

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

VERIFIED PETITION OF SOUTHERN INDIANA GAS AND)
ELECTRIC COMPANY d/b/a VECTREN ENERGY)
DELIVERY OF INDIANA, INC., FOR: (1) APPROVAL OF AN)
ADJUSTMENT TO ITS ELECTRIC SERVICE RATES)
THROUGH ITS TRANSMISSION, DISTRIBUTION, AND)
STORAGE SYSTEM IMPROVEMENT CHARGE ("TDSIC"))
RATE SCHEDULE; (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, ALL)
PURSUANT TO IND. CODE § 8-1-39-9)

**CAUSE NO. 44910
TDSIC 2**

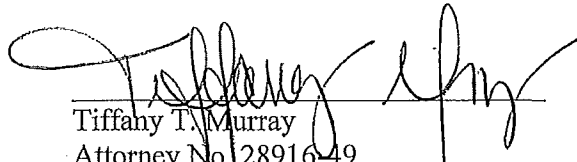
INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

REDACTED TESTIMONY OF

ANTHONY A. ALVAREZ – PUBLIC'S EXHIBIT NO. 2

APRIL 2, 2018

Respectfully submitted,



Tiffany T. Murray
Attorney No. 28916-49
Deputy Consumer Counselor

TESTIMONY OF OUCC WITNESS ANTHONY A. ALVAREZ
CAUSE NO. 44910 TDSIC-2
SOUTHERN INDIANA GAS AND ELECTRIC COMPANY D/B/A VECTREN
ENERGY DELIVERY OF INDIANA, INC.

I. INTRODUCTION

1 **Q: Please state your name, business address, and employment capacity.**

2 A: My name is Anthony A. Alvarez, and my business address is 115 West Washington
3 Street, Suite 1500 South, Indianapolis, Indiana 46204. I am employed as a Utility
4 Analyst in the Electric Division of the Indiana Office of Utility Consumer
5 Counselor ("OUCC"). I describe my educational background and preparation for
6 this filing in Appendix AAA to my testimony.

7 **Q: Have you previously testified before the Indiana Utility Regulatory**
8 **Commission ("Commission")?**

9 A: Yes. I have testified in a number of cases before the Commission, including electric
10 utility base rate cases, environmental tracker cases, Transmission, Distribution, and
11 Storage System Improvement Charge ("TDSIC") cases, and applications for
12 Certificates of Public Convenience and Necessity ("CPCN").

13 **Q: What is the purpose of your testimony?**

14 A: I provide my opinion, from an engineering perspective, on Vectren Energy Delivery
15 of Indiana, Inc.'s ("Petitioner" or "Vectren") request for Commission approval of
16 updates to the cost estimates of its 7-Year Plan for eligible transmission,
17 distribution and storage system improvements ("TDSIC Plan" or "Plan") in this
18 TDSIC proceeding ("TDSIC-2"). I address whether the TDSIC-2 Plan is consistent
19 with the Settlement Agreement in Cause No. 44910 ("Settlement Agreement"). I
20 provide an overview of Vectren's TDSIC-2 Plan update, including the overall

1 progress of the projects in the Plan and the annual and cumulative cost caps. I
2 discuss Vectren's proposal to move or reschedule certain projects affecting the
3 annual cost caps in this Plan. I also review the projects Vectren proposes to cancel
4 or substitute into the Plan. I provide the results of my analysis and evaluation of the
5 driving factors of certain project cost variances. Ultimately, I recommend the
6 Commission approve Vectren's TDSIC-2 Plan update and associated project cost
7 estimates.

II. TDSIC-2 PLAN UPDATE, PROGRESS, AND COST CAPS REVIEW

8 **Q: What is the status of Vectren's total and annual cost caps in its TDSIC-2 Plan**
9 **update?**

10 **A:** Vectren's TDSIC-2 Plan update remains within the \$446.5 million total capital cost
11 cap approved by the Commission's final order in Cause No. 44910 ("Order").¹ As
12 explained in more detail below, Vectren's filing in this Cause shows a proposed
13 increase to its annual cost caps in years 2017 through 2019 and a proposed decrease
14 to its cost caps in years 2020 through 2023.²

15 Table 1 below shows a comparison of the annual cost caps as authorized in
16 Cause Nos. 44910 and 44910 TDSIC-1 against the proposed annual cost caps in
17 this TDSIC filing.

¹ See Petitioner's Exhibit No. 1, Attachment SAH-2 in this Cause.

² The Settlement Agreement subjects the annual caps to a 5% tolerance for each year of the TDSIC Plan. See Cause No. 44910, Settlement Agreement at pp. 6 – 7.

1

Table 1 – Annual Cost Cap Comparison

Year	Approved in <u>44910</u>	Approved in <u>TDSIC-1</u>	Proposed in <u>TDSIC-2³</u>	<u>Difference</u>
2017	\$38,153,000	\$38,153,000	\$40,131,488	\$1,978,488
2018	53,925,000	53,925,000	57,335,759	3,410,759
2019	64,723,000	64,723,000	66,495,773	1,772,773
2020	68,098,000	68,098,000	62,953,171	(5,144,829)
2021	77,535,000	77,535,000	76,575,444	(959,556)
2022	80,838,000	80,838,000	80,509,287	(328,713)
2023	<u>63,236,000</u>	<u>63,236,000</u>	<u>62,507,078</u>	<u>(728,922)</u>
				\$
7-Year Total	\$446,508,000	\$446,508,000	\$ 446,508,000	-

2 **Q: How many projects does Vectren propose to move or reschedule in its TDSIC-**
3 **2 Plan update?**

4 **A:** Vectren's proposed TDSIC Plan-2 update includes moving or rescheduling thirty-
5 seven projects to different years within the Plan.⁴ Vectren's Exhibit No. 1,
6 Attachment SAH-3 (Confidential) shows the net effect of the rescheduled projects
7 on the annual cost caps for each affected year within the Plan. Table 2 below
8 summarizes the net effect per year of the rescheduled projects.

9

Table 2 – Net Effect per Year of Projects Moved within the Plan⁵

Year	Net Effect of <u>Projects Moved</u>
2017	\$ 1,980,841
2018	3,412,309
2019	1,775,084
2020	(5,142,362)
2021	(957,870)
2022	(327,190)
2023	(740,812)

10 The dollar amounts in Table 2 do not equal the corresponding year's dollar amount
11 shown in the "Difference" column of Table 1 due to factors other than project

³ Cause No. 44910 TDSIC-2, Petitioner's Exhibit No. 1, Attachment SAH-2.

⁴ Petitioner's Exhibit No. 1 at 25, lines 13 – 15.

⁵ Table 2 data source: Petitioner's Exhibit No. 1, Attachment SAH-3 (Confidential).

1 movements. However, a comparison illustrates how rescheduling projects affects
2 the caps of the corresponding years as the project moves in and out. The magnitude
3 of the rescheduled project estimates alone can explain much of the increases,
4 decreases, and adjustments Vectren proposed for the annual caps of its TDSIC-2
5 Plan.

6 **Q: Vectren witness Mr. Steven A. Hoover identified cancelled projects and**
7 **substitution projects Vectren moved into the Plan. Did these projects affect the**
8 **annual caps?**

9 A: No. cancelled projects and substitution projects moved into the Plan do not affect
10 or make changes to the annual caps of the Plan.⁶ I will discuss these projects later
11 in my testimony.

12 **Q: Do you have any concerns regarding the update, progress and proposed cost**
13 **cap adjustments in Vectren's TDSIC-2 Plan update?**

14 A: No. The Settlement Agreement permits annual cap adjustments for projects moved
15 to a different year in the Plan, and it states, “[a]ny amount above the annual cap in
16 a given year will operate as an offset to the available cap variance within the three
17 year rolling period.”⁷ Although Vectren made project movements that increased the
18 caps in years 2017 through 2019 of the Plan, its current projections show a 7-Year
19 total spend that does not exceed the approved \$446.5 million cap.⁸

⁶ Petitioner's Exhibit No. 1 at 25, lines 8 – 9.

⁷ Cause No. 44910, Settlement Agreement at pp. 7 - 8.

⁸ Petitioner's Exhibit No. 1 at 25, lines 17 – 21.

III. CANCELLED AND SUBSTITUTION PROJECTS REVIEW

1 **Q: Did you review the ten projects cancelled by Vectren?**

2 A: Yes. I reviewed the ten cancelled projects Mr. Hoover identified and listed in Table
3 SAH-2 of his testimony.⁹ I also evaluated the reasons why Vectren cancelled these
4 projects from its TDSIC-2 Plan. In addition to the information that Mr. Hoover
5 provided in his testimony, OUCC staff also discussed the cancelled projects during
6 a tech-to-tech meeting in Evansville, IN with Vectren's TDSIC team on March 8,
7 2018.

8 As Vectren went through its normal engineering process for its TDSIC Plan,
9 it evaluated upcoming individual projects, tightened its cost estimates, conducted
10 field inspections, and updated project information. Vectren found six (6) of the ten
11 (10) projects already had gang-operated air break switches ("GOAB") that it
12 replaced outside the TDSIC program.¹⁰ It completed one project, a three-phase
13 circuit tie, as a non-TDSIC transmission project in late 2016.¹¹ Finally, field
14 inspections revealed three of the projects already had "dead front" switchgears
15 instead of a "live-front" switchgear that needed replacement.¹² The cancelled
16 projects were for years 2017 and 2018 with a total estimate of approximately
17 \$488,513. Table 3 below summarizes the total amount of cancelled projects per
18 year in the TDSIC-2 Plan.

⁹ Petitioner's Exhibit No. 1, Table SAH-2, pp. 11 through 12.

¹⁰ *Id.*

¹¹ *Id.*

¹² *Id.*

1

Table 3 – Total Amount per Year of Cancelled Projects¹³

Year	<u>Total Amount of Cancelled Projects</u>
2017	\$ [REDACTED]
2018	458,801
Total	\$ 488,513

2 **Q: Do you have concerns regarding the cancelled projects in the TDSIC Plan?**

3 A: No. I do not have any concerns regarding the ten (10) projects Vectren cancelled in
4 its TDSIC-2 Plan.

5 **Q: Please describe briefly the substitution projects in the TDSIC Plan.**

6 A: In accordance with the Settlement Agreement, Vectren can move eligible
7 substitution projects into the TDSIC Plan up to a total capital cost of \$67 million.¹⁴
8 Although these substitution projects carry their own project estimates, if Vectren
9 moves a project into the Plan, it cannot affect or adjust the cost cap of the affected
10 year or exceed the \$446.5 million overall cap.¹⁵ In effect, the net amount from
11 cancelled projects and cost estimate decreases of a particular year becomes an
12 available amount that may fund any substitution projects moved into that year.¹⁶
13 Mr. Hoover proposed moving eight substitution projects into Plan years 2018
14 through 2023.¹⁷

15 **Q: Please describe your evaluation of the eight (8) substitution projects Vectren**
16 **proposes to move into the Plan.**

¹³ Table 3 data source: Petitioner's Exhibit No. 1, Table SAH-2: Cancelled Projects.

¹⁴ See Section 5 of the Settlement Agreement, Page 5.

¹⁵ *Id.*

¹⁶ Petitioner's Exhibit No. 1 at 8, lines 28 – 32.

¹⁷ See Table SAH-1: "Substitution Projects Moved into the Plan" in Mr. Hoover's testimony, pages 9 – 10.

1 A: I evaluated Mr. Hoover's information for each of the eight (8) substitution projects
2 identified in Table SAH-1 of his testimony.¹⁸ I discussed the details of these
3 projects in the March 8, 2018 tech-to-tech meeting with Vectren and obtained the
4 original work order document for each project from Vectren. In addition, I verified
5 that these projects were not among those identified as ineligible projects in Section
6 4a-e of the Settlement Agreement. Further, I reviewed each substitution project's
7 cost estimate and confirmed there was no cost of removal associated with each
8 project, as stipulated by the Settlement Agreement.¹⁹

9 Using Petitioner's Exhibit No. 1, Attachment No. 2 (Confidential), I
10 calculated the total project cost estimates for the eight substitution projects. My
11 calculation shows that the "previous" estimate for these projects was approximately
12 \$2.5 million and the "current" estimate is approximately \$2.9 million.²⁰ Table 4
13 below summarizes the total cost estimates of substitution projects per year Vectren
14 proposes to move into the TDSIC Plan, using both Vectren's previous and current
15 estimates as shown in Petitioner's Exhibit No. 1, Attachment No. 2 (Confidential).

¹⁸ *Id.*

¹⁹ See Section 4h of the Settlement Agreement, Page 4.

²⁰ Petitioner's Exhibit No. 1 at 8, lines 28 – 32.

1 **Table 4 – Total Cost Estimates of Proposed Substitution Projects to be Moved into Plan²¹**

Year	<u>Previous Estimate</u>	<u>Current Estimate</u>
2017	\$ -	\$ -
2018	595,112	859,637
2019	518,300	439,478
2020	██████████	██████████
2021	-	-
2022	-	-
2023	<u>1,194,069</u>	<u>1,401,045</u>
Total	\$ 2,483,960	\$ 2,876,639

2 **Q: Do you have any concerns regarding the substitution projects Vectren moved**
3 **in the TDSIC Plan?**

4 **A:** In general, no, I do not have any concerns regarding the eight substitution projects
5 Vectren moved into the TDSIC-2 Plan. However, Vectren should reconcile
6 between Mr. Hoover's estimate and that stated in Petitioner's Confidential Exhibit
7 No. 1. Attachment 2 the substitution project cost estimates added to the Plan.
8 Should the proposed substitution projects be other than the \$2,876,639, Vectren
9 should provide updated project information and work orders associated with
10 substitution projects it proposes to move in current (i.e., year 2018) and upcoming
11 (i.e., year 2019) years. This information will help the OUCC verify that these
12 substitution projects comply with the Settlement Agreement and ensure accurate
13 tracking in future TDSIC filings.

IV. COMPLETED PROJECTS REVIEW

14 **Q: Mr. Hoover testified that as of October 31, 2017, Vectren completed 84**
15 **projects. Did you review the projects Vectren reported as completed in the**
16 **Plan?**

²¹ Table 4 data source: Petitioner's Confidential Exhibit No. 1, Attachment No. 2 (Confidential).

1 A: Yes. I reviewed and evaluated the 84 projects Vectren reported completed in its
2 TDSIC-2 Plan update. Vectren's total current estimate for the 84 completed
3 projects is approximately \$19.2 million and its actual spend (through October 31,
4 2017) is approximately \$17.0 million. Vectren completed 63 distribution-related²²
5 projects, and 21 transmission-related²³ projects.²⁴ Table 5 below summarizes the
6 activity-based distribution and transmission projects Vectren reported completed in
7 its TDSIC-2 Plan update and shows the actual spend variance trend of these
8 projects.

9 **Table 5 – TDSIC-2 Completed Projects and Actual Spend Variance Trend as of 10/31/2017²⁵**

<u>Activity</u>	<u>Completed Projects</u>	<u>Current Estimate, \$</u>	<u>Actual Spend, \$</u>	<u>Actual Variance, \$</u>	<u>Actual Variance, %</u>
Distribution	48	7,546,349	8,870,075	-1,323,726	-17.5
Distribution Substation	<u>25</u>	<u>4,115,629</u>	<u>2,346,661</u>	<u>1,768,968</u>	<u>42.0</u>
Subtotal Distribution	63	11,661,978	11,216,735	445,243	3.8
Transmission	2	3,376,915	2,327,132	1,049,783	31.1
Transmission Substation	<u>19</u>	<u>4,159,269</u>	<u>3,508,082</u>	<u>651,187</u>	<u>15.7</u>
Subtotal Transmission	21	7,536,184	5,835,215	1,700,970	22.5
Total	84	19,198,163	17,051,950	2,146,213	11.2

10 **Q: Please discuss briefly the overall progress Vectren made with its completed**
11 **projects.**

12 A: Overall, as of October 31, 2017, Vectren's overall spend for its completed projects
13 trended *lower* (by 11.2%) than its approved estimates. However, pending billings
14 and any additional charges from contractors or vendors for projects initiated and

²² 48 Distribution projects and 15 Distribution Substation projects.

²³ 2 Transmission projects and 19 Transmission Substation projects.

²⁴ Vectren uses Activity Based Management ("ABM") to categorize its projects as: (1) Distribution; (2) Distribution Substation; (3) Transmission; and (4) Transmission Substation related projects. *See* Petitioner's Confidential Exhibit No. 1, Attachment No. 2 (Confidential).

²⁵ Table 5 data source: Petitioner's Confidential Exhibit No. 1, Attachment No. 2 (Confidential).

1 completed after October 31, 2017 are not included in this TDSIC-2 proceeding.
2 Vectren's actual spend for its completed Distribution Substation-specific,
3 Transmission and Transmission Substation-specific projects was lower than its
4 estimates while it spent \$1.32 million more than expected on its Distribution
5 projects.²⁶

6 **Q: How does underspending on completed projects and the amount of cancelled**
7 **projects affect Vectren's overall Plan?**

8 A: As shown in Table 5 above, overall, Vectren spent \$2.1 million less on its
9 completed projects, which, when combined with the total amount from cancelled
10 projects (\$0.5 million)— shown in Table 3 above, yielded approximately \$2.6
11 million of available offset for use with other projects in the Plan.

12 **Q: Do you have any concerns regarding the offset created by the savings on**
13 **Vectren's 84 completed projects, and the amount of cancelled projects?**

14 A: No. The Commission-approved \$446.5 million overall cap already contained or
15 accounted for any offset amount generated from the projects and the Settlement
16 Agreement stipulated its limited use. The OUCC will continue to track offset
17 amounts generated in each Plan update and tracker filing.

V. SIGNIFICANT COST ESTIMATE VARIANCES REVIEW

18 **Q: Vectren revised a total of 75 projects estimates within the Plan, which yielded**
19 **a net project cost reduction of approximately \$2.5 million. Please discuss**
20 **briefly your review of these project cost revisions.**

21 A: I reviewed the results of Vectren's variance analysis and evaluated the variance
22 drivers. I reviewed the information Mr. Hoover provided regarding the projects

²⁶ Projects executed and constructed in combination with other related projects for efficiency may also yield positive variances. See Petitioner's Confidential Exhibit No. 1, Attachment No. 2 (Confidential), completed projects with Maximo Nos. 14312149 and 14034433, and 13703502 and 14364806.

1 with significant cost estimate increases and decreases in his testimony. I discussed
2 these projects in detail with Vectren's TDSIC team during the March 8, 2018 tech-
3 to-tech meeting in Evansville.

4 Vectren also provided additional support I used to scrutinize the significant
5 variances further. I segregated these projects into two groups with significant: a)
6 cost increases and b) cost decreases, and evaluated the cost drivers in each group.
7 Out of the 75 project cost revisions, 31 project cost estimates *increased* by
8 approximately \$4.3 million and 44 project cost estimates *decreased* by
9 approximately \$6.8 million, which represented a *net cost reduction* of
10 approximately \$2.5 million in the TDSIC-2 Plan. Based on activity, cost estimate
11 revisions of Distribution-related projects represented a *net cost increase* of
12 approximately \$3.7 million while Distribution Substation (\$1.7 million),
13 Transmission (\$3.1 million) and Transmission Substation (\$1.4 million) related
14 projects had *net cost decreases*. Table 6 below summarizes the net variances of the
15 75 project cost estimate revisions in TDSIC-2 Plan.

16 **Table 6 – Net Variance from Project Cost Revisions in TDSIC-2 Plan²⁷**

<u>Activity</u>	<u>Net Variance, \$M</u>
Distribution	\$ -3.7
Distribution Substation	<u>1.7</u>
Subtotal Distribution	\$ -2.0
Transmission	\$ 3.1
Transmission Substation	<u>1.4</u>
Subtotal Transmission	\$ 4.4
Total	\$ 2.4

Note: (-) Increase / (+) Decrease

²⁷ Table 6 data source: Petitioner's Confidential Exhibit No. 1, Attachment No. 2 (Confidential).

1 **Q: From the 31 projects with cost increases, did your analysis identify the projects**
2 **with cost increases equal to or greater than either \$100,000 or 20%?**

3 A: Yes. I reviewed and evaluated each of the 31 projects with cost estimate increases,
4 and my analysis identified 20 projects with cost increases equal to or greater than
5 either \$100,000 or 20%.

6 **Q: Did you review and evaluate the 20 projects with cost estimate increases equal**
7 **to or greater than either \$100,000 or 20%?**

8 A: Yes. I reviewed and evaluated each of those 20 projects that experienced such an
9 increase. For purposes of my review, I requested and received additional support
10 information from Vectren for projects with these cost estimate increases beyond the
11 threshold of \$100,000 or 20% of its previously approved estimate. While Mr.
12 Hoover addressed some of these projects in his testimony, I scrutinized all 20
13 projects in detail to identify the drivers of these cost increases.

14 **Q: How did Vectren support the cost increase for the Distribution project with**
15 **Maximo Work Order No. 13501870, "Red Bank 12kV Circuit Rebuild"**
16 **("W.O. 13501870")?**

17 A: In its case-in-chief, Vectren initially attributed the W.O. 13501870 cost increase of
18 approximately \$ [REDACTED] ([REDACTED]%) to the additional three-phase conductors, various
19 line equipment and poles it found needed replacing during a field inspection it
20 conducted to move the project from a Class 4 to a Class 2 estimate. The OUCC
21 sought more support for the project and had an in-depth discussion on the cost
22 drivers of this project during the March 8, 2018 tech-to-tech meeting with Vectren.
23 Vectren explained that its normal engineering process includes its actual field
24 condition findings to move the project to a Class 2 estimate. To rebuild its Red
25 Bank 12kV circuit along S. Tekoppel Ave. in Evansville, its field inspection results

1 required the revision of its estimate to include replacement of aging facilities and
2 additional lengths of various three-phase overhead conductors, pole-top
3 transformers and number of poles for the project. As a result, the OUCC gained a
4 detailed understanding why Vectren revised its estimate, what the cost drivers were
5 and why both material and labor costs of the project increased.

6 **Q: With the additional information from the March 8, 2018 meeting, did Vectren**
7 **justify the cost estimate increase of W.O. 13501870?**

8 A: Yes. The additional replacement of conductors, line equipment and poles were
9 within the general scope of the 12 kV circuit rebuild and loop project of W.O.
10 13501870. The cost estimate details from the original and updated project work
11 orders supported the additional information Vectren provided in the March 8, 2018
12 meeting.

13 **Q: Please discuss your review of W.O. 13506115 "Underground Cable**
14 **Replacement, Shady Hills Subdivision," the project showing the largest cost**
15 **estimate increase of approximately \$ [REDACTED] ([REDACTED]%) in Vectren's TDSIC-2**
16 **Plan.**

17 A: Vectren's W.O. 13506115 is an underground cable replacement project involving
18 the replacement of aging underground facilities such as cables and conduits. These
19 underground facilities experienced outage occurrences in 2017 due to unreliable
20 and compromised cables. To prevent future outages of the same nature, Vectren
21 expanded the project to include an additional 10,000 feet of cable and distribution
22 transformer replacements. As a result, material cost increased by approximately
23 50% and labor cost more than doubled. Vectren updated the project's work order
24 to show the detailed material and labor costs increases. I compared the original
25 work order of this project with the updated work order to verify the changes Vectren

1 made on the project. Lastly, as discussed in the March 8, 2018 tech-to-tech meeting,
2 Vectren provided the OUCC additional information and explanation we requested
3 on the expanded scope of the project.

4 **Q: Vectren updated the estimate for W.O. 13616347, "Fifth Ave. and Highland**
5 **Circuit Tie Upgrade," from its original Class 4 to a Class 2 estimate, which**
6 **resulted in a negative cost variance of [REDACTED] % (\$ [REDACTED]). Please discuss your**
7 **review of this project.**

8 A: The original Class 4 estimate for W.O. 13616347 was based on the installation of
9 twenty-seven new poles, one pole-mounted distribution transformer and
10 approximately 3,316 feet of conductor "in-situ" using the same route and pole
11 locations to rebuild the circuit. However, field inspection revealed vegetation issues
12 in areas along the route that would affect reliability of the circuit should the project
13 proceed as originally planned. Vectren re-routed the circuit to run alongside the
14 road instead to achieve better line clearances, accessibility, and reliability. Vectren
15 updated its Class 2 estimate for the project for the additional installation of 45 new
16 poles, 34 distribution transformers and approximately 10,000 feet of conductor. As
17 a result, material, labor and the overall costs of the project increased. The original
18 and updated work orders for this project reflected the in-depth project information
19 and the circuit re-routing details, vegetation issues, and new route selection we
20 discussed at the March 8, 2018 tech-to-tech meeting. Vectren also sent additional
21 information to the OUCC, as requested in the meeting. The additional materials,
22 line equipment and conductors added in the updated project cost estimate appear
23 consistent with typical circuit rebuild, re-route and upgrade (reliability) projects
24 such as this one.

1 **Q: Please summarize the reasons for the other projects with cost increases equal**
2 **to or beyond the threshold.**

3 A: As shown in Table 6 above, most of the projects that incurred cost increases equal
4 to or beyond the \$100,000 or 20% threshold were Distribution-related projects.
5 Most of the changes occurred when cost estimates moved from a Class 4 to a Class
6 2 estimate. The revisions took into account changes from overhead and
7 underground actual field conditions, circuit re-routing, load growth, construction
8 method, design reconfiguration, design standards, material and equipment
9 specifications, and safety considerations, among others. These changes resulted in
10 material and labor costs increases such as additional lengths of various sizes and
11 types of conductors, transformers and other line equipment, new poles and pole
12 dressing materials, and construction and traffic labor worker-hours for the projects.

13 **Q: Do you have any concerns at this time regarding the significant cost estimate**
14 **increases experienced by Vectren in some of its projects in this tracker filing?**

15 A: No. The OUCC took notice of the large cost increases in certain projects discussed
16 above and took into account the support Vectren provided for these projects.
17 However, the OUCC will continue to monitor the progress of these projects and
18 any future projects that incur large cost increases. Nonetheless, Vectren provided
19 the OUCC the updated work orders for the various projects that experienced
20 significant cost increases in its TDSIC-2 Plan. Vectren discussed the different cost
21 drivers in detail during the March 8, 2018 meeting and provided additional support.
22 Moreover, I verified that Vectren's combined engineering and supervision, and
23 administrative and general costs remain at or below 18% of the overall project
24 direct costs. Further, Vectren maintained the use of offset amounts generated from

1 the projects within the limits stipulated in the Settlement Agreement. Finally,
2 Vectren kept the cost of its overall Plan within the Commission-approved cost cap.

VI. RECOMMENDATIONS

3 **Q: What do you recommend?**

4 A: For the reasons described above, I recommend the Commission approve Vectren's
5 TDSIC-2 Plan update. I further recommend that, in future TDSIC filings, Vectren
6 reconcile the substitution project cost estimates added to the Plan, and provide
7 updated project information and work orders associated with substitution projects
8 it proposes to move in current (i.e., year 2018) and upcoming (i.e., year 2019) years.

9 **Q: Does this conclude your testimony?**

10 A: Yes.

APPENDIX AAA

1 **Q: Please describe your educational background and experience.**

2 A: I hold an MBA from the University of the Philippines (“UP”), in Diliman, Quezon
3 City, Philippines. I also hold a Bachelor’s Degree in Electrical Engineering from
4 the University of Santo Tomas (“UST”), in Manila, Philippines.

5 I joined the OUCC in July 2009, and have completed the regulatory studies
6 program at Michigan State University sponsored by the National Association of
7 Regulatory Utility Commissioners (“NARUC”). I have also participated in other
8 utility and renewable energy resources-related seminars, forums, and conferences.

9 Prior to joining the OUCC, I worked for the Manila Electric Company
10 (“MERALCO”) in the Philippines as a Senior Project Engineer responsible for
11 overall project and account management for large and medium industrial and
12 commercial customers. I evaluated electrical plans, designed overhead and
13 underground primary and secondary distribution lines and facilities, primary and
14 secondary line revamps, extensions and upgrades with voltages up to 34.5 kV. I
15 successfully completed the MERALCO Power Engineering Program, a two-year
16 program designed for engineers in the power and electrical utility industry.

17 **Q: What did you do to prepare your testimony?**

18 A: I reviewed the petition, direct testimony and attached exhibits filed by Vectren in
19 this Cause. I also reviewed the Commission’s Order in Cause No. 44910, dated
20 September 20, 2017, approving Petitioner’s 7-Year Plan, and the Settlement
21 Agreement. Further, I reviewed the Commission’s Order in Cause No. 44910

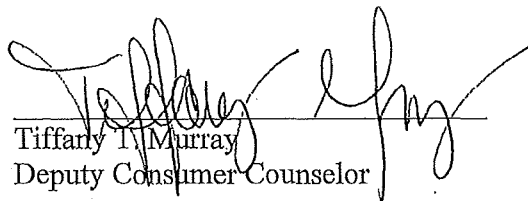
1 TDSIC-1, dated December 20, 2017, TDSIC-1 Plan, and Petitioner's witnesses'
2 testimonies and exhibits filed in TDSIC-1. On January 8, 2018, I attended the
3 TDSIC update presentation and pre-filing meeting with Vectren. On March 8, 2018,
4 I participated in post-filing and tech-to-tech meeting with Vectren staff regarding
5 the project actual cost and estimate changes, and the explanations for the variances
6 between the Commission-approved estimates and the final cost of any completed
7 projects. I reviewed the projects included in the Plan to ensure all project cost
8 estimate changes had adequate explanation and support.

CERTIFICATE OF SERVICE

This is to certify that a copy of the *OUCC REDACTED TESTIMONY OF ANTHONY A. ALVAREZ* has been served upon the following parties of record in the captioned proceeding by electronic service on *April 2, 2018* .

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Evansville, IN 47708
rheidorn@vectren.com
jstephenson@vectren.com

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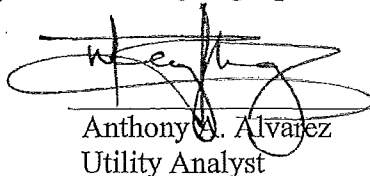


Tiffany I. Murray
Deputy Consumer Counselor

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AFFIRMATION

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



Anthony A. Alvarez
Utility Analyst

Indiana Office of Utility Consumer Counselor

April 2, 2018
Date

Cause No. 44910 TDSIC 2