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**VERIFIED DIRECT TESTIMONY OF ALISON M. BECKER**

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

2   A1. My name is Alison M. Becker. My business address is 150 W. Market Street, Suite  
3       600, Indianapolis, Indiana 46204. I am employed by Northern Indiana Public  
4       Service Company LLC ("NIPSCO" or the "Company") as Manager of Regulatory  
5       Policy.

6   **Q2. Please briefly describe your educational and business experience.**

7   A2. I graduated from the University of Evansville with a Bachelor of Arts degree with  
8       a double major in History and Political Science and a Masters of Business  
9       Administration from Valparaiso University and am a 2016 graduate of the Indiana  
10      University Robert H. McKinney School of Law. I was a Governor's Fellow from  
11      1997 to 1998 and then worked as a Budget Analyst for the Indiana State Budget  
12      Agency from 1998 to 2000. In 2000, I joined the Indiana Family and Social Services  
13      Administration as the Director of Fiscal Services for the Division of Disability,  
14      Aging and Rehabilitative Services and was promoted to the Director of  
15      Developmental Disabilities Services in 2003. From 2004 until 2008, I held  
16      management positions within nonprofit organizations providing services to  
17      individuals with developmental disabilities and community health centers. I

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

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

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

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

2 A4. Yes. I previously testified before the Commission in NIPSCO's request for  
3 approval of its gas TDSIC plan for eligible transmission, distribution, and storage  
4 system improvements approved in Cause No. 45330. I also provide testimony in  
5 NIPSCO's Electric TDSIC tracker proceedings in Cause Nos. 44733-TDSIC-X  
6 (including Cause No. 44733-TDSIC-1-S1) and NIPSCO's Gas TDSIC tracker  
7 proceedings in Cause Nos. 44403-TDSIC-X (beginning in TDSIC-6) and 45330-  
8 TDSIC-X (beginning in TDSIC-1). I also testified before the Commission  
9 supporting NIPSCO's request in (1) Cause No. 45465 for approval of a Low Income  
10 Program; and (2) Cause No. 45183 for a Certificate of Public Convenience and  
11 Necessity for federally mandated projects associated with NIPSCO's proposed  
12 PHMSA Compliance Project to comply with various provisions of the U.S.  
13 Department of Transportation, Pipeline and Hazardous Materials Safety  
14 Administration. I also filed testimony in a complaint brought by Thermo-Cycler  
15 Industries, Inc. in Cause No. 45163. I also routinely testify before the Commission  
16 in NIPSCO's requests for approval of electric and gas demand side management  
17 and energy efficiency programs, including Cause Nos. 44001, 44154, 44362, 44441,  
18 44496, 44501, 44634, 44637, 45011, 45012, 45455, and 45456 as well as NIPSCO's  
19 adjustment filings in Cause Nos. 43618-DSM-XX and 44001-GDSM-XX.

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

2 A5. The purpose of my direct testimony is to: (a) summarize the relief requested in  
3 this proceeding; (b) provide an overview of the statutory authority supporting  
4 NIPSCO's request for relief; (c) describe the termination, tracking and  
5 requirements for NIPSCO's 7-Year Electric TDSIC Plan for the period January 2016  
6 through December 2022 ("Electric Plan 1"); (d) provide an overview of NIPSCO's  
7 Electric TDSIC Plan for the period June 1, 2021 through December 31, 2026 ("2021-  
8 2026 Electric Plan" or "Plan"); (e) explain why the public convenience and  
9 necessity require or will require the eligible improvements included in the Plan;  
10 (f) support the conclusion that NIPSCO has provided best estimates of the cost of  
11 the Plan; (g) explain why the estimated costs of the eligible improvements  
12 included in the Plan are justified by incremental benefits attributable to the Plan;  
13 (h) provide an overview of the Economic Impacts of Projected NIPSCO T&D  
14 Expenditures, 2021-2026 dated May 2021 prepared by Sargent & Lundy (the  
15 "Economic Impact Report"); (i) explain NIPSCO's approach to inclusion of eligible  
16 economic development projects in the Plan, (j) explain NIPSCO's proposed  
17 process for updating the Plan; (k) confirm NIPSCO's intent to comply with the

1 statutory provisions of Ind. Code ch. 8-1-39;<sup>1</sup> (l) discuss NIPSCO's proposal for  
2 recovery of TDSIC costs; (m) explain NIPSCO's stakeholder outreach related to the  
3 Plan; (n) describe how NIPSCO proposes to change its General Rules and  
4 Regulations, and (o) introduce the other witnesses supporting NIPSCO's request  
5 for approval of the Plan.

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

7 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-C	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

8

9 **REQUESTED RELIEF**

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

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

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<sup>1</sup> 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").

1           Vamos' direct testimony as Confidential Attachment 2-A. Specifically, Petitioner  
2           requests (a) a finding that the investments contained in the 2021-2026 Electric Plan  
3           are "eligible transmission, distribution, and storage system improvements" within  
4           the meaning of Ind. Code § 8-1-39-2; (b) a finding of the best estimate of the cost of  
5           the eligible improvements included in the Plan; (c) a determination that the public  
6           convenience and necessity require or will require the eligible improvements  
7           included in the Plan; and (d) a determination that the estimated costs of the eligible  
8           improvements included in the Plan are justified by incremental benefits  
9           attributable to the Plan. If the Commission determines that the 2021-2026 Electric  
10          Plan is reasonable, Petitioner requests the Commission approve the Plan and  
11          designate the eligible transmission, distribution, and storage system  
12          improvements included in the Plan as eligible for TDSIC treatment in accordance  
13          with the TDSIC Statute and authorize Petitioner to include the improvements in  
14          Petitioner's rate base in any proceeding involving Petitioner's rates. Petitioner also  
15          requests authority to recover operation and maintenance expenses as TDSIC costs  
16          pursuant to Ind. Code § 8-1-39-7 under its approved Rider 888 – Adjustment of  
17          Charges for Transmission, Distribution and Storage System Improvement  
18          Charges. Petitioner further requests authority to defer any costs associated with  
19          the Plan that are incurred prior to and subsequent to the time the Commission

1 issues an order in this proceeding until such amounts are recovered through rates.

2 Finally, Petitioner requests that the Commission approve Petitioner's proposed  
3 process for updating the 2021-2026 Electric Plan in future TDSIC adjustment  
4 proceedings.

5 **TDSIC STATUTE**

6 **Q8. Please provide an overview of the statutory authority supporting NIPSCO's**  
7 **request for relief in this proceeding.**

8 A8. In addition to Ind. Code § 8-1-2-23, Section 10(a) of the TDSIC Statute provides  
9 that a public utility can petition the Commission for approval of a TDSIC plan for  
10 eligible transmission, distribution, and storage system improvements. Section  
11 10(b) of the TDSIC Statute provides that following notice and hearing, and not  
12 more than two hundred ten (210) days after the petition is filed, the Commission  
13 will issue an order (a) finding whether the best estimate of the cost of the eligible  
14 improvements is included in the Plan; (b) determining whether the public  
15 convenience and necessity require or will require the eligible improvements  
16 included in the Plan; and (c) determining whether the estimated costs of the  
17 eligible improvements included in the Plan are justified by incremental benefits  
18 attributable to the Plan. If the Commission determines that the 2021-2026 Electric  
19 Plan is reasonable, the Commission approves the Plan and authorizes TDSIC

1 treatment for the eligible transmission, distribution, and storage system  
2 improvements included in the Plan. Section 10(d) of the TDSIC Statute provides  
3 that a public utility may terminate an existing TDSIC plan before the end of the  
4 original plan period by providing the Commission a notice of termination at least  
5 sixty (60) days before the date on which the plan will terminate and that eligible  
6 transmission, distribution, and storage system improvements receiving TDSIC  
7 treatment under Section 9 of the TDSIC Statute before termination of the plan shall  
8 continue to receive TDSIC treatment after termination of the plan until a final  
9 order in the public utility's next general rate case is issued.<sup>2</sup>

10 **TERMINATION, TRACKING AND REQUIREMENTS FOR ELECTRIC PLAN 1**

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

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

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<sup>2</sup> 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.



1 terminated in a manner consistent with the TDSIC Statute.

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

5 A10. Yes. In accordance with Ind. Code § 8-1-39-10(d), the eligible transmission,  
6 distribution, and storage improvements in Electric Plan 1 receiving TDSIC  
7 treatment under Section 9 of the TDSIC Statute as of May 31, 2021 will continue to  
8 receive TDSIC treatment under Section 9 of the TDSIC Statute after termination of  
9 the plan until a final order in NIPSCO's next general rate case is issued.

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

1 A11. Yes. Electric Plan 1 was originally set to expire on December 31, 2022. NIPSCO  
2 petitioned the Commission for review and approval of its basic rates and charges  
3 for electric utility service on October 31, 2018, and the Commission issued its order  
4 changing NIPSCO's basic rates and charges on December 4, 2019 in Cause No.  
5 45159. This meets the requirements as set forth in both sections of the TDSIC  
6 Statute with respect to Electric Plan 1.

7 **OVERVIEW OF NIPSCO'S 2021-2026 ELECTRIC PLAN**

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

9 A12. Consistent with the provisions of the TDSIC Statute, NIPSCO has developed an  
10 electric plan detailing the eligible transmission, distribution, and storage system  
11 improvements NIPSCO will undertake for purposes of safety, reliability, system  
12 modernization or economic development.<sup>3</sup> The Plan also provides for appropriate  
13 economic development projects in the future, although none are proposed at this  
14 time. The total estimated cost of the 2021-2026 Electric Plan is \$1,635,535,402,  
15 inclusive of direct capital (\$1,396,615,415), indirect capital (\$181,560,012),  
16 allowance for funds used during construction ("AFUDC") (\$47,345,270), and  
17 operations and maintenance expenses (\$10,014,705). The 2021-2026 Electric Plan

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<sup>3</sup> As defined in Ind. Code § 8-1-39-2.

1 identifies the total annual projected costs and includes an Asset Register for Risk  
2 Based Projects (Confidential Appendix A) used to identify and prioritize the major  
3 assets measured and selected by NIPSCO's Risk Model (Substation Transformers,  
4 Substation Breakers, and Circuits), , an Asset Register for Non-Risk Based Projects  
5 (Confidential Appendix B) used to identify and prioritize the Deliverability and  
6 Condition Based Projects, 2021 Project Estimates (Confidential Appendix C), and  
7 2022 Project Estimates (Confidential Appendix D). NIPSCO is requesting  
8 approval for the total annual projected costs, including a portion for targeted  
9 economic development projects (when applicable),<sup>4</sup> for Years 1 through 6. The  
10 Plan is comprised of four main segments: (1) investments that target replacement  
11 of aging assets (Aging Infrastructure), (2) investments intended to maintain the  
12 capability of NIPSCO's electric system to deliver power to customers when they  
13 need it (System Deliverability), (3) investments for modernization of NIPSCO's  
14 electric system to deliver safe and reliable service (Grid Modernization), including  
15 installation of advanced metering infrastructure ("AMI"),<sup>5</sup> and (4) eligible  
16 economic development projects in the future (Economic Development). Witness  
17 Vamos explains all of the eligible transmission, distribution, and storage system

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<sup>4</sup> NIPSCO's Plan does not currently include any Targeted Economic Development projects.

<sup>5</sup> The AMI investments are discussed by Witnesses Holtz and Kiergan.

1 investments included in the Plan in more detail and sponsors the 2021-2026  
2 Electric Plan as Confidential Attachment 2-A.

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

5 A13. Yes. The only changes from the information that NIPSCO currently provides in  
6 its Electric Plan 1 is that NIPSCO does not intend to continue to identify the  
7 number of miles, breakers, or units for certain projects as is currently provided in  
8 support of Electric Plan 1 in the Project Detail pages.<sup>6</sup> Since Confidential Appendix  
9 B to the Plan shows the total number of miles, breakers, and units, NIPSCO does  
10 not intend to provide that same information in the 2021-2026 Electric Plan. Based  
11 on the nature of how specific projects are selected and are all ranked using  
12 independent assessments, NIPSCO also does not intend to continue to include the  
13 asset registers for Wood Pole Life Extensions and Steel Structure Life Extensions  
14 in its Asset Register for Deliverability and Condition Based Projects (Confidential  
15 Appendix B to the Plan). Other than those changes, NIPSCO has not made any  
16 other changes to the information that was provided in its Electric Plan 1 (in Cause

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<sup>6</sup> See Confidential Exhibit Electric Plan Update-8, Cause No. 44733-TDSIC-8, Pages 3 through 24 (Columns I and J).

1 No. 44733).

2 **Q14. Does NIPSCO's case-in-chief include all of the evidence and information**  
3 **necessary for the Commission to make the required findings to approve the**  
4 **2021-2026 Electric Plan?**

5 A14. Yes.

6 **PUBLIC INTEREST**

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

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

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

6 The Aging Infrastructure segment included in the 2021-2026 Electric Plan is  
7 essential to the continued safety of NIPSCO's employees and customers and  
8 reliability of NIPSCO's electric transmission and distribution systems. As more  
9 fully described by Witness Vamos, the Aging Infrastructure segments target  
10 replacement of aging assets based upon the condition of these facilities. To  
11 continue serving customers safely and reliably, while also complying with  
12 applicable laws, the public convenience and necessity require that the assets  
13 identified in the 2021-2026 Electric Plan be replaced. The public's reliance on  
14 electricity is linked directly with quality of life, economic enhancement and overall  
15 public safety. NIPSCO takes its role seriously in serving its customers safely and  
16 reliably, and this includes protecting customers and employees from potential  
17 injury, property damage and sustained electrical outages associated with the  
18 operation of its electric transmission and distribution systems.

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

8       The Grid Modernization segment included in the 2021-2026 Electric Plan is  
9       essential to enhance customer service, improve reliability, and enable new  
10      technologies to improve NIPSCO's ability to meet customers' evolving operability  
11      expectations. As more fully described by Witness Holtz, AMI holds great promise  
12      to improve safety, promote reliability, enable system modernization, and drive  
13      economic development in accordance with the tenets of the TDSIC Statute. As  
14      described by Witness Vamos, the other projects included in the Grid  
15      Modernization segment will help NIPSCO modernize its system and better serve  
16      its customers, including during outage events.

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

4 **BEST ESTIMATES**

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

7 A16. Yes. NIPSCO followed a rigorous project development, cost estimating and  
8 review process to provide its best estimate for each project included in the Plan.  
9 As Witness Vamos explains, NIPSCO utilized Sargent & Lundy to complete the  
10 modular cost estimates, followed by internal stakeholder reviews of those  
11 estimates. Sargent & Lundy also took an in-depth review of five large substation  
12 projects where walk downs were performed, site boundary surveys produced, a  
13 preliminary work scope identified, with conceptual layouts prepared for project  
14 execution, route reviews, and NIPSCO internal stakeholder reviews performed.  
15 Cost data from recent projects and updated budgetary quotes from construction  
16 contractors were used as the basis for the estimates in most cases, with experience  
17 modifiers considered for site specific conditions. Small projects are generally  
18 based on parametric or unit price estimates that reflect a mix of contractor and  
19 internal labor resources similar to the allocation of work maintained during



1 Electric Plan 1, and a review of routes and site conditions for many of the projects.  
2 For all projects, NIPSCO sought broad internal stakeholder input to assure  
3 comprehensive integrated work scopes were documented and validated through  
4 a formal review process. In addition, as further discussed by Witness Meece,  
5 NIPSCO's estimates for indirect costs and AFUDC are consistent with Generally  
6 Accepted Accounting Principles ("GAAP") and the Federal Energy Regulatory  
7 Commission ("FERC") Uniform System of Accounts for utilities.

8 **INCREMENTAL BENEFITS**

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

11 A17. Yes. As described by Witnesses Vamos, the estimated costs of the eligible  
12 improvements included in the 2021-2026 Electric Plan are justified by the  
13 reasonably expected incremental benefits attributable to the Plan. The Plan  
14 effectively addresses safety, reliability, system modernization, and economic  
15 development. It is essential in considering the incremental benefit of the Plan to  
16 recognize that continued safe, reliable service from the eligible investments in the  
17 Plan be compared against the potential for service deterioration that would occur  
18 if these investments were not made.

1 ECONOMIC IMPACT

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

4 A18. Yes.

5 **Q19. Please provide an overview of the projected economic impact of NIPSCO's 2021-**  
6 **2026 Electric Plan.**

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

1 NIPSCO's 2021-2026 Electric Plan, the total economic impact in Indiana is as  
 2 follows:<sup>7</sup>

Impact Type	Employment	Labor Income	Value Added	Output	State/Local Taxes	Federal Taxes
<b>Total Economic Impact from NIPSCO T&amp;D Construction Expenditures in Indiana (2021–2026)</b>						
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

3  
 4 The total economic impact inside the United States and outside of Indiana is as  
 5 follows:

Impact Type	Employment	Labor Income	Value Added	Output	State/Local Taxes	Federal Taxes
<b>Total Economic Impact from NIPSCO T&amp;D Construction Expenditures in the United States and Outside Indiana (2021–2026)</b>						
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

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<sup>7</sup> 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.

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

3    **ECONOMIC DEVELOPMENT PROJECTS**

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

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

7                   new or replacement electric or gas transmission, distribution, or storage  
8                   utility projects that: (1) a public utility undertakes for purposes of . . .  
9                   economic development . . .; (2) were not included in the public utility's rate  
10                  base in its most recent general rate case; and (3) either were: (A) described  
11                  in the public utility's TDSIC plan and approved by the commission under  
12                  section 10 of this chapter and authorized for TDSIC treatment; (B) described  
13                  in the public utility's update to the public utility's TDSIC plan under section  
14                  9 of this chapter and authorized for TDSIC treatment by the commission; or  
15                  (C) approved as a targeted economic development project under section 11  
16                  of this chapter.

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

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

1 A21. No. Since NIPSCO did not identify any specific economic development projects  
2 in its Electric Plan 1, NIPSCO is not proposing a budget for the general category  
3 of Economic Development Projects in its 2021-2026 Electric Plan. Instead, if  
4 NIPSCO becomes aware of an economic development project that would be  
5 eligible for TDSIC recovery, NIPSCO proposes to add the economic development  
6 project during a Plan Update filing.<sup>8</sup>

7 **Q22. Are you aware of any proposed Economic Development Projects that will be**  
8 **eligible for recovery through NIPSCO's 2021-2026 Electric Plan?**

9 A22. At this time, I am not aware of any proposed Economic Development Projects that  
10 would be eligible for TDSIC recovery. NIPSCO supports economic development  
11 initiatives and the job creation that results from beneficial and successful efforts.  
12 NIPSCO continuously works with community partners to identify potential  
13 economic development opportunities.

14 In Electric Plan 1, NIPSCO agreed to inclusion of an Economic Development  
15 project for LaPorte County Kingsbury Industrial Park, with a stated commitment  
16 to invest as much as \$3.5 million for distribution system and substation upgrades

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<sup>8</sup> 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.

1 associated with such a project, once the necessary project plans have been finalized  
2 (“Kingsbury Project”). In its 2021-2026 Electric Plan, NIPSCO agrees to work with  
3 LaPorte County and support inclusion of the Kingsbury Project in a Plan Update  
4 filing. At the time inclusion of the project is proposed, sufficient evidence will be  
5 provided for stakeholders and the Commission to evaluate the merits of the  
6 Kingsbury Project and any necessary upgrades, make a finding that a best estimate  
7 has been provided, and determine that the estimated costs of the project are  
8 justified by the incremental benefits attributable to the project.

9 **PLAN UPDATE PROCESS**

10 **Q23. How will NIPSCO update the 2021-2026 Electric Plan as required by the TDSIC**  
11 **Statute?**

12 A23. In accordance with the TDSIC Statute, NIPSCO proposes to update its 2021-2026  
13 Electric Plan annually, but in no event more frequently than once every six  
14 months. Each Plan Update will be supported by information on the actual costs  
15 incurred and an explanation in testimony of any increase greater than \$100,000  
16 and greater than 20% during the current year for projects. NIPSCO will provide  
17 an updated (1) Asset Register for Risk Based Projects (Confidential Appendix A to  
18 the Plan) and (2) Asset Register for Non-Risk Based Projects (Confidential  
19 Appendix B to the Plan), as new relevant information becomes available during

1 the Plan update process. Witness Vamos provides additional detail relating to the  
2 information that will be provided to support the Plan Update.

3 **Q24. What changes is NIPSCO proposing to what is currently provided in its updates**  
4 **to Electric Plan 1?**

5 A24. The changes to the information NIPSCO is including *in this filing* are discussed  
6 above. NIPSCO is also proposing two changes to what is currently provided *in its*  
7 *updates* to Electric Plan 1. First, in updates to Electric Plan 1, NIPSCO includes four  
8 pages comparing the approved plan to the updated plan, including the related  
9 variances. *See* Electric Plan 1, Plan Update-8, Pages 26 through 29. Since similar  
10 comparisons are already included elsewhere in the updated plan, NIPSCO does  
11 not intend to provide those four pages in its updates to the 2021-2026 Electric Plan.

12 Second, in updates to Electric Plan 1, projects with cost variances greater than  
13 \$30,000 or 15%, whichever is greater, are supported by a project change request  
14 ("PCR") form. *See* Electric Plan 1, Plan Update-8, Confidential Appendices 3.1 and  
15 3.2. Instead, NIPSCO is committing to provide PCRs and testimonial explanations  
16 to support projects with cost variances greater than \$100,000 and 20%.

17 **STATUTORY COMPLIANCE**

18 **Q25. Ind. Code § 8-1-39-9(e) requires "[a] public utility that implements a TDSIC**

1           under [the TDSIC Statute] shall, before the expiration of the public utility's  
2           approved TDSIC plan, petition the commission for review and approval of the  
3           public utility's basic rates and charges with respect to the same type of utility  
4           service." Will NIPSCO comply with this requirement for the 2021-2026 Electric  
5           Plan?

6    A25. Yes.

7    **Q26. Are all of the projects included in NIPSCO's 2021-2026 Electric Plan undertaken**  
8           **for purposes of safety, reliability, grid modernization, or economic**  
9           **development?**

10   A26. Yes.

11   **Q27. Are any of the projects included in the 2021-2026 Electric Plan included in**  
12           **NIPSCO's current base rates?**

13   A27. No.

14   **Q28. Does the 2021-2026 Electric Plan provide the best estimate of the cost of the**  
15           **eligible improvements?**

16   A28. Yes. This is described in greater detail by Witness Vamos and in the 2021-2026  
17           Investment Plan Cost Analysis (Confidential Attachment 2-C).

18   **Q29. Does the public convenience and necessity require or will require the eligible**



1           **improvements included in the 2021-2026 Electric Plan?**

2    A29. Yes. The eligible improvements included in the 2021-2026 Investment Plan are  
3           required or will be required to maintain the safety, integrity, and reliability of  
4           NIPSCO's transmission and distribution systems consistent with the public  
5           convenience and necessity, as discussed above.

6    **Q30. Are the estimated costs of the eligible transmission and distribution system**  
7           **improvements included in the 2021-2026 Electric Plan justified by incremental**  
8           **benefits attributable to the Plan?**

9    A30. Yes. This is described in greater detail above and in the Long-Term Investment  
10           Plan (Confidential Attachment 2-B) and in Witness Vamos' testimony.

11   **Q31. Is NIPSCO's 2021-2026 Electric Plan reasonable?**

12    A31. Yes. As demonstrated by the evidence provided in NIPSCO's case-in-chief, the  
13           2021-2026 Electric Plan is reasonable and should be approved by the Commission.

14    RATEMAKING

15    **Q32. Is NIPSCO proposing any changes to the way it recovers the TDSIC costs in this**  
16           **filing?**

17    A32. Yes. As discussed by Witness Meece, NIPSCO is proposing to include the recovery  
18           of operation and maintenance expenses incurred with respect to eligible

1 transmission and distribution system improvements through its TDSIC. This  
2 request is consistent with the definition of "TDSIC costs" in section 7(2) of the  
3 TDSIC Statute.

4 **STAKEHOLDER PROCESS**

5 **Q33. Please explain NIPSCO's stakeholder outreach efforts related to the 2021-2026**  
6 **Electric Plan.**

7 A33. Consistent with NIPSCO's commitment to working together with its stakeholders  
8 on regulatory solutions, NIPSCO reached out to its stakeholders about its plans to  
9 file the 2021-2026 Electric Plan. As a policy, NIPSCO makes the effort to  
10 communicate with its stakeholders before making major regulatory filings with  
11 the Commission. NIPSCO's stakeholder process focuses on educating its  
12 stakeholders on its plans and requesting their feedback.

13 NIPSCO met with the Indiana Office of Utility Consumer Counselor, NIPSCO  
14 Industrial Group, Citizens Action Coalition of Indiana, Inc., Indiana Municipal  
15 Utilities Group, and Indiana Distributed Energy Alliance on April 26, 2021 to  
16 preview NIPSCO's filing including the amount and types of investments and  
17 subsequently provided a draft of the 2021-2026 Electric Plan. NIPSCO also met  
18 with some of the Commissioners and members of the Commission Staff on April  
19 29, 2021 to preview NIPSCO's filing including the amount and types of

1 investments. The presentation provided for those meetings is attached as  
2 Attachment 1-C.

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

8 **PROPOSED TARIFF CHANGES**

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

11 A34. Yes. As Witness Holtz discusses, some customers may, for various reasons, have  
12 concerns about the installation of an AMI meter on their premises. As it does for  
13 its Automated Meter Reading meters, NIPSCO will continue to allow customers  
14 to "opt out" of installation of an AMI meter if they so choose. NIPSCO anticipates  
15 that revisions will be necessary to include an opt-out charge in Rule 15 –  
16 Miscellaneous and Non-Recurring Charges. Since NIPSCO anticipates the initial  
17 implementation of 3,000 meters will not occur until 2023, in this filing NIPSCO is  
18 proposing to revise its Tariff after a final Order is issued in this Cause approving  
19 the AMI Project and will do so through a 30-day filing. NIPSCO will work with

1 all parties to this proceeding in developing the required Tariff modifications.

2 **OTHER WITNESSES**

3 **Q35. Please introduce the other witnesses providing testimony in this filing.**

4 A35. Charles A. Vamos, Director, Electric T&D Engineering (1) provides a summary of  
5 the 2021-2026 Electric Plan, (2) explains how NIPSCO developed its 2021-2026  
6 Electric Plan, (3) explains the reduction of risks after executing Electric Plan 1, (4)  
7 explains the proposed plan update process, (5) explains the cost estimates  
8 associated with the 2021-2026 Electric Plan, (6) discusses contingency as a  
9 component of estimating, (7) explains the various components of projects included  
10 in the 2021-2026 Electric Plan, (8) discusses NIPSCO's proposed execution of the  
11 2021-2026 Electric Plan, and (9) explains why the 2021-2026 Electric Plan  
12 constitutes eligible transmission, distribution, and storage system improvements,  
13 including the expected benefits from certain projects.

14 Matthew G. Holtz, Managing Director of Transmission in the Electric Operations  
15 Department for NIPSCO, supports the AMI Project included in NIPSCO's 2021-  
16 2026 Electric Plan.

17 Christopher Kiergan, Senior Manager in the Energy and Utilities practice of West  
18 Monroe Partners, LLC, describes the general process in developing the

1 comprehensive cost-benefit analysis, explains the structure of the cost-benefit  
2 analysis, highlights the cost and benefit inputs and other information provided to  
3 West Monroe by NIPSCO, and supports and explains certain NIPSCO customer,  
4 and societal benefits calculated that are associated with the AMI Project. He also  
5 summarizes the results of the cost-benefit analysis and provides relevant industry  
6 perspective and context regarding the AMI Project.

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

14 **Q36. Does this conclude your prefiled direct testimony?**

15 A36. 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.

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Alison M. Becker

Date: June 1, 2021

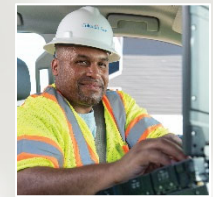
**Attachment 1-A**

**[Verified Petition – Not duplicated herein]**

Confidential Attachment 1-B (Redacted)

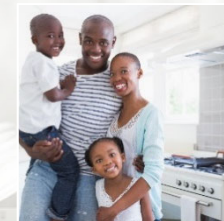
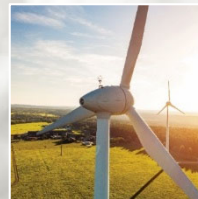
[Economic Impacts of Projected NIPSCO T&D Expenditures, 2021-2026]





## NIPSCO Electric TDSIC 2021-2026 Plan

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 injuries 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**

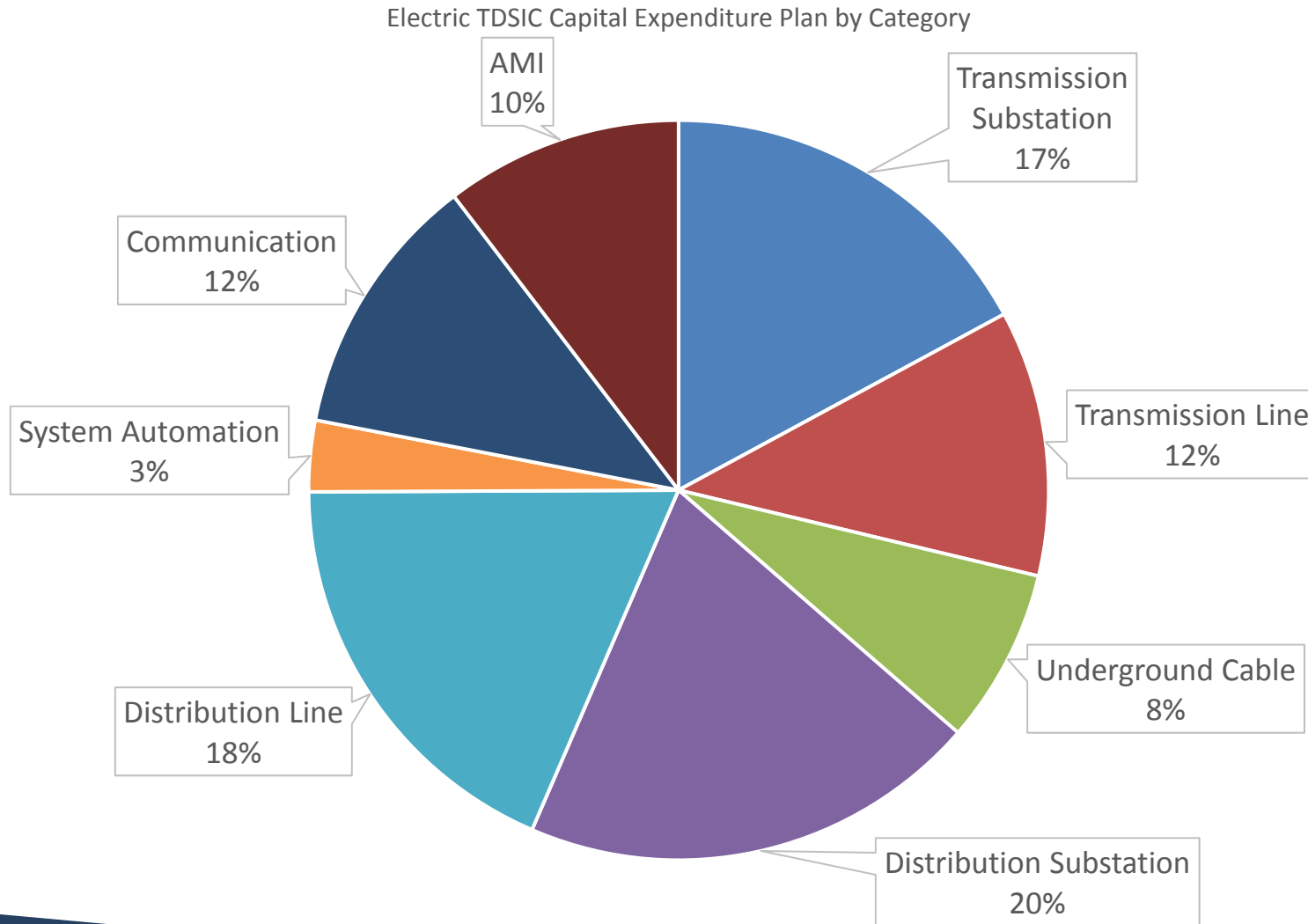
## Purpose for an Updated Plan - TDSIC 2021-2026 Plan

- 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

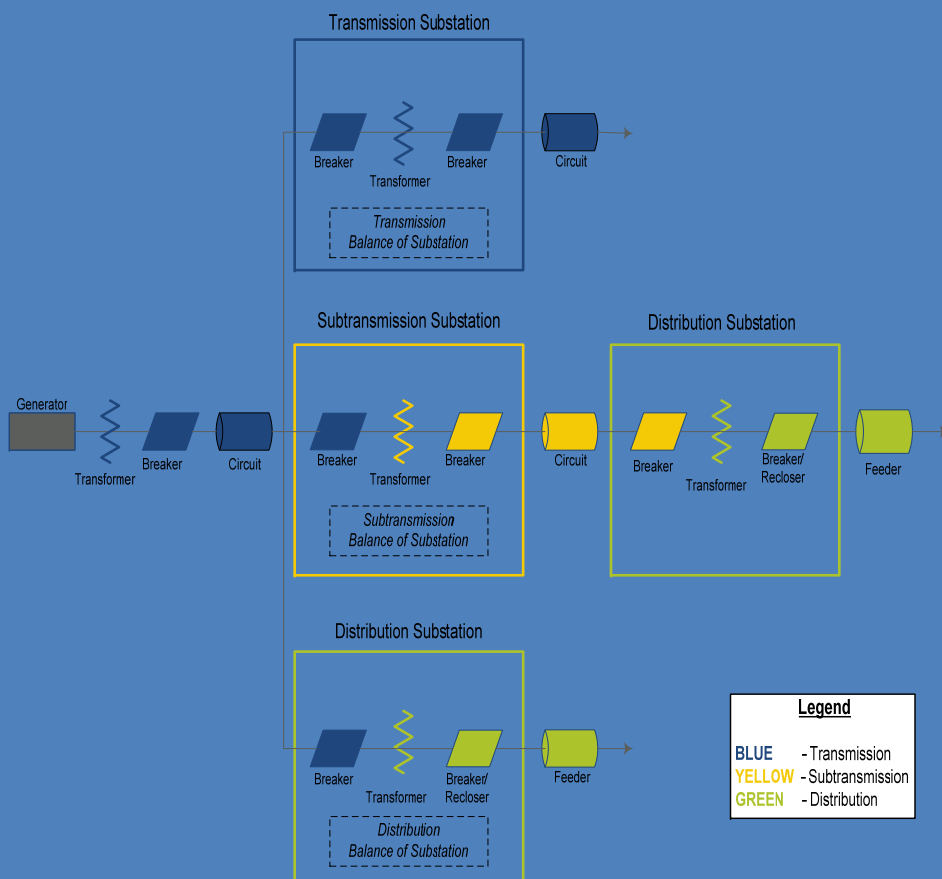
- Direct and indirect creation of jobs

# *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

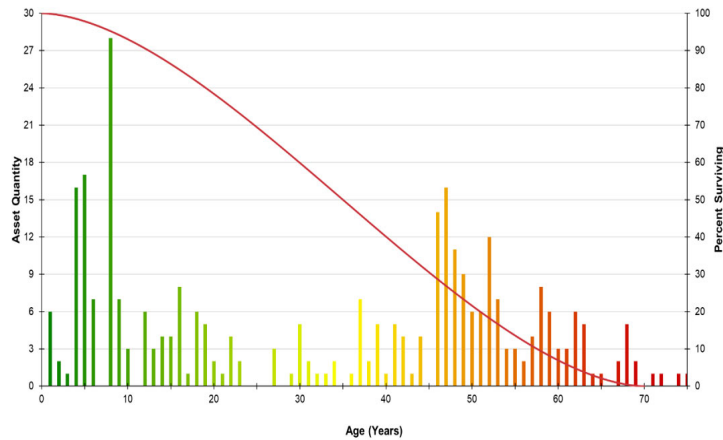
Asset Class	System Voltage	Total
BREAKER	138kV	64
BREAKER	345kV	5
BREAKER	34kV	39
BREAKER	69kV	66
BREAKER - REC	12kV	8
BREAKER - SWGR	12kV	181
BREAKER - TSB	12kV	2
TRANSFORMER	138/12kV	2
TRANSFORMER	138/34kV	5
TRANSFORMER	138/69kV	9
TRANSFORMER	34/12kV	10
TRANSFORMER	345/138kV	2
TRANSFORMER	69/12kV	41

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

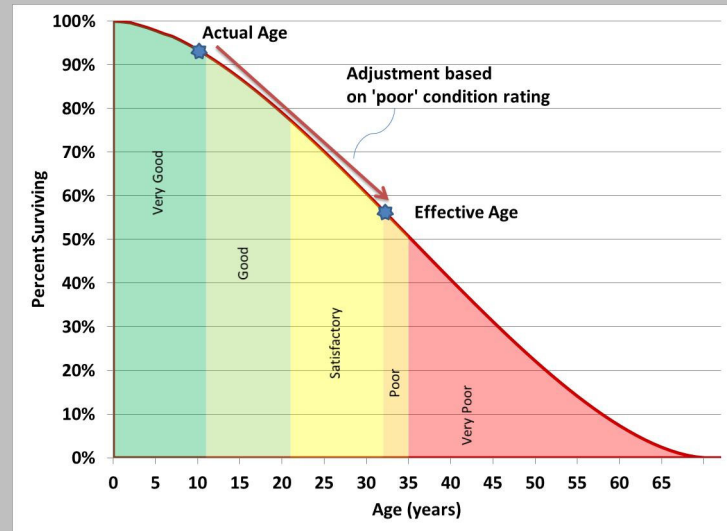
# Major T&D Asset Project Selection & Prioritization – Aging Infrastructure

## Asset Demographics & Inspection

Figure 1-6 — 34-kV Transformer Age Histogram and Survivor Curve



## Asset Condition Assessment & Eff. Age

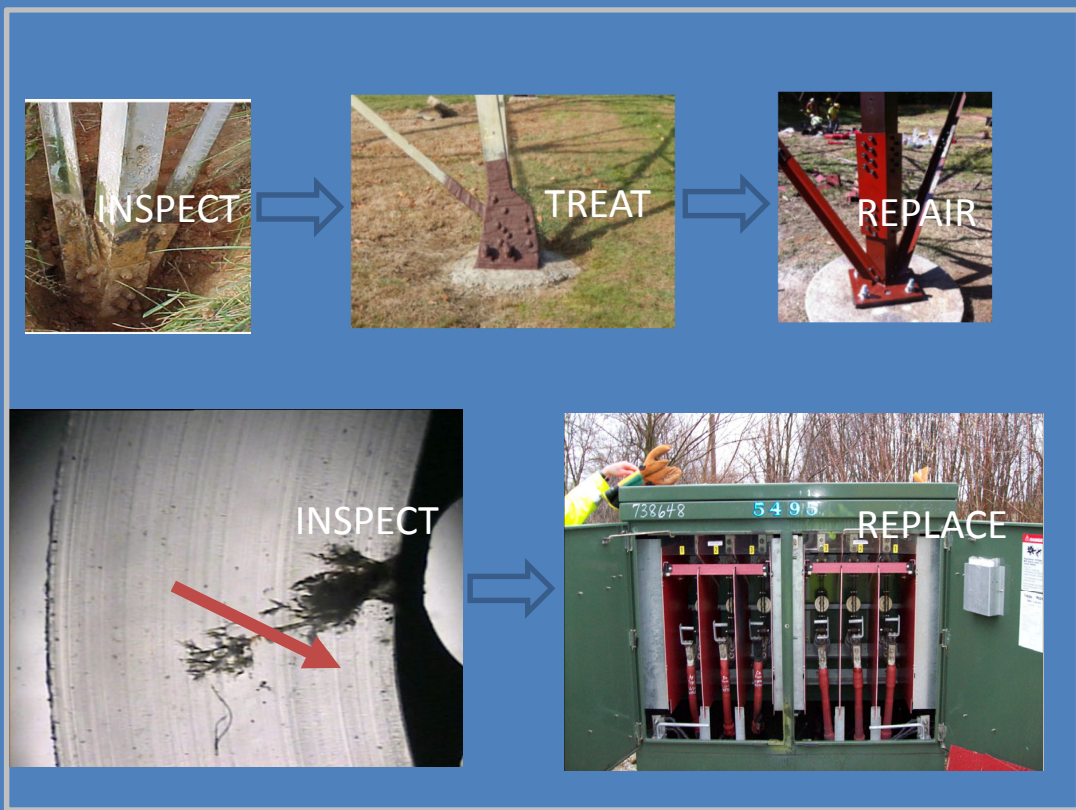


## Risk Scoring & Prioritization using Criticality & Likelihood of Failure

		Likelihood of Failure				
		Very Low – 1	Low – 2	Moderate – 3	High – 4	Very High – 5
Consequence of Failure	Very High – 5					Very High
	High – 4				High	
	Moderate – 3			Moderate		
	Low – 2		Low			
	Very Low – 1	Very Low				

## Minor Assets, Including Inspect & Mitigate - Aging Infrastructure

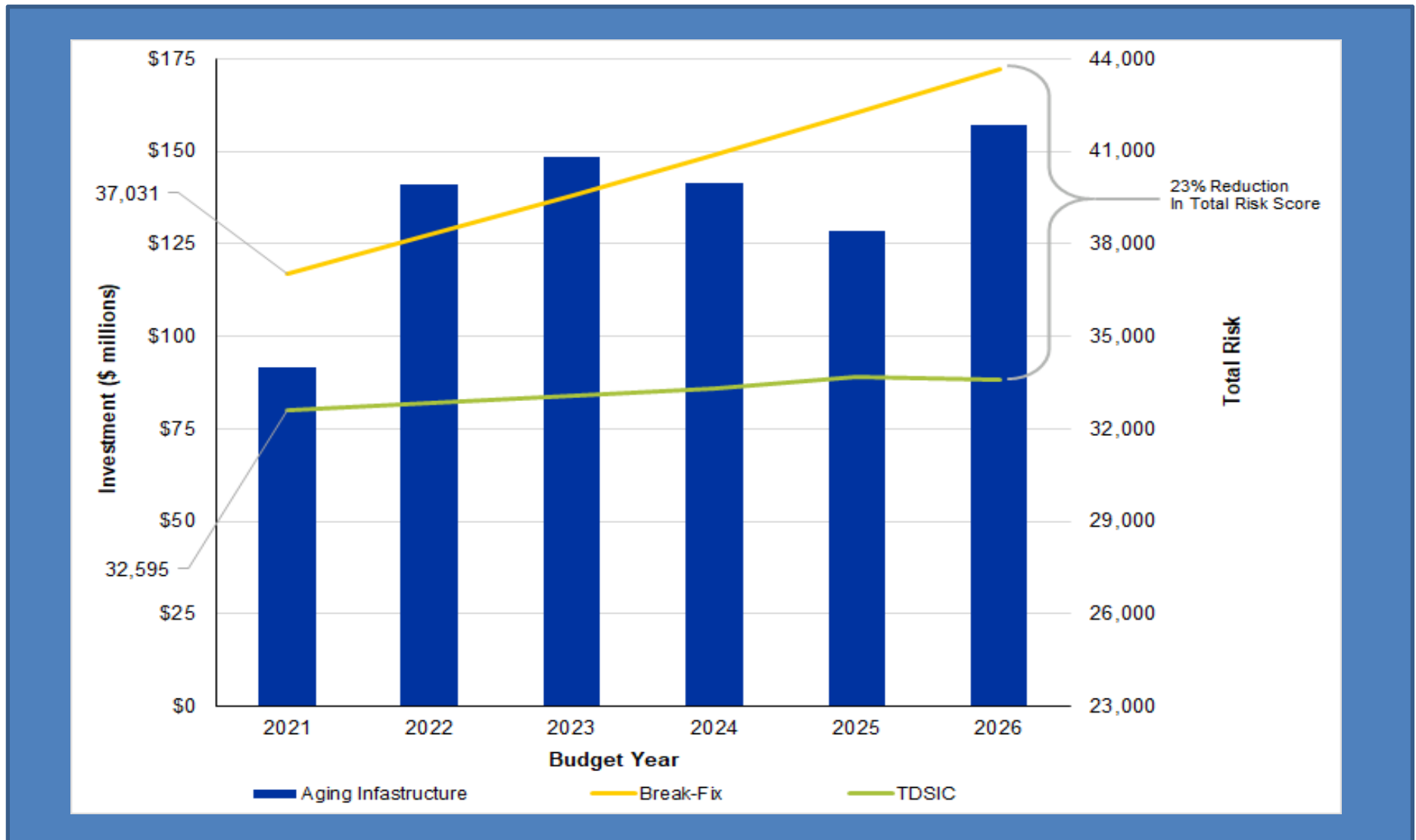
**Purpose:** NIPSCO’s electric system consists of many smaller components that are still critical to the operation, safety, and performance of the electric grid. Many of these assets have met or are approaching the end of their useful life. Most of the assets identified within this category go through 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.

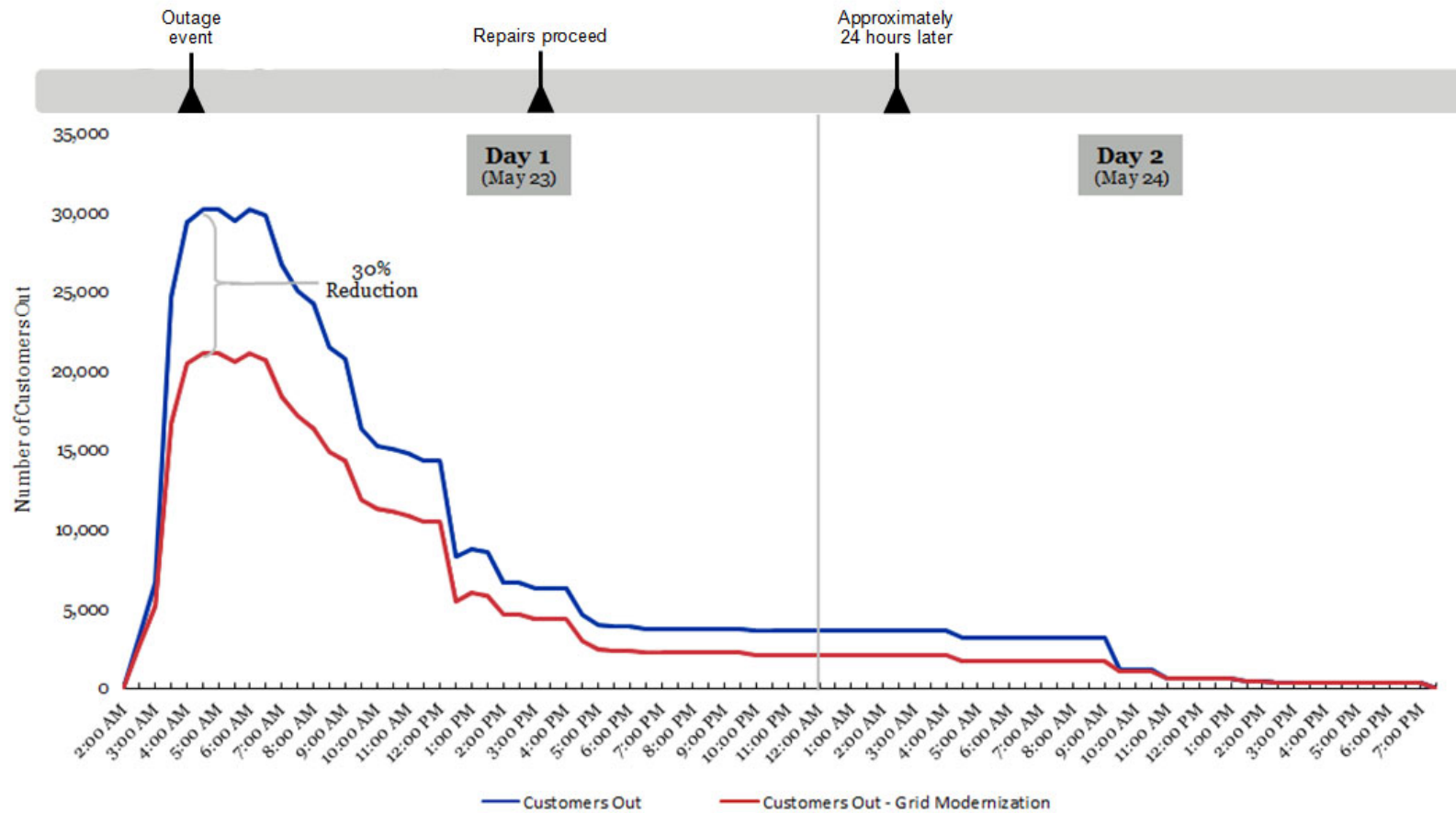
- Northwood Sub outage due to loss of 69 kV source – Up to 145% overload on Nappanee Circuit 12-261
- Northwood Circuit 12-744 outage due to line failure – Up to 145% overload on Nappanee Circuit 12-261
- Nappanee Circuit 12-261 outage due to line failure - 109% overload on Northwood Circuit 12-744

### 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)

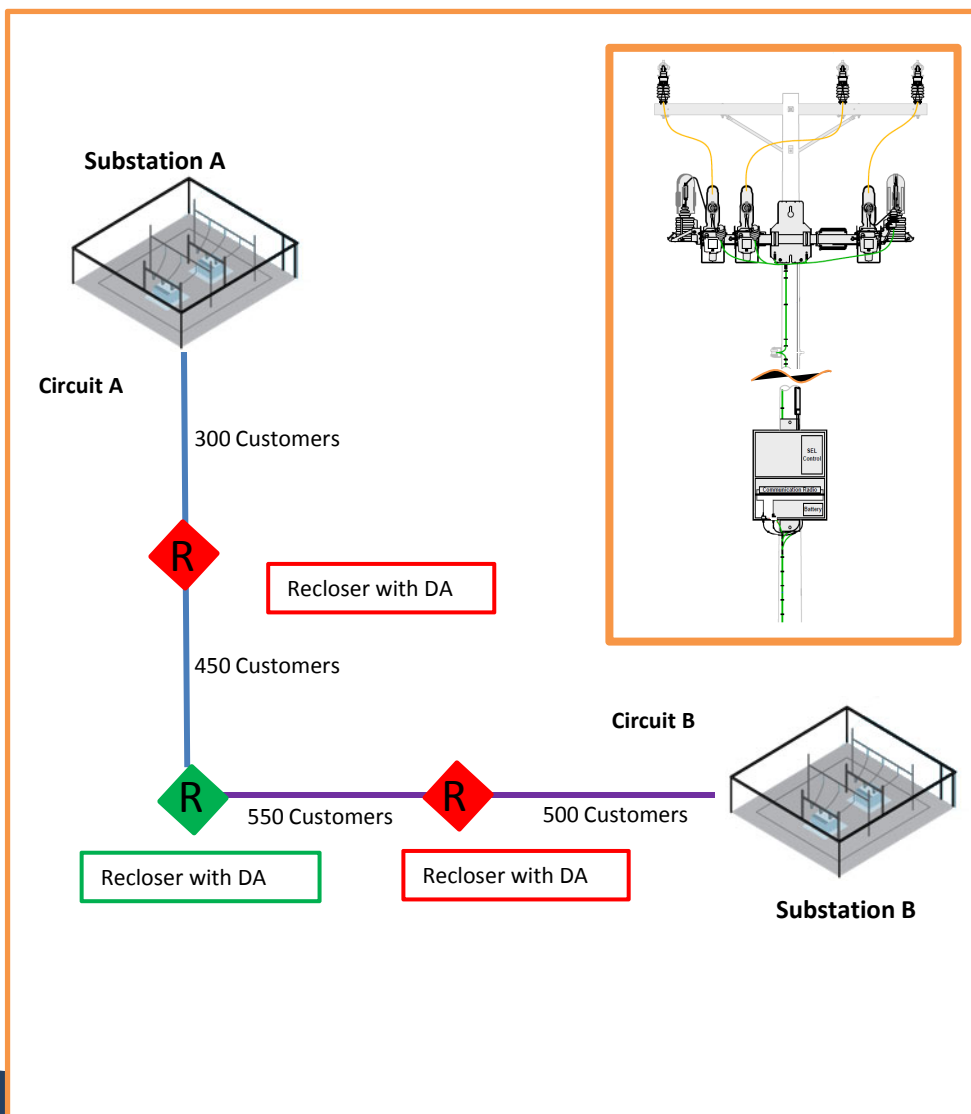




# Grid Modernization

## *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

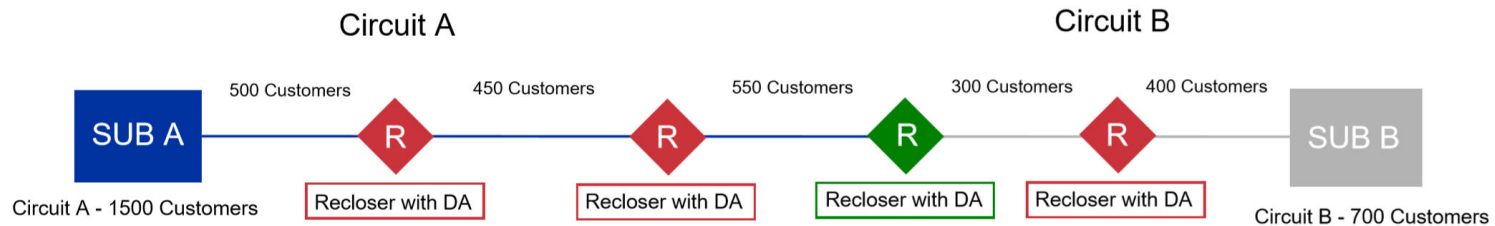


### Investment components

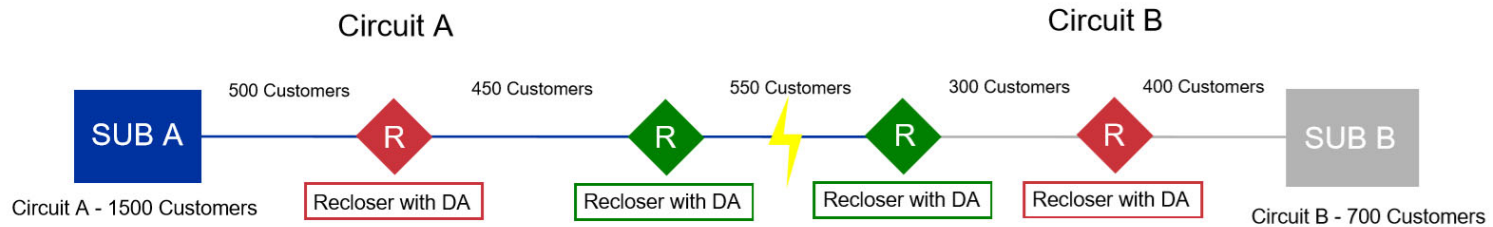
- **Breaker Relays:** Deploy microprocessor controlled relays at the breaker to better sectionalize circuits and collect breaker health data.
- **Transformer Monitoring:** Monitors that will collect data on temperature, oil analysis, and allow for smart cooling with fans.
- **Battery Monitoring:** Modern 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.

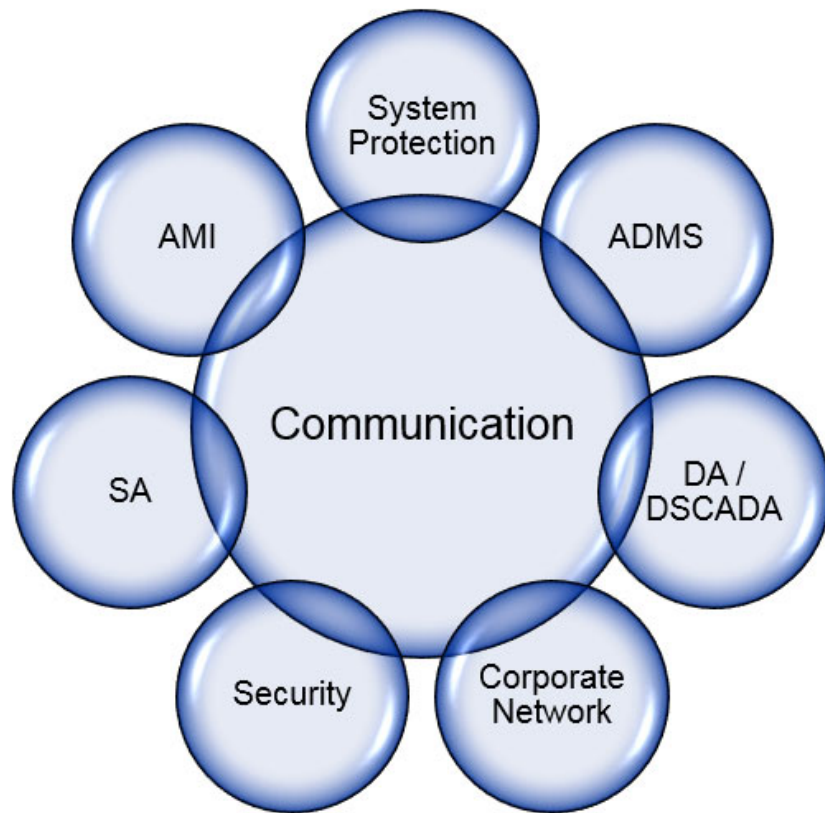
\*Green Switches are OPEN, Red Switches are CLOSED

# Grid Modernization

## *Communication*

# Communication - Grid Modernization

## Communication is the Key



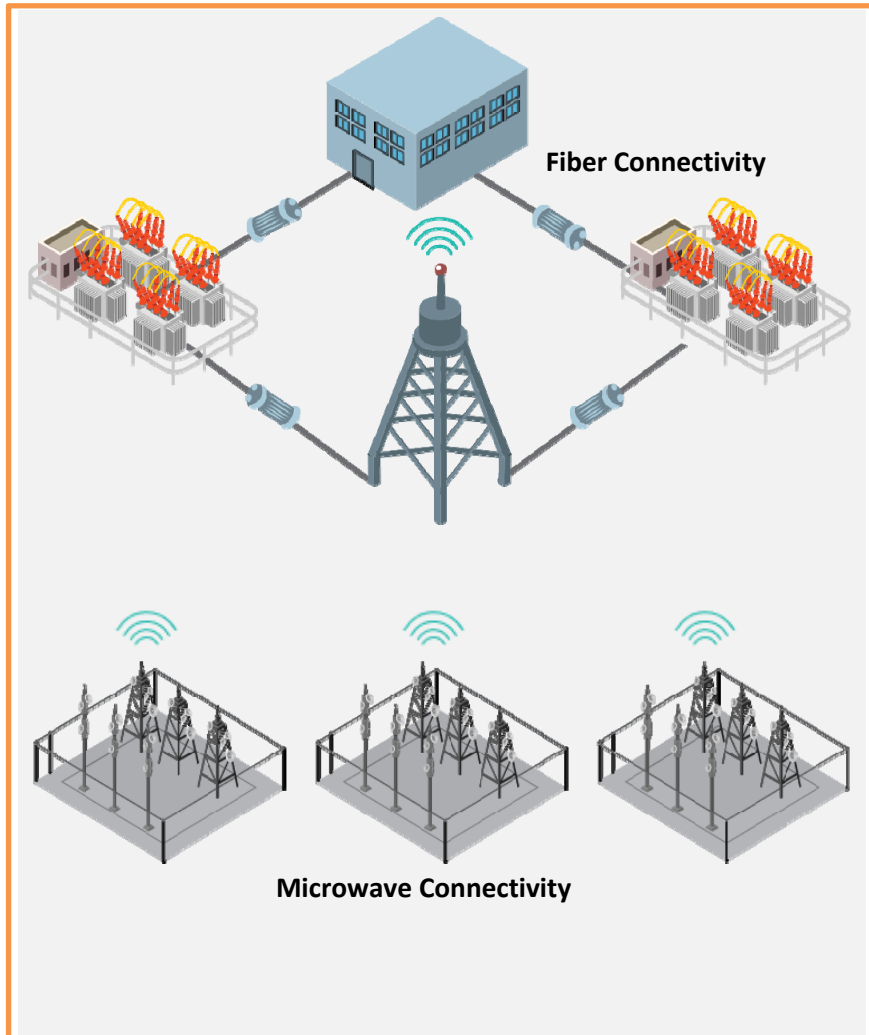
## Why Now?

- 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

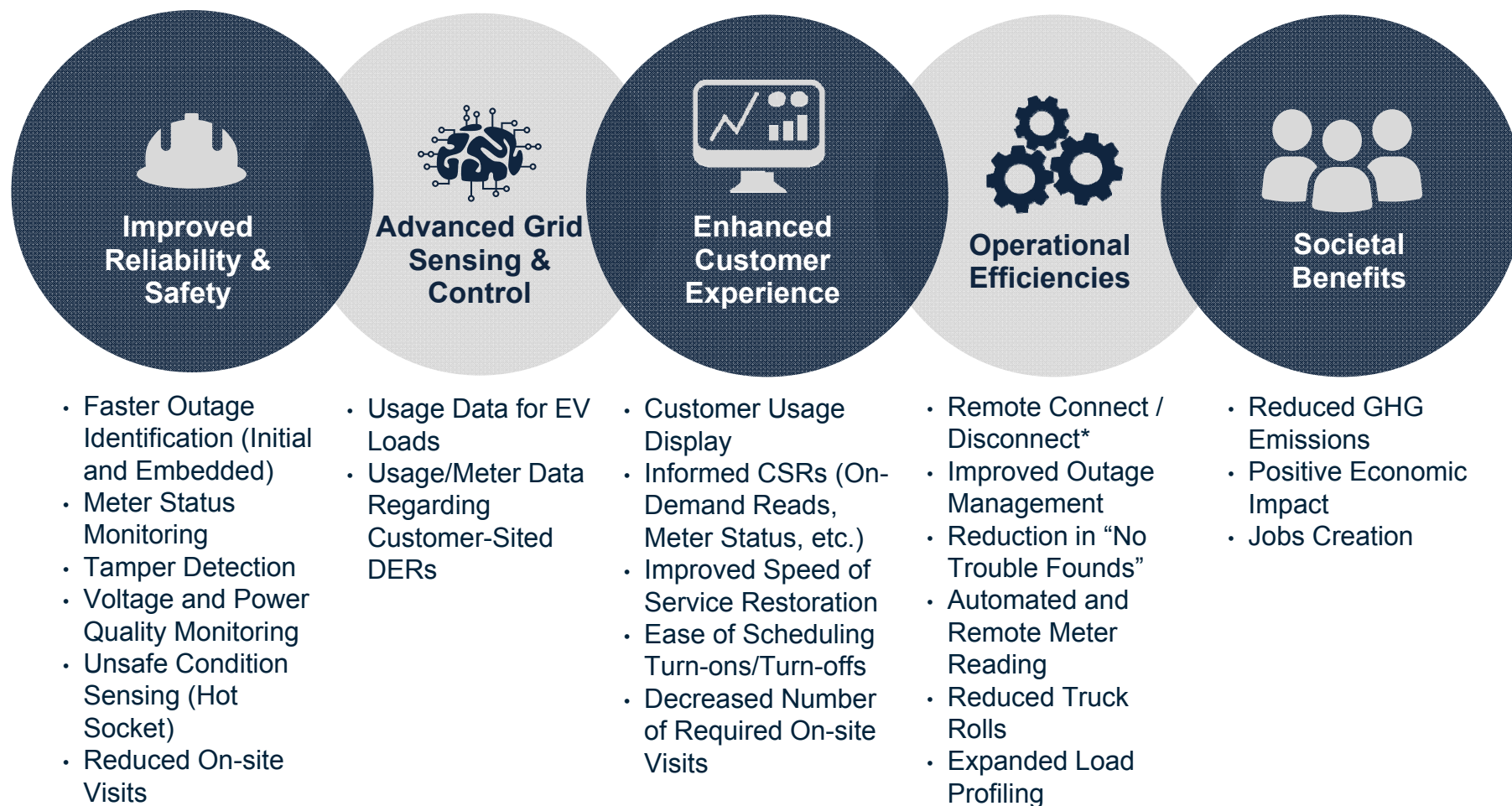
- Advanced metering capabilities (interval data, potential net metering) necessary for integration of EV charging and DERs into the distribution grid
- Improved forecasting of new supply assets and load patterns for integrated resource planning
- Data to understand impacts to and anticipate issues with 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**





















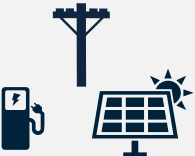
















## AMI will deliver considerable benefits across five key categories upon deployment



\*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		



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

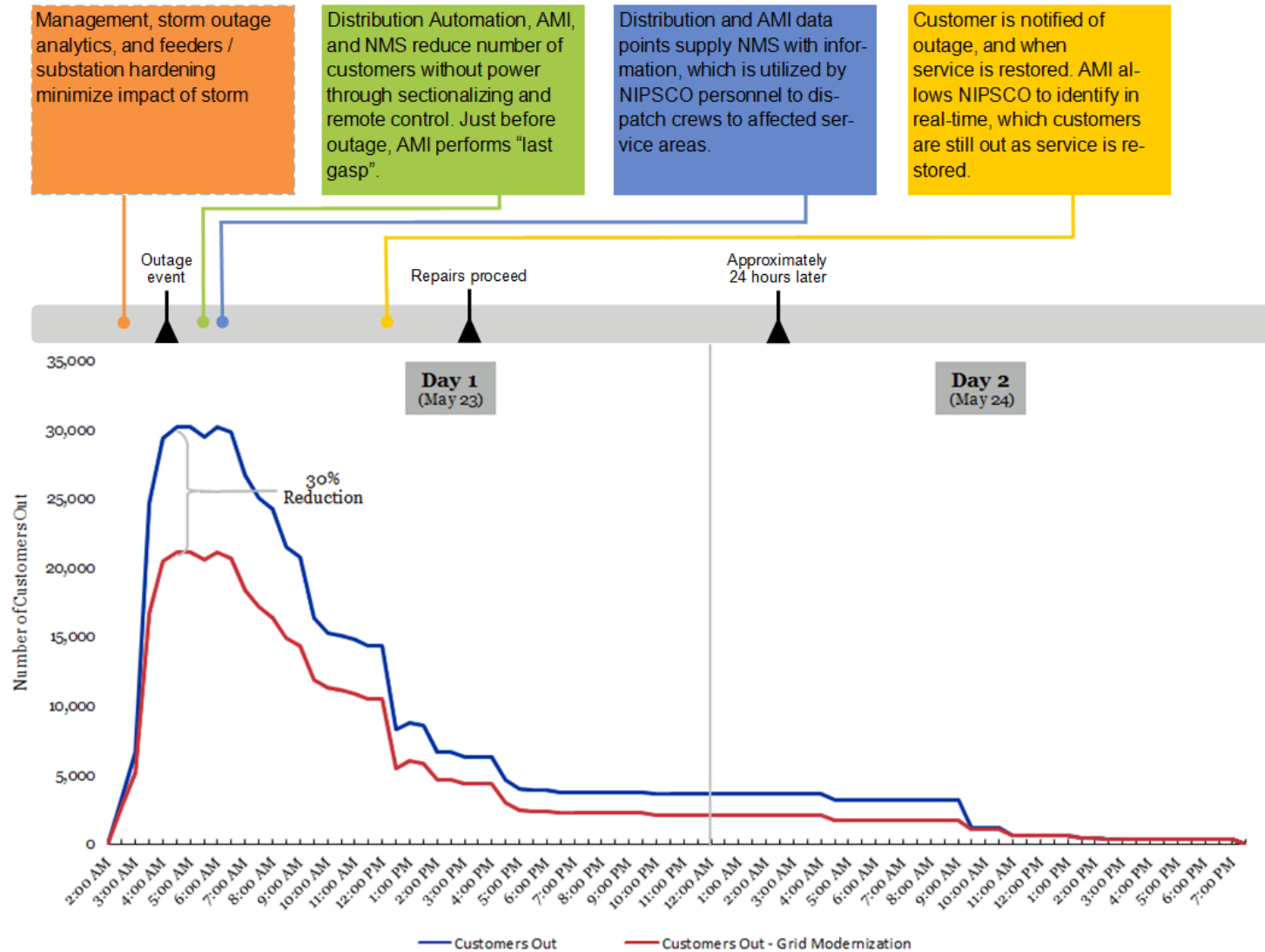
## Implementing AMI will begin with deploying MDMS and integrations in 2022-2023, followed by communications network and meters in 2024-2026

2021 Program Planning & Engagement	2022 Mobilization & Market Push	2023 Establish Systems & Install/Evaluate Initial Deployment	2024 Through 2026 Execute Full Deployment	Beyond 2026 Realize Benefits & Transform
<ul style="list-style-type: none"> <li>• Develop/Prepare AMI Regulatory Filing</li> <li>• Conduct Post-Filing Regulatory Engagement (data requests, interrogatories, etc.)</li> <li>• Conduct AMI Pre-Planning, including developing Governance, Staffing/Resource, and Stakeholder engagement plans</li> <li>• Develop Customer Engagement Plan</li> <li>• Develop Data Security Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Establish AMI Ops Organization</li> <li>• Develop, issue, and evaluate RFPs for               <ul style="list-style-type: none"> <li>• MDMS</li> <li>• Comms Network Engineering &amp; Hardware</li> <li>• AMI Meters</li> <li>• Comms Network Installation</li> <li>• AMI Meter install</li> </ul> </li> <li>• Begin MDMS design/ deployment</li> <li>• Initiate design of deployment and operational processes</li> </ul>	<ul style="list-style-type: none"> <li>• Award Contracts for Meters/Comms Vendors, Installers, and Line Work Contractors</li> <li>• Continue design &amp; planning to support meter deployment and integration</li> <li>• Complete deployment of MDMS and AMI Headend</li> <li>• Integrate AMI-MDM, MDM-CIS, MDM-Portal, and AMI-OMS</li> <li>• Conduct and evaluate Initial Deployment - 3,000 meters &amp; associated comms</li> </ul>	<ul style="list-style-type: none"> <li>• Install &amp; Optimize AMI Communications Network</li> <li>• Conduct Full Deployment – Approx. 490,000+ AMI meters</li> <li>• Execute AMI-OMS Integration Phases 1-4</li> <li>• Optimize deployment processes and ongoing operational processes</li> </ul>	<ul style="list-style-type: none"> <li>• Realize benefits through increased safety/reliability, enhanced customer experience, and operational efficiencies</li> <li>• Build off this foundation for further utility transformation</li> <li>• Potential future projects could include:               <ul style="list-style-type: none"> <li>• Billing and advanced rate options</li> <li>• Analytics solutions</li> <li>• CVR/VVO</li> <li>• Transformer loading</li> <li>• DER/EV optimization</li> </ul> </li> </ul>



**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*