VERIFIED DIRECT TESTIMONY OF RYAN T. CARR

INTRODUCTION

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

A1. My name is Ryan T. Carr. My business address is 3001 Leonard Dr., Valparaiso, Indiana 46383. I am employed by Northern Indiana Public Service Company LLC ("NIPSCO") as Manager Gas TDSIC E&C (Engineering and Construction) Program.

Q2. Please briefly describe your educational and business experience.

A2. I am a graduate of Purdue University where I earned a bachelor of science in electrical and computer engineering technology in 2005. I have been employed by NIPSCO and NiSource Corporate Services Company ("NCSC") in a variety of engineering, compliance, pipeline integrity, and gas projects & construction positions since 2005. I have been in my current position since March, 2020, and was in my prior position as Gas TDSIC E&C Program Manager since August, 2017.

Q3. What are your responsibilities as Manager Gas TDSIC E&C Program?

A3. As Manager Gas TDSIC E&C Program, I am responsible for a team managing, developing, implementing and serving as program subject

matter expert for projects related to the improvement of NIPSCO's physical gas transmission, distribution, and storage systems. This includes the determination of how to operate, maintain, monitor and analyze the TDSIC program and other gas trackers in order to optimize our goal of providing safe and reliable natural gas to customers through making system enhancements. To accomplish those responsibilities, I actively collaborate with internal executive leadership, Legal, Regulatory Policy, Operations, Engineering, and Capital Planning stakeholders. I also have responsibility for coordinating the project controls, including the preparation of annual budgets, and ongoing project cost control. My involvement began in July 2017 with the execution of the Year 2017 Projects in NIPSCO's 7-Year Gas TDSIC Plan for the period January 2014 through December 2020 ("Gas Plan 1").[1] I also was involved in the development and review of the Year 2017 through Year 2020 Projects in NIPSCO's Gas Plan 1. I was involved in coordinating the preparation of the 2020-2025 TDSIC Plan for the period January 2020 through December 2025 approved in Cause No. 45330 (the "2020-2025 TDSIC Plan"). In that role, I worked with engineers, including

[1] NIPSCO's Gas Plan 1 was set to expire December 31, 2020. In accordance with Ind. Code § 8-1-39-10(d), NIPSCO provided the Commission with a notice on October 30, 2019 that Gas Plan 1 will terminate on December 31, 2019. Gas Plan 1 terminated December 31, 2019.

those in a consulting role, as well as with others within the Company to compile, review, prioritize and analyze projects for incorporation into the 2020-2025 TDSIC Plan.

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

A4. Yes. I filed testimony before the Indiana Utility Regulatory Commission ("Commission") supporting NIPSCO's request for approval of its gas Transmission, Distribution and Storage System Improvement Charge ("TDSIC") plan for eligible transmission, distribution, and storage system improvements in Cause No. 45330 and NIPSCO's Gas TDSIC tracker proceeding in Cause No. 45330-TDSIC-X (beginning in TDSIC-1). I also testified in NIPSCO's Gas TDSIC tracker proceedings in Cause No. 44403-TDSIC-X (beginning in TDSIC-11). I also routinely provided testimony in NIPSCO's Gas Federally Mandated Cost Adjustment tracker proceedings in Cause No. 45007-FMCA-X (beginning in FMCA-4). I also filed testimony before the Commission in Cause No. 43507 in an electric service area boundary proceeding.

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

A5. The primary purpose of my testimony is to (1) support the actual capital expenditures relating to eligible transmission, distribution, and storage system improvements, (2) provide a description of how NIPSCO is executing the projects included in the 2020-2025 TDSIC Plan, (3) provide a description of how NIPSCO is managing costs of the projects included in the 2020-2025 TDSIC Plan, (4) provide a general overview of the Rural Extensions program in the 2020-2025 TDSIC Plan, (5) describe the plan update process application to the 2020-2025 TDSIC Plan, (6) support and explain NIPSCO's Updated 2020-2025 TDSIC Plan ("Plan Update-4"), and (7) confirm Plan Update-4 complies with the TDSIC Statute.

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

A6. Yes. NIPSCO's Verified Petition initiating this Cause is designated as Attachment 1-A sponsored by NIPSCO Witness Becker. I am sponsoring the following attachments, all of which were prepared by me or under my direction and supervision: (1) NIPSCO's currently approved 2020-2025 TDSIC Plan (Plan Update-3), which is attached to the Verified Petition initiating this Cause as Confidential Exhibit TDSIC Plan Update-3 (Redacted), (2) NIPSCO's proposed updated 2020-2025 TDSIC Plan (Plan Update-4), which is attached to the Verified Petition initiating this Cause as

Confidential Exhibit TDSIC Plan Update-4 (Redacted), and (3) Attachment 1, Schedule 1 (Columns B through F and J through N), which is attached to the Verified Petition initiating this Cause, showing the capital expenditures as of December 31, 2019 (Columns B and J) relating to eligible transmission, distribution, and storage system improvements included in Gas Plan 1, and the actual capital expenditures incurred through December 31, 2021 (Columns C through F and Columns K through N) relating to the eligible transmission, distribution, and storage system improvements included in the 2020-2025 TDSIC Plan.

I am also sponsoring the following documents, all of which were prepared by me or under my direction and supervision:

Attachment No.	Description
Attachment 3-A	Execution of the Plan
Attachment 3-B	Management of Costs
Confidential Attachment 3-C	Support for Rural Extensions
Attachment 3-D	Plan Update Process
Confidential Attachment 3-E	Summary of Plan Project Variances
Confidential Attachment 3-F	Project Changes by Plan

ACTUAL CAPITAL EXPENDITURES

Q7. What are the total actual capital expenditures associated with NIPSCO's

investment in transmission, distribution, and storage system improvements?

A7. As shown in Petitioner's Exhibit No. 1, Attachment 1-A, Attachment 1, Schedule 1 (Page 4), the total gross direct capital expenditures associated with NIPSCO's investment in transmission, distribution, and storage system improvements as of December 31, 2019 relating to Gas Plan 1 is $58,000,900 [Page 4, Lines 1-3, Column B]. The total indirect capital expenditures associated with NIPSCO's investment in transmission, distribution, and storage system improvements as of December 31, 2019 is $6,996,350 [Page 4, Line 4, Column B]. The total AFUDC for capital expenditures associated with NIPSCO's investment in transmission, distribution, and storage system improvements as of December 31, 2019 is $1,044,894 [Page 4, Line 5, Column B].

The total gross direct capital expenditures associated with NIPSCO's investment in transmission, distribution, and storage system improvements as of December 31, 2021 relating to the 2020-2025 TDSIC Plan is $182,084,853 [Page 4, Lines 1-3, Column E]. The total indirect capital expenditures associated with NIPSCO's investment in transmission, distribution, and storage system improvements as of December 31, 2021 relating to the 2020-

2025 TDSIC Plan is $22,509,210 [Page 4, Line 4, Column E]. The total AFUDC associated with NIPSCO's investment in transmission, distribution, and storage system improvements as of December 31, 2021 related to the 2020-2025 TDSIC Plan is $3,363,404 [Page 4, Line 5, Column E].

Q8. Referring to Plan Update-4 and Petitioner's Exhibit No. 1, Attachment 1-A, Attachment 1, Schedule 1, please explain why the subtotals for the transmission and distribution project categories may differ from the subtotals for transmission and distribution Federal Energy Regulatory Commission ("FERC") accounts.

A8. There may be differences in the transmission and distribution subtotals when comparing Project Category to FERC account. Some projects, such as inspect and mitigate projects, may incur charges that are booked to both distribution and transmission FERC accounts. However, because a majority of project costs related to specific projects are charged to either distribution or transmission FERC accounts, the project is classified into either a transmission or distribution project category on Plan Update-4 and Petitioner's Exhibit No. 1, Attachment 1-A, Attachment 1, Schedule 1.

EXECUTION OF THE 2020-2025 TDSIC PLAN

Q9. Please describe how NIPSCO is executing the projects included in the 2020-2025 TDSIC Plan.

A9. Attachment 3-A includes information supporting NIPSCO's execution of the 2020-2025 TDSIC Plan, including (1) an explanation of the project management processes NIPSCO uses to execute the Plan, (2) a description of how NIPSCO manages the portfolio of projects, (3) an explanation of NIPSCO's cost management process, and (4) a description of NIPSCO's process for executing the projects.

MANAGEMENT OF COSTS OF PROJECTS

Q10. Please describe how NIPSCO is managing costs of the projects included in the 2020-2025 TDSIC Plan.

A10. Attachment 3-B includes information supporting NIPSCO's management of costs in the 2020-2025 TDSIC Plan, including (1) an explanation of the estimation classes identified by the Association for the Advancement of Cost Engineering International, (2) an overview of NIPSCO's process for managing costs in the Plan, and (3) an explanation of the process NIPSCO uses to determine whether requested changes in cost estimates are eligible for TDSIC treatment.

RURAL EXTENSIONS

Q11. Please provide a general overview of the Rural Extensions program.

A11. In the 45330 Order, the Commission approved NIPSCO's proposal to include all rural gas extensions, both those that qualify using the 20-year margin test under Ind. Code § 8-1-39-11 and those that may qualify under NIPSCO's existing line extension policy, and provide an 80% credit to the TDSIC tracker for actual margins received from all new customers added under the rural extensions projects. The forecast in the 2020-2025 TDSIC Plan are the costs associated with designing and installing gas main and service projects to reach rural areas. In TDSIC-2, NIPSCO updated the average service installation cost based on experience in 2020, which affected all remaining years of the Plan. This will continue to be updated annually and the costs could increase based on NIPSCO's ongoing experience.

Q12. How does NIPSCO administer the rural gas extension process?

A12. The extension of NIPSCO's system must be undertaken thoughtfully and must include both short- and longer-term operational considerations. For that reason, NIPSCO has developed an internal process to ensure that rural extensions are approached to consider both the needs of potential new customers and the logical operational needs of the system. New customer

requests are bundled, based on location, into projects which are prioritized by cost effectiveness and number of potential customers to be connected, and then built as soon as possible taking into account available resources, weather and seasonal constraints.

As part of the process, if NIPSCO's Gas System Planning group recommends the installation of pipeline of greater capacity than what would be necessary to serve the specific customers requesting service to make sure that future growth can be supported, the larger pipe size is installed. It is more cost effective to install a larger distribution main during the initial installation than it would be to install the minimum size and return later and upsize the pipe to accommodate future growth. With that said, if NIPSCO elects to upsize the pipe in anticipation of future growth, individual customers are evaluated based on a minimum cost to serve their location. NIPSCO analyzes customer requests as they are received while accounting for future growth and system reliability to create cost effective projects, as specified in the TDSIC Statute.

Q13. Are the rural extensions projects included in Plan Update-4 projected to pass the 20-year test identified in Ind. Code § 8-1-39-11?

A13. Yes. There are two primary methods for NIPSCO to determine whether a new rural business project is eligible for TDSIC treatment: (1) new rural projects that meet the 6-year margin test under Rule 6 of NIPSCO's Tariff; and (2) application of the "20-year" margin test. The "20-year" margin test is based on customer inquiries and interest, and the geographic area is reviewed to define what customers have the potential to be served. A design is then prepared by NIPSCO's system planners, new business group, and field engineers for the facilities required to extend the distribution system and provide service to the inquiring customers that are within the geographic area. That design includes routes, amounts of main by size, amounts of service line, regulator stations, etc. From that design, a cost of installation is estimated. That cost is compared with the projected margins associated with customers expected to connect with the new project over a 20-year period, taking into consideration factors such as connection rates and customer usage for both commercial and residential customers.

Margins for rural extensions projects that meet the 6-year margin test are determined pursuant to Rule 6 of NIPSCO's Tariff. Margins for rural extensions projects under the 20-year margin test are projected based on historical data for margin per customer for residential and commercial

customers and for connection rates. The cost of the extension is estimated based on the project design and includes high level cost estimates. This analysis is performed within a model that is used to build a business case for the project in question.

Q14. In accordance with the Commission's June 16, 2021 Order in Cause No. 45330-TDSIC-2 (the "TDSIC-2 Order"), have you provided an annual summary of Project ID RE1?

A14. Yes. Confidential Attachment 3-C is an annual summary of Project ID RE1 as of December 31, 2020. In accordance with the TDSIC-2 Order, the annual summary shows: (1) the estimated and actual customers connected annually; and (2) a margin test for actual customers connected with Rural Extensions. Confidential Attachment 3-C reflects the data after close-out of 2020. The TDSIC-2 Order directed that the data be updated annually after close-out. Confidential Attachment 3-C will next be updated in TDSIC-5 after close-out of 2021.

PLAN UPDATE PROCESS

Q15. Please describe the plan update process applicable to the 2020-2025 TDSIC Plan.

A15. Attachment 3-D provides a description of the plan update process approved in the 45330 Order.

PLAN UPDATE-4

Q16. Has NIPSCO included the 2020-2025 TDSIC Plan as part of this filing as required by Ind. Code § 8-1-39-9?

A16. Yes. A public version of NIPSCO's currently-approved 2020-2025 TDSIC Plan (Plan Update-3) is attached to the Verified Petition initiating this Cause as Confidential Exhibit TDSIC Plan Update-3 (Redacted). The confidential version of NIPSCO's currently-approved 2020-2025 TDSIC Plan is the subject of a motion for protection of confidential information currently pending in this proceeding.

Q17. Has NIPSCO included an update to the 2020-2025 TDSIC Plan as part of this filing as required by Ind. Code § 8-1-39-9?

A17. Yes. A public version of NIPSCO's proposed update to the 2020-2025 TDSIC Plan (Plan Update-4) is attached to the Verified Petition initiating this Cause as Confidential Exhibit TDSIC Plan Update-4.[2] The confidential

[2] This is an update to Confidential Exhibit TDSIC Plan Update-3 approved in the TDSIC-3 Order.

version of NIPSCO's update to the 2020-2025 TDSIC Plan is the subject of a motion for protection of confidential information currently pending in this proceeding.

Q18. Please describe how Plan Update-4 is organized.

A18. Plan Update-4 is organized as follows:

Plan by Project Category	Provides a high level summary showing the breakout of investment by year for both transmission and distribution.
Plan by FERC Account	Provides a high level summary showing the break down by Federal Energy Regulatory Commission ("FERC") Uniform System of Account number by year for both transmission and distribution.
Project Detail by Year	Provides project detail separately for each year of the Plan (2020-2025). The Project Detail by Year pages are described in greater detail below.
Project Detail Variances	Provides an explanation of the moves and variances for Years 1 through 6 (2020 through 2025) of the Plan.
Project Detail Summary by Year	Matrix showing all of the projects included in Plan Update-4 by project category by year showing the total investment of the 2020-2025 TDSIC Plan, along with the total variance of the project over the life of the 2020-2025 TDSIC Plan.
Confidential Appendix 1	NIPSCO Transmission Risk Comparison

Confidential Appendix 2	2021 Project Estimate supporting Plan Update-1
Confidential Appendix 2.1	2021 Project Change Requests supporting Plan Update-3
Confidential Appendix 2.2	2021 Project Change Requests supporting Plan Update-4
Confidential Appendix 3	2023 Project Estimate supporting Plan Update-1
Confidential Appendix 4	Summary of Unit Cost Estimates supporting Plan Update-1
Confidential Appendix 4.1	Summary of Unit Cost Estimates supporting Plan Update-2 and Plan Update-3
Confidential Appendix 4.2	Summary of Unit Cost Estimates supporting Plan Update-4
Confidential Appendix 5	Rural Extensions Estimates supporting Plan Update-2 and Plan Update-3
Confidential Appendix 5.1	Rural Extensions Estimates supporting Plan Update-4

Q19. Please describe Confidential Appendix 1.

A19. Confidential Appendix 1 is the Transmission Risk Comparison prepared by EN Engineering dated November 26, 2019 (the "Risk Model") used in development of the 2020-2025 TDSIC Plan (along with internal subject matter expert input). The Risk Model shows the impact that the projects NIPSCO completed in Gas Plan 1 had and the projects NIPSCO anticipates completing in the 2020-2025 TDSIC Plan will have on reducing overall risk.

The engineering analysis for individual projects incorporated specific algorithms and ranking methodologies that are identified in Appendix A to Confidential Appendix 1.

Q20. Please describe Confidential Appendix 2.

A20. Confidential Appendix 2 includes the project estimates for 2021 supporting Plan Update-1.

Q21. Please describe Confidential Appendix 2.1.

A21. Confidential Appendix 2.1 includes the PCRs supporting revisions to individual projects costs for 2021 in Plan Update-3. A PCR is prepared for any project variance that is in excess of $30,000 or 15%, whichever is greater, or any variance that exceeds $100,000 for any project whether or not it meets the 15% threshold.

Q22. Please describe Confidential Appendix 2.2.

A22. Confidential Appendix 2.2 includes the PCRs supporting revisions to individual projects costs for 2021 in Plan Update-4. A PCR is prepared for any project variance that is in excess of $30,000 or 15%, whichever is greater, or any variance that exceeds $100,000 for any project whether or not it meets the 15% threshold.

Q23. Please describe Confidential Appendix 3.

A23. Confidential Appendix 3 includes the project estimates for 2023 supporting Plan Update-1.

Q24. Please describe Confidential Appendix 4.

A24. Confidential Appendix 4 is the Summary of Unit Cost Estimates supporting Plan Update-1.

Q25. Please describe Confidential Appendix 4.1.

A25. Confidential Appendix 4.1 is the Summary of Unit Cost Estimates supporting Plan Update-2 and Plan Update-3.

Q26. Please describe Confidential Appendix 4.2.

A26. Confidential Appendix 4.2 is the Summary of Unit Cost Estimates supporting Plan Update-4.

Q27. Please describe Confidential Appendix 5.

A27. Confidential Appendix 5 is the Rural Extensions Estimates supporting Plan Update-2 and Plan Update-3.

Q28. Please describe Confidential Appendix 5.1.

A28. Confidential Appendix 5 is the Rural Extensions Estimates supporting Plan Update-4. Please explain how the Project Detail pages of Plan Update-4 are organized.

The Project Detail pages of Plan Update-4 for each year of the Plan are organized, by year, as follows:

Column	Name	Description
	Line No.	
	Project ID	Shows the Project ID assigned to the project.
	Project Category	Shows the Category for the project.
	Project Driver	Shows the project driver
	Project Title	Shows the name of the project
A	Approved Project Cost	This shows the costs (direct dollars) approved in Plan Update-3
B	Updated Project Cost	This shows the updated project costs (direct dollars) included in Plan Update-4
C	Variance by Project	This shows the difference between the Approved Project Costs (direct dollars) and Updated Project Costs (direct dollars)

The Project Detail pages also provide an explanation for each of the variances for any year with a cost variance.

Q29. Please describe Confidential Attachment 3-E.

Excluded from Public Access per A.R. 9(G)

A29. Confidential Attachment 3-E shows plan variances (moves and costs) by year, by project, specifically showing the amount of the project move, the project cost variance, and the percent of project cost variance. The purpose of Confidential Attachment 3-E is to further break down the plan variances into project moves and project cost variances. The "Total Variance" (Column G) from Confidential Attachment 3-E is equal to the "Variance by Project" (Column C) from Plan Update-4 on the Project Detail Pages for each year. If a project moves into or out of a year, the move is captured in "Move In" (Column H) or "Move Out" (Column I). The sum of the "Move In" and "Move Out" columns is included in the "Net Moves" column (Column J). The value of the move in or out is equivalent to the previously approved plan. If the cost estimate of a project has changed, either up or down, the change in cost is captured in the "Project Cost Variance" column (Column K). The percent change is shown in the "% Total Variance" column (Column L).

Q30. Please describe Confidential Attachment 3-F.

A30. Confidential Attachment 3-F shows, by project, the 2020-2025 TDSIC Plan approved amount (Column E), Plan Update-1 Changes (Column F), Plan Update 2 Changes (Column G), Plan Update 3 Changes (Column H), Plan

Update 4 Changes (Column I), Total Changes from Original Plan (Column M), and Total Updated Plan (Column N). Columns J through L will be populated in future plan update filings.

Q31. Please provide an overview of changes to the 2020-2025 TDSIC Plan reflected in Plan Update-4.

A31. Plan Update-4 reflects actual costs through December 31, 2021. For projects scheduled for completion in 2022, the estimated costs are based on final or near final engineering and updated unit costs, or current bids. For projects scheduled for completion after 2022 estimates are based on unit costs, or NIPSCO has attempted to reflect its actual experience to date in its updated project cost estimates wherever feasible. It is more difficult to anticipate cost changes for specific projects the further in advance the estimate is made, so changes in non-unit costs have been made only where such changes have a basis in updated engineering analysis.

Plan Update-4 shows an overall increase in direct capital costs of $4,987,499 [Plan Update-4, Page 1, Line 27] or about .6% across the 2020-2025 TDSIC Plan. Indirect capital costs and AFUDC decreased by $3,339,630 [Plan Update-4, Page 1, Lines 28 and 29]. The overall projected 2020-2025 TDSIC

Plan cost increase is $1,647,869 or about .2% [Plan Update-4, Page 1, Line 30]. The projected increase in costs is not uniform and varies from project to project, with some projects reflecting a decrease in the projected costs, and the changes are spread unevenly across the Plan based on the timing of projects and the nature of the underlying work. Details supporting noteworthy cost increases by year are included below.

Q32. Is NIPSCO requesting approval of transmission, distribution, and storage system improvements not described in its approved 2020-2025 TDSIC Plan?

A32. No.

Q33. How do the total projected capital expenditures for Plan Update-4 compare to the approved total projected capital expenditures for the 2020-2025 TDSIC Plan (Plan Update-3)?

A33. The table below shows the total projected capital spending, including indirect capital costs and AFUDC, for Plan Update-4 compared to the approved 2020-2025 TDSIC Plan (Plan Update-3).

	2020	2021	2022	2023	2024	2025	Plan Total
Plan Update-3	$78,325,368	$129,357,689	$146,286,784	$196,435,834	$181,149,761	$175,557,761	$907,113,197
Plan Update-4	$78,325,368	$129,632,098	$157,700,720	$186,923,982	$180,621,137	$175,557,761	$908,761,066
Variance	$0	$247,409	$11,413,936	($9,511,852)	($528,624)	$0	$1,647,869

Q34. Did the indirect cost percentage of 13.5% used in Plan Update-3 change in Plan Update-4?

A34. No. The estimated indirect percentage of 13.5% for plan years 2022 through 2025 remains unchanged. Each future year will be updated to reflect actual indirect capital costs when a given calendar year is closed out.

Q35. Did the AFUDC percentage of 3.5% used in Plan Update-3 change in Plan Update-4?

A35. No. The estimated AFUDC percentage of 3.5% for plan years 2022 through 2025 remains unchanged. Each future year will be updated to reflect actual AFUDC costs when a given calendar year is closed out.

2021 PROJECTS

Q36. Did NIPSCO move any Projects to 2021 that were included in a different year in Plan Update-3?

A36. Yes. As shown in Confidential Attachment 3-E, the project costs moved into 2021 are shown below. This shift of costs does not change the total approved project costs.

- Aetna to 483# Loop [Project ID TP11]. Moved $[redacted] in direct costs from 2022 to 2021 as a result of adjusting the timing of material purchases and tree clearing.

Q37. Is NIPSCO proposing to add any projects to 2021 that were not previously included in Plan Update-3?

A37. No.

Q38. Is NIPSCO proposing to rename any projects included in 2021 of Plan Update-4?

A38. Yes. Arcelor Mittal Station #1 has been renamed Cleveland Cliffs Burns Harbor #1. This project name has been updated to reflect the Cleveland-Cliffs Inc. acquisition of substantially all of the operations of ArcelorMittal USA LLC.

Q39. Please explain what drove any noteworthy cost increases for the 2021 Projects.

A39. As shown in Confidential Attachment 3-E, the following projects show a cost increase greater than $100,000 or 20%, whichever is greater, over what was approved in Plan Update-3:

- Cleveland Cliffs Burns Harbor #1 [Project ID IM41] [$[redacted] (29%)]. After soil boring samples were analyzed, it was discovered that the planned horizontal directional drill ("HDD") would have a high likelihood of being unsuccessful. This, in conjunction with a limited available construction footprint, necessitated the need to switch to an auger-style bore. The switch to the auger bore increased cost due to additional engineering and labor required to complete it. Increased labor costs were also realized due to a valve not fully

sealing on the first attempt during a tie-in procedure, causing the activity to extend further than initially anticipated. There was also use of hydro excavation activities due to the site being within an industrial complex and having high risk of customer owned facilities within the work zone. Welders were retained on site while technical aspects of installing a fitting on the customers piping were discussed and analyzed. This mitigated the risk of skilled labor availability and eliminated the need to go through the Operational Qualification process again, which would further stretch the project schedule. Additional labor costs were also realized when the work week extended in order to meet the customer's timeline of a scheduled outage.

- Churubusco HP System Improvement [Project ID SD15] [$[redacted] (3%)]. Field tile repair quantities were greater than originally estimated. Field tiles are made of materials that are not locatable through the normal process (using the 811 system) and are very difficult to estimate ahead of project execution because most of the land these tiles are located in is privately owned, owners do not have exact locations for the tiles, and the tiles cannot be located through the usual practice which utilizes a tracer wire. The purchase of additional pipeline materials was expedited to minimize a productivity impact to the construction. In addition, NIPSCO construction standards require the new line to have an inline inspection, increasing support services duration.

- Shipshewana Distribution Headers [Project ID DSD13] [$[redacted] (18%)]. The primary reason for the cost increase was the difficulty in acquiring the final parcel and easement for the project. The condemnation process went much longer than is typical and was ultimately solved with a settlement agreement with the customer. This delay caused two additional months of equipment rental. While NIPSCO could have returned the equipment, there was no guarantee it would have been available when needed, which could have further delayed the project. Also, two additional HDDs were added instead of open cut. The HDDs allow for the agreed upon extra depth of cover due to the vehicle loads being driven over the pipe to access the impacted customer, minimizes the customers' business

interruptions, and avoids the removal of contested landscaping. Additionally, the HDDs prevented the removal a large amount of fencing, minimized significant amounts of land disturbance which would require shoring, and decreased the amount of restoration required. Finally, the bore fluid used for the HDDs is required to be disposed of at one of two certified facilities, which caused additional expense.

- Rural Extensions [Project ID RE1] [$[redacted] (8%)]. Additional work was required due to an increase in customer demand. There were multiple multi-million dollar rural extension projects in 2021, and roughly 500 additional services were installed compared to 2020. These projects were larger in scope than what was included in NIPSCO's previous estimate.

2022 PROJECTS

Q40. Did NIPSCO move any Projects to 2022 that were included in a different year in Plan Update-3?

A40. Yes. As shown in Confidential Attachment 3-E, the project costs moved into 2022 are shown below. This shift of costs does not change the total approved project costs.

- Aetna to Tassinong [Project ID TP10]. Moved $[redacted] in direct costs from 2021 and 2024 to 2022 as a result of adjusting the timing of electrical work, tree clearing, and civil work on three regulator stations.

- Aetna to 483# Loop [Project ID TP11]. Moved $[redacted] in direct costs from 2023 to 2022 to reflect the current execution plan.

- Cleveland Cliffs Burns Harbor #2 [Project ID IM42]. Moved $[redacted] in direct costs from 2023 to 2022 as a result of adjusting the timing of project engineering and material purchases.

- Shipshewana Distribution Headers [Project ID DSD13]. Moved $[redacted] in direct costs from 2021 to 2022 as a result of the project delay.

Q41. Is NIPSCO proposing to add any projects to 2022 that were not previously included in Plan Update-3?

A41. No.

Q42. Is NIPSCO proposing to rename any projects included in 2022 of Plan Update-4?

A42. Yes. Arcelor Mittal Station #1 has been renamed Cleveland Cliffs Burns Harbor #1 and Arcelor Mittal Station #2 has been renamed Cleveland Cliffs Burns Harbor #2. These project names have been updated to reflect the Cleveland-Cliffs Inc. acquisition of substantially all of the operations of ArcelorMittal USA LLC.

Q43. Please explain what drove any noteworthy cost increases for the 2022 Projects.

A43. As shown in Confidential Attachment 3-E, the following projects show a cost increase greater than $100,000 or 20%, whichever is greater, over what was approved in Plan Update-3:

- Corrosion Rectifiers Install/Replace [Project ID IM24] [$[redacted] (100%)]. Additional rectifier projects were added in 2022 due to

inspection results from NIPSCO's corrosion department. Full scoping of the six potential projects is underway and estimates will be refined as those activities progress. For these projects, NIPSCO is currently using the unit cost basis as approved in the TDSIC 2020-2025 plan.

- Cleveland Cliffs Burns Harbor #1 [Project ID IM41] [$[redacted] (100%)]. Work has been delayed from 2021 into 2022 due to the requirement of the customer to provide proper operating conditions for the project to be fully completed. These activities include the installation of the overpressure protection valve, the removal of the bypass required to keep the customer in service while construction activities took place, and final restoration and corrosion activities. These activities were unable to be completed in 2021, necessitating funding in 2022 that was unanticipated because the project was to be completed by the end of 2021. This was because certain work can only be completed under certain operating conditions on the customer side to safely complete these activities without a risk of interruption. The current plan is to finish the primary activities of this project in May of 2022 when the customer has a planned complete shut down of their facilities. This will allow for the safest, and least operational risk conditions for both NIPSCO and the customer. Please also refer to QA 39 above as that explanation also pertains to 2022.

- Shipshewana Distribution Headers [Project ID DSD13] [$[redacted] (100%)]. Additional work has been pushed into 2022 due to project delays in 2021 resulting from a difficulty in obtaining necessary real property. The 2022 work includes the final tie into an existing regulator station, final restoration, and conditioning of the pipeline.

<u>2023 PROJECTS</u>

Q44. Did NIPSCO move any Projects to 2023 that were included in a different year in Plan Update-3?

A44. Yes. As shown in Confidential Attachment 3-E, the project costs moved into 2023 are shown below. This shift of costs does not change the total approved project costs.

- RCUGS – Isolation Valves [Project ID SRC3]. Moved $[redacted] in direct costs from 2021 to 2023 as a result of work being delayed due to complications encountered during the engineering phase.

Q45. Is NIPSCO proposing to add any projects to 2023 that were not previously included in Plan Update-3?

A45. No.

Q46. Is NIPSCO proposing a rename of any projects included in 2023 of Plan Update-4?

A46. Yes. Arcelor Mittal Station #2 has been renamed Cleveland Cliffs Burns Harbor #2. This project name has been updated to reflect Cleveland-Cliffs Inc. acquisition of substantially all of the operations of ArcelorMittal USA LLC.

Q47. Please explain what drove any noteworthy cost increases for the 2023 Projects.

A47. As shown in Confidential Attachment 3-E, there are no projects showing a cost increase greater than $100,000 or 20%, whichever is greater, over what was approved in Plan Update-3.

2024 PROJECTS

Q48. Did NIPSCO move any Projects to 2024 that were included in a different year in Plan Update-3?

A48. No. As shown in Confidential Attachment 3-E, no project costs moved into 2024.

Q49. Is NIPSCO proposing to add any projects to 2024 that were not previously included in Plan Update-3?

A49. No.

Q50. Please explain what drove any noteworthy cost increases for the 2024 Projects.

A50. As shown in the Confidential Attachment 3-E, there are no projects showing a cost increase greater than $100,000 or 20%, whichever is greater, over what was approved in Plan Update-3.

2025 PROJECTS

Q51. Did NIPSCO move any Projects to 2025 that were included in a different

year in Plan Update-3?

A51. No. As shown in Confidential Attachment 3-E, no project costs moved into 2025.

Q52. Is NIPSCO proposing to add any projects to 2025 that were not previously included in Plan Update-3?

A52. No.

Q53. Please explain what drove any noteworthy cost increases for the 2025 Projects.

A53. As shown in the Confidential Attachment 3-E, there are no projects showing a cost increase greater than $100,000 or 20%, whichever is greater, over what was approved in Plan Update-3.

STATUTORY COMPLIANCE

Q54. Does Plan Update-4 provide the best estimate of the cost of the investments included in the 2020-2025 TDSIC Plan?

A54. Yes. Plan Update-4 provides information to support NIPSCO's best estimate of the cost of investments included in the 2020-2025 TDSIC Plan. As noted above, Plan Update-4 includes: (1) a Risk Model; (2) project change requests supporting any project variance that is in excess of $30,000

or 15%, whichever is greater, or any variance that exceeds $100,000 for any project whether or not it meets the 15% threshold; (3) project estimates; (4) a summary of unit cost estimates; and (5) rural extensions estimates. NIPSCO's best estimate of costs rests on a sound factual and analytical foundation and is reasonable.

Q55. Does the public convenience and necessity require, or will it require, the transmission, distribution, and storage system improvements included in Plan Update-4?

A55. Yes. The eligible improvements included in Plan Update-4 will serve the public convenience and necessity in various ways. NIPSCO's Plan Update-4 follows the requirements of the Statute by making investments for the purposes of safety, reliability, system modernization and economic development consistent with public policy and the public interest. NIPSCO has a statutory obligation to provide adequate retail service in its certificated gas service territory pursuant to Ind. Code § 8-1-2.3-4(a). NIPSCO performs this obligation for the public convenience and necessity. The eligible improvements included in Plan Update-4 are essential in protecting the integrity, safety, and reliable operation of the system and enhance the ability of NIPSCO customers to take advantage of the rapid

development of alternative natural gas supply and delivery options and also position NIPSCO's system to remain reliable and flexible in the event of significant changes to the economic and operational climate for natural gas. Additionally, the extension of gas service to rural areas will allow some residents in NIPSCO's service territory to access natural gas services for the first time.

Q56. Are the estimated costs of the eligible improvements included in Plan Update-4 justified by incremental benefits attributable to the Plan?

A56. Yes. Plan Update-4 focuses on maintaining safe, reliable service for NIPSCO's customers in a cost effective manner. While Plan Update-4 addresses all four types of eligible investment (safety, reliability, system modernization and economic development) in the TDSIC Statute, the emphasis of most of the Plan's investments is to positively impact public safety. Safety drivers focus on risk reduction related to gas system leaks, pipeline ruptures, or incidents of pressure excursion. Reliability drivers include the avoidance of gas outages driven from the inability to maintain gas system pressure during peak load events.

Plan Update-4 is intended to provide benefits in the form of investments to

maintain and improve system reliability through the capacity of the system to deliver gas to customers when they need it, replacement of certain system assets to ensure the ongoing integrity and safe operation of the gas system, and the extension of gas facilities into rural areas. The Rural Extensions projects included in Plan Update-4 will continue to increase the number of rural customers served over the life of the Plan.

Plan Update-4 cost effectively addresses safety, reliability, system modernization, and the extension of gas service into rural areas, and provides incremental benefits to NIPSCO's customers.

NIPSCO has prioritized and optimized the incremental benefits of Plan Update-4 and shown a sound basis for the proposed projects and associated costs, which is consistent with the standard the Commission has previously applied to the evaluation of incremental benefits under the TDSIC Statute. Plan Update-4 is proposed to reduce risk of asset failure and maintain service reliability. In doing so, Plan Update-4 provides incremental benefits compared to how the future would otherwise unfold.

Q57. Please summarize the relief NIPSCO is requesting with respect to Plan Update-4.

A57. NIPSCO requests the Commission to approve its Plan Update-4 as set forth in Confidential Exhibit TDSIC Plan Update-4 attached to its Verified Petition initiating this Cause, including the project cost estimates for each year of the Plan. NIPSCO requests the Commission to approve the projects included in Plan Update-4 as eligible transmission, distribution, and storage system improvements under Ind. Code § 8-1-39-2. NIPSCO also requests approval to recover the costs of the eligible investments included in Plan Update-4 through the TDSIC mechanism.

Q58. Does this conclude your prepared direct testimony?

A58. Yes.

VERIFICATION

I, Ryan T. Carr, Gas TDSIC E&C Program Manager 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.

Ryan T. Carr

Date: March 1, 2022

Execution of the 2020-2025 TDSIC Plan

Project Management Processes

NIPSCO's processes and procedures were developed around the Project Management Institute's Project Management Body of Knowledge (PMBOK) guidelines. The processes are designed to integrate project design and project planning, scope management, schedule and cost management, and risk management to provide a project life cycle plan and provide consistency in execution. Projects are monitored closely throughout the life cycle. During the design and planning phase, a gate process is followed with stakeholder involvement to assure required details are included in the design or construction plan. Prior to execution, formal schedule reviews are conducted for major projects to assure a comprehensive plan and appropriate controls are complete. A formal Project Management Plan and baseline schedule is issued by the Project Manager and Project Scheduler and approved by the Manager, Gas Major Projects for each of the major projects at the completion of the planning phase.

During project execution, the Project Manager and Project Scheduler provide weekly schedule updates that include a number of project performance indicators. The Project Manager and Project Controls team provide a cost update and forecast twice each month.

The TDSIC projects are of significant importance to NIPSCO's senior leadership, as well as the rest of the organization. Project updates which focus on the performance against the Project Management Plan are provided monthly. The updates include a review of the safety performance, environmental compliance, cost, and schedule as well as the status of any identified risks.

Management of the Portfolio of Projects

NIPSCO utilizes one department to manage the Gas TDSIC Plan project portfolio. The Engineering department developed the Gas TDSIC Plan and the initial cost estimates for the projects. The projects within the Gas TDSIC Plan were then assigned to the appropriate departments (including Engineering and Gas Major Projects) for design and execution. The Project Manager and the Project Controls Team have the primary responsibility to verify that costs are accurately forecasted, accounted for and tracked for all TDSIC projects. The Project Controls Team is responsible for obtaining, tracking and paying invoices for the TDSIC projects. The Project Controls Team is also responsible for creating monthly forecasts and accruals based on input from the Project Manager and appropriate groups. The Gas TDSIC Plan represents a major effort and is an increase in the amount of annual project work undertaken by NIPSCO. The Gas TDSIC Plan also requires simultaneous execution of numerous large capital projects. Managing this

amount of capital investment requires accounting and project control support, which the Project Controls Team provides.

Cost Management Process

The process for initiating a new TDSIC work order begins with the Project Engineer/Manager submitting a Capital Initiative Form ("CIF") to the TDSIC Support Budget Analyst. The Budget Analyst does a preliminary check of the asset register to verify the work is a valid TDSIC project. The Budget Analyst initiates the work order and routes the CIF to the Plan Owner and the Project Execution/Engineering Team for two levels of review. The purpose of the first level of review, termed "TDSIC Verification," is to verify that the project and costs are TDSIC eligible. This ensures that only eligible project costs are included in the TDSIC tracker. The Plan Owner reviews projects for TDSIC eligibility by referring to NIPSCO's currently approved Gas TDSIC Plan. The Plan Owner is responsible for understanding the intent and purpose of the overall Plan, and reviews all requests to determine if the work is authorized within the Plan. This is a critical component of the Gas TDSIC Plan as it allows NIPSCO the flexibility to address current system priorities. The purpose of the second level of review, termed "Work Order Approval," is to approve the scope and cost of the project work. The work order is approved by the Project Execution or Engineering Leader or Manager depending on who originates the work order request, either the Project Manager or

Engineer. Both TDSIC Verification and Work Order Approval are required before work is performed and project costs are incurred.

At the time of request and during the review and approval process, TDSIC work orders are identified and classified by category and sub-category. During initiation of the work order, the TDSIC Budget Analyst flags the TDSIC work order in NIPSCO's Fixed Asset System, (PowerPlant), with the specific TDSIC category and sub-category. These identifiers and classifications in PowerPlant assist in ensuring that only TDSIC work orders are included for recovery.

Once a TDSIC work order is initiated, NIPSCO records charges to the work order in accordance with NIPSCO's internal controls. Capital dollars at NIPSCO are separated into two segments: (1) direct capital and (2) indirect capital. Direct capital represents costs such as the engineering, materials and equipment installed, and the labor costs of the workers performing the construction. Indirect costs are associated with capital projects and must be capitalized in order to comply with Generally Accepted Accounting Principles. However, these often cannot be charged directly to a specific capital project work order as they cannot be directly linked to one particular project. These capital costs tend to be incurred away from the job site. NIPSCO groups these indirect capital costs

into three categories: (1) overheads, (2) stores, freight and handling, and (3) allowance for funds used during construction ("AFUDC").

Vendor related direct costs are procured through the use of a material requisition or equivalent form ("MR"). A purchase order or equivalent form ("PO") is required to order goods or services. To initiate a PO with a vendor, an MR is initiated and routed for approval. The MRs related to the TDSIC projects are labeled with a specific route code to ensure they are first routed to the TDSIC Project Controls Team, who then routes the request for required approvals. The MRs are approved by the Project Execution Leaders depending upon the dollar amount of the request. The Procurement group then generates a PO, which is identified as a TDSIC PO. The TDSIC route code on the PO ensures that TDSIC invoices are routed to the TDSIC Project Controls Team for validation. The TDSIC Project Controls Team routes TDSIC invoices to the TDSIC Project Execution group for two levels of approval.

In addition to the controls discussed above, the TDSIC Project Controls Team provides the Project Managers bi-weekly reports that show the year-to-date actual costs to each project and an estimate of the weekly costs for the current month. The TDSIC Project Controls Cost Engineers meet once per month with the Project Managers and Manager, Gas Major Projects to review actual costs, to estimate accruals, and to update

the forecast for the current year estimate at completion and full project estimate at completion for multi-year projects. The Project Managers also review all project costs to ensure that costs are properly recorded to the TDSIC work orders. This process includes the review of non-vendor payments such as internal labor and other direct costs. The TDSIC Project Managers review the detailed project cost reports provided by the TDSIC Project Controls Team to ensure that all vendor payments are properly recorded, and internal labor charges are appropriate. Any unusual charges are investigated and corrected if necessary.

Process for Executing Projects

With the exception of Rural Extension projects that are better handled by the local operating area, Engineering and Gas Major Projects execute all of the projects in the Gas TDSIC Plan. Major Projects develops the updates to the Gas TDSIC Plan and establishes the base scope of work associated with each updated Plan. Next the Engineering group develops a more detailed scope (with internal NIPSCO stakeholders) and provides detailed estimates for the projects within the Plan for the next year. In order to more efficiently perform the project, the Engineering group then conducts more detailed engineering prior to execution start, when possible and when appropriate. The estimating process includes the Project Manager, Engineering, Operations, Environmental, Real Estate, TDSIC Execution, TDSIC Project Controls, and other

NIPSCO departments that might be involved in each project. The TDSIC Execution group then executes TDSIC work, utilizing project managers, project engineers, construction managers, safety coordinators, quality assurance / quality control inspectors, and others as needed. The cost tracking of the work is managed by the Project Controls Team.

Management of Costs

Estimation Classes

AACE Recommended Practices identifies classes of estimates based on the use of the estimate and the level of detailed engineering required to produce inputs into the estimate. Those classes can be defined as follows:

- Analogous Class 5 (the estimate is based on expert judgment and overall system factors) – these estimates have very little of the total project defined, 0 – 2%, and require very little engineering in order to estimate.
- Parametric Class 4 (the estimate is developed using application of similar type estimates and specific equipment factors) – these estimates are done at about 1 – 15% of the total project being defined and usually have an engineering or feasibility study associated with them.
- Semi-detailed Class 2 / 3 (the estimate is developed with unit costs and with assembly level line items) – these estimates are performed at 10 – 70% project definition, have detailed engineering nearly complete, and use bids tendered as development for the estimate.
- Detailed Class 1 (the estimate is developed with unit costs and with detailed bill of materials) – these estimates are performed at 50 – 100% project definition with the detailed engineering complete, bids tendered and verified to develop the estimate.

See Cause No. 44403-TDSIC-4, Petitioner's Exhibit 3, pp. 48-49. NIPSCO generally uses these AACE Classifications with respect to its estimates for TDSIC projects, but the process of managing costs involves more than specifying a specific class or range of estimate.

Overview of NIPSCO's Process for Managing Costs

The general process NIPSCO follows for managing costs in its Gas TDSIC Plan is provided below broken down between projects to be completed in future years and those projects to be completed in the shorter term. Many of the projects identified in the Gas TDSIC Plan are substantial projects that span more than a single year. The process of estimate refinement is a continuous process as the Gas TDSIC Plan progresses. NIPSCO uses these estimating techniques to better utilize resources while providing the best estimate based on lead time for construction, with the goal of improving overall project continuity and efficiency.

Projects included in this Plan Update utilize an estimating process that includes a project scope review with additional NIPSCO and NiSource departments including Engineering, Real Estate, Environmental, Construction and other departments as necessary. Specific site details are then integrated into the estimate allowing risks that may result in the project cost decreasing or increasing based on the outcome of the site visit and input from all impacted parties to be taken into account. At this phase, estimates are refined and considered Class 3, with at least one site visit, and are based on additional engineering or analysis along with scope definition.

After projects advance from this phase, detailed engineering continues, which supports further refinement of the project cost estimate. For most projects, this occurs

within 18-24 months of the start of construction, and detailed engineering has been or will be complete. Detailed engineering includes generation of material lists, associated labor and technical drawings to be utilized during construction. Estimated labor hours are utilized to develop a resource plan which includes both internal and external labor resources. Detailed engineering documents are also used to bid external construction projects providing additional estimate refinement. A constructability review is also conducted to review the detailed engineering with project management and construction. This typically takes place at the project site and is designed to identify associated project risks for integration into the cost estimate. At this phase, estimates are refined and considered Class 2. It is important to note, however, that until construction begins, and until the project is complete, it is difficult to define all of the factors that influence a project's final cost. Some of the factors that can influence project costs are circumstances such as weather, seasonal site conditions, emergencies, specific equipment needs or other situations not identified until the construction process has started. Projects planned for 2020 continue to undergo refinement.

Process to Determine if Changes in Cost Estimates are Eligible for TDSIC Treatment

NIPSCO utilizes a reprioritization process to review and approve changes in current year project estimates, which could be increases or decreases. During the first half of the year, a formal reprioritization meeting is held once a month to review and

approve project estimate changes. Because of increased requests during the second half of the year, NIPSCO increases the meeting frequency to twice a month. This reprioritization process starts when the need for a project estimate change is identified. Once an estimate change has been identified, the Project Management team completes a Project Change Request ("PCR") form which includes a description of the project estimate change and the updated estimate. NIPSCO requires a PCR for estimate changes that are +/- $30,000 or 15%, whichever is greater, or any estimate changes that exceed $100,000 for any project even if it does not meet the 15% threshold in this filing, which is in accordance with NiSource's Capital Governance Policy. The intent of the reprioritization process is for leadership to review and approve estimate changes before they occur. The PCRs are included in Confidential Appendix 4 as support for the revised estimates in the Plan.

The TDSIC Support team summarizes a list of requested project estimate decreases ("returns") and project estimate increases ("requests") from the PCRs for review at the reprioritization meeting. Each project estimate change is reviewed and approved or rejected by a level of leadership in accordance with NiSource's Capital Governance Policy. If a "return" or "request" is approved for a project, then that "return" or "request" is included in the next Plan update. If the "return" or "request" is not approved, it may be placed on a "hold" list for review at a future meeting, or it may be denied, but it will not be included in a Plan update until it is approved.

Confidential Attachment 3-C (Redacted)
Cause No. 45330-TDSIC-4

Plan Update Process

Ind. Code § 8-1-39-9-9(b) provides that a utility shall update its TDSIC Plan at least annually. In its 45330 Order, the Commission approved NIPSCO's proposed Plan update process as follows:

- NIPSCO anticipates filing a new petition every six months.
- In each filing (1) the Plan will be updated with NIPSCO's best estimate by project for each calendar year; (2) NIPSCO will provide an updated Risk Model (Confidential Appendix 1) and updated unit costs (Confidential Appendix 3) included in the 2020-2025 TDSIC Plan as new relevant information becomes available during the Plan update process, (3) PCR forms will be provided to support material project estimate changes during the current year for projects, (4) actual costs (direct capital, indirect capital, and AFUDC) will be included in the Plan Update when a given calendar year is closed out, (5) rural extension inputs will be updated annually, and (6) the Plan Update will include a description of any moves between project years, and explanations of all increases that exceed the greater of $100,000 or 20%.
- NIPSCO will continue to meet with its stakeholders approximately four weeks prior to filing each Plan Update.

Confidential Attachment 3-E (Redacted)
Cause No. 45330-TDSIC-4

Confidential Attachment 3-F (Redacted)
Cause No. 45330-TDSIC-4