VERIFIED DIRECT TESTIMONY

OF

MICHAEL L. HOLTSCLAW

ON BEHALF OF

INDIANAPOLIS POWER & LIGHT COMPANY

D/B/A AES INDIANA

Cause No. 45911

VERIFIED DIRECT TESTIMONY OF MICHAEL L. HOLTSCLAW

ON BEHALF OF AES INDIANA

1. INTRODUCTION

Q1. Please state your name, employer, and business address.

A1. My name is Michael L. Holtsclaw. I am employed by Indianapolis Power & Light Company d/b/a AES Indiana ("AES Indiana", "IPL", or "the Company"). My business address is One Monument Circle, Indianapolis, IN 46204.

Q2. What is your position with AES Indiana?

A2. I am Director of Transmission Field Operations.

Q3. On whose behalf are you submitting this direct testimony?

A3. I am submitting this testimony on behalf of AES Indiana.

Q4. Please describe your duties as Director of Transmission Field Operations.

A4. I am responsible for the real time operations of the AES Indiana transmission and distribution systems, the operations and maintenance of all AES Indiana substations, outage restoration efforts, and the operation of the downtown secondary electrical network.

Q5. Please summarize your education and professional qualifications.

A5. I am a graduate of Purdue University with a Bachelor of Science in Electrical Engineering Technology. I am a registered Professional Engineer in the State of Indiana and the State of Ohio.

Q6. Please summarize your prior work experience.

A6. I have over forty-four years of experience with AES Indiana's Distribution and Transmission service operations groups. Specifically, I have eight years of experience in Distribution and Transmission system planning, thirteen years' experience as a Supervisor in underground engineering, two years' experience as Superintendent of Electrical, three years' experience as Team Leader of Transmission Operations, seven years as Director, Power Delivery Operations, two years as Director Engineering & Compliance, five years as Director, Transmission & Distribution Engineering, and as of the date of the prefiling of this testimony four years in my current role as Director of Transmission Field Operations.

Q7. Have you testified previously before the Indiana Utility Regulatory Commission ("Commission") or any other regulatory agency?

A7. Yes. I have filed written testimony before the Commission in Cause No. 44540 on AES Indiana's transmission system, in Cause No. 43245 on the Federal Energy Regulatory Commission's ("FERC's") Seven Factor Test, in Cause No. 42685 regarding IPL's request to transfer functional control of transmission assets to the Midcontinental Independent System Operator ("MISO"), in consolidated Cause Nos. 44576/44602, regarding IPL's basic rates and the downtown network investigation, and Cause No. 45029, IPL's last basic rate case.

Q8. What is the purpose of your testimony in this proceeding?

A8. My testimony discusses AES Indiana's test year end used and useful Transmission and Distribution ("T&D") plant in service. I explain why a five-month average for transmission and distribution inventory is representative as presented by AES Indiana witness Coklow in AES Indiana Financial Exhibit AES IN-RB, Schedule RB7, Electric Materials and

Supplies Inventory. I also provide an update on MISO Transmission Expansion costs that are included in the test year as non-fuel costs. I discuss declared storm events relevant to the pro forma adjustment shown in AES Indiana Financial Exhibit AESI-OPER, Schedule OM11 – Storm Expense and provide an update on AES Indiana's Major Storm Damage Restoration Reserve.[1]

Q9. Are you sponsoring or co-sponsoring any financial exhibits or attachments?

A9. Yes. I sponsor or co-sponsor the following financial exhibits or attachments:

- AES Indiana Financial Exhibit AESI-OPER, Schedule RB7 – Electric Materials and Supplies Inventory
- AES Indiana Financial Exhibit AESI-OPER, Schedule OM10 – Non-Jurisdictional MISO MTEP Operating and Maintenance Expenses
- AES Indiana Financial Exhibit AESI-OPER, Schedule OM13– MISO Non-Fuel Costs

Q10. Did you submit any workpapers?

A10. Yes, workpapers are provided in electronic format that support the financial exhibits that I sponsor.

Q11. Were these exhibits, attachments, or workpapers, or portions thereof, that you are sponsoring or co-sponsoring prepared or assembled by you or under your direction and supervision?

A11. Yes.

[1] AES Indiana Financial Exhibit AESI-OPER, Schedule OM11 is sponsored by AES Indiana witness Aliff.

2. TRANSMISSION AND DISTRIBUTION PLANT IN-SERVICE

Q12. Please provide an overview of AES Indiana's transmission system as it existed on December 31, 2022.

A12. The AES Indiana transmission system consists of approximately 458 miles of 345,000 volts (345 kV) lines, 408 miles of 138,000 volts (138 kV) lines and associated substations.

There is a 345 kV ring around Marion County with multiple 345 kV lines that interconnect into the ring at four different locations. Inside of the 345 kV ring is a 138 kV ring/grid. These two rings are connected through 345 kV to 138 kV auto-transformers at six locations. This allows power to flow from the 345 kV transmission system to the 138 kV system. The customers within the AES Indiana service territory are connected to the 138 kV system.

AES Indiana has generation connected to the 345 kV system at the Petersburg Generating Station and generation connected to the 138 kV system at Harding Street Station and Eagle Valley Generating Station. Supporting the AES Indiana transmission system is the 20 MW Harding Street Station Battery Energy Storage System located at the Harding Street Station and the +300/-100 MVAR Static VAR Compensator located at the Southwest Substation. All of these resources work together to support the resiliency of the AES Indiana Transmission and Distribution System. Consistent with state policy, the Transmission and Distribution System is integral in providing customers with reliable service and a stable source of electricity in which frequency and voltage are maintained consistent with industry standards.

Q13. Please explain how AES Indiana's transmission system is interconnected with the transmission systems of other electric utilities in Indiana.

A13. AES Indiana operates 23 transmission substations in its transmission system which is operated as part of a larger integrated network transmission system commonly referred to as the Eastern Interconnection. The Eastern Interconnection is that portion of North America east of the Rocky Mountains, excluding the State of Texas. The AES Indiana transmission system is directly connected to the transmission systems of Duke Energy Indiana ("Duke"), American Electric Power ("AEP"), CenterPoint Energy ("CPE"), previously known as Vectren, and Hoosier Energy ("HE"). Through the interconnections with these other utilities power can flow into and out of the AES Indiana transmission system. The AES Indiana transmission system also operates as a part of the MISO, Central Region. This provides additional reliability and resiliency along with access to the MISO Energy market to obtain power for our customers.

The AES Indiana transmission system is connected at both the 345 kV and 138 kV level with other utilities. At the Petersburg Generating Station there are 345 kV interconnections with Duke and AEP and 138 kV level interconnections with Duke, HE, and CPE. In the Indianapolis area, AES Indiana's transmission system is interconnected at the 345 kV level with Duke and AEP, and at the 138 kV level with Duke.

Q14. Please provide an overview of AES Indiana's electric distribution system as it existed on December 31, 2022.

A14. The AES Indiana distribution system serves approximately 519,000 retail customers spread across the 528 square mile service territory in central Indiana. There are 432 primary distribution circuits served from 62 distribution substations. The AES Indiana distribution system consists of 3,926 miles of overhead primary distribution lines and 4,299 miles of underground primary distribution lines operating at 4,160 volt (4 kV), 13,200 volt (13 kV),

and 34,500 volt (34 kV). The AES Indiana secondary system are those lines and facilities that operate below 600 volts. The vast majority of the AES Indiana customers are served directly from the secondary distribution facilities. This includes the street lighting facilities. The secondary distribution system consists of 3,065 miles of overhead secondary lines and 1,939 miles of underground secondary lines.

Q15. Please describe the overall condition of AES Indiana's transmission and distribution plant.

A15. The overall condition of the AES Indiana transmission and distribution system is good. AES Indiana performs regular routine maintenance to keep the system in good working order.

3. TRANSMISSION AND DISTRIBUTION INVENTORY

Q16. Please explain why a five-month average is representative of transmission and distribution inventory as presented by AES Indiana witness Coklow (Q/A 15).

A16. The Company is proposing to use a five-month average for inventory costs for transmission and distribution inventory because recent supply chain issues and inflation have increased the cost of these materials & supplies and high lead times have caused AES Indiana to increase inventory to serve customers. A five-month average is in line with what the Company expects costs of current operations to be for the next several years than a 13-month average. The 13-month average inventory cost from December 1, 2021 through December 31, 2022 was $37.9 million. The 5-month average from August 1, 2022 through December 31, 2022 was $49.7 million. The inventory cost for poles were moved into inventory in August 2022. This accounted for an increase of approximately $4 million in total inventory value. Prior to that, the pole costs were not in inventory and were

consignment costs that were charged when the poles were delivered for a project. Also, in August 2022 the Company began taking delivery of the additional materials that had been ordered to offset supply chain issues and longer lead times. This additional inventory material resulted in an increase in total inventory value.

Q17. Please further discuss how supply chain issues and inflation has affected transmission and distribution inventory.

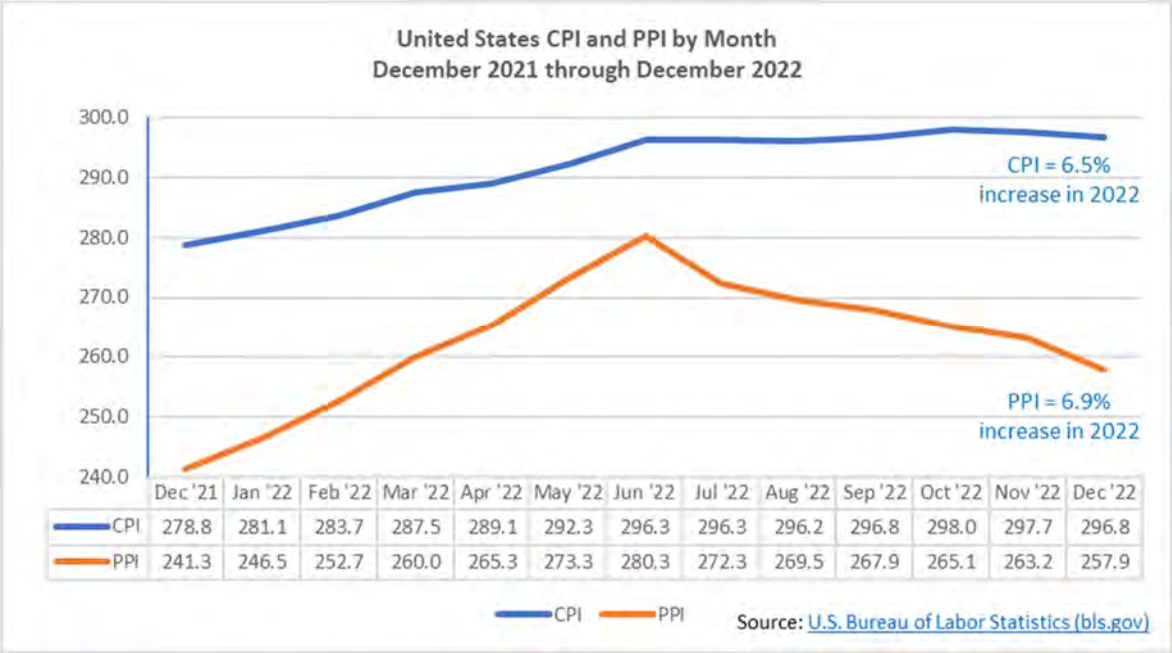
A17. During the COVID-19 Pandemic, the Supply Chain department at AES Indiana noticed that material lead times had increased substantially and prices for items increased over and above the Producer Price Index ("PPI") and labor rates were increasing due to the increase in the Consumer Price Index ("CPI"). Originally, the price increases were related to the COVID-19 Pandemic and the major role it played in the global supply chain disruptions. Now the price increases are driven by a high inflationary environment.

Because delivery lead times have increased significantly in the past two years on critical stock items, AES Indiana increased inventory stock levels to ensure equipment was available to meet customer in-service dates for their projects. The Company also continues to experience delivery issues on materials with leads significantly longer than what they were two years ago, and aggressive price increases in material and supplies. AES Indiana's Supply Chain department has continued to track the increase in lead times as well as prices continuing to increase over and above the PPI.

Q18. How much has the PPI and CPI increased?

A18. Figure 1 below charts the monthly United States CPI and PPI from December 2021 to December 2022. The CPI experienced an increase of 6.5% and the PPI experienced an increase of 6.9% over the time period December 2021 to December 2022.

Figure 1: United States CPI and PPI by Month



	Dec '21	Jan '22	Feb '22	Mar '22	Apr '22	May '22	Jun '22	Jul '22	Aug '22	Sep '22	Oct '22	Nov '22	Dec '22
CPI	278.8	281.1	283.7	287.5	289.1	292.3	296.3	296.3	296.2	296.8	298.0	297.7	296.8
PPI	241.3	246.5	252.7	260.0	265.3	273.3	280.3	272.3	269.5	267.9	265.1	263.2	257.9

Q19. What other impact has supply chain issues had on the inventory levels and costs for transmission and distribution inventory?

A19. Because delivery lead times have increased significantly in the past two years on critical stock items, AES Indiana has had to increase inventory stock levels to try and make sure equipment is available to meet customer in-service dates for their projects. The Company continues to experience delivery issues on material with leads more than double what they were just two years ago. The lead time for overhead wire has gone from 12-16 weeks to 40-50 weeks in the past year. The lead time for wood poles has gone from 4-6 weeks to 12-14 weeks for distribution class poles, transmission poles are ever longer. A simple item like ground rods has gone from 4-6 weeks delivery time to 52-54 weeks. The Company has

orders for distribution transformers that were placed in 2021 that have not yet been delivered.

The Company has increased the inventory level by three times what used to keep in stock for many stock inventory items to try and ensure materials will be available when needed for customer projects and storm restoration efforts.

Q20. Does the Company expect to need to maintain these inventory levels going forward?

A20. Yes. The higher inventory levels are expected to be maintained going forward until lead times return to where they had historically been. This is not expected to happen in the next two to three years. Also, the Company is seeing an increase in the number of new projects which is resulting in an increase in demand for stock materials.

4. MISO TRANSMISSION EXPANSION PLANNING ("MTEP") COSTS

Q21. How many MTEP projects are currently approved for AES Indiana's transmission system?

A21. There are currently no active MISO MTEP projects located within the AES Indiana transmission system footprint. There are three MTEP projects within the AES Indiana footprint that have been completed and are in-service. AES Indiana submitted a project which was approved as a MTEP project to replace the 345/138 kV auto-transformers in the Petersburg 345 kV switchyard in 2011. The project is complete, and the auto-transformers are in-service. The second MTEP project that AES Indiana completed was an upgrade to the AES Indiana Petersburg to AEP Breed 345 kV line and was associated with a transmission service request filed with MISO by another utility. The third MTEP project is the 345 kV breaker replacements at the Petersburg Power Plant switchyard. This upgrade

was placed in-service in December 2015. The MISO study process determined that each upgrade met the criteria for cost sharing as it provided reliability benefits to the southern Indiana bulk transmission system affecting multiple utility systems. MISO is collecting MTEP costs under MISO Schedule 26 for each of these projects from AES Indiana and other transmission owners and remitting them to AES Indiana as MTEP revenues. AES Indiana witness Aliff discusses the exclusion of these projects from the revenue requirement as non-jurisdictional.[2]

Q22. What is the expected total cost of all MTEP's to be allocated to AES Indiana over the period 2023 through 2027?

A22. The total amount of MTEP 2023 project costs allocated to AES Indiana pursuant to MISO Schedule 26 is expected to be $17.1 million between 2023 and 2027. AES Indiana currently expects to be allocated $108.2 million in MISO Schedule 26A Multi-value project costs in the period 2023 through 2027. These costs are variable from year to year and are outside of the Company's control. This is why the Company proposes to continue recovery of these costs through the Regional Transmission Organization ("RTO") Rider.

Q23. Is AES Indiana obligated to pay its portion of the MTEP costs?

A23. Yes. As a Transmission Owning member of MISO, AES Indiana is obligated to pay its allocated portion of the MTEP cost sharing under MISO's FERC-approved Tariff.

Q24. Are the incremental costs recovered through the RTO Adjustment Rider defined variable in amount from year to year, variable as to timing, and substantial in individual and aggregated amounts?

[2] AES Indiana witness Aliff, Direct Testimony, Q/A 17

A24. Yes. The non-fuel incremental MTEP costs from MISO vary from year to year depending on the number of MISO approved projects. The timing of the costs varies based on the construction schedules of the projects. The amount of the charges has been increasing each year as more projects are approved by MISO for cost sharing.

5. STORM EXPENSE

Q25. How does AES Indiana measure storms?

A25. In the AES Indiana Emergency Response Plan, there are clearly defined levels of declared storms. The level of the declared storm determines the support organization that is put in place for the restoration effort and guides the resources that will be needed for a particular restoration event. AES Indiana defines storms by their severity, number of customers affected, and the estimated restoration time. The storm events are described as Level 1 through Level 4, with a Level 4 storm being the most severe. The criteria to define the storm levels is shown in Table 1:

Table 1: Defined Storm Levels

	Level 1	Level 2	Level 3	Level 4
% of Customers Affected	N/A	< 10%	10% - 50%	> 50%
Customers Affected	< 10,000	10,000 to 52,000	52,000 to 260,000	> 260,000
Expected Restoration Time	< 24 Hours	24 - 48 Hours	> 48 Hours	4-5 Days
Internal Resources	AES Crews & Contractors	AES Crews & Contractors	AES Crews & Contractors	AES Crews & Contractors

Use Outside Mutual Assistance	No	May Use	Yes	Yes

Q26. Please discuss the declared storm event history relevant to the pro forma adjustment shown in AES Indiana Financial Exhibit AESI-OPER, Schedule OM11 sponsored by AES Indiana witness Aliff.

A26. Level 1 and Level 2 storm events are the more common types of declared storm events to occur in a year. Level 3 storms are less frequent and are normally associated with a major weather event. AES Indiana has never experienced a Level 4 storm event.

The table below shows the number of Level 1, 2, 3, and 4 declared events from 2018 through the end of the test year December 31, 2022. From a historical perspective, 2022 was a below average storm year in the number of Level 1 and 2 declared storm events with 17 declared storm events. The average number of declared storm events in the past five years was 23 storm events. The average for the past three years was 20 declared storm events.

Table 2: Storm Events

Storm Level Declaration	2018	2019	2020	2021	2022	Last 3 Year Average	Last 5 Year Average	2023 YTD through 6/30/23
Level 1	21	21	22	20	15	19	20	5
Level 2	3	2	2	0	2	1	2	4
Level 3	2	1	1	0	0	0	1	0
Level 4	0	0	0	0	0	0	0	0
Total	26	24	25	20	17	20	23	9

Q27. Why is the Company proposing to use a three-year average for storm expenses?

A27. First, the average number of declared storm events has decreased slightly over the past two years. The three-year average for 2020 through 2022 is more in line with the number of declared storms in 2021 and 2022 (test year). The second reason for proposing a three-year average is we are beginning to see the benefits of the change in the Company's construction standards to help storm harden the overhead distribution system. The changes that have been made to the construction standards make the distribution system more resilient and less susceptible to storm damage. Over time, this should result in a decrease in the number of declared storm events from less severe storms as the system will be less susceptible to damage from minor weather events.

Q28. Did any qualifying major storms occur during the test year ending December 31, 2022?

A28. There were no qualifying major storm events that occurred during the test year ending December 31, 2022.

6. STORM RESERVE

Q29. How does AES Indiana determine if a storm qualifies for inclusion in the Major Storm Damage Restoration Reserve?

A29. For a storm event to be included in the Major Storm Damage Reserve it must first meet the criteria for a Major Event Day ("MED") as defined by The Institute of Electrical and Electronics Engineers ("IEEE") Standard 1366 and it must be classified as a Level 3 or higher storm event as defined in the AES Indiana Emergency Response Plan. A MED is defined as a day in which the daily SAIDI exceeds a threshold value, T_{MED} which is

calculated using the IEEE 1366 methodology. For 2022 AES Indiana's T_{MED} was 3.643 minutes. The 2023 T_{MED} is 4.201.

Q30. How many qualifying storms have been charged to the Major Storm Damage Restoration Reserve since the last update provided in Cause No. 45029?

A30. AES Indiana has had no qualifying storm events for the Major Storm Damage Restoration Reserve since the last Rate Order in October 2018.

Q31. Is AES Indiana proposing to make any changes to the Major Storm Damage Restoration Reserve process?

A31. No, AES Indiana is not proposing to make any process changes to the Major Storm Damage Restoration Reserve. However, AES Indiana witness Aliff discusses the proposed adjustments to the Major Storm Damage Restoration Reserve.[3]

7. SUMMARY AND RECOMMENDATIONS

Q32. Please summarize your testimony and recommendations.

A32. My testimony presents the current Plant In-Service for AES Indiana and describes the Company's transmission system and how it is interconnected with other utilities in Indiana. I explain why a five-month average for transmission and distribution inventory is representative of going forward costs because of recent inflation and supply chain issues and the difficulty in obtaining material in a timely manner. Inventory levels have been increased to ensure that material is available when needed to meet customer expectations and deadlines for customer driven projects. The Company has had to order material further in advance than in the past resulting in higher inventory levels and higher inventory costs.

[3] AES Indiana witness Aliff, Direct Testimony, Q/A 25-27.

Moving the cost of poles into inventory in August of 2022 also resulted in a significant increase in inventory value.

I also explain MTEP costs that the Company is obligated to pay as a member of MISO and how those costs are handled. Additionally, I explain that the non-fuel MISO costs should continue to be recovered through the RTO Rider.

In addition, I discuss storm expenses and the number of declared storm events in the 2022 test year and how they compare to declared storm events in the past. I also explain why a three-year average is representative of storm events going forward. I also discuss the Major Storm Damage Restoration Reserve and explain that the Company is not proposing any changes to the Major Storm Damage Restoration Reserve process.

Q33. Does this conclude your verified pre-filed direct testimony?

A33. Yes.

VERIFICATION

I, Michael L. Holtsclaw, Director of Transmission Field Operations for AES Indiana, affirm under penalties for perjury that the foregoing representations are true to the best of my knowledge, information, and belief.

Michael L. Holtsclaw

Michael L. Holtsclaw
Dated: June 28, 2023