STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

VERIFIED PETITION OF DUKE ENERGY INDIANA, LLC FOR: (1) APPROVAL OF AN ADJUSTMENT TO ITS ELECTRIC SERVICE RATES THROUGH ITS TRANSMISSION, DISTRIBUTION AND STORAGE SYSTEM IMPROVEMENT CHARGE ("TDSIC") RATE SCHEDULE, STANDARD CONTRACT RIDER NO. 65; (2) AUTHORITY TO DEFER 20% OF THE APPROVED CAPITAL EXPENDITURES AND TDSIC COSTS FOR RECOVERY IN PETITIONER'S NEXT GENERAL RATE CASE; AND (3) APPROVAL OF PETITIONER'S UPDATED 7-YEAR ELECTRIC PLAN, PURSUANT TO IND. CODE § 8-1-39-9.	)	**CAUSE NO. 44720 TDSIC-01**

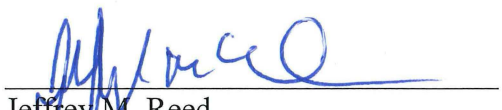
INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

REDACTED TESTIMONY OF

LEON A. GOLDEN – PUBLIC'S EXHIBIT NO. 2

JANUARY 11, 2017

Respectfully submitted,



Jeffrey M. Reed
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REDACTED TESTIMONY OF
OUCC WITNESS LEON A. GOLDEN
CAUSE NO. 44720 TDSIC-1
DUKE ENERGY INDIANA, LLC

NOTE: [redacted] INDICATES CONFIDENTIAL INFORMATION

I. INTRODUCTION

Q: Please state your name and business address.

A: My name is Leon A. Golden, and my business address is 115 West Washington Street, Suite 1500 South, Indianapolis, Indiana 46204.

Q: By whom are you employed and in what capacity?

A: I am employed by the Indiana Office of Utility Consumer Counselor ("OUCC"), as a Utility Analyst for the Resource Planning and Communications Division. My educational background, experience, and preparation for this testimony are detailed in Appendix LAG-1 attached to this testimony.

Q: What is the purpose of your testimony?

A: My testimony discusses Duke Energy Indiana, LLC's ("Duke" or "DEI") TDSIC Plan updates in this filing. I first provide an overview of the Settlement Agreement agreed to in Cause No. 44720. I then discuss my understanding of DEI's indirect costs and Allowance for Funds Used During Construction ("AFUDC") charges, followed by discussion of the cost support and project detail provided for its Plan Update. My testimony recommends that the Commission approve DEI's Plan Update in this filing.

II. TERMS OF SETTLEMENT

Q: Please explain the terms of the Settlement Agreement reached between DEI and the Settling Parties in DEI's 7-Year Plan filing (Cause No. 44720).

A: DEI's T&D Plan as filed in Cause No. 44720 consisted of capital expenditures of up to $1.613B and related O&M of up to $61.9M over the 7-Year Plan. In the Settlement Agreement, DEI agreed to reduce its TDSIC capital costs by $397M to no more than $1.408B, plus related O&M expenses.[1] The Settlement Agreement also stipulated that DEI would remove approximately $192M related to its proposed Advanced Metering Infrastructure ("AMI") project, plus approximately $175M in transmission and $30M in distribution capital improvement projects.[2] Furthermore, the Settlement Agreement allows DEI to use any project or program included in its original 7-Year Plan to make up its $1.408B in total capital expenditures, and allows the flexibility to move projects between years within the 7-Year Plan.[3] In addition, the Settling Parties agreed on the cumulative capital cost caps as shown in Table 1, with the ability to carry forward unspent dollars to a future Plan Year.

	2016	2017	2018	2019	2020	2021	2022	Total
Capital costs as filed	$ 113.9	$ 269.9	$ 318.2	$ 295.6	$ 270.1	$ 277.8	$ 259.6	$ 1,805.1
Remove AMI capital cost	$ (22.0)	$ (56.2)	$ (57.0)	$ (48.4)	$ (6.7)	$ (0.7)	$ (0.7)	$ (191.8)
Remove a portion of transmission capital cost	-	-	$ (43.8)	$ (43.8)	$ (43.8)	$ (43.8)	-	$ (175.0)
Remove a portion of distribution capital cost	-	-	$ (6.0)	$ (6.0)	$ (6.0)	$ (6.0)	$ (6.0)	$ (30.0)
Capital cost as adjusted	$ 91.8	$ 213.7	$ 211.4	$ 197.5	$ 213.7	$ 227.3	$ 252.9	$ 1,408.3
Cumulative capital cost as adjusted	$ 91.8	$ 305.5	$ 517.0	$ 714.4	$ 928.1	$ 1,155.4	$ 1,408.3	-

Table 1: Adjusted DEI T&D Plan Capital Cost (millions)[4]

[1] Duke Energy Indiana, IURC Cause No. 44720. 7-Year Plan and Transmission, Distribution and Storage Improvement Charge ("TDSIC") Settlement Agreement. Pages 1-2.
[2] *Id*. Page 2.
[3] *Id*.
[4] *Id*.

Q: Because TDSIC capital project cost recovery is capped in this Cause, does the OUCC still review actual and estimated project costs, and project changes?

A: Yes. Even though TDSIC cost recovery is capped, the OUCC wants to ensure that the projects in DEI's 7-Year Plan are planned, constructed, and put into service in a cost efficient manner that delivers the maximum value to DEI's ratepayers.

III. INDIRECT COSTS AND AFUDC

Q: Does the OUCC have any concerns with the high percentage increases in indirect costs and/or AFUDC for some transmission and distribution projects?

A: No. During my initial review, I had concerns with large percentage increases in indirect costs and/or AFUDC being attributed to some transmission and distribution projects. After discussing these increased costs with DEI staff and reviewing responses to data requests, I understand how these charges are allocated to DEI's capital projects. I discuss below why I concluded that the indirect costs and AFUDC as allocated to the T&D projects in this Plan Update are reasonable. The details of the overall project cost increases are discussed later in my testimony by project.

Q: Please explain how indirect costs are allocated to DEI's capital projects.

A: Indirect costs are project costs that cannot be directly assigned to a project. DEI allocated indirect cost estimates to TDSIC project cost estimates by using an estimated annual indirect cost rate.[5] As explained by DEI, indirect overhead costs are charged into an allocation pool, then fully cleared out each month by being allocated to O&M or capital projects.[6] DEI explained that for both its distribution and transmission groups, the indirect overheads pertain to certain work groups that

[5] See Attachment LAG-1, *DEI Response to OUCC Data Request 1.2*.
[6] *Id*.

provide "overall support to both O&M and capital work, but which the direct charging of the numerous individual direct work activities is impractical or impossible."[7] The actual indirect rate applied to each project varies monthly based on the amount of indirect costs to be allocated and the number of projects to absorb those costs. If a greater number of projects are available to absorb the indirect cost pool, each project is allocated a smaller amount of indirect costs; conversely, if there are fewer projects available to absorb the indirect cost pool, each project will absorb a greater amount of indirect costs.

Q: Please explain how AFUDC is allocated to DEI's capital projects.

A: AFUDC estimates for TDSIC projects were included based on estimated project costs and project length.[8] DEI explained that "AFUDC begins when eligible charges are posted to capital projects and continues as long as work continues on a progressive basis," stopping when the project goes into service or when charges to the project stop for six months, with the exception of Major Projects.[9] AFUDC charges in excess of initially estimated amounts for Distribution System Circuit Improvement, Distribution System Substation Improvement, and Transmission System Substation Improvement projects were due primarily to advanced engineering costs that began the clock on AFUDC charges.[10] This advanced engineering is reasonable given the voluminous amount of engineering work that must be performed to ensure that project schedules are kept on track.

[7] *Id*.
[8] *Id.*
[9] *Id*.
[10] See Attachments LAG-2, LAG-3 and LAG-4, *DEI Response to OUCC Data Request 1.3, 1.4 and 1.5.*

IV. TRANSMISSION/DISTRIBUTION POLE GROUND LINE TREATMENT

Q: Have there been any changes to DEI's Ground Line Treatment ("GLT") inspection based projects?

A: Yes. DEI's capital plan for 2016 shows increases in its distribution GLT program from $[redacted] to an updated amount of $[redacted], and its transmission GLT program from $[redacted] to an updated amount of $[redacted].[11] In addition, since filing its initial 7-Year Plan, DEI has changed inspection vendors, GLT program construction vendors, and introduced an internal accounting change in the way O&M and capital are allocated relative to its GLT program.

Q: Does the OUCC have any concerns with the changes to the GLT program?

A: No. DEI explained that it changed inspection vendors from 2015 and 2016, and the new vendor is more rigorous with its pole inspection criteria.[12] This more rigorous approach to the inspection process has contributed to a higher than average pole failure rate.

In addition, DEI suspended its primary contract construction vendor responsible for completing the GLT work as a result of serious safety violations. The new construction vendor is conducting work on a time and equipment based rate, which has contributed to an increase in contracted rates.[13]

Finally, the internal accounting change is a result of pole-top damage charges being moved from O&M to capital.[14] The wood and the preservatives at pole tops are susceptible to excessive degradation by ultraviolet radiation, water,

[11] Petitioner's Confidential Exhibit 1-C (WHF). Pages 1-2.
[12] Petitioner's Exhibit No. 1. Page 17, line 20 – page 18, line 12.
[13] Petitioner's Exhibit No. 1. Page 18, lines 15 – 21.
[14] Petitioner's Exhibit No. 1. Page 19, lines 1 – 3.

chemicals, and temperature. Over time, the affected wood will become weaker and more prone to erosion from weathering. In addition, moisture, temperature variations, and the effects of gravity tend to disproportionately affect pole tops. As the wood preservatives at the top of the pole are degraded, cracks and checks develop near the top surface and expose the untreated heartwood to the elements and fungi. Decayed pole tops can quickly lead to split or weakened pole tops, leading to problems with the hardware the pole is meant to support.

V. TRANSMISSION PROJECT OVERVIEW

Q: Have there been any changes to any of DEI's Transmission System Line Improvement projects?

A: Yes. Actual costs for Transmission System Line Improvement projects show costs of $[redacted] for the first six months of 2016, below the estimated amount of $[redacted] before the application of contingency.[15] The Transmission System Line Improvement program for all of 2016 is now estimated at $[redacted] versus an initial estimate of $[redacted],[16] an overall change in capital spending of 5.5%. The biggest change in DEI's Transmission System Line Improvement projects is attributable to O&M increases of 403%, from an initial estimate of $[redacted] to an updated estimate of $[redacted],[17] of which $[redacted] of that increase is attributable to the Transmission GLT program as discussed previously.

Q: Have there been changes to any of DEI's Transmission System Substation Improvement projects?

[15] Petitioner's Exhibit 2-A (DEB).
[16] Petitioner's Confidential Exhibit 1-C (WHF), page 2.
[17] Petitioner's Confidential Exhibit 2-B (DEB), page 2.

A: Yes. There are two Transmission System Substation Improvement projects that have increased by 20% or greater before the application of contingency. The *Batesvl 345 138kV TrfSwi Rpl TDSIC* project has increased by 33.8% and the *Crane Metr Repl 69kV Pots TDSIC* project has increased by 27.1%.

Q: Was DEI able to provide sufficient explanation for these cost increases?

A: Yes. DEI provided exhibits showing that the *Batesvl 345 138kV TrfSwi Rpl TDSIC* and the *Crane Metr Repl 69kV Pots TDSIC* project increases were reduced to 5% and 3%, respectively, after contractor credits were made to the projects after the June 30, 2016 cut-off date.[18]

Q: Did your review identify any concerns with the transmission project changes included in DEI's 7-Year Plan Update in this filing?

A: No. DEI estimates that overall 2016 spending for its transmission projects is on track to be approximately $[redacted] below its original estimate.[19]

VI. DISTRIBUTION PROJECT OVERVIEW

Q: Have there been changes to any of DEI's Distribution System Circuit Improvement projects?

A: Yes. The below Distribution System Circuit Improvement projects have experienced changes in estimated costs.

- *Limited Access Road Crossing Upgrade* project estimates have shown capital cost increases of 29.6% for the first six months of 2016, from $[redacted] to $[redacted],[20] and a total of 8.8% for the 2016 plan year, from

[18] Petitioner's Confidential Exhibit 2-C (DEB), page 3-4.
[19] Petitioner's Confidential Exhibit 1-C (WHF), page 2.
[20] Petitioner's Confidential Exhibit 1-J (WHF), page 1.

$[redacted] to $[redacted].[21] Mr. Fowler explained that these projects are to ensure compliance with Indiana Department of Transportation ("INDOT") standards at places where overhead distribution power lines cross limited access roadways.[22] He further explained that exact measurements cannot be obtained from the ground during initial project engineering and field evaluations, rather, must be measured from a bucket truck upon project execution. Upon further evaluation DEI determined that additional clearances were needed in order to comply with the latest National Electric Code ("NEC") requirements.[23]

- *Sectionalization* project estimates have shown O&M cost increases of 110% for the first six months of 2016, increasing from an estimated $[redacted] to an actual cost of $[redacted][24] This increase in O&M spending corresponds to an increase in capital costs from an estimated $[redacted] to an actual spend for the first six months of 2016 of $[redacted].[25] DEI explained in its supporting exhibits that sectionalization work typically results in multiple set-ups for short-duration work; therefore, contractors are charging time and equipment rates rather than standard labor rates.[26] Mr. Fowler explained that initial estimates were made with contractor sourcing contract rates that

[21] Petitioner's Confidential Exhibit 1-C (WHF), page 1.
[22] Petitioner's Exhibit 1, page 21, lines 5-8.
[23] Petitioner's Exhibit 1, page 21, lines 12-15.
[24] Petitioner's Confidential Exhibit 1-I (WHF), page 3.
[25] Petitioner's Confidential Exhibit 1-H (WHF), page 2.
[26] *Id*.

were established for longer duration projects, and that DEI is attempting to negotiate contracts for this type of work for future project years to mitigate these higher costs.[27]

- *Surface Mounted Equipment Follow-Up ("SMEI")* project estimates have shown capital cost increases of 178% for the first six months of 2016,[28] and a total of 59.8% for the 2016 plan year.[29] DEI's SMEI program is focused on inspecting and replacing equipment enclosure integrity, concrete or fiberglass pad integrity, safety/clearance signage, locking mechanism integrity, and general safe operations of pad-mounted equipment – transformers, switchgear, meter panels, and switching cabinets. Mr. Fowler explains that the initial estimates were based on historical actual costs where the cost of the transformer was pre-capitalized and not included in the project cost; however, the transformer cost is now included in the project cost due to an internal accounting change, resulting in the program cost increases.[30] Certain equipment purchased in bulk or kept in inventory can be capitalized prior to installation. The internal accounting change made by DEI has resulted in these distribution transformers not being pre-capitalized, rather, capitalized at the project level when they are placed into service.

[27] Petitioner's Exhibit 1, page 22, lines 4 – 14.
[28] Petitioner's Confidential Exhibit 1-J (WHF), page 1.
[29] Petitioner's Confidential Exhibit 1-C (WHF), page 1.
[30] Petitioner's Exhibit 1, page 22, line 17 – page 23, line 10.

- *Capacitor Changeouts* project estimates have shown O&M cost increases of 323% for the first six months of 2016, increasing from an estimated $[redacted] to an actual cost of $[redacted].[31] This increase in O&M spending results in a decrease in capital costs from an estimated $[redacted] to an actual spend for the first six months of 2016 of $[redacted].[32] DEI explained in its supporting exhibits that the initial estimates for this program were completed with the assumption that entire capacitor banks would be replaced; however, as the inspections are completed it is often determined that only specific components require replacement.[33] This targeted inspection and replacement process has resulted in the increased O&M spending and decreased capital spending.
- *Capacitor Cutout / Oil to Vacuum Switch Replacement* project estimates have shown O&M cost increases of 34.9% for the first six months of 2016, increasing from an estimated $[redacted] to an actual cost of $[redacted].[34] This increase in O&M spending results in a decrease in capital costs from an estimated $[redacted] to an actual spend for the first six months of 2016 of $[redacted].[35] DEI explained in its supporting exhibits that the initial estimates for this program were based on a "system snap shot in time" and as the

[31] Petitioner's Confidential Exhibit 1-I (WHF), page 1.
[32] Petitioner's Confidential Exhibit 1-H (WHF), page 1.
[33] *Id*.
[34] Petitioner's Confidential Exhibit 1-I (WHF), page 1.
[35] Petitioner's Confidential Exhibit 1-H (WHF), page 1.

engineering work for this program progressed, it was determined that some components did not need replaced.[36]

- *General Switchgear Replacement* project estimates have shown O&M cost increases of 192% for the first six months of 2016, increasing from an estimated $[redacted] to an actual cost of $[redacted].[37] This increase in O&M spending results in a decrease in capital costs from an estimated $[redacted] to an actual spend for the first six months of 2016 of $[redacted].[38] DEI explained in its supporting exhibits that fewer labor hours and material was needed at some locations which resulted in total capital costs being less than originally estimated.[39]
- *Hydraulic Recloser Replacement* project estimates have shown O&M cost increases of 59% for the first six months of 2016, increasing from an estimated $[redacted] to an actual cost of $[redacted].[40] This increase in O&M spending results in a decrease in capital costs from an estimated $[redacted] to an actual spend for the first six months of 2016 of $[redacted].[41]

Q: Have there been changes to any of DEI's Distribution System Substation Improvement projects?

A: Yes. There are two Distribution System Substation Improvement projects that have increased by 20% or greater before the application of contingency. The *Harodsbg*

[36] *Id.*
[37] Petitioner's Confidential Exhibit 1-I (WHF), page 2.
[38] Petitioner's Confidential Exhibit 1-H (WHF), page 1.
[39] *Id.*
[40] Petitioner's Confidential Exhibit 1-I (WHF), page 2.
[41] Petitioner's Confidential Exhibit 1-H (WHF), page 2.

13834 Tranruptr TDSIC project has increased by 21.8%, from $[redacted] to $[redacted] and the *Kok Delco Transrupter Rpl* project has increased by 23.2%, from $[redacted] to $[redacted].[42] The overall change to 2016 projects in DEI's Distribution System Substation Improvement plan shows a decrease of 3.8%.[43]

Q: Was DEI able to provide sufficient explanation for these cost increases?

A: Yes. DEI provided exhibits showing that the increases for both the *Harodsbg 13834 Tranruptr TDSIC* and the *Kok Delco Transrupter Rpl* projects is due primarily to indirect and AFUDC project charges.[44] In addition, the *Kok Delco Transrupter Rpl* project required additional material and labor to replace contaminated soil in order to be in compliance with updated soil testing and removal standards.[45]

Q: Did your review identify any concerns with the distribution project changes included in DEI's 7-Year Plan Update in this filing?

A: No. DEI estimates that overall 2016 spending for its distribution projects is on track to be approximately $[redacted] below its original estimate.[46]

VII. CONCLUSIONS AND RECOMMENDATIONS

Q: Please summarize your recommendations.

A: Based on my testimony, the OUCC recommends the Commission approve DEI's 7-Year Plan Update.

Q: Does this conclude your testimony?

A: Yes, it does.

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[42] Petitioner's Confidential Exhibit 2-B (DEB), page 1.
[43] Petitioner's Confidential Exhibit 2-B (DEB), page 2.
[44] Petitioner's Confidential Exhibit 2-C (DEB), page 2.
[45] *Id.*
[46] Petitioner's Confidential Exhibit 1-C (WHF), page 1.

APPENDIX TO TESTIMONY OF
OUCC WITNESS LEON A. GOLDEN

Q: Please describe your educational background and experience.

A: I graduated from Purdue University School of Engineering and Technology - Indianapolis in 2011, with a Bachelor of Science degree in Mechanical Engineering. In October of 2011, I passed the Fundamentals of Engineering exam administered by the Indiana Professional Licensing Agency.

I worked as a civil engineering technician from 2005-2008, performing materials testing in field and laboratory settings, conducting analysis of mechanical properties of soils, and working in accordance with a variety of testing standards. From 2009-2014, I worked as an engineer co-op and project engineer in the electric utility industry in a number of different areas, including Customer Projects, Substation Relaying and Protection, and Standards and Code Compliance. I have also worked as a project engineer on nearly fifty distributed generation solar projects, ranging from 20 kW/ac to 10 MW/ac.

I have participated in several IEEE technical workshops, including Smart Grid Cyber-Security, Smart Distribution Systems, and Wind Farm Collector System Design workshops. I have attended New Mexico State University – Center for Public Utilities' Basic Regulatory Training for the Electric Industry in New Mexico. In addition, I have attended MISO training courses on several topics, including Locational Marginal Price Mechanics, Financial Transmission Rights Mechanics, MISO Market Settlement Calculations, and Resource Adequacy Mechanics.

Q: Have you previously testified before this Commission?

A: Yes. I have testified in a number of Causes before this Commission.

Q: Please describe the review and analysis you conducted in order to prepare your testimony.

A: I reviewed and analyzed Duke Energy Indiana, LLC's case-in-chief, including the pre-filed direct testimony and supporting attachments in this cause. I reviewed all exhibits, the provided workpapers, and Petitioner's responses to data requests.

After reviewing Duke Energy Indiana's plan update, I had discussions with DEI staff regarding changes to some project actual costs and estimates, and the purposes of the variances between Commission approved estimates and the final cost of the completed projects. I reviewed the projects included in the plan to ensure all project cost estimate changes had adequate explanation and support. I also attended pre-filing meetings with DEI employees to discuss plan updates.

OUCC
IURC Cause No. 44720 TDSIC-1
Data Request Set No. 1
Received: December 9, 2016

OUCC 1.2

Request:

Please explain in detail how indirect costs and AFUDC are developed, accounted for, and assigned to each individual project.

Response:

Indirect Costs

As indicated in the witness testimony of Mr. Fowler and Mr. Broadhurst, the Transmission and Distribution indirect overhead costs represent project costs that cannot practically be directly assigned to a project. For planning purposes, the TDSIC project estimates utilized an estimated annual rate for the indirect overhead costs. The actual indirect overhead rates applied to projects may vary on a monthly basis based upon the timing and amount of overhead costs that are to be allocated, as well as by the timing and amount of the projects that are absorbing the indirect overheads. However, through the course of a year, the actual indirect overhead rate for each project grouping tends to average to the estimated annual rate utilized for planning.

A summary of the Distribution (Attachment OUCC 1.2-A) and Transmission (Attachment OUCC 1.2-B) Indirect Overhead Processes are attached. In general, the indirect overhead costs are charged into an allocation pool using FERC account 186. The costs are then fully cleared out each month by allocating to O&M or capital projects (and their respective FERC accounts) on the basis of direct labor charges incurred that month. This method of fully clearing out the allocation pool monthly rather than using a set overhead percentage applied to all projects for the year can therefore result in differing percentages of overheads being applied to different projects. These indirect overhead process documents further outline the purpose of the pools, provide a description of what functional and/or support costs are includable in the pools, as well as describe how the allocation process works.

AFUDC

Allowance for Funds used During Construction ("AFUDC") represent the financing costs of a project while the project is under construction. For planning purposes, the TDSIC project estimates included an estimate for AFUDC based upon project costs and project length. The actual amount of AFUDC applied to a project may vary based upon the

actual cost and/or duration of a project and the actual AFUDC rates during the project's construction.

Duke Energy Indiana uses its asset accounting system (Power Plant) to systematically apply AFUDC to applicable projects. A summary of the process is included below.

- Duke Energy Indiana (DEI) calculates the AFUDC rate based on the formula prescribed by FERC –Electric Plant Instruction No. 3 (17)a using the Company's short-term debt, long-term debt, equity, and construction work in progress (CWIP) amounts and rates. DEI has FERC authorization to calculate the rate monthly. See Workpaper 24-DLD for the calculation of the January through June 2016 AFUDC rates.

- The AFUDC rate is entered into Power Plant (Duke Energy's Project/Asset Management System). The capital projects that are eligible for AFUDC calculation are coded with "AFUDC Eligible code" of "Yes". Power Plant calculates AFUDC monthly based on the coding of the capital projects; and creates AFUDC entries (Debit to the Capital Project-CWIP Account 107 with Resource Types 99970-Debt and 99971-Equity).

- AFUDC Application:
    - AFUDC applies to CWIP (account 107)
    - AFUDC begins when eligible charges are posted to capital projects and continues as long as work continues on a progressive basis
    - If charges stop for 6 months, Power Plant will stop calculating AFUDC until charges resume, except Major Projects
    - AFUDC calculates to the day before in-service date. AFUDC stops when the project is in-service
    - If an in-service date is entered late, Power Plant auto-reverses the extra AFUDC accrued after the in-service date
    - AFUDC is not accrued on:
        - Blanket projects
        - Special projects with construction period < 30 days
        - Contract retention (Resource type 62000)
        - Property tax accruals
        - Accruals (Resource type 35000)
        - RWIP-Cost of Removal/Salvage (account 108.6)
        - Preliminary survey and investigation charges (account 183)
        - Plant held for future use (account 105)
        - Suspended projects

Distribution Overhead Allocations

I. Indirect Pool

A. Background and Purpose

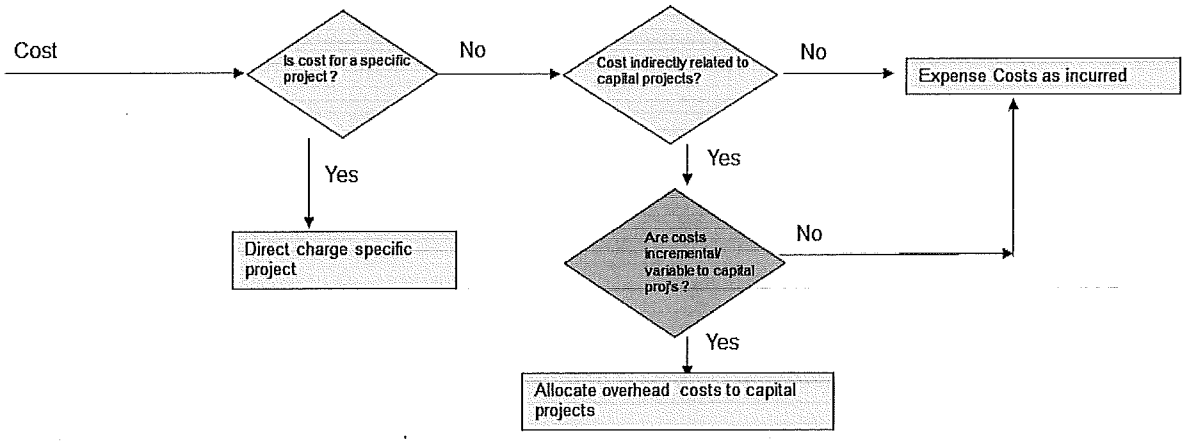
The Distribution organization includes certain work groups, which provide, over-reaching overall support to both O&M and capital direct work, but which the direct charging of the numerous individual direct work activities is impractical or impossible. Distribution considers these support groups to be overhead.

The purpose of the pool is to systematically allocate defined overhead costs (the "pool") over direct charged field labor (the "basis"), both O&M and capital. For the purpose of this document "pool" and "basis" shall be defined below:

"Pool" *– the place where costs are captured that will later be allocated to various projects*
"Basis" *– the costs that the pools will be allocated over.*

All costs incurred can be classified as:
1) Direct Costs in which case they are directly charged to a specific capital or O&M project
2) Overheads in which they are charged into an indirect or overhead pool

Direct charging is desired wherever possible. If someone cannot directly attribute their time to a specific activity, then they charge their time into an overhead pool. The decision chart below is used to aid in the applicability of overhead accounting.



The below outline was reviewed to ensure consistency with the Duke Energy Capitalization Guidelines. Specifically, the design, charging philosophy, determination of incremental costs, and review of costs to ensure they are directly in support of capital were supported by FERC Electric Plant instructions on Components of Construction Cost and Overhead Construction Costs (CFR 18 part 101 Electric Plant Instructions section 3 - 4); FERC Operating Expense Instructions (CFR part 101 Operating Expense Instructions section 1); and pages 31 - 41, 93 - 96 of the Duke Energy Capitalization Guidelines.

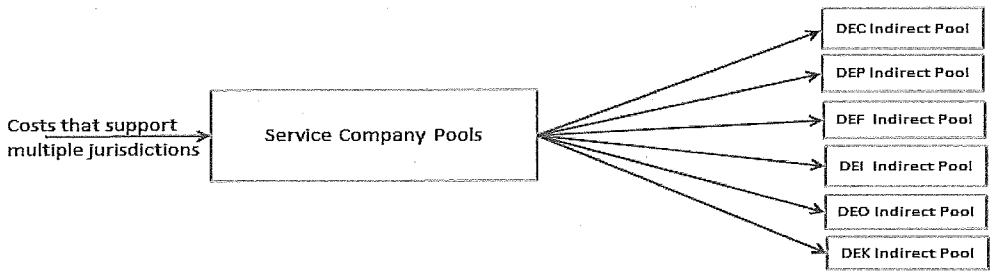
B. Pool Design

Distribution has two types of indirect pools:

1) Direct Charge Pools – Charges into Distribution indirect pools can be made directly to the pools using the OUs shown in the table below. Direct charge pools can only be used when the charge is from a utility company resp center and it only supports the utility pool being charged (Ex. Payco Resp Center 802 can only charge Oper Unit VIAF)

Utility	Operating Unit
DEO	VIAO
DEK	VIAK
DEI	VIAI
DEC	8048
DEP	VIAC
DEF	VIAF

2) Service Company Pools – For costs that fall outside the requirements for direct charge pool charging, then Service Company pools should be charged. Service company pools are designed for those that support the Distribution enterprise and are not region specific to one region. Service company pools spread the costs that support multiple jurisdictions into the individual jurisdictional pools (see diagram below). The allocation basis for allocating service company costs for Distribution is currently by line mile and distribution plant construction expenditures.



The Distribution pools can contain all types of costs including labor, fleet, contract labor, employee expenses, etc. The amount of costs allocated is determined by the charges into the pool. If the charges into the pool decrease, then the dollars allocated out will decrease and vice-versa as the pool clears each month. The split between O&M and capital for the dollars allocated out is determined directly by the direct charge field labor posted to the general ledger. If for example, 100% of the field labor charged O&M projects in a given month, then the pool would allocate 100% to O&M. In reality, the split between O&M and capital tends to stay within a band from month to month since the charging of field labor between O&M and capital is relatively consistent.

C. Basis

The Distribution pool is for the support of the Distribution field organizations (Construction and Maintenance (C&M), Resource and Project Management (R&PM), Engineering, and PQ/R&I) regardless of where charges from the organization go on a TO basis.

The pool allocates over labor and contract Labor (Resource Types 11000, 11001, 11002, 12000, 12001, 12004, 13000, 6XXXXX) rolling under C&M, Engineering, R&PM, and PQ/R&I responsibility center nodes. The allocation only follows O&M and Capital accounts and the business unit must be in the same jurisdiction as the pool (does not follow affiliate charges).

D. Overhead Allocation Support Groups

Support groups should share the following common characteristics:

a. They work on many different activities (jobs) which make direct charging difficult and cost ineffective
b. Their work supports both Capital and O&M
c. Capital projects cannot occur without their work efforts
d. Their work supports the field workforce

Note that the above activities, roles, and responsibilities are identified in the Duke Energy Capitalization Guidelines and FERC Electric Plant instructions on Components of Construction Cost and Overhead Construction Costs (CFR 18 part 101 Electric Plant Instructions section 3 - 4) FERC as acceptable overhead costs of a capital and O&M project.

E. Overhead Allocation Pool Groups within Distribution Organization

Internal Distribution Groups	Role of Group	Charges to Indirect pools
Construction and Maintenance Field Operations	Responsible for the construction, operation and maintenance of Distribution facilities	Supervision, Admin labor/expenses
Resource & Project Mgmt		
PQ/R&I		
Engineering and Construction Planning		
Distribution Operations		
VP Staff/Other	Provides overall direction and management of support to the department and all of its activities including making decision regarding work practices, design of facilities, operating practices, etc. providing direct support to both the O&M and capital programs of Distribution.	Labor , Misc charges including pool clearing for incentive true-ups, fleet, etc

F. Overhead Allocation Pool Groups outside Distribution Organization

External Groups	Role of Group	Charges to Indirect pools
Operations Support	Responsible for contract and labor strategies, skills training, IT, and process improvement for Distribution	All staff/oversight costs
Customer Call Center	Responsible for interfacing with the customer over the phone, internet or by other means excluding in person	Builder line cost designed to interface with customers requesting service to new premises
Corporate IT	Maintenance/enhancement of Distribution applications, IT chargebacks for servers, networks, support, etc	All IT chargebacks for general, non specific support. Charges for specific projects are made to those projects. Charges for work station leases are direct charged to O&M.
Environmental, Health, and Safety	Provides Distribution with safety and environmental support services	Support costs which can not be direct charged to a specific project
Distribution Finance	Responsible for budgeting, accounting support, financial reporting, and financial analysis activities for Distribution. Because the work performed by this group involves various tasks comprised of both capital and O&M items "en masse" it is not practical or possible to quantify or identify the amount of time spent individually on O&M vs capital work.	All staff/oversight costs
HR-Exec Incentives	Incentives booked by HR for executives which are not loaded using the normal incentive allocation steps	Executive Incentives for Distribution
Real Estate	Provides Distribution with land real estate services around acquisitions for Distribution Projects, both Right-of-ways and purchases and land surveying	Support costs which can not be direct charged to a specific project

Transmission Overhead Allocations

I. Indirect Pool

A. Background and Purpose

The Transmission organization includes certain work groups, which provide, over-reaching overall support to both O&M and capital direct work, but which the direct charging of the numerous individual direct work activities is impractical or impossible. Transmission considers these support groups to be overhead.

The purpose of the pool is to systematically allocate defined overhead costs (the "pool") over direct charged field labor (the "basis"), both O&M and capital. For the purpose of this document "pool" and "basis" shall be defined below:

"Pool" *– the place where costs are captured that will later be allocated to various projects*
"Basis" *– the costs that the pools will be allocated over.*

All costs incurred can be classified as:

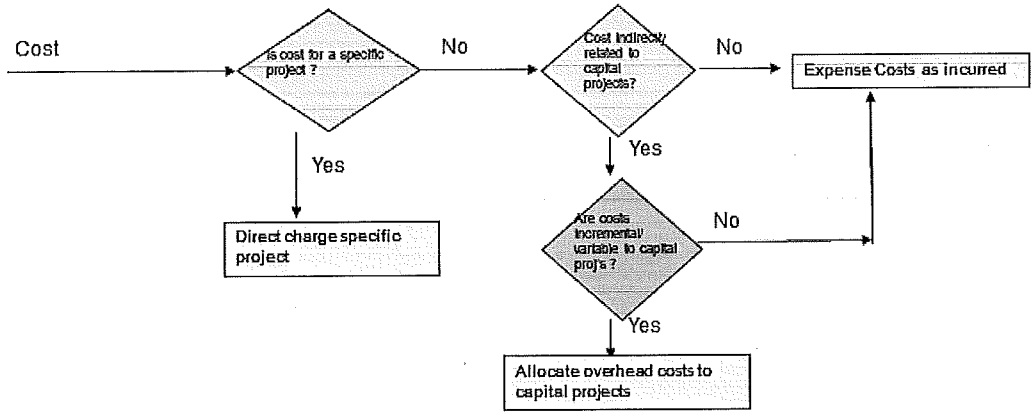
1) Direct Costs in which case they are directly charged to a specific capital or O&M project.
2) Overheads in which they are charged into an indirect or capital overhead pool.

Direct charging is desired wherever possible. If someone cannot directly attribute their time to a specific activity, then they charge their time into an overhead pool.

Support groups should share the following common characteristics:

a. They work on many different activities (jobs) which make direct charging difficult and cost ineffective.
b. Their work supports both Capital and O&M.
c. Capital projects cannot occur without their work efforts (incremental cost).
d. Their work supports the field workforce.

The decision chart below is used to aid in the applicability of overhead accounting.



2016 Transmission Allocation Pool Overview

B. Pool Design

Transmission has two types of indirect pools:

1) Direct Charge Pools – Charges into Transmission indirect pools can be made directly to the pools using the OUs shown in the table below. Direct charge pools can only be used when the charge is from a utility company resp center and it only supports the utility pool being charged (Ex. Pay Company Resp Center 802 can only charge Operating Unit TIAF).

Utility	Op Unit	Proj/Act	BU	Alloc to	Account
DEO	TIAO	MGTED/X	75023	Indirect	0186120
DEK	TIAK	MGTED/X	75084	Indirect	0186120
DEI	TIAI	MGTED/X	75115	Indirect	0186120
DEC	TIAD	MGTED/X	20017	Indirect	0186120
DEP	TIAP	MGTED/X	50126	Indirect	0186120
DEF	TIAF	MGTED/X	50226	Indirect	0186120

2) Service Company Pools – For costs that fall outside the requirements for direct charge pool charging, then Service Company pools should be charged. Service company pools are designed for those that support the Transmission enterprise and are not region specific to one region. Service company pools spread the costs that support multiple jurisdictions into the individual jurisdictional pools. The allocation method for allocating service company costs among jurisdictions for Transmission is currently by line mile.

The Transmission pools can contain all types of costs including labor, fleet, contract labor, employee expenses, etc. The amount of costs allocated is determined by the charges into the pool. If the charges into the pool decrease, then the dollars allocated out will decrease and vice-versa as the pool clears each month. The split between O&M and capital for the dollars allocated out is determined directly by the direct charge field labor posted to the general ledger. If for example, 100% of the field labor charged O&M projects in a given month, then the pool would allocate 100% to O&M. In reality, the split between O&M and capital tends to stay within a band from month to month since the charging of field labor between O&M and capital is relatively consistent.

C. Basis

The Transmission pool is for the support of the Transmission field organizations (Construction and Maintenance (C&M), Resource and Project Management (R&PM), and Engineering) regardless of where charges from the organization go on a TO basis.

The pool allocates over labor and contract Labor (Resource Types 11000, 11001, 11002, 12000, 12001, 12004, 13000, 6XXXXX) rolling under C&M, Engineering, and R&PM responsibility center nodes. The allocation only follows O&M and Capital accounts and the business unit must be in the same jurisdiction as the pool (does not follow affiliate charges).

There are two Transmission groups that do not charge any of their costs into the overhead pools nor do they receive any allocations from the pools. These groups are not included since they are self-sufficient organizations with little or no support or interaction with the remainder of Transmission.

1) Vegetation Management – Responsible for the maintenance of trees along the companies Transmission lines through dedicated contractors.
2) System Operations – Responsible for the operation of the bulk Transmission system, generation dispatch, and control area dispatch.

2016 Transmission Allocation Pool Overview

D. Overhead Allocation Pool Groups within Transmission Organization

Internal Transmission Groups	Role of Group	Charges to Indirect pools
Construction and Maintenance Field Operations	Responsible for the construction, operation and maintenance of Transmission facilities	Supervision, Admin labor/expenses
Work Management	Plans and manages the utilization of all Transmission resources in executing the O&M and Capital work activities.	All costs
Planning	Responsible for planning work that supports both O&M and capital through grid analysis and modeling.	All staff/oversight costs
Transmission Engineering	Responsible for the design and construction project management for major Transmission projects, development of construction design and material standards, and resolution of large customer power quality issues	Supervision, Admin labor/expenses
Asset Management	Responsible for the design, prioritization and execution of Transmission Reliability & Integrity programs (O&M and Capital), Transmission system planning and load studies and prioritization/scoping of major capital projects	All staff/oversight costs
Operation Services	Change management, training, human performance, work methods, operations excellence	All costs
VP Staff/Other	Provides overall direction and management of support to the department and all of its activities including making decision regarding work practices, design of facilities, operating practices, etc. providing direct support to both the O&M and capital programs of Transmission.	Labor (Excl Sys Ops VP), Misc charges including pool clearing for incentive true-ups, fleet, etc.

*****Supervision/Management*** *– These employees directly manage and supervise the Transmission workforce. They are responsible for the construction, operation and maintenance of the Transmission system. Their roles include the supervision of employees constructing capital projects by assisting in the organization of the work, communicating expectations, assisting in problem solving where required, and ensuring that the capital projects are built effectively and safely according to Duke Energy's construction and safety practices. Supervision and Management are involved with a large number of projects on a daily basis making it necessary to use an allocation process to assign their costs to individual projects.*

*****Admin*** *– These employees are responsible for processing the various documents and computer records necessary to initiate, design, schedule, execute and close each individual work request. The admin groups are responsible for the entry of data into systems, monitoring of it and the correction data as necessary. Specific activities include setting up capital projects, handling project documents, entering/processing invoices for approval and payment, closing projects upon completion, etc. Admin employees are involved with a large number of projects on a daily basis making it necessary to use an allocation process to assign their costs to individual projects.*

2016 Transmission Allocation Pool Overview

***Technical Support Groups** – These employees are responsible for the management of major capital projects, from ensuring that resources, both labor and materials, are available, prioritizing work, and assisting with resolution of technical issues, to insuring that the work performed by both company and contract crews are in compliance with all company standards. Each capital project must be planned out in order that materials and labor resources are available to construct it according to the time line laid out for each project. These employees are involved with a large number of projects on a daily basis making it necessary from a practical standpoint to use an allocation process to assign their costs to the individual projects.*

E. Overhead Allocation Pool Groups outside Transmission Organization

External Groups	Role of Group	Charges to Indirect pools
Project Controls	Monitoring, analysis, projecting related to special projects (predominately capital, but also associated O&M).	All costs
Corporate IT	Maintenance/enhancement of Transmission applications, IT chargebacks for servers, networks, support, etc	All IT chargebacks for general, non specific support. Charges for specific projects are made to those projects. Charges for work station leases are direct charged to O&M.
Environmental, Health, and Safety	Provides Transmission with Safety and environmental support services as it relates to capital and O&M work.	Support costs which cannot be direct charged to a specific project
Transmission Finance	Responsible for budgeting, accounting support, financial reporting, and financial analysis activities for Transmission. Because the work performed by this group involves various tasks comprised of both capital and O&M items "en masse" it is not practical or possible to quantify or identify the amount of time spent individually on O&M vs capital work.	All staff/oversight costs
Human Resources	Includes incentives booked by HR for executives which are not loaded using the normal incentive allocation steps. Also includes Talent Acquisition - recruiting employees who will perform both capital and O&M work.	Executive Incentives for Transmission, all costs for Talent Acquisition
Real Estate	Provides Transmission with land real estate services around acquisitions for Transmission Projects, both Right-of-ways and purchases and land surveying	Support costs which can not be direct charged to a specific project
Other Misc	Misc	Misc charges including pool clearing for incentive true-ups, fleet, etc

OUCC
IURC Cause No. 44720 TDSIC-1
Data Request Set No. 1
Received: December 9, 2016

OUCC 1.3

Request:

Referring to **CONFIDENTIAL** Workpaper 2-WHF, AFUDC costs for Distribution System Circuit Improvement projects have increased. Please explain in detail the cause(s) of these increases and explain how Duke Energy could not have anticipated these increases.

Response:

The estimate for AFUDC for all Distribution System Circuit Improvement projects in service through June 30, 2016 was $25,493 and the actuals through June 30, 2016 were $39,037. The total dollar amount of the variance is marginal when compared to the $16.5 million estimate of Distribution System Circuit Improvement capital projects placed into service through June 30, 2016.

The primary cause for this increase is due to advanced engineering costs triggering AFUDC charges beginning earlier than historically anticipated. Please see the testimony of William H. Fowler at Petitioner's Exhibit 1, p. 15, line 19 to p. 20, line 13. Duke Energy Indiana could not have anticipated this increase because the historical actuals the filing was based on could not have captured the additional AFUDC generated due to the advanced engineering cost.

Witness: Howard Fowler

OUCC
IURC Cause No. 44720 TDSIC-1
Data Request Set No. 1
Received: December 9, 2016

OUCC 1.4

Request:

Referring to **CONFIDENTIAL** Workpaper 2-WHF, Indirect and AFUDC costs for Distribution System Substation Improvement projects have increased. Please explain in detail the cause(s) of these increases and explain how Duke Energy could not have anticipated these increases.

Response:

Indirect costs:

Distribution System Substation Improvement Indirect costs were estimated to be $749,367 and the actuals through June 30, 2016 were $798,898. This is a 7% variance, which Duke Energy Indiana considers reasonable and in line with accurate estimating practices.

Please see the response to OUCC 1.2 for an explanation of how indirect costs are calculated. As expected, some indirect costs will go up and some will go down on a project by project basis. Indirect costs represent project costs that cannot be directly assigned to a project. Indirect costs are charged to an allocation pool as incurred. Each month the indirect cost pool is systematically allocated out to all projects based on actual direct project charges for the month. Monthly fluctuations in allocated costs will occur when the timing and volume of indirect charges (pool) are not consistent with the timing and volume of direct charges. For estimating purposes, the Company utilizes an annual average rate to assign indirect costs to each project. Actual vs. Estimate indirect variances generally reflect the difference between the estimated annual average rate and the actual monthly clearing rate.

AFUDC costs:

Please see the response to OUCC 1.2 for an explanation of how AFUDC is calculated. Duke Energy Indiana estimated $34,825 for Distribution Substation AFUDC. The total AFUDC cost through June 30, 2016 for Distribution Substation capital projects was $51,021, or a difference of $16,196. This variance is marginal, and within the range of normal estimating practices when the AFUDC is reviewed on a per project basis.

The primary cause for this increase is due to advanced engineering costs triggering AFUDC charges beginning earlier than historically anticipated. Duke Energy Indiana

could not have anticipated this increase because the historical actuals the filing was based on could not have captured the additional AFUDC generated due to the advanced engineering cost.

Witness: Donald Broadhurst

OUCC
IURC Cause No. 44720 TDSIC-1
Data Request Set No. 1
Received: December 9, 2016

OUCC 1.5

Request:

Referring to **CONFIDENTIAL** Workpaper 2-WHF, Indirect and AFUDC costs for Transmission System Substation Improvement projects have increased. Please explain in detail the cause(s) of these increases and explain how Duke Energy could not have anticipated these increases.

Response:

Indirect Costs:

The estimate for Transmission Substation indirect costs for all Transmission Substation capital projects was $422,871 and the actuals were $660,265. This variance is within the range of normal estimating practices when indirect costs are reviewed on a per project basis.

Please see the response to OUCC 1.2 for an explanation of how indirect costs are calculated. As expected, some indirect costs will go up and some will go down on a project by project basis. Indirect costs represent project costs that cannot be directly assigned to a project. Indirect costs are charged to an allocation pool as incurred. Each month the indirect cost pool is systematically allocated out to all projects based on actual direct project charges for the month. Monthly fluctuations in allocated costs will occur when the timing and volume of indirect charges (pool) are not consistent with the timing and volume of direct charges. For estimating purposes, the Company utilizes an annual average rate to assign indirect costs to each project. Actual vs. Estimate indirect variances generally reflect the difference between the estimated annual average rate and the actual monthly clearing rate.

AFUDC Costs:

The estimate for Transmission Substation AFUDC for all projects was $23,332 and the actual costs were $47,332. This variance is marginal, and within the range of normal estimating practices when AFUDC is reviewed on a per project basis.

The primary cause for this increase is due to advanced engineering costs triggering AFUDC charges beginning earlier than historically anticipated. Duke Energy Indiana could not have anticipated this increase because the historical actuals the filing was based

on could not have captured the additional AFUDC generated due to the advanced engineering cost.

Witness: Donald Broadhurst

AFFIRMATION

I affirm, under the penalties for perjury, that the foregoing representations are true.

Leon A. Golden
Utility Analyst
Indiana Office of Utility Consumer Counselor

January 11, 2017
Date

Cause No. 44720 TDSIC-01
Duke Energy Indiana, LLC

CERTIFICATE OF SERVICE

This is to certify that a copy of the ***Indiana Office of Utility Consumer Counselor Redacted Testimony of Leon A. Golden*** has been served upon the following parties of record in the captioned proceeding by electronic service on January 11, 2017.

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