

MONTANA-DAKOTA UTILITIES CO.
A Division of MDU Resources Group, Inc.

Before the South Dakota Public Utilities Commission

Docket No. NG12-__

Direct Testimony
of
Jay Skabo

1 **Q. Please state your name and business address.**

2 A. My name is Jay Skabo and my business address is 400 North
3 Fourth Street, Bismarck, North Dakota 58501.

4 **Q. By whom are you employed and in what capacity?**

5 A. I am the Vice President - Operations of Montana-Dakota Utilities
6 Co. (Montana-Dakota) and Great Plains Natural Gas Co., Divisions of
7 MDU Resources Group, Inc.

8 **Q. Please describe your duties and responsibilities with Montana-**
9 **Dakota.**

10 A. I have executive responsibility for the development, coordination,
11 and implementation of Company strategies and policies relative to all
12 areas of distribution operations.

13 **Q. Please outline your educational and professional background.**

14 A. I hold Bachelor's Degrees in Chemistry from Dickinson State
15 University and Chemical Engineering from the University of North Dakota.
16 My work experience includes three and half years as the Environmental
17 Manager at Montana-Dakota; one and a half years as a Region Manager

1 overseeing gas and electric crews, service technicians, and office
2 personnel in constructing and maintaining our gas and electric systems;
3 and since 2008 in my current capacity. Prior to joining Montana-Dakota, I
4 was the general manager of an industrial waste processing and disposal
5 facility.

6 **Q. What is the purpose of your testimony?**

7 A. The purpose of my testimony is to provide an overview of our South
8 Dakota natural gas operations and our organizational structure. I am
9 sponsoring Exhibit No. ____ (JWS-1)

10 **Q. Would you provide a summary of Montana-Dakota's gas operations**
11 **in South Dakota?**

12 A. Montana-Dakota provides natural gas service to approximately
13 54,800 customers in 25 communities, operating over 1,370 miles of
14 distribution mains and approximately 1,005 miles of service lines. The
15 customer base is 88 percent residential customers and 12 percent
16 commercial and industrial customers. As of June 30, 2012 the Company
17 had 73 full and part time employees who live and work throughout our
18 South Dakota electric and gas service area. Montana-Dakota's South
19 Dakota gas service area is divided into two operating regions with regional
20 offices located in Rapid City, South Dakota, and Bismarck, North Dakota.
21 In addition to the Rapid City regional office, there are two other fully
22 staffed operations centers located in the communities of Spearfish and
23 Mobridge. Additionally there are gas related service technicians and

1 construction employees headquartered in 11 other South Dakota
2 communities deemed strategic to the safe and reliable operation of our
3 distribution system. There are also electric-only personnel in additional
4 locations in South Dakota. Service technicians and construction
5 employees in North Dakota also support operations in South Dakota
6 communities close to the state border. A map of the gas distribution
7 system in South Dakota is included as Exhibit No. ___(JWS-1).

8 Montana-Dakota's customers have toll-free access to the Customer
9 Service Center located in Meridian, Idaho, with a backup center in
10 Bismarck, North Dakota, to place routine utility service requests and
11 inquiries from 7:00 am to 7:00 pm local time, Monday through Friday and
12 emergency calls on a 24-hour basis, as discussed in more detail by Mr.
13 Gardner. A Scheduling Center, located in the Meridian, Idaho, facility,
14 transmits electronic service orders to the mobile terminals placed in our
15 fleet of service and construction vehicles. This network allows us to
16 respond quickly to customer requests and emergency situations.

17 **Q. Mr. Skabo, would you explain how Montana-Dakota strives to**
18 **efficiently provide safe and reliable service to its South Dakota**
19 **customers?**

20 A. Certainly. Montana-Dakota has been continually reviewing its field
21 operations for ways to operate more efficiently and has been successful in
22 doing so. Much of this has been possible due to the advancement of cost
23 effective technology, such as Automated Meter Reading (AMR).

1 Montana-Dakota installed AMR technology on both the natural gas and
2 electric meter equipment throughout the four state service area. Montana-
3 Dakota is able to remotely read customers' natural gas and/or electric
4 meters without having to physically visit and read each natural gas and/or
5 electric meter. We have a project to add 1,419 AMR gas meters in
6 Bowdle, Gettysburg, Ipswich, Roscoe, Glenham, and Selby by the end of
7 May 2013, and then our gas meter reading process will be fully automated
8 in South Dakota. We have approximately 55,000 gas meters so we are
9 currently about 97 percent complete. Additional automated management
10 and recordkeeping projects include: a new mobile dispatch system called
11 Pragma CAD; a compliance monitoring program called GL Essentials; and
12 Mobile GIS, as discussed in more detail below.

13 Montana-Dakota has initiated a project to replace the existing
14 computer aided dispatching system for utility service orders. The existing
15 system, Mobile Up, which replaced a paper based system in 1999, has
16 resulted in improved customer service as well as increased operational
17 productivity. Productivity gains achieved with the original system were
18 estimated at 30 percent and the replacement project will ensure that we
19 are able to maintain and improve upon the current level of customer
20 service and operational efficiency gains. By installing this product at all of
21 the companies within the MDU Resources Utility Group, the purchase,
22 installation and ongoing maintenance costs will be reduced by being
23 shared among a larger base.

1 Montana-Dakota is also in the process of improving its gas
2 operations with the implementation of a compliance software package
3 called GL Essentials. Implementation of this software is to be completed
4 in phases starting this year with plans to be substantially completed by the
5 end of 2013. The overall purpose of this software is to help automate,
6 track, and manage work flow for distribution pipeline operations and to
7 allow for the effective central sharing of the data to the appropriate
8 operations groups to make better evaluations and decisions to enhance
9 public and worker safety around the distribution pipeline systems.

10 More specifically, this software system automates operations and
11 maintenance work orders that are then electronically dispatched to
12 technicians and the data is returned to the system and stored in a central
13 database. The data that is captured within this system can then be used
14 to enhance and support the existing safety programs at Montana-Dakota
15 such as the Distribution Integrity Management Plan (DIMP), the
16 Transmission Integrity Management Plan (TIMP), the Damage Prevention
17 Program, the Public Awareness Plan, and Emergency Response
18 Procedures. Montana-Dakota has always worked to provide for a safe
19 and reliable natural gas pipeline system. In recent years, the predominant
20 view, by both regulators and utilities, is to enhance data collection and
21 analysis of data in order to further improve safety and reliability. The GL
22 Essentials software and system allows for an effective use of operational
23 data to support operations plans such as TIMP and DIMP.

1 An additional enhancement that was also put into operation in 2012
2 is the development and deployment of a mobile mapping system.
3 Montana-Dakota made the change from paper maps to an electronic ESRI
4 GIS based mapping system in 2005. At that time, a very simple map view
5 product was deployed that could look at a snapshot in time of the GIS
6 mapping system. These maps had to be manually updated deployed to
7 the field users periodically. In order to support the larger data needs and
8 effectively support the requirements of new programs like DIMP and
9 TIMP, Montana-Dakota developed and deployed a mobile map product
10 from the 3GIS company. This new mobile map product enhances the
11 Montana-Dakota field mapping in several ways. First, the map updates
12 are now available real time in the field. Second, it gives the field users an
13 ability to mark up the map with critical information such as leak location,
14 damage location, pipe inspection location, or indicate map conflict or
15 errors. Third, it gives the operations group a mechanism to share location
16 information with field workers. Essentially, the addition and deployment of
17 the 3GIS products has allowed for the needed data support for enhancing
18 pipeline safety through the DIMP and TIMP programs.

19 Pay stations have also been established throughout Montana-
20 Dakota's service territory in an effort to provide convenient bill payment
21 options and extended hours by using established Western Union vendors.
22 Through this arrangement, payments are electronically transmitted to
23 Montana-Dakota, available for viewing by Montana-Dakota personnel

1 within an hour of when the payment is made and posted to customer
2 accounts by the next business day. The number of locations in South
3 Dakota increased from five Montana-Dakota offices, to fifteen pay station
4 locations. The number of employees handling payments companywide
5 was reduced from approximately thirty-five to three. Several pay station
6 locations were added in Rapid City, as well as locations in Sturgis and
7 Lead, where cashier service was not previously available. In addition,
8 these pay stations are open longer hours and on weekends, providing
9 more and better options for customers who prefer to pay in person. The
10 Company continues to work with established businesses throughout the
11 Company's service territory in order to expand the number of locations at
12 which customers can pay their bills.

13 The Company continues to review all aspects of the utility business
14 to ensure Montana-Dakota is operating as efficiently as possible.

15 **Q. Has the Company experienced a growth in customers?**

16 There has been an increase in average customers in South Dakota
17 from December 31, 2004, at the time of the last general rate case, to June
18 30, 2012 of approximately 6,200 gas customers, an increase of 12.8
19 percent, while at the same time achieving a reduction in the distribution
20 expense cost per customer.

21 Several factors have allowed us to be much more efficient and
22 allow us to keep O&M costs from increasing, despite inflationary
23 pressures. These factors included the migration to a more "paperless"

1 work environment and the minimization of paperwork handling and order
2 completion; providing customers the option to use pay stations rather than
3 staffing for cashiers and walk-in office traffic; adding Automated Meter
4 Reading; and our Utility Group integration efforts. In 2004, the average
5 distribution O&M cost per customer was \$70.90 and in 2011 that cost had
6 dropped to \$64.24.

7 **Q. Has Montana-Dakota made investments in the gas distribution**
8 **system in South Dakota, and how have these investments affected**
9 **the cost of operation and maintenance of the system?**

10 A. Yes, we have made significant investments into the gas distribution
11 infrastructure as well as investing in the efficiency measures discussed
12 above. The investments in efficiency have contributed to the Company's
13 success in reducing O&M costs per customer from 2004 levels, while the
14 investments in infrastructure allow us to operate the system safely and
15 reliably.

16 From 2004 to 2011, customer growth was substantial in the Black
17 Hills area, with many new subdivisions and commercial parks. During this
18 period an average of 174,000 feet of main was installed annually.
19 Approximately 89 percent of this main installation was due to system
20 growth and 11 percent was for replacements for system improvement or
21 relocation of pipe due to other construction. Approximately 688 new
22 customers were connected annually during this period. Over \$6 million
23 was invested in gas mains during this period for both growth and

1 replacement projects. While the growth related main investment was
2 supported by customer additions and/or customer contributions, there was
3 a continued decline in natural gas usage per customer as a result of
4 conservation efforts, including improved appliance efficiency.

5 Customer growth in the East River area has been fairly steady
6 since 2004. Since natural gas was introduced in 1993, the amount of
7 replacement work is minimal due to the relatively new system. The minor
8 amount of replacement work was driven by projects where existing gas
9 main is in the way, such as street projects. The growth in gas main
10 installation is to serve new customers and new subdivisions. From 2004
11 through 2011 an average of over 41,000 feet of new natural gas main was
12 added annually at an annual average cost of almost \$68,000. Over
13 \$3,700,000 has been invested in new gas mains during this period. The
14 average number of new service lines added annually is 168 during this
15 same period. This is a combination of a large number of customers still
16 converting from another heating source due to the competitive price of
17 natural gas along with providing service to the majority of new homes and
18 businesses being built.

19 The replacement projects result in improvements to safety and
20 reliability by replacing older pipe with new pipe and by allowing a re-
21 engineering of the system when needed. Those replacement projects
22 were selected based on making improvements to portions of the system
23 deemed to require upgrades. As discussed later, the process of selecting

1 areas of the system for replacements has become more standardized and
2 data-driven with the implementation of the Distribution Integrity
3 Management Plan.

4 In Spearfish, the downtown office and small warehouse facility (built
5 in 1965) were replaced with a combined office and operations center for
6 the Northern Hills District. This has resulted in improved efficiency as
7 management and operations personnel are in a single location resulting in
8 better communications and less time spent traveling between locations.
9 The operations portion of the new facility also provides safer and more
10 efficient working conditions for our employees.

11 In Pierre, there is a new building under construction with projected
12 completion in December 2012. Moving to one location will eliminate
13 approximately \$2,610 per month of expense renting a downtown office
14 and a remote warehouse space. The office space downtown is more than
15 is needed and the warehouse space is not large enough for employees to
16 function efficiently. The new combined office/warehouse will have enough
17 space for warehousing and to store work equipment/vehicles inside. This
18 move will also improve efficiency by eliminating time now spent traveling
19 between the two locations.

20 **Q. How will the proposed consolidation of the Black Hills and East River**
21 **areas into one jurisdiction affect operations?**

1 A. The proposed consolidation will not affect gas operations.
2 Customers will continue to be served from the same region and district
3 offices as they are today.

4 **Q. The Pipeline and Hazardous Materials Safety Administration has**
5 **promulgated a regulation requiring natural gas distribution**
6 **companies to develop what is known as a Distribution Integrity**
7 **Management Plan (DIMP). How has Montana-Dakota responded to**
8 **this regulation?**

9 A. DIMP is a Federal requirement issued as Subpart P of 49 CFR 192
10 pertaining to all gas distribution system operators. DIMP requires
11 operators to know the make-up of their distribution system. The objective
12 of the plan is to develop a model to assist in determining which areas of
13 the gas distribution system to focus operation, maintenance and repair
14 efforts and resources due to known or predicted threats to the distribution
15 system. The Montana-Dakota plan was implemented on August 1, 2011.

16 The model assesses eight different threat categories: Corrosion,
17 Natural Forces, Equipment Failure, Excavation, Incorrect Operation, Joint
18 Failure, Outside Force, and Other, all equally weighted.

19 A detailed geographical information system (GIS) map, with every
20 piece or component that makes up the gas distribution system, both above
21 and below ground, and with as much information about each piece as is
22 available is used as the basis of the model. Scores for various factors

1 were determined by a group of subject matter experts including office
2 engineers, field engineers and field technicians.

3 The model sets a 50 foot by 50 foot grid to analyze all components.
4 Each grid is then analyzed by eight individual sub-models with up to 150
5 calculations in each sub-model. This in turn produces a very
6 comprehensive look at the entire system with each component compared
7 equally to the others across the entire four state operating areas. In South
8 Dakota, 251,818 separate components totaling 12,370,616 feet of pipe
9 were analyzed.

10 The results obtained from the DIMP modeling are consistent with
11 what it was expected to produce by our subject matter experts. The
12 components that score the highest are generally located near district
13 regulator stations where there are concentrations of different components
14 such as fittings and valves, above ground piping, and elevated pressures.

15 Going forward, the DIMP results will be used as an operational tool
16 to aid in directing resources to reduce pipeline risks. The results will be
17 consistently analyzed to determine accelerated actions to the pipeline so
18 that changes to resource planning and budgeting can be made to carry
19 out the reduction in risks from pipeline threats.

20 **Q. Does this complete your direct testimony?**

21 **A.** Yes, it does.