



414 Nicollet Mall
Minneapolis, MN 55401

July 27, 2018

**PUBLIC DOCUMENT
NOT-PUBLIC OR PRIVILEGED
INFORMATION EXCISED**

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
2018 GAS UTILITY INFRASTRUCTURE COST RIDER
DOCKET NO. G002/M-17-787

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 Office of the Attorney General— Residential Utilities and Antitrust Division and the Department of Commerce, Division of Energy Resources discussed in their respective June 29, 2018 and July 3, 2018 Comments.

Attachment D to this response is marked as “Not-Public” because it includes contract information, vendor pricing terms and other purchasing detail considered to be trade secret data as defined by Minn. Stat. § 13.37(1)(b). Attachment E is marked as “Not-Public” because it contains confidential internal audit commentary, process and format detail the Company does not publicly disclose. Information in both attachments has independent economic value from not being generally known to and not being readily ascertainable by other parties who could obtain economic value from its disclosure or use. The disclosure of this information could adversely impact contract negotiations, potentially increasing costs for these services for our customers. Thus, Xcel Energy maintains this information as a trade secret pursuant to Minn. Rule 7829.0500.

Attachments D and E are marked as “Not-Public” in their entirety. Pursuant to Minn. Rule 7829.0500, subp. 3, the Company provides the following description of the excised material:

PUBLIC DOCUMENT
NOT-PUBLIC OR PRIVILEGED INFORMATION EXCISED

1. **Nature of the Material:** Attachment D is a pdf collection of vendor invoices for work on a selected group of O&M TIMP and DIMP projects. Attachment E is a pdf copy of a Company gas utility infrastructure project cost validation audit.
2. **Authors:** The invoice information was prepared by Xcel Energy sourcing and distribution finance personnel. The audit report was prepared by Xcel Energy Gas Operations and Audit Services personnel.
3. **Importance:** We protect this invoicing information, as disclosure can adversely affect negotiations and increase costs for services. We protect this internal audit information as confidential.
4. **Date the Information was Prepared:** Attachment D was prepared July 2018 for purposes of this Reply. Attachment E was published May 31, 2018.

We have electronically filed this document with the Commission, and copies have been served on the parties on the attached service list. If you have any questions regarding this filing, please contact Lisa Peterson at lisa.r.peterson@xcelenergy.com or (612) 330-7681 or Mary Martinka at mary.a.martinka@xcelenergy.com or (612) 330-6737.

SINCERELY,

/s/

AMY A. LIBERKOWSKI
DIRECTOR, REGULATORY PRICING AND ANALYSIS

Enclosures
c: Service List

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

Nancy Lange	Chair
Dan Lipschultz	Commissioner
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 2017,
REVENUE REQUIREMENTS FOR 2018,
AND REVISED ADJUSTMENT FACTORS

DOCKET NO. G002/M-17-787

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 June 29, 2018 Comments of the Office of the Attorney General-Antitrust and Utilities Division (OAG) and the July 3, 2018 Comments of the Minnesota Department of Commerce (Department) in the above-referenced docket.

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

- the incremental impact of asset replacements;
- incorporating recently approved depreciation rates;
- project costs proposed for GUIC Rider recovery;
- review of contracts, work orders, and invoices;
- classification of TIMP and DIMP GUIC projects;
- sales forecast;
- proposed rate of return;
- accumulated deferred income tax (ADIT) prorate;
- rate effective date, tracker balance carrying charge, and recovery period;
- performance metrics; and
- GUIC Rider schedules, tariff sheets, and customer notices.

We also respond to the OAG's Comments on our rate of return proposal and our proposed 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 as part of this Reply, we are also modifying our revenue requirement request to remove the rate base return, depreciation expense, and property tax impact for assets replaced as a part of GUIC work. We have also incorporated the impact of new depreciation rates approved by the Commission in our 2017 Transmission, Distribution, and General Depreciation filing.¹ We are also removing costs previously agreed to in responses to Department Information Requests and additional charges subsequently identified as non-GUIC eligible. As a result of these modifications, the Company is now requesting recovery of approximately \$23.2 million in projected transmission and distribution natural gas infrastructure investments and associated O&M costs for 2018, with rate factors calculated using an unadjusted sales forecast. A summary of the changes in our 2018 GUIC Rider revenue requirement presented in this Reply are summarized in Table 1 below. Finally, we respectfully request that the Commission approve our proposed capital structure with an overall 7.52 percent rate of return (ROR), including a return on equity (ROE) of 10.00 percent for the 2018 GUIC Rider.

Table 1
2018 GUIC Rider Revenue Requirements Summary (\$ Millions)

2018 Revenue Requirement as filed in March 27, 2018 Supplement	\$24.36
Depreciation Impact of New Depreciation Rates on GUIC Assets	(0.53)
Incremental Return/Depreciation Expense on Assets Replaced	(0.37)
Incremental Property Tax Expense on Assets Replaced	(0.11)
Removal of Non-GUIC Eligible Costs	(0.10)
Updated ADIT Prorate	<u>(0.03)</u>
Updated 2018 Revenue Requirement	\$23.22

REPLY

We appreciate the Department's conclusions that the projects included in the Company's Petition are eligible for GUIC Rider recovery. We also appreciate the Department's conclusions that the Company's cost/benefit analysis of the sewer inspection program

¹ Approved in E,G002/D-17-581.

is reasonable, that the GUIC Rider should continue, and that the GUIC should not incorporate newly approved depreciation rates for non-GUIC related assets. We respond to the remaining issues raised by the Department below. We also respond to the OAG's conclusions as to the appropriate rate of return to be used for the 2018 GUIC Rider and its comments on performance metrics.

A. Incremental Impact of Asset Replacements

The Department in its Initial Comments on page 46 makes the following recommendations:

- *require Xcel to include only incremental rate base amounts in its GUIC rider rate base; Alternatively, if Xcel Gas cannot reasonably determine the remaining book value of existing plant included in base rates since removed or retired due to GUIC projects, then direct Xcel Gas to do away with the adjustments to the GUIC rider accumulated depreciation reserve attributed to the removal costs of the old plant;*
- *require the Company to recalculate the incremental depreciation expense amount by accounting for the depreciation expense amounts included in base rates relevant to the plant assets replaced by (or retired through) the GUIC projects included in this rider. Any previously overstated revenue requirements should be credited back to ratepayers; and*
- *require Xcel to recalculate the incremental property tax expense amount for all GUIC years by adjusting original cost of GUIC projects by the original cost of plant assets replaced by (or retired through) the GUIC projects in each year, prior to applying Xcel's calculated property tax rate. Any overstated revenue requirements should be credited back to ratepayers;*

The Department also noted that the Company did not comply with one of the statutory filing requirements related to costs and salvage value of existing infrastructure that is being replaced or modified. We address these concerns and recommendations below.

1. Estimating Value of Replaced Assets

Minn. Stat. § 216B.1635, Subd. 4(2)(iii) requires that, among other things, the Company provide as part of its GUIC Rider filing “a description of the estimated costs and salvage value, if any, associated with the existing infrastructure replaced or modified as a result of the project.” In its Comments, the Department notes that the Company provided estimated costs and salvage values for the new infrastructure projects it is undertaking but not the existing infrastructure. The Department requested that the Company provide this additional information in Reply Comments. Below, we provide a discussion of the method we used to calculate these amounts and then provide the requested information.

In our response to Department Information Request No. 8,² the Company described how we used an automated statistical estimation process to identify and quantify assets that have been replaced as a part of GUIC projects. This is due to the fact that the Company accounts for its gas transmission and distribution assets using the group accounting method. In other words, all assets are grouped together and depreciated as a whole by FERC 300-Series Account, rather than as individual assets. Thus, when a retirement occurs, an estimate is performed by our asset accounting system to derive the original vintage year(s) of the asset being retired using retirement curves approved by the Commission in our Transmission, Distribution, and General depreciation studies.

Per FERC regulations in 18 C.F.R. Ch. 1, Subchapter F, Part 201, Gas Plant Instructions, 10 D:

The book cost of gas plant retired shall be the amount at which such property is included in the gas plant accounts, including all components of constructions costs. The book cost shall be determined from the utility's records and if this cannot be done it shall be estimated. Utilities must furnish the particulars of such estimates to the Commission, if requested. When it is impracticable to determine the book cost of each unit, due to the relatively large number or small cost thereof, an appropriate average book cost of the units, with due allowance for any differences in size and character, shall be used as the book cost of the units retired. (Emphasis added)

This process for grouping assets and depreciating them using retirement curves has been used by the Company for several decades. Before our most recent gas general rate case, the use of these methods was Commission approved for gas transmission and distribution assets in our 2007 Transmission, Distribution, and General depreciation filing. Most recently the methods were again approved by the Commission in our 2017 Transmission, Distribution, and General depreciation filing.

Even without having an asset-specific retirement process, the net result in our asset records is the same. The proper quantity is removed from our property records, along with the corresponding capitalized asset value. All assets, regardless of age, are retired at a net book value of zero, and the amount of accumulated depreciation retired is the same as the capitalized asset value retired. As allowed by FERC, the cost per asset is averaged by vintage when grouped together for plant accounting purposes. Thus, when an asset is retired, the system derives the vintages along the

² This response is included as Attachment 5 to the Department's Comments.

retirement curve because the actual installation years are unknown, and the average cost of the vintages is used to retire for both plant and reserve.

Through this method, we are able to quantify the value of the assets replaced, even though we are unable to specifically identify the original installation vintages. We have provided an estimate of the impact these retired assets had on the 2010 revenue requirement for purposes of this Reply. To do so, we had to make a number of assumptions based on information available about retirement-related work completed in conjunction with construction work on GUIC work orders because those assets no longer reside on our books and have been retired from the accounting system.

To estimate the original installation vintages of retired assets, the Company utilized the system-assigned retirement of old vintages as new assets were entered into service. We then compared the amount of retired assets to all assets in that vintage year to calculate an allocation percentage. We used plant and reserve balances and depreciation rates for the entire group as of December 31, 2009, as this was the last full year of actual results that would have been included in Docket No. G002/GR-09-1153 (2010 Rate Case).

Based on this analysis, we estimate that approximately \$6.4 million in assets that are included in our current base rates have been retired as of the result of GUIC work. We further estimate that these retired assets had a remaining net book value of approximately \$2.0 million³ at the start of the 2010 test year utilized in our last gas general rate case. When ADIT on the retired assets is also accounted for, the net impact to rate base is a decrease of \$1.5 million. The revenue requirement impact of removing these amounts from our request is shown in Table 2 below.

Attachment A to this Reply provides a summary of our retired asset estimate analysis along with a listing of all the actual asset retirements. We believe this, in combination with the estimated retirement values listed above, meets the filing requirements set forth in Minn. Stat. § 216B.1635, Subd. 4(2)(iii.).

2. Adjustments to Reflect Incremental Impact of Asset Replacements

The Department recommends that the Company “represent the 2010 test year ‘snapshot’ of the replaced assets’ contribution to base rates to arrive at an incremental cost amount for rider recovery purposes.”⁴ Similarly, the Department recommends that the Company “recalculate the incremental depreciation expense amount by accounting for the depreciation expense amounts included in base rates relevant to

³ Our estimate is that the assets, in aggregate, were approximately 69 percent depreciated at the start of the 2010 test year.

⁴ Department Comments at 15.

the plant assets replaced by (or retired through) the GUIC projects included in this rider.”⁵ The Department also recommends similar treatment with respect to property taxes—namely, that the Company adjust property tax recovery to account for assets recovered in base rates that have been subsequently retired.

While we appreciate the Department’s concerns regarding the isolation of incremental costs in this docket, we do note that depreciation of retired assets has increased annually since the 2010 Rate Case. We discussed this in detail in our Supplemental Comments. The increase includes the decrease in depreciation from retired assets (all retired assets, not just the ones triggered by the GUIC work) offset by the increase to depreciation for new assets (those added to the system but not included in the GUIC Riders). Similarly, capital plant has increased annually since the 2010 Rate Case, which has generated a higher actual property tax expense that is not currently being recovered. Nevertheless, given that the GUIC Rider represents a somewhat unique set of circumstances (insofar as it is the only Rider primarily involving the replacement of assets) and given the significant period of time since our last rate case, we will not object to the Department’s recommendations on these issues for this filing. Table 2 below shows the derivation of the revenue requirement impact of making these changes to our request

Table 2
Revenue Requirement Impact – GUIC Replaced Assets (\$ Millions)

Net Book Value of Retired Assets	\$1.96
Less: ADIT on Retired Assets	(0.45)
Rate Base	<u>\$1.51</u>
 Rate of Return on Rate Base	 \$0.19
Estimated Book Depreciation on Retired Assets	0.19
Annual Deferred Tax Impact	(0.01)
Estimated Property Tax on Retired Assets	0.11
Revenue Requirement Impact	<u>\$0.48</u>

Thus, removing the estimated retired assets from our request results in a net revenue requirement decrease of approximately \$481,000. This amount includes a decrease in depreciation expense of approximately \$191,000 and a decrease in property tax of approximately \$110,000.⁶ These adjustments have been factored into the revenue requirement schedules included as Attachment B with this Reply.

⁵ Department Comments at 46.

⁶ \$6.4 million in estimated retirements multiplied by estimated property tax rate of 1.7 percent.

B. Incorporating Recently Approved Depreciation Rates

On May 4, 2018, subsequent to our initial filing date in this docket, the Commission issued its Order on our 2017 Five-Year Transmission, Distribution, and General Depreciation study.⁷ In this Order, the Commission approved our proposed depreciation rates, with an effective date of January 1, 2018, which has an effect on the 2018 depreciation expense requested in our 2018 GUIC Rider filing. The Company estimates the impact of these new depreciation rates to be approximately \$540,000.⁸

As stated in our Supplemental Comments filed on May 29, 2018, we have incorporated these new depreciation rates into our calculation of depreciation expense requested in this case, and the impact of the new rates are reflected in the revised 2018 GUIC Rider revenue requirement included with this Reply in Attachment B. The final impact of the new rates may differ from the amount shown above due to future changes in depreciable plant balance resulting from the Commission's decision in this filing, or changes in the final capital costs for GUIC projects.

C. Project Costs Proposed for Inclusion in GUIC Recovery Rider

The Department, as a part of its review, analyzed various TIMP and DIMP projects. Within their Comments, the Department had questions with five TIMP and DIMP project areas. These areas included:

- replacement costs for Maximum Allowable Operating Pressure (MAOP) validation purposes,
- TIMP – Island Line South project,
- DIMP – Langdon Line project,
- DIMP – Lexington to Snelling project, and
- DIMP/TIMP – Expenditures on replacement of low-risk infrastructure.

In this section, the Company offers clarifications and additional supporting information to address the Department's questions. We continue to support the full recovery of all projects discussed.

1. Replacement Costs for MAOP Validation Purposes

In this section, we respond to concerns raised by the Department regarding the Company's record keeping with respect to MAOP validations. All of our pipelines—

⁷ Docket No. E,G002/D-17-581.

⁸ See the Company's response to Department Information Request No. 37, included as Attachment 8 to the Department's Comments.

transmission and intermediate pressure (IP) distribution included—are subject to the Federal Pipeline Safety Rules established in 1970. Only our transmission pipeline is subject to the Pipeline and Hazardous Materials Safety Administration (PHMSA) guidance issued in 2012, which requires MAOP records to be traceable, verifiable, and complete (TVC).⁹ Our IP distribution system is further governed by federal DIMP requirements established in December 2009 in 49 CFR 192.1007, subpart e, which requires operators to determine and implement measures designed to reduce the risk from failure of their gas distribution pipelines. In accordance with this requirement, the Company established a quantitative risk assessment methodology for IP distribution pipelines. The Company uses its quantitative risk assessment methodology to determine risk and only replaces those segments considered high or medium risk.¹⁰ The absence of a TVC pressure test is one of the factors that determine if a segment of pipeline is medium or high risk.¹¹

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. While the Company has always maintained appropriate documentation for its system, the more stringent requirements now in place make it imperative that the Company undertake efforts to reestablish MAOP to meet the new safety requirements. The expenditures requested in this filing are a part of a systematic effort to update records to satisfy PHMSA rules for our transmission pipeline and DIMP requirements for our IP distribution pipeline.

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). 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.¹²

⁹ Some of the Company's MAOP transmission work is to establish records for pipeline built before the 1970 Federal Pipeline Safety Rules were enacted, while other work is to establish TVC records to meet the more stringent 2012 PHMSA rules. Approximately 21 percent of the Company's transmission line lacks TVC MAOP records.

¹⁰ For additional detail about this process, please see Attachment D2 (a), Page 8, included with our initial filing in this docket.

¹¹ Approximately 53 percent (40.5 miles) of our IP distribution pipeline in the Metro area lacks pressure test records that are TVC. The Company has not yet analyzed IP distribution pipeline outside of the Metro area to determine the percentage of pipe that have TVC records. This topic is discussed further in our response to Department Information Request No. 59, which is included as Attachment 8 to the Department's Comments.

¹² Minn. Stat. § 216B.1635.

The Company uses the preferred industry method to gather MAOP and pressure test documentation in order to comply with important federal 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.¹³ 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.

2. *TIMP – Island Line South Project*

a. In Line Inspection

Next, the Department raises concerns regarding costs associated with In Line Inspection (ILI) assessments of the Island Line South Project and the reasonableness of costs related to these assessments in light of the Company's potential plans to replace the line in the near future.

As background, TIMP requires operators to conduct ongoing integrity assessments as often as necessary, with intervals not to exceed seven years, to assure the integrity of the pipeline, based on risk assessments.¹⁴ These assessments must be completed using assessment methods that are appropriate and capable of detecting applicable threats. ILI is the best available option because ILI tools allow the Company to inspect lines for multiple threats including external corrosion, internal corrosion, manufacturing defects, material defects, construction defects and third party damage. ILI reduces the possibility of several threats with one test and can be done without taking the line out of service. Additionally, ILI technology allows for assessment of longer lengths of pipeline in one inspection run. Other approved assessment methodologies, such as pressure testing or direct assessment, only assess for limited threats and are usually performed on relatively short segments of pipeline at a time.

The purpose of the 2018 ILI inspection of the Island Line South pipeline is to fulfill the TIMP requirement to assess the condition of the pipeline. Due to the leak and coating history of the line, the Company determined that an assessment of the line

¹³ 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.

¹⁴ 49 CFR 192.937 subpart b.

was necessary.¹⁵ The Company has not at this time determined whether it intends to replace this portion of the line, so the assessment is necessary to remediate the current risks. After completion of the scheduled integrity assessment, we will have sufficient information to evaluate the pipeline as per the quantitative risk assessment for TIMP pipeline assessments and make a determination of potential repairs or replacements. We therefore believe the ILI inspection costs are reasonable, necessary, and properly recoverable through the GUIC Rider.

b. Water Pumping

Through the course of construction of the Island Line South project, the Company has incurred approximately \$1.5 million more in costs than we anticipated in our initial forecast. These additional costs were primarily the result of unforeseen weather and permitting delays that impacted the cost of the project. Specifically, these delays were a result of excess rain during the project and environmental permit delays due to fledgling eagles and migratory bats in the area.

The Department asserts that “no utility is entitled to recover cost overruns in a rider,” and therefore concludes that the water pumping costs are not reasonable and should be removed from the GUIC Rider.¹⁶ We respectfully disagree. The recovery of projects costs—whether in base rates or through a rider—depends on the prudence of those costs rather than the accuracy of an initial forecast. Here, the additional costs were incurred due to unforeseen weather issues, which required pumping to make the area safe for continued work. Beyond weather issues, the Company could not have anticipated environmental permitting delays, and could not start work until permits were issued. 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.”¹⁷ As such, the additional costs incurred represent a reasonable GUIC cost and are properly recovered through the GUIC Rider.

3. *DIMP – Langdon Line Project*

As a part of the Langdon Line Project, the Company is replacing a portion of the line, currently composed of 6-inch or 8-inch diameter pipe, with 12-inch diameter pipe. After the project, the replaced portions of the line will be uniform with the remaining length of

¹⁵ In Attachment C2, the Island Line South project was quantitatively scored as medium risk. Medium risk projects qualify for GUIC recovery.

¹⁶ Department Comments at 26.

¹⁷ 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).

the line, which is already 12-inch pipe. Replacing the line with one continuous diameter will enable the use of ILI on the entire Langdon pipeline. This, in turn, will enable the Company to identify and remediate flaws or pipe deterioration in advance of a pipeline failure to ensure the integrity and safety of the pipeline.

DIMP requires operators to determine and implement measures designed to reduce the risks from failure of its gas distribution pipelines.¹⁸ When renewing large diameter, IP distribution pipelines operated in densely populated areas, the Company constructs in a manner to facilitate inspection by means of ILI tools in order to monitor for defects that could lead to pipeline failure and leakage. ILI tools allow the Company to inspect lines for multiple threats that include external corrosion, internal corrosion, manufacturing defects, material defects, construction defects and third party damage. Therefore, to reduce the risk from all threat types, ILI is the preferred inspection method for large diameter, IP distribution pipelines.

The Department questioned whether a smaller 8-inch pipeline would still allow for compatibility with ILI technology. It would not. Using 8-inch pipe for the Langdon Line replacement would not be ILI compatible because dual diameter tools capable of inspecting both 8-inch and 12-inch diameter pipe in a single run are not commercially available. In addition, in-pipe robotic tools, such as those referenced by the Department, are currently infeasible for this application because their battery life limits the range of the tools to distances much shorter than traditional ILI tools.

The Department also stated that utilizing a uniform 12-inch pipeline for the length of the Langdon Line equates to betterment, and as such the incremental cost between an 8-inch pipeline and 12-inch pipeline should be excluded from recovery in this rider. This recommendation is analogous to a concern raised by the OAG in our 2015 GUIC Rider filing¹⁹ regarding the East Metro pipeline project. In that case, the Company operated a transmission pipeline that consisted of aging pipe with diameters ranging from 16 to 24 inches. Due to the differing pipe diameters and the type of couplings used, the Company was unable to employ ILI tools to assess the condition of the line. The Company planned to install uniform, 20-inch steel pipe to ensure future safety and reliability and allow more effective inspection and pressure-testing of the line. There, with the Department's agreement, the Commission found:

The Commission concurs with Xcel and the Department that the East Metro project will not result in a betterment. Using 20-inch rather than 18-inch pipe is not a betterment because it is the best engineering choice to restore the pipe to its original, safe condition. Had Xcel used 24- or 30-inch pipe, the situation would be different, since it would suggest that the Company was taking advantage of the replacement to increase its capacity. However, 20 inches is the pipe size

¹⁸ 49 CFR 192.1007, subpart e.

¹⁹ Docket No. G002/M-14-336.

*Xcel routinely uses when replacing its transmission lines. The East Metro project therefore does not go “beyond repair or restoration” and is not a betterment.*²⁰

For the Langdon Line, ILI is the most prudent inspection method. The Commission has already determined that the Company is not required to use a smaller sized pipe just to avoid a betterment, and that the use of uniform pipe diameter for the purpose of facilitating ILI in the East Metro Project was permissible. The Company therefore maintains its initial position that the proposed cost of the Langdon Line project is prudent and the full cost should be included in its GUIC revenue requirement.

4. DIMP – Lexington to Snelling Project

In Comments, the Department raised concerns regarding the Company’s plans to relocate approximately 20 services currently connected to the Lexington to Snelling pipeline, so as to enable ILI without disrupting service to large volume commercial customers. The Department concluded that these costs (\$420,000) do not meet the definition of a “gas utility project” under Minn. Stat. § 216B.1635 Subd. 1(b)(c)(2).²¹

To be clear, the ILI work being undertaken is necessary to comply with DIMP regulations. Further, we believe it is reasonable to design and construct the pipeline in a manner that prevents unnecessary disruption of service. We therefore believe the transfer of services to another section of the system is based on requirements by a federal agency and is permissible under the GUIC statute, which should not be interpreted to require inefficient or disruptive construction or inspection practices. The Company maintains its initial position that the proposed costs are reasonable and the full cost should be included in its GUIC revenue requirement.

5. DIMP/TIMP – Expenditures on Replacement of Low-Risk Infrastructure

As the Company explained in Attachment D2(a) of the Petition, lower risk pipe segments that are in the same block as higher risk segments may be replaced as a part of projects to replace high risk segments in order to minimize disruption to the local community. Risk scores are subject to change as new leaks are repaired. Efficiencies are achieved by replacing small low-risk segments of pipeline that may exist in a block while contractors are already mobilized and on site to renew the high and medium risk pipeline. First, it avoids the potential for multiple projects over the course of different years on the same block. Second, avoiding multiple projects by replacing all pipe in the area at the same time likely decreases the overall cost of the GUIC initiatives by avoiding multiple digging situations. As such, the Company maintains

²⁰ See ORDER APPROVING RIDER WITH MODIFICATIONS, Page 11, Docket No. G002/M-14-336 (January 27, 2015).

²¹ However, the Department did not that its recommendation would not preclude the Company from requesting full project recovery in its next gas rate case.

its initial position that the proposed costs are reasonable and the full cost should be included in its GUIC revenue requirement.

That said, with respect to the Crossover Pipeline Project, the Company acknowledges that the high risk score shown in Attachment C of our Petition was incorrect. As acknowledged in our response to Department Information Request No. 55,²² this project should have been properly scored as low risk, and as such should not be included as a GUIC-recoverable project because it was not paired with a high risk segment. As such, we are adjusting our request in this docket by removing the costs of this project from our 2018 revenue requirement (amounting to \$95,319²³) and from our 2017 revenue requirement (amounting to \$4,140).

D. Review of Contracts, Work Orders, and Invoices

As a part of the discovery process in this docket, the Department requested a large volume of information regarding the capital and operational and maintenance (O&M) costs for GUIC projects.²⁴ As a result of that review, the Department has recommended several adjustments to our request. While we maintain that the majority of the costs in our initial Petition are properly included in our request, we agree with the Department's recommendation to remove the costs of two non-Minnesota projects from the revenue requirement request. However, we disagree with the Department's recommendation to remove \$8.3 million²⁵ in capital costs from the GUIC revenue requirement and with its recommendation to use a jurisdictional allocator for \$3.0 million in O&M costs. We provide additional documentation as part of this Reply, and we address the Department's concerns over documentation below.

1. Capital Costs are Appropriately Recovered in the GUIC

The capital project costs included as a part of our GUIC request are made up of a variety of cost types. In 2017, the Company incurred approximately \$25.6 million in capital costs. The majority of these costs (approximately \$17.4 million) are for outside vendor work, and we appreciate the Department concluding that these costs are appropriately traceable to specific contracts.²⁶ Beyond that, costs are incurred for things such as materials, transportation, overhead costs, contributions in aid of construction (CIAC), and other work. In response to Department Information

²² This response is included as Attachment 3 to the Department's Comments.

²³ The 2018 amount shown in this Reply is calculated using the newly approved depreciation rates and includes a change in the ADIT calculation methodology and is slightly different than the number initially shown in our information request response.

²⁴ The information was provided in Department Information Request Nos. 49, 62, and 63.

²⁵ Only \$7.8 million of these costs were included in our request.

²⁶ As stated in Table 6 on Page 31 of their Comments.

Request No. 62,²⁷ the Company provided a detailed listing of charges incurred for GUIC projects in 2017 and contracts that support the outside vendor contract charges. These contracts demonstrate the costs were incurred for Minnesota-specific work.

The Department has stated that \$8.3 million in capital costs should be removed from our request due to concerns that the costs may not be Minnesota-specific work. As an initial matter, we note that the \$8.3 million amount includes \$489,849 of internal labor, which is not eligible for GUIC recovery and was not included in our request. Thus, no adjustment is needed for this amount. Additionally, we do not agree with the Department's recommendation to remove the remaining \$7.8 million in capital charges because the documentation provided by the Company shows that all charges are related to Minnesota specific work. In particular, we note that the remaining costs are directly related to the same projects underlying the \$17.4 million in capital costs approved by the Department. In other words, the remaining costs are for materials, CIAC, overhead, and other charges for items that directly support the vendor work for which the Department takes no issue.²⁸

Attachment C to this Reply shows a breakdown of our 2017 capital charges by work order that are specific to Minnesota GUIC-related projects.²⁹ We believe the Commission and Department can use this breakdown to tie the \$8.3 million of disputed costs by work order number to the very same projects underlying the \$17.4 million of vendor costs found to be appropriate by the Department. As a result, we believe the Commission and Department can (and should) conclude that all the charges in question relate to specific Minnesota work and are charges that are eligible for GUIC recovery. We therefore maintain our position and disagree with the Department's recommendation to remove \$7.8 million in capital charges, exclusive of the internal labor amount which does not require an adjustment.

2. O&M Costs are Minnesota-Specific

In addition to reviewing capital charge data for GUIC projects, the Department also reviewed O&M charge data that was provided in our response to Department Information Request No. 62. The Department stated that for most of the O&M charges, "...there was some kind of clear indication that the work was performed exclusively in Minnesota."³⁰ However, the Department found \$2,994,264 of O&M

²⁷ This response is included as Attachment 19 to the Department's Comments.

²⁸ While we believe all of these costs are legitimate, GUIC-eligible costs, they are fully eligible for recovery through base rates in a future rate case.

²⁹ Information for this Attachment was sourced from Attachment E of our response to Department Information Request No. 62.

³⁰ See PUBLIC Comments of the Minnesota Department of Commerce, Division of Energy Resources, Page 34, Docket No. G002/M-17-787 (July 3, 2018).

charges were “jurisdictionally unclear”³¹ and has recommended that these charges be jurisdictionally allocated between Minnesota and North Dakota unless the Company can provide invoices for all of the charges.

The Company enters into contracts that cover work within multiple jurisdictions. However, by utilizing functionality built into our accounting and work management system, the Company is able to track work by jurisdiction. The use of jurisdictional-specific work orders within our systems enables the Company to design, estimate, and execute work and ensure that the cost of that work is assigned to the proper jurisdiction. When preparing the revenue requirement request for the GUIC Rider filings, the Company pulls only those work orders that are assigned to Minnesota work.³²

While we believe this process is an effective way to ensure that only Minnesota-specific work in our GUIC Rider requests, the Company has also provided Attachment D, which includes invoices for the individual O&M charge identified as “jurisdictionally unclear” by the Department, with some exceptions as outlined in the attachment. The invoices contain identifying information, including project name and contract numbers that correspond with documentation previously provided to the Department. In addition, many of the invoices provide addresses of where the work took place and clearly identify the work as taking place in Minnesota.

3. Removal of non-Minnesota Specific Projects

The Department requested the removal of two non-Minnesota projects identified by the Company in our response to Department Information Request No. 62. In that response we identified two work orders related entirely to work completed in Colorado were identified incorrectly as Minnesota-related work and subsequently were included in our initial GUIC revenue requirement. The revenue requirement impact of these projects is approximately \$213 in 2017 and \$465³³ in 2018. We agreed to remove this impact from our request. The revised revenue requirement request filed with this Reply reflects that change. In addition, during our review of the invoices provided with this Reply, we found two additional invoices for Colorado-related work, and one invoice that cannot be directly identified as being related to Minnesota work that were included in our initial GUIC Rider request. These three invoices totaled \$366.30 in costs. We have removed this full amount from our revised revenue requirement request.

³¹ Ibid., Page 35.

³² The two non-Minnesota projects mentioned below are an exception to this rule. Those projects were assigned Minnesota-specific work orders in error.

³³ This amount is slightly different than the amount shown in our response to Department Information Request No. 62 due the use of the newly approved depreciation rates and a change in ADIT calculation.

a. GUIC Audit

The Company regrets that some small charges for non-Minnesota-specific work were inadvertently included in our GUIC request. These instances of incorrect cross-jurisdictional charging are taken seriously. In response to the Colorado Pipeline Data Project (PDP) Project invoices being incorrectly applied to the Minnesota GUIC PDP in Docket No. G002/M-16-891, the Company ordered an internal audit to review the GUIC's O&M and capital cost settlement activity since the GUIC Rider's inception in 2015.

The GUIC Rider Audit Report, created by the Company's Audit Services Department, was published on May 31, 2018. A primary objective of the audit was to validate historical costs included in the GUIC Rider to ensure consistency under the definitions of the GUIC Statute.³⁴ The report presents the overall assessment and results of the audit and has been included as Attachment E.

Upon completion of the internal audit, various recommendations and opportunities were identified to confirm the proper posting of expenditures to the correct jurisdiction and business unit/project. The report identified six separate action items to address by specified target dates. Subsequent actions were taken by the Company based on the internal audit's results that evaluated, refined and created additional review processes using a variety of new reporting tools in the new SAP financial system. On a monthly basis, all capital and O&M transactions posting to GUIC cost structures are reviewed and require management approval. The Company believes the enhanced examination of individual transactions will help prevent instances of inadvertent jurisdictional assignments moving forward.

b. SAP Work & Asset Management Solution

The Company also recently replaced its outdated PassPort Work Management System with an integrated SAP Work and Asset Management (WAM) Solution. In the new system, GUIC-related expenditures enter the Company's financial system (SAP) through an established Work Order (WO). In SAP, each WO requires Work Breakdown Structure (WBS) attributes and Functional Location (FLOC) prior to releasing work for execution. The WBS is a financial attribute used to associate expenditures with downstream accounts utilized in various management and financial reporting views. FLOC, on the other hand, is an attribute related to a physical asset/location allowing for the determination of total operating costs. Both WBS and FLOC are associated with a specific operating company. At the time work is released, SAP includes an additional validation to ensure the WBS and FLOC are associated with the same operating company. If not, the order is not allowed to be

³⁴ Minn. Stat. § 216B.1635.

released and begin collecting charges. This system improvement will also help prevent instances of erroneous cross-jurisdictional charges.

The Company is committed to continuously improving our accounting process to ensure that information is accurate and costs are assigned to jurisdictions properly. The recently undertaken audit of the GUIC Rider data and our system improvements within SAP are a part of that commitment.

E. Classification of TIMP and DIMP GUIC Projects

The Department asked for clarification on the allocation of transmission costs between Minnesota and North Dakota, and how the occasional reclassification of assets from transmission to distribution can affect the allocation of costs. Attachment F to this response lists all reclassified projects, and projects currently expected to be reclassified during the course of the GUIC initiative. This attachment also includes an explanation of the cause for the classification along with other project related information.

The Company provides all cost allocation methodologies in the Cost Assignment and Allocation Manual with each rate case filed. Gas transmission and distribution capital costs are directly assigned to the jurisdiction based on where the property is located. The Company's property records contain location information as a part of the data relating to capitalized property.

Costs in support of the gas distribution function are assigned to Minnesota or North Dakota based on the location where work is being performed. For O&M expense, the Company utilizes location indicators within its general ledger accounting system to determine the appropriate jurisdiction for assigning costs. When a unique state designation is not applicable, gas distribution costs are allocated to jurisdiction based on the number of customers. All distribution GUIC-related costs have been direct assigned to the proper states.

The gas transmission function is operated to serve customer requirements on a system-wide basis, and O&M costs in this function are allocated to both the Minnesota and North Dakota jurisdictions based on the Gas Load Dispatch allocator. Expressed as a percentage, the Gas Load Dispatch allocator is a combination of the Minnesota jurisdiction Design Demand Day and the Minnesota jurisdiction total Retail sales and Transportation throughput each weighted equally. Beyond the O&M related to the East Metro Pipeline included in our 2015 GUIC

Rider filing,³⁵ there has been no further transmission-related O&M costs proposed for a project with a subsequent classification change.

The Company does not own or operate transmission pipelines within North Dakota. As a result, North Dakota transmission project O&M costs are not allocated to the Minnesota jurisdiction. Distribution O&M associated with North Dakota integrity management projects should have a location indicator of North Dakota, and would be direct assigned to that jurisdiction. As such, at this time there are no North Dakota projects that will affect the allocation of costs between Minnesota and North Dakota.

F. Sales Forecast

In this section, the Company responds to the Department's Comments regarding the historical monthly adjustment in the sales forecast and the decrease in forecasted sales in 2018 and 2019 from actual sales amounts in 2016 and 2017. Based on the Department's Comments, we agree to use an unadjusted sales forecast for the 2018 GUIC Rider. Further, the Company provides clarification as to the difference in forecasted sales compared to actuals.

1. Use of Historical Monthly Adjustment

The Company used a sales forecast utilizing a historical monthly adjustment in its initial 2018 GUIC Rider filing. The Commission made its ruling on our 2017 GUIC Rider filing subsequent to the initial 2018 filing. The Commission Order in that docket stated that the Company should use an unadjusted sales forecast for that year's Rider. We did not make this change in our Petition Supplement when we made other changes to our 2018 GUIC Rider recommendation as we did not initially believe that the Order excluded the Company from using adjusted sales forecasts in future GUIC Rider filings. However, in light of the Department's comments on the use of an adjusted sales forecast, we have modified our proposal in this Reply to use an unadjusted sales forecast, removing the historical monthly adjustment. Attachment G to this response shows this unadjusted sales forecast. Our revenue requirement schedules in Attachment B also reflect this unadjusted sales forecast.

While the Company has made this change in light of the Department's comments about the use of an adjusted sales forecast for this Rider filing, the Company would like to point out why we believe an adjustment to the sales forecast for historical

³⁵ In our 2015 GUIC Rider filing (Docket No. G002/M-14-336), the Company estimated that approximately \$40,000 of transmission-related O&M expenses, related to the East Metro Pipeline Replacement project would be incurred in 2015. These costs were initially allocated between Minnesota and North Dakota. However subsequent to that filing, the O&M expenses were removed from GUIC recovery, as the work was completed by internal labor.

monthly differences is beneficial. This adjustment is a normal process in the development of the sales forecast used for the Company's revenue forecasting and gas planning purposes. The adjustments are done in a manner that ensures that the annual sales for a given calendar year remain unchanged; *i.e.*, the annual adjusted sales equal the annual unadjusted sales. The adjustment comes at little or no cost, as it does not have any meaningful impact on an annual basis or on the calculated allocated cost per therm in this proceeding.

2. Difference in Historic Actual Sales versus Forecasted Future Sales

We understand that the Department had questions about why the actual sales for 2016 and 2017 were higher than the forecasted sales for 2018 and 2019 used in this proceeding. In this section we offer clarification for the decrease in forecasted sales. The primary contributor to higher actual sales in 2016 and 2017 than the forecast in 2018 and 2019 is a decrease in the forecasted sales for the transportation class, particularly the interdepartmental transport class.

The interdepartmental transport class is comprised of gas volumes used for electric generation. The forecast of gas transported for electric generation is an output from the Company's production cost model of anticipated electric dispatch. The forecast of interdepartmental transport sales was developed in July 2017 and predicted that less gas would be used for electric generation during the forecast period than was used in 2016 and 2017 – more than seven million dekatherms less than 2016 actual sales and more than five million dekatherms less than 2017 actual sales. The Department stated a belief that sales may have been underestimated for this forecast, but the forecast was considering an expected decrease in gas transports to our electric generating plants. The decrease in demand at our production facilities is driven partially due to the addition of new gas generation at the Black Dog and Mankato facilities, which operate more efficiently, along with the continued addition of renewable wind and solar generation which reduces the overall gas generation forecast. As such the Company maintains that the proposed sales forecast is appropriate and no further adjustments are needed at this time. To ensure that changes in sales forecasts are well understood, in future GUIC Rider filings we intend to include a discussion of any drivers causing major increases or decreases in sales forecasts compared to actual sales in previous years.

G. Proposed Rate of Return

The Company continues to believe that the cost of capital we have proposed for the 2018 GUIC Rider filing—an ROR of 7.52 percent and an ROE of 10.00 percent—is reasonable, because it is expressly authorized by statute, consistent with comparable proxy groups, and within the range required by equity investors to invest in utilities

similar to the Company under current capital market conditions. We respond to the Department's and OAG's analyses in turn below.

1. Department Recommend Rate of Return

While the Commission has historically maintained a consistent capital structure and ROR on debt over prior years, it has approved adjustments to the ROE component at the time of the GUIC Rider filing. As the Department notes in 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 10.00 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.

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 this 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." We continue to believe that our independent expert analysis supports our proposal for a 10.00 percent ROE, and that changes in market conditions over the intervening year, including successive increases in interest rates by the Federal Reserve and a corresponding increase in government and corporate bond yields, provide additional support for an increase in the authorized ROE relative to the 2017 GUIC docket. Since our independent expert's analysis was conducted in September 2017, 30-day average yields on 10-year Treasury bonds have increased from 2.19 percent to 2.92 percent, yields on 30-year Treasury bonds have increased from 2.77 percent to 3.07 percent, yields on Moody's A-rated utility bonds have increased from 3.86 percent to 4.27 percent, and yields on Moody's Baa-rated utility bonds have risen from 4.23 percent to 4.71 percent.³⁶ We therefore maintain our request for an overall 7.52 percent ROR.

³⁶ All comparisons are as of June 30, 2018 using data from Bloomberg.

2. OAG Recommended Rate of Return

In its Reply, the OAG has recommended limiting the ROR for the 2018 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.³⁷ As the Company pointed out in its May 14, 2018, Reply Comments in the aforementioned docket, the OAG's ROR recommendation is unreasonable and does not meet the three standards established in the *Hope Natural Gas*³⁸ and *Bluefield Waterworks*³⁹ decisions for a fair return:

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

The OAG's argument that 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 not reasonable to set the Company's ROE for the GUIC Rider based on long-term debt costs when the Company is using both equity and debt to finance these projects.

The OAG 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. As we also stated in our TCR Reply Comments, a Minnesota Statute related to GUIC projects sets the necessary precedent for the Commission, and it is not necessary to look to an inapplicable rulemaking in Iowa. The GUIC statute establishes that, for GUIC 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,⁴⁰ 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 is a significant reduction in an overall ROR from what the Commission recently established in its 2017 Order. As discussed above, the public interest favors approving a ROR higher than what was previously approved.

³⁷ Docket No. E002/M-17-797.

³⁸ Federal Power Commission v. Hope Natural Gas Co., 320 US 591, 603 (1944).

³⁹ Bluefield Waterworks & Improvement Co. v. Public Service Commission of West Virginia, 262 US 679, 693 (1923).

⁴⁰ Docket No. G002/M-16-891.

H. Accumulated Deferred Income Tax (ADIT) Prorate

In our initial Petition, the Company proposed that the 2018 GUIC Rider rates become effective August 1, 2018, and that ADIT be prorated to comply with IRS normalization rules. As an alternative, the Department recommends in its Comments that the Company should instead delay implementation of its 2018 GUIC Rider rates until the end of the 2018 test period, and implement 2018 GUIC Rider rates no sooner than January 1, 2019.

The Department's recommendation would result in a five-month delay in the application of rates versus the Company's proposal, in order to avoid the \$26,416 of revenue requirements from ADIT prorate presented in the Company's previous filings.

The Company now proposes that—instead of the ADIT prorate methodology utilized in the Company's previous filings in this docket, or postponing the implementation of 2018 GUIC Rider rates—a new methodology be utilized to prorate ADIT. Implementing this new methodology results in an ADIT prorate adjustment that has very little impact to customer rates.

The Company took steps to evaluate this topic in significant depth and explore what alternative treatments could be applied across all of the Company's open rider proceedings so as to minimize the customer impact while still maintaining the significant deferred tax benefits provided to customers. The Company engaged Deloitte Tax to evaluate rider calculations and propose any further optimizations that could be applied. Based on recent IRS guidance, Deloitte Tax along with our tax experts developed the following proposal:

1. Apply a mid-month convention for the proration factors in each of the monthly revenue requirement calculations.
2. Remove ADIT from the beginning-of-month and end-of-month rate base average, since the proration is itself a form of averaging.

Attachment H illustrates the application of the new methodology, separately to TIMP and DIMP projects. As calculated in the schedule, the impact of the new ADIT prorate methodology on TIMP projects is \$71, and the impact on DIMP projects is \$79. Application of this new ADIT prorate methodology has also been proposed by the Company in its ongoing Transmission Cost Recovery, Renewable Energy Standard, and State Energy Policy Rider dockets, with similar de minimis impacts on customer revenue requirements.

Although delaying the implementation date of the 2018 GUIC Rider, as the Department recommends, would also result in compliance with IRS normalization

rules, the Company believes that its new ADIT prorate methodology (1) is straightforward to calculate, (2) complies with normalization requirements set forth in the most recent IRS rulings, and (3) reduces the impact to customers to an amount that is de minimis.

Further, we ask to only apply our proposed methodology for the 2018 GUIC Rider, with no commitment from parties regarding future treatment. That is, should parties or the Commission accept our proposed ADIT prorate treatment in this proceeding, the Company commits here to refrain from using this outcome as an argument for acceptance in future proceedings. We believe this creates a win for customers: compliance with normalization rules, protection of customers, and avoidance of precedent for resolution of this issue in future proceedings.

The associated revenue requirement of \$150 under the new ADIT prorate methodology has, for practical purposes, very little impact on customer costs relative to the \$23.2 million modified 2018 GUIC Rider revenue requirement.

I. Rate Effective Date, Tracker Balance Carrying Charge, and Recovery Period

The Department argues that the effective date for the GUIC rate recovery should be delayed until January 1, 2019, at the earliest. The Department claims that the implementation of rider recovery before the end of the forecast test period, which necessitates the proration of ADIT, will cause harm to customers. However, as we have shown above, the impact of our alternative method of proration on our revenue requirement is \$150. The Company requests that the Commission allow implementation of new rates as soon as practicable after their written Order.

The Department argues against the use of a tracker balance carrying charge while also recommending to postpone the recovery of 2018 GUIC Rider costs until 2019, which together will result in the under recovery of costs in 2018. The current forecast test year structure of the GUIC Rider provides more current recovery and better incentivizes timely safety investments. The use of a de facto historical test year will have a much larger negative impact on the Company's GUIC Rider recovery than the increase in revenue requirement caused by the use of our proposed ADIT proration method. However, if it is determined that avoiding ADIT proration is essential, then the Company contends that a carrying charge should be considered in order to relieve financial pressures caused by a delay in the recovery of costs.

Although the Company initially proposed an 8-month recovery period for the 2018 GUIC Rider filing, it acknowledges that the Commission approved a 12-month recovery period for our 2017 GUIC Rider after our initial filing date in this proceeding. The Company, therefore, does not oppose the Department's recommendation to use a 12-month period.

J. Performance Metrics

The Department reviewed our proposed performance metrics and found them to be reasonable, with one exception. Its Comments included a request to recalculate our DIMP Poor Performing Main Unit Cost metric. We are appreciative of the Department's review and support of the majority of our metrics. We provide the revised version of the calculation as requested as Attachment I to our Reply. The attachment also includes an evaluation of six projects that have unit cost variances greater than one standard deviation from the average unit cost.

The OAG noted that the Company has not reconvened stakeholders to further discuss performance metrics. The Company plans to work with stakeholders prior to the next GUIC filing in November, and will be reaching out to them within the next few weeks to begin that process.

K. GUIC Rider Schedules, Tariff Sheets, and Customer Notices

The Department requested clarifying modifications to the GUIC Rider schedules. Specifically they requested that the schedules be modified to include historical and projected revenue requirements, rates, and recoveries within a single tracker for each year. The Company will work to modify these schedules going forward and will present an updated format in our next GUIC Rider filing.

In addition, the Department requested that if any changes were approved to the proposed 2018 GUIC Rider revenue requirement, then the Company should make a compliance filing within 10 days of the written order date. We have no concerns with this request and are also happy to provide a similar filing within 10 days of any rate changes resulting from overlapping rate period recovery ending, with a subsequent customer bill message alerting customers to the change in rates.

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 2018 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 7.52 percent.

Dated: July 27, 2018

Northern States Power Company

Index of Attachments	
Attachment	Item
A	Asset Retirements
B	Updated Revenue Requirements Petition Attachments
	(E) Capital TIMP and DIMP Expenditures Actual and Forecast Through 2022
	(F) TIMP Capital Revenue Requirements for 2016-2019
	(G) DIMP Capital Revenue Requirements for 2016-2019
	(K) Universal Inputs
	(L) Magnitude of GUIC in Relation to Last Approved Natural Gas Rate Case Docket No. G002/GR-09-1153
	(N) Annual Revenue Requirements Tracker Summary for 2016-2022
	(O) Revenue Requirements Monthly Tracker for 2016-2019
	(Q) GUIC Rate Factor Determination
C	2017 Capital Charges by Work Order
D	O&M TIMP and DIMP Project Invoices
E	GUIC Rider Audit Report
F	Pipeline Project Reclassifications
G	Updated Sales Forecast with Historical Monthly Adjustment Removed
H	Accumulated Deferred Income Tax Prorate Calculation
I	Recalculation of DIMP Poor Performing Main Unit Cost Metric and Projects Evaluation

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4584498	1,138,112.99	727,159.33	410,953.66	(588,410.60)	52%	212,465.28	2.89%	16,998.53	20367000-Transmission Mains
4584499	118,508.05	71,833.85	46,674.20	(58,294.67)	49%	22,959.26	2.89%	1,684.07	20367000-Transmission Mains
4584500	160,030.19	91,759.19	68,271.00	(79,213.34)	49%	33,793.46	2.89%	2,288.39	20367000-Transmission Mains
4584501	667,967.18	339,231.68	328,735.50	(596,455.35)	89%	293,541.44	2.89%	17,230.93	20367000-Transmission Mains
4584502	13,644.50	6,482.39	7,162.11	(5,780.96)	42%	3,034.47	2.89%	167.01	20367000-Transmission Mains
4584544	25,152.80	32,698.64	(7,545.84)	(22,031.24)	88%	(6,609.37)	2.89%	636.46	20367000-Transmission Mains
4584545	137,819.26	179,165.04	(41,345.78)	(7,115.48)	5%	(2,134.64)	2.89%	205.56	20367000-Transmission Mains
4584659	379,108.30	436,123.78	(57,015.48)	(1,764.00)	0%	(265.29)	2.89%	50.96	20376010-Distribution Mains-Steel
4584661	27,934.20	30,782.26	(2,848.06)	(486.00)	2%	(49.55)	2.89%	14.04	20376010-Distribution Mains-Steel
4584698	104,514.88	120,233.26	(15,718.38)	(192.67)	0%	(28.98)	2.89%	5.57	20376010-Distribution Mains-Steel
4584720	(2,751.06)	(3,576.38)	825.32	340.44	12%	102.13	2.89%	(9.83)	20376010-Distribution Mains-Steel
4584724	669.30	870.09	(200.79)	(276.00)	41%	(82.80)	2.89%	7.97	20376010-Distribution Mains-Steel
4584725	3,005.77	3,907.50	(901.73)	(680.92)	23%	(204.28)	2.89%	19.67	20376010-Distribution Mains-Steel
4584727	2,993.36	3,891.36	(898.00)	(882.70)	29%	(264.81)	2.89%	25.50	20376010-Distribution Mains-Steel
4584729	2,674.78	3,477.21	(802.43)	(856.89)	32%	(257.07)	2.89%	24.75	20376010-Distribution Mains-Steel
4584731	842.47	1,095.20	(252.73)	(359.46)	43%	(107.83)	2.89%	10.38	20376010-Distribution Mains-Steel
4584733	2,816.53	3,649.38	(832.85)	(711.69)	25%	(210.45)	2.89%	20.56	20376010-Distribution Mains-Steel
4584735	2,170.31	2,759.53	(589.22)	(537.00)	25%	(145.79)	2.89%	15.51	20376010-Distribution Mains-Steel
4584736	11,111.00	13,858.40	(2,747.40)	(2,996.23)	27%	(740.87)	2.89%	86.56	20376010-Distribution Mains-Steel
4584737	13,504.12	16,516.22	(3,012.10)	(2,803.64)	21%	(625.35)	2.89%	80.99	20376010-Distribution Mains-Steel
4584738	11,996.42	14,381.69	(2,385.27)	(2,317.82)	19%	(460.86)	2.89%	66.96	20376010-Distribution Mains-Steel
4584739	3,938.25	4,625.90	(687.65)	(873.20)	22%	(152.47)	2.89%	25.23	20376010-Distribution Mains-Steel
4584740	17,797.83	20,474.53	(2,676.70)	(3,521.73)	20%	(529.65)	2.89%	101.74	20376010-Distribution Mains-Steel
4584742	10,211.46	11,499.89	(1,288.43)	(1,638.36)	16%	(206.72)	2.89%	47.33	20376010-Distribution Mains-Steel
4584743	13,021.75	14,349.39	(1,327.64)	(2,665.52)	20%	(271.76)	2.89%	77.00	20376010-Distribution Mains-Steel
4584744	12,955.20	13,962.31	(1,007.11)	(2,784.87)	21%	(216.49)	2.89%	80.45	20376010-Distribution Mains-Steel
4584746	7,606.12	8,013.18	(407.06)	(1,693.29)	22%	(90.62)	2.89%	48.92	20376010-Distribution Mains-Steel
4584749	6,101.44	6,280.20	(178.76)	(1,021.67)	17%	(29.93)	2.89%	29.51	20376010-Distribution Mains-Steel
4584751	2,309.61	2,321.34	(11.73)	(332.56)	14%	(1.69)	2.89%	9.61	20376010-Distribution Mains-Steel
4584819	43,766.76	56,896.79	(13,130.03)	(794.39)	2%	(238.32)	2.89%	22.95	20376010-Distribution Mains-Steel
4584825	15,415.14	20,039.68	(4,624.54)	(1,169.28)	8%	(350.78)	2.89%	33.78	20376010-Distribution Mains-Steel
4584827	50,957.13	66,244.26	(15,287.13)	(972.53)	2%	(291.76)	2.89%	28.10	20376010-Distribution Mains-Steel
4584833	8,193.59	10,219.61	(2,026.02)	(1,396.28)	17%	(345.26)	2.89%	40.34	20376010-Distribution Mains-Steel
4584835	12,412.94	15,181.66	(2,768.72)	(1,291.55)	10%	(288.08)	2.89%	37.31	20376010-Distribution Mains-Steel
4584841	28,491.58	31,396.47	(2,904.89)	(988.65)	3%	(100.80)	2.89%	28.56	20376010-Distribution Mains-Steel
4584854	89,162.40	42,108.45	47,053.95	(284.22)	0%	149.99	2.89%	8.21	20376010-Distribution Mains-Steel
4584877	852.66	1,108.46	(255.80)	(108.39)	13%	(32.52)	2.89%	3.13	20376010-Distribution Mains-Steel

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4584879	712.52	926.28	(213.76)	(7,031.42)	987%	(2,109.47)	2.89%	203.13	20376010-Distribution Mains-Steel
4584880	216.78	275.63	(58.85)	(10,245.95)	4726%	(2,781.50)	2.89%	295.99	20376010-Distribution Mains-Steel
4584883	14,062.83	11,409.60	2,653.23	(2,224.71)	16%	419.74	2.89%	64.27	20376010-Distribution Mains-Steel
4584885	20,491.89	9,677.64	10,814.25	(303.71)	1%	160.28	2.89%	8.77	20376010-Distribution Mains-Steel
4584955	302,384.84	355,185.02	(52,800.18)	(430.55)	0%	(75.18)	2.89%	12.44	20376010-Distribution Mains-Steel
4584956	38,056.62	43,780.12	(5,723.50)	(424.18)	1%	(63.79)	2.89%	12.25	20376010-Distribution Mains-Steel
4584957	37,595.99	42,339.68	(4,743.69)	(451.37)	1%	(56.95)	2.89%	13.04	20376010-Distribution Mains-Steel
4584960	52,659.64	58,028.63	(5,368.99)	(549.28)	1%	(56.00)	2.89%	15.87	20376010-Distribution Mains-Steel
4584966	63,882.11	67,300.98	(3,418.87)	(182.56)	0%	(9.77)	2.89%	5.27	20376010-Distribution Mains-Steel
4584969	52,181.30	53,710.21	(1,528.91)	(23.95)	0%	(0.70)	2.89%	0.69	20376010-Distribution Mains-Steel
4584972	39,899.99	40,102.77	(202.78)	(667.44)	2%	(3.39)	2.89%	19.28	20376010-Distribution Mains-Steel
4585002	3,388.54	4,405.11	(1,016.57)	(1,142.05)	34%	(342.62)	2.89%	32.99	20376010-Distribution Mains-Steel
4585008	187,076.41	219,742.29	(32,665.88)	(1,171.48)	1%	(204.56)	2.89%	33.84	20376010-Distribution Mains-Steel
4585051	1,325,900.97	305,061.62	1,020,839.35	(3,541.38)	0%	2,726.58	2.89%	102.31	20376010-Distribution Mains-Steel
4585145	2,342.97	2,808.83	(465.86)	(2,336.83)	100%	(464.64)	2.89%	67.51	20376010-Distribution Mains-Steel
4585148	7,082.75	5,746.45	1,336.30	(791.52)	11%	149.34	2.89%	22.87	20376010-Distribution Mains-Steel
4585153	14,870.88	19,332.09	(4,461.21)	(1,585.32)	11%	(475.59)	2.89%	45.80	20376010-Distribution Mains-Steel
4585154	15,077.93	19,536.56	(4,458.63)	(4,447.68)	29%	(1,315.20)	2.89%	128.49	20376010-Distribution Mains-Steel
4585155	47,246.76	60,073.55	(12,826.79)	(3,566.82)	8%	(968.34)	2.89%	103.04	20376010-Distribution Mains-Steel
4585156	35,695.31	44,521.76	(8,826.45)	(19,234.80)	54%	(4,756.23)	2.89%	555.67	20376010-Distribution Mains-Steel
4585158	208,589.04	255,114.85	(46,525.81)	(13,020.89)	6%	(2,904.31)	2.89%	376.16	20376010-Distribution Mains-Steel
4585159	132,735.07	159,127.01	(26,391.94)	(22,755.89)	17%	(4,524.59)	2.89%	657.39	20376010-Distribution Mains-Steel
4585160	250,174.96	293,858.57	(43,683.61)	(25,126.20)	10%	(4,387.34)	2.89%	725.87	20376010-Distribution Mains-Steel
4585161	286,264.45	329,316.77	(43,052.32)	(20,170.48)	7%	(3,033.51)	2.89%	582.70	20376010-Distribution Mains-Steel
4585163	238,246.16	268,306.88	(30,060.72)	(21,253.86)	9%	(2,681.71)	2.89%	614.00	20376010-Distribution Mains-Steel
4585166	257,626.53	283,893.00	(26,266.47)	(25,289.49)	10%	(2,578.41)	2.89%	730.59	20376010-Distribution Mains-Steel
4585169	312,008.57	336,263.29	(24,254.72)	(22,961.63)	7%	(1,784.98)	2.89%	663.34	20376010-Distribution Mains-Steel
4585172	314,643.38	331,482.71	(16,839.33)	(22,110.89)	7%	(1,183.35)	2.89%	638.76	20376010-Distribution Mains-Steel
4585175	298,012.72	306,744.39	(8,731.67)	(7,592.28)	3%	(222.45)	2.89%	219.33	20376010-Distribution Mains-Steel
4585178	96,237.78	96,726.78	(489.00)	(3,470.76)	4%	(17.64)	2.89%	100.27	20376010-Distribution Mains-Steel
4585181	63,144.61	61,935.96	1,208.65	(3,846.12)	6%	73.62	2.89%	111.11	20376010-Distribution Mains-Steel
4585184	53,722.38	51,393.18	2,329.20	(839.25)	2%	36.39	2.89%	24.25	20376010-Distribution Mains-Steel
4585188	24,608.92	22,350.05	2,258.87	(1,027.25)	4%	94.29	2.89%	29.68	20376010-Distribution Mains-Steel
4585190	27,016.80	23,882.34	3,134.46	(1,593.61)	6%	184.89	2.89%	46.04	20376010-Distribution Mains-Steel
4585192	20,762.58	17,851.10	2,911.48	(8,737.93)	42%	1,225.30	2.89%	252.43	20376010-Distribution Mains-Steel
4585195	163,961.48	136,998.01	26,963.47	(11,010.23)	7%	1,810.63	2.89%	318.07	20376010-Distribution Mains-Steel
4585240	210,543.07	273,705.98	(63,162.91)	(20,712.28)	10%	(6,213.68)	2.89%	598.35	20376010-Distribution Mains-Steel

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4585242	348,345.70	452,849.53	(104,503.83)	(10,165.59)	3%	(3,049.68)	2.89%	293.67	20376010-Distribution Mains-Steel
4585245	173,790.70	225,927.99	(52,137.29)	(14,559.14)	8%	(4,367.75)	2.89%	420.60	20376010-Distribution Mains-Steel
4585248	258,232.52	334,593.60	(76,361.08)	(15,483.58)	6%	(4,578.60)	2.89%	447.30	20376010-Distribution Mains-Steel
4585251	280,415.40	356,544.76	(76,129.36)	(13,257.27)	5%	(3,599.19)	2.89%	382.99	20376010-Distribution Mains-Steel
4585254	257,326.23	320,955.00	(63,628.77)	(21,092.42)	8%	(5,215.50)	2.89%	609.34	20376010-Distribution Mains-Steel
4585256	422,598.47	516,859.12	(94,260.65)	(20,073.71)	5%	(4,477.44)	2.89%	579.91	20376010-Distribution Mains-Steel
4585259	405,083.09	485,626.26	(80,543.17)	(17,470.61)	4%	(3,473.70)	2.89%	504.71	20376010-Distribution Mains-Steel
4585261	377,894.55	443,879.65	(65,985.10)	(22,673.27)	6%	(3,959.04)	2.89%	655.01	20376010-Distribution Mains-Steel
4585263	499,763.46	574,924.76	(75,161.30)	(17,369.87)	3%	(2,612.32)	2.89%	501.80	20376010-Distribution Mains-Steel
4585265	403,327.83	454,217.66	(50,889.83)	(15,911.65)	4%	(2,007.65)	2.89%	459.67	20376010-Distribution Mains-Steel
4585267	367,523.47	404,994.60	(37,471.13)	(18,687.19)	5%	(1,905.27)	2.89%	539.85	20376010-Distribution Mains-Steel
4585269	460,817.13	496,639.71	(35,822.58)	(13,004.21)	3%	(1,010.91)	2.89%	375.68	20376010-Distribution Mains-Steel
4585271	334,787.45	352,704.72	(17,917.27)	(11,997.69)	4%	(642.10)	2.89%	346.60	20376010-Distribution Mains-Steel
4585273	320,021.65	329,398.20	(9,376.55)	(8,090.88)	3%	(237.06)	2.89%	233.74	20376010-Distribution Mains-Steel
4585275	157,171.58	157,970.08	(798.50)	(7,857.05)	5%	(39.92)	2.89%	226.98	20376010-Distribution Mains-Steel
4585277	269,924.87	264,759.12	5,165.75	(4,450.23)	2%	85.17	2.89%	128.56	20376010-Distribution Mains-Steel
4585279	114,655.66	109,684.27	4,971.39	(2,224.27)	2%	96.44	2.89%	64.26	20376010-Distribution Mains-Steel
4585281	80,780.64	75,321.79	5,458.85	(1,900.59)	2%	128.43	2.89%	54.91	20376010-Distribution Mains-Steel
4585287	53,929.22	46,366.81	7,562.41	(5,498.68)	10%	771.07	2.89%	158.85	20376010-Distribution Mains-Steel
4585289	190,640.19	159,289.17	31,351.02	(3,587.58)	2%	589.98	2.89%	103.64	20376010-Distribution Mains-Steel
4585341	124,088.65	161,315.19	(37,226.54)	(7,463.47)	6%	(2,239.04)	2.89%	215.61	20376010-Distribution Mains-Steel
4585343	280,108.56	364,141.09	(84,032.53)	(1,786.78)	1%	(536.03)	2.89%	51.62	20376010-Distribution Mains-Steel
4585345	94,431.45	122,760.92	(28,329.47)	(6,684.96)	7%	(2,005.49)	2.89%	193.12	20376010-Distribution Mains-Steel
4585347	283,533.65	367,376.44	(83,842.79)	(5,503.60)	2%	(1,627.45)	2.89%	158.99	20376010-Distribution Mains-Steel
4585349	253,363.89	322,149.11	(68,785.22)	(4,503.59)	2%	(1,222.67)	2.89%	130.10	20376010-Distribution Mains-Steel
4585351	216,259.04	269,733.21	(53,474.17)	(12,495.82)	6%	(3,089.83)	2.89%	360.99	20376010-Distribution Mains-Steel
4585353	558,715.01	683,336.41	(124,621.40)	(4,355.48)	1%	(971.49)	2.89%	125.82	20376010-Distribution Mains-Steel
4585355	153,670.58	184,225.10	(30,554.52)	(11,690.62)	8%	(2,324.46)	2.89%	337.73	20376010-Distribution Mains-Steel
4585357	619,299.81	727,437.26	(108,137.45)	(5,039.22)	1%	(879.91)	2.89%	145.58	20376010-Distribution Mains-Steel
4585359	292,741.15	336,767.55	(44,026.40)	(6,344.00)	2%	(954.10)	2.89%	183.27	20376010-Distribution Mains-Steel
4585361	368,412.11	414,896.49	(46,484.38)	(4,501.00)	1%	(567.91)	2.89%	130.03	20376010-Distribution Mains-Steel
4585363	184,373.70	203,171.71	(18,798.01)	(4,030.41)	2%	(410.92)	2.89%	116.43	20376010-Distribution Mains-Steel
4585365	155,033.96	167,085.85	(12,051.89)	(1,448.28)	1%	(112.59)	2.89%	41.84	20376010-Distribution Mains-Steel
4585368	91,212.68	96,094.18	(4,881.50)	(3,449.06)	4%	(184.59)	2.89%	99.64	20376010-Distribution Mains-Steel
4585370	207,642.18	213,725.92	(6,083.74)	(1,989.49)	1%	(58.29)	2.89%	57.47	20376010-Distribution Mains-Steel
4585372	138,051.48	138,752.92	(701.44)	(2,358.29)	2%	(11.98)	2.89%	68.13	20376010-Distribution Mains-Steel
4585374	188,993.73	185,376.77	3,616.96	(13.83)	0%	0.26	2.89%	0.40	20376010-Distribution Mains-Steel

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4585376	126,593.24	121,104.50	5,488.74	(3,582.84)	3%	155.34	2.89%	103.50	20376010-Distribution Mains-Steel
4585380	115,170.28	104,598.21	10,572.07	(1,445.09)	1%	132.65	2.89%	41.75	20376010-Distribution Mains-Steel
4585386	144,877.61	121,052.39	23,825.22	(2,195.40)	2%	361.04	2.89%	63.42	20376010-Distribution Mains-Steel
4585390	114,713.49	90,292.36	24,421.13	(5,813.20)	5%	1,237.56	2.89%	167.94	20376010-Distribution Mains-Steel
4585392	381,704.44	291,199.57	90,504.87	(7,230.67)	2%	1,714.44	2.89%	208.89	20376010-Distribution Mains-Steel
4585394	487,708.47	360,257.52	127,450.95	(13,686.36)	3%	3,576.60	2.89%	395.38	20376010-Distribution Mains-Steel
4585396	774,716.16	553,499.78	221,216.38	(10,285.85)	1%	2,937.07	2.89%	297.15	20376010-Distribution Mains-Steel
4585402	588,453.65	377,668.66	210,784.99	(10,945.92)	2%	3,920.85	2.89%	316.22	20376010-Distribution Mains-Steel
4585408	585,017.46	332,958.12	252,059.34	(8,381.08)	1%	3,611.05	2.89%	242.12	20376010-Distribution Mains-Steel
4585410	653,891.94	356,321.03	297,570.91	(2,821.78)	0%	1,284.13	2.89%	81.52	20376010-Distribution Mains-Steel
4585414	446,011.52	221,438.34	224,573.18	(14,116.13)	3%	7,107.67	2.89%	407.80	20376010-Distribution Mains-Steel
4585416	1,303,765.12	615,725.01	688,040.11	(26,023.19)	2%	13,733.30	2.89%	751.78	20376010-Distribution Mains-Steel
4585437	43,400.65	56,420.84	(13,020.19)	(345.11)	1%	(103.53)	2.89%	9.97	20376010-Distribution Mains-Steel
4585439	635.00	825.50	(190.50)	(167.97)	26%	(50.39)	2.89%	4.85	20376010-Distribution Mains-Steel
4585440	223.97	291.16	(67.19)	(51.06)	23%	(15.32)	2.89%	1.48	20376010-Distribution Mains-Steel
4585441	59.57	77.44	(17.87)	(38.62)	65%	(11.59)	2.89%	1.12	20376010-Distribution Mains-Steel
4585443	69.50	86.69	(17.19)	(51.08)	73%	(12.63)	2.89%	1.48	20376010-Distribution Mains-Steel
4585444	59.59	72.88	(13.29)	(28.69)	48%	(6.40)	2.89%	0.83	20376010-Distribution Mains-Steel
4585445	57.37	67.39	(10.02)	(75.05)	131%	(13.11)	2.89%	2.17	20376010-Distribution Mains-Steel
4585446	140.71	161.87	(21.16)	(3,653.08)	2596%	(549.35)	2.89%	105.53	20376010-Distribution Mains-Steel
4585450	233,140.06	303,082.06	(69,942.00)	(4,066.83)	2%	(1,220.05)	2.89%	117.49	20376010-Distribution Mains-Steel
4585451	299,261.62	389,040.11	(89,778.49)	(3,991.84)	1%	(1,197.55)	2.89%	115.32	20376010-Distribution Mains-Steel
4585453	118,347.84	153,344.07	(34,996.23)	(4,112.50)	3%	(1,216.09)	2.89%	118.81	20376010-Distribution Mains-Steel
4585454	101,373.13	128,894.68	(27,521.55)	(1,366.50)	1%	(370.99)	2.89%	39.48	20376010-Distribution Mains-Steel
4585456	106,815.06	130,640.17	(23,825.11)	(4,602.08)	4%	(1,026.49)	2.89%	132.95	20376010-Distribution Mains-Steel
4585458	188,604.75	221,537.51	(32,932.76)	(3,852.59)	2%	(672.71)	2.89%	111.30	20376010-Distribution Mains-Steel
4585783	69,496.84	83,314.99	(13,818.15)	(1,208.27)	2%	(240.24)	2.89%	34.91	20376010-Distribution Mains-Steel
4585784	118,211.20	138,852.36	(20,641.16)	(10,946.20)	9%	(1,911.34)	2.89%	316.22	20376010-Distribution Mains-Steel
4585785	45,213.78	52,013.64	(6,799.86)	(1,984.69)	4%	(298.48)	2.89%	57.34	20376010-Distribution Mains-Steel
4585787	11,050.68	12,444.99	(1,394.31)	(1,439.52)	13%	(181.63)	2.89%	41.59	20376010-Distribution Mains-Steel
4585788	25,727.82	28,350.94	(2,623.12)	(629.12)	2%	(64.14)	2.89%	18.17	20376010-Distribution Mains-Steel
4585791	251,980.39	271,568.65	(19,588.26)	(7,826.03)	3%	(608.37)	2.89%	226.09	20376010-Distribution Mains-Steel
4585794	46,638.68	49,134.71	(2,496.03)	(14,000.35)	30%	(749.28)	2.89%	404.45	20376010-Distribution Mains-Steel
4585797	34,999.59	36,025.05	(1,025.46)	(11,630.80)	33%	(340.77)	2.89%	336.00	20376010-Distribution Mains-Steel
4585800	16,033.24	16,114.71	(81.47)	(2,473.57)	15%	(12.57)	2.89%	71.46	20376010-Distribution Mains-Steel
4585830	102,934.63	123,401.28	(20,466.65)	(3,001.66)	3%	(596.82)	2.89%	86.71	20376010-Distribution Mains-Steel
4585834	191,654.94	225,120.28	(33,465.34)	(8,094.53)	4%	(1,413.41)	2.89%	233.84	20376010-Distribution Mains-Steel

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4585836	165,548.11	190,445.52	(24,897.41)	(958.47)	1%	(144.15)	2.89%	27.69	20376010-Distribution Mains-Steel
4585838	36,767.56	41,406.70	(4,639.14)	(2,481.97)	7%	(313.16)	2.89%	71.70	20376010-Distribution Mains-Steel
4585840	46,692.09	51,452.63	(4,760.54)	(1,210.40)	3%	(123.41)	2.89%	34.97	20376010-Distribution Mains-Steel
4585842	130,183.34	140,303.44	(10,120.10)	(500.68)	0%	(38.92)	2.89%	14.46	20376010-Distribution Mains-Steel
4585844	17,172.69	18,091.73	(919.04)	(128.33)	1%	(6.87)	2.89%	3.71	20376010-Distribution Mains-Steel
4585846	43,287.43	44,555.73	(1,268.30)	-	0%	-	2.89%	-	20376010-Distribution Mains-Steel
4585850	10,377.40	10,178.77	198.63	(531.24)	5%	10.17	2.89%	15.35	20376010-Distribution Mains-Steel
4585853	13,595.48	12,676.78	918.70	(2,770.73)	20%	187.23	2.89%	80.04	20376010-Distribution Mains-Steel
4585878	125,502.61	150,456.47	(24,953.86)	(2,224.99)	2%	(442.40)	2.89%	64.28	20376010-Distribution Mains-Steel
4586209	(2,096.76)	(2,332.58)	235.82	(6,959.14)	332%	782.69	2.56%	177.84	20376020-Distribution Mains-Plastic
4586210	3,972.88	4,216.49	(243.61)	(1,475.03)	37%	(90.45)	2.56%	37.70	20376020-Distribution Mains-Plastic
4586213	25,867.06	26,130.11	(263.05)	(488.76)	2%	(4.97)	2.56%	12.49	20376020-Distribution Mains-Plastic
4586216	19,565.14	19,263.75	301.39	(851.11)	4%	13.11	2.56%	21.75	20376020-Distribution Mains-Plastic
4586218	66,864.29	64,124.32	2,739.97	(595.42)	1%	24.40	2.56%	15.22	20376020-Distribution Mains-Plastic
4586221	10,624.82	9,917.71	707.11	(4,037.36)	38%	268.70	2.56%	103.18	20376020-Distribution Mains-Plastic
4586224	5,618.30	5,100.67	517.63	(814.00)	14%	75.00	2.56%	20.80	20376020-Distribution Mains-Plastic
4586226	14,242.73	12,566.33	1,676.40	(1,205.90)	8%	141.94	2.56%	30.82	20376020-Distribution Mains-Plastic
4586229	9,101.02	7,797.09	1,303.93	(7,345.26)	81%	1,052.38	2.56%	187.71	20376020-Distribution Mains-Plastic
4586231	42,929.91	35,681.28	7,248.63	(5,521.60)	13%	932.31	2.56%	141.11	20376020-Distribution Mains-Plastic
4586233	15,498.56	12,485.32	3,013.24	(1,424.00)	9%	276.85	2.56%	36.39	20376020-Distribution Mains-Plastic
4586234	26,627.05	20,769.20	5,857.85	(1,826.00)	7%	401.71	2.56%	46.66	20376020-Distribution Mains-Plastic
4586235	147,883.45	111,567.77	36,315.68	(1,892.00)	1%	464.62	2.56%	48.35	20376020-Distribution Mains-Plastic
4586236	95,363.20	69,506.08	25,857.12	(1,518.00)	2%	411.60	2.56%	38.79	20376020-Distribution Mains-Plastic
4586237	16,475.68	11,587.09	4,888.59	(834.00)	5%	247.46	2.56%	21.31	20376020-Distribution Mains-Plastic
4586238	31,452.85	21,315.89	10,136.96	(676.00)	2%	217.87	2.56%	17.28	20376020-Distribution Mains-Plastic
4586239	32,069.40	20,913.56	11,155.84	(1,046.92)	3%	364.19	2.56%	26.75	20376020-Distribution Mains-Plastic
4586240	38,283.96	23,987.20	14,296.76	(2,018.40)	5%	753.75	2.56%	51.58	20376020-Distribution Mains-Plastic
4586241	19,111.11	11,485.53	7,625.58	(715.23)	4%	285.39	2.56%	18.28	20376020-Distribution Mains-Plastic
4586242	14,425.84	8,300.85	6,124.99	(773.18)	5%	328.28	2.56%	19.76	20376020-Distribution Mains-Plastic
4586243	45,612.65	25,079.62	20,533.03	(2,805.57)	6%	1,262.96	2.56%	71.70	20376020-Distribution Mains-Plastic
4586244	94,354.40	49,466.72	44,887.68	(624.79)	1%	297.23	2.56%	15.97	20376020-Distribution Mains-Plastic
4586245	36,279.06	18,092.04	18,187.02	(1,323.05)	4%	663.26	2.56%	33.81	20376020-Distribution Mains-Plastic
4586246	23,686.16	11,206.34	12,479.82	(750.50)	3%	395.43	2.56%	19.18	20376020-Distribution Mains-Plastic
4586247	111,618.54	49,954.15	61,664.39	(2,788.30)	2%	1,540.41	2.56%	71.26	20376020-Distribution Mains-Plastic
4586248	28,677.75	12,101.14	16,576.61	(1,639.04)	6%	947.41	2.56%	41.89	20376020-Distribution Mains-Plastic
4586249	66,602.27	26,400.85	40,201.42	(2,729.45)	4%	1,647.51	2.56%	69.75	20376020-Distribution Mains-Plastic
4586250	55,513.58	20,585.63	34,927.95	(2,434.10)	4%	1,531.48	2.56%	62.20	20376020-Distribution Mains-Plastic

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4586251	149,003.61	51,443.16	97,560.45	(1,634.16)	1%	1,069.97	2.56%	41.76	20376020-Distribution Mains-Plastic
4586252	102,415.78	32,739.63	69,676.15	(708.04)	1%	481.70	2.56%	18.09	20376020-Distribution Mains-Plastic
4586253	102,654.81	30,190.80	72,464.01	(895.20)	1%	631.92	2.56%	22.88	20376020-Distribution Mains-Plastic
4586254	91,509.68	24,572.71	66,936.97	(576.77)	1%	421.89	2.56%	14.74	20376020-Distribution Mains-Plastic
4586284	16,350.08	18,188.89	(1,838.81)	(2,115.14)	13%	(237.88)	2.56%	54.05	20376020-Distribution Mains-Plastic
4586286	12,526.86	13,294.95	(768.09)	(894.81)	7%	(54.87)	2.56%	22.87	20376020-Distribution Mains-Plastic
4586288	18,673.12	19,340.58	(667.46)	(1,539.38)	8%	(55.02)	2.56%	39.34	20376020-Distribution Mains-Plastic
4586290	14,218.98	14,363.54	(144.56)	(303.85)	2%	(3.09)	2.56%	7.77	20376020-Distribution Mains-Plastic
4586293	22,678.29	22,328.91	349.38	(216.00)	1%	3.33	2.56%	5.52	20376020-Distribution Mains-Plastic
4586296	21,018.26	20,156.94	861.32	(983.06)	5%	40.29	2.56%	25.12	20376020-Distribution Mains-Plastic
4586298	5,395.71	5,036.60	359.11	(1,628.00)	30%	108.35	2.56%	41.60	20376020-Distribution Mains-Plastic
4586307	22,847.28	18,989.53	3,857.75	(2,917.17)	13%	492.56	2.56%	74.55	20376020-Distribution Mains-Plastic
4586309	66,728.64	53,755.13	12,973.51	(2,910.03)	4%	565.77	2.56%	74.37	20376020-Distribution Mains-Plastic
4586311	60,334.81	47,061.41	13,273.40	(11.61)	0%	2.55	2.56%	0.30	20376020-Distribution Mains-Plastic
4586312	111,092.29	83,811.39	27,280.90	(871.51)	1%	214.02	2.56%	22.27	20376020-Distribution Mains-Plastic
4586314	88,809.12	64,729.10	24,080.02	(1,376.16)	2%	373.14	2.56%	35.17	20376020-Distribution Mains-Plastic
4586315	38,153.57	26,832.74	11,320.83	(1,800.32)	5%	534.19	2.56%	46.01	20376020-Distribution Mains-Plastic
4586316	10,949.42	7,420.59	3,528.83	(1,980.42)	18%	638.26	2.56%	50.61	20376020-Distribution Mains-Plastic
4586317	26,230.50	15,764.17	10,466.33	(2,707.44)	10%	1,080.31	2.56%	69.19	20376020-Distribution Mains-Plastic
4586318	42,989.30	24,736.68	18,252.62	(1,059.20)	2%	449.72	2.56%	27.07	20376020-Distribution Mains-Plastic
4586319	72,437.86	39,829.18	32,608.68	(3,202.32)	4%	1,441.56	2.56%	81.84	20376020-Distribution Mains-Plastic
4586320	110,407.27	57,882.65	52,524.62	(2,612.74)	2%	1,242.97	2.56%	66.77	20376020-Distribution Mains-Plastic
4586321	258,758.24	129,040.44	129,717.80	(10.10)	0%	5.06	2.56%	0.26	20376020-Distribution Mains-Plastic
4586322	99,509.17	47,079.51	52,429.66	(304.04)	0%	160.19	2.56%	7.77	20376020-Distribution Mains-Plastic
4586323	177,505.48	79,441.48	98,064.00	(733.10)	0%	405.01	2.56%	18.73	20376020-Distribution Mains-Plastic
4586325	101,997.95	40,431.57	61,566.38	(811.94)	1%	490.09	2.56%	20.75	20376020-Distribution Mains-Plastic
4586326	155,250.49	57,570.32	97,680.17	-	0%	-	2.56%	-	20376020-Distribution Mains-Plastic
4586327	165,181.25	57,028.41	108,152.84	(1,843.56)	1%	1,207.08	2.56%	47.11	20376020-Distribution Mains-Plastic
4586328	379,000.46	121,156.61	257,843.85	(515.12)	0%	350.45	2.56%	13.16	20376020-Distribution Mains-Plastic
4586329	327,721.26	96,382.82	231,338.44	(1,322.84)	0%	933.79	2.56%	33.81	20376020-Distribution Mains-Plastic
4586330	279,664.16	75,097.08	204,567.08	(507.54)	0%	371.25	2.56%	12.97	20376020-Distribution Mains-Plastic
4586332	322,464.54	78,343.48	244,121.06	(418.56)	0%	316.87	2.56%	10.70	20376020-Distribution Mains-Plastic
4586334	11,327.95	11,443.14	(115.19)	(925.20)	8%	(9.41)	2.56%	23.64	20376020-Distribution Mains-Plastic
4586336	17,629.57	17,358.01	271.56	(1,059.46)	6%	16.32	2.56%	27.08	20376020-Distribution Mains-Plastic
4586348	153,133.44	115,528.51	37,604.93	(1,121.48)	1%	275.40	2.56%	28.66	20376020-Distribution Mains-Plastic
4586368	529,807.66	169,365.65	360,442.01	(2,285.69)	0%	1,555.01	2.56%	58.41	20376020-Distribution Mains-Plastic
4586455	(3,468.24)	(3,858.30)	390.06	(2,243.56)	65%	252.32	2.56%	57.34	20376020-Distribution Mains-Plastic

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4586457	87,413.63	95,009.12	(7,595.49)	(2,324.36)	3%	(201.97)	2.56%	59.40	20376020-Distribution Mains-Plastic
4586459	27,449.10	29,132.17	(1,683.07)	(476.06)	2%	(29.19)	2.56%	12.17	20376020-Distribution Mains-Plastic
4586461	64,638.69	66,949.03	(2,310.34)	(1,698.90)	3%	(60.72)	2.56%	43.42	20376020-Distribution Mains-Plastic
4586463	28,385.54	28,674.34	(288.80)	(937.25)	3%	(9.54)	2.56%	23.95	20376020-Distribution Mains-Plastic
4586465	20,232.47	19,920.75	311.72	(1,569.32)	8%	24.18	2.56%	40.10	20376020-Distribution Mains-Plastic
4586469	32,708.92	30,532.01	2,176.91	(2,108.51)	6%	140.33	2.56%	53.88	20376020-Distribution Mains-Plastic
4586474	21,640.45	19,093.34	2,547.11	(1,681.11)	8%	197.87	2.56%	42.96	20376020-Distribution Mains-Plastic
4586476	68,667.14	58,828.97	9,838.17	(3,710.43)	5%	531.61	2.56%	94.82	20376020-Distribution Mains-Plastic
4586478	46,782.57	38,883.34	7,899.23	(3,761.52)	8%	635.13	2.56%	96.13	20376020-Distribution Mains-Plastic
4586480	71,182.12	57,342.73	13,839.39	(1,392.31)	2%	270.70	2.56%	35.58	20376020-Distribution Mains-Plastic
4586481	97,992.71	76,434.61	21,558.10	(1,428.09)	1%	314.18	2.56%	36.50	20376020-Distribution Mains-Plastic
4586482	201,128.31	151,737.39	49,390.92	(710.93)	0%	174.58	2.56%	18.17	20376020-Distribution Mains-Plastic
4586484	310,304.27	226,167.14	84,137.13	(3,219.86)	1%	873.05	2.56%	82.29	20376020-Distribution Mains-Plastic
4586485	334,392.76	235,172.53	99,220.23	(2,114.86)	1%	627.52	2.56%	54.05	20376020-Distribution Mains-Plastic
4586486	145,519.11	98,619.60	46,899.51	(2,552.98)	2%	822.80	2.56%	65.24	20376020-Distribution Mains-Plastic
4586487	252,210.31	164,475.06	87,735.25	(3,234.07)	1%	1,125.02	2.56%	82.65	20376020-Distribution Mains-Plastic
4586488	288,569.59	180,806.35	107,763.24	(3,382.83)	1%	1,263.28	2.56%	86.45	20376020-Distribution Mains-Plastic
4586489	276,831.78	166,372.31	110,459.47	(3,639.72)	1%	1,452.30	2.56%	93.02	20376020-Distribution Mains-Plastic
4586490	467,079.78	268,763.74	198,316.04	(4,157.79)	1%	1,765.34	2.56%	106.25	20376020-Distribution Mains-Plastic
4586491	402,491.57	221,305.57	181,186.00	(219.12)	0%	98.64	2.56%	5.60	20376020-Distribution Mains-Plastic
4586492	860,192.89	450,969.18	409,223.71	(508.18)	0%	241.76	2.56%	12.99	20376020-Distribution Mains-Plastic
4586493	847,137.25	422,459.97	424,677.28	(998.00)	0%	500.31	2.56%	25.50	20376020-Distribution Mains-Plastic
4586494	412,741.79	195,275.31	217,466.48	(3,031.72)	1%	1,597.36	2.56%	77.48	20376020-Distribution Mains-Plastic
4586495	452,368.18	202,454.41	249,913.77	(1,401.29)	0%	774.15	2.56%	35.81	20376020-Distribution Mains-Plastic
4586496	210,956.77	89,017.38	121,939.39	(1,664.48)	1%	962.12	2.56%	42.54	20376020-Distribution Mains-Plastic
4586497	1,042,403.88	413,204.31	629,199.57	(2,339.25)	0%	1,411.98	2.56%	59.78	20376020-Distribution Mains-Plastic
4586498	737,520.30	273,488.64	464,031.66	(3,230.20)	0%	2,032.37	2.56%	82.55	20376020-Distribution Mains-Plastic
4586499	1,051,280.05	362,952.10	688,327.95	(1,824.16)	0%	1,194.37	2.56%	46.62	20376020-Distribution Mains-Plastic
4586500	1,583,487.39	506,199.59	1,077,287.80	(1,861.68)	0%	1,266.55	2.56%	47.58	20376020-Distribution Mains-Plastic
4586501	1,468,532.48	431,895.32	1,036,637.16	(870.88)	0%	614.75	2.56%	22.26	20376020-Distribution Mains-Plastic
4586502	1,729,585.95	464,438.86	1,265,147.09	(3,126.54)	0%	2,286.98	2.56%	79.90	20376020-Distribution Mains-Plastic
4586503	2,503,772.28	608,296.81	1,895,475.47	(1,974.24)	0%	1,494.59	2.56%	50.45	20376020-Distribution Mains-Plastic
4586506	1,538.82	1,554.41	(15.59)	(3,965.38)	258%	(40.17)	2.56%	101.34	20376020-Distribution Mains-Plastic
4586507	20,639.88	19,266.25	1,373.63	(4,164.68)	20%	277.17	2.56%	106.43	20376020-Distribution Mains-Plastic
4586511	25,743.41	21,396.71	4,346.70	(11,425.79)	44%	1,929.21	2.56%	291.99	20376020-Distribution Mains-Plastic
4586517	287,604.48	209,622.37	77,982.11	(12,376.64)	4%	3,355.85	2.56%	316.29	20376020-Distribution Mains-Plastic
4586519	113,301.25	79,682.78	33,618.47	(9,437.66)	8%	2,800.32	2.56%	241.18	20376020-Distribution Mains-Plastic

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4586525	265,617.84	166,425.76	99,192.08	(9,834.55)	4%	3,672.61	2.56%	251.33	20376020-Distribution Mains-Plastic
4586531	152,073.13	83,615.74	68,457.39	(14,567.60)	10%	6,557.77	2.56%	372.28	20376020-Distribution Mains-Plastic
4586533	811,013.58	425,186.17	385,827.41	(10,129.61)	1%	4,819.01	2.56%	258.87	20376020-Distribution Mains-Plastic
4586535	234,048.73	116,718.02	117,330.71	(16,565.81)	7%	8,304.59	2.56%	423.35	20376020-Distribution Mains-Plastic
4586537	289,957.39	137,183.87	152,773.52	(14,437.47)	5%	7,606.85	2.56%	368.96	20376020-Distribution Mains-Plastic
4586541	224,217.42	94,612.92	129,604.50	(9,524.23)	4%	5,505.30	2.56%	243.40	20376020-Distribution Mains-Plastic
4586543	814,548.26	322,883.33	491,664.93	(11,439.53)	1%	6,904.95	2.56%	292.34	20376020-Distribution Mains-Plastic
4586545	673,729.22	249,833.39	423,895.83	(20,738.76)	3%	13,048.38	2.56%	529.99	20376020-Distribution Mains-Plastic
4586546	610,056.70	210,620.72	399,435.98	(60,383.28)	10%	39,536.09	2.56%	1,543.13	20376020-Distribution Mains-Plastic
4586548	739,919.98	236,533.07	503,386.91	(62,470.44)	8%	42,500.27	2.56%	1,596.47	20376020-Distribution Mains-Plastic
4586549	1,090,415.97	320,691.29	769,724.68	(28,710.89)	3%	20,267.02	2.56%	733.72	20376020-Distribution Mains-Plastic
4586550	1,656,455.92	444,801.61	1,211,654.31	(19,757.48)	1%	14,452.08	2.56%	504.91	20376020-Distribution Mains-Plastic
4586551	757,110.08	183,941.51	573,168.57	(19,040.96)	3%	14,414.92	2.56%	486.60	20376020-Distribution Mains-Plastic
4586553	19,790.03	9,869.13	9,920.90	(19,428.40)	98%	9,739.61	2.56%	496.50	20376020-Distribution Mains-Plastic
4586566	(29,470.12)	(33,890.64)	4,420.52	(9,579.67)	33%	1,436.95	2.56%	244.81	20376020-Distribution Mains-Plastic
4586571	78,555.97	85,381.58	(6,825.61)	(16,117.00)	21%	(1,400.38)	2.56%	411.88	20376020-Distribution Mains-Plastic
4586573	80,196.81	85,114.12	(4,917.31)	(36,206.83)	45%	(2,220.04)	2.56%	925.29	20376020-Distribution Mains-Plastic
4586575	255,511.38	264,644.32	(9,132.94)	(15,479.41)	6%	(553.29)	2.56%	395.58	20376020-Distribution Mains-Plastic
4586578	292,376.85	295,350.12	(2,973.27)	(16,181.39)	6%	(164.55)	2.56%	413.52	20376020-Distribution Mains-Plastic
4586581	222,221.04	218,797.63	3,423.41	(14,785.93)	7%	227.78	2.56%	377.86	20376020-Distribution Mains-Plastic
4586583	268,203.55	257,213.24	10,990.31	(19,952.26)	7%	817.59	2.56%	509.89	20376020-Distribution Mains-Plastic
4586585	386,161.96	360,462.17	25,699.79	(20,843.54)	5%	1,387.18	2.56%	532.67	20376020-Distribution Mains-Plastic
4586587	283,454.34	257,340.37	26,113.97	(30,640.76)	11%	2,822.86	2.56%	783.04	20376020-Distribution Mains-Plastic
4586589	508,729.67	448,851.65	59,878.02	(36,427.02)	7%	4,287.50	2.56%	930.91	20376020-Distribution Mains-Plastic
4586591	497,404.36	426,139.33	71,265.03	(35,738.74)	7%	5,120.43	2.56%	913.32	20376020-Distribution Mains-Plastic
4586593	342,207.45	284,425.84	57,781.61	(25,507.44)	7%	4,306.92	2.56%	651.86	20376020-Distribution Mains-Plastic
4586595	453,464.09	365,301.06	88,163.03	(27,362.48)	6%	5,319.85	2.56%	699.26	20376020-Distribution Mains-Plastic
4586597	999,885.24	779,914.92	219,970.32	(1,744.53)	0%	383.79	2.56%	44.58	20376020-Distribution Mains-Plastic
4586599	2,950,300.45	2,225,796.23	724,504.22	(1,338.90)	0%	328.79	2.56%	34.22	20376020-Distribution Mains-Plastic
4586601	3,195,908.02	2,329,358.14	866,549.88	(1,568.73)	0%	425.35	2.56%	40.09	20376020-Distribution Mains-Plastic
4586602	1,687,144.21	1,186,539.01	500,605.20	(2,114.12)	0%	627.30	2.56%	54.03	20376020-Distribution Mains-Plastic
4586604	1,125,930.45	763,052.78	362,877.67	(3,919.09)	0%	1,263.09	2.56%	100.15	20376020-Distribution Mains-Plastic
4586606	1,157,667.76	754,955.46	402,712.30	(4,299.31)	0%	1,495.58	2.56%	109.87	20376020-Distribution Mains-Plastic
4586607	1,539,411.47	964,535.00	574,876.47	(2,102.52)	0%	785.16	2.56%	53.73	20376020-Distribution Mains-Plastic
4586609	1,049,859.00	630,951.40	418,907.60	(3,585.15)	0%	1,430.52	2.56%	91.62	20376020-Distribution Mains-Plastic
4586610	1,485,315.55	854,669.97	630,645.58	(3,790.30)	0%	1,609.31	2.56%	96.86	20376020-Distribution Mains-Plastic
4586612	847,317.54	465,888.23	381,429.31	(1,550.37)	0%	697.92	2.56%	39.62	20376020-Distribution Mains-Plastic

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4586613	1,476,062.15	773,847.71	702,214.44	(971.15)	0%	462.01	2.56%	24.82	20376020-Distribution Mains-Plastic
4586614	3,822,588.28	1,906,291.42	1,916,296.86	(4,645.76)	0%	2,328.96	2.56%	118.72	20376020-Distribution Mains-Plastic
4586615	1,699,832.83	804,220.56	895,612.27	(7,438.54)	0%	3,919.24	2.56%	190.10	20376020-Distribution Mains-Plastic
4586616	2,031,799.85	909,318.52	1,122,481.33	(13,787.77)	1%	7,617.15	2.56%	352.35	20376020-Distribution Mains-Plastic
4586617	1,916,218.60	808,585.93	1,107,632.67	(11,672.39)	1%	6,747.00	2.56%	298.29	20376020-Distribution Mains-Plastic
4586618	3,052,458.37	1,209,980.71	1,842,477.66	(14,410.07)	0%	8,697.98	2.56%	368.26	20376020-Distribution Mains-Plastic
4586619	3,062,603.22	1,135,679.76	1,926,923.46	(11,449.35)	0%	7,203.68	2.56%	292.59	20376020-Distribution Mains-Plastic
4586621	5,234,772.40	1,807,293.52	3,427,478.88	(8,029.29)	0%	5,257.20	2.56%	205.19	20376020-Distribution Mains-Plastic
4586624	6,207,667.53	1,984,428.99	4,223,238.54	(11,235.51)	0%	7,643.81	2.56%	287.13	20376020-Distribution Mains-Plastic
4586625	6,865,746.50	2,019,215.88	4,846,530.62	(9,415.20)	0%	6,646.19	2.56%	240.61	20376020-Distribution Mains-Plastic
4586628	5,201,249.92	1,396,671.03	3,804,578.89	(6,256.35)	0%	4,576.36	2.56%	159.88	20376020-Distribution Mains-Plastic
4586629	6,158,563.51	1,496,236.23	4,662,327.28	(11,975.12)	0%	9,065.74	2.56%	306.03	20376020-Distribution Mains-Plastic
4586631	79,928.65	86,873.78	(6,945.13)	(2,161.83)	3%	(187.84)	2.56%	55.25	20376020-Distribution Mains-Plastic
4586633	45,797.73	48,605.84	(2,808.11)	(46.02)	0%	(2.82)	2.56%	1.18	20376020-Distribution Mains-Plastic
4586635	28,786.30	29,815.14	(1,028.84)	-	0%	-	2.56%	-	20376020-Distribution Mains-Plastic
4586637	87,872.28	88,765.82	(893.54)	-	0%	-	2.56%	-	20376020-Distribution Mains-Plastic
4586639	163,710.56	161,188.50	2,522.06	(3,816.61)	2%	58.80	2.56%	97.54	20376020-Distribution Mains-Plastic
4586641	149,775.19	143,637.59	6,137.60	(9,841.23)	7%	403.28	2.56%	251.50	20376020-Distribution Mains-Plastic
4586643	136,532.55	127,445.94	9,086.61	(11,925.54)	9%	793.68	2.56%	304.76	20376020-Distribution Mains-Plastic
4586645	184,395.69	167,407.92	16,987.77	(3,870.28)	2%	356.56	2.56%	98.91	20376020-Distribution Mains-Plastic
4586647	179,122.05	158,039.56	21,082.49	-	0%	-	2.56%	-	20376020-Distribution Mains-Plastic
4586649	91,399.74	78,304.34	13,095.40	-	0%	-	2.56%	-	20376020-Distribution Mains-Plastic
4586651	115,839.69	96,280.62	19,559.07	(4,209.48)	4%	710.75	2.56%	107.58	20376020-Distribution Mains-Plastic
4586653	371,659.83	299,400.92	72,258.91	(285.64)	0%	55.53	2.56%	7.30	20376020-Distribution Mains-Plastic
4586655	587,123.55	457,958.78	129,164.77	(295.57)	0%	65.02	2.56%	7.55	20376020-Distribution Mains-Plastic
4586657	1,353,997.06	1,021,496.45	332,500.61	(971.04)	0%	238.46	2.56%	24.82	20376020-Distribution Mains-Plastic
4586659	1,494,804.53	1,089,497.78	405,306.75	(639.46)	0%	173.39	2.56%	16.34	20376020-Distribution Mains-Plastic
4586661	1,276,232.38	897,551.86	378,680.52	(818.64)	0%	242.90	2.56%	20.92	20376020-Distribution Mains-Plastic
4586663	718,057.22	486,633.44	231,423.78	(836.34)	0%	269.55	2.56%	21.37	20376020-Distribution Mains-Plastic
4586665	731,485.26	477,026.89	254,458.37	(979.05)	0%	340.58	2.56%	25.02	20376020-Distribution Mains-Plastic
4586667	1,293,262.70	810,307.59	482,955.11	(581.89)	0%	217.30	2.56%	14.87	20376020-Distribution Mains-Plastic
4586669	1,195,203.12	718,301.51	476,901.61	(1,525.72)	0%	608.78	2.56%	38.99	20376020-Distribution Mains-Plastic
4586671	1,101,424.38	633,773.68	467,650.70	(1,525.99)	0%	647.92	2.56%	39.00	20376020-Distribution Mains-Plastic
4586673	2,552,656.25	1,403,550.41	1,149,105.84	(1,066.08)	0%	479.91	2.56%	27.24	20376020-Distribution Mains-Plastic
4586675	1,504,770.78	788,898.90	715,871.88	(1,402.06)	0%	667.01	2.56%	35.83	20376020-Distribution Mains-Plastic
4586677	3,684,634.99	1,837,495.30	1,847,139.69	(2,246.88)	0%	1,126.38	2.56%	57.42	20376020-Distribution Mains-Plastic
4586679	3,994,045.69	1,889,652.43	2,104,393.26	(3,943.32)	0%	2,077.67	2.56%	100.77	20376020-Distribution Mains-Plastic

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4586681	2,751,839.40	1,231,567.81	1,520,271.59	(2,661.48)	0%	1,470.35	2.56%	68.02	20376020-Distribution Mains-Plastic
4586683	3,394,331.87	1,432,304.77	1,962,027.10	(1,057.97)	0%	611.54	2.56%	27.04	20376020-Distribution Mains-Plastic
4586685	3,758,173.48	1,489,723.39	2,268,450.09	(1,621.78)	0%	978.91	2.56%	41.45	20376020-Distribution Mains-Plastic
4586687	4,144,530.76	1,536,881.73	2,607,649.03	(675.78)	0%	425.19	2.56%	17.27	20376020-Distribution Mains-Plastic
4586689	1,914,494.16	660,974.75	1,253,519.41	(1,470.45)	0%	962.78	2.56%	37.58	20376020-Distribution Mains-Plastic
4586691	2,590,183.73	828,014.07	1,762,169.66	(1,128.00)	0%	767.41	2.56%	28.83	20376020-Distribution Mains-Plastic
4586693	2,342,366.08	688,889.77	1,653,476.31	(651.44)	0%	459.85	2.56%	16.65	20376020-Distribution Mains-Plastic
4586695	1,680,122.31	451,156.54	1,228,965.77	(419.67)	0%	306.98	2.56%	10.72	20376020-Distribution Mains-Plastic
4586697	1,722,774.76	418,551.73	1,304,223.03	(366.27)	0%	277.28	2.56%	9.36	20376020-Distribution Mains-Plastic
4586700	6,971.34	5,437.67	1,533.67	(1,779.28)	26%	391.44	2.56%	45.47	20376020-Distribution Mains-Plastic
4586704	386,116.82	202,427.59	183,689.23	(5,147.63)	1%	2,448.91	2.56%	131.55	20376020-Distribution Mains-Plastic
4586705	1,132,668.40	564,851.79	567,816.61	(8,323.63)	1%	4,172.71	2.56%	212.71	20376020-Distribution Mains-Plastic
4586707	1,553,901.45	695,438.35	858,463.10	(12,767.04)	1%	7,053.24	2.56%	326.27	20376020-Distribution Mains-Plastic
4586709	1,269,469.79	503,212.23	766,257.56	(14,819.40)	1%	8,945.06	2.56%	378.72	20376020-Distribution Mains-Plastic
4586710	2,292,746.28	850,200.05	1,442,546.23	(8,713.13)	0%	5,482.11	2.56%	222.67	20376020-Distribution Mains-Plastic
4586714	714,645.90	228,453.62	486,192.28	(10,222.38)	1%	6,954.55	2.56%	261.24	20376020-Distribution Mains-Plastic
4586716	1,085,880.13	319,357.31	766,522.82	(15,647.94)	1%	11,045.88	2.56%	399.89	20376020-Distribution Mains-Plastic
4586718	713,539.98	191,604.07	521,935.91	(17,770.26)	2%	12,998.48	2.56%	454.13	20376020-Distribution Mains-Plastic
4586720	1,285,358.06	312,280.51	973,077.55	(18,379.48)	1%	13,914.15	2.56%	469.70	20376020-Distribution Mains-Plastic
4586731	9,558.86	10,144.94	(586.08)	(3,507.84)	37%	(215.08)	2.56%	89.64	20376020-Distribution Mains-Plastic
4586733	8,367.62	8,666.69	(299.07)	(4,455.00)	53%	(159.23)	2.56%	113.85	20376020-Distribution Mains-Plastic
4586735	31,858.28	32,182.26	(323.98)	(2,344.80)	7%	(23.85)	2.56%	59.92	20376020-Distribution Mains-Plastic
4586737	21,999.16	21,660.28	338.88	(516.21)	2%	7.95	2.56%	13.19	20376020-Distribution Mains-Plastic
4586740	29,368.60	28,165.06	1,203.54	(1,735.68)	6%	71.13	2.56%	44.36	20376020-Distribution Mains-Plastic
4586743	33,562.55	31,328.85	2,233.70	(1,989.42)	6%	132.40	2.56%	50.84	20376020-Distribution Mains-Plastic
4586745	38,279.94	34,753.26	3,526.68	(1,475.54)	4%	135.94	2.56%	37.71	20376020-Distribution Mains-Plastic
4586748	23,208.84	20,477.21	2,731.63	(2,082.22)	9%	245.07	2.56%	53.21	20376020-Distribution Mains-Plastic
4586750	77,389.78	66,301.84	11,087.94	(1,716.80)	2%	245.97	2.56%	43.87	20376020-Distribution Mains-Plastic
4586752	77,899.29	64,746.16	13,153.13	(1,032.85)	1%	174.39	2.56%	26.40	20376020-Distribution Mains-Plastic
4586754	54,772.91	44,123.88	10,649.03	(3,199.35)	6%	622.02	2.56%	81.76	20376020-Distribution Mains-Plastic
4586756	89,846.89	70,080.90	19,765.99	(530.08)	1%	116.62	2.56%	13.55	20376020-Distribution Mains-Plastic
4586757	154,776.80	116,768.31	38,008.49	(600.89)	0%	147.56	2.56%	15.36	20376020-Distribution Mains-Plastic
4586758	233,263.24	170,015.39	63,247.85	(3,732.30)	2%	1,011.99	2.56%	95.38	20376020-Distribution Mains-Plastic
4586759	171,427.21	120,561.78	50,865.43	(3,134.40)	2%	930.03	2.56%	80.10	20376020-Distribution Mains-Plastic
4586760	78,046.39	52,892.65	25,153.74	(1,794.60)	2%	578.39	2.56%	45.86	20376020-Distribution Mains-Plastic
4586762	146,925.22	92,057.59	54,867.63	(983.16)	1%	367.15	2.56%	25.13	20376020-Distribution Mains-Plastic
4586763	101,853.44	61,212.55	40,640.89	(396.16)	0%	158.07	2.56%	10.12	20376020-Distribution Mains-Plastic

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4586764	181,250.92	104,294.13	76,956.79	(237.60)	0%	100.88	2.56%	6.07	20376020-Distribution Mains-Plastic
4586766	123,067.62	64,520.06	58,547.56	(267.10)	0%	127.07	2.56%	6.83	20376020-Distribution Mains-Plastic
4586767	84,784.98	42,281.56	42,503.42	(586.08)	1%	293.81	2.56%	14.98	20376020-Distribution Mains-Plastic
4586769	68,733.37	30,761.24	37,972.13	(480.45)	1%	265.43	2.56%	12.28	20376020-Distribution Mains-Plastic
4586770	77,477.08	32,693.01	44,784.07	(1,974.56)	3%	1,141.35	2.56%	50.46	20376020-Distribution Mains-Plastic
4586780	340,507.23	82,726.86	257,780.37	(312.85)	0%	236.84	2.56%	8.00	20376020-Distribution Mains-Plastic
4586815	206,303.32	118,709.62	87,593.70	(1,805.92)	1%	766.77	2.56%	46.15	20376020-Distribution Mains-Plastic
4586834	407,920.47	182,562.12	225,358.35	(1,857.17)	0%	1,026.01	2.56%	47.46	20376020-Distribution Mains-Plastic
4587204	174,123.27	226,360.22	(52,236.95)	(159.98)	0%	(47.99)	3.25%	5.20	20380010-Distribution Service-Steel
4587209	226,946.93	295,031.02	(68,084.09)	(1,124.15)	0%	(337.25)	3.25%	36.53	20380010-Distribution Service-Steel
4587213	349,927.68	454,906.08	(104,978.40)	(1,732.30)	0%	(519.69)	3.25%	56.30	20380010-Distribution Service-Steel
4587219	421,363.94	547,773.15	(126,409.21)	(1,646.76)	0%	(494.03)	3.25%	53.52	20380010-Distribution Service-Steel
4587225	251,034.06	326,344.34	(75,310.28)	(1,258.78)	1%	(377.63)	3.25%	40.91	20380010-Distribution Service-Steel
4587229	571,319.26	742,715.14	(171,395.88)	(948.85)	0%	(284.66)	3.25%	30.84	20380010-Distribution Service-Steel
4587240	549,571.19	714,442.47	(164,871.28)	(4,383.04)	1%	(1,314.91)	3.25%	142.45	20380010-Distribution Service-Steel
4587246	626,844.72	814,898.04	(188,053.32)	(1,310.96)	0%	(393.29)	3.25%	42.61	20380010-Distribution Service-Steel
4587251	717,463.01	932,701.86	(215,238.85)	(3,035.55)	0%	(910.66)	3.25%	98.66	20380010-Distribution Service-Steel
4587255	424,371.10	551,682.36	(127,311.26)	(3,917.52)	1%	(1,175.26)	3.25%	127.32	20380010-Distribution Service-Steel
4587263	306,329.88	398,228.86	(91,898.98)	(3,740.85)	1%	(1,122.26)	3.25%	121.58	20380010-Distribution Service-Steel
4587270	262,838.80	341,690.44	(78,851.64)	(3,757.68)	1%	(1,127.30)	3.25%	122.12	20380010-Distribution Service-Steel
4587278	137,245.55	178,419.18	(41,173.63)	(3,985.85)	3%	(1,195.75)	3.25%	129.54	20380010-Distribution Service-Steel
4587283	153,697.60	199,806.93	(46,109.33)	(366.62)	0%	(109.99)	3.25%	11.92	20380010-Distribution Service-Steel
4587288	74,251.94	96,527.49	(22,275.55)	(1,085.46)	1%	(325.64)	3.25%	35.28	20380010-Distribution Service-Steel
4587294	40,780.56	53,014.73	(12,234.17)	(1,444.05)	4%	(433.22)	3.25%	46.93	20380010-Distribution Service-Steel
4587298	70,294.95	91,383.46	(21,088.51)	(1,570.71)	2%	(471.21)	3.25%	51.05	20380010-Distribution Service-Steel
4587301	201,597.45	262,076.71	(60,479.26)	(1,044.24)	1%	(313.27)	3.25%	33.94	20380010-Distribution Service-Steel
4587304	110,665.68	143,001.12	(32,335.44)	(1,804.48)	2%	(527.25)	3.25%	58.65	20380010-Distribution Service-Steel
4587308	116,604.16	148,292.62	(31,688.46)	(2,794.54)	2%	(759.45)	3.25%	90.82	20380010-Distribution Service-Steel
4587319	145,927.19	181,112.77	(35,185.58)	(2,934.26)	2%	(707.50)	3.25%	95.36	20380010-Distribution Service-Steel
4587371	29,541.04	38,403.35	(8,862.31)	(2,600.24)	9%	(780.07)	3.25%	84.51	20380010-Distribution Service-Steel
4587373	87,875.82	114,238.54	(26,362.72)	(8,336.37)	9%	(2,500.91)	3.25%	270.93	20380010-Distribution Service-Steel
4587377	66,083.80	85,909.01	(19,825.21)	(2,864.25)	4%	(859.28)	3.25%	93.09	20380010-Distribution Service-Steel
4587381	57,885.19	75,250.74	(17,365.55)	(4,286.88)	7%	(1,286.06)	3.25%	139.32	20380010-Distribution Service-Steel
4587383	107,665.16	139,964.69	(32,299.53)	(3,046.54)	3%	(913.96)	3.25%	99.01	20380010-Distribution Service-Steel
4587386	88,545.10	115,108.62	(26,563.52)	(4,738.08)	5%	(1,421.42)	3.25%	153.99	20380010-Distribution Service-Steel
4587388	55,631.65	72,321.15	(16,689.50)	(3,909.06)	7%	(1,172.72)	3.25%	127.04	20380010-Distribution Service-Steel
4587392	31,461.65	40,900.13	(9,438.48)	(3,744.93)	12%	(1,123.48)	3.25%	121.71	20380010-Distribution Service-Steel

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4587393	11,884.95	15,450.44	(3,565.49)	(3,685.36)	31%	(1,105.61)	3.25%	119.77	20380010-Distribution Service-Steel
4587394	4,514.47	5,868.81	(1,354.34)	(2,216.36)	49%	(664.91)	3.25%	72.03	20380010-Distribution Service-Steel
4587400	5,074.91	6,597.38	(1,522.47)	(3,130.86)	62%	(939.26)	3.25%	101.75	20380010-Distribution Service-Steel
4587557	16,996.75	22,095.77	(5,099.02)	(108.84)	1%	(32.65)	3.25%	3.54	20380020-Distribut Service-Plastic
4587558	8,007.64	10,262.07	(2,254.43)	(647.68)	8%	(182.34)	3.25%	21.05	20380020-Distribut Service-Plastic
4587561	26,039.91	32,547.08	(6,507.17)	(490.11)	2%	(122.47)	3.25%	15.93	20380020-Distribut Service-Plastic
4587566	47,865.46	58,312.05	(10,446.59)	(228.08)	0%	(49.78)	3.25%	7.41	20380020-Distribut Service-Plastic
4587568	26,927.71	31,952.59	(5,024.88)	(1,054.41)	4%	(196.76)	3.25%	34.27	20380020-Distribut Service-Plastic
4587570	32,506.19	37,543.46	(5,037.27)	(748.16)	2%	(115.94)	3.25%	24.32	20380020-Distribut Service-Plastic
4587575	34,224.88	38,445.52	(4,220.64)	(1,012.60)	3%	(124.87)	3.25%	32.91	20380020-Distribut Service-Plastic
4587577	27,160.31	29,650.32	(2,490.01)	(1,268.45)	5%	(116.29)	3.25%	41.22	20380020-Distribut Service-Plastic
4587580	27,698.92	29,361.82	(1,662.90)	(1,331.40)	5%	(79.93)	3.25%	43.27	20380020-Distribut Service-Plastic
4587584	50,206.63	51,632.11	(1,425.48)	(2,745.30)	5%	(77.95)	3.25%	89.22	20380020-Distribut Service-Plastic
4587587	29,068.74	28,974.24	94.50	(1,996.50)	7%	6.49	3.25%	64.89	20380020-Distribut Service-Plastic
4587590	20,454.21	19,740.50	713.71	(1,969.74)	10%	68.73	3.25%	64.02	20380020-Distribut Service-Plastic
4587593	69,914.43	65,262.58	4,651.85	(1,787.90)	3%	118.96	3.25%	58.11	20380020-Distribut Service-Plastic
4587595	129,365.70	116,664.68	12,701.02	(5,615.68)	4%	551.34	3.25%	182.51	20380020-Distribut Service-Plastic
4587598	48,918.73	42,568.01	6,350.72	(7,617.12)	16%	988.87	3.25%	247.56	20380020-Distribut Service-Plastic
4587601	47,565.72	39,885.53	7,680.19	(4,375.03)	9%	706.41	3.25%	142.19	20380020-Distribut Service-Plastic
4587603	65,607.50	52,938.18	12,669.32	(2,505.55)	4%	483.84	3.25%	81.43	20380020-Distribut Service-Plastic
4587605	81,429.30	63,128.02	18,301.28	(3,316.14)	4%	745.30	3.25%	107.77	20380020-Distribut Service-Plastic
4587607	95,387.20	70,930.56	24,456.64	(3,796.66)	4%	973.44	3.25%	123.39	20380020-Distribut Service-Plastic
4587609	82,099.76	58,452.06	23,647.70	(2,784.30)	3%	801.98	3.25%	90.49	20380020-Distribut Service-Plastic
4587612	101,633.24	69,143.22	32,490.02	(3,515.12)	3%	1,123.71	3.25%	114.24	20380020-Distribut Service-Plastic
4587614	67,792.80	43,975.70	23,817.10	(5,106.31)	8%	1,793.96	3.25%	165.96	20380020-Distribut Service-Plastic
4587616	122,557.42	75,622.26	46,935.16	(6,897.80)	6%	2,641.61	3.25%	224.18	20380020-Distribut Service-Plastic
4587619	95,017.62	55,622.59	39,395.03	(6,293.70)	7%	2,609.42	3.25%	204.55	20380020-Distribut Service-Plastic
4587622	151,357.27	83,814.03	67,543.24	(3,683.78)	2%	1,643.89	3.25%	119.72	20380020-Distribut Service-Plastic
4587626	157,410.23	82,184.94	75,225.29	(4,330.62)	3%	2,069.57	3.25%	140.75	20380020-Distribut Service-Plastic
4587630	133,968.39	65,706.67	68,261.72	(5,935.39)	4%	3,024.29	3.25%	192.90	20380020-Distribut Service-Plastic
4587633	153,841.99	70,585.95	83,256.04	(6,500.76)	4%	3,518.07	3.25%	211.27	20380020-Distribut Service-Plastic
4587636	221,142.33	94,467.20	126,675.13	(3,831.29)	2%	2,194.65	3.25%	124.52	20380020-Distribut Service-Plastic
4587639	172,669.70	68,296.99	104,372.71	(4,664.31)	3%	2,819.41	3.25%	151.59	20380020-Distribut Service-Plastic
4587642	205,638.29	74,830.26	130,808.03	(6,605.91)	3%	4,202.07	3.25%	214.69	20380020-Distribut Service-Plastic
4587645	177,692.70	59,038.36	118,654.34	(5,843.07)	3%	3,901.71	3.25%	189.90	20380020-Distribut Service-Plastic
4587649	183,996.31	55,310.56	128,685.75	(5,552.54)	3%	3,883.41	3.25%	180.46	20380020-Distribut Service-Plastic
4587651	639.93	831.93	(192.00)	(10,971.61)	1715%	(3,291.84)	3.25%	356.58	20380020-Distribut Service-Plastic

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4587657	13,264.98	16,579.79	(3,314.81)	(1,700.40)	13%	(424.92)	3.25%	55.26	20380020-Distribut Service-Plastic
4587659	20,960.30	25,534.87	(4,574.57)	(2,615.80)	12%	(570.90)	3.25%	85.01	20380020-Distribut Service-Plastic
4587661	21,544.64	25,565.01	(4,020.37)	(6,347.32)	29%	(1,184.45)	3.25%	206.29	20380020-Distribut Service-Plastic
4587663	17,802.67	20,561.43	(2,758.76)	(10,050.21)	56%	(1,557.41)	3.25%	326.63	20380020-Distribut Service-Plastic
4587665	14,639.46	16,444.81	(1,805.35)	(17,888.45)	122%	(2,206.02)	3.25%	581.37	20380020-Distribut Service-Plastic
4587667	75,333.33	82,239.70	(6,906.37)	(23,028.58)	31%	(2,111.20)	3.25%	748.43	20380020-Distribut Service-Plastic
4587669	23,925.39	25,361.72	(1,436.33)	(24,660.09)	103%	(1,480.44)	3.25%	801.45	20380020-Distribut Service-Plastic
4587671	63,139.57	64,932.23	(1,792.66)	(33,597.65)	53%	(953.91)	3.25%	1,091.92	20380020-Distribut Service-Plastic
4587673	85,095.70	84,819.06	276.64	(31,307.85)	37%	101.78	3.25%	1,017.51	20380020-Distribut Service-Plastic
4587676	88,898.39	85,796.41	3,101.98	(44,436.25)	50%	1,550.54	3.25%	1,444.18	20380020-Distribut Service-Plastic
4587679	101,145.21	94,415.37	6,729.84	(74,983.26)	74%	4,989.12	3.25%	2,436.96	20380020-Distribut Service-Plastic
4587682	110,408.04	99,567.92	10,840.12	(88,915.19)	81%	8,729.90	3.25%	2,889.74	20380020-Distribut Service-Plastic
4587685	54,259.57	47,215.49	7,044.08	(138,014.47)	254%	17,917.30	3.25%	4,485.47	20380020-Distribut Service-Plastic
4587688	41,247.82	34,587.74	6,660.08	(137,935.60)	334%	22,271.77	3.25%	4,482.91	20380020-Distribut Service-Plastic
4587691	52,948.46	42,723.71	10,224.75	(64,710.33)	122%	12,496.06	3.25%	2,103.09	20380020-Distribut Service-Plastic
4587694	58,115.76	45,054.21	13,061.55	(54,972.90)	95%	12,355.19	3.25%	1,786.62	20380020-Distribut Service-Plastic
4587697	50,819.06	37,789.39	13,029.67	(59,350.27)	117%	15,217.02	3.25%	1,928.88	20380020-Distribut Service-Plastic
4587699	82,554.95	58,776.14	23,778.81	(69,957.24)	85%	20,150.21	3.25%	2,273.61	20380020-Distribut Service-Plastic
4587702	117,769.30	80,120.92	37,648.38	(69,216.36)	59%	22,127.02	3.25%	2,249.53	20380020-Distribut Service-Plastic
4587705	171,861.17	111,482.58	60,378.59	(66,895.98)	39%	23,502.02	3.25%	2,174.12	20380020-Distribut Service-Plastic
4587708	134,888.50	83,230.95	51,657.55	(76,929.61)	57%	29,461.33	3.25%	2,500.21	20380020-Distribut Service-Plastic
4587711	523,597.64	306,510.11	217,087.53	(64,996.02)	12%	26,947.84	3.25%	2,112.37	20380020-Distribut Service-Plastic
4587714	210,619.00	116,630.16	93,988.84	(86,615.28)	41%	38,652.11	3.25%	2,815.00	20380020-Distribut Service-Plastic
4587717	316,275.82	165,129.75	151,146.07	(78,577.92)	25%	37,551.86	3.25%	2,553.78	20380020-Distribut Service-Plastic
4587720	227,619.48	111,639.15	115,980.33	(97,275.83)	43%	49,565.54	3.25%	3,161.46	20380020-Distribut Service-Plastic
4587723	370,163.16	169,838.67	200,324.49	(62,758.56)	17%	33,963.61	3.25%	2,039.65	20380020-Distribut Service-Plastic
4587727	340,738.53	145,556.09	195,182.44	(68,859.86)	20%	39,444.43	3.25%	2,237.95	20380020-Distribut Service-Plastic
4587731	348,276.95	137,755.87	210,521.08	(63,122.08)	18%	38,155.06	3.25%	2,051.47	20380020-Distribut Service-Plastic
4587734	360,635.90	131,232.75	229,403.15	(59,321.36)	16%	37,734.75	3.25%	1,927.94	20380020-Distribut Service-Plastic
4587738	284,802.53	94,625.57	190,176.96	(49,291.52)	17%	32,914.42	3.25%	1,601.97	20380020-Distribut Service-Plastic
4587741	409,098.24	122,977.78	286,120.46	(51,384.00)	13%	35,937.61	3.25%	1,669.98	20380020-Distribut Service-Plastic
4587829	4,462.56	5,801.36	(1,338.80)	(5,463.70)	122%	(1,639.15)	3.25%	177.57	20380020-Distribut Service-Plastic
4587830	31,250.56	40,625.73	(9,375.17)	(5,829.58)	19%	(1,748.87)	3.25%	189.46	20380020-Distribut Service-Plastic
4587831	24,994.93	32,031.87	(7,036.94)	(5,783.52)	23%	(1,628.26)	3.25%	187.96	20380020-Distribut Service-Plastic
4587834	32,615.34	40,765.67	(8,150.33)	(9,618.99)	29%	(2,403.71)	3.25%	312.62	20380020-Distribut Service-Plastic
4587837	48,200.16	58,719.79	(10,519.63)	(12,085.15)	25%	(2,637.57)	3.25%	392.77	20380020-Distribut Service-Plastic
4587839	40,213.02	47,717.03	(7,504.01)	(15,256.24)	38%	(2,846.91)	3.25%	495.83	20380020-Distribut Service-Plastic

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4587842	59,945.27	69,234.62	(9,289.35)	(8,917.18)	15%	(1,381.84)	3.25%	289.81	20380020-Distribut Service-Plastic
4587844	71,286.03	80,077.07	(8,791.04)	(4,477.77)	6%	(552.20)	3.25%	145.53	20380020-Distribut Service-Plastic
4587846	59,468.56	64,920.50	(5,451.94)	(4,379.92)	7%	(401.54)	3.25%	142.35	20380020-Distribut Service-Plastic
4587848	183,936.20	194,978.80	(11,042.60)	(5,695.36)	3%	(341.92)	3.25%	185.10	20380020-Distribut Service-Plastic
4587850	165,376.39	170,071.78	(4,695.39)	(4,125.76)	2%	(117.14)	3.25%	134.09	20380020-Distribut Service-Plastic
4587853	120,481.44	120,089.80	391.64	(6,017.52)	5%	19.56	3.25%	195.57	20380020-Distribut Service-Plastic
4587856	257,455.05	248,471.55	8,983.50	(5,213.51)	2%	181.92	3.25%	169.44	20380020-Distribut Service-Plastic
4587858	356,993.08	333,240.07	23,753.01	(4,786.80)	1%	318.50	3.25%	155.57	20380020-Distribut Service-Plastic
4587862	524,491.04	472,996.93	51,494.11	(3,327.77)	1%	326.72	3.25%	108.15	20380020-Distribut Service-Plastic
4587866	311,419.77	270,990.54	40,429.23	(3,415.51)	1%	443.41	3.25%	111.00	20380020-Distribut Service-Plastic
4587869	216,477.46	181,523.95	34,953.51	(4,582.48)	2%	739.91	3.25%	148.93	20380020-Distribut Service-Plastic
4587872	310,612.12	250,630.53	59,981.59	(3,495.86)	1%	675.08	3.25%	113.62	20380020-Distribut Service-Plastic
4587876	417,633.07	323,769.79	93,863.28	(2,908.98)	1%	653.79	3.25%	94.54	20380020-Distribut Service-Plastic
4587881	403,723.71	300,211.67	103,512.04	(3,961.20)	1%	1,015.62	3.25%	128.74	20380020-Distribut Service-Plastic
4587888	629,711.08	448,331.48	181,379.60	(2,930.00)	0%	843.95	3.25%	95.23	20380020-Distribut Service-Plastic
4587892	541,737.96	368,555.70	173,182.26	(3,234.06)	1%	1,033.86	3.25%	105.11	20380020-Distribut Service-Plastic
4587896	965,683.57	626,417.82	339,265.75	(2,524.64)	0%	886.96	3.25%	82.05	20380020-Distribut Service-Plastic
4587901	871,231.87	537,580.82	333,651.05	(2,827.80)	0%	1,082.95	3.25%	91.90	20380020-Distribut Service-Plastic
4587905	598,161.35	350,159.11	248,002.24	(4,706.03)	1%	1,951.16	3.25%	152.95	20380020-Distribut Service-Plastic
4587909	810,314.60	448,711.40	361,603.20	(1,334.18)	0%	595.38	3.25%	43.36	20380020-Distribut Service-Plastic
4587913	1,005,461.23	524,958.13	480,503.10	(2,568.28)	0%	1,227.36	3.25%	83.47	20380020-Distribut Service-Plastic
4587921	1,118,680.19	548,672.31	570,007.88	(3,965.30)	0%	2,020.46	3.25%	128.87	20380020-Distribut Service-Plastic
4587925	908,008.70	416,613.53	491,395.17	(3,703.96)	0%	2,004.51	3.25%	120.38	20380020-Distribut Service-Plastic
4587928	1,094,114.95	467,382.14	626,732.81	(242.82)	0%	139.09	3.25%	7.89	20380020-Distribut Service-Plastic
4587931	1,633,119.51	645,956.65	987,162.86	(1,541.90)	0%	932.02	3.25%	50.11	20380020-Distribut Service-Plastic
4587935	1,552,318.53	564,877.22	987,441.31	(4,958.11)	0%	3,153.89	3.25%	161.14	20380020-Distribut Service-Plastic
4587940	2,242,430.83	745,047.12	1,497,383.71	(4,300.00)	0%	2,871.33	3.25%	139.75	20380020-Distribut Service-Plastic
4587946	3,414,707.87	1,026,484.85	2,388,223.02	(2,840.71)	0%	1,986.77	3.25%	92.32	20380020-Distribut Service-Plastic
4587951	370,050.04	481,065.19	(111,015.15)	(325.53)	0%	(97.66)	3.25%	10.58	20380020-Distribut Service-Plastic
4587952	83,466.80	106,965.59	(23,498.79)	(12,832.42)	15%	(3,612.77)	3.25%	417.05	20380020-Distribut Service-Plastic
4587956	228,506.74	285,608.70	(57,101.96)	(3,163.82)	1%	(790.61)	3.25%	102.82	20380020-Distribut Service-Plastic
4587960	369,207.64	449,786.84	(80,579.20)	(3,122.23)	1%	(681.42)	3.25%	101.47	20380020-Distribut Service-Plastic
4587965	477,196.66	566,244.52	(89,047.86)	(2,839.68)	1%	(529.90)	3.25%	92.29	20380020-Distribut Service-Plastic
4587969	587,441.48	678,473.46	(91,031.98)	(2,484.00)	0%	(384.93)	3.25%	80.73	20380020-Distribut Service-Plastic
4587973	656,745.95	737,736.30	(80,990.35)	(3,056.82)	0%	(376.97)	3.25%	99.35	20380020-Distribut Service-Plastic
4587978	920,452.91	1,004,838.00	(84,385.09)	(3,605.26)	0%	(330.52)	3.25%	117.17	20380020-Distribut Service-Plastic
4587985	884,086.19	937,162.28	(53,076.09)	(3,074.91)	0%	(184.60)	3.25%	99.93	20380020-Distribut Service-Plastic

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4587990	1,382,161.63	1,421,404.25	(39,242.62)	(973.19)	0%	(27.63)	3.25%	31.63	20380020-Distribut Service-Plastic
4587994	2,352,153.86	2,344,507.75	7,646.11	(10,238.34)	0%	33.28	3.25%	332.75	20380020-Distribut Service-Plastic
4587999	2,924,814.33	2,822,757.32	102,057.01	(357.54)	0%	12.48	3.25%	11.62	20380020-Distribut Service-Plastic
4588004	4,876,869.87	4,552,380.72	324,489.15	(1,359.28)	0%	90.44	3.25%	44.18	20380020-Distribut Service-Plastic
4588009	5,254,128.89	4,738,281.68	515,847.21	(21,505.46)	0%	2,111.39	3.25%	698.93	20380020-Distribut Service-Plastic
4588013	3,621,692.24	3,151,516.48	470,175.76	(5,180.10)	0%	672.49	3.25%	168.35	20380020-Distribut Service-Plastic
4588017	2,453,003.99	2,056,930.02	396,073.97	(5,989.80)	0%	967.14	3.25%	194.67	20380020-Distribut Service-Plastic
4588021	2,972,749.98	2,398,689.07	574,060.91	(178.51)	0%	34.47	3.25%	5.80	20380020-Distribut Service-Plastic
4588027	3,515,634.63	2,725,493.80	790,140.83	(1,093.70)	0%	245.81	3.25%	35.55	20380020-Distribut Service-Plastic
4588032	3,692,236.29	2,745,571.29	946,665.00	(6,566.29)	0%	1,683.55	3.25%	213.40	20380020-Distribut Service-Plastic
4588037	3,878,946.84	2,761,669.62	1,117,277.22	(25,119.22)	1%	7,235.25	3.25%	816.37	20380020-Distribut Service-Plastic
4588041	4,864,964.41	3,309,737.26	1,555,227.15	(47,814.92)	1%	15,285.43	3.25%	1,553.98	20380020-Distribut Service-Plastic
4588046	4,398,026.97	2,852,903.77	1,545,123.20	(376.01)	0%	132.10	3.25%	12.22	20380020-Distribut Service-Plastic
4588052	6,318,714.43	3,898,869.70	2,419,844.73	(5,729.46)	0%	2,194.18	3.25%	186.21	20380020-Distribut Service-Plastic
4588058	6,278,899.01	3,675,620.04	2,603,278.97	(3,071.15)	0%	1,273.32	3.25%	99.81	20380020-Distribut Service-Plastic
4588063	8,209,086.21	4,545,778.35	3,663,307.86	(5,110.48)	0%	2,280.55	3.25%	166.09	20380020-Distribut Service-Plastic
4588067	5,848,228.23	3,053,399.60	2,794,828.63	(3,084.42)	0%	1,474.02	3.25%	100.24	20380020-Distribut Service-Plastic
4588072	6,820,222.41	3,345,073.16	3,475,149.25	(149.12)	0%	75.98	3.25%	4.85	20380020-Distribut Service-Plastic
4588077	6,690,418.08	3,069,705.08	3,620,713.00	(15,568.53)	0%	8,425.36	3.25%	505.98	20380020-Distribut Service-Plastic
4588082	6,947,859.77	2,967,974.74	3,979,885.03	(2,917.00)	0%	1,670.92	3.25%	94.80	20380020-Distribut Service-Plastic
4588087	6,471,056.01	2,559,531.97	3,911,524.04	(858.44)	0%	518.90	3.25%	27.90	20380020-Distribut Service-Plastic
4588093	6,961,238.25	2,533,143.08	4,428,095.17	(5,807.40)	0%	3,694.13	3.25%	188.74	20380020-Distribut Service-Plastic
4588098	6,791,744.83	2,256,555.69	4,535,189.14	(2,436.23)	0%	1,626.79	3.25%	79.18	20380020-Distribut Service-Plastic
4588103	7,047,640.53	2,118,569.55	4,929,070.98	(1,617.10)	0%	1,130.99	3.25%	52.56	20380020-Distribut Service-Plastic
4588124	3,281.56	4,205.44	(923.88)	(2,691.88)	82%	(757.86)	3.25%	87.49	20380020-Distribut Service-Plastic
4588126	4,249.56	5,311.49	(1,061.93)	(200.46)	5%	(50.09)	3.25%	6.51	20380020-Distribut Service-Plastic
4588128	24,342.25	29,654.92	(5,312.67)	(2,477.00)	10%	(540.60)	3.25%	80.50	20380020-Distribut Service-Plastic
4588130	39,645.28	47,043.34	(7,398.06)	(1,338.89)	3%	(249.85)	3.25%	43.51	20380020-Distribut Service-Plastic
4588133	30,406.69	35,118.62	(4,711.93)	(2,679.32)	9%	(415.20)	3.25%	87.08	20380020-Distribut Service-Plastic
4588136	61,091.71	68,625.58	(7,533.87)	(2,014.33)	3%	(248.41)	3.25%	65.47	20380020-Distribut Service-Plastic
4588140	66,892.15	73,024.66	(6,132.51)	(14,401.33)	22%	(1,320.28)	3.25%	468.04	20380020-Distribut Service-Plastic
4588144	99,340.85	105,304.78	(5,963.93)	(3,940.64)	4%	(236.58)	3.25%	128.07	20380020-Distribut Service-Plastic
4588146	116,337.77	119,640.86	(3,303.09)	(4,756.16)	4%	(135.04)	3.25%	154.58	20380020-Distribut Service-Plastic
4588149	126,513.29	126,102.04	411.25	(1,774.87)	1%	5.77	3.25%	57.68	20380020-Distribut Service-Plastic
4588152	218,754.71	211,121.57	7,633.14	(22,206.96)	10%	774.88	3.25%	721.73	20380020-Distribut Service-Plastic
4588155	414,004.60	386,457.92	27,546.68	(5,615.24)	1%	373.62	3.25%	182.50	20380020-Distribut Service-Plastic
4588158	411,517.66	371,115.19	40,402.47	(5,298.70)	1%	520.22	3.25%	172.21	20380020-Distribut Service-Plastic

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4588161	257,814.83	224,344.77	33,470.06	(16,638.30)	6%	2,160.02	3.25%	540.74	20380020-Distribut Service-Plastic
4588164	155,501.94	130,393.84	25,108.10	(19,573.14)	13%	3,160.37	3.25%	636.13	20380020-Distribut Service-Plastic
4588167	141,252.65	113,975.68	27,276.97	(1,261.42)	1%	243.59	3.25%	41.00	20380020-Distribut Service-Plastic
4588169	225,225.72	174,606.12	50,619.60	(2,774.48)	1%	623.57	3.25%	90.17	20380020-Distribut Service-Plastic
4588172	169,156.99	125,786.26	43,370.73	(12,989.36)	8%	3,330.39	3.25%	422.15	20380020-Distribut Service-Plastic
4588175	297,365.70	211,713.61	85,652.09	(2,702.98)	1%	778.56	3.25%	87.85	20380020-Distribut Service-Plastic
4588177	218,447.69	148,614.53	69,833.16	(3,256.92)	1%	1,041.17	3.25%	105.85	20380020-Distribut Service-Plastic
4588179	252,265.30	163,638.98	88,626.32	(1,939.14)	1%	681.26	3.25%	63.02	20380020-Distribut Service-Plastic
4588182	177,851.97	109,740.94	68,111.03	(703.94)	0%	269.58	3.25%	22.88	20380020-Distribut Service-Plastic
4588185	212,736.06	124,534.08	88,201.98	(3,831.60)	2%	1,588.61	3.25%	124.53	20380020-Distribut Service-Plastic
4588188	295,568.33	163,670.85	131,897.48	(1,899.30)	1%	847.56	3.25%	61.73	20380020-Distribut Service-Plastic
4588191	240,215.00	125,417.88	114,797.12	(6,490.45)	3%	3,101.74	3.25%	210.94	20380020-Distribut Service-Plastic
4588195	246,296.09	120,799.36	125,496.73	(966.77)	0%	492.60	3.25%	31.42	20380020-Distribut Service-Plastic
4588199	311,615.06	142,975.58	168,639.48	(4,166.78)	1%	2,254.97	3.25%	135.42	20380020-Distribut Service-Plastic
4588202	263,700.99	112,647.33	151,053.66	(1,118.88)	0%	640.92	3.25%	36.36	20380020-Distribut Service-Plastic
4588204	296,994.04	117,471.68	179,522.36	(1,015.84)	0%	614.04	3.25%	33.01	20380020-Distribut Service-Plastic
4588207	289,704.32	105,421.26	184,283.06	(1,076.19)	0%	684.57	3.25%	34.98	20380020-Distribut Service-Plastic
4588210	323,782.68	107,576.73	216,205.95	(3,885.99)	1%	2,594.87	3.25%	126.29	20380020-Distribut Service-Plastic
4588213	598,335.63	179,863.84	418,471.79	(815.41)	0%	570.29	3.25%	26.50	20380020-Distribut Service-Plastic
4790078	1,334.18	819.92	514.26	(1,366.82)	102%	526.84	4.03%	55.11	20378000-Dist Meas & Reg Sta Eq-Gen
4790079	2,568.28	1,578.33	989.95	(3,329.27)	130%	1,283.28	4.03%	134.24	20378000-Dist Meas & Reg Sta Eq-Gen
4790080	3,965.30	2,436.86	1,528.44	(545.07)	14%	210.10	4.03%	21.98	20378000-Dist Meas & Reg Sta Eq-Gen
4790081	3,703.96	2,276.25	1,427.71	(1,164.74)	31%	448.95	4.03%	46.97	20378000-Dist Meas & Reg Sta Eq-Gen
4790082	242.82	149.22	93.60	(1,530.96)	630%	590.14	4.03%	61.73	20378000-Dist Meas & Reg Sta Eq-Gen
4790091	1,541.90	947.57	594.33	(887.63)	58%	342.14	4.03%	35.79	20378000-Dist Meas & Reg Sta Eq-Gen
4790092	4,958.11	3,046.99	1,911.12	(2,031.64)	41%	783.10	4.03%	81.92	20378000-Dist Meas & Reg Sta Eq-Gen
4790093	4,300.00	2,642.55	1,657.45	(1,027.22)	24%	395.95	4.03%	41.42	20378000-Dist Meas & Reg Sta Eq-Gen
4790094	2,840.71	1,745.75	1,094.96	(706.18)	25%	272.20	4.03%	28.48	20378000-Dist Meas & Reg Sta Eq-Gen
4790095	4,958.11	3,046.99	1,911.12	(1,553.40)	31%	598.76	4.03%	62.64	20378000-Dist Meas & Reg Sta Eq-Gen
4790096	2,397.78	1,473.55	924.23	(1,634.11)	68%	629.87	4.03%	65.89	20378000-Dist Meas & Reg Sta Eq-Gen
4790097	221.29	135.99	85.30	(536.60)	242%	206.84	4.03%	21.64	20378000-Dist Meas & Reg Sta Eq-Gen
4790694	3,876.70	2,633.19	1,243.51	(1,124.64)	29%	360.75	4.03%	45.35	20378000-Dist Meas & Reg Sta Eq-Gen
4790695	4,305.90	2,924.72	1,381.18	(770.18)	18%	247.05	4.03%	31.06	20378000-Dist Meas & Reg Sta Eq-Gen
4790696	3,581.67	2,432.80	1,148.87	(943.82)	26%	302.74	4.03%	38.06	20378000-Dist Meas & Reg Sta Eq-Gen
4790697	3,876.71	2,633.20	1,243.51	(1,033.70)	27%	331.57	4.03%	41.68	20378000-Dist Meas & Reg Sta Eq-Gen
4790698	3,852.09	2,616.48	1,235.61	(1,745.87)	45%	560.01	4.03%	70.40	20378000-Dist Meas & Reg Sta Eq-Gen
4790699	325.53	221.11	104.42	(1,080.40)	332%	346.56	4.03%	43.56	20378000-Dist Meas & Reg Sta Eq-Gen

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
4791503	12,832.42	5,119.06	7,713.36	(936.57)	7%	562.96	4.03%	37.76	20378000-Dist Meas & Reg Sta Eq-Gen
4791504	3,163.82	1,262.10	1,901.72	(1,424.30)	45%	856.12	4.03%	57.43	20378000-Dist Meas & Reg Sta Eq-Gen
4791505	3,122.23	1,245.51	1,876.72	(867.72)	28%	521.57	4.03%	34.99	20378000-Dist Meas & Reg Sta Eq-Gen
4791506	2,839.68	1,132.79	1,706.89	(705.30)	25%	423.95	4.03%	28.44	20378000-Dist Meas & Reg Sta Eq-Gen
4791507	2,484.00	990.91	1,493.09	(1,244.88)	50%	748.28	4.03%	50.20	20378000-Dist Meas & Reg Sta Eq-Gen
4791549	3,056.82	1,812.64	1,244.18	(1,188.74)	39%	483.84	4.03%	47.93	20378000-Dist Meas & Reg Sta Eq-Gen
4791949	3,605.26	971.75	2,633.51	(1,003.90)	28%	733.31	4.03%	40.48	20378000-Dist Meas & Reg Sta Eq-Gen
4791975	3,074.91	828.80	2,246.11	(660.63)	21%	482.57	4.03%	26.64	20378000-Dist Meas & Reg Sta Eq-Gen
4795404	235,491.78	48,478.32	187,013.46	(1,368.47)	1%	1,086.76	2.89%	39.53	20376010-Distribution Mains-Steel
4795418	2,289,980.19	497,791.55	1,792,188.64	(7,964.75)	0%	6,233.39	2.56%	203.54	20376020-Distribution Mains-Plastic
4795421	958,468.23	208,350.03	750,118.20	(1,547.84)	0%	1,211.37	2.56%	39.56	20376020-Distribution Mains-Plastic
4795440	163,113.15	43,871.58	119,241.57	(45,544.56)	28%	33,294.71	3.25%	1,480.20	20380020-Distribut Service-Plastic
4795442	3,679,824.36	989,740.46	2,690,083.90	(16,530.11)	0%	12,084.10	3.25%	537.23	20380020-Distribut Service-Plastic
4795443	629,901.49	169,420.88	460,480.61	(9,203.04)	1%	6,727.75	3.25%	299.10	20380020-Distribut Service-Plastic
4795444	1,554,981.46	418,234.20	1,136,747.26	(4,958.11)	0%	3,624.56	3.25%	161.14	20380020-Distribut Service-Plastic
5287228	357,703.90	77,757.06	279,946.84	(22,022.67)	6%	17,235.42	2.56%	562.80	20376020-Distribution Mains-Plastic
6851764	383,503.56	83,365.33	300,138.23	(961.70)	0%	752.65	2.56%	24.58	20376020-Distribution Mains-Plastic
7391636	2,343,510.10	556,164.76	1,787,345.34	(2,397.78)	0%	1,828.74	3.25%	77.93	20380020-Distribut Service-Plastic
7391712	5,477,475.42	1,050,603.25	4,426,872.17	(17,675.07)	0%	14,284.92	2.56%	451.70	20376020-Distribution Mains-Plastic
7391717	9,049,917.15	2,147,737.76	6,902,179.39	(27,724.76)	0%	21,145.08	3.25%	901.05	20380020-Distribut Service-Plastic
7391893	99,347.28	23,577.22	75,770.06	(1,243.14)	1%	948.12	3.25%	40.40	20380020-Distribut Service-Plastic
7391922	1,060,308.48	203,371.70	856,936.78	(11,209.80)	1%	9,059.71	2.56%	286.47	20376020-Distribution Mains-Plastic
7391969	1,834,750.36	351,912.96	1,482,837.40	(1,120.62)	0%	905.68	2.56%	28.64	20376020-Distribution Mains-Plastic
8500823	895,434.99	212,505.75	682,929.24	(43,938.45)	5%	33,510.92	3.25%	1,428.00	20380020-Distribut Service-Plastic
8500834	397,301.02	76,204.04	321,096.98	(257.28)	0%	207.93	2.56%	6.57	20376020-Distribution Mains-Plastic
11287563	48,416.60	9,286.54	39,130.06	(1,069.20)	2%	864.12	2.56%	27.32	20376020-Distribution Mains-Plastic
12435917	3,936,724.38	654,403.25	3,282,321.13	(15,390.73)	0%	12,832.32	2.56%	393.32	20376020-Distribution Mains-Plastic
13014594	1,989,768.50	330,760.10	1,659,008.40	(2,943.41)	0%	2,454.13	2.56%	75.22	20376020-Distribution Mains-Plastic
13819657	102,462.56	17,032.39	85,430.17	(1,000.34)	1%	834.05	2.56%	25.56	20376020-Distribution Mains-Plastic
14766146	170,969.78	26,914.43	144,055.35	(575.46)	0%	484.87	2.89%	16.62	20376010-Distribution Mains-Steel
16268507	437,882.47	61,591.00	376,291.47	(497.88)	0%	427.85	2.56%	12.72	20376020-Distribution Mains-Plastic
16276071	1,336,351.90	187,966.68	1,148,385.22	(3,503.28)	0%	3,010.52	2.56%	89.53	20376020-Distribution Mains-Plastic
16276709	5,215,361.12	733,574.43	4,481,786.69	(9,582.55)	0%	8,234.70	2.56%	244.89	20376020-Distribution Mains-Plastic
16638119	6,276,384.48	1,092,314.28	5,184,070.20	-	0%	-	3.25%	-	20380020-Distribut Service-Plastic
20290704	-	-	-	(1,279.43)	0%	-	2.56%	32.70	20376020-Distribution Mains-Plastic
20291152	-	-	-	(6,351.20)	0%	-	2.89%	183.48	20376010-Distribution Mains-Steel
23860823	1,641,033.39	188,854.28	1,452,179.11	(1,433.72)	0%	1,268.72	2.56%	36.64	20376020-Distribution Mains-Plastic

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
23860828	884,919.89	101,838.86	783,081.03	(7,414.88)	1%	6,561.56	2.56%	189.49	20376020-Distribution Mains-Plastic
23861345	3,160,746.45	363,747.03	2,796,999.42	(10,308.73)	0%	9,122.37	2.56%	263.45	20376020-Distribution Mains-Plastic
23861375	2,011,886.13	231,533.07	1,780,353.06	(1,618.74)	0%	1,432.45	2.56%	41.37	20376020-Distribution Mains-Plastic
23861380	851,684.87	98,014.10	753,670.77	(15,160.50)	2%	13,415.79	2.56%	387.44	20376020-Distribution Mains-Plastic
23863724	166,037.54	19,108.03	146,929.51	(421.62)	0%	373.10	2.56%	10.77	20376020-Distribution Mains-Plastic
32303665	388.21	42.31	345.90	(178.13)	46%	158.72	2.89%	5.15	20376010-Distribution Mains-Steel
33898552	6,532,609.87	584,725.33	5,947,884.54	(16,698.82)	0%	15,204.13	2.56%	426.75	20376020-Distribution Mains-Plastic
33898670	1,771,043.46	158,523.74	1,612,519.72	(503.13)	0%	458.10	2.56%	12.86	20376020-Distribution Mains-Plastic
34949551	993,906.53	88,963.27	904,943.26	(5,760.88)	1%	5,245.23	2.56%	147.22	20376020-Distribution Mains-Plastic
34949792	421,666.78	37,742.85	383,923.93	(1,027.46)	0%	935.49	2.56%	26.26	20376020-Distribution Mains-Plastic
36954016	143,348.09	12,830.90	130,517.19	(1,045.33)	1%	951.76	2.56%	26.71	20376020-Distribution Mains-Plastic
44260449	1,559,564.51	99,710.41	1,459,854.10	-	0%	-	2.56%	-	20376020-Distribution Mains-Plastic
44260798	174,410.76	11,150.91	163,259.85	(1,921.94)	1%	1,799.06	2.56%	49.12	20376020-Distribution Mains-Plastic
44261044	4,357,797.31	278,614.89	4,079,182.42	(14,337.22)	0%	13,420.57	2.56%	366.40	20376020-Distribution Mains-Plastic
45695733	1,773,947.58	113,416.89	1,660,530.69	(491.05)	0%	459.65	2.56%	12.55	20376020-Distribution Mains-Plastic
51432385	2,253,868.14	463,572.06	1,790,296.08	(221.29)	0%	175.78	3.25%	7.19	20380020-Distribut Service-Plastic
51432386	188,822.30	38,836.68	149,985.62	(1,951.54)	1%	1,550.15	3.25%	63.43	20380020-Distribut Service-Plastic
51432387	4,602,875.59	946,712.22	3,656,163.37	-	0%	-	3.25%	-	20380020-Distribut Service-Plastic
51432404	2,301,482.99	400,539.95	1,900,943.04	(3,876.70)	0%	3,202.02	3.25%	125.99	20380020-Distribut Service-Plastic
51432410	2,118,109.16	301,603.39	1,816,505.77	(4,305.90)	0%	3,692.77	3.25%	139.94	20380020-Distribut Service-Plastic
51432415	4,545,791.28	647,287.73	3,898,503.55	(4,826.85)	0%	4,139.54	3.25%	156.87	20380020-Distribut Service-Plastic
51432419	5,494,375.42	608,501.63	4,885,873.79	(589.14)	0%	523.89	3.25%	19.15	20380020-Distribut Service-Plastic
51432420	396,715.59	43,936.22	352,779.37	(2,930.29)	1%	2,605.76	3.25%	95.23	20380020-Distribut Service-Plastic
51432423	1,561,331.16	172,917.30	1,388,413.86	(3,581.67)	0%	3,185.00	3.25%	116.40	20380020-Distribut Service-Plastic
51432425	4,622,226.99	365,650.88	4,256,576.11	(9,518.78)	0%	8,765.78	3.25%	309.36	20380020-Distribut Service-Plastic
51432431	1,357,486.79	107,386.82	1,250,099.97	(3,876.71)	0%	3,570.03	3.25%	125.99	20380020-Distribut Service-Plastic
51432432	685,818.72	141,058.12	544,760.60	(364.62)	0%	289.63	3.25%	11.85	20380020-Distribut Service-Plastic
51432433	504,177.96	71,791.27	432,386.69	(1,891.95)	0%	1,622.55	3.25%	61.49	20380020-Distribut Service-Plastic
51432437	87,382.16	6,912.54	80,469.62	(6,013.60)	7%	5,537.88	3.25%	195.44	20380020-Distribut Service-Plastic
51432447	910,775.06	158,507.28	752,267.78	(424.95)	0%	350.99	3.25%	13.81	20380020-Distribut Service-Plastic
51432448	515,587.65	40,786.63	474,801.02	(2,085.00)	0%	1,920.06	3.25%	67.76	20380020-Distribut Service-Plastic
52893431	1,911,909.16	73,342.55	1,838,566.61	(8,486.82)	0%	8,161.26	2.56%	216.89	20376020-Distribution Mains-Plastic
52896108	76,280.26	3,620.49	72,659.77	(3,781.00)	5%	3,601.54	3.25%	122.88	20380020-Distribut Service-Plastic
55410534	413.53	19.63	393.90	(2,571.88)	622%	2,449.79	3.25%	83.59	20380020-Distribut Service-Plastic
55673138	749,805.68	28,763.18	721,042.50	(8,086.22)	1%	7,776.03	2.56%	206.65	20376020-Distribution Mains-Plastic
55675327	51,807.83	2,459.00	49,348.83	(2,300.78)	4%	2,191.58	3.25%	74.78	20380020-Distribut Service-Plastic
56468336	714,396.23	27,404.86	686,991.37	(5,407.48)	1%	5,200.04	2.56%	138.19	20376020-Distribution Mains-Plastic

Estimate of Net Book Value of Replaced Assets

Asset ID	Book Value	Estimated Reserve 1/1/2010	Net Book Value 1/1/2010	Estimated GUIC Retirement	% of Book Value Retired	Estimate of 2010 Rate Base for Replaced Asset	Approved Depreciation Rate	Depreciation Expense	Utility Account
56760362	2,062,988.89	79,138.02	1,983,850.87	(2,709.57)	0%	2,605.63	2.56%	69.24	20376020-Distribution Mains-Plastic
56763759	35,877.92	1,702.95	34,174.97	(1,301.29)	4%	1,239.52	3.25%	42.29	20380020-Distribut Service-Plastic
58037637	3,866,537.96	183,522.34	3,683,015.62	(4.26)	0%	4.06	3.25%	0.14	20380020-Distribut Service-Plastic
58037665	985,826.78	46,791.53	939,035.25	(3,852.09)	0%	3,669.25	3.25%	125.19	20380020-Distribut Service-Plastic
58037827	578,538.81	27,459.91	551,078.90	(3,798.36)	1%	3,618.07	3.25%	123.45	20380020-Distribut Service-Plastic
58045438	360,166.62	5,698.32	354,468.30	(17,273.85)	5%	17,000.55	3.25%	561.40	20380020-Distribut Service-Plastic
	<u>471,973,827.75</u>	<u>219,565,478.19</u>	<u>252,408,349.56</u>	<u>(6,402,254.26)</u>	<u>1%</u>	<u>1,959,512.54</u>		<u>190,597.42</u>	

Replacement Projects Summary**GUIC Rider Legacy Parents/WBS - Capital**

Project No	PROJECT DESCRIPTION	Install Dates of Replaced Assets	GUIC Program
GUIC TIMP			
11503515	ASV/REV Installation on High Pressure systems - MN Rider	No related retirements. New installations	GUIC TIMP
11615874	East Metro Pipe Replac. Proj HP Gas	1940s/1950s	GUIC TIMP
12013233	East Metro Pipeline Replacement - Reg Installation	1940s/1950s	GUIC TIMP
11676981	East Metro Pipe Replac. Proj Distr	1940s/1950s	GUIC TIMP
11706370	Install Rice & Co Rd Regulator	1940s/1950s	GUIC TIMP
11819647	RTUs - East Metro Pipe Replacement	1940s/1950s	GUIC TIMP
11649797	High Bridge Lateral Replacement	1948/but partial relocation in 1960	GUIC TIMP
11649797	High Bridge Lateral Replacement	1948/but partial relocation in 1960	GUIC TIMP
34000342	High Bridge Lat Replace Dist Reg	1948/but partial relocation in 1960	GUIC TIMP
11649521	NSPM TIMP Mitigation of ILI Results	Island Line 1950s / East County Line Casings 1960	GUIC TIMP
11651650	NSPM Pre 1950 Trans and IP Pipe	1950s	GUIC TIMP
34003261	NSPM Trans and IP Pipe - Distr	1950s	GUIC TIMP
50000704	MN/WBL/County Rd B Replacement-NSP to Rice	1950s	GUIC TIMP
50000709	MN/STP/ECL Replace-Maplewood to NSP	1957	GUIC TIMP
GUIC DIMP			
11649520	NSPM Install 6" and 4" Distribution Valves	No related retirements. New installations	GUIC DIMP
50000646	NSPM Install 6" and 4" Distribution Valves	No related retirements. New installations	GUIC DIMP
11649522	NSPM Programmatic Main Replacements	See Detail on Valve/Mains/Services Tabs	GUIC DIMP
50000644	NSPM Programmatic Main Replacements	See Detail on Valve/Mains/Services Tabs	GUIC DIMP
11649766	NSPM Programmatic Service Replacement	See Detail on Valve/Mains/Services Tabs	GUIC DIMP
50000645	NSPM Programmatic Service Replacement	See Detail on Valve/Mains/Services Tabs	GUIC DIMP
11813698	Pipeline Data Project Dist - NSPM	No related retirements. New installations	GUIC DIMP
11980562	Hugo Line ILI improvements	No related retirements. Assessment work only	GUIC DIMP
12173704	Replace Emr Vls in NSPM metro Dist Sys	See Detail on Valve/Mains/Services Tabs	GUIC DIMP
12173830	NSPM Programmatic Service Reply	See Detail on Valve/Mains/Services Tabs	GUIC DIMP
12173831	NSPM Programmatic Main Replace	See Detail on Valve/Mains/Services Tabs	GUIC DIMP
34000462	Sartell Bridge Replacement	See Detail on Valve/Mains/Services Tabs	GUIC DIMP
50000705	MN/STP/County Rd B Replace-Rice to Hamline	1950s	GUIC DIMP
	MN/Colby Lake Lateral Replace	1964-1965	GUIC DIMP
	MN/Arden Hills/System H05 Replace	1964	GUIC DIMP
50000708	MN/NPT/Langdon Line Replacement	1958	GUIC DIMP

Valve Replacements

Functional Class	Type of Asset Replaced	Project Description	Location	Year Retired Asset was Installed	Quantity Replaced	Year of Replacement	Valve #	Valve Size
Distribution	Valve	Inoperable Emergency Valve	Henry Ave & Fleming Field, SSTP	Unknown	1	2017	EV1245	12" SC
Distribution	Valve	Inoperable Emergency Valve	Algonquin & Iroquois, STP	1975	1	2017	EV1275	12" SC
Distribution	Valve	Inoperable Emergency Valve	7th & Dale, STP	Unknown	1	2017	EV1241	12" SC
Distribution	Valve	Inoperable Emergency Valve	Forest & Rose, STP	1974	1	2017	EV1202	12" SC
Distribution	Valve	Inoperable Emergency Valve	Cypress & 6th, STP	1974	1	2017	EV1218	6" SC
Distribution	Valve	Inoperable Emergency Valve	Victoria & St. Anthony, STP	Unknown	1	2017	EV1069	6" SC
Distribution	Valve	Inoperable Emergency Valve	Algonquin & Iroquois, STP	1975	1	2017	EV1276	6" SC
Distribution	Valve	Inoperable Emergency Valve	Robert & Page, STP	1963	1	2017	EV1178	8" SC
Distribution	Valve	Inoperable Emergency Valve	Cypress & Reaney, STP	1974	1	2017	EV1213	8" SC
Distribution	Valve	Inoperable Emergency Valve	Roselawn & McMenomie	1954	1	2017	DV6070	4" SC
Distribution	Valve	Inoperable Emergency Valve	Roselawn & McMenomie	1954	1	2017	DV6068	6" SC
Distribution	Valve	Inoperable Emergency Valve	Roselawn & McMenomie	1954	1	2017	EV6069	6" SC
Distribution	Valve	Inoperable Emergency Valve	McKnight & 3rd St E	1954	1	2017	EV1289	4" SC
Distribution	Valve	Inoperable Emergency Valve	McKnight & 3rd St E	1954	1	2017	EV1288	8" SC
Distribution	Valve	Inoperable Emergency Valve	McKnight & 3rd St E	1954	1	2017	EV1290	4" SC
Distribution	Valve	Inoperable Emergency Valve	Larpenter & Gary (Postponed to 2019)	1953	1	2017	EV1261	8" SC
Distribution	Valve	Inoperable Emergency Valve	Larpenter & Gary (Postponed to 2019)	1953	1	2017	EV1262	8" SC
Distribution	Valve	Inoperable Emergency Valve	Larpenter & Gary (Postponed to 2019)	1953	1	2017	EV1263	8" SC
Distribution	Valve	Inoperable Emergency Valve	McKnight & Hudson Rd	1954	1	2017	EV1291	8" SC
Distribution	Valve	Inoperable Emergency Valve	Larpenter & Gary (Postponed to 2019)	1953	1	2017	EV6132	8" SC
Distribution	Valve	Inoperable Emergency Valve	Hwy 19 W TBS	2002	1	2017	EV3512	8" SC
Distribution	Valve	Inoperable Emergency Valve	Hwy 19 W TBS	2002	1	2017	EV3513	6" SC
Distribution	Valve	Inoperable Emergency Valve	Snelling & Englewood, STP	Unknown	1	2018	EV1020	12" SC
Distribution	Valve	Inoperable Emergency Valve	Fairview & Juno, STP	1974	1	2018	EV1030	16" SC
Distribution	Valve	Inoperable Emergency Valve	Fairview & Montreal, STP	1976	1	2018	EV1037	16" SC
Distribution	Valve	Inoperable Emergency Valve	Dayton Ave & Cretin Ave, STP	N/A	1	2018	EV5199	2" PE
Distribution	Valve	Inoperable Emergency Valve	St. Albans & Alley South of Selby, STP	1974	1	2018	EV1373	4" SC
Distribution	Valve	Inoperable Emergency Valve	Hamline & County Road "B", RSV	N/A	1	2018	R063 bypass	4" SC
Distribution	Valve	Inoperable Emergency Valve	St. Peter & 10th St., STP	N/A	1	2018	R172 Block Val	6" SC
Distribution	Valve	Inoperable Emergency Valve	7th & South, NSTP (Delayed to 2019)	1953	1	2018	EV0291	6" SC
Distribution	Valve	Inoperable Emergency Valve	Rich Valley Rd & 105th St, Eagan	N/A	1	2018	R413W bypass	2" SC
Distribution	Valve	Inoperable Emergency Valve	Plato & Water, STP	N/A	1	2018	R182 Block Val	4" SC
Distribution	Valve	Inoperable Emergency Valve	Larpenter & Gary (Carry Over from 2017)	1953	1	2018	EV1261	8" SC
Distribution	Valve	Inoperable Emergency Valve	Larpenter & Gary (Carry Over from 2017)	1953	1	2018	EV1262	8" SC
Distribution	Valve	Inoperable Emergency Valve	Larpenter & Gary (Carry Over from 2017)	1953	1	2018	EV1263	8" SC
Distribution	Valve	Inoperable Emergency Valve	Larpenter & Gary (Carry Over from 2017)	1953	1	2018	EV6132	8" SC

DIMP Replacement Project Detail for 2015

NSP-MN Main & Services DIMP Replacements			Year Retired Main was Installed	Remaining Depreciable Service Life 1/1/2010 [1]	Main Footage		Actual Installed from Passport	Service		
Division	Project	WO			Estimate	Actual Replaced		Estimate	Replaced	Transferred
St Paul	STP/ARLINGTON, NEVADA, NEBRASKA BTN. WHITE BEAR & FURNESS	11935351	1977	12	12,760	7,100	12,760	230	223	4
	ROSEVILLE/ COHANSEY ST. PROJECT/ INSTALL 7500' OF 2" PE	12118923	1965	0	7,500	4,530	7,517	74	71	2
	STP / CLARENCE ST BTN ARLINGTON AVE E & HOYT AVE E / DIMP PR	12096468	1967	2	2,600	1,300	1,300	48	46	4
	Barclay/Dieter	12185039	Unknown	-	3,750	2,675	3,925	60	58	4
	STP / IVY AVE E XST: RUTH ST / LOW PRESSURE DIMP PROJECT	12088590	1953	0	16,000	11,350	16,031	218	224	0
	STP / 7TH ST W BTN ALTON & RANKIN ST	12217850	1972	7	2,326	4,660	2,326	24	21	4
	Idaho / Barclay / Clarence ROSEVILLE/ GALTIER ST/ INSTALL 4600' OF 2" PE MAIN (DIMP)	12227467	1960	0	7,350	4,775	7,467	99	93	8
		12122749	Unknown	-	4,400	2,405	4,560	49	48	0
White Bear Lake	VADNAIS HEIGHTS-5-STAR MOBILE ESTATES-INSTALL 10,480' 2" PE	12100647	1974	9	10,480	9,225	10,124	190	112	77
	LAKE ELMO-CIMARRON MOBILE HOME PARK-SOUTH HALF-RENEW MAIN	12148971	1970	5	15,000	15,234	15,234	250	228	0
	LAKE ELMO-CIMARRON MOBILE HOME PARK-NORTH HALF-RENEW MAIN	12225339	1970	5	16,709	16,064	16,709	252	237	0
	WBL/OPH/Area D	12200298	1962	0	5,000	4,520	5,097	12	14	7
	Vad Heights - North Star Estates	12226824	1972	7	10,000	7,040	9,485	172	161	8
	BAYPORT 5TH ST S INSTALL 3900' OF 2"PE MAIN RENEW 43 SVCS	12093773	Unknown	-	2,900	2,000	3,845	43	16	23
	NO ST PAUL / 14th AVE E	11945105	1978	13	3,865	2,105	3,999	48	40	6
Wyoming	Forest Lake - Carry-over from 2014	12185020	1968	3	9,000	10,850	8,741	93	68	28
	Forest Lake - 11th Ave & 6th St	12233388	1968	3	4,100	3,310	3,310	36	41	6
	Forest Lake - 1st Ave / 2nd Ave / 8th St / 7th St / 6th St	12234310	Unknown	-	4,650	3,750	4,642	27	43	9
Newport	Cloman Way & Lower 67th St	12262781	1971	6	5,500	3,900	6,322	152	154	0
	ST PAUL PARK /2015 DIMP/ DIXON / BLOSSOM	12148969	Unknown	-	2,204	950	2,224	26	26	0
	2015 DIMP / ST PAUL PK / DIXON DR	12149144	Unknown	-	2,581	1,600	2,549	29	29	0
	2015 DIMP / ST PAUL PK / GARY/ SELBY / DAYTON	12149707	Unknown	-	9,274	5,050	9,274	110	110	0
	ST PAUL PARK / 2015 DIMP / PORTLAND AVE / 13TH / 15TH	12101212	1972	7	1,800	1,240	1,764	16	11	5
	SOUTH ST PAUL / 2015 DIMP / BUTLER / KASSAN	12089427	1974	9	2,224	2,980	2,224	20	15	3
	SOUTH ST PAUL / 2015 DIMP BUTLER AVE / BUTLER CT	12101218	1974	9	2,298	1,200	2,298	30	26	6
	Denton	12255539	1973	8	4,828	4,220	4,828	75	75	0
	Burns Ave	12170859	Unknown	-	6,901	3,900	6,902	85	73	11
St Cloud	DLH / DIMP / RIVER'S EDGE PARKING	12188957	Unknown	-	250	256	270	2	0	0
	St Cloud - Lincoln Ave*	12223516	Unknown	-	7,750	5,990	6,273	36	18	11
	Watertown	12162124	Unknown	-	10,200	7,030	10,210	95	73	37
	Sauk Rapids - 7th St NE (@ 2nd Ave NE)	12227154	Unknown	-	286	250	250	3	3	0
Southeast	GOODVIEW-LAKE VILLAGE MOBILE HOME PARK	12157111	1974	9	9,989	6,930	8,455	230	192	0
	Northfield Viking Ter	12241776	1970	5	10,550	8,525	7,677	180	180	0
	7th St S - Lake City	12205025	1971	6	1,400	-	1,256	6	0	0
	Hallstrom Dr & Burton St - Red Wing	12218584	1971	6	17,000	14,482	14,482	270	136	25
	Bluffview - Winona	12231997	1971	6	2,000	1,120	1,626	5	12	3
	Bush St & Langsford Ave - Red Wing	12212950	1972	7	5,950	5,100	6,337	85	69	7
	Hillsdale - Hidden Valley Mobile Home Park	12162836	1976	11	10,064	8,115	10,699	185	176	0
Moorhead	Moorehead 30th Ave & 8th St S	12215066 & 12208317	Unknown	-	975	-		1	0	0
	Moorehead Dale & 5th St S	12215099 & 12210767	Unknown	-	1,608	-	1,599	32	0	0
Service Materials										
Totals					254,022	195,731	244,591	3,598	3,122	298

[1] Remaining Service Life at start of 2010 Test Year in 2010 Gas Rate Case (G002/GR-09-1153). Based on Gas Distribution Main Depreciation Average Service Life of 45 Years (Approved in E.G002/D-07-1528)

DIMP Replacement Project Detail for 2016

NSP-MN Main & Services DIMP Replacement Projects 2016						
Area	Work Order Number	Description	Year Retired Main was Installed	Remaining Depreciable Service Life 1/1/2010 [1]	Total Design FT.	Tot. Svc
St Paul	12092489	ST PAUL - ARMSTRONG AVE XST: CHATSWORTH ST S	1990	25	1,350	28
	12328949	ST PAUL - ARMSTRONG AVE	1990	25	7,506	150
	12381180	ST PAUL - ATLANTIC, DULUTH & LARPENTEUR	1955	0	8,900	118
	12294860	ROSEVILLE - GLENHILL, WOODLYNN, CLARMAR	1955	0	7,810	81
	12398688	LAUDERDALE - EUSTIS ST	Unknown	-	1,100	17
	12380740	ROSEVILLE - WEWERS RD	Unknown	-	1,400	15
	12404989	ST PAUL - DOWNTOWN - 10TH-MINNESOTA	1957	0	1,200	5
	12344852	ROSEVILLE - COUNTY RD C, FISK, AVON, GROTO	1958	0	23,400	305
	12444470	ST PAUL - DOWN TOWN (Kellogg)	1956	0	150	-
	12361662	ST PAUL - JUNO CONTRACTOR PORTION	1980	15	4,750	56
	12358730	ST PAUL - JUNO LOCAL PORTION	1980	15	1,260	20
	12364882	ST PAUL - AURORA - LOCAL PORTION	1980	15	960	36
	12369728	ST PAUL - AURORA - CONTRACTOR PORTION	1980	15	3,875	100
	12317526	ST PAUL - BERKELY-STANFORD-WELLESLEY	1980	15	10,440	195
White Bear Lake	12294862	ROSEVILLE - SKILLMAN-ELDRIDGE	1963	0	6,700	79
	12344860	LAKE ELMO - 32ND ST	Unknown	-	8,600	77
	12293638	LAKE ELMO - LAKE ELMO AVE	Unknown	-	6,800	51
	12334697	NORTH ST PAUL - 19TH AVE	1956	0	7,000	85
	12371725	BAYTOWN TWP/ 13606 30TH ST N	Unknown	-	320	5
	12320156	OAKDALE - GROSPPOINT AVE	1960	0	16,200	178
	12317855	WHITE BEAR LAKE - FLORENCE ST	1976	11	16,600	109
	12320058	MAPLEWOOD - ROSELAWN AVE	1954	0	12,900	179
	12320143	OAKDALE - GERSHWIN AVE	1967	2	9,500	70
	12320392	SHOREVIEW - DEBRA LN	1976	11	11,200	105
	12317856	SHOREVIEW - NANCY PL	1971	6	7,600	85
Wyoming	12275730	OAKDALE - GREENE AVE	Unknown	-	2,150	22
	12334677	FOREST LAKE - 2ND ST SE	1972	7	10,900	128
Newport	12346387	SOUTH ST PAUL - 3RD AVE S - 6TH ST S	Unknown	-	1,680	28
	12352620	MENDOTA HTS - 3RD ST-VANDALL-SOMERSET	1968	3	1,900	22
	12352631	ST PAUL PARK - 13TH-14TH-CHICAGO	Unknown	-	8,815	100
	12346491	SOUTH ST PAUL - 2ND AVE S - MARIE AVE	Unknown	-	7,530	120
	12346357	MENDOTA HTS - HWY 13 - WACHTER AVE	Unknown	-	911	5
St Cloud	12342575	ST JOSEPH - 1ST AVE NE - CTY RD 75	1966	1	9,150	79
	12403875	SARTELL - MISSISSIPPI RIVER CROSSING	1973	8	1,700	-
	12249351	DELANO	Unknown	-	14,800	127
Southeast	12385504	WINONA - 3RD ST BTW GALE ST-MECHANIC ST	1974	9	8,100	127
	12354151	NORTHFIELD - FLORELLAS CT	1968	3	1,550	22
	12328936	FARIBAULT - 8TH ST SW	Unknown	-	5,320	48
	12345274	FARIBAULT - 7TH ST NW	1980	15	4,900	43
	12350531	FARIBAULT - 8TH ST SW, BOTSFORD, CARLTON	Unknown	-	3,000	49
Moorhead	12359542	MOORHEAD - REGAL ESTATES	Unknown	-	10,500	210
2016 DIMP-related Main Replacement Total					270,427	3,279

[1] Remaining Service Life at start of 2010 Test Year in 2010 Gas Rate Case (G002/GR-09-1153). Based on Gas Distribution Main Depreciation Average Service Life of 45 Years (Approved in E,G002/D-07-1528)

DIMP Replacement Project Detail for 2017

NSP-MN Main & Services DIMP Replacement Projects 2017						
Area	Work Order Number	Description	Year Retired Main was Installed	Remaining Depreciable Service Life 1/1/2010 [1]	Total Design FT.	Tot. Svc
St Paul	12294045	ROSEVILLE - FERNWOOD ST	1955	0	3,760	44
	12315892	ST PAUL - CASE AVE BTN EDGERTON-EARL	1979	14	11,300	177
	12328310	ST PAUL - HAGUE/SELBY	1978	13	6,745	128
	12326608	ST PAUL - EDMOND	Unknown	-	5,290	113
	N/A	ST PAUL - ST PETER, FORD 4TH	1963	0	4,200	62
	12320752	ST PAUL - ETNA-BIRMINGHAM-WINCHELL	1962	0	9,600	141
White Bear Lake	12317581	ARDEN HILLS - ARDEN VIEW DR	Unknown	-	2,300	34
	12320389	ARDEN HILLS - GLENPAUL AVE	1955	0	4,700	58
	12319969	MAHTOMEDI - GRIFFIN AVE	1968	3	3,200	39
	12092590	BAYPORT - 7TH ST	1964	0	1,000	11
Wyoming	12320014	FOREST LAKE - 11TH AVE SW (LAKE ST)	Unknown	-	2,100	25
	12320051	FOREST LAKE - 208TH-209TH ST	1969	4	4,000	47
	12320027	FOREST LAKE - IVERSON AVE	1967	2	3,700	53
	N/A	FOREST LAKE - HEATH AVE	1968	3	3,600	34
Newport	12352434	COTTAGE GROVE - IRONWOOD	1971	6	3,338	100
	12438126	ST PAUL - BURNS-RUTH	1955	0	11,715	147
	DE 522036	COTTAGE GROVE - HYDE	1961	0	3,710	41
	DE 521888	COTTAGE GROVE - PT DOUGLAS RD, IDEAL AVE	1961	0	4,735	56
	DE 521609	COTTAGE GROVE - IDEAL-85TH ST	1962	0	4,160	36
	DE 521021	MENDOTA HTS - BACHELOR-SUTTON-MARIE	1973	8	10,570	77
	DE 526906	INVER GROVE HTS - DAWN-UPPER 75TH-77TH	1971	6	5,160	89
	DE 519457	INVER GROVE HTS - CONROY CT	1972	7	5,400	142
St Cloud	N/A	ST CLOUD - 16TH AVE - 3RD ST N	1972	7	4,100	26
	12412846	ST CLOUD - 44TH AVE N, APPOLLO BY VA	1972	7	2,500	10
Southeast	DE 525652	WINONA - 3RD ST BTW WINONA ST-LIBERTY ST	1968	3	8,500	154
	12320940	NORTHFIELD - WOODLEY ST E	1977	12	500	13
	12344771	NORTHFIELD - ARCHIBALD ST/ASTER	1981	16	3,500	55
	12356426	LAKE CITY - LAKEWOOD AVE	1972	7	4,250	79
	12360394	RED WING - SPRUCE/SOUTHWOOD	Unknown	-	6,000	86
	12356414	WINONA - 9TH/52ND	1977	12	3,500	42
	N/A	NORTHFIELD - EDWARDS LN	1968	3	1,660	42
	DE 525650	RED WING - BUSH ST - PLUM ST	1983	18	3,250	76
	N/A	RED WING - WRIGHT/FINRUD	1975	10	10,400	130
Moorhead	12410474	MOORHEAD-MOBILE MANOR-1224 15TH AVE. N	1972	7	1,260	38
	12422040	DILWORTH - 1ST AVE SE	1972	7	5,000	48
2017 Designed DIMP-related Main Replacement Total					168,703	2,453

[1] Remaining Service Life at start of 2010 Test Year in 2010 Gas Rate Case (G002/GR-09-1153). Based on Gas Distribution Main Depreciation Average Service Life of 45 Years (Approved in E,G002/D-07-1528)

Capital Expenditures
Actual and Forecast through 2022

Capital Expenditures (CWIP Only excluding internal labor)										
Project Name	Sub Project	Pre-2016	2016	2017	2018	2019	2020	2021	2022	Total by Subproject
TIMP	Transmission	1,209,118	4,556,068	6,191,157	6,875,780	26,818,810	20,467,310	30,940,660	30,786,800	127,845,704
TIMP	Distribution	39,086,442	14,195,598	600,218	-	-	-	-	-	53,882,258
Total TIMP		40,295,560	18,751,666	6,791,375	6,875,780	26,818,810	20,467,310	30,940,660	30,786,800	181,727,961
DIMP	Distribution	10,677,614	12,628,215	13,333,269	36,813,456	34,145,700	26,851,200	17,267,600	17,267,600	168,984,654
DIMP	Software	-	444,543	-	-	-	-	-	-	444,543
Total DIMP		10,677,614	13,072,758	13,333,269	36,813,456	34,145,700	26,851,200	17,267,600	17,267,600	169,429,197
Total GUIC		50,973,174	31,824,424	20,124,644	43,689,236	60,964,510	47,318,510	48,208,260	48,054,400	351,157,158

TIMP - Capital Revenue Requirements	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Total
Rate Base													
CWIP	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant In-Service	41,002,201	41,224,699	41,221,031	41,358,584	41,362,685	48,647,724	47,049,533	52,672,931	54,706,235	52,527,236	55,163,535	59,397,911	59,397,911
Less Accumulated Book Depreciation Reserve	(135,999)	(50,939)	34,589	120,256	206,070	296,627	396,067	493,430	605,136	716,688	828,720	946,473	946,473
Less Accumulated Deferred Taxes	3,463,357	3,641,795	3,820,232	3,998,670	4,177,107	4,355,545	4,533,982	4,712,419	4,890,857	5,069,294	5,247,732	5,426,169	5,426,169
End Of Month Rate Base	37,674,842	37,633,843	37,366,210	37,239,658	36,979,507	43,995,552	42,119,484	47,467,082	49,210,242	46,741,253	49,087,083	53,025,270	53,025,270
Average Rate Base (Prior Mo + Cur Month/2)	37,883,938	37,654,342	37,500,026	37,302,934	37,109,583	40,487,530	43,057,518	44,793,283	48,338,662	47,975,747	47,914,168	51,056,176	
Return on Rate Base													
Debt Return (Avg RB * Wtd Cost of Debt)	71,664	71,229	70,938	70,565	70,199	76,589	81,450	84,734	91,441	90,754	90,638	96,581	966,781
Equity Return (Avg RB * Wtd Cost of Equity)	159,744	158,776	158,125	157,294	156,479	170,722	181,559	188,878	203,828	202,298	202,038	215,287	2,155,028
Total Return on Rate Base	231,408	230,005	229,063	227,859	226,678	247,311	263,010	273,612	295,269	293,052	292,676	311,868	3,121,810
Income Statement Items													
AFUDC Pre-Eligible	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-
Property Taxes	58,295	58,295	58,295	58,295	58,295	58,295	58,295	58,295	58,295	58,295	58,295	58,295	699,538
Book Depreciation	85,242	85,299	85,528	85,667	85,814	93,467	99,439	103,666	111,704	111,552	112,032	117,752	1,177,163
Deferred Taxes	178,437	178,437	178,437	178,437	178,437	178,437	178,437	178,437	178,437	178,437	178,437	178,437	2,141,249
Gross Up for Income Tax (see below)	92,384	90,635	87,726	84,170	81,749	106,482	113,452	130,383	136,622	(1,153,157)	1,072,867	(1,462,389)	(619,076)
Total Income Statement Expense	414,358	412,666	409,986	406,569	404,296	436,681	449,624	470,782	485,059	(804,873)	1,421,631	(1,107,905)	3,398,874
Total Revenue Requirement	645,766	642,672	639,048	634,428	630,973	683,993	712,633	744,394	780,328	(511,821)	1,714,307	(796,037)	6,520,684
Capital Structure													
Weighted Cost of Debt	2.27%												
Weighted Cost of Equity	5.06%												
Required Rate of Return	7.33%												
Current Income Tax Calculation													
Equity Return	159,744	158,776	158,125	157,294	156,479	170,722	181,559	188,878	203,828	202,298	202,038	215,287	2,155,028
Book Depreciation	85,242	85,299	85,528	85,667	85,814	93,467	99,439	103,666	111,704	111,552	112,032	117,752	1,177,163
Deferred Taxes	178,437	178,437	178,437	178,437	178,437	178,437	178,437	178,437	178,437	178,437	178,437	178,437	2,141,249
Less Tax Depreciation	292,496	294,064	298,157	303,611	309,691	299,354	309,528	299,258	315,276	2,145,430	(1,005,281)	2,595,461	6,457,047
Plus CPI-Tax Interest (If Applicable)	-	-	392	1,499	4,817	7,635	10,877	13,057	14,929	18,877	22,690	11,471	106,244
Total	130,927	128,448	124,326	119,286	115,856	150,908	160,785	184,781	193,623	(1,634,266)	1,520,478	(2,072,513)	(877,362)
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	92,384	90,635	87,726	84,170	81,749	106,482	113,452	130,383	136,622	(1,153,157)	1,072,867	(1,462,389)	(619,076)

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
Less Accumulated Deferred Taxes	5,555,475	5,684,780	5,814,086	5,943,392	6,072,697	6,202,003	6,331,309	6,460,615	6,589,920	6,719,226	6,848,532	6,977,837	6,977,837
End Of Month Rate Base	52,783,255	52,620,434	52,381,157	52,408,887	52,549,011	52,618,512	52,678,839	52,652,758	52,415,964	52,179,203	57,381,250	57,424,761	57,424,761
Average Rate Base (Prior Mo + Cur Month/2)	52,904,263	52,701,845	52,500,796	52,395,022	52,478,949	52,583,762	52,648,676	52,665,799	52,534,361	52,297,584	54,780,227	57,403,006	
Return on Rate Base													
Debt Return (Avg RB * Wtd Cost of Debt)	100,077	99,694	99,314	99,114	99,273	99,471	99,594	99,626	99,377	98,930	103,626	108,587	1,206,683
Equity Return (Avg RB * Wtd Cost of Equity)	209,413	208,611	207,816	207,397	207,729	208,144	208,401	208,469	207,949	207,011	216,838	227,220	2,524,998
Total Return on Rate Base	309,490	308,306	307,130	306,511	307,002	307,615	307,995	308,095	307,326	305,941	320,464	335,808	3,731,682
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	129,306	129,306	129,306	129,306	129,306	129,306	129,306	129,306	129,306	129,306	129,306	129,306	1,551,668
Gross Up for Income Tax (see below)	22,536	4,641	33,802	48,316	26,809	18,872	(23,573)	(37,620)	(12,933)	60,896	51,477	33,203	226,427
Total Income Statement Expense	356,687	338,862	368,093	382,903	361,986	354,613	312,636	298,938	323,760	397,594	393,784	381,423	4,271,281
Total Revenue Requirement	666,177	647,168	675,223	689,414	668,988	662,228	620,631	607,033	631,087	703,535	714,249	717,230	8,002,962
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	209,413	208,611	207,816	207,397	207,729	208,144	208,401	208,469	207,949	207,011	216,838	227,220	2,524,998
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	129,306	129,306	129,306	129,306	129,306	129,306	129,306	129,306	129,306	129,306	129,306	129,306	1,551,668
Less Tax Depreciation	430,608	454,506	412,664	392,174	423,652	435,683	496,445	517,274	482,894	382,112	410,612	445,769	5,284,393
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	31,939	6,577	47,905	68,474	37,995	26,746	(33,407)	(53,316)	(18,328)	86,303	72,953	47,055	320,895
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	22,536	4,641	33,802	48,316	26,809	18,872	(23,573)	(37,620)	(12,933)	60,896	51,477	33,203	226,427

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	67,193,989	67,263,059	67,369,530	67,568,704	67,814,405	68,242,787	68,807,996	69,688,308	70,603,550	71,464,466	72,163,270	72,726,911	72,726,911
Less Accumulated Book Depreciation Reserve	(2,226,319)	(3,637,282)	(4,150,819)	(4,217,231)	(4,199,050)	(4,143,846)	(4,073,216)	(3,999,889)	(3,921,861)	(3,838,174)	(3,744,985)	(3,645,330)	(3,645,330)
Less Accumulated Deferred Taxes	7,049,581	7,121,754	7,193,284	7,265,028	7,336,558	7,408,302	7,479,831	7,551,361	7,623,105	7,694,635	7,766,379	7,837,909	7,837,909
End Of Month Rate Base	62,370,727	63,778,587	64,327,066	64,520,908	64,676,897	64,978,332	65,401,381	66,136,836	66,902,305	67,608,005	68,141,875	68,534,332	68,534,332
Average Rate Base (Prior Mo + Cur Month/2)	59,861,872	63,038,571	64,017,061	64,388,115	64,563,138	64,791,743	65,154,092	65,733,343	66,483,698	67,219,390	67,839,068	68,302,339	
Return on Rate Base													
Debt Return (Avg RB * Wtd Cost of Debt)	113,239	119,248	121,099	121,801	122,132	122,564	123,250	124,346	125,765	127,157	128,329	129,205	1,478,134
Equity Return (Avg RB * Wtd Cost of Equity)	261,896	275,794	280,075	281,698	282,464	283,464	285,049	287,583	290,866	294,085	296,796	298,823	3,418,592
Total Return on Rate Base	375,134	395,042	401,174	403,499	404,596	406,028	408,299	411,929	416,631	421,242	425,125	428,028	4,896,726
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	110,632	110,996	111,092	111,259	111,502	111,870	112,412	113,201	114,181	115,151	116,002	116,691	1,354,991
Deferred Taxes	78,169	78,169	78,169	78,169	78,169	78,169	78,169	78,169	78,169	78,169	78,169	78,169	938,027
Gross Up for Income Tax (see below)	29,999	35,782	36,730	35,939	36,340	32,534	30,965	27,815	32,413	36,642	43,277	45,671	424,107
Total Income Statement Expense	313,390	319,537	320,581	319,957	320,601	317,163	316,136	313,775	319,354	324,552	332,038	335,121	3,852,204
Total Revenue Requirement	688,525	714,579	721,754	723,456	725,197	723,191	724,435	725,704	735,985	745,793	757,162	763,149	8,748,930
Capital Structure													
Weighted Cost of Debt	2.27%												
Weighted Cost of Equity	5.25%												
Required Rate of Return	7.52%												
Current Income Tax Calculation													
Equity Return	261,896	275,794	280,075	281,698	282,464	283,464	285,049	287,583	290,866	294,085	296,796	298,823	3,418,592
Book Depreciation	110,632	110,996	111,092	111,259	111,502	111,870	112,412	113,201	114,181	115,151	116,002	116,691	1,354,991
Deferred Taxes	78,169	78,169	78,169	78,169	78,169	78,169	78,169	78,169	78,169	78,169	78,169	78,169	938,027
Less Tax Depreciation	376,457	376,457	378,593	382,675	383,080	394,584	401,390	413,728	407,409	401,314	388,215	384,665	4,688,566
Plus CPI-Tax Interest (If Applicable)	134	209	318	650	1,041	1,741	2,529	3,734	4,553	4,755	4,540	4,210	28,415
Total	74,375	88,711	91,061	89,102	90,096	80,660	76,769	68,960	80,360	90,845	107,293	113,228	1,051,459
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	29,999	35,782	36,730	35,939	36,340	32,534	30,965	27,815	32,413	36,642	43,277	45,671	424,107

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	73,043,140	73,235,166	73,388,812	73,523,190	73,647,897	73,804,982	74,024,865	74,276,273	74,543,506	74,795,412	84,666,290	84,782,093	84,782,093
Less Accumulated Book Depreciation Reserve	(3,539,215)	(3,429,832)	(3,320,594)	(3,211,366)	(3,102,079)	(2,995,521)	(2,893,747)	(2,794,212)	(2,695,641)	(2,595,635)	(2,483,441)	(2,362,108)	(2,362,108)
Less Accumulated Deferred Taxes	8,002,781	8,090,217	8,176,875	8,263,792	8,350,450	8,437,367	8,524,025	8,610,683	8,697,600	8,784,257	8,871,175	8,957,832	8,957,832
End Of Month Rate Base	68,579,573	68,574,781	68,532,531	68,470,764	68,399,526	68,363,136	68,394,588	68,459,802	68,541,547	68,606,790	78,278,557	78,186,369	78,186,369
Average Rate Base (Prior Mo + Cur Month/2)	68,474,517	68,533,459	68,510,327	68,458,189	68,391,816	68,337,872	68,335,533	68,383,866	68,457,216	68,530,840	73,399,215	78,189,134	
Return on Rate Base													
Debt Return (Avg RB * Wtd Cost of Debt)	129,531	129,642	129,599	129,500	129,375	129,272	129,268	129,359	129,498	129,638	138,847	147,908	1,581,437
Equity Return (Avg RB * Wtd Cost of Equity)	299,576	299,834	299,733	299,505	299,214	298,978	298,968	299,179	299,500	299,822	321,122	342,077	3,657,509
Total Return on Rate Base	429,107	429,476	429,331	429,005	428,589	428,251	428,236	428,539	428,999	429,460	459,968	489,985	5,238,946
Income Statement Items													
AFUDC Pre-Eligible	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-
Property Taxes	103,011	103,011	103,011	103,011	103,011	103,011	103,011	103,011	103,011	103,011	103,011	103,011	1,236,128
Book Depreciation	117,171	117,449	117,638	117,795	117,936	118,090	118,296	118,553	118,836	119,119	124,645	130,096	1,435,624
Deferred Taxes	94,701	94,701	94,701	94,701	94,701	94,701	94,701	94,701	94,701	94,701	94,701	94,701	1,136,410
Gross Up for Income Tax (see below)	36,267	36,372	34,958	26,336	23,651	18,896	21,224	10,340	26,148	37,258	53,293	74,129	398,872
Total Income Statement Expense	351,150	351,532	350,307	341,842	339,299	334,697	337,231	326,604	342,695	354,089	375,650	401,936	4,207,034
Total Revenue Requirement	780,257	781,009	779,638	770,847	767,888	762,948	765,467	755,143	771,694	783,549	835,618	891,922	9,445,980
Capital Structure													
Weighted Cost of Debt	2.27%												
Weighted Cost of Equity	5.25%												
Required Rate of Return	7.52%												
Current Income Tax Calculation													
Equity Return	299,576	299,834	299,733	299,505	299,214	298,978	298,968	299,179	299,500	299,822	321,122	342,077	3,657,509
Book Depreciation	117,171	117,449	117,638	117,795	117,936	118,090	118,296	118,553	118,836	119,119	124,645	130,096	1,435,624
Deferred Taxes	94,701	94,701	94,701	94,701	94,701	94,701	94,701	94,701	94,701	94,701	94,701	94,701	1,136,410
Less Tax Depreciation	425,470	425,470	429,127	453,313	466,138	486,476	491,011	531,319	506,401	488,925	469,053	432,433	5,605,137
Plus CPI-Tax Interest (If Applicable)	3,937	3,661	3,724	6,606	12,924	21,553	31,665	44,520	58,190	67,654	60,713	49,342	364,489
Total	89,915	90,175	86,668	65,293	58,637	46,846	52,619	25,635	64,826	92,372	132,127	183,782	988,895
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	36,267	36,372	34,958	26,336	23,651	18,896	21,224	10,340	26,148	37,258	53,293	74,129	398,872

DIMP - Capital Revenue Requirements	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Total
Rate Base													
CWIP	-	-	-	-	-	-	-	-	-	-	-	-	-
Plant In-Service	11,591,891	11,546,320	11,589,091	11,749,440	12,686,185	12,706,057	12,936,863	13,820,732	14,467,586	19,846,491	23,139,956	23,274,296	23,274,296
Less Accumulated Book Depreciation Reserve	114,394	104,450	33,015	14,442	3,907	14,247	47,575	64,242	44,465	(140,799)	(1,169,948)	(1,668,782)	(1,668,782)
Less Accumulated Deferred Taxes	504,217	658,388	812,558	966,729	1,120,900	1,275,070	1,429,241	1,583,411	1,737,582	1,891,753	2,045,923	2,200,094	2,200,094
End Of Month Rate Base	10,973,279	10,783,483	10,743,518	10,768,269	11,561,378	11,416,740	11,460,048	12,173,079	12,685,539	18,095,537	22,263,980	22,742,984	22,742,984
Average Rate Base (Prior Mo + Cur Month/2)	10,861,346	10,878,381	10,763,501	10,755,894	11,164,824	11,489,059	11,438,394	11,816,563	12,429,309	15,390,538	20,179,759	22,503,482	
Return on Rate Base													
Debt Return (Avg RB * Wtd Cost of Debt)	20,546	20,578	20,361	20,347	21,120	21,733	21,638	22,353	23,512	29,114	38,173	42,569	302,044
Equity Return (Avg RB * Wtd Cost of Equity)	45,799	45,871	45,386	45,354	47,078	48,446	48,232	49,827	52,410	64,897	85,091	94,890	673,280
Total Return on Rate Base	66,345	66,449	65,747	65,701	68,198	70,179	69,870	72,180	75,922	94,011	123,265	137,459	975,324
Income Statement Items													
AFUDC Pre-Eligible	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-
Property Taxes	15,865	15,865	15,865	15,865	15,865	15,865	15,865	15,865	15,865	15,865	15,865	15,865	190,385
Book Depreciation	23,933	24,295	24,292	24,505	28,895	33,137	33,401	34,571	36,178	42,505	51,611	55,210	412,535
Deferred Taxes	154,171	154,171	154,171	154,171	154,171	154,171	154,171	154,171	154,171	154,171	154,171	154,171	1,850,048
Gross Up for Income Tax (see below)	81,988	41,273	77,361	50,769	54,250	53,127	(523)	(2,384)	(77,872)	(1,020,590)	(584,416)	(80,545)	(1,407,564)
Total Income Statement Expense	275,957	235,604	271,689	245,310	253,181	256,300	202,914	202,223	128,342	(808,049)	(362,769)	144,702	1,045,403
Total Revenue Requirement	342,301	302,053	337,436	311,011	321,379	326,479	272,783	274,402	204,265	(714,038)	(239,504)	282,160	2,020,727
Capital Structure													
Weighted Cost of Debt	2.27%												
Weighted Cost of Equity	5.06%												
Required Rate of Return	7.33%												
Current Income Tax Calculation													
Equity Return	45,799	45,871	45,386	45,354	47,078	48,446	48,232	49,827	52,410	64,897	85,091	94,890	673,280
Book Depreciation	23,933	24,295	24,292	24,505	28,895	33,137	33,401	34,571	36,178	42,505	51,611	55,210	412,535
Deferred Taxes	154,171	154,171	154,171	154,171	154,171	154,171	154,171	154,171	154,171	154,171	154,171	154,171	1,850,048
Less Tax Depreciation	109,084	166,990	115,501	154,203	156,771	165,290	245,644	255,682	372,717	1,735,391	1,152,560	323,555	4,953,387
Plus CPI-Tax Interest (If Applicable)	1,376	1,146	1,288	2,123	3,510	4,829	9,099	13,735	19,596	27,427	33,446	(94,865)	22,711
Total	116,194	58,492	109,636	71,950	76,883	75,292	(741)	(3,379)	(110,361)	(1,446,391)	(828,241)	(114,149)	(1,994,815)
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	81,988	41,273	77,361	50,769	54,250	53,127	(523)	(2,384)	(77,872)	(1,020,590)	(584,416)	(80,545)	(1,407,564)

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)
Less Accumulated Deferred Taxes	2,470,309	2,740,523	3,010,738	3,280,953	3,551,168	3,821,382	4,091,597	4,361,812	4,632,026	4,902,241	5,172,456	5,442,670	5,442,670
End Of Month Rate Base	25,057,191	24,752,386	24,311,832	24,242,232	25,633,095	27,014,464	27,935,279	29,554,814	30,403,153	33,222,503	34,178,418	35,872,317	35,872,317
Average Rate Base (Prior Mo + Cur Month/2)	23,900,087	24,904,788	24,532,109	24,277,032	24,937,663	26,323,779	27,474,872	28,745,047	29,978,984	31,812,828	33,700,460	35,025,368	
Return on Rate Base													
Debt Return (Avg RB * Wtd Cost of Debt)	45,211	47,112	46,407	45,924	47,174	49,796	51,973	54,376	56,710	60,179	63,750	66,256	634,868
Equity Return (Avg RB * Wtd Cost of Equity)	94,605	98,581	97,106	96,097	98,712	104,198	108,755	113,782	118,667	125,926	133,398	138,642	1,328,468
Total Return on Rate Base	139,816	145,693	143,513	142,021	145,885	153,994	160,728	168,159	175,377	186,105	197,148	204,898	1,963,336
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	270,215	270,215	270,215	270,215	270,215	270,215	270,215	270,215	270,215	270,215	270,215	270,215	3,242,576
Gross Up for Income Tax (see below)	(6,127)	(53,177)	(59,232)	(376,795)	(324,931)	(174,768)	(280,766)	(347,130)	(345,355)	(238,864)	(99,638)	(50,164)	(2,356,947)
Total Income Statement Expense	353,730	308,000	301,789	(15,739)	37,618	190,411	86,847	23,112	27,454	137,247	279,740	332,248	2,062,457
Total Revenue Requirement	493,546	453,693	445,302	126,282	183,503	344,405	247,575	191,271	202,831	323,352	476,888	537,146	4,025,793
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	94,605	98,581	97,106	96,097	98,712	104,198	108,755	113,782	118,667	125,926	133,398	138,642	1,328,468
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	270,215	270,215	270,215	270,215	270,215	270,215	270,215	270,215	270,215	270,215	270,215	270,215	3,242,576
Less Tax Depreciation	431,885	504,306	513,191	962,520	893,225	688,091	844,827	946,534	951,641	811,742	626,111	561,739	8,735,813
Plus CPI-Tax Interest (If Applicable)	1,705	2,150	4,086	4,336	4,435	3,998	3,520	3,518	3,691	4,151	5,093	2,559	43,241
Total	(8,684)	(75,364)	(83,944)	(533,997)	(460,496)	(247,683)	(397,905)	(491,957)	(489,440)	(338,520)	(141,208)	(71,092)	(3,340,290)
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	(6,127)	(53,177)	(59,232)	(376,795)	(324,931)	(174,768)	(280,766)	(347,130)	(345,355)	(238,864)	(99,638)	(50,164)	(2,356,947)

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	37,252,640	37,917,192	38,405,943	39,163,724	40,873,517	43,217,007	45,619,607	49,255,112	52,710,376	56,361,754	59,507,225	61,120,763	61,120,763
Less Accumulated Book Depreciation Reserve	(5,909,860)	(5,907,984)	(5,928,767)	(5,905,688)	(5,930,440)	(5,981,682)	(6,025,218)	(6,098,024)	(6,150,882)	(6,202,904)	(6,234,921)	(6,184,788)	(6,184,788)
Less Accumulated Deferred Taxes	5,522,895	5,603,598	5,683,582	5,763,806	5,843,791	5,924,015	6,004,000	6,083,984	6,164,208	6,244,193	6,324,417	6,404,402	6,404,402
End Of Month Rate Base	37,639,605	38,221,578	38,651,128	39,305,605	40,960,166	43,274,674	45,640,825	49,269,152	52,697,049	56,320,465	59,417,729	60,901,149	60,901,149
Average Rate Base (Prior Mo + Cur Month/2)	36,715,849	37,890,240	38,396,361	38,938,255	40,092,893	42,077,308	44,417,757	47,414,996	50,942,988	54,468,765	57,828,985	60,119,447	
Return on Rate Base													
Debt Return (Avg RB * Wtd Cost of Debt)	69,454	71,676	72,633	73,658	75,842	79,596	84,024	89,693	96,367	103,037	109,393	113,726	1,039,100
Equity Return (Avg RB * Wtd Cost of Equity)	160,632	165,770	167,984	170,355	175,406	184,088	194,328	207,441	222,876	238,301	253,002	263,023	2,403,204
Total Return on Rate Base	230,086	237,446	240,617	244,013	251,249	263,684	278,351	297,134	319,243	341,338	362,395	376,749	3,442,304
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	66,989	68,910	69,869	70,905	72,956	76,325	80,270	85,289	91,183	97,090	102,740	106,695	989,219
Deferred Taxes	87,408	87,408	87,408	87,408	87,408	87,408	87,408	87,408	87,408	87,408	87,408	87,408	1,048,900
Gross Up for Income Tax (see below)	7,210	7,421	8,884	(1,154)	(29,068)	(36,832)	(23,914)	(54,279)	(17,788)	(13,625)	16,602	69,688	(66,855)
Total Income Statement Expense	212,039	214,172	216,593	207,591	181,729	177,334	194,197	168,850	211,235	221,305	257,182	314,223	2,576,451
Total Revenue Requirement	442,125	451,617	457,210	451,605	432,977	441,018	472,548	465,984	530,478	562,643	619,577	690,972	6,018,755
Capital Structure													
Weighted Cost of Debt	2.27%												
Weighted Cost of Equity	5.25%												
Required Rate of Return	7.52%												
Current Income Tax Calculation													
Equity Return	160,632	165,770	167,984	170,355	175,406	184,088	194,328	207,441	222,876	238,301	253,002	263,023	2,403,204
Book Depreciation	66,989	68,910	69,869	70,905	72,956	76,325	80,270	85,289	91,183	97,090	102,740	106,695	989,219
Deferred Taxes	87,408	87,408	87,408	87,408	87,408	87,408	87,408	87,408	87,408	87,408	87,408	87,408	1,048,900
Less Tax Depreciation	298,252	304,542	304,462	333,713	412,770	447,991	433,766	533,511	471,158	488,029	438,137	321,693	4,788,025
Plus CPI-Tax Interest (If Applicable)	1,098	853	1,226	2,184	4,934	8,856	12,472	18,803	25,591	31,450	36,146	37,339	180,953
Total	17,875	18,399	22,024	(2,861)	(72,066)	(91,314)	(59,288)	(134,570)	(44,100)	(33,780)	41,159	172,772	(165,748)
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	7,210	7,421	8,884	(1,154)	(29,068)	(36,832)	(23,914)	(54,279)	(17,788)	(13,625)	16,602	69,688	(66,855)

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	61,940,204	62,502,634	62,922,531	63,536,494	64,883,000	66,689,697	68,504,181	70,925,844	73,310,724	75,797,334	98,693,687	99,654,547	99,654,547
Less Accumulated Book Depreciation Reserve	(6,107,254)	(6,026,338)	(5,940,792)	(5,868,890)	(5,842,891)	(5,840,642)	(5,830,232)	(5,838,520)	(5,828,209)	(5,816,671)	(5,774,277)	(5,643,233)	(5,643,233)
Less Accumulated Deferred Taxes	6,597,707	6,704,478	6,810,297	6,916,434	7,022,254	7,128,391	7,234,210	7,340,030	7,446,167	7,551,987	7,658,123	7,763,943	7,763,943
End Of Month Rate Base	61,449,751	61,824,494	62,053,026	62,488,950	63,703,637	65,401,948	67,100,203	69,424,334	71,692,765	74,062,018	96,809,841	97,533,836	97,533,836
Average Rate Base (Prior Mo + Cur Month/2)	61,078,797	61,583,737	61,885,850	62,217,920	63,043,383	64,499,724	66,198,165	68,209,358	70,505,481	72,824,482	85,382,861	97,118,929	
Return on Rate Base													
Debt Return (Avg RB * Wtd Cost of Debt)	115,541	116,496	117,067	117,696	119,257	122,012	125,225	129,029	133,373	137,760	161,516	183,717	1,578,688
Equity Return (Avg RB * Wtd Cost of Equity)	267,220	269,429	270,751	272,203	275,815	282,186	289,617	298,416	308,461	318,607	373,550	424,895	3,651,151
Total Return on Rate Base	382,760	385,925	387,818	389,899	395,072	404,198	414,842	427,445	441,834	456,367	535,066	608,612	5,229,838
Income Statement Items													
AFUDC Pre-Eligible	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenses	-	-	-	-	-	-	-	-	-	-	-	-	-
Property Taxes	86,572	86,572	86,572	86,572	86,572	86,572	86,572	86,572	86,572	86,572	86,572	86,572	1,038,860
Book Depreciation	108,718	109,866	110,683	111,542	113,172	115,793	118,803	122,324	126,319	130,368	151,467	171,297	1,490,349
Deferred Taxes	115,641	115,641	115,641	115,641	115,641	115,641	115,641	115,641	115,641	115,641	115,641	115,641	1,387,697
Gross Up for Income Tax (see below)	25,068	23,769	24,634	12,551	(11,087)	(16,538)	(5,081)	(23,635)	5,484	14,417	44,887	105,742	200,212
Total Income Statement Expense	335,999	335,848	337,530	326,306	304,298	301,468	315,935	300,901	334,016	346,998	398,567	479,252	4,117,118
Total Revenue Requirement	718,759	721,773	725,348	716,205	699,370	705,666	730,777	728,347	775,851	803,365	933,632	1,087,864	9,346,957
Capital Structure													
Weighted Cost of Debt	2.27%												
Weighted Cost of Equity	5.25%												
Required Rate of Return	7.52%												
Current Income Tax Calculation													
Equity Return	267,220	269,429	270,751	272,203	275,815	282,186	289,617	298,416	308,461	318,607	373,550	424,895	3,651,151
Book Depreciation	108,718	109,866	110,683	111,542	113,172	115,793	118,803	122,324	126,319	130,368	151,467	171,297	1,490,349
Deferred Taxes	115,641	115,641	115,641	115,641	115,641	115,641	115,641	115,641	115,641	115,641	115,641	115,641	1,387,697
Less Tax Depreciation	468,598	474,898	474,898	509,104	578,119	607,225	595,822	662,758	613,840	612,646	588,265	478,867	6,665,042
Plus CPI-Tax Interest (If Applicable)	39,170	38,890	38,898	40,834	46,005	52,604	59,165	67,780	77,015	83,772	58,892	29,193	632,216
Total	62,150	58,928	61,074	31,116	(27,487)	(41,001)	(12,596)	(58,597)	13,597	35,742	111,285	262,159	496,370
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	25,068	23,769	24,634	12,551	(11,087)	(16,538)	(5,081)	(23,635)	5,484	14,417	44,887	105,742	200,212

Universal Inputs

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Cap Structure (Last Authorized)				
Long Term Debt %	45.61%	45.61%	45.61%	45.61%
Long Term Debt Cost	4.94%	4.94%	4.94%	4.94%
Short Term Debt %	1.89%	1.89%	1.89%	1.89%
Short Term Debt Cost	1.12%	1.12%	1.12%	1.12%
Weighted Cost of Debt	2.27%	2.27%	2.27%	2.27%
Common Stock %	52.50%	52.50%	52.50%	52.50%
Common Stock Cost	9.64%	9.04%	10.00%	10.00%
Weighted Cost of Equity	5.06%	4.75%	5.25%	5.25%
Rate of Return	7.33%	7.02%	7.52%	7.52%
Tax Rates				
Income Tax Rates				
State Income Tax Rate	9.80%	9.80%	9.80%	9.80%
Federal Income Tax Rate	35.00%	35.00%	21.00%	21.00%
Composite Income Tax Rate				
State Composite Income Tax Rate	41.3700%	41.3700%	28.7420%	28.7420%
Company Composite Income Tax Rate	40.8097%	40.8468%	28.1061%	28.1061%
Property Tax Rate	1.70%	1.70%	1.70%	1.70%
Book Depreciation Lives				
Transmission	75.00	75.00	75.00	75.00
Distribution	46.14	46.14	46.14	46.14
Software	5.00	5.00	5.00	5.00
Net Salvage %				
Transmission	-15.00%	-15.00%	-15.00%	-15.00%
Distribution	-16.39%	-16.39%	-16.39%	-16.39%
Software	0.00%	0.00%	0.00%	0.00%
Book Depreciation Rates				
Transmission	1.53%	1.53%	1.31%	1.31%
Distribution	2.52%	2.52240%	2.52%	2.52%
Software	20.00%	20.00%	19.35%	19.35%
*Note: 2018 Book Depreciation Rates reflect the depreciation change from Average Service Life to Average Remaining Life				
Carrying Charge Rate Calculation				
Rate of Return	7.33%	7.02%	7.52%	7.52%
Equity Tax Gross-up	3.57%	3.35%	2.12%	2.12%
Annual Carrying Charge Rate	10.90%	10.37%	9.64%	9.64%
Monthly Carrying Charge Rate	0.87%	0.83%	0.77%	0.77%

GUIC Rider in Relation to Last Approved Rate Case
Docket No. G002/GR-09-01153

" Minn. Stat. § 216B.1635 Subd. 3 (VII) magnitude of GUIC in relation to gas utility's rate base revenue approved by the Commission in gas utility's most recent general rate case, exclusive of gas purchase costs and transportation charges "

" Minn. Stat. § 216B.1635 Subd. 3 (VIII) magnitude of GUIC in relation to gas utility's capital expenditures since its most recent general rate case"

2010 Rate Case, Cost of Service Study - Docket G002/GR-09-1153
(\$000s)

<u>Operating Revenues</u>	<u>2010 TY</u>
Retail	588,179 Fn 1
<u>Operating Expenses:</u>	
Fuel & Purchased Energy	429,081
Base Revenue, Net of Gas Purchase	<u>159,098</u> [A]
Costs & Transportation Charges	
<u>Capital Expenditures (CWIP)</u>	<u>29,890</u> [B]

Proposed Gas Utility Infrastructure Costs (GUIC) Rider
(Dollars in Thousands)

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
Revenue Collection Forecast	12,696	6,031	23,845	33,348	27,003	32,162	39,258 [C] Fn 2
% of GUIC Revenue as Compared to Base Revenue Approved in Docket G-002/GR-09-1153 (2010 TY)	7.98%	3.79%	14.99%	20.96%	16.97%	20.22%	24.68% = [C] / [A]
Capital Expenditures Forecast	31,824	20,125	43,689	60,965	47,319	48,208	48,054 [D]
% of GUIC Capital Expenditures as Compared to Expenditures Approved in Docket G-002/GR-09-1153 (2010 TY)	106.47%	67.33%	146.17%	203.96%	158.31%	161.29%	160.77% = [D] / [B]

Notes

Fn 1 Excludes \$4.69 million of other operating income for customer-related charges not included in retail rates. See Compliance Filing in Docket No. G002/GR-09-1153: "Income Statement Adjustment Schedules", Page 13, Line No. 4

Fn 2 Reflects forecasted revenue recovery for gas costs eligible for rider recovery under Minnesota 2013 Statute §216B.1635 Recovery of Gas Utility Infrastructure Costs, including:
(a) revenue requirements associated with new gas utility infrastructure projects, and
(b) deferred costs include implementation of the inspection and remediation of sewer/natural gas line conflicts approved in Docket No. G002/M-10-422 and costs to comply with gas pipeline safety programs approved in Docket No. G002/M-12-248

Annual Revenue Requirements Tracker Summary for 2016-2022

MN GUIC Rider - Annual Tracker Summary							
	2016	2017	2018	2019	2020	2021	2022
	Actual	Actual	Forecast	Forecast	Forecast	Forecast	Forecast
Operations & Maintenance Expenses							
TIMP	35,502	17,646	1,325,876	2,548,987	1,487,425	1,484,999	1,483,641
DIMP	4,360,607	3,443,970	3,532,999	2,779,001	579,000	579,000	579,000
Total Operations & Maintenance Expenses	4,396,110	3,461,616	4,858,875	5,327,988	2,066,425	2,063,999	2,062,641
Capital-Related Revenue Requirements							
TIMP	6,520,684	8,002,962	8,748,928	9,445,980	10,938,142	15,994,510	19,798,065
DIMP	2,020,727	4,025,794	6,018,755	9,346,958	14,364,601	18,340,432	20,197,714
Total Capital-Related Revenue Requirements	8,541,411	12,028,756	14,767,683	18,792,938	25,302,742	34,334,942	39,995,780
Deferred Gas Infrastructure Costs							
TIMP	820,227	820,224	820,224	820,224	-	-	-
DIMP	3,733,856	3,733,860	3,733,860	3,733,860	-	-	-
Total Deferred Gas Infrastructure Costs	4,554,083	4,554,084	4,554,084	4,554,084	-	-	-
Revenue Requirement in Base Rates	(480,000)	(480,000)	(480,000)	(480,000)	(480,000)	(480,000)	(480,000)
Rider Revenue Adjustment	-	4,471	(484,636)	-	0	0	0
Revenue Requirement Subtotal	17,011,604	19,568,927	23,216,006	28,195,010	26,889,168	35,918,942	41,578,421
Prior Year Carryover	(1,184,983)	538,473	-	-	-	-	-
Revenue Requirement (RR)	15,826,621	20,107,400	23,216,006	28,195,010	26,889,168	35,918,942	41,578,421
Revenue Collections (RC)	15,288,148	20,107,400	23,216,006	28,195,010	26,889,168	35,918,942	41,578,421
Carryover Balance (RR - RC)	538,473	0	-	-	-	-	-

Revenue Requirements Monthly Tracker 2016-2019

MN GUIC Rider 2016 Tracker													
	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Annual Total
	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	
Operations & Maintenance Expenses													
TIMP	7,956	11,839	8,757	1,834	3,144	1,707	(158)	424	0	-	-	-	35,502
DIMP	(9,085)	24,617	11,073	18,187	345,187	221,367	636,329	625,508	593,576	458,013	631,593	804,240	4,360,607
Total Operations & Maintenance Expenses	(1,129)	36,456	19,830	20,021	348,332	223,075	636,171	625,932	593,576	458,013	631,593	804,240	4,396,110
Capital-Related Revenue Requirements													
TIMP	645,766	642,672	639,048	634,428	630,973	683,993	712,633	744,394	780,328	(511,821)	1,714,307	(796,037)	6,520,684
DIMP	342,301	302,053	337,436	311,011	321,379	326,479	272,783	274,402	204,265	(714,038)	(239,504)	282,160	2,020,727
Total Capital-Related Revenue Requirments	988,067	944,724	976,484	945,439	952,353	1,010,472	985,417	1,018,796	984,592	(1,225,859)	1,474,803	(513,876)	8,541,411
Deferred Gas Infrastructure Costs													
TIMP	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	820,227
DIMP	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	3,733,856
Total Deferred Gas Infrastructure Costs	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	4,554,083
Revenue Requirement in Base Rates	-	(270)	(267)	(12,219)	(46,850)	(48,208)	(69,327)	(38,264)	(66,149)	(66,149)	(66,149)	(66,147)	(480,000)
Rider Revenue Adjustment	-	-	-	-	-	-	-	-	-	-	-	-	-
Revenue Requirement Subtotal	1,366,445	1,360,417	1,375,555	1,332,748	1,633,341	1,564,845	1,931,767	1,985,971	1,891,526	(454,488)	2,419,754	603,724	17,011,604

Prior Year Carryover Balance (1,184,983)

Total Revenue Requirements	15,826,621
-----------------------------------	-------------------

Revenue Collections (Jan '16-Mar '17)*	15,288,148
---	-------------------

Current Year Carryover Balance	538,473
---------------------------------------	----------------

* Note - revenues related to the 2016 revenue requirements were approved to be collected over the 15-month period 1/1/16 through 3/31/17 in Docket No. G002/M-15-808.

Revenue Requirements Monthly Tracker 2016-2019

MN GUIC Rider 2017 Tracker													
	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Annual Total
	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	
Operations & Maintenance Expenses													
TIMP				17,646									17,646
DIMP	45,587	46,451	95,972	141,495	387,299	369,829	447,098	450,596	391,436	556,069	469,300	42,838	3,443,970
Total Operations & Maintenance Expenses	45,587	46,451	95,972	159,141	387,299	369,829	447,098	450,596	391,436	556,069	469,300	42,838	3,461,616
Capital-Related Revenue Requirements													
TIMP	666,177	647,168	675,223	689,414	668,988	662,227	620,631	607,034	631,087	703,535	714,248	717,230	8,002,962
DIMP	493,545	453,693	445,302	126,282	183,503	344,405	247,576	191,270	202,832	323,352	476,888	537,146	4,025,794
Total Capital-Related Revenue Requirments	1,159,722	1,100,861	1,120,525	815,696	852,491	1,006,632	868,207	798,304	833,919	1,026,887	1,191,136	1,254,376	12,028,756
Deferred Gas Infrastructure Costs													
TIMP	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	820,224
DIMP	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	3,733,860
Total Deferred Gas Infrastructure Costs	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	4,554,084
Revenue Requirement in Base Rates	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(480,000)
Rider Revenue Adjustment	(71)	(74)	30	(589)	(31)	(130)	(249)	(747)	57	(528)	3,836	2,967	4,471
Revenue Requirement Subtotal	1,544,745	1,486,745	1,556,034	1,313,755	1,579,266	1,715,838	1,654,563	1,587,660	1,564,919	1,921,935	2,003,779	1,639,688	19,568,927

Prior Year Carryover Balance 538,473

Total Revenue Requirements 20,107,400

Revenue Collections at previous Do. 15-808 rate (Apr '17-Feb '18)	5,511,326
Revenue Collections at new Do. 16-891 rate (Mar '18-Feb '19)*	14,596,074

Current Year Carryover Balance -

* Note - The remaining revenue collections of \$14.6 million were approved to be collected over a 12-month period starting in March 2018 through February 2019 in Docket No. G-002/M-16-891.

Revenue Requirements Monthly Tracker 2016-2019

MN GUIC Rider 2018 Tracker													
	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Annual Total
	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	
Operations & Maintenance Expenses													
TIMP						127,488	152,986	191,232	254,976	382,464	25,498	191,232	1,325,876
DIMP		16,100	7,242	11,895	268,374	191,960	451,556	623,014	631,310	489,046	481,347	361,155	3,532,999
Total Operations & Maintenance Expenses	-	16,100	7,242	11,895	268,374	319,448	604,542	814,246	886,286	871,510	506,845	552,387	4,858,875
Capital-Related Revenue Requirements													
TIMP	688,525	714,578	721,754	723,456	725,197	723,191	724,434	725,704	735,984	745,794	757,162	763,149	8,748,928
DIMP	442,125	451,618	457,210	451,604	432,978	441,018	472,548	465,984	530,479	562,642	619,577	690,972	6,018,755
Total Capital-Related Revenue Requirments	1,130,650	1,166,196	1,178,964	1,175,060	1,158,175	1,164,209	1,196,982	1,191,688	1,266,463	1,308,436	1,376,739	1,454,121	14,767,683
Deferred Gas Infrastructure Costs													
TIMP	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	820,224
DIMP	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	3,733,860
Total Deferred Gas Infrastructure Costs	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	4,554,084
Revenue Requirement in Base Rates	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(480,000)
Rider Revenue Adjustment	(480,210)	74	86	589	31	130	249	747	(57)	528	(3,836)	(2,967)	(484,636)
Revenue Requirement Subtotal	989,947	1,521,877	1,525,799	1,527,051	1,766,087	1,823,294	2,141,280	2,346,188	2,492,199	2,519,981	2,219,255	2,343,048	23,216,006

Prior Year Carryover Balance -

Total Revenue Requirements	23,216,006
----------------------------	------------

Revenue Collections (Aug '18 - Mar '19)	23,216,006
---	------------

Revenue Requirements Monthly Tracker 2016-2019

MN GUIC Rider 2019 Tracker													
	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Annual Total
	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	
Operations & Maintenance Expenses													
TIMP						245,095	294,114	367,642	490,190	735,285	49,019	367,642	2,548,987
DIMP		16,045	7,217	11,854	229,935	153,941	421,923	500,387	479,575	328,116	350,533	279,475	2,779,001
Total Operations & Maintenance Expenses	-	16,045	7,217	11,854	229,935	399,036	716,037	868,029	969,765	1,063,401	399,552	647,117	5,327,988
Capital-Related Revenue Requirements													
TIMP	780,258	781,009	779,638	770,847	767,888	762,948	765,467	755,143	771,694	783,549	835,618	891,921	9,445,980
DIMP	718,760	721,772	725,348	716,205	699,370	705,666	730,777	728,347	775,851	803,365	933,633	1,087,864	9,346,958
Total Capital-Related Revenue Requirments	1,499,018	1,502,781	1,504,986	1,487,052	1,467,258	1,468,614	1,496,244	1,483,490	1,547,545	1,586,914	1,769,251	1,979,785	18,792,938
Deferred Gas Infrastructure Costs													
TIMP	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	68,352	820,224
DIMP	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	311,155	3,733,860
Total Deferred Gas Infrastructure Costs	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	379,507	4,554,084
Revenue Requirement in Base Rates	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(480,000)
Rider Revenue Adjustment	-	-	-	-	-	-	-	-	-	-	-	-	-
Revenue Requirement Subtotal	1,838,525	1,858,333	1,851,710	1,838,413	2,036,700	2,207,157	2,551,788	2,691,026	2,856,817	2,989,822	2,508,310	2,966,409	28,195,010

Prior Year Carryover Balance -

Total Revenue Requirements	28,195,010
-----------------------------------	-------------------

Revenue Collections (Apr '19 - Mar '20)	28,195,010
--	-------------------

Current Year Carryover Balance	-
---------------------------------------	----------

GUIC Rate Factor Determination

2018 GUIC Revenue Requirement		\$23,216,006			
Proposed to be recovered Aug 2018 - Mar 2019					
	Revenue Apportionment	GUIC \$ recovered in Aug18-Mar19	Aug18-Mar19 Sales therms	Mar18-Feb19 GUIC Factors \$/therm	Do. 16-891 GUIC Factors \$/therm
Residential	67.2244%	\$15,606,821	307,016,793	\$0.050834	\$0.027634
Commercial Firm	21.2597%	\$4,935,653	167,032,360	\$0.029549	\$0.015080
Commercial Demand Billed	2.1010%	\$487,768	20,552,326	\$0.023733	\$0.011332
Interruptible	5.6521%	\$1,312,192	73,468,374	\$0.017861	\$0.008114
Transportation	3.7628%	\$873,572	133,424,793	\$0.006547	\$0.003287
Total		\$23,216,006	701,494,646		

Sales (therms)	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Total
Residential						6,220,242	7,734,266	19,149,830	37,165,434	60,507,646	70,439,774	59,340,248	46,459,353	307,016,793
Commercial Firm						4,458,427	5,605,508	10,194,895	19,453,197	31,394,026	36,961,451	32,679,665	26,285,191	167,032,360
Commercial Demand Billed						1,371,982	1,671,566	1,876,991	2,486,050	2,680,956	3,819,473	3,929,898	2,715,410	20,552,326
Interruptible						5,144,066	5,423,787	6,630,074	9,484,193	11,687,392	12,586,582	11,335,912	11,176,368	73,468,374
Transport						23,783,914	17,835,901	9,286,452	13,224,808	22,282,321	22,081,183	11,846,992	13,083,222	133,424,793
Total Therm Sales in Month						40,978,631	38,271,029	47,138,242	81,813,682	128,552,340	145,888,464	119,132,715	99,719,544	701,494,646

Revenue Recovery Forecast	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Total
Residential						\$316,198	\$393,162	\$973,458	\$1,889,259	\$3,075,832	\$3,580,719	\$3,016,488	\$2,361,704	\$15,606,821
Commercial Firm						\$131,742	\$165,638	\$301,250	\$574,824	\$927,665	\$1,092,177	\$965,654	\$776,703	\$4,935,653
Commercial Demand Billed						\$32,561	\$39,671	\$44,547	\$59,001	\$63,627	\$90,648	\$93,268	\$64,445	\$487,768
Interruptible						\$91,876	\$96,872	\$118,417	\$169,394	\$208,744	\$224,804	\$202,467	\$199,617	\$1,312,192
Transport						\$155,720	\$116,777	\$60,801	\$86,587	\$145,889	\$144,572	\$77,566	\$85,660	\$873,572
Total Revenue						\$728,099	\$812,120	\$1,498,473	\$2,779,065	\$4,421,757	\$5,132,920	\$4,355,443	\$3,488,129	\$23,216,006

2017 Authorized and 2018 Proposed Rates Combined

Revenue Recovery Forecast	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Total
Residential	\$1,299,071	\$702,154	\$351,185	\$133,079	\$134,276	\$459,274.04	\$600,348.26	\$1,489,639.80	\$2,940,635.97	\$4,774,494.43	\$5,521,155.34	\$4,651,924.94	\$2,361,704	\$25,418,942
Commercial Firm	\$403,954	\$235,113	\$104,582	\$102,197	\$73,676	\$201,984.75	\$254,439.15	\$460,757.37	\$882,081.57	\$1,420,655.32	\$1,656,932.44	\$1,465,658.03	\$776,703	\$8,038,734
Commercial Demand Billed	\$31,547	\$21,026	\$20,922	\$17,208	\$18,803	\$49,442.47	\$58,024.84	\$68,296.57	\$88,981.54	\$94,361.36	\$127,953.92	\$133,420.69	\$64,445	\$794,432
Interruptible	\$87,701	\$68,334	\$50,403	\$46,701	\$47,566	\$137,844.33	\$146,842.63	\$175,334.70	\$250,179.91	\$306,896.90	\$322,852.97	\$296,903.56	\$199,617	\$2,137,176
Transport	\$51,066	\$44,534	\$46,224	\$54,671	\$86,082	\$211,449.78	\$167,267.74	\$89,321.75	\$119,906.56	\$186,113.15	\$179,112.27	\$101,384.46	\$85,660	\$1,422,793
Total Revenue	\$1,873,338	\$1,071,160	\$573,316	\$353,856	\$360,404	\$1,059,995	\$1,226,923	\$2,283,350	\$4,281,786	\$6,782,521	\$7,808,007	\$6,649,292	\$3,488,129	\$37,812,077

Effective GUIC Factors \$/Therm

[illegible]

2017 Capital Charges by Work Order - Specific to MN GUIC Projects

									Internal Labor Capital Costs. Not GUIC Eligible			
Work Order	Project Description	Outside Vendor	Overheads	CIAC	Material	Other	Transportation	Subtotal (GUIC	Company Labor	Company OT	Company ST	Total Capital
Number		Contract						Eligible Capital	Loadings	Labor	Labor	Costs
								Costs)				
E.0000002.005	DIMP Service Renewals	\$ 1,473,631	\$ 389,436	\$ (79)	\$ 93,452	\$ 93	\$ 74	\$ 1,956,606	\$ 1,109	\$ 429	\$ 4,176	\$ 1,962,321
E.0000002.043	NSPM Programmatic Service Repl	724,927	221,449	2,637	50,465	282	6,010	1,005,770	4,830	3,455	14,160	1,028,215
E.0000002.053	NSPM Programmatic Service Repl	5,921	2,055		1,464		2,294	11,733	5,572	3,779	12,072	33,157
E.0000002.056	NSPM Programmatic Service Repl	(935)	841		2,720			2,626		0		2,626
E.0000004.019	TL0206 High Bridge Lateral Rplc	(29,446)	(16,573)		(5,005)	(1)	(32)	(51,057)	(79)	(55)	(204)	(51,394)
E.0000004.048	NSPM Pipe Trans and IMP - Dist FERC Acct	4,029,425	1,085,514		419,755	243,889	301	5,778,884	10,004	7,435	29,015	5,825,338
E.0000004.054	NSPM Install 6"" and 4"" Distr	4,263	4,030		516	247	661	9,717	1,886	86	3,533	15,222
E.0000004.064	Repl 12in Upper55 to SStPaul R	83,158	45,058			129,982	528	258,726	3,128	182	6,345	268,382
E.0000004.075	NSPM Install 6"" and 4"" Distr	1,888	1,098		(333)	3,143		5,796	98			5,894
E.0000007.002	MNGD Main Renewal-MN	4,719,602	1,162,413		103,989	12,453	154	5,998,612	5,634	5,030	14,842	6,024,117
E.0000007.006	Sartell Bridge Replacement	567,593	241,821		7,684	231	(75,703)	741,626	1,469	1,684	3,281	748,060
E.0000007.045	NSPM Programmatic Main Replace	3,786,852	1,264,740		384,104	17,846	(76,739)	5,376,803	5,040	1,674	12,377	5,395,894
E.0000007.053	IP Line Assessments	105,942	30,184			16,563		152,689	4,029	936	8,897	166,550
E.0000007.060	NSPM Programmatic Main Replace	52,225	35,403		25,514	18	6,130	119,290	14,652	7,499	33,337	174,778
E.0000007.067	NSPM Programmatic Main Replace	24,941	6,223		183	175	385	31,908	771	92	2,010	34,780
E.0000008.002	MNGM Main Reinforcement-MN	69,975	65,700		98,845	12,403	3,845	250,768	26,456	21,154	67,394	365,772
E.0000008.050	Emergency Valve Replacement	22,774	7,495		18,615	-	3,430	52,314	4,824	4,564	12,486	74,188
E.0000009.018	High Bridge Lat Replace Dist Reg	2,026	1,284		0			3,310				3,310
E.0000018.041	ASV/REV Installation on High Pr	17,918	17,567		203,445	459	1,093	240,482	6,585	2,629	15,018	264,714
E.0000018.052	NSPM TIMP Mitigation of ILI Re	905,133	42,135		19,297	449	5,526	972,540	8,808	1,441	36,735	1,019,525
E.0000030.001	East Metro Pipe Replac. Proj H		35		1,973	766		2,774				2,774
E.0000030.002	EastMetro Pipe Repla. Proj Dis	572,895	17,366		11,483	1,101	689	603,534	2,540	3,386	10,499	619,958
E.0000030.004	East Metro Pipeline Replacement				(260)			(260)				(260)
E.0010011.003	Programmatic Main Replacement - Mains	103,670	218,579		67,082	725,728		1,115,060	575	540	1,151	1,117,326
E.0010011.004	Programmatic Main Replacement - Services	122,362	101,807		1,033	271,003		496,205				496,205
E.0010011.005	NSPM Install 6" and 4" Dist. Valves	19	6,626		10,057	632		17,334	6,130	6,166	16,557	46,187
Grand Total		\$ 17,366,758	\$ 4,952,287	\$ 2,558	\$ 1,516,080	\$ 1,437,464	\$ (121,355)	\$ 25,153,791	\$ 114,062	\$ 72,105	\$ 303,682	\$ 25,643,640

PUBLIC DOCUMENT
NOT-PUBLIC OR PRIVILEGED INFORMATION EXCISED

Northern States Power Company

Docket No. G002/M-17-787
Gas Utility Infrastructure Cost Rider – 2018 Factors
Reply Comments – July 27, 2018
Attachment D – 405 Pages Total

Attachment D to this response is marked as “Not-Public” because it includes contract information, vendor pricing terms and other purchasing detail considered to be trade secret data as defined by Minn. Stat. § 13.37(1)(b). This information has independent economic value from not being generally known to and not being readily ascertainable by other parties who could obtain economic value from its disclosure or use. The disclosure of this information could adversely impact contract negotiations, potentially increasing costs for these services for our customers. Thus, Xcel Energy maintains this information as a trade secret pursuant to Minn. Rule 7829.0500.

Attachment D is marked as “Not-Public” in its entirety. Pursuant to Minn. Rule 7829.0500, subp. 3, the Company provides the following description of the excised material:

1. **Nature of the Material:** Attachment D is a pdf collection of vendor invoices for work on a selected group of O&M TIMP and DIMP projects.
2. **Authors:** The invoice information was prepared by Xcel Energy sourcing and distribution finance personnel.
3. **Importance:** We protect this invoicing information, as disclosure can adversely affect negotiations and increase costs for services.
4. **Date the Information was Prepared:** Attachment D was prepared July 2018 for purposes of this Reply.

[TRADE SECRET BEGINS]

TRADE SECRET ENDS]

PUBLIC DOCUMENT
NOT-PUBLIC OR PRIVILEGED INFORMATION EXCISED

Northern States Power Company

Docket No. G002/M-17-787
Gas Utility Infrastructure Cost Rider – 2018 Factors
Reply Comments – July 27, 2018
Attachment E – 6 Pages Total

Attachment E is marked as “Not-Public” because it contains confidential internal audit commentary, process and format detail the Company does not publicly disclose and considers to be trade secret data as defined by Minn. Stat. § 13.37(1)(b).

This information has independent economic value from not being generally known to and not being readily ascertainable by other parties who could obtain economic value from its disclosure or use. The disclosure of this information could adversely impact contract negotiations, potentially increasing costs for these services for our customers. Thus, Xcel Energy maintains this information as a trade secret pursuant to Minn. Rule 7829.0500.

Attachment E is marked as “Not-Public” in its entirety. Pursuant to Minn. Rule 7829.0500, subp. 3, the Company provides the following description of the excised material:

1. **Nature of the Material:** Attachment E is a pdf copy of a Company gas utility infrastructure project cost validation audit.
2. **Authors:** The audit report was prepared by Xcel Energy Gas Operations and Audit Services personnel.
3. **Importance:** We protect this internal audit information as confidential.
4. **Date the Information was Prepared:** Attachment E was published May 31, 2018.

[TRADE SECRET BEGINS

TRADE SECRET ENDS]

Projects Reclassified or Anticipated to be Reclassified During GUIC Rider Initiative

GUIC Program	Year	Project Name	Approx. Footage Replaced	Diameter Replaced	Classification Replaced	Approx. Footage Installed	Diameter Installed	Classification Installed	General Comments	Explain characteristics that caused the reclassification
TIMP	2013-2017	East Metro Pipeline Replacement	60,720	24", 20", and 18"	Transmission	60,720	20	Distribution	20" is the standard pipe size being used for the East Metro Project. Grade B pipe replaced with X52.	The Company is using modern pipe available with Specified Minimum Yield Strengths (SMYS) higher than vintage pipelines. Installation of stronger pipe reclassifies the lines as distribution piping under 49 CFR 192 even though the new pipeline is similar in size and pressure as the pipe replaced. Specifically, the classification of Distribution vs. Transmission is a result of PHMSA definitions and the outcome of using modern pipe for new construction. The Pipeline Safety Code of Federal Regulations (49 CFR 192.3) definition for a pipeline operating at a hoop stress of less than 20 percent of the specified minimum yield strength (SMYS) is that it is considered to be a "Distribution" pipeline. The new pipeline will be operated at a pressure that results in a hoop stress of less than 20 percent of SMYS, therefore it is a Distribution asset with respect to engineering and regulatory accounting.
TIMP	2016	Transmission Pipeline Assessment - High Bridge Lateral	3,600	18"	Transmission	3,500	8"	Distribution	18" transmission steel line replaced with a 8" PE distribution line. Reconfiguration was possible due to a new line installed to the High Bridge Generating Facility in 2006.	
TIMP	2016	Transmission Pipeline Assessment - Island Line South	2,000	18"	Transmission	2,000	20"	Distribution	18 inch non-standard pipe size to be Replaced with 20 inch standard size pipe. Also installing launchers/receivers. Grade B pipe replaced with X52.	
TIMP	2017	Montreal Line South Renewal	7,900	20"	Transmission	7,900	20"	Distribution	20 inch pipe size to be Replaced with 20 inch standard size pipe. Grade B replaced with X52.	
TIMP	2017	Island Line South Renewal	1,300	20"	Transmission	1,300	20"	Distribution	20 inch pipe size to be Replaced with 20 inch standard size pipe. Grade B replaced with X52. Launcher and receiver installed in 2016.	
TIMP	2018	East County Line Renewal – S.St. Paul Station to RR Tracks	2,820	30"	Transmission	2,820	24"	Distribution	30 inch pipe size to be Replaced with 24 inch standard size pipe with installing launchers/receivers. • Grade B replaced with X52. Note: This will operate below 20% strength but because it is tied to a transmission line it will remain reported as transmission.	
TIMP	2019	County Road B (NSP to Rice)	34,331	30", 24" and 20"	Transmission	34,331	20"	Distribution	30 inch, 24 inch, and 20 inch pipe size to be Replaced with 20 inch standard size pipe with installing launchers/receivers. Grade B to be replaced with X-52.	
TIMP	2019	East County Line (30"Maplewood Propane to North Saint Paul)	7,323	30"	Transmission	7,323	20"	Distribution	30 inch to be Replaced with 20 inch standard size pipe with installing launchers/receivers. Grade B to be replaced with X-52.	

Modified Sales Forecast with Historical Monthly Adjustment Excluded

													Unadjusted 12-month Total
Unadjusted (Therms)	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	
Residential	25,785,634	13,686,538	6,719,887	6,318,170	6,220,242	7,734,266	19,149,830	37,165,434	60,507,646	70,439,774	59,340,248	46,459,353	359,527,022
Commercial Firm	15,478,032	8,730,543	4,889,985	4,668,409	4,458,427	5,605,508	10,194,895	19,453,197	31,394,026	36,961,451	32,679,665	26,285,191	200,799,330
Commercial Demand Billed	2,133,280	1,734,077	1,252,441	1,557,563	1,371,982	1,671,566	1,876,991	2,486,050	2,680,956	3,819,473	3,929,898	2,715,410	27,229,687
Interruptible	8,235,053	6,133,571	5,855,664	5,052,145	5,144,066	5,423,787	6,630,074	9,484,193	11,687,392	12,586,582	11,335,912	11,176,368	98,744,808
Transport	11,244,778	17,843,436	18,067,142	29,173,564	23,783,914	17,835,901	9,286,452	13,224,808	22,282,321	22,081,183	11,846,992	13,083,222	209,753,711
Total Sales	62,876,776	48,128,166	36,785,119	46,769,852	40,978,631	38,271,029	47,138,242	81,813,682	128,552,340	145,888,464	119,132,715	99,719,544	896,054,558

Adjusted (Therms)	Adjusted 12- month Total	% Diff
Residential	358,741,823	-0.2%
Commercial Firm	201,055,282	0.1%
Commercial Demand Billed	27,107,239	-0.4%
Interruptible	98,462,293	-0.3%
Transport	209,753,711	0.0%
Total Sales	895,120,348	-0.1%

Accumulated Deferred Income Tax Prorate Calculation

As filed

Line No.

1	Pro-Rate Days	A	335	307	276	246	215	185	154	123	93	62	32	1	
2	Pro-Rate Factor	B = A/365	-	-	-	-	-	-	-	-	-	-	-	-	
3															
4	Deferred Tax Exp	C	399,864	399,864	399,864	399,864	399,864	399,864	399,864	399,864	399,864	399,864	399,864	399,864	4,798,370
5	Prorated Deferred Tax Expense	D = B*C	-	-	-	-	-	-	-	-	-	-	-	-	-
6															
7	Revenue Requirement Factor	E = WACC*(T/(1-T))	4.95%	4.95%	4.95%	4.95%	4.95%	4.95%	4.95%	4.95%	4.95%	4.95%	4.95%	4.95%	
8															
9	RR of ADIT Pro-rate	F = D*E	-	-	-	-	-	-	-	-	-	-	-	-	-
10															
11	Jurisdictional Allocator	G	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
12															
13	MN Jur RR of ADIT Pro-rate	H = F*G	-	-	-	-	-	-	-	-	-	-	-	-	-
14															
15															
16															
17			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
18															
19	Pro-Rate Days	A	335	307	276	246	215	185	154	123	93	62	32	1	
20	Pro-Rate Factor	B = A/365	0.917808	0.841096	0.756164	0.673973	0.589041	0.506849	0.421918	0.336986	0.254795	0.169863	0.087671	0.002740	
21															
22	Deferred Tax Exp	C	156,665	156,665	156,665	156,665	156,665	156,665	156,665	156,665	156,665	156,665	156,665	156,665	1,879,977
23	Prorated Deferred Tax Expense	D = B*C	143,788	131,770	118,464	105,588	92,282	79,405	66,100	52,794	39,917	26,612	13,735	429	870,884
24															
25	Revenue Requirement Factor	E = WACC*(T/(1-T))	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	
26															
27	RR of ADIT Pro-rate	F = D*E	4,361	3,997	3,593	3,203	2,799	2,409	2,005	1,601	1,211	807	417	13	26,416
28															
29	Jurisdictional Allocator	G	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
30															
31	MN Jur RR of ADIT Pro-rate	H = F*G	4,361	3,997	3,593	3,203	2,799	2,409	2,005	1,601	1,211	807	417	13	26,416
32															
33															
34															
35			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
36															
37	Pro-Rate Days	A	335	307	276	246	215	185	154	123	93	62	32	1	
38	Pro-Rate Factor	B = A/365	0.917808	0.841096	0.756164	0.673973	0.589041	0.506849	0.421918	0.336986	0.254795	0.169863	0.087671	0.002740	
39															
40	Deferred Tax Exp	C	196,571	196,571	196,571	196,571	196,571	196,571	196,571	196,571	196,571	196,571	196,571	196,571	2,358,855
41	Prorated Deferred Tax Expense	D = B*C	180,415	165,335	148,640	132,484	115,789	99,632	82,937	66,242	50,085	33,390	17,234	539	1,092,721
42															
43	Revenue Requirement Factor	E = WACC*(T/(1-T))	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	
44															
45	RR of ADIT Pro-rate	F = D*E	5,472	5,015	4,509	4,018	3,512	3,022	2,516	2,009	1,519	1,013	523	16	33,144
46															
47	Jurisdictional Allocator	G	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
48															
49	MN Jur RR of ADIT Pro-rate	H = F*G	5,472	5,015	4,509	4,018	3,512	3,022	2,516	2,009	1,519	1,013	523	16	33,144

Accumulated Deferred Income Tax Prorate Calculation

2018 Total		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
Pro-Rate Days	A	15	14	15	15	15	15	15	15	15	15	15	15	
Pro-Rate Factor	B = A/Days in Month	0.483871	0.500000	0.483871	0.500000	0.483871	0.500000	0.483871	0.483871	0.500000	0.483871	0.500000	0.483871	
Deferred Beg Bal	C	12,420,508	12,586,085	12,751,662	12,917,239	13,082,817	13,248,394	13,413,971	13,579,548	13,745,126	13,910,703	14,076,280	14,241,857	
Deferred Tax Exp Activity	D	165,577	165,577	165,577	165,577	165,577	165,577	165,577	165,577	165,577	165,577	165,577	165,577	1,986,927
Deferred Tax End Bal	E=C+D	12,586,085	12,751,662	12,917,239	13,082,817	13,248,394	13,413,971	13,579,548	13,745,126	13,910,703	14,076,280	14,241,857	14,407,435	
Average ADIT End Bal	F=(C+E)/2	12,503,296	12,668,874	12,834,451	13,000,028	13,165,605	13,331,183	13,496,760	13,662,337	13,827,914	13,993,491	14,159,069	14,324,646	
Deferred Tax Exp Prorated Activity	G=B*D	80,118	82,789	80,118	82,789	80,118	82,789	80,118	80,118	82,789	80,118	82,789	80,118	
Deferred Tax End Bal Prorated	H = C+G	12,500,626	12,668,874	12,831,780	13,000,028	13,162,935	13,331,183	13,494,089	13,659,666	13,827,914	13,990,821	14,159,069	14,321,975	
Revenue Requirement Factor	I= (WACC+(Equity Return*T/(1-T)))/12	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	
RR of ADIT Pro-rate	J = (F-H)*I	21	(0)	21	0	21	(0)	21	21	-	21	0	21	150
Jurisdictional Allocator	K	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
MN Jur RR of ADIT Pro-rate	L = J*K	21	(0)	21	0	21	(0)	21	21	-	21	0	21	150

2019

Line No.

1	TIMP		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	Excel Line Reference on Tab F
2																
3	Pro-Rate Days	A	15	14	15	15	15	15	15	15	15	15	15	15		
4	Pro-Rate Factor	B = A/Days in Month	0.483871	0.500000	0.483871	0.500000	0.483871	0.500000	0.483871	0.483871	0.500000	0.483871	0.500000	0.483871		
5																
6	Deferred Beg Bal	C	7,837,909	7,932,610	8,027,311	8,122,012	8,216,713	8,311,413	8,406,114	8,500,815	8,595,516	8,690,217	8,784,917	8,879,618		
7	Deferred Tax Exp Activity	D	94,701	94,701	94,701	94,701	94,701	94,701	94,701	94,701	94,701	94,701	94,701	94,701	1,136,410	Line No. 21
8	Deferred Tax End Bal	E=C+D	7,932,610	8,027,311	8,122,012	8,216,713	8,311,413	8,406,114	8,500,815	8,595,516	8,690,217	8,784,917	8,879,618	8,974,319		
9	Average ADIT End Bal	F=(C+E)/2	7,885,260	7,979,960	8,074,661	8,169,362	8,264,063	8,358,764	8,453,465	8,548,165	8,642,866	8,737,567	8,832,268	8,926,969		
10																
11	Deferred Tax Exp Prorated Activity	G=B*D	45,823	47,350	45,823	47,350	45,823	47,350	45,823	45,823	47,350	45,823	47,350	45,823		
12	Deferred Tax End Bal Prorated	H = C+G	7,883,732	7,979,960	8,073,134	8,169,362	8,262,535	8,358,764	8,451,937	8,546,638	8,642,866	8,736,040	8,832,268	8,925,441		Line No. 7
13																
14	Revenue Requirement Factor	I= (WACC+(Equity Return*T/(1-T)))/12	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%		
15																
16	RR of ADIT Pro-rate	J = (F-H)*I	12	-	12	-	12	-	12	12	0	12	0	12	86	
17																
18	Jurisdictional Allocator	K	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%		
19																
20	MN Jur RR of ADIT Pro-rate	L = J*K	12	-	12	-	12	-	12	12	0	12	0	12	86	
21																
22																
23	DIMP		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	Excel Line Reference on Tab G
24																
25	Pro-Rate Days	A	15	14	15	15	15	15	15	15	15	15	15	15		
26	Pro-Rate Factor	B = A/Days in Month	0.483871	0.500000	0.483871	0.500000	0.483871	0.500000	0.483871	0.483871	0.500000	0.483871	0.500000	0.483871		
27																
28	Deferred Beg Bal	C	6,404,402	6,520,043	6,635,685	6,751,326	6,866,967	6,982,609	7,098,250	7,213,892	7,329,533	7,445,175	7,560,816	7,676,458		
29	Deferred Tax Exp Activity	D	115,641	115,641	115,641	115,641	115,641	115,641	115,641	115,641	115,641	115,641	115,641	115,641	1,387,697	Line No. 21
30	Deferred Tax End Bal	E=C+D	6,520,043	6,635,685	6,751,326	6,866,967	6,982,609	7,098,250	7,213,892	7,329,533	7,445,175	7,560,816	7,676,458	7,792,099		
31	Average ADIT End Bal	F=(C+E)/2	6,462,222	6,577,864	6,693,505	6,809,147	6,924,788	7,040,430	7,156,071	7,271,713	7,387,354	7,502,995	7,618,637	7,734,278		
32																
33	Deferred Tax Exp Prorated Activity	G=B*D	55,956	57,821	55,956	57,821	55,956	57,821	55,956	55,956	57,821	55,956	57,821	55,956		
34	Deferred Tax End Bal Prorated	H = C+G	6,460,357	6,577,864	6,691,640	6,809,147	6,922,923	7,040,430	7,154,206	7,269,847	7,387,354	7,501,130	7,618,637	7,732,413		Line No. 7
35																
36	Revenue Requirement Factor	I= (WACC+(Equity Return*T/(1-T)))/12	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%		
37																
38	RR of ADIT Pro-rate	J = (F-H)*I	15	0	15	0	15	0	15	15	-	15	-	15	105	
39																
40	Jurisdictional Allocator	K	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%		
41																
42	MN Jur RR of ADIT Pro-rate	L = J*K	15	0	15	0	15	0	15	15	-	15	-	15	105	
43																
44																

Accumulated Deferred Income Tax Prorate Calculation

2019 Total		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
Pro-Rate Days	A	15	14	15	15	15	15	15	15	15	15	15	15	
Pro-Rate Factor	B = A/Days in Month	0.483871	0.500000	0.483871	0.500000	0.483871	0.500000	0.483871	0.483871	0.500000	0.483871	0.500000	0.483871	
Deferred Beg Bal	C	14,242,311	14,452,653	14,662,995	14,873,338	15,083,680	15,294,022	15,504,364	15,714,707	15,925,049	16,135,391	16,345,733	16,556,076	
Deferred Tax Exp Activity	D	210,342	210,342	210,342	210,342	210,342	210,342	210,342	210,342	210,342	210,342	210,342	210,342	2,524,107
Deferred Tax End Bal	E=C+D	14,452,653	14,662,995	14,873,338	15,083,680	15,294,022	15,504,364	15,714,707	15,925,049	16,135,391	16,345,733	16,556,076	16,766,418	
Average ADIT End Bal	F=(C+E)/2	14,347,482	14,557,824	14,768,167	14,978,509	15,188,851	15,399,193	15,609,536	15,819,878	16,030,220	16,240,562	16,450,905	16,661,247	
Deferred Tax Exp Prorated Activity	G=B*D	101,779	105,171	101,779	105,171	101,779	105,171	101,779	101,779	105,171	101,779	105,171	101,779	
Deferred Tax End Bal Prorated	H = C+G	14,344,089	14,557,824	14,764,774	14,978,509	15,185,458	15,399,193	15,606,143	15,816,485	16,030,220	16,237,170	16,450,905	16,657,854	
Revenue Requirement Factor	I= (WACC+(Equity Return*T/(1-T)))/12	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%	
RR of ADIT Pro-rate	J = (F-H)*I	27	0	27	-	27	0	27	27	-	27	0	27	191
Jurisdictional Allocator	K	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
MN Jur RR of ADIT Pro-rate	L = J*K	27	0	27	-	27	0	27	27	-	27	0	27	191

Recalculated DIMP Poor Performing Main Unit Cost Metric

Bin	Frequency
30	17
40	7
50	4
60	3
More	6

\$ 38.8 Mean
\$ 17.9 Std Dev
\$ 10.6 Min
\$ 80.9 Max
\$ 56.6 Mean + Std Dev

Data for Figure 3□

Unit Costs for Poor Performing Main Replacement Projects

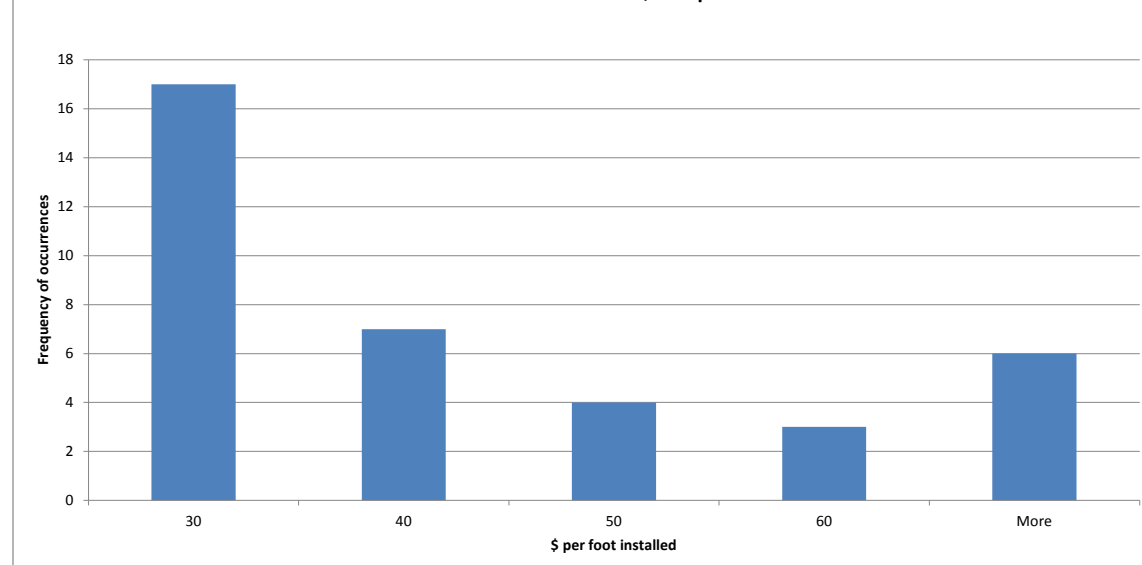
District	Project	WO	Actual \$	Main Footage	Main CPU
St Paul	ST PAUL - ARMSTRONG AVE XST: CHATSWORTH ST S	12092489	\$257,014	8,804	\$29.19
	ST PAUL - ARMSTRONG AVE	12328949	\$390,059	7,704	\$50.63
	ST PAUL - ATLANTIC, DULUTH & LARPENDEUR	12381180	\$295,480	9,006	\$32.81
	ROSEVILLE - GLENHILL, WOODLYNN, CLARMAR	12294860	\$126,996	6,850	\$18.54
	LAUDERDALE - EUSTIS ST	12398688	\$57,202	1,188	\$48.15
	ROSEVILLE - WEWERS RD	12380740	\$71,035	1,388	\$51.18
	ROSEVILLE - COUNTY RD C, FISK, AVON, GROTO	12344852	\$1,538,468	23,645	\$65.07
	ST PAUL - DOWNTOWN - 10TH-MINNESOTA	12404989			
	ST PAUL - JUNO (CONTRACTOR PORTION)	12361662	\$389,647	4,880	\$79.85
	ST PAUL - JUNO (INTERNAL PORTION)	12358730	\$88,284	1,288	\$68.54
	ST PAUL - AURORA (INTERNAL PORTION)	12364882	\$78,567	971	\$80.91
	ST PAUL - AURORA (CONTRACTOR PORTION)	12369728	\$189,102	3,740	\$50.56
	ST PAUL - BERKELY-STANFORD-WELLESLEY	12317526	\$247,703	10,566	\$23.44
	ROSEVILLE - SKILLMAN-ELDRIDGE	12294862	\$141,177	6,648	\$21.24
White Bear Lake	LAKE ELMO - 32ND ST	12344860	\$257,014	8,702	\$29.54
	LAKE ELMO - LAKE ELMO AVE	12293638	\$191,687	6,766	\$28.33
	NORTH ST PAUL - 19TH AVE	12334697	\$184,690	7,102	\$26.01
	BAYTOWN TWP/ 13606 30TH ST N	12371725	\$24,351	308	\$79.06
	OAKDALE - GROSPONT AVE	12320156	\$479,969	16,470	\$29.14
	WHITE BEAR LAKE - FLORENCE ST	12317855	\$577,920	16,720	\$34.56
	MAPLEWOOD - ROSELAWN AVE	12320058	\$597,768	12,860	\$46.48
	OAKDALE - GERSHWIN AVE	12320143	\$50,431	2,170	\$23.24
	SHOREVIEW - DEBRA LN	12320392	\$366,570	11,194	\$32.75
	OAKDALE - GREENE AVE	12275730	\$50,431	2,134	\$23.63
Wyoming	SHOREVIEW - NANCY PL	12317856	\$181,770	7,554	\$24.06
	FOREST LAKE - 2ND ST SE	12334677	\$402,423	11,102	\$36.25
Newport	MENDOTA HTS - HWY 13 - WACHTER AVE	12346357	\$8,927	844	\$10.58
	SOUTH ST PAUL - 3RD AVE S - 6TH ST S	12346387	\$102,882	1,704	\$60.38
	MENDOTA HTS - 3RD ST-VANDALL-SOMERSET	12352620	\$92,540	1,941	\$47.68
	ST PAUL PARK - 13TH-14TH-CHICAGO	12352631	\$199,174	8,794	\$22.65
	SOUTH ST PAUL - 2ND AVE S - MARIE AVE	12346491	\$200,936	7,496	\$26.81
St Cloud	DELANO	12249351	\$427,255	14,868	\$28.74
	ST JOSEPH - 1ST AVE NE - CTY RD 75	12342575	\$337,745	9,088	\$37.16
Southeast	WINONA - 3RD ST BTW GALE ST-MECHANIC ST	12385504	\$273,141	8,066	\$33.86
	NORTHFIELD - FLORELLAS CT	12354151	\$37,725	1,542	\$24.46
	FARIBAULT - 8TH ST SW	12328936	\$158,253	5,308	\$29.81
	FARIBAULT - 7TH ST NW	12345274	\$157,378	4,884	\$32.22
	FARIBAULT - 8TH ST SW, BOTSFORD, CARLTON	12350531	\$141,662	2,996	\$47.28

CPU > Mean + 1 Std Dev
 Removed Outlier
 CPU > Mean + 1 Std Dev
 CPU > Mean + 1 Std Dev
 CPU > Mean + 1 Std Dev

CPU > Mean + 1 Std Dev

CPU > Mean + 1 Std Dev

Histogram of 2016 NSPM Poor Performing Main Replacement Projects - Cost per Foot Installed
 Mean + 1 Std. Deviation = \$56.6 per foot



Revised Cost Per Unit Variance Explanations**WO# 12344852 – ROSEVILLE – CTY RD C, FISK, AVON, GROTTO**

This project replaced 4" and 2" main in a townhome development where our gas main was installed behind the buildings, and this area has since grown over with lakeshore vegetation making our facilities impossible to access with normal excavating equipment. Much of the installation was completed by hand digging and utilizing smaller equipment where possible. This contributed to much higher installation and restoration costs than utilizing directional boring as we would in most projects of this nature. Additionally, a large percentage of the gas meters had been built around with decks and resulted in not meeting current building codes, so we needed to relocate meters and in some cases air conditioning units in coordination with the townhome association to accomplish code compliance. Lastly, permit costs for this large project exceeded \$18,700, as the trench portion resulted in greater inspection and costs to the City of Roseville.

WO# 12361662 ST PAUL – JUNO (CONTRACTOR PORTION)

Both the contractor portion and internal portion of this job encountered similar challenges that increased the costs (see item below). Rocky soil was encountered throughout the project area and required clean fill to be brought in to pad our pipe per our standards. This construction method also increased the amount of blacktop and concrete that was removed and had to be replaced. Due to open trench for much of this project, additional Storm water Pollution Prevention Plan (SWPPP) measures were needed, resulting in actual charges of \$27,044.23 for the contractor portion, compared to design estimate of \$7,200.

WO# 12358730 ST PAUL – JUNO (INTERNAL PORTION)

Rocky soil was encountered throughout the project area and required clean fill to be brought in to pad our pipe per our standards. This construction method also increased the amount of blacktop and concrete that was removed and had to be replaced. Actual restoration invoice costs for the project were \$24,394.28, or 28% of the project cost. Typically, restoration costs are 10-12% of the total project cost for similar projects where rock is not encountered.

WO# 12364882 ST PAUL – AURORA (INTERNAL PORTION)

The internal portion of this job encountered similar challenges to the Juno project that increased the costs; on the contractor portion these were mostly avoided. Rocky soil was encountered throughout the project area and required clean fill to be brought in to pad our pipe per our standards. This construction method also increased the amount of blacktop and concrete that was removed and had to be replaced. Actual restoration invoice costs for the project were \$28,853.58, or 37% of the project cost. Typically, restoration costs are 10-12% of the total project cost for similar projects where rock is not encountered.

WO# 12371725 BAYTOWN TWP – 13606 30TH ST N

The Cost per Foot for this internal project was relatively higher as a result of the short length of the replaced segment and also the discovery that this pipe segment was Century Pipe, a defective type of pipe installed between 1971 and 1977 manufactured by Century Utility Products. The impact was an increased Cost per Foot due to the mobilization of the crew to and from the jobsite in relation to the actual length of pipe replaced. Larger projects can mitigate CPU pressures through productivity gains that spread costs out. Another item of note was a meter relocation that was needed to provide adequate clearance per our standards. The Company had a replacement plan from 2006 to 2008 to eliminate all Century pipe from the system. The discovery and replacement of this Century pipe segment became the Company's highest priority and extensive efforts were made to immediately replace the pipe.

WO# 12346387 SOUTH ST PAUL – 3RD AVE S – 6TH ST S

Internal crews worked on this project, utilizing contractors to bore, inspect and clear sewers, provide traffic control and restoration. The City of South St Paul required additional asphalt restoration due to large holes in the street near intersections and taking into account that they had recently milled and overlaid the road, so wanted the road returned to like condition. Actual restoration invoice costs for this project were \$23,406.58, or 23% of the project cost. Typically, restoration costs are 10-12% of the total project cost for similar projects where additional restoration is not required.

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

or

xx electronic filing

Docket No. G002/M-17-787

Dated this 27th day of July 2018

/s/

Jim Erickson
Regulatory Administrator

[illegible]

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Ian	Dobson	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	OFF_SL_17-787_M-17-787
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_17-787_M-17-787
Edward	Garvey	garveyed@aol.com	Residence	32 Lawton St Saint Paul, MN 55102	Electronic Service	No	OFF_SL_17-787_M-17-787
Edward	Garvey	edward.garvey@AESLconsulting.com	AESL Consulting	32 Lawton St Saint Paul, MN 55102-2617	Electronic Service	No	OFF_SL_17-787_M-17-787
Todd J.	Guerrero	todd.guerrero@kutakrock.com	Kutak Rock LLP	Suite 1750 220 South Sixth Street Minneapolis, MN 554021425	Electronic Service	No	OFF_SL_17-787_M-17-787
Kimberly	Hellwig	kimberly.hellwig@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-787_M-17-787
Annete	Henkel	mui@mutilityinvestors.org	Minnesota Utility Investors	413 Wacouta Street #230 St. Paul, MN 55101	Electronic Service	No	OFF_SL_17-787_M-17-787
Michael	Hoppe	il23@mtn.org	Local Union 23, I.B.E.W.	932 Payne Avenue St. Paul, MN 55130	Electronic Service	No	OFF_SL_17-787_M-17-787
Linda	Jensen	linda.s.jensen@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota Street St. Paul, MN 551012134	Electronic Service	No	OFF_SL_17-787_M-17-787
Richard	Johnson	Rick.Johnson@lawmoss.com	Moss & Barnett	150 S. 5th Street Suite 1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-787_M-17-787

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Sarah	Johnson Phillips	sarah.phillips@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-787_M-17-787
Michael	Krikava	mkrikava@briggs.com	Briggs And Morgan, P.A.	2200 IDS Center 80 S 8th St Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-787_M-17-787
Peder	Larson	plarson@larkinhoffman.com	Larkin Hoffman Daly & Lindgren, Ltd.	8300 Norman Center Drive Suite 1000 Bloomington, MN 55437	Electronic Service	No	OFF_SL_17-787_M-17-787
Eric	Lipman	eric.lipman@state.mn.us	Office of Administrative Hearings	PO Box 64620 St. Paul, MN 551640620	Electronic Service	No	OFF_SL_17-787_M-17-787
Peter	Madsen	peter.madsen@ag.state.mn.us	Office of the Attorney General-DOC	Bremer Tower, Suite 1800 445 Minnesota Street St. Paul, Minnesota 55101	Electronic Service	No	OFF_SL_17-787_M-17-787
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	OFF_SL_17-787_M-17-787
Mary	Martinka	mary.a.martinka@xcelenergy.com	Xcel Energy Inc	414 Nicollet Mall 7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_17-787_M-17-787
David	Moeller	dmoeller@allte.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	OFF_SL_17-787_M-17-787
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-787_M-17-787
David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency	220 South Sixth Street Suite 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_17-787_M-17-787

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Amanda	Rome	amanda.rome@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 5 Minneapolis, MN 55401	Electronic Service	No	OFF_SL_17-787_M-17-787
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750 St. Paul, MN 55101	Electronic Service	No	OFF_SL_17-787_M-17-787
Zeviel	Simpser	zsimpser@briggs.com	Briggs and Morgan PA	2200 IDS Center80 South Eighth Street Minneapolis, MN 554022157	Electronic Service	No	OFF_SL_17-787_M-17-787
James M.	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered	470 U.S. Bank Plaza 200 South Sixth Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_17-787_M-17-787
Cam	Winton	cwinton@mnchamber.com	Minnesota Chamber of Commerce	400 Robert Street North Suite 1500 St. Paul, Minnesota 55101	Electronic Service	No	OFF_SL_17-787_M-17-787
Daniel P	Wolf	dan.wolf@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_17-787_M-17-787