

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

IURC CAUSE NO. 45378

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

ON

PROPOSED EXCESS DISTRIBUTED GENERATION RIDER TARIFF

**SPONSORING PETITIONER'S EXHIBIT NO. 2,
ATTACHMENTS JCS-1 THROUGH JCS-3**

DIRECT TESTIMONY OF J. CAS SWIZ

I. INTRODUCTION

Q. Please state your name and business address.

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

Q. By whom are you employed?

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

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

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

Q. Please describe your educational background.

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

Q. Please describe your professional experience.

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

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 and Vectren North in its Gas Transmission,
12 Distribution, and Storage System Improvement Charge ("TDSIC") proceedings, Cause
13 No. 44429 (Vectren South) and Cause No. 44430 (Vectren North). I have also testified
14 on behalf of Vectren South in connection with its Electric TDSIC proceedings under
15 Cause No. 44910. In addition, I have testified on behalf of Vectren South and Vectren
16 North in its Gas Cost Adjustment ("GCA") proceedings, Cause No. 37366 (Vectren
17 South) and Cause No. 37394 (Vectren North), and on behalf of Vectren South in its
18 Fuel Adjustment Clause ("FAC") proceedings, Cause No. 38708. I have also testified
19 before the Public Utilities Commission of Ohio on behalf of Vectren Ohio.
20

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

22 A. I will support Vectren South's request to implement an Excess Distributed Generation
23 Rider ("Rider EDG") within Vectren South's Tariff for Electric Service.
24

25 In support of Rider EDG, I will discuss the status of customer participation in Vectren
26 South's Net Metering program in accordance with the requirements of Indiana Code
27 ("IC") § 8-1-40 et seq. (the "Distributed Generation Statute"). I will cover how current
28 customer participation necessitates the creation of Rider EDG, and how the
29 requirements of the Distributed Generation Statute dictate the timing and pricing
30 structure of Rider EDG. I will discuss how Vectren South will prioritize and grandfather
31 current pending applications, and how Rider EDG will apply to future distributed

1 generation applications. Finally, I will discuss how the Rider EDG Tariff will be updated
2 annually.
3

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

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

- 6 • Petitioner's Exhibit No. 2, Attachment JCS-1: Decision Tree for Prioritization and
7 Grandfathering of Eligible Customers
- 8 • Petitioner's Exhibit No. 2, Attachment JCS-2: Proposed Excess Distributed
9 Generation Rider Tariff Sheet
- 10 • Petitioner's Exhibit No. 2, Attachment JCS-3: Other Tariff Sheet Changes
11

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

13 A. Yes, they were.
14
15

16 **II. STATUS OF VECTREN SOUTH NET METERING PROGRAM**
17

18 **Q. Please summarize the requirements of the Distributed Generation Statute as it
19 relates to Net Metering.**

20 A. The Distributed Generation Statute requires that Vectren South will maintain a net
21 metering tariff with capacity available for net metering customers based upon one and
22 one-half percent (1.5%) of its summer peak load. IC 8-1-40-10 requires that the net
23 metering tariff will remain available to customers until the earlier of January 1 of the
24 first calendar year after the calendar year in which the 1.5% capacity is reached, or
25 July 1, 2022. Further, with respect to the available capacity, Vectren South must
26 reserve portions of that capacity for specific customers as set forth in Section 12 of the
27 Distributed Generation Statute.
28

29 **Q. What is the aggregate amount of net metering capacity for Vectren South and
30 how much is remaining as of March 31, 2020?**

31 A. Per the Distributed Generation Statute, the required available net metering capacity
32 based upon 1.5% of Vectren South's 2019 summer peak load equals 15,816.000 kW.

Vectren South must reserve its available net metering capacity as follows: (1) 40% or 6,326.400 kW reserved for residential customers; (2) 15% or 2,372.400 kW reserved for customers who install a Biomass resource; and (3) 45% or the remaining 7,117.200 kW or "non-reserved" capacity for all other eligible customers.

As of March 31, 2020, there was approximately 10,979.717 kW of net metering generation in operation on Vectren South's system, of which 10,963.517 kW is solar and 16.2 kW is wind.

Table JCS-1 below reflects the total net metering capacity, actual operating capacity and the remaining capacity available for each type of customer group as of March 31, 2020.

Table JCS-1

	Total (kW)	Residential (kW)	Biomass (kW)	Non-Reserved (kW)
Summer Peak Load (2019)	1,054,400.00			
Net Metering Capacity	15,816.000	6,326.400	2,372.400	7,117.200
Operating Capacity	10,979.717	5,558.757	0.000	5,420.960
Remaining Capacity	4,836.283	767.643	2,372.400	1,696.240

Q. Does Vectren South maintain discrete queues for each reserved and non-reserved customer category?

A. Yes, in accordance with General Administrative Order 2019-2 ("GAO 2019-2"), the Company has maintained a public queue, available on its website¹ to customers, of the residential, biomass, and non-reserved categories.

Q. Please describe how the queue is organized for each of the customer categories.

A. GAO 2019-2 defines how the queue will be structured, based on three defined participant levels.

- "Net Metering Queue Participants" ("Non-Approved Participants") are those

¹ www.vectren.com/information/customer-generation

customers who have submitted an application to Vectren South but have not received confirmation of review and approval from the Company. These customers are sorted based on the date the application was received.

- “Net Metering Approved Participants” (“Approved Participants”) are those customers who have received approval from Vectren South and signed an interconnection agreement with the Company. These customers are considered to be participating in the Company’s net metering tariff (as defined in GAO 2017-2) and are grouped ahead of the Queue Participants, sorted by date of approval of the application and signed interconnection agreements.
- “Net Metering Operating Participants” are those customers who have completed installation of their distributed generation resource. Vectren South updates its monthly queue with customer information for those customers that have gone operational in the current month.

Q. Please describe the status of the reserved capacity for each reserved and non-reserved customer category.

A. Table JCS-2 summarizes this information.

Table JCS-2

	Total (kW)	Residential (kW)	Biomass (kW)	Non-Reserved (kW)
Remaining Capacity	4,836.236	767.643	2,372.400	1,696.240
Queue – Approved Participants	1,869.850	254.050	0.000	1,615.800
Queue – Non-Approved Participants	2,450.714	786.474	0.000	1,664.240
Queue – Remaining	515.719	(272.881)	2,372.400	(1,583.800)

For the residential class, in addition to operating capacity, there are 254.050 kW of customer projects which are considered Approved Participants, meaning these customers have signed agreements with Vectren South. In addition, there are 786.474 kW of customer projects which are considered Non-Approved Participants and have not received a final, signed interconnection agreement with Vectren South. The total of these applications exceeds the remaining capacity.

1
2 The Company does not have any Approved Participants for Biomass installations, nor
3 has the Company received any applications for Biomass installations for review.
4

5 For all other customers, pending applications currently exceed the remaining available
6 capacity. Customer projects totaling 1,615,800 kW are considered Approved
7 Participants. Non-Approved Participant applications total 1,664,240 kW, which are
8 pending review and approval by Vectren South or completion of a final, signed
9 interconnection agreement.
10

11 **Q. What does the Distributed Generation Statute require once the defined capacity**
12 **amount is reached?**

13 A. Section 10 of the Distributed Generation Statute requires that, prior to July 1, 2022, if
14 Vectren South reasonably anticipates that the aggregate available net metering
15 capacity will be exhausted, the Company must petition the commission for approval of
16 a rate for procurement of excess distributed generation. Further, Section 16 of the
17 Distributed Generation Statute requires that, absent reaching this threshold, the
18 Company shall file, no later than March 1, 2021, for a petition requesting a rate for the
19 procurement of excess distributed generation. The Rider EDG proposal in this
20 proceeding addresses both statutory requirements.
21

22 **Q. Does Vectren South manage the capacity required under the Distributed**
23 **Generation Statute as discrete by the defined customer classes or in aggregate?**

24 A. Vectren South manages the capacity, and the individual queues, by the defined
25 customer class (residential, biomass, non-reserved); however, the point at which the
26 Distributed Generation Statute requires use of the Rider EDG provisions is dictated at
27 the aggregated 1.5% threshold (IC 8-1-40-10). In theory, management of the capacity
28 at the individual customer class level ensures that the overall capacity is managed to
29 the defined 1.5%.
30

31 The current status – specifically the lack of Biomass interest – presents a situation
32 whereby the reserved capacity unused for one segment is being used for others. Since

1 Vectren South has neither received any Biomass resource applications nor expects to
2 receive any Biomass resource applications in the near future, the Company has
3 elected to make available the 2,372.400 kW currently reserved for Biomass for use by
4 other customers.

5

6 **Q. Does Vectren South anticipate that the remaining capacity for residential**
7 **customers will be exhausted during 2020?**

8 A. Yes. While it is likely that some Non-Approved Participant applications currently
9 pending will not result in approved projects, the current data demonstrates that the
10 applications received thus far in 2020 exceeds the available capacity for this customer
11 segment.

12

13 **Q. Does Vectren South anticipate that the remaining non-reserved capacity for all**
14 **other customers will be exhausted during 2020?**

15 A. Yes. Given the magnitude of existing and expected applications which are currently in
16 excess of the remaining capacity, the available capacity for this customer segment will
17 be completely used in the near future.

18

19 **Q. If there is interest in Biomass resources prior to July 1, 2022, how will Vectren**
20 **South handle the reserved capacity for Biomass?**

21 A. Prior to July 1, 2022, if there is an interest in Biomass resources, Vectren South will
22 ensure that capacity will be made available for any Biomass applications up to the
23 15% reservation threshold, even if such resources cause the amount of operating net
24 metering to exceed the 1.5% aggregate capacity limit.

25

26 **Q. Why is Vectren South seeking approval of Rider EDG at this time?**

27 A. Under the Distributed Generation Statute, net metering capacity has been established
28 as 1.5% of summer peak load, with that capacity being divided into the three customer-
29 generator types under IC 8-1-40-12(a). While potential Biomass customers will likely
30 have reserved capacity available into 2021, all other customers (non-reserved
31 category) already have the largest amount of proposed resources in queue, and
32 therefore will exceed their 45% capacity availability, even before approval of Rate

1 EDG. In addition, the current data reflects that the residential customer category
2 applications are in excess of available capacity.
3

4 While Vectren South has expanded capacity availability for other customers through
5 access to the Biomass reserved capacity, it is highly likely that such added capacity
6 will also be exhausted in 2020. As a result and in accordance with Section 10 of the
7 Distributed Generation Statute, Vectren South is seeking approval of Rider EDG so it
8 will be able to procure the excess distributed generation from customers at a rate that
9 is calculated using the formula set forth in IC 8-1-40-17.
10
11

12 **III. PRIORITIZATION AND GRANDFATHERING**
13

14 **Q. How will Vectren South transition from its net metering tariff ("Rider NM") to the**
15 **Rider EDG rate for eligible customers?**

16 **A.** As previously discussed in this testimony, Vectren South will continue to allow eligible
17 customers to utilize Rider NM until such point as the overall capacity threshold of 1.5%
18 of summer peak load is met, while still adhering to the reserved capacity guidelines as
19 defined in the Distributed Generation Statute. When considering whether a customer
20 is eligible for Rider NM, it is necessary to think of eligible customers in three separate
21 groups.
22

23 First, for Operating Participants, or applications that have been approved and are
24 operational as of the date of this filing, Rider NM will continue to apply in accordance
25 with the Distribution Generation Statute. Specifically, IC 8-1-40-14 requires that
26 customers who installed DG resources before January 1, 2018 would remain a Rider
27 NM customer until July 1, 2047². IC 8-1-40-13 requires that those customers who
28 install DG resources after December 31, 2017 and before the expiration of Rider NM

² Unless or until the customer removes or replaces the eligible DG resource, at which point the customer would be removed from Rider NM.

1 (IC 8-1-40-10) would remain a Rider NM customer until July 1, 2032³. After these
2 respective dates, the customer would become a Rider EDG customer.

3

4 Second, Approved Participants – applications that have been submitted and approved
5 with final, signed interconnection agreements, but not yet operational – will be
6 considered, in accordance with GAO 2019-2, a Rider NM eligible customer provided
7 that (1) there is available capacity in the representative customer-generator group
8 (Residential, Biomass, or Non-Reserved), or (2) there is capacity available in the
9 overall 1.5% aggregate limit. If these criteria are not met, Vectren South will evaluate
10 the status of the Approved Participant. In accordance with GAO 2019-2, if the
11 Approved Participant has been approved for more than a year without going
12 operational *and the overall 1.5% aggregate limit is reached*, that customer will be
13 moved, following notification of such, to a Non-Approved Participant within the queue,
14 restarting the application process. This situation will result in the customer becoming
15 a Rider EDG customer once operational. If the Approved Participant has not been
16 approved for more than a year, then Vectren South will ensure that any customer that
17 is an Approved Participant by January 1, 2021 will be considered a Rider NM eligible
18 customer in accordance with IC 8-1-40-10 and IC 8-1-40-13.

19

20 Finally, for Non-Approved Participants in the queue that are operational after the
21 approval of Vectren South's Rider EDG and *after the statutory aggregate capacity*
22 *level is exhausted*, these customers will not be guaranteed eligibility for Rider NM.
23 Once the application is approved, these customers will follow the hierarchy described
24 above for Approved Participants.

25

26 Petitioner's Exhibit No. 2, Attachment JCS-1 provides a summary decision tree on
27 how eligible customers will be evaluated for Rider NM and Rider EDG.

28

29 **Q. Will a customer ever be transferred from Rider NM to Rider EDG?**

30 A. No. Outside of the defined end dates within the Distributed Generation Statute,

³ Unless or until the customer removes or replaces the eligible DG resource, at which point the customer would be removed from Rider NM.

1 Vectren South will not transfer a customer from Rider NM to Rider EDG. Vectren South
2 will ensure that the interconnection agreement with the customer defines the pricing
3 structure for any excess DG.
4

5 **Q. Will this result in Vectren South exceeding the 1.5% limit defined in the**
6 **Distributed Generation Statute?**

7 A. Most likely yes. First, Vectren South will utilize the Biomass reserved capacity up to
8 the 1.5% threshold; however, Vectren South has committed to maintaining this amount
9 for any future Biomass resources that become operational before June 30, 2022,
10 which could push the net metering operating capacity above the 1.5% threshold.
11 Second, by ensuring that Approved Applicants in the queue through January 1, 2021
12 will continue to be eligible for Rider NM, current trends would support the fact that
13 these applications will most likely exceed the 1.5% capacity threshold.
14

15 **Q. Is Vectren South working with external parties on communicating the**
16 **prioritization and grandfathering?**

17 A. Yes. Vectren South will be engaging with external parties (customers, developers) to
18 explain how the statutory capacity levels reported on its website impact their potential
19 projects, and specifically how the application approval date and operational date of
20 their project will determine whether the customer will be a Rider NM or Rider EDG
21 customer. The Company will ensure that the application approval process clearly
22 identifies for the customer these provisions.
23
24

25 **IV. PROPOSED EXCESS DISTRIBUTED GENERATION TARIFF**
26

27 **Q. Please summarize Vectren South's proposal for Rider EDG.**

28 A. In accordance with IC 8-1-40-16, Vectren South is requesting approval of Rider EDG
29 to establish a rate for the procurement of excess distributed generation. This rate will
30 apply to any customer that is ineligible for Rider NM, using the prioritization and
31 grandfathering discussed earlier in my testimony. As previously discussed, any
32 customer that becomes operational prior to reaching these defined capacity levels will

1 be considered a Net Metering customer in accordance with the Distributed Generation
2 Statute.

3
4 **Q. How does the Distributed Generation Statute define Excess Distribution**
5 **Generation (“EDG”)?**

6 A. Section 5 defines EDG as the difference between the electricity that is supplied by an
7 electricity supplier to a customer that produces distributed generation, and the
8 electricity that is supplied back to the electricity supplier by the customer.

9
10 **Q. How will Vectren South measure EDG for application in Rider EDG?**

11 A. Vectren South will instantaneously measure the flow of energy via its Advanced
12 Metering Infrastructure (“AMI”) metering equipment. The electricity supplied by
13 Vectren to the customer is defined as “inflow”, and the electricity supplied by the
14 customer to Vectren is defined as “outflow”. Because the meter can only register the
15 instantaneous measurement of electricity in either direction, each unit of power can
16 only be either inflow and outflow (or net zero in the case of perfect matching of
17 generation to consumption).

18
19 **Q. How will the inflow and outflow be used to determine the charges on the monthly**
20 **bill?**

21 A. The total inflow amount for the billing period will be priced at the applicable tariff rate
22 for the customer, as it represents delivered energy direct from the Company to the
23 customer. The total outflow amount for the billing period will be priced at the Rider
24 EDG credit rate, as it represents excess distributed generation from the customer to
25 the Company. The total inflow and total outflow charges and credits will be netted
26 together to create a net monthly bill for the customer.

27
28 **Q. Does the instantaneous measurement of inflow and outflow allow a customer to**
29 **utilize its distributed generation resource to offset load?**

30 A. Yes, the energy produced by the distributed generation resource can be used to offset
31 the customer's load, provided that the production of electricity by the customer
32 synchronizes with the usage of electricity by the customer. In instances when the

1 production occurs with no usage or when production exceeds usage, generating an
2 outflow measurement on the meter, the distributed generation resource is providing
3 electricity to the utility (and the grid) for use by other customers. In instances when the
4 usage occurs with no production or when usage exceeds production, generating an
5 inflow measurement on the meter, the utility is providing the electricity to the customer
6 from the grid.

7

8 **Q. Please describe the pricing of Rider EDG.**

9 A. Pursuant to IC 8-1-40-17, the marginal price of electricity to be used for Excess DG
10 ("Marginal DG Price") is (1) the average marginal price of electricity paid by the
11 electricity supplier during the most recent calendar year; multiplied by (2) one and
12 twenty-five hundredths (1.25). Vectren South witness Justin M. Joiner explains the
13 calculation in more detail.

14

15 **Q. Please describe Vectren South's proposal for updating the Marginal DG Price in**
16 **Rider EDG annually.**

17 A. Section 16 of the Distributed Generation Statute states:

18 "After an electricity supplier's initial rate for excess distributed
19 generation is approved by the commission under section 17 of this
20 chapter, the electricity supplier shall submit on an annual basis, not
21 later than March 1 of each year, an updated rate for excess distributed
22 generation in accordance with the methodology set forth in section 17
23 of this chapter."

24 Vectren South proposes to file a compliance tariff annually under this docket to reflect
25 the update to the Marginal DG Price, following the same process used to set the initial
26 rate as described by Witness Joiner. The Company will work with Commission Staff to
27 determine a timeline that allows for Staff's review prior to implementing the updated
28 Rider EDG Marginal DG Price.

29

30 **Q. Please describe how the Marginal DG Price will be applied to the monthly**
31 **customer bill.**

32 A. Total outflow for the month will be priced at the Marginal DG Price under Rider EDG,
33 generating a credit on the monthly customer bill ("Rider EDG Billing Credit"). Total
34 inflow for the month will be priced at the customer's applicable Rate Schedule rates

1 and charges. Customers will receive the EDG Billing Credit up to the point where the
2 total net bill reaches the Minimum Monthly Charge as defined in the customer's
3 applicable Rate Schedule.

4
5 **Q. Will Vectren South seek to recover the EDG Billing Credits in rates?**

6 A. Yes. As the EDG Billing Credits represent a purchase by the utility of excess
7 generation, for use by other customer's on Vectren South's system, this cost will be
8 recovered as fuel costs, specifically purchased power costs, in the monthly Fuel
9 Adjustment Clause ("FAC") in accordance with IC 8-1-40-15.

10
11 **Q. Will the unused EDG Billing Credit in any month be maintained by the customer
12 for use in future periods?**

13 A. Yes, in accordance with the Distributed Generation Statute, as long as the customer
14 continues service with the Company, any unused EDG Billing Credit will be held in a
15 balance to be used in a subsequent period. If the customer discontinues service with
16 the Company, any remaining EDG Billing Credit balance will revert to the Company
17 and such balance will be credited to the FAC.

18
19 **Q. Is the structure of Rider EDG and the instantaneous measurement of inflow and
20 outflow considered a "Buy-All / Sell-All" arrangement with Vectren South?**

21 A. No. Rider EDG is not "Buy-All / Sell-All", which would require separate metering to
22 measure the full production of the distributed generation resource along with a meter
23 to measure the full load of the customer. Under Rider EDG, the customer is still able
24 to utilize the distributed generation resource to offset instantaneous load. In periods
25 when a DG resource is producing electricity to fully offset load, no inflow will occur,
26 and the effective rate applied to the generated energy is the tariff retail rate. In periods
27 when a DG resource is producing excess (outflow), that excess production will be
28 compensated at the Rider EDG rate

29
30 **Q. How will Rider EDG differ from Rider NM?**

31 A. Pricing for outflow under Rider EDG differs from Rider NM in that customers are not
32 receiving credit at the applicable tariff Rate Schedule rates and charges for all excess

1 distributed generation. This minimizes subsidies provided by other customers under
2 Rider NM, which the Legislature has already acted to end no later than June 30, 2022.
3

4 Table JCS-3 shows examples of customer billing under Rider NM, Rider EDG, and a
5 "Buy-All / Sell-All" option, using actual data from a current Rider NM customer for April
6 2019. A customer under Rider NM who takes a net amount of electric service of 58
7 kWh (inflow) for a month will have a total bill (before sales tax) of \$21.13, including
8 total volumetric and fixed charges. A customer under Rider EDG, who also has net
9 service of 58 kWh, now measured with 1,541 kWh of total inflow and 1,483 kWh of
10 total outflow, will have a total bill (before sales tax) of \$173.48. This is because, rather
11 than a single net amount of service being billed for the month under Rider NM, the
12 meter now records the flows every instance, determining when energy produced by
13 the distributed generation resource is actually consumed by the customer and when it
14 is a DG resource providing energy to Vectren South (outflow). This outflow is then
15 priced at the Marginal DG price. In instances when the customer required more than
16 the distributed generation resource produced (inflow), the energy is billed at retail
17 rates. Under the "Buy-All / Sell-All" option, a customer who has net use of 58 kWh,
18 consisting of 2,650 kWh separately metered consumption (inflow) and 2,592 kWh of
19 separately metered production⁴ (outflow), will have a total bill (before sales tax) of
20 \$287.48. In that instance, the distributed generation resource is never used to offset
21 electric service, but instead all production is separately metered and is compensated
22 at the Rider EDG Marginal DG Price and then used as a credit against electric service.
23

⁴ As Vectren South does not currently have a separately metered interconnection to be able to measure against, the production associated with the solar investment is based on the sized capacity for the customer and the anticipated capacity factor for this area and investment.

1

Table JCS-3

Residential – Rate RS (April 2019)	Rider NM	Rider EDG	Buy All / Sell All
kWh – Inflow	58	1,541	2,650
kWh – Outflow		(1,483)	(2,592)
Net kWh – Metered	58	58	58
Total Volumetric Charges – Rate RS	\$8.13	\$214.32	\$368.60
Total Fixed Charges – Rate RS	\$13.00	\$13.00	\$13.00
Total Generation Credit – EDG	\$0.00	\$(53.84)	\$(94.12)
Total Bill	\$21.13	\$173.48	\$287.48

2

3 **Q. Table JCS-3 presents data for April 2019. Is there a significant difference in the**
4 **impacts using a peak period?**

5 **A.** Looking at a peak period – August 2019 – the Company would expect that more of the
6 produced energy from the DG resources would be consumed by the customer, leaving
7 less treated as excess. Thus, Rider EDG does continue to provide the opportunity to
8 utilize the production from the customer DG resources to offset usage in each instant.
9 Given the restrictions on size of the DG resource, this offset remains the primary
10 purpose of the resource and such offsetting production is essentially compensated at
11 the retail rate. Table JCS-4 presents the comparison of Rider NM, Rider EDG, and the
12 hypothetical “Buy-All / Sell-All” option for the August 2019 period. Excess DG
13 production (“outflow”) is used as a credit against the customer’s bill for retail service.

14

Table JCS-4

Residential – Rate RS (August 2019)	Rider NM	Rider EDG	Buy All / Sell All
kWh – Inflow	1,581	2,676	4,173
kWh – Outflow		(1,095)	(2,592)
Net kWh – Metered	1,581	1,581	1,581
Total Volumetric Charges – Rate RS	\$219.95	\$372.21	\$580.44
Total Fixed Charges – Rate RS	\$13.00	\$13.00	\$13.00
Total Generation Credit – EDG	\$0.00	\$(34.85)	\$(82.50)
Total Bill	\$232.95	\$350.36	\$510.94

1

2

3 **V. TARIFF PROPOSAL AND MODIFICATIONS**

4

5 **Q. Is Vectren South requesting approval of a proposed Rider EDG tariff sheet in**
6 **this proceeding?**

7 A. Yes. Attachment JCS-2 is the proposed Vectren South Tariff Sheet, Sheet No. 56 –
8 Rider EDG – Excess Distributed Generation.

9

10 **Q. Are any changes required to the Rate Schedules in the Tariff?**

11 A. Yes. The Rate Schedules must be updated to reflect that the Rider EDG is available
12 for all applicable Rate Schedules. Clean and redline versions of the Tariff Sheet Index
13 and Rate Schedules, reflecting this change, are shown in Attachment JCS-3.

14

15

16 **VI. CONCLUSION**

17

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

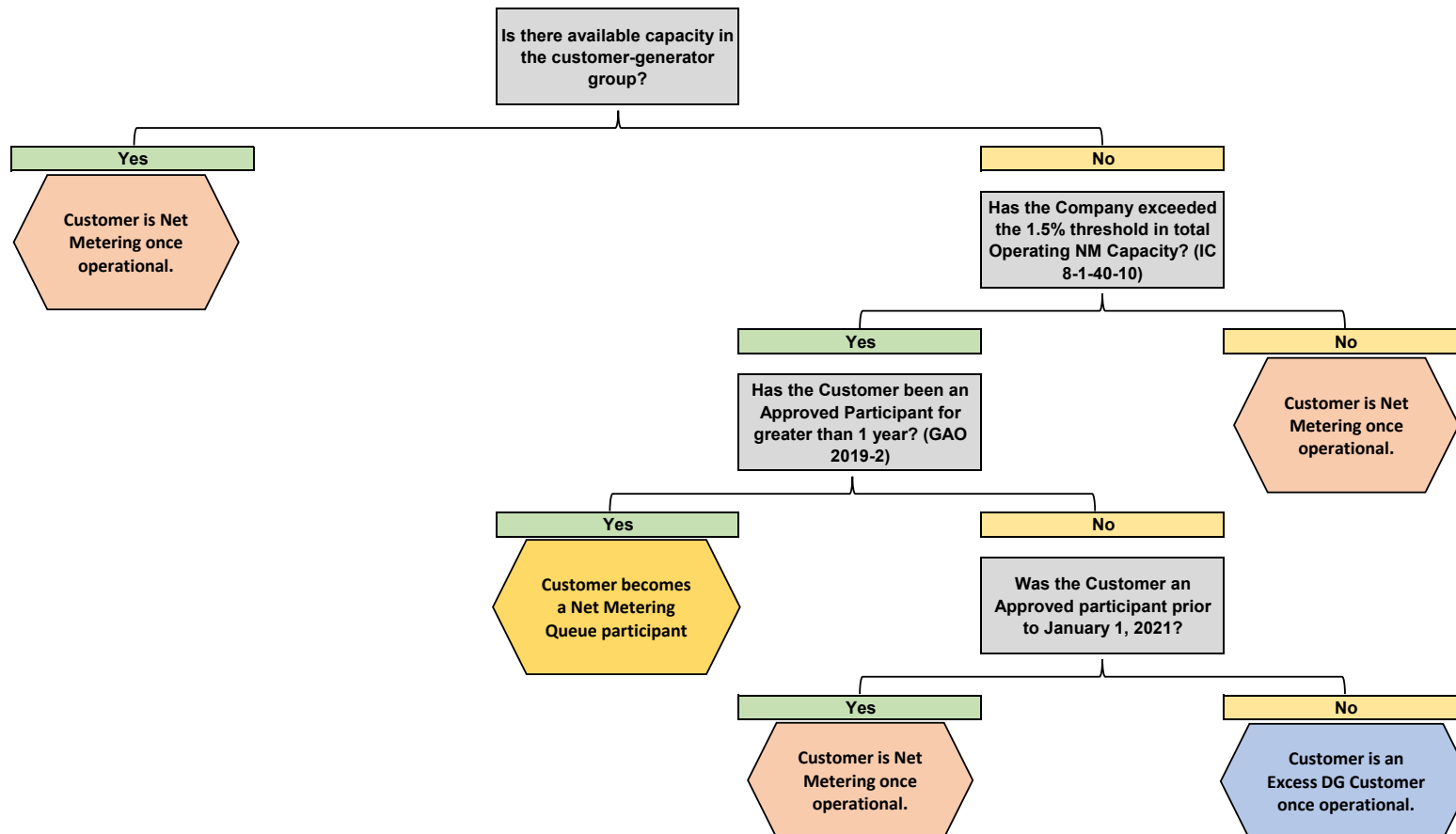
19 A. Yes, it does.

VERIFICATION

The undersigned, J. Cas Swiz, affirms under the penalties of perjury that the answers in the foregoing Direct Testimony in Cause No. 45378 are true to the best of his knowledge, information and belief.


J. Cas Swiz

Decision Tree Net Metering Approved Participants



Definitions:

Net Metering Approved Participant - GAO 2019-2 - I-C-3 - approved by the utility and signed an interconnection agreement.

Customer-Generator Group - GAO 2019-2 - I-C-1 - Residential, Biomass, and Non-Reserved

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

Sheet No. 53
Original Page 1 of 5

RIDER EDG **EXCESS DISTRIBUTED GENERATION**

AVAILABILITY

This Rider shall be available throughout Company's Service Area subject to the terms of Indiana Code ("IC") 8-1-40 and subject to the availability of adequate facilities and power supplies, which determinations shall be within Company's reasonable discretion.

APPLICABILITY

This Rider is applicable to any Customer receiving Electric Service electing service hereunder who has installed on its Premises an eligible distributed generation energy resource ("DG" resource) or other renewable energy technologies determined appropriate by the Commission. Customer must meet the Metering, Generator System Requirements, and Interconnection Requirements specified below. Customer must not be eligible for Rider NM.

DEFINITIONS

The following definitions are applicable to Customers under Rider EDG:

Inflow – (kWh) the measurement of energy supplied by Company to Customer.

Outflow – (kWh) the measurement of energy delivered by Customer to Company.

Rider EDG Billing Credit – in accordance with IC 8-1-40-17 and 8-1-40-18, the credit determined by taking the Outflow multiplied by the Marginal DG Price.

Rider EDG Billing Credit Balance – in accordance with IC 8-1-40-18, the cumulative amount of Rider EDG Billing Credits not applied to a customer's bill due to Minimum Monthly Charge requirements.

Net Metering Queue – in accordance with IURC General Administrative Order ("GAO") 2019-2, a prioritized list for each of the three customer-generator types (residential, biomass, and non-reserved) by date of operation of distributed generation energy resource, date of application approval by the Company, and date of completed application by the Customer to the Company.

Net Metering Operating Participant – in accordance with GAO 2019-2, those customers who have completed installation and have a fully operating (or energized) DG resource.

Net Metering Approved Participant – in accordance with GAO 2019-2, those customers who have applied and received approval from the utility, and who have signed an interconnection agreement with the utility.

Net Metering Queue Participant – in accordance with GAO 2019-2, those customers who have applied but not yet received approval from the utility to complete an interconnection agreement.

Rider NM Participation Cap – in accordance with IC 8-1-40, participation in Rider NM is limited to one and one-half percent (1.5%) of Company's most recent aggregate summer peak load.

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

Sheet No. 53
Original Page 2 of 5

RIDER EDG
EXCESS DISTRIBUTED GENERATION
(Continued)

BILLING

During the Month, Company shall measure the total kWh amount of Inflow and the total kWh amount of Outflow.

The Inflow kWh for the Month shall be billed in accordance with the Customer's standard Rate Schedule, with all applicable rates and charges (heretofore defined as *Standard Charges*).

The Excess DG kWh (Outflow) for the Month shall be multiplied by the Marginal DG Price to determine the Rider EDG Billing Credit.

For each Month, the Customer will be billed the Minimum Monthly Charge as defined in the Customer's applicable Rate Schedule. If the portion of the Customer's bill for the Month attributed to the Rider EDG Billing Credit is in excess of the amount attributed to Standard Charges less the Minimum Monthly Charge, the amount in excess will be accumulated in a Rider EDG Billing Credit Balance for use in a subsequent period.

If the portion of the Customer's bill for the Month attributed to the Standard Charges is in excess of the Rider EDG Billing Credit, any remaining Rider EDG Billing Credit Balance will be applied until the bill becomes the Minimum Monthly Charge or until the Rider EDG Billing Credit Balance becomes zero.

In accordance with IC 8-1-40-18, when Customer discontinues Rider EDG service and no longer receives retail electric service from the Company at the Premises, any unused and remaining Rider EDG Billing Credit Balance will revert to Company.

p

MARGINAL DG PRICE

Marginal DG Price is the average marginal price of energy paid by the Company during the most recent calendar year, multiplied by one and twenty-five hundredths (1.25), in accordance with IC 8-1-40-17.

Marginal DG Price:

\$0.03183 for all Outflow kWh

METERING

Customer's eligible for Rider EDG will be required to have a meter installed which can separately measure Inflow and Outflow. If Customer's standard meter is not capable of measuring Inflow and Outflow separately, Company will at its expense install a meter to meet the requirements of Rider EDG.

For Customers receiving three-phase service Company will install, at Customer's expense, a meter to meet the requirements of Rider EDG.

Company's General Terms and Conditions Applicable to Electric Service will govern meter testing procedures.

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

Sheet No. 53
Original Page 3 of 5

RIDER EDG
EXCESS DISTRIBUTED GENERATION
(Continued)

ELIGIBILITY

Customers eligible for Rider EDG must not be eligible for Rider NM. Eligibility for Rider EDG and Rider NM will be determined based upon the Company's Net Metering Queue, maintained on the Company's website in accordance with GAO 2019-2.

1. For all Net Metering Queue Participants, eligibility will be determined once the customer (Net Metering Queue Participant) becomes a Net Metering Approved Participant.
2. Those customers that become a Net Metering Approved Participant before the Rider NM Participation Cap is met, will be eligible for Rider NM once operational in accordance with the requirements of IC 8-1-40 et seq.
3. Those customers that become a Net Metering Approved Participant after the Rider NM Participation Cap is met, will be eligible for Rider NM once operational in accordance with the requirements of IC 8-1-40 et seq., provided that the customer:
 - a. has not been a Net Metering Approved Participant for greater than one year without becoming operational; and
 - b. was a Net Metering Approved Participant prior to January 1, 2021.

If these conditions are not met, then the Net Metering Approved Participant will not be eligible for Rider NM and will become eligible for Rider EDG.

4. Net Metering Operating Participants prior to January 1, 2021 will remain eligible for Rider NM in accordance with IC 8-1-40 guidelines.
5. The eligibility of Net Metering Operating Participants after January 1, 2021 will be determined upon their status as Net Metering Approved Participants in accordance with the specifications listed above.

DISTRIBUTED GENERATOR SYSTEM REQUIREMENTS

Customer's distributed generator system must initially and continuously meet the following requirements in accordance with IC 8-1-40-3. The Company retains the right to periodically verify adherence to these requirements. Lack of adherence to the requirements revokes the applicability of this Rider.

1. The nameplate rating of Customer's generator system must not exceed 1 megawatt ("MW");
2. The generator system must be owned and operated by Customer and must be located on Customer's Premises;
3. Customer's generator system installed kW nameplate rating shall not represent an intent to exceed a Customer's on-going twelve-month kWh usage;
4. The generator system must operate in parallel with Company's distribution facilities;
5. The generator system must satisfy the Interconnection Requirements specified below;
6. The generator system cannot be used primarily for emergency back-up purposes; and
7. The generator system must not be operating under the NM Rider.

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

Sheet No. 53
Original Page 4 of 5

RIDER DG
DISTRIBUTED GENERATION
(Continued)

INTERCONNECTION REQUIREMENTS

1. Customer shall comply and maintain compliance with Company's interconnection requirements and Interconnection Guidelines for Customer Owned Generation (VEC-006). A generator system shall be deemed in compliance with Company's interconnection requirements if such generator system conforms to the most current Indiana Electrical Code, IEEE Standard 1547, has UL or CSA certification that it has satisfied the testing requirements of UL 1741 dated January 28, 2010, or IEEE 1547.1, or any IEEE or UL Standards that supersede these. The distributed generation facility shall comply with the applicable requirements of 170 IAC 4-4.3.
2. Customer owning and operating a generator system shall provide proof of liability insurance providing coverage for claims resulting from Bodily Injury and/or Property Damage in the amount of at least one hundred thousand dollars (\$100,000) for the liability of the insured against loss arising out of the use of a distributed generation metering facility, as provided in 170 IAC 4-4.2-8. This coverage must be maintained as long as Customer is interconnected with Company's distribution system.
3. Conformance with these requirements does not convey any liability to Company for injuries or damages arising from the installation or operation of the generator system.
4. Customer shall execute Company's standard Distributed Generation Interconnection Application form and provide other information reasonably requested by Company for service under this Rider. Company shall require proof of qualified installation, including but not limited to proper configuration of service transformers and grounding requirements, prior to acceptance and completion of the interconnection agreement. Certification by a licensed electrician shall constitute one form of acceptable proof.

TERMS AND CONDITIONS OF SERVICE

1. Any characteristic of Customer's generator that degrades or otherwise compromises the quality of service provided to other Company Customers will not be permitted. In Company's determination, all generators shall be installed in compliance with corresponding service connection and IEEE Standard 519.
2. Customer shall agree that Company shall at all times have immediate access to Customer's metering, control, and protective equipment.
3. Customer shall install, operate and maintain the distributed generation facility in accordance with the manufacturer's suggested practices for safe, efficient and reliable operation in parallel with Company's system.
4. Company may, at its own discretion, isolate any distributed generation facility if Company has reason to believe that continued interconnection with the distributed generation facility creates or contributes to a system emergency. System emergencies causing discontinuance of interconnection shall be subject to verification at the Commission's discretion.

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

Sheet No. 53
Original Page 5 of 5

RIDER DG
DISTRIBUTED GENERATION
(Continued)

5. A disconnecting device must be located at the point of common coupling for all Level 3 interconnections and applicable Level 2 interconnections as determined by Company. For three-phase interconnections, the disconnecting device must be gang operated. The disconnecting device must be accessible to Company personnel at all times and be suitable for use by Company as a protective tagging location. The disconnecting device shall have a visible open gap when in the open position and be capable of being locked in the open position. The cost and ownership of the main disconnect switch shall reside with Customer.
6. Customer is responsible for operating the proposed distributed generation facility such that voltage imbalance attributable to the distributed generation facility shall not exceed 1% at the point of common coupling. If voltage imbalance is more than 1% without the generator operating, the generator shall be installed and operated so as not contribute to a further imbalance. Voltage imbalance is the maximum phase deviation from average as specified in ANSI C84.1.
7. Company reserves the right to witness compliance testing at the time of installation and maintenance testing of the interconnection system for compliance with these conditions of service.
8. Customer is responsible for establishing a program for and performing periodic scheduled maintenance on the distributed generation facility's interconnection system (relays, interrupting devices, control schemes and batteries that involve the protection of Company's distribution system). A periodic maintenance program is to be established in accordance with the requirements of IEEE 1547. Company may examine copies of the periodic test reports or inspection logs associated with the periodic maintenance program. Upon Company's request, Company shall be informed of the next scheduled maintenance and be able to witness the maintenance performed and any associated testing.
9. The interconnection system hardware and software design requirements included in these terms and conditions of service are intended to ensure protection of Company's distribution system. Customer is solely responsible to determine, design and apply any additional hardware and software necessary to protect equipment at the distributed generation facility.
10. Customer agrees that Company shall not be liable for any damage to or breakdown of Customer's equipment operated in parallel with Company's electric system.
11. Customer shall agree to release, indemnify, and hold harmless Company from any and all claims for injury to persons or damage to property due to or in any way connected with the operation of Customer-owned equipment and/or generators.
12. The supplying of, and billing for service under this Rider shall be governed by Company's General Terms and Conditions Applicable to Electric Service under the jurisdiction of the Commission.

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

Sheet No. 2
Fourth Revised Page 2 of 4
Cancels Third Revised Page 2 of 4

TARIFF SHEET INDEX

(Continued)

TARIFF SHEET NO.

DESCRIPTION

	<u>RIDER</u>	<u>RIDERS</u>
50		RESERVED FOR FUTURE USE
51	IP-2	INTERRUPTIBLE POWER SERVICE
52	NM	NET METERING RIDER
53	EDG	EXCESS DISTRIBUTED GENERATION RIDER
54	DLC	DIRECT LOAD CONTROL RIDER
55	IC	INTERRUPTIBLE CONTRACT RIDER
56	IO	INTERRUPTIBLE OPTION RIDER
57	AFS	ALTERNATE FEED SERVICE RIDER
58	ED	ECONOMIC DEVELOPMENT RIDER
59	AD	AREA DEVELOPMENT RIDER
60	TS	TEMPORARY SERVICE RIDER
61	SAS	STANDBY OR AUXILIARY SERVICE RIDER
62	DR	MISO DEMAND RESPONSE RIDER
63-64		RESERVED FOR FUTURE USE

APPENDIX

ADJUSTMENTS

65	A	FUEL ADJUSTMENT CLAUSE (FAC)
66	B	DEMAND SIDE MANAGEMENT ADJUSTMENT (DSMA)
67	C	CLEAN ENERGY COST ADJUSTMENT (CECA)
68	D	OTHER CHARGES
69	E	ENVIRONMENTAL COST ADJUSTMENT (ECA)
70-72		RESERVED FOR FUTURE USE
73	I	MISO COST AND REVENUE ADJUSTMENT (MCRA)
74	J	RELIABILITY COST AND REVENUE ADJUSTMENT (RCRA)
75	K	TRANSMISSION, DISTRIBUTION AND STORAGE SYSTEM IMPROVEMENT CHARGE (TDSIC)
76-78		RESERVED FOR FUTURE USE

RATE

PURCHASE RATES

79	CSP	COGENERATION AND SMALL POWER PRODUCTION
----	-----	---

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

Sheet No. 10
Fourth Revised Page 2 of 2
Cancels Third Revised Page 2 of 2

RATE RS
RESIDENTIAL SERVICE
(Continued)

Minimum Monthly Charge:

The Minimum Monthly Charge shall be the Customer Facilities Charge.

Adjustments:

The following Adjustments shall be applied monthly:

- Appendix A – Fuel Adjustment Clause
- Appendix B – Demand Side Management Adjustment
- Appendix C – Clean Energy Cost Adjustment
- Appendix E – Environmental Cost Adjustment
- Appendix I – MISO Cost and Revenue Adjustment
- Appendix J – Reliability Cost and Revenue Adjustment
- Appendix K – Transmission, Distribution, and Storage System Improvement Charge

Riders:

The following Riders are available to qualified Customers:

- Rider NM – Net Metering Rider
- Rider EDG – Excess Distributed Generation Rider
- Rider DLC – Direct Load Control Rider

Other Charges:

The Other Charges set forth in Appendix D shall be charged to Customer, if applicable.

TERMS AND CONDITIONS OF SERVICE

Service under this Rate Schedule shall be governed by Company's General Terms and Conditions and the Commission's Regulations.

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

Sheet No. 14
Eighth Revised Page 1 of 2
Cancels Seventh Revised Page 1 of 2

RATE SGS **SMALL GENERAL SERVICE**

AVAILABILITY

This Rate Schedule shall be available throughout Company's Service Area, subject to the availability of adequate facilities and power supplies, which determinations shall be within Company's reasonable discretion.

APPLICABILITY

This Rate Schedule shall be applicable to any Non-Residential Customer with a Prior Year Maximum Demand or, if new Customer, an estimated Maximum Demand, of 10kW, or less electing service hereunder. Company shall determine Customer's estimated Maximum Demand by review of the connected load or other suitable means.

CHARACTER OF SERVICE

Service provided hereunder shall be alternating current, sixty hertz, Single Phase, three-wire 120/240 or 120/208 nominal volts, or any other mutually agreed upon voltages.

RATES AND CHARGES

The monthly Rates and Charges for service hereunder shall be:

Customer Facilities Charge:

\$11.00 per month

Energy Charge:

\$0.08811 per kWh for the first 1,000 kWh used per month

\$0.06686 per kWh for the next 1,000 kWh used per month

\$0.03687 per kWh for all over 2,000 kWh used per month

Fuel Charge:

\$0.03889 per kWh for all kWh used per month

Variable Production Charge:

\$0.00475 per kWh for all kWh used per month

Minimum Monthly Charge:

The Minimum Monthly Charge shall be the Customer Facilities Charge.

Adjustments:

The following Adjustments shall be applied monthly:

- Appendix A – Fuel Adjustment Clause
- Appendix B – Demand Side Management Adjustment
- Appendix C – Clean Energy Cost Adjustment
- Appendix E – Environmental Cost Adjustment
- Appendix I – MISO Cost and Revenue Adjustment
- Appendix J – Reliability Cost and Revenue Adjustment
- Appendix K – Transmission, Distribution, and Storage System Improvement Charge

Riders:

The following Riders are available to qualified Customers:

- Rider NM – Net Metering Rider
- Rider EDG – Excess Distributed Generation Rider
- Rider DLC – Direct Load Control Rider

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

Sheet No. 15
Fourth Revised Page 2 of 2
Cancels Third Revised Page 2 of 2

RATE DGS
DEMAND GENERAL SERVICE
(Continued)

Minimum Monthly Charge:

The Minimum Monthly Charge shall be the Customer Facilities Charge plus the Demand Charge.

Transformer Ownership Discount:

Customers with a Maximum Demand of 100 kW or greater and receiving service at Company's available Primary Voltage may own, operate and maintain all transformer facilities. A discount of forty-five and one-tenth cents (\$0.451) for each kW of Billing Demand will apply to such customers.

Adjustments:

The following Adjustments shall be applied monthly:

- Appendix A – Fuel Adjustment Clause
- Appendix B – Demand Side Management Adjustment
- Appendix C – Clean Energy Cost Adjustment
- Appendix E – Environmental Cost Adjustment
- Appendix I – MISO Cost and Revenue Adjustment
- Appendix J – Reliability Cost and Revenue Adjustment
- Appendix K – Transmission, Distribution, and Storage System Improvement Charge

Riders:

The following Riders are available to qualified Customers:

- Rider IP-2 – Interruptible Power Service
- Rider NM – Net Metering Rider
- Rider EDG – Excess Distributed Generation Rider
- Rider DLC – Direct Load Control Rider
- Rider IO – Interruptible Option Rider
- Rider AFS – Alternate Feed Service Rider
- Rider ED – Economic Development Rider
- Rider AD – Area Development Rider
- Rider TS – Temporary Service Rider
- Rider DR – MISO Demand Response

Other Charges:

The Other Charges set forth in Appendix D shall be charged to Customer, if applicable.

DETERMINATION OF BILLING DEMAND

The Billing Demand for the current month shall be the Maximum Demand, but not less than 60% of the highest Maximum Demand for the Prior Year.

SEPARATE METERING

When the lighting and power demands are metered separately, the Maximum Demand of the Month shall be the arithmetical sum of the Maximum Demand of each meter. The energy use of the lighting and power meters shall also be added.

TERMS AND CONDITIONS OF SERVICE

Service under this Rate Schedule shall be governed by Company's General Terms and Conditions and the Commission's Regulations.

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

Sheet No. 16
Second Revised Page 1 of 2
Cancels First Revised Page 2 of 2

RATE OSS
OFF-SEASON SERVICE
(Continued)

Adjustments:

The following Adjustments shall be applied monthly:

- Appendix A – Fuel Adjustment Clause
- Appendix B – Demand Side Management Adjustment
- Appendix C – Clean Energy Cost Adjustment
- Appendix E – Environmental Cost Adjustment
- Appendix I – MISO Cost and Revenue Adjustment
- Appendix J – Reliability Cost and Revenue Adjustment
- Appendix K – Transmission, Distribution, and Storage System Improvement Charge

Riders:

The following Riders are available to qualified Customers:

- Rider IP-2 – Interruptible Power Service
- Rider NM – Net Metering Rider
- Rider EDG – Excess Distributed Generation Rider
- Rider DLC – Direct Load Control Rider
- Rider IO – Interruptible Option Rider
- Rider AFS – Alternate Feed Service Rider
- Rider DR – MISO Demand Response

Other Charges:

The Other Charges set forth in Appendix D shall be charged to Customer, if applicable.

DETERMINATION OF BILLING DEMAND

The Billing Demand for the current month shall be the highest Maximum Demand established during the previous months of June, July, August or September, but not less than 10 kW.

TERMS AND CONDITIONS OF SERVICE

Service under this Rate Schedule shall be governed by Company's General Terms and Conditions and the Commission's Regulations.

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

Sheet No. 20
Fourth Revised Page 2 of 2
Cancels Third Revised Page 2 of 2

RATE MLA
MUNICIPAL LEVEE AUTHORITY SERVICE
(Continued)

Transformer Ownership Discount:

This discount is available to any Customer electing service under this Rate Schedule, when Customer owns, operates and maintains all transformer facilities and receives service at Company's available Primary Voltage. Customer's current monthly bill will be decreased by forty-five and one-tenth cents (\$0.451) for each kW of Billing Demand.

Adjustments:

The following Adjustments shall be applied monthly:

- Appendix A – Fuel Adjustment Clause
- Appendix B – Demand Side Management Adjustment
- Appendix C – Clean Energy Cost Adjustment
- Appendix E – Environmental Cost Adjustment
- Appendix I – MISO Cost and Revenue Adjustment
- Appendix J – Reliability Cost and Revenue Adjustment
- Appendix K – Transmission, Distribution, and Storage System Improvement Charge

Riders:

The following Riders are available to qualified Customers:

- Rider NM – Net Metering Rider
- Rider EDG – Excess Distributed Generation Rider
- Rider IO – Interruptible Option Rider
- Rider AFS – Alternate Feed Service Rider
- Rider ED – Economic Development Rider
- Rider TS – Temporary Service Rider
- Rider DR – MISO Demand Response

Other Charges:

The Other Charges set forth in Appendix D shall be charged to Customer, if applicable.

DETERMINATION OF BILLING DEMAND

Billing Demand shall be the higher of Maximum Demand and Monthly Contract Demand.

The Monthly Contract Demand shall be the demand amount agreed upon between Customer and Company in a Contract.

SEPARATE METERING

When the lighting and power demands are metered separately, the Maximum Demand of the Month shall be the arithmetical sum of the Maximum Demand of each meter. The energy use of the lighting and power meters shall also be added.

CONTRACT

For service hereunder, a written contract is required for an initial term of not less than two (2) years and such contract shall continue for annual successive terms unless cancelled. The contract may be cancelled by either party by giving written notice to the other party not less than one (1) year prior to the date of termination.

TERMS AND CONDITIONS OF SERVICE

Service under this Rate Schedule shall be governed by Company's General Terms and Conditions and the Commission's Regulations.

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

Sheet No. 2
Fourth Revised Page 2 of 4
Cancels Third Revised Page 2 of 4

Deleted: Third

Deleted: Second

TARIFF SHEET INDEX

(Continued)

TARIFF SHEET NO.

DESCRIPTION

RIDER

RIDERS

50		RESERVED FOR FUTURE USE
51	IP-2	INTERRUPTIBLE POWER SERVICE
52	NM	NET METERING RIDER
53	EDG	EXCESS DISTRIBUTED GENERATION RIDER
54	DLC	DIRECT LOAD CONTROL RIDER
55	IC	INTERRUPTIBLE CONTRACT RIDER
56	IO	INTERRUPTIBLE OPTION RIDER
57	AFS	ALTERNATE FEED SERVICE RIDER
58	ED	ECONOMIC DEVELOPMENT RIDER
59	AD	AREA DEVELOPMENT RIDER
60	TS	TEMPORARY SERVICE RIDER
61	SAS	STANDBY OR AUXILIARY SERVICE RIDER
62	DR	MISO DEMAND RESPONSE RIDER
63-64		RESERVED FOR FUTURE USE

Deleted: RESERVED FOR FUTURE USE

APPENDIX

ADJUSTMENTS

65	A	FUEL ADJUSTMENT CLAUSE (FAC)
66	B	DEMAND SIDE MANAGEMENT ADJUSTMENT (DSMA)
67	C	CLEAN ENERGY COST ADJUSTMENT (CECA)
68	D	OTHER CHARGES
69	E	ENVIRONMENTAL COST ADJUSTMENT (ECA)
70-72		RESERVED FOR FUTURE USE
73	I	MISO COST AND REVENUE ADJUSTMENT (MCRA)
74	J	RELIABILITY COST AND REVENUE ADJUSTMENT (RCRA)
75	K	TRANSMISSION, DISTRIBUTION AND STORAGE SYSTEM IMPROVEMENT CHARGE (TDSIC)
76-78		RESERVED FOR FUTURE USE

RATE

PURCHASE RATES

79	CSP	COGENERATION AND SMALL POWER PRODUCTION
----	-----	---

Effective:

Deleted: June 1, 2019

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

Sheet No. 10

Fourth Revised Page 2 of 2

Cancels Third Revised Page 2 of 2

Deleted: Third

Deleted: Second

RATE RS **RESIDENTIAL SERVICE**

(Continued)

Minimum Monthly Charge:

The Minimum Monthly Charge shall be the Customer Facilities Charge.

Adjustments:

The following Adjustments shall be applied monthly:

- Appendix A – Fuel Adjustment Clause
- Appendix B – Demand Side Management Adjustment
- Appendix C – Clean Energy Cost Adjustment
- Appendix E – Environmental Cost Adjustment
- Appendix I – MISO Cost and Revenue Adjustment
- Appendix J – Reliability Cost and Revenue Adjustment
- Appendix K – Transmission, Distribution, and Storage System Improvement Charge

Riders:

The following Riders are available to qualified Customers:

- Rider NM – Net Metering Rider
- Rider EDG – Excess Distributed Generation Rider
- Rider DLC – Direct Load Control Rider

Other Charges:

The Other Charges set forth in Appendix D shall be charged to Customer, if applicable.

TERMS AND CONDITIONS OF SERVICE

Service under this Rate Schedule shall be governed by Company's General Terms and Conditions and the Commission's Regulations.

Effective:

Deleted: June 1, 2019

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

Sheet No. 14

Eighth Revised Page 1 of 2
Cancels Seventh Revised Page 1 of 2

Deleted: Seventh

Deleted: Sixth

RATE SGS **SMALL GENERAL SERVICE**

AVAILABILITY

This Rate Schedule shall be available throughout Company's Service Area, subject to the availability of adequate facilities and power supplies, which determinations shall be within Company's reasonable discretion.

APPLICABILITY

This Rate Schedule shall be applicable to any Non-Residential Customer with a Prior Year Maximum Demand or, if new Customer, an estimated Maximum Demand, of 10kW, or less electing service hereunder. Company shall determine Customer's estimated Maximum Demand by review of the connected load or other suitable means.

CHARACTER OF SERVICE

Service provided hereunder shall be alternating current, sixty hertz, Single Phase, three-wire 120/240 or 120/208 nominal volts, or any other mutually agreed upon voltages.

RATES AND CHARGES

The monthly Rates and Charges for service hereunder shall be:

Customer Facilities Charge:

\$11.00 per month

Energy Charge:

\$0.08811 per kWh for the first 1,000 kWh used per month

\$0.06686 per kWh for the next 1,000 kWh used per month

\$0.03687 per kWh for all over 2,000 kWh used per month

Fuel Charge:

\$0.03889 per kWh for all kWh used per month

Variable Production Charge:

\$0.00475 per kWh for all kWh used per month

Minimum Monthly Charge:

The Minimum Monthly Charge shall be the Customer Facilities Charge.

Adjustments:

The following Adjustments shall be applied monthly:

- Appendix A – Fuel Adjustment Clause
- Appendix B – Demand Side Management Adjustment
- Appendix C – Clean Energy Cost Adjustment
- Appendix E – Environmental Cost Adjustment
- Appendix I – MISO Cost and Revenue Adjustment
- Appendix J – Reliability Cost and Revenue Adjustment
- Appendix K – Transmission, Distribution, and Storage System Improvement Charge

Riders:

The following Riders are available to qualified Customers:

- Rider NM – Net Metering Rider
- Rider EDG – Excess Distributed Generation Rider
- Rider DLC – Direct Load Control Rider

Effective:

Deleted: June 1, 2019

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

Sheet No. 15

Fourth Revised Page 2 of 2
Cancels Third Revised Page 2 of 2

Deleted: Third

Deleted: Second

RATE DGS
DEMAND GENERAL SERVICE
(Continued)

Minimum Monthly Charge:

The Minimum Monthly Charge shall be the Customer Facilities Charge plus the Demand Charge.

Transformer Ownership Discount:

Customers with a Maximum Demand of 100 kW or greater and receiving service at Company's available Primary Voltage may own, operate and maintain all transformer facilities. A discount of forty-five and one-tenth cents (\$0.451) for each kW of Billing Demand will apply to such customers.

Adjustments:

The following Adjustments shall be applied monthly:

- Appendix A – Fuel Adjustment Clause
- Appendix B – Demand Side Management Adjustment
- Appendix C – Clean Energy Cost Adjustment
- Appendix E – Environmental Cost Adjustment
- Appendix I – MISO Cost and Revenue Adjustment
- Appendix J – Reliability Cost and Revenue Adjustment
- Appendix K – Transmission, Distribution, and Storage System Improvement Charge

Riders:

The following Riders are available to qualified Customers:

- Rider IP-2 – Interruptible Power Service
- Rider NM – Net Metering Rider
- Rider EDG – Excess Distributed Generation Rider
- Rider DLC – Direct Load Control Rider
- Rider IO – Interruptible Option Rider
- Rider AFS – Alternate Feed Service Rider
- Rider ED – Economic Development Rider
- Rider AD – Area Development Rider
- Rider TS – Temporary Service Rider
- Rider DR – MISO Demand Response

Other Charges:

The Other Charges set forth in Appendix D shall be charged to Customer, if applicable.

DETERMINATION OF BILLING DEMAND

The Billing Demand for the current month shall be the Maximum Demand, but not less than 60% of the highest Maximum Demand for the Prior Year.

SEPARATE METERING

When the lighting and power demands are metered separately, the Maximum Demand of the Month shall be the arithmetical sum of the Maximum Demand of each meter. The energy use of the lighting and power meters shall also be added.

TERMS AND CONDITIONS OF SERVICE

Service under this Rate Schedule shall be governed by Company's General Terms and Conditions and the Commission's Regulations.

Effective:

Deleted: June 1, 2019

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

Sheet No. 16
Second Revised Page 1 of 2
Cancels First Revised Page 2 of 2

Deleted: First

Deleted: Original

RATE OSS
OFF-SEASON SERVICE
(Continued)

Adjustments:

The following Adjustments shall be applied monthly:

- Appendix A – Fuel Adjustment Clause
- Appendix B – Demand Side Management Adjustment
- Appendix C – Clean Energy Cost Adjustment
- Appendix E – Environmental Cost Adjustment
- Appendix I – MISO Cost and Revenue Adjustment
- Appendix J – Reliability Cost and Revenue Adjustment
- Appendix K – Transmission, Distribution, and Storage System Improvement Charge

Riders:

The following Riders are available to qualified Customers:

- Rider IP-2 – Interruptible Power Service
- Rider NM – Net Metering Rider
- Rider EDG – Excess Distributed Generation Rider
- Rider DLC – Direct Load Control Rider
- Rider IO – Interruptible Option Rider
- Rider AFS – Alternate Feed Service Rider
- Rider DR – MISO Demand Response

Other Charges:

The Other Charges set forth in Appendix D shall be charged to Customer, if applicable.

DETERMINATION OF BILLING DEMAND

The Billing Demand for the current month shall be the highest Maximum Demand established during the previous months of June, July, August or September, but not less than 10 kW.

TERMS AND CONDITIONS OF SERVICE

Service under this Rate Schedule shall be governed by Company's General Terms and Conditions and the Commission's Regulations.

Effective:

Deleted: June 1, 2019

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

Sheet No. 20

Fourth Revised Page 2 of 2
Cancels Third Revised Page 2 of 2

Deleted: Third

Deleted: Second

RATE MLA
MUNICIPAL LEVEE AUTHORITY SERVICE
(Continued)

Transformer Ownership Discount:

This discount is available to any Customer electing service under this Rate Schedule, when Customer owns, operates and maintains all transformer facilities and receives service at Company's available Primary Voltage. Customer's current monthly bill will be decreased by forty-five and one-tenth cents (\$0.451) for each kW of Billing Demand.

Adjustments:

The following Adjustments shall be applied monthly:

- Appendix A – Fuel Adjustment Clause
- Appendix B – Demand Side Management Adjustment
- Appendix C – Clean Energy Cost Adjustment
- Appendix E – Environmental Cost Adjustment
- Appendix I – MISO Cost and Revenue Adjustment
- Appendix J – Reliability Cost and Revenue Adjustment
- Appendix K – Transmission, Distribution, and Storage System Improvement Charge

Riders:

The following Riders are available to qualified Customers:

- Rider NM – Net Metering Rider
- Rider EDG – Excess Distributed Generation Rider
- Rider IO – Interruptible Option Rider
- Rider AFS – Alternate Feed Service Rider
- Rider ED – Economic Development Rider
- Rider TS – Temporary Service Rider
- Rider DR – MISO Demand Response

Other Charges:

The Other Charges set forth in Appendix D shall be charged to Customer, if applicable.

DETERMINATION OF BILLING DEMAND

Billing Demand shall be the higher of Maximum Demand and Monthly Contract Demand.

The Monthly Contract Demand shall be the demand amount agreed upon between Customer and Company in a Contract.

SEPARATE METERING

When the lighting and power demands are metered separately, the Maximum Demand of the Month shall be the arithmetical sum of the Maximum Demand of each meter. The energy use of the lighting and power meters shall also be added.

CONTRACT

For service hereunder, a written contract is required for an initial term of not less than two (2) years and such contract shall continue for annual successive terms unless cancelled. The contract may be cancelled by either party by giving written notice to the other party not less than one (1) year prior to the date of termination.

TERMS AND CONDITIONS OF SERVICE

Service under this Rate Schedule shall be governed by Company's General Terms and Conditions and the Commission's Regulations.

Effective:

Deleted: June 1, 2019