VERIFIED REBUTTAL TESTIMONY

OF

BARRY J. BENTLEY

ON BEHALF OF

INDIANAPOLIS POWER & LIGHT COMPANY

IURC Cause No. 45264

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

A1. My name is Barry J. Bentley. I am AES US Vice President, US Utilities Operations, which includes Indianapolis Power & Light Company ("IPL" or "Company"). My business address is One Monument Circle, Indianapolis, Indiana 46204.

Q2. Please briefly describe your duties as AES US Vice President, US Utilities Operations.

A2. In this position, my principal responsibilities include transmission and distribution planning, engineering, construction, operations and asset management for AES' US Utilities Operations, including IPL.

Q3. Are you the same Barry J. Bentley who filed prefiled direct testimony in this matter?

A3. Yes.

Q4. What is the purpose of your rebuttal testimony in this proceeding?

A4. I am responding to the various points raised by IPL Industrial Group Witness Collins, City of Indianapolis Witnesses Stephens and Alvarez, Citizens Action Coalition ("CAC") Witness Olson, Environment Law & Policy Center ("ELPC") Witness Sandoval~~ and OUCC Witness Krieger~~ in their direct testimonies filed in this proceeding.

Q5. Are you sponsoring any attachments?

A5. No.

Q6. Are you submitting workpapers?

A6. No.

Q7. What is your overall response to the testimony offered by witnesses for IPL Industrial Group and the City of Indianapolis regarding IPL's service reliability?

A7. IPL Industrial Group Witness Collins stated on page 9 of his testimony, "Among the five investor-owned electric utilities in Indiana, IPL again has consistently performed well in reliability metrics." The City of Indianapolis Witness Stephens (page 7) stated: "If IPL has been delivering safe, exceptionally reliable service at reasonable rates through compliance with standard industry practices, I see no rationale for departing from standard industry practices in IPL's TDSIC plan."

While I appreciate both the IPL Industrial Group and City of Indianapolis acknowledging IPL's historical reliability performance and delivering safe and reliable electricity at reasonable rates, I disagree with their view that IPL is departing from standard industry practices in IPL's TDSIC Plan. In fact, I would contend IPL is completely following industry and equipment standards and practices to provide safe and reliable service at reasonable rates into the foreseeable future. Furthermore, I recognize that IPL has performed within the top quartile reliability performance in the electric utility industry the past several years with an IEEE System Average Interruption Duration Index (SAIDI) near 60 minutes of SAIDI.

That being said, it is important to recognize that IPL has experienced recent degradation the past couple of years of approximately a 10%-20% increase in our IEEE SAIDI reliability performance. Based upon IPL's robust asset management system and asset

health information, IPL would expect that performance to continue to degrade unless we are able to make additional investments in the IPL T&D system.

IPL has done a good job over the past several years of balancing the reliability performance, maintaining and extending the life of the T&D assets and replacing the assets that were reaching end of life. However, our asset management program and asset risk modeling are indicating a higher number of our assets will be reaching end of life, not based strictly on the age of the assets, but on the health of the assets. Therefore, I disagree that IPL's good work warrants the rejection of the IPL TDSIC Plan.

Q8. City of Indianapolis Witness Stephens contends that IPL should replace assets only as they fail (page 8) and adds that IPL's TDSIC Plan is "age-based" (page 9). What is your overall response?

A8. These assertions do not capture the asset management program IPL has in place and they overlook the work the Indiana Commission has done in this area.

The IPL Asset Management program is based upon systematic data-driving decisions for all dimensions of asset maintenance, operations, risk, and investment. This approach drives a range of initiatives that ensure consistent collection, organization, and communication of asset data. The data is used to measure and monitor the performance and health of each asset, which is in turn used to systematically identify and prioritize system and asset risk and optimize investment decisions. The foundation of a good asset management program starts with the underlying asset health data and information.

In the November 9th, 2016, IURC Testimonial Staff's Response to IPL's Compliance Filing on October 24th, 2016, in IURC Cause No. 44602, Section 4, paragraph 3 stated:

One example may serve to underscore this point. One of the attributes of asset management (one of the rows of the matrix) is Asset Health/Risk Indexing. This refers to a method or technique that the industry is in the process of adopting and that evaluates each asset within a category (e.g., each circuit breaker or transformer) as to its specific probability of failure and the impact of that failure, given its position in the network. Many companies now recognize this as an admirable and ultimately achievable goal, yet very few, if any, have achieved this level for all of their asset categories, and those who have done so for some assets often consider it in a pilot stage, sometimes relying too heavily on asset age rather than asset condition. IPL has made good progress in developing asset health/risk indices for a number of assets (see that row of the table for different columns) and has intentions to continue to develop them further.

RATE BASE GROWTH

Q9. Do you agree with IPL Industrial Group Witness Collins' characterizations regarding IPL's rate base growth (pages 4-5)?

A9. No. IPL Industrial Group Witness Collins testifies that, "[o]ver its last two rate cases in the past five years, IPL added a large amount of rate base," and with its proposal in this case, "IPL will add even more rate base to be recovered in rates."[1] He goes on to state that as a result of this rate base growth, "IPL's proposal would have a serious impact on rates, both during the plan period and in IPL's next rate case."[2]

As an initial mater, IPL Witness Rogers (question 26) clarifies in his rebuttal that the "rate base" amount reported by IPL Industrial Group Witness Collins is not the IPL "rate base" approved by the Commission. Additionally, as shown in Table 1 of IPL Witness Rogers' direct testimony (page 9), the estimated average aggregate increase in IPL's total retail revenues, and thus the relative TDSIC investment impact on rates, is gradual and trends under or near the historic U.S inflation rate.

[1] IPL Industrial Group Witness Collins Testimony, page 3.
[2] IPL Industrial Group Witness Collins Testimony, page 3.

IPL's rate base growth in recent years has been primarily driven by prudent investments in generation and environmental compliance. IPL Industrial Group Witness Collins fails to recognize that the transmission investments were associated with adding new generation (Eagle Valley CCGT), converting generation (Harding Street refueling), and retiring generation (Eagle Valley coal units). For the reasons cited in our case-in-chief, now is an appropriate time to turn our attention to other IPL transmission and distribution assets. And doing so is consistent with Indiana policy.

Senate Enrolled Act 560, which was signed into law in 2013, allows utilities to request Commission approval to pursue distribution and transmission system improvement projects for purposes of safety, reliability, system modernization, and economic development. Proactive investments in utility infrastructure, especially in the capital city of Indianapolis, are not only prudent, but necessary. As the grid continues to evolve, IPL must harden and modernize its transmission and distribution infrastructure to allow for continued growth in customer demand, distributed energy resources, and electric vehicles. IPL Industrial Group Witness Collins' concerns do not warrant rejection of the Plan.

METER REPLACEMENT PROJECT

Q10. CAC Witness Olson asserts a number of arguments and recommendations to the Commission regarding the deployment of AMI meters. How do you respond?

A10. IPL began using smart meters almost 20 years ago and is currently in the process of deploying the next generation of automated meters. As of October 1, 2019, IPL has installed over 180,000 AMI meters, including 174,000 for residential customers, and has received very few customer complaints or concerns regarding this automation.

Q11. CAC Witness Olson (page 4) states that concerns have been raised across the country around health impacts related to the installation and utilization of smart meters. Has IPL considered the potential health impact of smart meters?

A11. Yes. Concerns over radio frequency exposure are not new and has been studied by a wide variety of health organizations over the years. Smart meters emit a low level of radio frequency energy that is both Federal Communications Commission-approved and lower than the level of Radio Frequency energy emitted by many other devices that are used daily by millions of people, such as cell phones and microwave ovens.[3] The World Health Organization and American Cancer Society have found that low level, non-ionizing radiation, such as that produced by a smart meter is not directly associated with damage to human DNA.[4] Additionally, smart meters transmit radio frequency energy for only a few minutes each day, are generally located outside of a residence and usually shielded by walls, so their potential impact to human health is greatly diminished by those factors.

Q12. CAC Witness Olson (page 4) states that concerns have been raised across the country around data privacy and cyber security risks related to the installation and utilization of smart meters. Please describe the security and privacy protections of the smart meter data.

A12. No customer identity information is transmitted from the AMI meter. Only meter readings and electrical quantities are transmitted over the network. IPL's existing

[3] https://ccst.us/wp-content/uploads/2011smart-final.pdf

[4] www.who.int/peh-emf/publications/facts/fs304/en/ & www.cancer.org/cancer/cancer-causes/radiation-exposure/smart-meters.html

AMR/AMI network security suite is built and certified by IPL's AMR/AMI meter supplier to meet or exceed US government and international standards.

Q13. CAC Witness Olson (page 6) recommends the Commission direct IPL to file an AMI opt-out tariff and commence a statewide rule-making related to smart meters. How do you respond?

A13. As stated previously, IPL began installing smart meters almost 20 years ago. Smart meters are a very important step to improving the delivery of electricity for consumers. Working as a part of the smart grid, smart meters improve power outage detection, resulting in faster restoration and improved status notification to the customer. Smart meters help create a more efficient, more reliable, and better quality of service for customers. These meters will allow IPL to manage the grid and provide improved accommodation for distributed generation such as solar and wind, as well as be better able to meet increased adoption of storage and electric vehicles in the future.

An opt-out program would require IPL to use outdated meters. This would ultimately lead to the creation of special routines to read meters, provide less outage information to customers and the utility, and increase costs to dispatch meter-readers. Thus, an AMI opt-out requirement would be burdensome and costly. Experience with this technology in IPL's service territory does not warrant this additional cost being imposed as part of this proceeding.

If the Commission desires to further explore these matters, it has the ability to initiate a rulemaking, which would allow the issue to be adequately assessed and addressed on an industry-wide basis.

Q14. ELPC Witness Sandoval (page 21) recommends IPL enhance its smart thermostat program in coordination with the IPL DSM Oversight Board and should offer optional time-variant rates as a small-scale pilot in order to leverage the customer benefits that AMI can deliver. How do you respond?

A14. While there are many customer benefits associated with smart thermostats and additional AMI enabled rate designs, the recommendations made by ELPC Witness Sandoval are outside the scope of IPL's TDSIC Plan and the TDSIC statute. IPL is willing to discuss the enhancement of the smart thermostat program with the DSM Oversight Board. IPL is also willing to consider whether a pilot would be beneficial and to seek stakeholder input. However, it is premature to impose requirements at this point.

Q15. ELPC Witness Sandoval states (page 21) that "IPL should initiate a transparent stakeholder process within six months of a final order in this proceeding in order to develop a set of standards and expectations for IPL, their customers, and third parties on what data will be collecting using AMI and how that data can and should be used and accessed." Do you agree with this recommendation?

A15. No. As stated above, if the Commission wishes to establish a set of standards regarding AMI data, it has the ability to initiate a rulemaking. IPL believes a rulemaking would be a better approach because it would allow the issue to be fully and adequately assessed and addressed on an industry-wide basis.

Q16. City of Indianapolis Witness Alvarez (page 7) states that the Meter Replacement project should be rejected because it is not cost-effective. Do you agree?

A16. No. As noted in IPL's TDSIC Plan, the Meter Replacement Project addresses the ongoing replacement of the existing automated meters with the next generation of meter

technology, but at a faster pace. As a result, IPL customers will realize savings of approximately $17.6 million. (refer to Table 6.6.2 in IPL Attachment BJB-2, page 50) The basis for this calculated savings involves a comparison of continuing to replace these meters as they fail (i.e.; current reactive approach) with adopting a proactive replacement approach (i.e.; proposed in the TDSIC Plan).

The Company's case-in-chief shows that the proactive approach is both more efficient and avoids the risk of an anticipated increase in rate of failure of the previously installed AMR meters. More specifically, savings include (1) the advantage of planned vs. reactive work, (2) a corresponding reduction of emergent field trips, and (3) accelerated realization of the benefits of improved operations, enhanced customer care, and advanced rate design. In addition, this Project allows IPL to prepare for new and emerging technologies such as electric vehicle charging infrastructure and energy storage sooner, also benefiting IPL's customers.

INTEGRATED DISTRIBUTION PLANNING PROCESS

Q17. ELPC Witness Sandoval (page 11) proposes IPL transition to Integrated Distribution Planning process. Please respond.

A17. ELPC's recommendation is not a reason to reject IPL's TDSIC Plan. A comprehensive statewide study regarding Integrated Distribution Planning ("IDP") is already underway; the 2019 session of the Indiana legislature passed a modification to Indiana Code § 8-1-8.5-3.1 (b) which requires the IURC to initiate a comprehensive study that includes the impacts of "new and emerging technologies for the generation of electricity, including the potential impact of such technologies on local grids or distribution infrastructure." This is not something that needs to be addressed within the context of this TDSIC case.

Q18. Has the IURC initiated the study and is IPL participating in the study?

A18. Yes, the IURC has initiated the study and has submitted an initial data request to the Indiana electric utilities, which includes IPL. IPL will be providing the requested data and will actively participate in the study process as it moves forward.

Q19. ELPC Witness Sandoval (pages 9-11) suggests it is important for the Commission to impose Integrated Distribution Planning requirements on IPL now. Do you agree?

A19. No. It is inappropriate to impose new and unique IDP requirements on IPL now when the IURC is considering statewide requirements in compliance with the Indiana legislature directives (see IURC GAO 2019-3). Further, IPL is successfully integrating Distributed Energy Resources ("DER"), electric vehicles and other loads today. Approval of IPL's TDSIC Plan helps prepare IPL for future IDP requirements by improving automation, communication and control.

Q20. ELPC Witness Sandoval (page 12) states in his testimony that "IPL should develop forecasts that consider the adoption rates of DER technologies." Does IPL consider the adoption rates of DER technologies in its load forecast?

A20. Yes. For the 2019 Integrated Resource Plan (IRP), IPL contracted a third party, the consulting firm MCR Performance Solutions (MCR), to forecast electric vehicle and photovoltaic ("PV") adoption in IPL's service territory. The forecasts were used to adjust the system level load forecast that is included in IPL's 2019 IRP.

Q21. Does MCR's forecast of EV and PV adoption signal a need for an Integrated Distribution Plan for IPL to reliably serve load at the feeder level?

A21. No. IPL will utilize the TDSIC improvements to enhance our understanding of the real-time distribution system operations and improve the modeling of DERs, and to gather information to cost effectively improve system reliability and resiliency. Based on MCR's EV and PV forecast, system-level impacts from DER technologies are not expected to be significant enough to justify undertaking a costly and resource intensive Integrated Distribution Plan in advance of the statewide, IURC-initiated study.

Q22. Does the proposed TDSIC Plan provide infrastructure and investment that will support the ongoing integration of DERs and evolution of IDP once the state's comprehensive study is completed?

A22. Yes. The continued modernization of IPL's distribution control system with Distribution Automation and AMI is necessary to manage the ongoing interconnection, operation, and maintenance of increasing numbers of electric vehicles, solar, wind and battery energy storage systems. Deployment of these systems will give the necessary visibility to accommodate greater penetration of distributed devices in the future.

Q23. ELPC Witness Sandoval also proposes (page 18) that the "Commission create a transparent stakeholder process mediated by Commission staff to inform the Company's distribution planning process, and to commence within six months of a final order." Do you agree with this recommendation?

A23. No. As an initial mater, ELPC Witness Sandoval is pointing out policy considerations that are outside the scope of this TDSIC Plan which is pending under Section 10 of Indiana's TDSIC statute.

A stakeholder process on distribution planning is unnecessary in the context of reviewing this case. As noted above, the legislature is already looking at this. Furthermore, IPL's current IRP process already lends itself to a transparent stakeholder planning process that includes a discussion of distributed generation within the service territory and its potential effects on: (a) generation planning; (b) transmission planning; (c) distribution planning; and (d) load forecasting. An additional stakeholder process as recommended by ELPC Witness Sandoval would be inefficient and impose an unnecessary additional cost and burden.

Q24. Do ELPC Witnesses Sandoval or CAC Witness Olson object to any specific TDSIC investment?

A24. No.

~~**TDSIC CAPITALIZED LINE CLEARANCE COSTS**~~

~~**Q25. OUCC Witness Krieger (pages 9-10) states in his testimony that he has concerns about whether the line clearing cost included in the IPL TDSIC plan is eligible for recovery. OUCC Witness Krieger believes that the line clearing costs in the project estimates may include trimming already included in the existing retail revenue requirement. Are these concerns justified?**~~

~~A25. No. As described also by IPL Witnesses Shields and Rogers, the type of line clearing expenses covered in existing rate base is associated with ongoing programmatic vegetation management expenses, or cycle trimming. Cycle trimming is maintenance trimming and addresses the growth of vegetation near existing overhead lines during a defined window of time. The purpose of that type of ongoing programmatic vegetation~~

~~management is to keep vegetation from growing into energized conductors and causing outages. Those maintenance expenses are not included in the TDSIC cost estimates.~~

~~On the other hand, the TDSIC capitalized line clearance costs included in the Plan are part of a capital project, for example, clearing the right-of-way of a pole line so that the pole line can be constructed or reconstructed. This type of line clearing requires the removal of vegetation from the ground up to and above where the construction activity is taking place. Clearing the right-of-way in this fashion is required because construction equipment and material must be staged along the pole line to construct the new pole line. As such, these TDSIC capitalized line clearing costs are required to complete the capital project and are therefore included as part of the TDSIC project.~~

PERFORMANCE EVALUATION AND REPORTING

Q26. ELPC Witness Sandoval (page 22) recommends that a series of performance metrics be developed to accompany each one of the benefit categories in IPL's TDSIC Plan Filing and (page 25) states "IPL should work with stakeholders to define appropriate metrics to measure the performance of TDSIC projects." Please respond.

A26. IPL has a well-established asset management framework and already reports performance metrics, which were established through a stakeholder collaborative discussion conducted in accordance with the Commission order in IURC Cause No. 44576, on an annual basis. These performance metrics, reported annually, provide transparency on a number of categories important to IPL stakeholders, including: safety, reliability, operational efficiency, customer satisfaction, asset management, and many others. ELPC Witness Sandoval's recommendation and prescribed metrics stem from his observations of

processes in other states (page 23), whereas IPL's current performance metric reporting process stems from a collaborative of members including IPL's local stakeholders and customers. ELPC Witness Sandoval does not articulate why his proposed metrics should be tracked, and he fails to consider the resource and cost considerations of such efforts. Therefore, if the Commission concludes there is a need to proceed with ELPC Witness Sandoval's proposal, the Commission should structure such regulatory requirements through the context of IPL's existing Collaborative, established in IURC Cause No. 44602, so as to mitigate the cost thereof.

Finally, the performance-based regulation issues of interest to ELPC Witness Sandoval are not limited to IPL but affect other utilities as well. While I recognize that smaller forums or collaboratives may be better suited for an initial exploration of issues, the Commission has generally convened rulemakings or other generic proceedings to assess matters affecting the utility industry at large.

Q27. Does this conclude your prepared verified rebuttal testimony?

A27. Yes.

VERIFICATION

I, Barry J. Bentley, AES US Vice President, US Utilities Operations, affirm under penalties of perjury that the foregoing representations are true and correct to the best of my knowledge, information and belief.

Dated: 10/23, 2019

Barry J. Bentley