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BEFORE THE IDAHO PUBLIC UTILITES COMMISSION

IN THE MATTER OF THE APPLICATION OF INTERMOUNTAIN GAS COMPANY FOR THE AUTHORITY TO CHANGE ITS RATES AND CHARGES FOR NATURAL GAS SERVICE TO NATURAL GAS CUSTOMERS IN THE STATE OF IDAHO	)	Case No. INT-G-16-02

DIRECT TESTIMONY OF HART GILCHRIST

FOR INTERMONTAIN GAS COMPANY

August 12, 2016

I. INTRODUCTION

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

A. My name is Hart Gilchrist. I am Vice President, Operations, for Intermountain Gas Company. My business address is 555 South Cole Road, Boise, Idaho 83709.

Q. Mr. Gilchrist, would you please summarize your educational and professional experience.

A. I have been working in the natural gas industry and at Intermountain Gas for 22 years, where I started as an Engineering Technician in the Boise District office. I was named Vice President, Operations in July 2015. Prior to this role I have held numerous positions in the operations department. In my current assignment, I am responsible for corporate and field operations and engineering functions for the Company. These activities include transmission and distribution integrity management, corrosion, leak survey, damage prevention, gas measurement, public awareness and installation and maintenance of natural gas facilities in our distribution system.

I have bachelor's degrees in finance and marketing from the University of Idaho and an MBA from Boise State University. I serve on the United Way of Treasure Valley board of directors, Boise State University College of Business and Economics Advisory Board, College of Western Idaho Foundation Board, American Gas Association Managing Committee, Northwest Gas Association Board and Boise Chamber of Commerce Advisory Board.

Q. What is the purpose of your testimony in this docket?

A. My testimony will cover several areas.

First, I will discuss the delivery chain involved in bringing natural gas from the well-head to the consumer, and the role Intermountain plays in the last part, or local distribution, of that delivery chain. Second, I will provide some detail on certain operations and maintenance expenses of the Company operating as a local gas distribution company ("LDC"). Third, I will explain the Company's focus on building and maintaining a safe and reliable natural gas distribution system and the costs incurred in that endeavor. Fourth, I will explain Intermountain's infrastructure replacement program and spending and lay out a proposal for a future program and regulatory case that would allow the Company to identify parts of its distribution system that has aged or has been identified as needing replacement per federal pipeline safety programs to the point where it needs to be replaced in the near-term, and how Intermountain can recover our replacement costs more quickly for a portion of this pipeline replacement.

II. GAS SUPPLY CHAIN

Q. Please describe Intermountain's delivery chain. Where does Intermountain acquire its natural gas and how is the cost of that wholesale commodity passed through to customers of the Company?

A. First, it is important to distinguish the role Intermountain plays as an LDC, and that it is not a vertically integrated utility. By that, I mean it does not own any producing gas wells that are ultimately used to supply its retail customers in Idaho. Instead, the Company contracts with a wholesale supplier to acquire the gas needed to meet its regulatory obligation to provide service to its Idaho

Customers. Currently, Intermountain has contracted with IGI Resources, Inc., a wholly owned subsidiary of BP Energy ("IGI/BP") to acquire wholesale gas on behalf of Intermountain, and arrange, or contract, for transportation of that gas to the Company's various distribution systems in southern Idaho. That contacted-for delivery occurs over an interstate pipeline system that is not owned by Intermountain, but in the Company's case, is owned by Williams-Northwest Pipeline Company ("NW Pipeline"). Prices for wholesale gas acquired by IGI/BP on behalf of Intermountain are market driven, while transportation costs paid to NW Pipeline are at rate-of-return regulated prices set by FERC. Both gas commodity costs and transportation costs are then passed through, dollar for dollar, to Intermountain's customers pursuant to the Company's annual Purchased Gas Adjustment (PGA) cost recovery filing.

Q. Please describe Intermountain's gas supply chain.

A. Page 1 of Exhibit 3 is a simplified diagram of the gas supply chain from the gas wellhead to the end consumer. As shown on this diagram, gas comes out of the ground at the gas wellhead, which is independently owned, with the various wells connected via a gathering system to a gas compressor station and gas processing station. IGI/BP will acquire a gas supply on behalf of Intermountain from producers/wholesalers who represent a wellhead owner. It does not matter to Intermountain where the gas originates; it's just a commodity to us. IGI then contracts with one or more interstate pipeline owners to move the contracted-for gas to a city gate or a farm tap, where Intermountain takes delivery of the wholesale gas and distributes it to our customers.

Q. Please describe what happens once Intermountain takes delivery of the wholesale gas.

A. The Company takes delivery of gas at a variety of points on the NW Pipeline system that roughly correspond with the various Idaho cities, towns and farms served by Intermountain. Those multiple delivery points are the "Gas Station" box as shown on Exhibit 3, Page 1. Downstream from the "Gas Station" box on Page 1 of Exhibit 3 is the portion of the diagram showing storage facilities, compressor stations, distribution pipelines, and industrial, commercial and residential consumers. All of these facilities and infrastructure are designed and built to deliver gas supply to core market and non-interruptible industrial customers on the coldest peak-day period. The storage facilities, or liquid natural gas (LNG) facilities are an additional failsafe necessary to provide deliverability and reliability on the coldest peak-day period. Peak-day is defined as the maximum daily quantity of gas distributed through the Company's system. In order to meet peak-day demand, the Company has to design and build the distribution system with enough capacity (or using correct pipe size and pressure blends) to meet this demand, regardless of what the demand is on non-peak days. The Company receives the gas at pressures between 500-800 psig and through a series of pressure cuts (via regulators at city gates, district regulator stations and domestic regulators) delivers gas to our customers between 20 psig and 4 oz.

Q. Where does Intermountain provide retail gas service in Idaho, and what is the Company's customer base.

A Page 2 of Exhibit 3 shows a map of the Company's service area in southern Idaho. The Company's current customer base consists of 302,790 residential customers and 31,860 commercial customers.

III. OPERATIONS AND MAIINTENANCE OF PLANT AND FACILITIES

Q. Please describe the Company's operation centers in Idaho and elsewhere that support customers in Idaho.

A. The Company has a general office, five (5) major operations centers with two (2) satellite service centers serving Intermountain customers, as well as a customer service center in Meridian. The general office, located in Boise, is made up of Intermountain's administrative staff. This staff includes Intermountain's executive team and employees that lead Intermountain's safety, training, operations, engineering, accounting, regulatory, human resources, cash processing, marketing/public relations, information technology and geographic information systems. Each of the five operations centers is made up of our operations and service groups. These groups provide all field service activities, operations and maintenance (pipeline safety compliance) activities, customer acquisition activities and emergency response activities. These five operations centers are located in Nampa, Boise, Twin Falls, Pocatello and Idaho Falls. The two satellite service centers, located in Hailey and Soda Springs, respectively, provide field service activities and emergency response activities in our more remote areas. The MDU Resources' customer service center, located in Meridian, serves over a million customers in eight (8) states across 4 brands: Intermountain,

Cascade Natural Gas, Montana-Dakota Utilities and Great Plains Natural Gas. The 2010 addition of the customer service center has been an asset to Idaho's economy and Intermountain is fortunate that MDU Resources selected Idaho and Meridian in particular to make this significant capital investment for its customer service center.

Q. Could you please describe the effort and investment the Company has made in information and technology systems?

A. Yes, but first let me set the stage for you. In 1985, Intermountain served less than 100,000 customers with approximately 425 employees, compared to serving approximately 330,000 customers today with 241 employees, plus shared services employees. We have been able to achieve this significant reduction in customer-to-employee ratio through several avenues: transformation of the personal computer; operations mobile field solutions, including electronic field order completion and leak survey; implementation of encoder receiver transmitters (ERT's) on customer meters; integrated geographic information system (GIS); electronic pipeline safety compliance system that interfaces with GIS and; electronic work management system. Each of these technology implementations has allowed Intermountain to streamline work processes, reduce paperwork and back-office activities and continue to maintain a safe, reliable distribution system.

Q. How have O&M costs historically been maintained, reduced or deferred in the past?

A. One example, as referenced above related to ERT's, pertains to the 2001-2002 implementation of the company's automated meter reading (AMR) system. The

AMR system included the installation of approximately 280,000 ERT's on customer meters and the implementation of three mobile collectors installed in vehicles to capture monthly meter reads. Prior to the implementation of the AMR system, Intermountain collected monthly customer meter reads manually, on foot, using 27 meter reader staff. Upon completion of the AMR implementation, the company is able to read the same amount of customer meters with 7 employees. Intermountain continues to read 330,000 customer meters today with the same number of employees, thus deferring additional O&M costs of additional employees since 2001.

IV. SAFETY

Q. Many of Intermountain's operating expenses relate to the Company's commitment to both customer safety and employee safety. Please give us an idea of the safety systems the Company has in place regarding customer safety, and how that impact's system operations.

A. Intermountain is committed to customer safety. As part of this commitment, Intermountain has an extensive pipeline safety program, which will be discussed later in this testimony as well as a dedicated staff of employees to address customer needs and concerns as well as natural gas emergencies. The company's first responders are trained to assess, make safe and repair any abnormal operating conditions on the distribution system. This group of employees is made up of service technicians and construction crews. The company keeps employees in these positions on stand-by 24 hours per day, seven days per week to allow for quick response to customer needs, facility damages and outages. This is

accomplished by investing in safety and ensuring a qualified workforce. All of our operations employees go through a series of training modules covering all aspects of their jobs and have to display competency through testing and hands-on evaluations. This program is called Operator Qualification. Additionally, our service technicians go through an extensive service technician apprentice program which consists of classroom training as well as ride-a long's with seasoned employees. Service technicians cannot be on-call or respond to emergencies on their own until the successful completion of the apprentice program which takes one full year. All of these programs help ensure that the company provides a qualified workforce that prudently operates the distribution system and provides a safe system for our customers.

Q. You also mentioned employee safety as the second part of Intermountain's safety commitment. Please elaborate?

A. Intermountain's employee safety goal is "Commitment to Zero", evidencing a drive towards zero vehicle accidents and zero employee injuries. As such, the Company views safety as in investment, although in reality it is an operating expense. As part of Intermountain's *Commitment to Zero* the Company provides all necessary Personal Protective Equipment (PPE) to its employees. This includes the likes of hard hats, safety glasses, high visibility clothing, gloves, safety toe footwear, etc. The Company also provides its employees with regular safety training as well as defensive driving training specifically geared toward zero accidents. Intermountain's belief is that a serious commitment to and

investment in safety will help to ensure that Intermountain's employees go home in the same condition they came to work in.

Q. What are some of the federal safety requirements that are driving the Company's maintenance costs?

A. Intermountain has several processes or systems in place that help ensure the safe operation of our distribution system. Most of these are derived from federal pipeline safety requirements that can be found in the Code of Federal Regulations, Title 49, Part 192. Specifically, I will discuss the following areas: Leak Survey, Corrosion, Atmospheric Corrosion, Public Awareness, Damage Prevention, Regulator Station inspection and testing, Valve maintenance, Transmission Integrity Management and Distribution Integrity Management. Intermountain applies these processes to approximately 6,216 miles (32 million feet) of gas mainline and approximately 350,000 service lines.

Q. Please explain the federal Leak Survey, Corrosion and Atmospheric Corrosion requirements?

A. *Leak Survey:* Intermountain is required to leak survey all natural gas distribution pipelines of its non-business districts every four (4) years and those in business districts annually. The Company is required to survey all natural gas transmission lines annually and if they fall in a Class 3 location (46 or more buildings intended for human occupancy within 220 yards of the pipeline of any continuous mile) have to be surveyed twice annually.

Corrosion: For all steel natural gas pipelines, Intermountain must protect them against external corrosion using the following means: (1) install pipelines

with an external protective coating; (2) have a cathodic protection system installed which is designed to protect the pipe; typically this "system" is a combination of anodes and rectifiers. These systems have to be annually inspected to insure they are functioning properly to protect the steel pipelines against external corrosion. This is done by measuring the "pipe-to-soil" interface of cathodically protected and isolated pipe districts, regardless of the use of anodes or rectifiers. In addition, rectifiers are inspected every two (2) months to ensure they are properly protecting the steel pipe.

Atmospheric Corrosion: All pipe and components related to the natural gas pipeline system that are above ground and exposed to the atmosphere are inspected every three (3) years to ensure the atmosphere is not causing any deterioration to our system.

Q. Please explain the federal Public Awareness, Damage Prevention, Regulator Station inspection and testing requirements.

A. *Public Awareness:* Intermountain follows the American Petroleum Institute (API) Recommended Practice (RP) 1162 which is incorporated by reference into Part 192. Activities surrounding public awareness include educating the public, appropriate government organizations and persons engaged in excavation activities on the following: (1) use of the Idaho one call (Digline) system prior to excavation; (2) possible hazards associated with unintended releases from a gas pipeline facility; (3) physical indications that such a release may have occurred; (4) steps that should be taken for public safety in the event of a gas pipeline release; and (5) procedures for reporting such an event.

Damage Prevention: The Company engages in location of gas facilities prior to excavation work (when notified by the excavator) through its contractual relationship with Digline of Idaho. Excavators can call Digline at no charge to the excavator. Digline then contacts a Company representative who locates Intermountain gas facilities within 48 hours of the request. Additionally, Company representatives regularly meet with excavators to educate them about the importance of safe excavation.

Regulator Station inspection and testing: The Company inspects each regulator station and its equipment on an annual basis to ensure it is in good mechanical condition, has adequate capacity and reliability, is set to control, increase or relieve pressure, and is properly installed and protected from dirt, liquids, and other conditions that could prevent proper operations. Across Intermountain's distribution system, the Company has 664 regulator stations that receive this annual maintenance.

Valve Maintenance: Each Company valve that is either on a transmission class pipeline or which may be used for the safe isolation of Intermountain's system is required to be and is inspected annually. For transmission class valves this includes partially operating the valve; for the remaining valves this includes checking and servicing the valves. The Company has 5,115 valves that receive this annual maintenance.

Q. Finally, what are the federal safety requirements related to Transmission Integrity Management and Distribution Integrity Management?

A. *Transmission Integrity Management Plan (TIMP):* The Company implements the TIMP on any segment of transmission pipeline that falls in a High Consequence Area (HCA). An HCA is an area or circle along the transmission pipeline containing either 20 or more buildings intended for human occupancy, or an otherwise identified site. The company has 290 miles of transmission pipeline and 14 of those miles are in an HCA. There are 42 specific pipe segments that fall under the TIMP. Federal TIMP requirements subjects covered pipelines in TIMP areas to a process of threat identification, risk assessment, baseline assessment, repair/maintenance, preventative and mitigative measures, quality control, performance management and management of change, followed by reassessment of each segment of covered pipeline every seven years.

Distribution Integrity Management Plan (DIMP): The federal DIMP safety requirements consists of seven elements: 1) Demonstrate knowledge of distribution system; 2) Identify threats; 3) Evaluate and prioritize risk; 4) Identify and implement measures to address risk; 5) Measure performance, monitor results and evaluate effectiveness; 6) Perform periodic evaluation and improvement; and 7) Report results. The Company implements the DIMP on any segment of distribution line in the company territory; in other words, the entire distribution system that is within the company's jurisdiction.

Q. Please describe the O&M costs related to these safety processes and programs in 2015, as well as how they have trended historically and how the company expects them to trend in the future.

A. Intermountain's O&M costs related to District Operations each year can be attributed to the safety and maintenance of our pipeline system. These are costs associated with our field employees, tools and equipment, which are responsible for carrying out the safety programs and processes previously discussed. In 2015, the District Operations O&M cost were $17.825 million. While these costs have certainly increased over the last 30 years due to salary increases, cost of living increases, etc., the company has been able to control these costs remarkably well. For example, in 2011, these same O&M costs were$16.333 million. In the future, the expectation is that O&M costs will continue to rise, but at a more accelerated rate due to recent and upcoming pipeline safety regulations, notably DIMP and associated aging infrastructure replacements as referenced above, as well as pending transmission pipeline regulation, quality assurance regulation and pipeline safety management system regulation, to name a few.

V. PIPELINE REPLACEMENT

Q. The fourth point you wished to discuss was the Company's investment in gas pipeline infrastructure. Could you give an overview of the Company's commitment to and spending on infrastructure replacement?

A. Intermountain's annual capital requirements has steadily increased from approximately $ 17 million in 2008, to approximately $42 million in 2015. Capital spending of $43.5 million and $42 million is planned for the years 2016 and 2017 respectively. A significant portion of this capital spending relates to infrastructure replacement

Q Please describe Intermountain's ongoing program for managing and replacing its natural gas pipe?

A. The Company is continuing its pipeline integrity management program to systematically replace select portions of pipe in its natural gas distribution system in Idaho. The pipeline integrity management program is a risk based replacement program that assesses risk based on a pipe segments age, material, operating pressure, leak history, damage history, etc. Intermountain began replacing infrastructure in 2015 under the Distribution Pipeline Integrity rule that became effective in 2013. Since 2005, Intermountain has been conducting pipeline assessments on our transmission pipelines, but have only had to make minor repairs. In 2015 under the company's DIMP, approximately 30,000 feet of plastic pipe was removed and replaced. The company plans to remove another 22,000 in 2016 and 25,000 in 2017. The company will continue to model the distribution system and schedule replacement of pipe as determined by the risk model and available monetary resources.

Q. Please describe Intermountain's protocol for pipeline replacement?

A**.** Intermountain uses its TIMP and DIMP as drivers for pipeline replacement. These two plans both use a risk-based approach to assessing pipelines and determining which segments of pipe need repair or replacement. Once pipe segments have been identified for replacement, the company assesses the capital requirements for replacement compared to capital available in a given year. This then determines how much replacement can be achieved in a given year.

Q. Do you believe the current pace for pipeline replacement and the system for rate basing that investment is adequate, or is there a potentially better regulatory model for more expeditiously replacing pipe that is at or near the end of its useful life?

A. I believe a better way to more quickly fund and replace pipeline infrastructure would be through a pipeline infrastructure cost recovery mechanism (ICRM) that would allow Intermountain to accelerate its spending in this area, and to more timely recover those costs that are incurred to promote the safety and reliability of Intermountain's distribution system.

Q. Is Intermountain proposing a pipeline ICRM in this case?

A. No. However, the Company intends to follow this case with an ICRM case filing.

Q. Why is the eventual establishment of a pipeline ICRM important to Intermountain?

A. There are many portions of Intermountain's system that need to considered for replacement based on material, age, leak history, excavation activity, etc. Intermountain is obligated to provide safe, reliable service to its customers, and to that end, Intermountain is using a systematic approach to identify the elevated risk pipe segments and replace those segments first. A potential problem for the Company is that the costs incurred for replacing pipe has no new revenue associated with those costs. In other words, performing these system improvements increases costs and reduces earnings.

Q. How has Intermountain been able to incur these costs without rate recovery to date?

A. Over the past few years Intermountain has primarily funded its pipeline improvement program through operating efficiency improvements, many of them resulting from the MDU Resources' acquisition of Intermountain. However, rate base and other cost increases have reached the point that Intermountain can no longer fund this large a capital investment from additional operating efficiencies.

Q. What are the benefits to customers and the Company if a pipeline cost recovery mechanism were established and approved by the Commission?

A. In addition to updating the pipeline system to continue operating a safe and reliable system, the mechanism will potentially reduce the need for future rate cases. Without an ICRM, Intermountain will likely be in a position where it will need to file subsequent rate cases for cost recovery of this single and significant capital spending program, until such time as the Company's modeling indicates an acceptable level of risk profile is attained. An ICRM will provide an incentive for the Company to control other costs between rate cases and reduce the need for incurring additional rate case costs.

Q. Can you please describe how such a mechanism would work?

A. Yes. Intermountain would annually file for recovery of pipeline replacement investment incurred over a set period of time, likely a 12 month period. It would also seem that the timing of the filing might best coincide with Intermountain's annual PGA filings in August, with an effective date of October 1. The period of recovery for the prior year's investment would be a matter for determination by the Commission.

Q. Do other MDU Resources' Companies and other gas utilities in the northwest currently have a similar mechanism in place in other states?

A. Yes. Cascade Natural Gas is operating under similar programs in both Oregon and Washington where it files for recovery of pipeline replacement costs under a pipeline CRM. In addition, Northwest Natural Gas currently has a System Integrity Program, which was adopted to encourage Northwest Natural to replace bare steel and cast iron pipe. Cascade's Washington cost recovery mechanism was based on Northwest Natural mechanism in place in Oregon.

Q. Do you anticipate that there would be O&M savings associated with the replacement of some of the aging infrastructure?

A. As a general rule, there will be less O&M costs associated with new infrastructure, as opposed to aging or obsolete pipelines. On a net basis however, Intermountain will continue to see overall increased O&M costs to maintain a system, some of which is now approaching 60 years in age. It is important for the Company to systematically reinvest and upgrade a portion of its pipeline system every year, in addition to making the investments needed or required to meet reliability requirements. While such systematic reinvestment works to slow the growth of annual O&M costs, it does not result in a year to year reduction in overall O&M costs.

Q. Does this conclude your direct testimony?

A. Yes. Thank you.