STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

VERIFIED PETITION OF NORTHERN INDIANA PUBLIC SERVICE COMPANY LLC FOR (1) APPROVAL OF PETITIONER'S TDSIC PLAN FOR ELIGIBLE TRANSMISSION, DISTRIBUTION, AND STORAGE SYSTEM IMPROVEMENTS, PURSUANT TO IND. CODE § 8-1-39-10(a) INCLUDING TARGETED ECONOMIC DEVELOPMENT PROJECTS PURSUANT TO IND. CODE § 8-1-39-10(c), (2) AUTHORITY TO DEFER COSTS FOR FUTURE RECOVERY, (3) APPROVAL FOR INCLUSION OF NIPSCO'S TDSIC PLAN PROJECTS IN ITS RATE BASE IN ITS NEXT GENERAL RATE PROCEEDING PURSUANT TO IND. CODE § 8-1-2-23, AND (4) AUTHORITY TO RECOVER OPERATION AND MAINTENANCE EXPENSES AS TDSIC COSTS PURSUANT TO IND. CODE § 8-1-39-7 UNDER ITS APPROVED RIDER 888 – ADJUSTMENT OF CHARGES FOR TRANSMISSION, DISTRIBUTION AND STORAGE SYSTEM IMPROVEMENT CHARGES.	)	**CAUSE NO. 45557**

PETITIONER'S SUBMISSION OF REVISIONS

Northern Indiana Public Service Company LLC, by counsel, respectfully submits the attached revisions to the Verified Direct Testimony of Alison M. Becker and the Verified Direct Testimony of Matthew G. Holtz. Due to the changes to Ms. Becker's testimony, Attachment 1-C has been relabeled Attachment 1-B. A redlined version of the revised pages is attached hereto. Due to the change in pagination, a complete clean version of Mr. Holtz's and Ms. Becker's testimony is attached hereto and will be the version offered into evidence at the hearing in this Cause.

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing was served by email transmission upon the following:

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Dated this 30th day of September, 2021.

Bryan M. Likins

Q5. What is the purpose of your direct testimony in this proceeding?

A5. The purpose of my direct testimony is to: (a) summarize the relief requested in this proceeding; (b) provide an overview of the statutory authority supporting NIPSCO's request for relief; (c) describe the termination, tracking and requirements for NIPSCO's 7-Year Electric TDSIC Plan for the period January 2016 through December 2022 ("Electric Plan 1"); (d) provide an overview of NIPSCO's Electric TDSIC Plan for the period June 1, 2021 through December 31, 2026 ("2021-2026 Electric Plan" or "Plan"); (e) explain why the public convenience and necessity require or will require the eligible improvements included in the Plan; (f) support the conclusion that NIPSCO has provided best estimates of the cost of the Plan; (g) explain why the estimated costs of the eligible improvements included in the Plan are justified by incremental benefits attributable to the Plan; ~~(h) provide an overview of the Economic Impacts of Projected NIPSCO T&D Expenditures, 2021-2026 dated May 2021 prepared by Sargent & Lundy (the "Economic Impact Report");~~ (h~~i~~) explain NIPSCO's approach to inclusion of eligible economic development projects in the Plan, (i~~j~~) explain NIPSCO's proposed process for updating the Plan; (j~~k~~) confirm NIPSCO's intent to comply

with the statutory provisions of Ind. Code ch. 8-1-39;[1] (kl) discuss NIPSCO's proposal for recovery of TDSIC costs; (lm) explain NIPSCO's stakeholder outreach related to the Plan; (mn) describe how NIPSCO proposes to change its General Rules and Regulations, and (no) introduce the other witnesses supporting NIPSCO's request for approval of the Plan.

Q6. Are you sponsoring any attachments to your direct testimony?

A6. Yes. I am sponsoring the following attachments, which are attached hereto:

Attachment 1-A	Verified Petition filed June 1, 2021
~~Confidential Attachment 1-B~~	~~Economic Impact Report~~
Attachment 1-BC	NIPSCO's presentation relating to the 2021-2026 Electric Plan provided to external stakeholders on April 26, 2021 and the Commissioners and members of the Commission Staff on April 29, 2021

REQUESTED RELIEF

Q7. Please summarize the relief NIPSCO is requesting in this proceeding.

A7. In accordance with Ind. Code § 8-1-39-10(a), Petitioner requests Commission approval of its 2021-2026 Electric Plan, which is attached to NIPSCO Witness

[1] 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").

No. 44733).

Q14. Does NIPSCO's case-in-chief include all of the evidence and information necessary for the Commission to make the required findings to approve the 2021-2026 Electric Plan?

A14. Yes.

PUBLIC INTEREST

Q15. Does the public convenience and necessity require or will it require the eligible improvements included in the 2021-2026 Electric Plan?

A15. Yes. There is a reasonable and apparent need for the Plan. The eligible improvements included in the 2021-2026 Electric Plan will serve the public convenience and necessity in various ways. ~~The Economic Impact Report, attached hereto as Confidential Attachment 1-B, provides the estimated economic impacts of NIPSCO's planned TDSIC expenditures for the State of Indiana, as well as the United States.~~ As further addressed by Witness Vamos, NIPSCO's evidence~~, including the Economic Impact Report,~~ demonstrates the estimated costs of the eligible improvements included in the Plan are justified by incremental benefits attributable to the Plan.

~~ECONOMIC IMPACT~~

~~**Q18. Have you reviewed the Economic Impact Report prepared by Sargent & Lundy (Confidential Attachment 1-B)?**~~

~~A18. Yes.~~

~~**Q19. Please provide an overview of the projected economic impact of NIPSCO's 2021-2026 Electric Plan.**~~

~~A19. NIPSCO retained Sargent & Lundy to study and evaluate the economic impact of the proposed expenditures associated with NIPSCO's 2021-2026 Electric Plan. The majority of the study is limited to capital expenses and investment relating to transmission and distribution systems. While the majority of NIPSCO's economic impact is expected to occur in Indiana, the analysis focused on the economic impact within Indiana and the United States but contains three geographic regions total – Indiana, the remaining United States, and outside the United States. The impact analysis for planning (IMPLAN) software was used to estimate the economic benefit of NIPSCO's expenditures and investments categorized as net employment, income, value added to the market, wages injected into the economy, and federal, state, and local taxes. In summary, based on the investment level in~~

NIPSCO's 2021-2026 Electric Plan, the total economic impact in Indiana is as follows:[7]

Impact Type	Employment	Labor Income	Value Added	Output	State/Local Taxes	Federal Taxes
Total Economic Impact from NIPSCO T&D Construction Expenditures in Indiana (2021–2026)						
Direct Effect	5,707	$446,029,390	$671,828,968	$1,398,677,214	$70,316,868	$88,792,316
Indirect Effect	2,244	$155,110,746	$335,119,962	$730,644,266	$46,953,297	$35,526,593
Induced Effect	3,163	$156,292,808	$273,589,155	$477,425,157	$25,929,595	$32,977,077
Total Effect	11,115	$757,432,944	$1,280,538,085	$2,606,746,637	$143,199,759	$157,295,986

The total economic impact inside the United States and outside of Indiana is as follows:

Impact Type	Employment	Labor Income	Value Added	Output	State/Local Taxes	Federal Taxes
Total Economic Impact from NIPSCO T&D Construction Expenditures in the United States and Outside Indiana (2021–2026)						
Direct Effect	2,688	$217,603,322	$318,056,146	$600,865,429	$13,319,482	$44,432,078
Indirect Effect	1,651	$128,935,382	$209,969,820	$454,406,770	$18,177,507	$28,144,480
Induced Effect	2,798	$162,289,009	$287,966,822	$513,551,345	$27,584,359	$36,329,388
Total Effect	7,137	$508,827,713	$815,992,788	$1,568,823,544	$59,081,348	$108,905,945

[7] Direct Effect, sometimes referred to as the "initial change to the economy," is the result solely of the expenditures between a producer and consumer relating to the project. Indirect Effect is the result of the purchases and contracts with the third parties providing the goods, inputs, and services to the project. Induced Effect is the result of project laborers spending wages they acquired while working on the project. Confidential Attachment 1-B, Page II.

~~These findings are detailed in Table ES-2 of the Economic Impact Report (Confidential Attachment 1-B).~~

ECONOMIC DEVELOPMENT PROJECTS

~~Q20.~~Q18. **What does the TDSIC Statute say about Economic Development Projects?**

~~A20.~~A18. Under Section 2 of the TDSIC Statute, "eligible transmission, distribution, and storage system improvements" means:

> new or replacement electric or gas transmission, distribution, or storage utility projects that: (1) a public utility undertakes for purposes of . . . economic development . . .; (2) were not included in the public utility's rate base in its most recent general rate case; and (3) either were: (A) described in the public utility's TDSIC plan and approved by the commission under section 10 of this chapter and authorized for TDSIC treatment; (B) described in the public utility's update to the public utility's TDSIC plan under section 9 of this chapter and authorized for TDSIC treatment by the commission; or (C) approved as a targeted economic development project under section 11 of this chapter.

Therefore, there are three general types of economic development projects: (a) those approved by the Commission as part of a utility's TDSIC plan; (b) those approved by the Commission as part of a utility's update to its TDSIC plan; and (c) targeted economic development projects as defined under Section 11.

~~Q21.~~Q19. **Are any Economic Development Projects included in NIPSCO's 2021-2026 Electric Plan?**

subsequently provided a draft of the 2021-2026 Electric Plan. NIPSCO also met with some of the Commissioners and members of the Commission Staff on April 29, 2021 to preview NIPSCO's filing including the amount and types of investments. The presentation provided for those meetings is attached as Attachment 1-BC.

During the external stakeholder meetings, NIPSCO requested feedback to understand their positions, identify areas of confusion or misunderstanding, and make adjustments to the extent possible to NIPSCO's overall approach to better align with its stakeholders. The results of this ongoing process are reflected in NIPSCO's 2021-2026 Electric Plan.

PROPOSED TARIFF CHANGES

~~Q34.~~Q32. **Once the 2021-2026 Electric Plan is approved, will any changes be required to NIPSCO's Electric Service Tariff?**

~~A34.~~A32. Yes. As Witness Holtz discusses, some customers may, for various reasons, have concerns about the installation of an AMI meter on their premises. As it does for its Automated Meter Reading meters, NIPSCO will continue to allow customers to "opt out" of installation of an AMI meter if they so choose. NIPSCO anticipates that revisions will be necessary to include an opt-out charge in Rule 15 – Miscellaneous and Non-Recurring Charges. Since NIPSCO anticipates the initial

VERIFICATION

I, Alison M. Becker, Manager of Regulatory Policy for 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.

_____

Alison M. Becker

Date: September 30~~June~~ 1, 2021

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 ~~Managing~~ Director of Asset and Risk Management ~~Transmission in the Electric Operations Department~~ for NiSource Corporate Services Company. ~~Northern Indiana Public Service Company LLC ("NIPSCO").~~

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").

~~Q2.~~Q3. Please briefly describe your educational and business experience.

~~A2.~~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 ~~my current~~ 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.

~~Q3.~~Q4. **What are your current responsibilities as Director of Asset and Risk Management~~Managing Director Transmission~~?**

~~A3.~~A4. As Director of Asset and Risk Management~~Managing Director of Transmission~~, 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. ~~groups that support NIPSCO transmission operations, perform the long term and short term planning functions for NIPSCO's electric systems (distribution and transmission), provide oversight to NIPSCO's compliance with the NERC Reliability Standards, and oversee the administration of NIPSCO's wholesale transmission contracts.~~

~~Q4.~~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").**

~~A4.~~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.

VERIFICATION

I, Matthew Holtz, Director of Asset and Risk Management~~Managing Director of Transmission in the Electric Operations Department~~ for NiSource Corporate Services Company, ~~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.

_____

Matthew G. Holtz

Dated: September 30~~June 1~~, 2021

VERIFIED DIRECT TESTIMONY OF ALISON M. BECKER

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

A1. My name is Alison M. Becker. My business address is 150 W. Market Street, Suite 600, Indianapolis, Indiana 46204. I am employed by Northern Indiana Public Service Company LLC ("NIPSCO" or the "Company") as Manager of Regulatory Policy.

Q2. Please briefly describe your educational and business experience.

A2. I graduated from the University of Evansville with a Bachelor of Arts degree with a double major in History and Political Science and a Masters of Business Administration from Valparaiso University and am a 2016 graduate of the Indiana University Robert H. McKinney School of Law. I was a Governor's Fellow from 1997 to 1998 and then worked as a Budget Analyst for the Indiana State Budget Agency from 1998 to 2000. In 2000, I joined the Indiana Family and Social Services Administration as the Director of Fiscal Services for the Division of Disability, Aging and Rehabilitative Services and was promoted to the Director of Developmental Disabilities Services in 2003. From 2004 until 2008, I held management positions within nonprofit organizations providing services to individuals with developmental disabilities and community health centers. I

joined NiSource in 2008 as a Lead Performance Measurement Analyst in Information Technology Service Performance. After leaving the Company briefly in 2008, I accepted the position of Senior Analyst, Regulatory Policy for NIPSCO in 2009 and was promoted to my current position as Manager, Regulatory Policy in 2011.

Q3. What are your responsibilities as Manager of Regulatory Policy?

A3. As Manager of Regulatory Policy, I am and/or have been responsible for supporting a variety of regulatory initiatives before the Indiana Utility Regulatory Commission ("Commission") including: NIPSCO's electric and gas demand side management and energy efficiency filings; NIPSCO's electric and gas Transmission, Distribution, and Storage System Improvement Charge ("TDSIC") filings; NIPSCO's electric vehicle and economic development pilot approved in Cause No. 44016; NIPSCO's low income program in Cause No. 45465; the development, negotiation and filing of NIPSCO's demand response tariffs approved in Cause No. 43566-MISO-1; and the development of revised line extension practices governing residential real estate developments as approved by the Commission in Cause No. 43706. I also served as Chair of the Demand Side Management Coordination Committee and as a member of its subcommittees, as created in the Commission's December 9, 2009 Phase II Order in Cause No. 42693.

Q4. Have you previously testified before this or any other regulatory commission?

A4. Yes. I previously testified before the Commission in NIPSCO's request for approval of its gas TDSIC plan for eligible transmission, distribution, and storage system improvements approved in Cause No. 45330. I also provide testimony in NIPSCO's Electric TDSIC tracker proceedings in Cause Nos. 44733-TDSIC-X (including Cause No. 44733-TDSIC-1-S1) and NIPSCO's Gas TDSIC tracker proceedings in Cause Nos. 44403-TDSIC-X (beginning in TDSIC-6) and 45330-TDSIC-X (beginning in TDSIC-1). I also testified before the Commission supporting NIPSCO's request in (1) Cause No. 45465 for approval of a Low Income Program; and (2) Cause No. 45183 for a Certificate of Public Convenience and Necessity for federally mandated projects associated with NIPSCO's proposed PHMSA Compliance Project to comply with various provisions of the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration. I also filed testimony in a complaint brought by Thermo-Cycler Industries, Inc. in Cause No. 45163. I also routinely testify before the Commission in NIPSCO's requests for approval of electric and gas demand side management and energy efficiency programs, including Cause Nos. 44001, 44154, 44362, 44441, 44496, 44501, 44634, 44637, 45011, 45012, 45455, and 45456 as well as NIPSCO's adjustment filings in Cause Nos. 43618-DSM-XX and 44001-GDSM-XX.

Q5. What is the purpose of your direct testimony in this proceeding?

A5. The purpose of my direct testimony is to: (a) summarize the relief requested in this proceeding; (b) provide an overview of the statutory authority supporting NIPSCO's request for relief; (c) describe the termination, tracking and requirements for NIPSCO's 7-Year Electric TDSIC Plan for the period January 2016 through December 2022 ("Electric Plan 1"); (d) provide an overview of NIPSCO's Electric TDSIC Plan for the period June 1, 2021 through December 31, 2026 ("2021-2026 Electric Plan" or "Plan"); (e) explain why the public convenience and necessity require or will require the eligible improvements included in the Plan; (f) support the conclusion that NIPSCO has provided best estimates of the cost of the Plan; (g) explain why the estimated costs of the eligible improvements included in the Plan are justified by incremental benefits attributable to the Plan; (h) explain NIPSCO's approach to inclusion of eligible economic development projects in the Plan, (i) explain NIPSCO's proposed process for updating the Plan; (j) confirm NIPSCO's intent to comply with the statutory provisions of Ind. Code ch. 8-1-39;[1] (k) discuss NIPSCO's proposal for recovery of TDSIC costs; (l) explain NIPSCO's stakeholder outreach related to the Plan; (m) describe how NIPSCO

[1] 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").

proposes to change its General Rules and Regulations, and (n) introduce the other witnesses supporting NIPSCO's request for approval of the Plan.

Q6. Are you sponsoring any attachments to your direct testimony?

A6. Yes. I am sponsoring the following attachments, which are attached hereto:

Attachment 1-A	Verified Petition filed June 1, 2021
Attachment 1-B	NIPSCO's presentation relating to the 2021-2026 Electric Plan provided to external stakeholders on April 26, 2021 and the Commissioners and members of the Commission Staff on April 29, 2021

REQUESTED RELIEF

Q7. Please summarize the relief NIPSCO is requesting in this proceeding.

A7. In accordance with Ind. Code § 8-1-39-10(a), Petitioner requests Commission approval of its 2021-2026 Electric Plan, which is attached to NIPSCO Witness Vamos' direct testimony as Confidential Attachment 2-A. Specifically, Petitioner requests (a) a finding that the investments contained in the 2021-2026 Electric Plan are "eligible transmission, distribution, and storage system improvements" within the meaning of Ind. Code § 8-1-39-2; (b) a finding of the best estimate of the cost of the eligible improvements included in the Plan; (c) a determination that the public convenience and necessity require or will require the eligible improvements

included in the Plan; and (d) a determination that the estimated costs of the eligible improvements included in the Plan are justified by incremental benefits attributable to the Plan. If the Commission determines that the 2021-2026 Electric Plan is reasonable, Petitioner requests the Commission approve the Plan and designate the eligible transmission, distribution, and storage system improvements included in the Plan as eligible for TDSIC treatment in accordance with the TDSIC Statute and authorize Petitioner to include the improvements in Petitioner's rate base in any proceeding involving Petitioner's rates. Petitioner also requests authority to recover operation and maintenance expenses as TDSIC costs pursuant to Ind. Code § 8-1-39-7 under its approved Rider 888 – Adjustment of Charges for Transmission, Distribution and Storage System Improvement Charges. Petitioner further requests authority to defer any costs associated with the Plan that are incurred prior to and subsequent to the time the Commission issues an order in this proceeding until such amounts are recovered through rates. Finally, Petitioner requests that the Commission approve Petitioner's proposed process for updating the 2021-2026 Electric Plan in future TDSIC adjustment proceedings.

TDSIC STATUTE

Q8. Please provide an overview of the statutory authority supporting NIPSCO's

request for relief in this proceeding.

A8. In addition to Ind. Code § 8-1-2-23, Section 10(a) of the TDSIC Statute provides that a public utility can petition the Commission for approval of a TDSIC plan for eligible transmission, distribution, and storage system improvements. Section 10(b) of the TDSIC Statute provides that following notice and hearing, and not more than two hundred ten (210) days after the petition is filed, the Commission will issue an order (a) finding whether the best estimate of the cost of the eligible improvements is included in the Plan; (b) determining whether the public convenience and necessity require or will require the eligible improvements included in the Plan; and (c) determining whether the estimated costs of the eligible improvements included in the Plan are justified by incremental benefits attributable to the Plan. If the Commission determines that the 2021-2026 Electric Plan is reasonable, the Commission approves the Plan and authorizes TDSIC treatment for the eligible transmission, distribution, and storage system improvements included in the Plan. Section 10(d) of the TDSIC Statute provides that a public utility may terminate an existing TDSIC plan before the end of the original plan period by providing the Commission a notice of termination at least sixty (60) days before the date on which the plan will terminate and that eligible transmission, distribution, and storage system improvements receiving TDSIC

treatment under Section 9 of the TDSIC Statute before termination of the plan shall continue to receive TDSIC treatment after termination of the plan until a final order in the public utility's next general rate case is issued.[2]

TERMINATION, TRACKING AND REQUIREMENTS FOR ELECTRIC PLAN 1

Q9. Did NIPSCO terminate its existing Electric Plan 1 before the end of the original plan period?

A9. Yes. NIPSCO's Electric Plan 1 is set to expire December 31, 2022. In accordance with Ind. Code § 8-1-39-10(d), NIPSCO provided the Commission with a notice on April 1, 2021 that Electric Plan 1 would terminate on May 31, 2021. That Notice was provided more than sixty (60) days before the date on which the plan terminated in a manner consistent with the TDSIC Statute.

Q10. Will the eligible transmission, distribution, and storage improvements in Electric Plan 1 as of May 31, 2021 continue to receive TDSIC treatment after termination of the plan on May 31, 2021?

A10. Yes. In accordance with Ind. Code § 8-1-39-10(d), the eligible transmission, distribution, and storage improvements in Electric Plan 1 receiving TDSIC

[2] Section 10(d) of the TDSIC Statute also provides that a public utility that terminates a plan (1) may petition the commission for approval of a new TDSIC plan under this section, and (2) must petition the Commission for review and approval of the public utility's basic rates and charges with respect to the same type of utility service before the original expiration date of the terminated plan.

treatment under Section 9 of the TDSIC Statute as of May 31, 2021 will continue to receive TDSIC treatment under Section 9 of the TDSIC Statute after termination of the plan until a final order in NIPSCO's next general rate case is issued.

Q11. Ind. Code § 8-1-39-9(e) requires "[a] public utility that implements a TDSIC under [the TDSIC Statute] shall, before the expiration of the public utility's approved TDSIC plan, petition the commission for review and approval of the public utility's basic rates and charges with respect to the same type of utility service." Ind. Code § 8-1-39-10(d)(2) requires a public utility that terminates a plan "must petition the commission for review and approval of the public utility's basic rates and charges with respect to the same type of utility service before the original expiration date of the terminated plan." Has NIPSCO complied with these requirements?

A11. Yes. Electric Plan 1 was originally set to expire on December 31, 2022. NIPSCO petitioned the Commission for review and approval of its basic rates and charges for electric utility service on October 31, 2018, and the Commission issued its order changing NIPSCO's basic rates and charges on December 4, 2019 in Cause No. 45159. This meets the requirements as set forth in both sections of the TDSIC Statute with respect to Electric Plan 1.

OVERVIEW OF NIPSCO'S 2021-2026 ELECTRIC PLAN

Q12. Please provide an overview of the 2021-2026 Electric Plan.

A12. Consistent with the provisions of the TDSIC Statute, NIPSCO has developed an electric plan detailing the eligible transmission, distribution, and storage system improvements NIPSCO will undertake for purposes of safety, reliability, system modernization or economic development.[3] The Plan also provides for appropriate economic development projects in the future, although none are proposed at this time. The total estimated cost of the 2021-2026 Electric Plan is $1,635,535,402, inclusive of direct capital ($1,396,615,415), indirect capital ($181,560,012), allowance for funds used during construction ("AFUDC") ($47,345,270), and operations and maintenance expenses ($10,014,705). The 2021-2026 Electric Plan identifies the total annual projected costs and includes an Asset Register for Risk Based Projects (Confidential Appendix A) used to identify and prioritize the major assets measured and selected by NIPSCO's Risk Model (Substation Transformers, Substation Breakers, and Circuits), , an Asset Register for Non-Risk Based Projects (Confidential Appendix B) used to identify and prioritize the Deliverability and Condition Based Projects, 2021 Project Estimates (Confidential Appendix C), and 2022 Project Estimates (Confidential Appendix D). NIPSCO is requesting

[3] As defined in Ind. Code § 8-1-39-2.

approval for the total annual projected costs, including a portion for targeted economic development projects (when applicable),[4] for Years 1 through 6. The Plan is comprised of four main segments: (1) investments that target replacement of aging assets (Aging Infrastructure), (2) investments intended to maintain the capability of NIPSCO's electric system to deliver power to customers when they need it (System Deliverability), (3) investments for modernization of NIPSCO's electric system to deliver safe and reliable service (Grid Modernization), including installation of advanced metering infrastructure ("AMI"),[5] and (4) eligible economic development projects in the future (Economic Development). Witness Vamos explains all of the eligible transmission, distribution, and storage system investments included in the Plan in more detail and sponsors the 2021-2026 Electric Plan as Confidential Attachment 2-A.

Q13. Is there any information that NIPSCO currently provides in its Electric Plan 1 that is not included in the 2021-2026 Electric Plan?

A13. Yes. The only changes from the information that NIPSCO currently provides in its Electric Plan 1 is that NIPSCO does not intend to continue to identify the number of miles, breakers, or units for certain projects as is currently provided in

[4] NIPSCO's Plan does not currently include any Targeted Economic Development projects.

[5] The AMI investments are discussed by Witnesses Holtz and Kiergan.

support of Electric Plan 1 in the Project Detail pages.[6] Since Confidential Appendix B to the Plan shows the total number of miles, breakers, and units, NIPSCO does not intend to provide that same information in the 2021-2026 Electric Plan. Based on the nature of how specific projects are selected and are all ranked using independent assessments, NIPSCO also does not intend to continue to include the asset registers for Wood Pole Life Extensions and Steel Structure Life Extensions in its Asset Register for Deliverability and Condition Based Projects (Confidential Appendix B to the Plan). Other than those changes, NIPSCO has not made any other changes to the information that was provided in its Electric Plan 1 (in Cause No. 44733).

Q14. Does NIPSCO's case-in-chief include all of the evidence and information necessary for the Commission to make the required findings to approve the 2021-2026 Electric Plan?

A14. Yes.

PUBLIC INTEREST

Q15. Does the public convenience and necessity require or will it require the eligible

[6] *See* Confidential Exhibit Electric Plan Update-8, Cause No. 44733-TDSIC-8, Pages 3 through 24 (Columns I and J).

improvements included in the 2021-2026 Electric Plan?

A15. Yes. There is a reasonable and apparent need for the Plan. The eligible improvements included in the 2021-2026 Electric Plan will serve the public convenience and necessity in various ways. As further addressed by Witness Vamos, NIPSCO's evidence demonstrates the estimated costs of the eligible improvements included in the Plan are justified by incremental benefits attributable to the Plan.

NIPSCO seeks relief pursuant to the TDSIC Statute. NIPSCO's 2021-2026 Electric Plan follows the requirements of the statute and achieves the legislative intent of making new and replacement transmission and distribution investments for the purpose of safety, reliability, system modernization and economic development. This is consistent with public policy and serves the public interest.

The Aging Infrastructure segment included in the 2021-2026 Electric Plan is essential to the continued safety of NIPSCO's employees and customers and reliability of NIPSCO's electric transmission and distribution systems. As more fully described by Witness Vamos, the Aging Infrastructure segments target replacement of aging assets based upon the condition of these facilities. To continue serving customers safely and reliably, while also complying with

applicable laws, the public convenience and necessity require that the assets identified in the 2021-2026 Electric Plan be replaced. The public's reliance on electricity is linked directly with quality of life, economic enhancement and overall public safety. NIPSCO takes its role seriously in serving its customers safely and reliably, and this includes protecting customers and employees from potential injury, property damage and sustained electrical outages associated with the operation of its electric transmission and distribution systems.

The System Deliverability segment included in the 2021-2026 Electric Plan is essential in protecting the integrity, safety, and reliable operation of the system – not only for NIPSCO's customers, but also for the bulk electric system as a whole. These investments provide for the public convenience and necessity at a much broader level than just NIPSCO's service territory by reaching not only its own customers but also all utilities and customers in the Eastern Interconnection. NIPSCO must do its part to help secure its portion of the bulk electric system.

The Grid Modernization segment included in the 2021-2026 Electric Plan is essential to enhance customer service, improve reliability, and enable new technologies to improve NIPSCO's ability to meet customers' evolving operability expectations. As more fully described by Witness Holtz, 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. As described by Witness Vamos, the other projects included in the Grid Modernization segment will help NIPSCO modernize its system and better serve its customers, including during outage events.

For all these reasons, as well as those stated by Witnesses Vamos and Holtz, approval of the 2021-2026 Electric Plan is required and will be required for the public convenience and necessity.

BEST ESTIMATES

Q16. Are the estimated costs of the eligible improvements included in the 2021-2026 Electric Plan NIPSCO's best estimate?

A16. Yes. NIPSCO followed a rigorous project development, cost estimating and review process to provide its best estimate for each project included in the Plan. As Witness Vamos explains, NIPSCO utilized Sargent & Lundy to complete the modular cost estimates, followed by internal stakeholder reviews of those estimates. Sargent & Lundy also took an in-depth review of five large substation projects where walk downs were performed, site boundary surveys produced, a preliminary work scope identified, with conceptual layouts prepared for project execution, route reviews, and NIPSCO internal stakeholder reviews performed.

Cost data from recent projects and updated budgetary quotes from construction contractors were used as the basis for the estimates in most cases, with experience modifiers considered for site specific conditions. Small projects are generally based on parametric or unit price estimates that reflect a mix of contractor and internal labor resources similar to the allocation of work maintained during Electric Plan 1, and a review of routes and site conditions for many of the projects. For all projects, NIPSCO sought broad internal stakeholder input to assure comprehensive integrated work scopes were documented and validated through a formal review process. In addition, as further discussed by Witness Meece, NIPSCO's estimates for indirect costs and AFUDC are consistent with Generally Accepted Accounting Principles ("GAAP") and the Federal Energy Regulatory Commission ("FERC") Uniform System of Accounts for utilities.

INCREMENTAL BENEFITS

Q17. Are the estimated costs of the eligible improvements included in the 2021-2026 Electric Plan justified by incremental benefits attributable to the Plan?

A17. Yes. As described by Witnesses Vamos, the estimated costs of the eligible improvements included in the 2021-2026 Electric Plan are justified by the reasonably expected incremental benefits attributable to the Plan. The Plan effectively addresses safety, reliability, system modernization, and economic

development. It is essential in considering the incremental benefit of the Plan to recognize that continued safe, reliable service from the eligible investments in the Plan be compared against the potential for service deterioration that would occur if these investments were not made.

ECONOMIC DEVELOPMENT PROJECTS

Q18. What does the TDSIC Statute say about Economic Development Projects?

A18. Under Section 2 of the TDSIC Statute, "eligible transmission, distribution, and storage system improvements" means:

> new or replacement electric or gas transmission, distribution, or storage utility projects that: (1) a public utility undertakes for purposes of . . . economic development . . .; (2) were not included in the public utility's rate base in its most recent general rate case; and (3) either were: (A) described in the public utility's TDSIC plan and approved by the commission under section 10 of this chapter and authorized for TDSIC treatment; (B) described in the public utility's update to the public utility's TDSIC plan under section 9 of this chapter and authorized for TDSIC treatment by the commission; or (C) approved as a targeted economic development project under section 11 of this chapter.

Therefore, there are three general types of economic development projects: (a) those approved by the Commission as part of a utility's TDSIC plan; (b) those approved by the Commission as part of a utility's update to its TDSIC plan; and (c) targeted economic development projects as defined under Section 11.

Q19. Are any Economic Development Projects included in NIPSCO's 2021-2026

Electric Plan?

A19. No. Since NIPSCO did not identify any specific economic development projects in its Electric Plan 1, NIPSCO is not proposing a budget for the general category of Economic Development Projects in its 2021-2026 Electric Plan. Instead, if NIPSCO becomes aware of an economic development project that would be eligible for TDSIC recovery, NIPSCO proposes to add the economic development project during a Plan Update filing.[8]

Q20. Are you aware of any proposed Economic Development Projects that will be eligible for recovery through NIPSCO's 2021-2026 Electric Plan?

A20. At this time, I am not aware of any proposed Economic Development Projects that would be eligible for TDSIC recovery. NIPSCO supports economic development initiatives and the job creation that results from beneficial and successful efforts. NIPSCO continuously works with community partners to identify potential economic development opportunities.

In Electric Plan 1, NIPSCO agreed to inclusion of an Economic Development project for LaPorte County Kingsbury Industrial Park, with a stated commitment

[8] While there are no economic development projects with specificity at this time, this demonstrates the criticality of the Plan Update process in order to respond to any new emerging opportunity that cannot be identified at this time.

to invest as much as $3.5 million for distribution system and substation upgrades associated with such a project, once the necessary project plans have been finalized ("Kingsbury Project"). In its 2021-2026 Electric Plan, NIPSCO agrees to work with LaPorte County and support inclusion of the Kingsbury Project in a Plan Update filing. At the time inclusion of the project is proposed, sufficient evidence will be provided for stakeholders and the Commission to evaluate the merits of the Kingsbury Project and any necessary upgrades, make a finding that a best estimate has been provided, and determine that the estimated costs of the project are justified by the incremental benefits attributable to the project.

PLAN UPDATE PROCESS

Q21. How will NIPSCO update the 2021-2026 Electric Plan as required by the TDSIC Statute?

A21. In accordance with the TDSIC Statute, NIPSCO proposes to update its 2021-2026 Electric Plan annually, but in no event more frequently than once every six months. Each Plan Update will be supported by information on the actual costs incurred and an explanation in testimony of any increase greater than $100,000 and greater than 20% during the current year for projects. NIPSCO will provide an updated (1) Asset Register for Risk Based Projects (Confidential Appendix A to the Plan) and (2) Asset Register for Non-Risk Based Projects (Confidential

Appendix B to the Plan), as new relevant information becomes available during the Plan update process. Witness Vamos provides additional detail relating to the information that will be provided to support the Plan Update.

Q22. What changes is NIPSCO proposing to what is currently provided in its updates to Electric Plan 1?

A22. The changes to the information NIPSCO is including *in this filing* are discussed above. NIPSCO is also proposing two changes to what is currently provided *in its updates* to Electric Plan 1. First, in updates to Electric Plan 1, NIPSCO includes four pages comparing the approved plan to the updated plan, including the related variances. *See* Electric Plan 1, Plan Update-8, Pages 26 through 29. Since similar comparisons are already included elsewhere in the updated plan, NIPSCO does not intend to provide those four pages in its updates to the 2021-2026 Electric Plan.

Second, in updates to Electric Plan 1, projects with cost variances greater than $30,000 or 15%, whichever is greater, are supported by a project change request ("PCR") form. *See* Electric Plan 1, Plan Update-8, Confidential Appendices 3.1 and 3.2. Instead, NIPSCO is committing to provide PCRs and testimonial explanations to support projects with cost variances greater than $100,000 and 20%.

STATUTORY COMPLIANCE

Q23. Ind. Code § 8-1-39-9(e) requires "[a] public utility that implements a TDSIC under [the TDSIC Statute] shall, before the expiration of the public utility's approved TDSIC plan, petition the commission for review and approval of the public utility's basic rates and charges with respect to the same type of utility service." Will NIPSCO comply with this requirement for the 2021-2026 Electric Plan?

A23. Yes.

Q24. Are all of the projects included in NIPSCO's 2021-2026 Electric Plan undertaken for purposes of safety, reliability, grid modernization, or economic development?

A24. Yes.

Q25. Are any of the projects included in the 2021-2026 Electric Plan included in NIPSCO's current base rates?

A25. No.

Q26. Does the 2021-2026 Electric Plan provide the best estimate of the cost of the eligible improvements?

A26. Yes. This is described in greater detail by Witness Vamos and in the 2021-2026

Investment Plan Cost Analysis (Confidential Attachment 2-C).

Q27. Does the public convenience and necessity require or will require the eligible improvements included in the 2021-2026 Electric Plan?

A27. Yes. The eligible improvements included in the 2021-2026 Investment Plan are required or will be required to maintain the safety, integrity, and reliability of NIPSCO's transmission and distribution systems consistent with the public convenience and necessity, as discussed above.

Q28. Are the estimated costs of the eligible transmission and distribution system improvements included in the 2021-2026 Electric Plan justified by incremental benefits attributable to the Plan?

A28. Yes. This is described in greater detail above and in the Long-Term Investment Plan (Confidential Attachment 2-B) and in Witness Vamos' testimony.

Q29. Is NIPSCO's 2021-2026 Electric Plan reasonable?

A29. Yes. As demonstrated by the evidence provided in NIPSCO's case-in-chief, the 2021-2026 Electric Plan is reasonable and should be approved by the Commission.

RATEMAKING

Q30. Is NIPSCO proposing any changes to the way it recovers the TDSIC costs in this filing?

A30. Yes. As discussed by Witness Meece, NIPSCO is proposing to include the recovery of operation and maintenance expenses incurred with respect to eligible transmission and distribution system improvements through its TDSIC. This request is consistent with the definition of "TDSIC costs" in section 7(2) of the TDSIC Statute.

STAKEHOLDER PROCESS

Q31. Please explain NIPSCO's stakeholder outreach efforts related to the 2021-2026 Electric Plan.

A31. Consistent with NIPSCO's commitment to working together with its stakeholders on regulatory solutions, NIPSCO reached out to its stakeholders about its plans to file the 2021-2026 Electric Plan. As a policy, NIPSCO makes the effort to communicate with its stakeholders before making major regulatory filings with the Commission. NIPSCO's stakeholder process focuses on educating its stakeholders on its plans and requesting their feedback.

NIPSCO met with the Indiana Office of Utility Consumer Counselor, NIPSCO Industrial Group, Citizens Action Coalition of Indiana, Inc., Indiana Municipal Utilities Group, and Indiana Distributed Energy Alliance on April 26, 2021 to preview NIPSCO's filing including the amount and types of investments and subsequently provided a draft of the 2021-2026 Electric Plan. NIPSCO also met

with some of the Commissioners and members of the Commission Staff on April 29, 2021 to preview NIPSCO's filing including the amount and types of investments. The presentation provided for those meetings is attached as Attachment 1-B.

During the external stakeholder meetings, NIPSCO requested feedback to understand their positions, identify areas of confusion or misunderstanding, and make adjustments to the extent possible to NIPSCO's overall approach to better align with its stakeholders. The results of this ongoing process are reflected in NIPSCO's 2021-2026 Electric Plan.

PROPOSED TARIFF CHANGES

Q32. Once the 2021-2026 Electric Plan is approved, will any changes be required to NIPSCO's Electric Service Tariff?

A32. Yes. As Witness Holtz discusses, some customers may, for various reasons, have concerns about the installation of an AMI meter on their premises. As it does for its Automated Meter Reading meters, NIPSCO will continue to allow customers to "opt out" of installation of an AMI meter if they so choose. NIPSCO anticipates that revisions will be necessary to include an opt-out charge in Rule 15 – Miscellaneous and Non-Recurring Charges. Since NIPSCO anticipates the initial implementation of 3,000 meters will not occur until 2023, in this filing NIPSCO is

proposing to revise its Tariff after a final Order is issued in this Cause approving the AMI Project and will do so through a 30-day filing. NIPSCO will work with all parties to this proceeding in developing the required Tariff modifications.

OTHER WITNESSES

Q33. Please introduce the other witnesses providing testimony in this filing.

A33. Charles A. Vamos, Director, Electric T&D Engineering (1) provides a summary of the 2021-2026 Electric Plan, (2) explains how NIPSCO developed its 2021-2026 Electric Plan, (3) explains the reduction of risks after executing Electric Plan 1, (4) explains the proposed plan update process, (5) explains the cost estimates associated with the 2021-2026 Electric Plan, (6) discusses contingency as a component of estimating, (7) explains the various components of projects included in the 2021-2026 Electric Plan, (8) discusses NIPSCO's proposed execution of the 2021-2026 Electric Plan, and (9) explains why the 2021-2026 Electric Plan constitutes eligible transmission, distribution, and storage system improvements, including the expected benefits from certain projects.

Matthew G. Holtz, Managing Director of Transmission in the Electric Operations Department for NIPSCO, supports the AMI Project included in NIPSCO's 2021-2026 Electric Plan.

Christopher Kiergan, Senior Manager in the Energy and Utilities practice of West Monroe Partners, LLC, describes the general process in developing the comprehensive cost-benefit analysis, explains the structure of the cost-benefit analysis, highlights the cost and benefit inputs and other information provided to West Monroe by NIPSCO, and supports and explains certain NIPSCO customer, and societal benefits calculated that are associated with the AMI Project. He also summarizes the results of the cost-benefit analysis and provides relevant industry perspective and context regarding the AMI Project.

Erin K. Meece, Lead Regulatory Analyst for NiSource Corporate Services Company, explains (1) NIPSCO's proposed accounting and ratemaking treatment to be used to record and recover costs associated with NIPSCO's 2021-2026 Electric Plan, including the recovery of operations and maintenance expenses, (2) indirect capital and its treatment in the Plan, (3) an assessment of the impact on retail revenue from the Plan, and (4) the process to be used for allocating approved costs associated with the 2021-2026 Electric Plan.

Q34. Does this conclude your prefiled direct testimony?

A34. Yes.

VERIFICATION

I, Alison M. Becker, Manager of Regulatory Policy for 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.

Dated: September 30, 2021

Attachment 1-A

[Verified Petition – Not duplicated herein]

NIPSCO
A NiSource Company

NIPSCO Electric TDSIC 2021-2026 Plan

NiSource

April 26, 2021

Safety Moment – Safety Doesn't Stop at the Workplace

Safety at Home

- According to the National Safety Council, 25 million preventable injuries occur in homes annually.
- #1 cause is falls from ladders. Approximately 9 million ER injures are due to falls.
- #2 cause is cuts.
- #3 is eye injuries.
- #4 cause is hit by fallen debris.
- #5 is poisoning.

Outline - NIPSCO Electric TDSIC 2021-2026 Plan

- Purpose for an Updated Plan
- Level of Investment
- Investments in the TDSIC 2021-2026 Plan
- Aging Infrastructure – Purpose & Risk Modeling
- Deliverability – Purpose & Overview
- Grid Modernization – Purpose & Overview
- Ratemaking Considerations
- Questions

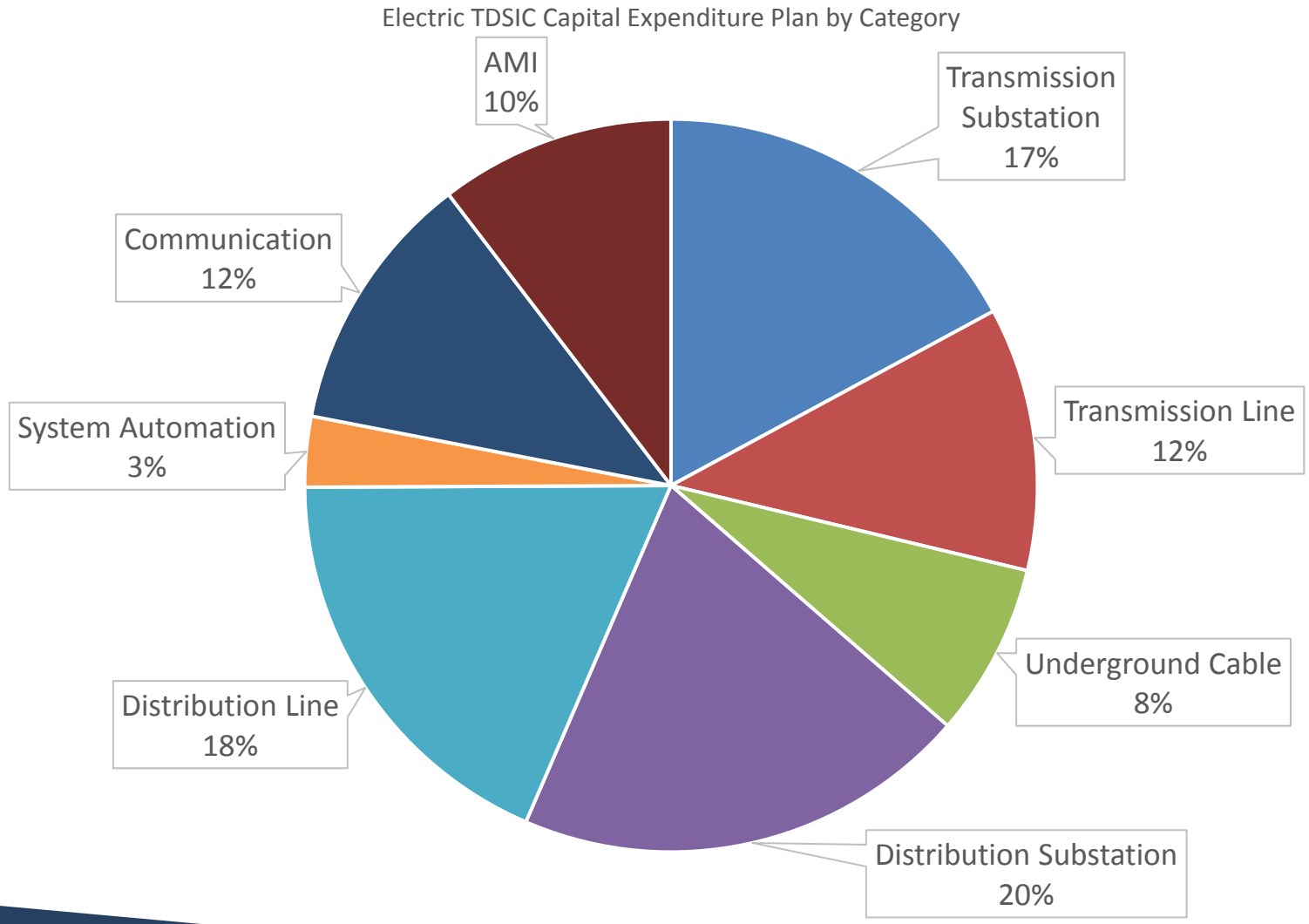
Purpose for an Updated Plan - TDSIC 2021-2026 Plan

- NIPSCO has substantially completed the current Electric TDSIC 2016 – 2022 Plan
- Continue to improve reliability and resiliency performance for our customers
- Continue to meet the current and future load requirements of our customers
- Modernize our system to enhance the overall customer experience, and ensure we are positioned to provide the service our customers expect

Relentless champions of safety, service, and comfort.

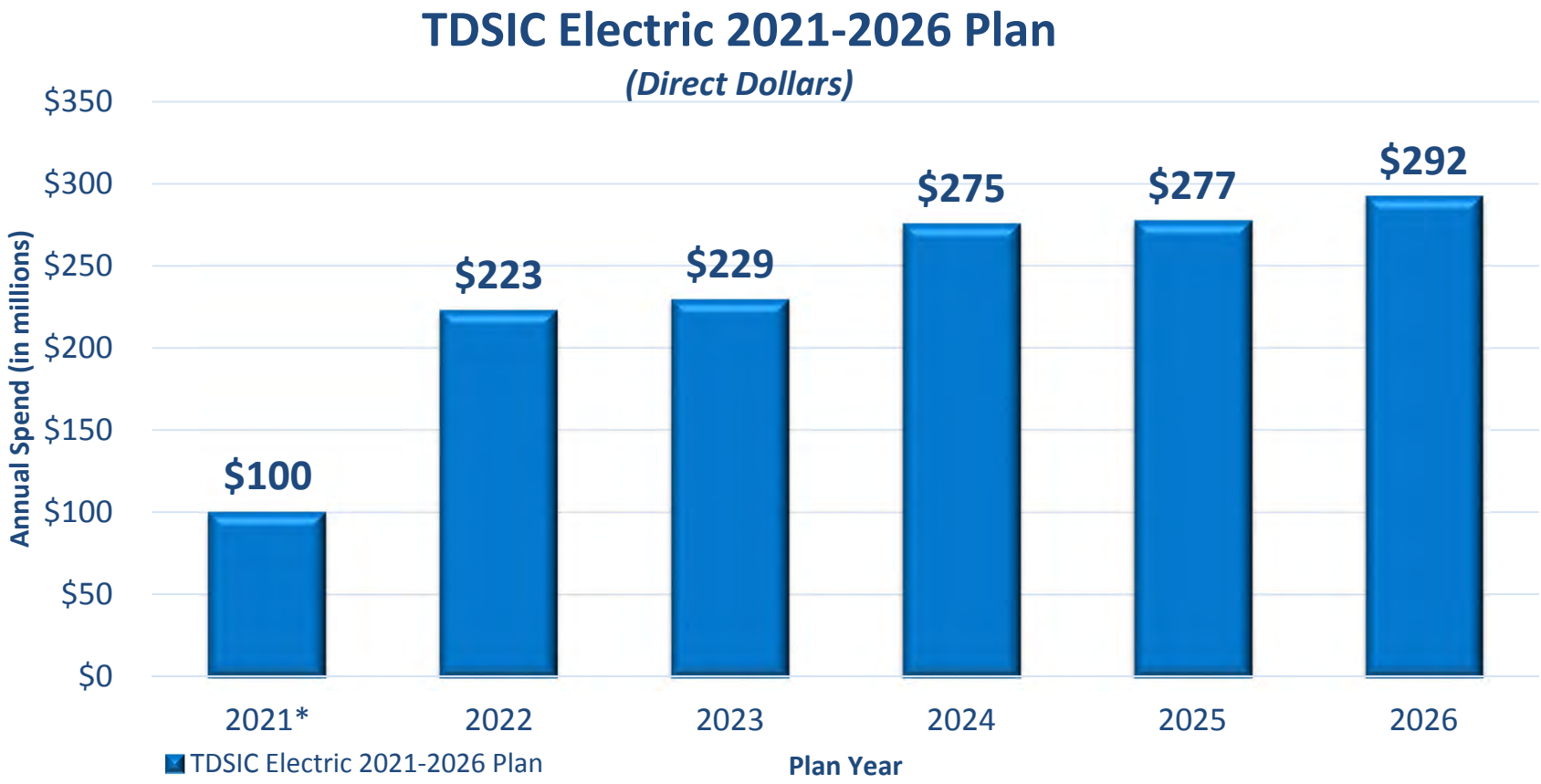
Level of Investment by Category - TDSIC 2021-2026 Plan

Breakdown of $1.4B Plan



Level of Investment - TDSIC 2021-2026 Plan

- **$1.4B direct dollar spend over 6 years**



*2021 Partial Year from June - December

Investments in the TDSIC 2021-2026 Plan

Aging Infrastructure

- Proactive replacement of aged equipment across T&D systems
- Reduction of risk of equipment failure

Grid Modernization

- Higher system reliability & resiliency
- Improved customer experience
- Improved maintenance and outage response through enhanced monitoring
- Safer system operation through modern protective devices and systems

Deliverability

- Ability to meet current and future load and reliability demands

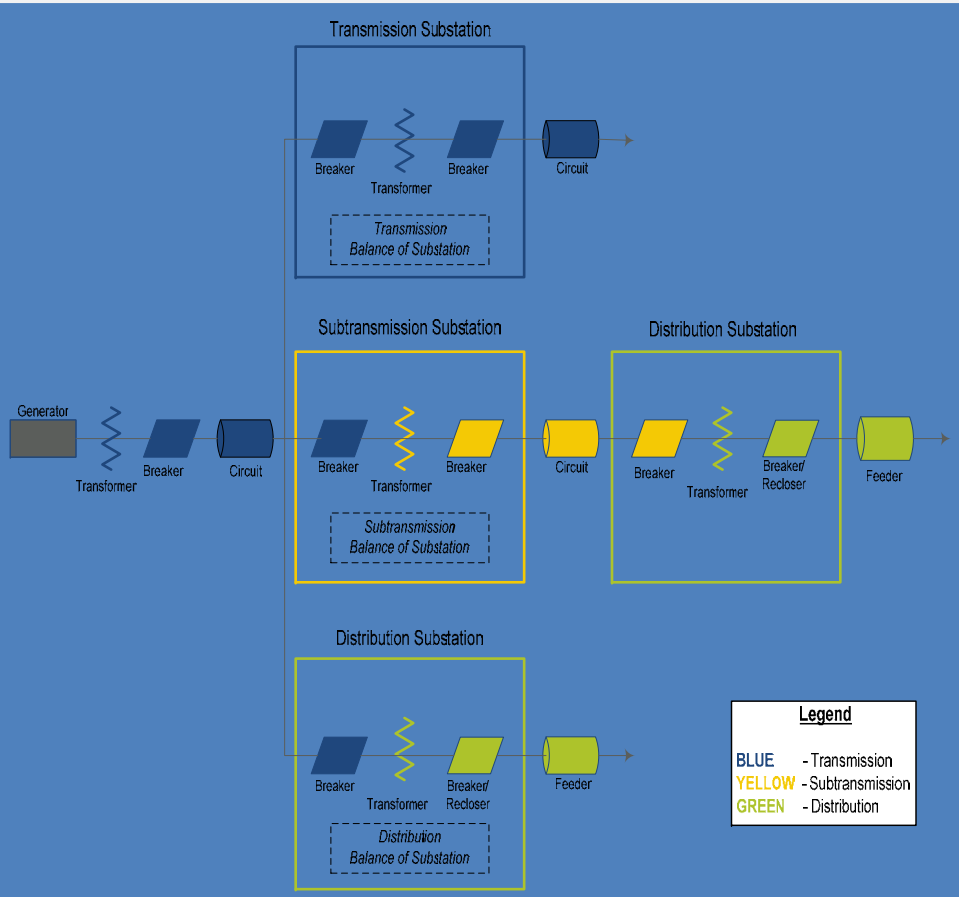
Economic Development

- Direct and indirect creation of jobs

Aging Infrastructure

Major T&D Assets - Aging Infrastructure

Purpose: As NIPSCO's system ages, the potential of large scale, impactful asset failures increases. Reliability & Resiliency performance can be impacted significantly when critical T&D assets fail due to deterioration. Substation Transformers, Substation Breakers, and Circuits are the three categories that are most critical to the performance of NIPSCO's electric system.



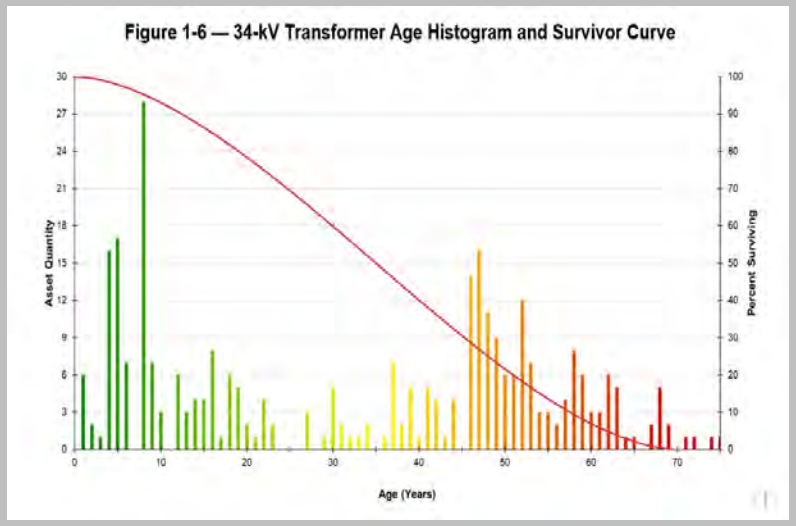
Estimated Major Asset Upgrades and Replacements

Asset Class	System Voltage	Total
BREAKER	138kV	64
BREAKER	345kV	5
BREAKER	34kV	39
BREAKER	69kV	66
BREAKER - REC	12kV	8
BREAKER - SWGR	12kV	181
BREAKER - TSB	12kV	2
TRANSFORMER	138/12kV	2
TRANSFORMER	138/34kV	5
TRANSFORMER	138/69kV	9
TRANSFORMER	34/12kV	10
TRANSFORMER	345/138kV	2
TRANSFORMER	69/12kV	41

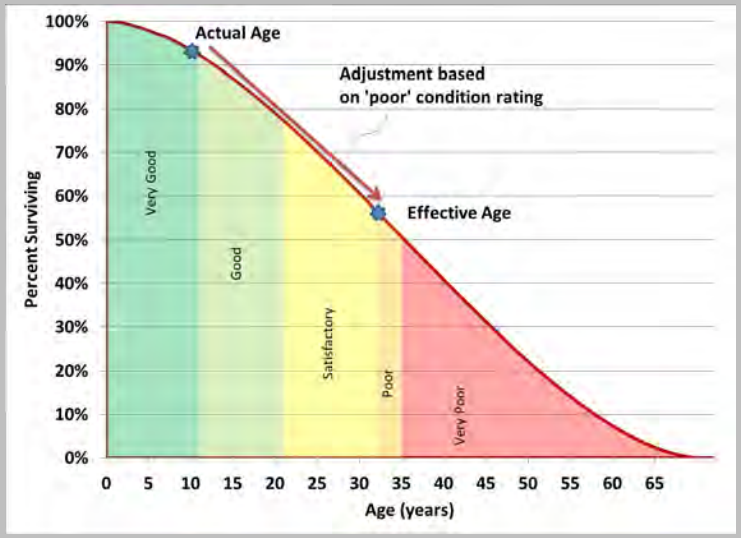
Asset Class	System Voltage	Miles
CIRCUIT REBUILD	138kV	2
CIRCUIT REBUILD	69kV	266
CIRCUIT REBUILD	34kV	22
CIRCUIT REBUILD	12kV	249
CIRCUIT REBUILD	12kV UG	258

Major T&D Asset Project Selection & Prioritization – Aging Infrastructure

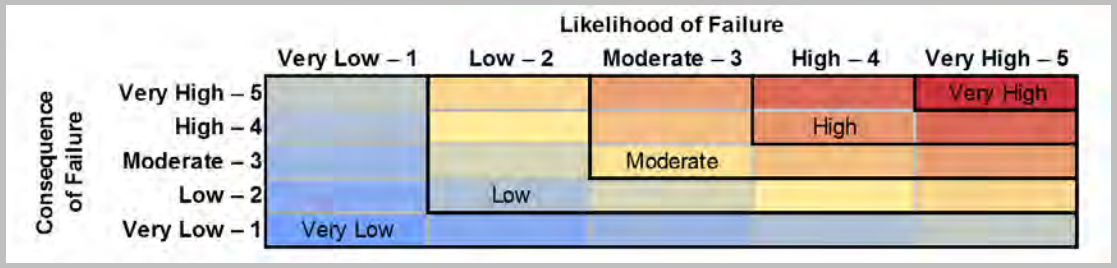
Asset Demographics & Inspection



Asset Condition Assessment & Eff. Age

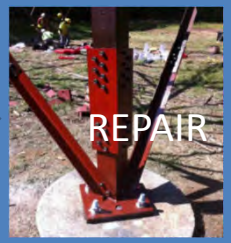


Risk Scoring & Prioritization using Criticality & Likelihood of Failure



Minor Assets, Including Inspect & Mitigate - Aging Infrastructure

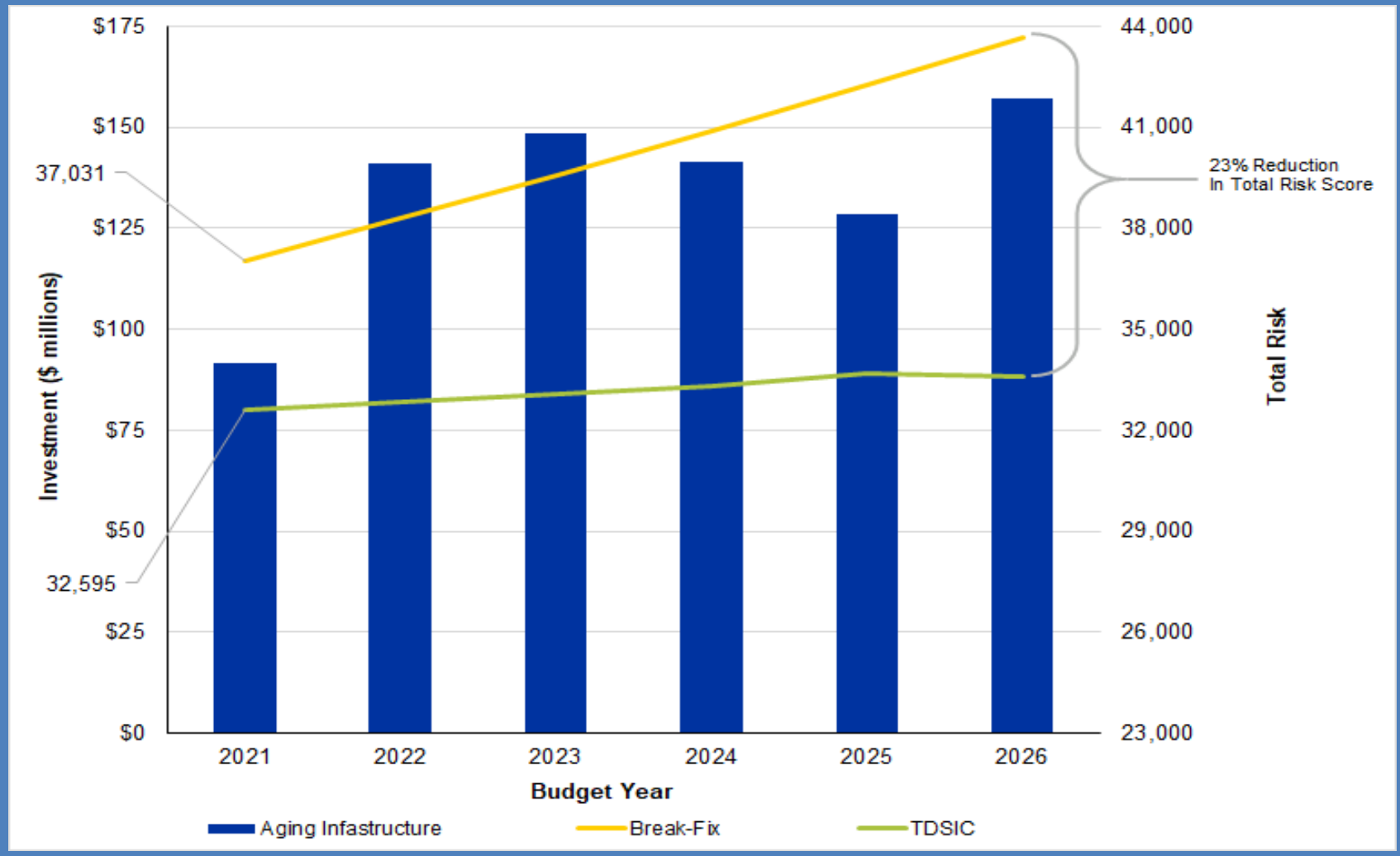
Purpose: NIPSCO's electric system consists of many smaller components that are still critical to the operation, safety, and performance of the electric grid. Many of these assets have met or are approaching the end of their useful life. Most of the assets identified within this category go through or will go through an inspect and mitigate process that includes mitigation, life extension, or replacement.



Estimated Minor Asset Upgrades and Replacements

Annunciator Projects - Transmission	9
Battery & Charger Equipment Projects - Distribution	63
Battery & Charger Equipment Projects - Transmission	41
Substation Feeder Cable Projects - Distribution	9
Switches to Clear Incoming Lines Projects - Distribution	55
Line Switch Projects - Distribution	63
Line Switch Projects - Transmission	37
Potential Transformer Projects - Distribution	3
Potential Transformer Projects - Transmission	35
Substation Switch Projects - Distribution	11
LED Conversions	11353

Risk Reduction and Spend Over the Plan Horizon - Aging Infrastructure



Deliverability

Deliverability – Meeting Current and Future Loads

Purpose: These projects increase the capacity of the NIPSCO electric system. The proposed T&D system deliverability projects preserve NIPSCO's ability to service expected peak loads through system capacity additions where needed. These projects are consistent with NIPSCO's adherence to the NERC Reliability Standards and NIPSCO's standards for customer reliability.

Examples of System Needs Addressed

Nappanee service area most recent 2-year period high growth rates:

- **Nappanee Sub – annual rate of 26%**
- **Northwood Sub – annual rate of 9%**

Existing line overloads and reliability complaints will be further exacerbated with continued load growth.

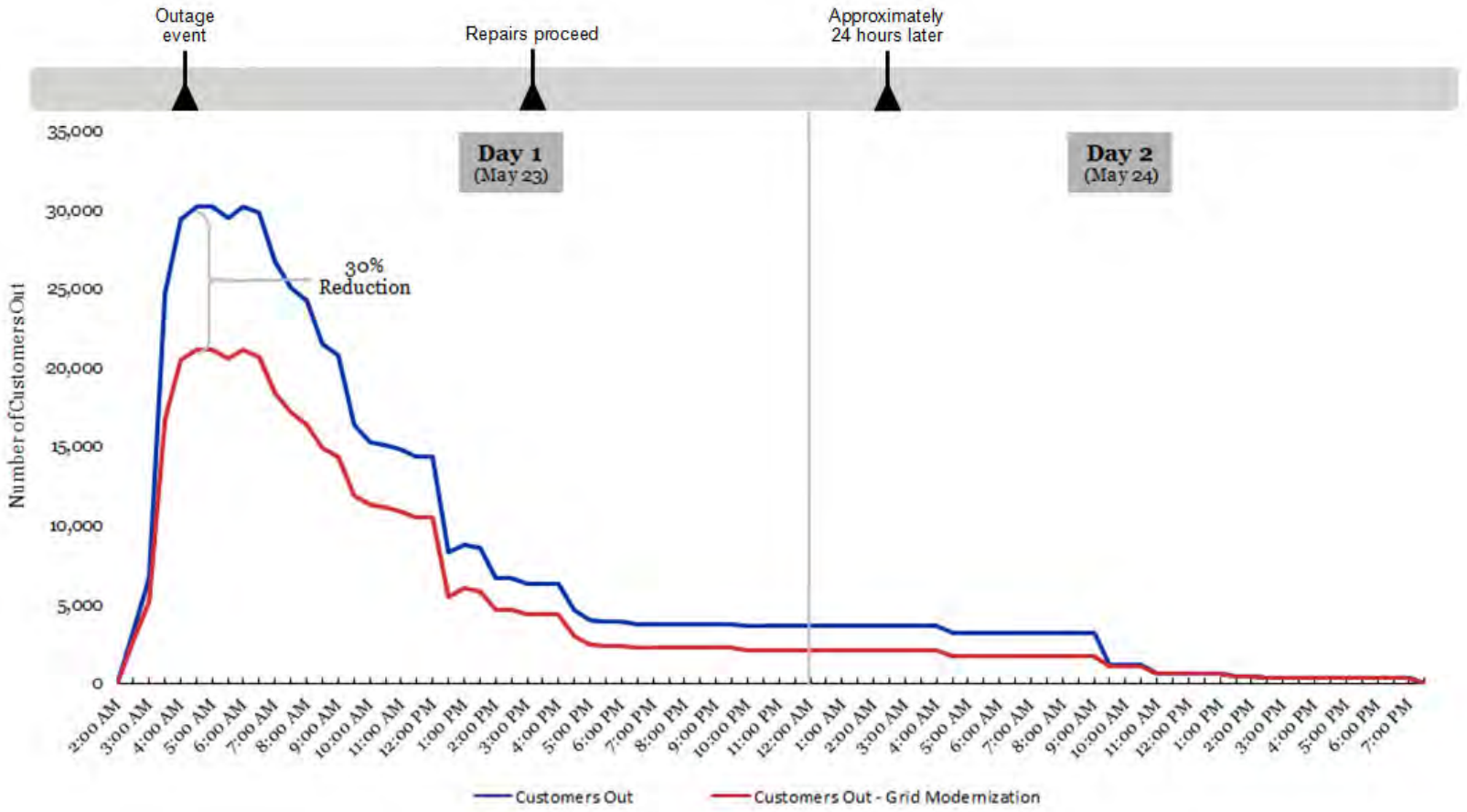
- **Northwood Sub outage due to loss of 69 kV source – Up to 145% overload on Nappanee Circuit 12-261**
- **Northwood Circuit 12-744 outage due to line failure – Up to 145% overload on Nappanee Circuit 12-261**
- **Nappanee Circuit 12-261 outage due to line failure - 109% overload on Northwood Circuit 12-744**

Estimated Deliverability Projects

Number of Assets by Category	
New/Rebuild Distribution Substations	10
New/Rebuild Transmission Substations	6
Transformer Upgrades/Additions	26
Breaker Upgrades/Additions	12

Grid Modernization

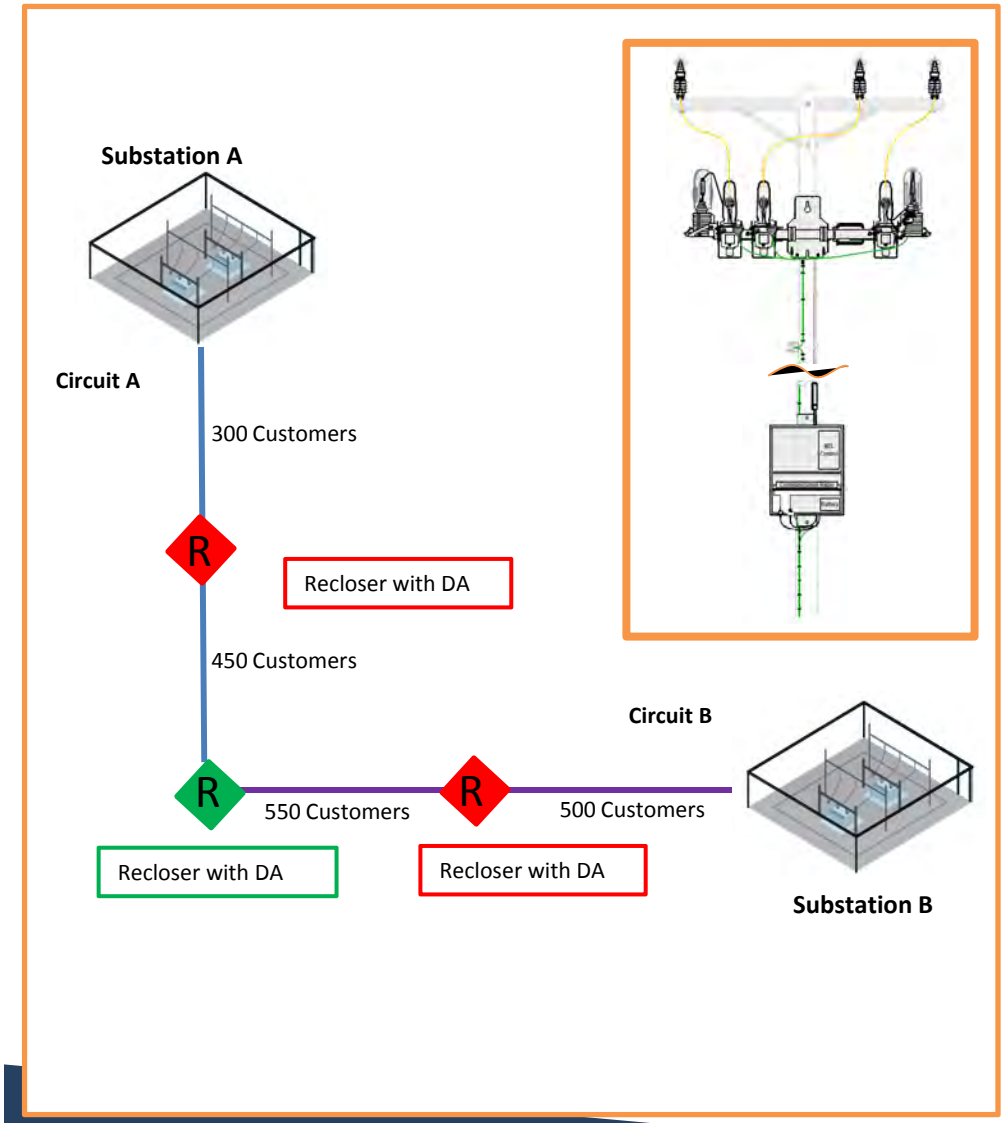
Storm Event prior to Grid Modernization (current condition = blue line)



Grid Modernization

Distribution and Substation Automation

Distribution Automation - Grid Modernization



Investment components

- ***Electronic Reclosers:*** Deploy 700+ Reclosers on 12kV system.
- Deployment of Reclosers will enable NIPSCO to "sectionalize" customers.
- Open/close function will allow NIPSCO to isolate faults and reconfigure faulted segments of the distribution feeder, then restore customers connected to line segments without a fault.
- Target is 500 customers per segment and providing alternative sourcing for critical customers.

*Green Switches are OPEN, Red Switches are CLOSED

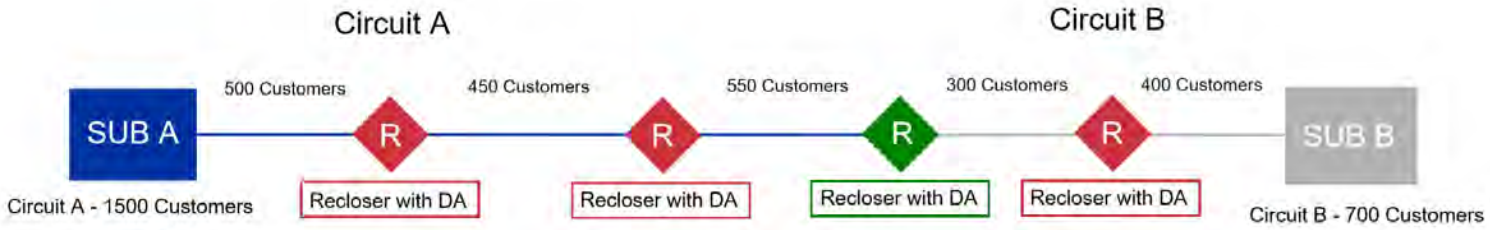
Substation Automation - Grid Modernization

Investment components

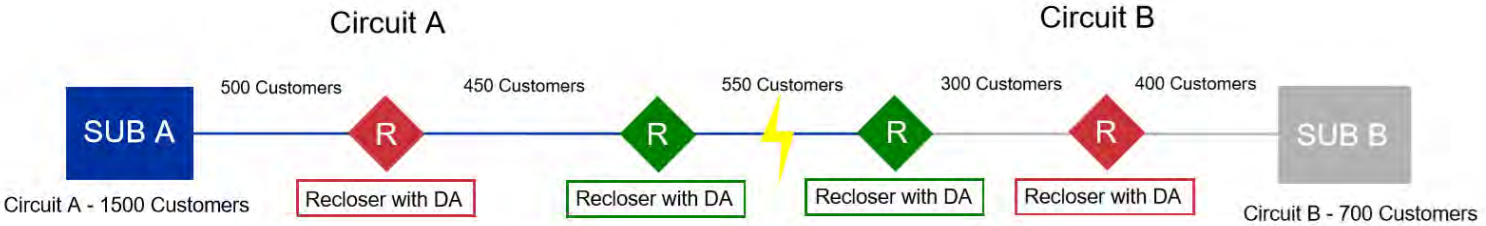
- ***Breaker Relays:*** Deploy microprocessor controlled relays at the breaker to better sectionalize circuits and collect breaker health data.
- ***Transformer Monitoring:*** Monitors that will collect data on temperature, oil analysis, and allow for smart cooling with fans.
- ***Battery Monitoring:*** Modern monitors at the transmission substations to collect data, analysis, and alarm history.
- ***D-SCADA, Distribution Network Automation (DNA):*** Telemetry will be brought back in order to view system status and pinpoint interruptions.

Distribution and Substation Automation - Grid Modernization

Circuit Configuration – No Fault



Circuit Configuration – Faulted



***Substation Breakers stays closed and energized.**

***Green Switches are OPEN, Red Switches are CLOSED**

Grid Modernization

Communication

Communication - Grid Modernization

Communication is the Key

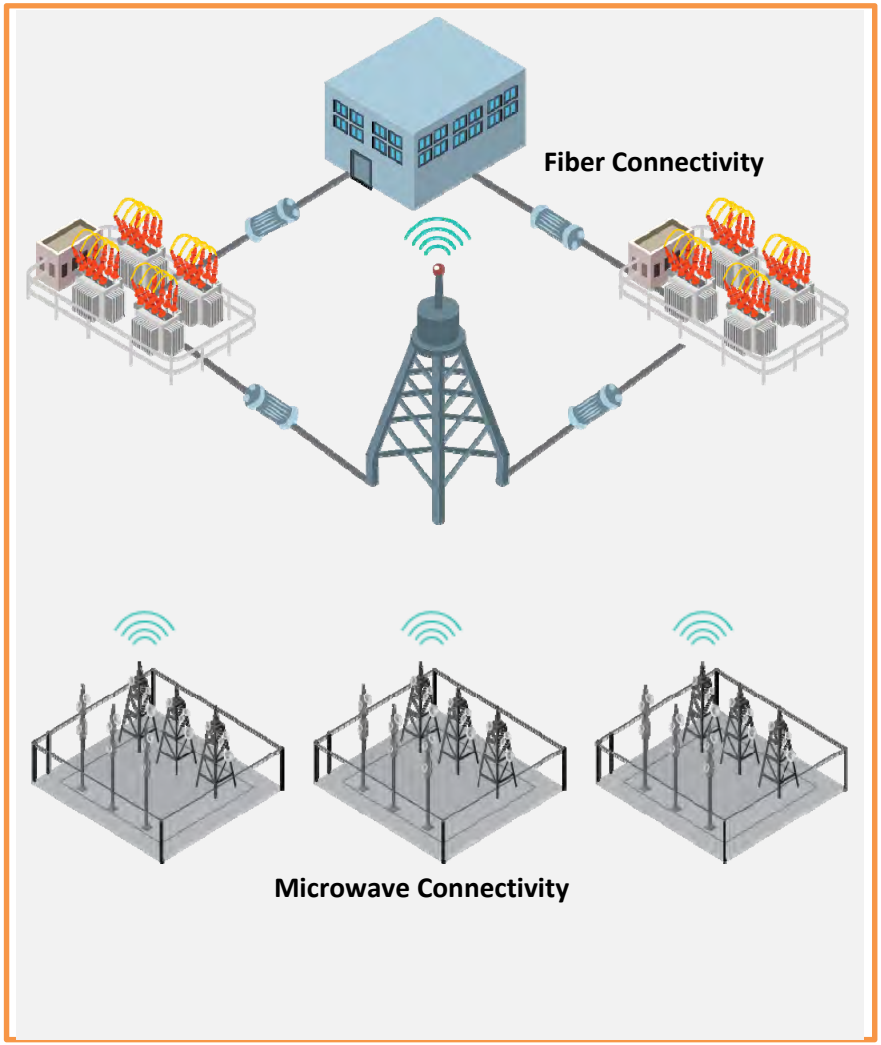
Why Now?

- Aging Communication System
  - Legacy Time-Division Multiplexed Network originated in 2006 and is end-of-life
  - Microwave Radios reaching end-of-life (originating from 1996 - 2008)
  - Microwave Towers on average 35 years old (a few 50+ years old)
- Limited Substation Visibility: ~30% of Dist. Subs
- Operating a modern grid and as a modern utility is impossible without upgrades

Outcome

- Increased Reliability & Resiliency With Improved SAIDI and CAIDI Metrics
- High Capacity Scalable IP-based Technology for Future Growth Integration
- 100% Substation Visibility
  - Reduces Risk: Less Drive Time when Investigating Outages

Communication Infrastructure – Grid Modernization



Investment Components

- ***Fiber Optic lines****:* Fiber optic cables will be installed to replace aging ADSS lines, as well as to create continuous fiber runs, providing for high capacity communication.
- ***Microwave Towers:*** Provide high speed communication for relaying, SCADA, asset monitoring and metering. Replace or extend existing towers while installing new towers to create communication rings.
- ***Microwave Monopoles:*** Communication antennas placed at D-subs that collect and transmit data to operate and monitor substation assets, as well as route metering data.

Quantity of Investments

Years	Lattice Towers	Monopoles	Fiber (miles)
2021 - 2026	32	98	347

Grid Modernization

Advanced Metering Infrastructure

Advanced Metering Infrastructure (AMI) is central to NIPSCO's efforts to enable modern utility capabilities

Expected Grid Transformation Over the Next Decade

Proliferation of

Residential and Fleet EVs and Distribution-Level DERs

Driven by

- FERC Order 2222 and the aggregation of DERs into the MISO market
- MISO's positioning with respect to solar
- Utility coalitions to coordinate EV charging network efforts
- Increasing customer demand and manufacturer supply of EV models
- Biden Administration's infrastructure plan focused on "winning the EV market"

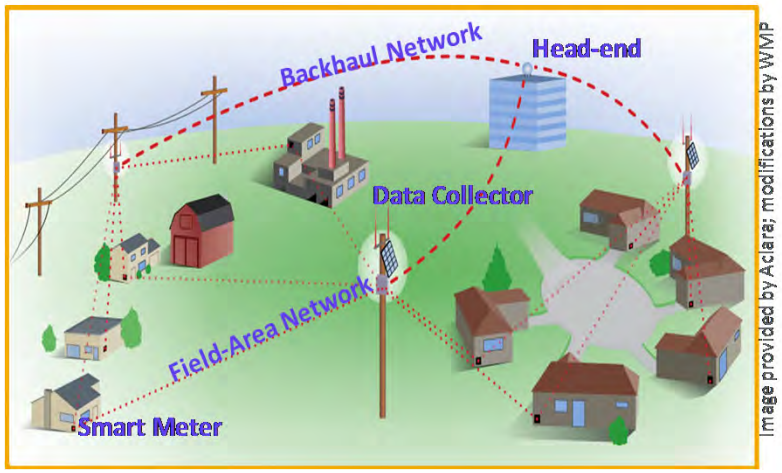
Capabilities Required

- Advanced metering capabilities (interval data, potential net metering) necessary for integration of EV charging and DERs into the distribution grid
- Improved forecasting of new supply assets and load patterns for integrated resource planning
- Data to understand impacts to and anticipate issues with distribution system as generation mix and loads evolve in order to maintain reliability
- Support for MISO requirements around metering data for settlement purposes and resources' operational capabilities that impact dispatch

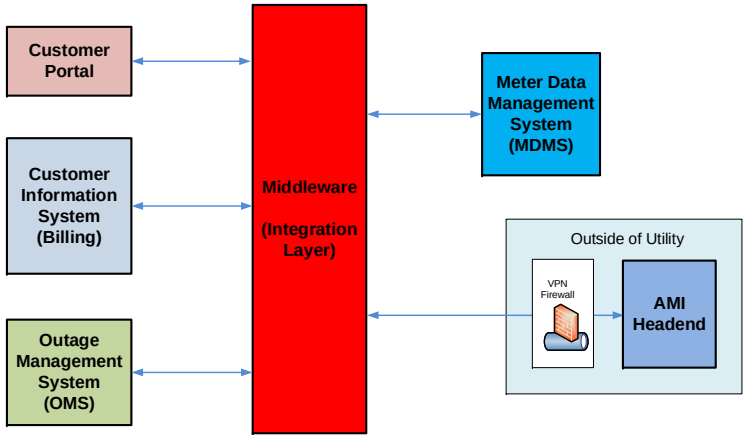
AMI Provides NIPSCO with these Capabilities

Deploying AMI requires investments in field assets, technology, and processes

Primary Field Assets



Illustrative Architecture Diagram



Investment Components

Field Assets

- ***Electric Meters****:* Measures electric consumption at site and transmits usage data, status, and events/alarms back to central repository; receives control inputs
- ***AMI Communications Network***
  - ***Field-Area Network****:* Radio communications between meters and data collectors
  - ***Data Collectors/Communication Nodes****:* Devices deployed throughout territory to transmit AMI meter usage data, status, and events/alarms, transmit control signals, and check status of meters
  - ***Communication Backhaul Network***: Transmits data from data collectors to the AMI Headend system

Technology

- ***AMI Headend System****:* Licensed software system to monitor and control meters and communications nodes
- ***Meter Data Management System****:* Central repository where data is correlated & supplied to OMS, CIS, and Customer Portal
- ***IT Integrations****:* Integrations between AMI Headend, MDMS, OMS, CIS, and Customer Portal

Processes

- ***People and Processes****:* Internal change management, business process redesign, and AMI Operations team to optimize processes and maximize AMI benefits delivered
- ***Customer Engagement****:* Communications shared iteratively before, during, and after installation to raise awareness and understanding and inform deployment

AMI will deliver considerable benefits across five key categories upon deployment

- Faster Outage Identification (Initial and Embedded)
- Meter Status Monitoring
- Tamper Detection
- Voltage and Power Quality Monitoring
- Unsafe Condition Sensing (Hot Socket)
- Reduced On-site Visits

- Usage Data for EV Loads
- Usage/Meter Data Regarding Customer-Sited DERs

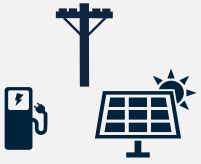
- Customer Usage Display
- Informed CSRs (On-Demand Reads, Meter Status, etc.)
- Improved Speed of Service Restoration
- Ease of Scheduling Turn-ons/Turn-offs
- Decreased Number of Required On-site Visits

- Remote Connect / Disconnect*
- Improved Outage Management
- Reduction in “No Trouble Founds”
- Automated and Remote Meter Reading
- Reduced Truck Rolls
- Expanded Load Profiling

- Reduced GHG Emissions
- Positive Economic Impact
- Jobs Creation

*NIPSCO is not requesting a waiver for door knocks for non-pay disconnects as part of this filing

AMI, as a foundational technology, enables many beneficial, follow-on programs, though each will require additional analysis to deploy

Benefits Category	Program or Functionality	Level of Additional Investment*	Complexity of Implementation*
Improved Operational Insights 	Vegetation Management through Analysis of Momentaries	◔	◔
	Targeted Power Quality Improvements via Voltage Analysis	◑	◔
	Enhanced Voltage Level Verification	◑	◔
	Interruption Trending Data Analysis	◑	◔
	Transformer Loading and Right-Sizing	◑	◔
Enhanced Customer Experience 	Programs for DER and EV Charging Integration	◑	◑
	Billing Programs (High Bill Alert, Bill Date Choice, Prepay)	◑	◔
	Advanced Rate Options (TOU, PTR, CPP, etc.)	◑	●
	Enhanced Demand Response/Energy Efficiency Programs	◑	◑
Advanced Distribution Management Technology 	Integrate DERs and EV Charging Into the Distribution Grid (Monitoring/Control), Including Load Capacity Forecasting	●	●
	IoT Solutions (Smart streetlights, Transformer monitoring)	◔	◔
	Dynamic Power Flow Analysis	◑	●
	Improved Connectivity Modeling	◑	●
	Open Neutral Analysis	◑	◑
	Incremental CVR/VVO through AMI Voltage Sensing	●	●
	Smart Inverters	◑	◑

Increasing → ◔ ◑ ●

* Level of investment and complexity are relative and estimated; detailed analysis required to quantify

Implementing AMI will begin with deploying MDMS and integrations in 2022-2023, followed by communications network and meters in 2024-2026

2021 Program Planning & Engagement

- Develop/Prepare AMI Regulatory Filing
- Conduct Post-Filing Regulatory Engagement (data requests, interrogatories, etc.
- Conduct AMI Pre-Planning, including developing Governance, Staffing/Resource, and Stakeholder engagement plans
- Develop Customer Engagement Plan
- Develop Data Security Plan

2022 Mobilization & Market Push

- Establish AMI Ops Organization
- Develop, issue, and evaluate RFPs for
  - MDMS
  - Comms Network Engineering & Hardware
  - AMI Meters
  - Comms Network Installation
  - AMI Meter install
- Begin MDMS design/ deployment
- Initiate design of deployment and operational processes

2023 Establish Systems & Install/Evaluate Initial Deployment

- Award Contracts for Meters/Comms Vendors, Installers, and Line Work Contractors
- Continue design & planning to support meter deployment and integration
- Complete deployment of MDMS and AMI Headend
- Integrate AMI-MDM, MDM-CIS, MDM-Portal, and AMI-OMS
- Conduct and evaluate Initial Deployment - 3,000 meters & associated comms

2024 Through 2026 Execute Full Deployment

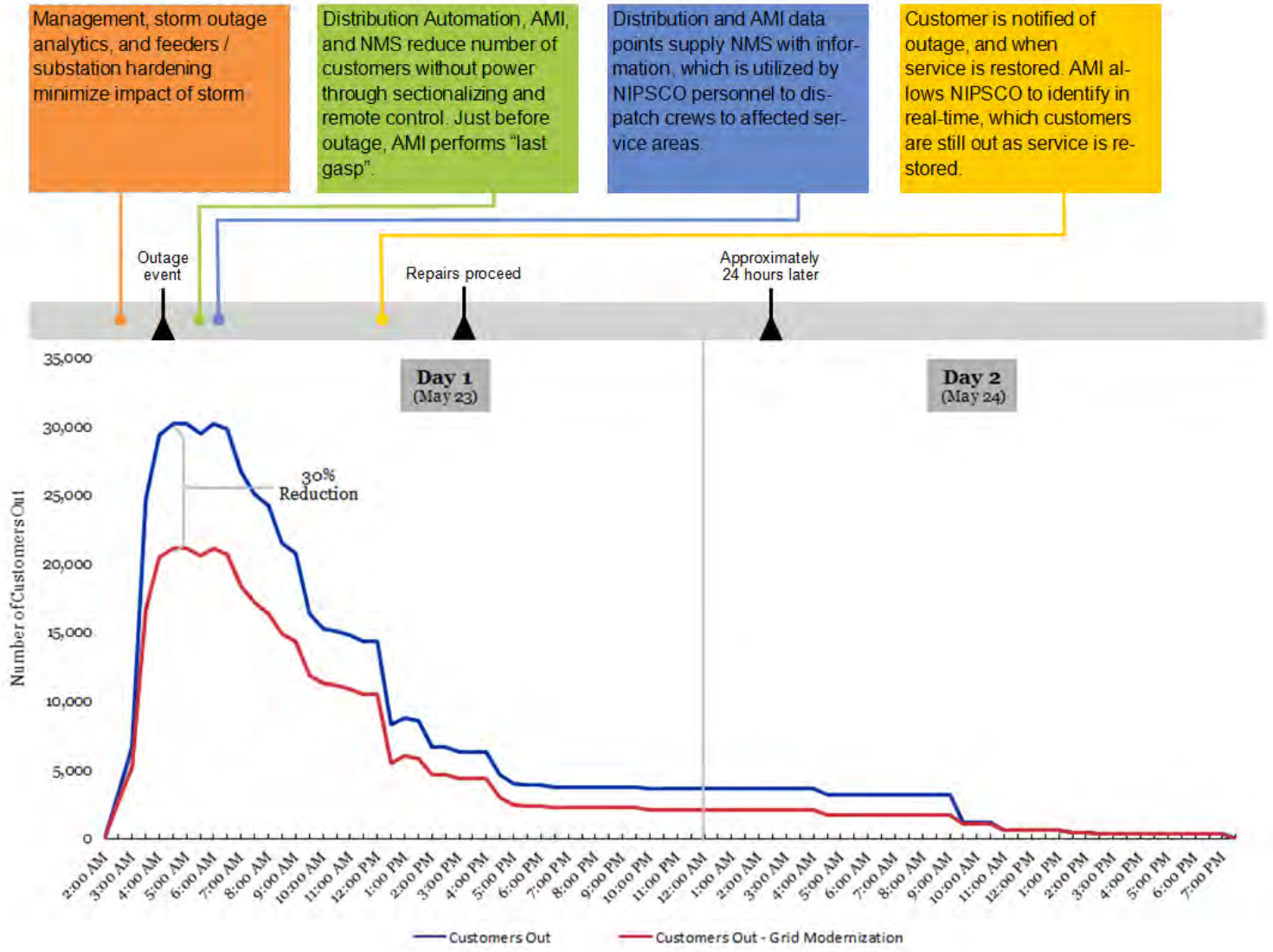
- Install & Optimize AMI Communications Network
- Conduct Full Deployment – Approx. 490,000+ AMI meters
- Execute AMI-OMS Integration Phases 1-4
- Optimize deployment processes and ongoing operational processes

Beyond 2026 Realize Benefits & Transform

- Realize benefits through increased safety/reliability, enhanced customer experience, and operational efficiencies
- Build off this foundation for further utility transformation
- Potential future projects could include:
  - Billing and advanced rate options
  - Analytics solutions
  - CVR/VVO
  - Transformer loading
  - DER/EV optimization

On-Going: Regulatory Engagement, Customer Engagement, Project Management, Stakeholder Communications, Training, Procurement of Materials, Reporting Deployment and Benefit Realization Metrics, etc.

Storm Event with Full Grid Modernization



Ratemaking Considerations

Ratemaking Considerations

Two changes will align NIPSCO's Gas and Electric TDSIC Plans

1) Depreciation and property tax expenses recovery will shift from historical period to forecasted period recovery.

- Aligns the recovery of these expenses with the period in which they are incurred.
- Any over-/under-collection compared to actual costs will be reconciled and included in future rates.
- Projected depreciation and property tax expense will be calculated on TDSIC plant in service as of the capital cut-off date.

2) Depreciation expense will now reflect a reduction associated with retired assets replaced as a part of TDSIC.

- Retirement rates will be developed using a three-year average by FERC account from the information available in NIPSCO's FERC Form 1.
- Retirement rates by FERC account will then be applied to the TDSIC investment by FERC account to estimate TDSIC retirements for which a credit will be applied.
- The credit is calculated by using retirement amount by FERC account times the associated depreciation rate.

NIPSCO will continue to utilize the current allocation factors as approved in Cause No. 45159, with any potential rate migrations to be addressed in a future electric base rate case proceeding.

Questions

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

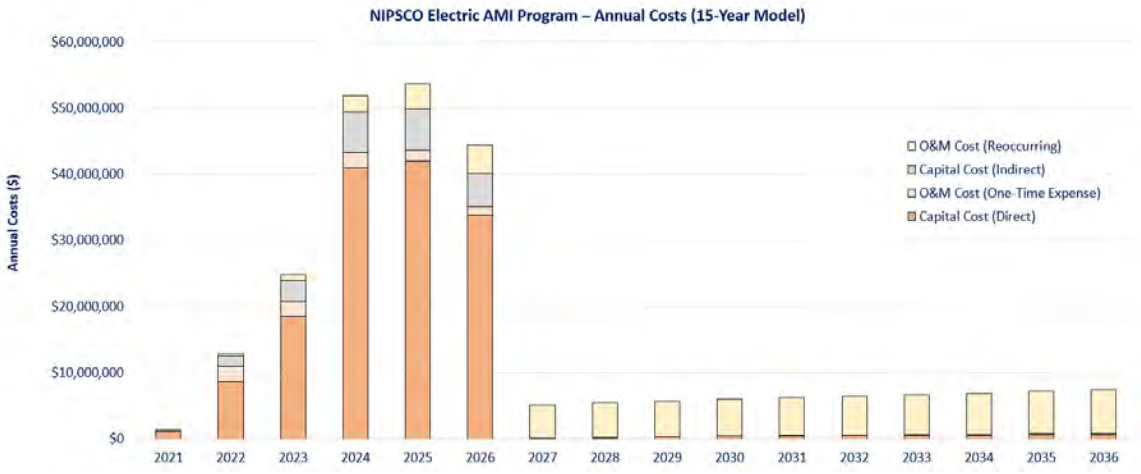
[2] As further discussed by NIPSCO Witness Kiergan, the Headend System is the software package that will enable NIPSCO to monitor and control both meters and communication assets.

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,

[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

[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

[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

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.

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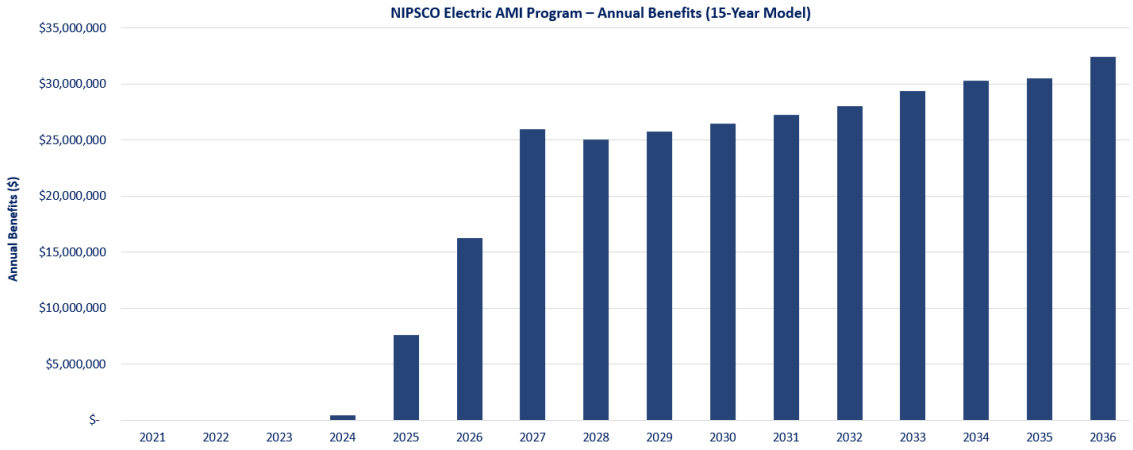
[15] NIPSCO Witness Meece further explains NIPSCO's request for recovery of O&M.

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

[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.

[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

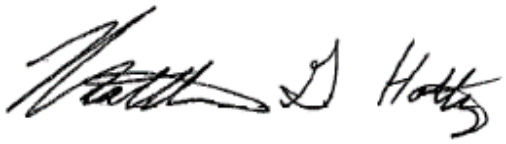
to NIPSCO's gas customers. Options being considered include both automatic and remote shut-off capabilities, focusing on shutting off a customer's gas service quickly in the event of a leak or an emergency at a customer's home or business. Technological improvements in this area are still underway with 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