

OFFICIAL
EXHIBITS

Petitioner's Exhibit No. 4
Cause No. 45052-ECA-1
Vectren South
Page 1 of 9

SOUTHERN INDIANA GAS AND ELECTRIC COMPANY
d/b/a VECTREN ENERGY DELIVERY OF INDIANA, INC.,
A CENTERPOINT ENERGY COMPANY
(VECTREN SOUTH)

IURC CAUSE NO. 45052-ECA-1

IURC
PETITIONER'S
EXHIBIT NO. 4
9-1-20
DATE REPORTER

DIRECT TESTIMONY
OF
J. CAS SWIZ
DIRECTOR, REGULATORY AND RATES

ON

PROPOSED ECA RATES AND CHARGES

SPONSORING PETITIONER'S EXHIBIT NO. 4,
ATTACHMENTS JCS-1 THROUGH JCS-3

DIRECT TESTIMONY OF J. CAS SWIZ

1 **I. INTRODUCTION**

2

3 **Q. Please state your name and business address.**

4 A. My name is J. Cas Swiz. My business address is One Vectren Square, Evansville,
5 Indiana 47708.

6

7 **Q. By whom are you employed?**

8 A. I am employed by CenterPoint Energy, Inc. ("CenterPoint"). Southern Indiana Gas
9 and Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc. ("Petitioner",
10 "Vectren South" or "the Company") is a subsidiary of CenterPoint.

11

12 **Q. What position do you hold with Petitioner Vectren South?**

13 A. I am Director, Regulatory and Rates for CenterPoint, the immediate parent company
14 of Vectren South. I hold the same position with two other utility subsidiaries of
15 CenterPoint – Indiana Gas Company, Inc. d/b/a Vectren Energy Delivery of Indiana,
16 Inc. ("Vectren North") and Vectren Energy Delivery of Ohio, Inc. ("Vectren Ohio").

17

18 **Q. Please describe your educational background.**

19 A. I am a 2001 graduate of the University of Evansville with a Bachelor of Science degree
20 in Accounting, and a 2005 graduate of the University of Southern Indiana with a Master
21 of Business Administration.

22

23 **Q. Please describe your professional experience.**

24 A. From 2001 to 2003, I was employed by ExxonMobil Chemical as a Product and
25 Inventory accountant. Since 2003, I have been employed with Vectren Corporation
26 ("Vectren") and CenterPoint in various accounting capacities. In 2008, I was named
27 Manager, Regulatory and Utility Accounting, and in November 2012, I was named
28 Director, Regulatory Implementation and Analysis. In August 2015, I was named
29 Director, Rates and Regulatory Analysis. I was named to my current position in
30 February 2019.

31

1 **Q. What are your present duties and responsibilities as Director, Regulatory and**
2 **Rates?**

3 A. I am responsible for the Indiana and Ohio regulatory and rate matters of the regulated
4 utilities within CenterPoint in proceedings before the Indiana and Ohio utility regulatory
5 commissions. I also have responsibility for the implementation of all regulatory
6 initiatives of Vectren South (and other utility subsidiaries in Indiana and Ohio), as well
7 as the preparation of accounting exhibits submitted in various regulatory proceedings.
8

9 **Q. Have you ever testified before any state regulatory commission?**

10 A. Yes. I have testified before the Indiana Utility Regulatory Commission ("IURC" or
11 "Commission") on behalf of Vectren South in its prior Electric Transmission,
12 Distribution, and Storage System Improvement Charge ("TDSIC") proceedings under
13 Cause No. 44910. I have also testified on behalf of Vectren South in its request for
14 approval of certain projects to comply with Federally Mandated requirements in cause
15 No. 45052. I have also testified on behalf of Vectren South and Vectren North in its
16 Gas TDSIC proceedings, Cause No. 44429 (Vectren South) and Cause No. 44430
17 (Vectren North). I have testified on behalf of Vectren South and Vectren North in its
18 Gas Cost Adjustment ("GCA") proceedings Cause No. 37366 (Vectren South) and
19 Cause No. 37394 (Vectren North) and on behalf of Vectren South in its Fuel
20 Adjustment Clause ("FAC") proceeding, Cause No. 38708. I have also testified before
21 the Public Utilities Commission of Ohio on behalf of Vectren Ohio.
22

23 **Q. What is the purpose of your testimony in this proceeding?**

24 A. I will support Vectren South's request to update the Environmental Cost Adjustment
25 ("ECA") as previously approved by the Commission in Cause No. 45052 on April 24,
26 2019 (the "Order") under Ind. Code 8-1-8.4 ("Federal Mandate Statute"). I will provide
27 a brief description of the authority granted by the Commission for recovery of costs
28 associated with two defined projects: (1) the F.B. Culley Unit 3 Environmental
29 Compliance Project ("Culley 3 Project") approved in the Order; and (2) the projects
30 associated with the Mercury and Air Toxics Standards ("MATS"), National Pollutant
31 Discharge Elimination System ("NPDES"), and the Environmental Protection Agency
32 ("EPA") Notice of Violation ("NOV") (collectively the "MATS Projects") approved in
33 Cause No. 44446. I will also discuss the inclusion in the ECA of the pending Closure

1 by Removal Project ("CBR Project") of the A.B. Brown coal ash pond to comply with
2 the EPA Coal Combustion Residual ("CCR") rule filed under Cause No. 45280 ("Brown
3 Pond Project"). I will support Vectren South's request to (1) recover 80% of the
4 calculated revenue requirement of the three defined projects (collectively the "ECA
5 Projects"), and (2) defer 20% of the calculated revenue requirement for future recovery
6 in Vectren South's next general rate case.

7
8 Finally, I will support the updated ECA rates and charges and request approval for the
9 costs incurred through December 31, 2019 to be recovered in the ECA, with such rates
10 and charges approved in this proceeding implemented no earlier than August 1, 2020
11 and remaining in effect until replaced in a subsequent ECA filing.

12
13 **Q. Are you sponsoring any exhibits in this proceeding?**

14 **A.** Yes. I am sponsoring the following exhibits in this proceeding:

- 15 • Petitioner's Exhibit No. 4, Attachment JCS-1: ECA rate derivation, Schedules 1-
16 3
- 17 • Petitioner's Exhibit No. 4, Attachment JCS-2: Proposed ECA Tariff Sheet, Pages
18 1 and 2.
- 19 • Petitioner's Exhibit No. 4, Attachment JCS-3: ECA Bill Impacts by Customer
20 Class

21
22 **Q. Were these exhibits prepared by you or under your supervision?**

23 **A.** Yes, they were.
24
25

26 **II. BACKGROUND**
27

28 **Q. Please summarize the statutory authority that allows Vectren South to seek
29 approval of a rate adjustment mechanism associated with the ECA Projects.**

30 **A.** In accordance with the authority granted by the Commission in the Order, Vectren
31 South is requesting approval and subsequent timely recovery and deferred accounting
32 treatment of the costs of the ECA Projects, pursuant to the Federal Mandate Statute,

1 which allows for the timely recovery of eighty percent (80%) of the revenue
2 requirement associated with approved federally mandated costs through a periodic
3 retail rate adjustment mechanism (Ind. Code § 8-1-8.4-7(c)(1)). Vectren South is
4 proposing to include these costs within the ECA, as described further below and within
5 the testimony of Vectren South Witness Angie M. Bell, with the remaining twenty
6 percent (20%) of the revenue requirement deferred and recovered by the Company
7 as part of its next general base rate case (Ind. Code § 8-1-8.4-7(c)(2)).
8
9

10 **III. RATEMAKING TREATMENT**
11

12 **Q. Please summarize the Commission's findings in the Order related to ratemaking**
13 **and the applicable statutory authority.**

14 A. In Cause No. 45052, Vectren South was authorized accounting authority for, and
15 subsequent recovery of, costs specific to the Culley 3 Project. In addition, the Order
16 approved the recovery of the capital investments, inclusive of return, and the deferred
17 costs associated with the MATS Projects originally approved in Cause No. 44446. The
18 accounting authority approved includes the timely recovery within the ECA of eighty
19 percent (80%) of the revenue requirement associated with the ECA Projects and
20 Operations and Maintenance ("O&M") expenses, and deferral of the remaining twenty
21 percent (20%) of the revenue requirement until Vectren South's next base rate case.
22 Finally, in Cause No. 45280, Vectren South requested accounting authority and
23 subsequent recovery within the ECA of the costs associated with the Brown Pond
24 Project. A Stipulation and Settlement was filed in this proceeding, and Vectren South
25 is awaiting an order from the Commission.
26

27 **Q. Is Vectren South including costs associated with the pending Brown Pond**
28 **Project in this ECA proceeding?**

29 A. Yes.
30

31 **Q. If an Order in Cause No. 45280 is not issued prior to the effective date of the**
32 **proposed rates in the ECA proceeding, will Vectren South adjust this filing to**
33 **remove the Brown Pond Project?**

1 A. Yes. If an Order is not received, or the Commission does not approve the Settlement
2 in Cause No. 45280, Vectren South will adjust the proposed ECA rates and charges
3 to remove this project.
4

5 **Q. Please explain the specific ratemaking treatment Vectren South is requesting in**
6 **this case.**

7 A. Consistent with the terms of the Order, Vectren South is proposing the following
8 ratemaking treatment in accordance with the statutes previously discussed:

- 9 1. Recovery via the ECA of 80% of eligible revenue requirement amounts, as
10 supported by Vectren South Witness Bell, as of December 31, 2019.
11 2. Deferral of 20% of eligible revenue requirement amounts as of December 31, 2019
12 for subsequent recovery in a base rate case.
13
14

15 **IV. VARIANCES, ALLOCATIONS, AND RATE DERIVATION**
16

17 **Q. Please describe Schedule 1 (Actual Variances by Rate Schedule).**

18 A. Schedule 1 calculates the over or under-recovery variance by comparing actual
19 recoveries, exclusive of Indiana Utility Receipts Tax ("IURT"), to the approved
20 recoveries from the ECA for the twelve-months ended December 31, 2019. Actual
21 recoveries represent billed ECA revenues from the Company's customer billing
22 system by month and by Rate Schedule for this period. The over or under-recovery
23 variance is determined by month and by Rate Schedule. The specific identification of
24 the variance by Rate Schedule ensures that customers are paying for only the costs
25 allocated to and approved for recovery from that Rate Schedule. As the ECA will be
26 aggregated to recover the costs associated with three ECA Projects, the variance will
27 not be specifically identified by project.
28

29 **Q. How were the approved recoveries determined for the ECA-1 reconciliation**
30 **period (January 2019 through December 2019)?**

31 A. The approved recoveries for the ECA-1 reconciliation period represent the ECA-0
32 approved amounts for January 2019 through December 2019, noted in ECA-0
33 Attachment JCS-1, Schedule 14.

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Q. How was the variance calculated for the ECA-1 reconciliation period?

A. The Total Variance, noted on line 40 of Schedule 1, was calculated by subtracting the actual recoveries for the reconciliation period, exclusive of IURT (lines 14 through 25), from the approved recoveries (line 27 through 38). The resulting variance is an under recovery of \$3,652,235 and will be collected from customers in the ECA-1 rates and charges over a one-year period.

Q. How will the approved recoveries be determined for ECA-1 to be reconciled in ECA-2?

A. As reflected on Schedule 3, approved recoveries represent the amounts the Company expects to collect each month. These approved recoveries are calculated by multiplying the billing determinants by month by the applicable rates and charges for the ECA period. Any under recoveries resulting from instances in which ECA rates and charges are not in place for the full period will be recovered as an under-recovery variance in a subsequent ECA proceeding.

Q. Please describe Schedule 2 (Allocation and Rate Derivation).

A. Schedule 2 shows the allocation of the ECA revenue requirement and the derivation of ECA rates and charges by Rate Schedule, including the variance calculated on Schedule 1. The schedule is divided into two sections to reflect the allocation percentages applicable to ECA costs and the inclusion of the specifically identified variances from Schedule 1 to derive the proposed ECA charges by Rate Schedule.

Lines 1 through 7 show the derivation of the revenue requirement component of the ECA. The allocation percentages listed in Column A reflect the four-coincident peak ("4CP") allocation percentages for Vectren South currently approved for the ECA in Cause No. 45052:

Rate Schedule	Cause No. 43839		Shift in Demand (kW)	Modified 4CP	
	Demand (kW)	Original 4CP Allocation		Modified Demand (kW)	Modified 4CP Allocation
RS	464,042	40.4145%		464,042	43.1221%
B	1,406	0.1225%		1,406	0.1307%
SGS	19,622	1.7089%		19,622	1.8234%
DGS/MLA	300,282	26.1523%		300,282	27.9043%
OSS	23,196	2.0202%		23,196	2.1556%
LP/BAMP	218,745	19.0511%	39,190	257,935	23.9692%
HLF	120,912	10.5305%	(111,284)	9,628	0.8947%
	1,148,205	100.0000%	(72,094)	1,076,111	100.0000%

These allocation percentages are applied to the total ECA revenue requirement from AMB-1, Schedule 1, Line 18 to determine the amounts recoverable from each Rate Schedule (Column B). The amounts allocated to each Rate Schedule are divided by the estimated energy (kWh) sales in Column C to determine the per unit ECA rates and charges excluding IURT in Column D.

Lines 9 through 15 of Schedule 2 shows the derivation of the variance component of the ECA rate, using the specific variance amounts by Rate Schedule from Schedule 1. The variance component of the ECA will be collected in a subsequent ECA filing over twelve months.

Lines 17 through 23 sum the revenue requirement and variance amounts to determine the total rate (Column D). The calculated rates in Column D are grossed up for IURT to determine the rates proposed in the Tariff in Column D, lines 25 through 31.

Q. Please describe Schedule 3 of Attachment JCS-1 (Projected Recoveries by Month).

A. Schedule 3 calculates the ECA recoveries by month. These are the expected monthly recoveries of the approved ECA revenue requirement to which actual ECA revenues will be compared for reconciliation purposes.

V. TARIFF PROPOSAL AND MODIFICATIONS

1

2 **Q. Please describe Petitioner's Exhibit No. 4, Attachment JCS-2.**

3 A. Attachment JCS-2 is the proposed Vectren South Tariff Sheet, Sheet No. 69 –
4 Appendix E, containing the ECA rates and charges proposed herein. Both redlined
5 and clean versions of Sheet No. 69 are included. The redlined version contains
6 changes proposed in Cause No. 45280, pending Commission approval, as well as
7 proposed changes in this proceeding.

8

9 **Q. If an Order in Cause No. 45280 is not issued prior to the effective date of the**
10 **proposed rates in the ECA proceeding, will Vectren South adjust this filing to**
11 **revise Petitioner's Exhibit No. 4, Attachment JCS-2?**

12 A. Yes. If an Order is not received, or the Commission does not approve the Settlement
13 in Cause No. 45280, Vectren South will adjust this attachment to remove changes
14 proposed in Cause No. 45280 and correct the rates and charges proposed in this
15 proceeding.

16

17

18 **VI. AVERAGE ANNUAL BILLING IMPACT**

19

20 **Q. If the Commission approves Vectren South's proposed ECA Adjustment, what**
21 **will be the average annual billing impact on all customer classes?**

22 A. Attachment JCS-3, Schedule 1 summarizes the estimated annual impact of the
23 projects on customers by rate class. As requested, the ECA adjustment applicable to
24 Residential customers would increase by \$0.003599 per kWh, from \$0.003173 per
25 kWh to \$0.006772 per kWh. The monthly bill during the ECA period for a Residential
26 customer using 1,000 kWh would increase by \$3.60 under the Company's proposal.

27

28

29 **VII. CONCLUSION**

30

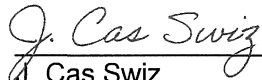
31 **Q. Does this conclude your prepared direct testimony?**

32 A. Yes, it does.

VERIFICATION

The undersigned, J. Cas Swiz, affirms under the penalties of perjury that the answers in the foregoing Direct Testimony in Cause No. 45052-ECA-1 are true to the best of his knowledge, information and belief.

SOUTHERN INDIANA GAS AND ELECTRIC
COMPANY D/B/A VECTREN ENERGY DELIVERY
OF INDIANA, INC., A CENTERPOINT ENERGY
COMPANY



J. Cas Swiz
Director, Regulatory and Rates

SOUTHERN INDIANA GAS AND ELECTRIC COMPANY
d/b/a VECTREN ENERGY DELIVERY OF INDIANA, INC.
VECTREN SOUTH
ENVIRONMENTAL COST ADJUSTMENT
ACTUAL VARIANCES BY RATE SCHEDULE THROUGH DECEMBER 31, 2019

Line	Description	A	B	C	D	E	F	G	H	I
		Rate Schedule							Total	Reference
	Actual Recoveries (Inclusive of IURT)	RS	B	SGS	DGS / MLA	OSS	LP / BAMP	HLF		
1	Jan-19	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	(A)
2	Feb-19	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	(A)
3	Mar-19	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	(A)
4	Apr-19	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	(A)
5	May-19	\$ 99,784	\$ 375	\$ 4,312	\$ 65,646	\$ 3,850	\$ 172,549	\$ 7,740	\$ 354,257	(A)
6	Jun-19	\$ 371,771	\$ 947	\$ 14,109	\$ 230,788	\$ 15,296	\$ 198,601	\$ 7,543	\$ 839,057	(A)
7	Jul-19	\$ 457,608	\$ 896	\$ 15,762	\$ 234,465	\$ 14,887	\$ 206,728	\$ 5,746	\$ 936,092	(A)
8	Aug-19	\$ 508,692	\$ 891	\$ 17,459	\$ 285,445	\$ 17,488	\$ 214,993	\$ 7,576	\$ 1,052,544	(A)
9	Sep-19	\$ 474,296	\$ 897	\$ 22,367	\$ 264,098	\$ 17,540	\$ 232,966	\$ 6,779	\$ 1,018,943	(A)
10	Oct-19	\$ 374,777	\$ 807	\$ 12,873	\$ 237,031	\$ 15,621	\$ 188,343	\$ 7,622	\$ 837,074	(A)
11	Nov-19	\$ 282,626	\$ 904	\$ 19,317	\$ 197,503	\$ 15,468	\$ 161,141	\$ 7,253	\$ 684,213	(A)
12	Dec-19	\$ 335,468	\$ 1,035	\$ 11,229	\$ 183,347	\$ 17,904	\$ 156,885	\$ 7,464	\$ 713,331	(A)
13	Total Actual Recoveries Inclusive of IURT	\$ 2,905,023	\$ 6,752	\$ 117,427	\$ 1,698,325	\$ 118,054	\$ 1,532,206	\$ 57,724	\$ 6,435,511	Sum Lines 1-12
	Actual Recoveries (Exclusive of IURT)	RS	B	SGS	DGS / MLA	OSS	LP / BAMP	HLF		
14	Jan-19	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Line 1 x 0.9852
15	Feb-19	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Line 2 x 0.9852
16	Mar-19	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Line 3 x 0.9852
17	Apr-19	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	Line 4 x 0.9852
18	May-19	\$ 98,308	\$ 369	\$ 4,248	\$ 64,675	\$ 3,793	\$ 169,995	\$ 7,626	\$ 349,014	Line 5 x 0.9852
19	Jun-19	\$ 366,269	\$ 933	\$ 13,901	\$ 227,373	\$ 15,070	\$ 195,662	\$ 7,431	\$ 828,639	Line 6 x 0.9852
20	Jul-19	\$ 450,835	\$ 882	\$ 15,529	\$ 230,995	\$ 14,667	\$ 203,668	\$ 5,661	\$ 922,238	Line 7 x 0.9852
21	Aug-19	\$ 501,164	\$ 878	\$ 17,201	\$ 281,221	\$ 17,229	\$ 211,811	\$ 7,464	\$ 1,036,967	Line 8 x 0.9852
22	Sep-19	\$ 467,276	\$ 884	\$ 22,036	\$ 260,190	\$ 17,280	\$ 229,519	\$ 6,679	\$ 1,003,863	Line 9 x 0.9852
23	Oct-19	\$ 369,230	\$ 795	\$ 12,682	\$ 233,523	\$ 15,390	\$ 185,556	\$ 7,509	\$ 824,686	Line 10 x 0.9852
24	Nov-19	\$ 278,443	\$ 891	\$ 19,031	\$ 194,580	\$ 15,239	\$ 158,756	\$ 7,146	\$ 674,086	Line 11 x 0.9852
25	Dec-19	\$ 330,503	\$ 1,019	\$ 11,063	\$ 180,633	\$ 17,639	\$ 154,563	\$ 7,354	\$ 702,774	Line 12 x 0.9852
26	Total Actual Recoveries Exclusive of IURT	\$ 2,862,028	\$ 6,652	\$ 115,689	\$ 1,673,190	\$ 116,307	\$ 1,509,529	\$ 56,870	\$ 6,340,265	Sum Lines 14-25
	Approved Recoveries (Exclusive of IURT) (A)	RS	B	SGS	DGS / MLA	OSS	LP / BAMP	HLF		
27	Jan-19	\$ 464,462	\$ 1,466	\$ 16,776	\$ 223,234	\$ 24,215	\$ 183,393	\$ 7,228	\$ 920,773	(B)
28	Feb-19	\$ 360,058	\$ 1,294	\$ 15,768	\$ 204,895	\$ 21,776	\$ 183,836	\$ 6,923	\$ 794,550	(B)
29	Mar-19	\$ 301,523	\$ 1,115	\$ 14,423	\$ 210,021	\$ 18,593	\$ 188,115	\$ 7,558	\$ 741,348	(B)
30	Apr-19	\$ 259,026	\$ 1,142	\$ 13,210	\$ 206,234	\$ 15,353	\$ 196,037	\$ 7,390	\$ 698,392	(B)
31	May-19	\$ 302,642	\$ 1,020	\$ 13,487	\$ 227,963	\$ 14,175	\$ 206,542	\$ 7,403	\$ 773,231	(B)
32	Jun-19	\$ 411,194	\$ 935	\$ 16,034	\$ 264,705	\$ 16,192	\$ 206,812	\$ 7,267	\$ 923,139	(B)
33	Jul-19	\$ 510,949	\$ 941	\$ 17,730	\$ 283,738	\$ 17,854	\$ 212,128	\$ 7,331	\$ 1,050,673	(B)
34	Aug-19	\$ 458,268	\$ 908	\$ 16,698	\$ 283,775	\$ 16,865	\$ 223,663	\$ 7,370	\$ 1,007,548	(B)
35	Sep-19	\$ 318,788	\$ 895	\$ 14,259	\$ 236,525	\$ 14,742	\$ 211,677	\$ 7,409	\$ 804,295	(B)
36	Oct-19	\$ 253,519	\$ 958	\$ 13,286	\$ 215,172	\$ 15,181	\$ 205,574	\$ 7,805	\$ 711,495	(B)
37	Nov-19	\$ 278,746	\$ 1,080	\$ 14,433	\$ 198,313	\$ 18,312	\$ 193,025	\$ 7,675	\$ 711,584	(B)
38	Dec-19	\$ 389,802	\$ 1,305	\$ 16,099	\$ 233,762	\$ 22,140	\$ 184,319	\$ 8,044	\$ 855,472	(B)
39	Total Approved Recoveries Exclusive of IURT	\$ 4,308,977	\$ 13,060	\$ 182,203	\$ 2,788,337	\$ 215,398	\$ 2,395,122	\$ 89,403	\$ 9,992,500	Sum Lines 27-38
40	Total Variance (C)	\$ 1,446,949	\$ 6,408	\$ 66,514	\$ 1,115,147	\$ 99,091	\$ 885,593	\$ 32,533	\$ 3,652,235	Line 39 - Line 26
	Under/(Over) Recovery									

(A) Actual Recoveries represent billed ECA revenues from the company's customer billing system by month and by rate schedule.
(B) Based on prior ECA approvals
(C) To Attachment JCS-1, Schedule 2

**SOUTHERN INDIANA GAS AND ELECTRIC COMPANY
d/b/a VECTREN ENERGY DELIVERY OF INDIANA, INC.
VECTREN SOUTH
ENVIRONMENTAL COST ADJUSTMENT
ALLOCATION AND RATE DERIVATION**

	A	B	C	D	E
	Rate Schedule	4CP Allocators	Amount	Projected Billing Quantities (kWh)	(Per kWh)
					Reference
ECA Allocated Revenue Requirement					
1	RS	43.1221%	\$ 7,649,508	1,363,397,280 (D)	\$ 0.005611
2	B	0.1307%	\$ 23,185	7,946,703 (D)	\$ 0.002918
3	SGS	1.8234%	\$ 323,456	64,732,674 (D)	\$ 0.004997
4	DGS/MLA	27.9043%	\$ 4,949,995	1,072,657,787 (D)	\$ 0.004615
5	OSS	2.1556%	\$ 382,386	90,731,495 (D)	\$ 0.004214
6	LP/BAMP	23.9692%	\$ 4,251,940	2,261,582,856 (D)	\$ 0.001880
7	HLF	0.8947%	\$ 158,712	79,734,000 (D)	\$ 0.001991
8	Total	100.0000%	\$ 17,739,182 (A)		
ECA Allocated Variances Under/(Over) Recovery					
9	RS		\$ 1,446,949	1,363,397,280 (D)	\$ 0.001061
10	B		\$ 6,408	7,946,703 (D)	\$ 0.000806
11	SGS		\$ 66,514	64,732,674 (D)	\$ 0.001028
12	DGS/MLA		\$ 1,115,147	1,072,657,787 (D)	\$ 0.001040
13	OSS		\$ 99,091	90,731,495 (D)	\$ 0.001092
14	LP/BAMP		\$ 885,593	2,261,582,856 (D)	\$ 0.000392
15	HLF		\$ 32,533	79,734,000 (D)	\$ 0.000408
16	Total		\$ 3,652,235 (B)		
Total Excluding IURT					
17	RS		\$ 9,096,457		\$ 0.006672 Line 1 + 9
18	B		\$ 29,593		\$ 0.003724 Line 2 + 10
19	SGS		\$ 389,970		\$ 0.006024 Line 3 + 11
20	DGS/MLA		\$ 6,065,142		\$ 0.005654 Line 4 + 12
21	OSS		\$ 481,477		\$ 0.005307 Line 5 + 13
22	LP/BAMP		\$ 5,137,533		\$ 0.002272 Line 6 + 14
23	HLF		\$ 191,245		\$ 0.002399 Line 7 + 15
24	Total		\$ 21,391,417		
Total Including IURT (C)					
25	RS			\$ 0.006772	Line 25 / 0.9853
26	B			\$ 0.003780	Line 26 / 0.9853
27	SGS			\$ 0.006114	Line 27 / 0.9853
28	DGS/MLA			\$ 0.005739	Line 28 / 0.9853
29	OSS			\$ 0.005386	Line 29 / 0.9853
30	LP/BAMP			\$ 0.002306	Line 30 / 0.9853
31	HLF			\$ 0.002434	Line 31 / 0.9853

Notes:

- (A) From AMB-1, Schedule 1, Line 18
(B) From JCS-1, Schedule 1, Line 40 - amount to be recovered from or passed back to customers over 12-months
(C) Blended IURT gross up factor of 0.9853
(D) Based on 2020/21 budgeted annual volumes

**SOUTHERN INDIANA GAS AND ELECTRIC COMPANY
d/b/a VECTREN ENERGY DELIVERY OF INDIANA, INC.
VECTREN SOUTH
ENVIRONMENTAL COST ADJUSTMENT
PROJECTED RECOVERIES BY MONTH**

Line	Rate Schedule		Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Annual Total
Projections (A)															
1	RS - Residential Service	KWh	153,920,056	103,921,697	75,204,810	96,859,338	119,792,656	142,548,027	106,652,310	102,243,175	79,603,413	87,478,027	128,697,361	166,476,411	1,363,397,280
2	B - Water Heating Service	KWh	539,559	557,907	596,021	628,027	750,391	885,317	786,503	725,983	694,066	592,855	620,455	569,619	7,946,703
3	SGS - Small General Service	KWh	5,964,471	5,075,723	4,719,414	5,137,648	5,744,151	5,963,477	5,597,053	5,107,988	4,665,807	4,764,486	5,687,764	6,304,693	64,732,674
4	DGS - Demand General Service / Municipal Levee Authority	KWh	114,101,595	92,261,526	80,723,333	82,988,093	82,912,600	87,242,810	72,466,939	80,952,601	75,801,431	88,450,926	100,555,536	114,100,395	1,072,657,787
5	OSS - Off-Season Service	KWh	7,110,679	6,193,726	6,400,492	7,763,979	9,413,770	10,204,971	9,193,942	7,809,037	6,427,280	5,930,415	6,782,658	7,500,546	90,731,495
6	LP/BAMP - Large Power Service / Backup Auxiliary and Maintenance Power	KWh	217,308,701	199,025,891	194,302,573	174,608,985	166,133,907	169,751,965	173,888,936	177,845,309	180,741,971	193,126,819	204,968,209	210,879,562	2,261,582,856
7	HLF - High Load Factor Service	KWh	7,056,000	6,726,000	5,934,000	6,942,000	6,942,000	6,894,000	6,372,000	7,088,000	6,882,000	7,020,000	5,772,000	6,096,000	79,734,000
Applicable Rates (B)															
8	RS - Residential Service	\$ / KWh	\$ 0.006672	\$ 0.006672	\$ 0.006672	\$ 0.006672	\$ 0.006672	\$ 0.006672	\$ 0.006672	\$ 0.006672	\$ 0.006672	\$ 0.006672	\$ 0.006672	\$ 0.006672	\$ 0.006672
9	B - Water Heating Service	\$ / KWh	\$ 0.003724	\$ 0.003724	\$ 0.003724	\$ 0.003724	\$ 0.003724	\$ 0.003724	\$ 0.003724	\$ 0.003724	\$ 0.003724	\$ 0.003724	\$ 0.003724	\$ 0.003724	\$ 0.003724
10	SGS - Small General Service	\$ / KWh	\$ 0.006024	\$ 0.006024	\$ 0.006024	\$ 0.006024	\$ 0.006024	\$ 0.006024	\$ 0.006024	\$ 0.006024	\$ 0.006024	\$ 0.006024	\$ 0.006024	\$ 0.006024	\$ 0.006024
11	DGS - Demand General Service / Municipal Levee Authority	\$ / KWh	\$ 0.005654	\$ 0.005654	\$ 0.005654	\$ 0.005654	\$ 0.005654	\$ 0.005654	\$ 0.005654	\$ 0.005654	\$ 0.005654	\$ 0.005654	\$ 0.005654	\$ 0.005654	\$ 0.005654
12	OSS - Off-Season Service	\$ / KWh	\$ 0.005307	\$ 0.005307	\$ 0.005307	\$ 0.005307	\$ 0.005307	\$ 0.005307	\$ 0.005307	\$ 0.005307	\$ 0.005307	\$ 0.005307	\$ 0.005307	\$ 0.005307	\$ 0.005307
13	LP/BAMP - Large Power Service / Backup Auxiliary and Maintenance Power	\$ / KWh	\$ 0.002272	\$ 0.002272	\$ 0.002272	\$ 0.002272	\$ 0.002272	\$ 0.002272	\$ 0.002272	\$ 0.002272	\$ 0.002272	\$ 0.002272	\$ 0.002272	\$ 0.002272	\$ 0.002272
14	HLF - High Load Factor Service	\$ / KWh	\$ 0.002399	\$ 0.002399	\$ 0.002399	\$ 0.002399	\$ 0.002399	\$ 0.002399	\$ 0.002399	\$ 0.002399	\$ 0.002399	\$ 0.002399	\$ 0.002399	\$ 0.002399	\$ 0.002399
Projected Recoveries															
15	RS - Residential Service	Line 1 x 8	\$ 1,026,940	\$ 693,356	\$ 501,759	\$ 646,236	\$ 799,245	\$ 951,067	\$ 711,574	\$ 682,157	\$ 531,106	\$ 583,645	\$ 858,657	\$ 1,110,715	\$ 9,096,457
16	B - Water Heating Service	Line 2 x 9	\$ 2,009	\$ 2,078	\$ 2,220	\$ 2,339	\$ 2,794	\$ 3,297	\$ 2,929	\$ 2,704	\$ 2,585	\$ 2,208	\$ 2,311	\$ 2,121	\$ 29,593
17	SGS - Small General Service	Line 3 x 10	\$ 35,932	\$ 30,578	\$ 28,431	\$ 30,951	\$ 34,605	\$ 35,926	\$ 33,718	\$ 30,772	\$ 28,108	\$ 26,703	\$ 34,265	\$ 37,981	\$ 369,970
18	DGS - Demand General Service / Municipal Levee Authority	Line 4 x 11	\$ 645,168	\$ 521,675	\$ 456,435	\$ 469,241	\$ 468,814	\$ 493,298	\$ 499,751	\$ 457,731	\$ 429,170	\$ 500,129	\$ 568,572	\$ 645,159	\$ 6,065,142
19	OSS - Off-Season Service	Line 5 x 12	\$ 37,734	\$ 32,869	\$ 33,985	\$ 41,200	\$ 49,955	\$ 54,154	\$ 48,789	\$ 41,440	\$ 34,107	\$ 31,470	\$ 35,993	\$ 39,802	\$ 481,477
20	LP/BAMP - Large Power Service / Backup Auxiliary and Maintenance Power	Line 6 x 13	\$ 493,650	\$ 449,646	\$ 441,388	\$ 396,651	\$ 377,369	\$ 365,618	\$ 395,015	\$ 404,003	\$ 410,583	\$ 438,717	\$ 465,617	\$ 479,045	\$ 5,137,533
21	HLF - High Load Factor Service	Line 7 x 14	\$ 16,924	\$ 16,133	\$ 14,233	\$ 16,651	\$ 16,651	\$ 16,536	\$ 15,283	\$ 17,025	\$ 16,507	\$ 16,638	\$ 13,844	\$ 14,621	\$ 191,245
22	Total Recoveries including variances		\$ 2,258,355	\$ 1,746,533	\$ 1,478,431	\$ 1,603,269	\$ 1,749,462	\$ 1,939,895	\$ 1,617,060	\$ 1,635,831	\$ 1,452,167	\$ 1,601,710	\$ 1,979,258	\$ 2,329,446	\$ 21,391,417
23	20% Deferred (based on Revenue Requirement piece only)		\$ 468,520	\$ 361,902	\$ 305,968	\$ 332,182	\$ 362,864	\$ 402,660	\$ 335,354	\$ 339,066	\$ 300,705	\$ 331,644	\$ 410,442	\$ 483,489	\$ 4,434,796

Notes:

- (A) Source: Vectren South 2020/2021 Budget
(B) Exclusive of IURT
(C) Proposed Rates and Charge, multiplied by Estimated Billing Determinants (A)

Southern Indiana Gas and Electric Company D/B/A
Vectren Energy Delivery of Indiana, Inc. (Vectren South)
Tariff for Electric Service
I.U.R.C. No. E-13

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APPENDIX E

ENVIRONMENTAL COST ADJUSTMENT

APPLICABILITY

The Environmental Cost Adjustment ("ECA") shall be applicable to all Customers on the Rate Schedules set forth in the ECA Rates section below.

DESCRIPTION

The ECA shall recover, as approved by the Commission:

- (1) In Cause No. 45052, recovery of costs associated with Company's Culley 3 Project pursuant to Ind. Code § 8-1-8.4-7.
- (2) In Cause No. 45052, recovery of costs associated with Company's MATS Projects pursuant to Ind. Code § 8-1-8.4-7.
- (3) In Cause No. 45280, recovery of costs associated with Company's Brown Pond Project pursuant to Ind. Code § 8-1-8.4-7.
- (4) Any other projects approved to be recovered through the ECA

Reconciliation

Company's actual ECA costs shall be reconciled annually with actual ECA recoveries, with any differences being reflected as a charge or credit in a subsequent ECA.

Allocation Percentages

ECA costs shall be allocated to the Rate Schedules based on the percentages approved in Cause No. 45052 and shown in the ECA Rates section below.

ECA RATES

The ECA shall be applied to each kWh of electric usage as applicable. The current ECA rates and charges by Rate Schedule are set forth below:

<u>Rate Schedule</u>	<u>Allocation Percentage(4 CP)</u>	<u>Charge Adjusted</u>	<u>ECA Rate (\$ per KWh)</u>
RS	43.1221%	Energy	\$0.006772
B	0.1307%	Energy	\$0.003780
SGS	1.8234%	Energy	\$0.006114
DGS/MLA	27.9043%	Energy	\$0.005739
OSS	2.1556%	Energy	\$0.005386
LP	23.9692%	Energy	\$0.002306
HLF	0.8947%	Energy	\$0.002434

Effective:

Southern Indiana Gas and Electric Company D/B/A
Vectren Energy Delivery of Indiana, Inc. (Vectren South)
Tariff for Electric Service
I.U.R.C. No. E-13

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Effective:

**SOUTHERN INDIANA GAS AND ELECTRIC COMPANY
d/b/a VECTREN ENERGY DELIVERY OF INDIANA, INC.
VECTREN SOUTH
ENVIRONMENTAL COST ADJUSTMENT
BILL IMPACT BY CUSTOMER CLASS**

Line No.	A	B	C	D
	Allocation by Rate	Revenue Requirement		
	Rate Schedule	Schedule	by Rate Schedule	Reference
1	Rate RS	43.1221%	\$ 9,096,457	JCS-1, Schedule 2, Line 17
2	Rate B	0.1307%	\$ 29,593	JCS-1, Schedule 2, Line 18
3	Rate SGS	1.8234%	\$ 389,970	JCS-1, Schedule 2, Line 19
4	Rate DGS/MLA	27.9043%	\$ 6,065,142	JCS-1, Schedule 2, Line 20
5	Rate OSS	2.1556%	\$ 481,477	JCS-1, Schedule 2, Line 21
6	Rate LP/BAMP	23.9692%	\$ 5,137,533	JCS-1, Schedule 2, Line 22
7	Rate HLF	0.8947%	\$ 191,245	JCS-1, Schedule 2, Line 23
8	Total	100.0000%	\$ 21,391,417	

	Allocation by Rate	Revenue Requirement		% Revenue Change by
	Rate Class	Class (A)	by Rate Class (A)	Annual Revenues (B)
9	Residential	43.2528%	\$ 9,126,050	\$ 216,149,371
10	Commercial	31.8833%	\$ 6,936,589	\$ 152,038,076
11	Industrial	24.8639%	\$ 5,328,778	\$ 163,315,544
12	Total	100.0000%	\$ 21,391,417	\$ 531,502,991

Notes:

- (A) Residential = Rate RS + Rate B
Commercial = Rate SGS + Rate DGS/MLA + Rate OSS
Industrial = Rate LP/BAMP + Rate HLF
(B) Revenues for 12 months ending December 31, 2019
(C) Column [B] divided by Column [C]