Direct Testimony and Schedules
Scott S. Hults

Before the Minnesota Public Utilities Commission
State of Minnesota

In the Matter of the Application of Northern States Power Company
for Authority to Increase Rates for Natural Gas Service in Minnesota

Docket No. G002/GR-21-678
Exhibit___(SSH-1)

New Service and Main Extensions

November 1, 2021

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Schedules

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND OCCUPATION.

A. My name is Scott S. Hults. I am the Manager of Commercial and Industrial Account Management for Northern States Power Company, a Minnesota corporation (Xcel Energy or the Company).

Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS AND EXPERIENCE.

A. I have been in my current role as the Manager of Commercial and Industrial Account Management since 2010. I am responsible for the Minnesota and North Dakota gas business development group within Account Management. My current responsibilities include developing and implementing new growth policies, investment analysis and approval processes for new customers, and general oversight and budgeting related to new gas business investments. In addition, I support large gas customer services in Account Management including interruptible, large firm, and large transportation customer offerings. Prior to 2010, I served for four years as the Director, New Business Development. During this time, I was responsible for gas business development, service policy, and the builders' call line. My resume is included as Exhibit___(SSH-1), Schedule 1.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to discuss several compliance requirements related to the Company's gas service extension policies arising from various proceedings before the Minnesota Public Utilities Commission (Commission). Prior to addressing these compliance requirements, I provide a brief background related to gas service extensions and main extensions. My testimony also discusses two proposed tariff changes arising from the

Commission's 2019 polar vortex docket (Docket No. E,G999/CI-19-160) and changes to update the nomination cycles used in our transportation service tariff: Large Firm Transportation Service Rate Code 104, Interruptible Transportation Service Rate Codes 123, 107, 124, Negotiated Transportation Service Rate Code 114, Small Volume Flex Interruptible Transportation of Customer Owned Gas (Closed) Rate Code 157, and the following agreements: Firm Gas Transportation Agreement and Interruptible Gas Transportation Agreement.

Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?

A. The remainder of my testimony is organized as follows:

- *Section II*: Background on Gas Service and Main Extensions
- *Section III*: Compliance Requirements
- *Section IV:* Proposed Tariff Changes
- *Section V*: Conclusion

II. BACKGROUND ON GAS SERVICE AND MAIN EXTENSIONS

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A. As many of the compliance items I discuss below relate to gas service extensions, in this section of my testimony, I will provide brief background information regarding these types of extensions.

Q. WHAT ARE GAS SERVICE EXTENSIONS?

A. Gas service extensions are mains and service additions that extend Xcel Energy's natural gas infrastructure to new customers that have requested service. A gas main is a pipe that serves more than one customer, while a gas

service extension typically connects to the gas main and goes directly to a gas meter. The gas meter is the terminus of the Company's gas utility facilities and the point at which customer piping begins in order to serve a customer's natural gas equipment at their residence or business.

Q. WHEN ARE GAS SERVICE EXTENSIONS NECESSARY?

A. Gas service extensions are necessary whenever the Company's current infrastructure is not adequate to serve the natural gas requirements of a new or current natural gas customer.

Q. HOW DOES THE COMPANY DETERMINE WHETHER OR NOT A CUSTOMER IS REQUIRED TO PAY A CONTRIBUTION IN AID OF CONSTRUCTION (CIAC) RELATED TO THE CONSTRUCTION OF A GAS MAIN OR SERVICE EXTENSION?

A. This process is set forth in greater detail in our tariff but, generally speaking, for shorter main extension projects for Residential customers that will use natural gas as their primary heat source, the free footage allowance would apply (100 feet of main and 75 feet of service), such that no CIAC would be owed by the customer. For longer main extensions to Residential customers, the Residential Extension Model (REM) would be used to determine the amount of CIAC owed. The REM is designed to calculate the total revenue requirement for each year of the book service life of the project and is addressed in Gas Rate Book Section No. 6 (General Rules and Regulations) on Sheet No. 18.01, Section 5.3 (Residential Main Extension Policy). For Commercial customers, the Company performs an economic feasibility study for the gas main or service line extension. If the cost for the gas main or service extension is greater than the expected revenue from the Commercial customer, then the Company charges the customer CIAC for the installation

costs that exceed the break-even point. This is described in more detail in Gas Rate Book Section No. 6 on Sheet No. 17.1, Section 5.2 (Commercial And Industrial Service And Main Extension Policy).

Q. HAS THE NUMBER OF GAS SERVICE EXTENSIONS INCREASED IN RECENT YEARS?

A. Yes. The number of gas service extensions has been growing fairly consistently, with an average of 3,025 new gas service extensions added each year from 2017 to 2020. From 2014 to 2016, average new gas service extensions were 2,800 each year, and for the five years previous to that, the average was 1,626 per year.

III. COMPLIANCE REQUIREMENTS

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A. In this section of my testimony, I will be addressing compliance requirements that arose from the following Commission proceedings:

1) Docket No. G002/GR-04-1511: *In the Matter of an Application by Northern States Power d/b/a Xcel Energy for Authority to Increase Rates for Natural Gas Service in the State of Minnesota.*

2) Docket No. G999/CI-90-563: *In the Matter of an Inquiry into Competition Between Gas Utilities in Minnesota.*

3) Docket No. G002/C-06-155: *In the Matter of a Formal Complaint Against Xcel Energy and Request for Investigation by Linwood Township.*

4) Docket No. G002/GR-06-1429: *In the Matter of the Application of Northern States Power Company, a Minnesota Corporation and Wholly-Owned Subsidiary of Xcel Energy, Inc., for Authority to Increase Rates for Natural Gas Service in Minnesota.*

5) Docket No. G002/GR-09-1153: *In the Matter of the Application of Northern States Power Company, a Minnesota Corporation, for Authority to Increase Rates for Natural Gas Service in Minnesota.*

A. Riser Cost Study – Docket No. G002/GR-04-1511

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A. In this section of my testimony, I will provide information related to riser costs incurred for gas service extensions performed by Xcel Energy from 2006 to 2012 in compliance with a 2014 Commission Order issued in the Company's 2004 gas rate case in Docket No. G002/GR-04-1511.

Q. WHAT ARE RISER COSTS?

A. Riser costs are the material and setup costs incurred to install additional equipment used to transition from the below-ground gas service pipe and extend vertically to a point where the meter set and meter inlet piping (as applicable) are attached to the top of the riser. Riser costs are typically a very small part of the total cost of a commercial main and service extension project.

Q. WHAT DID THE 2014 COMMISSION ORDER REQUIRE RELATED TO RISER COSTS?

A. In its Order dated February 7, 2014 in Docket No. G002/GR-04-1511, the Commission stated:

> In the Company's next general gas rate case filing, require the Company to file direct testimony discussing its commercial and industrial line extension activity since the implementation of final rates in Docket No. G002/GR-04-1511 (2004 Rate Case). The testimony should provide the amount of riser costs incurred (in each year) for service extensions that either were uneconomical or would have been uneconomical had the rider costs been included in the feasibility calculations since the implementation of the 2004 Rate Case final rates.[1]

Q. WHAT TRIGGERED THIS 2014 ORDER?

A. The settlement agreement approved in the 2004 gas rate case docket (Docket No. G002/GR-04-1511) required that the Company submit annual filings related to the cost inputs used to perform its feasibility studies for commercial main and service extensions. The relevant portion of the settlement agreement states that:

> [Xcel Energy] agreed to establish a cost sheet for commercial and industrial main and service extensions, which will be filed annually with the Department, identifying the current cost inputs used by the Company in performing feasibility studies required by the tariff for commercial mains and service extensions.[2]

On March 1, 2013, the Company filed its annual Commercial and Industrial Service and Main Extension Installation Cost Sheet compliance filing as required by the settlement agreement. This compliance filing included a new separately-listed cost input for riser costs. The Company was unable to verify whether or not riser costs had been included in the Company's previous

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[1] *See In the Matter of Northern States Power Company d/b/a Xcel Energy Annual Compliance Filing of Commercial and Industrial Cost Inputs Related to Customers Requesting Service and Main Extensions*, Docket No. G002/GR-04-1511, ORDER (February 7, 2014).

[2] *See In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Authority to Increase its Rates for Natural Gas Services Minnesota*, Docket No. G002/GR-04-1511, SETTLEMENT OFFER at 42. (April 19, 2005).

compliance filings or economic feasibility studies prior to 2013 since this item was not separately listed.[3]

On July 19, 2013, the Minnesota Department of Commerce (Department) submitted comments that focused on the possible impact of riser costs on the economic feasibility studies for new Commercial and Industrial customers.[4] The Department expressed concern that the cost of risers might not have been properly reflected in the cost estimation process. Therefore, some proposed projects that may have otherwise been deemed uneconomical (if riser costs were included) would have been accepted as economical, and customers may not have been charged the appropriate CIAC amounts.

Q. WHAT TIMEFRAME DOES THE 2014 ORDER ENCOMPASS?

A. Final rates from the 2004 rate case (Docket No. G002/GR-04-1511) went into effect on December 1, 2005. The riser costs line was expressly added as a separate cost input to the feasibility studies in 2013. As a result, the Company examined commercial and industrial extensions from 2006–2012.

Q. ASSUMING THAT RISER COSTS WERE NOT INCLUDED IN THE ECONOMIC FEASIBILITY CALCULATIONS FOR COMMERCIAL AND INDUSTRIAL EXTENSIONS FROM 2006–2012, HOW WOULD INCLUDING RISER COSTS IMPACT THE ECONOMIC FEASIBILITY ANALYSIS?

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[3] Xcel Energy started making these compliance filings on March 26, 2007.

[4] *See In the Matter of Northern States Power Company d/b/a Xcel Energy Annual Compliance Filing of Commercial and Industrial Cost Inputs Related to Customers Requesting Service and Main Extensions*, Docket No. G002/GR-04-1511, COMMENTS FROM THE DEPARTMENT OF COMMERCE, DIVISION OF ENERGY RESOURCES, (July 19, 2013).

A. Adjusting the economic feasibility analysis to include such costs may have resulted in a small number of Commercial and Industrial customers paying some or more CIAC.

Q. HOW DID THE COMPANY CALCULATE THE ADDITIONAL CIAC THAT WOULD HAVE BEEN COLLECTED, AND WHAT IS THAT AMOUNT?

A. Because the riser expense is a relatively small part of commercial and industrial natural gas service extensions, the Company added riser costs to existing calculations for 2012 extension projects to determine if additional CIAC would have been required. The riser cost amounts filed in the 2013 compliance filing ($16.88 for American Meter Company model numbers AC-250 and AL-425 meters [small commercial projects] and $29.64 for American Meter Company model numbers AC-630 and AL-1000 meters) were used in the calculation as a proxy for 2012 riser costs.

As expected, the additional riser costs would not have changed the economic feasibility of most commercial and industrial natural gas service extension projects. Based on the study of 2012 projects, one project was close enough to being economic that adding in the riser costs would have required a portion of that riser cost ($14.82) to be charged as CIAC for the project. Eight other projects were already collecting CIAC to enable the projects to meet the economic feasibility requirements and would have required additional CIAC ($16.88 for each project). In total, these nine projects are 4.5 percent of the 201 commercial and industrial extension projects completed in 2012. The increase to CIAC would have been $150 or just 0.018 percent of the total CIAC of approximately $827,000 that was collected in 2012.

Q. DID THE COMPANY CONDUCT A SIMILAR IN-DEPTH ANALYSIS OF ALL COMMERCIAL AND INDUSTRIAL EXTENSIONS FOR THE 2006–2011 CONSTRUCTION YEARS?

A. No. Given the time required to conduct such an analysis, the Company did not conduct a similar analysis for these other six years. Instead, the 2012 results were used as a proxy to calculate the potential CIAC for these other years. If CIAC adjustments similar to 2012 were made for the entire period 2006-2012, the total impact would have totaled $1,000.

Q. WHAT DO YOU CONCLUDE ABOUT THIS ANALYSIS OF RISER COSTS?

A. For all commercial and industrial service extension projects, adding riser costs would not have materially impacted their overall economic feasibility. However, CIAC or additional CIAC may have been required for a very small number of projects, and the Company estimates that this additional CIAC amount would not have been significant.

Q. HAS THE COMPANY CONTINUED TO COMPLY WITH THE REQUIREMENT OF THE COMMISSION'S AUGUST 11, 2005 ORDER FROM THE COMPANY'S 2004 GAS RATE CASE (DOCKET NO. G002/GR-04-1511) TO FILE ANNUAL UPDATES TO ITS COMMERCIAL AND INDUSTRIAL EXTENSION COST INPUTS?

A. Yes. In conformity with Section 4.6.9 of the Settlement Agreement, approved in the above-referenced Order from the 2004 gas rate case, the Company has made annual filings to update these cost inputs, with the most recent filing having been made in March 2021.[5]

[5] *See In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Authority to Increase its Rates for Natural Gas Services Minnesota*, Docket No. G002/GR-04-1511, ANNUAL COMPLIANCE FILING OF COMMERCIAL AND INDUSTRIAL COST INPUTS (March 10, 2021).

B. Other Gas Service and Main Extension Compliance Requirements

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR DIRECT TESTIMONY?

A. In this section of my testimony, I discuss the Company's compliance with other ongoing requirements from Docket Nos. G999/CI-90-563, G002/GR-09-1153, and G002/GR-06-1429.

Q. PLEASE DESCRIBE THE COMPLIANCE REQUIREMENTS THAT AROSE FROM DOCKET NO. G999/CI-90-563.

A. On pages 6 and 7 of its Order dated March 31, 1995 in the above-referenced docket, the Commission required all gas utilities to perform a review of their service extension policies and tariffs for consistency in terms of service, the fairness of refund provisions, and the consideration of possible customer financing.[6] In particular, the Commission required the reviews to be performed in all future gas rate cases and set forth six specific questions for utilities to answer. Below are those six questions and my responses.

Q. COMMISSION QUESTION 1 ASKS: "SHOULD THE 'FREE' FOOTAGE ALLOWANCE OR SERVICE EXTENSION ALLOWANCE INCLUDE THE MAJORITY OF ALL NEW EXTENSIONS WITH ONLY THE EXTREMELY LONG EXTENSIONS REQUIRING A CUSTOMER CONTRIBUTION-IN-AID-OF-CONSTRUCTION ("CIAC")?" PLEASE RESPOND.

A. Yes, the majority of extensions should be "free" (that is, no CIAC). The Commission determined in Docket No. G999/CI-90-563 that, as a general policy, customers should receive some amount of service and main extensions without a CIAC, but that it would be left to future rate cases as to how best to implement that policy. It has been the Company's practice, approved by the

Commission in the last four natural gas rate cases and in Docket No. G002/C-06-155, to use service and main extension policies that allow the majority of new customers to receive service without a CIAC. For instance, residential customers are provided 75 feet of service line extension without CIAC. This policy provides a number of customer benefits without unduly burdening existing customers. First, it treats new customers in a manner consistent with the treatment provided to past customers. Second, the addition of new customers benefits existing customers, because it allows common costs to be shared across a larger customer base. Third, it benefits the new customers by providing them with affordable access to natural gas service.

Q. COMMISSION QUESTION 2 ASKS: "HOW SHOULD THE LDC [LOCAL DISTRIBUTION COMPANY] DETERMINE THE ECONOMIC FEASIBILITY OF SERVICE EXTENSION PROJECTS AND WHETHER THE EXCESS FOOTAGE CHARGES ARE COLLECTED?" PLEASE RESPOND.

A. The tariff should provide for connection without a CIAC where the expected revenue from a new Commercial or Industrial customer will exceed the cost of the extension to the local distribution company (LDC) serving the customer within a reasonable period of time. For Residential customers, the amount of free footage allowance should reflect past practice, allowing consistent treatment between existing and new Residential customers. The terms of the Company's approved extension tariff provides a reasonable balance between connection without a charge and recovery of excessive costs.

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[6] *See In the Matter of an Inquiry into Competition Between Gas Utilities in Minnesota*, Docket No. G999/CI-90-563, ORDER TERMINATING INVESTIGATION AND CLOSING DOCKET at 6-7 (March 31, 1995).

Q. COMMISSION QUESTION 3 ASKS: "SHOULD THE LDC'S SERVICE EXTENSION POLICY BE TARIFFED IN NUMBER OF FEET WITHOUT CONSIDERATION TO VARYING CONSTRUCTION COSTS AMONGST PROJECTS OR SHOULD THE ALLOWANCE BE TARIFFED AS A TOTAL DOLLAR AMOUNT PER CUSTOMER?" PLEASE RESPOND.

A. Xcel Energy interprets this question to relate to our residential service extensions. A free footage allowance is appropriate in residential applications, where the customer usage and construction costs are very similar. The footage allowance is a simple approach that is easily understood by customers, and it offers consistency with many other Minnesota gas utilities' extension tariffs. Xcel Energy proposes to maintain the residential service footage allowance at 75 feet and the main footage allowance at 100 feet, as currently outlined in our tariff. See Section II above for additional discussion.

Q. COMMISSION QUESTION 4 ASKS: "IS THE LDC'S EXTENSION CHARGE REFUND POLICY APPROPRIATE?" PLEASE RESPOND.

A. Yes, it is appropriate. The Company refunds CIAC main payments when other new customers are served by the main within five years from the initial CIAC payment. The Company finds this to be a reasonable and sufficient time to allow most new developments that benefit from the main to be completed.

Q. COMMISSION QUESTION 5 ASKS: "SHOULD CUSTOMERS BE ALLOWED TO RUN THEIR OWN SERVICE LINE FROM THE STREET TO THE HOUSE (OR USE AN INDEPENDENT CONTRACTOR) IF IT WOULD BE LESS EXPENSIVE THAN HAVING THE UTILITY CONSTRUCT THE LINE?"

A. No, they should not be allowed to do this. In order to maintain the safety and quality standards of the natural gas system, it is important that only the

Company or its assigned contractors perform this type of work. There are strict operator qualifications that are required for installation, maintenance, and operation of natural gas distribution systems. The safe operation and maintenance of Company-owned facilities requires that work on the natural gas system be performed by qualified technicians that complete the necessary training and have the requisite certifications.

Q. COMMISSION QUESTION 6 ASKS: "SHOULD THE LDC BE REQUIRED TO OFFER ITS CUSTOMERS FINANCING FOR SERVICE EXTENSION CHARGES?"

A. No, it should not be required to offer customers financing for service extension charges. The Company did arrange to have a third party offer financing previously for Residential customers; however there were very few inquiries, so the arrangement ended. There also has been limited interest from commercial customers, who generally already have access to financing options. Therefore, the Company has not identified such a need, particularly since for most new construction projects, natural gas service costs are typically a small portion of the overall investment. If the market conditions change such that there is customer interest in such financing, the Company would evaluate establishing a new arrangement or offering.

Q. WERE THERE ANY OTHER COMPLIANCE ITEMS THAT CAME OUT OF THE COMMISSION'S March 31, 1995 ORDER IN DOCKET NO. G999/CI-90-563?

A. Yes. In addition to the six above-enumerated questions in Docket No. G999/CI-90-563, the Commission expressed concerns about the impact of service extension-related additions on the Company's rate base. The Commission requested that in future natural gas rate cases, the Department investigate each company's service extension-related additions to rate base to

make sure that: (1) LDCs are applying their tariffs correctly and consistently, (2) they are appropriately cost and load justified, and (3) wasteful additions to plant and facilities are not allowed into rate base.[7]

Q. PLEASE ADDRESS THE COMMISSION'S FIRST CONCERN AND EXPLAIN WHETHER THE COMPANY HAS CORRECTLY AND CONSISTENTLY APPLIED ITS EXTENSION TARIFF.

A. To determine whether the Company correctly and consistently applied its extension tariffs, studies were conducted under my direction to examine service and main extension projects constructed since our last natural gas rate case in 2009.

Q. PLEASE DESCRIBE THE COMPANY'S ANALYSIS OF ITS SERVICE AND MAIN EXTENSION PROJECTS.

A. The Company examined service and main extensions for the following periods: January 2009-December 2013; January 2014-December 2016; January 2017-December 2020. The studies were developed with a methodology similar to that used in the Company's last natural gas rate case (Docket No. G002/GR-09-1153). This approach involved first establishing the total population of service and main extension projects during the noted periods, as included in Table 1 below:

[7] *Id.* at 7.

Table 1

Total Population of Service and Main Extensions (2009-2020)

Time Period	Service Extensions Total Projects	Main Extensions Total Projects
2009-2013	8,130	387
2014-2016	8,381	956
2017-2020	12,098	620

Q. WHAT WAS THE NEXT STEP IN THE ANALYSIS?

A. The next step was to determine samples of projects. A sample was selected from each of the service and main project populations for the above-noted timeframes. The decision to draw samples for testing was based on the central limit theorem[8] and a desire to maintain a reasonable confidence level at a reasonable cost. The sample sizes each were in excess of 30 projects, the acceptable minimum under the central limit theorem. We believe this sampling approach provides a supportable conclusion regarding the test population and is consistent with previous sampling methodologies utilized in the Company's previous two rate cases.

Samples of service extension projects were determined by stratifying the population of service extension projects by cost. For example, for 2019, a sample of 67 was created by selecting the top ten projects by cost, then choosing a random selection of 57 projects across eight cost strata. For 2020, a sample of 61 was created by selecting the top ten projects by cost, then

[8] "According to the central limit theorem, for large sample sizes (typically, 30 is a reasonable minimum size), the distribution sample mean tends to be normally distributed, almost independently of the shape of the original population." (Guy, Dan M., D.R. Carmichael, and O. Ray Whittington. Audit Sampling: An Introduction. Fifth Edition. New York: John Wiley & Sons, Inc., 2001 at 97.)

choosing a random selection of 51 projects across eight cost strata. The sample size from each stratum was proportionate to the number of projects relative to the total population, with a minimum sample size of four for all projects in the stratum.

Similarly, samples of main projects were determined by stratifying the population of main projects by cost. For example, for 2019, a sample of 36 main projects was determined by selecting the top nine projects by cost, then choosing a random selection of 27 projects across four cost strata. For 2020, a sample of 39 main projects was determined by selecting the top seven projects by cost, then choosing a random selection of 32 projects across four cost strata. The sample size from each stratum was proportionate to the number of projects relative to the total population, with a minimum sample size of five.

Q. AFTER THE SAMPLES WERE SELECTED, WHAT WAS THE NEXT STEP?

A. For each project included in the service extension samples, we reviewed all documentation, including service orders, construction drawings, and work orders, to determine whether the service extension tariff was applied correctly for the 2009-2020 period. Where CIAC was identified, we also confirmed that it was correctly charged and collected from customers.

For each project included in the main extension samples, we reviewed the documentation to determine if the cost justification tariff was accurately applied from January 2009 through December 2020 for commercial projects. For residential service projects, we determined if the footage allowance from January 2009 through December 2020 was accurately applied. Where CIAC was identified, we also confirmed that it was collected from customers.

Q. BASED ON THIS ANALYSIS, WHAT AMOUNT OF CIAC DID THE COMPANY DETERMINE WAS UNCOLLECTED FOR SERVICE EXTENSIONS FROM 2009 TO 2020?

A. The amount of CIAC not collected (or for which records were not available) for 2009-2020 service extensions totaled $142,326, or 2.8 percent of the total CIAC owed for that period. Exhibit___(SSH-1), Schedule 2 summarizes the results of the service extension study.

Q. BASED ON THIS ANALYSIS, WHAT AMOUNT OF CIAC DID THE COMPANY DETERMINE WAS UNCOLLECTED FOR MAIN EXTENSIONS FROM 2009 TO 2020?

A. The amount of CIAC not collected (or for which records were not available) for 2009-2020 main extensions totaled $6,917, or 0.4 percent of the total CIAC owed for that period. Exhibit___(SSH-1), Schedule 3 summarizes the results of the main extension study.

Q. IS THE COMPANY PROPOSING ANY ADJUSTMENT TO RATE BASE FOR THESE UNCOLLECTED CIAC AMOUNTS?

A. Yes. Company witness Mr. Benjamin C. Halama makes an adjustment to rate base for the above-noted uncollected CIAC amounts for 2009-2020 service and main extensions, as noted in his Direct Testimony.

Q. WHAT DO YOU CONCLUDE BASED ON THIS ANALYSIS?

A. I conclude the Company has correctly and consistently applied its extension tariff and that, for nearly all of our service and main extensions, CIAC was properly charged and collected.

Q. THE SECOND CONCERN EXPRESSED BY THE COMMISSION IN DOCKET NO. G999/CI-90-563 WAS WHETHER THE EXTENSION TARIFFS ARE APPROPRIATELY COST AND LOAD JUSTIFIED. PLEASE RESPOND.

A. As a result of the Company's 2004 natural gas rate case in Docket No. G002/GR-04-1511, the Commission approved changes to the existing extension tariffs to ensure appropriate cost and load justification for Commercial and Industrial customers. In addition, the residential main extension tariff was changed from a cost justification formula to a footage allowance, and the cost per foot of excess service footage was updated to reflect current costs. In addition, in the Company's compliance filing in Docket No. G002/C-06-155, the Residential Main Extension tariff provides the opportunity for unjustified projects (those requiring more than 100 feet of main) to be installed if a customer contribution is made as determined by the application of the Residential Extension Model (REM).

Q. THE FINAL CONCERN EXPRESSED BY THE COMMISSION IN DOCKET NO. G999/CI-90-563 WAS WHETHER WASTEFUL ADDITIONS TO PLANT AND FACILITIES ARE ALLOWED INTO RATE BASE. PLEASE EXPLAIN WHY THE COMPANY'S ADDITIONS TO PLANT AND FACILITIES ARE REASONABLE.

A. Xcel Energy abides by its Commission-approved tariff related to all service and main extensions to ensure that all additions to plant and facilities are reasonable. The Company evaluates all new service and main extensions based on the requirements outlined in its tariff and, when required, performs an economic feasibility study. To the extent that CIAC is required, the Company assesses CIAC to the customer.

Q. HAVE THERE BEEN ANY OTHER REVIEWS TO DETERMINE IF THE COMPANY'S ADDITIONS TO PLANT AND FACILITIES ARE REASONABLE?

A. Yes, the Commission's Order in the Company's last gas rate case (Docket No. G002/GR-09-1153) adopted the Administrative Law Judge's Report, Finding 307, which recommended the Company be required to continue tracking

information relating to unusual construction charges, joint trenching practice and the waiver of CIAC in competitive situations in advance of its next natural gas rate case. We address each of these requirements below:

1. Unusual Construction Charges

Q. PLEASE DESCRIBE THE TRACKING REQUIREMENTS RELATED TO UNUSUAL CONSTRUCTION CHARGES AND UNUSUAL WINTER CONSTRUCTION CHARGES.

A. In Docket No. G002/GR-04-1511, the Company agreed to retain records of unusual construction charges and unusual winter construction charges. We continue to track data for each unusual construction charge as contained in each project Work Order. Data for joint trench residential developments is provided by vendors by way of a winter construction form. Charges are billed to the developer and recorded on a tracking spreadsheet along with payment confirmation. Data for non-joint trench underground residential developments is identified by Charge Code in the CRS billing system, and queries of the data for a given timeframe list the transactions by invoice number. Individual entries can be reviewed in the CRS system to determine charges.

2. Joint Trenching Practice

Q. PLEASE DESCRIBE THE TRACKING REQUIREMENTS RELATED TO JOINT TRENCHING.

A. In Docket No. G002/GR-06-1429, the Company agreed to show that it revised its natural gas extension records to clearly indicate when a joint trench or utility corridor was used for joint electric and natural gas extension projects. The Company was also required to provide reports for two years demonstrating compliance with the joint trenching provisions contained in

Section 6, subsection 5.4 of Xcel Energy's Gas Rate Book.[9] We continue to track data for joint electric and natural gas extension projects as part of each project Work Order. The Company utilizes an enterprise Work and Asset management system (SAP) integrated with a Geospatial Information System (GIS) to track joint trench locations as work is being completed in the field. Costs associated with this work are captured via work order documentation and data associated with the work order record. An audit of the CIAC aspect of the joint trench data has also been conducted and is discussed earlier in my testimony. This process and corresponding technology allow us to confirm the data required to meet this requirement is complete.

3. Waiver of CIAC in Competitive Situations

Q. XCEL ENERGY'S TARIFF REQUIRES THE COMPANY TO MAKE A RATE BASE ADJUSTMENT IF IT WAIVED THE COLLECTION OF OTHERWISE APPLICABLE CIAC AS A RESULT OF A PROMOTION. DID THE COMPANY INVESTIGATE WHETHER SUCH A PROMOTION OCCURRED?

A. Yes. We have investigated this and determined the Company has offered no such promotions since the Commission's September 19, 2018 Order in Docket No. G999/CI-17-499. In that Order, the Commission decided that "natural gas utilities are prohibited from offering cash or noncash promotional incentives on a prospective basis."[10] Before this decision, when the Company was competing with another utility for the right to provide natural gas service,

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[9] *In the Matter of the Application of Northern States Power Company, a Minnesota Corporation and Wholly-Owned Subsidiary of Xcel Energy, Inc., for Authority to Increase Rates for Natural Gas Service in Minnesota,* Docket No. G002/GR-06-1429, COMPLIANCE FILING – GAS RATE CASE, JOINT TRENCH (February 26, 2010 and March 5, 2009).

[10] *In the Matter of a Commission Investigation into Parameters for Competing Among Natural Gas Utilities Involving Duplication of Facilities and Use of Promotional Incentives and Other Payments*, Docket No. G999/CI-17-499, ORDER ADOPTING STANDARDS GOVERNING COMPETITION AMONG NATURAL GAS UTILITIES at 11 (September 19, 2018).

we used promotional funds to pay for the CIAC amount otherwise owed by the customer. The promotional funds paid reduced the investment recorded to rate base in the same manner as CIAC payments. More specifically, these payments were charged to the account entitled "Non-Recovery Construction Waiver Gas Funds," a below-the-line account, and none of the waiver costs were charged to customers.

Q. HAS THE COMPANY COMPLIED WITH THE COMMISSION'S 2018 ORDER AGAINST PROMOTIONAL INCENTIVES?

A. Yes. Xcel Energy has not offered promotional funds to customers since the Commission's 2018 Order.[11] Xcel Energy has also complied with the Commission's September 19, 2018 Order by withdrawing its Competitive Agreement from its Gas Rate Book. Only grandfathered agreements that contained promotional funds provisions executed prior to the Commission's 2018 Order have been charged to the account entitled "Non-Recovery Construction Waiver Gas Funds."

IV. PROPOSED TARIFF REVISIONS

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A. In this section of my testimony, I discuss two tariff revisions the Company is proposing as part of this proceeding arising out of the Commission's inquiry into the impact of the severe weather in January and February 2019 (Docket No. E,G999/CI-19-160) (the polar vortex docket). In addition, I discuss the Company's proposed updates to nomination cycles to reflect current North American Energy Standards Board (NAESB) standards, as well as options

afforded by upstream pipeline offerings, that will be reflected in our transportation service tariff and agreements.

Q. WHAT TARIFF REVISIONS IS THE COMPANY PROPOSING RELATED TO THE POLAR VORTEX DOCKET?

A. In the polar vortex docket, the Company agreed to implement process improvements to address severe weather events, including multiple tariff changes.[12] The Company's proposals here build on those changes and relate to resetting the penalties for failing to curtail gas usage each season and adding a negotiated gas transport agreement to our rate book.

Q. PLEASE DESCRIBE THE COMPANY'S FIRST PROPOSED TARIFF REVISION RELATED TO THE POLAR VORTEX DOCKET.

A. In the polar vortex docket, the Company agreed to modify its "Additional Charge for Unauthorized Use of Gas During Service Curtailment, Interruption, or Restriction" tariff provision to include tiered penalties based on the frequency of a customer's failure to comply with curtailment calls, with higher penalties for subsequent failures to comply. The Company now proposes resetting when the higher penalties will apply. Under this revision, the lower Tier 1 penalty would apply upon the first failure to comply with a curtailment call of each gas year (winter season). Upon a second failure to comply, the higher Tier 2 penalty would apply to that failure to comply and any further failures to comply until the end of the gas year. In the new gas

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[11] *Ibid.*, ORDER DISMISSING COMPLAINT, SUSPENDING TARIFF, AND SOLICITING COMMENT at 9 (April 10, 2018).

[12] *See In the Matter of a Commission Inquiry into the Impacts of Severe Weather in January and February 2019 on Utility Operations and Service*, Docket No. E,G999/CI-19-160, COMPLIANCE FILING – PROJECT UPDATES AND TARIFFS (December 6, 2019).

year, the customer would again be subject to the Tier 1 penalty for their first failure to comply.

Q. WHY IS THE COMPANY PROPOSING TO RESET THE FAILURE TO COMPLY PENALTY EACH YEAR?

A. The Company proposes to reset the penalty because in a particular gas year, interruptible customers may encounter backup system problems or alternate fuel delivery issues that result in a failure to comply with the curtailment calls. These one-time issues should not require a more punitive penalty into perpetuity. Resetting the penalties back to Tier 1 each gas year still puts an economic incentive in place for customers to arrange for reliable backup options for the next curtailment call. Further, if customers are not successful, the penalties do increase, and the financial consequences are even more significant, considering the cost of each MMBtu of natural gas would be 10 times the normal rate and 20 times upon Tier 2 penalties.

For the above-discussed tariff edits, see Gas Rate Book Sheet Nos. 5-4.1, 5-8, 5-12, 5-19, 5-26, 5-33 and 5-54 included in Volume 2E of the rate case application.

Q. PLEASE DESCRIBE THE COMPANY'S PROPOSED SECOND TARIFF REVISION RELATED TO THE POLAR VORTEX DOCKET.

A. When the Company made its polar vortex tariff updates last year, we identified that a sample negotiated gas transport agreement was not included in the Company's existing rate book and should be added in the next rate case. We are proposing to add such a sample agreement and to include the polar vortex updates performed for the other agreements already in the tariff. These polar vortex updates include attestation for backup equipment and three points of

contact, and the right to discontinue service or increase the penalty due to non-compliance. For the sample agreement, see the Gas Rate Book starting at Sheet No. 7-85 as included in Volume 2E of the rate case application

Q. PLEASE DESCRIBE THE COMPANY'S PROPOSED CHANGES TO THE NOMINATION CYCLES FOR TRANSPORTATION SERVICES THAT ARE IN THE GAS RATE BOOK.

A. The Company is proposing updates to the nomination cycles included in the transportation service tariff and agreements to align with current NAESB nomination cycles as well as the current options afforded by upstream pipelines. These updates will be made to the following tariff sections: Large Firm Transportation Service Rate Code 104, Interruptible Transportation Service Rate Codes 123, 107, 124, Negotiated Transportation Service Rate Code 114, and Small Volume Flex Interruptible Transportation of Customer Owned Gas (Closed) Rate Code 157. Updates will also be made to the following agreements: Firm Gas Transportation Agreement and Interruptible Gas Transportation Agreement.

For the above-discussed tariff edits, see Gas Rate Book Sheet Nos. 5-6.2, 5-18, 5-25, 5-31, 7-13 and 7-19 included in Volume 2E of the rate case application.

V. CONCLUSION

Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

A. Yes.

SCOTT S. HULTS

Manager, Gas Business Development/Account Management - Xcel Energy
825 Rice Street, Saint Paul, Minnesota 55117

Current Responsibilities (July 2010 to present)
Responsible for the Minnesota and North Dakota gas business development group within Account Management. Develop and implement new growth policies, investment analysis, approval processes, and general oversight of spending related to new gas business investments. In addition I support large gas customer services in Account Management including interruptible, large firm, and large transportation customer offerings.

Previous Employment (Xcel Energy-Northern States Power Company)
Director, New Business Development 2006-2010
Manager, Gas Supply & Federal Regulatory Affairs 1999-2006
Gas Supply Consultant 1992-1998
Industrial Gas Sales Engineer II 1989-1992
Industrial Gas Sales Engineer I 1988-1989

Education
Augustana College, B.A. Interdepartmental Math and Physics
South Dakota State University, B.S. Mechanical Engineering
University of St. Thomas, Masters of Business Administration-Management
University of Minnesota, Carlson School of Management, MMI

Previous Testimony
National Energy Board of Canada, Export License Application GH-4-95
Minnesota Public Utilities Commission, Docket No. G002/GR-97-1606
Federal Energy Regulatory Commission, Docket No. RP00-107-003, et al.
Minnesota Public Utilities Commission, Docket No. G002/GR-09-1153

Professional Associations
American Society of Mechanical Engineers
Association of Energy Engineers

CIAC Audit Results: Service Extensons 2009-2020

Service Projects 2009-2013

	A	B
Population	**No. of Projects**	**Total Cost**
Stratum #1 (projects $0-$440)	1,857	$ 575,177
Stratum #2 (projects $440-$750)	2,155	$ 1,253,021
Stratum #3 (projects $750-$1,200)	1,460	$ 1,388,294
Stratum #4 (projects $1,200-$1,900)	1,088	$ 1,641,913
Stratum #5 (projects $1,900-$2,800)	739	$ 1,703,320
Stratum #6 (projects $2,800-$4,300)	474	$ 1,604,265
Stratum #7 (projects $4,300-$7,400)	254	$ 1,375,211
Stratum #8 (projects $7,400-$20,000)	97	$ 998,013
Stratum #9 (projects greater than $20,000)	6	$ 149,502
Total Service Projects	8,130	$10,688,717

	C	D	E	F	G	H	I=G÷D	J=H÷D
Sample	**No. of Projects**	**Sample Cost**	**CIAC Identified**	**CIAC Billed/Collected**	**CIAC Not Collected**	**CIAC Over-Collected**	**% Not Collected**	**% of CIAC Overcollected**
Stratum #1 (projects $0-$440)	5	$ 1,461	$ 259	$ 122	$ 137	$ -	9.36%	0.00%
Stratum #2 (projects $440-$750)	6	$ 3,491	$ 2,189	$ 2,189	$ -	$ -	0.00%	0.00%
Stratum #3 (projects $750-$1,200)	7	$ 6,642	$ 866	$ 747	$ 119	$ -	1.79%	0.00%
Stratum #4 (projects $1,200-$1,900)	5	$ 7,335	$ 635	$ 1,035	$ -	$ 400	0.00%	5.45%
Stratum #5 (projects $1,900-$2,800)	6	$ 14,329	$ 1,974	$ 1,974	$ -	$ -	0.00%	0.00%
Stratum #6 (projects $2,800-$4,300)	6	$ 20,232	$ 4,995	$ 3,206	$ 1,789	$ -	8.84%	0.00%
Stratum #7 (projects $4,300-$7,400)	6	$ 30,280	$ 9,274	$ 9,274	$ -	$ -	0.00%	0.00%
Stratum #8 (projects $7,400-$20,000)	6	$ 63,332	$ 15,853	$ 16,475	$ 623	$ -	0.98%	0.00%
Stratum #9 (projects greater than $20,000)	6	$ 149,502	$ 231	$ 231	$ -	$ -	0.00%	0.00%
TOTAL Adjustment for Service Projects	53	$ 296,603	$ 36,275	$ 35,253	$ 2,667	$ 400	0.90%	0.13%

sample cost % of CIAC (E÷D) 12.23%

7.35% CIAC not collected (G÷E)

Cost of service ext $ 10,688,717
assumed CIAC % 12.23%
assumed extrapolated CIAC $ 1,307,245

assumed CIAC % not collected 7.35%
assumed extrapolated CIAC not collected **$ 96,115** Rate Base Reduction

Service Projects 2014-2016

	A	B
Population	**No. of Projects**	**Total Cost**
Stratum #1 (projects $0-$350)	2,032	$ 452,006
Stratum #2 (projects $350-$700)	1,948	$ 1,000,491
Stratum #3 (projects $700-$1,100)	1,539	$ 1,364,785
Stratum #4 (projects $1,100-$1,700)	1,240	$ 1,694,523
Stratum #5 (projects $1,700-$2,600)	838	$ 1,743,928
Stratum #6 (projects $2,600-$4,200)	502	$ 1,625,787
Stratum #7 (projects $4,200-$8,000)	219	$ 1,206,058
Stratum #8 (projects $8,000-$30,000)	60	$ 738,257
Stratum #9 (projects greater than $30,000)	3	$ 126,318
Total Service Projects	8,381	$ 9,952,154

	C	D	E	F	G	H	I=G÷D	J=H÷D
Sample	**No. of Projects**	**Sample Cost**	**CIAC Identified**	**CIAC Billed/Collected**	**CIAC Not Collected**	**CIAC Over-Collected**	**% Not Collected**	**% of CIAC Overcollected**
Stratum #1 (projects $0-$350)	2	$ 528	$ -	$ -	$ -	$ -	0.00%	0.00%
Stratum #2 (projects $350-$700)	8	$ 3,529	$ 1,055	$ 2,516	$ -	$ 1,461	0.00%	41.39%
Stratum #3 (projects $700-$1,100)	5	$ 2,774	$ 1,964	$ 1,969	$ 5	$ -	0.17%	0.00%
Stratum #4 (projects $1,100-$1,700)	8	$ 9,566	$ 4,557	$ 4,557	$ -	$ -	0.00%	0.00%
Stratum #5 (projects $1,700-$2,600)	8	$ 13,374	$ 2,323	$ 2,309	$ 14	$ -	0.10%	0.00%
Stratum #6 (projects $2,600-$4,200)	8	$ 34,690	$ 3,080	$ 3,080	$ -	$ -	0.00%	0.00%
Stratum #7 (projects $4,200-$8,000)	9	$ 40,619	$ 14,209	$ 13,894	$ 315	$ -	0.78%	0.00%
Stratum #8 (projects $8,000-$30,000)	8	$ 83,308	$ 14,311	$ 14,211	$ 100	$ -	0.12%	0.00%
Stratum #9 (projects greater than $30,000)	3	$ 82,231	$ -	$ -	$ -	$ -	0.00%	0.00%
TOTAL Adjustment for Service Projects	59	$ 270,620	$ 41,499	$ 42,535	$ 434	$ 1,461	0.16%	0.54%

sample cost % of CIAC (E÷D) 15.33%

1.04% CIAC not collected (G÷E)

Cost of service ext $ 9,952,154
assumed CIAC % 15.33%
assumed extrapolated CIAC $ 1,526,133

assumed CIAC % not collected 1.04%
assumed extrapolated CIAC not collected **$ 15,948** Rate Base Reduction

CIAC Audit Results: Service Extensons 2009-2020

Service Projects 2017

	A	B
Population	**No. of Projects**	**Total Cost**
Stratum #1 (projects $0-$600)	620	$ 235,842.00
Stratum #2 (projects $600-$1,099)	574	$ 475,103.00
Stratum #3 (projects $1,099-$1,798)	421	$ 597,722.00
Stratum #4 (projects $1,798-$2,691)	290	$ 641,136.00
Stratum #5 (projects $2,691-$4,195)	175	$ 576,033.00
Stratum #6 (projects $4,195-$6,968)	98	$ 514,663.00
Stratum #7 (projects $6,968-$13,403)	46	$ 405,503.00
Stratum #8 (projects $13,403-$50,000)	12	$ 246,508.00
Stratum #9 (projects greater than $50,000)	2	$ 319,264.00
Total Service Projects	2,238	$ 4,011,774

	C	D	E	F	G	H	I=G÷D	J=H÷D
Sample	**No. of Projects**	**Sample Cost**	**CIAC Identified**	**CIAC Billed/Collected**	**CIAC Not Collected**	**CIAC Over-Collected**	**% Not Collected**	**% of CIAC Overcollected**
Stratum #1 (projects $0-$600)	6	$ 2,442	$ 166	$ 253	$ -	$ 88	0.00%	3.58%
Stratum #2 (projects $600-$1,099)	6	$ 4,461	$ 1,420	$ 1,420	$ -	$ -	0.00%	0.00%
Stratum #3 (projects $1,099-$1,798)	6	$ 9,102	$ 4,868	$ 4,452	$ 416	$ -	4.57%	0.00%
Stratum #4 (projects $1,798-$2,691)	5	$ 11,014	$ 288	$ 255	$ 33	$ -	0.30%	0.00%
Stratum #5 (projects $2,691-$4,195)	6	$ 19,792	$ 4,752	$ 4,752	$ -	$ -	0.00%	0.00%
Stratum #6 (projects $4,195-$6,968)	6	$ 30,214	$ 6,327	$ 6,195	$ 132	$ -	0.44%	0.00%
Stratum #7 (projects $6,968-$13,403)	5	$ 44,025	$ 2,059	$ 2,059	$ -	$ -	0.00%	0.00%
Stratum #8 (projects $13,403-$50,000)	5	$ 96,001	$ 9,791	$ 9,791	$ -	$ -	0.00%	0.00%
Stratum #9 (projects greater than $50,000)	2	$ 319,264	$ 1,401	$ 1,401	$ -	$ -	0.00%	0.00%
TOTAL Adjustment for Service Projects	47	$ 536,315	$ 31,071	$ 30,577	$ 582	$ 88	0.11%	0.02%

sample cost % of CIAC (E÷D) 5.79% 1.87% CIAC not collected (G÷E)

Cost of service ext	$ 4,011,774
assumed CIAC %	5.79%
assumed extrapolated CIAC	$ 232,422
assumed CIAC % not collected	1.87%
assumed extrapolated CIAC not collected	**$ 4,352** Rate Base Reduction

Service Projects 2018

	A	B
Population	**No. of Projects**	**Total Cost**
Stratum #1 (projects $0-$500)	822	$ 267,403.41
Stratum #2 (projects $500-$1,000)	1,061	$ 787,785.21
Stratum #3 (projects $1,000-$2,000)	983	$ 1,404,279.55
Stratum #4 (projects $2,000-$3,000)	413	$ 1,000,964.19
Stratum #5 (projects $3,000-$4,000)	185	$ 628,289.41
Stratum #6 (projects $4,000-$6,000)	152	$ 732,899.99
Stratum #7 (projects $6,000-$10,000)	90	$ 666,204.79
Stratum #8 (projects $10,000-$15,000)	17	$ 199,854.64
Stratum #9 (projects greater than $15,000)	8	$ 195,635.81
Total Service Projects	3,731	$ 5,883,317

	C	D	E	F	G	H	I=G÷D	J=H÷D
Sample	**No. of Projects**	**Sample Cost**	**CIAC Identified**	**CIAC Billed/Collected**	**CIAC Not Collected**	**CIAC Over-Collected**	**% Not Collected**	**% of CIAC Overcollected**
Stratum #1 (projects $0-$500)	8	$ 2,764	$ 931	$ 955	$ -	$ 24	0.00%	0.85%
Stratum #2 (projects $500-$1,000)	15	$ 11,331	$ 1,868	$ 1,882	$ -	$ 14	0.00%	0.12%
Stratum #3 (projects $1,000-$2,000)	10	$ 13,836	$ 2,080	$ 2,178	$ -	$ 98	0.00%	0.71%
Stratum #4 (projects $2,000-$3,000)	4	$ 9,653	$ 5,162	$ 5,162	$ -	$ -	0.00%	0.00%
Stratum #5 (projects $3,000-$4,000)	3	$ 9,663	$ 7,375	$ 7,375	$ -	$ -	0.00%	0.00%
Stratum #6 (projects $4,000-$6,000)	5	$ 22,790	$ 10,832	$ 10,888	$ -	$ 56	0.00%	0.25%
Stratum #7 (projects $6,000-$10,000)	5	$ 37,370	$ 1,190	$ 1,407	$ -	$ 217	0.00%	0.58%
Stratum #8 (projects $10,000-$15,000)	4	$ 46,008	$ 3,513	$ 3,629	$ -	$ 116	0.00%	0.25%
Stratum #9 (projects greater than $15,000)	7	$ 176,927	$ 11,933	$ 11,835	$ 97	$ -	0.05%	0.00%
TOTAL Adjustment for Service Projects	61	$ 330,343	$ 44,883	$ 45,310	$ 97	$ 525	0.03%	0.16%

sample cost % of CIAC (E÷D) 13.59% 0.22% CIAC not collected (G÷E)

Cost of service ext	$ 5,883,317
assumed CIAC %	13.59%
assumed extrapolated CIAC	$ 799,347
assumed CIAC % not collected	0.22%
assumed extrapolated CIAC not collected	**$ 1,729** Rate Base Reduction

CIAC Audit Results: Service Extensons 2009-2020

Service Projects 2019-2020

	A	B
Population	**No. of Projects**	**Total Cost**
Stratum #1 (projects $0-$500)	1,286	$ 366,928
Stratum #2 (projects $500-$1,000)	1,298	$ 979,153
Stratum #3 (projects $1,000-$2,000)	1,771	$ 2,510,747
Stratum #4 (projects $2,000-$3,000)	768	$ 1,863,938
Stratum #5 (projects $3,000-$4,000)	387	$ 1,339,870
Stratum #6 (projects $4,001-$6,000)	356	$ 1,704,807
Stratum #7 (projects $6,000-$10,000)	162	$ 1,182,775
Stratum #8 (projects $10,000-$20,000)	79	$ 1,098,022
Stratum #9 (projects greater than $20,000)	22	$ 1,934,965
Total Service Projects	6,129	$12,981,205

	C	D	E	F	G	H	I=G÷D	J=H÷D
Sample	**No. of Projects**	**Sample Cost**	**CIAC Identified**	**CIAC Billed/Collected**	**CIAC Not Collected**	**CIAC Over-Collected**	**% Not Collected**	**% of CIAC Overcollected**
Stratum #1 (projects $0-$500)	16	$ 4,403	$ 1,603	$ 1,603	$ -	$ -	0.00%	0.00%
Stratum #2 (projects $500-$1,000)	14	$ 10,207	$ 6,927	$ 6,341	$ 586	0	5.74%	0.00%
Stratum #3 (projects $1,000-$2,000)	27	$ 36,720	$ 4,193	$ 4,350	$ -	$ 158	0.00%	0.43%
Stratum #4 (projects $2,000-$3,000)	11	$ 27,195	$ 7,072	$ 6,995	$ 77	$ -	0.28%	0.00%
Stratum #5 (projects $3,000-$4,000)	9	$ 30,211	$ 1,919	$ 2,265	$ -	$ 346	0.00%	1.15%
Stratum #6 (projects $4,000-$6,000)	11	$ 51,711	$ 6,610	$ 6,091	$ 519	$ -	1.00%	0.00%
Stratum #7 (projects $6,000-$10,000)	10	$ 75,688	$ 14,049	$ 13,990	$ 59	$ -	0.08%	0.00%
Stratum #8 (projects $10,000-$20,000)	10	$ 137,205	$ 12,092	$ 12,495	$ -	$ 404	0.00%	0.29%
Stratum #9 (projects greater than $20,000)	20	$ 557,367	$ 30,183	$ 29,690	$ 494	$ -	0.09%	0.00%
TOTAL Adjustment for Service Projects	128	$ 930,708	$ 84,646	$ 83,820	$ 1,734	$ 908	0.19%	0.10%

sample cost % of CIAC (E÷D) 9.09%

2.05% CIAC not collected (G÷E)

Cost of service ext	$ 12,981,205
assumed CIAC %	9.09%
assumed extrapolated CIAC	$ 1,180,616
assumed CIAC % not collected	2.05%
assumed extrapolated CIAC not collected	**$ 24,182** Rate Base Reduction

2009-2013	**$**	**96,115**
2014-2016	**$**	**15,948**
2017	**$**	**4,352**
2018	**$**	**1,729**
2019-2020	**$**	**24,182**
	$	**142,326** **Total Services Rate Base Reduction**

CIAC Audit Results: Main Extensions 2009-2020

Main Projects 2009-2013

	A	B
Population	**No. of Projects**	**Total Cost**
Stratum #1-#5 (projects up to $100,000)	378	$ 4,166,604
Stratum #6 (projects greater than $100,000)	9	$ 2,939,718
Total Main Projects	387	$ 7,106,322

	C	D	E	F	G	H	I=G÷D	J=H÷D
Sample	**No. of Projects**	**Sample Cost**	**CIAC Identified**	**CIAC Billed/Collected**	**CIAC Not Collected**	**CIAC Over-Collected**	**% Not Collected**	**% of CIAC Overcollected**
Stratum #1-#5 (projects up to $100,000)	24	$ 490,326	$ 45,462	$ 45,462	$ -	$ -	0.00%	0.00%
Stratum #6 (projects greater than $100,000)	9	$ 2,939,718	$ 265,519	$ 265,519	$ -	$ -	0.00%	0.00%
TOTAL Adjustment for Main Projects	33	$ 3,430,044	$ 310,981	$ 310,981	$ -	$ -	0.00%	0.00%
							0.00%	0.00%

sample cost % of CIAC (E÷D) 9.07% 0.00% CIAC not collected (G÷E)

Cost of Main ext	$ 7,106,322
assumed CIAC %	9.07%
assumed extrapolated CIAC	$ 644,286
assumed CIAC % not collected	0.00%
assumed extrapolated CIAC not collected	**$ -** Rate Base Reduction

Main Projects 2014-2016

	A	B
Population	**No. of Projects**	**Total Cost**
Stratum #1-#4 (projects $0 up to $250,000)	943	$ 9,944,888
Stratum #5 (projects greater than $250,000)	13	$ 11,016,163
Total Main Projects	956	$ 20,961,052

	C	D	E	F	G	H	I=G÷D	J=H÷D
Sample	**No. of Projects**	**Sample Cost**	**CIAC Identified**	**CIAC Billed/Collected**	**CIAC Not Collected**	**CIAC Over-Collected**	**% Not Collected**	**% of CIAC Overcollected**
Stratum #1-#4 (projects $0 up to $250,000)	20	$ 688,456	$ 48,493	$ 48,493	$ -	$ -	0.00%	0.00%
Stratum #5 (projects greater than $250,000)	12	$ 10,633,328	$ -	$ -	$ -	$ -	0.00%	0.00%
TOTAL Adjustment for Main Projects	32	$ 11,321,784	$ 48,493	$ 48,493	$ -	$ -	0.00%	0.00%

sample cost % of CIAC (E÷D) 0.43% 0.00% CIAC not collected (G÷E)

Cost of Main ext	$ 20,961,052
assumed CIAC %	0.43%
assumed extrapolated CIAC	$ 89,779
assumed CIAC % not collected	0.00%
assumed extrapolated CIAC not collected	**$ -** Rate Base Reduction

CIAC Audit Results: Main Extensions 2009-2020

Main Projects 2017-2018

	A	B
Population	**No. of Projects**	**Total Cost**
Stratum #1-#4 (projects $0 up to $100,000)	358	$ 5,830,773
Stratum #5 (projects greater than $100,000)	18	$ 6,256,461
Total Main Projects	376	$ 12,087,234

	C	D	E	F	G	H	I=G÷D	J=H÷D
Sample	**No. of Projects**	**Sample Cost**	**CIAC Identified**	**CIAC Billed/Collected**	**CIAC Not Collected**	**CIAC Over-Collected**	**% Not Collected**	**% of CIAC Overcollected**
Stratum #1-#4 (projects $0 up to $100,000)	44	$ 1,096,059	$ 126,215	$ 126,215	$ -	$ -	0.00%	0.00%
Stratum #5 (projects greater than $100,000)	15	$ 5,688,080	$ 96,050	$ 96,050	$ -	$ -	0.00%	0.00%
TOTAL Adjustment for Main Projects	59	$ 6,784,139	$ 222,265	$ 222,265	$ -	$ -	0.00%	0.00%

sample cost % of CIAC (E÷D)	3.28%	
	0.00%	CIAC not collected (G÷E)
Cost of Main ext	$ 12,087,234	
assumed CIAC %	3.28%	
assumed extrapolated CIAC	$ 396,008	
assumed CIAC % not collected	0.00%	
assumed extrapolated CIAC not collected	**$ -**	Rate Base Reduction

Main Projects 2019-2020

	A	B
Population	**No. of Projects**	**Total Cost**
Stratum #1-#4 (projects $0 up to $125,000)	228	$ 6,727,386
Stratum #5 (projects greater than $125,000)	16	$ 2,923,766
Total Main Projects	244	$ 9,651,152

	C	D	E	F	G	H	I=G÷D	J=H÷D
Sample	**No. of Projects**	**Sample Cost**	**CIAC Identified**	**CIAC Billed/Collected**	**CIAC Not Collected**	**CIAC Over-Collected**	**% Not Collected**	**% of CIAC Overcollected**
Stratum #1-#4 (projects $0 up to $125,000)	52	$ 1,540,862	$ 76,343	$ 73,143	$ 3,200	$ -	0.21%	0.00%
Stratum #5 (projects greater than $125,000)	16	$ 2,923,766	$ 165,363	$ 165,363	$ -	$ -	0.00%	0.00%
TOTAL Adjustment for Main Projects	68	$ 4,464,628	$ 241,706	$ 238,506	$ 3,200	$ -	0.11%	0.00%

sample cost % of CIAC (E÷D)	5.41%	
	1.32%	CIAC not collected (G÷E)
Cost of Main ext	$ 9,651,152	
assumed CIAC %	5.41%	
assumed extrapolated CIAC	$ 522,493	
assumed CIAC % not collected	1.32%	
assumed extrapolated CIAC not collected	**$ 6,917**	Rate Base Reduction

2009-2013	**$ -**	
2014-2016	**$ -**	
2017-2018	**$ -**	
2019-2020	**$ 6,917**	
	$ 6,917	**Total Mains Rate Base Reduction**