FILED September 11, 2020 INDIANA UTILITY REGULATORY COMMISSION



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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

IURC PETITIONER'S EXHIBIT NO. · H REPORTER

REBUTTAL TESTIMONY OF JASON L. WILLIAMS

DIRECTOR, SYSTEM OPERATIONS

ON

RESPONSE TO THE DIRECT TESTIMONY OF INTERVENING PARTIES ON ADVANCED METER INFRASTRUCTURE

SPONSORING PETITIONER'S EXHIBIT NO. 5

REBUTTAL TESTIMONY OF JASON L. WILLIAMS

1	I.	INTRODUCTION		
2				
3	Q.	Please state your name and business address.		
4	Α.	My name is Jason L. Williams and my business address is One Vectren Square		
5		Evansville, Indiana 47708.		
6				
7	Q.	By whom are you employed?		
8	Α.	I am employed by CenterPoint Energy, Inc. ("CenterPoint"). Southern Indiana Gas and		
9		Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc. ("Petitioner", "Vectren		
10		South" or "the Company") is a subsidiary of CenterPoint.		
11				
12	Q.	What position do you hold with Petitioner?		
13	Α.	I am Director of System Operations for Vectren South.		
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15	Q.	Please describe your educational background.		
16	Α.	I hold a Bachelor of Science Degree in Mechanical Engineering from the University of		
17		Evansville (2004) and Master of Business Administration (MBA) from the University of		
18		Southern Indiana (2009).		
19				
20	Q.	Please describe your professional experience.		
21	Α.	I have 15 years of professional experience, all with Petitioner. I started in 2005 as a		
22		Project Engineer and then transitioned to the role of Operations Supervisor. I held that		
23		role from 2006 – 2011 with responsibilities for various gas and electric maintenance		
24		and construction activities, emergency response, vegetation management, customer		
25		service orders, and electric metering. From 2011 – 2016, as Division		
26		Supervisor/Operations Manager, I had additional responsibilities for electric substation		
27		maintenance, construction, controls, and communication activities. In 2016, I became		
28		Director of System Operations with responsibilities explained in the following question.		
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Q. What are your present duties and responsibilities as Director of System Operations?

- 3 Α. As Director of System Operations, I have had responsibilities for the gas and electric 4 control centers (excluding power generation), emergency dispatching, electronic field 5 communications, as well as gas and electric measurement and metering, including 6 advanced metering initiatives. As a result of the Merger between Vectren and 7 CenterPoint Energy on February 1, 2019 and subsequent organizational changes, I 8 have maintained advanced metering initiatives; electric transmission control center 9 and field activities; electric reliability compliance; electric substation maintenance; and 10 construction, controls, and field communication activities.
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Q. Have you previously testified before this Commission?

- A. No, I have not.
- 13 14

15 Q. What is the purpose of your Rebuttal Testimony in this proceeding?

- 16 Α. The purpose of my testimony is to respond to the direct testimony of the intervening parties in the subject proceeding. In particular, I describe Vectren South's deployment 17 18 of Advanced Metering Infrastructure ("AMI") and more importantly, why AMI is not 19 needed for, nor related to, the implementation of the Excess Distributed Generation 20 Tariff ("Rider EDG"). I also explain the transition from digital to AMI meters and the 21 deliberative process Vectren South undertakes before deploying additional 22 functionality. In addition, I provide a technical overview of how the AMI meters record 23 inflow and outflow and how such information will be made available to customers in 24 an easy and transparent way.
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I have not attempted to respond to every claim or argument made by the Intervenors
and the fact that I do not address a particular statement should not be construed as
my agreement thereto.

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- 30 Q. Are you sponsoring any attachments in this proceeding?
- 31 A. No.

1 II. **DATA RETRIEVAL AND COMPLETENESS**

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3 Q. Do you agree with the assertion made by Solarize Indiana, Inc. ("Solarize") 4 Witness Mullett that Petitioner is not ready to implement its Rider EDG as of 5 January 1, 2021, and this fact requires material modification of its proposal and 6 therefore a significant delay in Rider EDG's implementation?

7 Α. No. Vectren South is ready to implement Rider EDG on January 1, 2021, or as soon 8 thereafter as practicable following, and subject to, Indiana Utility Regulatory 9 Commission ("Commission") approval. There are no material modifications nor delays 10 required to implement Rider EDG.

12 Mr. Mullett mistakenly believes implementation of Rider EDG is connected to, or 13 dependent upon, Vectren South's deployment of AMI meters within its service territory. 14 To the contrary, as explained later in my testimony, there is no direct correlation 15 between Vectren South's deployment of AMI and implementation of Rider EDG. 16 Additionally, Vectren South's AMI deployment was substantially complete in the fourth 17 quarter of 2019. Vectren South has had distributed generation ("DG") customers on its 18 system since February 2006 (before the AMI platform was deployed in Vectren South's 19 territory); when the first digital net meter was set to properly register customer inflow 20 and outflow, on separate delivered and received channels, respectively. Since 21 February 2006, Vectren South has set and maintained a total of 694 net meters and 22 billed customers for their net usage (measured as the monthly netting of the inflow and 23 outflow). Of these 694 customers, the below graph (Chart JLW - 1) demonstrates the 24 number of meters set each year and supports the fact that Vectren South has many 25 years of experience successfully metering and billing these DG customers.

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CHART JLW-1



Annual vs. Total Net Meters Installed

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Q. How do you respond to the contention made by Solarize Witness Mullett that Vectren South is proposing undeveloped, undisclosed, untested and unreviewed programming for the retrieval and processing of data?

7 Vectren South is not proposing to use undeveloped, undisclosed, untested, nor Α. 8 unreviewed programming for the retrieval and processing of customer inflow or outflow 9 data. A misconception on the part of the intervening parties seems to be that Vectren 10 South cannot successfully bill a net metered DG customer because it just recently 11 started using AMI to remotely read and provide the customer usage data for its meters. 12 In fact, a utility could continue to conduct traditional meter reading – i.e., in-person, 13 manual reads of meters - without AMI and still fully service DG customers under either 14 traditional Net Metering ("Rider NM") or Rider EDG. AMI does improve many core 15 functions such as (1) the ability to read meters remotely and more frequently, (2) using 16 this remote read capability to provide more frequent metering data to customers, (3) 17 improving operational efficiencies, and (4) providing the potential for more benefits and 18 enhancements which will be explained later in my testimony. Current additional 19 benefits resulting from the Vectren South AMI initiative and the OpenWay Riva solution 20 include faster reporting of electric outages by electric meters communicating their 21 outages directly to the distribution outage management system. This allows for faster

- restoration of electric service and improves public safety and utility safety because of
 the faster pinpointing where the outage occurred in order to begin restoration.
- 3

4 Q. Please provide some background on Vectren South's AMI initiative¹ ("AMI 5 Project").

6 Α. Vectren South's AMI deployment was a collaboration with Itron: Oracle as a software 7 vendor; and Accenture who helped install various applications as well as service the 8 system integrations to receive and process Itron meter data. Deployment began in 9 December of 2017 with a small subset of residential meters as well as launch of 10 supporting systems such as Meter Data Management System ("MDMS"). Work in 11 2018 was largely focused on mass deployment of electric meters and gas meter 12 communication modules with work in 2019 continuing the mass deployment while also 13 beginning to read and bill meters over the AMI network in February 2019. The 14 deployment of AMI meters was substantially completed in the fourth quarter of 2019, 15 meaning most meters had been exchanged save for a small number of meters 16 requiring additional customer appointments or other more extensive means to 17 exchange the meter such as engineering or construction.

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Q. How were DG Customers' meters read and bills calculated before implementation of AMI?

A. Prior to Vectren South's deployment of AMI meters, the customers' digital meters were
 read manually once per month, in person, with a walk-by meter reader. The meter
 reader recorded the net meter reading and the customers' bills were processed
 accordingly.

¹ Vectren South presented its AMI Project for recovery within its proposed transmission, distribution, and storage system improvement charge ("TDSIC") mechanism within Cause No. 44910 (Order September 20, 2017). A Stipulation and Settlement Agreement within Cause No. 44910 approved the project for deferred accounting authority, with the prudency of the inclusion of the AMI investments in rate base to be determined in the Company's next electric base rate case (Order page 32).

1Q.Please explain the transition from digital meters to AMI meters for DG2Customers.

- A. In December of 2017, under contract with Itron, Vectren South began deploying AMI
 meters. During this timeframe, there was a transitional period where a combination of
 legacy digital meters ("legacy meters") and new AMI meters were both on the Vectren
 South system. Meters were systematically exchanged, including all net meters, over
 the course of the AMI Project.
- 9 Since December 2017, any new DG net metering customer received an Itron AMI 10 meter with the last legacy digital net meter being exchanged in August of 2019.
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Q. Please explain how DG Customer meter reads and bills are calculated after Vectren South's implementation of AMI as well as any benefits to automatic reads.

- 15 Α. In simplistic, non-technical terms, part of the AMI Project included supporting systems 16 such as a MDMS which were needed to process the remote meter reads from the 17 cellular network to the billing system. This functionality has been in place and 18 successfully utilized to read and bill meters over the AMI network since February 2019. 19 All AMI meters are communicated with up to 3 times per day via a cellular network of routers. The meter data is passed from the meters across a network of meters and 20 21 routers, ultimately routed to the MDMS and then the billing system. For Rider NM DG 22 customers, the MDMS processes the inflow and outflow data based on the billing cycle 23 and sends a net read to the billing system. For Rider EDG customers, the monthly 24 cumulative data for the inflow and outflow channels would be sent from MDMS to the 25 billing system. This functionality has been in place and successfully utilized to read 26 and bill meters over the AMI network since February 2019.
- 27

As a result of having a reliable AMI network, which is fully deployed and reading remotely, Vectren South is more readily able to process and share customer data more frequently, benefiting all customers as well as DG customers. Additionally, if the Cellular AMI network experienced a communication outage, the data is still captured and stored in the meter and would transmit all data at the next available opportunity or

1 if necessary, periodically downloaded on-site at the meter. 2 3 Q. Is Vectren South's proposed Rider EDG dependent upon the execution of the 4 AMI Project? 5 Α. No. While Vectren South did not begin installing AMI meters until December 2017, 6 Vectren South has been reading and billing net meters since 2006, as depicted above 7 in Chart JLW-1. While the timing of the Rider EDG filing does coincide on the calendar 8 with Vectren South's AMI deployment, EDG billing and AMI have no dependency on 9 the ability or inability of the utility to read and bill DG customers with existing dual-10 channel meters. 11 12 Are you aware of any requirement then for Vectren South to have AMI meters Q. 13 installed, or the complete roll-out of its AMI Project initiatives, as asserted in 14 various intervenor testimony, before Vectren South could implement its 15 proposed Rider EDG? 16 No. To put it more directly, AMI is just a vehicle by which information travels from the Α. 17 DG meters to the billing system. Net metering in and of itself has not changed; but 18 rather has been taking place at Vectren South since 2006. Data is still captured, 19 customer usage and customer excess generation is still registered with revenue 20 guality metering but now instead of physically traveling to the customer's meter once 21 a month, Vectren South has the capability to receive this information automatically as 22 much as three times per day. Rider EDG is independent of AMI, an Itron contract, or 23 any other services provided since the AMI Project began in 2017. 24 25 26 **III**. AMI METER CHANNELS AND FLOW OF ELECTRICITY 27

Q. Please provide a technical overview as to how the total "outflow" is the measurement of the excess distributed generation as defined in IC § 8-1-40-5.
A. The meters used for Rider NM customers, and that are proposed to be used for Rider EDG customers, are programmed to register on two different channels: (1) an inflow channel; and (2) an outflow channel.

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Inflow is commonly referred to as electricity supplied to the customer from the utility.
The Inflow registered on the meter is the excess of the consumption that is required
by the customer above what is produced by the DG resource. Outflow is commonly
referred to as electricity that is supplied to the utility from the customer, produced by
to DG resource in excess of what the customer consumed behind the meter.
Therefore, outflow registered on the meter is the measurement of the excess
distributed generation above what is used by the customer.

9 Q. How do the meters register the inflow and outflow of electricity supplied?

Interval Data

A. Both inflow and outflow channels are registered at the meter and then transmitted to
MDMS. Please refer to Table JLW-1 showing a snapshot of data transmitted from the
meter to MDMS for outflow (Wh r) and inflow (Wh d), in hourly increments; where the
"r" represents "received" or OUTFLOW, from the customer to the utility; and the "d"
represents "delivered" or INFLOW, from the utility to the customer.

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TABLE JLW-1

Load Profile				
Interval End Date/Time	Wh d	Whr		
06/30/2020, 1:00 AM (-05:00)	1,874.000	0.000		
06/30/2020, 2:00 AM (-05:00)	709.000	0.000		
06/30/2020, 3:00 AM (-05:00)	1,991.000	0.000		
06/30/2020, 4:00 AM (-05:00)	710.000	0.000		
06/30/2020, 5:00 AM (-05:00)	712.000	0.000		
06/30/2020, 6:00 AM (-05:00)	739.000	0.000		
06/30/2020, 7:00 AM (-05:00)	2,051.000	129.000		
06/30/2020, 8:00 AM (-05:00)	102.000	346.000		
06/30/2020, 9:00 AM (-05:00)	154.000	185.000		
06/30/2020, 10:00 AM (-05:00)	319.000	2.000		
06/30/2020, 11:00 AM (-05:00)	87.000	179.000		
06/30/2020, 12:00 PM (-05:00)	0.000	2,114.000		
06/30/2020, 1:00 PM (-05:00)	18.000	2,687.000		
06/30/2020, 2:00 PM (-05:00)	142.000	133.000		
06/30/2020, 3:00 PM (-05:00)	46.000	2,113.000		

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Each hour independently captures the cumulative energy consumed above the customer's generation (inflow) or energy generated by the customer in excess of their consumption (outflow). In hours where both are occurring, energy is not flowing both directions at the same time. If the customer requirements or generation were isolated into moments in time, then there could be periods in the same hour showing alternating inflow and outflow. Samples of hourly data are currently available to customers through the customer portal and will be readily available for viewing by all customers, including DG customers, by the end of 2020. As discussed in the rebuttal testimony of Petitioner's Witness-Swiz, the ability to net the hourly data provided by the MDMS, as proposed by various Intervenors, is not possible in the Company's current billing system. For Rider EDG customers, the monthly cumulative read for the inflow and outflow channels aligns with the billing processes.

Q. Please explain why, contrary to the position of a few intervening parties, Vectren
 South's Customer Portal is not required for DG Customers to review and
 understand the amount of consumption between bills.

17 Α. A DG customer does not have to use Vectren South's portal to understand if they are 18 consuming more, or generating more, electricity on any given hour or day. This has 19 been the case since 2006 with Rider NM customers and continues to be post-AMI 20 deployment. For a Rider NM customer, the customer can simply view the digital meter 21 display at their premise which shows net usage. For a Rider EDG customer, the meter 22 will be programmed and installed at the customer's premise to display inflow and 23 outflow reads at the meter. The meter display is an easy, and transparent, way for a 24 customer to know each day, week, or with whichever frequency they choose and 25 assess whether the inflow or outflow is increasing. If the delivered (i.e., Inflow) register 26 display is increasing, then the customer is consuming more electricity than is being 27 generated. If the received (i.e., Outflow) register display is increasing, then the 28 customer is consuming less electricity than is being generated. Similarly, each display is cumulative, over time the customer can see if their consumption has increased or if 29 30 their generation has increased in comparison to the other register.

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1 IV. IMPACT OF MERGER ON AMI PROJECT

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Q. Have there been any impacts to the metering, billing process, or AMI strategy as

4 a result of Petitioner's merger with CenterPoint?

5 Α. To date, other than leadership changes, there have not been any significant impacts 6 to the metering, billing process, or AMI Project strategy as a result of the merger with 7 CenterPoint. Vectren South engaged with Itron and signed a Master Sales Agreement 8 in 2017 (the "2017 Master Sales Agreement") which is still active and in effect. Vectren 9 South has not executed any amendments to the original 2017 Master Sales 10 Agreement with Itron. Moreover, while there may be future integration from Vectren 11 South's technology systems to CenterPoint systems for operational savings and 12 efficiencies, there is no foreseeable plan to change Vectren South's Itron OpenWay 13 Riva system, the Oracle Outage Management System, or the Oracle MDMS.

14

15Q.What is the current status of the Itron contract with Vectren South regarding16AMI?

A. Vectren South is still under the original active agreement signed in 2017 with Itron. Vectren South's contract with Itron makes no mention of Rider EDG as being a required part of the contract.

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Q. Please explain the OpenWay Riva System and the availability of certain features or functionality deployed in Vectren South's territory.

A. The OpenWay Riva System is not a solution where everything was immediately
 available in 2017 or for that matter, at the completion of meter installations in 2019.
 Moreover, the services and applications advertised such as theft detection and high
 impedance detection come at additional costs. These services and applications are
 simply potential options or enhancements that may be obtainable with the OpenWay
 Riva System, not agreed upon in the original contract, nor free of cost, and in some
 instances not yet available to be implemented.

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31 Similar to a smart phone, AMI and metering in general are computer/technology 32 solutions that require upgrades, downloads, etc. With each upgrade, additional

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features and/or functionality may become available with the OpenWay Riva platform
serving as the baseline operating system. Each AMI meter is essentially its own
computer with software and hardware that communicate with other meters in a
network, and relay information back through cellular connected grid routers that also
have software and hardware.

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7 The OpenWay Riva solution currently deployed at Vectren South gives us the ability 8 to implement the suite of distributed intelligence applications, which include, but are 9 not limited to: distributed outage management application; demand side management; 10 theft detection; high impedance detection; high gas usage alerts at residences and 11 other safety diagnostics; transformer load management; peer-to-peer communication; 12 and distributed energy resource management tools. The OpenWay Riva solution 13 makes possible the use of these "distributed intelligence" applications and 14 enhancements.

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16Q.Solarize Witness Mullett claims Vectren South will not share its roadmap or17vision for AMI and the ITRON OpenWay Riva system and asserts Rider EDG18appears to be a short-term project representing a "bridge to nowhere". How do19you respond?

20 As explained previously in my testimony, OpenWay Riva System is simply the Α. 21 technology platform under which many applications, features, or enhancements can 22 be developed to operate. Vectren South is currently evaluating several applications 23 and initiatives as it relates to the Itron OpenWay Riva System beyond the core 24 functionality associated with the AMI deployment. As with any initiative, cost-benefit 25 analyses need to be completed and features and functionality need to be evaluated 26 and tested to assess and identify the best value-added solutions for customers and 27 the utility. This is not a "bridge to nowhere" but ensuring that neither the utility, nor 28 customer, bear any unnecessary costs without the corresponding increase in 29 value/benefit. Finally, additional roadmaps for AMI or the Itron OpenWay Riva System 30 are not necessary to implement Rider EDG. The net meter functionality pre-AMI and 31 additional availability of data post-AMI deployment has achieved what is necessary for 32 Rider EDG implementation. Future roadmaps and/or evaluations of technology should

not preclude the use of data and services that are available, used and useful.

Regarding the vision for the future of Distributed Energy Resources ("DERs"), as 3 4 mentioned by Mr. Mullett, the technology and infrastructure that Vectren South has 5 installed and is currently using is equipped to handle DERs now and in the future. 6 Between our Oracle Outage Management System, Itron OpenWay Riva solution, and 7 Supervisory Control and Data Acquisition ("SCADA") system, we are prepared for the 8 future DER Management while also acknowledging that future regulatory collaboration 9 will inform the ultimate strategy and any large-scale implementation. Again, these are 10 not precursors to Rider EDG but rather simply enhancements to the AMI, and other 11 systems that can happen alongside DG.

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14 V. <u>CONCLUSION</u>

16 Q. What do you recommend to the Commission?

17 Α. I recommend that the Commission approve Rider EDG as proposed by Vectren South 18 in this proceeding without material modification to the proposal or significant delay in 19 implementation. The Intervenors' mistaken belief that implementation of Rider EDG 20 is dependent upon, and directly connected to, Vectren South's recent AMI deployment 21 should be disregarded. As discussed, there is no direct correlation between Vectren 22 South's AMI Project and implementation of Rider EDG, namely metering and billing a 23 DG customer. Vectren South has had DG customers on its system since 2006, before 24 the AMI platform was available to Vectren South customers. Vectren South's 25 deployment of the Itron OpenWay Riva AMI System has only enhanced its ability to 26 serve and provide consumption or generation data to its customers and neither it (the 27 system) nor its enhancements are prerequisites for implementation of Rider EDG.

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29 Q. Does this conclude your prepared rebuttal testimony?

30 A. Yes, it does.