A Division of MDU Resources Group, Inc.

400 North Fourth Street Bismarck, ND 58501 (701) 222-7900

February 26, 2016

Ms. Kate Whitney, Administrator Utility Division Montana Public Service Commission 1701 Prospect Avenue Helena, MT 59620

RE:

Annual Electric Reliability Report-2015

ARM 38.5.8619

Dear Ms. Whitney:

Montana-Dakota Utilities Co., a Division of MDU Resources Group, Inc. herewith submits an original and ten copies of its Annual Report of Montana Electric Reliability Indices pursuant to ARM 38.5.8619.

The Reliability Indices provided in this report include the System Average Interruption Frequency Index (SAIFI), the System Average Interruption Duration Index (SAIDI) and the Customer Average Interruption Duration Index (CAIDI) for the state of Montana and by major district served by Montana-Dakota in Montana for calendar year 2015. Historical data for calendar years 2014 and 2013 is also included. All indices in this report include outage data for both the distribution system and the transmission system and the SAIDI and CAIDI indices are reported in minutes.

A graphical presentation of the SAIFI, SAIDI and CAIDI indices for 2013-2015 is provided in Attachment A, pages 1 and 2 with a categorization of the causes associated with service interruptions in 2013 through 2015 shown on Attachment A, page 3. In 2015, the outage numbers are attributed primarily to storms throughout the service territory and planned outages necessary to replace conductors, transformers, regulators switches, poles, insulators, ties and other equipment. Please refer to Attachment B for the index data.

Montana-Dakota did have two storms in the Glendive district and one storm in the Wolf Point district that were classified as major storm events in 2015 where more than 10% of a major town's circuits were affected. The outages in the Glendive district occurred on 6/21/15 lasting approximately 29 minutes and a second event occurred on 7/27/15 for a duration of up to eleven hours. The Wolf Point district had one major storm event occurring on 10/27/15 with a duration of 40 minutes. An explanation of storm related outages not classified as major storm events is provided in Attachment B, page 2

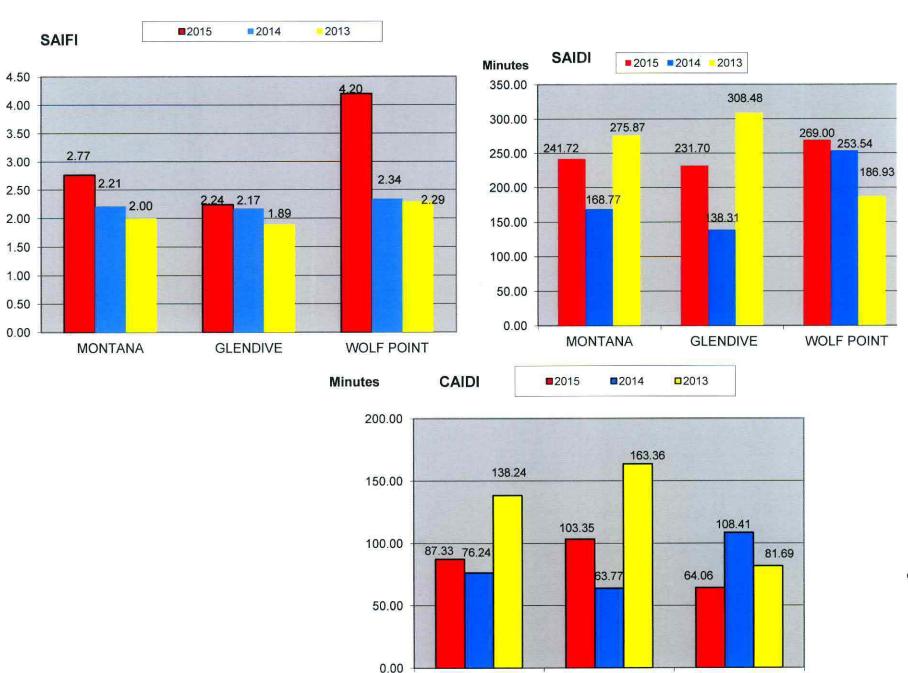
Please contact me with any questions regarding this report

Sincerely,

Tamie A. Aberle

Director of Regulatory Affairs

# MONTANA-DAKOTA UTILITIES CO. RELIABILITY INDEX WITH IDENTIFIED STORM EVENT(S) ELECTRIC UTILITY-MONTANA 2013-2015

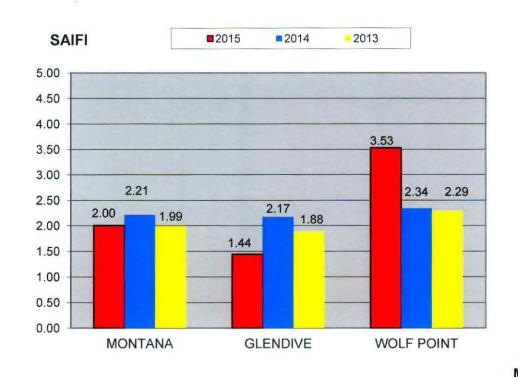


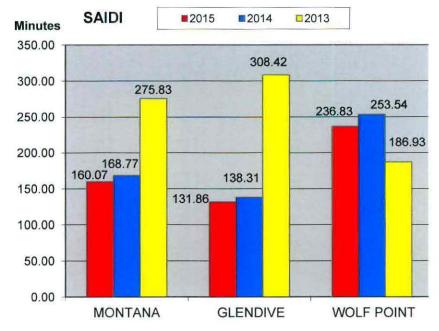
**MONTANA** 

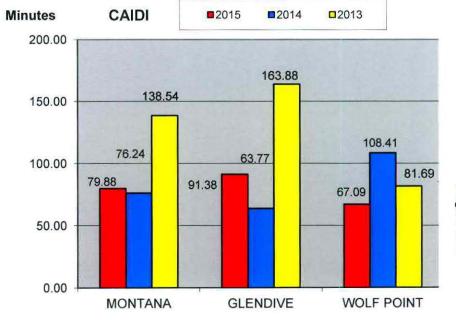
**GLENDIVE** 

**WOLF POINT** 

# MONTANA-DAKOTA UTILITIES CO. RELIABILITY INDEX WITHOUT IDENTIFIED STORM EVENT(S) ELECTRIC UTILITY-MONTANA 2013-2015

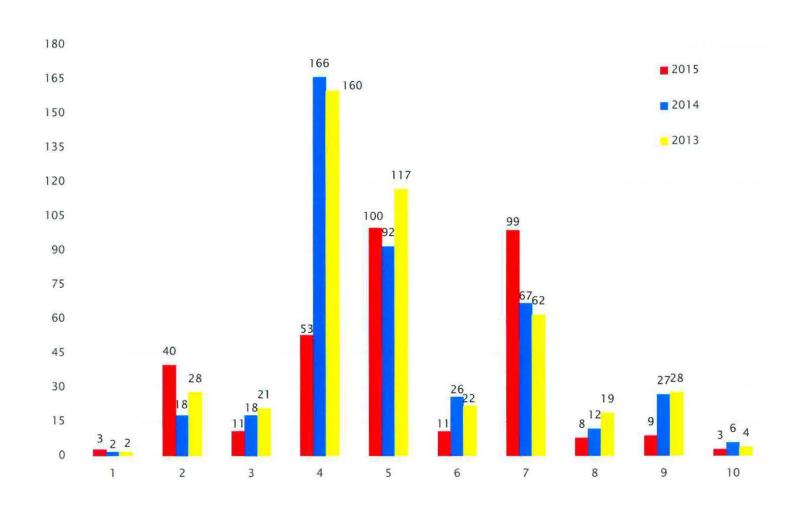






Attachment A Page 2 of 3

## MONTANA-DAKOTA UTILITIES CO. ELECTRIC UTILITY MONTANA OUTAGES BY CAUSE 2013-2015



## Distribution and Transmission Outages:

		2015	2014	2013
1)	Customer	3	2	2
2)	Equipment	40	18	28
3)	Other	11	18	21
4)	Planned	53	166	160
5)	Storms	100	92	117
6)	Trees/Vegetation	11	26	22
7)	Unknown	99	67	62
8)	Wildlife	8	12	19
9)	Vehicle Collison	9	27	28
10)	Improper Construction/Dig In	3	6	4
		337	434	463

# MONTANA-DAKOTA UTILITIES CO. ANNUAL ELECTRIC RELIABILITY REPORT-MONTANA CALENDAR YEAR 2015 MONTANA RULE 38.5.8619

	Montana			Glendive District			Wolf Point District		
Reliablility Index with Identified Storm Event(s)	2015	2014	2013	2015	2014	2013	2015	2014	2013
SAIFI (System Average Interruption Frequency Index)	2.77	2.21	2.00	2.24	2.17	1.89	4.20	2.34	2.29
SAIDI (System Average Interruption Duration Index)	241.72	168.77	275.87	231.70	138.31	308.48	269.00	253.54	186.93
CAIDI (Customer Average Interruption Duration Index)	87.33	76.24	138.24	103.35	63.77	163.36	64.06	108.41	81.69

	Montana			Glendive District			<b>Wolf Point District</b>		
Reliablility Index-Without Identified Storm Event(s)	2015	2014	2013	2015	2014	2013	2015	2014	2013
SAIFI (System Average Interruption Frequency Index)	2.00	2.21	1.99	1.44	2.17	1.88	3.53	2.34	2.29
SAIDI (System Average Interruption Duration Index)	160.07	168.77	275.83	131.86	138.31	308.42	236.83	253.54	186.93
CAIDI (Customer Average Interruption Duration Index)	79.88	76.24	138.54	91.38	63.77	163.88	67.09	108.41	81.69

# Outages caused by Major Storms/Events:

#### Glendive District:

- 1. Glendive District had two storms classified as major storm events in 2015. One on 6/21/2015 effecting 937 customers off the Forsyth 12 KV line and 479 customers served from the Forsyth 4 KV line. Outage duration was approximately 29 minutes long.
- 2. The second major storm event in the Glendive district occurred on 7/27/15 on the Glendive-Clough, Savage, Glendive Wesco and Glendive West Line. This affected approximately 2,995 customers served off these lines and lasted approximately 11 hours.

#### **Wolf Point District:**

1. On 10/27/15 a storm interrupted service to approximately 1,857 customers for the duration of approximately 40 minutes.

## Montana-Dakota Utilities Co. Electric Utility – Montana Outage Data Information 2015

The following storm outages, while not classified as a major storm events by definition, did affect reliability indices in calendar year 2015. In addition to the specific storm related outages noted below, storm related outages occurred on the following dates: 4/24, 6/01, 6/13, 6/21, 6/30 and 9/04 affecting the Montana system.

Specific storm related outages on the transmission system affecting distribution substations included:

#### Baker

- 7/28/15-Storm related weather and wind
- 7/28/15-Storm related weather and wind

### Baker-Pine B

7/27/15-Storm related weather and wind

## Baker- Herigstatd

- 7/27/15-Storm related weather and wind
- 7/28/15- Storm related weather and wind

#### Froid

9/6/15- Storm related weather and wind

## Glendive-Cedar Circle

- 7/27/15-Storm related weather, wind
- 7/28/15-Storm related weather, wind

## Homestead

9/6/15-Storm related weather, wind

### Intake-WAPA

7/27/15-Storm related weather, wind

### Medicine Lake

9/06/15-Storm related weather, wind

### Miles City-Radar

6/21/15-Storm related weather, wind

## Miles City - Ulmer

• 6/21/15-Storm related weather, wind

## Poplar Oil Field

- 7/01/15-Storm related weather, wind
- 8/17/15-Storm related weather, wind

## Poplar-Sprole

7/28/15-Storm related weather, wind