VERIFIED DIRECT TESTIMONY OF MATTHEW G. HOLTZ

Introduction

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

A1. My name is Matthew G. Holtz. My business address is 801 East 86th Avenue, Merrillville, Indiana 46410. I am the Director of Asset and Risk Management for NiSource Corporate Services Company.

Q2. On whose behalf are you testifying in this proceeding?

A2. I am testifying on behalf of Northern Indiana Public Service Company LLC ("NIPSCO" or "Company").

Q3. Please briefly describe your educational and business experience.

A3. I received a Bachelor of Science degree in Electrical Engineering Technology from Purdue University. I also received a Master of Business Administration degree from the University of Notre Dame. I have been employed by NIPSCO in various departments since 2005. I began my employment with NIPSCO in 2005 in the Transmission Operations Department as a Transmission System Supervisor, performing system reliability studies. Since that time I have held the positions of

Policy Engineer in the Federal Energy Regulatory Commission ("FERC") Policy Department, Manager of Transmission Operations, and Director of the System Reliability and Development Department. In July, 2015, I accepted the role as Managing Director of Transmission where I have NIPSCO's Transmission and Distribution Planning, Operations Planning, System Protection Engineering, North American Electric Reliability Corporation ("NERC") Compliance, and other supporting groups reporting to me. I accepted my current position of Director of Asset and Risk Management in July 2021.

Q4. What are your current responsibilities as Director of Asset and Risk Management?

A4. As Director of Asset and Risk Management, I am responsible for the leading the asset and risk management team within NiSource for both electric and gas assets; including Transmission Integrity Management (TIMP), Distribution Integrity Management (DIMP), Facility Integrity Management (FIMP), Storage Integrity Management (SIMP), Transmission and Distribution line management, Transmission & Distribution substation management, as well as other electric programs.

Q5. Please provide an overview of your role with respect to the deployment of

advanced metering infrastructure ("AMI") (the "AMI Project") included in NIPSCO's Electric TDSIC Plan for the period June 1, 2021 through December 31, 2026 (the "2021-2026 Electric Plan").

A5. I am part of the team that helps to determine how NIPSCO will plan and operate its electric system in a changing environment where government policy and customer preferences are increasing the reliance on NIPSCO's electric system. Some of these future changes include greater customer electrification (including electric vehicles ("EVs")) and the anticipated increased penetration of Distributed Energy Resources ("DERs"), including potential participation by these DERs in the wholesale energy markets at the Midcontinent Independent System Operator, Inc. ("MISO"). AMI is viewed as a tool to help ensure NIPSCO is able to successfully support these changes.

Q6. Have you previously testified before the Indiana Utility Regulatory Commission ("Commission")?

A6. Yes. I previously testified before the Commission in NIPSCO's request for a Certificate of Public Convenience and Necessity for a federally mandated NERC Compliance Project in Cause No. 44889 and in NIPSCO's semi-annual tracker filings in Cause No. 44340-FMCA-XX (beginning in FMCA-8). I also testified

before the Commission in NIPSCO's Regional Transmission Organization Adjustment tracker filings in Cause No. 44156-RTO-X (in RTO-1, RTO-2, and RTO-8 through 10), in NIPSCO's first Transmission, Distribution and Storage System Improvement Charge ("TDSIC") tracker filing in Cause No. 44371-TDSIC-1, and in Cause No. 45037 (NIPSCO / AEP Sale and Transfer of Asset).

Q7. What is the purpose of your direct testimony in this proceeding?

A7. The primary purpose of my testimony is to support the AMI Project included in NIPSCO's 2021-2026 Electric Plan. NIPSCO is proposing approximately $145 Million in direct capital and $10 Million in operations and maintenance ("O&M") expense for implementation of the AMI Project.

Q8. Are you sponsoring any attachments to your direct testimony?

A8. No.

NIPSCO'S ELECTRIC AMI PROJECT

Q9. Please describe NIPSCO's current electric metering infrastructure.

A9. NIPSCO currently uses Advanced Meter Reading ("AMR") metering technology. While NIPSCO has realized efficiencies from implementation of AMR technology, as further discussed below, NIPSCO needs to modernize its metering technology

to AMI to operate as a modern electric utility and be able to respond to and serve its customers' changing needs. As the push for electrification continues, the visibility enabled by AMI will allow NIPSCO to more efficiently plan for and operate its system in a way that meets customers' expectations, and also realize significant, additional benefits.

Q10. Please provide an overview of NIPSCO's AMI Project.

A10. NIPSCO's AMI Project includes deployment of AMI meters and related communications technology to the vast majority[1] of electric meters in NIPSCO's electric service territory. It includes replacement of over 479,000 current electric AMR meters, plus any growth that occurs through the end of deployment.

At its core, AMI consists of an array of integrated meters, communications networks, and information technology ("IT") systems that enable two-way communication between a utility and customer meters. Beyond technology, an AMI program is also an investment in people and processes that directly enables operating efficiencies, improved reliability/safety, and enhanced customer

[1] The NIPSCO meters that are not currently modeled for replacement include approximately 350 large industrial, MV-90-read meters that require real-time data transmission functionality.

outcomes while establishing a foundation for transformation as NIPSCO leverages AMI to respond to the demands on a modern electric utility.

NIPSCO will select a communications system solution, comprised of a field-area network ("FAN") of data collectors and communications from meters and backhaul communications from data collectors to the AMI Headend System,[2] through the evaluation of competitive Request for Proposals ("RFP") bids. This evaluation will align with procurement best practices and will determine the most effective technology solution for NIPSCO's AMI system. Total costs of the primary communications system solutions are generally similar, and costs modeled as part of the AMI Project Cost-Benefit Analysis prepared for NIPSCO by West Monroe Partners, LLC ("West Monroe") ("CBA Results"), Attachment 3-B to NIPSCO Witness Kiergan's direct testimony, have been calculated using standard cost benchmarking.

The other major software component needed for the AMI Project is the Meter Data Management System ("MDMS"), which, as its name suggests, is the software that performs long-term data storage and management for the vast quantities of data

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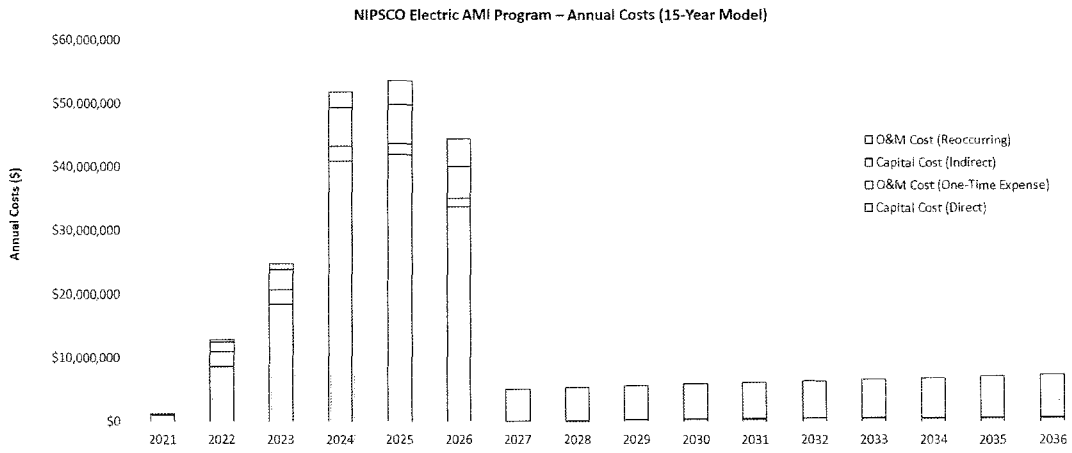
[2] As further discussed by NIPSCO Witness Kiergan, the Headend System is the software package that will enable NIPSCO to monitor and control both meters and communication assets.

delivered by the smart meters via the AMI Headend System. The MDMS performs the validating, editing, and estimation analysis and calculates the billing determinants for each customer. This data is then sent from the MDMS to the Customer Information System ("CIS") for customer billing.

As further discussed in Section 2.5 of the 2021-2026 NIPSCO Electric AMI Business Case prepared by West Monroe (the "AMI Business Case") (Confidential Attachment 2-B, Appendix C to Witness Vamos' direct testimony), NIPSCO plans to run an RFP process and subsequent analysis to determine the AMI communications solution best suited for its service territory. The current estimated cost, which is considered a Class 4 estimate, is included below.[3]

Figure 1 - NIPSCO Electric AMI Program Forecasted Costs

[3] *See* AMI Business Case, Page C-31.



Q11. Why is NIPSCO proposing the AMI Project in its 2021-2026 Electric Plan?

A11. The roll-out of AMI will provide NIPSCO with greater visibility into distribution system operations and capabilities for enhanced planning activities (including load forecasting) and other future benefits. AMI data provides NIPSCO the insight needed to better understand its customers, for example being able to more accurately model / forecast loads, allowing NIPSCO to design effective future offerings, and provide insights to NIPSCO's customers. NIPSCO will be able to better understand how its customers use energy, which will address one of the suggested enhancements to its 2018 Integrated Resource Plan ("IRP") recommended in the Final Director's Report for Northern Indiana Public Service Company (NIPSCO's) 2018 Integrated Resource Plan dated February 10, 2020 (p. 5).

AMI is also foundational for NIPSCO to successfully navigate an environment where customers are pursuing greater electrification, including the increasing penetration of EVs and DERs. AMI will provide the sub-hourly interval, real-time meter data to reliably balance energy supply and demand, settle for energy supplied to the system at the time it occurs, and properly respond to customer demand increases that will come with higher adoption rates of EVs.

AMI also aligns with other NIPSCO initiatives driving system modernization and enhanced customer value that are more powerful when viewed together than as distinct parts, especially when coupled with the rich data that AMI provides to NIPSCO and its customers to utilize. With other components of the TDSIC filing, especially the grid modernization efforts, there are synergies as more sensors and controls are deployed that are complimented by AMI's capabilities to improve power quality analysis/mitigation and transformer mapping/analytics, for example. Separate from the planned investment in AMI, systems like Oracle Network Management System (or NMS) for outage management are being upgraded; a new "Customer Portal" and mobile application are being stood up; analytics architecture and governance are planned for future state innovation; new

customer payment programs are being developed; and a market potential study has shown a pathway for demand response.

AMI also provides benefits in line with the TDSIC Statute.[4] The Indiana General Assembly amended the TDSIC Statute to explicitly allow for grid modernization projects (including advanced metering infrastructure) to be included for recovery in approved TDSIC plans, indicating a recognition of the benefits associated with these kinds of projects. AMI holds great promise to improve safety, promote reliability, enable system modernization, and drive economic development in accordance with the tenets of the TDSIC Statute. From a cost effectiveness point of view in relation to TDSIC purposes and stakeholders, AMI functionality enables a core set of operational efficiencies to be realized, provides benefits directly to customers, and unlocks future transformative programs to potentially be pursued by NIPSCO. To be prepared, NIPSCO has developed a holistic implementation plan and costs for the people, processes, and technology needed to achieve the targeted AMI program outcomes. While I discuss some of these benefits below,

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[4] Ind. Code Ch. 8-1-39 (Transmission, Distribution, and Storage System Improvement Charges and Deferrals) was enacted as part of Senate Enrolled Act 560 and became effective on April 30, 2013, which was amended in House Enrolled Act No. 1470 and became effective on April 24, 2019 (the "TDSIC Statute").

NIPSCO Witness Kiergan provides a more detailed discussion of the benefits associated with the AMI Program.

Q12. How will NIPSCO account for current AMR meters that will be replaced by AMI meters?

A12. In its 7-Year Electric TDSIC Plan for the period January 2016 through December 2022 ("Electric Plan 1"), NIPSCO did not account for depreciation associated with assets that were replaced. However, as further discussed by NIPSCO Witness Meece, in this filing, NIPSCO is proposing to include a "netting" proposal to address concerns associated with assets that are not fully depreciated but are retired and then replaced under the 2021-2016 Electric Plan, which will apply to all retired assets, including AMR meters.

Q13. Please provide an overview of the CBA Results.

A13. As further discussed by NIPSCO Witness Kiergan, the CBA Results sets out a schedule and plan that includes the deployment of AMI to NIPSCO's electric customers. It outlines the planning activities prior to and required for AMI deployment, communicates the timing required for AMI meters, the AMI communications network, and associated technology to be deployed, and

articulates the schedule on which NIPSCO plans to conduct these activities. The CBA Results identifies:

- Components of the proposed AMI system, both materials in the field and IT applications;
- Planned integrations with existing systems;
- Resources required to plan and fully deploy AMI;
- Operational benefits to be achieved through AMI deployment;
- Societal benefits and potential programs enabled by the AMI deployment; and
- Process and organizational changes related to ongoing operations that result from AMI deployment.

Q14. What are NIPSCO's primary goals for the AMI Project?

A14. NIPSCO's overarching goal for the AMI Project is to position NIPSCO to be able to provide the service its customers expect from a modern electric utility company. In addition to the system benefits that I discuss elsewhere, the primary, tangible goals of the AMI Project are to enhance customer experience, increase safety and reliability, and improve field workforce efficiency, while providing the foundation

for additional potential offerings and improvements. A brief description of the primary goals is provided below.[5]

Enhance Customer Experience

NIPSCO's AMI Project encompasses the recording, retrieval, storage, and analysis of usage data and provision of the data to customers via an electronic portal created for NIPSCO's customers. Once deployed, customers will be able to access this data, learn from it, and adjust their electric usage accordingly. This same AMI system is designed to facilitate access to future customer-deployed technologies, such as home area networks (HANs) and participation in potential future programs (e.g., energy efficiency, demand response, or time of use rates). In addition to providing data to customers, customer service representatives ("CSRs") will be able to access customer interval usage data, perform on-demand reads, and check the status of meters, all of which will increase the situational knowledge of customers and CSRs, thereby improving the overall level of customer service that NIPSCO can provide. Connection and disconnection tasks can also be performed remotely and at a convenient time selected by the customer,

[5] As discussed in Section 1.3 of the AMI Business Case, NIPSCO also expects some benefits related to job creation.

rather than being dependent upon on on-site visit by NIPSCO personnel. Furthermore, NIPSCO expects customers to benefit from improved service reliability as a result of the AMI Project, especially when combined with the other grid modernization projects discussed by NIPSCO Witness Vamos.

Increase Safety

The remote meter reading capability, coupled with the capability to remotely connect and disconnect service, enables a reduction in the number of site visits performed by meter readers, meter servicers, and field service personnel to customer premises. This reduces the risk of safety incidents involving these personnel and removes vehicles from the roads. AMI meters also provide various alarms and notifications to NIPSCO, including outages, hot sockets, voltage swells or sags, or tampering. This functionality increases customer safety by alerting NIPSCO of failures and impending failures, enabling NIPSCO to respond more quickly and prevent more serious incidents at customer sites. Remote disconnection where there is serious event at a customer site is also anticipated to increase safety for responding personnel.

Transform Distribution System Operations / Improve Field Workforce Efficiency

Full deployment of AMI is expected to improve operational efficiency in the areas of meter reading, meter service, meter investigation, connects and disconnects, turn-ons and shut-offs for non-payment,[6] avoiding a response to trouble calls where the present service issue is on the customer's system and not on the NIPSCO side (meter "found on"), as well as load profiling. Information provided by AMI will also enable and support other technologies that improve reliability, such as automated outage verification and restoration confirmation, accurate outage location identification, and identification of nested outages during larger outage events.

Enable Expanded Customer Engagement & Improved Distribution Operations

AMI is a foundational technology that provides a platform and data for future potential programs in the areas of expanded customer engagement, improved distribution operations, enhanced grid situational awareness, and enabled DER / EV integrations into the NIPSCO grid. From an operational improvement perspective, AMI can enable and enhance initiatives that could be pursued in the future, including the integration of smart inverters, voltage optimization and

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[6] NIPSCO will continue to follow the Commission's rules regarding disconnections for non-payment and is not seeking waiver of those rules.

control, utility or community DERs, and data-driven asset management and proactive maintenance. NIPSCO's AMI Business Case provides a solid interoperable foundation that will enable these potential future programs. Customer preferences, market forces, and utility focus will ultimately drive these programs.[7]

Q15. How will implementation of AMI meters improve NIPSCO's ability to understand customer's energy usage and impact the IRP process?

A15. Currently, without AMI technology, NIPSCO's insight into customers' energy usage is limited. For example, during the last 12 to 15 months, COVID has driven changes to customer and customer class usage, shifting some load from commercial customers to residential customers with a higher population working from home. NIPSCO's current technological capabilities are limited relying on monthly data points and more generalized usage patterns, allowing only limited insight into customers' energy use changes.

AMI will allow NIPSCO to better understand its customers and their usage patterns. This more granular look into its customers' daily usage patterns will

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[7] NIPSCO cannot foresee with certainty which listed applications, devices, and programs will emerge and be pursued over the fifteen-year (15) horizon, and, therefore, has not listed the associated costs and benefits in the AMI Business Case.

allow NIPSCO to build more accurate load curves for NIPSCO's different customer classes, which will enable NIPSCO to produce more accurate load forecasts into the future. This is an important improvement as customers' overall electric usage is changing with the increased penetration of EVs and DERs, and a trend toward electrification in general.

With higher EV penetration levels, the charging of these vehicles could strain the NIPSCO electric system if not closely monitored and prepared for. According to the U.S. Department of Energy,[8] drivers of EVs perform more than 80% of their vehicle charging at their home. Depending on the charging technology selected by a customer with an EV, the power draw could range from a low end of 1.4 kW up to 19.2 kW,[9] with the desire being on the higher end due to faster charging times (8 hours versus 22 hours to fully charge from empty for a small electric vehicle).[10] Chargers typically used in public settings can see a power draw up to 120 kW per individual charger. Incremental load additions at this scale were not planned for in the past 50 years as utilities have been installing service level equipment to serve their customers. Without the visibility that AMI provides, NIPSCO will need to

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8 https://www.energy.gov/eere/electricvehicles/charging-home.

9 https://www.nrel.gov/docs/fy19osti/73303.pdf.

10 https://pluginamerica.org/understanding-electric-vehicle-charging/.

make assumptions on its customers' future usage levels and patterns as the electrification trend continues, potentially leading to the upgrade of service level equipment prematurely. AMI will potentially enable NIPSCO to monitor actual customer usage levels and patterns throughout the day, season to season, giving NIPSCO the ability to upgrade service level equipment when the need is reached. Without AMI data, NIPSCO would also not be in a position to explore other methods of incenting customers (including EV customers) to change their electric usage patterns (e.g., time of use rates) to off-peak times, leveling load curves and potentially avoiding system upgrades or resource capacity additions.

With the reductions in installed cost for customer level resources, NIPSCO and the industry in general have seen an increase in installed DER capacity in their footprints. Starting in 2015 through 2019, DER installed capacity on NIPSCO's system went from 32,879 kW to 57,693 kW, a 175% increase.[11] One of the main drivers of this growth is solar panel installations. Under NIPSCO's net metering program, NIPSCO's system saw growth from 811 kW of installed solar capacity in 2015 to 28,155 kW by the end of 2020. AMI is key to enable a smoother transition

[11] Data sourced from NIPSCO's annual reports on Net Metering (170 IAC 4-4.2-9 Tariff and Reporting Requirements) and Feed-in Tariff (Cause No. 44393).

to an environment with a continued higher penetration of customer-owned, smaller scale generation. The more granular AMI data could potentially support the settlement of energy in periods that would measure when the energy injection occurs, as opposed to AMR which provides very limited data points. This granular level data is foundational to allow for DER aggregation and participation in the MISO Energy Market, as enabled in FERC's Order No. 2222. In order for a resource to participate in the MISO Energy Market, resource monitoring and sub-hourly meter sampling are required.[12] AMI technology could support this option for customers, whereas existing AMR metering technology cannot.

Q16. What is NIPSCO's plan to secure customer data and the network that will be built out as part of AMI?

A16. NIPSCO's IT and Operations Technology functions are centralized as part of NiSource's IT department. NiSource IT plans to protect customer and company data associated with AMI that is contained in the NiSource environment in the same fashion that it protects this data today. Proper firewall, monitoring, and controls will be in place to ensure the protection of this data.

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[12] MISO has not filed its proposed changes to the tariff to comply with FERC Order No. 2222; however, certain technical characteristics would be required to operate in a market that balances energy and demand, and settles on a frequency as granular as 5-minute increments.

In the same way, when it comes to the new network and external vendor interfaces associated with AMI, NiSource IT will again approach this as it does with the critical systems that it supports today. Extensions of company controlled networks will have the proper firewall, network monitoring, and control capabilities. As further discussed by NIPSCO Witness Kiergan, NIPSCO anticipates that its Headend System will likely be a vendor software-as-a-service ("SaaS") solution, requiring an external interface to move data between the NiSource IT systems and the vendor's systems. Vendor security controls will be integral as part of the negotiation of the AMI system on the front end to ensure that the vendor NIPSCO selects will have the proper security controls in place to ensure they are protecting NIPSCO customer data as the company would. In addition, NiSource IT again will secure its interfaces with the vendor as it does today with firewall, monitoring, and controls that is standard with other critical systems.

Q17. How will the AMI Project be executed?

A17. The AMI Project is expected to be executed over the next 5 years, with the vast majority of customer meters being replaced in the 2024–2026 timeframe. In 2021 NIPSCO plans to conduct a series of pre-planning activities to begin developing

the governance structure and high-level plans (communications, customer engagement, security, etc.) that will guide the project. In 2022, the AMI Project will transition to initial design, issuance of RFPs for the AMI system, MDMS, and related integrations, and formal project management governance. After that, the focus will be on the IT systems, executing these investments prior to the initial implementation of roughly 3,000 meters in 2023. During the period of initial implementation, processes and employee training will be revised, tested, and updated to have all processes optimized for full deployment.

More information on AMI deployment can be found in Section 1.4 of the AMI Business Case and also described in more detail by NIPSCO Witness Kiergan.

Figure 2 — Timeline Summary[13]

13 AMI Business Case, Page C-8.

Q18. Please provide an overview of the costs and benefits for the AMI Project.

A18. NIPSCO estimates that it will need to invest $145.5 million (direct) in capital between 2021 and 2026 to build out its AMI system. The cost estimates include the cost of AMI meters, AMI communications network, installation labor, and a comprehensive list of necessary investments needed to enable the AMI benefits further discussed below. For maintenance capital expenditures (e.g., replacement meters, new customers, etc.) after the AMI system is in service, $4.3 million (direct) in ongoing capital expense is estimated. In terms of one-time O&M expense, the CBA Results estimates a total of approximately $10.0 million needed as part of project execution. Recurring O&M expenses after project deployment is complete is estimated at $69.9 million between Years 2021 and 2036.[14] Lastly, indirect capital costs were estimated for Years 2021 to 2036 to account for capital costs associated with corporate overhead and Allowance for Funds Used During Construction (or AFUDC), totaling $22.2 million.

In terms of quantified value, NIPSCO has estimated $305.5 million in total benefits between the years 2021 and 2036. Those benefits are discussed further below.

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[14] While this amount is included in the cost-benefit analysis performed by West Monroe and included in the CBA Results, NIPSCO is not seeking recovery of ongoing O&M expenses through its TDSIC tracker.

Beyond results directly impacting NIPSCO, there are further benefits in terms of economic impact, job creation, and greenhouse gas ("GHG") emission reductions that have been quantitatively estimated. Furthermore, there are additional qualitative benefits that would be directly realized through NIPSCO's investment in electric metering infrastructure, and there are further opportunities for programs to be established that would provide value streams to NIPSCO customers in service of system modernization goals.

Q19. What are the primary capital investment categories for the AMI Project?

A19. The primary categories of capital investment are described in Section 2 of the AMI Business Case. These generally include:

- AMI Meters and Installation Labor: This is one of the most significant categories of investment and includes the replacement of more than 479,000 current meters, as well as installation of new meters for projected customer growth between 2021 and 2024 (approximately 15,000).
- AMI Communications Network Equipment and Installation Labor: The communications network serves as the backbone for the AMI network. This category includes the physical infrastructure such as collectors and relays, deployment of this infrastructure, engineering design of installation points, as well as the AMI System vendor costs associated with the execution of the network design, testing, and optimization.

- MDMS, Other Systems, and Integrations: All systems must be integrated into the NIPSCO/NiSource corporate enterprise in order to realize the full benefits of AMI. There will be costs associated with hardware, software, and installation to accomplish this integration.

- Cyber Security Protections: Each AMI meter is a "communicating device" and potential entry point into NIPSCO's/NiSource's IT network. NIPSCO plans to utilize primarily internal labor to test and enable the needed cyber security protections.

Q20. What are the primary O&M expense categories related to meter replacement?

A20. The primary categories of O&M expense are described in Section 3.4.2 of the AMI Business Case. These expenses can be divided into two general categories—those one-time expenses required to establish the AMI Project and recurring expenses, which will continue after program implementation.

One-Time Expenses

- Project Management and Change Management/Business Readiness: These activities pertain primarily to the design/redesign, development, implementation, and internal training required for operational processes that are required due to AMI deployment. These processes span the organization and includes processes in metering, meter reading, meter servicing, billing, theft detection, and outage management, to name a few.

- Customer Outreach and Education: Customer engagement during the AMI Project will improve benefit realization and process execution. This effort will be accomplished through bill inserts, mailed fact sheets, door hangers, web videos, social media campaigns, and/or town halls.

Recurring Expenses

- AMI IT: A new organization will be established at NIPSCO for the management and execution of core AMI system implementation, integration, go-live, and ongoing maintenance / support / upgrades. This includes the AMI Headend System and other related integrations such as the MDMS, Outage Management System, and Customer Portal.

- AMI Operations: A new organization will be established at NIPSCO for the operation of the growing AMI footprint of communications devices and meters. Responsibilities would include the monitoring of performance, leveraging data analytics tools, coordinating with field resources to resolve communications issues, upgrading firmware, certifying meters, and many other tasks.

- AMI Communications Fees, Warranties, and Maintenance: NIPSCO expects that the AMI Headend System will reside in the vendor's data center and will provide data to NIPSCO via SaaS delivery model. Additional fees include product support fees, VPN fees, and warranties on physical infrastructure.

- AMI Meter Replacement Labor: When existing AMI meters need to be replaced, labor expenses will be incurred to replace those meters.

Q21. Which of these expense categories are included in the estimated costs of the AMI Project for which NIPSCO seeks recovery in this proceeding, and why is recovery through the TDSIC tracker appropriate for these expenses?

A21. NIPSCO is only seeking recovery of the "one-time expenses" listed above, which are estimated to be approximately $10 million over the entire TDSIC Plan period. Recovery of these expenses is appropriate because this work is directly tied to AMI Project implementation and incremental to (or different than) any O&M expenses

that NIPSCO recovers in its base rates and charges. Accounting rules require that these expenses are to be classified as O&M expenses rather than capital costs even though these expenses will be incurred as part of the AMI Project execution. Consistent with the TDSIC Statute where "operation and maintenance expenses" are defined as a component of "TDSIC costs" in sub-section 7, it is appropriate to recover these costs through the TDSIC tracker.[15]

Q22. Regarding the other expense categories, for which NIPSCO is not seeking recovery in this proceeding, have these costs been included in the CBA Results performed by West Monroe and sponsored by NIPSCO Witness Kiergan?

A22. Yes. Although NIPSCO is not seeking recovery of the "recurring expenses" through the TDSIC tracker, at NIPSCO's direction, they have been included in the analysis performed by West Monroe under Witness Kiergan's supervision, as NIPSCO wanted to ensure that the cost-benefit analysis contained in the CBA Results reflected appropriate costs and benefits associated with the AMI Project.

Q23. What are the anticipated benefits and primary benefit categories associated with the AMI Project?

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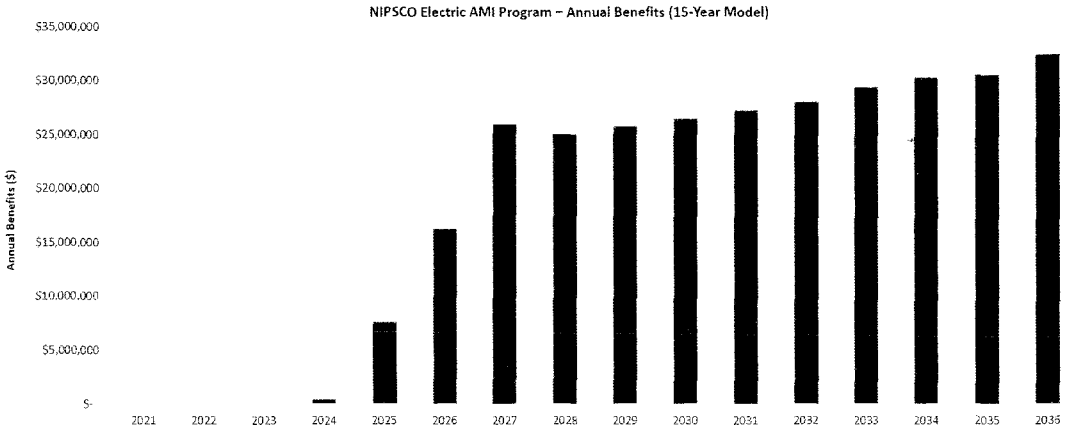
15 NIPSCO Witness Meece further explains NIPSCO's request for recovery of O&M.

A23. The AMI Project benefits fall into three broad categories: (1) NIPSCO Operational Benefits; (2) Customer Benefits; and (3) Societal Benefits.[16] Each includes sub-categories of benefits and is described in more detail by NIPSCO Witness Kiergan. Additional information about the expected benefits from the AMI Project is provided in Section 3.3 of the AMI Business Case. A graph summarizing these benefits is provided below, which is followed by an overview of the benefit categories.

Figure 3 — NIPSCO Electric AMI Program Annual Benefits[17]



Operational Benefits

16 As discussed by NIPSCO Witness Kiergan, these categories are the quantified benefits categories. There are several other benefit categories that have been referenced, as they are direct results of the AMI Program, but they have not been quantified.

17 AMI Business Case, Page C-24.

Operational Benefits include three subcategories: (a) Avoided Capital, (b) Additional Cost of Service Reduction, and (c) O&M and Expense Reduction. These benefits are primarily driven by the O&M and Expense Reduction benefit category, which equates to about $164.9 million in expected savings. Together, Avoided Capital and Additional Cost of Service Reductions benefit categories yield NIPSCO an additional $41.9 million in expected operational benefits, thereby enabling NIPSCO to realize a total of $206.8 million benefits without considering the benefit of other programs enabled by AMI and other qualitative benefits.[18]

- Avoided Capital: Benefits classified as avoided capital expenditures include the vehicle purchases avoided by retirements in the meter reading fleet, avoided AMR collector hardware refresh costs, and avoided AMR meter replacements.[19]
- Additional Cost of Service Reduction: Benefits categorized as a reduction in the additional cost of service provided by NIPSCO reflect costs incurred due to unbillable electric utilization that ultimately gets accounted for and socialized back into NIPSCO customer rates. Insights from AMI can reduce these higher cost of service drivers such as electricity generation that is unbillable from theft and also from consumption on inactive meters.
- O&M and Expense Reduction: O&M and Expense Reduction benefits pertain to meter reading, meter servicing, outage management, AMR software and licensing avoidance, residential

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18 *See* page 13 of AMI BCA.

19 During the time of AMI roll-out, which is expected to be late 2024 through late 2026, NIPSCO will ensure AMR meters that need to be replaced are replaced, while also keeping in the mind the switch-over to AMI technology.

and commercial AMR meter replacements avoided, bad debt, and billing exceptions. Using AMI data and insights, opportunities will also be available to enhance and even automate activities, processes, and analysis performed by the above service areas at NIPSCO. Despite the annual O&M expenses described above, current projections indicate that a net reduction in O&M would occur after AMI is deployed and integrated into NIPSCO operations.

Customer Benefits

Customer Benefits relate to Improved Reliability and Energy Savings. This category is projected to produce a $98.7 million benefit.[20]

- Reduced Customer Outage Minutes Benefit: This benefit category provides the largest Customer Benefit. It is driven by a reduction in service interruption minutes during outage events throughout the year that can likely be mitigated through insights from AMI data.
- Customer Energy Savings: Energy savings was modeled to assume that 10% of the residential customer base would make use of insights after full AMI deployment, and those customers would reduce their energy demand by 1.1%.

Societal Benefits[21]

Societal Benefits of the AMI Project relate to reductions in GHG emissions and positive economic impact to NIPSCO's service territory and Indiana more broadly. In total, they are expected to be approximately $495.4 million.

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20 *See* page 13 of CBA Results.

21 The Societal Benefits of the AMI Project are not modeled to directly impact the net present value of the cost-benefit analysis.

- Reduced GHG Emissions: Though small, benefits are expected related to fewer carbon dioxide emission, as fewer truck miles will be driven and power plant emissions will be avoided.

- Regional Economic Benefit: This calculation was determined utilizing IMPLAN methodology which utilizes program capital spend categorized into representative categories of spend that have an associated economic multiplier. It is expected that the prolonged spend and influx of workers would benefit the region through necessary touchpoints with the local economy.

Q24. How will NIPSCO address situations where a customer does not want an AMI meter installed?

A24. NIPSCO understands that some customers may, for various reasons, have concerns about the installation of an AMI meter on their premises. As it does for its AMR meters, NIPSCO will continue to allow customers to "opt out" of installation of an AMI meter if they so choose. This is discussed further by NIPSCO Witness Becker.

Q25. What is NIPSCO's plan for AMI meters for its gas customers?

A25. NIPSCO's approach to AMI for its combined (electric and gas) customers and gas-only customers is still being developed. NiSource is investigating AMI solutions across all of its six operating companies, including NIPSCO Gas. Although more granular gas usage data is important to both NIPSCO and its customers, the NiSource team is focused on finding a solution that also provides safety benefits

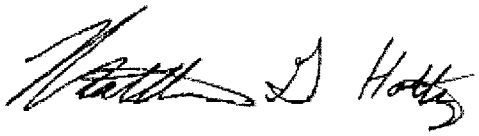
to NIPSCO's gas customers. Options being considered include both automatic and remote shut-off capabilities, focusing on shutting off a customer's gas service quickly in the event of a leak or an emergency at a customer's home or business. Technological improvements in this area are still underway with meter manufacturers. NiSource is actively investigating and testing solutions to ensure that effective metering options are targeted. The NIPSCO electric AMI Project team is actively coordinating with the team investigating gas AMI solutions to include gas functional requirements as part of the electric AMI technology evaluation process, primarily in the area of AMI communications network and MDMS. This would provide the opportunity for NIPSCO to investigate the potential benefits of utilizing electric AMI assets to support gas AMI for combined gas and electric customers in its electric service territory in the future, providing efficiencies down the road when gas AMI is deployed.

Q26. Does this conclude your direct testimony?

A26. Yes.

VERIFICATION

I, Matthew Holtz, Director of Asset and Risk Management for NiSource Corporate Services Company, affirm under penalties of perjury that the foregoing representations are true and correct to the best of my knowledge, information and belief.



Matthew G. Holtz

Dated: September 30, 2021