revenue Requirements (Line 9 + Line 10)		\$ 500,511,633	\$ 458,020,170	\$ 468,595,068

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Computation of Gross Revenue Conversion Factor**  
**For the Twelve Months Ended March 31, 2017**

**Schedule A-2**

**Page 1 of 1**

**Work Paper Reference No(s).:**

Line No.	Description		Percent of Incremental Gross Revenue
1	Operating Revenues		100.000%
2			
3	Less:		
4	Uncollectible Accounts Expenses	0.5569%	
5	City of Cincinnati Franchise Tax	0.1000%	
6	Commercial Activities Tax	0.2600%	0.917%
9			
10	Income before Income Tax (Line 1 - Line 8)		99.08310%
11			
12	State Income Tax (0.0618% x 99.083%)		0.06123%
13			
14	Municipal Income Tax (0.4938% x 99.083%)		0.48927%
15			
16	Income before Federal Income Tax (Line 10 - Line 12 - Line 14)		98.53260%
17			
18	Federal Income Tax (35% x 98.533%)		34.48641%
19			
20	Operating Income Percentage (Line 16 - Line 18)		64.04619%
21			
22	Gross Revenue Conversion Factor (100% / 64.04619%)		1.5613731



**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Jurisdictional Rate Base Summary**  
**As of June 30, 2016**

**Schedule B-1**  
**Page 1 of 1**

**Work Paper Reference No(s): See Below**

Line No.	Rate Base Component	Supporting Schedule Reference	Company Proposed Amount	Staff Proposed Amount
1	Plant In Service			
2	Distribution	B-2	\$ 2,280,210,325	\$ 2,278,714,295
3	General	B-2	220,662,496	217,141,090
4	Common	B-2	187,847,075	184,388,305
5	Total Plant In Service		<u>2,688,719,896</u>	<u>2,680,243,690</u>
6	Reserve for Accumulated Depreciation			
7	Distribution	B-3	(746,596,574)	(747,093,755)
8	General	B-3	(84,598,441)	(84,580,748)
9	Common	B-3	(71,397,475)	(68,320,146)
10	Total Reserve for Accumulated Depreciation		<u>(902,592,490)</u>	<u>(899,994,649)</u>
11	Net Plant In Service (Line 5 + Line 12)		1,786,127,406	1,780,249,041
12	Construction Work in Progress	B-4	0	0
13	Cash Working Capital Allowance	B-5	0	0
14	Material and Supplies	B-5	29,819,070	0
15	Other Items:			
16	Contributions in Aid of Construction (a)	B-6	0	0
17	Customer Service Deposits	B-6	(18,535,684)	(18,535,684)
18	Unclaimed Funds	B-6	0	(322,353)
19	Postretirement Benefits	B-6	8,387,395	8,387,395
20	Investment Tax Credits	B-6	0	0
21	Deferred Income Taxes	B-6	(499,759,260)	(499,759,260)
22	Other Rate Base Adjustments	B-6	<u>32,446,159</u>	<u>32,446,159</u>
23	Rate Base (Line 13 through Line 23)		<u>\$ 1,338,485,086</u>	<u>\$ 1,302,465,298</u>

(a) Contributions in aid of construction are already netted against gross plant per FPC Order No. 490.

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Plant In Service Summary by Major Property Groupings**  
**As of June 30, 2016**

**Schedule B-2**

**Page 1 of 1**

**Work Paper Reference No(s): Staff's Schedule B-2.1**

Line No.	Major Property Groupings	Total Company	Adjustments	Adjusted Total Company	Allocation %	Allocated Jurisdiction
		\$	\$	\$		\$
1	Transmission	758,815,596	0	758,815,596	0.000%	0
2	Distribution	2,280,210,325	(1,496,030)	2,278,714,295	100.000%	2,278,714,295
3	General	238,374,372	(4,116,629)	234,257,743	92.693%	217,141,090
4	Common (Allocated to Electric)	212,691,388	(3,953,874)	208,737,514	88.335%	184,388,305
5	Completed Construction Not Classified (1)	0	0	0	0.000%	0
6	Total	3,490,091,681	(9,566,533)	3,480,525,148		2,680,243,690

(1) Included in each function on Schedule B-2.1

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Plant In Service by Accounts and Subaccounts**  
**As of June 30, 2016**  
**Non-Jurisdictional Electric Plant**

**Schedule B-2.1**  
**Page 1 of 4**

**Work Paper Reference No(s): Applicant's Schedule B-2.1 & Staff's Schedule B-2.2**

Line No.	FERC Acct. No.	Company Acct. No.	Account Title	Total Company	Staff Adjustments	Adjusted Total Company	Allocation %	Allocated Jurisdiction
				\$	\$	\$		\$
1	Various	Various	Electric Production - Steam	0		0	0.000%	0
2	Various	Various	Electric Production - Other	0		0	0.000%	0
3	Various	Various	Electric Transmission Plant	758,815,596		758,815,596	0.000%	0
4	Various	Various	Electric Prod./Trans. Plant - DENA Plants	0		0	0.000%	0
5			Total Non-Jurisdictional Electric Plant	758,815,596		758,815,596		0

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Plant In Service by Accounts and Subaccounts**  
**As of June 30, 2016**  
**Distribution Plant**

**Schedule B-2.1**  
**Page 2 of 4**

**Work Paper Reference No(s): Applicant's Schedule B-2.1 & Staff's Schedule B-2.2**

Line No.	FERC Acct. No.	Company Acct. No.	Account Title	Total Company	Staff Adjustments	Adjusted Total Company	Allocation %	Allocated Jurisdiction
				\$	\$	\$		\$
1	360	3600	Land and Land Rights	13,770,789	(631,853)	13,138,936	100.000%	13,138,936
2	360	3601	Rights of Way	26,286,892		26,286,892	100.000%	26,286,892
3	361	3610	Structures and Improvements	19,163,278		19,163,278	100.000%	19,163,278
4	362	3620	Station Equipment	212,968,774	(703,767)	212,265,007	100.000%	212,265,007
5	362	3622	Major Equipment	115,821,737	(158,485)	115,663,252	100.000%	115,663,252
6	362	3635	Station Equipment Electronic	0		0	100.000%	0
7	364	3640	Poles, Towers & Fixtures	309,688,484	(1,925)	309,686,559	100.000%	309,686,559
8	365	3650	Overhead Conductors and Devices	535,173,982		535,173,982	100.000%	535,173,982
9	365	3651	Overhead Conductors and Devices	21,745,684		21,745,684	100.000%	21,745,684
10	366	3660	Underground Conduit	113,261,755		113,261,755	100.000%	113,261,755
11	367	3670	Underground Conductors and Devices	344,816,482		344,816,482	100.000%	344,816,482
12	368	3680, 3681	Line Transformers	332,913,015		332,913,015	100.000%	332,913,015
13	368	3682	Customer Transformer Installations	3,755,296		3,755,296	100.000%	3,755,296
14	369	3691	Services - Underground	5,525,489		5,525,489	100.000%	5,525,489
15	369	3692	Services - Overhead	81,827,784		81,827,784	100.000%	81,827,784
16	370	3700	Meters	0		0	100.000%	0
17	370	3700	Instrumentation Transformers	7,409,920		7,409,920	100.000%	7,409,920
18	370	3701	Leased Meters	385,629		385,629	100.000%	385,629
19	370	3701	Instrumentation Transformers	5,672,328		5,672,328	100.000%	5,672,328
20	370	3702	Utility of the Future Meters	3,068,034		3,068,034	100.000%	3,068,034
21	370	3702	Echelon AMI Meters	68,730,098		68,730,098	100.000%	68,730,098
22	371	3710	Installations on Customers' Premises	0		0	100.000%	0
23	371	3712	Company Owned Outdoor Light	0		0	100.000%	0
24	372	3720	Leased Property on Customers' Premises	102,503		102,503	100.000%	102,503
25	373	3730	Street Lighting	0		0	100.000%	0
26	373	3731	Street Lighting - Overhead	15,300,749		15,300,749	100.000%	15,300,749
27	373	3732	Street Lighting - Boulevard	27,727,622		27,727,622	100.000%	27,727,622
28	373	3733	Light Security OL POL Flood	15,094,001		15,094,001	100.000%	15,094,001
29	373	3734	Light Choice OLE - Public	0		0	100.000%	0
30			Total Electric Distribution Plant	2,280,210,325	(1,496,030)	2,278,714,295		2,278,714,295

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Plant In Service by Accounts and Subaccounts**  
**As of June 30, 2016**  
**General Plant**

**Schedule B-2.1**  
**Page 3 of 4**

**Work Paper Reference No(s): Applicant's Schedule B-2.1, Staff's Schedule B-2.2, and B-7a**

Line No.	FERC Acct. No.	Company Acct. No.	Account Title	Total Company	Staff Adjustments	Adjusted Total Company	Allocation %	Allocated Jurisdiction
				\$	\$	\$		\$
1	303	3030	Miscellaneous Intangible Plant	31,468,851		31,468,851	85.541%	26,918,770
2	303	3030	Miscellaneous Intangible Plant - Smart Grid	11,941,524		11,941,524	100.000%	11,941,524
3	389	3890	Land and Land Rights	5,034,039	(4,084,826)	949,213	85.541%	811,966
4	390	3900	Structures and Improvements	27,094,414		27,094,414	85.541%	23,176,833
5	391	3910	Office Furniture and Equipment	374,308		374,308	85.541%	320,187
6	391	3911	Electronic Data Processing Equipment	3,657,042		3,657,042	85.541%	3,128,270
7	391	3911	Electronic Data Processing Equip. - Smart Grid	1,899,274		1,899,274	100.000%	1,899,274
8	391	3920	Transportation Equipment	360,621		360,621	85.541%	308,479
9	391	3921	Trailers	2,408,331		2,408,331	85.541%	2,060,110
10	393	3930	Stores Equipment	1,851,312		1,851,312	85.541%	1,583,631
11	394	3940	Tools, Shop & Garage Equipment	23,748,691		23,748,691	85.541%	20,314,868
12	395	3950	Laboratory Equipment	0		0	85.541%	0
13	396	3960	Power Operated Equipment	1,881,512		1,881,512	85.541%	1,609,464
14	397	3970	Communication Equipment	24,534,326	(31,803)	24,502,523	85.541%	20,959,703
15	397	3970	Communication Equipment - Smart Grid -Other	277,636		277,636	100.000%	277,636
16	397	3970	Communication Equipment - Smart Grid Nodes	101,758,692		101,758,692	100.000%	101,758,692
17	398	3980	Miscellaneous Equipment	83,799		83,799	85.541%	71,683
18			Total Electric General Plant	238,374,372	(4,116,629)	234,257,743		217,141,090
19			Total Electric Plant	3,277,400,293	(5,612,659)	3,271,787,634		2,495,855,385

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Plant In Service by Accounts and Subaccounts**  
**As of June 30, 2016**  
**Common Plant**

**Schedule B-2.1**

**Page 4 of 4**

**Work Paper Reference No(s): Applicant's Schedule B-2.1, Staff's Schedule B-2.2, and B-7a**

Line No.	FERC Acct. No.	Company Acct. No.	Account Title	Total Company	Staff Adjustments	Adjusted Total Company	Gas/Electric Allocation %	Allocated Electric	T & D Allocation %	Allocated Jurisdiction
				\$	\$	\$		\$		\$
1		1030	Miscellaneous Intangible Plant	49,645,123		49,645,123	63.700%	31,623,943	85.541%	27,051,437
2		1701	Common AMI Meters	9,527,396		9,527,396	62.520%	5,956,528	85.541%	5,095,274
3		1701	Common AMI Meters - Smart Grid	11,136,417		11,136,417	62.520%	6,962,488	100.000%	6,962,488
4		1890	Land and Land Rights	595,291	(195,578)	399,713	63.700%	254,617	85.541%	217,802
5		1890	Land and Land Rights	1,378,244		1,378,244	60.420%	832,735	85.541%	712,330
6		1890	Land and Land Rights	287,863		287,863	63.700%	183,369	85.541%	156,856
7		1891	Rights of Way	37,969	(37,969)	0	63.700%	0	85.541%	0
8		1900	Structures & Improvements - Clopay 3rd Floor	272,078	(272,078)	0	63.700%	0	85.541%	0
9		1900	Structures & Improvements - Clopay 4th/5th/6th Floor	820,726	(820,726)	0	63.700%	0	85.541%	0
10		1900	Structures & Improvements -Clopay Bldg & Access Ram	4,179,441	(4,179,441)	0	63.700%	0	85.541%	0
11		1900	Structures & Improvements - 4th & Main	110,251,326		110,251,326	60.420%	66,613,851	85.541%	56,982,154
12		1900	Structures & Improvements - Micro	183,649	(77,290)	106,359	63.700%	67,750	85.541%	57,954
13		1900	Structures & Improvements	94,719		94,719	100.000%	94,719	85.541%	81,024
14		1900	Structures & Improvements	46,225,637	(202,861)	46,022,776	63.700%	29,316,508	85.541%	25,077,634
15		1900	Structures & Improvements - Holiday Park	303,876	(303,876)	0	62.520%	0	85.541%	0
16		1910	Office Furniture & Equipment	7,174,863		7,174,863	60.420%	4,335,052	85.541%	3,708,247
17		1911	Electronic Data Processing	1,966,408		1,966,408	63.700%	1,252,602	85.541%	1,071,488
18		1911	Electronic Data Processing - Smart Grid	61,445		61,445	63.700%	39,140	100.000%	39,140
19		1920	Transportation Equipment	85,311		85,311	63.700%	54,343	85.541%	46,486
20		1921	Trailers	474,273		474,273	63.700%	302,112	85.541%	258,430
21		1930	Stores Equipment	469,805		469,805	63.700%	299,266	85.541%	255,995
22		1940	Tools, Shop & Garage Equipment	2,450,630	(16,549)	2,434,081	63.700%	1,550,510	85.541%	1,326,322
23		1950	Laboratory Equipment	0		0	63.700%	0	85.541%	0
24		1960	Power Operated Equipment	153,899		153,899	63.700%	98,034	85.541%	83,859
25		1970	Communication Equipment	24,853,377		24,853,377	63.700%	15,831,601	85.541%	13,542,510
26		1970	Communication Equipment - Micro	5,345,027	(246,838)	5,098,189	63.700%	3,247,546	85.541%	2,777,983
27		1970	Communication Equipment - Node	9,919,956		9,919,956	62.520%	6,201,956	85.541%	5,305,215
28		1970	Communication Equipment - Node - Smart Grid	0		0	62.520%	0	100.000%	0
29		1970	Communication Equipment - Nodes being replaced	53,317,545		53,317,545	62.520%	33,334,129	100.000%	33,334,129
30		1980	Miscellaneous Equipment	446,962		446,962	63.700%	284,715	85.541%	243,548
31		1990, 1991	ARO Common General Plant	99,735		99,735	0.000%	0	85.541%	0
32			Total Common Plant	341,758,992	(6,353,206)	335,405,786		208,737,514		184,388,305
33		62.23%	Common Plant Allocated to Electric	212,691,388	(3,953,874)	208,737,514				184,388,305
34			Total Electric Plant Including Allocated Common	3,490,091,681	(9,566,533)	3,480,525,148				2,680,243,690

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjustments to Plant In Service**  
**As of June 30, 2016**

**Schedule B-2.2**

**Page 1 of 1**

**Work Paper Reference No(s): Staff's Schedules B-2.2a through B-2.2g**

<b>Line No.</b>	<b>Company Acct. No.</b>	<b>Account Title</b>	<b>Staff's Total Company Adjustment</b>	<b>Allocation %</b>	<b>Staff's Allocated Adjustment</b>
1	<b>Distribution Plant</b>				
2	3600	Land & Land Rights	\$ (631,853)	100.00%	\$ (631,853)
3	3620	Station Equipment	(703,767)	100.00%	(703,767)
4	3622	Major Equipment	(158,485)	100.00%	(158,485)
5	3640	Poles, Towers, & Fixtures	(1,925)	100.00%	(1,925)
6					
7		<b>Total Distribution</b>	<u>(1,496,030)</u>		<u>(1,496,030)</u>
8	<b>General Plant</b>				
9	3890	Land & Land Rights	(4,084,826)	100.00%	(4,084,826)
10	3970	Communication Equipment	(31,803)	100.00%	(31,803)
11					
12		<b>Total General</b>	<u>(4,116,629)</u>		<u>(4,116,629)</u>
13					
14	<b>Common Plant</b>				
15	1890	Land & Land Rights	(195,578)	62.23%	(121,716)
16	1891	Rights of Way	(37,969)	62.23%	(23,630)
17	1900	Structures & Improvements - Clopay 3rd Floor	(272,078)	62.23%	(169,326)
18	1900	Structures & Improvements - Clopay 4th, 5th, 6th Floors	(820,726)	62.23%	(510,773)
19	1900	Structures & Improvements - Clopay Bldg & Access Ramp	(4,179,441)	62.23%	(2,601,047)
20	1900	Structures & Improvements - Micro	(77,290)	62.23%	(48,101)
21	1900	Structures & Improvements	(202,861)	62.23%	(126,249)
22	1900	Structures & Improvements - Holiday Park	(303,876)	62.23%	(189,115)
23	1940	Tools, Shop, & Garage Equipment	(16,549)	62.23%	(10,299)
24	1970	Communication Equipment - Micro	(246,838)	62.23%	(153,618)
25					
26		<b>Total Common</b>	<u>(6,353,206)</u>		<u>(3,953,874)</u>
27		<b>Total Adjustments including Allocated Common</b>	<u><u>\$ (11,965,865)</u></u>		<u><u>\$ (9,566,534)</u></u>

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Adjustments to Plant In Service  
As of June 30, 2016

Adjustment to Columbia Substation Land  
Work Paper Reference No(s): Data Request 178

Schedule B-2.2a  
Page 1 of 1

Line No.	Company Acct. No.	Account Title	Description	Total Adjustment
1	<b>Distribution</b>			
2	3600	Land & Land Rights	Land for the new Columbia Station is not currently in-service	\$ (631,853)
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15			<b>Total Adjustment</b>	<u>\$ (631,853)</u>



**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjustments to Plant In Service**  
**As of June 30, 2016**

**Adjustment to St. Clair Substation**  
**Work Paper Reference No(s): Data Request 173**

**Schedule B-2.2b**  
**Page 1 of 1**

Line No.	Company Acct. No.	Account Title	Description	Total Adjustment
1		<b>Distribution</b>		
2	3620	Station Equipment	St. Clair substation is no longer used & useful	\$ (582,591)
3	3620	Station Equipment	St. Clair substation is no longer used & useful	(102,775)
4	3620	Station Equipment	St. Clair substation is no longer used & useful	(6,582)
5	3620	Station Equipment	St. Clair substation is no longer used & useful	(2,349)
6				<u>(694,297)</u>
7				
8				
9	3622	Major Equipment	St. Clair substation is no longer used & useful	(112,271)
10	3622	Major Equipment	St. Clair substation is no longer used & useful	(46,214)
11				<u>(158,485)</u>
12				
13				
14				
15			<b>Total Adjustment</b>	<u>\$ (852,781)</u>

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Adjustments to Plant In Service  
As of June 30, 2016

Adjustment to ESO Control Center Land  
Work Paper Reference No(s): Data Request 182

Schedule B-2.2c  
Page 1 of 1

Line No.	Company Acct. No.	Account Title	Description	Total Adjustment
1	<b>General</b>			
2	3890	Land & Land Rights	Land for the new ESO Control Center is not currently in-service	\$ (4,084,826)
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
<b>Total Adjustment</b>				<u><u>\$ (4,084,826)</u></u>

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjustments to Plant In Service**  
**As of June 30, 2016**

**Adjustment to Leased Property**  
**Work Paper Reference No(s): Data Request 185**

**Schedule B-2.2d**  
**Page 1 of 1**

Line No.	Company Acct. No.	Account Title	Description	Total Adjustment
1	<b>Common</b>			
2	1900	Structures & Improvements	4th & Walnut (Clopay - 3rd Floor)	\$ (272,078)
3	1900	Structures & Improvements	4th & Walnut (Clopay - 4th, 5th, 6th Floors)	(820,726)
4	1900	Structures & Improvements	4th & Walnut (Clopay Building & Access Ramp)	(4,179,441)
5	1900	Structures & Improvements	Holiday Park	(303,876)
6				
7				
8				
9				
10				
11				
12				
13				
14				
15			<b>Total Adjustment</b>	<u><u>\$ (5,576,121)</u></u>

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Adjustments to Plant In Service  
As of June 30, 2016

Adjustment to Hartwell Recreation Facility  
Work Paper Reference No(s): Data Request 59

Schedule B-2.2e  
Page 1 of 1

Line No.	Company Acct. No.	Account Title	Description	Total Adjustment
1	Common			
2	1940	Tools, Shop, & Garage Equipment	Hartwell Recreation Facility	\$ (16,549)
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
Total Adjustment				<u>\$ (16,549)</u>

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjustments to Plant In Service**  
**As of June 30, 2016**

**Adjustments to Indiana/Kentucky/Transmission Assets**  
**Work Paper Reference No(s): Data Requests 184 & 188**

**Schedule B-2.2f**  
**Page 1 of 1**

Line No.	Company Acct. No.	Account Title	Description	Total Adjustment
1		<b>Distribution</b>		
2	3620	Station Equipment	Station Equipment	\$ (9,470)
3	3640	Poles, Towers, & Fixtures	RI-YANKEE/OXFORD STATE RD/TRANSMIS- FDRS F 5666/3263/F5661 - PP 934039 - T MEYER	(1,898)
4	3640	Poles, Towers, & Fixtures	RI-YANKEE/OXFORD STATE RD/TRANSMIS- FDRS F 5666/3263/F5661 - PP 934039 - T MEYER	(26)
5				
6			<b>Total Distribution</b>	<u>(11,395)</u>
7		<b>General</b>		
8	3970	Communication Equipment	Lawrenceburg Microwave Site - 5509.00 - Property in Indiana	(1,457)
9	3970	Communication Equipment	Verona Microwave Station - Property in Kentucky	(1,457)
10	3970	Communication Equipment	Wilder Microwave Station - Property in Kentucky	(28,889)
11				
12			<b>Total General</b>	<u>(31,803)</u>
13				
14		<b>Common</b>		
15	1890	Land & Land Rights	Brookville Microwave Station - Property in Indiana	(31,035)
16	1890	Land & Land Rights	Lawrenceburg Microwave Station - Property in Indiana	(69,073)
17	1890	Land & Land Rights	Verona Microwave Station - Property in Kentucky	(54,369)
18	1890	Land & Land Rights	Kentucky Assets - Project No. 48168	(24,987)
19	1890	Land & Land Rights	Kentucky Assets - Project No. 48214	(16,114)
20	1891	Rights of Way	Beckjord Reflector Microwave Station - Property in Kentucky	(18,292)
21	1891	Rights of Way	Wilder Microwave Station - Property in Kentucky	(19,677)
22	1900	Structures & Improvements - Micro.	Verona Microwave Station - Property in Kentucky	(11,283)
23	1900	Structures & Improvements - Micro.	Wilder Microwave Station - Property in Kentucky	(13,513)
24	1900	Structures & Improvements - Micro.	Kentucky Assets - Project No. C6403	(2,152)
25	1900	Structures & Improvements - Micro.	Kentucky Assets - Project No. KYP110347	(50,342)
26	1970	Communication Equipment - Micro.	Kentucky Assets - Project No. KYP110346	(59,176)
27	1970	Communication Equipment - Micro.	Verona Microwave Station - Property in Kentucky	(175,589)
28	1970	Communication Equipment - Micro.	Wilder Microwave Station - Property in Kentucky	(8,524)
29	1970	Communication Equipment - Micro.	Taylor Mill Microwave Station - Property in Kentucky	(3,550)
30				
31			<b>Total Common</b>	<u>(557,675)</u>
32				
33			<b>Total Adjustment</b>	<u><u>\$ (600,873)</u></u>
34				
35				

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjustments to Plant In Service**  
**As of June 30, 2016**

**Miscellaneous Adjustments**  
**Work Paper Reference No(s): Data Request 170**

**Schedule B-2.2g**  
**Page 1 of 1**

Line No.	Company Acct. No.	Account Title	Description	Total Adjustment
1	<b>Common</b>			
2	1900	Structures & Improvements	Atrium II Move to 4th & Main Building	\$ (200,000)
3	1900	Structures & Improvements	AHUs & Bus. Duct Repl. at 4th & Main	(2,611)
4	1900	Structures & Improvements	Clopay to 4th & Main Consolidation - Mezzanine	(250)
5				
6				
7				
8				
9				
10				
11			<b>Total Adjustment</b>	<b>\$ <u>(202,861)</u></b>

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Leased Property**  
**(Total Company)**  
**As of June 30, 2016**

**Schedule B-2.4**  
**Page 1 of 1**

**Work Paper Reference No(s):**

Identification or Reference Number	Description of Type and Use of Property	Name of Lessor	Frequency of Payment	Amount of Lease Payment	Dollar Value of Property Involved	Explain Method of Capitalization	Included In Rate Base (Yes/No)
				\$	\$		
3701	Meters	Bank of America	Monthly	85,503	8,348,448	Per Regulatory and GAAP Guidelines	Yes
1900	Fourth & Walnut (Clopay) (1)	Merrill Lynch Mortgage Trust CMPTC			5,272,245		Yes
1900	Holiday Park (1)	Cincy Office Properties, Inc.			303,876		Yes

(1) These expenditures are capitalized as Leasehold Improvements and are amortized over the life of the lease

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Accumulated Depreciation and Amortization**  
**As of June 30, 2016**

**Non-Jurisdictional Electric Plant**

**Schedule B-3**  
**Page 1 of 4**

**Work Paper Reference No(s): Staff's Schedule B-3.1**

Line No.	FERC Acct. No.	Company Acct. No.	Account Title	Total Company Plant Investment	Total Company	Adjustments	Adjusted Total Company	Allocation %	Allocated Jurisdiction
				\$	\$		\$		\$
1	Various	Various	Electric Production - Steam	0			0	0.000%	0
2	Various	Various	Electric Production - Other	0			0	0.000%	0
3	Various	Various	Electric Transmission Plant	758,815,596	243,026,390		243,026,390	0.000%	0
4	Various	Various	Electric Prod./Trans. Plant - DENA Plants	0			0	0.000%	0
<hr/>									
5			Total Non-Jurisdictional Electric Plant	758,815,596	243,026,390	0	243,026,390		0



**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Accumulated Depreciation and Amortization**  
**As of June 30, 2016**  
**Distribution Plant**

**Schedule B-3**  
**Page 2 of 4**

**Work Paper Reference No(s): Staff's Schedule B-3.1**

Line No.	FERC Acct. No.	Company Acct. No.	Account Title	Total Company Plant Investment	Total Company	Adjustments	Adjusted Total Company	Allocation %	Allocated Jurisdiction
				\$	\$		\$		\$
1	360	3600	Land and Land Rights	13,770,789	2,754		2,754	100.000%	2,754
2	360	3601	Rights of Way	26,286,892	4,027,028		4,027,028	100.000%	4,027,028
3	361	3610	Structures and Improvements	19,163,278	4,461,821		4,461,821	100.000%	4,461,821
4	362	3620	Station Equipment	212,968,774	76,841,335	(265,144)	76,576,191	100.000%	76,576,191
5	362	3622	Major Equipment	115,821,737	43,955,677	(67,506)	43,888,171	100.000%	43,888,171
6	363	3635	Dist. Station Equip Elec	0	0		0	100.000%	0
7	364	3640	Poles, Towers & Fixtures	309,688,484	124,853,252	(169)	124,853,083	100.000%	124,853,083
8	365	3650	Overhead Conductors and Devices	535,173,982	125,520,072		125,520,072	100.000%	125,520,072
9	365	3651	Overhead Conductors and Devices	21,745,684	1,356,395		1,356,395	100.000%	1,356,395
10	366	3660	Underground Conduit	113,261,755	43,376,369		43,376,369	100.000%	43,376,369
11	367	3670	Underground Conductors and Devices	344,816,482	93,833,245		93,833,245	100.000%	93,833,245
12	368	3680, 3681	Line Transformers	332,913,015	147,962,151		147,962,151	100.000%	147,962,151
13	368	3682	Customer Transformer Installations	3,755,296	2,637,652		2,637,652	100.000%	2,637,652
14	369	3691	Services - Underground	5,525,489	2,537,125		2,537,125	100.000%	2,537,125
15	369	3692	Services - Overhead	81,827,784	46,533,748		46,533,748	100.000%	46,533,748
16	370	3700	Meters	0	(6,753,931)		(6,753,931)	100.000%	(6,753,931)
17	370	3700	Instrumentation Transformers	7,409,920	2,204,858		2,204,858	100.000%	2,204,858
18	370	3701	Leased Meters	385,629	(718,804)		(718,804)	100.000%	(718,804)
19	370	3701	Instrumentation Transformers	5,672,328	994,857		994,857	100.000%	994,857
20	370	3702	Utility of the Future Meters	3,068,034	19,487,051	(19,505,785)	(18,734)	100.000%	(18,734)
21	370	3702	Echelon AMI Meters	68,730,098	0	19,505,785	19,505,785	100.000%	19,505,785
22	371	3710	Installations on Customers' Premises	0	10,635		10,635	100.000%	10,635
23	371	3712	Company Owned Outdoor Light	732,923	(298,114)	298,114	0	100.000%	0
24	372	3720	Leased Property on Customers' Premises	102,503	(58,390)		(58,390)	100.000%	(58,390)
25	373	3730	Street Lighting	2,004,201	(432,366)	432,366	0	100.000%	0
26	373	3731	Street Lighting - Overhead	15,300,749	12,340,799		12,340,799	100.000%	12,340,799
27	373	3732	Street Lighting - Boulevard	27,727,622	8,700,863		8,700,863	100.000%	8,700,863
28	373	3733	Light Security OL POL Flood	15,094,001	8,085,172		8,085,172	100.000%	8,085,172
29	373	3734	Light Choice OLE - Public	10,326,930	(169,815)	169,815	0	100.000%	0
30		108	Retirement Work in Progress		(15,595,160)	830,000	(14,765,160)	100.000%	(14,765,160)
31			Total Electric Distribution Plant	2,293,274,379	745,696,279	1,397,476	747,093,755		747,093,755

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Accumulated Depreciation and Amortization**  
**As of June 30, 2016**  
**General Plant**

**Schedule B-3**  
**Page 3 of 4**

**Work Paper Reference No(s): Staff's Schedule B-3.1 and WPB-7a**

Line No.	FERC Acct. No.	Company Acct. No.	Account Title	Total Company Plant Investment	Total Company	Adjustments	Adjusted Total Company	Allocation %	Allocated Jurisdiction
				\$	\$		\$		\$
1	303	3030	Miscellaneous Intangible Plant	31,468,851	26,316,391		26,316,391	85.541%	22,511,304
2	303	3030	Miscellaneous Intangible Plant - Smart Grid	11,941,524	6,447,659		6,447,659	100.000%	6,447,659
3	389	3890	Land and Land Rights	5,034,039	0		0	85.541%	0
4	390	3900	Structures and Improvements	27,094,414	12,948,531		12,948,531	85.541%	11,076,303
5	391	3910	Office Furniture and Equipment	374,308	126,272		126,272	85.541%	108,014
6	391	3911	Electronic Data Processing Equipment	3,657,042	1,427,614		1,427,614	85.541%	1,221,195
7	391	3911	Electronic Data Processing Equip. - Smart Grid	1,899,274	1,495,669		1,495,669	100.000%	1,495,669
8	392	3920	Transportation Equipment	360,621	116,409		116,409	85.541%	99,577
9	392	3921	Trailers	2,408,331	1,760,034		1,760,034	85.541%	1,505,551
10	393	3930	Stores Equipment	1,851,312	264,607		264,607	85.541%	226,347
11	394	3940	Tools, Shop & Garage Equipment	23,748,691	6,981,494		6,981,494	85.541%	5,972,040
12	395	3950	Laboratory Equipment	0	1,337		1,337	85.541%	1,144
13	396	3960	Power Operated Equipment	1,881,512	1,186,449		1,186,449	85.541%	1,014,900
14	397	3970	Communication Equipment	24,534,326	5,949,197	(20,685)	5,928,512	85.541%	5,071,309
15	397	3970	Communication Equipment - Smart Grid	277,636	28,363,681	(27,879,807)	483,874	100.000%	483,874
16	397	3970	Communication Equipment - Smart Grid Nodes	101,758,692		27,879,807	27,879,807	100.000%	27,879,807
17	398	3980	Miscellaneous Equipment	83,799	42,313		42,313	85.541%	36,195
18		108	Retirement Work in Progress	0	(666,511)		(666,511)	85.541%	(570,140)
19			Total Electric General Plant	238,374,372	92,761,146	(20,685)	92,740,461		84,580,748
20			Total Electric Plant	3,290,464,347	1,081,483,815	1,376,791	1,082,860,606		831,674,503

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Accumulated Depreciation and Amortization**  
**As of June 30, 2016**  
**Common Plant**

**Schedule B-3**  
**Page 4 of 4**

**Work Paper Reference No(s): Staff's Schedule B-3.1 and WPB-7a**

Line No.	FERC Acct. No.	Company Acct. No.	Account Title	Total Company Plant Investment	Total Company	Adjustments	Adjusted Total Company	Gas/Electric Allocation %	Allocated Electric	T & D Allocation %	Allocated Jurisdiction
				\$	\$		\$		\$		\$
1		1030	Miscellaneous Intangible Plant	49,645,123	49,193,862		49,193,862	63.700%	31,336,490	85.541%	26,805,547
2		1701	Common AMI Meters	9,527,396	1,890,024		1,890,024	62.520%	1,181,643	85.541%	1,010,789
3		1701	Common AMI Meters - Smart Grid	11,136,417	2,186,660		2,186,660	100.000%	2,186,660	100.000%	2,186,660
4		1890	Land and Land Rights	595,291	17,483	(4,840)	12,643	63.700%	8,053	85.541%	6,889
5		1890	Land and Land Rights	1,378,244	82,196		82,196	60.420%	49,663	85.541%	42,482
6		1890	Land and Land Rights	287,863	7,228		7,228	63.700%	4,604	85.541%	3,938
7		1891	Rights of Way	37,969	0		0	63.700%	0	85.541%	0
8		1900	Structures & Improvements- Clopay 3rd Floor	272,078	228,640	(228,640)	0	63.700%	0	85.541%	0
9		1900	Structures & Improvements- Clopay 4th/5th/6th Floor	820,726	792,911	(792,911)	0	63.700%	0	85.541%	0
10		1900	Structures & Improv. - Clopay Bldg & Access Ramp	4,179,441	4,192,540	(4,192,540)	0	63.700%	0	85.541%	0
11		1900	Structures & Improvements - 4th & Main	110,251,326	29,829,840		29,829,840	60.420%	18,023,189	85.541%	15,417,216
12		1900	Structures & Improvements - Micro	183,649	26,271	(4,389)	21,882	63.700%	13,939	85.541%	11,924
13		1900	Structures & Improvements	94,719	22,136		22,136	100.000%	22,136	85.541%	18,935
14		1900	Structures & Improvements	46,225,637	3,903,161	(24,588)	3,878,573	63.700%	2,470,651	85.541%	2,113,420
15		1900	Structures & Improvements - Holiday Park	303,876	303,781	(303,781)	0	62.520%	0	85.541%	0
16		1910	Office Furniture & Equipment	7,174,863	2,406,349		2,406,349	60.420%	1,453,916	85.541%	1,243,694
17		1911	Electronic Data Processing	1,966,408	1,209,331		1,209,331	63.700%	770,344	85.541%	658,960
18		1911	Electronic Data Processing - Smart Grid	61,445	65,972		65,972	100.000%	65,972	100.000%	65,972
19		1920	Transportation Equipment	85,311	85,311		85,311	63.700%	54,343	85.541%	46,486
20		1921	Trailers	474,273	333,469		333,469	63.700%	212,420	85.541%	181,706
21		1930	Stores Equipment	469,805	120,356		120,356	63.700%	76,667	85.541%	65,582
22		1940	Tools, Shop & Garage Equipment	2,450,630	936,652	(14,992)	921,660	63.700%	587,097	85.541%	502,209
23		1950	Laboratory Equipment	0	0		0	63.700%	0	85.541%	0
24		1960	Power Operated Equipment	153,899	89,169		89,169	63.700%	56,801	85.541%	48,588
25		1970	Communication Equipment	24,853,377	14,308,070	(1,190,014)	13,118,056	63.700%	8,356,202	85.541%	7,147,979
26		1970	Communication Equipment - Micro	5,345,027	1,814,844	(86,496)	1,728,348	63.700%	1,100,957	85.541%	941,770
27		1970	Communication Equipment - Node	9,919,956	0		0	62.520%	0	85.541%	0
28		1970	Communication Equipment - Node - Smart Grid	0	8,912,739	(8,912,739)	0	100.000%	0	100.000%	0
29		1970	Communication Equipment - Nodes being replaced	53,317,545	0	10,102,753	10,102,753	100.000%	10,102,753	100.000%	10,102,753
30		1980	Miscellaneous Equipment	446,962	194,987		194,987	63.700%	124,207	85.541%	106,248
31		1990, 1991	Retirement Work in Process - ARO	99,735	285,938		285,938	0.000%	0	85.541%	0
32		108	Retirement Work in Progress		(751,705)		(751,705)	63.700%	(478,836)	85.541%	(409,601)
33			Total Common Plant	341,758,992	122,688,215	(5,653,178)	117,035,037		77,779,871		68,320,146
34			Common Plant Allocated to Electric								
35			Original Cost Reserve	212,691,388	81,536,895	(3,757,024)	77,779,871				68,320,146
36			Total Electric Plant Including Allocated Common	3,503,155,735	1,163,020,710	(2,380,233)	1,160,640,477				899,994,649

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjustments to Accumulated Depreciation and Amortization**  
**As of June 30, 2016**

**Schedule B-3.1**

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**Work Paper Reference No(s): Staff's Schedules B-3.1a through B-3.1g**

Line No.	Company Acct. No.	Account Title	Total Company Adjustment
1	<b>Distribution Plant</b>		
2	3620	Station Equipment	\$ (265,144)
3	3622	Major Equipment	(67,506)
4	3640	Poles, Towers, and Fixtures	(169)
5	3702	Utility of the Future Meters	(19,505,785)
6	3702	Echelon AMI Meters	19,505,785
7	3712	Company Owned Outdoor Lights	298,114
8	3730	Street Lighting	432,366
9	3734	Light Choice OLE Public	169,815
10			
11		<b>Total Distribution</b>	<u>567,476</u>
12	<b>General Plant</b>		
13	3970	Communication Equipment	(20,685)
14	3970	Communication Equipment - Smart Grid - Other	(27,879,807)
15	3970	Communication Equipment - Smart Grid - Nodes	27,879,807
16			
17		<b>Total General</b>	<u>(20,685)</u>
18	<b>Common Plant</b>		
19	1890	Land & Land Rights	(909)
20	1890	Land & Land Rights	(3,931)
21	1900	Structures & Improvements - Clopay 3rd Floor	(228,640)
22	1900	Structures & Improvements - Clopay 4th, 5th, 6th Floors	(792,911)
23	1900	Structures & Improvements - Clopay Building & Access Ramp	(4,192,540)
24	1900	Structures & Improvements - Micro	(4,389)
25	1900	Structures & Improvements - Holiday Park	(303,781)
26	1900	Structures & Improvements	(24,588)
27	1940	Tools, Shop, & Garage Equipment	(14,992)
28	1970	Communication Equipment - Micro	(86,496)
29	1970	Communication Equipment	(1,190,014)
30	1970	Communication Equipment - Node - Smart Grid	(8,912,739)
31	1970	Communication Equipment - Nodes Being Replaced	10,102,753
32			
33		<b>Total Common</b>	<u>(5,653,178)</u>
34			
35	<b>RWIP</b>		
36	108	RWIP	<b>Total RWIP</b> <u>830,000</u>
37			
38			
39			
40		<b>Total Electric Plant Adjustments including Allocated Common</b>	<u><u>\$ (4,276,387)</u></u>

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjustments to Accumulated Depreciation and Amortization**  
**As of June 30, 2016**

**Adjustment to St. Clair Substation**  
**Work Paper Reference No(s): See below**

**Schedule B-3.1a**  
**Page 1 of 1**

Line No.	Company Acct. No.	Account Title	Description	Total Adjustment
1	3620	Station Equipment	St. Clair substation is no longer used & useful (1)	\$ (264,947)
2				
3				
4	3622	Major Equipment	St. Clair substation is no longer used & useful (1)	<u>(67,506)</u>
5				
6				
7				
8				
9				
			<b>Total Adjustment</b>	<b>\$ <u>(332,453)</u></b>
(1)	Staff Data Request No. 173			

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjustments to Accumulated Depreciation and Amortization**  
**As of June 30, 2016**

**Adjustment to Leased Property**  
**Work Paper Reference No(s): See below**

**Schedule B-3.1b**  
**Page 1 of 1**

<b>Line No.</b>	<b>Company Acct. No.</b>	<b>Account Title</b>	<b>Description</b>	<b>Total Adjustment</b>
1	1900	Structures & Improvements	Fourth & Walnut (Clopay - 3rd Floor) (2)	\$ (228,640)
2				
3	1900	Structures & Improvements	Fourth & Walnut (Clopay - 4th, 5th, & 6th Floors) (2)	(792,911)
4				
5	1900	Structures & Improvements	Fourth & Walnut (Clopay Building & Access Ramp) (2)	(4,192,540)
6				
7	1900	Structures & Improvements	Holiday Park (2)	<u>(303,781)</u>
8				
9				
10				
11				
			<b>Total Adjustment</b>	<b>\$ <u>(5,517,872)</u></b>
(2)	Staff Data Request No. 185			

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjustments to Accumulated Depreciation and Amortization**  
**As of June 30, 2016**

**Adjustment to Hartwell Recreation Facility**  
**Work Paper Reference No(s): See below**

**Schedule B-3.1c**  
**Page 1 of 1**

Line No.	Company Acct. No.	Account Title	Description	Total Adjustment
1	1940	Tools, Shop, & Garage Equip.	Hartwell Recreation Facility (3)	\$ (14,992)
2				
3				
4				
5				
6				
7				
8				
9				
				Total Adjustment \$ (14,992)
(3)	Staff Data Request No. 59			

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjustments to Accumulated Depreciation and Amortization**  
**As of June 30, 2016**

**Adjustment to Kentucky Assets**  
**Work Paper Reference No(s): See below**

**Schedule B-3.1d**  
**Page 1 of 1**

Line No.	Company Acct. No.	Account Title	Description	Total Adjustment
1	<b>Distribution</b>			
2	3620	Station Equipment	Station Equipment	\$ (197)
3	3640	Poles, Towers, & Fixtures	RI-Yankee/Oxford State Rd/Transmis - FDRS F 5666/3263/F5661 - PP 934039 - T Meyer	(167)
4	3640	Poles, Towers, & Fixtures	RI-Yankee/Oxford State Rd/Transmis - FDRS F 5666/3263/F5661 - PP 934039 - T Meyer	(2)
5				
6			<b>Total Distribution</b>	<u>(366)</u>
7	<b>General</b>			
8	3970	Communication Equipment	Lawrenceburg Microwave Site - 5509.00 - Property in Indiana	(1,218)
9	3970	Communication Equipment	Verona Microwave Station - Property in Kentucky	(1,218)
10	3970	Communication Equipment	Wilder Microwave Station - Property in Kentucky	(18,249)
11				
12			<b>Total General</b>	<u>(20,685)</u>
13	<b>Common</b>			
14	1890	Land & Land Rights	Brookville Microwave Station - Property In Indiana	(793)
15	1890	Land & Land Rights	Lawrenceburg Microwave Station - Property in Indiana	(1,699)
16	1890	Land & Land Rights	Verona Microwave Station - Property in Kentucky	(1,440)
17	1890	Land & Land Rights	Kentucky Assets - Project No. 48168 (4)	(544)
18	1890	Land & Land Rights	Kentucky Assets - Project No. 48214 (4)	(366)
19	1891	Rights of Way	Beckjord Reflector Microwave Station - Property in Kentucky	-
20	1891	Rights of Way	Wilder Microwave Station - Property in Kentucky	-
21	1900	Structures & Improvements - Micro.	Verona Microwave Station - Property in Kentucky	(857)
22	1900	Structures & Improvements - Micro.	Wilder Microwave Station - Property in Kentucky	(1,096)
23	1900	Structures & Improvements - Micro.	Kentucky Assets - Project No. C6403 (4)	(231)
24	1900	Structures & Improvements - Micro.	Kentucky Assets - Project No. KYP110347 (4)	(2,206)
25	1970	Communication Equipment - Micro.	Kentucky Assets - Project No. KYP110346 (4)	(16,495)
26	1970	Communication Equipment - Micro.	Verona Microwave Station - Property in Kentucky	(63,510)
27	1970	Communication Equipment - Micro.	Wilder Microwave Station - Property in Kentucky	(2,987)
28	1970	Communication Equipment - Micro.	Taylor Mill Microwave Station - Property in Kentucky	(3,504)
(4)	Staff Data Request No. 184 and 188		<b>Total Common</b>	<u>(95,726)</u>
			<b>Total Adjustment</b>	<u>\$ (116,777)</u>



**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjustments to Accumulated Depreciation and Amortization**  
**As of June 30, 2016**

Adjustment to RWIP  
Work Paper Reference No(s).: See below

Schedule B-3.1e  
Page 1 of 1

Line No.	Company Acct. No.	Account Title	Description	Total Adjustment
1	108	RWIP	Retirement Work in Progress (5)	\$ 830,000
2				
3				
4				
5				
6				
7				
8				
9				
			<b>Total Adjustment</b>	<b>\$ 830,000</b>
(5)	Staff Data Request No. 118			

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjustments to Accumulated Depreciation and Amortization**  
**As of June 30, 2016**

**Miscellaneous Adjustments**  
**Work Paper Reference No(s): See below**

**Schedule B-3.1f**  
**Page 1 of 1**

Line No.	Company Acct. No.	Account Title	Description	Total Adjustment
1	1900	Structures & Improvements	Atrium II Move to Fourth & Main Building	\$ (24,310)
2				
3	1900	Structures & Improvements	AHUs & Bus. Duct Repl. at 4h & Main	(257)
4				
5	1900	Structures & Improvements	Clopay to 4th & Main Consolidation - Mezzanine	<u>(22)</u>
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
			<b>Total Adjustment</b>	<b>\$ <u>(24,588)</u></b>
(2)	Staff Data Request No. 185			

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjustments to Accumulated Depreciation and Amortization**  
**As of June 30, 2016**

**Company Adjustments**  
**Work Paper Reference No(s): See below**

**Schedule B-3.1g**  
**Page 1 of 1**

Line No.	Company Acct. No.	Account Title	Description	Total Adjustment
1		<b>Distribution Plant</b>		
2	3702	Utility of the Future Meters	Echelon AMI for Depreciation Study Purposes	\$ (19,505,785)
3	3702	Echelon AMI Meters	Echelon AMI for Depreciation Study Purposes	19,505,785
4	3712	Company Owned Outdoor Lights	Exclusion Due to Tariffed Rate	298,114
5	3730	Street Lighting	Exclusion Due to Tariffed Rate	432,366
6	3734	Light Choice OLE Public	Exclusion Due to Tariffed Rate	169,815
7				
8			<b>Total Distribution</b>	<u>900,295</u>
9		<b>General Plant</b>		
10	3970	Comm. Equip. - Smart Grid - Other	Communication nodes associated with Echelon Meters for Depreciation Study Purposes	(27,879,807)
11	3970	Comm. Equip. - Smart Grid - Nodes	Communication nodes associated with Echelon Meters for Depreciation Study Purposes	27,879,807
12				
13			<b>Total General</b>	<u>-</u>
14		<b>Common Plant</b>		
15	1970	Comm. Equip. - Node	Communication nodes associated with Echelon Meters for Depreciation Study Purposes	(1,190,014)
16	1970	Comm. Equip. - Node - Smart Grid	Communication nodes associated with Echelon Meters for Depreciation Study Purposes	(8,912,739)
17	1970	Comm. Equip. - Nodes Being Replaced	Communication nodes associated with Echelon Meters for Depreciation Study Purposes	10,102,753
18				
19			<b>Total Common</b>	<u>-</u>
			<b>Total Adjustment</b>	<u><u>\$ 900,295</u></u>

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Proposed Depreciation Accrual Rates & Accumulated Balances by Accounts**  
**For the Twelve Months Ended March 31, 2017**  
**Non-Jurisdictional Electric Plant**

Schedule B-3.2  
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Work Paper Reference No(s).:

Line No.	FERC Acct. No.	Company Acct. No.	Account Title or Major Property Grouping	Adjusted Jurisdiction		Proposed Accrual Rate	Calculated Depr. Expense	% Net Salvage	Average Service Life	Curve Form
				Plant Investment	Accumulated Balance					
(A)	(B-1)	(B-3)	(C)	(D)	(E)	(F)	(G=DxF)	(H)	(I)	(J)
				\$	\$	%	\$			
1	Various	Various	Electric Production - Steam	0	0					
2	Various	Various	Electric Production - Other	0	0					
3	Various	Various	Electric Transmission Plant	0	0					
4			Total Non-Jurisdictional Electric Plant	0	0					

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Proposed Depreciation Accrual Rates & Accumulated Balances by Accounts**  
**For the Twelve Months Ended March 31, 2017**  
**Distribution Plant**

Schedule B-3.2  
Page 2 of 4

Work Paper Reference No(s).:

Line No.	FERC Acct. No.	Company Acct. No.	Account Title or Major Property Grouping	Adjusted Jurisdiction		Proposed Accrual Rate	Calculated Depr. Expense	% Net Salvage	Average Service Life	Curve Form
				Plant Investment	Accumulated Balance					
(A)	(B-1)	(B-3)	(C)	(D)	(E)	(F)	(G=DxF)	(H)	(I)	(J)
				\$	\$	%	\$			
1	360	3600	Land and Land Rights	13,138,936	2,754			Perpetual Life		
2	360	3601	Rights of Way	26,286,892	4,027,028	1.33	349,616	0	75	R4
3	361	3610	Structures and Improvements	19,163,278	4,461,821	1.71	327,692	(20)	70	R2.5
4	362	3620	Station Equipment	212,265,007	76,576,191	1.97	4,181,621	(20)	61	R1.5
5	362	3622	Major Equipment	115,663,252	43,888,171	1.77	2,047,240	(15)	65	R2.5
6	362	3635	Station Equipment Electronic	0	0	5.00	0	0	20	S3
7	364	3640	Poles, Towers & Fixtures	309,686,559	124,853,083	2.27	7,029,885	(25)	55	R1
8	365	3650	Overhead Conductors and Devices	535,173,982	125,520,072	2.36	12,630,106	(30)	55	R0.5
9	365	3651	Overhead Conductors and Devices	21,745,684	1,356,395	2.36	513,198	(30)	55	R0.5
10	366	3660	Underground Conduit	113,261,755	43,376,369	2.00	2,265,235	(50)	75	R3
11	367	3670	Underground Conductors and Devices	344,816,482	93,833,245	1.92	6,620,476	(25)	65	R1.5
12	368	3680, 3681	Line Transformers	332,913,015	147,962,151	2.44	8,123,078	(10)	45	R1
13	368	3682	Customer Transformer Installations	3,755,296	2,637,652	2.44	91,629	(10)	45	R1
14	369	3691	Services - Underground	5,525,489	2,537,125	1.92	106,089	(25)	65	R1.5
15	369	3692	Services - Overhead	81,827,784	46,533,748	2.90	2,373,006	(45)	50	R0.5
16	370	3700	Meters (1)	0	(6,753,931)	Amort	2,251,310	Amortization	3 Year	
17	370	3700	Instrumentation Transformers	7,409,920	2,204,858	4.55	337,151	0	22	L1
18	370	3701	Leased Meters (1)	385,629	(718,804)	Amort	368,144	Amortization	3 Year	
19	370	3701	Instrumentation Transformers	5,672,328	994,857	4.55	258,091	0	22	L1
20	370	3702	Utility of the Future Meters	3,068,034	(18,734)	6.67	204,638	0	15	S2.5
21	370	3702	Echelon AMI Meters	68,730,098	19,505,785	Amort	4,922,431	Amortization	10 Year	
22	371	3710	Installations on Customers' Premises	0	10,635	9.17	0	(10)	12	L1
23	371	3712	Company Owned Outdoor Lighting	0	0	9.17	0	(10)	12	L1
24	372	3720	Leased Property on Customers' Premises	102,503	(58,390)	4.04	4,141	(5)	26	L1.5
25	373	3730	Street Lighting	0	0	4.00	0	(20)	30	L1
26	373	3731	Street Lighting - Overhead	15,300,749	12,340,799	4.00	612,030	(20)	30	L1
27	373	3732	Street Lighting - Boulevard	27,727,622	8,700,863	2.50	693,191	(15)	46	R2
28	373	3733	Light Security OL POL Flood	15,094,001	8,085,172	3.33	502,630	(20)	36	R0.5
29	373	3734	Light Choice OLE - Public	0	0	5.53	0	(5)	19	L0
30		108	Retirement Work in progress		(14,765,160)					
31			Total Electric Distribution	2,278,714,295	747,093,755		56,812,629			

(1) Meters in company accounts 3700 and 3701 are being amortized per order in Case No. 08-709-EL-AIR, et al.

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Proposed Depreciation Accrual Rates & Accumulated Balances by Accounts**  
**For the Twelve Months Ended March 31, 2017**  
**General Plant**

Schedule B-3.2  
Page 3 of 4

Work Paper Reference No(s).:

Line No.	FERC Acct. No.	Company Acct. No.	Account Title or Major Property Grouping	Adjusted Jurisdiction		Proposed Accrual Rate	Calculated Depr. Expense	% Net Salvage	Average Service Life	Curve Form
				Plant Investment	Accumulated Balance					
(A)	(B-1)	(B-3)	(C)	(D)	(E)	(F)	(G=DxF)	(H)	(I)	(J)
				\$	\$	%	\$			
1	303	3030	Miscellaneous Intangible Plant	26,918,770	22,511,304	Various	2,165,481	Amortization		
2	303	3030	Miscellaneous Intangible Plant - Smart Grid	11,941,524	6,447,659	20.00	2,388,305	0	5	SQ
3	389	3890	Land and Land Rights	811,966	0					
4	390	3900	Structures and Improvements	23,176,833	11,076,303	4.20	973,427	Composite		
5	391	3910	Office Furniture and Equipment	320,187	108,014	5.00	16,009	0	20	SQ
6	391	3911	Electronic Data Processing Equipment	3,128,270	1,221,195	20.00	625,654	0	5	SQ
7	391	3911	Electronic Data Processing Equipment - Smart Grid	1,899,274	1,495,669	20.00	379,855	0	5	SQ
8	392	3920	Transportation Equipment	308,479	99,577	9.09		0	11	L4
9	392	3921	Trailers	2,060,110	1,505,551	4.13		5	23	S1.5
10	393	3930	Stores Equipment	1,583,631	226,347	5.00	79,182	0	20	SQ
11	394	3940	Tools, Shop & Garage Equipment	20,314,868	5,972,040	4.00	812,595	0	25	SQ
12	395	3950	Laboratory Equipment	0	1,144	6.67	0		15	SQ
13	396	3960	Power Operated Equipment	1,609,464	1,014,900	5.29		10	17	S0
14	397	3970	Communication Equipment	20,959,703	5,071,309	6.67	1,398,012	0	15	SQ
15	397	3970	Communication Equipment - Smart Grid	277,636	483,874	6.67	18,518	0	15	SQ
16	397	3970	Communication Equipment - Smart Grid Nodes	101,758,692	27,879,807		7,387,889	Amortization	10 Year	
17	398	3980	Miscellaneous Equipment	71,683	36,195	5.00	3,584	0	20	SQ
18		108	Retirement Work in progress		(570,140)					
19 Total Electric General				217,141,090	84,580,748		16,248,511			
20 Total Electric Distribution and General Plant				2,495,855,385	831,674,503		73,061,139			

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Proposed Depreciation Accrual Rates & Accumulated Balances by Accounts**  
**For the Twelve Months Ended March 31, 2017**  
**Common Plant**

Schedule B-3.2  
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Work Paper Reference No(s).:

Line No.	FERC Acct. No.	Company Acct. No.	Account Title or Major Property Grouping	Adjusted Jurisdiction		Proposed Accrual Rate	Calculated Depr. Expense	% Net Salvage	Average Service Life	Curve Form
				Plant Investment	Accumulated Balance					
(A)	(B-1)	(B-3)	(C)	(D)	(E)	(F)	(G=DxF)	(H)	(I)	(J)
				\$	\$	%	\$			
1		1030	Miscellaneous Intangible Plant	27,051,437	26,805,547	Various	227,001	Amortization		
2		1701	Common AMI Meters	5,095,274	1,010,789	6.67	339,855	0	15	S2.5
3		1701	Common AMI Meters - Smart Grid	6,962,488	2,186,660	6.67	464,398		15	S2.5
4		1890	Land and Land Rights	217,802	6,889					
5		1890	Land and Land Rights	712,330	42,482					
6		1890	Land and Land Rights	156,856	3,938					
7		1891	Rights of Way	0	0		0			
8		1900	Structures & Improvements - Clopay 3rd Floor (2)	0	0		0	Amortization		
9		1900	Structures & Improvements - Clopay 4th/5th/6th Floor (2)	0	0		0	Amortization		
10		1900	Structures & Improvements - Clopay Bldg & Access Ramp (2)	0	0		0	Amortization		
11		1900	Structures & Improvements - 4th & Main	56,982,154	15,417,216	3.29	1,874,713			
12		1900	Structures & Improvements - Micro	57,954	11,924	3.29	1,907			
13		1900	Structures & Improvements	81,024	18,935	3.29	2,666	-10	80	R1
14		1900	Structures & Improvements	25,077,634	2,113,420	3.29	825,054	-20	50	R3
15		1900	Structures & Improvements - Holiday Park (2)	0	0		0	Amortization		
16		1910	Office Furniture & Equipment	3,708,247	1,243,694	5.00	185,412	0	20	SQ
17		1911	Electronic Data Processing	1,071,488	658,960	20.00	214,298	0	5	SQ
18		1911	Electronic Data Processing - Smart Grid	39,140	65,972	20.00	7,828	0	5	SQ
19		1920	Transportation Equipment	46,486	46,486	8.33		0	12	L3
20		1921	Trailers	258,430	181,706	4.13		5	23	S1.5
21		1930	Stores Equipment	255,995	65,582	5.00	12,800	0	20	SQ
22		1940	Tools, Shop & Garage Equipment	1,326,322	502,209	4.00	53,053	0	25	SQ
23		1950	Laboratory Equipment	0	0	6.67	0	0	15	SQ
24		1960	Power Operated Equipment	83,859	48,588	5.29		10	17	S0
25		1970	Communication Equipment	13,542,510	7,147,979	6.67	903,285	0	15	SQ
26		1970	Communication Equipment - Micro	2,777,983	941,770	6.67	185,291	0	15	SQ
27		1970	Communication Equipment - Node	5,305,215	0	6.67	353,858	0	15	SQ
28		1970	Communication Equipment - Node - Smart Grid	0	0	6.67	0	0	15	SQ
29		1970	Communication Equipment - Nodes being replaced	33,334,129	10,102,753		2,323,138	Amortization	10 Year	
30		1980	Miscellaneous Equipment	243,548	106,248	5.00	12,177	0	20	SQ
31		1990, 1991	Retirement Work in Process - ARO	0	0					
32		108	Retirement Work in progress		(409,601)					
33			Total Common	184,388,305	68,320,146		7,986,734			
34			Total Electric Plant Including Allocated Common	2,680,243,690	899,994,649		81,047,873			

(2) These leasehold improvements are being amortized over the life of the lease

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Depreciation Reserve Accounts, Retirements, and Transfers**  
**From April 1, 2012 to June 30, 2016**  
**Distribution Plant**

**Schedule B-3.3**  
**Page 1 of 3**

Work Paper Reference No(s): WPB-3.3a through WPB-3.3m

Line No.	FERC Acct. No.	Company Acct. No.	Account Title	Beginning Balance	Accrual	Salvage	Retirements	Cost of Removal	Transfers/Reclassifications			Ending Balance
									Amount	Explanation of Transfer	Other Accts. Involved	
				\$	\$	\$	\$	\$	\$			\$
1	360	3600	Land and Land Rights	1,538	-	315,880	32,305	2,484	(279,875)			2,754
2	360	3601	Rights of Way	2,520,994	1,506,210	3,460	1,076	391	(2,169)			4,027,028
3	361	3610	Structures and Improvements	4,004,655	1,065,114	7,971	350,918	298,916	33,915			4,461,821
4	362	3620	Station Equipment	70,648,575	16,627,815	241,500	8,302,277	2,122,226	(252,052)			76,841,335
5	362	3622	Major Equipment	36,923,265	9,289,153	149,976	2,214,810	359,256	167,349			43,955,677
6	363	3635	Dist. Station Equip Elec	209,329	189,678	-	-	-	(399,007)			-
7	364	3640	Poles, Towers & Fixtures	108,050,273	27,268,927	516,302	6,845,573	4,493,993	357,316			124,853,252
8	365	3650	Overhead Conductors and Devices	99,663,811	57,446,819	1,047,963	36,883,825	10,332,390	14,577,694			125,520,072
9	365	3651	Overhead Conductors and Devices	21,921	1,334,474	-	-	-	-			1,356,395
10	366	3660	Underground Conduit	35,969,974	8,047,515	19,013	311,576	425,292	76,735			43,376,369
11	367	3670	Underground Conductors and Devices	73,293,964	27,439,899	58,996	5,615,359	1,364,813	20,558			93,833,245
12	368	3680, 3681	Line Transformers	143,569,294	35,101,157	7,290,492	18,661,627	3,339,301	(15,997,864)			147,962,151
13	368	3682	Customer Transformer Installations	2,628,004	476,448	2,875	72,651	42,169	(354,855)			2,637,652
14	369	3691	Services - Underground	2,248,642	346,425	443	36,610	8,447	(13,328)			2,537,125
15	369	3692	Services - Overhead	36,808,118	10,297,665	13,904	395,469	219,602	29,132			46,533,748
16	370	3700	Meters	12,697,347	14,908,112	506,007	34,953,597	195,753	283,953			(6,753,931)
17	370	3700	Instrumentation Transformers	-	611,187	368,893	23,842	114	1,248,734			2,204,858
18	370	3701	Leased Meters	4,187,965	7,443,644	16,014	9,703,832	7,142	(2,655,453)			(718,804)
19	370	3701	Instrumentation Transformers	-	459,722	-	311,294	480	846,909			994,857
20	370	3702	Utility of the Future Meters	2,853,004	16,608,298	327,093	23,226	54,358	(223,760)			19,487,051
21	371	3710	Installations on Customers' Premises	2,770	594,155	-	1,046	-	(585,244)			10,635
22	371	3712	Company Owned Outdoor Lighting	(244,225)	336,940	-	929,785	76,475	615,431			(298,114)
23	372	3720	Leased Property on Customers' Premises	(76,084)	17,694	-	-	-	-			(58,390)
24	373	3730	Street Lighting	(1,748,866)	360,412	-	1,061	44	957,193			(432,366)
25	373	3731	Street Lighting - Overhead	10,738,064	2,882,744	52,477	898,807	279,236	(154,443)			12,340,799
26	373	3732	Street Lighting - Boulevard	5,929,055	2,905,678	-	149,680	-	15,810			8,700,863
27	373	3733	Light Security OL POL Flood	5,507,956	2,662,677	-	87,242	60	1,841			8,085,172
28	373	3734	Light Choice OLE - Public	(375,920)	873,355	-	619,704	1,485	(46,061)			(169,815)
29		108	Retirement Work in Progress	(7,669,688)	-	-	7,925,472	-	-			(15,595,160)
30			Total Electric Distribution	648,363,735	247,101,917	10,939,259	135,352,664	23,624,427	(1,731,541)			745,696,279



**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Depreciation Reserve Accounts, Retirements, and Transfers**  
**From April 1, 2012 to June 30, 2016**  
**General Plant**

**Schedule B-3.3**  
**Page 2 of 3**

Work Paper Reference No(s): WPB-3.3a through WPB-3.3m

Line No.	FERC Acct. No.	Company Acct. No.	Account Title	Beginning Balance	Accrual	Salvage	Retirements	Cost of Removal	Transfers/Reclassifications			Ending Balance
									Amount	Explanation of Transfer	Other Accts. Involved	
				\$	\$	\$	\$	\$	\$			\$
1	303	3030	Miscellaneous Intangible Plant	26,857,642	8,939,774	-	9,455,446	-	(25,579)			26,316,391
2	303	3030	Miscellaneous Intangible Plant - Smart Grid	1,526,149	7,281,095	-	2,407,929	-	48,344			6,447,659
3	389	3890	Land and Land Rights	-	-	-	-	-	-			-
4	390	3900	Structures and Improvements	10,786,139	2,892,346	-	139,551	307,906	(282,497)			12,948,531
5	391	3910	Office Furniture and Equipment	44,916	204,763	-	123,307	100	-			126,272
6	391	3911	Electronic Data Processing Equipment	225,392	2,315,247	-	1,253,707	-	140,682			1,427,614
7	391	3911	Electronic Data Processing Equipment - Smart Grid	216,033	1,276,667	-	-	-	2,969			1,495,669
8	392	3920	Transportation Equipment	1,218,529	40,806	-	1,140,176	-	(2,750)			116,409
9	392	3921	Trailers	1,621,154	622,847	227	555,490	-	71,296			1,760,034
10	393	3930	Stores Equipment	(597)	265,204	-	-	-	-			264,607
11	394	3940	Tools, Shop & Garage Equipment	3,920,085	4,344,486	-	1,297,873	-	14,796			6,981,494
12	395	3950	Laboratory Equipment	(1,080,986)	1,207,433	-	125,110	-	-			1,337
13	396	3960	Power Operated Equipment	1,088,310	104,302	-	-	-	(6,163)			1,186,449
14	397	3970	Communication Equipment	3,227,744	3,712,695	-	991,242	-	-			5,949,197
15	397	3970	Communication Equipment - Smart Grid	4,244,815	24,118,866	-	-	-	-			28,363,681
16	398	3980	Miscellaneous Equipment	10,413	31,900	-	-	-	-			42,313
17		108	Retirement Work in Progress	1,671,182	-	-	2,337,693	-	-			(666,511)
<hr/>												
18			Total Electric General Plant	55,576,920	57,358,431	227	19,827,524	308,006	(38,902)			92,761,146
<hr/>												
19			Total Electric Distribution and General Plant	703,940,655	304,460,348	10,939,486	155,180,188	23,932,433	(1,770,443)			838,457,425

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Depreciation Reserve Accounts, Retirements, and Transfers**  
**From April 1, 2012 to June 30, 2016**  
**Common Plant**

**Schedule B-3.3**  
**Page 3 of 3**

Work Paper Reference No(s): WPB-3.3a through WPB-3.3m

Line No.	FERC Acct. No.	Company Acct. No.	Account Title	Beginning Balance	Accrual	Salvage	Retirements	Cost of Removal	Transfers/Reclassifications			Ending Balance
									Amount	Explanation of Transfer	Other Accts. Involved	
				\$	\$	\$	\$	\$	\$			\$
1		1030	Miscellaneous Intangible Plant	107,949,730	14,021,491	(919)	72,523,304	-	(253,136)			49,193,862
2		1701	Common AMI Meters	-	1,890,024	-	-	-	-			1,890,024
3		1701	Common AMI Meters - Smart Grid	-	2,186,660	-	-	-	-			2,186,660
4		1890	Land and Land Rights	24,711	-	-	-	-	(7,228)			17,483
5		1890	Land and Land Rights	82,196	-	-	-	-	-			82,196
6		1890	Land and Land Rights	-	-	-	-	-	7,228			7,228
7		1891	Rights of Way	-	-	-	-	-	-			-
8		1900	Structures & Improvements - Atrium II	257,921	-	-	257,952	(31)	-			-
9		1900	Structures & Improvements - Clopay 3rd Floor	56,437	172,203	-	-	-	-			228,640
10		1900	Structures & Improvements - Clopay 4th/5th/6th Floor	700,921	91,990	-	-	-	-			792,911
11		1900	Structures & Improvements - Clopay Bldg & Access Ramp	4,097,941	85,330	-	-	-	9,269			4,192,540
12		1900	Structures & Improvements - 4th & Main	16,874,045	15,034,113	-	1,114,241	1,027,189	63,112			29,829,840
13		1900	Structures & Improvements - Micro	-	14,278	-	-	-	11,993			26,271
14		1900	Structures & Improvements	8,598	13,538	-	-	-	-			22,136
15		1900	Structures & Improvements	3,742,348	5,535,555	-	3,734,574	1,296,677	(343,491)			3,903,161
16		1900	Structures & Improvements - Envision Center	681,977	222,837	-	-	-	(904,814)			-
17		1900	Structures & Improvements - Holiday Park	227,019	76,762	-	-	-	-			303,781
18		1910	Office Furniture & Equipment	(1,746,219)	6,128,838	-	1,965,842	58,459	48,031			2,406,349
19		1911	Electronic Data Processing	274,745	1,546,660	23,261	649,896	-	14,561			1,209,331
20		1911	Electronic Data Processing - Smart Grid	34,024	46,080	-	-	-	(14,132)			65,972
21		1920	Transportation Equipment	85,311	-	-	-	-	-			85,311
22		1921	Trailers	234,545	99,382	-	-	-	(458)			333,469
23		1930	Stores Equipment	(151,380)	390,052	-	86,656	36,436	4,776			120,356
24		1940	Tools, Shop & Garage Equipment	555,791	542,038	-	140,651	20,526	-			936,652
25		1950	Laboratory Equipment	1,291	(1,291)	-	-	-	-			-
26		1960	Power Operated Equipment	62,760	26,409	-	-	-	-			89,169
27		1970	Communication Equipment	12,183,687	15,990,984	-	968,010	8,920	(12,889,671)			14,308,070
28		1970	Communication Equipment - Micro	-	276,626	-	6,853,197	5,100	8,396,515			1,814,844
29		1970	Communication Equipment - Node	-	(5,297,853)	-	-	-	5,297,853			-
30		1970	Communication Equipment - Node - Smart Grid	1,908,843	7,798,559	-	-	-	(794,663)			8,912,739
31		1980	Miscellaneous Equipment	131,815	81,426	-	9,727	2,469	(6,058)			194,987
32		1990, 1991	Retirement Work in Progress - ARO	117,272	168,666	-	-	-	-			285,938
33		108	Retirement Work in Progress	(869,368)	-	-	(117,663)	-	-			(751,705)
34			Total Common Plant	147,526,961	67,141,357	22,342	88,186,387	2,455,745	(1,360,313)			122,688,215

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Depreciation Reserve and Expense for Leased Property**  
**(Total Company)**  
**As of June 30, 2016**

**Schedule B-3.4**  
**Page 1 of 1**

**Work Paper Reference No(s).:**

Identification or Reference Number	Account Number	Account Title	Dollar Value of Plant Investment	Accumulated Depreciation / Amortization Reserve	Accrual Rate / Amortization Period	Depreciation / Amortization Expense	Explain Method of Depreciation / Amortization	Included In Rate Base (Yes/No)
			\$	\$	%	\$		
	3701	Meters	385,628	(718,804)	amortized	1,570,224	Per Regulatory and GAAP Guidelines	Yes
	1900	Structures & Improvements						
		Fourth & Walnut (Clopay) (1)	272,078	28,640	15.1900%	41,329		Yes
		Fourth & Walnut (Clopay) (1)	820,726	792,911	2.6900%	22,078		Yes
		Fourth & Walnut (Clopay) (1)	4,179,441	4,192,540	0.4900%	20,479		Yes
		Holiday Park (1)	303,876	303,781	16.2300%	49,319		Yes

(1) These expenditures are capitalized as Leasehold Improvements and are amortized over the life of the lease

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Construction Work In Progress - Percent Complete (Time)**  
**As of June 30, 2016**

**Schedule B-4**  
**Page 1 of 1**

**Work Paper Reference No(s):**

Line No.	Project No.	Description of Project	Accumulated Costs			Allocation %	Total Jurisdictional Cost at Date Certain	Estimated Physical Percent Completion
			Construction Dollars	AFUDC Capitalized	Total Cost			
(A)	(B)	(C)	(D)	(E)	(F=D+E)	(G)	(H)	(I)

Pollution Control Projects:

1 The Company has not included any Construction Work in Progress in this Rate Case.

Other Projects:

2 The Company has not included any Construction Work in Progress in this Rate Case.

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Construction Work In Progress - Percent Complete (Dollars)**  
**As of June 30, 2016**

**Schedule B-4.1**  
**Page 1 of 1**

**Work Paper Reference No(s).:**

Line No.	Project No.	Date Construction Work Began	Estimated Project Completion Date	Elapsed Days: Beginning to Date Certain	Elapsed Days: Beginning to Estimated Completion	Date Certain % Completion	Date Certain % of Total Expenditures
(A)	(B)	(C)	(D)	(E)	(F)	(G)=(E)/(F)	(H)

The Company has not included any Construction Work in Progress in this Rate Case.

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Construction Work In Progress - Percent Complete (Time)**  
**As of June 30, 2016**

**Schedule B-4.2**  
**Page 1 of 1**

**Work Paper Reference No(s).:**

Line No.	Project No.	Most Recent Budget Estimate				Project Expenditures as of Date Certain		Date Certain % Completion	
		Construction Dollars	AFUDC	Total	Construction Dollars Trended	Construction Dollars	Construction Dollars Trended	Construction Dollars	Construction Dollars Trended
(A)	(B)	(C)	(D)	(E)=(C)+(D)	(F)	(G)	(H)	(I)=(G)/(C)	(J)=(H)/(F)

The Company has not included any Construction Work in Progress in this Rate Case.

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Working Capital  
As of June 30, 2016

Schedule B-5  
Page 1 of 1

Work Paper Reference No(s): Staff Report Text

Line No.	Working Capital Component	Description of Methodology	Work Paper Reference Number	Total	Jurisdiction
1	Cash Working Capital	None Requested		\$ -	\$ -
2					
3					
4	Material and Supplies:				
5					
6	Other	13 Month Average Balance		\$ 0	\$ 0
7		less allowance for new			
8		construction			
9					
10	Total Working Capital			<u>\$ 0</u>	<u>\$ 0</u>

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Other Rate Base Items Summary**  
**As of June 30, 2016**

**Schedule B-6**  
**Page 1 of 2**

**Work Paper Reference No(s): Schedule B-6.1 & WPB-6.1a through WPB-6.1e**

Line No.	Account No.	Description	Total Company	Adjustments	Adjusted Total Company	Allocation		Allocated Total
						Code	Percent	
			\$	\$	\$			\$
1	252	Customer Advances for Construction	0	0	0	DALL	100.00%	0
2								
3	235	Customer Service Deposits - Retail	(18,535,684)	0	(18,535,684)	DALL	100.00%	(18,535,684)
4								
5	235	Customer Service Deposits - Transmission Service	(6,755,736)	0	(6,755,736)	DNON	0.00%	0
6								
7		Unclaimed Funds*						(322,353)
8								
9	253	Post Retirement Benefits	0	8,387,395	8,387,395	DALL	100.00%	8,387,395
10								
11	255	Investment Tax Credits: (A)						
12		Pre-1971 3% Credit	0	0	0	DALL	100.00%	0
13		1971 4% Credit	0	0	0	DALL	100.00%	0
14		1975 6% Credit	0	0	0	DNON	0.00%	0
15		1981 10% Credit	(716,369)	716,369	0	DNON	0.00%	0
16		Total Investment Tax Credits	(716,369)	716,369	0			0
17								
18		Deferred Income Taxes:						
19	190	401(k) Incentive Plan	14,190	0	14,190	DALL	100.00%	14,190
20	190	ARO Cumulative Effect	223,458	0	223,458	DALL	100.00%	223,458
21	190	Cash Flow Hedge	(947,168)	0	(947,168)	DALL	100.00%	(947,168)
22	190	Contract Reserve	(480,035)	0	(480,035)	DALL	100.00%	(480,035)
23	190	Demand Side Management	630,652	(630,652)	0	DALL	100.00%	0
24	190	Electric Meters	1,894,458	0	1,894,458	DALL	100.00%	1,894,458
25	190	FAS 106 OPEB	3,776,763	0	3,776,763	DALL	100.00%	3,776,763
26	190	FAS 87 Non-Qualified Pension	703,597	0	703,597	DALL	100.00%	703,597
27	190	FAS 87 Qualified Pension	2,301,758	0	2,301,758	DALL	100.00%	2,301,758
28	190	Federal Deferred Tax Receivable	11,244,447	0	11,244,447	DALL	100.00%	11,244,447
29	190	Incentive Plan	410,671	0	410,671	DALL	100.00%	410,671
30	190	ITC FAS 109	660,985	(660,985)	0	DALL	100.00%	0
31	190	Joint Owner Pension Receivable	(1,549)	1,549	0	DALL	100.00%	0
32	190	Miscellaneous	207,543	1,888	209,431	DALL	100.00%	209,431
33	190	Post Retirement Benefits - SFAS 112	303,462	0	303,462	DALL	100.00%	303,462
34	190	Property Tax	366,232	0	366,232	DALL	100.00%	366,232
35	190	State Deferred Tax Receivable	666,378	0	666,378	DALL	100.00%	666,378
36	190	Tax Interest Accrual	2,014,599	0	2,014,599	DALL	100.00%	2,014,599
37	190	Unamortized Debt Premium	(1,338,838)	0	(1,338,838)	DALL	100.00%	(1,338,838)
38	190	Uncollectible Accounts	5,899,402	0	5,899,402	DALL	100.00%	5,899,402
39	190	Vacation Pay Accruals	1,051,917	0	1,051,917	DALL	100.00%	1,051,917
40		Total Account 190	29,602,922	(1,288,200)	28,314,722			28,314,722



**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Other Rate Base Items Summary**  
**As of June 30, 2016**

**Schedule B-6**  
**Page 2 of 2**

**Work Paper Reference No(s): Schedule B-6.1 & WPB-6.1a through WPB-6.1e**

Line No.	Account No.	Description	Total Company	Adjustments	Adjusted Total Company	Allocation		Allocated Total
						Code	Percent	
			\$	\$	\$			\$
1		Deferred Income Taxes: (Continued)						
2	282	263A	(79,255,325)	0	(79,255,325)	DALL	100.00%	(79,255,325)
3	282	AFUDC Debt	(2,385,612)	0	(2,385,612)	DALL	100.00%	(2,385,612)
4	282	Casualty Loss	(12,299,154)	0	(12,299,154)	DALL	100.00%	(12,299,154)
5	282	CIAC	16,169,146	0	16,169,146	DALL	100.00%	16,169,146
6	282	CWIP Differences	1,643,421	0	1,643,421	DALL	100.00%	1,643,421
7	282	FAS109	(33,186,510)	33,186,510	0	DALL	100.00%	0
8	282	Miscellaneous	(4,294,101)	0	(4,294,101)	DALL	100.00%	(4,294,101)
9	282	Non-Cash Overheads	19,349,962	0	19,349,962	DALL	100.00%	19,349,962
10	282	Section 174	(689,177)	0	(689,177)	DALL	100.00%	(689,177)
11	282	Software	(106,027)	0	(106,027)	DALL	100.00%	(106,027)
12	282	Tax Depreciation	(337,325,505)	0	(337,325,505)	DALL	100.00%	(337,325,505)
13	282	Tax Expensing	(104,171,714)	0	(104,171,714)	DALL	100.00%	(104,171,714)
14	282	Tax Interest Capitalized	6,414,645	0	6,414,645	DALL	100.00%	6,414,645
15		Total Account 282	<u>(530,135,951)</u>	<u>33,186,510</u>	<u>(496,949,441)</u>			<u>(496,949,441)</u>
16								
17	283	ARO Cumulative Effect	(184,336)	0	(184,336)	DALL	100.00%	(184,336)
18	283	Distribution Decoupling	(465,740)	465,740	0	DALL	100.00%	0
19	283	Electric Rate Case	(24,516)	0	(24,516)	DALL	100.00%	(24,516)
20	283	FAS 106 OPEB	(619,364)	0	(619,364)	DALL	100.00%	(619,364)
21	283	FAS 87 Non-Qualified Pension	(158,550)	0	(158,550)	DALL	100.00%	(158,550)
22	283	FAS 87 Qualified Pension	(16,411,892)	0	(16,411,892)	DALL	100.00%	(16,411,892)
23	283	Loss on Reacquired Debt	(579,665)	0	(579,665)	DALL	100.00%	(579,665)
24	283	Miscellaneous	(362,901)	0	(362,901)	DALL	100.00%	(362,901)
25	283	Reg. Asset Storm Damage Recovery	193,775	(193,775)	0	DALL	100.00%	0
26	283	Smart Grid PISCC	(16,700,532)	5,353,662	(11,346,870)	DALL	100.00%	(11,346,870)
27	283	Tax Interest Accrual	(817,467)	0	(817,467)	DALL	100.00%	(817,467)
28	283	Vacation Pay Accruals	(618,980)	0	(618,980)	DALL	100.00%	(618,980)
29		Total Account 283	<u>(36,750,168)</u>	<u>5,625,627</u>	<u>(31,124,541)</u>			<u>(31,124,541)</u>
30								
31		Total Deferred Income Taxes	<u>(537,283,197)</u>	<u>37,523,937</u>	<u>(499,759,260)</u>			<u>(499,759,260)</u>
32								
33		Other Rate Base Adjustments						
34		Smart Grid Post-in-Service Carrying Costs	0	32,446,159	32,446,159	DALL	100.00%	32,446,159
35		Total Other	<u>0</u>	<u>32,446,159</u>	<u>32,446,159</u>			<u>32,446,159</u>

(A) The company elected the immediate flow through option under Section 46(e)(3) in regards to the 1971 election and the ratable flow through option provided under Section 46(f)(2) in regards to the 1975 election. The total company balance does not include balances related to non-regulated production plant.

\*See Staff DR-125-001

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjustments to Other Rate Base Items**  
**As of June 30, 2016**

Schedule B-6.1

Page 1 of 1

Work Paper Reference No(s): WPB-6.1c through WPB-6.1e

Line No.	Account No.	Account Title	Work Paper Reference	Total Company Adjustment	Allocation		Jurisdictional Adjustment
					Code	Percent	
1							
2							
3	253	Post Retirement Benefits	WPB-6.1b,c	\$ 8,387,395	DALL	100.00%	<u>\$ 8,387,395</u>
4							
5	255	Investment Tax Credits					
6		6% Credit	WPB-6.1e	0	DALL	100.00%	0
7		10% Credit	WPB-6.1e	716,369	DALL	100.00%	716,369
8		Total					<u>716,369</u>
9							
10		Deferred Income Taxes:					
11	190	Demand Side Management		(630,652)	DALL	100.00%	(630,652)
12	190	ITC FAS 109		(660,985)	DALL	100.00%	(660,985)
13	190	Joint Owner Pension Receivable		1,549	DALL	100.00%	1,549
14	190	Miscellaneous		1,888	DALL	100.00%	1,888
15	282	FAS109		33,186,510	DALL	100.00%	33,186,510
16	283	Distribution Decoupling		465,740	DALL	100.00%	465,740
17	283	Reg. Asset Storm Damage Recovery		(193,775)	DALL	100.00%	(193,775)
18	283	Smart Grid PISCC		5,353,662	DALL	100.00%	5,353,662
19		Total					<u>37,523,937</u>
20							
21		Other					
22		Smart Grid Post-in-Service Carrying Costs		\$ 32,446,159	DALL	100.00%	<u>\$ 32,446,159</u>

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Contributions In Aid of Construction by Accounts and Subaccounts**  
**As of June 30, 2016**

**Schedule B-6.2**  
**Page 1 of 1**

**Work Paper Reference No(s):**

<b>Line No.</b>	<b>Account No.</b>	<b>Account Title</b>	<b>Total Company</b>	<b>Allocation %</b>	<b>Allocated Total</b>	<b>Adjustments</b>	<b>Adjusted Jurisdiction</b>
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Netted against gross plant per FPC Order No. 490.

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Jurisdictional Allocation Factors**  
**Rate Base and Operating Income**

**Schedule B-7**  
**Page 1 of 1**

**Work Paper Reference No(s): Schedule B-7.1 & WPB-7a**

Line No.	Account No.	Account Title	Jurisdictional Allocation Factor		Description of Factors and/or Method of Allocation
			Code	Percent	
1		Most accounts are 100% jurisdictional. Certain accounts are specifically coded as non-jurisdictional			
2		or have been allocated to Distribution. The following accounts have been allocated:			
3					
4	<u>Rate Base</u>				
5					
6	Various	General Plant	G229	85.541%	Distribution Salaries and Wages (T&D Only)
7					
8	Various	Common Plant	G229	85.541%	Distribution Salaries and Wages (T&D Only)
9					
10	Various	Common Plant	A3O1	63.700%	3 Factor Electric/Gas
11					
12	Various	Common Plant	A3O2	63.700%	3 Factor Electric/Gas General
13					
14	Various	Common Plant	ACO3	62.520%	Other Customer Elec Gas
15					
16	Various	Common Plant	AP01	60.420%	Other Property Plant & Equipment
17					
18	Various	Common Plant	CSOE	100.000%	Ohio Electric Customer Service
19					
20	Various	Materials and Supplies	N/A	95.140%	See Supplemental (C)(14)(c)
21					
22	<u>Operating Income</u>				
23					
24	Various	Labor Distribution	DLAB	85.541%	Distribution Salaries and Wages (T&D Operating Only)
25					
26	Various	Property Insurance & Property Tax	DPTX	79.000%	Distribution Property Taxes
27					
28	408191	Commercial Activity Tax	D595	56.030%	Total Distribution Revenue

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Jurisdictional Allocation Statistics**

**Schedule B-7.1**

**Page 1 of 1**

**Work Paper Reference No(s): WPB-7a**

Line No.	Allocation Code	Allocation Factor Description	Statistic Total Company	Adjustment to Total Company Statistic	Adjusted Statistic for Total Company	Statistic for Rate Area	Jurisdictional Allocation Factor
			\$	\$	\$	\$	
1	G229	Distribution of Salaries and Wages (T&D Only)	49,692,152	0	49,692,152	42,506,973	85.541%
2							
3	A3O1	3 Factor Electric/Gas					
4		PP&E	3,945,586,177		3,945,586,177	2,383,810,841	60.420%
5		Labor	48,247,127		48,247,127	31,452,908	65.190%
6		Gross Margin	991,225,539		991,225,539	650,054,154	65.580%
7		34% PP&E + 33% Labor + 33% Gross Margin					63.700%
8							
9	A3O2	3 Factor Electric/Gas General					
10		PP&E	3,945,586,177		3,945,586,177	2,383,810,841	60.420%
11		Labor	48,247,127		48,247,127	31,452,908	65.190%
12		Gross Margin	991,225,539		991,225,539	650,054,154	65.580%
13		34% PP&E + 33% Labor + 33% Gross Margin					63.700%
14							
15	ACO3	Other Customer Elec Gas	1,120,743	0	1,120,743	700,679	62.520%
16							
17	APO1	Other Property Plant & Equipment	3,945,586,177	0	3,945,586,177	2,383,810,841	60.420%
18							
19	DLAB	Distribution of Salaries and Wages (T&D Operating Onl	49,692,152	0	49,692,152	42,506,973	85.541%
20							
21	DPTX	Distribution Property Taxes	29,967,000	0	29,967,000	23,673,930	79.000%
22							
23	D595	Distribution Revenue	975,847,213	0	975,847,213	546,815,097	56.030%

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Explanation of Changes In Allocation Procedures**

**Schedule B-7.2**  
**Page 1 of 1**

**Work Paper Reference No(s):**

Line No.	Account Number	Description	Procedures Approved In Prior Case	Rationale for Change
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Refer to the direct testimony of P.A. Laub for discussion of jurisdictional allocation factors.

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Jurisdictional Pro Forma Income Statement**  
**For the Twelve Months Ended March 31, 2017**

Schedule C-1

Page 1 of 1

Work Paper Reference No(s): Schedule C-2, WPC-1a

Line No.	Description	Adjusted Revenue & Expenses	Proposed Increase	Pro Forma Revenue & Expenses
		(A)	(B)	(C)
1	Operating Revenues	\$ 486,952,854	\$ 15,405,219	\$ 502,358,073
2				
3	Operating Expenses			
4	Operation & Maintenance	147,513,041	108,652	147,621,693
5	Depreciation	81,047,873	0	81,047,873
6	Taxes - Other	99,186,723	55,459	99,242,182
7	Operating Expenses before Income Taxes	327,747,636	164,111	327,911,747
8				
9	State Income Taxes	735,014	84,680	819,694
10	Federal Income Taxes	45,901,927	5,304,750	51,206,677
11				
12	Total Operating Expenses	374,384,577	5,553,541	379,938,118
13				
14	Net Operating Income	\$ 112,568,277	\$ 9,851,678	\$ 122,419,955
15				
16	Rate Base	\$ 1,302,465,298		\$ 1,302,465,298
17				
18	Rate of Return	8.64%		9.40%

(A) Staff's Schedule C-2  
(B) Applicant's WPC-1a  
(C) Column (A) + Column (B)

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjusted Test Year Operating Income**  
**For the Twelve Months Ended March 31, 2017**

**Schedule C-2**  
**Page 1 of 1**

**Work Paper Reference No(s): Applicant's Schedule C-2.1 and Staff's Schedules C-3 & WPC-2a**

Line No.	Description	Unadjusted Revenue & Expenses	Adjustments	Adjusted Revenue & Expenses
1	<b>OPERATING REVENUES</b>			
2	Base Revenue and Riders	\$ 612,739,375	\$ (141,438,455)	\$ 471,300,920
3	Fuel Cost Revenue	0	0	0
4	Other Operating Revenue	24,809,232	(9,157,298)	15,651,934
5	Total Operating Revenues	637,548,607	(150,595,753)	486,952,854
6				
7	<b>OPERATING EXPENSES</b>			
8	Operation and Maintenance Expenses			
9	Production Expenses			
10	Fuel Cost	0	0	0
11	Other	0	0	0
12	Total Production Expense	0	0	0
13	Transmission Expense	0	0	0
14	Distribution Expense	80,582,357	(3,833,851)	76,748,506
15	Customer Accounts Expense	26,660,544	(1,310,689)	25,349,855
16	Customer Service & Information Expense	4,045,851	873	4,046,724
17	Sales Expense	2,862,615	(146,558)	2,716,057
18	Administrative & General Expense	43,809,003	(7,567,791)	36,241,212
19	Amortization of Deferred Expense	32,026,140	(29,615,453)	2,410,687
20	Total Operation and Maintenance Expense	189,986,510	(42,473,469)	147,513,041
21				
22	Depreciation Expense	88,365,933	(7,318,060)	81,047,873
23				
24	Taxes Other Than Income Taxes			
25	Other Federal Taxes	3,736,837	(154,496)	3,582,341
26	State and Other Taxes	157,971,600	(62,367,218)	95,604,382
27	Total Taxes Other Than Income Taxes	161,708,437	(62,521,714)	99,186,723
28				
29	State and Municipal Income Taxes			
30	Normal and Surcharge	336,642	(237,786)	98,856
31	Provision for Deferred Income Taxes	584,881	51,277	636,158
32	Total State Income Tax Expense	921,523	(186,509)	735,014
33				
34	Federal Income Taxes			
35	Normal and Surcharge	21,088,926	(14,896,088)	6,192,838
36	Provision for Deferred Income Taxes	36,496,440	3,212,649	39,709,089
37	Total Federal Income Tax Expense	57,585,366	(11,683,439)	45,901,927
38				
39	Total Operating Expenses and Taxes	498,567,769	(124,183,192)	374,384,577
40				
41	Net Operating Income	\$ 138,980,838	\$ (26,412,561)	\$ 112,568,277



**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Summary of Jurisdictional Adjustments**  
**to Operating Income**  
**For the Twelve Months Ended March 31, 2017**

Schedule C-3  
Page 1 of 5

Work Paper Reference No(s): See Below

Line No.	Title of Adjustment	Total Schedule C-3	Annualize / Normalize Revenue & Expenses	Eliminate Decoup / EE / ECF Revenue & Expenses	Rate Case Expense	Annualize Depreciation	Customer Service Deposits
	Schedule Reference		C-3.1	C-3.2	C-3.3	C-3.4	C-3.5
1	<b>OPERATING REVENUE</b>						
2	Base	(141,438,455)	(25,739,774)	(42,721,160)			
3	Fuel Cost	0					
4	Other	(9,157,298)	(380,194)	(8,777,104)			
5	Total Revenue	(150,595,753)	(26,119,968)	(51,498,264)	0	0	0
6							
7	<b>OPERATING EXPENSES</b>						
8	Operation and Maintenance Expenses						
9	Production Expenses						
10	Fuel Cost	0					
11	Other	0					
12	Total Production Expense	0	0	0	0	0	0
13	Transmission Expense	0					
14	Distribution Expense	(3,833,851)					
15	Customer Accounts Expense	(1,310,689)					556,071
16	Customer Serv & Info Expense	873					
17	Sales Expense	(146,558)					
18	Administrative & General Expense	(7,567,791)			85,310		
19	Amortization of Deferred Expense	(29,615,453)		0			
20	Total Operation and Maintenance Expenses	(42,473,469)	0	0	85,310	0	556,071
21							
22	Depreciation Expense	(7,318,060)	0	0	0	(7,318,060)	0
23							
24	Taxes Other Than Income Taxes						
25	Other Federal Taxes	(154,496)					
26	State and Other Taxes	(62,367,218)					
27	Total Taxes Other Than Income Tax	(62,521,714)	0	0	0	0	0
28							
29	State & Municipal Income Taxes						
30	Normal and Surtax	(237,786)	(145,122)	(286,124)	(474)	0	(3,090)
31	Prov Deferred Income Tax (Deferrals)	51,277				40,659	
32	Prov Deferred Income Tax (Writebacks)	0					
33	Total State Income Tax Expense	(186,509)	(145,122)	(286,124)	(474)	40,659	(3,090)
34							
35	Federal Income Taxes						
36	Normal and Surtax	(14,896,088)	(9,091,196)	(17,924,249)	(29,693)	0	(193,543)
37	Prov Deferred Income Tax (Deferrals)	3,212,649				2,547,417	
38	Prov Deferred Income Tax (Writebacks)	0					
39	Total Federal Income Tax Expense	(11,683,439)	(9,091,196)	(17,924,249)	(29,693)	2,547,417	(193,543)
40							
41	Total Oper. Expenses and Tax	(124,183,192)	(9,236,318)	(18,210,373)	55,143	(4,729,984)	359,438
42							
43	Net Operating Income	\$ (26,412,561)	\$ (16,883,650)	\$ (33,287,891)	\$ (55,143)	\$ 4,729,984	\$ (359,438)

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Summary of Jurisdictional Adjustments**  
**to Operating Income**  
**For the Twelve Months Ended March 31, 2017**

Schedule C-3  
Page 2 of 5

Work Paper Reference No(s): See Below

Line No.	Title of Adjustment	Annualize Property Tax	Interest Expense Deductible	Major Storm Expenses	Ohio Excise Tax Rider	Eliminate Non-Jurisdictional Expenses	Adjust PUCO/OCC Assessments
	Schedule Reference	C-3.6	C-3.7	C-3.8	C-3.9	C-3.10	C-3.11
1	<b>OPERATING REVENUE</b>						
2	Base				(69,291,364)		
3	Fuel Cost						
4	Other						
5	Total Revenue	0	0	0	(69,291,364)	0	0
6							
7	<b>OPERATING EXPENSES</b>						
8	Operation and Maintenance Expenses						
9	Production Expenses						
10	Fuel Cost						
11	Other						
12	Total Production Expense	0	0	0	0	0	0
13	Transmission Expense						
14	Distribution Expense			(1,921,812)			
15	Customer Accounts Expense						
16	Customer Serv & Info Expense					873	
17	Sales Expense					(146,558)	
18	Administrative & General Expense					(617,549)	(52,984)
19	Amortization of Deferred Expense						
20	Total Operation and Maintenance Expenses	0	0	(1,921,812)	0	(763,234)	(52,984)
21							
22	Depreciation Expense	0	0	0	0	0	0
23							
24	Taxes Other Than Income Taxes						
25	Other Federal Taxes						
26	State and Other Taxes	7,410,307			(69,698,967)		
27	Total Taxes Other Than Income Tax	7,410,307	0	0	(69,698,967)	0	0
28							
29	State & Municipal Income Taxes						
30	Normal and Surtax	(41,172)	15,081	10,678	2,265	4,241	295
31	Prov Deferred Income Tax (Deferrals)		11,109				
32	Prov Deferred Income Tax (Writebacks)						
33	Total State Income Tax Expense	(41,172)	26,190	10,678	2,265	4,241	295
34							
35	Federal Income Taxes						
36	Normal and Surtax	(2,579,197)	944,737	668,897	141,868	265,648	18,441
37	Prov Deferred Income Tax (Deferrals)		695,932				
38	Prov Deferred Income Tax (Writebacks)						
39	Total Federal Income Tax Expense	(2,579,197)	1,640,669	668,897	141,868	265,648	18,441
40							
41	Total Oper. Expenses and Tax	4,789,938	1,666,859	(1,242,237)	(69,554,834)	(493,345)	(34,248)
42							
43	Net Operating Income	\$ (4,789,938)	\$ (1,666,859)	\$ 1,242,237	\$ 263,470	\$ 493,345	\$ 34,248

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Summary of Jurisdictional Adjustments**  
**to Operating Income**  
**For the Twelve Months Ended March 31, 2017**

Schedule C-3  
Page 3 of 5

Work Paper Reference No(s): See Below

Line No.	Title of Adjustment	Adjust Uncollectible Expense	Annualize Commercial Activities Tax	Annualize Test Year Wages	Eliminate Merger Costs	Amortization of IT Deferral CRES Logo	Amortization of Ohio Electric Choice Site Deferral
	Schedule Reference	C-3.12	C-3.13	C-3.14	C-3.15	C-3.16	C-3.17
1	<b>OPERATING REVENUE</b>						
2	Base	(3,686,157)					
3	Fuel Cost						
4	Other						
5	Total Revenue	(3,686,157)	0	0	0	0	0
6							
7	<b>OPERATING EXPENSES</b>						
8	Operation and Maintenance Expenses						
9	Production Expenses						
10	Fuel Cost						
11	Other						
12	Total Production Expense	0	0	0	0	0	0
13	Transmission Expense						
14	Distribution Expense						
15	Customer Accounts Expense	(1,866,649)			(111)		
16	Customer Serv & Info Expense						
17	Sales Expense						
18	Administrative & General Expense			(5,913,775)	(987,394)		
19	Amortization of Deferred Expense	(474,291)				117,654	70,625
20	Total Operation and Maintenance Expenses	(2,340,940)	0	(5,913,775)	(987,505)	117,654	70,625
21							
22	Depreciation Expense	0	0	0	0	0	0
23							
24	Taxes Other Than Income Taxes						
25	Other Federal Taxes			(154,496)			
26	State and Other Taxes		(78,558)				
27	Total Taxes Other Than Income Tax	0	(78,558)	(154,496)	0	0	0
28							
29	State & Municipal Income Taxes						
30	Normal and Surtax	(7,474)	437	33,715	5,486	(654)	(393)
31	Prov Deferred Income Tax (Deferrals)						
32	Prov Deferred Income Tax (Writebacks)						
33	Total State Income Tax Expense	(7,474)	437	33,715	5,486	(654)	(393)
34							
35	Federal Income Taxes						
36	Normal and Surtax	(468,210)	27,342	2,112,095	343,707	(40,950)	(24,581)
37	Prov Deferred Income Tax (Deferrals)						
38	Prov Deferred Income Tax (Writebacks)						
39	Total Federal Income Tax Expense	(468,210)	27,342	2,112,095	343,707	(40,950)	(24,581)
40							
41	Total Oper. Expenses and Tax	(2,816,624)	(50,779)	(3,922,462)	(638,312)	76,050	45,651
42							
43	Net Operating Income	\$ (869,533)	\$ 50,779	\$ 3,922,462	\$ 638,312	\$ (76,050)	\$ (45,651)

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Summary of Jurisdictional Adjustments**  
**to Operating Income**  
**For the Twelve Months Ended March 31, 2017**

Schedule C-3  
Page 4 of 5

Work Paper Reference No(s): See Below

Line No.	Title of Adjustment	Smart Grid PISCC Amortization	Public Service Advertising & Customer Education	Street Light Audits	Infrastructure Modernization Rider Amortization	Advanced Meter Opt-Out	Customer Billing System
	Schedule Reference	C-3.18	C-3.19	C-3.20	C-3.21	C-3.22	C-3.23
1	<b>OPERATING REVENUE</b>						
2	Base						
3	Fuel Cost						
4	Other						
5	Total Revenue	0	0	0	0	0	0
6							
7	<b>OPERATING EXPENSES</b>						
8	Operation and Maintenance Expenses						
9	Production Expenses						
10	Fuel Cost						
11	Other						
12	Total Production Expense	0	0	0	0	0	0
13	Transmission Expense						
14	Distribution Expense			0			
15	Customer Accounts Expense						
16	Customer Serv & Info Expense		0				0
17	Sales Expense						
18	Administrative & General Expense						
19	Amortization of Deferred Expense	88,204			(29,466,269)	48,624	
20	Total Operation and Maintenance Expenses	88,204	0	0	(29,466,269)	48,624	0
21							
22	Depreciation Expense	0	0	0	0	0	0
23							
24	Taxes Other Than Income Taxes						
25	Other Federal Taxes						
26	State and Other Taxes						
27	Total Taxes Other Than Income Tax	0	0	0	0	0	0
28							
29	State & Municipal Income Taxes						
30	Normal and Surtax	0	0	0	163,714	(270)	0
31	Prov Deferred Income Tax (Deferrals)	(491)					
32	Prov Deferred Income Tax (Writebacks)						
33	Total State Income Tax Expense	(491)	0	0	163,714	(270)	0
34							
35	Federal Income Taxes						
36	Normal and Surtax	0	0	0	10,255,894	(16,924)	0
37	Prov Deferred Income Tax (Deferrals)	(30,700)					
38	Prov Deferred Income Tax (Writebacks)						
39	Total Federal Income Tax Expense	(30,700)	0	0	10,255,894	(16,924)	0
40							
41	Total Oper. Expenses and Tax	57,013	0	0	(19,046,661)	31,430	0
42							
43	Net Operating Income	\$ (57,013)	\$ 0	\$ 0	\$ 19,046,661	\$ (31,430)	\$ 0

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Summary of Jurisdictional Adjustments**  
**to Operating Income**  
**For the Twelve Months Ended March 31, 2017**

Schedule C-3  
Page 5 of 5

Work Paper Reference No(s).: See Below

Line No.	Title of Adjustment	Overhead Lines Expenses	Adjust Projected Expenses	Net Metering Adjustment		
	Schedule Reference	C-3.24	C-3.25	C-3.26		
1	<b>OPERATING REVENUE</b>					
2	Base					
3	Fuel Cost					
4	Other					
5	Total Revenue	0	0	0		
6						
7	<b>OPERATING EXPENSES</b>					
8	Operation and Maintenance Expenses					
9	Production Expenses					
10	Fuel Cost					
11	Other					
12	Total Production Expense	0	0	0		
13	Transmission Expense					
14	Distribution Expense	(1,979,826)		67,787		
15	Customer Accounts Expense					
16	Customer Serv & Info Expense					
17	Sales Expense					
18	Administrative & General Expense		(81,399)			
19	Amortization of Deferred Expense					
20	Total Operation and Maintenance Expenses	(1,979,826)	(81,399)	67,787		
21						
22	Depreciation Expense	0	0	0		
23						
24	Taxes Other Than Income Taxes					
25	Other Federal Taxes					
26	State and Other Taxes					
27	Total Taxes Other Than Income Tax	0	0	0		
28						
29	State & Municipal Income Taxes					
30	Normal and Surtax	11,000	452	(377)		
31	Prov Deferred Income Tax (Deferrals)					
32	Prov Deferred Income Tax (Writebacks)					
33	Total State Income Tax Expense	11,000	452	(377)		
34						
35	Federal Income Taxes					
36	Normal and Surtax	689,089	28,331	(23,594)		
37	Prov Deferred Income Tax (Deferrals)					
38	Prov Deferred Income Tax (Writebacks)					
39	Total Federal Income Tax Expense	689,089	28,331	(23,594)		
40						
41	Total Oper. Expenses and Tax	(1,279,737)	(52,616)	43,816		
42						
43	Net Operating Income	\$ 1,279,737	\$ 52,616	\$ (43,816)		

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Annualized Revenue**  
**For the Twelve Months Ended March 31, 2017**

Schedule C-3.1  
Page 1 of 1

Work Paper Reference No(s): WPC-3.1a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	
<u>Purpose and Description:</u> To eliminate unbilled revenue and to adjust test year base and other revenues to the amounts calculated on Schedule E-4.				
Billed Base Revenue Adjustments	\$ (6,368,363)	DALL	100.000%	\$ (6,368,363)
Unbilled Revenue	<u>(19,371,411)</u>	DALL	100.000%	<u>(19,371,411)</u>
Total Base Revenue	<u><u>(25,739,774)</u></u>			<u><u>(25,739,774)</u></u>
				↓
				To Sch C-3 Summary
Other Revenue	<u><u>\$ (380,194)</u></u>	DALL	100.000%	<u><u>\$ (380,194)</u></u>
				↓
				To Sch C-3 Summary

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Eliminate EE, ECF, and Decoupling Revenue and Expenses**  
**For the Twelve Months Ended March 31, 2017**

Schedule C-3.2

Page 1 of 1

Work Paper Reference No(s): WPC-2a, Sch. C-2.1, and WPC-3.2a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	
<u>Purpose and Description:</u> To eliminate Energy Efficiency, Decoupling, and ECF revenue and expense.				
Base Revenue	\$ (42,721,160)	DALL	100.000%	\$ (42,721,160)
Other Revenue	<u>(8,777,104)</u>	DALL	100.000%	<u>(8,777,104)</u>
Total Revenue	<u>\$ (51,498,264)</u>			<u>\$ (51,498,264)</u>



To Sch C-3 Summary

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Rate Case Expense  
For the Twelve Months Ended March 31, 2017

Schedule C-3.3

Page 1 of 1

Work Paper Reference No(s): Schedule C-8, WPC-3.3a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	

Purpose and Description: To adjust the test year expenses to reflect the estimated cost of presenting this case as reflected on Schedule C-8.

Total	<u>\$ 85,310</u>	DALL	100.000%	<u>\$ 85,310</u>
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To Sch C-3 Summary



Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Annualized Depreciation Expense  
For the Twelve Months Ended March 31, 2017

Schedule C-3.4

Page 1 of 1

Work Paper Reference No(s): WPC-3.4a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	

Purpose and Description: To reflect the adjustment to annualized depreciation expense as shown on Schedule B-3.2 based on plant at June 30, 2016.

Total	\$ <u>(7,318,060)</u>	DALL	100.000%	\$ <u>(7,318,060)</u>
				↓ To Sch C-3 Summary

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Interest On Customer Service Deposits**  
**For the Twelve Months Ended March 31, 2017**

Schedule C-3.5  
Page 1 of 1

Work Paper Reference No(s).: WPB-6.1a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	
<u>Purpose and Description:</u> To reflect the interest on Customer Service Deposits as an operating expense.				
Customer Service Deposits - Retail	\$ 556,071	DALL	100.000%	\$ 556,071
Customer Service Deposits - Transmission Service	<u>16,214</u>	DNON	0.000%	<u>0</u>
Total	<u>\$ 572,285</u>			<u>\$ 556,071</u>



To Sch C-3 Summary

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Property Tax Adjustment  
For the Twelve Months Ended March 31, 2017

Schedule C-3.6

Page 1 of 1

Work Paper Reference No(s): WPC-3.6a through WPC-3.6c

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	

Purpose and Description: To reflect the change in expense if  
property taxes were calculated based on plant in service as of June 30, 2016

Total	<u>\$ 7,410,307</u>	DALL	100.000%	<u>\$ 7,410,307</u>
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To Sch C-3 Summary

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Interest Expense Deductible  
For the Twelve Months Ended March 31, 2017

Schedule C-3.7

Page 1 of 2

Work Paper Reference No(s): WPC-3.7a, Schedule B-1, Schedule D-1

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	
<u>Purpose and Description:</u> To reflect income taxes at 35.00% due to interest deductible for tax purposes being based on rate base at June 30, 2016 as shown on Schedule B-1 and the weighted cost of debt of 2.54% as shown on Schedule D-1.				
Municipal Income Tax	\$ 15,081	DALL	100.000%	\$ 15,081
Federal Income Tax	944,737	DALL	100.000%	944,737
Total	\$ 959,818			\$ 959,818



To Sch C-3 Summary

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Interest Expense Deductible  
For the Twelve Months Ended March 31, 2017

Schedule C-3.7

Page 2 of 2

Work Paper Reference No(s): WPC-3.7a, Schedule B-1, Schedule D-1

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	
<u>Purpose and Description:</u> To reflect the elimination of federal and state deferred tax expenses related to Allowance for Funds Used During Construction, Capitalized Interest, and Loss on Reacquired Debt.				
Federal Deferrals:				
Capitalized Interest	\$ 1,018,646	DALL	100.000%	\$ 1,018,646
AFUDC - Debt	(388,663)	DALL	100.000%	(388,663)
Loss on Reacquired Debt	<u>65,949</u>	DALL	100.000%	<u>65,949</u>
Total	<u><u>695,932</u></u>			<u><u>695,932</u></u>
				↓ To Sch C-3 Summary
State Deferrals:				
Capitalized Interest	16,259	DALL	100.000%	16,259
AFUDC - Debt	(6,203)	DALL	100.000%	(6,203)
Loss on Reacquired Debt	<u>1,053</u>	DALL	100.000%	<u>1,053</u>
Total	<u><u>\$ 11,109</u></u>			<u><u>\$ 11,109</u></u>
				↓ To Sch C-3 Summary

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Major Storm Expenses**  
**For the Twelve Months Ended March 31, 2017**

Schedule C-3.8

Page 1 of 1

Work Paper Reference No(s): WPC-3.8a

Purpose and Description		Total Amount	Allocation		Jurisdictional Amount
			Code	Percent	
<u>Purpose and Description:</u> To adjust storm expenses in base rates to the amount of the average of the last 5 years					
(1)	Adjusted Storm Expenses (a)	\$ 4,300,000			
(2)	Test Year Storm Expenses (b)	<u>6,221,812</u>			
(3)	Adjustment (1) - (2)	<u>\$ (1,921,812)</u>	DALL	100.000%	<u>\$ (1,921,812)</u>
(a)	Staff's Workpaper WPC-3.8a				↓
(b)	Applicant's Schedule C-2.1				To Sch C-3 Summary

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Ohio Excise Tax Rider  
For the Twelve Months Ended March 31, 2017

Schedule C-3.9

Page 1 of 1

Work Paper Reference No(s): WPC-3.9a, WPC-2a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	
<u>Purpose and Description:</u> To adjust revenue and expense for the annualized Ohio Excise Tax revenue and expense.				
Annualized Ohio Excise Tax Revenue	<u>\$ (69,291,364)</u>	DALL	100.000%	<u>\$ (69,291,364)</u>
Test Year Ohio Excise Tax Expense	<u>(69,698,967)</u>	DALL	100.000%	<u>(69,698,967)</u>
Total Expense	<u>\$ (69,698,967)</u>			<u>\$ (69,698,967)</u>



To Sch C-3 Summary

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Eliminate Non-Jurisdictional Expenses**  
**For the Twelve Months Ended March 31, 2017**

**Schedule C-3.10**

**Page 1 of 1**

**Work Paper Reference No(s): WPC-3.10a & WPC-3.10b**

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	
<u>Purpose and Description:</u> To eliminate non-jurisdictional operating expenses				
Customer Serv & Info Expense	\$ 873	DALL	100.000%	\$ 873
Sales Expense	(146,558)	DALL	100.000%	(146,558)
Administrative & General Expense	<u>(617,549)</u>	DALL	100.000%	<u>(617,549)</u>
Total Operating Expense Adjustment	<u>\$ (763,234)</u>			<u>\$ (763,234)</u>



To Sch C-3 Summary



Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Annualize PUCO and OCC Assessments  
For the Twelve Months Ended March 31, 2017

Schedule C-3.11

Page 1 of 1

Work Paper Reference No(s): WPC-3.11a & WPC-3.11b

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	

Purpose and Description: To annualize the level of PUCO, OCC, and Division of Forecasting assessments to the latest known level.

Annualize PUCO, OCC and Division of Forecasting Assessments	\$ (52,984)	DALL	100.000%	\$ (52,984)
Total	<u>\$ (52,984)</u>			<u>\$ (52,984)</u>



To Sch C-3 Summary

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjust Uncollectible Expense**  
**For the Twelve Months Ended March 31, 2017**

**Schedule C-3.12**

**Page 1 of 1**

**Work Paper Reference No(s): Applicant's Schedule C-2.1 and WPC-3.12a**

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	
<u>Purpose and Description:</u> To eliminate Rider UE-ED revenues, eliminate deferred amounts on the loss on sale of receivables and annualize uncollectible expense not being recovered via Rider UE-ED.				
Eliminate Rider Revenue	<u>\$ (3,686,157)</u>	DALL	100.000%	<u>\$ (3,686,157)</u>
				↓
				To Sch C-3 Summary
Eliminate Deferral Account - Account 407907	<u>\$ (474,291)</u>	DALL	100.000%	<u>\$ (474,291)</u>
				↓
				To Sch C-3 Summary
Uncollectible Accounts Expense	<u>\$ (1,866,649)</u>	DALL	100.000%	<u>\$ (1,866,649)</u>
				↓
				To Sch C-3 Summary

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Annualize Commercial Activities Tax  
For the Twelve Months Ended March 31, 2017

Schedule C-3.13

Page 1 of 1

Work Paper Reference No(s): WPC-3.13a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	

Purpose and Description: To annualize the amount of  
test year Commercial Activities Tax based on annualized revenue.

Total	<u>\$ (78,558)</u>	DALL	100.000%	<u>\$ (78,558)</u>
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To Sch C-3 Summary

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Annualize Test Year Wages, Pension & Benefits, Bonus Pay, and Payroll Taxes**  
**For the Twelve Months Ended March 31, 2017**

Schedule C-3.14  
Page 1 of 1

Work Paper Reference No(s): Schedule C-3.14a through C-3.14e

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	
<u>Purpose and Description:</u> To annualize test year payroll costs, pension and benefits, bonus pay, and payroll taxes using the test year.				
Total Annualized Test Year Wage Adjustment	\$ (1,998,482)			\$ (1,998,482)
Total Annualized Pension and Benefits Adjustment	213,990			213,990
Total Bonus Pay Adjustment	<u>(4,129,284)</u>	DALL	100.000%	<u>(4,129,284)</u>
Total				<u><u>\$ (5,913,775)</u></u>
				↓ To Sch C-3 Summary
Total Annualized Payroll Taxes Adjustment	<u><u>\$ (154,496)</u></u>	DALL	100.000%	<u><u>\$ (154,496)</u></u>
				↓ To Sch C-3 Summary

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Annualize Test Year Wages, Pension & Benefits, Bonus Pay, and Payroll Taxes**  
**For the Twelve Months Ended March 31, 2017**

**Adjust O&M Labor Expense**  
**Workpaper Reference No(s): See below**

**Schedule C-3.14a**  
**Page 1 of 1**

Line No.	Description	Workpaper Reference	Amount
(1)	O&M Electric Labor Expense	Staff's WPC-3.14a1 through WPC-3.14h	\$ 45,646,784
(2)	Energy Efficiency Labor Expense	Staff's WPC-3.14a1	<u>2,241,365</u>
(3)	Total O&M Electric Labor Expense (1) + (2)		47,888,149
(4)	Less: Test Year Electric T&D O&M Labor Expense	Applicant's WPC-3.14a	<u>49,886,631</u>
(5)	O&M Electric Labor Adjustment (3) - (4)		<u><u>\$ (1,998,482)</u></u>

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Annualize Test Year Wages, Pension & Benefits, Bonus Pay, and Payroll Taxes**  
**For the Twelve Months Ended March 31, 2017**

**Adjust Pension and Benefits Expense**  
**Workpaper Reference No(s): See below**

**Schedule C-3.14b**  
**Page 1 of 1**

Line No.	Description	Workpaper Reference	Amount
(1)	O&M Pension and Benefits Expense	Staff's WPC-3.14a2	\$ 10,583,839
(2)	Energy Efficiency Pension and Benefits Expense	Staff's WPC-3.14a2	471,807
(3)	Less: Test Year O&M Pension and Benefits Expense	Applicant's WPC-3.14d	<u>10,841,656</u>
(4)	Pension and Benefits Adjustment (1) + (2) - (3)		<u><u>\$ 213,990</u></u>

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Annualize Test Year Wages, Pension & Benefits, Bonus Pay, and Payroll Taxes**  
**For the Twelve Months Ended March 31, 2017**

**Adjust Bonus Pay Expense**  
**Workpaper Reference No(s): See below**

**Schedule C-3.14c**  
**Page 1 of 1**

Line No.	Description	Workpaper Reference	Amount
(1)	Bonus Pay Expense	Staff's WPC-3.14a3	\$ 3,522,526
(2)	Energy Efficiency Bonus Pay Expense	Staff's WPC-3.14a3	133,800
(3)	Total Bonus Pay Expense (1) + (2)		<u>3,656,326</u>
(4)	Test Year Bonus Pay	Staff's WPC-3.14a3	7,785,610
(5)	Test Year Energy Efficiency Bonus Pay	Staff's WPC-3.14a3	294,844
(6)	Total Test Year Bonus Pay (4) + (5)		<u>8,080,454</u>
(7)	Bonus Pay Adjustment (1) - (4)	Staff's WPC-3.14a3	(4,263,084)
(8)	Energy Efficiency Bonus Pay Adjustment (2) - (5)	Staff's WPC-3.14a3	(161,044)
(9)	Total Bonus Pay Adjustment (2) + (7)		<u>\$ (4,129,284)</u>

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Annualize Test Year Wages, Pension & Benefits, Bonus Pay, and Payroll Taxes**  
**For the Twelve Months Ended March 31, 2017**

**Adjust Payroll Tax Expense**  
**Workpaper Reference No(s): See below**

**Schedule C-3.14d**  
**Page 1 of 1**

Line No.	Description	Workpaper Reference	Labor Expense	Payroll Tax Rate (a)	Amount
(1)	Staff Adjusted Payroll Tax Expense	C-3.14a	45,646,784	7.48%	\$ 3,414,379
(2)	Energy Efficiency Payroll Tax Expense	C-3.14a	2,241,365	7.48%	<u>167,654</u>
(3)	Total Payroll Taxes (1) + (2)				3,582,034
(4)	Less: Test Year Payroll Taxes	Applicant's WPC-3.14e			<u>3,736,530</u>
(5)	Payroll Tax Adjustment (3) - (4)				<u><u>\$ (154,496)</u></u>

(a) Staff Data Request 15



**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Annualize Test Year Wages, Pension & Benefits, Bonus Pay, and Payroll Taxes**  
**For the Twelve Months Ended March 31, 2017**

**Energy Efficiency Adjustments Summary**  
**Workpaper Reference No(s): See below**

**Schedule C-3.14e**  
**Page 1 of 1**

Line No.	Description	Workpaper Reference	Amount
(1)	Energy Efficiency Labor Expense	C-3.14a	\$ 2,241,365
(2)	Energy Efficiency Pension and Benefits Expense	C-3.14b	471,807
(3)	Energy Efficiency Bonus Pay Expense	C-3.14c	133,800
(4)	Energy Efficiency Payroll Tax Expense	C-3.14d	<u>167,654</u>
(5)	Total Energy Efficiency Expenses		<u><u>\$ 3,014,627</u></u>

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Eliminate Merger Costs  
For the Twelve Months Ended March 31, 2017

Schedule C-3.15  
Page 1 of 1

Work Paper Reference No(s): WPC-3.15a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	
<u>Purpose and Description:</u> To eliminate the costs to achieve the merger with Progress Energy & Piedmont Natural Gas included in the test year.				
Customer Accounts Expense	\$ (111)	DALL	100.000%	\$ (111)
Administrative & General Expense	<u>(987,394)</u>	DALL	100.000%	<u>(987,394)</u>
Total	<u>\$ (987,505)</u>			<u>\$ (987,505)</u>



To Sch C-3 Summary

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
CRES Logo Amortization  
For the Twelve Months Ended March 31, 2017

Schedule C-3.16  
Page 1 of 1

Work Paper Reference No(s): WPC-3.16a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	

Purpose and Description: Amortization of CRES Logo Deferral  
from Case No. 15-855-EL-AAM.

Total	\$	<u>117,654</u>	DALL	100.000%	\$	<u>117,654</u>
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To Sch C-3 Summary

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Ohio Electric Choice Supplier Site Amortization  
For the Twelve Months Ended March 31, 2017

Schedule C-3.17  
Page 1 of 1

Work Paper Reference No(s): WPC-3.17a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	
<u>Purpose and Description:</u> Amortization of OH Electric Choice Supplier Site Deferral from Case No. 11-3549-EL-SSO.				
Total	\$ 70,625	DALL	100.000%	\$ 70,625
				↓
				To Sch C-3 Summary

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Annualize Amortization of PISCC - Smart Grid  
For the Twelve Months Ended March 31, 2017

Schedule C-3.18  
Page 1 of 1

Work Paper Reference No(s).: WPC-3.18a & WPC-3.18b

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	
<u>Purpose and Description:</u> To reflect the adjustment to annualize amortization of Post In Service Carrying Costs accrued as of June 30, 2016 on the electric smart grid investment.				
Total	\$ 88,204	DALL	100.000%	\$ 88,204
				↓
				To Sch C-3 Summary

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Public Service Advertising and Customer Education  
For the Twelve Months Ended March 31, 2017

Schedule C-3.19  
Page 1 of 1

Work Paper Reference No(s).: WPC-3.19a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	
<u>Purpose and Description:</u> To adjust test year expenses for cost of public service advertising & customer education.				
Total	\$ 0	DALL	100.000%	\$ 0
				↓
				To Sch C-3 Summary

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Street Light Audits  
For the Twelve Months Ended March 31, 2017

Schedule C-3.20  
Page 1 of 1

Work Paper Reference No(s): WPC-3.20a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	
<u>Purpose and Description:</u> To adjust test year expenses for incremental cost of street light audits.				
Total	\$ 0	DALL	100.000%	\$ 0
				↓ To Sch C-3 Summary

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Infrastructure Modernization Rider Amortization  
For the Twelve Months Ended March 31, 2017

Schedule C-3.21  
Page 1 of 1

Work Paper Reference No(s): WPC-3.21a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	

Purpose and Description: To eliminate Infrastructure Modernization Rider Amortization.

Total	\$ (29,466,269)	DALL	100.000%	\$ (29,466,269)
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These costs will be collected in Rider DR-IM as approved by Commission Order on December 21, 2016 in Case No. 16-1404-EL-RDR.

To Sch C-3 Summary



Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Advanced Meter Opt-Out  
For the Twelve Months Ended March 31, 2017

Schedule C-3.22  
Page 1 of 1

Work Paper Reference No(s): WPC-3.22a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	
<u>Purpose and Description:</u> Amortization of IT system improvement costs related to advanced meter opt-outs from Case No. 14-1160-EL-UNC.				
Total	\$ 48,624	DALL	100.000%	\$ 48,624
				↓
				To Sch C-3 Summary

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Customer Billing System  
For the Twelve Months Ended March 31, 2017

Schedule C-3.23  
Page 1 of 1

Work Paper Reference No(s): WPC-3.23a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	
<u>Purpose and Description:</u> Include levelized O&M expenses for new customer billing system projected to be in-service in 2022.				
Total	\$ 0	DALL	100.000%	\$ 0
				<div>↓</div> To Sch C-3 Summary

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Overhead Line Expenses  
For the Twelve Months Ended March 31, 2017

Schedule C-3.24  
Page 1 of 1

Workpaper Reference No(s): WPC-3.24a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	

Purpose and Description: To adjust distribution pole inspection expenses and amortize the expense over a 5 year period.

Total	<u>\$ (1,979,826)</u>	DALL	100.00%	<u>\$ (1,979,826)</u>
				↓
				To Sch C-3 Summary

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Adjust Projected Expenses**  
**For the Twelve Months Ended March 31, 2017**

**Schedule C-3.25**

**Page 1 of 1**

**Workpaper Reference No(s): WPC-3.25a**

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	

Purpose and Description: To adjust overall O&M expenses to account for discrepancies found between the approved Corporate budget for Jan - Mar 2017 and the corresponding period in the projected portion of the Company's test year

Total	<u>\$ (81,399)</u>	DALL	100.00%	<u>\$ (81,399)</u>
				↓
				To Sch C-3 Summary

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Net Metering Expense  
For the Twelve Months Ended March 31, 2017

Schedule C-3.26

Page 1 of 1

Workpaper Reference No(s): WPC-3.26a

Purpose and Description	Total Amount	Allocation		Jurisdictional Amount
		Code	Percent	

Purpose and Description: To adjust expenses to account for costs associated with net metering.

Total	\$ 67,787	DALL	100.00%	\$ 67,787
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↓  
To Sch C-3 Summary

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Development of Jurisdictional Federal and State Income Taxes Before Adjustments**  
**For the Twelve Months Ended March 31, 2017**

Work Paper Reference No(s): Schedule C-4.1, WPC-4.1a

Schedule C-4  
Page 1 of 1

Line No.	Description	At Current Rates			At Proposed Rates	
		Unadjusted Distribution	Schedule C-3 Adjustments	Adjusted Distribution	Proforma Adjustments	Proforma
		(1)	(2)	(3)	(4)	(5)
		\$	\$	\$	\$	\$
1	Operating Income before Federal					
2	and State Income Taxes	197,487,727	(38,282,509)	159,205,218	15,241,108	174,446,326
3						
4	Reconciling Items:					
5	Interest Charges	(38,711,078)	4,713,557	(33,997,521)	0	(33,997,521)
6	Net Interest Charges	(38,711,078)	4,713,557	(33,997,521)	0	(33,997,521)
7						
8	Tax Depreciation	(148,668,031)		(148,668,031)	0	(148,668,031)
9	Book Depreciation	86,944,042	(7,318,060)	79,625,982	0	79,625,982
10	Excess of Tax over Book Depreciation	(61,723,989)	(7,318,060)	(69,042,049)	0	(69,042,049)
11						
12	Other Reconciling Items:					
13	Temporary Differences	(43,546,258)	(1,911,024)	(45,457,282)	0	(45,457,282)
14	Permanent Differences	7,084,315	0	7,084,315	0	7,084,315
15	Total Other Reconciling Items	(36,461,943)	(1,911,024)	(38,372,967)	0	(38,372,967)
16	Total Reconciling Items	(136,897,010)	(4,515,527)	(141,412,537)	0	(141,412,537)
17	Federal Taxable Income	60,590,717	(42,798,036)	17,792,681	15,241,108	33,033,789
18						
19						
20	State Taxable Income	60,590,717	(42,798,036)	17,792,681	15,241,108	33,033,789
21						
22	State Income Tax @ 0.0618%	37,445	(26,449)	10,996	9,419	20,415
23	Municipal Income Tax @ 0.4938%	299,197	(211,337)	87,860	75,261	163,121
24	State Income Tax	336,642	(237,786)	98,856	84,680	183,536
25						
26	Provision for Deferred State Income Taxes:					
27	Deferred Income Taxes	584,881	51,277	636,158	0	636,158
28	Total State & Municipal Income Tax Expense	921,523	(186,509)	735,014	84,680	819,694
29						
30	Federal Taxable Income (Line 17)	60,590,717	(42,798,036)	17,792,681	15,241,108	33,033,789
31						
32	State Income Tax Deductible (Line 22)	37,445	(26,449)	10,996	9,419	20,415
33	Municipal Income Tax Deductible (Line 23)	299,197	(211,337)	87,860	75,261	163,121
34						
35	Federal Taxable Income	60,254,075	(42,560,250)	17,693,825	15,156,428	32,850,253
36						
37	Federal Income Taxes @ 35% (A)	21,088,926	(14,896,087)	6,192,839	5,304,750	11,497,589
38	Federal Income Taxes - Current	21,088,926	(14,896,087)	6,192,839	5,304,750	11,497,589
39						
40	Provision Deferred Federal Income Taxes - Net					
41	Deferred Income Tax on Depreciation	21,952,638	2,547,417	24,500,055	0	24,500,055
42	Other Deferred Income Taxes - Net	15,158,452	665,232	15,823,684	0	15,823,684
43	Deferred Income Tax Adjustment - ARAM	(438,098)	0	(438,098)	0	(438,098)
44	Deferred Income Tax Adjustment - Flow-Through	0	0	0	0	0
45	Amortization of Investment Tax Credit	(176,552)		(176,552)	0	(176,552)
46	Total Deferred Income Taxes	36,496,440	3,212,649	39,709,089	0	39,709,089
47						
48	Total Federal Income Taxes	57,585,366	(11,683,438)	45,901,928	5,304,750	51,206,678

(A) Calculation may be different due to rounding

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Development of Jurisdictional Federal and State Income Taxes Before Adjustments**  
**For the Twelve Months Ended March 31, 2017**

**Schedule C-4.1**  
**Page 1 of 1**

Work Paper Reference No(s): WPC-4.1a, Supplemental (C)(13),

Line No.	Description		Unadjusted Total	Allocation %	Unadjusted Distribution	Allocation Code
		\$	\$		\$	
1	Operating Income before Federal					
2	and State Income Taxes		166,813,697		197,487,727	
3						
4	Reconciling Items:					
5	Interest Charges		(38,711,078)	100.000%	(38,711,078)	DALL
6	Net Interest Charges		(38,711,078)		(38,711,078)	
7						
8	Tax Depreciation		(148,668,031)	100.000%	(148,668,031)	DALL
9	Book Depreciation		86,944,042	100.000%	86,944,042	DALL
10	Excess of Tax over Book Depreciation		(61,723,989)		(61,723,989)	
11						
12	Other Reconciling Items:					
13	Temporary Differences		(43,546,258)	100.000%	(43,546,258)	DALL
14	Permanent Differences		7,084,315	100.000%	7,084,315	DALL
15	Total Other Reconciling Items		(36,461,943)		(36,461,943)	
16	Total Reconciling Items		(136,897,010)		(136,897,010)	
17	Federal Taxable Income		29,916,687		60,590,717	
18						
19	State Taxable Income		29,916,687		60,590,717	
20						
21	State Income Tax @ 0.0618%		18,488	COMPUTED	37,445	
22	Municipal Income Tax @ 0.4938%		147,729	COMPUTED	299,197	
23	State Income Tax		166,217		336,642	
24						
25	Provision for Deferred State Income Taxes:					
26	Deferred Income Taxes		584,881	100.000%	584,881	DALL
27	Total State & Municipal Income Tax Expense		751,098		921,523	
28						
29	Federal Taxable Income (Line 17)		29,916,687		60,590,717	
30						
31	State Income Tax Deductible (Line 21)		18,488		37,445	
32	Municipal Income Tax Deductible (Line 22)		147,729		299,197	
33						
34	Federal Taxable Income		29,750,470		60,254,075	
35						
36	Federal Income Taxes @ 35%	(A)	10,412,665	COMPUTED	21,088,926	
37	Federal Income Taxes - Current		10,412,665		21,088,926	
38						
39	Deferred Federal Income Taxes - Net					
40	Tax Depreciation	(148,668,031)				
41	Tax S/L Depreciation	85,603,860 (B)				
42	Excess of Tax over S/L	(63,064,171)				
43						
44	Deferred Income Tax on Depreciation (Line 42 * 34.81%)		21,952,638	100.000%	21,952,638	DALL
45	Other Deferred Income Taxes - Net (Line 13 * 34.81%)		15,158,452	100.000%	15,158,452	DALL
46	Deferred Income Tax Adjustment - ARAM		(438,098)	100.000%	(438,098)	DALL
47	Deferred Income Tax Adjustment - Flow-Through		0	100.000%	0	DALL
48	Amortization of Investment Tax Credit		(176,552)	100.000%	(176,552)	DALL
49	Total Prov Deferred Federal Income Tax		36,496,440		36,496,440	
50	Total Federal Income Tax Expense		46,909,105		57,585,366	

(A) Calculation may be different due to rounding  
(B) Book Depreciation less Depreciation on Equity AFUDC

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Rate of Return Summary**  
**Capital Structure as of March 31, 2016**

Schedule D-1

Page 1 of 1

	Amount \$	% of Total	% Cost	Weighted Cost %
Long Term Debt	\$1,882,918,025	49.25%	5.16%	2.54%
Preferred Stock	\$0	0.00%	0.00%	0.00%
Common Equity	<u>\$1,940,620,204</u>	50.75%	9.22% -10.24%	<u>4.68% -5.20%</u>
Total Capital	\$3,823,538,229	100.00%		7.22% -7.74%



**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Equity Issuance Cost Adjustment**  
**March 31, 2016**

**Schedule D-1.1**  
**Page 1 of 1**

Line No.		
(1)	Retained Earnings <sup>1</sup>	\$1,186,641,118
(2)	Total Common Equity <sup>2</sup>	\$1,940,620,204
(3)	Ratio of (1) to (2)	0.47515
(4)	Generic Issuance Cost, f	3.50%
(5)	External Equity Ratio, w [1.0 - (3)]	0.52485
(6)	Net Adjustment Factor, $(w/(1 - f)) + (1 - w)$	1.01904
(7)	Low End Equity Cost [9.1685 x Line (6)]	9.22%
(8)	High End Equity Cost [10.1685 x Line (6)]	10.24%

Sources:

1 Applicant's Workpaper WPD-1a

2 Applicant's Schedule D-1

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**DCF Cost of Equity Estimate**

**Schedule D-1.4**  
**Page 1 of 7**

<b>Stock Prices (\$): <sup>1</sup></b>	<b><u>AEP</u></b>	<b><u>EIX</u></b>	<b><u>EXC</u></b>	<b><u>PCG</u></b>	<b><u>SO</u></b>
05/02/16	62.1112	69.5302	33.8005	56.8815	48.1862
05/03/16	62.2463	69.7541	33.5019	57.2111	48.2722
05/04/16	63.1052	70.8150	33.9642	57.3372	49.0942
05/05/16	62.8736	70.3673	34.0798	57.3469	48.3869
05/06/16	62.8444	70.0655	34.3688	57.2014	47.3067
05/09/16	63.5550	70.6495	33.9546	57.3178	47.6126
05/10/16	63.3214	69.4135	33.9064	57.4438	47.9281
05/11/16	63.4772	70.0461	34.3516	57.3372	48.1001
05/12/16	63.9152	70.0169	34.4683	57.4341	48.4868
05/13/16	63.8665	69.5010	33.9628	57.3662	48.2258
05/16/16	64.1780	69.5010	33.7490	57.2984	48.2741
05/17/16	62.7958	68.2358	33.3796	55.8926	47.4428
05/18/16	61.6179	67.1457	32.9033	55.2721	46.4375
05/19/16	62.1533	67.7200	33.2241	55.7859	47.0465
05/20/16	62.1046	68.1774	33.3116	55.8732	47.0272
05/23/16	61.2772	67.3696	32.7867	55.8538	46.4858
05/24/16	61.9391	68.0411	33.0394	56.7555	46.8435
05/25/16	61.7445	67.9049	32.9325	56.6682	46.9305
05/26/16	62.6205	68.9463	33.2144	57.5795	47.5781
05/27/16	62.6011	68.8879	33.3699	57.7056	47.5201
05/31/16	63.0099	69.7152	33.3116	58.2485	47.7908
06/01/16	63.1657	69.6568	33.4476	58.4715	47.9165
06/02/16	62.9612	69.8417	33.7490	58.7527	47.7135
06/03/16	64.0612	70.5911	33.9823	59.6737	48.5061
06/06/16	63.9541	70.6008	34.0406	59.4313	48.4578
06/07/16	64.0904	70.5035	33.7490	59.7610	48.4191
06/08/16	64.4408	70.9512	34.0697	60.1197	48.6898
06/09/16	65.1807	71.6909	34.1572	61.0601	49.1634
06/10/16	65.0736	71.9829	33.6323	61.0989	49.4051
06/13/16	64.7816	71.9050	33.4379	60.6917	49.2891
06/14/16	65.0541	72.0997	32.9033	61.0601	49.6178
06/15/16	64.4798	71.4962	33.2338	60.4493	49.1828
06/16/16	65.1028	71.9439	33.2532	61.0310	49.3568
06/17/16	65.4240	72.1386	33.6809	61.0989	49.4438
06/20/16	65.0152	71.9537	33.4768	60.6626	49.2408
06/21/16	64.9957	72.1386	33.7879	60.7208	49.2021
06/22/16	64.7329	71.8661	33.4671	60.2554	49.1538
06/23/16	64.8205	72.0121	33.9725	60.2360	49.3568
06/24/16	65.4727	72.5960	33.4282	60.7499	49.4824
06/27/16	66.5337	74.4063	33.6226	61.2443	50.4587
06/28/16	66.8160	74.4749	33.9045	60.9707	50.5651
06/29/16	66.8939	74.5336	34.1378	61.1466	50.4781

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**DCF Cost of Equity Estimate**

**Schedule D-1.4**  
**Page 2 of 7**

<b>Stock Prices (\$): <sup>1</sup></b>	<b><u>AEP</u></b>	<b><u>EIX</u></b>	<b><u>EXC</u></b>	<b><u>PCG</u></b>	<b><u>SO</u></b>
06/30/16	68.2275	76.0713	35.3431	62.4559	51.8410
07/01/16	68.2761	76.0517	35.3917	62.5634	52.0344
07/05/16	68.9283	76.9332	35.1973	63.4037	52.4403
07/06/16	69.3761	76.7863	35.6056	63.8922	52.6240
07/07/16	68.4124	75.4543	34.7016	62.9249	51.8700
07/08/16	68.8310	76.5610	35.1001	63.3451	52.3340
07/11/16	68.8213	76.3847	35.3820	63.2474	51.9957
07/12/16	67.7310	74.9940	35.4111	62.2410	51.0774
07/13/16	68.1496	75.8167	35.7222	63.0813	51.3577
07/14/16	67.5363	75.5229	35.3723	62.7295	51.8217
07/15/16	67.7894	75.5914	35.4695	63.1399	51.8410
07/18/16	68.0912	75.6306	35.6444	63.0422	51.8314
07/19/16	67.9160	75.5229	35.5570	62.9347	51.8314
07/20/16	67.5071	74.9352	35.2362	62.7881	51.5510
07/21/16	67.5850	75.1605	35.4403	62.6904	52.1020
07/22/16	68.1983	76.0419	36.3637	63.5307	52.7207
07/25/16	67.9160	75.7873	36.4512	63.4428	52.7207
07/26/16	67.8868	75.2780	36.0527	62.6904	52.6337
07/27/16	67.0302	74.4553	35.5667	62.4852	51.7540
07/28/16	67.0886	74.8764	35.8291	62.2898	51.4834
07/29/16	67.4585	75.7873	36.2374	62.4755	51.7154
08/01/16	67.4682	75.4641	36.4123	62.6806	51.8604
08/02/16	67.1762	74.9842	35.7514	62.8565	51.5800
08/03/16	66.6311	74.4161	35.5472	63.0715	51.2707
08/04/16	66.8160	74.6610	35.3139	63.0324	51.3867
08/05/16	66.0470	73.4465	35.1293	62.4364	50.8841
08/08/16	65.9096	73.4073	35.1001	62.0553	50.9324
08/09/16	66.1452	73.7501	34.8474	62.0064	51.0774
08/10/16	66.3120	73.5640	34.5363	62.1530	51.1160
08/11/16	66.4691	73.9460	34.1420	62.6123	51.1160
08/12/16	66.3022	74.2790	34.2695	62.6513	51.1454
08/15/16	65.2912	73.0253	33.9655	61.9967	50.3051
08/16/16	64.4667	71.8207	33.5732	61.2052	49.7873
08/17/16	65.2716	72.7119	33.9164	62.2214	50.2856
08/18/16	66.1550	73.5150	34.0439	63.6773	51.1063
08/19/16	65.1440	72.6825	33.7105	63.3060	50.7643
08/22/16	65.2912	72.8490	33.7693	63.2083	50.8034
08/23/16	65.0557	72.4475	33.9263	62.3875	50.5201
08/24/16	65.1145	72.4671	34.0439	62.2312	50.5982
08/25/16	65.1440	72.1341	33.8478	61.9869	50.6666
08/26/16	63.4950	70.4201	33.2495	60.6776	49.8753
08/29/16	63.9760	71.3114	33.3966	60.9316	50.1586

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**DCF Cost of Equity Estimate**

Schedule D-1.4  
Page 3 of 7

<b>Stock Prices (\$): <sup>1</sup></b>	<b><u>AEP</u></b>	<b><u>EIX</u></b>	<b><u>EXC</u></b>	<b><u>PCG</u></b>	<b><u>SO</u></b>
08/30/16	63.1319	70.4789	33.1612	60.4529	49.7873
08/31/16	63.3772	71.2232	33.3476	60.5213	50.1488
09/01/16	63.2202	71.2036	33.1612	60.3942	50.0023
09/02/16	64.0349	72.1830	33.4162	60.9219	50.6080
09/06/16	64.8201	72.5846	33.7889	61.5472	50.9304
09/07/16	64.8299	72.2516	33.8968	61.4593	51.0183
09/08/16	64.8790	72.3300	34.1715	61.6449	51.2626
09/09/16	62.5331	69.9304	32.7591	59.4367	49.6994
09/12/16	63.5147	71.0273	32.9847	60.1402	50.7643
09/13/16	62.6313	70.1556	32.4158	59.4269	50.0804
09/14/16	62.8374	70.3515	32.4845	60.0229	50.1684
09/15/16	63.1122	70.7139	33.0043	60.4236	50.2758
09/16/16	63.6128	71.5758	33.1808	60.9903	50.7741
09/19/16	64.2115	72.0067	33.5045	61.2345	51.2235
09/20/16	63.8091	71.8500	33.2593	61.1173	50.9402
09/21/16	64.9673	73.4563	34.1813	62.2507	51.9563
09/22/16	65.3697	73.9558	34.5442	62.5536	52.2494
09/23/16	65.4286	74.0635	34.1322	62.7295	52.2982
09/26/16	65.1342	73.9950	34.1518	62.4364	52.0833
09/27/16	64.2901	72.7119	33.5241	61.4104	51.6241
09/28/16	64.1527	72.6528	33.3574	61.4301	51.4873
09/29/16	63.3085	71.6473	32.6512	60.8196	50.8523
09/30/16	63.0239	71.2234	32.6512	60.2385	50.1195
10/03/16	62.3368	70.3756	32.1412	59.2439	49.5529
10/04/16	61.0314	68.8969	31.2486	57.9243	48.6931
10/05/16	61.0314	68.7688	31.5135	57.8554	48.3805
10/06/16	61.1001	68.8279	31.4448	58.1114	48.2925
10/07/16	60.6486	68.8969	31.5625	58.4167	48.0288
10/10/16	61.0608	69.2617	31.8764	58.5644	48.6052
10/11/16	60.2069	68.4237	31.5331	57.9243	48.2730
10/12/16	60.8547	69.0645	31.8862	58.4069	48.8787
10/13/16	61.3749	70.0010	32.2196	59.4507	49.5919
10/14/16	61.1492	69.8433	32.0725	58.8894	49.3965
10/17/16	61.8068	70.2080	32.1216	59.4803	49.5236
10/18/16	62.1994	71.0459	32.4550	60.0022	49.9143
10/19/16	62.0227	70.9966	32.2491	59.9628	49.5626
10/20/16	61.7479	70.7305	32.2098	59.9136	49.5529
10/21/16	61.3259	69.8926	31.8764	59.3916	49.3672
10/24/16	61.8657	70.2474	32.0235	59.5886	49.6799
10/25/16	62.2878	70.6023	32.2687	59.8643	49.7971
10/26/16	62.3565	70.7403	32.6218	59.9923	49.7971
10/27/16	62.0227	70.3953	32.6316	59.7757	49.5919

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**DCF Cost of Equity Estimate**

**Schedule D-1.4**  
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<b>Stock Prices (\$): <sup>1</sup></b>	<b><u>AEP</u></b>	<b><u>EIX</u></b>	<b><u>EXC</u></b>	<b><u>PCG</u></b>	<b><u>SO</u></b>
10/28/16	62.2387	70.8586	32.5923	60.0613	49.5333
10/31/16	63.6423	72.4359	33.4162	61.1741	50.3833
11/01/16	62.2092	71.4698	32.6218	60.2779	49.3184
11/02/16	61.4535	69.6954	32.0725	59.3424	49.0351
11/03/16	61.7577	70.0404	32.1510	59.2833	49.2305
11/04/16	61.2473	69.3109	32.0627	58.9189	48.9569
11/07/16	62.0718	70.5530	32.7787	60.1598	49.4552
11/08/16	62.6465	71.2332	33.0141	61.0756	49.5919
11/09/16	60.6847	69.1729	31.4546	58.5053	48.0874
11/10/16	59.1887	67.7830	29.9072	57.6092	46.8075
11/11/16	59.4364	67.8717	29.7190	57.5895	46.6805
11/14/16	58.1781	67.3689	30.4818	57.2645	46.5340
11/15/16	58.9113	68.4533	31.7696	58.2001	47.2276
11/16/16	58.4456	67.8618	31.3040	57.8160	47.3156
11/17/16	58.3168	67.7140	31.1951	57.7766	46.9498
11/18/16	57.9007	67.4774	31.4328	57.4910	46.5841
11/21/16	58.7725	68.2956	32.1758	58.2591	46.9894
11/22/16	58.6239	68.7392	32.1560	58.4167	47.0487
11/23/16	58.2772	68.0097	32.0074	57.8160	46.6830
11/25/16	59.1689	68.7688	32.2749	58.3872	47.2266
11/28/16	60.3380	70.2573	33.0773	59.8151	47.7505
11/29/16	60.7046	70.1390	33.3447	59.5394	47.7505
11/30/16	58.5050	67.7928	32.2055	57.9046	46.2777
12/01/16	57.6233	67.5858	31.8687	57.1562	46.0504
12/02/16	58.1583	68.4139	32.7008	57.3925	46.2184
12/05/16	58.6537	68.7490	33.0079	57.4910	46.3271
12/06/16	58.9212	67.8717	32.7405	57.4910	46.3864
12/07/16	59.6940	68.6209	33.2160	57.9046	46.6039
12/08/16	59.6246	68.4533	33.8797	58.2887	46.8609
12/09/16	60.4271	68.9758	34.5731	58.4266	47.3847
12/12/16	61.3783	69.4490	34.1868	58.9091	48.1557
12/13/16	62.1313	70.1587	35.1279	59.6674	48.6203
12/14/16	61.1306	68.6012	34.7613	58.5940	47.9185
12/15/16	61.5368	69.1927	35.3953	59.0962	47.8987
12/16/16	62.2303	70.7009	35.3854	60.1105	48.3534
12/19/16	62.3591	70.5925	35.4152	59.8939	48.5214
12/20/16	62.6266	71.0854	35.1279	60.1992	48.6302
12/21/16	62.2204	70.7206	34.8109	60.1893	48.6697
12/22/16	62.6564	71.1051	34.9793	60.3469	48.7883
12/23/16	62.5870	70.8784	34.9694	60.2582	48.7587
12/27/16	62.5474	70.9178	35.0684	60.2484	48.7290
12/28/16	61.8142	70.6724	34.8703	59.6428	48.3336

**Duke Energy Ohio, Inc.**  
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<b>Stock Prices (\$): <sup>1</sup></b>	<b><u>AEP</u></b>	<b><u>EIX</u></b>	<b><u>EXC</u></b>	<b><u>PCG</u></b>	<b><u>SO</u></b>
12/29/16	62.6960	71.7949	35.3854	60.6455	48.7982
12/30/16	62.3790	71.5068	35.1576	60.3278	48.6203
01/03/17	62.1808	71.2684	34.8604	59.9307	48.4720
01/04/17	62.2700	71.8743	35.1576	60.1491	48.4226
01/05/17	62.6068	71.6161	35.1675	60.0995	48.5709
01/06/17	62.5573	71.2088	35.7421	60.7745	48.4424
01/09/17	61.7350	70.5433	34.9397	59.8612	47.9679
01/10/17	61.5467	70.6327	34.7316	59.6329	47.8197
01/11/17	62.5969	71.6459	35.0585	60.4370	48.1755
01/12/17	62.7059	71.8942	35.1081	60.1690	48.4325
01/13/17	62.6465	71.6161	35.1081	60.1392	48.2348
01/17/17	63.2211	72.0233	35.5439	61.3305	49.1145
01/18/17	62.8743	71.8147	35.3755	61.0128	49.0453
01/19/17	62.1214	71.2386	35.4053	60.6554	48.4819
01/20/17	62.3294	71.4869	35.4647	60.9135	48.4918
01/23/17	62.1313	71.3379	34.9694	60.5462	48.2644
01/24/17	62.2006	71.5167	34.8010	60.4469	48.0075
01/25/17	61.9529	71.2486	35.0189	60.3973	47.9284
01/26/17	62.0619	71.4770	34.9595	60.3179	48.0668
01/27/17	62.3889	71.5167	34.7514	60.1789	47.9185
01/30/17	62.6266	71.4472	34.7118	60.1392	48.0964
01/31/17	63.4688	72.3908	35.5439	61.4397	48.8575
02/01/17	62.5078	71.1194	35.1180	60.4469	47.9877
02/02/17	63.1914	72.1226	35.4845	61.4992	48.4127
02/03/17	63.4391	72.0531	35.4449	61.1418	48.2644
02/06/17	63.2310	72.2617	35.4746	61.1815	48.1953
02/07/17	63.3400	72.5597	35.6727	61.3801	48.2051
02/08/17	63.8000	74.3277	34.9000	62.7103	48.6499
02/09/17	63.4200	74.2582	34.5236	62.4324	48.2941
02/10/17	63.9500	74.7052	34.6920	62.8890	48.4819
02/13/17	63.7900	75.0528	35.1000	63.2266	48.6499
02/14/17	63.2700	74.8840	35.3600	62.8592	48.0272
02/15/17	63.2900	74.4767	35.2200	62.4820	47.7900
02/16/17	63.7000	75.2813	35.4200	62.9287	48.2400
02/17/17	64.1100	75.8276	35.5800	63.4549	47.8000
02/21/17	64.7600	76.7017	35.9200	64.1696	48.2800
02/22/17	65.3100	76.6719	35.6900	64.2888	48.9900
02/23/17	66.0100	77.3771	35.9800	64.9340	49.6700
02/24/17	67.1500	78.3406	37.1800	65.8473	50.5000
02/27/17	66.7000	78.4698	36.5700	65.6389	50.2700
02/28/17	66.9700	79.2048	36.7100	66.2643	50.8200
03/01/17	66.1200	78.8472	36.0700	65.3708	50.0600

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**DCF Cost of Equity Estimate**

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<b>Stock Prices (\$): <sup>1</sup></b>	<b><u>AEP</u></b>	<b><u>EIX</u></b>	<b><u>EXC</u></b>	<b><u>PCG</u></b>	<b><u>SO</u></b>
03/02/17	66.5000	79.3836	36.4200	65.6984	50.3200
03/03/17	66.5200	78.9565	36.3200	65.5892	50.3700
03/06/17	66.3500	78.8174	36.0700	65.2815	50.2400
03/07/17	66.2400	78.7181	36.1300	65.7779	50.4000
03/08/17	65.1500	77.5957	35.7200	64.6859	49.7700
03/09/17	64.8400	77.4765	35.7800	64.6561	49.5000
03/10/17	65.4000	78.2810	35.9700	65.1524	49.6300
03/13/17	65.8100	78.5492	35.9400	65.2716	49.7300
03/14/17	65.7900	77.8936	35.6400	65.1921	49.8800
03/15/17	66.6800	79.2743	36.2800	66.3834	50.6300
03/16/17	66.0100	78.6485	35.9800	65.5396	50.1900
03/17/17	66.4700	79.0657	36.0100	66.1055	50.6700
03/20/17	66.1300	78.2711	35.5700	65.6786	50.3800
03/21/17	66.9800	79.0260	35.9600	66.8202	51.0100
03/22/17	67.4400	79.3240	36.3000	66.9691	50.7300
03/23/17	67.4500	79.6518	35.9600	67.0485	50.3700
03/24/17	67.7900	80.1683	36.1200	67.3662	50.4200
03/27/17	67.6900	79.9597	35.8400	66.7011	50.3000
03/28/17	67.8400	80.3570	35.6700	66.8500	50.0900
03/29/17	67.3900	79.8200	35.9300	66.6300	49.9500
03/30/17	67.1600	79.4900	35.7000	66.3600	49.6700
03/31/17	67.1300	79.6100	35.9800	66.3600	49.7800
04/03/17	67.1500	79.9500	35.8200	66.5400	49.9600
04/04/17	67.2900	79.9700	36.1400	66.9200	50.0200
04/05/17	67.8300	80.5900	36.0600	67.4800	50.4300
04/06/17	67.6200	80.4600	36.2700	67.3600	50.1300
04/07/17	67.3200	80.2500	35.9700	67.0100	49.6900
04/10/17	67.5000	80.0800	35.8100	67.0700	49.6700
04/11/17	67.3900	79.9900	36.1400	67.0100	49.3000
04/12/17	67.7900	80.8000	36.1900	67.5200	49.6600
04/13/17	67.5400	80.3100	35.9700	67.1400	49.4200
04/17/17	67.7400	80.6700	35.9000	67.4800	49.7800
04/18/17	67.9800	80.8700	35.7800	67.5300	49.9700
04/19/17	67.7400	80.6200	35.4600	67.5400	49.7500
04/20/17	67.4400	80.3100	35.0500	67.1500	49.7700
04/21/17	67.8600	80.6000	35.0300	67.3300	49.9800
04/24/17	67.9700	80.9400	35.5000	67.7900	50.1500
04/25/17	67.8600	80.8200	35.0800	67.6600	50.1600
04/26/17	67.6900	80.1900	34.9000	67.0000	49.9700
04/27/17	68.1000	80.3500	34.8400	67.2800	50.0700
04/28/17	67.8300	79.9700	34.6300	67.0500	49.8000

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**DCF Cost of Equity Estimate**

**Schedule D-1.4**  
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<b>Stock Prices (\$): <sup>1</sup></b>	<b><u>AEP</u></b>	<b><u>EIX</u></b>	<b><u>EXC</u></b>	<b><u>PCG</u></b>	<b><u>SO</u></b>
AVERAGE (\$)	64.0785	73.0394	34.2560	61.4554	49.3947
QUARTERLY DIV. <sup>2</sup> (\$)	0.5600	0.4800	0.3180	0.8700	0.4900
	0.5600	0.4800	0.3180	0.8700	0.4900
	0.5900	0.4800	0.3180	0.8700	0.4000
	0.5900	0.5425	0.3280	0.9830	0.4900
ANNUAL DIVIDEND (\$)	2.3000	1.9825	1.2820	3.5930	1.8700
YIELD	3.59%	2.71%	3.74%	5.85%	3.79%
REUTERS <sup>3</sup>	2.31%	4.36%	2.10%	3.59%	4.24%
YAHOO <sup>1</sup>	3.88%	4.31%	2.88%	3.82%	3.12%
DCF GROWTH FACTOR VALUE LINE <sup>2</sup> :	3.10%	4.34%	2.49%	3.71%	3.68%
'17 EARNINGS (\$)	3.85	4.25	2.80	3.90	3.10
'19-21 EARNINGS (\$)	4.75	5.00	3.50	4.50	3.75
	5.25%	4.06%	5.58%	3.58%	4.76%
VALUE LINE, "BOXED"	4.00%	6.00%	5.00%	9.50%	4.50%
VALUE LINE	4.63%	5.03%	5.29%	6.54%	4.63%
DCF GROWTH ESTIMATE	3.86%	4.68%	3.89%	5.12%	4.15%
DCF COST OF EQUITY ESTIMATI	9.26%	8.75%	9.40%	11.90%	9.53%
DCF AVERAGE	9.77%				
CAPM	8.88%				

Sources:

- 1 Yahoo Financial
- 2 Value Line Investment Guide
- 3 investor.reuters.com



**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**AEP Non-Constant DCF Calculation**

Schedule D-1.5  
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		<u>non const</u>			<u>const</u>
g=	3.86%		dcf=	9.26%	dcf= 7.59%
D=	\$2.30		P=	-\$64.08	g(e)= 6.37%

<u>Year</u>	<u>Growth Rate</u>	<u>Dividend</u>
1	3.86%	\$2.39
2	3.86%	\$2.48
3	3.86%	\$2.58
4	3.86%	\$2.68
5	3.86%	\$2.78
6	3.99%	\$2.89
7	4.11%	\$3.01
8	4.24%	\$3.14
9	4.36%	\$3.27
10	4.49%	\$3.42
11	4.61%	\$3.58
12	4.74%	\$3.75
13	4.86%	\$3.93
14	4.99%	\$4.13
15	5.11%	\$4.34
16	5.24%	\$4.56
17	5.36%	\$4.81
18	5.49%	\$5.07
19	5.62%	\$5.36
20	5.74%	\$5.67
21	5.87%	\$6.00
22	5.99%	\$6.36
23	6.12%	\$6.75
24	6.24%	\$7.17
25	6.37%	\$7.62
26	6.37%	\$8.11
27	6.37%	\$8.62
28	6.37%	\$9.17
29	6.37%	\$9.76
30	6.37%	\$10.38

This schedule is truncated; the calculation extends to 400 years to ensure the stability of the calculation.

g, D, P are from Schedule D-1.4  
g(e) is from Schedule D-1.9

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**EIX Non-Constant DCF Calculation**

Schedule D-1.6  
Page 1 of 1

	<u>non const</u>		<u>const</u>
g= 4.68%		dcf= 8.75%	
D= \$1.98		P= -\$73.04	
			dcf= 7.52%
			g(e)= 6.37%

<u>Year</u>	<u>Growth Rate</u>	<u>Dividend</u>
1	4.68%	\$2.08
2	4.68%	\$2.17
3	4.68%	\$2.27
4	4.68%	\$2.38
5	4.68%	\$2.49
6	4.77%	\$2.61
7	4.85%	\$2.74
8	4.94%	\$2.87
9	5.02%	\$3.02
10	5.10%	\$3.17
11	5.19%	\$3.34
12	5.27%	\$3.51
13	5.36%	\$3.70
14	5.44%	\$3.90
15	5.53%	\$4.12
16	5.61%	\$4.35
17	5.69%	\$4.59
18	5.78%	\$4.86
19	5.86%	\$5.15
20	5.95%	\$5.45
21	6.03%	\$5.78
22	6.11%	\$6.13
23	6.20%	\$6.51
24	6.28%	\$6.92
25	6.37%	\$7.36
26	6.37%	\$7.83
27	6.37%	\$8.33
28	6.37%	\$8.86
29	6.37%	\$9.43
30	6.37%	\$10.03

This schedule is truncated; the calculation extends to 400 years to ensure the stability of the calculation.

g, D, P are from Schedule D-1.4  
g(e) is from Schedule D-1.9

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**EXC Non-Constant DCF Calculation**

Schedule D-1.7  
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		<u>non const</u>			<u>const</u>		
g=	3.89%		dcf=	9.40%		dcf=	7.78%
D=	\$1.28		P=	-\$34.26		g(e)=	6.37%

<u>Year</u>	<u>Growth Rate</u>	<u>Dividend</u>
1	3.89%	\$1.33
2	3.89%	\$1.38
3	3.89%	\$1.44
4	3.89%	\$1.49
5	3.89%	\$1.55
6	4.01%	\$1.61
7	4.14%	\$1.68
8	4.26%	\$1.75
9	4.39%	\$1.83
10	4.51%	\$1.91
11	4.63%	\$2.00
12	4.76%	\$2.10
13	4.88%	\$2.20
14	5.00%	\$2.31
15	5.13%	\$2.43
16	5.25%	\$2.55
17	5.38%	\$2.69
18	5.50%	\$2.84
19	5.62%	\$3.00
20	5.75%	\$3.17
21	5.87%	\$3.36
22	6.00%	\$3.56
23	6.12%	\$3.78
24	6.24%	\$4.01
25	6.37%	\$4.27
26	6.37%	\$4.54
27	6.37%	\$4.83
28	6.37%	\$5.13
29	6.37%	\$5.46
30	6.37%	\$5.81

This schedule is truncated; the calculation extends to 400 years to ensure the stability of the calculation.

g, D, P are from Schedule D-1.4  
g(e) is from Schedule D-1.9

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**PCG Non-Constant DCF Calculation**

**Schedule D-1.8**  
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		<u>non const</u>			<u>const</u>		
<b>g=</b>	<b>5.12%</b>		<b>dcf=</b>	<b>11.90%</b>		<b>dcf=</b>	<b>11.27%</b>
<b>D=</b>	<b>\$3.59</b>		<b>P=</b>	<b>-\$61.46</b>		<b>g(e)=</b>	<b>6.37%</b>

<u>Year</u>	<u>Growth Rate</u>	<u>Dividend</u>
1	5.12%	\$3.78
2	5.12%	\$3.97
3	5.12%	\$4.17
4	5.12%	\$4.39
5	5.12%	\$4.61
6	5.18%	\$4.85
7	5.25%	\$5.11
8	5.31%	\$5.38
9	5.37%	\$5.67
10	5.43%	\$5.97
11	5.50%	\$6.30
12	5.56%	\$6.65
13	5.62%	\$7.03
14	5.68%	\$7.43
15	5.74%	\$7.85
16	5.81%	\$8.31
17	5.87%	\$8.80
18	5.93%	\$9.32
19	5.99%	\$9.88
20	6.06%	\$10.47
21	6.12%	\$11.11
22	6.18%	\$11.80
23	6.24%	\$12.54
24	6.30%	\$13.33
25	6.37%	\$14.18
26	6.37%	\$15.08
27	6.37%	\$16.04
28	6.37%	\$17.06
29	6.37%	\$18.15
30	6.37%	\$19.30

This schedule is truncated; the calculation extends to 400 years to ensure the stability of the calculation.

g, D, P are from Schedule D-1.4  
g(e) is from Schedule D-1.9

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**SO Non-Constant DCF Calculation**

Schedule D-1.9  
Page 1 of 1

		<u>non const</u>			<u>const</u>
<b>g=</b>	<b>4.15%</b>		<b>dcf=</b>	<b>9.53%</b>	<b>dcf= 8.10%</b>
<b>D=</b>	<b>\$1.87</b>		<b>P=</b>	<b>-\$49.39</b>	<b>g(e)= 6.37%</b>

<u>Year</u>	<u>Growth Rate</u>	<u>Dividend</u>
1	4.15%	\$1.95
2	4.15%	\$2.03
3	4.15%	\$2.11
4	4.15%	\$2.20
5	4.15%	\$2.29
6	4.27%	\$2.39
7	4.38%	\$2.49
8	4.49%	\$2.61
9	4.60%	\$2.73
10	4.71%	\$2.85
11	4.82%	\$2.99
12	4.93%	\$3.14
13	5.04%	\$3.30
14	5.15%	\$3.47
15	5.26%	\$3.65
16	5.37%	\$3.85
17	5.48%	\$4.06
18	5.59%	\$4.28
19	5.70%	\$4.53
20	5.81%	\$4.79
21	5.92%	\$5.08
22	6.04%	\$5.38
23	6.15%	\$5.71
24	6.26%	\$6.07
25	6.37%	\$6.46
26	6.37%	\$6.87
27	6.37%	\$7.30
28	6.37%	\$7.77
29	6.37%	\$8.26
30	6.37%	\$8.79

This schedule is truncated; the calculation extends to 400 years to ensure the stability of the calculation.

g, D, P are from Schedule D-1.4  
g(e) is from Schedule D-1.9

**Duke Energy**  
**Case No. 17-0032-EL-AIR**  
**Growth In U.S. Gross National Product, 1929 to 2016**

**Schedule D-1.10**  
**Page 1 of 2**

Year	GNP (\$Billion)	Change (\$Billion)	Growth %
1929	104.6		
1930	92.2	-12.40	-11.85%
1931	77.4	-14.80	-16.05%
1932	59.5	-17.90	-23.13%
1933	57.2	-2.30	-3.87%
1934	66.8	9.60	16.78%
1935	74.3	7.50	11.23%
1936	84.9	10.60	14.27%
1937	93.0	8.10	9.54%
1938	87.4	-5.60	-6.02%
1939	93.5	6.10	6.98%
1940	102.9	9.40	10.05%
1941	129.4	26.50	25.75%
1942	166.0	36.60	28.28%
1943	203.1	37.10	22.35%
1944	224.6	21.50	10.59%
1945	228.2	3.60	1.60%
1946	227.8	-0.40	-0.18%
1947	249.9	22.10	9.70%
1948	274.8	24.90	9.96%
1949	272.8	-2.00	-0.73%
1950	300.2	27.40	10.04%
1951	347.3	47.10	15.69%
1952	367.7	20.40	5.87%
1953	389.7	22.00	5.98%
1954	391.1	1.40	0.36%
1955	426.2	35.10	8.97%
1956	450.1	23.90	5.61%
1957	474.9	24.80	5.51%
1958	482.0	7.10	1.50%
1959	522.5	40.50	8.40%
1960	543.3	20.80	3.98%
1961	563.3	20.00	3.68%
1962	605.1	41.80	7.42%
1963	638.6	33.50	5.54%
1964	685.8	47.20	7.39%
1965	743.7	57.90	8.44%
1966	815.0	71.30	9.59%
1967	861.7	46.70	5.73%
1968	942.5	80.80	9.38%
1969	1,019.9	77.40	8.21%
1970	1,075.9	56.00	5.49%
1971	1,167.8	91.90	8.54%
1972	1,282.4	114.60	9.81%
1973	1,428.5	146.10	11.39%
1974	1,548.8	120.30	8.42%
1975	1,688.9	140.10	9.05%

**Duke Energy**  
**Case No. 17-0032-EL-AIR**  
**Growth In U.S. Gross National Product, 1929 to 2016**

**Schedule D-1.10**

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<b>Year</b>	<b>GNP (\$Billion)</b>	<b>Change (\$Billion)</b>	<b>Growth %</b>
1976	1,877.6	188.70	11.17%
1977	2,086.0	208.40	11.10%
1978	2,356.6	270.60	12.97%
1979	2,632.1	275.50	11.69%
1980	2,862.5	230.40	8.75%
1981	3,211.0	348.50	12.17%
1982	3,345.0	134.00	4.17%
1983	3,638.1	293.10	8.76%
1984	4,040.7	402.60	11.07%
1985	4,346.7	306.00	7.57%
1986	4,590.2	243.50	5.60%
1987	4,870.2	280.00	6.10%
1988	5,252.6	382.40	7.85%
1989	5,657.7	405.10	7.71%
1990	5,979.6	321.90	5.69%
1991	6,174.0	194.40	3.25%
1992	6,539.3	365.30	5.92%
1993	6,878.7	339.40	5.19%
1994	7,308.8	430.10	6.25%
1995	7,664.1	355.30	4.86%
1996	8,100.2	436.10	5.69%
1997	8,608.5	508.30	6.28%
1998	9,089.2	480.70	5.58%
1999	9,660.6	571.40	6.29%
2000	10,284.8	624.20	6.46%
2001	10,621.8	337.00	3.28%
2002	10,977.5	355.70	3.35%
2003	11,510.7	533.20	4.86%
2004	12,274.9	764.20	6.64%
2005	13,093.7	818.80	6.67%
2006	13,855.9	762.20	5.82%
2007	14,477.6	621.70	4.49%
2008	14,718.6	241.00	1.66%
2009	14,418.7	-299.90	-2.04%
2010	14,964.4	545.70	3.78%
2011	15,517.9	553.50	3.70%
2012	16,155.3	637.40	4.11%
2013	16,691.5	536.20	3.32%
2014	17,393.1	701.60	4.20%
2015	18,036.6	643.50	3.70%
2016	18,569.1	532.50	2.95%
<b>Average</b>			<b>6.37%</b>

Sources: ( 1 ) National Income and Product Accounts ( NIPA ) from the U. S. Bureau of Economic Analysis and Econostats; BEA Data; NIPA Index; Section 1. Domestic Product and Income Table 1.7.5 Relation of Gross Domestic Product, Gross National Product, Net National Product, National Income, and Personal Income. ( 2 ) U. S. Department of Commerce; Survey of Current of the United States Business and Historical Statistics

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Embedded Cost of Long-Term Debt**

**Date of Long Term Debt: June 30, 2016**  
**Work Paper Reference No(s):**

**Schedule D-3A**  
**Page 1 of 1**

Line No.	Debt Issue Type	Coupon Rate	Date Issued (Day/Mo/Yr)	Maturity Date (Day/Mo/Yr)	Principal Amount	Face Amount Outstanding	Unamortized (Discount) or Premium	Unamortized Debt Expense	Unamort. Loss On Reacquired Debt	Carrying Value (H=D+E-F-G)	Annual Interest Cost (*)	Amortization of Debt Items	Interest Payments Per Year	Compound Interest Rate	Compound Annual Interest	Annual Interest Cost (I)
1	<b>Duke Energy Ohio</b>															
2	Capital Leases:															
3	Meter Leases	4.372%	Various	31-Dec-19	24,257,654	7,916,167				7,916,167			12	4.460%	353,083	353,083
4	Other Long-Term Debt:															
5	Series	6.900%	1-Jun-95	1-Jun-25	150,000,000	150,000,000				150,000,000			1	6.900%	10,350,000	10,350,000
6	Series	5.400%	16-Jun-03	15-Jun-33	200,000,000	200,000,000				200,000,000			1	5.400%	10,800,000	10,800,000
7	Series	5.375%	16-Jun-03	15-Jun-33	200,000,000	200,000,000				200,000,000			1	5.375%	10,750,000	10,750,000
8	First Mortgage Bond	5.450%	18-Mar-09	1-Apr-19	450,000,000	450,000,000				450,000,000			1	5.450%	24,525,000	24,525,000
9	First Mortgage Bond	3.800%	6-Sep-13	1-Sep-23	300,000,000	300,000,000				300,000,000			1	3.800%	11,400,000	11,400,000
10	First Mortgage Bond	3.700%	23-Jun-16	15-Jun-46	250,000,000	250,000,000				250,000,000			1	3.700%	9,250,000	9,250,000
11	Loss on Reacquisition of Debt								3,303,667	(3,303,667)		445,504				445,504
12	Gain on Reacquisition of Debt								(300,759)	300,759		(41,484)				(41,484)
13	Unamortized discount, premium, and debt expense						(28,252,964)	5,181,611		(33,434,575)		2,076,807				2,076,807
14	Current Maturities					(3,126,482)	-	-	-	(3,126,482)					(150,574)	(150,574)
15	<b>Total Ohio Excl. Pollution Control Bonds</b>				<u>1,574,257,654</u>	<u>1,554,789,685</u>	<u>(28,252,964)</u>	<u>5,181,611</u>	<u>3,002,908</u>	<u>1,518,352,202</u>						<u>79,758,336</u>
16	<b>Duke Energy Kentucky (A)</b>															
17	Capital Leases:															
18	Meter Leases	4.635%	Various	31-Dec-19	7,451,447	2,280,672				2,280,672			12	4.734%	107,975	107,975
19	Erlanger Lease	8.634%	1-Oct-05	30-Sep-20	2,100,000	901,832				901,832			12	8.984%	81,021	81,021
20	Other Long-Term Debt:															
21	Series	3.420%	5-Jan-16	15-Jan-26	45,000,000	45,000,000				45,000,000			1	3.420%	1,539,000	1,539,000
22	Series	4.450%	5-Jan-16	15-Jan-46	50,000,000	50,000,000				50,000,000			1	4.450%	2,225,000	2,225,000
23	Series	4.650%	22-Sep-09	1-Oct-19	100,000,000	100,000,000				100,000,000			1	4.650%	4,650,000	4,650,000
24	Series	6.200%	10-Mar-06	10-Mar-36	65,000,000	65,000,000				65,000,000			1	6.200%	4,030,000	4,030,000
25	Long-term Commercial Pape	0.842%	15-Dec-14	30-Jan-20	25,000,000	25,000,000				25,000,000			12	0.845%	211,314	211,314
26	Loss on Reacquisition of Debt								1,415,589	(1,415,589)		250,905				250,905
27	Unamortized discount, premium, and debt expense						(362,733)	1,068,902		(1,431,635)		163,673				163,673
28	Current Maturities					(1,370,992)	-	-	-	(1,370,992)					(74,228)	(74,228)
29	<b>Total Kentucky Excl. Pollution Control Bonds</b>				<u>294,551,447</u>	<u>286,811,512</u>	<u>(362,733)</u>	<u>1,068,902</u>	<u>1,415,589</u>	<u>283,964,288</u>						<u>13,184,660</u>
30	<b>Total Ohio Consolidated Excl. Pollution Control Bonds</b>				<u>1,868,809,101</u>	<u>1,841,601,197</u>	<u>(28,615,697)</u>	<u>6,250,513</u>	<u>4,418,498</u>	<u>1,802,316,489</u>						<u>92,942,996</u>
31	Embedded Cost of Long-Term Debt - Excl. Pollution Control Bonds (I / H)															<u>5.16%</u>



**Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Typical Bill Comparison**

**Rate RS - Residential Service**

<b>Rate Code</b>	<b>Usage</b>	<b>Applicant Current</b>	<b>Applicant Proposed</b>	<b>Increase / (Decrease)</b>	<b>Percent Change</b>	<b>Staff Proposed</b>	<b>Increase / (Decrease)</b>	<b>Percent Change</b>
<b><u>RS - Summer</u></b>	300	43.66	52.02	8.36	19.15%	39.51	(4.15)	-9.52%
	400	54.44	61.77	7.33	13.47%	50.67	(3.77)	-6.92%
	500	65.22	71.52	6.30	9.66%	61.84	(3.38)	-5.18%
	800	97.56	100.77	3.21	3.29%	95.35	(2.21)	-2.27%
	1,000	119.13	120.28	1.15	0.96%	117.69	(1.44)	-1.21%
	1,500	173.10	169.10	(4.00)	-2.31%	173.60	0.50	0.29%
	2,000	227.08	217.93	(9.15)	-4.03%	229.52	2.44	1.07%
<b><u>RS - Winter</u></b>	300	43.66	52.02	8.36	19.15%	39.51	(4.15)	-9.52%
	400	54.44	61.77	7.33	13.47%	50.67	(3.77)	-6.92%
	500	65.22	71.52	6.30	9.66%	61.84	(3.38)	-5.18%
	800	97.56	100.77	3.21	3.29%	95.35	(2.21)	-2.27%
	1,000	119.13	120.28	1.15	0.96%	117.69	(1.44)	-1.21%
	1,500	163.29	159.29	(4.00)	-2.45%	163.79	0.50	0.31%
	3,000	295.33	275.88	(19.45)	-6.59%	301.65	6.32	2.14%
	6,000	558.95	508.59	(50.36)	-9.01%	576.91	17.96	3.21%

**Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Typical Bill Comparison**

**Rate ORH - Optional Residential Service with Electric Space Heating**

Rate Code	Demand	Usage	Applicant Current	Applicant Proposed	Increase / (Decrease)	Percent Change	Staff Proposed	Increase / (Decrease)	Percent Change
<b><u>ORH - Summer</u></b>		1,000	114.01	115.16	1.15	1.01%	112.58	(1.44)	-1.26%
		1,500	163.17	159.17	(4.00)	-2.45%	163.67	0.50	0.31%
		2,000	212.32	203.17	(9.15)	-4.31%	214.76	2.44	1.15%
		3,000	310.17	290.71	(19.45)	-6.27%	316.49	6.32	2.04%
<b><u>ORH - Winter</u></b>	20	1,000	117.91	128.51	10.60	8.99%	113.74	(4.17)	-3.53%
	20	2,000	191.00	201.14	10.14	5.31%	187.47	(3.53)	-1.85%
	20	3,000	263.64	273.31	9.67	3.67%	260.75	(2.89)	-1.10%
	20	6,000	456.39	465.12	8.73	1.91%	454.79	(1.61)	-0.35%

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Typical Bill Comparison**

**Rate RSLI - Residential Service - Low Income**

Rate Code	Usage	Applicant Current	Applicant Proposed	Increase / (Decrease)	Percent Change	Staff Proposed	Increase / (Decrease)	Percent Change
<b><u>RSLI - Summer</u></b>	300	39.34	48.02	8.68	22.06%	35.51	(3.84)	-9.75%
	400	50.12	57.77	7.65	15.26%	46.67	(3.45)	-6.88%
	500	60.90	67.52	6.62	10.87%	57.84	(3.06)	-5.02%
	800	93.25	96.77	3.53	3.78%	91.35	(1.90)	-2.03%
	1,000	114.81	116.28	1.47	1.28%	113.69	(1.12)	-0.98%
	1,500	168.78	165.10	(3.68)	-2.18%	169.60	0.82	0.49%
	2,000	222.76	213.93	(8.83)	-3.97%	225.52	2.76	1.24%
<b><u>RSLI - Winter</u></b>	300	39.34	48.02	8.68	22.06%	35.51	(3.84)	-9.75%
	400	50.12	57.77	7.65	15.26%	46.67	(3.45)	-6.88%
	500	60.90	67.52	6.62	10.87%	57.84	(3.06)	-5.02%
	800	93.25	96.77	3.53	3.78%	91.35	(1.90)	-2.03%
	1,000	114.81	116.28	1.47	1.28%	113.69	(1.12)	-0.98%
	1,500	158.97	155.29	(3.68)	-2.32%	159.79	0.82	0.52%
	3,000	291.01	271.88	(19.14)	-6.58%	297.65	6.64	2.28%
	6,000	554.63	504.59	(50.04)	-9.02%	572.91	18.28	3.30%

**Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Typical Bill Comparison**

**Rate CUR Common Use Residential Service**

<b>Rate Code</b>	<b>Usage</b>	<b>Applicant Current</b>	<b>Applicant Proposed</b>	<b>Increase / (Decrease)</b>	<b>Percent Change</b>	<b>Staff Proposed</b>	<b>Increase / (Decrease)</b>	<b>Percent Change</b>
<b><u>CUR - Summer</u></b>	300	44.57	52.93	8.36	18.76%	40.42	(4.15)	-9.32%
	400	55.65	62.98	7.33	13.17%	51.89	(3.77)	-6.77%
	500	66.74	73.04	6.30	9.44%	63.36	(3.38)	-5.06%
	800	99.99	103.20	3.21	3.21%	97.77	(2.21)	-2.22%
	1,000	122.16	123.31	1.15	0.94%	120.72	(1.44)	-1.18%
	1,500	175.37	171.37	(4.00)	-2.28%	175.87	0.50	0.29%
	2,000	228.58	219.43	(9.15)	-4.00%	231.02	2.44	1.07%
<b><u>CUR - Winter</u></b>	300	44.57	52.93	8.36	18.76%	40.42	(4.15)	-9.32%
	400	55.65	62.98	7.33	13.17%	51.89	(3.77)	-6.77%
	500	66.74	73.04	6.30	9.44%	63.36	(3.38)	-5.06%
	800	99.99	103.20	3.21	3.21%	97.77	(2.21)	-2.22%
	1,000	122.16	123.31	1.15	0.94%	120.72	(1.44)	-1.18%
	1,500	167.79	163.79	(4.00)	-2.38%	168.29	0.50	0.30%
	3,000	304.23	284.78	(19.45)	-6.39%	310.55	6.32	2.08%
	6,000	576.66	526.30	(50.36)	-8.73%	594.62	17.96	3.11%

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Typical Bill Comparison**

**Rate RS3P Residential Three-Phase Service**

<b>Rate Code</b>	<b>Usage</b>	<b>Applicant Current</b>	<b>Applicant Proposed</b>	<b>Increase / (Decrease)</b>	<b>Percent Change</b>	<b>Staff Proposed</b>	<b>Increase / (Decrease)</b>	<b>Percent Change</b>
<b><u>RS3P- Summer</u></b>	300	46.36	54.52	8.16	17.60%	42.01	(4.35)	-9.39%
	400	57.14	64.27	7.13	12.48%	53.17	(3.97)	-6.94%
	500	67.92	74.02	6.10	8.98%	64.34	(3.58)	-5.27%
	800	100.26	103.27	3.01	3.00%	97.85	(2.41)	-2.41%
	1,000	121.83	122.78	0.95	0.78%	120.19	(1.64)	-1.34%
	1,500	175.80	171.60	(4.20)	-2.39%	176.10	0.30	0.17%
	2,000	229.78	220.43	(9.35)	-4.07%	232.02	2.24	0.98%
<b><u>RS3P - Winter</u></b>	300	46.36	54.52	8.16	17.60%	42.01	(4.35)	-9.39%
	400	57.14	64.27	7.13	12.48%	53.17	(3.97)	-6.94%
	500	67.92	74.02	6.10	8.98%	64.34	(3.58)	-5.27%
	800	100.26	103.27	3.01	3.00%	97.85	(2.41)	-2.41%
	1,000	121.83	122.78	0.95	0.78%	120.19	(1.64)	-1.34%
	1,500	165.99	161.79	(4.20)	-2.53%	166.29	0.30	0.18%
	3,000	298.03	278.38	(19.65)	-6.59%	304.15	6.12	2.05%
	6,000	561.65	511.09	(50.56)	-9.00%	579.41	17.76	3.16%

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Typical Bill Comparison**

**Rate DS - Service At Secondary Distribution Voltage**

Rate Code	Demand	Usage	Applicant Current	Applicant Proposed	Increase / (Decrease)	Percent Change	Staff Proposed	Increase / (Decrease)	Percent Change
<b><u>DS</u></b>	30	6,000	767.97	765.39	(2.58)	-0.34%	751.85	(16.11)	-2.10%
	30	9,000	925.32	922.74	(2.58)	-0.28%	909.20	(16.11)	-1.74%
	30	12,000	1,079.28	1,076.70	(2.58)	-0.24%	1,063.17	(16.11)	-1.49%
	50	10,000	1,241.06	1,240.88	(0.18)	-0.01%	1,221.45	(19.61)	-1.58%
	50	15,000	1,503.31	1,503.13	(0.18)	-0.01%	1,483.70	(19.61)	-1.30%
	50	20,000	1,757.11	1,756.94	(0.18)	-0.01%	1,737.51	(19.61)	-1.12%
	75	15,000	1,832.43	1,835.25	2.82	0.15%	1,808.45	(23.98)	-1.31%
	75	20,000	2,091.88	2,094.70	2.82	0.13%	2,067.90	(23.98)	-1.15%
	75	30,000	2,602.31	2,605.13	2.82	0.11%	2,578.33	(23.98)	-0.92%
	100	20,000	2,420.99	2,426.82	5.82	0.24%	2,392.64	(28.35)	-1.17%
	100	30,000	2,939.89	2,945.72	5.82	0.20%	2,911.54	(28.35)	-0.96%
	100	40,000	3,447.50	3,453.33	5.82	0.17%	3,419.15	(28.35)	-0.82%
	300	60,000	7,129.53	7,159.35	29.82	0.42%	7,066.20	(63.33)	-0.89%
	300	90,000	8,686.23	8,716.05	29.82	0.34%	8,622.90	(63.33)	-0.73%
	300	120,000	10,209.06	10,238.88	29.82	0.29%	10,145.73	(63.33)	-0.62%
	500	100,000	11,838.06	11,891.88	53.81	0.45%	11,739.76	(98.30)	-0.83%
	500	200,000	16,970.61	17,024.43	53.81	0.32%	16,872.31	(98.30)	-0.58%
	500	300,000	21,990.01	22,043.83	53.81	0.24%	21,891.71	(98.30)	-0.45%

Duke Energy Ohio, Inc.  
Case No. 17-0032-EL-AIR  
Typical Bill Comparison

Rate EH - Optional Rate for Electric Space Heating

Rate Code	Usage	Applicant Current	Applicant Proposed	Increase / (Decrease)	Percent Change	Staff Proposed	Increase / (Decrease)	Percent Change
<u>EH - Winter</u>	9,400	952.03	963.47	11.44	1.20%	938.78	(13.25)	-1.39%
	23,600	2,297.20	2,330.35	33.15	1.44%	2,280.35	(16.85)	-0.73%
	37,800	3,646.79	3,701.77	54.98	1.51%	3,626.32	(20.47)	-0.56%

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Typical Bill Comparison**

**Rate DM - Secondary Distribution Service - Small**

<b>Rate Code</b>	<b>Demand</b>	<b>Usage</b>	<b>Applicant Current</b>	<b>Applicant Proposed</b>	<b>Increase / (Decrease)</b>	<b>Percent Change</b>	<b>Staff Proposed</b>	<b>Increase / (Decrease)</b>	<b>Percent Change</b>
<b><u>DM - Summer</u></b>	1	72	25.58	19.42	(6.16)	-24.08%	18.25	(7.33)	-28.66%
	1	144	34.66	28.29	(6.37)	-18.37%	27.84	(6.82)	-19.67%
	1	288	52.82	46.04	(6.78)	-12.84%	47.03	(5.79)	-10.97%
	5	360	61.90	54.91	(6.99)	-11.29%	56.62	(5.28)	-8.53%
	5	720	107.30	99.27	(8.03)	-7.48%	104.58	(2.72)	-2.53%
	5	1,440	198.09	187.99	(10.10)	-5.10%	200.50	2.41	1.22%
	10	720	107.30	99.27	(8.03)	-7.48%	104.58	(2.72)	-2.53%
	10	1,440	198.09	187.99	(10.10)	-5.10%	200.50	2.41	1.22%
	10	2,880	373.43	359.41	(14.02)	-3.75%	385.58	12.14	3.25%
	15	1,080	152.69	143.63	(9.07)	-5.94%	152.54	(0.15)	-0.10%
	15	2,160	288.81	276.64	(12.18)	-4.22%	296.35	7.54	2.61%
	15	4,320	449.23	435.21	(14.03)	-3.12%	462.23	13.00	2.89%
	15	6,480	556.74	543.75	(12.99)	-2.33%	571.60	14.86	2.67%
<b><u>DM - Winter</u></b>	1	72	24.55	19.31	(5.24)	-21.34%	17.08	(7.48)	-30.45%
	1	144	32.60	28.08	(4.53)	-13.88%	25.50	(7.11)	-21.80%
	1	288	48.70	45.60	(3.10)	-6.36%	42.33	(6.37)	-13.08%
	5	360	56.75	54.37	(2.39)	-4.20%	50.75	(6.00)	-10.58%
	5	720	97.00	98.18	1.18	1.22%	92.84	(4.16)	-4.29%
	5	1,440	177.50	185.82	8.32	4.69%	177.01	(0.48)	-0.27%
	10	720	97.00	98.18	1.18	1.22%	92.84	(4.16)	-4.29%
	10	1,440	177.50	185.82	8.32	4.69%	177.01	(0.48)	-0.27%
	10	2,880	333.39	355.19	21.80	6.54%	339.91	6.52	1.95%
	15	1,080	137.25	142.00	4.75	3.46%	134.93	(2.32)	-1.69%
	15	2,160	257.92	273.37	15.45	5.99%	261.12	3.20	1.24%
	15	4,320	409.19	430.98	21.79	5.33%	416.56	7.37	1.80%
	15	6,480	516.69	539.51	22.83	4.42%	525.92	9.23	1.79%



**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Typical Bill Comparison**

**Rate DP - Service at Primary Distribution Voltage**

<b>Rate Code</b>	<b>Demand</b>	<b>Usage</b>	<b>Applicant Current</b>	<b>Applicant Proposed</b>	<b>Increase / (Decrease)</b>	<b>Percent Change</b>	<b>Staff Proposed</b>	<b>Increase / (Decrease)</b>	<b>Percent Change</b>
<b><u>DP</u></b>	100	14,400	2,220.62	2,211.57	(9.05)	-0.41%	2,174.20	(46.42)	-2.09%
	100	28,800	2,974.60	2,965.56	(9.05)	-0.30%	2,928.18	(46.42)	-1.56%
	100	43,200	3,707.37	3,698.32	(9.05)	-0.24%	3,660.94	(46.42)	-1.25%
	200	28,800	4,176.55	4,166.29	(10.25)	-0.25%	4,109.24	(67.31)	-1.61%
	200	57,600	5,683.84	5,673.58	(10.25)	-0.18%	5,616.53	(67.31)	-1.18%
	200	86,400	7,149.36	7,139.11	(10.25)	-0.14%	7,082.05	(67.31)	-0.94%
	300	43,200	6,132.13	6,120.67	(11.46)	-0.19%	6,043.94	(88.19)	-1.44%
	300	86,400	8,393.07	8,381.61	(11.46)	-0.14%	8,304.88	(88.19)	-1.05%
	300	129,600	10,591.36	10,579.90	(11.46)	-0.11%	10,503.17	(88.19)	-0.83%
	500	72,000	10,043.31	10,029.43	(13.88)	-0.14%	9,913.35	(129.96)	-1.29%
	500	144,000	13,811.54	13,797.66	(13.88)	-0.10%	13,681.57	(129.96)	-0.94%
	500	216,000	17,475.35	17,461.47	(13.88)	-0.08%	17,345.39	(129.96)	-0.74%
	800	115,200	15,910.08	15,892.57	(17.50)	-0.11%	15,717.46	(192.61)	-1.21%
	800	230,400	21,939.24	21,921.73	(17.50)	-0.08%	21,746.62	(192.61)	-0.88%
	800	345,600	27,801.34	27,783.84	(17.50)	-0.06%	27,608.73	(192.61)	-0.69%
	1,000	144,000	19,821.25	19,801.33	(19.92)	-0.10%	19,586.87	(234.38)	-1.18%
	1,000	288,000	27,357.70	27,337.78	(19.92)	-0.07%	27,123.32	(234.38)	-0.86%
	1,000	432,000	34,685.33	34,665.42	(19.92)	-0.06%	34,450.95	(234.38)	-0.68%
	1,500	216,000	29,599.19	29,573.24	(25.96)	-0.09%	29,260.39	(338.81)	-1.14%
	1,500	432,000	40,903.87	40,877.91	(25.96)	-0.06%	40,565.06	(338.81)	-0.83%
	1,500	648,000	51,895.32	51,869.36	(25.96)	-0.05%	51,556.51	(338.81)	-0.65%
	3,000	432,000	58,933.02	58,888.94	(44.08)	-0.07%	58,280.95	(652.07)	-1.11%
	3,000	864,000	81,522.90	81,478.82	(44.08)	-0.05%	80,870.83	(652.07)	-0.80%
	3,000	1,296,000	103,234.50	103,190.42	(44.08)	-0.04%	102,582.43	(652.07)	-0.63%

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Typical Bill Comparison**

**Rate TS - Service at Transmission Voltage**

Rate Code	Demand	Usage	Applicant Current	Applicant Proposed	Increase / (Decrease)	Percent Change	Staff Proposed	Increase / (Decrease)	Percent Change
<b><u>TS</u></b>	1,000	200,000	17,757.21	17,757.21	0.00	0.00%	17,757.21	0.00	0.00%
	1,000	400,000	27,683.81	27,683.81	0.00	0.00%	27,683.81	0.00	0.00%
	2,500	500,000	44,078.16	44,078.16	0.00	0.00%	44,078.16	0.00	0.00%
	2,500	1,000,000	68,789.78	68,789.78	0.00	0.00%	68,789.78	0.00	0.00%
	5,000	1,000,000	87,841.53	87,841.53	0.00	0.00%	87,841.53	0.00	0.00%
	5,000	2,000,000	136,846.53	136,846.53	0.00	0.00%	136,846.53	0.00	0.00%
	10,000	2,000,000	174,950.03	174,950.03	0.00	0.00%	174,950.03	0.00	0.00%
	10,000	4,000,000	272,960.03	272,960.03	0.00	0.00%	272,960.03	0.00	0.00%
	10,000	6,000,000	368,857.03	368,857.03	0.00	0.00%	368,857.03	0.00	0.00%
	20,000	4,000,000	349,167.03	349,167.03	0.00	0.00%	349,167.03	0.00	0.00%
	20,000	8,000,000	545,187.03	545,187.03	0.00	0.00%	545,187.03	0.00	0.00%
	20,000	12,000,000	736,981.03	736,981.03	0.00	0.00%	736,981.03	0.00	0.00%
	40,000	16,000,000	1,089,641.03	1,089,641.03	0.00	0.00%	1,089,641.03	0.00	0.00%
	40,000	24,000,000	1,473,229.03	1,473,229.03	0.00	0.00%	1,473,229.03	0.00	0.00%
	80,000	32,000,000	2,178,549.03	2,178,549.03	0.00	0.00%	2,178,549.03	0.00	0.00%
	80,000	48,000,000	2,945,725.03	2,945,725.03	0.00	0.00%	2,945,725.03	0.00	0.00%
	160,000	64,000,000	4,356,365.03	4,356,365.03	0.00	0.00%	4,356,365.03	0.00	0.00%
	160,000	96,000,000	5,890,717.03	5,890,717.03	0.00	0.00%	5,890,717.03	0.00	0.00%

**Duke Energy Ohio, Inc.**  
**Case No. 17-0032-EL-AIR**  
**Typical Bill Comparison**

**Rate RTP - Real Time Pricing Program**

<b>Rate Code</b>	<b>Demand</b>	<b>Usage</b>	<b>Applicant Current</b>	<b>Applicant Proposed</b>	<b>Increase / (Decrease)</b>	<b>Percent Change</b>	<b>Staff Proposed</b>	<b>Increase / (Decrease)</b>	<b>Percent Change</b>
<b><u>DS-RTP</u></b>	100	20,000	2,143.63	2,109.78	(33.85)	-1.58%	2,109.67	(33.96)	-1.58%
	100	30,000	2,662.53	2,628.68	(33.85)	-1.27%	2,628.57	(33.96)	-1.28%
	100	40,000	3,170.14	3,136.29	(33.85)	-1.07%	3,136.18	(33.96)	-1.07%
	300	60,000	5,694.82	5,659.52	(35.30)	-0.62%	5,659.19	(35.64)	-0.63%
	300	90,000	7,251.52	7,216.22	(35.30)	-0.49%	7,215.89	(35.64)	-0.49%
	300	120,000	8,774.35	8,739.05	(35.30)	-0.40%	8,738.72	(35.64)	-0.41%
	500	100,000	9,246.02	9,209.27	(36.75)	-0.40%	9,208.70	(37.31)	-0.40%
	500	200,000	14,378.57	14,341.82	(36.75)	-0.26%	14,341.25	(37.31)	-0.26%
	500	300,000	19,397.97	19,361.22	(36.75)	-0.19%	19,360.65	(37.31)	-0.19%
<b><u>DP-RTP</u></b>	500	144,000	11,587.57	11,553.43	(34.14)	-0.29%	11,552.89	(34.68)	-0.30%
	500	216,000	15,251.38	15,217.24	(34.14)	-0.22%	15,216.70	(34.68)	-0.23%
	800	115,200	12,290.13	12,255.37	(34.76)	-0.28%	12,254.51	(35.62)	-0.29%
	800	230,400	18,319.29	18,284.53	(34.76)	-0.19%	18,283.67	(35.62)	-0.19%
	800	345,600	24,181.39	24,146.64	(34.76)	-0.14%	24,145.78	(35.62)	-0.15%
	1,000	144,000	15,270.65	15,235.49	(35.16)	-0.23%	15,234.41	(36.24)	-0.24%
	1,000	288,000	22,807.10	22,771.94	(35.16)	-0.15%	22,770.86	(36.24)	-0.16%
	1,000	432,000	30,134.74	30,099.57	(35.16)	-0.12%	30,098.50	(36.24)	-0.12%
	1,500	216,000	22,721.96	22,685.78	(36.18)	-0.16%	22,684.17	(37.80)	-0.17%
	1,500	432,000	34,026.64	33,990.46	(36.18)	-0.11%	33,988.84	(37.80)	-0.11%
	1,500	648,000	45,018.09	44,981.90	(36.18)	-0.08%	44,980.29	(37.80)	-0.08%
	3,000	432,000	45,075.90	45,036.65	(39.25)	-0.09%	45,033.42	(42.47)	-0.09%
	3,000	864,000	67,665.78	67,626.53	(39.25)	-0.06%	67,623.30	(42.47)	-0.06%
	3,000	1,296,000	89,377.38	89,338.13	(39.25)	-0.04%	89,334.90	(42.47)	-0.05%
<b><u>TS-RTP</u></b>	10,000	6,000,000	368,982.03	368,982.03	0.00	0.00%	368,982.03	-	0.00%
	20,000	4,000,000	349,292.03	349,292.03	0.00	0.00%	349,292.03	-	0.00%
	20,000	8,000,000	545,312.03	545,312.03	0.00	0.00%	545,312.03	-	0.00%
	20,000	12,000,000	737,106.03	737,106.03	0.00	0.00%	737,106.03	-	0.00%
	40,000	16,000,000	1,089,766.03	1,089,766.03	0.00	0.00%	1,089,766.03	-	0.00%
	40,000	24,000,000	1,473,354.03	1,473,354.03	0.00	0.00%	1,473,354.03	-	0.00%
	80,000	32,000,000	2,178,674.03	2,178,674.03	0.00	0.00%	2,178,674.03	-	0.00%
	80,000	48,000,000	2,945,850.03	2,945,850.03	0.00	0.00%	2,945,850.03	-	0.00%
	160,000	64,000,000	4,356,490.03	4,356,490.03	0.00	0.00%	4,356,490.03	-	0.00%
	160,000	96,000,000	5,890,842.03	5,890,842.03	0.00	0.00%	5,890,842.03	-	0.00%

**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

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**in**

**Case No(s). 17-0032-EL-AIR**

Summary: Staff Report Filed electronically filed by Mr. Jonathan J Borer on behalf of Staff