

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
GREGG M. MAURER
DIRECTOR, INDIANA ELECTRIC DISTRIBUTION OPERATIONS**

ON

DISTRIBUTION OPERATIONS ACTIVITIES AND RELIABILITY INITIATIVES

PETITIONER'S EXHIBIT NO. 6

DIRECT TESTIMONY OF GREGG M. MAURER

1 I. **INTRODUCTION**

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

3 A. My name is Gregg M. Maurer. 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”), an indirect subsidiary
8 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, Indiana Electric Distribution Operations.

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

14 A. I earned a Bachelor of Applied Science degree in Operations Management from
15 Oakland City University in 2021. I also earned an Associate Degree in Industrial
16 Maintenance from Ivy Tech College in 1998.

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

18 A. I have been employed by CEI South¹ since 2009 and have held various positions
19 before becoming Director, Indiana Electric Distribution Operations in 2021. From 2015
20 to 2021, I served as Manager, Distribution System Operations and before that, held
21 several managerial roles within Electric and Gas Operations. Prior to holding
22 managerial roles, I was employed as an Electric Meter Shop Supervisor and held
23 Supervisor positions in Electric Construction and Gas Construction.

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 DIRECTOR,
2 INDIANA ELECTRIC DISTRIBUTION OPERATIONS?

3 A. I am responsible for real-time operations of CEI South’s electric distribution system,
4 which includes field operations, overhead and underground maintenance and
5 construction, electric meter shop, Distribution System Operations (“DSO”), and
6 vegetation management. I provide leadership, management, and organizational skills
7 to assure proper resources, tools, and materials are provided and efficiently utilized in
8 the construction, operation, and maintenance of CEI South’s electric distribution
9 activities. In addition, I maintain an effective Emergency Operations Plan and direct
10 employee response in restoration activities.

11 Q. HAVE YOU EVER TESTIFIED BEFORE THE INDIANA UTILITY REGULATORY
12 COMMISSION (“COMMISSION”) OR ANY OTHER STATE REGULATORY
13 COMMISSION?

14 A. No.

15 II. PURPOSE & SCOPE OF TESTIMONY

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

17 A. My testimony will describe the commitment of CEI South’s Distribution Operations to
18 electric service reliability and the initiatives underway and programs planned to sustain
19 and improve upon CEI South’s ability to deliver safe and reliable power to our
20 customers.

21 Q. ARE YOU SPONSORING ANY ATTACHMENTS IN THIS PROCEEDING?

22 A. No.

23 III. DISTRIBUTION OPERATIONS

24 Q. DESCRIBE CEI SOUTH’S RELIABILITY INITIATIVES AS THEY RELATE TO YOUR
25 PURVIEW.

26 A. CEI South’s reliability initiative programs, within my purview, include distribution
27 overhead, distribution underground, and vegetation management. All of these
28 initiatives were designed to preserve existing facilities through greater maintenance,
29 reducing the likelihood of outages, and/or improving public and employee safety.

1 Costs associated with these programs include both Operation and Maintenance
2 (“O&M”) and. The O&M forecast for 2025 for Distribution Operations is approximately
3 \$16.7 million. This is an increase of \$1.8 million from 2022 actuals – the historical base
4 period in this Cause. The increase of \$1.8 million is primarily driven by inflation and
5 increased costs for contractor labor and materials and is needed to provide safe and
6 reliable service through consistent execution of existing distribution programs (Circuit
7 Patrol Program, Wood pole Replacement Program, Underground Maintenance
8 Program, and Vegetation Management Program). These programs are described in
9 greater detail below. My testimony will focus on O&M whereas Petitioner’s Witness
10 Stephen R. Rawlinson discusses the capital investment plan for Transmission &
11 Distribution (“T&D”).

12 **Q. PLEASE DESCRIBE CEI SOUTH’S ELECTRIC DISTRIBUTION SYSTEM.**

13 A. Distribution Operations maintains and operates both overhead and underground
14 distribution facilities. The overhead facilities consist of approximately: 96,000
15 distribution poles; 38,000 overhead transformers; 360 capacitor banks; and 4,600
16 miles of 12.5 kilovolt (“kV”) distribution overhead wire. The underground facilities
17 include approximately: 222 distribution circuits; 19,000 padmount transformers; and
18 2,600 miles of 12.5kV distribution underground wire.

19 **Q. PLEASE DESCRIBE CEI SOUTH’S INSPECTION AND MAINTENANCE**
20 **PROGRAMS AND THEIR IMPORTANCE.**

21 A. CEI South has inspection and maintenance programs for both the distribution
22 overhead facilities and distribution underground facilities. The programs are designed
23 to identify equipment, overhead or underground, that requires replacement or
24 increased system maintenance. Applying this proactive approach to inspection and
25 maintenance helps CEI South identify issues that may otherwise go undetected and
26 result in interruptions of service or public safety issues if left unmitigated. Along with
27 maintenance optimization, we determine whether equipment has reached the end of
28 its useful life. When an end-of-life asset gets replaced that investment falls into the
29 various capital categories described within the testimony of Petitioner’s Witness
30 Rawlinson.

1 **IV. DISTRIBUTION OPERATIONS INSPECTION AND MAINTENANCE PROGRAMS**

2 **Q. PLEASE DESCRIBE CEI SOUTH’S TARGETED DISTRIBUTION OVERHEAD**
3 **MAINTENANCE PROGRAM.**

4 A. Because distribution overhead facilities are exposed to the elements, CEI South has
5 a program to inspect and maintain supporting structures and overhead circuitry,
6 allowing the Company to more proactively identify and correct problems before system
7 outages occur, improving safety and reliability of CEI South’s distribution system. The
8 distribution overhead maintenance program consists of two programs: (1) the Circuit
9 Patrol Program; and (2) the Wood Pole Replacement Program, the latter of which is
10 described in greater detail by Petitioner’s Witness Rawlinson.

11 **Q. PLEASE DESCRIBE THE CIRCUIT PATROL PROGRAM.**

12 A. The Circuit Patrol Program is a targeted ten-year program wherein CEI South targets
13 10% (or one-tenth) of the overhead distribution system for patrol each year. The Circuit
14 Patrol Program is designed to identify and correct issues with defective equipment, for
15 example, crossarms, guy wires, conductors, labeling, grounding, insulators, fuses,
16 cutouts, varmint guarding, etc. Identification and correction of issues or equipment that
17 needs replacement, repair, or maintenance, such as loose pole hardware, conductor
18 issues, transformer abnormalities, failed fuses, cutouts, and other items, is critical to
19 avoiding a failure of those facilities in the future. CEI South selects the circuit to patrol
20 based on the timing of the pole inspections which are also on a ten-year cycle and
21 selected by circuit, as described in greater detail by Petitioner’s Witness Rawlinson.
22 CEI South staggers the circuit patrols and pole inspections by five years, allowing for
23 a facility review (by either a circuit patrol or a pole inspection) every five years.
24 Inspection results, or findings, are prioritized based on customer safety and/or
25 reliability, using three levels of priority: (1) Critical – mitigation to be completed in less
26 than a week from date of inspection; (2) Priority 1 – mitigation to be completed within
27 90 days from date of inspection; and (3) Priority 2 – mitigation to be completed within
28 a year of the inspection. The inspections themselves are classified as 100% to O&M;
29 whereas the follow-up mitigation work, i.e., arrestor, crossarm, and insulator
30 replacements, are considered capital. Please refer to **Table GMM-1** (below) for the
31 O&M associated with the Circuit Patrol Program.

Table GMM-1 – O&M Forecast for Circuit Patrol Program

	Actual	Projected O&M for Inspections & Follow Up Work			
	2022	2023	2024	2025	
Inspection O&M	\$ -	\$ 18,300.00	\$ 18,849.00	\$ 19,414.47	
O&M Follow Up Work	\$ -	\$ 17,962.08	\$ 18,500.94	\$ 19,055.97	
Total O&M	\$ -	\$ 36,262.08	\$ 37,349.94	\$ 38,470.44	

1 **Q. WHY IS CEI SOUTH FORECASTING APPROXIMATELY \$38,470 IN O&M FOR**
 2 **2025 WHEN THERE WAS NO O&M FOR THIS PROGRAM IN 2022 (THE BASE**
 3 **PERIOD)?**

4 A. For years 2020-2023, the Company allocated funds to execute this program two out
 5 of four years. For this reason, funds were not available to execute this program in
 6 2022. However, it is important for CEI South to execute on this program annually in
 7 order for the Company to meet its stated goal to patrol 10% of the overhead distribution
 8 system each year thereby allowing CEI South to more proactively identify and correct
 9 problems before system outages occur improving safety and reliability of CEI South’s
 10 distribution system. CEI South cannot achieve this goal without executing this program
 11 on an annual basis. Both CEI South’s Engineering and Distribution Operations teams
 12 believe it is necessary to execute this program annually and will plan to do so in the
 13 future. This is why CEI South is forecasting approximately \$38,470 in O&M for 2025,
 14 despite not spending at this level in 2022.

15 **Q. PLEASE DESCRIBE CEI SOUTH’S TARGETED DISTRIBUTION UNDERGROUND**
 16 **MAINTENANCE PROGRAM.**

17 A. Unlike overhead facilities, which are elevated on wood poles or other structures, CEI
 18 South’s underground equipment, which consists of transformers, vaults, pedestals,
 19 switch gears, and cable, is generally on the ground level (except for the underground
 20 cable) meaning the equipment is accessible to the public, with much of the equipment
 21 being installed in backyards. By design, the underground equipment: (1) is kept safely
 22 secured with locking mechanisms, such as Penta bolt and single-use locks; (2) has
 23 surfaces that are either non-conductive or properly grounded; and (3) includes code-
 24 required warning labels. During the underground equipment inspections, field
 25 personnel ensure the previously described measures are still in place, mitigating risk
 26 to public safety along with addressing reliability concerns. With respect to safety, the
 27 primary concerns are to make sure there is no contact voltage and no public
 28 accessibility (i.e., bolts, locks, holes, alignment). The primary concerns related to

1 safety with the underground padmount inspections is mitigating risk of electric shock
 2 from issues such as unlocked or unsecured access, major holes in the facility, or
 3 facilities that have been pushed off the pad creating access to the cables. With respect
 4 to reliability, the primary concerns assessed during the inspection are signs of leaking
 5 and leaning. Identifying and correcting major leans, oil leaks, and eliminating
 6 obstructions helps to address contributors to premature asset failure and ensures
 7 access to our equipment in case of an emergency or other type of urgent event. The
 8 timing for resolving any issues identified during the inspection is driven by the
 9 prioritization rating assigned to each inspection result (i.e., damaged, unsecured,
 10 leaning, obstructions, damaged pad, missing appropriate labeling). Similar to the other
 11 inspection and maintenance programs, the three priority levels include (1) Critical –
 12 mitigation to be completed in less than a week from the date of the inspection; (2)
 13 Priority 1 – mitigation to be completed within 90 days from the date of the inspection;
 14 and (3) Priority 2 – mitigation to be completed within a year of the inspection.

15 The inspection period is based on a five-year cycle. For the first inspection cycle, CEI
 16 South identifies the underground facilities to inspect by selecting an area that has not
 17 been previously inspected, with the optimal location being facilities that are in close
 18 proximity to each other for efficiency of work. For subsequent inspection cycles, i.e.,
 19 the second cycle onward, the facilities are inspected based on lapse of time, on a five-
 20 year cycle. **Table GMM-2**, below, provides the O&M forecast related to the
 21 Underground Maintenance Program.

Table GMM-2 – O&M Forecast for Underground Maintenance Program

	Actual	Projected O&M for Inspections & Follow Up Work		
	2022	2023	2024	2025
Total O&M	\$ -	\$ 261,984	\$ 269,844	\$ 277,939

22 **Q. WHY IS CEI SOUTH FORECASTING APPROXIMATELY \$277,939 IN O&M FOR**
 23 **2025 WHEN THERE WAS NO O&M FOR THIS PROGRAM IN 2022 (THE BASE**
 24 **PERIOD)?**

25 **A.** For years 2020 – 2023, CEI South did not allocate sufficient funds to execute this
 26 program two out of four years. For this reason, CEI South did not have allocated funds
 27 to execute this program in 2022. However, it is important for CEI South to execute on
 28 this program annually in order for the Company to meet its stated goal to inspect 20%
 29 of the distribution underground system each year, thereby allowing CEI South to

1 mitigate risk to public safety and address reliability concerns. CEI South cannot
2 achieve this goal without executing this program on an annual basis. Both CEI South’s
3 Engineering and Distribution Operations teams believe it is necessary to execute this
4 program annually and will plan to do so in the future. This is why CEI South is
5 forecasting approximately \$277,939 in O&M for 2025, despite not spending at this
6 level in 2022.

7 **Q. PLEASE DESCRIBE CEI SOUTH’S VEGETATION MANAGEMENT PROGRAM.**

8 A. The Vegetation Management program is designed to keep distribution and
9 transmission lines clear from vegetation and other impediments using the best
10 management practices. Tree contacts are a major source of outages on distribution
11 and transmission systems. If trees are not maintained properly on a regular basis,
12 there is greater potential for outages and interrupted service, even under relatively
13 mild weather conditions. Events such as an ice storm, snowstorm, heavy winds, or
14 falling dead trees can cause trees to come into contact with energized conductors,
15 ultimately creating a fault and tripping protective devices. Because of its very highwater
16 content, a tree is an excellent conductor, which can create a fault upon contact when
17 it grounds the energized line. The fault then trips protective devices such as a recloser,
18 fuse, or breaker and the result is a momentary, if not extended, outage.

19 **Q. PLEASE PROVIDE AN OVERVIEW OF CEI SOUTH’S DISTRIBUTION AND
20 TRANSMISSION VEGETATION MANAGEMENT PROGRAMS.**

21 A. CEI South’s Vegetation Management Program for its distribution system targets, at a
22 minimum, a five-year trim cycle for all distribution circuits by tracking the last year each
23 circuit was trimmed. Within five years of the circuit’s last trim, CEI South either patrols
24 the circuit and trims problem areas of the circuit or schedules a complete trim of the
25 circuit. CEI South re-prioritizes the trim cycle of the circuits based on available budget
26 and reliability data due to vegetation outages, targeting circuits that are affecting
27 reliability on a more frequent basis to reduce outages.

28 CEI South’s Vegetation Management Program for its transmission system consists of
29 performing one aerial flight of the entire transmission system (approximately 1,000
30 miles) once per year, usually early summer timeframe. The aerial patrol serves dual
31 purposes – not only to perform an aerial inspection of the Company’s transmission
32 infrastructure (poles, wires, insulators, etc.) but also a vegetation management

1 assessment. CEI South also performs two ground patrols on the 345kV line of our
2 transmission system, once in spring and once in fall. CEI South creates a list of areas
3 that need remediation based on the findings from the aerial and foot patrols,
4 documenting any vegetation concerns, and prioritizing the findings. CEI South
5 remediates the items on the list based on the priority ranking and available funds. As
6 with the other programs, priority levels include: (1) Critical – mitigation to be completed
7 in less than a week; (2) Priority 1 – mitigation to be completed within 90 days; and (3)
8 Priority 2 – mitigation to be completed within the year.

9 **Q. DOES THE COMPANY PERFORM OTHER VEGETATION MANAGEMENT**
10 **ACTIVITIES BEYOND ROUTINE MAINTENANCE?**

11 A. Yes. In addition to the routine maintenance and vegetation management performed
12 as part of CEI South’s planned distribution cycle, CEI South also performs unplanned
13 maintenance as customer concerns are reported throughout the year. These concerns
14 are assigned a priority ranking based on customer safety and/or reliability and are then
15 addressed based on this priority ranking and available budget.

16 **Q. PLEASE EXPLAIN WHY CEI SOUTH USES A 5-YEAR CYCLE FOR VEGETATION**
17 **MANAGEMENT.**

18 A. Based on the types of trees and climate in Southwest Indiana, a five-year cycle is
19 appropriate. Based off the easement widths that we have in our area along with the
20 growth rates of the prevalent species of trees, a five-year cycle (at a minimum) is
21 needed to keep our easements and right of way clear and prevent the trees from
22 growing into our electric lines causing reliability issues. We are prioritizing our circuits
23 based off their reliability score and plan to trim circuits that have a bigger impact on
24 reliability on a more frequent basis, based on available budget. For circuits that have
25 a low impact on reliability, we plan to perform a patrol / trim problem areas approach
26 on these circuits to better utilize the program budget in the most effective way to
27 improve reliability for our customers. As depicted by **Graph GMM-1**, below, the cost
28 to perform this work has increased from 2020 to 2023 by an average of 9% per year
29 due to increased costs associated with contract labor and equipment. Given the
30 increase of price per mile to perform this work coupled with the dollars needed to fund
31 crews to process priority transmission vegetation maintenance and work customer
32 driven distribution orders, the Company is forecasting an increase of approximately
33 \$1.5 million in 2025 O&M compared to 2022, as shown in **Table GMM-3**, below.

Graph GMM-1 – Vegetation Management Price Per Mile (Planned Circuit Trim)

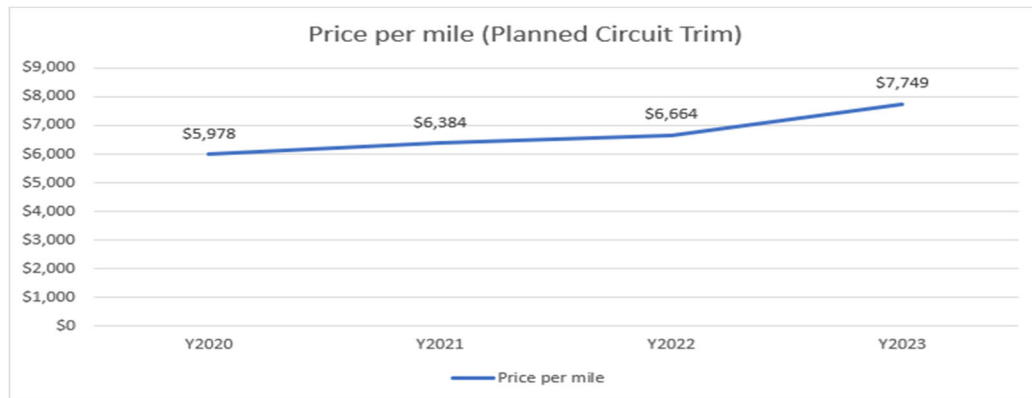


Table GMM-3 – O&M Forecast for T&D Vegetation Management Programs

	Actual	Projected VM O&M for Distribution & Transmission			
	2022	2023	2024	2025	
Total O&M	\$ 5,374,946	\$ 5,853,316	\$ 6,374,261	\$ 6,941,571	

1 **Q. WHO PERFORMS THE VEGETATION MANAGEMENT RESOLUTION WORK?**

2 A. The Company uses qualified contractors to perform the vegetation management field
3 activities on the electric distribution and transmission system.

4 **V. STORM RESTORATION / EMERGENCY OPERATIONS PLAN**

5 **Q. PLEASE DESCRIBE HOW CEI SOUTH PREPARES FOR SEVERE WEATHER-
6 RELATED EVENTS.**

7 A. CEI South electric field operations prepares for severe weather through annual drills
8 such as Emergency Operations Plan (“EOP”) drills and Storm Response Plan drills.
9 For the drill, a pre-determined date is set with a mock major event identified. Each of
10 the storm section chiefs prepares their respective teams, taking it as an opportunity to
11 ensure rosters are accurate and roles/responsibilities are understood. The team works
12 through the mock scenarios of the drill day, identifying any improvement areas so
13 counter measures can be taken prior to an actual event taking place. Prior to an actual
14 specific severe weather event, plans are executed to ensure planned outages are
15 restored, providing maximum redundancy for the system. Electric Field Operations
16 keeps an inventory of spare equipment specifically for storm restoration efforts to
17 provide assurance that equipment is available in time-sensitive situations. Vehicles
18 are stocked and maintained to ensure readiness. Options are identified in anticipation

1 of need for additional materials (laydown yards, increased min/max levels, and
 2 agreements with vendors to get us emergency material).

3 **Q. WHAT IS THE SUMMARIZED TIMELINE FOR WEATHER-RELATED EVENTS?**

4 A. Distribution System Operations (“DSO”) monitors daily weather. When a storm event
 5 is forecasted and reaches an identified threshold, the DSO manager informs the
 6 requisite employees so preparation activities can begin based on the notification and
 7 severity of the weather event. If the identified threshold reaches a higher level, DSO
 8 escalates to initiate additional readiness activities, initiating the response team or
 9 Incident Command Structure. If/when the storm impacts CEI South’s service territory
 10 CEI South executes restoration plans until restoration efforts are completed. Once the
 11 event has concluded, CEI South conducts an After-Action Review to review the event
 12 and facilitate continued improvement.



13 **Q. WHAT ARE THE CONSIDERATIONS FOR DETERMINING STORM LEVELS**
 14 **LEADING UP TO AN EOP DETERMINATION?**

15 A. Safety is CEI South’s highest priority as CEI South executes its restoration plans. CEI
 16 South strives to ensure the safe and reliable delivery of electricity to its customers. As

1 CEI South is working through a storm event, CEI South determines the storm level
2 while continuously monitoring additional severe weather on the horizon and assessing
3 the damage and equipment failures caused by the storm and forecasting the number
4 of projected days needed for storm restoration based on crew count. CEI South’s
5 crews immediately begin repairing and restoring service to impacted customers,
6 working around the clock – day and night – to repair the electric system and restore
7 service to impacted customers as safely, efficiently, and quickly as possible. If CEI
8 South determines the need to execute its EOP plan, CEI South engages additional
9 internal and external resources. CEI South utilizes its Bergdolt Training Center for on-
10 boarding non-resident crews, which may consist of CEI South’s primary Regional
11 Mutual Assistance Group (“RMAG”) – the Great Lake Mutual Assistance (“GLMA”)
12 crews – as well as additional crews via CEI South’s native contractor crews or a storm
13 restoration contractor. On occasion, CEI South will also engage former CEI South
14 employees, or retirees, as field crew coordinators to lead the non-resident crews. The
15 on-boarding of non-resident crews includes safety training, work assignments,
16 obtaining of materials, etc.

17 **Q. PLEASE DESCRIBE THE RESTORATION PRIORITIES AFTER A SEVERE**
18 **WEATHER EVENT.**

19 A. The distribution service restoration prioritizes impacted facilities in the following order:
20 1. Transmission and Substations
21 2. Circuits/Sections
22 3. Fuses
23 4. Transformers
24 5. Local Outages (individual customers)

25 However, the above-described sequence may be bypassed in cases of threat to critical
26 loads, that is, loads for which electric service is considered crucial for the protection
27 and maintenance of public safety. These loads are ranked in a four tier system by
28 vulnerability and potential impact, with Tier 1 being the highest priority and associated
29 with life-endangered situations (e.g., live line on vehicle) or the imminent damage of a
30 facility (e.g., real-time overloads, extreme voltage excursions) due to outage
31 conditions. Tier 2 follows Tier 1 and consists of facilities such as hospitals. The
32 remaining two tiers are Tier 3, which includes water and wastewater facilities, city and

1 administration buildings, jails, etc. and Tier 4, which are “seasonal” and limited to flood
2 pumping stations.

3 VI. **CONCLUSION**


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

5 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



Gregg M. Maurer
Director, Indiana Electric Distribution Operations

11-27-23
Date