

CAUSE NO. 45990

FILED
December 5 2023
INDIANA UTILITY
REGULATORY COMMISSION

**SOUTHERN INDIANA GAS AND ELECTRIC COMPANY
d/b/a CENTERPOINT ENERGY INDIANA SOUTH
(CEI SOUTH)**

**DIRECT TESTIMONY
OF
AMY L. FOLZ
DIRECTOR, INDIANA HIGH VOLTAGE OPERATIONS**

ON

**RELIABILITY INITIATIVES, ADVANCED METERING INFRASTRUCTURE,
ALTERNATIVE REGULATORY PLAN FOR REMOTE DISCONNECTIONS, AND HIGH
VOLTAGE OPERATIONS AND INSPECTION PROGRAMS**

PETITIONER'S EXHIBIT NO. 5

DIRECT TESTIMONY OF AMY L. FOLZ

1 I. **INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Amy L. Folz. My business address is 1 North Main Street, Evansville,
4 Indiana 47711.

5 **Q. BY WHOM ARE YOU EMPLOYED?**

6 A. I am employed by Southern Indiana Gas and Electric Company d/b/a CenterPoint
7 Energy Indiana South (“CEI South”, “Petitioner”, or “Company”), which is an indirect
8 subsidiary of CenterPoint Energy, Inc.

9 **Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS DIRECT TESTIMONY?**

10 A. I am submitting testimony on behalf of CEI South.

11 **Q. WHAT IS YOUR ROLE WITH RESPECT TO PETITIONER CEI SOUTH?**

12 A. I am the Director of Indiana High Voltage Operations.

13 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

14 A. I earned a Bachelor of Science degree in 2003 from the University of Southern Indiana
15 with a major in Advertising and Public Relations and a minor in Marketing.

16 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE.**

17 A. I have been employed by CEI South¹ since 2008. Over the years, I have held positions
18 of increasing responsibility within the organization. Prior to becoming the Director of
19 Indiana High Voltage Operations in 2021, I was the Electric Reliability Compliance
20 Manager; and before that Technical Training Manager, Training and Development
21 Consultant, and Technical Training Coordinator for both gas and electric training
22 programs.

¹ For the sake of clarity, my testimony refers to CEI South, even though in certain situations, I may be referring to Southern Indiana Gas and Electric Company operating under a prior assumed business name.

1 Q. WHAT ARE YOUR PRESENT DUTIES AND RESPONSIBILITIES AS THE
2 DIRECTOR OF INDIANA HIGH VOLTAGE OPERATIONS?

3 A. I am responsible for real-time operations of CEI South’s transmission grid,
4 transmission and substation field operations, maintenance and construction,
5 distribution automation, advanced meter solutions, and Midcontinent Independent
6 System Operator (“MISO”) affairs. I provide leadership, management, and
7 organizational skills to assure proper resources, tools, and materials are provided and
8 efficiently utilized in the construction, operation, and maintenance of CEI South’s
9 substation and transmission activities. I provide oversight and strategic direction for
10 CEI South’s advanced meter infrastructure and metering technology applications. I
11 ensure compliance and execution of real-time operations on the electric transmission
12 system, including compliance with Federal Energy Regulatory Commission (“FERC”),
13 North American Electric Reliability Corporation (“NERC”), Department of Energy
14 (“DOE”), Reliability First (“RF”), Indiana Utility Regulatory Commission
15 (“Commission”), and MISO requirements, and other agency regulations and standards
16 as related to the planning, interconnection, construction, and operation of electric
17 facilities. I maintain an effective Emergency Operations Plan (“EOP”) and direct
18 employee response in restoration activities. I oversee performance and reliability of
19 the electric Energy Management System (“EMS”) and Supervisory Control and Data
20 Acquisition (“SCADA”) system and devices, as well as system performance and
21 reliability of advanced metering network and communications devices. I oversee
22 relationships with MISO affairs, policies, and proposals that affect electric generation,
23 power marketing, transmission planning, and system operations.

24 Q. HAVE YOU EVER TESTIFIED BEFORE THE COMMISSION OR ANY OTHER
25 STATE REGULATORY COMMISSION?

26 A. No.

27 II. PURPOSE & SCOPE OF TESTIMONY

28 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

29 A. I will describe CEI South’s ongoing reliability initiatives to sustain and enhance its
30 ability to deliver power to our customers using Advanced Metering Infrastructure
31 (“AMI”) technology, including Distributed Intelligence (“DI”), as well as Distribution

1 Automation (“DA”) technology and reliability initiatives, including inspection programs
2 for electric transmission system, substation, underground network, conservation
3 voltage reduction, communication equipment, and associated maintenance programs.
4 My testimony will also provide an overview of Transmission System Operations
5 (“TSO”) and MISO Affairs. Within my testimony, I am addressing CEI South’s request
6 to implement remote disconnect for non-payment processes through a waiver of 170
7 Ind. Admin. Code (“IAC”) 4-1-16(f), and I explain how CEI South’s request for this
8 Alternate Regulatory Plan (“ARP”) satisfies the requirements of Ind. Code ch. 8-1-2.5
9 (the “Alternative Utility Regulation Act” or “AUR Statute”).

10 **III. OVERVIEW OF ADVANCED METERING INFRASTRUCTURE (“AMI”)**

11 **Q. WHAT IS AMI?**

12 A. The Advanced Metering Infrastructure system is an electric distribution system asset
13 that helps CEI South improve the safety, reliability, and performance of the electric
14 distribution grid. It is the framework for two-way communication of energy data and
15 electric systems operations between advanced meters and CEI South’s management
16 systems. These management systems include billing, customer service, outage
17 information, and distribution management. AMI enables CEI South to collect near real-
18 time energy usage data. The data collected from the meter is used to ultimately
19 improve customer service and more efficiently and reliably operate the electric
20 distribution system. Components of the AMI infrastructure include the metering
21 hardware, secured telecommunications, and an AMI management control system,
22 also called an AMI head-end controller or system. Collectively, the AMI system
23 provides a powerful set of tools and capabilities that sharpen the ability of our
24 engineers and planners to make cost efficient, cost effective, and informed decisions
25 on how best to deploy capital and other resources to sustain the reliability of the
26 electrical distribution grid. As explained later in my testimony, from the customer’s
27 perspective, the AMI system helps customers use energy in a more informed way, with
28 greater choice and insight, and with a higher degree of service convenience.

29 **Q. HOW DOES AMI IMPROVE CUSTOMER SERVICE?**

30 A. The AMI system automates the meter reading function, which significantly improves
31 read accuracy. Through AMI, CEI South routinely collects nearly 100% of its monthly

1 billing reads, virtually, eliminating estimated reads and estimated bills. The system is
2 designed to capture interval meter data every day. This allows CEI South to collect
3 interval consumption data remotely to satisfy customer requests to transfer service
4 when moving in or out without a field visit. This data can also be used to investigate
5 billing inquiries from customers, leading to quicker resolution. In addition, the meter
6 self-reports events such as outages, tampering, and voltage levels. This enables back-
7 office processes to identify and isolate outages, detect theft, and identify abnormal
8 voltage, which ultimately improves both safety and reliability.

9 **Q. ASIDE FROM METER READING ACCURACY, ARE THERE ANY OTHER**
10 **CAPABILITIES AND/OR BENEFITS OF CEI SOUTH’S AMI DEPLOYMENT?**

11 A. Yes. AMI also provides the capability of remotely connecting or disconnecting power
12 to the customer premises. This eliminates the need for a field visit, providing safer,
13 faster, and better customer service. AMI supplies customer call center operations with
14 better quality information to specifically address customer inquiries and help
15 customers self-manage their usage patterns and energy choices. In addition, through
16 their online account, residential customers have web access to interval usage on a
17 next day basis, thus enabling them to make informed decisions related to their energy
18 consumption. Also, the data integration with our outage management systems helps
19 system operators respond to outages more efficiently.

20 **Q. HAS THE COMPANY PRESENTED INFORMATION TO THE COMMISSION ON AMI**
21 **BEFORE? PLEASE EXPLAIN.**

22 A. Yes. In Cause No. 44910, CEI South requested that the AMI program be included as
23 an eligible project under Ind. Code ch. 8-1-39 (the Transmission, Distribution and
24 Storage System Improvements Charge (“TDSIC”) Statute). Specifically, CEI South
25 sought recovery of costs associated with AMI network design, integrating the AMI
26 head-end system with the Meter Data Management (“MDM”) system, and the MDM
27 system integration to the billing and outage management systems, installing network
28 equipment in the field and the implementation of remote connect/disconnect capability,
29 outage management integration, customer access to detailed energy use, and
30 granular energy use data integrated with system management tools.

31 In Cause No. 44910, CEI South, the Office of Utility Consumer Counselor (“OUCC”),
32 and CEI South’s Industrial Group (the “44910 Settling Parties”), entered into a

1 Stipulation and Settlement Agreement (the “44910 Settlement Agreement”), which
2 was approved by the Commission in its September 20, 2017 Order (the “44910
3 Order”).² In consideration for CEI South’s agreement to remove the AMI project from
4 the TDSIC Plan, the Settling Parties agreed that CEI South may retain any savings
5 associated with the AMI project until the time of its next base rate case. The Settling
6 Parties further agreed to allow CEI South to defer, without carrying costs, 100% of the
7 depreciation associated with the AMI project (which was capped at an investment of
8 \$39 million) for recovery in CEI South’s next retail base rate proceeding. Additionally,
9 the Settling Parties agreed to allow CEI South to defer debt related post-in-service
10 carrying costs associated with the AMI project for recovery in CEI South’s next retail
11 base rate proceeding. As further explained by Petitioner’s Witness Chrissy M. Behme,
12 the Settling Parties agreed CEI South would recover the deferred depreciation and
13 deferred post-in-service carrying costs over a ten-year period. The Commission
14 ultimately approved the terms of the Settlement Agreement relating to AMI in their
15 entirety and ordered that the inclusion of AMI in rate base will be subject to a normal
16 prudence review in CEI South’s next rate case.³

17 **Q. PLEASE DESCRIBE THE STATUS OF AMI IMPLEMENTATION AND THE**
18 **BENEFITS REALIZED SINCE THE COMPANY’S IMPLEMENTATION OF AMI.**

19 A. The AMI network has been designed and implemented with network equipment
20 deployed in the field. CEI South began the implementation in 2017, completing it in
21 2020. Since implementing AMI, CEI South has realized the following benefits, which
22 are also summarized in **Table ALF-1**, below:

- 23 • Improved cost performance of meter reading, reducing field service orders, and
24 streamlining back-office processes in areas of metering, power quality
25 investigations, outage management, billing, and contact center;
 - 26 i. Improved customer/field service options and customer conveniences,
27 such as timely disconnection and connection flexibility, improved
28 responsiveness to energy use inquiries, billing, and customer care
29 functions;
 - 30 ii. Reduced risk of customer damage claims by removing nearly

² *S. Ind. Gas & Electric. Co.*, Cause No. 44910, 2017 WL 4232049 (IURC Sept. 20, 2017).

³ *Id.* at 31.

⁴ Includes both electric and gas.

- 1 three million⁴ visits to customers’ premises annually.
- 2 iii. Improved accuracy of customer bills;
- 3 iv. Improved customer access to their specific energy detail to aid their
- 4 planning and conservation efforts;
- 5 v. Improved timeliness and accuracy in addressing power outages and
- 6 power quality issues;
- 7 vi. Improved meter maintenance processes to update software and
- 8 configurations over the air; and
- 9 vii. Improved theft and tamper identification and investigation.
- 10 • Improved safety in maintaining CEI South’s infrastructure through:
 - 11 i. Reduced safety risks by removing inherent hazard and risk of injury and
 - 12 accident posed by manual meter reading; and
 - 13 ii. Improved overall safety in performing outage work reducing vehicle
 - 14 travel and volume of service visits.

Table ALF-1 – Benefit Category and Description

Benefit Category	Benefit Description
Billing	Reduced exceptions and estimations
Customer Care	Improved handling of customer calls, complaints, and inquiries
Distribution Engineering	Power quality-based error detection and improvements
Field Meter Services	Avoided meter service orders related to move-in/move-out orders and billing inquiries
Meter Reading	Elimination of manual meter reading expenses; Reduction in manual meter reading support costs; and Reduction in meter reading related claims
Metering	Net metering and excess distributed generation (EDG)
Outage Management	Improved storm and outage restoration; Reduced trouble calls (single lights out); and Improved data to evaluate circuit performance, including Customers Experiencing Multiple Interruptions (“CEMI”)

1 **Q. PLEASE DESCRIBE ADDITIONAL DETAILS OF THE IMPACT OF AMI ON THE**
2 **METER READING DEPARTMENT.**

3 A. In 2019, prior to the implementation of AMI, there was over \$850,000⁴ in costs
4 associated with contractor meter reading expense and three full-time (internal)
5 employees that covered manual meter reads. As of 2020, the contractors were
6 released, and two of the three full-time (internal) employees transferred to other
7 departments in 2021 with the final (third) employee retiring at the end of 2022. As of
8 2023, these expenses have been eliminated.

9 **Q. PLEASE DESCRIBE ANY ADDITIONAL OPPORTUNITIES NOT YET REALIZED**
10 **WITH THE COMPANY’S IMPLEMENTATION OF AMI.**

11 A. The Company has not yet fully integrated, or automated, AMI, which would include but
12 is not limited to, data integration and connect/disconnect commands with downstream
13 systems. Petitioner’s Witness Ronald W. Bahr explains that full automation is part of
14 the Company’s Enterprise Integration Program (“EIP”). Therefore, until full automation
15 is available, CEI South is performing remote connects/disconnects manually.

16 **Q. ONCE FULLY AUTOMATED, WHAT ARE THE BENEFITS OF FULLY**
17 **INTEGRATING AMI CAPABILITIES?**

18 A. Full integration will provide additional operational efficiencies and enhanced customer
19 experience outcomes through integration with the outage management system and
20 data analytics platforms which will ultimately further improve both safety and reliability.
21 This will support identification of momentary outages, improved reliability with reduced
22 outage times, and additional insight into distribution system performance.

23 **Q. WHAT ARE THE BENEFITS OF FULLY ADOPTING REMOTE CAPABILITIES**
24 **THROUGH AUTOMATION?**

25 A. With remote capabilities, residential customers would not need to schedule field
26 personnel to perform the task but rather would simply request the need for connection
27 or disconnection and the task could be completed remotely through automation.
28 Similarly, field personnel would not be required to go onsite to a customer’s premises
29 to perform a connect or disconnect. Therefore, whether it is a customer that is moving
30 who needs service disconnected or connected, or a customer who previously was

⁴ Includes both electric and gas.

1 disconnected for non-payment but has met the obligation to be reconnected, the
2 customer will have power restored more safely, quickly, and efficiently through the
3 remote capability than through the traditional truck roll and field personnel being
4 dispatched to the customer’s premise.

5 **Q. SAFETY IS INCLUDED AS A BENEFIT THROUGHOUT YOUR TESTIMONY.**
6 **PLEASE EXPLAIN IN MORE DETAIL.**

7 A. Safety is a core value of CEI South. It is the foundation of decisions made to improve
8 operations which includes the implementation of AMI. Providing automated meter
9 reads through AMI eliminates both the minor and major hazards and risks to our
10 employees, contractors, and customers. There are hazards and risks associated with
11 customer’s premises which could be as minor as contacting poison ivy or twisting an
12 ankle on unlevel ground to more severe, such as assault and injuries resulting from
13 customers or their pets. Also, of note, with AMI, CEI South has reduced the inherent
14 hazard and risk of injury and accident posed by vehicle route-based meter reading.
15 With the improvements to the meter reading function, employees and contractors are
16 no longer required to travel to obtain meter reads at the customer’s premise which
17 eliminates the risk of vehicle accidents. Similarly, aside from meter reading, remote
18 connect and disconnect capabilities reduce the number of truck rolls which also
19 eliminates the risk associated with the connect and disconnect orders. Through AMI,
20 CEI South can also identify, investigate, and correct potential diversion and theft cases
21 which are safety concerns for our customers therefore preventing risk of fire and
22 electrocution.

23 **Q. HAS CEI SOUTH IMPLEMENTED ADDITIONAL AMI CAPABILITIES SINCE THE**
24 **2017 FILING?**

25 A. Yes. Leveraging the AMI network, in 2021, CEI South began a pilot program for
26 Distributed Intelligence (“DI”) through which CEI South collects and analyzes data,
27 validating its accuracy, detecting anomalies, and proactively making repairs to the
28 service based on usage and temperature data, to name a few. It is with this data
29 analytics tool that CEI South can detect anomalies and resolve poor connections
30 before the poor connections become a safety or fire hazard, or nuisance for our
31 customers (i.e., blinking lights, poor electric service, etc.). High Impedance Detection,
32 one of the piloted DI applications, identifies and locates high impedance connections.
33 By proactively identifying these high impedance connections, CEI South (1) improves

1 customer safety by addressing failed connections and fire risk, (2) minimizes customer
2 complaints, and (3) provides a reduction in resolution time and costs for voltage issues.

3 **Q. WHAT’S NEXT FOR AMI?**

4 A. CEI South continues to transition, incorporating additional capabilities into our model
5 that will further enhance our efficiencies by providing additional data and empowering
6 CEI South and its customers to make proactive decisions. These future capabilities
7 include pilot programs of offerings such as Time of Use (“TOU”) rates, additional
8 Distributed Intelligence applications, and better planning for distribution system
9 enhancements.

10 Time of Use Rates. Rates depending on the time of day incentivize customers to
11 modify usage behavior, reducing peak period energy demand, while empowering
12 customers to take advantage of lower rates during off peak times. Petitioner’s Witness
13 Matt A. Rice provides further details on CEI South’s request to pilot critical peak
14 pricing, a Time of Use (“TOU”) rate.

15 Distributed Intelligence. The future of the grid requires CEI South to continue to invest
16 in communication and technology that provides access to information in near real time.
17 Data sourced from DI will allow us to adapt and support the grid of the future.

18 Distribution System Enhancements. Data provided by AMI allows CEI South to
19 perform more granular circuit analysis for distribution system enhancements, including
20 the analysis of energy use patterns, power quality problems and management of
21 Distributed Energy Resources.

22 **IV. WAIVER OF 170 IAC 4-1-16(f): REMOTE DISCONNECTIONS FOR NON-PAYMENT**

23 **Q. YOU PREVIOUSLY DESCRIBED THE REMOTE CONNECT AND DISCONNECT**
24 **CAPABILITY WITH AMI. DOES CEI SOUTH USE THE AMI CAPABILITY TO**
25 **REMOTELY DISCONNECT CUSTOMERS FOR NON-PAYMENT WITHOUT FIRST**
26 **SENDING A UTILITY REPRESENTATIVE TO THE CUSTOMER’S PREMISE?**

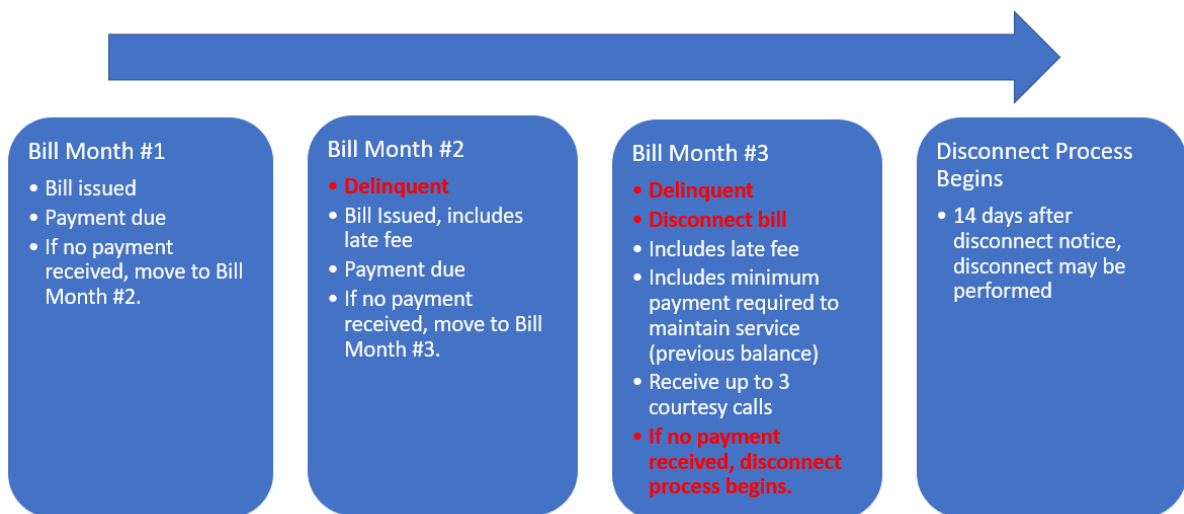
27 A. No. In the case of disconnection for non-payment, CEI South sends a field employee
28 to the customer’s premises at the time of service disconnection in compliance with 170
29 IAC 4-1-16(f), which requires the utility employee to, among other things, immediately

1 before the actual disconnection of service, make a reasonable attempt to identify
 2 himself or herself; announce the purpose of his/her visit to the premises; inform the
 3 customer of the reason for disconnection, including the amount of any delinquent bill
 4 of the customer; and request any available verification that the outstanding bills have
 5 been satisfied. CEI South is specifically seeking a variance from the requirement to be
 6 physically present on the customer’s premise for the disconnect for non-payment.

7 **Q. PLEASE DESCRIBE CEI SOUTH’S PROCESS FOR NOTIFYING A CUSTOMER**
 8 **PRIOR TO A DISCONNECTION FOR NON-PAYMENT.**

9 A. Prior to disconnection for non-payment, a notice is sent to the customer through mail
 10 or email depending on whether the customer signed up for electronic billing. The
 11 disconnect bill notice includes messaging to contact CEI South, if the customer cannot
 12 pay the bill, to arrange payments, or to identify if they qualify for low-income
 13 assistance. Beginning five days after the customer disconnect notice is sent, CEI
 14 South provides outbound courtesy/reminder calls. A customer may receive up to three
 15 calls before being disconnected. The three calls are made on consecutive days and
 16 cease once contact is made or a message is left for the customer. The customer may
 17 be disconnected any time following fourteen days from the disconnect notice. See
 18 disconnection timeline below.

Figure ALF-1 – Disconnection Timeline



19 CEI South will not perform disconnects for non-payment unless the disconnect
 20 satisfies the limitations set forth in IAC 4-1-16(d) as outlined below:

1 No utility may disconnect service unless it is done between the hours
2 of 8:00 a.m. and 3:00 p.m., prevailing local time. Disconnections under
3 subsections (a) and (b) are not subject to this limitation. A utility may
4 not disconnect service for non-payment on any day, or beyond noon of
5 the day immediately preceding any day, on which the utility office is not
6 open to the public.

7 **Q. IS THE DISCONNECTION DUE TO NON-PAYMENT PROCESS DIFFERENT FOR**
8 **A CUSTOMER THAT IS DEEMED TO HAVE A MEDICAL NEED?**

9 A. Yes. The initial process is the same, however, if the customer provides a medical
10 certification statement from a licensed physician or public health official stating that
11 the disconnection would be a serious and immediate threat to the health or safety of a
12 designated person in the household, an additional 10-day disconnection
13 postponement is placed on the account with additional postponement allowed, so long
14 as an updated medical statement is received per 170 IAC 4-1-16(c). See language
15 from 170 IAC 4-1-16(c) set forth below:

16 (c) Except as otherwise provided in subsections (a) and (b), a utility
17 shall postpone the disconnection of service for ten (10) days if, prior to
18 the disconnect date specified in the disconnect notice, the customer
19 provides the utility with a medical statement from a licensed physician
20 or public health official that states that disconnection would be a serious
21 and immediate threat to the health or safety of a designated person in
22 the household of the customer. The postponement of disconnection
23 shall be continued for one (1) additional ten (10) day period upon the
24 provision of an additional such medical statement.

25 **Q. DESCRIBE CEI SOUTH’S REQUEST FOR AN ALTERNATE REGULATORY PLAN**
26 **(“ARP”) FOR REMOTE DISCONNECTS FOR NON-PAYMENT.**

27 A. CEI South is seeking a variance from the requirements of 170 IAC 4-1-16(f) in this
28 Cause to allow CEI South to fully adopt remote disconnect capabilities. CEI South is
29 specifically seeking a variance from the requirement to be physically present on the
30 customer’s premise for the disconnect for non-payment. As mentioned earlier in my
31 testimony, CEI South will maintain contact with the customer through the disconnect
32 notice and outbound phone calls. If this waiver is granted, CEI South will also modify
33 its disconnection notices to include a statement that the customer’s disconnection for
34 non-payment may be completed remotely and will provide a text message and email
35 the day prior to disconnect and the day of the disconnect. Details included in the text
36 and email will include the date of scheduled disconnect, contact information to get
37 payment assistance and/or pay bill, the customer’s total delinquent amount due, as
38 well as, information to get reconnected, which generally meets 170 IAC 4-1-16(f).

1 **Table ALF-2** (below) compares the language set forth in 170 IAC 4-1-16(f) to CEI
 2 South’s Proposal under the ARP. Medical need customers and life support customers
 3 will be exempt from this process and will continue to have field personnel on premise.
 4 More details on medical need, life support, and vulnerable customers is provided later
 5 in my testimony.

Table ALF-2 – 170 IAC 4-1-16(f) Language and CEI South’s Proposal

170 IAC 4-1-16(F)	CEI South’s Proposal Under the ARP
(1) make a reasonable attempt to identify himself or herself to the customer or any other responsible person then upon the premises;	Communication to the customer through the disconnect bill, and outbound calls, will clearly identify CEI South as the originator of the communication, in addition to providing the phone number for CEI South’s contact center, giving the customer access to a customer service representative. Also, if a waiver is granted, the additional communication through text and email will provide another series of notices, identifying CEI South.
(2) announce the purpose of his or her presence;	Communication to the customer through the disconnect bill and outbound calls will clearly communicate the purpose of the disconnect due to delinquency in payment, as well as provide the phone number for CEI South’s contact center, giving the customer access to a customer service representative. Also, if a waiver is granted, the additional communication through text and email will provide the purpose of the disconnect due to delinquency in payment.

<p>(3) make a record thereof to be maintained for at least thirty (30) days;</p>	<p>Records will continue to be maintained.</p>
<p>(4) have in his or her possession information sufficient to enable him or her to inform the customer or other responsible person the reason for disconnection, including the amount of any delinquent bill of the customer; and</p>	<p>Communication to the customer through the disconnect bill provides the reason for disconnect as well as the amount of delinquency. The disconnect bill, and outbound calls, also include the phone number for CEI South’s contact center, giving the customer access to a customer service representative to enable the customer to obtain this information. Also, if a waiver is granted, the additional communication through text and email will provide details on the date of scheduled disconnect, contact information to get payment assistance and/or pay bill, the customer’s total delinquent amount due, as well as information to get reconnected.</p>
<p>(5) request the customer for any available verification that the outstanding bill has been satisfied or is currently in dispute pursuant to review.</p>	<p>Communication to the customer through the disconnect bill and outbound calls includes the phone number for CEI South’s contact center, giving the customer access to a customer service representative enabling the customer to provide payment verification. Also, if a waiver is granted, the additional communication through text and email will provide details on how to contact CEI South for payment verification.</p>

1 **Q. PLEASE EXPLAIN THE BENEFITS, TO INCLUDE CONVENIENCE, OF CEI**
2 **SOUTH’S PROPOSED PROCESS FOR ITS CUSTOMERS.**

3 A. By eliminating the on-premise visit but continuing to provide the phone number for CEI
4 South’s contact center, the customer will have access to a Customer Service
5 Representative (“CSR”) who has expertise responding to, and handling, calls related
6 to non-payment. Given the access the CSR has to customer information, the CSR is
7 in a better position to help the customer than field personnel. Notably, while on the
8 phone with the CSR, the customer can make the payment, get payment assistance,
9 or low-income support, which is better and more convenient for the customer than if
10 the field personnel is making initial contact, since the field personnel can only provide
11 limited information without the ability to fully resolve the issue or take payment. CEI
12 South’s proposed actions under the ARP eliminate an unnecessary step, allowing
13 customers to more quickly, and conveniently, take action to resolve the disconnection
14 of service.

15 **Q. HAS THE COMMISSION GRANTED A WAIVER FROM 170 IAC 4-1-16(F) TO**
16 **OTHER INDIANA UTILITIES TO ALLOW FOR REMOTE DISCONNECTION FOR**
17 **NON-PAYMENT? EXPLAIN.**

18 A. Yes. In Duke Energy Indiana’s most recent base rate case, Cause No. 45253, the
19 Commission granted a waiver of 170 IAC 4-1-16(f) and approved the use of remote
20 disconnect/connect.⁵ Further, in Cause No. 44967, the Commission granted Indiana
21 Michigan Power (“I&M”) authority, pursuant to a Settlement Agreement, to remotely
22 disconnect customers who have demonstrated a safety risk to I&M personnel. In
23 Cause No. 45576, I&M’s 2021 base rate case, I&M requested Commission authority
24 to more broadly implement remote disconnect and connect. The Commission granted
25 I&M a waiver of 170 IAC 4-1-16(f) in accordance with a Settlement Agreement entered
26 into between the parties, subject to I&M providing notification to its customers of I&M’s
27 ability to remotely disconnect and/or connect service.⁶ AES Indiana has also requested
28 a waiver of this provision in its base rate case, which is pending Commission approval
29 under Cause No. 45911. On November 29, 2023, the parties filed a settlement
30 agreement and supporting testimony, in which the parties agreed to AES implementing

⁵ *Duke Energy Ind.*, Cause No. 45253 (IURC June 29, 2020), pp. 148-49, 170.

⁶ *I&M*, Cause No. 45576 (IURC Feb. 23, 2022) pp. 34, 44.

1 remote disconnection and/or reconnection after notifying the customer by text or e-
2 mail.

3 **Q. WHAT ARE THE BENEFITS OF REMOTE DISCONNECT FOR NON-PAYMENT?**

4 A. Remotely performing disconnect for non-payment orders will further reduce safety
5 risks, improve work efficiencies, and significantly reduce the reconnect charge for
6 remote reconnects.

7 **Q. WHAT ARE THE STEPS CEI SOUTH PLANS TO MAKE PRIOR TO REMOTE
8 DISCONNECT DUE TO NON-PAYMENT?**

9 A. CEI South’s current, proactive notification process, will be expanded for customer
10 notifications of remote disconnection due to non-payment. As noted above, prior to
11 disconnection for non-payment, a notice is sent to the customer by mail or email
12 depending if the customer signed up for electronic billing. The disconnect bill notice
13 includes messaging to contact CEI South if the customer cannot pay the bill, to arrange
14 payments, or to identify if they qualify for low-income assistance. Beginning five days
15 after the customer disconnect notice is sent, CEI South provides outbound
16 courtesy/reminder phone calls. As I discussed previously in my testimony, a customer
17 may receive up to three calls before being disconnected. The customer may be
18 disconnected any time following fourteen days from the disconnect notice. If a waiver
19 of 170 IAC 4-1-16(f) is granted, the disconnect bill notice will also include information
20 on our ability to disconnect the customer remotely. In addition to the current
21 communication process to our customer regarding disconnects due to non-payment,
22 the customer will receive a series of text and email messages noting the date of
23 scheduled disconnect, contact information to get payment assistance and/or pay bill,
24 the customer’s total delinquent amount due, as well as information to get reconnected.

25 **Q. WILL THE PROCESS BE ANY DIFFERENT FOR CUSTOMERS WITH A MEDICAL
26 NEED OR OTHER VULNERABLE CUSTOMERS?**

27 A. Yes. CEI South customers with a medical need, life support customers, and low-
28 income customers follow different processes.

29 Medical need customers. As mentioned above, if the customer provides a medical
30 certification statement from a licensed physician or public health official stating that
31 the disconnection would be a serious and immediate threat to the health or safety of a

1 designated person in the household, an additional ten day disconnection
2 postponement is placed on the account with additional postponement allowed, so long
3 as an updated medical statement is received per 170 IAC 4-1-16 (c). These customers
4 will be excluded from remote disconnects.

5 Life support customers. CEI South has a coding system that identifies customers that
6 are considered a life support customer. This coding prevents the generation of a
7 disconnect order for the customer which will be transferred to the new remote
8 disconnect process. These customers will be excluded from remote disconnects.

9 Low-income customers. If at the time of disconnect for non-payment, CEI South is
10 notified that a customer is applying for, or received funds for, Low Income Home
11 Energy Assistance Program (“LIHEAP”) (during that current LIHEAP season), CEI
12 South would not process the disconnect for non-payment during that LIHEAP season.
13 Further, CEI South would comply with Ind. Code § 8-1-2-121 which provides electric
14 and natural gas utilities in Indiana may not disconnect a customer between December
15 1 through March 15 if the customer is (1) receiving help from the federally funded
16 Energy Assistance Program (“EAP”), or (2) qualifies for EAP funds, has formally
17 applied for the program at his or her local EAP office, and has given CEI South written
18 proof.

19 **Q. DOES CEI SOUTH PLAN TO NOTIFY ALL CUSTOMERS THAT MAY BE SUBJECT**
20 **TO REMOTE DISCONNECTION FOR NON-PAYMENT PRIOR TO IMPLEMENTING**
21 **THE PROCESS?**

22 A. Yes. CEI South will notify customers prior to implementing the remote disconnect
23 process through mailed bill messaging, and emailed bill messaging, if the customer is
24 signed up for electronic billing. CEI South will also modify its disconnection notices to
25 include a statement that the customer’s disconnection for non-payment may be
26 completed remotely. The bill will continue to provide contact information and
27 information on options for customers that cannot pay their bill.

28 **Q. WHEN DOES CEI SOUTH INTEND TO BEGIN REMOTE DISCONNECT FOR NON-**
29 **PAYMENT?**

30 A. If a waiver of 170 IAC 4-1-16(f) is granted in this Cause, CEI South will begin remote
31 disconnects for non-payment once all system changes and communications have

1 been addressed. CEI South plans to approach this project in phases, adding
2 communication through text and email to customers in an attempt to avoid disconnects
3 for non-payment while also recognizing the impact on cross-functional departments
4 within CEI South. As the initial communication increases, call volume should correlate.
5 With a phased approach, CEI South can ensure prompt attention to customer inquiries.
6 If the waiver is granted, CEI South will then implement system changes to complete
7 the disconnections for non-payment remotely.

8 **Q. ARE YOU FAMILIAR WITH THE ALTERNATIVE UTILITY REGULATION (“AUR”)**
9 **STATUTE AND ITS FOUR CRITERIA FOR DETERMINING IF APPROVAL OF AN**
10 **ALTERNATIVE REGULATORY PLAN (“ARP”) SERVES THE PUBLIC INTEREST?**

11 A. Yes. For approval by the Commission, a proposed ARP must meet four criteria set
12 forth in the AUR Statute, Ind. Code ch. 8-1-2.5:

13 (1) whether technological or operating conditions, competitive forces,
14 or the extent of regulation by other state or federal regulatory bodies
15 render the exercise, in whole or in part, of jurisdiction by the
16 commission unnecessary or wasteful;

17 (2) whether the commission's declining to exercise, in whole or in part,
18 its jurisdiction will be beneficial for the energy utility, the energy utility's
19 customers, or the state;

20 (3) whether the commission's declining to exercise, in whole or in part,
21 its jurisdiction will promote energy utility efficiency;

22 (4) whether the exercise of commission jurisdiction inhibits an energy
23 utility from competing with other providers of functionally similar energy
24 services or equipment.

25 **Q. PLEASE EXPLAIN HOW TECHNOLOGICAL OR OPERATING CONDITIONS,**
26 **COMPETITIVE FORCES, OR THE EXTENT OF REGULATION BY OTHER STATE**
27 **OR FEDERAL REGULATORY BODIES RENDER TRADITIONAL REGULATION**
28 **UNNECESSARY OR WASTEFUL.**

29 A. Due to the advancement in technology and through the use of AMI, there are safer
30 and more effective ways to notify a customer of potential disconnect due to non-
31 payment and to ultimately disconnect the customer than what was historically available
32 when 170 IAC 4-1-16(f) was promulgated. Modern technology allows the Company to
33 notify the customer multiple times and in many different forms in the event of a
34 potential disconnect. Further, through the use of AMI and the remote
35 connect/disconnect capability, the Company does not need to be physically on the
36 customer's premises to connect or disconnect service. Thus, the goals of 170 IAC 4-

1 1-16(f) – to sufficiently notify a customer of potential disconnect and to identify oneself
2 if you are on a customer’s property – can be achieved in a safer and more effective
3 way through the use of modern technology because AMI allows for remote connect
4 and disconnect. As such, modern technology and AMI have rendered these provisions
5 of 170 IAC 4-1-16(f) no longer applicable given the current environment.

6 **Q. PLEASE EXPLAIN HOW THE COMMISSION’S APPROVAL OF CEI SOUTH’S**
7 **PROPOSED ARP WILL BE BENEFICIAL FOR THE UTILITY, ITS CUSTOMERS,**
8 **OR THE STATE.**

9 A. Remotely performing disconnect for non-payment orders will further reduce safety
10 risks, improve work efficiencies, and significantly reduce the reconnect charge for
11 remote reconnects.

12 **Q. PLEASE EXPLAIN HOW THE COMMISSION’S DECLINING TO EXERCISE, IN**
13 **WHOLE OR IN PART, ITS JURISDICTION WILL PROMOTE ENERGY UTILITY**
14 **EFFICIENCY.**

15 A. By waiving the requirements under 170 IAC 4-1-16(f), CEI South will be able to
16 complete disconnects for non-payment more safely, quickly, and efficiently through
17 the remote disconnect capability through AMI than through the traditional truck roll and
18 field personnel being dispatched to the customer’s premise.

19 **Q. PLEASE EXPLAIN HOW THE EXERCISE OF COMMISSION JURISDICTION**
20 **INHIBITS CEI SOUTH FROM COMPETING WITH OTHER PROVIDERS OF**
21 **FUNCTIONALLY SIMILAR SERVICES OR EQUIPMENT.**

22 A. In Duke Energy Indiana’s most recent base rate case, Cause No. 45253, the
23 Commission granted a waiver of 170 IAC 4-1-16(f) and approved the use of remote
24 disconnect/connect. Further, in Cause No. 44967, the Commission authorized Indiana
25 Michigan Power (“I&M”), pursuant to a Settlement Agreement, to remotely disconnect
26 customers who have demonstrated a safety risk to I&M personnel. In Cause No.
27 45567, I&M’s 2021 base rate case, I&M requested Commission authority to more
28 broadly implement remote disconnect and connect. The Commission granted I&M a
29 waiver of 170 IAC 4-1-16(f) in accordance with a Settlement Agreement entered into
30 between the parties, subject to I&M providing notification to its customers of I&M’s
31 ability to remotely disconnect and/or connect service.

1 Q. IN ADDITION TO SATISFYING THE FOUR CRITERIA,⁷ PLEASE EXPLAIN HOW
2 CEI SOUTH’S PROPOSED ARP ENHANCES OR MAINTAINS THE VALUE OF THE
3 ENERGY UTILITY’S RETAIL ENERGY SERVICES, OR PROPERTY; INCLUDING
4 PRACTICES, PROCEDURES AND MECHANISMS FOCUSING ON THE PRICE,
5 QUALITY, RELIABILITY, AND EFFICIENCY OF THE SERVICE PROVIDED BY THE
6 ENERGY UTILITY.

7 A. As I mentioned earlier in my testimony, there are three main benefits to remotely
8 performing disconnect for non-payment orders:

9 Reduction in Safety Risks. With the removal of the on-premise site visit, employees
10 and contractors would no longer be required to travel to complete the disconnect at
11 the customer’s premise which eliminates the risk of vehicle accidents. Also, hazards
12 and risks associated with customer’s premises are lessened, such as contacting
13 poison ivy, twisting an ankle on unlevel ground, assault and injuries resulting from dog
14 attacks.

15 Improved Work Efficiencies. Removing the requirement for an on-premise site visit for
16 the disconnect for non-payment will further improve CEI South’s work efficiencies
17 associated with rolling a truck to the premise for the disconnect. With CEI South’s
18 current reduction in truck rolls from remote connects/reconnects and requested
19 disconnects, the field personnel are able to prioritize and gain efficiencies on required
20 meter change outs, investigate orders, etc. The field personnel also benefit from real
21 time meter consumption data as it allows them to have a better understanding of
22 issues when conducting investigation type work/orders.

23 Reduction in Reconnect Charge. CEI South is proposing to include a significantly
24 reduced reconnect fee for reconnections that are performed remotely. The proposed
25 reconnect fee is \$5 for a remote disconnect that does not require CEI South to roll a
26 truck. This fee is approximately \$39 less than CEI South’s current fee of \$44.

27 Q. HOW DID CEI SOUTH DEVELOP THE PROPOSED \$5 RECONNECT CHARGE?

28 A. The cost is based on two phone calls with a level two Customer Service
29 Representative (“CSR”). The average salary of a level two CSR with overheads was
30 utilized, along with an estimated average call time for reconnects.

⁷ Ind. Code ch. 8-1-2.5.

1 Q. HAS CEI SOUTH EVALUATED THE CUSTOMER RECONNECT CHARGE FOR
2 CUSTOMERS THAT REQUIRE A TRUCK ROLL?

3 A. Yes. Based on CEI South’s analysis, it is projected to cost approximately \$40 to work
4 CEI South’s existing process with a truck roll. CEI South will request to update this
5 charge which is currently \$44.34. This is reflected in the updated tariff sponsored by
6 Petitioner’s Witness Rice.

7 Q. BRIEFLY DESCRIBE THE FORECASTED COSTS FOR AMI DURING THE TEST
8 YEAR, 2025.

9 A. Costs associated with AMI include both Operations and Maintenance (“O&M”) and
10 capital. Although there are multiple cross-functional areas that benefit and/or support
11 AMI, specific to my purview, the forecasted O&M for 2025 is \$344,890. The majority
12 of costs are associated with labor at \$319,250 while the remaining balance of \$25,640
13 is associated with items such as industry involvement, dues and licenses, and
14 education expenses. The forecasted O&M for 2025 is \$49,385 higher than the 2022
15 base year actuals which were \$295,505. The higher projection is due to planned
16 promotions within the department and inflation-related cost increases. The AMI capital
17 investments are noted in Petitioner’s Witness Bahr and Stephen R. Rawlinson’s
18 testimony.

19 V. RELIABILITY INITIATIVES

20 Q. DESCRIBE CEI SOUTH’S RELIABILITY INITIATIVES AS THEY RELATE TO YOUR
21 PURVIEW.

22 A. CEI South’s reliability initiative programs, within my purview, include transmission
23 overhead, substation, downtown network, underground, Distribution Automation,
24 Conservation Voltage Reduction, and communication programs. These initiatives
25 were designed to preserve existing facilities through greater maintenance, reducing
26 the likelihood of outages, and/or improving public and employee safety. Costs
27 associated with these programs include both O&M and capital. The forecasted O&M
28 for 2025 is \$2,077,016. This is an increase of \$147,757 from 2022 actuals due to
29 increased headcount for the expansion of the Distribution Automation Program and an
30 increase in contract expenses associated with inflation. The reliability initiative capital
31 investments, including substation power transformer replacements, substation circuit

1 breaker replacements, SCADA system upgrades, transmission circuit rebuilds,
2 transmission optical ground wire installations, transmission structure
3 replacements/installations, Distribution Automation, transmission line rebuilds,
4 substation rebuilds, protective relaying upgrades, substation physical security, etc.,
5 are noted in the Direct Testimony of Petitioner’s Witness Rawlinson.

6 **Q. PLEASE DESCRIBE CEI SOUTH’S TRANSMISSION OVERHEAD MAINTENANCE**
7 **PROGRAMS.**

8 A. CEI South owns, operates, and maintains approximately 566 miles of 69 kilovolt (“kV”)
9 transmission lines, 416 miles of 138kV transmission lines, 64 miles of 345 kV
10 transmission lines and 34 transmission substations. CEI South maintains transmission
11 interconnections with five neighboring entities, including Duke Energy Indiana,
12 Louisville Gas and Electric, Big Rivers Electric Corporation, Hoosier Energy, and AES
13 Indiana.

14 CEI South’s overhead systems are exposed to the elements, making them more
15 vulnerable. CEI South inspects and maintains supporting structures and overhead
16 circuitry which have improved the ability to more proactively identify and correct
17 problems before system outages occur, improving safety and reliability of CEI South’s
18 transmission system.

19 These programs include the following:

20 Aerial Inspections. CEI South conducts annual aerial inspections for electric
21 transmission lines, identifying structure damage and vegetation hazards. This visual
22 inspection focuses on our infrastructure, including the conductor, poles, cross-arms,
23 and insulators, reviewing for damage or deterioration. Inspection results, or findings,
24 are prioritized based on customer safety and/or reliability, using three levels of priority:
25 (1) Critical – mitigation to be completed in less than a week from date of inspection;
26 (2) Priority 1 – mitigation to be completed within 90 days from date of inspection; and
27 (3) Priority 2 – mitigation to be completed within a year of the inspection. Petitioner’s
28 Witness Gregg M. Maurer provides further details on CEI South’s vegetation
29 management program.

30 Ground Inspections. CEI South conducts ground inspections in conjunction with the
31 annual aerial inspections. The ground inspections are completed within city limits

1 where aerial inspections are not permissible. The ground inspections include the same
2 focus on our infrastructure, including the conductor, poles, cross-arms, and insulators,
3 reviewing for damage or deterioration. Structure damage is documented and assigned
4 a priority level to complete the mitigation. Priority levels include (1) Critical – mitigation
5 to be completed in less than a week from date of inspection; (2) Priority 1 – mitigation
6 to be completed within 90 days from date of inspection; and (3) Priority 2 – mitigation
7 to be completed within a year of the inspection. Petitioner’s Witness Maurer provides
8 for further details on CEI South’s vegetation management program.

9 Transmission Tower – Light Program. CEI South maintains lighting on top of three
10 transmission towers. In 2022, CEI South implemented a program to monitor the
11 lighting with sensors that alarm in our EMS/SCADA system. These alarms are
12 monitored on a 24 x 7 basis and Field Operations is notified for review and
13 troubleshooting onsite.

14 Transmission Lattice Tower and Steel Pole – Ground Line Inspection Program. In
15 2021, CEI South implemented a transmission tower and steel pole inspection program.
16 Through the inspection, CEI South identifies corrosion, repairs the affected areas and
17 paints the tower or steel pole.

18 **Q. BEYOND THE INSPECTION PROGRAMS AND OVERALL MAINTENANCE, HOW**
19 **DOES CEI SOUTH RESPOND TO TRANSMISSION OPERATIONS AND**
20 **OUTAGES?**

21 A. In addition to the aforementioned inspection and maintenance programs, CEI South
22 also performs the following in response to outages:

23 Circuit Patrols. In addition to the inspection programs, CEI South patrols transmission
24 lines after each operation and outage to verify cause and ensure appropriate
25 remediation. Transmission Field Operations is notified by TSO of all operations and
26 outages. If the transmission operation results in a momentary outage, signifying a
27 successful reclose, the circuit patrol is completed as soon as possible which is typically
28 the next day; however, it is completed within three days. If a sustained outage occurs,
29 the circuit patrol is conducted shortly after the notification in order to minimize the
30 outage time. A circuit patrol is also conducted when CEI South is notified by a third
31 party that our infrastructure may have damage or be obstructed by vegetation.

1 Storm Response. Following storm restoration activities, CEI South reviews outage
2 data and performs circuit patrols to ensure structure damage and vegetation hazards
3 are mitigated. Petitioner’s Witness Maurer provides further details on CEI South’s
4 emergency operations plan.

5 **Q. PLEASE DESCRIBE CEI SOUTH’S SUBSTATION PROGRAMS.**

6 A. CEI South owns 112 total substations, which includes 78 distribution substations and
7 34 transmission substations. The specific substation maintenance programs include
8 the following:

9 Substation Inspection Program. CEI South performs inspections at all electric
10 substations three times a year. The substation inspections include an extensive list of
11 tests and checks that are performed. For example, CEI South conducts battery tests
12 (ensuring voltage levels, continuity and verifying there are no loose connections),
13 verifies gas or oil levels in the breakers, checks transformer oil levels, etc. Any
14 identified issues are either corrected onsite, during the inspection or, if the identified
15 issue requires an outage, CEI South initiates either an emergency outage to address
16 the issue or, if not an emergency to correct, creates a work order to complete, as
17 needed. During these inspections, CEI South also completes infrared scans which
18 assist in determining if the equipment is carrying more than its designed load, if there
19 are loose connections and other potential faults, and assists in mitigating potential
20 equipment defects before failure occurs. The discovery and correction of issues
21 prevents circuit outages.

22 Substation Safety Reviews. CEI South also performs thorough substation safety
23 reviews during the substation inspections to ensure that all substation security
24 measures are properly installed and functioning as designed. CEI South verifies that
25 danger signs (both in English and Spanish) are appropriately posted, and the fence
26 grounding and barbed wire is intact; verifies the fence has no damage; ensures the
27 control house building is clean; verifies the gate and door locks are operating correctly
28 and doors are operational; and removes all unnecessary materials ensuring the
29 substation yard is clean. CEI South performs these safety reviews to ensure
30 appropriate physical security at the substation.

1 Equipment Preventative Maintenance (“PM”). CEI South’s preventative maintenance
2 program is essential to avoiding equipment failures, providing a more reliable system.
3 CEI South completes PMs on equipment on a specific timeframe, depending on the
4 type of equipment, ranging from five to ten years. For example, CEI South’s
5 transmission breakers are taken out of service and tested every five years; distribution
6 oil breakers are completed every six years; and distribution vacuum breakers are
7 completed every ten years.

8 Field Verification – Walkdowns. Beginning in 2023, CEI South performs field
9 verification walkdowns on a schedule designed to review 69kV and above facilities on
10 a four year cycle. During the field verification walkdown, equipment such as the
11 bus/jumpers, switches, breakers, autotransformers, wave traps, and line reactors are
12 reviewed and verified accurate on the most current one-line diagram. All discrepancies
13 identified are updated on the applicable drawings, the ratings database, and all other
14 needed databases. This field verification is tied to NERC Standard FAC-008 Facility
15 Ratings.

16 Relay Testing & Alarms. Relay testing is performed in accordance with our internal
17 procedures which are compliant with NERC Standard PRC-005 Protection System,
18 Automatic Reclosing, and Sudden Pressure Relaying Maintenance. CEI South
19 performs testing as required on the test form provided by engineering and records the
20 results. Any anomalies discovered during testing are immediately reported to
21 engineering for further investigation. Relays are monitored through alarms in our
22 EMS/SCADA system. These alarms are monitored on a 24/7 basis and field operations
23 is notified for review and troubleshooting onsite.

24 **Q. PLEASE DESCRIBE CEI SOUTH’S UNDERGROUND MAINTENANCE PROGRAM**
25 **RELATED TO THE EVANSVILLE DOWNTOWN NETWORK.**

26 A. The Evansville downtown network consists of approximately 145 total underground
27 vaults and manholes for primary and secondary combined, numerous transformers,
28 and associated duct systems. The Downtown Network Maintenance Program includes
29 underground inspections, thermal equipment scans, and sidewalk grate inspection
30 and repair. During underground inspections, CEI South pumps water from the
31 vault/manhole, checks the physical condition of the vault/manhole, completes a
32 thermal scan on the cables and equipment, and completes a sidewalk grate inspection.

1 These inspections are tracked as PM orders and are completed on an annual basis.
2 Upgrades to the Downtown Network include cable replacements, transformer
3 upgrades and relay upgrades, enabling SCADA monitoring and control.

4 **Q. PLEASE DESCRIBE CEI SOUTH’S DISTRIBUTION AUTOMATION PROGRAM.**

5 A. CEI South’s Distribution Automation (“DA”) program increases reliability on the
6 distribution system and decreases sustained outages for our customers. The DA
7 program consists of installing DA capable equipment to allow automatic switching of
8 customers during an outage event. This equipment can be opened and closed
9 remotely from CEI South’s distribution system operations desk allowing for reduced
10 mobilizations to return the system to normal condition which equates to less truck rolls
11 and mobilization of employees to the field. Of note, the associated communication and
12 automation can be leveraged in the future to enable more complex schemes to
13 manage the evolving distribution system.

14 **Q. DESCRIBE CEI SOUTH’S DISTRIBUTION AUTOMATION PREVENTATIVE
15 MAINTENANCE PROGRAM.**

16 A. In 2023, CEI South implemented a PM program for pole mounted DA devices. At this
17 time, the PM orders are set up for battery replacements every three years. CEI South
18 also inspects the control cabinet, cabinet locks, labeling, relay, heater, and conduit on
19 a periodic basis. During this inspection, CEI South also cuts back vegetation near the
20 devices. Also, beginning in 2023, our pad mounted DA devices go through functional
21 operation testing every 6 months as well as the same visual inspection of the cabinet
22 and contents mentioned above for pole mounted DA devices. To manage the DA
23 program, one additional employee was hired in 2023 with additional headcount
24 planned to be added in 2025 as additional DA devices are installed and enabled on
25 CEI South’s electric system. The DA department monitors the DA devices in a
26 dedicated facility that includes screens for monitoring device status. DA operating
27 schemes continue to be reviewed and revised, as needed to better serve our
28 customers. As noted previously, a planned headcount addition is included in the 2025
29 forecast. Based on the number of devices deployed and the amount of maintenance
30 needed, the department will need between one to three additional headcount to
31 maintain the system. For the purposes of the 2025 forecast, the lower range was used,
32 including only one additional headcount.

1 **Q. DESCRIBE CEI SOUTH’S CONSERVATION VOLTAGE REDUCTION PROGRAM.**

2 A. CEI South currently maintains Conservation Voltage Reduction (“CVR”) at three
3 substations. CVR equipment coordinates and provides customer voltages in the lower
4 end of the acceptable range, with the goal of achieving energy and demand reductions
5 for customers.

6 **Q. DESCRIBE CEI SOUTH’S CONSERVATION VOLTAGE REDUCTION**
7 **MAINTENANCE PROGRAM.**

8 A. Since 2023, CEI South began a maintenance program for our CVR equipment. CEI
9 South’s maintenance plan is based on the monitoring of alarms that provide the
10 Company with information regarding the equipment itself and associated equipment
11 such as the regulators, capacitor banks, load tap changers, and end of line monitors.
12 As mentioned above, these alarms are monitored 24/7 and field operations is notified
13 to ensure prompt response for review and troubleshooting and corrective action.

14 **Q. DESCRIBE CEI SOUTH’S COMMUNICATION EQUIPMENT AND ASSOCIATED**
15 **MAINTENANCE PROGRAMS.**

16 A. Communication equipment is a key component for real-time monitoring and controlling
17 CEI South’s individual assets and overall infrastructure. It allows CEI South to
18 continuously monitor our assets, ensuring our system is at peak performance. If a
19 deviation is identified, sensors and monitors use the communication path to alarm the
20 Company’s 24/7 system operations. Depending on the type of alarm, the Operator can
21 then either remotely support the issue, using the communication path to the asset, or
22 contact field operations for onsite review, troubleshooting and corrective action. CEI
23 South uses multiple communication paths including microwave, power line carriers,
24 mesh radio network, cellular and fiber. Maintaining communication equipment is vital
25 in order for CEI South to have visibility into real time monitoring and controlling which
26 deliver safe, reliable and efficient energy.

27 Microwave system. This communication system uses the transmission of information
28 by electromagnetic waves, using towers, antennas and repeaters to transmit the
29 information. To maintain these systems, CEI South performs annual microwave tower
30 inspections which includes evaluating the structure, foundation, and lighting. Issues
31 are identified and mitigated onsite, as possible. If equipment is not available for the
32 mitigation, the work is tracked by field operations until completion. Alarms are set up

1 with lighting failure, generator trouble, DC power failure, issue with microwave system
2 (among other critical alarms) which are monitored through TSO. Following a significant
3 wind event around our towers, CEI South inspects microwave towers to ensure
4 continued reliability. In accordance with the Federal Communications Commission
5 (“FCC”), CEI South must maintain tower lighting. In an effort to provide efficiencies
6 from both a time and cost perspective, CEI South recently moved from incandescent
7 bulbs to LED. The incandescent bulbs were replaced every year to ensure continued
8 performance while LED bulbs have a warranty for ten years.

9 Power Line Carriers. This communication system carries data on a conductor. To
10 monitor these systems, Power Line Carrier (“PLC”) communication paths are
11 continuously monitored by TSO through alarming in the EMS/SCADA system. Once
12 an alarm comes through, TSO notifies field operations for troubleshooting and
13 corrective action. PLCs perform a self test every 24 hours. Per NERC Standard PRC-
14 005, a PM order is in place where the power output is checked, as well as connections,
15 relay interface, tuner and alarming is verified.

16 DA/CVR Mesh Radio Network. This communication system is a network made up of
17 radio nodes organized in a mesh topology. To maintain this network, based on
18 seasonal changes, a PM is set up every six months for CEI South to review and
19 change the radio frequency path to ensure proper communication paths for best
20 communication reliability.

21 Cellular Network. This communication system is a telecommunications network where
22 the link to and from end nodes is wireless and the network is distributed over land
23 areas called cells, each served by at least one fixed-location transceiver. CEI South
24 maintains cell modems to ensure continuity of service. Cellular communication paths
25 are continuously monitored by TSO through alarming in the EMS/SCADA system.
26 Once an alarm comes through, TSO notifies field operations for troubleshooting and
27 corrective action.

28 Fiber. This communication system is a method of transmitting information from one
29 place to another by sending pulses of infrared or visible light through an optical fiber.
30 CEI South maintains the fiber to ensure continuity of service. Fiber communication
31 paths are continuously monitored by TSO through alarming in the EMS/SCADA

1 system. Once an alarm comes through, TSO notifies field operations for
2 troubleshooting and corrective action.

3 **VI. TRANSMISSION SYSTEM OPERATIONS (“TSO”) OVERVIEW**

4 **Q. PLEASE EXPLAIN HOW CEI SOUTH’S TRANSMISSION SYSTEM IS**
5 **INTERCONNECTED WITH THE TRANSMISSION SYSTEMS OF OTHER**
6 **ELECTRIC UTILITIES IN INDIANA.**

7 A. CEI South operates 34 transmission substations in its transmission system which is
8 operated as part of a larger integrated network transmission system commonly
9 referred to as the Eastern Interconnection. As mentioned above, CEI South’s
10 transmission system is directly connected to the transmission systems of Duke Energy
11 Indiana, Louisville Gas and Electric, Big Rivers Electric Corporation, Hoosier Energy,
12 and AES Indiana. Through the interconnections with these other utilities power can
13 flow into and out of the CEI South transmission system. CEI South transmission
14 system also operates as a part of the MISO Central Region. This provides additional
15 reliability and resiliency along with access to the MISO Energy market to obtain power
16 for our customers.

17 **Q. HOW DOES TRANSMISSION SYSTEM OPERATIONS CONTRIBUTE TO THE**
18 **OVERALL SAFETY, RELIABILITY AND RESILIENCY OF THE GRID?**

19 A. CEI South’s TSO is responsible for operating CEI South’s electric transmission system
20 in compliance with all applicable policies and procedures and regulatory requirements,
21 including FERC, NERC, RF, and DOE. CEI South’s TSO takes, or directs, real-time
22 actions to ensure safe and reliable operation of the Bulk Electric System (“BES”). CEI
23 South’s TSO complies with MISO operating protocols and procedures and is
24 responsible for real-time reliability coordination.

25 In order to maintain real-time monitoring and response, CEI South’s Control Center is
26 staffed 24 hours a day, 7 days a week. CEI South maintains six TSO Operators on 12-
27 hour rotating shifts. During the day, CEI South has one primary TSO Operator with
28 one Senior Operator available for support. In the evening, CEI South maintains one
29 TSO Operator. There are seven support personnel onsite during daytime hours and
30 on-call in the evenings for emergencies related to CEI South’s EMS/SCADA system.

1 CEI South’s TSO Operators use the EMS/SCADA system to monitor real-time
2 conditions, including transmission and substation system status changes, alarms
3 associated with remote terminal units, transmission operations or lockouts,
4 transmission facility overloads, and substation devices. CEI South’s TSO Operators
5 coordinate with MISO regarding transmission outages, overloads, transmission
6 congestion issues, remedial actions, and transmission security. Details on the
7 Company’s relationship with MISO are noted below.

8 **Q. BRIEFLY DESCRIBE THE FORECAST FOR TRANSMISSION SYSTEM**
9 **OPERATIONS DURING THE TEST YEAR, 2025.**

10 A. Costs associated with TSO include both O&M and capital. The forecasted O&M for
11 2025 is \$2,864,666. The majority of these costs are associated with labor at
12 \$2,393,422 while the remaining balance of \$471,244 is associated with items such as
13 NERC and MISO quarterly dues, other contractual dues, licenses, and education
14 expenses. The forecasted O&M for 2025 is an increase of \$561,801 from the 2022
15 base year actuals which were \$2,302,865. The increase is due to additional headcount
16 associated with planned retirements in TSO and increased process changes for both
17 CEI South and MISO, prompting a need for additional headcount in MISO Affairs. More
18 details on the additional headcount are noted later in my testimony. Petitioner’s
19 Witness Bahr addresses the TSO capital investments in further detail.

20 **Q. WHAT ARE SOME OF THE MOST NOTABLE CHANGES AFFECTING CEI**
21 **SOUTH’S TRANSMISSION SYSTEM OPERATIONS?**

22 A. In order to maintain and continuously improve the Company’s operations, notable
23 changes take place within TSO to ensure safety, reliability and resiliency. Of note, from
24 the past several years, is the EMS/SCADA system upgrade, including the Operator
25 Training Simulator, NERC Critical Infrastructure Protection Compliance Project,
26 control center improvements, and organizational changes. Details of each of these
27 notable changes are below.

28 EMS/SCADA System Upgrade, including Operator Training Simulator (“OTS”). In
29 2020, CEI South upgraded the EMS/SCADA system. This upgrade was necessary
30 due to the need to transition to a newer operating system. CEI South used the same
31 platform, Hitachi Power Grids, requiring only a version upgrade. With this upgrade,
32 hardware was updated, including new servers, workstations, network switches and

1 firewalls. CEI South consulted with RF prior to the system upgrade and a recertification
2 and review was conducted with RF to ensure continued compliance with NERC
3 standards. Included in the EMS/SCADA upgrade was OTS which provides CEI
4 South’s TSO Operators with training that mirrors CEI South’s EMS/SCADA system for
5 more realistic training scenarios.

6 NERC Critical Infrastructure Protection (“CIP”) Compliance Project. Based on a Market
7 Efficiency study performed by MISO, a new 345 kV line was built and connected to
8 one of CEI South’s substations. With the addition of this new line, the substation met
9 NERC criteria to bolster cyber and physical security controls which then required CEI
10 South’s Control Center to meet the threshold for additional compliance requirements.

11 Control Center Improvements. In order to reduce fatigue, and optimize productivity
12 and safety of CEI South’s workforce, adjustable desks, monitors and chairs were
13 added to CEI South’s Control Center in 2018. Also in 2018, to provide better visual
14 awareness, CEI South’s video wall was expanded to include bigger displays and better
15 functionality.

16 Organizational Changes. As compliance with regulatory requirements increase and
17 become more substantial, CEI South added a Transmission Policy Consultant to the
18 TSO department. The Transmission Policy Consultant is responsible for monitoring
19 current and future compliance requirements, including, but not limited to, FERC,
20 NERC, DOE, RF, and MISO. The Transmission Policy Consultant ensures compliance
21 with these requirements by compiling evidence and maintaining compliance and non-
22 compliance departmental procedures. This role provides guidance, assessment and
23 support regarding assigned transmission-related compliance and policy issues,
24 including coordination with cross-functional work groups.

25 Retirement Planning. As CEI South plans for experienced TSO Operators to retire,
26 additional headcount is needed to successfully complete the required training and
27 certifications needed to operate the transmission system independently. Training and
28 certifications take six months to a year depending on prior experience and knowledge.
29 As noted previously, a planned headcount addition is included in the forecast for 2025.

1 VII. **OVERVIEW OF MISO**

2 Q. **WHAT IS MIDCONTINENT INDEPENDENT SYSTEM OPERATOR (“MISO”)?**

3 A. MISO is an independent, not-for-profit, member-based organization focused on the
4 following three critical tasks: (1) managing the flow of high-voltage electricity across
5 fifteen U.S. states and the Canadian province of Manitoba, (2) facilitating one of the
6 world’s largest energy markets with more than \$40 billion in annual transactions, and
7 (3) planning the grid of the future.

8 Q. **PLEASE EXPLAIN CEI SOUTH’S RELATIONSHIP WITH MISO.**

9 A. CEI South is a member of MISO and has been since 1999. Based on CEI South’s
10 assets, NERC requires that the Company meet certain functional requirements in
11 order to be interconnected to the electrical grid. Being a member of MISO is a
12 fundamental piece of the functional requirements. MISO has functional control of CEI
13 South’s transmission system. MISO manages the electric grid by ensuring the
14 appropriate amount of electricity is generated to meet the demand of our customers.

15 Q. **HOW DOES CEI SOUTH KEEP CURRENT ON MISO AFFAIRS?**

16 A. CEI South has one full time employee, the MISO Affairs Manager, dedicated to serving
17 as the primary contact for MISO and representing CEI South’s interest at MISO
18 workshops and stakeholder meetings, which includes the Market Subcommittee,
19 Reliability Subcommittee, Resource Adequacy Subcommittee, Planning Advisory
20 Committee and the Reliability Expansion Criteria and Benefits Working Group. MISO
21 provides regularly scheduled public forums to introduce all major policy issues and
22 initiatives to stakeholders for transparency, open discussion and debate prior to
23 decision and implementation. CEI South’s MISO Affairs Manager works with MISO
24 and other stakeholders by voicing CEI South’s position on issues independently, or as
25 part of a collaborative group (i.e., MISO Transmission Owners). CEI South’s MISO
26 Affairs Manager is engaged with both MISO Markets and Transmission Planning
27 forums and works closely with internal subject matter experts from CEI South’s
28 Wholesale Power Marketing, Engineering, TSO, Electric Reliability Compliance and,
29 to a limited extent, Power Supply and Distribution System Operations, to ensure
30 technical expert participation in MISO committees and meetings, as necessary, as well
31 as keep abreast on policy changes effecting CEI South as a load serving entity.

1 In addition, CEI South’s MISO Affairs Manager works closely with CEI South’s
2 Regulatory and Legal departments to develop policy related positions and ensure
3 consistency across CEI South’s service territory.

4 **Q. HOW DOES CEI SOUTH AND MISO COORDINATE PLANNING AND OPERATION**
5 **OF CEI SOUTH’S TRANSMISSION SYSTEM?**

6 A. Planning and operation of the system is integrated through the coordinated efforts of
7 MISO and CEI South. MISO has protocols and operating criteria that must be followed
8 to ensure the reliability of the electric grid. CEI South monitors these processes and
9 participates in stakeholder meetings, workshops, etc. When processes are updated,
10 CEI South reviews for required changes to our internal processes, communicating and
11 implementing within the required timeframe. Please refer to the Direct Testimony of
12 Petitioner’s Witnesses Justin L. Forshey and Rice for details regarding Petitioner’s
13 Demand Response Rider.

14 **Q. DOES FERC ORDER 881 IMPACT PROCESSES RELATED TO MISO AND CEI**
15 **SOUTH?**

16 A. Yes. In coordination with MISO, CEI South has monitored MISO’s progress to meet
17 the requirements of FERC Order 881. In this order, all transmission providers are
18 required to use ambient-adjusted ratings as the basis for evaluating near-term
19 transmission service to increase the accuracy of near-term line ratings. The goal of
20 this final rule is to more efficiently use our nation’s transmission grid and help lower
21 costs for consumers by improving both the accuracy and transparency of transmission
22 line ratings. In order to meet the requirements, CEI South is working closely with MISO
23 to understand the data required and the format needed for MISO to receive this data.
24 A cross-functional team within CEI South is currently working to ensure appropriate
25 systems and assets are in place to meet this requirement.

26 **VIII. CONCLUSION**

27 **Q. DOES THIS CONCLUDE YOUR PREPARED DIRECT TESTIMONY?**

28 A. Yes, it does.

VERIFICATION

I affirm under penalties for perjury that the foregoing representations are true to the best of my knowledge, information, and belief.

SOUTHERN INDIANA GAS AND ELECTRIC
COMPANY D/B/A CENTERPOINT ENERGY
INDIANA SOUTH



Amy L. Folz
Director, Indiana High Voltage Operations



Date