VERIFIED REBUTTAL TESTIMONY OF KEVIN A. KIRKHAM

Q1. Please state your name, business address and job title.

A1. My name is Kevin A. Kirkham. My business address is 801 E. 86th Avenue, Merrillville, Indiana 46410. I am employed by Northern Indiana Public Service Company LLC ("NIPSCO") as Manager of New Business.

Q2. Are you the same Kevin A. Kirkham who previously prefiled direct testimony in this Cause?

A2. Yes.

Q3. What is the purpose of your rebuttal testimony in this proceeding?

A3. The purpose of my rebuttal testimony is to respond to direct testimony filed by Anthony A. Alvarez on behalf of the Indiana Office of Utility Consumer Counselor ("OUCC") and filed by Benjamin D. Inskeep on behalf of the Indiana Distributed Energy Alliance ("IndianaDG") on July 27, 2021. Specifically, I address Mr. Inskeep's proposal that NIPSCO not be allowed to require external disconnect switches for certain types of generation facilities and also clarify how NIPSCO's metering technology functions. My rebuttal testimony is limited to a discussion of the issues set out below, and the failure to address each and every issue in each

piece of testimony does not imply agreement with the positions taken by any party with respect to other issues.

Q4. Are you sponsoring any attachments to your rebuttal testimony?

A4. No.

<u>NIPSCO's Metering Technology</u>

Q5. Please briefly describe NIPSCO's metering technology and its capabilities.

A5. As noted in Witness Sears' direct testimony at Question / Answer 15, NIPSCO currently has dual channel meters that have the capability to measure "inflow" and "outflow" either monthly or instantaneously; thus, other netting time periods–such as hourly, daily, weekly, or any other interval—are not technically feasible for NIPSCO at this time.

Q6. Please describe how Inflow and Outflow are measured.

A6. While NIPSCO refers to its proposed netting methodology as "instantaneous," the period being measured by the meter is an interval of less than one second. There can be inflow or outflow for any particular period, or the meter can register "0" if the electricity NIPSCO is supplying to the customer and the electricity the customer is supplying to NIPSCO match during a particular period.

There is one channel labeled "inflow" that measures the electricity being used by the customer, *net of* the amount of electricity being produced by the customer during the period recorded by the meter. Stated differently, the inflow channel is calculating the difference between two components: (1) electricity being produced by the customer's distributed generation facility and (2) the electricity that NIPSCO is supplying to the customer. It is the difference between these two components that is being measured and recorded by the meter as "inflow."

Similarly, the channel labeled "outflow" measures electricity being produced by the customer *above* the electricity being used by the customer for the same period. Again, stated differently, the outflow channel is calculating the difference between two components: (1) electricity that NIPSCO is supplying to the customer and the customer is consuming and (2) electricity being produced by the customer's distributed generation facility. It is the difference between these two components that is being measured and recorded by the meter as "outflow."

If the customer is producing more than they are consuming, it is registered as Outflow. And if they are consuming more than they are producing, it is registered as Inflow.

Q7. How are the Inflow and Outflow utilized for purposes of NIPSCO's proposed

Rider 889 – Excess Distributed Generation Rider ("EDG Rider")?

A7. As provided in Section 2 of the EDG Rider, "[t]he Inflow kWh for the monthly billing cycle shall be the amount of energy billed in accordance with the Customer's standard Rate Schedule, with all applicable rates and charges (herein defined as *Standard Charges*)." As provided in Section 3 of the EDG Rider, "[t]he Outflow kWh (Excess Distributed Generation) for the monthly billing cycle shall be multiplied by the Marginal DG Price to determine the DG Billing Credit."

Q8. What criticisms does Mr. Alvarez raise about NIPSCO's metering for potential EDG customers?

A8. At page 5, lines 14, Mr. Alvarez claims that "[b]y utilizing a utility meter for EDG customers with channels pre-programmed to register net readings of various energy components, it runs counter to the plain language of the statutory definition of 'excess distributed generation' requiring the difference between two components[.]" In this statement, he admits that NIPSCO's meters are registering "net readings," but, as discussed by Witness Sears in his rebuttal testimony, Mr. Alvarez apparently believes the two individual components under Section 5[1] must

[1] These two components are (1) the electricity that is supplied by an electricity supplier to a customer that produces distributed generation; and (2) the electricity that is supplied back to the electricity supplier by the customer.

be separately and independently calculated, then a third calculation of the difference between the two must be performed. However, on page 6, lines 1-3, he concludes that "NIPSCO's request should be denied because the manner in which its proposed utility meters measure EDG do not conform with the statute's requirements."

Q9. Are you confident that NIPSCO's meters are actually performing the required calculation of "the difference between" the two components required under Section 5 of the DG Statute, and not just a single component?

A9. Yes. As I explained above, the calculation being performed by the meter is calculating "the difference between" the two applicable components, as required by Section 5. The Outflow (as measured and recorded by NIPSCO's meters) is the net, in kWh, of both components of Section 5—the "electricity that is supplied back to the electricity supplier by the customer" and the "electricity that is supplied by an electricity supplier to a customer." While NIPSCO defines Outflow as "[t]he separate meter channel measurement of electricity being produced by Customer above the electricity being used by Customer" in the EDG Rider, this simply a simplified statement that uses the word "above" to refer to the "net" or "difference" between the two components. Thus, as provided in Section 3 of the

EDG Rider, NIPSCO takes the "Outflow kWh (Excess Distributed Generation)" for the monthly billing cycle, multiplies it by the Marginal DG Price, and gets the customer's DG Billing Credit. As Witness Sears explains in his rebuttal testimony, this complies with the language of Section 5 specifically, and the DG Statute generally.

Q10. Has the Commission addressed this kind of argument about how meters perform an instantaneous netting calculation?

A10. Yes. In its April 7, 2021 Order in Cause No. 45378 ("Vectren Order"), on pages 34-36, the Commission discussed this issue directly and extensively and, ultimately, it rejected this same (or very similar argument) that was raised by Mr. Alvarez. For example, on page 34, the Commission noted Mr. Alvarez's contention that Vectren's instantaneous netting proposal was not compliant with Section 5 of the DG Statute, and the Commission definitively stated:

> we find [OUCC Witness Alvarez] is incorrect in asserting that the outflow Petitioner's meter captures only recognizes Section 5(2). Petitioner's amended EDG tariff defines EDG consistent with Section 5, and mechanically, Petitioner's evidence shows that in measuring outflow, Vectren South's meter instantaneously nets both components of EDG under Section 5 at the meter to arrive at EDG. The EDG the meter measures is the difference between these components, not merely one component.

The Commission continued on page 34 by stating that "[t]he Commission finds the instantaneous calculation the meter performs of the difference between the electricity Vectren South is supplying and the electricity the customer is supplying to Petitioner properly measures EDG under Section 5." Further, the Commission found that "because it can only flow one way, to become outflow, both components of Section 5 are netted at the meter to arrive at EDG."[2] Lastly, "the Commission [found] that the electricity that flows through the meter and registers as outflow is the EDG produced by a DG customer for purposes of Section 5."

Q11. Do NIPSCO's meters operate similarly to Vectren's in the way they calculate Inflow and Outflow?

A11. To the best of my knowledge, yes, they do. In preparing my direct testimony, I reviewed the Vectren Order and also had conversations with employees in NIPSCO metering department. I confirmed that, with respect to how Inflow and Outflow are measured, the meters NIPSCO utilizes for EDG customers operate similarly to how Vectren's meters were described.

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[2] Mr. Alvarez quoted a portion of this sentence in his testimony (at p. 6, lines 6-8), but he failed to provide the context for this quote—which directly contradicts the position he offers in his testimony.

Therefore, based on the language of Section 5 of the DG Statute, as interpreted by the Commission, I am confident that when NIPSCO's meters register as "outflow" is "the difference between" the two components under Section 5.

Disconnect Switch Requirement

Q12. What concerns or issues does Mr. Inskeep raise about NIPSCO's proposed EDG Rider?

A12. On pages 80-81 of his testimony, Mr. Inskeep takes issue with the requirement NIPSCO has included in Section 10 of the Distributed Generation Agreement, included as part of the EDG Rider. This requirement states: "At the Customer's expense, Customer shall install a lockable manual or power operable disconnect switch, or lockable circuit breaker shall be installed between the generation source and Company's electric system, and be accessible to Company personnel at all times." He claims (at p. 80, lines 11-12) that, based on his understanding, "external disconnect switches are not necessary for isolating a small, inverter-based DG facility" and requests (at p. 81, lines 2-3) that "the Commission direct NIPSCO to clarify in its EDG Rider that disconnect switches are not required for Level 1 interconnections."

Q13. What is the purpose for the requirement for a disconnect switch?

A13. Stated simply, it is about safety. This includes the safety of the customer and NIPSCO's employees, as well as first responders who may have to access a customer's property or equipment in the event of an emergency. A disconnect switch is a standard requirement for all customer-owned generation, and it is currently required for Level 1, Level 2, and Level 3 interconnections.[3] It also required for all Net Metering facilities.[4]

I point this out, not because inclusion in other areas of the NIPSCO Electric Service Tariff is conclusive for purposes of the EDG Rider, but to demonstrate that this is a standard safety requirement for NIPSCO, which has been previously approved by the Commission in multiple instances.

Q14. Mr. Inskeep notes that New York's Standardized Interconnection Requirements do not require disconnect switches for inverter-based systems 25 kW or less and that Vectren's approved EDG tariff does not require Level 1 interconnections to install an external disconnect switch. What is your response to this point?

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[3] *See* https://www.nipsco.com/docs/librariesprovider11/rates-and-tariffs/electric-rates/2020-current-rates/electric-service-tariff-(entire-book).pdf?sfvrsn=24, at Rider 789, Sheet No. 7 of 16 (Level 1) and Sheet No. 10 of 16 (Levels 2 and 3).

[4] *See id.* at Rider 880, Sheet No. 5 of 9.

A14. While Mr. Inskeep provides two examples of where they are not required, there are several other utilities that NIPSCO System Planning informed me do require them. For example, Duke Energy requires disconnect switches, even for facilities 20 kW or smaller.[5] Similarly, Indiana Michigan Power Company requires disconnect switches for Net Metering facilities.[6] DTE Energy also has this requirement.[7]

Q15. What does the DG Statute say about this issue?

A15. Section 22 of the DG Statute provides as follows:

> A customer that produces distributed generation shall comply with applicable safety, performance, and reliability standards established by the following:
> (1) The commission.
> (2) An electricity supplier, subject to approval by the commission.
> (3) The National Electric Code.
> (4) The National Electrical Safety Code.
> (5) The Institute of Electrical and Electronics Engineers.
> (6) Underwriters Laboratories.
> (7) The Federal Energy Regulatory Commission.

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[5] *See* https://www.duke-energy.com/home/products/renewable%20energy/generate%20your%20own/interconnection%20up%20to%2020kw?jur=NC01.

[6] *See* https://www.indianamichiganpower.com/lib/docs/business/builders/IMP-INNetMeteringServicePacket_20200202.pdf.

[7] *See* https://newlook.dteenergy.com/wps/wcm/connect/dte-web/home/service-request/common/electric/gmop/interconnection-process; *see also* https://newlook.dteenergy.com/wps/wcm/connect/7d410fc0-ac33-4848-b84f-4cda1bff77a5/SolarPanelInstallationOverview.pdf?MOD=AJPERES.

(8) Local regulatory authorities.

Q16. Is inclusion of a disconnect switch a requirement under any of these applicable categories?

A16. As noted above, inclusion of a disconnect switch has been previously approved by the Commission in several areas of NIPSCO's tariff, including for Level 1 interconnections under Rider 879 – Interconnection Standards. NIPSCO's proposal in the EDG Rider is that these same interconnection requirements will apply equally to EDG facilities. Additionally, NIPSCO System Planning informed me it is also a requirement under Section 690.13 of the National Electric Code (Photovoltaic System Disconnecting Means), including specifically in Section E. There are other relevant provisions in Section 690.12, which relates to rapid shutdown for protection of firefighters and first responders, and Section 690.33.

Thus, it is appropriate to require disconnect switches for safety purposes, including for consistency so that NIPSCO employees who service equipment will know that such equipment is required for all levels of interconnection. And it is also allowed under Section 22 of the DG Statute.

Conclusion

Q17. Does this conclude your prefiled rebuttal testimony?

A17. Yes.

VERIFICATION

I, Kevin A. Kirkham, Manager of New Business of Northern Indiana Public Service Company LLC, affirm under penalties of perjury that the foregoing representations are true and correct to the best of my knowledge, information and belief.

Kevin A. Kirkham

Date: August 9, 2021