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October 13, 2020

Nebraska Public Service Commission
1200 N Street
Suite 300
Lincoln, Nebraska 68508

Attn: Mr. Mike Hybl
Executive Director

Re: **Progress Report**

Black Hills/Nebraska Gas Utility Company, LLC d/b/a Black Hills Energy Seeking Approval to adjust the surcharge for the Farm Tap Safety Program for 2019-2020 and Associated Tariff Application No. NG-0090.2 – Final Report

Dear Mr. Hybl:

Pursuant to the Nebraska Public Service Commission's ("Commission") Hearing Officer Order dated October 29, 2019 in the above-captioned proceeding. That Order stated:

> *"Within sixty (60) days of completion of the project, Black Hills should file its Final Report summarizing the Farm Tap Project and including final expenditures, surcharge revenue collected, the number of service lines purchase, replaced, or abandoned, a progress report based upon the implementation plan including any customer requests for line upgrades or extensions, and any other information necessary for adequate review of the complete project."*

As of October 13, the Farm Tap Replacement Project has not been completed due to legal disputes and easement issues. BH Nebraska Gas provides this Progress Farm Tap Report that includes all of the reporting requirements of the Final Report. This Report is shown in Exhibit A contains information current as of September 30, 2020. BH Nebraska Gas will file a Final Report within 60 days of the completion of the project.

All customer requests for line upgrades or extensions were analyzed independently, and no related construction costs were charged to the Farm Tap Workorders.

BH Nebraska Gas continues to investigate and to resolve the few remaining Farm Taps that continue to have easement disputes or other landowner issues. In compliance with the BH Nebraska Gas tariff, if these easement disputes and related issues are not be resolved by mutual agreement after repeated attempts by BH Nebraska Gas, then BH Nebraska Gas will plan to stop serving these customers. There will be no service disconnections in the winter and customers will be given ample notice for them to switch to propane. Any costs associated with the Farm Taps remaining to be purchased or replace due to the easement issues will be included in a future regulatory filing with the Commission.

If you have any questions or concerns regarding the enclosed filing, please contact me at your earliest convenience.

Respectfully submitted,

/s/ Jason Bennett

Jason Bennett
Manager of Regulatory & Finance – Nebraska

And

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ATTORNEY FOR BLACK HILLS NEBRASKA GAS, LLC d/b/a Black Hills Energy

CERTIFICATE OF SERVICE

On the 13th day of October, 2020, I caused to be served a true and accurate copy of this notice upon the appropriate parties to this proceeding by depositing the same in the United States mail, postage prepaid, addressed to:

Commission
Nichole Mulcahy
Sallie Dietrich
Deena Ackerman

Public Advocate
William Austin – Public Advocate
Donna Mullinax – Public Advocate

Black Hills Energy
Robert Amdor
Kevin Jarosz
Jill Becker
Tyler Frost
Jeff Thomas
Christina Ellis

/s/Christina Ellis
Christina Ellis

2021 PROJECTS
REFLECTED IN THE
SYSTEM SAFETY AND INTEGRITY RIDER
FOR BLACK HILLS NEBRASKA GAS, LLC
IN NEBRASKA

Black Hills Energy
Improving life with energy

October 13~~June 1~~, 2020

2021 PROJECTS REFLECTED IN THE SYSTEM SAFETY AND INTEGRITY RIDER FOR BLACK HILLS NEBRASKA GAS, LLC IN NEBRASKA

Filed ~~June 1~~October 13, 2020

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2021 PROJECTS REFLECTED IN THE

SYSTEM SAFETY AND INTEGRITY RIDER

FOR BLACK HILLS NEBRASKA GAS, LLC IN NEBRASKA

I. INTRODUCTION

As set forth on First Revised Sheet Nos. 127-131 of the proposed Nebraska Gas Tariff No. 1 (the "Tariff") of BH Nebraska Gas, LLC d/b/a Black Hills Energy (the "Company"), all Jurisdictional Residential, Commercial, and Commercial – Energy Options customers shall be subject to a System Safety and Integrity Rider ("SSIR") designed to collect Eligible System Safety and Integrity Costs. BH Nebraska Gas is proposing the SSIR Tariff, with the same effective date as Docket No. NG-109.

Under the proposed SSIR Tariff, the Company will be authorized to collect the revenue requirement of Eligible System Safety and Integrity Costs projected for the period January 1, 2021 through December 31, 2021 through the Safety and Integrity Charge (the "SSIR Charge") over the period March 1, 2021 through December 31, 2021. The SSIR Charge to be applied to each Rate Schedule is as set forth on the Rate Schedules and Other Charges Schedule of Rates, Sheet No. 78 of the Tariff.

The proposed SSIR Tariff requires that this application include pertinent information and supporting data related to eligible SSIR costs, including, at a minimum, SSIR Project descriptions and scopes, SSIR Project costs, and in-service dates.

The proposed SSIR Tariff defines Eligible System Safety and Integrity Costs to mean:

1) A return, at a percentage equal to the Company's currently authorized weighted average cost of capital grossed up for taxes, on the projected increase in the jurisdictional component of the month ending net plant in-service balances associated with the Projects for the particular calendar year in which the SSIR Charge shall be in effect, exclusive of all plant in-service included in the determination of the revenue requirements approved in the Company's last general rate case;

2) The plant-related ownership costs associated with such incremental plant investment, including depreciation, accumulated deferred income taxes, and all taxes including income taxes and property taxes; and

3) The projected jurisdictional component of the operation and maintenance expenses related to the Projects for the particular year in which the SSIR Charge shall be in effect.

The return and income taxes and plant related costs associated with improvements or upgrades to facilities, made at the discretion of the Company to extend service or for future growth that is not specifically required by a statute or regulation, shall be excluded from Eligible System Safety and Integrity Costs.

As set forth in the proposed SSIR Tariff, SSIR Projects (also referenced in this filing as "Projects") mean:

i. Projects to comply with Code of Federal Regulations ("CFR") Title 49 (Transportation), Part 192 (Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards), Subpart O (Gas Transmission Pipeline Integrity Management), including Projects in accordance with the Company's transmission integrity management program ("TIMP") and Projects in accordance with State enforcement of Subpart O and the Company's TIMP;

ii. Projects to comply with CFR Title 49 (Transportation), Part 192 (Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards), Subpart P (Gas Distribution Pipeline Integrity Management), including Projects in accordance with the Company's distribution integrity management program ("DIMP") and Projects in accordance with State enforcement of Subpart P and the Company's DIMP;

iii. Projects to comply with final rules and regulations of the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration ("PHMSA") that become effective on or after the filing date of the application requesting approval of the SSIR; and

iv. Facility relocation projects with a per-Project total cost of $20,000 or more, exclusive of all costs that have been, are being, or will be reimbursed otherwise, that are required due to construction or improvement of a highway, road, street, public way or other public work by or on behalf of the United States, the State of Nebraska, a political subdivision of the State of Nebraska or another entity having the power of eminent domain.

v. Projects to ensure gas is available, delivered and measured for our customers in all situations. In some cases, these projects will not replace any existing infrastructure, and are required to maintain minimum pressure requirements on our distribution system to prevent loss of customers on a winter peak day. These projects are considered "Reliability Projects".

As shown in Exhibit 2, Table K page 11 of 13 to this application, the Company has identified 93 individually numbered Capital SSIR Projects and 1 Operations and Maintenance ("O&M") Expense SSIR Projects for the instant filing. In total, the Company's projected capital and O&M expenditures for 2021 SSIR Projects total $50,321,427.

All 94 Projects will be in service in 2021.

Additionally, the Company each year encounters the need to conduct facility relocation projects in connection with municipal infrastructure projects. Municipalities typically do not finalize their plans for infrastructure projects for a particular calendar year, however, until late in the previous calendar year or early in the calendar year in which those projects will be conducted. Consequently, although the Company is aware of several potential municipal infrastructure projects in 2021 (*see* Section II.I below) that may require the Company to conduct facility relocation projects the costs of which are Eligible System Safety and Integrity Costs for recovery through the SSIR Tariff, those Projects are not sufficiently definitive at this time for the Company to request prospective recovery of Eligible System Safety and Integrity Costs through this filing. Therefore, as part of its annual surveillance report, the Company will provide an update of its facility relocation projects in connection with municipal infrastructure projects and, through its 2022 annual filing, will seek to recover the Eligible System Safety and Integrity Costs associated with those projects.

The Company uses three distinct risk models corresponding to the TIMP, DIMP and the At-Risk Meter Relocation (ARMR) Program. All three models use objective and external factors and provide scores that correlate to proactive analysis of system risk, as described below.

1) The TIMP risk model is based on PHMSA mandates and laws enacted in 2004 which are very prescriptive. It is a relative risk ranking that utilizes a Risk of Failure = Likelihood of Failure * Consequence of Failure algorithm. It considers the nine primary threats categories recognized by PHMSA 192 Subpart O and ASME B31.8S: External Corrosion, Internal Corrosion, Stress Corrosion Cracking, Third Party Damage, Weather and Outside Force Damage, Manufacturing Defects, Construction Defects, Incorrect Operations, and Equipment Failure. The range of scores are a relative percentage of Risk of Failure (ROF). For Nebraska the range is 10.4% to 61.2%.

2) The DIMP risk model[1] is based on PHMSA mandates from 2011 and is much less prescriptive. It uses spatial analysis and other external factors beyond leak and

[1] The Black Hills Energy DIMP O&M Risk Assessment is included as Appendix A.

damage history to assess eight threat categories: Corrosion Failure; Natural Force Damage; Excavation Damage; Other Outside Force Damage; Pipe, Weld, or Joint Failure; Equipment Failure; Incorrect Operation; Other Causes. Each threat category has multiple sub-threats, creating 75 sub-threats[2] to be evaluated for each project. The likelihood of failure and consequence of failure and asset consequence of sub-threats are quantified and accumulated to determine the score for projects. For Nebraska, the range of scores are 698.8 to 3389.

3) The ARMR risk model[3] is unique because most of the pipe involved is customer owned pipe, so the risk ranking is based on nearby damages. Meter location data is used to identify meters most likely at risk based on location assignment. Leak data is then applied to determine a subset of those meters that are most likely in harms way based on historic damage. The DIMP risk score and consequence threats are used to further prioritize the results. Finally, interpolation zones are created based on the DIMP risk data to assign remaining meters a ranking. For Nebraska, the range of scores are 2.57 to 2,480,896.80.

In addition to the risk models, the Company also considers other criteria, such as the availability of internal and external crews; project management constraints; local economic development plans; customer inconvenience and impact; other specific regulatory requirements; threat assessment; corrosion control analysis; pipeline vintage; pipeline material; pipeline design and class location; pipeline configuration and segmentation; pipeline system constraints; pipeline replacement history; population density; pipeline maintenance and internal inspection history; pipeline piggability; existence and reliability of pipeline asset and testing records; pipeline leakage and other incident history; subject matter expert knowledge; Project timeframe; weather and climate constraints on the construction season; permitting constraints; probability of pipeline testing failures and dewatering constraints; service outage management; and pipeline source of supply and availability of alternate gas supply.

As part of the analysis, the proposed SSIR Tariff requires the Company to identify and describe the proposed SSIR Projects that are for high-risk gas infrastructure by providing its risk assessment for each such SSIR Project including, if applicable, the probability of failure, the consequences of failure for the SSIR Project and how the Company prioritized the SSIR Project for which it seeks recovery. There are no SSIR Projects included within this filing that fall into this category.

[2] The Threat Matrix of the 75 sub-threats are included as Appendix B.
[3] The workflow of the ARMR Program Identification & Prioritization Process is included as Appendix C.

II. 2021 SSIR PROJECTS

A. Replacement of Bare Steel Distribution Main

1. Background

The Company operates approximately almost 5000 miles of distribution system in Nebraska, of which approximately 15% are bare steel distribution main with various dates of installation ranging from the 1930s to approximately 1960. Although age alone does not determine the integrity of a pipeline system, some older pipeline facilities that are constructed of certain materials, including bare steel, may have degraded over time. It becomes increasingly difficult to maintain effective corrosion protection because of the age of the system, and bare steel pipeline, in coordination with the State Fire Marshall's office, is no longer cathodically protected which has necessitated an accelerated removal. Compared with coated steel pipelines, bare steel pipelines corrode at a higher rate because there is no coating to serve as a barrier between the steel and the soil. Also, many pipeline segments may not meet today's pipeline construction standards, and some have been exposed to additional threats, such as excavation damage. In addition, there are some early vintage steel pipelines in certain areas that may pose risks because of incomplete records or construction practices not up to today's standard. Based upon known data, including installation records and construction methods, leakage history, cathodic protection data, damage history and population density, the Company's DIMP identifies bare steel segments that are higher risk.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

The Company identified three bare steel distribution main pipeline segments requiring remediation under CFR Title 49, Part 192, Subpart P, DIMP. Section 192.1007 requires a pipeline operator to identify threats, evaluate and risk rank, and identify and implement measures to address risks.

b) Objective Criteria Analyzed

The Company used the objective criteria included in the DIMP risk model, as well as the availability of internal and external crews, project management constraints, local economic development plans and customer impact.

3. Program Description

The Company has identified three specific bare steel distribution main replacement projects scheduled to be completed in 2021. Typically for distribution line replacement projects, polyethylene pipe is used for both the distribution mains and associated service lines unless the system is required to operate above 100 pounds per square inch gauge ("psig"). If the system is required to operate above 100 psig, then steel pipe with fusion bonded epoxy coating is utilized. Bare Steel pipe is associated with accelerated corrosion and a construction date that usually predates the creation of formal construction standards in the natural gas utility industry. The total capital expenditure for these SSIR Projects in 2021 is estimated to be $*2,286,001*.

4. Specific Projects

a) Crete, Nebraska – Bare Main Replacement

This SSIR project will consist of replacing 330 feet of unprotected bare steel main that was installed in the 1970's in Crete, NE. It will also involve the replacement of 123 service lines, each averaging 50 to 100 feet in length with one-inch PE pipe. The max score for this project is 2066.7 based on the risk model. The estimated total capital cost of this SSIR Project is $13,012. The anticipated in-service date is October 31, 2021.

b) Peru, Nebraska – Bare Main Replacement

This SSIR project will consist of replacing 428 feet of unprotected bare steel main that was installed in the 1970's in Peru, NE. The max score for this project is 1972.4 based on the risk model. The estimated total capital cost of this SSIR Project is $16,840. The anticipated in-service date is October 31, 2021.

c) Wayne, Nebraska – Bare Main Replacement

This SSIR project will consist of replacing 57,272 feet of unprotected bare steel main that was installed in the 1970's in Wayne, NE. It will also involve the replacement of 690 service lines, each averaging 50 to 100 feet in length with one-inch PE pipe. The max score for this project is 1951.6 based on the risk model. The estimated total capital cost of this SSIR Project is $2,256,149. The anticipated in-service date is October 31, 2021.

B. Replacement of Transmission Pipeline

1. Background

BH Nebraska Gas operates more than 1,200 miles of transmission system in Nebraska. Although age alone does not determine the integrity of a pipeline system, some older pipeline facilities installed prior to 1960 are constructed of certain materials and with certain coatings that have degraded over time. Even though these transmission lines are cathodically protected, it becomes increasingly difficult to maintain effective corrosion protection because of the age of the system. Based upon known data, including installation records and construction methods, leakage history, cathodic protection data, damage history and population density, the Company's TIMP identifies transmission pipeline segments that are higher risk.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

The Company identified no transmission pipeline segments displaying safety threats requiring remediation in 2021 under CFR Title 49, Part 192, Subpart O, TIMP. Section 192.917 requires a pipeline operator to evaluate and remediate pipeline segments where corrosion has been identified that could adversely affect the integrity of the line.

b) Objective Criteria Analyzed

The Company used the objective criteria included in the TIMP risk model, as well as the availability of internal and external crews, project management constraints, local economic development plans and customer impact.

3. Program Description

The Company has not identified any specific transmission replacement project scheduled to be completed in 2021.

C. Barricades

1. Background

These SSIR Projects involve the installation of barricades to protect meter, regulator and valve settings from outside force damage. This threat is largely caused by meter loops being at the customer's property line, in an alley or adjacent to the street. In addition, the widening of streets and highways, increased utilization of agricultural land, and increased traffic from both mechanized farm equipment and motor vehicles have rendered many meters more vulnerable to outside force damage. Often times, these meters are bumped by vehicles backing out of garages or hit alongside a street that result in a bent meter or leak to the meter loop. Alongside meter loops, regulator and valve sets also are susceptible to outside force damage both in city limits and rural areas. The occurrence of such damage has increased over the years, and Company records show that the greatest risk to its distribution system is outside force damage, much of which is a result of meters being hit by vehicles and farm equipment.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

The Company identified no facilities requiring remediation in 2021 under CFR Title 49, Part 192, Subpart P, DIMP. Section 192.1007 requires a pipeline operator to identify threats, evaluate and risk rank, and identify and implement measures to address risks.

b) Objective Criteria Analyzed

The Company used the objective criteria included in the DIMP risk model, as well as the availability of internal and external crews, project management constraints, local economic development plans and customer impact.

3. Program Description

Barricades are structures typically fabricated from pipe material and resemble a fence or cage-like structure around the meter. For most meter applications, the Company installs prefabricated meter barricades manufactured with two-inch pipe. Larger meters, regulator stations or valve settings may require custom fabrication to properly fit and protect the asset. The locations requiring the installation of a barricade are determined by field personnel working in

conjunction with the Company's integrity management members to determine which facilities are at high risk. Factors in this determination include, but are not limited to, previous damage history, proximity to roadways, field observations and system operating pressures. The Company does not plan to install any barricades in 2021.

D. Cathodic Protection and Corrosion Prevention

1. Background

Cathodic protection infrastructure is to be applied to all steel pipelines according to PHMSA regulations published in 49 CFR Section 192.451. The Company meets this requirement by utilizing galvanic anode applications as well as Impressed Current Cathodic Protection. Cathodic protection is an electrochemical process used to protect steel structures in contact with soil. The soil is the electrolyte portion of the corrosion cell with the pipeline as the cathode of the electrical circuit. The intent in the application of cathodic protection is to convert the oxygen in the soil to a hydroxyl ion thus causing the environment surrounding the pipeline to become more alkaline. Steel tends to passivate in alkaline environments which result in very low corrosion rates. Magnesium anodes are installed in situations where a small amount of electrical current is needed to achieve adequate cathodic protection levels. Cathodic protection rectifiers with graphite anodes, as an Impressed Current Cathodic Protection system, are installed when a larger amount of electrical current is needed to achieve adequate cathodic protection levels.

The Company's steel pipeline system varies from bare Top of Ground ("TOG") to buried lines with various types of coatings in a variety of conditions. The electrical current requirement for each type of installation, whether bare or coated, covers a wide range. The cathodic protection levels are measured periodically as required along the pipeline. The periodic surveys will readily indicate deficiencies in the cathodic protection system. These deficiencies can be indicative of active corrosion, dis-bonded coating, anode degradation or shorted pipeline casings.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

The Company identified no projects requiring cathodic protection remediation in 2021 under CFR Title 49, Part 192 that be subject to either Subpart O (TIMP) or Subpart P (DIMP) depending on whether the pipe segment is classified as transmission or distribution pipe. For transmission segments, Section 192.917 requires a pipeline operator to evaluate and remediate pipeline segments where corrosion has been identified that could adversely affect the integrity of the line. Remediation of distribution segments is specified in Section 192.1007, which requires a

pipeline operator to identify threats, evaluate and risk rank, and identify and implement measures to address risks.

b) Objective Criteria Analyzed

The Company used the objective criteria included in the DIMP and TIMP risk models, as well as the availability of internal and external crews, project management constraints, local economic development plans and customer impact.

3. Program Description

The Company has not identified any cathodic protection SSIR Projects that require the replacement or installation of anode ground beds or rectifiers in 2021.

E. Town Border Stations ("TBS")

1. Background

Many TBS facilities in service today were built in the 1950s-1960s era, well before the requirements of 49 CFR 192 existed. Although many of these stations have provided service for well over 50 years, they may not have been built in accordance with today's standards. Many TBS facilities have outdated equipment including shop fabricated heaters that are inefficient, weighted lever reliefs, and excessive pressure drop regulators. Because of their age and certain construction methods at the time of installation, many station components are displaying corrosion concerns on the piping and other components. In some cases, the TBS equipment and piping are still adequate but the existing line heater is inefficient, undersized and/or corroding and needs to be replaced. Through a multi-year program, the Company plans to replace these aging stations and/or line heaters with components built to today's standards.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

The Company identified pipeline system components displaying safety threats requiring remediation in 2021 under CFR Title 49, Part 192 that be subject to either Subpart O (TIMP) or Subpart P (DIMP). For transmission components, Section 192.917 requires a pipeline operator to evaluate and remediate pipeline segments where corrosion has been identified that could adversely affect the integrity of the system. Remediation of distribution components is specified in Section 192.1007, which requires a pipeline operator to identify threats, evaluate and risk rank, and identify and implement measures to address risks.

b) Objective Criteria Analyzed

The Company used the objective criteria included in the DIMP and TIMP risk models, as well as the availability of internal and external crews, project management constraints, local economic development plans and customer impact.

3. Program Description

Through a multi-year program, the Company plans to replace these aging stations and/or line heaters with components built to today's standards. The new stations will be built with new components including regulators, pressure relief and isolation valves, line heaters and coated or painted new piping. For 2021, the Company has identified and scheduled for the replacement of 6 TBS at a total estimated capital cost of $*936,000*.

The Company has also identified 32 Line Heaters that need replacement at a total estimated capital cost of 607,002. These Projects are expected to be completed by December 31, 2021.

4. Specific Projects

a) Alliance, Nebraska – TBS Relocation & Replacement

This SSIR Project includes the relocation and replacement of a TBS in Alliance, NE in an effort to bring the TBS up to current code requirements and to improve the safety and reliability of the facility. The existing TBS has an open flame line heater without proper safety controls, gas carrier pipe that is used as piping support resting on concrete which is a corrosion concern, valves that are in poor condition, and pressure regulating equipment that needs updating. The max score for this project is 3254 based on the risk model. The new TBS will include a much safer manufactured water bath line heater, proper pipe supports, standby alternate path to avoid system outage, new valves, and new pressure regulating equipment. The total capital cost of this SSIR Project is estimated at $*156,000*, with a scheduled in-service date of November 30, 2021.

b) Clearwater, Nebraska – TBS Relocation & Replacement

This SSIR Project includes the relocation and replacement of a TBS in Clearwater, NE in an effort to bring the TBS up to current code requirements and to improve the safety and reliability of the facility. The existing TBS has an open flame line heater without proper safety controls, gas carrier pipe that is used as piping support resting on concrete which is a corrosion concern, valves that are in poor condition, and pressure regulating equipment that needs updating. The max score for this project is 3209 based on the risk model. The new TBS will include a much safer manufactured water bath line heater, proper pipe supports, standby

alternate path to avoid system outage, new valves, and new pressure regulating equipment. The total capital cost of this SSIR Project is estimated at $*156,000*, with a scheduled in-service date of November 30, 2021.

c) McCook, Nebraska – TBS Relocation & Replacement

This SSIR Project includes the relocation and replacement of a TBS in McCook, NE in an effort to bring the TBS up to current code requirements and to improve the safety and reliability of the facility. The existing TBS has an open flame line heater without proper safety controls, gas carrier pipe that is used as piping support resting on concrete which is a corrosion concern, valves that are in poor condition, and pressure regulating equipment that needs updating. The max score for this project is 3257 based on the risk model. The new TBS will include a much safer manufactured water bath line heater, proper pipe supports, standby alternate path to avoid system outage, new valves, and new pressure regulating equipment. The total capital cost of this SSIR Project is estimated at $*156,000*, with a scheduled in-service date of November 30, 2021.

d) Ogallala, Nebraska – TBS Relocation & Replacement

This SSIR Project includes the relocation and replacement of a TBS in Ogallala, NE in an effort to bring the TBS up to current code requirements and to improve the safety and reliability of the facility. The existing TBS has an open flame line heater without proper safety controls, gas carrier pipe that is used as piping support resting on concrete which is a corrosion concern, valves that are in poor condition, and pressure regulating equipment that needs updating. The max score for this project is 3203.7 based on the risk model. The new TBS will include a much safer manufactured water bath line heater, proper pipe supports, standby alternate path to avoid system outage, new valves, and new pressure regulating equipment. The total capital cost of this SSIR Project is estimated at $*156,000*, with a scheduled in-service date of November 30, 2021.

e) Plainview, Nebraska – TBS Relocation & Replacement

This SSIR Project includes the relocation and replacement of a TBS in Plainview, NE in an effort to bring the TBS up to current code requirements and to improve the safety and reliability of the facility. The

existing TBS has an open flame line heater without proper safety controls, gas carrier pipe that is used as piping support resting on concrete which is a corrosion concern, valves that are in poor condition, and pressure regulating equipment that needs updating. The max score for this project is 3256 based on the risk model. The new TBS will include a much safer manufactured water bath line heater, proper pipe supports, standby alternate path to avoid system outage, new valves, and new pressure regulating equipment. The total capital cost of this SSIR Project is estimated at $*156,000*, with a scheduled in-service date of November 30, 2021.

f) Utica, Nebraska – TBS Relocation & Replacement

This SSIR Project includes the relocation and replacement of a TBS in Utica, NE in an effort to bring the TBS up to current code requirements and to improve the safety and reliability of the facility. The existing TBS has an open flame line heater without proper safety controls, gas carrier pipe that is used as piping support resting on concrete which is a corrosion concern, valves that are in poor condition, and pressure regulating equipment that needs updating. The max score for this project is 3241 based on the risk model. The new TBS will include a much safer manufactured water bath line heater, proper pipe supports, standby alternate path to avoid system outage, new valves, and new pressure regulating equipment. The total capital cost of this SSIR Project is estimated at $*156,000*, with a scheduled in-service date of November 30, 2021.

g) Multiple Locations, Nebraska – Line Heater Replacement

The company has identified 25 line heaters that are to be replaced with Catalytic Panels. They are located throughout the state, specifically in Bayard, Bertrand, Broadwater, Burwell, Cambridge, Clearwater, Davenport, Deshler, Ewing, Fairfield, Franklin, Greeley, Henderson, Hildreth, Indianola, Lewellen, Lodgepole, Long Pine, Loup City, North Loup, Orchard, Oshkosh, Potter, Sargent and Wilcox. The total capital cost of these projects is estimated at $219,648 ($8,786 each), with a scheduled in-service date of November 30, 2021.

The company has identified 7 line heaters to be replaced by safe and efficient manufactured water bath style line heaters. They are located throughout the state, specifically in Elgin, Genoa, Gibbon, Laurel,

McCook (East), Ravenna and St Edward. The total capital cost of these projects is estimated at $387,354 ($55,336 each), with a scheduled in-service date of November 30, 2021.

F. Top of Ground (TOG), Span, Shallow and Exposed Pipe Replacement

1. Background

Natural gas pipelines installed today generally are below grade with a minimum cover of three feet. Burying pipelines reduces the overall risk of the pipeline from outside force among other threats. Many pipeline segments operated by the Company in Nebraska, however, were installed by the Company's predecessor during the 1950s and 1960s on top of the ground. These lines today are referred to as "Top of Ground" (TOG) within the system. During the time these lines were installed, the Company's predecessor made a push to serve agricultural customers and small communities and installing TOG lines expedited service to these areas and reduced installation costs. When originally installed, most line segments were laid along fence lines, section lines or other rights-of-way that did not pose a high level of risk because they were visible and known to farmers. Through time, however, property owners and lease tenants have changed, many fences have been removed, agricultural land has been developed and, in places, the TOG segments have become partially buried. These TOG segments are susceptible to outside force damage as well as corrosion threats.

Spans are segments of pipe that were intentionally installed above grade and that cross a known obstacle, which can include creeks, rivers, ditches, or highways. These pipes can be supported or unsupported. Supported spans can be attached to a bridge or similar structure. Unsupported spans are generally shorter segments of pipe that are not supported by any structures and are also known as freestanding. Spans are susceptible to outside force damage as well as corrosion threats.

The risk of damage from outside forces and threats of corrosion are significant to TOG but are even greater for pipe that is shallow or has become exposed. While TOG may have been originally laid along fence lines, section lines or other rights-of-way that did not pose a high level of risk because they were visible and known to farmers, shallow and exposed pipe are not visible and known to customers until there is imminent danger of causing damage.

While the Company will be compliant with regulatory and operational standards, such as a minimum cover of 36 inches for transmission lines, only projects that meet these definitions **and** pose a significant risk will be recommended for replacement. That risk will be based on the depth of the pipe, the location and use of the land, and the ROF.

Exposed pipe would include pipe that was originally laid above the ground (like TOG) and pipe that has not buried deep enough as is now visible and exposed.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

TOG, Span, Shallow and Exposed Pipe Projects identified are covered under CFR Title 49, Part 192, and may be subject to either Subpart O (TIMP) or Subpart P (DIMP) depending on whether the pipe segment is classified as transmission or distribution pipe. For transmission segments, Section 192.917 requires a pipeline operator to evaluate and remediate threats to pipeline segments including where corrosion has been identified or potential outside force damage could occur that could adversely affect the integrity of the line. Remediation of distribution segments is specified in Section 192.1007, which requires a pipeline operator to identify threats, evaluate and risk rank, and identify and implement measures to address risks.

b) Objective Criteria Analyzed

The Company used the objective criteria included in the DIMP and TIMP risk models, as well as the availability of internal and external crews, project management constraints, local economic development plans and customer impact.

3. Program Description

The Company has identified ten SSIR Projects to replace TOG, Span, Shallow and Exposed pipeline segments. Pipeline segments typically are replaced with polyethylene pipe, but segments that are required to operate at a higher pressure, in excess of 100 PSIG, typically are replaced with steel pipe coated with fusion bonded epoxy. The total capital expenditure for these ten SSIR Projects in 2021 is estimated to be $16,842,264. All ten TOG, Span, Shallow and Exposed Pipe SSIR Projects are expected to be completed by December 31, 2021.

4. Specific Projects

a) Holdrege, Nebraska – TOG Replacement Eustis Area – 10

This SSIR project will consist of replacing 113,544 feet (21.5 miles) of pipe, all of which is TOG and installed between 1947 and 1963 in Eustis, NE. The max score for this project is 2650.9 based on the risk model. The estimated total capital cost of this SSIR Project is $3,373,405. The anticipated in-service date is October 31, 2021.

b) Sutton, Nebraska – TOG Replacement 3900160-6

This SSIR project will consist of replacing 130,457 feet (24.7 miles) of pipe, all of which is TOG and installed between 1957 and 1958 in Benedict, NE. The max score for this project is 2924.4 based on the risk model. The estimated total capital cost of this SSIR Project is $1,707,766. The anticipated in-service date is October 31, 2021.

c) Sutton, Nebraska – TOG Replacement 4603480-20

This SSIR project will consist of replacing 101,017 feet (19.1 miles) of pipe, all of which is TOG and installed between 1955 and 1966 in Sutton, NE. The max score for this project is 2323.9 based on the risk model. The estimated total capital cost of this SSIR Project is $2,831,619. The anticipated in-service date is October 31, 2021.

d) Sutton, Nebraska - Exposed Main Replacement 63213.87

This SSIR project will consist of replacing 1,738 feet of exposed pipe installed in 1959 in Shelton, NE. The ROF for this project is 25.4% based on the TIMP risk model. The estimated total capital cost of this SSIR Project is $970,366. The anticipated in-service date is October 31, 2021.

e) Sutton, Nebraska - Shallow Main Replacement 68332.92

This SSIR project will consist of replacing 131 feet of shallow 4 inch pipe installed in 1959 in Shelton, NE. The depth of this segment is 19 inches, less than the standards recommended by PHMSA and the Company standards, and poses a significant risk as it is located in land used for agricultural purposes. The ROF for this project is 24.7% based on the TIMP risk model. The estimated total capital cost of this SSIR Project is $108,379. The anticipated in-service date is October 31, 2021.

f) Kearney, Nebraska - Span Main Replacement 50171.96

This SSIR project will consist of replacing 332 feet of unsupported span pipe installed in North Loup, NE. The ROF for this project is 24.9% based on the TIMP risk model. The estimated total capital cost of this SSIR Project is $288,438. The anticipated in-service date is October 31, 2021.

g) Kearney, Nebraska - Shallow Pipe Replacement 1498.52

This SSIR project will consist of replacing 185 feet of 6 inch shallow pipe installed in 1996 in Litchfield, NE. The depth of this segment is 20 inches, less than the standards recommended by PHMSA and the Company standards, and poses a significant risk as it is located in land used for agricultural purposes. The ROF for this project is 24.7% based on the TIMP risk model. The estimated total capital cost of this SSIR Project is $147,720. The anticipated in-service date is October 31, 2021.

h) Albion, Nebraska - Exposed Pipe Replacement 1292.97

This SSIR project will consist of replacing 1,888 feet of exposed pipe installed in 1953 in Plainview, NE. The ROF for this project is 24.4% based on the TIMP risk model. The estimated total capital cost of this SSIR Project is $1,158,639. The anticipated in-service date is October 31, 2021.

i) Albion, Nebraska - Shallow Pipe Replacement 20122.78

This SSIR project will consist of replacing 8,016 feet of 6 inch shallow pipe installed in 1953 in Breslau, NE. The depth of this segment is 13 inches, less than the standards recommended by PHMSA and the Company standards, and poses a significant risk as it is located in land used for agricultural purposes. The ROF for this project is 24.4% based on the TIMP risk model. The estimated total capital cost of this SSIR Project is $3,003,281. The anticipated in-service date is October 31, 2021.

j) Albion, Nebraska - Shallow Pipe Replacement 31129.47

This SSIR project will consist of replacing 8,877 feet of 6 inch shallow pipe installed in 1953 in Breslau, NE. The depth of this segment is 19 inches, less than the standards recommended by PHMSA and the Company standards, and poses a significant risk as it is located in land used for agricultural purposes. The ROF for this project is 23.7% based on

the TIMP risk model. The estimated total capital cost of this SSIR Project is $3,252,650. The anticipated in-service date is October 31, 2021.

G. Meter Relocations

1. Background

These SSIR Projects involve the relocation of meter loops from their current location near a highway, street or alley to the structure to better protect them from outside force damage, while replacing the customer owned and installed "yard line" to the newly placed meter. This threat is equally caused by meter loops being at the customer's property line, in an alley or adjacent to the street and customer owned lines not having proper materials, repairs, maintenance, installation procedures, or records. Often times, these meters are bumped by vehicles backing out of garages or hit alongside a street that result in a bent meter or leak to the meter loop. The occurrence of such damage has increased over the years, and Company records show that the 2nd greatest risk to its distribution system is outside force, much of which is a result of meters being hit by vehicles.

Also included are the relocation of meters that are inside residences ("Inside Meters"). Inside meters may present a safety issue because they are susceptible to damage from customers within their homes. The consequence of a meter leak is of much greater significance because we do not vent to atmosphere, but into a home with large amounts of ignition sources and customers. Also, as part of the routine process of testing and exchanging meters, these meters require entrance into the customer's home or business and often second visits to re-light gas appliances.

Currently, BH Nebraska Gas must schedule an appointment to operate and maintain a meter located inside a customer's premise. This meter location can result in inconvenience and disruption for customers. In addition, if the Customer does not permit access to the premise, fails to honor the service appointment, or is tardy to a scheduled appointment, then the cost of waiting or rearranging the BH Nebraska Gas appointment can end up costing the Company more time and expense than if the meter is relocated outside of the premise.

The relocation of meters, whether from near a highway, street, alley or inside the residences, typically involves the installation of a new service line, the retirement of the existing meter and the installation of a new meter assembly (risers, regulator, bypass meter assembly and meter). Only capital activity would be considered eligible in the SSIR mechanism.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

The Company identified these facilities requiring remediation under CFR Title 49, Part 192, Subpart P, DIMP. Section 192.1007 requires a pipeline operator to identify threats, evaluate and risk rank, and identify and implement measures to address risks.

b) Objective Criteria Analyzed

The Company used the objective criteria included in the ARMR risk model, as well as the availability of internal and external crews, project management constraints, local economic development plans and customer impact.

3. Program Description

Meter loops are typically relocated from the vulnerable location to the structure to better protect them from outside force damage. In most cases, the service lines are replaced due to age, pipe material or condition of the pipe. The decision to relocate meters is dependent upon adequate material, adequate installation information, and accurate records of a customer owned fuel lines, which is not likely.. The Company plans to relocate 5272 meters in 2021. The total capital expenditure for meter relocations in 2021 is estimated to be $22,848,800. All meter relocation SSIR Projects listed are expected to be completed by December 31, 2021.

4. Specific Projects

Below are the towns and cities where the 2021 Meter Relocation Projects will occur and may not correspond to the project names.

a) Beatrice, Nebraska – Meter Relocation

The Company will relocate 33 meters from vulnerable locations and place them next to structures in Beatrice, NE. All meters are outside of buildings. The average max score for these meters is 6,844.2 based on the risk model. The total capital cost is estimated at $143,022, and all replacements are scheduled to be in service by December 31, 2021.

b) Chadron, Nebraska – Meter Relocation

The Company will relocate 121 meters from vulnerable locations and place them next to structures in Chadron, NE. 118 meters are in alleys with an average max score of 76,572.4, 2 meters are at easement lines with an average max score of 91,139.7, and 1 meter is outside of a building with a max score of 52,386.2 based on the risk model. The average max score for all 121 meters is 76,613.3 based on the risk model. The total capital cost is estimated at $524,413 and all replacements are scheduled to be in service by December 31, 2021.

c) Cozad, Nebraska – Meter Relocation

The Company will relocate 11 meters from vulnerable locations and place them next to structures in Cozad, NE. All meters are at easement lines. The average max score for these meters is 4.7 based on the risk model. The total capital cost is estimated at $47,674, and all replacements are scheduled to be in service by December 31, 2021.

d) Fairbury, Nebraska – Meter Relocation

The Company will relocate 1 meter from a vulnerable location and place it next to the structure in Fairbury, NE. The meter is outside of a building. The max score for this meter is 721.5 based on the risk model. The total capital cost is estimated at $4,334, and the replacement is scheduled to be in service by December 31, 2021.

e) Gering, Nebraska – Meter Relocation

The Company will relocate 242 meters from vulnerable locations and place them next to structures in Gering, NE. 208 meters are in alleys with an average max score of 76,279.8, and 34 meters are at easement lines with an average max score of 75,440.7 based on the risk model. The average max score for all 242 meters is 76,161.9 based on the risk model. The total capital cost is estimated at $1,048,826 and all replacements are scheduled to be in service by December 31, 2021.

f) Holdrege, Nebraska – Meter Relocation

The Company will relocate 171 meters from vulnerable locations and place them next to structures in Holdrege, NE. 166 meters are in alleys with an average max score of 100,249.0, 4 meters are at easement lines with an average max score of 94,432.2, and 1 meter is outside of a building with a max score of 87,139.6 based on the risk model. The average max score for all 171 meters is 100,036.3 based on the risk model. The total capital cost is estimated at $741,112 and all replacements are scheduled to be in service by December 31, 2021.

g) Lexington, Nebraska – Meter Relocation

The Company will relocate 878 meters from vulnerable locations and place them next to structures in Lexington, NE. 658 meters are in alleys with an average max score of 20,799.3, 200 meters are at easement lines with an average max score of 9,232.4, 17 meters are inside structures with an average max score of 72,953.0, and 3 meters are outside of buildings with an average max score of 4,906.7 based on the risk model. The average max score for all 658 meters is 19,120 based on the risk model. The total capital cost is estimated at $3,805,244 and all replacements are scheduled to be in service by December 31, 2021.

h) Lincoln, Nebraska – Meter Relocation

The Company will relocate 2,076 meters from vulnerable locations and place them next to structures in Lincoln, NE. 1,343 meters are inside structures with an average max score of 93,667.0, and 733 meters are outside of buildings with an average max score of 24,908.1 based on the risk model. The average max score for all 2,076 meters is 69,389.4 based on the risk model. The total capital cost is estimated at $8,997,365 and all replacements are scheduled to be in service by December 31, 2021.

i) McCook, Nebraska – Meter Relocation

The Company will relocate 171 meters from vulnerable locations and place them next to structures in McCook, NE. 162 meters are in alleys with an average max score of 61,748.8, 8 meters are at easement lines with an average max score of 60,862.0, and 1 meter is outside of a building with a max score of 27,363.1 based on the risk model. The average max score for all 171 meters is 61,506.3 based on the risk model. The total capital cost is estimated at $741,112 and all replacements are scheduled to be in service by December 31, 2021.

j) Ogallala, Nebraska – Meter Relocation

The Company will relocate 500 meters from vulnerable locations and place them next to structures in Ogallala, NE. 410 meters are in alleys with an average max score of 14,859.2, 85 meters are at easement lines with an average max score of 11,797.1, 1 meter is inside a structure with a max score of 9,561.6, and 4 meters are outside of buildings with an average max score of 4,078.5 based on the risk model. The average max score for all 500 meters is 14,241.8 based on the risk model. The total capital cost is estimated at $2,166,995 and all replacements are scheduled to be in service by December 31, 2021.

k) Oneill, Nebraska – Meter Relocation

The Company will relocate 615 meters from vulnerable locations and place them next to structures in Oneill, NE. 415 meters are in alleys with an average max score of 9,130.8, 198 meters are at easement lines with an average max score of 8,722.2, and 2 meters are outside of buildings with an average max score of 3,244.2 based on the risk model. The average max score for all 615 meters is 8,980.1 based on the risk model. The total capital cost is estimated at $2,665,404 and all replacements are scheduled to be in service by December 31, 2021.

l) Scottsbluff, Nebraska – Meter Relocation

The Company will relocate 194 meters from vulnerable locations and place them next to structures in Scottsbluff, NE. 173 meters are in alleys with an average max score of 86,820.5, 20 meters are at easement lines

with an average max score of 97,045.1, and 1 meter is inside a structure with a max score of 99,537.5 based on the risk model. The average max score for all 194 meters is 87,940.1 based on the risk model. The total capital cost is estimated at $840,794 and all replacements are scheduled to be in service by December 31, 2021.

m) Seward, Nebraska – Meter Relocation

The Company will relocate 1 meter from a vulnerable location and place it next to the structure in Seward, NE. The meter is outside of a building. The max score for this meter is 8.9 based on the risk model. The total capital cost is estimated at $4,334, and the replacement is scheduled to be in service by December 31, 2021.

n) Terrytown, Nebraska – Meter Relocation

The Company will relocate 8 meters from vulnerable locations and place them next to structures in Terrytown, NE. 7 meters are in alleys with an average max score of 31,752.4, and 1 meter is at an easement line with a max score of 31,752.4 based on the risk model. The average max score for all 8 meters is 31,752.4 based on the risk model. The total capital cost is estimated at $34,672 and all replacements are scheduled to be in service by December 31, 2021.

o) York, Nebraska – Meter Relocation

The Company will relocate 80 meters from vulnerable locations and place them next to structures in York, NE. 1 meter is in an alley with a max score of 29,587.2, 29 meters are at easement lines with an average max score of 2,349.0, and 50 meters are outside buildings with an average max score of 3,292.2 based on the risk model. The average max score for all 80 meters is 3,279.0 based on the risk model. The total capital cost is estimated at $346,719 and all replacements are scheduled to be in service by December 31, 2021.

H. Obsolete Pipe Replacement

1. Background

The Company currently operates approximately less than 900 miles of polyvinylchloride ("PVC") distribution pipelines in Nebraska which were installed between the mid-1960s through 1980. By the mid-1980's PVC was no longer a recommended piping material due to the evolution of superior piping materials, such as PE pipe, and new construction methods. There are several safety issues with PVC pipe that the Company, and the industry as a whole, face. For example, PVC pipe has a high instance of leaks at joints due to adhesive failure. Additionally, in many instances the integrity of older PVC pipe is compromised because the material becomes brittle over time, which makes PVC pipe more prone to failure due to stress intensification that occurs when soil around a pressurized pipe is removed. Also, PVC pipe was installed with tracer wire to assist in locating the pipe, and over time that tracer wire has corroded and no longer carries a current. This makes it difficult for the Company to provide accurate pipe location points, which significantly increases the risk of third party damage.

There are also pipelines made of material other than PVC that are not recommended currently, due to the evolution of superior piping materials and new construction methods, causing these types of piping to pose safety issues to BH Nebraska Gas and the public. Examples include copper, Aldyl-A and Orangeb~~e~~urg.

The Company recognizes that all pipe that is no longer the industry standard may not necessarily be considered a significant high risk in the context of failure and consequence. Only such pipe that also poses a significant risk will be recommended for replacement. That risk will be based on the risk model including factors including, but not limited to, age, material, the location, and the ability to locate the pipe.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

Obsolete Pipe Replacement Projects identified are covered under CFR Title 49, Part 192, and may be subject to either Subpart O (TIMP) or Subpart P (DIMP) depending on whether the pipe segment is classified as

transmission or distribution pipe. For transmission segments, Section 192.917 requires a pipeline operator to evaluate and remediate threats to pipeline segments including where corrosion has been identified or potential outside force damage could occur that could adversely affect the integrity of the line. Remediation of distribution segments is specified in Section 192.1007, which requires a pipeline operator to identify threats, evaluate and risk rank, and identify and implement measures to address risks.

b) Objective Criteria Analyzed

The Company used the objective criteria included in the DIMP and TIMP risk models, as well as the availability of internal and external crews, project management constraints, local economic development plans and customer impact.

3. Program Description

The Company has identified six specific PVC distribution main pipelines that will be replaced with PE pipe in 2021. The total capital expenditure for these six SSIR Projects in 2021 is estimated to be $*1,625,284*. All six of these PVC SSIR Projects are expected to be completed by December 31, 2021.

4. Specific Projects

a) Holdrege, Nebraska PVC 270-2174 – PVC Main Replacement

This SSIR project will consist of replacing 7,849 feet of PVC main that was installed in 1971 in Atlanta, NE. The max score for this project is 1,763 based on the risk model. The estimated total capital cost of this SSIR Project is $125,320. The anticipated in-service date is October 31, 2021.

b) Kearney, Nebraska PVC 470-1612 – PVC Main Replacement

This SSIR project will consist of replacing 4,154 feet of PVC main that was installed in 1973 in Bloomington, NE. The max score for this project is 3,120.5 based on the risk model. The estimated total capital cost of this SSIR Project is $63,913. The anticipated in-service date is October 31, 2021.

c) Scottsbluff, Nebraska PVC 110-2653 – PVC Main Replacement

This SSIR project will consist of replacing 12,913 feet of PVC main that was installed in 1969 in Chappell, NE. The max score for this project is 1,763 based on the risk model. The estimated total capital cost of this SSIR Project is $206,960. The anticipated in-service date is October 31, 2021.

d) Sutton 20, Nebraska PVC 460-2515 – PVC Main Replacement

This SSIR project will consist of replacing 5,269 feet of PVC main that was installed in 1967 in Deshler, NE. The max score for this project is 1,763 based on the risk model. The estimated total capital cost of this SSIR Project is $349,976. The anticipated in-service date is October 31, 2021.

e) Sutton 10, Nebraska PVC 380-2582 – PVC Main Replacement

This SSIR project will consist of replacing 54,463 feet of PVC main that was installed between 1968 and 1972 in Hansen, NE. The max score for this project is 1,753.9 based on the risk model. The estimated total capital cost of this SSIR Project is $840,493. The anticipated in-service date is October 31, 2021.

f) Sutton 10, Nebraska PVC 460-2826 – PVC Main Replacement

This SSIR project will consist of replacing 5,171 feet of PVC main that was installed in 1972 in Trumbull, NE. The max score for this project is 1,753.9 based on the risk model. The estimated total capital cost of this SSIR Project is $38,622. The anticipated in-service date is October 31, 2021.

I. Facility Relocation Projects

The SSIR Tariff authorizes the Company to recover the costs of facility relocation projects in the SSIR Charge. The Company each year encounters the need to conduct facility relocation projects in connection with municipal infrastructure projects. These facility relocation projects, when they occur, are directly related to pipeline safety and integrity activities. Such projects are an integral step in the overall safety and integrity process. These projects are required by government entities to enhance the public welfare, including safety.

Although the Company is currently aware of some state or municipal infrastructure projects in 2021 that may require the Company to conduct facility relocation projects, the costs of which are Eligible System Safety and Integrity Costs for recovery through the SSIR Tariff, the possibility of changes or cancellations to those or identification of additional qualified project could arise. Therefore, as part of its quarterly surveillance reports, the Company will provide updates of its facility relocation projects in connection with state or municipal infrastructure projects and, through its 2022 annual filing, will seek to recover the Eligible System Safety and Integrity Costs associated with those projects that occurred in 2021.

J. Date Infrastructure Improvement Program (DIIP)

1. Background

In order to appropriately rank higher risk pipeline projects for purposes of prioritizing accelerated threat mitigation efforts, it is vital for the Company to be able to identify risks, understand the consequences of those risks, develop GIS tools, close known data gaps, and continuously improve system knowledge. The Company will implement a Data Infrastructure Improvement Program ("DIIP") to close known data gaps, develop and improve GIS tools, and verify current data for accuracy. This data will help develop more predictive and analytical risk models, improve system mapping and ultimately help protect against our top threat of third-party damage.

As data gaps are closed and data is verified as a result of the DIIP, the results will be incorporated annually into the DIMP and TIMP risk models. The effect will be a continuous improvement of the asset risk outputs, which will enhance the predictive abilities of the models. Verification of location-based data will directly improve safety of the system as well.

As the DIIP progresses, future SSIR applications will include the impact to the DIMP and TIMP programs and risk models, the Company's knowledge and population of high-risk-defined assets, the selection of annual portfolio of projects, and overall program(s) life cycles.

The Company has initiated a similar DIIP for transmission lines and has seen significant improvement of data by increased spatial accuracy of transmission assets, in some cases by hundreds of feet. Having accurate asset centerlines and mapping previously unmapped service lines will have a direct impact on the DIMP and TIMP, and by extension the safety of the public, environment, customers and employees. It will ensure proper one-call coverage and have practical safety impacts for 3rd party damage reduction, safe operations and emergency response.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

The Company identified the DIIP under CFR Title 49, Part 192, Subpart P (DIMP) and under CFR Title 49, Part 192, Subpart O, TIMP . Section 192.1007 requires a pipeline operator to identify threats, evaluate and risk rank, and identify

and implement measures to address risks. ASME B31.8S which is a referenced standard under the CFR Title 49, Part 192, Subpar O, identifies the necessary data elements needed to model risk accurately and reliably and recommends surveying all potential locations where records could exist and to remedy data deficiencies known to the transmission pipeline. Also, PHMSA Advisory Bulletins ADB 11-01, ADB 12-06, and the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 direct owners to verify that data and records accurately reflect the MAOP of their pipelines within Class 3, Class 4 and in High consequence areas.

b) Objective Criteria Analyzed

The DIIP is intended to improve the knowledge of the BH Nebraska Gas pipeline system to provide BH Nebraska Gas with the ability to positively confirm the integrity of the pipeline system. There continues to be knowledge gaps with respect to the pipeline system. The Program will implement specific initiatives to improve system data, including data gap elimination, GIS updates, programmatic improvements, and the continued roll-out of Digital As-Built Technology in Nebraska.

3. Program Description

The Company has identified nine projects within the DIIP as described below. The total expenditure for 2021 is estimated to be $961,164, of which $91,116 are internal costs and are not included in the SSIR Application. The remaining $865,048 are external costs and are included in the SSIR Application.

4. Specific Projects

a) Transmission/Gathering Traceable, Verifiable and Complete (TVC) Records

This project includes gathering, scanning and storing original construction records in a document management system and linking to the Geospatial Information System (GIS) asset. The documents will be used to verify Maximum Allowable Operating Pressure (MAOP) and MAOP attributes and update any missing pipeline attributes and features in GIS. Include the following record sources in the project for review: Historical

Computer Aided Drafting (CAD) and Platt Book records, In-Line Inspection (ILI) records.

There are no costs for this project in 2021.

b) Gas Service Card Mapping

This is a two-phase project.

Phase 1: This phase of the project will include adding all electronically generated service lines to our GIS database that are not currently in live production. This will include adding legacy Captricity and Distribution Integrity Management (DIMP) automatically generated service lines to production GIS data, performing a gap analysis to identify what spatial and attribute data issues we still have. The project will involve identifying all stakeholders who use service line data and displaying the created service lines in a way that communicates the risks with the spatial accuracy of these lines. Service lines already in the production GIS database with centerline accuracy issues will also be considered during phase one to promote consistency. The project will create a service line centerline for all active service points that do not currently have a service connection to the main.

Phase 2: This phase includes mapping, verifying, or adjusting the centerlines of roughly 190,000 electronic Nebraska service line as-builts that are currently stored in the document management system. This phase would include updating the pipeline and pressure test attributes on these service lines from the information gathered from the as-builts.

The total expenditure for 2021 is estimated to be $961,164, of which $91,116 are internal costs and are not included in the SSIR Application. The remaining $865,048 are external costs and are included in the SSIR Application

c) Distribution Main & Service Centerline Survey

This project includes the high accuracy Global Position System (GPS) survey of mains, service lines and meter locations. This project includes adding unmapped service lines to GIS, updating the spatial location of service lines in GIS and correcting the location of service points and meters in GIS. Other information to be gathered and updated includes

meter structure location, meter number, and abandoned live services (Service Point Status), above grade facilities, unlocatable mains. This survey should be combined with the required atmospheric corrosion survey. Towns will be prioritized using DIMP analysis. The GIS updates as a result of this project will be made as a part of the "Distribution Data Attribute Improvement" project for efficiency purposes.

There are no costs for this project in 2021.

d) Distribution Data Attribute Improvement

This project includes updating high priority pipeline attributes and features in GIS that are gathered from historic data, and records. This project will include the review of legacy data sets including historical CAD data, the MAOP access database for Legacy Source Gas Nebraska and the original construction records. The process to review construction records will include the scanning and indexing records, linking the records to GIS including the original construction documents and MAOP documentation. GIS updates and corrections from the Centerline Survey project will be included in this project. Prioritization will follow the same method as the centerline survey.

There are no costs for this project in 2021.

e) GIS Pressure Systems

This project will create pressure systems in GIS that will share a unique ID with Gas Valve and Asset Suite. This pressure systems will be updated with data for system MAOP, Operating Pressure, and odorized, and take points. Correction of connectivity issues will be included in the scope of this project.

There are no costs for this project in 2021.

f) GIS Emergency Response Zones

This project includes the creation and standardization of Emergency Response Zones per O&M to support company O&M 116 and Emergency

Valves in GIS. Ensuring consistency with these GIS features to the CIS+ Valve database and WAM system. Includes the digitization of the Emergency response plans for each system and linking to these zones.

There are no costs for this project in 2021.

g) GIS Cathodic Protection (CP) Zones

This project includes the creation and standardization of Cathodic Protection (CP) zones and features in GIS and ensuring consistency between GIS and the CP Databases. CP test stations as well as other CP assets will be included in scope for this project.

There are no costs for this project in 2021.

h) Bare Pipe Inspection (BPI) and Subject Matter Expert (SME) Pipeline Attribute Assessment

This project would use electronically available buried pipe inspection information and Subject Matter Expert knowledge to analyze and identify data issues. The data would then be corrected in the GIS system. It would include a process to verify the quality of this data before any updates are made.

There are no costs for this project in 2021.

i) Document Management Migration

This project includes the migration of the following documents sources to the new FileNet document management location: SharePoint Maximum Allowable Operating Pressure (MAOP) Library, FileNet Gas Service Cards, N: Drive As-built polygon files.

There are no costs for this project in 2021.

K. Reliability Projects

1. Background

While the focus of integrity projects is to replace aging or at -risk infrastructure, the focus of reliability projects is to ensure that gas is available, delivered and measured for our customers in all situations. In some cases, these projects will not replace any existing infrastructure, and are required to maintain minimum pressure requirements on our distribution system to prevent loss of customers on a winter peak day.

Projects to be included will be based on measurable criteria that improve safety and mitigate risk. The installation or replacement of pipe to facilitate growth, whether for identified or expected customers, will not be eligible to be included in the SSIR mechanism.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

The Company identified the Reliability Projects under CFR Title 49, Part 192, Subpart P (DIMP) and under CFR Title 49, Part 192, Subpart O, TIMP . Section 192.1007 requires a pipeline operator to identify threats, evaluate and risk rank, and identify and implement measures to address risks. Section 192.917 requires a pipeline operator to evaluate and remediate pipeline segments where corrosion has been identified that could adversely affect the integrity of the line.

b) Objective Criteria Analyzed

The objective criteria that the Company analyzed for these Projects are: pipeline design, configuration and segmentation; pipeline leakage and other incident history; population density; city plans for future growth; Project timeframe; weather and climate constraints on the construction season; permitting constraints; service outage management; pipeline source of supply and availability of alternate gas supply; and subject matter expert knowledge.

3. Program Description

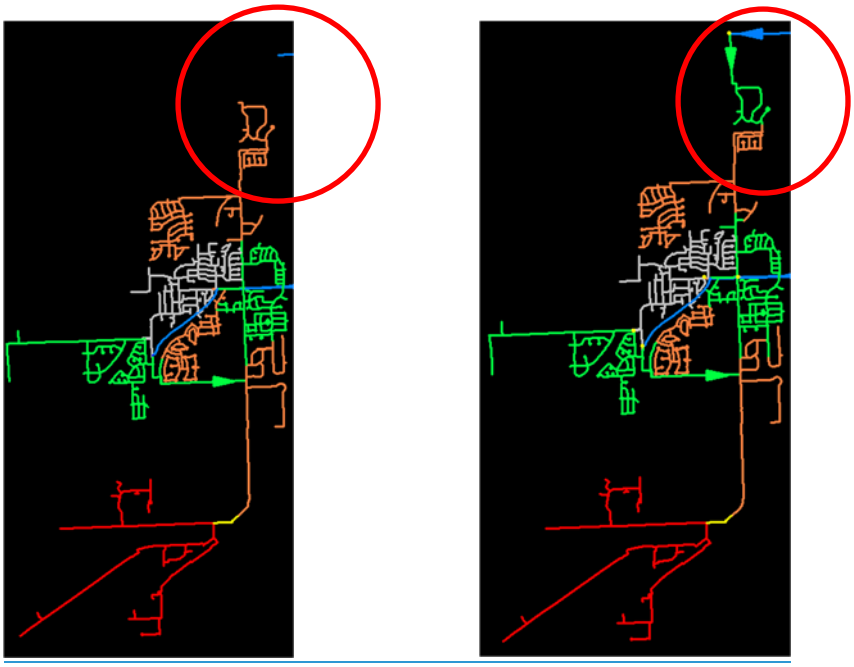
The Company has identified seven specific projects to improve the reliability of the distributions system in 2021. The total capital expenditure for these eight SSIR Projects in 2021 is estimated to be $*4,214,912*. All seven of these SSIR Projects are expected to be completed by December 31, 2021.

4. Specific Projects

a) Giles to Valeretta Drive Loop

This Project is designed to support the north side of the Gretna distribution system that is primarily fed from the southeast part of Gretna. Customers in this area will benefit with a two-way feed into this expanding area from a connection that will be coming from the north.

The ideal system pressure in this area is 70% of the MAOP of 50 psig on peak days. As shown in the pictures below, the circled area is currently operation at 50%-70% of MAOP. Adding the loop will increase the pressure to more than 90% of MAOP.



Current System System after the loop project

- Green: >90% of MAOP
- Yellow: 70-90% of MAOP
- Orange: 50-70% of MAOP
- Red: <50% of MAOP

Without this project, the risk of system pressure loss is increased. Should there be a significant system pressure loss, there is a low probability but high consequence risk.

The estimated total capital cost of this SSIR Project is $127,760. The anticipated in-service date is October 31, 2021.

b) Highway 31 & Giles DRS Loop

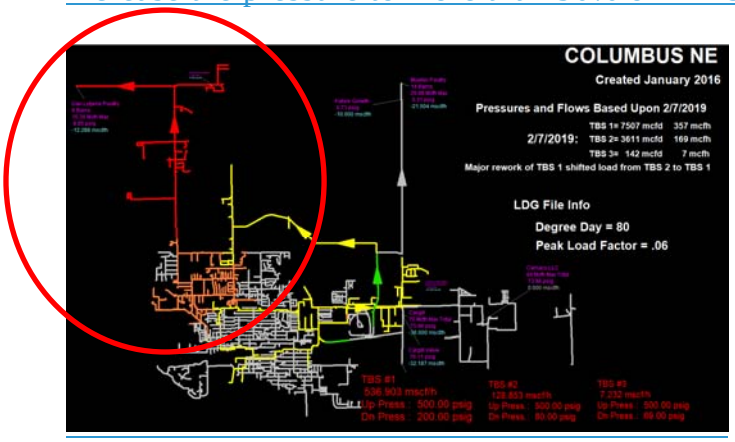
This Project will continue to support ~~our growth in~~ western Sarpy County by bringing much-needed capacity to the intersection of 204th and Giles Road. This project is necessary to serve the "Giles to Valeretta Drive Loop Project" listed as project a). The two projects ~~and additional growth to the west and north of this intersection.~~

The estimated total capital cost of this SSIR Project is $120,000. The anticipated in-service date is October 31, 2021.

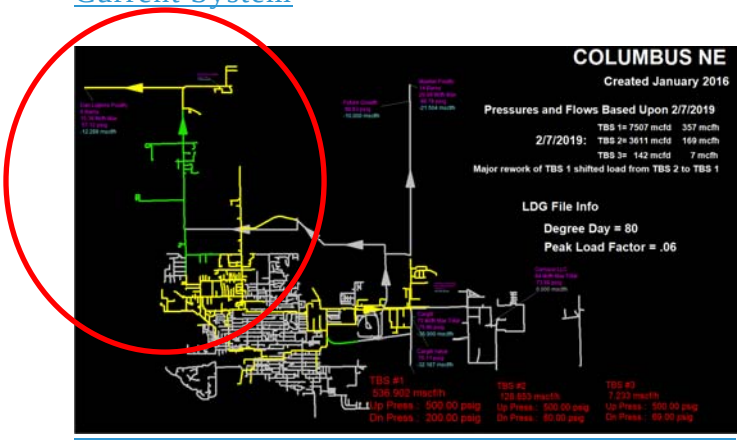
c) Columbus Capacity Loop

This Project is necessary to support the Columbus distribution system in the north and west areas of the community where there are~~. The Lakeview community in the north has continued to grow over the years and has caused~~ some bottlenecks in the current infrastructure. Also, this loop will support the western part of the Columbus system by providing a two-way feed into the Columbus distribution system.

The ideal system pressure in this area is 70% of the MAOP of 68 psig on peak days. As shown in the pictures below, the circled area is currently operation at 50%-70% of MAOP. Adding the loop will increase the pressure to more than 90% of MAOP.



Current System



System after loop project

- Green: >90% of MAOP
- Yellow: 70-90% of MAOP
- Orange: 50-70% of MAOP
- Red: <50% of MAOP

Without this project, the risk of system pressure loss is increased. Should there be a significant system pressure loss, there is a low probability but high consequence risk.

The estimated total capital cost of this SSIR Project is $40,600. The anticipated in-service date is October 31, 2021.

~~**d) David City Capacity Loop**~~

~~This Project is necessary to maintain the minimum pressure requirements in the north end of the David City distribution system. Over the years, existing customers have expanded operations causing some stress on the overall performance of the distribution system in the north part of the community. The estimated total capital cost of this SSIR Project is $121,000. The anticipated in-service date is October 31, 2021.~~

~~e)~~d) Kearney ERT Upgrade

This project is to exchange 40G Electronic Reading Transmitters (ERTs) that were installed 15-20 years ago in Kearney, NE. The typical life span of ERTs are 16-20 years. A fully functioning ERT provides the ability to detect active leaks, unusual consumption that the Company investigates that allows leaks to be detected. If these ERTs are not replaced, the ability to detect active leaks and unusual consumption and the accuracy of the monthly usage reads will begin to degrade rapidly and will eventually cease~~, causing missing reads and estimated bills~~.

Replacing 40G ERTs with 100G ERTs is necessary for future implementation of an Automated Metering Infrastructure (AMI) program, that will give the Company the ability to download data showing hourly usage for up to 60 days. Methane and pressure sensors will also be able to be integrated. As SCADA and asset consequence are parts of the DIMP risk model, fully functioning and advanced capability ERTs allow quick response to damages. Areas without the ability to detect damages or leaks will be ranked higher.

Ultimately, this safety-based project could allow for quicker leak response.

The estimated total capital cost of this SSIR Project is $2,333,185. The anticipated in-service date is October 31, 2021.

~~f)~~e) Holdrege ERT Upgrade

This project is to exchange 40G Electronic Reading Transmitters (ERTs) that were installed 15-20 years ago in Holdrege, NE. The typical life span of ERTs are 16-20 years. A fully functioning ERT provides the ability to detect active leaks, unusual consumption that the Company investigates that allows leaks to be detected. If these ERTs are not replaced, the ability to detect active leaks and unusual consumption and the accuracy of the monthly usage reads will begin to degrade rapidly and will eventually cease~~, causing missing reads and estimated bills~~.

Replacing 40G ERTs with 100G ERTs is necessary for future implementation of an Automated Metering Infrastructure (AMI) program, that will give the Company the ability to download data showing hourly usage for up to 60 days. Methane and pressure sensors will also be able to be integrated. As SCADA and asset consequence are parts of the DIMP risk model, fully functioning and advanced capability ERTs allow quick response to damages. Areas without the ability to detect damages or leaks will be ranked higher.

Ultimately, this safety-based project could allow for quicker leak response.

The estimated total capital cost of this SSIR Project is $1,485,867. The anticipated in-service date is October 31, 2021.

~~g)~~f) Scottsbluff Chart Replacements

This Project consists of replacing outdated chart recording equipment in Scottsbluff which monitors distribution system operating pressures as required by code. The existing chart recorders require a technician to visit the site weekly or monthly, depending on the chart type, to change the paper chart. The chart recorders offer no real time pressure monitoring and they will be replaced by electronic pressure monitoring equipment that will be

remotely monitored by SCADA/Gas Control and will not require regular visits.

Remotely monitored equipment that provide real-time data will give the Company the ability to detect leaks and changes in pressure immediately. As SCADA and asset consequence are parts of the DIMP risk model, advanced measurement equipment allows quick response to damages. Areas without the ability to timely detect leaks or changes in pressure will be ranked higher.

Ultimately, this safety-based project will allow for quicker leak response.

The estimated total capital cost of this SSIR Project is $13,500. The anticipated in-service date is October 31, 2021.

2021 PROJECTS
REFLECTED IN THE
SYSTEM SAFETY AND INTEGRITY RIDER
FOR BLACK HILLS NEBRASKA GAS, LLC
IN NEBRASKA

Black Hills Energy
Improving life with energy

October 13, 2020

2021 PROJECTS REFLECTED IN THE SYSTEM SAFETY AND INTEGRITY RIDER FOR BLACK HILLS NEBRASKA GAS, LLC IN NEBRASKA

Filed October 13, 2020

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2021 PROJECTS REFLECTED IN THE

SYSTEM SAFETY AND INTEGRITY RIDER

FOR BLACK HILLS NEBRASKA GAS, LLC IN NEBRASKA

I. INTRODUCTION

As set forth on First Revised Sheet Nos. 127-131 of the proposed Nebraska Gas Tariff No. 1 (the "Tariff") of BH Nebraska Gas, LLC d/b/a Black Hills Energy (the "Company"), all Jurisdictional Residential, Commercial, and Commercial – Energy Options customers shall be subject to a System Safety and Integrity Rider ("SSIR") designed to collect Eligible System Safety and Integrity Costs. BH Nebraska Gas is proposing the SSIR Tariff, with the same effective date as Docket No. NG-109.

Under the proposed SSIR Tariff, the Company will be authorized to collect the revenue requirement of Eligible System Safety and Integrity Costs projected for the period January 1, 2021 through December 31, 2021 through the Safety and Integrity Charge (the "SSIR Charge") over the period March 1, 2021 through December 31, 2021. The SSIR Charge to be applied to each Rate Schedule is as set forth on the Rate Schedules and Other Charges Schedule of Rates, Sheet No. 78 of the Tariff.

The proposed SSIR Tariff requires that this application include pertinent information and supporting data related to eligible SSIR costs, including, at a minimum, SSIR Project descriptions and scopes, SSIR Project costs, and in-service dates.

The proposed SSIR Tariff defines Eligible System Safety and Integrity Costs to mean:

1) A return, at a percentage equal to the Company's currently authorized weighted average cost of capital grossed up for taxes, on the projected increase in the jurisdictional component of the month ending net plant in-service balances associated with the Projects for the particular calendar year in which the SSIR Charge shall be in effect, exclusive of all plant in-service included in the determination of the revenue requirements approved in the Company's last general rate case;

2) The plant-related ownership costs associated with such incremental plant investment, including depreciation, accumulated deferred income taxes, and all taxes including income taxes and property taxes; and

3) The projected jurisdictional component of the operation and maintenance expenses related to the Projects for the particular year in which the SSIR Charge shall be in effect.

The return and income taxes and plant related costs associated with improvements or upgrades to facilities, made at the discretion of the Company to extend service or for future growth that is not specifically required by a statute or regulation, shall be excluded from Eligible System Safety and Integrity Costs.

As set forth in the proposed SSIR Tariff, SSIR Projects (also referenced in this filing as "Projects") mean:

i. Projects to comply with Code of Federal Regulations ("CFR") Title 49 (Transportation), Part 192 (Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards), Subpart O (Gas Transmission Pipeline Integrity Management), including Projects in accordance with the Company's transmission integrity management program ("TIMP") and Projects in accordance with State enforcement of Subpart O and the Company's TIMP;

ii. Projects to comply with CFR Title 49 (Transportation), Part 192 (Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards), Subpart P (Gas Distribution Pipeline Integrity Management), including Projects in accordance with the Company's distribution integrity management program ("DIMP") and Projects in accordance with State enforcement of Subpart P and the Company's DIMP;

iii. Projects to comply with final rules and regulations of the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration ("PHMSA") that become effective on or after the filing date of the application requesting approval of the SSIR; and

iv. Facility relocation projects with a per-Project total cost of $20,000 or more, exclusive of all costs that have been, are being, or will be reimbursed otherwise, that are required due to construction or improvement of a highway, road, street, public way or other public work by or on behalf of the United States, the State of Nebraska, a political subdivision of the State of Nebraska or another entity having the power of eminent domain.

v. Projects to ensure gas is available, delivered and measured for our customers in all situations. In some cases, these projects will not replace any existing infrastructure, and are required to maintain minimum pressure requirements on our distribution system to prevent loss of customers on a winter peak day. These projects are considered "Reliability Projects".

As shown in Exhibit 2, Table K page 11 of 13 to this application, the Company has identified 93 individually numbered Capital SSIR Projects and 1 Operations and Maintenance ("O&M") Expense SSIR Projects for the instant filing. In total, the Company's projected capital and O&M expenditures for 2021 SSIR Projects total $50,321,427.

All 94 Projects will be in service in 2021.

Additionally, the Company each year encounters the need to conduct facility relocation projects in connection with municipal infrastructure projects. Municipalities typically do not finalize their plans for infrastructure projects for a particular calendar year, however, until late in the previous calendar year or early in the calendar year in which those projects will be conducted. Consequently, although the Company is aware of several potential municipal infrastructure projects in 2021 (*see* Section II.I below) that may require the Company to conduct facility relocation projects the costs of which are Eligible System Safety and Integrity Costs for recovery through the SSIR Tariff, those Projects are not sufficiently definitive at this time for the Company to request prospective recovery of Eligible System Safety and Integrity Costs through this filing. Therefore, as part of its annual surveillance report, the Company will provide an update of its facility relocation projects in connection with municipal infrastructure projects and, through its 2022 annual filing, will seek to recover the Eligible System Safety and Integrity Costs associated with those projects.

The Company uses three distinct risk models corresponding to the TIMP, DIMP and the At-Risk Meter Relocation (ARMR) Program. All three models use objective and external factors and provide scores that correlate to proactive analysis of system risk, as described below.

1) The TIMP risk model is based on PHMSA mandates and laws enacted in 2004 which are very prescriptive. It is a relative risk ranking that utilizes a Risk of Failure = Likelihood of Failure * Consequence of Failure algorithm. It considers the nine primary threats categories recognized by PHMSA 192 Subpart O and ASME B31.8S: External Corrosion, Internal Corrosion, Stress Corrosion Cracking, Third Party Damage, Weather and Outside Force Damage, Manufacturing Defects, Construction Defects, Incorrect Operations, and Equipment Failure. The range of scores are a relative percentage of Risk of Failure (ROF). For Nebraska the range is 10.4% to 61.2%.

2) The DIMP risk model[1] is based on PHMSA mandates from 2011 and is much less prescriptive. It uses spatial analysis and other external factors beyond leak and

[1] The Black Hills Energy DIMP O&M Risk Assessment is included as Appendix A.

damage history to assess eight threat categories: Corrosion Failure; Natural Force Damage; Excavation Damage; Other Outside Force Damage; Pipe, Weld, or Joint Failure; Equipment Failure; Incorrect Operation; Other Causes. Each threat category has multiple sub-threats, creating 75 sub-threats[2] to be evaluated for each project. The likelihood of failure and consequence of failure and asset consequence of sub-threats are quantified and accumulated to determine the score for projects. For Nebraska, the range of scores are 698.8 to 3389.

3) The ARMR risk model[3] is unique because most of the pipe involved is customer owned pipe, so the risk ranking is based on nearby damages. Meter location data is used to identify meters most likely at risk based on location assignment. Leak data is then applied to determine a subset of those meters that are most likely in harms way based on historic damage. The DIMP risk score and consequence threats are used to further prioritize the results. Finally, interpolation zones are created based on the DIMP risk data to assign remaining meters a ranking. For Nebraska, the range of scores are 2.57 to 2,480,896.80.

In addition to the risk models, the Company also considers other criteria, such as the availability of internal and external crews; project management constraints; local economic development plans; customer inconvenience and impact; other specific regulatory requirements; threat assessment; corrosion control analysis; pipeline vintage; pipeline material; pipeline design and class location; pipeline configuration and segmentation; pipeline system constraints; pipeline replacement history; population density; pipeline maintenance and internal inspection history; pipeline piggability; existence and reliability of pipeline asset and testing records; pipeline leakage and other incident history; subject matter expert knowledge; Project timeframe; weather and climate constraints on the construction season; permitting constraints; probability of pipeline testing failures and dewatering constraints; service outage management; and pipeline source of supply and availability of alternate gas supply.

As part of the analysis, the proposed SSIR Tariff requires the Company to identify and describe the proposed SSIR Projects that are for high-risk gas infrastructure by providing its risk assessment for each such SSIR Project including, if applicable, the probability of failure, the consequences of failure for the SSIR Project and how the Company prioritized the SSIR Project for which it seeks recovery. There are no SSIR Projects included within this filing that fall into this category.

[2] The Threat Matrix of the 75 sub-threats are included as Appendix B.
[3] The workflow of the ARMR Program Identification & Prioritization Process is included as Appendix C.

II. 2021 SSIR PROJECTS

A. Replacement of Bare Steel Distribution Main

1. Background

The Company operates approximately almost 5000 miles of distribution system in Nebraska, of which approximately 15% are bare steel distribution main with various dates of installation ranging from the 1930s to approximately 1960. Although age alone does not determine the integrity of a pipeline system, some older pipeline facilities that are constructed of certain materials, including bare steel, may have degraded over time. It becomes increasingly difficult to maintain effective corrosion protection because of the age of the system, and bare steel pipeline, in coordination with the State Fire Marshall's office, is no longer cathodically protected which has necessitated an accelerated removal. Compared with coated steel pipelines, bare steel pipelines corrode at a higher rate because there is no coating to serve as a barrier between the steel and the soil. Also, many pipeline segments may not meet today's pipeline construction standards, and some have been exposed to additional threats, such as excavation damage. In addition, there are some early vintage steel pipelines in certain areas that may pose risks because of incomplete records or construction practices not up to today's standard. Based upon known data, including installation records and construction methods, leakage history, cathodic protection data, damage history and population density, the Company's DIMP identifies bare steel segments that are higher risk.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

The Company identified three bare steel distribution main pipeline segments requiring remediation under CFR Title 49, Part 192, Subpart P, DIMP. Section 192.1007 requires a pipeline operator to identify threats, evaluate and risk rank, and identify and implement measures to address risks.

b) Objective Criteria Analyzed

The Company used the objective criteria included in the DIMP risk model, as well as the availability of internal and external crews, project management constraints, local economic development plans and customer impact.

3. Program Description

The Company has identified three specific bare steel distribution main replacement projects scheduled to be completed in 2021. Typically for distribution line replacement projects, polyethylene pipe is used for both the distribution mains and associated service lines unless the system is required to operate above 100 pounds per square inch gauge ("psig"). If the system is required to operate above 100 psig, then steel pipe with fusion bonded epoxy coating is utilized. Bare Steel pipe is associated with accelerated corrosion and a construction date that usually predates the creation of formal construction standards in the natural gas utility industry. The total capital expenditure for these SSIR Projects in 2021 is estimated to be $*2,286,001*.

4. Specific Projects

a) Crete, Nebraska – Bare Main Replacement

This SSIR project will consist of replacing 330 feet of unprotected bare steel main that was installed in the 1970's in Crete, NE. It will also involve the replacement of 123 service lines, each averaging 50 to 100 feet in length with one-inch PE pipe. The max score for this project is 2066.7 based on the risk model. The estimated total capital cost of this SSIR Project is $13,012. The anticipated in-service date is October 31, 2021.

b) Peru, Nebraska – Bare Main Replacement

This SSIR project will consist of replacing 428 feet of unprotected bare steel main that was installed in the 1970's in Peru, NE. The max score for this project is 1972.4 based on the risk model. The estimated total capital cost of this SSIR Project is $16,840. The anticipated in-service date is October 31, 2021.

c) Wayne, Nebraska – Bare Main Replacement

This SSIR project will consist of replacing 57,272 feet of unprotected bare steel main that was installed in the 1970's in Wayne, NE. It will also involve the replacement of 690 service lines, each averaging 50 to 100 feet in length with one-inch PE pipe. The max score for this project is 1951.6 based on the risk model. The estimated total capital cost of this SSIR Project is $2,256,149. The anticipated in-service date is October 31, 2021.

B. Replacement of Transmission Pipeline

1. Background

BH Nebraska Gas operates more than 1,200 miles of transmission system in Nebraska. Although age alone does not determine the integrity of a pipeline system, some older pipeline facilities installed prior to 1960 are constructed of certain materials and with certain coatings that have degraded over time. Even though these transmission lines are cathodically protected, it becomes increasingly difficult to maintain effective corrosion protection because of the age of the system. Based upon known data, including installation records and construction methods, leakage history, cathodic protection data, damage history and population density, the Company's TIMP identifies transmission pipeline segments that are higher risk.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

The Company identified no transmission pipeline segments displaying safety threats requiring remediation in 2021 under CFR Title 49, Part 192, Subpart O, TIMP. Section 192.917 requires a pipeline operator to evaluate and remediate pipeline segments where corrosion has been identified that could adversely affect the integrity of the line.

b) Objective Criteria Analyzed

The Company used the objective criteria included in the TIMP risk model, as well as the availability of internal and external crews, project management constraints, local economic development plans and customer impact.

3. Program Description

The Company has not identified any specific transmission replacement project scheduled to be completed in 2021.

C. Barricades

1. Background

These SSIR Projects involve the installation of barricades to protect meter, regulator and valve settings from outside force damage. This threat is largely caused by meter loops being at the customer's property line, in an alley or adjacent to the street. In addition, the widening of streets and highways, increased utilization of agricultural land, and increased traffic from both mechanized farm equipment and motor vehicles have rendered many meters more vulnerable to outside force damage. Often times, these meters are bumped by vehicles backing out of garages or hit alongside a street that result in a bent meter or leak to the meter loop. Alongside meter loops, regulator and valve sets also are susceptible to outside force damage both in city limits and rural areas. The occurrence of such damage has increased over the years, and Company records show that the greatest risk to its distribution system is outside force damage, much of which is a result of meters being hit by vehicles and farm equipment.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

The Company identified no facilities requiring remediation in 2021 under CFR Title 49, Part 192, Subpart P, DIMP. Section 192.1007 requires a pipeline operator to identify threats, evaluate and risk rank, and identify and implement measures to address risks.

b) Objective Criteria Analyzed

The Company used the objective criteria included in the DIMP risk model, as well as the availability of internal and external crews, project management constraints, local economic development plans and customer impact.

3. Program Description

Barricades are structures typically fabricated from pipe material and resemble a fence or cage-like structure around the meter. For most meter applications, the Company installs prefabricated meter barricades manufactured with two-inch pipe. Larger meters, regulator stations or valve settings may require custom fabrication to properly fit and protect the asset. The locations requiring the installation of a barricade are determined by field personnel working in

conjunction with the Company's integrity management members to determine which facilities are at high risk. Factors in this determination include, but are not limited to, previous damage history, proximity to roadways, field observations and system operating pressures. The Company does not plan to install any barricades in 2021.

D. Cathodic Protection and Corrosion Prevention

1. Background

Cathodic protection infrastructure is to be applied to all steel pipelines according to PHMSA regulations published in 49 CFR Section 192.451. The Company meets this requirement by utilizing galvanic anode applications as well as Impressed Current Cathodic Protection. Cathodic protection is an electrochemical process used to protect steel structures in contact with soil. The soil is the electrolyte portion of the corrosion cell with the pipeline as the cathode of the electrical circuit. The intent in the application of cathodic protection is to convert the oxygen in the soil to a hydroxyl ion thus causing the environment surrounding the pipeline to become more alkaline. Steel tends to passivate in alkaline environments which result in very low corrosion rates. Magnesium anodes are installed in situations where a small amount of electrical current is needed to achieve adequate cathodic protection levels. Cathodic protection rectifiers with graphite anodes, as an Impressed Current Cathodic Protection system, are installed when a larger amount of electrical current is needed to achieve adequate cathodic protection levels.

The Company's steel pipeline system varies from bare Top of Ground ("TOG") to buried lines with various types of coatings in a variety of conditions. The electrical current requirement for each type of installation, whether bare or coated, covers a wide range. The cathodic protection levels are measured periodically as required along the pipeline. The periodic surveys will readily indicate deficiencies in the cathodic protection system. These deficiencies can be indicative of active corrosion, dis-bonded coating, anode degradation or shorted pipeline casings.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

The Company identified no projects requiring cathodic protection remediation in 2021 under CFR Title 49, Part 192 that be subject to either Subpart O (TIMP) or Subpart P (DIMP) depending on whether the pipe segment is classified as transmission or distribution pipe. For transmission segments, Section 192.917 requires a pipeline operator to evaluate and remediate pipeline segments where corrosion has been identified that could adversely affect the integrity of the line. Remediation of distribution segments is specified in Section 192.1007, which requires a

pipeline operator to identify threats, evaluate and risk rank, and identify and implement measures to address risks.

b) Objective Criteria Analyzed

The Company used the objective criteria included in the DIMP and TIMP risk models, as well as the availability of internal and external crews, project management constraints, local economic development plans and customer impact.

3. Program Description

The Company has not identified any cathodic protection SSIR Projects that require the replacement or installation of anode ground beds or rectifiers in 2021.

E. Town Border Stations ("TBS")

1. Background

Many TBS facilities in service today were built in the 1950s-1960s era, well before the requirements of 49 CFR 192 existed. Although many of these stations have provided service for well over 50 years, they may not have been built in accordance with today's standards. Many TBS facilities have outdated equipment including shop fabricated heaters that are inefficient, weighted lever reliefs, and excessive pressure drop regulators. Because of their age and certain construction methods at the time of installation, many station components are displaying corrosion concerns on the piping and other components. In some cases, the TBS equipment and piping are still adequate but the existing line heater is inefficient, undersized and/or corroding and needs to be replaced. Through a multi-year program, the Company plans to replace these aging stations and/or line heaters with components built to today's standards.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

The Company identified pipeline system components displaying safety threats requiring remediation in 2021 under CFR Title 49, Part 192 that be subject to either Subpart O (TIMP) or Subpart P (DIMP). For transmission components, Section 192.917 requires a pipeline operator to evaluate and remediate pipeline segments where corrosion has been identified that could adversely affect the integrity of the system. Remediation of distribution components is specified in Section 192.1007, which requires a pipeline operator to identify threats, evaluate and risk rank, and identify and implement measures to address risks.

b) Objective Criteria Analyzed

The Company used the objective criteria included in the DIMP and TIMP risk models, as well as the availability of internal and external crews, project management constraints, local economic development plans and customer impact.

3. Program Description

Through a multi-year program, the Company plans to replace these aging stations and/or line heaters with components built to today's standards. The new stations will be built with new components including regulators, pressure relief and isolation valves, line heaters and coated or painted new piping. For 2021, the Company has identified and scheduled for the replacement of 6 TBS at a total estimated capital cost of $*936,000*.

The Company has also identified 32 Line Heaters that need replacement at a total estimated capital cost of 607,002. These Projects are expected to be completed by December 31, 2021.

4. Specific Projects

a) Alliance, Nebraska – TBS Relocation & Replacement

This SSIR Project includes the relocation and replacement of a TBS in Alliance, NE in an effort to bring the TBS up to current code requirements and to improve the safety and reliability of the facility. The existing TBS has an open flame line heater without proper safety controls, gas carrier pipe that is used as piping support resting on concrete which is a corrosion concern, valves that are in poor condition, and pressure regulating equipment that needs updating. The max score for this project is 3254 based on the risk model. The new TBS will include a much safer manufactured water bath line heater, proper pipe supports, standby alternate path to avoid system outage, new valves, and new pressure regulating equipment. The total capital cost of this SSIR Project is estimated at $*156,000*, with a scheduled in-service date of November 30, 2021.

b) Clearwater, Nebraska – TBS Relocation & Replacement

This SSIR Project includes the relocation and replacement of a TBS in Clearwater, NE in an effort to bring the TBS up to current code requirements and to improve the safety and reliability of the facility. The existing TBS has an open flame line heater without proper safety controls, gas carrier pipe that is used as piping support resting on concrete which is a corrosion concern, valves that are in poor condition, and pressure regulating equipment that needs updating. The max score for this project is 3209 based on the risk model. The new TBS will include a much safer manufactured water bath line heater, proper pipe supports, standby

alternate path to avoid system outage, new valves, and new pressure regulating equipment. The total capital cost of this SSIR Project is estimated at $*156,000*, with a scheduled in-service date of November 30, 2021.

c) McCook, Nebraska – TBS Relocation & Replacement

This SSIR Project includes the relocation and replacement of a TBS in McCook, NE in an effort to bring the TBS up to current code requirements and to improve the safety and reliability of the facility. The existing TBS has an open flame line heater without proper safety controls, gas carrier pipe that is used as piping support resting on concrete which is a corrosion concern, valves that are in poor condition, and pressure regulating equipment that needs updating. The max score for this project is 3257 based on the risk model. The new TBS will include a much safer manufactured water bath line heater, proper pipe supports, standby alternate path to avoid system outage, new valves, and new pressure regulating equipment. The total capital cost of this SSIR Project is estimated at $*156,000*, with a scheduled in-service date of November 30, 2021.

d) Ogallala, Nebraska – TBS Relocation & Replacement

This SSIR Project includes the relocation and replacement of a TBS in Ogallala, NE in an effort to bring the TBS up to current code requirements and to improve the safety and reliability of the facility. The existing TBS has an open flame line heater without proper safety controls, gas carrier pipe that is used as piping support resting on concrete which is a corrosion concern, valves that are in poor condition, and pressure regulating equipment that needs updating. The max score for this project is 3203.7 based on the risk model. The new TBS will include a much safer manufactured water bath line heater, proper pipe supports, standby alternate path to avoid system outage, new valves, and new pressure regulating equipment. The total capital cost of this SSIR Project is estimated at $*156,000*, with a scheduled in-service date of November 30, 2021.

e) Plainview, Nebraska – TBS Relocation & Replacement

This SSIR Project includes the relocation and replacement of a TBS in Plainview, NE in an effort to bring the TBS up to current code requirements and to improve the safety and reliability of the facility. The

existing TBS has an open flame line heater without proper safety controls, gas carrier pipe that is used as piping support resting on concrete which is a corrosion concern, valves that are in poor condition, and pressure regulating equipment that needs updating. The max score for this project is 3256 based on the risk model. The new TBS will include a much safer manufactured water bath line heater, proper pipe supports, standby alternate path to avoid system outage, new valves, and new pressure regulating equipment. The total capital cost of this SSIR Project is estimated at $*156,000*, with a scheduled in-service date of November 30, 2021.

f) Utica, Nebraska – TBS Relocation & Replacement

This SSIR Project includes the relocation and replacement of a TBS in Utica, NE in an effort to bring the TBS up to current code requirements and to improve the safety and reliability of the facility. The existing TBS has an open flame line heater without proper safety controls, gas carrier pipe that is used as piping support resting on concrete which is a corrosion concern, valves that are in poor condition, and pressure regulating equipment that needs updating. The max score for this project is 3241 based on the risk model. The new TBS will include a much safer manufactured water bath line heater, proper pipe supports, standby alternate path to avoid system outage, new valves, and new pressure regulating equipment. The total capital cost of this SSIR Project is estimated at $*156,000*, with a scheduled in-service date of November 30, 2021.

g) Multiple Locations, Nebraska – Line Heater Replacement

The company has identified 25 line heaters that are to be replaced with Catalytic Panels. They are located throughout the state, specifically in Bayard, Bertrand, Broadwater, Burwell, Cambridge, Clearwater, Davenport, Deshler, Ewing, Fairfield, Franklin, Greeley, Henderson, Hildreth, Indianola, Lewellen, Lodgepole, Long Pine, Loup City, North Loup, Orchard, Oshkosh, Potter, Sargent and Wilcox. The total capital cost of these projects is estimated at $219,648 ($8,786 each), with a scheduled in-service date of November 30, 2021.

The company has identified 7 line heaters to be replaced by safe and efficient manufactured water bath style line heaters. They are located throughout the state, specifically in Elgin, Genoa, Gibbon, Laurel,

McCook (East), Ravenna and St Edward. The total capital cost of these projects is estimated at $387,354 ($55,336 each), with a scheduled in-service date of November 30, 2021.

F. Top of Ground (TOG), Span, Shallow and Exposed Pipe Replacement

1. Background

Natural gas pipelines installed today generally are below grade with a minimum cover of three feet. Burying pipelines reduces the overall risk of the pipeline from outside force among other threats. Many pipeline segments operated by the Company in Nebraska, however, were installed by the Company's predecessor during the 1950s and 1960s on top of the ground. These lines today are referred to as "Top of Ground" (TOG) within the system. During the time these lines were installed, the Company's predecessor made a push to serve agricultural customers and small communities and installing TOG lines expedited service to these areas and reduced installation costs. When originally installed, most line segments were laid along fence lines, section lines or other rights-of-way that did not pose a high level of risk because they were visible and known to farmers. Through time, however, property owners and lease tenants have changed, many fences have been removed, agricultural land has been developed and, in places, the TOG segments have become partially buried. These TOG segments are susceptible to outside force damage as well as corrosion threats.

Spans are segments of pipe that were intentionally installed above grade and that cross a known obstacle, which can include creeks, rivers, ditches, or highways. These pipes can be supported or unsupported. Supported spans can be attached to a bridge or similar structure. Unsupported spans are generally shorter segments of pipe that are not supported by any structures and are also known as freestanding. Spans are susceptible to outside force damage as well as corrosion threats.

The risk of damage from outside forces and threats of corrosion are significant to TOG but are even greater for pipe that is shallow or has become exposed. While TOG may have been originally laid along fence lines, section lines or other rights-of-way that did not pose a high level of risk because they were visible and known to farmers, shallow and exposed pipe are not visible and known to customers until there is imminent danger of causing damage.

While the Company will be compliant with regulatory and operational standards, such as a minimum cover of 36 inches for transmission lines, only projects that meet these definitions **and** pose a significant risk will be recommended for replacement. That risk will be based on the depth of the pipe, the location and use of the land, and the ROF.

Exposed pipe would include pipe that was originally laid above the ground (like TOG) and pipe that has not buried deep enough as is now visible and exposed.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

TOG, Span, Shallow and Exposed Pipe Projects identified are covered under CFR Title 49, Part 192, and may be subject to either Subpart O (TIMP) or Subpart P (DIMP) depending on whether the pipe segment is classified as transmission or distribution pipe. For transmission segments, Section 192.917 requires a pipeline operator to evaluate and remediate threats to pipeline segments including where corrosion has been identified or potential outside force damage could occur that could adversely affect the integrity of the line. Remediation of distribution segments is specified in Section 192.1007, which requires a pipeline operator to identify threats, evaluate and risk rank, and identify and implement measures to address risks.

b) Objective Criteria Analyzed

The Company used the objective criteria included in the DIMP and TIMP risk models, as well as the availability of internal and external crews, project management constraints, local economic development plans and customer impact.

3. Program Description

The Company has identified ten SSIR Projects to replace TOG, Span, Shallow and Exposed pipeline segments. Pipeline segments typically are replaced with polyethylene pipe, but segments that are required to operate at a higher pressure, in excess of 100 PSIG, typically are replaced with steel pipe coated with fusion bonded epoxy. The total capital expenditure for these ten SSIR Projects in 2021 is estimated to be $16,842,264. All ten TOG, Span, Shallow and Exposed Pipe SSIR Projects are expected to be completed by December 31, 2021.

4. Specific Projects

a) Holdrege, Nebraska – TOG Replacement Eustis Area – 10

This SSIR project will consist of replacing 113,544 feet (21.5 miles) of pipe, all of which is TOG and installed between 1947 and 1963 in Eustis, NE. The max score for this project is 2650.9 based on the risk model. The estimated total capital cost of this SSIR Project is $3,373,405. The anticipated in-service date is October 31, 2021.

b) Sutton, Nebraska – TOG Replacement 3900160-6

This SSIR project will consist of replacing 130,457 feet (24.7 miles) of pipe, all of which is TOG and installed between 1957 and 1958 in Benedict, NE. The max score for this project is 2924.4 based on the risk model. The estimated total capital cost of this SSIR Project is $1,707,766. The anticipated in-service date is October 31, 2021.

c) Sutton, Nebraska – TOG Replacement 4603480-20

This SSIR project will consist of replacing 101,017 feet (19.1 miles) of pipe, all of which is TOG and installed between 1955 and 1966 in Sutton, NE. The max score for this project is 2323.9 based on the risk model. The estimated total capital cost of this SSIR Project is $2,831,619. The anticipated in-service date is October 31, 2021.

d) Sutton, Nebraska - Exposed Main Replacement 63213.87

This SSIR project will consist of replacing 1,738 feet of exposed pipe installed in 1959 in Shelton, NE. The ROF for this project is 25.4% based on the TIMP risk model. The estimated total capital cost of this SSIR Project is $970,366. The anticipated in-service date is October 31, 2021.

e) Sutton, Nebraska - Shallow Main Replacement 68332.92

This SSIR project will consist of replacing 131 feet of shallow 4 inch pipe installed in 1959 in Shelton, NE. The depth of this segment is 19 inches, less than the standards recommended by PHMSA and the Company standards, and poses a significant risk as it is located in land used for agricultural purposes. The ROF for this project is 24.7% based on the TIMP risk model. The estimated total capital cost of this SSIR Project is $108,379. The anticipated in-service date is October 31, 2021.

f) Kearney, Nebraska - Span Main Replacement 50171.96

This SSIR project will consist of replacing 332 feet of unsupported span pipe installed in North Loup, NE. The ROF for this project is 24.9% based on the TIMP risk model. The estimated total capital cost of this SSIR Project is $288,438. The anticipated in-service date is October 31, 2021.

g) Kearney, Nebraska - Shallow Pipe Replacement 1498.52

This SSIR project will consist of replacing 185 feet of 6 inch shallow pipe installed in 1996 in Litchfield, NE. The depth of this segment is 20 inches, less than the standards recommended by PHMSA and the Company standards, and poses a significant risk as it is located in land used for agricultural purposes. The ROF for this project is 24.7% based on the TIMP risk model. The estimated total capital cost of this SSIR Project is $147,720. The anticipated in-service date is October 31, 2021.

h) Albion, Nebraska - Exposed Pipe Replacement 1292.97

This SSIR project will consist of replacing 1,888 feet of exposed pipe installed in 1953 in Plainview, NE. The ROF for this project is 24.4% based on the TIMP risk model. The estimated total capital cost of this SSIR Project is $1,158,639. The anticipated in-service date is October 31, 2021.

i) Albion, Nebraska - Shallow Pipe Replacement 20122.78

This SSIR project will consist of replacing 8,016 feet of 6 inch shallow pipe installed in 1953 in Breslau, NE. The depth of this segment is 13 inches, less than the standards recommended by PHMSA and the Company standards, and poses a significant risk as it is located in land used for agricultural purposes. The ROF for this project is 24.4% based on the TIMP risk model. The estimated total capital cost of this SSIR Project is $3,003,281. The anticipated in-service date is October 31, 2021.

j) Albion, Nebraska - Shallow Pipe Replacement 31129.47

This SSIR project will consist of replacing 8,877 feet of 6 inch shallow pipe installed in 1953 in Breslau, NE. The depth of this segment is 19 inches, less than the standards recommended by PHMSA and the Company standards, and poses a significant risk as it is located in land used for agricultural purposes. The ROF for this project is 23.7% based on

the TIMP risk model. The estimated total capital cost of this SSIR Project is $3,252,650. The anticipated in-service date is October 31, 2021.

G. Meter Relocations

1. Background

These SSIR Projects involve the relocation of meter loops from their current location near a highway, street or alley to the structure to better protect them from outside force damage, while replacing the customer owned and installed "yard line" to the newly placed meter. This threat is equally caused by meter loops being at the customer's property line, in an alley or adjacent to the street and customer owned lines not having proper materials, repairs, maintenance, installation procedures, or records. Often times, these meters are bumped by vehicles backing out of garages or hit alongside a street that result in a bent meter or leak to the meter loop. The occurrence of such damage has increased over the years, and Company records show that the 2nd greatest risk to its distribution system is outside force, much of which is a result of meters being hit by vehicles.

Also included are the relocation of meters that are inside residences ("Inside Meters"). Inside meters may present a safety issue because they are susceptible to damage from customers within their homes. The consequence of a meter leak is of much greater significance because we do not vent to atmosphere, but into a home with large amounts of ignition sources and customers. Also, as part of the routine process of testing and exchanging meters, these meters require entrance into the customer's home or business and often second visits to re-light gas appliances.

Currently, BH Nebraska Gas must schedule an appointment to operate and maintain a meter located inside a customer's premise. This meter location can result in inconvenience and disruption for customers. In addition, if the Customer does not permit access to the premise, fails to honor the service appointment, or is tardy to a scheduled appointment, then the cost of waiting or rearranging the BH Nebraska Gas appointment can end up costing the Company more time and expense than if the meter is relocated outside of the premise.

The relocation of meters, whether from near a highway, street, alley or inside the residences, typically involves the installation of a new service line, the retirement of the existing meter and the installation of a new meter assembly (risers, regulator, bypass meter assembly and meter). Only capital activity would be considered eligible in the SSIR mechanism.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

The Company identified these facilities requiring remediation under CFR Title 49, Part 192, Subpart P, DIMP. Section 192.1007 requires a pipeline operator to identify threats, evaluate and risk rank, and identify and implement measures to address risks.

b) Objective Criteria Analyzed

The Company used the objective criteria included in the ARMR risk model, as well as the availability of internal and external crews, project management constraints, local economic development plans and customer impact.

3. Program Description

Meter loops are typically relocated from the vulnerable location to the structure to better protect them from outside force damage. In most cases, the service lines are replaced due to age, pipe material or condition of the pipe. The decision to relocate meters is dependent upon adequate material, adequate installation information, and accurate records of a customer owned fuel lines, which is not likely.. The Company plans to relocate 5272 meters in 2021. The total capital expenditure for meter relocations in 2021 is estimated to be $22,848,800. All meter relocation SSIR Projects listed are expected to be completed by December 31, 2021.

4. Specific Projects

Below are the towns and cities where the 2021 Meter Relocation Projects will occur and may not correspond to the project names.

a) Beatrice, Nebraska – Meter Relocation

The Company will relocate 33 meters from vulnerable locations and place them next to structures in Beatrice, NE. All meters are outside of buildings. The average max score for these meters is 6,844.2 based on the risk model. The total capital cost is estimated at $143,022, and all replacements are scheduled to be in service by December 31, 2021.

b) Chadron, Nebraska – Meter Relocation

The Company will relocate 121 meters from vulnerable locations and place them next to structures in Chadron, NE. 118 meters are in alleys with an average max score of 76,572.4, 2 meters are at easement lines with an average max score of 91,139.7, and 1 meter is outside of a building with a max score of 52,386.2 based on the risk model. The average max score for all 121 meters is 76,613.3 based on the risk model. The total capital cost is estimated at $524,413 and all replacements are scheduled to be in service by December 31, 2021.

c) Cozad, Nebraska – Meter Relocation

The Company will relocate 11 meters from vulnerable locations and place them next to structures in Cozad, NE. All meters are at easement lines. The average max score for these meters is 4.7 based on the risk model. The total capital cost is estimated at $47,674, and all replacements are scheduled to be in service by December 31, 2021.

d) Fairbury, Nebraska – Meter Relocation

The Company will relocate 1 meter from a vulnerable location and place it next to the structure in Fairbury, NE. The meter is outside of a building. The max score for this meter is 721.5 based on the risk model. The total capital cost is estimated at $4,334, and the replacement is scheduled to be in service by December 31, 2021.

e) Gering, Nebraska – Meter Relocation

The Company will relocate 242 meters from vulnerable locations and place them next to structures in Gering, NE. 208 meters are in alleys with an average max score of 76,279.8, and 34 meters are at easement lines with an average max score of 75,440.7 based on the risk model. The average max score for all 242 meters is 76,161.9 based on the risk model. The total capital cost is estimated at $1,048,826 and all replacements are scheduled to be in service by December 31, 2021.

f) Holdrege, Nebraska – Meter Relocation

The Company will relocate 171 meters from vulnerable locations and place them next to structures in Holdrege, NE. 166 meters are in alleys with an average max score of 100,249.0, 4 meters are at easement lines with an average max score of 94,432.2, and 1 meter is outside of a building with a max score of 87,139.6 based on the risk model. The average max score for all 171 meters is 100,036.3 based on the risk model. The total capital cost is estimated at $741,112 and all replacements are scheduled to be in service by December 31, 2021.

g) Lexington, Nebraska – Meter Relocation

The Company will relocate 878 meters from vulnerable locations and place them next to structures in Lexington, NE. 658 meters are in alleys with an average max score of 20,799.3, 200 meters are at easement lines with an average max score of 9,232.4, 17 meters are inside structures with an average max score of 72,953.0, and 3 meters are outside of buildings with an average max score of 4,906.7 based on the risk model. The average max score for all 658 meters is 19,120 based on the risk model. The total capital cost is estimated at $3,805,244 and all replacements are scheduled to be in service by December 31, 2021.

h) Lincoln, Nebraska – Meter Relocation

The Company will relocate 2,076 meters from vulnerable locations and place them next to structures in Lincoln, NE. 1,343 meters are inside structures with an average max score of 93,667.0, and 733 meters are outside of buildings with an average max score of 24,908.1 based on the risk model. The average max score for all 2,076 meters is 69,389.4 based on the risk model. The total capital cost is estimated at $8,997,365 and all replacements are scheduled to be in service by December 31, 2021.

i) McCook, Nebraska – Meter Relocation

The Company will relocate 171 meters from vulnerable locations and place them next to structures in McCook, NE. 162 meters are in alleys with an average max score of 61,748.8, 8 meters are at easement lines with an average max score of 60,862.0, and 1 meter is outside of a building with a max score of 27,363.1 based on the risk model. The average max score for all 171 meters is 61,506.3 based on the risk model. The total capital cost is estimated at $741,112 and all replacements are scheduled to be in service by December 31, 2021.

j) Ogallala, Nebraska – Meter Relocation

The Company will relocate 500 meters from vulnerable locations and place them next to structures in Ogallala, NE. 410 meters are in alleys with an average max score of 14,859.2, 85 meters are at easement lines with an average max score of 11,797.1, 1 meter is inside a structure with a max score of 9,561.6, and 4 meters are outside of buildings with an average max score of 4,078.5 based on the risk model. The average max score for all 500 meters is 14,241.8 based on the risk model. The total capital cost is estimated at $2,166,995 and all replacements are scheduled to be in service by December 31, 2021.

k) Oneill, Nebraska – Meter Relocation

The Company will relocate 615 meters from vulnerable locations and place them next to structures in Oneill, NE. 415 meters are in alleys with an average max score of 9,130.8, 198 meters are at easement lines with an average max score of 8,722.2, and 2 meters are outside of buildings with an average max score of 3,244.2 based on the risk model. The average max score for all 615 meters is 8,980.1 based on the risk model. The total capital cost is estimated at $2,665,404 and all replacements are scheduled to be in service by December 31, 2021.

l) Scottsbluff, Nebraska – Meter Relocation

The Company will relocate 194 meters from vulnerable locations and place them next to structures in Scottsbluff, NE. 173 meters are in alleys with an average max score of 86,820.5, 20 meters are at easement lines

with an average max score of 97,045.1, and 1 meter is inside a structure with a max score of 99,537.5 based on the risk model. The average max score for all 194 meters is 87,940.1 based on the risk model. The total capital cost is estimated at $840,794 and all replacements are scheduled to be in service by December 31, 2021.

m) Seward, Nebraska – Meter Relocation

The Company will relocate 1 meter from a vulnerable location and place it next to the structure in Seward, NE. The meter is outside of a building. The max score for this meter is 8.9 based on the risk model. The total capital cost is estimated at $4,334, and the replacement is scheduled to be in service by December 31, 2021.

n) Terrytown, Nebraska – Meter Relocation

The Company will relocate 8 meters from vulnerable locations and place them next to structures in Terrytown, NE. 7 meters are in alleys with an average max score of 31,752.4, and 1 meter is at an easement line with a max score of 31,752.4 based on the risk model. The average max score for all 8 meters is 31,752.4 based on the risk model. The total capital cost is estimated at $34,672 and all replacements are scheduled to be in service by December 31, 2021.

o) York, Nebraska – Meter Relocation

The Company will relocate 80 meters from vulnerable locations and place them next to structures in York, NE. 1 meter is in an alley with a max score of 29,587.2, 29 meters are at easement lines with an average max score of 2,349.0, and 50 meters are outside buildings with an average max score of 3,292.2 based on the risk model. The average max score for all 80 meters is 3,279.0 based on the risk model. The total capital cost is estimated at $346,719 and all replacements are scheduled to be in service by December 31, 2021.

H. Obsolete Pipe Replacement

1. Background

The Company currently operates approximately less than 900 miles of polyvinylchloride ("PVC") distribution pipelines in Nebraska which were installed between the mid-1960s through 1980. By the mid-1980's PVC was no longer a recommended piping material due to the evolution of superior piping materials, such as PE pipe, and new construction methods. There are several safety issues with PVC pipe that the Company, and the industry as a whole, face. For example, PVC pipe has a high instance of leaks at joints due to adhesive failure. Additionally, in many instances the integrity of older PVC pipe is compromised because the material becomes brittle over time, which makes PVC pipe more prone to failure due to stress intensification that occurs when soil around a pressurized pipe is removed. Also, PVC pipe was installed with tracer wire to assist in locating the pipe, and over time that tracer wire has corroded and no longer carries a current. This makes it difficult for the Company to provide accurate pipe location points, which significantly increases the risk of third party damage.

There are also pipelines made of material other than PVC that are not recommended currently, due to the evolution of superior piping materials and new construction methods, causing these types of piping to pose safety issues to BH Nebraska Gas and the public. Examples include copper, Aldyl-A and Orangeburg.

The Company recognizes that all pipe that is no longer the industry standard may not necessarily be considered a significant high risk in the context of failure and consequence. Only such pipe that also poses a significant risk will be recommended for replacement. That risk will be based on the risk model including factors including, but not limited to, age, material, the location, and the ability to locate the pipe.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

Obsolete Pipe Replacement Projects identified are covered under CFR Title 49, Part 192, and may be subject to either Subpart O (TIMP) or Subpart P (DIMP) depending on whether the pipe segment is classified as transmission or distribution pipe. For transmission segments, Section

192.917 requires a pipeline operator to evaluate and remediate threats to pipeline segments including where corrosion has been identified or potential outside force damage could occur that could adversely affect the integrity of the line. Remediation of distribution segments is specified in Section 192.1007, which requires a pipeline operator to identify threats, evaluate and risk rank, and identify and implement measures to address risks.

b) Objective Criteria Analyzed

The Company used the objective criteria included in the DIMP and TIMP risk models, as well as the availability of internal and external crews, project management constraints, local economic development plans and customer impact.

3. Program Description

The Company has identified six specific PVC distribution main pipelines that will be replaced with PE pipe in 2021. The total capital expenditure for these six SSIR Projects in 2021 is estimated to be $*1,625,284*. All six of these PVC SSIR Projects are expected to be completed by December 31, 2021.

4. Specific Projects

a) Holdrege, Nebraska PVC 270-2174 – PVC Main Replacement

This SSIR project will consist of replacing 7,849 feet of PVC main that was installed in 1971 in Atlanta, NE. The max score for this project is 1,763 based on the risk model. The estimated total capital cost of this SSIR Project is $125,320. The anticipated in-service date is October 31, 2021.

b) Kearney, Nebraska PVC 470-1612 – PVC Main Replacement

This SSIR project will consist of replacing 4,154 feet of PVC main that was installed in 1973 in Bloomington, NE. The max score for this project is 3,120.5 based on the risk model. The estimated total capital cost of this SSIR Project is $63,913. The anticipated in-service date is October 31, 2021.

c) Scottsbluff, Nebraska PVC 110-2653 – PVC Main Replacement

This SSIR project will consist of replacing 12,913 feet of PVC main that was installed in 1969 in Chappell, NE. The max score for this project is 1,763 based on the risk model. The estimated total capital cost of this SSIR Project is $206,960. The anticipated in-service date is October 31, 2021.

d) Sutton 20, Nebraska PVC 460-2515 – PVC Main Replacement

This SSIR project will consist of replacing 5,269 feet of PVC main that was installed in 1967 in Deshler, NE. The max score for this project is 1,763 based on the risk model. The estimated total capital cost of this SSIR Project is $349,976. The anticipated in-service date is October 31, 2021.

e) Sutton 10, Nebraska PVC 380-2582 – PVC Main Replacement

This SSIR project will consist of replacing 54,463 feet of PVC main that was installed between 1968 and 1972 in Hansen, NE. The max score for this project is 1,753.9 based on the risk model. The estimated total capital cost of this SSIR Project is $840,493. The anticipated in-service date is October 31, 2021.

f) Sutton 10, Nebraska PVC 460-2826 – PVC Main Replacement

This SSIR project will consist of replacing 5,171 feet of PVC main that was installed in 1972 in Trumbull, NE. The max score for this project is 1,753.9 based on the risk model. The estimated total capital cost of this SSIR Project is $38,622. The anticipated in-service date is October 31, 2021.

I. Facility Relocation Projects

The SSIR Tariff authorizes the Company to recover the costs of facility relocation projects in the SSIR Charge. The Company each year encounters the need to conduct facility relocation projects in connection with municipal infrastructure projects. These facility relocation projects, when they occur, are directly related to pipeline safety and integrity activities. Such projects are an integral step in the overall safety and integrity process. These projects are required by government entities to enhance the public welfare, including safety.

Although the Company is currently aware of some state or municipal infrastructure projects in 2021 that may require the Company to conduct facility relocation projects, the costs of which are Eligible System Safety and Integrity Costs for recovery through the SSIR Tariff, the possibility of changes or cancellations to those or identification of additional qualified project could arise. Therefore, as part of its quarterly surveillance reports, the Company will provide updates of its facility relocation projects in connection with state or municipal infrastructure projects and, through its 2022 annual filing, will seek to recover the Eligible System Safety and Integrity Costs associated with those projects that occurred in 2021.

J. Date Infrastructure Improvement Program (DIIP)

1. Background

In order to appropriately rank higher risk pipeline projects for purposes of prioritizing accelerated threat mitigation efforts, it is vital for the Company to be able to identify risks, understand the consequences of those risks, develop GIS tools, close known data gaps, and continuously improve system knowledge. The Company will implement a Data Infrastructure Improvement Program ("DIIP") to close known data gaps, develop and improve GIS tools, and verify current data for accuracy. This data will help develop more predictive and analytical risk models, improve system mapping and ultimately help protect against our top threat of third-party damage.

As data gaps are closed and data is verified as a result of the DIIP, the results will be incorporated annually into the DIMP and TIMP risk models. The effect will be a continuous improvement of the asset risk outputs, which will enhance the predictive abilities of the models. Verification of location-based data will directly improve safety of the system as well.

As the DIIP progresses, future SSIR applications will include the impact to the DIMP and TIMP programs and risk models, the Company's knowledge and population of high-risk-defined assets, the selection of annual portfolio of projects, and overall program(s) life cycles.

The Company has initiated a similar DIIP for transmission lines and has seen significant improvement of data by increased spatial accuracy of transmission assets, in some cases by hundreds of feet. Having accurate asset centerlines and mapping previously unmapped service lines will have a direct impact on the DIMP and TIMP, and by extension the safety of the public, environment, customers and employees. It will ensure proper one-call coverage and have practical safety impacts for 3rd party damage reduction, safe operations and emergency response.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

The Company identified the DIIP under CFR Title 49, Part 192, Subpart P (DIMP) and under CFR Title 49, Part 192, Subpart O, TIMP . Section 192.1007 requires a pipeline operator to identify threats, evaluate and risk rank, and identify

and implement measures to address risks. ASME B31.8S which is a referenced standard under the CFR Title 49, Part 192, Subpar O, identifies the necessary data elements needed to model risk accurately and reliably and recommends surveying all potential locations where records could exist and to remedy data deficiencies known to the transmission pipeline. Also, PHMSA Advisory Bulletins ADB 11-01, ADB 12-06, and the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 direct owners to verify that data and records accurately reflect the MAOP of their pipelines within Class 3, Class 4 and in High consequence areas.

b) Objective Criteria Analyzed

The DIIP is intended to improve the knowledge of the BH Nebraska Gas pipeline system to provide BH Nebraska Gas with the ability to positively confirm the integrity of the pipeline system. There continues to be knowledge gaps with respect to the pipeline system. The Program will implement specific initiatives to improve system data, including data gap elimination, GIS updates, programmatic improvements, and the continued roll-out of Digital As-Built Technology in Nebraska.

3. Program Description

The Company has identified nine projects within the DIIP as described below. The total expenditure for 2021 is estimated to be $961,164, of which $91,116 are internal costs and are not included in the SSIR Application. The remaining $865,048 are external costs and are included in the SSIR Application.

4. Specific Projects

a) Transmission/Gathering Traceable, Verifiable and Complete (TVC) Records

This project includes gathering, scanning and storing original construction records in a document management system and linking to the Geospatial Information System (GIS) asset. The documents will be used to verify Maximum Allowable Operating Pressure (MAOP) and MAOP attributes and update any missing pipeline attributes and features in GIS. Include the following record sources in the project for review: Historical

Computer Aided Drafting (CAD) and Platt Book records, In-Line Inspection (ILI) records.

There are no costs for this project in 2021.

b) Gas Service Card Mapping

This is a two-phase project.

Phase 1: This phase of the project will include adding all electronically generated service lines to our GIS database that are not currently in live production. This will include adding legacy Captricity and Distribution Integrity Management (DIMP) automatically generated service lines to production GIS data, performing a gap analysis to identify what spatial and attribute data issues we still have. The project will involve identifying all stakeholders who use service line data and displaying the created service lines in a way that communicates the risks with the spatial accuracy of these lines. Service lines already in the production GIS database with centerline accuracy issues will also be considered during phase one to promote consistency. The project will create a service line centerline for all active service points that do not currently have a service connection to the main.

Phase 2: This phase includes mapping, verifying, or adjusting the centerlines of roughly 190,000 electronic Nebraska service line as-builts that are currently stored in the document management system. This phase would include updating the pipeline and pressure test attributes on these service lines from the information gathered from the as-builts.

The total expenditure for 2021 is estimated to be $961,164, of which $91,116 are internal costs and are not included in the SSIR Application. The remaining $865,048 are external costs and are included in the SSIR Application

c) Distribution Main & Service Centerline Survey

This project includes the high accuracy Global Position System (GPS) survey of mains, service lines and meter locations. This project includes adding unmapped service lines to GIS, updating the spatial location of service lines in GIS and correcting the location of service points and meters in GIS. Other information to be gathered and updated includes

meter structure location, meter number, and abandoned live services (Service Point Status), above grade facilities, unlocatable mains. This survey should be combined with the required atmospheric corrosion survey. Towns will be prioritized using DIMP analysis. The GIS updates as a result of this project will be made as a part of the "Distribution Data Attribute Improvement" project for efficiency purposes.

There are no costs for this project in 2021.

d) Distribution Data Attribute Improvement

This project includes updating high priority pipeline attributes and features in GIS that are gathered from historic data, and records. This project will include the review of legacy data sets including historical CAD data, the MAOP access database for Legacy Source Gas Nebraska and the original construction records. The process to review construction records will include the scanning and indexing records, linking the records to GIS including the original construction documents and MAOP documentation. GIS updates and corrections from the Centerline Survey project will be included in this project. Prioritization will follow the same method as the centerline survey.

There are no costs for this project in 2021.

e) GIS Pressure Systems

This project will create pressure systems in GIS that will share a unique ID with Gas Valve and Asset Suite. This pressure systems will be updated with data for system MAOP, Operating Pressure, and odorized, and take points. Correction of connectivity issues will be included in the scope of this project.

There are no costs for this project in 2021.

f) GIS Emergency Response Zones

This project includes the creation and standardization of Emergency Response Zones per O&M to support company O&M 116 and Emergency

Valves in GIS. Ensuring consistency with these GIS features to the CIS+ Valve database and WAM system. Includes the digitization of the Emergency response plans for each system and linking to these zones.

There are no costs for this project in 2021.

g) GIS Cathodic Protection (CP) Zones

This project includes the creation and standardization of Cathodic Protection (CP) zones and features in GIS and ensuring consistency between GIS and the CP Databases. CP test stations as well as other CP assets will be included in scope for this project.

There are no costs for this project in 2021.

h) Bare Pipe Inspection (BPI) and Subject Matter Expert (SME) Pipeline Attribute Assessment

This project would use electronically available buried pipe inspection information and Subject Matter Expert knowledge to analyze and identify data issues. The data would then be corrected in the GIS system. It would include a process to verify the quality of this data before any updates are made.

There are no costs for this project in 2021.

i) Document Management Migration

This project includes the migration of the following documents sources to the new FileNet document management location: SharePoint Maximum Allowable Operating Pressure (MAOP) Library, FileNet Gas Service Cards, N: Drive As-built polygon files.

There are no costs for this project in 2021.

K. Reliability Projects

1. Background

While the focus of integrity projects is to replace aging or at -risk infrastructure, the focus of reliability projects is to ensure that gas is available, delivered and measured for our customers in all situations. In some cases, these projects will not replace any existing infrastructure, and are required to maintain minimum pressure requirements on our distribution system to prevent loss of customers on a winter peak day.

Projects to be included will be based on measurable criteria that improve safety and mitigate risk. The installation or replacement of pipe to facilitate growth, whether for identified or expected customers, will not be eligible to be included in the SSIR mechanism.

2. SSIR Project Classification

a) Classification Under SSIR Tariff

The Company identified the Reliability Projects under CFR Title 49, Part 192, Subpart P (DIMP) and under CFR Title 49, Part 192, Subpart O, TIMP . Section 192.1007 requires a pipeline operator to identify threats, evaluate and risk rank, and identify and implement measures to address risks. Section 192.917 requires a pipeline operator to evaluate and remediate pipeline segments where corrosion has been identified that could adversely affect the integrity of the line.

b) Objective Criteria Analyzed

The objective criteria that the Company analyzed for these Projects are: pipeline design, configuration and segmentation; pipeline leakage and other incident history; population density; city plans for future growth; Project timeframe; weather and climate constraints on the construction season; permitting constraints; service outage management; pipeline source of supply and availability of alternate gas supply; and subject matter expert knowledge.

3. Program Description

The Company has identified seven specific projects to improve the reliability of the distributions system in 2021. The total capital expenditure for these eight SSIR Projects in 2021 is estimated to be $*4,214,912*. All seven of these SSIR Projects are expected to be completed by December 31, 2021.

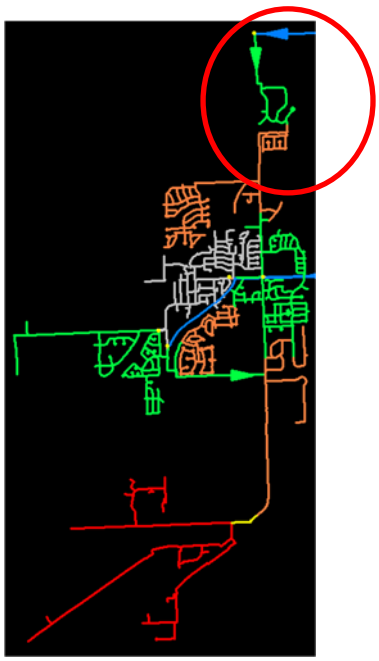
4. Specific Projects

a) Giles to Valeretta Drive Loop

This Project is designed to support the north side of the Gretna distribution system that is primarily fed from the southeast part of Gretna. Customers in this area will benefit with a two-way feed into this expanding area from a connection that will be coming from the north.

The ideal system pressure in this area is 70% of the MAOP of 50 psig on peak days. As shown in the pictures below, the circled area is currently operation at 50%-70% of MAOP. Adding the loop will increase the pressure to more than 90% of MAOP.

Current System



System after the loop project

- Green: >90% of MAOP
- Yellow: 70-90% of MAOP
- Orange: 50-70% of MAOP
- Red: <50% of MAOP

Without this project, the risk of system pressure loss is increased. Should there be a significant system pressure loss, there is a low probability but high consequence risk.

The estimated total capital cost of this SSIR Project is $127,760. The anticipated in-service date is October 31, 2021.

b) Highway 31 & Giles DRS Loop

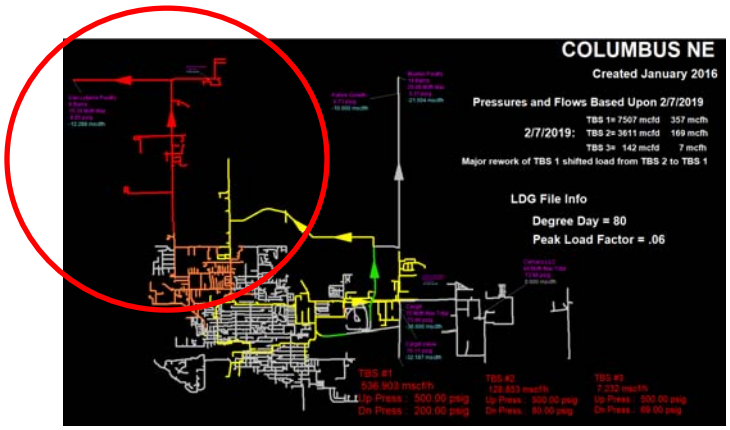
This Project will continue to support western Sarpy County by bringing much-needed capacity to the intersection of 204th and Giles Road. This project is necessary to serve the "Giles to Valeretta Drive Loop Project" listed as project a). The two projects

The estimated total capital cost of this SSIR Project is $120,000. The anticipated in-service date is October 31, 2021.

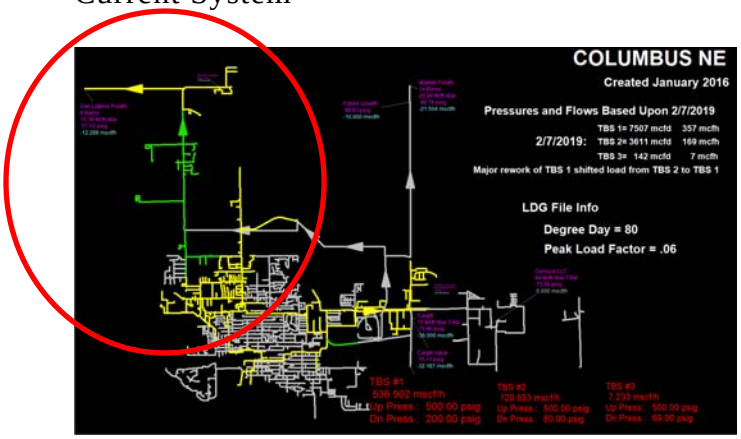
c) Columbus Capacity Loop

This Project is necessary to support the Columbus distribution system in the north and west areas of the community where there are some bottlenecks in the current infrastructure. Also, this loop will support the western part of the Columbus system by providing a two-way feed into the Columbus distribution system.

The ideal system pressure in this area is 70% of the MAOP of 68 psig on peak days. As shown in the pictures below, the circled area is currently operation at 50%-70% of MAOP. Adding the loop will increase the pressure to more than 90% of MAOP.



Current System



System after loop project

- Green: >90% of MAOP
- Yellow: 70-90% of MAOP
- Orange: 50-70% of MAOP
- Red: <50% of MAOP

Without this project, the risk of system pressure loss is increased. Should there be a significant system pressure loss, there is a low probability but high consequence risk.

The estimated total capital cost of this SSIR Project is $40,600. The anticipated in-service date is October 31, 2021.

d) <u>Kearney ERT Upgrade</u>

This project is to exchange 40G Electronic Reading Transmitters (ERTs) that were installed 15-20 years ago in Kearney, NE. The typical life span of ERTs are 16-20 years. A fully functioning ERT provides the ability to detect active leaks, unusual consumption that the Company investigates

that allows leaks to be detected. If these ERTs are not replaced, the ability to detect active leaks and unusual consumption and the accuracy of the monthly usage reads will begin to degrade rapidly and will eventually cease.

Replacing 40G ERTs with 100G ERTs is necessary for future implementation of an Automated Metering Infrastructure (AMI) program, that will give the Company the ability to download data showing hourly usage for up to 60 days. Methane and pressure sensors will also be able to be integrated. As SCADA and asset consequence are parts of the DIMP risk model, fully functioning and advanced capability ERTs allow quick response to damages. Areas without the ability to detect damages or leaks will be ranked higher.

Ultimately, this safety-based project could allow for quicker leak response.

The estimated total capital cost of this SSIR Project is $2,333,185. The anticipated in-service date is October 31, 2021.

e) <u>Holdrege ERT Upgrade</u>

This project is to exchange 40G Electronic Reading Transmitters (ERTs) that were installed 15-20 years ago in Holdrege, NE. The typical life span of ERTs are 16-20 years. A fully functioning ERT provides the ability to detect active leaks, unusual consumption that the Company investigates that allows leaks to be detected. If these ERTs are not replaced, the ability to detect active leaks and unusual consumption and the accuracy of the monthly usage reads will begin to degrade rapidly and will eventually cease.

Replacing 40G ERTs with 100G ERTs is necessary for future implementation of an Automated Metering Infrastructure (AMI) program, that will give the Company the ability to download data showing hourly usage for up to 60 days. Methane and pressure sensors will also be able to be integrated. As SCADA and asset consequence are parts of the DIMP risk model, fully functioning and advanced capability ERTs allow quick response to damages. Areas without the ability to detect damages or leaks will be ranked higher.

Ultimately, this safety-based project could allow for quicker leak response.

The estimated total capital cost of this SSIR Project is $1,485,867. The anticipated in-service date is October 31, 2021.

f) Scottsbluff Chart Replacements

This Project consists of replacing outdated chart recording equipment in Scottsbluff which monitors distribution system operating pressures as required by code. The existing chart recorders require a technician to visit the site weekly or monthly, depending on the chart type, to change the paper chart. The chart recorders offer no real time pressure monitoring and they will be replaced by electronic pressure monitoring equipment that will be remotely monitored by SCADA/Gas Control and will not require regular visits.

Remotely monitored equipment that provide real-time data will give the Company the ability to detect leaks and changes in pressure immediately. As SCADA and asset consequence are parts of the DIMP risk model, advanced measurement equipment allows quick response to damages. Areas without the ability to timely detect leaks or changes in pressure will be ranked higher.

Ultimately, this safety-based project will allow for quicker leak response.

The estimated total capital cost of this SSIR Project is $13,500. The anticipated in-service date is October 31, 2021.