414 Nicollet Mall
Minneapolis, MN 55401

March 14, 2019

Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101

—Via Electronic Filing—

RE: REPLY COMMENTS
2019 GAS UTILITY INFRASTRUCTURE COST RIDER
DOCKET NO. G002/M-18-692

Dear Mr. Wolf:

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Public Utilities Commission the enclosed Reply Comments in response to issues the Department of Commerce, Division of Energy Resources and the Office of the Attorney General–Residential Utilities and Antitrust Division discussed in their respective March 4, 2019 Comments.

We have electronically filed this document with the Minnesota Public Utilities Commission, and copies have been served on the parties on the attached service list. If you have any questions regarding this filing, please contact Brandon Kirschner at (612) 215-5361 or brandon.m.kirschner@xcelenergy.com or Mary Martinka at (612) 330-6737 or mary.a.martinka@xcelenergy.com.

SINCERELY,

/s/

LISA R. PETERSON
MANAGER, REGULATORY ANALYSIS

Enclosures
c: Service List

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

Dan Lipschultz	Vice-Chair
Matthew Schuerger	Commissioner
Katie J. Sieben	Commissioner
John A. Tuma	Commissioner

IN THE MATTER OF THE PETITION OF NORTHERN STATES POWER COMPANY FOR APPROVAL OF A GAS UTILITY INFRASTRUCTURE COST RIDER TRUE-UP REPORT FOR 2018, REVENUE REQUIREMENTS FOR 2019, AND REVISED ADJUSTMENT FACTORS

DOCKET NO. G002/M-18-692

REPLY COMMENTS

INTRODUCTION

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Public Utilities Commission these Reply Comments in response to the March 4, 2019 Comments from the Department of Commerce, Division of Energy Resources (Department) and the Office of the Attorney General–Residential Utilities and Antitrust Division (OAG).

We appreciate the Department's and OAG's thorough review of our Petition. In this Reply, we respond to comments regarding the following topics:

- Proposed rate of return (ROR)
- Sales forecast
- Tax Cuts and Jobs Act of 2017 (TCJA)
- Sewer and natural gas line conflict costs
- GUIC Rider-related retirements revenue requirement impact
- Proration of Accumulated Deferred Income Tax (ADIT)
- Carrying charge on unrecovered rider tracker balance
- Distribution Integrity Management Programs (DIMP) low-risk infrastructure work
- Removal costs impact on accumulated deferred taxes
- Transmission Integrity Management Programs (TIMP) programmatic replacement and maximum allowable operating pressure (MAOP) remediation
- Overhead, other, and transportation costs

- Risk assessments
- Projects shown in 2018 and 2019 GUIC Rider filings
- Performance Metrics

As discussed in our initial Petition, the Company's Transmission Integrity Management Program (TIMP) and Distribution Integrity Management Program (DIMP) are safety-related initiatives implemented in response to state and federal regulations. Recovery of associated costs through the GUIC Rider is in the public interest, as it provides for frequent regulatory review as the Company pursues important efforts to improve safety.

In addition to responding to comments from the Department and OAG, we update the revenue requirement to reflect actual GUIC-related retirements through the end of 2018 and an updated estimate of retirements in 2019. We also reduce our revenue requirement by $50,000 to account for sewer conflict remediation costs already included in our current gas utility base rates, as recommended by the Department.

With these updates, the Company requests recovery of approximately $28.96 million in projected transmission and distribution natural gas infrastructure investments and associated operation and maintenance (O&M) costs for 2019. A summary of the changes in our 2019 GUIC Rider revenue requirement presented in this Reply are summarized in Table 1 below.

Table 1
2019 GUIC Rider Revenue Requirements Summary ($ Millions)

2019 Revenue Requirement in Petition	$28.91
Adjustment of 2018 GUIC-related retirement revenue impact[1]	0.10
Removal of Sewer Conflict O&M in Base Rates	(0.05)
Updated 2019 Revenue Requirement	**$28.96**

REPLY

We appreciate the Department's conclusion that the Company's Petition complies with the GUIC Rider filing requirements and its finding that the proposed projects are eligible for GUIC Rider recovery. In this Reply, we respond to the topics discussed by the Department and OAG.

[1] Incorporates actual retirement data through the end of 2018.

A. Proposed Rate of Return

The Company maintains that the rate of return (ROR) proposed in our Petition—an ROR of 7.63 percent and a return on equity (ROE) of 10.25 percent—is reasonable, consistent with the statute and comparable proxy groups, supported by our collective interest in public safety, and within the range required by equity investors to invest in utilities similar to the Company under current capital market conditions. In their comments, both the Department and OAG repeated their rationales from the prior GUIC proceeding[2] for approving a lower ROR. We include our response to the Department's and OAG's analyses below.

1. Department's Recommended Rate of Return

While the Commission has historically maintained a consistent capital structure and ROR on debt over prior years, the ROE has been allowed to fluctuate for market conditions. The Commission has approved adjustments to the ROE component in previous GUIC Rider filings. As the Department notes in their comments, the Commission approved a 9.64 percent ROE in 2016, and a 9.04 percent ROE in 2017. Each of these approved GUIC Rider ROEs utilized updated market conditions to significantly adjust the 10.09 percent ROE reflected in base rates and the 2015 GUIC Rider.

The Company's Petition has conformed to this practice by requesting a capital structure and cost of debt consistent with prior filings and by providing an expert analysis in support of our request for a 10.25 percent ROE. That analysis applied three commonly-used analytical tools to assess the reasonableness of the Company's request—namely (1) the Constant Growth Discounted Cash Flow model; (2) the Capital Asset Pricing Model; and (3) a Risk Premium model. We continue to believe that our independent expert analysis supports our proposal for a 10.25 percent ROE.

The Department recommends that the Commission alter its policy of approving changes to ROE in GUIC dockets based on updated market conditions, and instead apply the same overall rate of return (7.02 percent) that was approved in the 2017 GUIC Rider proceeding. We respectfully oppose their recommendation and note that it is contrary to the Commission's February 8, 2018 Order in Docket No. G002/M-16-891, in which the Commission stated that it "continues to believe that the public interest is served by setting the GUIC rate of return based on the most up-to-date information available." The following changes in market conditions since approval of our current GUIC Rider ROR, include the following:

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[2] Docket No. G002/M-17-787.

- Successive increases in interest rates by the Federal Reserve, including four increases of 25 basis points each in 2018, bringing the federal funds rate to within a range of 2.25 percent to 2.50 percent.
- Increasing capital cost environment, as illustrated by increasing yields on longer-term government and utility bonds, as shown in Table 2 below. Yields on government bonds have increased by 33 to 76 basis points since September 2017, while yields on utility bonds have increased by 43 to 45 basis points.

Table 2
Interest Rate Comparison

	9/30/2017	9/30/2018	Change
10-year Treasury	2.19%	2.95%	0.76%
30-year Treasury	2.77%	3.10%	0.33%
Moody's A Utility Bond	3.86%	4.29%	0.43%
Moody's Baa Utility Bond	4.25%	4.70%	0.45%

- S&P 500 Dividend Yield increased from 1.89 percent in 2017 to 2.15 percent in 2018 (Sources: Bloomberg Professional. S&P 500 Dividend Yield).

In addition, authorized equity returns for comparable-risk gas distribution companies, including those in Minnesota, have been well above the currently-authorized ROE for NSPM's GUIC rider. For example, in their December 26, 2018 litigated decision, the Commission granted Minnesota Energy Resources Corporation an authorized ROE of 9.70 percent for its gas distribution operations, based in large part on the Two-Stage DCF analysis filed by the Department.[3]

These factors provide additional support for an increase in the authorized ROE relative to the 2017 GUIC Rider docket, and the reasonableness of the Company's request.

2. OAG Recommended Rate of Return

The OAG has once again recommended limiting the ROR for the 2019 GUIC Rider to the Company's cost of long-term debt, just as it recommended in the Company's ongoing Transmission Cost Recovery (TCR) Rider docket[4] and in our 2018 GUIC Rider docket. As the Company pointed out in its May 14, 2018 Reply Comments in the aforementioned TCR docket, the OAG's recommendation is unreasonable and

[3] Docket No. G011/GR-17-563.
[4] Docket No. E002/M-17-797.

does not meet the three standards established in the *Hope Natural Gas*[5] and *Bluefield Waterworks*[6] decisions for a fair return. Those standards are that the rate must:

- be sufficient to attract capital on reasonable terms,
- be sufficient to maintain the financial integrity of the company, and
- provide a return comparable to other investments with commensurate risk.

The OAG's argument that the ROE should be limited to the cost of long-term debt violates the basic financial principle that dividends are not guaranteed to equity investors and that shareholders should be compensated for taking on risk of ownership through a higher return than what is provided for debt holders. Furthermore, the OAG's recommendation to base the ROE on the Company's long-term debt cost is not consistent with the way in which the Company finances the projects included in the GUIC Rider, which involves a mix of equity and debt capital. It is simply not reasonable to set the Company's ROE for the GUIC Rider based on long-term debt costs when the Company is actually using both equity and debt to finance these projects.

The OAG again refers to a decision in a 2011 rulemaking in Iowa in which the Iowa Utility Board determined that an appropriate rate of return for a gas utility's capital projects should be set at the utility's cost of debt. In Minnesota, the GUIC Statute provides the authority for this proceeding, and it is not necessary to look to an inapplicable rulemaking in Iowa. The GUIC Rider statute establishes that, for GUIC Rider projects, the appropriate return should be set at the ROE allowed in the Company's last general rate case, unless the Commission determines that a different rate of return is in the public interest. In the Company's 2017 GUIC Rider filing docket,[7] the Commission determined that the appropriate ROE should be set at 9.04 percent, which resulted in a ROR of 7.02 percent. The OAG's recommended ROR would represent an extraordinary reduction in an overall ROR from what the Commission recently established in its 2017 Order. And as already discussed above, the market conditions support approving a ROR *higher* than what was previously approved.

We therefore strongly oppose these recommendations from the OAG, which we believe are unsupported by market data and contrary to the public interest, particularly given the connection between the investments at issue in this docket and public safety.

5 Federal Power Commission v. Hope Natural Gas Co., 320 US 591, 603 (1944).

6 Bluefield Waterworks & Improvement Co. v. Public Service Commission of West Virginia, 262 US 679, 693 (1923).

7 Docket No. G002/M-16-891.

B. Sales Forecast

The Department sought clarification on two sales forecast related items. The first item was whether any cost drivers were included in the sales forecast data and projections. The second item was which average customer count is used in the forecasting process.

In regard to major cost drivers in the sales forecast data, the Company included a reduction in Interdepartmental Transport volumes in the forecast used in the GUIC Rider filing. This is a continuation of the reduction that was included in the sales forecast used in our 2018 GUIC Rider filing. This adjustment accounts for decreases in our natural gas generation and interdepartmental transport forecasts that will result when we have additional energy from new wind projects. The next large addition of wind generation will begin service in the fourth quarter of 2019 and continues into 2020.[8]

In regard to customer counts used in the forecasting process, the Company uses active service counts, which are also called calendar month customer counts. The Company does not use billing month customer count numbers in any part of the forecasting process.

C. Tax Cuts and Jobs Act of 2017

The Department requested modifications to Schedules G and H, which showed revenue requirement information in our initial Petition. The requested modifications include:

- separating out the excess ADIT (EDIT) that will be returned to ratepayers
- EDIT included in the GUIC Rider revenue requirement

The Company has modified the schedules as requested in order to show the separation of EDIT and ADIT numbers. These modified schedules can be found as Attachment A and B to this Reply.

The ADIT and EDIT balances presented in this Petition represent fully normalized federal and state plant ADIT balances calculated using the Average Rate Assumption Method ("ARAM"). Under this method, deferred tax expense is calculated at the current rate, and the deferred taxes flow back at the average of all the current rates used to set up the deferred balance. The calculation is performed for all years in which the tax depreciation is greater than the book depreciation, and it flows back when the reverse occurs. Using ARAM assures that when a tax rate decreases, the

[8] Approved in Docket No. E002/M-16-777.

overall deferred liability is not immediately adjusted downward. ARAM allows the deferred amounts to flow back at the established rates over the remaining life of the assets. This method is consistent with the method used for EDIT within our base rates and is in agreement with Internal Revenue Service (IRS) tax normalization rules.

Currently, flow back of EDIT is occurring for some GUIC assets with a shorter tax life. For all other assets, flow back will occur when book depreciation for an asset is greater than tax depreciation for the asset. This analysis is done on an individual asset basis. For illustrative purposes we have provided Attachment C with this Reply, which shows the revenue requirement calculation for an individual project with a short tax life. As the example shows, deferred taxes for this project accumulate until book depreciation is greater than tax depreciation, at which time the excess flows back to customers over the remaining life of the project. Most of the assets included in this Petition have not started to flow back, since all assets are placed in service after 2012 and they have not reached the end of their tax life. Bonus depreciation could impact when flow back begins.

The bifurcation of ADIT and EDIT resulted in a refinement to the Company's revenue requirement model, which slightly increased the 2019 revenue requirements. The Company is not updating the 2019 GUIC revenue requirements in this Petition to incorporate this increase.

D. Sewer and Natural Gas Line Conflict Costs

The Department recommended a reduction in the 2019 GUIC Rider revenue requirement by $50,000 to account for sewer and natural gas line conflict costs already included in current gas utility base rates. As the Department noted, our 2010 Sewer and Natural Gas Line Conflict deferred accounting treatment request[9] stated that our 2010 test year distribution O&M budget[10] included approximately $50,000 for performing sewer line conflict investigations at a customer's request. The Department further noted that this work included in base rates sounded similar to the emergency sewer line conflict work we had described in our response to Department Information Request No. 41.[11] The Company agrees with the Department's assessment. We have shown the $50,000 revenue requirement reduction in our introduction to these Reply Comments and our final 2019 GUIC Rider revenue requirement will exclude this amount.

[9] Docket No. G002/M-10-422.
[10] As filed in Docket No. G002/GR-09-1153.
[11] Included as Attachment 3 to the Department's Comments.

E. GUIC Rider-Related Retirements Revenue Requirement Calculation

The Department requested a change to our calculation of the revenue requirement impact of GUIC Rider-related retirements to remove the annual deferred tax impact. For the reasons discussed below, we do not believe this adjustment is necessary, and we continue to believe our calculation method is appropriate. We do, however, provide an update to the revenue requirement adjustment for retirements to incorporate a full year of actual data for 2018.

1. *Inclusion of Annual Deferred Tax Impact in Calculation*

In the Company's proposed 2019 GUIC Rider retirement revenue credit calculation table, as shown in Table 1 of our Petition, rate of return on rate base includes the debt and equity return plus current taxes only. The deferred tax piece is shown separately as its own item. Table 3 below shows the details behind this calculation.

Table 3
2019 Revenue Requirement Impact – GUIC Rider Retirements ($ Millions)[12]

1	Net Book Value of Retired Assets	$3.09	
2	Reduced by ADIT on Retired Assets	(0.70)	
3	Rate Base	$2.39	
4a	Equity Return	$0.13	Line 3 * 5.29%[13]
4b	Debt Return	0.07	Line 3 * 2.98%[14]
4c	Current Income Taxes	0.11	Line 4a * (40.85%/(1-40.85%)) - Deferred Tax
4	Total Return on Rate Base	$0.31	Sum of Lines 4a-4c
5	Book Depreciation on Retired assets	0.30	Calculated on retired assets, based on approved depreciation rates
6	Annual Deferred Tax Impact	(0.02)	Calculated on retired assets, based on assumed deferred tax rate
7	Property Tax on Retired Assets	0.17	Calculated on gross value of retired assets, based on property tax of 1.7%
8	Revenue Requirement Impact	**$0.76**	Sum of Lines 4-7

[12] Based on information in Petition, Table 1.
[13] Weighted cost of equity approved in our 2009 Gas General Rate Case, Docket No. G002/GR-09-1153.
[14] Weighted cost of debt approved in our 2009 Gas General Rate Case.

Because the annual deferred tax amount is not included in the Rate of Return on Rate Base (Line 4), but is shown on a separate line (Line 6), it should not be removed from the Retirement Revenue Credit calculation and should not reduce the overall revenue requirements estimate.

2. *Update of 2018 Retirements*

In our initial Petition in this docket, we provided an estimate of annual GUIC Rider-related retirements from 2012 through 2019. This estimate was based on actual data from 2012 through 2017, and we committed to update our estimate with additional data. In this Reply, we update using actual retirement information through the end of 2018.

The change in estimated annual retirements for 2018 and 2019 is a decrease of $1.9 million. The estimated retirements for 2012 through 2017, a total of $6.3 million, do not change with this update. Table 4 below compares our updated annual estimates for 2018 and 2019 to our initial estimates, as provided in Attachment J filed with our Petition.

Table 4
Annual Estimated GUIC Rider Retirements

Year	Updated Estimate	Initial Estimate	Change
2018	$370,315	$1,913,419	$(1,543,104)
2019	$1,527,643	$1,913,419	$(385,776)
Total	$1,897,958	$3,826,838	$(1,928,880)

Table 5 below shows the impact the change in estimate retirements has on the retirement-related adjustment in our 2019 GUIC Rider revenue requirement.

Table 5
2019 Revenue Requirement Impact – GUIC Rider Retirements ($ Millions)

	Updated Impact	Initial Petition[15]	Change
Net Book Value of Retired Assets	$2.44	$3.09	$(0.65)
Less: ADIT on Retired Assets	(0.48)	(0.70)	0.22
Rate Base	$1.96	$2.39	$(0.43)
Rate of Return on Rate Base	$0.29	$0.31	$(0.02)
Estimated Book Depreciation on Retired Assets	0.24	0.30	(0.06)
Annual Deferred Tax Impact	(0.01)	(0.02)	0.01
Estimated Property Tax Impact	0.14	0.17	(0.03)
Revenue Requirement Impact	**$0.66**	**$0.76**	**$(0.10)**

[15] See Table 1 on Page 20 of our Petition in this docket.

F. Proration of Accumulated Deferred Income Tax

The Department discussed the proration of ADIT in the GUIC Rider filing. Included was a discussion about proration of ADIT no longer being needed for the GUIC Rider. We agree with the Department's assessment. Because we will be recovering our 2019 revenue requirement after the 2019 GUIC Rider test year is complete. In this situation, proration of ADIT is no longer necessary under IRS tax normalization rules. We will remove the impact of ADIT proration from our final 2019 GUIC Rider revenue requirement in our compliance filing.

G. Carrying Charge on Unrecovered Rider Tracker Balance

The Department opposes our proposal to include a carrying charge in our revenue requirement calculation arguing, among other things, that the GUIC represents an optional recovery tool that is within the Company's control and that it is subject to true-up, meaning the Company will recover its actual costs as opposed to revenues based on a forecast. We do not take issue with those facts, but we do believe our proposal for a carrying charge is nonetheless reasonable and appropriate. The lengthening review process for GUIC Rider filings has introduced a significant amount of additional delay in the Company's ability to recover the costs of these important investments. While we recognize the complexity associated with this docket and the need for time to properly evaluate our Petition, we believe the addition of a reasonable carrying charge enables to the Company to remain financial whole during this review process.

That said, we do not object to the Department's suggestions (as alternatives to its recommended disallowance of a carrying charge altogether) regarding symmetry and a lower rate. Specifically, we have no objection to applying a carrying charge symmetrically so that it applies to under- and over-recovered tracker balances. Nor do we object to using the Company's cost of short-term debt. While this lower amount will not keep the Company financially whole, it will help to close the gap and represents a reasonable first step in addressing the growing regulatory lag issues in this docket.

H. Distribution Integrity Management Programs Low-Risk Infrastructure Work

The Department discussed the Company's practice of replacing short segments (maximum of 500 feet) of lower risk pipe in the same block as higher risk segments as part of the same project. The Company explained in our response to Department Information Request No. 47[16] that this practice not only minimizes the disruption to

[16] Included as Attachment 7 to the Department's Comments.

local communities but also streamlines the construction process resulting in a more efficient and cost-effective replacement.

Indeed, it is the Company's practice to complete DIMP infrastructure work in the most cost-effective manner possible. In this case, we estimate that including a low-risk segment in the overall scope of construction work can save approximately $24,000 per project by eliminating duplicative costs for excavation, tie-in, and reclamation. By contrast, we estimate that the incremental costs associated with the low-risk work (which is primarily the additional pipeline equipment) is—at most—$1,200 per project. Moreover, while we do not normally track the amount of low-risk projects completed in conjunction with high-risk work, we estimate that the total number of such projects in our current GUIC request is less than ten. In total the Department's concern relates to less than $12,000 of incremental costs in this docket. Due to the efficiencies discussed above, we believe our practice is reasonable and squarely within customers' interests.

I. Removal Costs Impact on Accumulated Deferred Income Taxes

The Department included a brief analysis of removal costs and asked for the Company to explain any relationship between accumulated book depreciation reserve removal costs and accumulated deferred taxes. The Company originally addressed the issue in our response to Department Information Request No. 20.[17] In that response, the revenue requirement calculation included only removal expenditures and the impact of those expenditures on the accumulated book depreciation balance and deferred income tax (ADIT). Intuitively, ADIT is the tax rate applied to the accumulated book depreciation balance associated with removal work in progress (RWIP). However, the current revenue requirement calculation using only removal costs has some timing issues. The removal expenditures flow into the annual ADIT balance when they occur (Removal expenditures * tax rate = ADIT activity). Removal costs do not impact the accumulated book depreciation balance until the removal work is completed and removal expenditures close. Due to timing differences, there is no direct relationship between accumulated book depreciation balance and accumulated deferred income tax.

The Company acknowledges this disconnect in methodology. Either the ADIT calculation should be based on the amount of RWIP closed or the accumulated book depreciation balance should be impacted as RWIP expenditures are incurred. Either of these options would result in an increase to rate base for the GUIC rider in the current year, but eventually both would align when all removal has closed.

[17] Included as Attachment 8 to the Department's Comments.

The Department's Table 6 in their Comments requires a correction. The Accumulated Deferred Taxes amounts were shifted one year. For example, the 2017 amount in Table 6 actually represents the 2018 amount. The information was provided correctly in the Company's response to DOC Information Request No. 20.

J. Transmission Integrity Management Programs Programmatic Replacement and Maximum Allowable Operating Pressure Remediation

The Department again expressed concerns regarding the Company's record keeping with respect to MAOP validations. The Department is again asking the Commission to limit our return on investments in our TIMP Programmatic Replacement and MAOP remediation project to the weighted debt cost rate. We disagree with the Department's characterization of the need for our MAOP remediation work. The rules that govern MAOP documentation have changed dramatically in recent years, and the Company's MAOP remediation work is being undertaken to meet these new, more stringent requirements.

The rules that govern MAOP documentation have emerged only within the last few years. These new requirements are significantly more stringent than the rules that were in place when the vast majority of our system was constructed, and the Company could not have reasonably anticipated these new requirements decades before they were adopted. The Company has always maintained appropriate documentation for its system based on the requirements established in 1970. Those 1970 requirements did not require that documentation be traceable, verifiable, and complete (TVC). The Pipeline and Hazardous Materials Safety Administration (PHMSA) issued guidance in 2012, which requires MAOP records to be TVC. PHMSA considers validation of MAOP for gas transmission pipelines based on the new TVC criteria it established in 2012 as sufficiently extraordinary to be the subject of a MAOP Remediation Advisory Bulletin as well as a subject of a new rule proposed by the PHMSA in April 2016, entitled Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines (Proposed Pipeline Safety Rule).[18] Moreover, they are critical requirements put in place by PHMSA, and the costs incurred to meet these requirements are specifically considered in the GUIC Statute.[19]

With these requirements now in place, it is imperative that the Company undertake efforts to reestablish MAOP to meet the new safety requirements. The expenditures requested in this filing are part of a systematic effort to update records to satisfy PHMSA rules for our transmission pipeline and DIMP requirements for our IP distribution pipeline. The Company uses the preferred industry method to gather MAOP and pressure test documentation in order to comply with important federal

[18] See http://www.gpo.gov/fdsys/pkg/FR-2012-05-07/pdf/2012-10866.pdf.
[19] Minn. Stat. § 216B.1635.

pipeline safety regulations. Although PHMSA's Proposed Pipeline Safety Rule provides that operators may present alternative technologies for determining MAOP, the Company is not aware of any alternative technology that is available at this time that satisfies the proposed criteria set forth by PHMSA.[20] In fact, we understand that PHMSA included this provision with the intent that the regulations not preclude the development of future technology that could present an alternative to existing solutions. To that end, the Company monitors technological developments through its participation in the American Gas Association and other industry forums but, again, is not aware of any currently available alternative technologies. We believe we have demonstrated that these costs are properly incurred and are eligible for GUIC recovery in full.

There was extensive discussion of this topic in responses to Department Information Requests. The Company has included these responses as Attachment D to this Reply.

K. Overhead, Other, and Transportation Costs

The Department again took the position that overhead, other, and transportation costs should not be recovered through the GUIC Rider as these costs are already considered in our approved gas base rates. This is a similar argument to the one the Department made in the 2018 GUIC Rider proceeding. We disagree with the Department's assertion.

The overhead, other, and transportation costs included in our GUIC Rider request are legitimate costs for Minnesota GUIC Rider-related projects. The overhead costs included in this petition are assigned to projects based on an overhead pool allocation process, which has been in effect since at least 1980. These costs are not reflected as normal O&M costs as a part of our budgets in a rate case and would not have been reflected as such in the last rate case. Rather they are capital costs that are allocated to open construction projects during the time period. Overhead costs included in our 2010 base rates would have been allocated to capital projects under construction in 2010. Once those construction projects are complete, they no longer receive overhead allocation costs. GUIC projects were not considered when our current base rates were established. As such, legitimate costs related to our GUIC Rider projects, like the ones in dispute here, are by definition outside of the scope of our current base rates. We therefore maintain our position and disagree with the Department's recommendation to remove $8.2 million in capital charges, exclusive of the internal labor amount which does not require an adjustment.

[20] The Company monitors technological developments through participation in the American Gas Association and other industry forums and has seen no alternative technology at this time that satisfies the proposed criteria set forth by PHMSA.

On a related note, the Department referenced our response to Department Information Request No. 21[21] as a source for their discussion of overheads and other costs. In that response, we agreed to update the attachment included with that response in our Reply, once all 2018 actual information was available. Attachment E to this Reply is an updated version of that attachment. The updated amount of total GUIC Rider-eligible capital costs incurred in 2018 is $44.0 million. The change in total capital costs is primarily the result of a decrease in RWIP expenditures from what was initially forecasted. RWIP expenditures were removed from total capital expenditures to arrive at recoverable costs. This update does not affect the costs recommended for disallowance by the Department.

L. Risk Assessments

The Department argued that the Company should provide high-level snapshots that display the risk profile of all assets that could potentially fall within a given TIMP or DIMP Program. In our response to Department Information Request No. 50,[22] we explained that the high-level risk profile tables included for the DIMP Poor Performing Main and Service Program are the result of the Company's Optimain DS commercial risk software that is designed specifically to evaluate Gas Distribution Main and Service replacement risks. This software is not applicable to other GUIC programs. Further, software capable of providing the high-level risk profile information the Department is requesting for each specific TIMP or DIMP program is not commercially available.

We have made an initial assessment of all of our TIMP and DIMP programs, and we believe that it may be possible to develop a full risk assessment for two programs. The two programs are the Transmission Pipeline Assessment and Programmatic Replacement/MAOP Remediation programs. The Company appreciates the Department's request and will continue to identify and develop opportunities to provide additional risk assessment information.

M. Projects Shown in 2018 and 2019 GUIC Rider Filings

The Department argued that 12 DIMP poor performing mains and services projects that were included in our 2018 GUIC Rider filing and 2019 GUIC Rider filing are being double counted and that those projects should be removed from recovery in our 2019 GUIC Rider. We believe this reflects a misunderstanding of how the projects are shown in our DIMP poor performing mains and service replacement project schedules and how capital projects are ultimately included in our GUIC Rider

[21] Included as Attachment 10 to the Department's Comments.
[22] Included as Attachment 11 to the Department's Comments.

recovery. Below, we clarify how these projects are represented in our schedules and why these projects are not being double counted.

The DIMP poor performing mains and services replacement project is a multi-year program. The Company strives to mitigate higher risk projects in the appropriate order. The Company is continually evaluating threats on the pipeline system and identifying distribution main segments that pose a risk due to pipe material deterioration or leaks. The selection and prioritization of pipe segments and/or areas targeted for replacement is based on leak history, relative ranking from the risk modeling, deficiencies in coating or cathodic protection, and construction methods, particularly those joined using mechanical couplings. As such, over time projects can get moved from year to year if other pipeline segments are determined to have more urgent needs for remediation. Also, the Company sometimes experiences constraints with construction resources, which may require delays in certain projects.

The forecast that was used in our 2018 GUIC Rider filing petition was prepared in the summer of 2017. At that time, the scope of the DIMP poor performing mains and services projects set to be completed in 2018 included the 12 projects in question. As such, it was included as a part of the 2018 GUIC Rider budget. However, as project risk rankings and prioritization continued, the projects expected to be completed in 2018 changed. When our 2019 GUIC Rider filing was being prepared, we were in the middle of the 2018 construction season. At that time, it was thought that the 12 projects in question would slip from the 2018 construction schedule to 2019 schedule. To acknowledge that fact, in our 2019 GUIC Rider filing petition, the Company included the projects as a part of our 2019 DIMP work, shown in Attachment D1(d), and not our 2018 DIMP work plan, which was shown in Attachment D1(c). This explains why the projects showed up in our 2018 scope in our 2018 GUIC Rider filing but in the 2019 scope in our 2019 GUIC Rider filing.

However, showing the projects in different years in two different filings does not create a situation where the project will be double recovered. One benefit of the GUIC Rider filing is that the recovery mechanism is subject to a true-up.[23] As the 2018 GUIC Rider recovery has not been finalized, the final rates approved in that docket will only include projects that are completed in that year. Projects that shift from the 2018 scope will not be included in the final 2018 GUIC Rider rates.

This true-up will also work for projects that shift from 2019 to 2018. If a project is initially expected be completed in 2019, but ultimately is completed in 2018, that project will be included in the final 2018 GUIC Rider rates. That project would also be included in 2019 rates, as all capitalized projects with remaining book value would, but the full value of the project would not be capitalized a second time. This is what

[23] This is a fact acknowledged by the Department on Page 19 of their March 4, 2019 Comments in this docket.

ultimately happened with these projects. After our 2019 work scope was completed for our 2019 GUIC Rider filing, it was determined that the Company would have the ability to complete these projects in 2018. These projects were in-serviced in 2018 and will be reflected in our final 2018 GUIC Rider revenue requirement. They will not be included as a new project in our final 2019 GUIC Rider revenue requirement.

The true-up mechanism inherent in the GUIC Rider revenue requirement process ensures that our final revenue requirements only reflects capital projects that were in-serviced during that year, and assets in-serviced in previous years. It prevents the situation of a project being placed in-service in two separate years. The projects in question here all ended up being placed in-service in 2018. They will be included in our final 2018 GUIC Rider revenue requirements and will be included as an on-going capital project in our 2019 GUIC Rider filing. No additional adjustment to our final 2019 GUIC Rider revenue requirement will be needed.

N. Performance Metrics

The Department's comments on performance metrics covered a wide variety of topics, including the development of additional performance metrics and the recovery of project costs over original estimates. The Department also asked for clarification on the results of some of our proposed performance metrics and also on some GUIC projects.

1. Development of Additional Performance Metrics

The Company appreciates the Department's thoughtful recommendation of additional performance metrics. The Company has completed an initial review of the Department's recommendations. While the Company is in progress with reviewing their recommendations, we offer some initial responses.

First, the following Department recommended metrics are already being completed by the Company, and we have no objection to continuing to report these metrics:

- Poor performing main replacement unit cost
- Poor performing service replacement unit Cost

In addition, the following Department recommended metrics may be feasible, and also may require modifications:

- Distribution Valve Replacement Unit Cost
- Sewer and gas line conflict investigation inspection unit cost
- ASVs and RCVs time period of leak detection by event for each replaced and non-replaced asset

- Programmatic replacement and MAOP remediation percentage of records complete over time
- Poor performing main replacement number of leaks
- Poor performing services replacement number of leaks
- Intermediate pressure line assessment number of leaks
- Sewer and gas line conflict investigation percentage of potential projects inspected over time
- Federal code mitigation percentage of projects out of compliance over time

The Company will continue to analyze these recommended metrics and will engage directly with the Department to clarify our understanding of their proposal. To the extent we encounter feasibility challenges, we will work with the Department to determine alternatives or modifications.

Based on our preliminary review, we believe some of the Department's proposed metrics may not be feasible at this time. Unit cost performance metrics is one such area. We believe unit cost performance metrics are only relevant in scenarios where the unitized costs are expected to be similar and where a statistically significant sample size exists. For example, the Company currently utilizes unit cost performance metrics for the Poor Performing Main Replacement and Poor Performing Service Replacement programs. However, for programs such as Transmission Pipeline Assessments, we do not have enough projects in a given year to achieve a statistically significant sample size. In 2017 the Company completed five Transmission Pipeline Assessments projects as compared to 56 Poor Performing Main Replacement projects. Further, Federal Code requires operators to conduct assessments to address the applicable threats to each specific pipeline. Costs for such assessments vary widely based on factors such as the assessment method or methods utilized, diameter of the line, length of the line, the condition of the line, specific threats to be addressed, etc. As such, unit costs may not be relevant or indicative of performance.

Along these same lines, the Company proposes to continue to track actual vs. estimated cost variance explanations for capital projects where unit costs are not applicable. The Company will continue to utilize unit costs to track the performance of the Poor Performing Main Replacement and Poor Performing Service Replacement programs and will work with the Department to identify other programs for which unit costs may be applicable.

For effectiveness measurements, the Department requested that the Company develop a leak volume metric for each type of asset to serve as new effectiveness performance metrics. At this time, the Company does not have the ability to create a leak volume metric for any of its programs because the Company does not have information about the volume of natural gas released from these leaks. Also, comparing leaks for repaired versus non-repaired transmission pipelines, as suggested by the Department may not be statistically meaningful due to our limited number of leaks. In 2018 there were zero transmission pipeline leaks.

Despite this, the Company has information about the number of leaks occurring for most of our programs. If the Department and others would find that information useful to be paired with our leak rate metrics that have already been created, we can work with them to create those metrics.

2. Poor Performing Main Performance Metric

a. Use of Normal Distribution Curve

The Department requested an explanation of our use of a normal distribution curve in our poor performing main replacement projects cost per foot analysis.[24] The Company utilized a normal distribution curve to plot the results of our cost per foot analysis because in our view, that is what fit the data experienced.

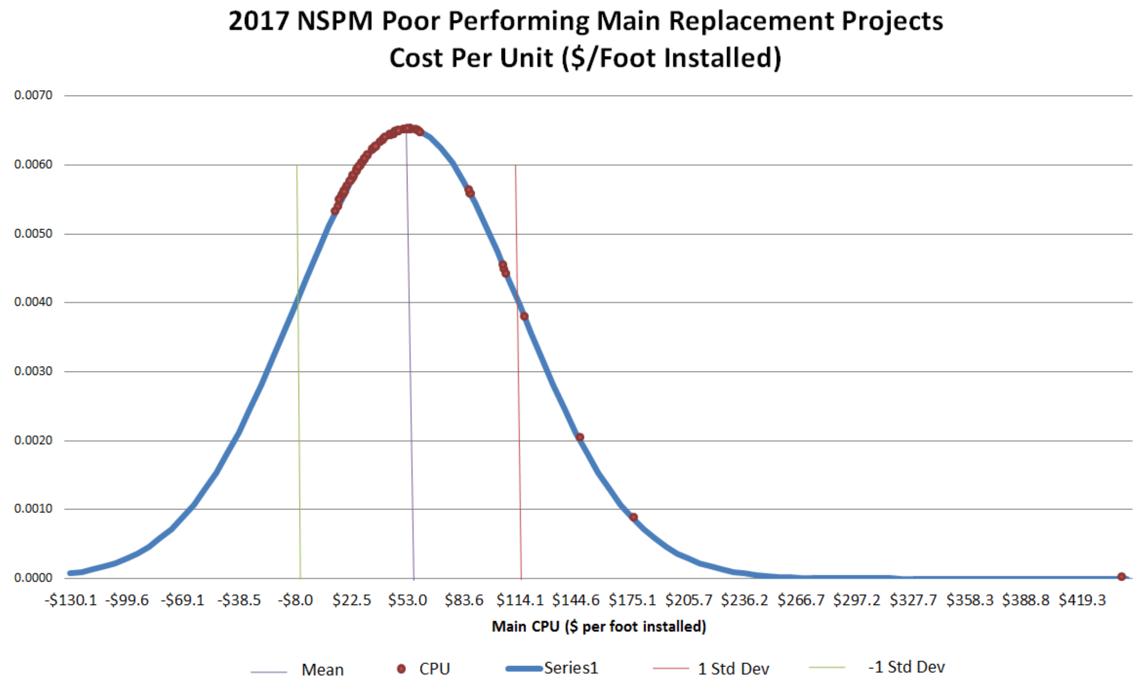
While we support our choice of curve in this instance, the ultimate results of our analysis would still be the same regardless of what distribution curve is chosen. Both mean and standard deviation are influenced by the actual data, and are not affected by the choice of distribution curve. The analyses inherent in the metric ultimately are driven by the mean and standard deviation. The choice of a different distribution curve would not result in a greater number of projects falling outside of one standard deviation, which would necessitate the discussion of additional projects.

b. Explanation for Additional Project

The Department asked for clarification on an observation that appeared to have a cost of $320 per foot on the graph of our poor performing main replacement projects cost per foot analysis. After reviewing the data, the Company discovered that the chart included in our initial filing was not accurate and the observation in question should not have been contained in the chart. As such, there is no additional information to offer about the project as it did not take place. We apologize for the confusion, and provide an updated version of the chart as Figure 1 below. The Data underlying this update chart was provided in Attachment B included with our response to Department Information Request No. 50.

[24] Shown on Page 7 of Attachment W included with our Petition in this docket.

Figure 1



c. Consequence Class Data for Pipelines

The Department requested that the Company provide additional data about our programs to include categorizations about population "consequence" classes using an appropriate scale. We have provided the information as requested by the Department as Attachment F to this Reply.

For steel mains under our DIMP poor performing mains program and all other GUIC programs, our risk ranking process does not track this type of consequence information for each project. However, the Company believes that going forward, it would be reasonable for us to add appropriate consequence information as a part of our risk ranking methodology for all GUIC programs. If the Department finds the information provided in Attachment F useful, the Company will work to provide this information for all GUIC programs in future GUIC Rider filings.

3. Winona Collegeview Project

The Department requested clarification about a DIMP poor performing mains and services project on Collegeview Street in Winona. For this project, we reported an anticipated cost of $1.3 million in our 2018 GUIC Rider filing. However, at the time of our 2019 GUIC Rider filing, we expected this project to slip into 2019. In that filing, we reported an anticipated cost of $149,282 for the same project.

We confirm that the amount report initially in our 2018 GUIC Rider filing was included in error. Subsequent to the preparation of our 2018 and 2019 GUIC Rider filings, the project was completed and placed in-service in 2018. The total cost of the project was $120,622. Our final 2018 and 2019 GUIC Rider revenue requirements will reflect this actual amount of project costs.

4. *Eagan Line Transmission Pipeline Assessment*

The Department has asked for additional clarification on the Eagan Line Project included in our TIMP program. The Eagan line is a 5.8-mile, 12-inch diameter pipeline installed in 1941. The pipeline was last assessed by pressure testing in 2013 and currently contains High Consequence Areas. Based on the Company's Transmission Pipeline Assessments Project Risk methodology provided in Attachment C2 this project has a risk score of 4 and be high risk.

5. *2019 High-Risk Valve Replacement*

The Department has asked for additional clarification on the DIMP Distribution Valve Replacement Project included in our DIMP Program. The table of high and medium risk DIMP Distribution Valve Replacement projects in the DIMP risk assessment was the 2018 project list and was included in error. At the time of filing, no DIMP Distribution Valve Replacement projects were included in the 2019 work plan. As described in our response to Department Information Request No. 14,[25] nine of the 2018 projects were delayed into 2019. The nine DIMP Distribution Valve Replacement projects planned for 2019 are listed below in Table 6 with their associated cost estimates and risk scores.

Table 6
Valve Replacement Projects Delay to 2019

Project Name/Location	Size/Mtl	Risk Score[26]	Risk Category[27]	2019 Estimated Cost
Algonquin & Iroquois, St. Paul	12-inch SC	12	High	$25,000
Algonquin & Iroquois, St. Paul[28]	6-inch SC	12	High	$25,000
Highway 19 W TBS, Northfield	8-inch SC	15	High	$42,500
Highway 19 W TBS, Northfield[28]	6-inch SC	15	High	$42,500
Snelling & Englewood, St. Paul	12-inch SC	9	Medium	$50,000
Fairview & Juno, St. Paul	16-inch SC	12	High	$50,000
Fairview & Montreal, St. Paul	16-inch SC	12	High	$60,000
Fairview & Montreal, St. Paul[28]	16-inch SC	12	High	$60,000
Fairview & Montreal, St. Paul[28]	16-inch SC	12	High	$10,000

[25] Included as Attachment 1 to the Department's Comments.
[26] Risk score information also shown on Page 11 of Attachment D2(a) included with our initial petition.
[27] High Risk: Risk Score ≥ 12, Medium Risk: 9≤ Risk Score < 12.
[28] Not the same as the valve directly above. There are multiple valves at this intersection.

6. *Recovery of Costs Greater than Initial Estimates*

The Department asserted in their Comments that the Company should not be allowed to recover any cost overruns in our GUIC Rider. We respectfully disagree. The recovery of project costs—whether in base rates or through a rider—depends on the prudency of those costs rather than the accuracy of an initial forecast. A prudently incurred cost is no less prudent because it was unforeseen. Indeed, the Commission has previously concluded that "cost overruns can be prudently incurred" and that the "Commission will therefore permit utilities to seek higher recovery levels in future proceedings, with proper documentation and explanation in their rider filings."[29] As such, the additional costs incurred represent a reasonable GUIC cost and are properly recovered through the GUIC Rider.

The Department has also requested a table that identifies all 2017 cost overruns. The Company provides a comparison of forecast and actual costs for each GUIC Rider program in Table 7 below.[30]

Table 7
2017 Forecast and Actual Cost by GUIC Rider Program ($ Millions)[31]

Program	2017 Forecast	2017 Actual	Variance
TIMP			
East Metro Pipeline Replacement	$0.60	$0.61	$0.01
Transmission Pipeline Assessments	1.40	0.94	(0.46)
ASV/RCV	0.17	0.24	0.07
Programmatic Replacements/MAOP Remediation	7.63	6.04	(1.59)
Total - TIMP	**$9.80**	**$7.83**	**$(1.97)**
DIMP			
Poor Performing Main Replacements	$9.33	$13.29	$3.96
Poor Performing Service Replacements	5.52	3.47	(2.05)
Intermediate Pressure Line Assessments	0.73	0.15	(0.58)
Distribution Valve Replacement Project	0.31	0.34	0.03
Federal Code Mitigation	0.47	0.16	(0.31)
Sewer & Gas Line Conflict Investigation	3.43	3.28	(0.15)
Total – DIMP	**$19.79**	**$20.69**	**0.90**
Total – TIMP and DIMP	**$29.59**	**$28.52**	**(1.07)**

[29] In the Matter of the Application of ITC Midwest LLC for a Certificate of Need for the Minnesota-Iowa 345 kV Transmission Line Projects in Jackson, Martin, and Faribault Counties, Docket No. ET-6675/CN-12-1053, at 6 (November 25, 2014).
[30] A comparison of 2017 actual and forecast costs was initially provided with our Petition in Attachment C, Page 19 for TIMP programs and Attachment D, Page 18 for DIMP programs.
[31] Includes both capital and O&M costs

Our total costs for all TIMP projects in 2017 were $7.83 million, compared to a forecast of $9.81 million. For all DIMP programs, our total costs were $20.69 million, compared to a forecast of $19.8 million. For the GUIC as a whole, then, our total actual costs for 2017 were $1.09 million *less* than what we forecasted.

Of the programs listed in Table 7 above, only the DIMP poor performing main replacement program had actuals that were significantly higher than our forecast in 2017. In that case, the increase in actual costs was not an imprudent "cost overrun". Rather, the higher costs were driven by two factors. The first was that more main costs were incurred relative to service costs incurred as a result of home density differences between urban, suburban, and rural settings. Dollars originally budgeted as part of service costs were actually spent on main replacement activities. This can be seen when comparing our 2017 actual and forecasted costs for the DIMP poor performing services program, which had actual costs $2.05 million lower than forecasted. Second, the scope of final work varied significantly from original plans. This was the result of instances of construction under asphalt and concrete, larger diameter steel main, or a bore crossing the Mississippi River.

Frequently, the scope of projects can change from the time we initially forecast program costs until the time actual work is completed. This may result in us incurring additional costs and/or shifting expected costs from one program to another, as we did in connection with our 2017 DIMP poor performing services program. All of these costs were nevertheless prudently incurred, and we do not believe that any adjustment is necessary to remove these costs from our GUIC Rider revenue requirement.

CONCLUSION

We respectfully request that the Commission, consistent with its previous Orders, grant recovery of the Company's gas utility infrastructure costs through a GUIC Rider and approve the proposed 2019 GUIC Rider factors. In its Petition, the Company described its reasonable and prudent investments in pipeline safety planning and outlined its cost recovery proposal for these investments. Finally, the Company respectfully requests that the Commission approve our proposed ROR of 7.63 percent.

Dated: March 14, 2019

Northern States Power Company

TIMP - Capital Revenue Requirements	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Total
Rate Base													
CWIP	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant In-Service	59,405,917	59,493,185	59,504,067	59,782,253	60,173,422	60,494,532	60,806,937	61,029,357	61,012,569	61,028,374	66,480,475	66,781,746	66,781,746
Less Accumulated Book Depreciation Reserve	1,067,186	1,187,970	1,308,824	1,429,974	1,551,713	1,674,017	1,796,789	1,915,984	2,006,684	2,129,945	2,250,693	2,379,149	2,379,149
Accumulated Deferred Taxes (ADIT)	5,645,449	5,864,728	6,084,008	6,303,287	6,522,567	6,741,847	6,961,126	7,180,406	7,399,685	7,618,965	7,838,245	8,057,524	8,057,524
Excess ADIT (EDIT)	93,509	96,930	100,351	103,773	107,194	110,615	114,036	117,457	120,878	124,299	127,720	131,141	131,141
Less Total Accumulated Deferred Taxes	5,738,958	5,961,659	6,184,359	6,407,060	6,629,761	6,852,461	7,075,162	7,297,863	7,520,563	7,743,264	7,965,965	8,188,665	8,188,665
End Of Month Rate Base	52,599,772	52,343,556	52,010,884	51,945,219	51,991,948	51,968,054	51,934,986	51,815,510	51,485,321	51,155,165	56,263,817	56,213,932	56,213,932
Average Rate Base (Prior Mo + Cur Month/2)	52,767,477	52,471,664	52,177,220	51,978,051	51,968,583	51,980,001	51,951,520	51,875,248	51,650,415	51,320,243	53,709,491	56,238,875	
Return on Rate Base													
Debt Return (Avg RB * Wtd Cost of Debt)	99,818	99,259	98,702	98,325	98,307	98,329	98,275	98,131	97,705	97,081	101,600	106,385	1,191,918
Equity Return (Avg RB * Wtd Cost of Equity)	208,871	207,700	206,535	205,746	205,709	205,754	205,641	205,340	204,450	203,143	212,600	222,612	2,494,101
Total Return on Rate Base	308,690	306,959	305,237	304,072	304,016	304,083	303,916	303,470	302,155	300,223	314,201	328,997	3,686,019
Income Statement Items													
AFUDC Pre-Eligible	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-
Property Taxes	84,131	84,131	84,131	84,131	84,131	84,131	84,131	84,131	84,131	84,131	84,131	84,131	1,009,577
Book Depreciation	120,714	120,784	120,854	121,150	121,739	122,304	122,772	123,122	123,256	123,261	128,870	134,783	1,483,608
Deferred Taxes	219,280	219,280	219,280	219,280	219,280	219,280	219,280	219,280	219,280	219,280	219,280	219,280	2,631,355
Excess Deferred Taxes	3,421	3,421	3,421	3,421	3,421	3,421	3,421	3,421	3,421	3,421	3,421	3,421	41,053
Total Deferred Taxes	222,701	222,701	222,701	222,701	222,701	222,701	222,701	222,701	222,701	222,701	222,701	222,701	2,672,408
Gross Up for Income Tax (see below)	(66,661)	(84,817)	(55,917)	(41,664)	(63,432)	(71,630)	(114,335)	(128,644)	(104,217)	(30,649)	(40,329)	(58,864)	(861,160)
Total Income Statement Expense	360,885	342,799	371,769	386,318	365,140	357,506	315,269	301,310	325,871	399,444	395,373	382,751	4,304,433
Total Revenue Requirement	**669,575**	**649,758**	**677,006**	**690,390**	**669,156**	**661,589**	**619,185**	**604,780**	**628,026**	**699,667**	**709,574**	**711,748**	**7,990,453**
Capital Structure													
Weighted Cost of Debt	2.27%												
Weighted Cost of Equity	4.75%												
Required Rate of Return	7.02%												
Current Income Tax Calculation													
Equity Return	208,871	207,700	206,535	205,746	205,709	205,754	205,641	205,340	204,450	203,143	212,600	222,612	2,494,101
Book Depreciation	120,714	120,784	120,854	121,150	121,739	122,304	122,772	123,122	123,256	123,261	128,870	134,783	1,483,608
Deferred Taxes	222,701	222,701	222,701	222,701	222,701	222,701	222,701	222,701	222,701	222,701	222,701	222,701	2,672,408
Less Tax Depreciation	649,873	673,771	631,929	611,439	642,917	654,948	715,711	736,539	702,160	601,377	629,877	665,034	7,915,576
Plus CPI-Tax Interest (If Applicable)	3,115	2,382	2,593	2,795	2,872	2,676	2,560	3,062	4,056	8,837	8,551	1,515	45,014
Total	(94,473)	(120,204)	(79,246)	(59,047)	(89,896)	(101,514)	(162,037)	(182,315)	(147,697)	(43,436)	(57,155)	(83,423)	(1,220,445)
Tax Rate (T/(1-T)	0.705611	0.705611	0.705611	0.705611	0.705611	0.705611	0.705611	0.705611	0.705611	0.705611	0.705611	0.705611	0.705611
Gross Up for Income Tax	(66,661)	(84,817)	(55,917)	(41,664)	(63,432)	(71,630)	(114,335)	(128,644)	(104,217)	(30,649)	(40,329)	(58,864)	(861,160)

TIMP - Capital Revenue Requirements	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total
Rate Base													
CWIP	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant In-Service	66,961,891	67,017,881	68,871,363	70,688,202	70,688,599	70,668,590	71,431,497	72,214,816	72,895,998	73,525,908	74,076,611	74,551,685	74,551,685
Less Accumulated Book Depreciation Reserve	2,489,604	2,600,257	2,711,971	2,826,207	2,941,954	3,086,838	(1,572,397)	(1,623,238)	(1,597,174)	(1,532,236)	(1,447,130)	(1,345,805)	(1,345,805)
Accumulated Deferred Taxes (ADIT)	7,877,771	7,698,018	7,518,265	7,338,512	7,158,759	6,979,006	6,799,252	6,619,499	6,439,746	6,259,993	6,080,240	5,900,487	5,900,487
Excess ADIT (EDIT)	343,170	555,199	767,228	979,257	1,191,286	1,403,315	1,615,343	1,827,372	2,039,401	2,251,430	2,463,459	2,675,488	2,675,488
Less Total Accumulated Deferred Taxes	8,220,941	8,253,217	8,285,493	8,317,769	8,350,044	8,382,320	8,414,596	8,446,872	8,479,147	8,511,423	8,543,699	8,575,975	8,575,975
End Of Month Rate Base	56,251,346	56,164,407	57,873,900	59,544,226	59,396,601	59,199,432	64,589,298	65,391,182	66,014,024	66,546,720	66,980,042	67,321,515	67,321,515
Average Rate Base (Prior Mo + Cur Month/2)	56,232,639	56,207,876	57,019,154	58,709,063	59,470,414	59,298,016	61,878,227	64,974,102	65,686,465	66,264,234	66,747,243	67,134,640	
Return on Rate Base													
Debt Return (Avg RB * Wtd Cost of Debt)	105,436	105,390	106,911	110,079	111,507	111,184	116,022	121,826	123,162	124,245	125,151	125,877	1,386,791
Equity Return (Avg RB * Wtd Cost of Equity)	246,018	245,909	249,459	256,852	260,183	259,429	270,717	284,262	287,378	289,906	292,019	293,714	3,235,847
Total Return on Rate Base	351,454	351,299	356,370	366,932	371,690	370,613	386,739	406,088	410,540	414,151	417,170	419,592	4,622,638
Income Statement Items													
AFUDC Pre-Eligible	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-
Property Taxes	94,590	94,590	94,590	94,590	94,590	94,590	94,590	94,590	94,590	94,590	94,590	94,590	1,135,079
Book Depreciation	110,456	110,653	111,713	114,237	115,747	115,737	116,123	117,022	117,986	118,891	119,722	120,465	1,388,751
Deferred Taxes	(179,753)	(179,753)	(179,753)	(179,753)	(179,753)	(179,753)	(179,753)	(179,753)	(179,753)	(179,753)	(179,753)	(179,753)	(2,157,037)
Excess Deferred Taxes	212,029	212,029	212,029	212,029	212,029	212,029	212,029	212,029	212,029	212,029	212,029	212,029	2,544,347
Total Deferred Taxes	32,276	32,276	32,276	32,276	32,276	32,276	32,276	32,276	32,276	32,276	32,276	32,276	387,310
Gross Up for Income Tax (see below)	7,728	7,996	774,197	10,395	12,007	14,571	15,190	19,668	21,756	23,264	25,151	31,357	963,279
Total Income Statement Expense	245,049	245,514	1,012,777	251,498	254,619	257,174	258,179	263,556	266,608	269,020	271,739	278,687	3,874,419
Total Revenue Requirement	**596,503**	**596,814**	**1,369,146**	**618,429**	**626,309**	**627,786**	**644,917**	**669,644**	**677,149**	**683,171**	**688,909**	**698,279**	**8,497,057**
Capital Structure													
Weighted Cost of Debt	2.25%												
Weighted Cost of Equity	5.25%												
Required Rate of Return	7.50%												
Current Income Tax Calculation													
Equity Return	246,018	245,909	249,459	256,852	260,183	259,429	270,717	284,262	287,378	289,906	292,019	293,714	3,235,847
Book Depreciation	110,456	110,653	111,713	114,237	115,747	115,737	116,123	117,022	117,986	118,891	119,722	120,465	1,388,751
Deferred Taxes	32,276	32,276	32,276	32,276	32,276	32,276	32,276	32,276	32,276	32,276	32,276	32,276	387,310
Less Tax Depreciation	370,092	369,126	(1,525,792)	378,405	381,147	375,541	385,934	388,686	387,688	387,688	386,179	372,471	2,657,167
Plus CPI-Tax Interest (If Applicable)	502	111	173	813	2,708	4,225	4,477	3,888	3,987	4,292	4,517	3,757	33,449
Total	19,159	19,823	1,919,413	25,772	29,767	36,126	37,659	48,761	53,939	57,676	62,355	77,740	2,388,189
Tax Rate (T/(1-T)	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351
Gross Up for Income Tax	7,728	7,996	774,197	10,395	12,007	14,571	15,190	19,668	21,756	23,264	25,151	31,357	963,279

TIMP - Capital Revenue Requirements	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
Rate Base													
CWIP	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant In-Service	74,653,577	74,734,328	74,827,289	74,926,380	75,028,547	75,159,400	75,338,580	75,542,016	75,757,628	75,962,388	85,727,506	85,825,266	85,825,266
Less Accumulated Book Depreciation Reserve	(1,236,824)	(1,124,120)	(1,011,300)	(898,366)	(785,316)	(674,267)	(566,775)	(460,937)	(355,802)	(249,572)	(132,481)	(7,032)	(7,032)
Accumulated Deferred Taxes (ADIT)	5,992,946	6,085,405	6,177,864	6,270,323	6,362,782	6,455,241	6,547,700	6,640,159	6,732,618	6,825,077	6,917,536	7,009,995	7,009,995
Excess ADIT (EDIT)	2,677,797	2,680,105	2,682,414	2,684,723	2,687,031	2,689,340	2,691,649	2,693,957	2,696,266	2,698,575	2,700,883	2,703,192	2,703,192
Less Total Accumulated Deferred Taxes	8,670,743	8,765,510	8,860,278	8,955,046	9,049,813	9,144,581	9,239,349	9,334,116	9,428,884	9,523,652	9,618,420	9,713,187	9,713,187
End Of Month Rate Base	67,219,658	67,092,937	66,978,311	66,869,700	66,764,050	66,689,086	66,666,006	66,668,837	66,684,546	66,688,308	76,241,568	76,119,110	76,119,110
Average Rate Base (Prior Mo + Cur Month/2)	67,223,202	67,108,914	66,988,240	66,876,621	66,769,491	66,679,184	66,630,162	66,620,038	66,629,308	66,639,043	71,417,554	76,132,955	
Return on Rate Base													
Debt Return (Avg RB * Wtd Cost of Debt)	126,044	125,829	125,603	125,394	125,193	125,023	124,932	124,913	124,930	124,948	133,908	142,749	1,529,465
Equity Return (Avg RB * Wtd Cost of Equity)	301,384	300,872	300,331	299,830	299,350	298,945	298,725	298,680	298,721	298,765	320,189	341,329	3,657,121
Total Return on Rate Base	427,428	426,701	425,934	425,224	424,543	423,968	423,657	423,592	423,651	423,713	454,097	484,079	5,186,586
Income Statement Items													
AFUDC Pre-Eligible	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-
Property Taxes	105,595	105,595	105,595	105,595	105,595	105,595	105,595	105,595	105,595	105,595	105,595	105,595	1,267,144
Book Depreciation	120,874	120,974	121,069	121,174	121,284	121,411	121,580	121,789	122,017	122,247	127,689	133,072	1,475,179
Deferred Taxes	92,459	92,459	92,459	92,459	92,459	92,459	92,459	92,459	92,459	92,459	92,459	92,459	1,109,508
Excess Deferred Taxes	2,309	2,309	2,309	2,309	2,309	2,309	2,309	2,309	2,309	2,309	2,309	2,309	27,704
Total Deferred Taxes	94,768	94,768	94,768	94,768	94,768	94,768	94,768	94,768	94,768	94,768	94,768	94,768	1,137,212
Gross Up for Income Tax (see below)	39,082	39,002	37,510	28,542	26,016	21,974	25,454	14,645	31,334	42,768	57,755	78,435	442,518
Total Income Statement Expense	360,319	360,339	358,941	350,078	347,663	343,748	347,397	336,797	353,715	365,378	385,807	411,871	4,322,053
Total Revenue Requirement	**787,747**	**787,040**	**784,875**	**775,302**	**772,206**	**767,716**	**771,054**	**760,389**	**777,366**	**789,092**	**839,903**	**895,949**	**9,508,639**
Capital Structure													
Weighted Cost of Debt	2.25%												
Weighted Cost of Equity	5.38%												
Required Rate of Return	7.63%												
Current Income Tax Calculation													
Equity Return	301,384	300,872	300,331	299,830	299,350	298,945	298,725	298,680	298,721	298,765	320,189	341,329	3,657,121
Book Depreciation	120,874	120,974	121,069	121,174	121,284	121,411	121,580	121,789	122,017	122,247	127,689	133,072	1,475,179
Deferred Taxes	94,768	94,768	94,768	94,768	94,768	94,768	94,768	94,768	94,768	94,768	94,768	94,768	1,137,212
Less Tax Depreciation	423,289	423,289	426,871	452,102	465,199	484,694	487,400	528,830	503,117	485,702	467,871	430,665	5,579,029
Plus CPI-Tax Interest (If Applicable)	3,156	3,371	3,698	7,091	14,299	24,050	35,434	49,903	65,296	75,955	68,413	55,955	406,620
Total	96,893	96,695	92,995	70,761	64,501	54,478	63,107	36,308	77,685	106,033	143,187	194,459	1,097,104
Tax Rate (T/(1-T)	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351
Gross Up for Income Tax	39,082	39,002	37,510	28,542	26,016	21,974	25,454	14,645	31,334	42,768	57,755	78,435	442,518

TIMP - Capital Revenue Requirements	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Total
Rate Base													
CWIP	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant In-Service	85,960,694	86,115,031	86,358,431	86,646,537	86,957,082	87,306,034	87,708,192	88,137,056	88,579,327	89,034,498	89,341,109	138,826,768	138,826,768
Less Accumulated Book Depreciation Reserve	115,580	(33,250)	81,268	192,583	302,479	409,731	513,229	615,099	716,403	819,007	931,873	1,077,105	1,077,105
Accumulated Deferred Taxes (ADIT)	7,159,812	7,309,630	7,459,447	7,609,264	7,759,081	7,908,898	8,058,715	8,208,532	8,358,349	8,508,166	8,657,983	8,807,800	8,807,800
Excess ADIT (EDIT)	2,705,237	2,707,283	2,709,328	2,711,373	2,713,419	2,715,464	2,717,509	2,719,555	2,721,600	2,723,646	2,725,691	2,727,736	2,727,736
Less Total Accumulated Deferred Taxes	9,865,050	10,016,912	10,168,775	10,320,637	10,472,499	10,624,362	10,776,224	10,928,087	11,079,949	11,231,812	11,383,674	11,535,537	11,535,537
End Of Month Rate Base	75,980,065	76,131,368	76,108,388	76,133,316	76,182,104	76,271,941	76,418,738	76,593,871	76,782,975	76,983,679	77,025,563	126,214,126	126,214,126
Average Rate Base (Prior Mo + Cur Month/2)	75,973,656	75,979,785	76,043,947	76,044,921	76,081,779	76,151,091	76,269,409	76,430,373	76,612,492	76,807,396	76,928,690	101,543,913	
Return on Rate Base													
Debt Return (Avg RB * Wtd Cost of Debt)	142,451	142,462	142,582	142,584	142,653	142,783	143,005	143,307	143,648	144,014	144,241	190,395	1,764,126
Equity Return (Avg RB * Wtd Cost of Equity)	340,615	340,643	340,930	340,935	341,100	341,411	341,941	342,663	343,479	344,353	344,897	455,255	4,218,222
Total Return on Rate Base	483,066	483,105	483,513	483,519	483,753	484,194	484,946	485,970	487,128	488,367	489,138	645,650	5,982,349
Income Statement Items													
AFUDC Pre-Eligible	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-
Property Taxes	121,563	121,563	121,563	121,563	121,563	121,563	121,563	121,563	121,563	121,563	121,563	121,563	1,458,759
Book Depreciation	133,200	133,358	133,575	133,865	134,192	134,552	134,962	135,415	135,891	136,381	136,796	163,975	1,646,160
Deferred Taxes	149,817	149,817	149,817	149,817	149,817	149,817	149,817	149,817	149,817	149,817	149,817	149,817	1,797,805
Excess Deferred Taxes	2,045	2,045	2,045	2,045	2,045	2,045	2,045	2,045	2,045	2,045	2,045	2,045	24,544
Total Deferred Taxes	151,862	151,862	151,862	151,862	151,862	151,862	151,862	151,862	151,862	151,862	151,862	151,862	1,822,349
Gross Up for Income Tax (see below)	8,889	9,079	4,422	(8,592)	(4,127)	(7,940)	(3,313)	(3,093)	12,542	33,854	43,994	69,583	155,297
Total Income Statement Expense	415,514	415,862	411,422	398,698	403,490	400,038	405,074	405,748	421,858	443,661	454,216	506,984	5,082,565
Total Revenue Requirement	**898,580**	**898,967**	**894,935**	**882,217**	**887,243**	**884,232**	**890,020**	**891,718**	**908,986**	**932,028**	**943,354**	**1,152,634**	**11,064,914**
Capital Structure													
Weighted Cost of Debt	2.25%												
Weighted Cost of Equity	5.38%												
Required Rate of Return	7.63%												
Current Income Tax Calculation													
Equity Return	340,615	340,643	340,930	340,935	341,100	341,411	341,941	342,663	343,479	344,353	344,897	455,255	4,218,222
Book Depreciation	133,200	133,358	133,575	133,865	134,192	134,552	134,962	135,415	135,891	136,381	136,796	163,975	1,646,160
Deferred Taxes	151,862	151,862	151,862	151,862	151,862	151,862	151,862	151,862	151,862	151,862	151,862	151,862	1,822,349
Less Tax Depreciation	660,467	660,467	672,956	711,059	711,059	734,370	739,695	758,746	739,695	698,930	680,051	679,518	8,447,012
Plus CPI-Tax Interest (If Applicable)	56,828	57,112	57,551	63,094	73,672	86,861	102,715	121,138	139,556	150,267	155,566	80,938	1,145,296
Total	22,038	22,508	10,962	(21,302)	(10,233)	(19,684)	(8,215)	(7,668)	31,093	83,933	109,071	172,512	385,016
Tax Rate (T/(1-T)	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351
Gross Up for Income Tax	8,889	9,079	4,422	(8,592)	(4,127)	(7,940)	(3,313)	(3,093)	12,542	33,854	43,994	69,583	155,297

DIMP - Capital Revenue Requirements	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Total
Rate Base													
CWIP	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant In-Service	24,536,584	24,531,083	24,387,313	24,564,804	25,809,184	27,069,459	28,128,413	29,572,813	30,572,801	32,717,247	33,685,075	35,605,770	35,605,770
Less Accumulated Book Depreciation Reserve	(2,990,916)	(2,961,827)	(2,935,257)	(2,958,380)	(3,375,078)	(3,766,387)	(3,898,463)	(4,343,813)	(4,462,379)	(5,407,497)	(5,665,799)	(5,709,218)	(5,709,218)
Accumulated Deferred Taxes (ADIT)	2,554,556	2,906,481	3,258,405	3,610,330	3,962,254	4,314,179	4,666,103	5,018,028	5,369,952	5,721,877	6,073,801	6,425,726	6,425,726
Excess ADIT (EDIT)	86,520	104,879	123,239	141,599	159,958	178,318	196,678	215,037	233,397	251,757	270,117	288,476	288,476
Less Total Accumulated Deferred Taxes	2,641,076	3,011,360	3,381,644	3,751,928	4,122,213	4,492,497	4,862,781	5,233,065	5,603,349	5,973,634	6,343,918	6,714,202	6,714,202
End Of Month Rate Base	24,886,424	24,481,549	23,940,926	23,771,256	25,062,050	26,343,349	27,164,095	28,683,561	29,431,830	32,151,110	33,006,956	34,600,786	34,600,786
Average Rate Base (Prior Mo + Cur Month/2)	23,779,355	24,683,987	24,211,238	23,856,091	24,416,653	25,702,699	26,753,722	27,923,828	29,057,695	30,791,470	32,579,033	33,803,871	
Return on Rate Base													
Debt Return (Avg RB * Wtd Cost of Debt)	44,983	46,694	45,800	45,128	46,188	48,621	50,609	52,823	54,967	58,247	61,629	63,946	619,634
Equity Return (Avg RB * Wtd Cost of Equity)	94,127	97,707	95,836	94,430	96,649	101,740	105,900	110,532	115,020	121,883	128,959	133,807	1,296,590
Total Return on Rate Base	139,109	144,401	141,636	139,558	142,837	150,361	156,509	163,354	169,988	180,130	190,587	197,753	1,916,224
Income Statement Items													
AFUDC Pre-Eligible	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-
Property Taxes	32,966	32,966	32,966	32,966	32,966	32,966	32,966	32,966	32,966	32,966	32,966	32,966	395,590
Book Depreciation	56,677	57,997	57,840	57,875	59,368	61,998	64,433	67,062	69,628	72,930	76,198	79,231	781,237
Deferred Taxes	351,924	351,924	351,924	351,924	351,924	351,924	351,924	351,924	351,924	351,924	351,924	351,924	4,223,094
Excess Deferred Taxes	18,360	18,360	18,360	18,360	18,360	18,360	18,360	18,360	18,360	18,360	18,360	18,360	220,317
Total Deferred Taxes	370,284	370,284	370,284	370,284	370,284	370,284	370,284	370,284	370,284	370,284	370,284	370,284	4,443,410
Gross Up for Income Tax (see below)	(73,815)	(129,204)	(129,740)	(447,930)	(395,916)	(245,806)	(352,460)	(419,108)	(417,612)	(311,584)	(172,409)	(123,220)	(3,218,804)
Total Income Statement Expense	386,112	332,043	331,350	13,195	66,702	219,443	115,223	51,204	55,266	164,596	307,039	359,261	2,401,434
Total Revenue Requirement	**525,221**	**476,444**	**472,986**	**152,753**	**209,540**	**369,803**	**271,732**	**214,558**	**225,254**	**344,726**	**497,627**	**557,013**	**4,317,657**
Capital Structure													
Weighted Cost of Debt	2.27%												
Weighted Cost of Equity	4.75%												
Required Rate of Return	7.02%												
Current Income Tax Calculation													
Equity Return	94,127	97,707	95,836	94,430	96,649	101,740	105,900	110,532	115,020	121,883	128,959	133,807	1,296,590
Book Depreciation	56,677	57,997	57,840	57,875	59,368	61,998	64,433	67,062	69,628	72,930	76,198	79,231	781,237
Deferred Taxes	370,284	370,284	370,284	370,284	370,284	370,284	370,284	370,284	370,284	370,284	370,284	370,284	4,443,410
Less Tax Depreciation	627,762	711,703	712,791	1,162,663	1,092,782	887,228	1,044,387	1,146,087	1,151,195	1,011,601	825,655	761,293	11,135,147
Plus CPI-Tax Interest (If Applicable)	2,063	2,606	4,962	5,262	5,384	4,847	4,259	4,245	4,418	4,923	5,875	3,342	52,186
Total	(104,612)	(183,109)	(183,868)	(634,811)	(561,096)	(348,358)	(499,511)	(593,964)	(591,845)	(441,581)	(244,339)	(174,629)	(4,561,723)
Tax Rate (T/(1-T)	0.705611	0.705611	0.705611	0.705611	0.705611	0.705611	0.705611	0.705611	0.705611	0.705611	0.705611	0.705611	0.705611
Gross Up for Income Tax	(73,815)	(129,204)	(129,740)	(447,930)	(395,916)	(245,806)	(352,460)	(419,108)	(417,612)	(311,584)	(172,409)	(123,220)	(3,218,804)

DIMP - Capital Revenue Requirements	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total
Rate Base													
CWIP	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant In-Service	35,219,317	35,955,134	36,100,797	37,240,702	38,781,550	39,273,714	40,968,748	44,752,463	48,796,615	52,898,205	56,215,748	74,190,519	74,190,519
Less Accumulated Book Depreciation Reserve	(5,608,057)	(5,551,986)	(5,489,114)	(5,335,022)	(5,259,675)	(5,181,040)	(5,501,813)	(5,650,681)	(5,790,981)	(5,926,881)	(6,004,998)	(5,960,180)	(5,960,180)
Accumulated Deferred Taxes (ADIT)	6,360,452	6,295,179	6,229,905	6,164,631	6,099,358	6,034,084	5,968,811	5,903,537	5,838,264	5,772,990	5,707,717	5,642,443	5,642,443
Excess ADIT (EDIT)	455,585	622,693	789,801	956,909	1,124,017	1,291,126	1,458,234	1,625,342	1,792,450	1,959,559	2,126,667	2,293,775	2,293,775
Less Total Accumulated Deferred Taxes	6,816,037	6,917,871	7,019,706	7,121,541	7,223,375	7,325,210	7,427,045	7,528,879	7,630,714	7,732,549	7,834,383	7,936,218	7,936,218
End Of Month Rate Base	34,011,336	34,589,249	34,570,204	35,454,183	36,817,850	37,129,543	39,043,516	42,874,265	46,956,882	51,092,537	54,386,363	72,214,481	72,214,481
Average Rate Base (Prior Mo + Cur Month/2)	34,306,061	34,300,293	34,579,727	35,012,194	36,136,016	36,973,696	38,035,612	40,907,973	44,864,656	48,973,792	52,688,533	63,249,505	
Return on Rate Base													
Debt Return (Avg RB * Wtd Cost of Debt)	64,324	64,313	64,837	65,648	67,755	69,326	71,317	76,702	84,121	91,826	98,791	118,593	937,553
Equity Return (Avg RB * Wtd Cost of Equity)	150,089	150,064	151,286	153,178	158,095	161,760	166,406	178,972	196,283	214,260	230,512	276,717	2,187,623
Total Return on Rate Base	214,413	214,377	216,123	218,826	225,850	231,086	237,723	255,675	280,404	306,086	329,303	395,309	3,125,175
Income Statement Items													
AFUDC Pre-Eligible	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-
Property Taxes	50,432	50,432	50,432	50,432	50,432	50,432	50,432	50,432	50,432	50,432	50,432	50,432	605,186
Book Depreciation	65,299	65,589	66,322	67,390	69,619	71,308	73,126	77,680	84,187	90,958	97,125	114,823	943,426
Deferred Taxes	(65,274)	(65,274)	(65,274)	(65,274)	(65,274)	(65,274)	(65,274)	(65,274)	(65,274)	(65,274)	(65,274)	(65,274)	(783,283)
Excess Deferred Taxes	167,108	167,108	167,108	167,108	167,108	167,108	167,108	167,108	167,108	167,108	167,108	167,108	2,005,299
Total Deferred Taxes	101,835	101,835	101,835	101,835	101,835	101,835	101,835	101,835	101,835	101,835	101,835	101,835	1,222,016
Gross Up for Income Tax (see below)	13,671	3,272	1,588	2,649	(7,591)	(29,949)	(68,870)	(105,231)	(85,128)	(71,357)	(25,806)	47,332	(325,419)
Total Income Statement Expense	231,236	221,128	220,176	222,306	214,294	193,626	156,524	124,717	151,326	171,868	223,585	314,422	2,445,209
Total Revenue Requirement	**445,649**	**435,505**	**436,299**	**441,133**	**440,144**	**424,712**	**394,246**	**380,391**	**431,730**	**477,954**	**552,889**	**709,731**	**5,570,384**

Capital Structure													
Weighted Cost of Debt	2.25%												
Weighted Cost of Equity	5.25%												
Required Rate of Return	7.50%												
Current Income Tax Calculation													
Equity Return	150,089	150,064	151,286	153,178	158,095	161,760	166,406	178,972	196,283	214,260	230,512	276,717	2,187,623
Book Depreciation	65,299	65,589	66,322	67,390	69,619	71,308	73,126	77,680	84,187	90,958	97,125	114,823	943,426
Deferred Taxes	101,835	101,835	101,835	101,835	101,835	101,835	101,835	101,835	101,835	101,835	101,835	101,835	1,222,016
Less Tax Depreciation	288,554	313,534	320,298	320,886	353,577	416,193	524,318	639,534	623,067	623,067	540,780	405,799	5,369,609
Plus CPI-Tax Interest (If Applicable)	5,225	4,159	4,791	5,051	5,208	7,040	12,208	20,156	29,711	39,105	47,329	29,772	209,755
Total	33,893	8,113	3,936	6,568	(18,820)	(74,250)	(170,743)	(260,891)	(211,052)	(176,909)	(63,979)	117,347	(806,788)
Tax Rate (T/(1-T)	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351
Gross Up for Income Tax	13,671	3,272	1,588	2,649	(7,591)	(29,949)	(68,870)	(105,231)	(85,128)	(71,357)	(25,806)	47,332	(325,419)

DIMP - Capital Revenue Requirements	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
Rate Base													
CWIP	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant In-Service	75,521,782	76,340,173	76,879,415	77,590,916	78,903,983	80,698,639	82,565,481	85,083,665	87,353,991	89,659,144	91,548,806	92,415,881	92,415,881
Less Accumulated Book Depreciation Reserve	(5,872,337)	(5,773,932)	(6,165,671)	(6,071,644)	(6,019,031)	(5,990,338)	(5,955,484)	(5,937,815)	(5,900,875)	(5,861,490)	(5,806,583)	(5,685,658)	(5,685,658)
Accumulated Deferred Taxes (ADIT)	5,752,688	5,862,933	5,973,177	6,083,422	6,193,667	6,303,912	6,414,156	6,524,401	6,634,646	6,744,891	6,855,135	6,965,380	6,965,380
Excess ADIT (EDIT)	2,295,863	2,297,952	2,300,040	2,302,128	2,304,216	2,306,305	2,308,393	2,310,481	2,312,569	2,314,657	2,316,746	2,318,834	2,318,834
Less Total Accumulated Deferred Taxes	8,048,551	8,160,884	8,273,217	8,385,550	8,497,883	8,610,216	8,722,549	8,834,882	8,947,215	9,059,548	9,171,881	9,284,214	9,284,214
End Of Month Rate Base	73,345,568	73,953,222	74,771,869	75,277,010	76,425,130	78,078,761	79,798,416	82,186,598	84,307,651	86,461,086	88,183,508	88,817,325	88,817,325
Average Rate Base (Prior Mo + Cur Month/2)	72,723,858	73,593,228	74,306,379	74,968,273	75,794,903	77,195,779	78,882,422	80,936,341	83,190,958	85,328,202	87,266,131	88,444,250	
Return on Rate Base													
Debt Return (Avg RB * Wtd Cost of Debt)	136,357	137,987	139,324	140,566	142,115	144,742	147,905	151,756	155,983	159,990	163,624	165,833	1,786,183
Equity Return (Avg RB * Wtd Cost of Equity)	326,045	329,943	333,140	336,108	339,814	346,094	353,656	362,865	372,973	382,555	391,243	396,525	4,270,961
Total Return on Rate Base	462,403	467,930	472,465	476,673	481,929	490,836	501,561	514,620	528,956	542,545	554,867	562,358	6,057,144
Income Statement Items													
AFUDC Pre-Eligible	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-
Property Taxes	105,084	105,084	105,084	105,084	105,084	105,084	105,084	105,084	105,084	105,084	105,084	105,084	1,261,005
Book Depreciation	130,870	132,657	133,786	134,825	136,508	139,091	142,135	145,780	149,760	153,563	157,050	159,341	1,715,366
Deferred Taxes	110,245	110,245	110,245	110,245	110,245	110,245	110,245	110,245	110,245	110,245	110,245	110,245	1,322,937
Excess Deferred Taxes	2,088	2,088	2,088	2,088	2,088	2,088	2,088	2,088	2,088	2,088	2,088	2,088	25,059
Total Deferred Taxes	112,333	112,333	112,333	112,333	112,333	112,333	112,333	112,333	112,333	112,333	112,333	112,333	1,347,996
Gross Up for Income Tax (see below)	40,058	39,231	40,516	32,900	15,859	8,166	15,963	8,048	27,142	30,232	43,877	73,840	375,832
Total Income Statement Expense	388,345	389,305	391,719	385,142	369,784	364,674	375,514	371,244	394,318	401,212	418,343	450,598	4,700,199
Total Revenue Requirement	**850,748**	**857,235**	**864,183**	**861,815**	**851,713**	**855,510**	**877,075**	**885,865**	**923,274**	**943,757**	**973,211**	**1,012,956**	**10,757,342**
Capital Structure													
Weighted Cost of Debt	2.25%												
Weighted Cost of Equity	5.38%												
Required Rate of Return	7.63%												
Current Income Tax Calculation													
Equity Return	326,045	329,943	333,140	336,108	339,814	346,094	353,656	362,865	372,973	382,555	391,243	396,525	4,270,961
Book Depreciation	130,870	132,657	133,786	134,825	136,508	139,091	142,135	145,780	149,760	153,563	157,050	159,341	1,715,366
Deferred Taxes	112,333	112,333	112,333	112,333	112,333	112,333	112,333	112,333	112,333	112,333	112,333	112,333	1,347,996
Less Tax Depreciation	474,539	480,209	480,209	502,776	550,404	578,641	570,250	602,909	569,456	574,899	552,785	485,653	6,422,732
Plus CPI-Tax Interest (If Applicable)	4,604	2,539	1,400	1,077	1,068	1,368	1,701	1,885	1,681	1,400	940	519	20,181
Total	99,314	97,262	100,449	81,567	39,318	20,245	39,575	19,953	67,291	74,952	108,781	183,065	931,773
Tax Rate (T/(1-T)	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351
Gross Up for Income Tax	40,058	39,231	40,516	32,900	15,859	8,166	15,963	8,048	27,142	30,232	43,877	73,840	375,832

DIMP - Capital Revenue Requirements	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Total
Rate Base													
CWIP	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant In-Service	92,870,514	93,226,333	93,457,261	94,043,104	95,295,459	97,071,809	98,895,511	101,431,118	103,718,448	106,040,352	107,939,274	108,811,467	108,811,467
Less Accumulated Book Depreciation Reserve	(5,547,082)	(5,409,002)	(5,268,552)	(5,144,018)	(5,062,636)	(5,006,278)	(4,944,375)	(4,899,986)	(4,836,281)	(4,770,097)	(4,688,180)	(4,540,128)	(4,540,128)
Accumulated Deferred Taxes (ADIT)	7,087,707	7,210,034	7,332,361	7,454,687	7,577,014	7,699,341	7,821,668	7,943,995	8,066,321	8,188,648	8,310,975	8,433,302	8,433,302
Excess ADIT (EDIT)	2,318,564	2,318,294	2,318,024	2,317,754	2,317,485	2,317,215	2,316,945	2,316,675	2,316,405	2,316,135	2,315,865	2,315,595	2,315,595
Less Total Accumulated Deferred Taxes	9,406,271	9,528,328	9,650,385	9,772,442	9,894,499	10,016,556	10,138,613	10,260,669	10,382,726	10,504,783	10,626,840	10,748,897	10,748,897
End Of Month Rate Base	89,011,325	89,107,007	89,075,428	89,414,681	90,463,597	92,061,532	93,701,274	96,070,435	98,172,003	100,305,666	102,000,613	102,602,698	102,602,698
Average Rate Base (Prior Mo + Cur Month/2)	88,853,297	88,998,138	89,030,189	89,184,026	89,878,110	91,201,536	92,820,374	94,824,826	97,060,190	99,177,806	101,092,111	102,240,627	
Return on Rate Base													
Debt Return (Avg RB * Wtd Cost of Debt)	166,600	166,872	166,932	167,220	168,521	171,003	174,038	177,797	181,988	185,958	189,548	191,701	2,108,177
Equity Return (Avg RB * Wtd Cost of Equity)	398,359	399,008	399,152	399,842	402,954	408,887	416,145	425,131	435,153	444,647	453,230	458,379	5,040,886
Total Return on Rate Base	564,959	565,880	566,084	567,062	571,475	579,890	590,183	602,928	617,141	630,606	642,777	650,080	7,149,063
Income Statement Items													
AFUDC Pre-Eligible	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-
Property Taxes	130,898	130,898	130,898	130,898	130,898	130,898	130,898	130,898	130,898	130,898	130,898	130,898	1,570,779
Book Depreciation	160,440	161,113	161,601	162,280	163,808	166,326	169,318	172,941	176,950	180,782	184,290	186,593	2,046,442
Deferred Taxes	122,327	122,327	122,327	122,327	122,327	122,327	122,327	122,327	122,327	122,327	122,327	122,327	1,467,922
Excess Deferred Taxes	(270)	(270)	(270)	(270)	(270)	(270)	(270)	(270)	(270)	(270)	(270)	(270)	(3,239)
Total Deferred Taxes	122,057	122,057	122,057	122,057	122,057	122,057	122,057	122,057	122,057	122,057	122,057	122,057	1,464,683
Gross Up for Income Tax (see below)	55,242	53,438	53,664	44,863	27,616	19,761	27,552	19,553	39,012	42,368	56,166	86,204	525,439
Total Income Statement Expense	468,637	467,507	468,221	460,099	444,379	439,042	449,825	445,449	468,918	476,104	493,411	525,752	5,607,344
Total Revenue Requirement	**1,033,596**	**1,033,386**	**1,034,304**	**1,027,160**	**1,015,854**	**1,018,932**	**1,040,008**	**1,048,377**	**1,086,059**	**1,106,710**	**1,136,189**	**1,175,832**	**12,756,407**
Capital Structure													
Weighted Cost of Debt	2.25%												
Weighted Cost of Equity	5.38%												
Required Rate of Return	7.63%												
Current Income Tax Calculation													
Equity Return	398,359	399,008	399,152	399,842	402,954	408,887	416,145	425,131	435,153	444,647	453,230	458,379	5,040,886
Book Depreciation	160,440	161,113	161,601	162,280	163,808	166,326	169,318	172,941	176,950	180,782	184,290	186,593	2,046,442
Deferred Taxes	122,057	122,057	122,057	122,057	122,057	122,057	122,057	122,057	122,057	122,057	122,057	122,057	1,464,683
Less Tax Depreciation	544,180	549,850	549,850	573,394	621,307	649,951	641,559	674,503	640,358	645,231	622,711	555,293	7,268,184
Plus CPI-Tax Interest (If Applicable)	282	156	86	441	953	1,674	2,346	2,849	2,917	2,784	2,383	1,983	18,857
Total	136,958	132,485	133,046	111,226	68,465	48,993	68,307	48,476	96,720	105,039	139,249	213,719	1,302,685
Tax Rate (T/(1-T)	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351	0.403351
Gross Up for Income Tax	55,242	53,438	53,664	44,863	27,616	19,761	27,552	19,553	39,012	42,368	56,166	86,204	525,439

Northern States Power Company | Docket No. G002/M-18-692
Gas Utility Infrastructure Cost Rider - 2019 Factors
Flow Back of Excess Accumulated Deferred Income Tax | Reply Comments - March 14, 2019
Example: GUIC Project with Short Tax Life | Attachment C - Page 1 of 1

DIMP - Capital Revenue Requirements **Project A.0006059.147 Pipeline Data Project**	Total 2017	Total 2018	Total 2019	Total 2020	Total 2021
Rate Base					
CWIP	-	-	-	-	-
Plant In-Service	2,138,962	2,138,962	2,138,962	2,138,962	2,138,962
Less Accumulated Book Depreciation Reserve	695,158	1,108,990	1,522,821	1,936,653	2,138,962
Accumulated Deferred Taxes (ADIT)	153,907	186,250	169,524	55,663	(0)
Excess ADIT (EDIT)	(39)	47,967	43,659	14,335	0
Less Total Accumulated Deferred Taxes	153,868	234,217	213,183	69,998	-
End Of Month Rate Base	1,289,935	795,755	402,958	132,311	-
Average Rate Base (Prior Mo + Cur Month/2)	1,312,393	812,998	420,201	149,554	-
Return on Rate Base					
Debt Return (Avg RB * Wtd Cost of Debt)	35,399	23,426	13,505	6,156	395
Equity Return (Avg RB * Wtd Cost of Equity)	74,073	54,661	32,293	14,720	943
Total Return on Rate Base	109,472	78,088	45,798	20,876	1,338
Income Statement Items					
AFUDC Pre-Eligible	-	-	-	-	-
Operating Expenses	-	-	-	-	-
Property Taxes	36,356	36,356	36,356	36,356	36,356
Book Depreciation	427,792	413,831	413,831	413,831	202,309
Deferred Taxes	111,228	32,343	(16,727)	(113,861)	(55,663)
Excess Deferred Taxes	(39)	48,006	(4,308)	(29,324)	(14,335)
Total Deferred Taxes	111,189	80,349	(21,035)	(143,184)	(69,998)
Gross Up for Income Tax (see below)	(54,990)	(57,335)	32,063	115,103	53,748
Total Income Statement Expense	520,347	473,201	461,216	422,106	222,415
Total Revenue Requirement	**629,819**	**551,289**	**507,013**	**442,981**	**223,753**
Capital Structure					
Weighted Cost of Debt					
Weighted Cost of Equity					
Required Rate of Return					
Current Income Tax Calculation					
Equity Return	74,073	54,661	32,293	14,720	943
Book Depreciation	427,792	413,831	413,831	413,831	202,309
Deferred Taxes	111,189	80,349	(21,035)	(143,184)	(69,998)
Less Tax Depreciation	690,987	690,987	345,597	-	-
Plus CPI-Tax Interest (If Applicable)	-	-	-	-	-
Total	(77,933)	(142,145)	79,492	285,367	133,255
Tax Rate (T/(1-T)	0.705611	0.403351	0.403351	0.403351	0.403351
Gross Up for Income Tax	(54,990)	(57,335)	32,063	115,103	53,748

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Xcel Energy		Information Request No.	4
Docket No.:	G002/M-18-692		
Response To:	MN Department of Commerce		
Requestor:	Dorothy Morrissey / Danielle Winner		
Date Received:	January 8, 2019		

<u>Question:</u>

Topic:	TIMP Programmatic Replacement and MAOP Remediation Program
Reference(s):	Petition, pp. 7, 27

Please provide an explanation to distinguish these two TIMP project descriptions: "Programmatic Replacement" and "MAOP Remediation."

<u>Response:</u>

As referenced on pages 7 and 27 of the Gas Utility Infrastructure Costs ("GUIC") Rider Petition, the terms "Programmatic Replacement" and "MAOP Remediation" refer to one TIMP program called the Programmatic Replacement and MAOP Remediation program. This program addresses the validation of MAOP through pressure testing and/or replacement of vintage transmission pipelines. The term "MAOP Remediation" generally refers to projects for which the pipeline will be pressure tested and replacement is not necessary to validate the MAOP. The term "Programmatic Replacement" is generally utilized to characterize those projects in which replacement of vintage transmission pipelines is necessary to establish the MAOP.

Preparer:	Ray Gardner
Title:	Director
Department:	Gas Integrity Management Programs
Telephone:	303-571-3904
Date:	January 18, 2019

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Xcel Energy Information Request No. 12
Docket No.: G002/M-18-692
Response To: MN Department of Commerce
Requestor: Dorothy Morrissey / Danielle Winner
Date Received: January 8, 2019

Question:

Topic: Risks that Repair Cannot Mitigate
Reference(s): Petition, page 27.

Please identify, fully discuss and explain the "risks that cannot be mitigated with repairs" referred to on Page 27 of the Petition.

Response:

The Pipeline and Hazardous Materials Safety Administration issued its MAOP Remediation Advisory Bulletin 13 in 2011 specifically addressing pipeline safety in terms of record verification. Initial language in the Bulletin regarding risks that cannot be mitigated with repairs included:

- Material records that cannot be validated as traceable, verifiable and complete;
- Test Pressure records that cannot be validated as traceable, verifiable and complete.
- Legacy pipe with test pressure records less than specified in Code of Federal Regulations, Part 192.619(a)(2) or 1.25 times the MAOP, whichever is greater.

We discuss how the codes and regulations have evolved over time and the Company's remediation of data gaps in Attachment C, Section II.3. to the Petition.

Preparer: Ray Gardner
Title: Director
Department: Gas Integrity Management Programs
Telephone: 303-571-3904
Date: January 18, 2019

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Xcel Energy		Information Request No.	19
Docket No.:	E002/M-18-692		
Response To:	MN Department of Commerce		
Requestor:	Dorothy Morrissey, Danielle Winner		
Date Received:	January 11, 2019		

Question:

Topic:	TIMP – PHMSA Notice of Proposed Rulemaking (NOPR); Docket PHMSA-2011-0023
Reference(s):	Petition, Attachment C, page 4

With respect to the potential integrity management requirement changes (i.e., PHMSA-2011-0023), please discuss what, from this pending NOPR, the Company has taken into consideration for its TIMP-related work plan in Minnesota.

Response:

The Company's 2019 TIMP-related work plan for Minnesota is in conformance with existing Federal Pipeline Safety Rules. Pursuant to the Safety of Gas Transmission and Gathering Lines (PHMSA-2011-0023) Notice of Proposed Rulemaking, PHMSA is in the rulemaking process, and a final rule has not yet been issued. The Company continues to monitor the progress of the rulemaking. Once the final rule is issued, the Company will adjust its work plans as necessary to meet the new requirements.

Preparer:	Ray Gardner
Title:	Director
Department:	Gas Integrity Management Programs
Telephone:	303-571-3904
Date:	January 22, 2019

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Xcel Energy		Information Request No. 22
Docket No.:	G002/M-18-692	
Response To:	MN Department of Commerce	
Requestor:	Dorothy Morrissey/ Danielle Winner	
Date Received:	January 18, 2019	

Question:

Topic: Programmatic Replacement and MAOP Remediation
Reference(s): Petition, p. 26

Please identify and explain the "risks" being referred to in the statement:

The Programmatic Replacement and MAOP Remediation program addresses validation of the MAOP and/or replacement of vintage transmission pipelines "where risks cannot be mitigated with repairs."

Response:

Per the Pipeline and Hazardous Materials Safety Administration's MAOP Remediation Advisory Bulletin, ADB-12-06 (Docket No. PHMSA-2012-0068), risks that cannot be mitigated with repairs include the following:

- Material records that cannot be validated as traceable, verifiable and complete.
- Test Pressure records that cannot be validated as traceable, verifiable and complete.
- Legacy pipe with test pressure records less than specified in Code of Federal Regulations, Part 192.619(a)(2) or 1.25 times the MAOP, whichever is greater.

We discuss how the codes and regulations have evolved over time and the Company's remediation of data gaps on pages 10-12 in Petition Attachment C.

Preparer: Ray Gardner
Title: Director
Department: Gas Integrity Management Programs
Telephone: 303-571-3904
Date: January 28, 2019

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Xcel Energy		Information Request No.	24
Docket No.:	G002/M-18-692		
Response To:	MN Department of Commerce		
Requestor:	Dorothy Morrissey/ Danielle Winner		
Date Received:	January 18, 2019		

<u>Question:</u>

Topic: TIMP Valves – ASVs and RCVs
Reference(s): Attachment C, p. 9+

A. Please explain how the Company records/differentiates TIMP project work classification.

B. When a pipeline replacement occurs and a valve is installed in conjunction with the pipeline replacement, please explain under which TIMP Project group the valve work is represented – 1) in the TIMP ASVs and RCVs project costs, or 2) in the Programmatic Replacement Project costs. Please explain how the Company ensures that the cost of integrity management work that could be captured under more than one project category is not included in more than one TIMP/DIMP Project category.

<u>Response:</u>

A. Classification of projects is driven by the overall scope of the work. In the case of valve installations, standalone valve work on existing pipelines (i.e. not in conjunction with main service work) is tracked under the valve projects, such as the ASVs and RCVs project. If valves are installed as a part of main remediation, replacement, or other larger main work, then the valve installation costs would be included as a part of the main installation project.

In regards to classifying types of valves, the Company does not differentiate between ASV and RCV when tracking and accounting for the installation projects. However, installed valves are typically RCVs.

B. The costs for installing valves in conjunction with a pipeline replacement are included in the Programmatic Replacement Project costs. The TIMP ASVs and RCVs project only includes installation of individual mainline isolation valves to existing pipelines or adding actuators to existing valves.

Preparer:	Ray Gardner
Title:	Director
Department:	Gas Integrity Management Programs
Telephone:	303-571-3904
Date:	January 29, 2019

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☒ **Public Document**

Xcel Energy		Information Request No.	26
Docket No.:	G002/M-18-692		
Response To:	MN Department of Commerce		
Requestor:	Dorothy Morrissey/ Danielle Winner		
Date Received:	January 18, 2019		

Question:

Topic: TIMP MAOP
Reference(s): Attachment C, p. 12

A. Please describe the activities and efforts involved in
   i. "obtaining adequate proof of MAOP records";
   ii. ensuring MAOP records become part of the Company's official system of record; and

B. Please identify the entities involved in carrying out the above (Part A) activities.

Response:

A. Activities and efforts involved in "obtaining adequate proof of MAOP records" include the collection and review of applicable records and determination of whether or not the available records meet the PHMSA requirements for traceable, verifiable and complete records as defined in PHMSA advisory bulletin ADB-2012-06. Records meeting the PHMSA requirements are then scanned and stored electronically in the Company's official system of record, Documentum.

B. The project team consists of individuals from the Company's Gas Engineering and Geospatial departments.

Preparer:	Ray Gardner
Title:	Director
Department:	Gas Integrity Management Programs
Telephone:	303-571-3904
Date:	January 28, 2019

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☒ **Public Document**

Xcel Energy		Information Request No.	27
Docket No.:	G002/M-18-692		
Response To:	MN Department of Commerce		
Requestor:	Dorothy Morrissey/ Danielle Winner		
Date Received:	January 18, 2019		

Question:

Topic: TIMP Pipeline Assessments
Reference(s): Attachment C2, p. 2

A. Please fully explain the Company's "inability to assess for an applicable threat." Include in the explanation each of the threat-types that cannot be assessed and reasons why the threat-type cannot be assessed.

B. Identify any USDOT/PHMSA compliant alternatives and/or any USDOT/PHMSA grantable exceptions for threat assessment given the identified circumstances/reasoning that certain threat-types (Part A) cannot be assessed by the Company.

C. Explain how pipeline replacement would remedy the threat-assessment-ability limitation prospectively for each identified threat-type (Part A).

Response:

A. For pipelines that cannot be assessed by In-Line Inspection (ILI) and cannot be taken out of service for pressure testing, direct assessment is the only approved assessment method available. Most commonly, lines cannot be assessed via ILI due to the design of the pipeline. Certain valves, taps, and radius elbow can restrict the ability to assess a line via ILI. Gas flow rate can also be a restriction on using ILI. Pressure testing requires taking that segment of pipeline out of service. Due to this reason, the Company avoids using pressure testing if the test will result in customer outages.

Title 49 of the Code of Federal Regulations (CFR) Part 192.923 specifies that direct assessment may only be utilized to address the threats of external corrosion, internal corrosion, and stress corrosion cracking. As such, threats such as manufacturing, welding/fabrication/construction, and third party damage would not be able to be assessed.

49 CFR Part 192 Subpart O requires pipeline operators to identify potential threats to a pipeline and then assess the integrity of the pipeline using limited approved methods including ILI, pressure testing, or direct assessment. The applicability of specific threats and the ability of the Company to assess for those threats is determined on a case-by-case basis for each pipeline. The Company's 2019 TIMP related work plan for Minnesota does not include any TIMP Transmission Pipeline Assessment Replacement Projects. For 2019, there were no projects identified that cannot be assessed using our normal methods of inspection.

B. The Pipeline and Hazardous Materials Safety Administration does not provide any compliant alternatives or grantable exceptions for circumstances in which a threat is not able to be assessed.

C. In the scenario described in part A to this response, a pipeline that is not able to be assessed by ILI and cannot be taken out of service for pressure testing, replacement of the pipeline would be expected to make the line assessable by ILI. Replacement would allow the line to be assessed for threats such as manufacturing, welding/fabrication/construction, and third party damage in the future.

Preparer: Ray Gardner
Title: Director
Department: Gas Integrity Management Programs
Telephone: 303-571-3904
Date: January 29, 2019

GUIC Capital Expenditures by Work Order

										Internal Labor (Not Eligible for GUIC Recovery)								
Work Order Number	Project Description	Contractor	Overheads	CIAC	Material	Other	Transportation	Budget	Salvage	Company Labor Loadings	Company OT Labor	Company ST Labor	Employee Expenses	Total Capital Costs	Less: Internal Labor	Less: RWIP	Less: Betterment Adjustment	Total GUIC Recoverable Costs
E.0000002.005	DIMP Service Renewals	$ 2,460	$ 7,789	$ -	$ 11,260	$ 27	$ -	$ -	$ -	$ 87	$ -	$ 390	$ -	$ 22,012	$ (477)	$ (79)	$ -	$ 21,457
E.0000002.043	NSPM Programmatic Service Repl	-	6	-	-	-	-	-	-	-	-	-	-	6	-	-	-	6
E.0000004.048	NSPM Pipe Trans and IMP - Dist FERC Acct	1,147,050	912,918	-	1,096	-	-	-	-	-	-	-	-	2,061,064	-	-	-	2,061,064
E.0000004.054	NSPM Install 6" and 4" Distribution Valves	(11)	(7)	-	(9)	(2)	(3)	-	-	(10)	(2)	(28)	-	(73)	40	(10,607)	-	(10,639)
E.0000007.002	MNGD Main Renewal-MN (Programmatic Main Repl)	(35,131)	(15,072)	-	(1,583)	1,105	-	-	-	-	-	-	-	(50,682)	-	11,549	-	(39,132)
E.0000007.006	Sartell Bridge Replacement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,727	-	10,727
E.0000007.045	MNGD Main Renewal-MN (Programmatic Main Repl)	(39,711)	(6,640)	-	(1)	-	-	-	-	-	-	-	-	(46,352)	-	(65,598)	-	(111,950)
E.0000007.053	IP Line Assessments	(103,471)	130,326	-	297	136,178	-	-	-	6,061	67	24,138	472	194,068	(30,738)	(6,014)	-	157,316
E.0000008.002	MNGM Main Reinforcement-MN (Repl Emergency Valves)	(2,562)	(160)	-	2,536	(264)	1,191	-	-	4,222	9,333	11,880	-	26,176	(25,435)	(22,854)	-	(22,114)
E.0000018.041	ASV/REV Instalation on High Pr	247,715	35,129	-	39,794	4,731	811	-	-	23,919	12,764	66,634	84	431,581	(103,401)	29	-	328,209
E.0000018.052	NSPM TIMP Mitigation of ILI Re	354,044	19,267	-	2,691	-	-	-	-	2,657	1,190	6,710	-	386,558	(10,556)	2,398,706	-	2,774,708
E.0000018.055	NSPM Pre 1950 Trans and IP Pip	3,167,515	306,409	-	423,294	5,400	709	-	-	5,776	7,837	16,645	154	3,933,737	(30,411)	(927,223)	-	2,976,103
E.0000018.102	NSPM Pipe Trans and IP - GUIC Bette	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E.0000030.002	EastMetro Pipe Repla. Proj Dis	332	8	-	-	-	-	-	-	-	-	-	-	340	-	-	-	340
E.0000030.009	EastMetro Pipe Repla. Proj Dis	(33,170)	-	-	-	-	-	-	-	-	-	-	-	(33,170)	-	-	-	(33,170)
E.0000042.001	MN/WBL/County Rd B Replacement-NSP	712,782	47,515	-	-	-	-	-	-	2,148	-	3,306	171	765,923	(5,626)	(30,637)	-	729,661
E.0000044.001	MN/STP/ECL Replace-Mplwd-NSP Main	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E.0000044.002	MN/STP/East County Line Tran Line	198,530	79,583	-	-	-	-	-	-	511	-	648	-	279,273	(1,159)	(5,585)	-	272,528
E.0000051.001	MN/Colby Lake Lateral Replace	9,027,511	1,869,701	-	694,392	39,626	438	-	(2,702)	10,315	6,342	14,645	67	11,660,334	(31,369)	(276,218)	(2,066,200)	9,286,547
E.0000052.001	MN/Arden Hills/System H05 Replace	6,536,081	1,393,699	-	633,750	480	1,895	-	-	9,279	10,102	25,691	108	8,611,084	(45,180)	(206,709)	-	8,359,195
E.0010011.003	Progrommatic Main Replacement - Mains	11,750,417	2,500,973	-	578,479	14,614	270	-	-	28,307	23,816	69,146	134	14,966,157	(121,403)	(861,274)	-	13,983,479
E.0010011.004	Progrommatic Main Replacement - Services	2,377,508	565,368	(200)	111,043	-	1,848	-	-	2,199	2,018	7,417	315	3,067,516	(11,949)	(138,043)	-	2,917,524
E.0010011.005	NSPM Install 6" and 4" Dist. Valves	134,135	96,939	-	148,015	-	4,087	-	-	27,145	24,420	66,228	27	500,994	(117,820)	(29,897)	-	353,278
E.0010073.004	MN/STP/ECL Replace-Maplewood to NSP	26,262	805	-	-	-	-	-	-	-	-	-	-	27,067	-	(541)	-	26,526
	Grand Total	$ 35,468,285	$ 7,944,554	$ (200)	$ 2,645,053	$ 201,895	$ 11,246	$ -	$ (2,702)	$ 122,616	$ 97,887	$ 313,448	$ 1,531	$ 46,803,614	$ (535,483)	$ (160,269)	$ (2,066,200)	$ 44,041,662

Consequence Class Data for Plastic Pipelines

Work Order	Description	City	Material	QRA Score	Likelihood Score	Consequence Score	Installed Footage	Services Replaced	Service CPU	Total Service Cost	Main Cost ($/ft installed)	Cost Per Unit ($/Ft Installed)
12499044	MAHTOMEDI - HALLMAN-KENWOOD-WILLIAMS	MAHTOMEDI	PE (Aldyl A)	5.9375	4.75	1.25	5,680	47	$1,203	$56,541	$195,641	$34.44
12317857	ARDEN HILLS - ARDEN VIEW DR	ARDEN HILLS	PE (Aldyl A)	1.125	0.75	1.5	2,276	33	$1,129	$37,266	$38,952	$17.11
12490131	MAPLEWOOD - WINTHROP DR.	MAPLEWOOD	PE (Aldyl A)	7.125	4.75	1.5	2,886	33	$1,127	$37,202	$125,069	$43.34
12480668	MAPLEWOOD - BEAVER LAKE ESTATES	MAPLEWOOD	PE (Aldyl A)	7.125	4.75	1.5	13,282	164	$1,361	$223,212	$531,283	$40.00
12466988	MAPLEWOOD - MCKNIGHT	MAPLEWOOD	PE (Aldyl A)	7.125	4.75	1.5	2,100	43	$1,218	$52,377	$214,163	$101.98
12484866	MAHTOMEDI - OAKRIDGE DR	MAHTOMEDI	PE (Aldyl A)	5.9375	4.75	1.25	4,354	35	$1,200	$42,016	$140,837	$32.35
12488109	NORTH OAKS - HAYCAMP RD	NORTH OAKS	PE (Aldyl A)	6.25	5	1.25	19,313	19	$2,743	$52,125	$506,384	$26.22
12486720	MOUNDS VIEW - WOODALE DR	MOUNDS VIEW	PE (Aldyl A)	7.125	4.75	1.5	7,621	26	$1,159	$30,137	$196,472	$25.78
100391006	NORTH ST PAUL - COWERN PL/NORTHWOOD DR	North St. Paul	PE (Aldyl A)	6.75	4.5	1.5	8,765	122	$1,277	$155,789	$240,222	$27.41
12509429	CENTER CITY - CRESCENT RD	CENTER CITY	PE (Aldyl A)	4.75	4.75	1	1,944	12	$1,299	$15,592	$44,006	$22.64
100441854	FOREST LAKE - 208TH/209TH	FOREST LAKE	PE (Aldyl A)	4.75	4.75	1	4,002	32	$1,348	$43,139	$90,602	$22.64
12586221	FOREST LAKE - 216/IMPERIAL/INWOOD	FOREST LAKE	PE (Aldyl A)	4.75	4.75	1	3,333	25	$1,178	$29,457	$81,193	$24.36
12490080	LINDSTROM- ANDREWS AVE	LINDSTROM	PE (Aldyl A)	4.75	4.75	1	2,218	25	$1,520	$37,979	$87,225	$39.33
12505525	FOREST LAKE - BAY DR	FOREST LAKE	PE (Aldyl A)	4.75	4.75	1	10,693	77	$1,346	$103,649	$402,666	$37.66
100441815	WYOMING - FINELY AVE	WYOMING	PE (Aldyl A)	4.75	4.75	1	3,123	21	$1,279	$26,862	$60,166	$19.27
12586414	FOREST LAKE - IVERSON AVE DIMP	FOREST LAKE	PE (Aldyl A)	4.75	4.75	1	3,701	53	$1,283	$68,004	$111,938	$30.25
100441850	FOREST LAKE - 215TH/INWOOD AVE	FOREST LAKE	PE (Aldyl A)	5	5	1	4,291	33	$1,253	$41,355	$101,330	$23.61
12352434	COTTAGE GROVE - IRONWOOD DIMP	COTTAGE GROVE	PE (Aldyl A)	5.938	4.75	1.25	3,227	99	$1,314	$130,090	$144,482	$44.77
12533323	ST CLOUD - 44TH AVE N, VA	Saint Cloud	PE (Aldyl A)	4.75	4.75	1	2,200	7	$1,640	$11,466	$105,081	$47.76
12527212	ST. CLOUD-44TH AVE. & VETERANS DR.-DIMP-2400' 4" PE	Saint Cloud	PE (Aldyl A)	4.75	4.75	1	2,400	12	$1,410	$16,925	$122,742	$51.14
12467823	ST CLOUD - 16TH AVE - 2ND ST N TO BRECKENRIDGE	Saint Cloud	PE (Aldyl A)	4.75	4.75	1	8,136	106	$1,328	$140,772	$452,598	$55.63
12466583	ST CLOUD - 16TH AVE - 2ND ST N TO GERMAIN	Saint Cloud	PE (Aldyl A)	4.75	4.75	1	2,799	38	$1,314	$49,922	$120,546	$43.07
100349421	WINONA 3RD STREET DIMP - RAILROAD WORK	Winona	PE (Aldyl A)	4.75	4.75	1	300	0	$0	$0	$52,540	$175.13
12356426	LAKE CITY - LAKEWOOD AVE DIMP	LAKE CITY	PE (Aldyl A)	4.75	4.75	1	4,110	79	$983	$77,701	$207,910	$50.59
12422040	DILWORTH - 1ST AVE SE DIMP	DILWORTH	PE (Aldyl A)	4.5	4.5	1	4,989	60	$1,214	$72,838	$94,049	$18.85

CERTIFICATE OF SERVICE

I, Jim Erickson, hereby certify that I have this day served copies or summaries of the foregoing documents on the attached list(s) of persons.

xx by depositing a true and correct copy thereof, properly enveloped with postage paid in the United States Mail at Minneapolis, Minnesota

xx electronic filing

Docket No. G002/M-18-692

Dated this 14th day of March 2019

/s/

____

Jim Erickson
Regulatory Case Specialist

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