

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

February 28, 2022

Mr. Will Rosquist
Utility Division
Montana Public Service Commission
1701 Prospect Avenue
Helena, MT 59620

RE: Annual Electric Reliability Report – 2021
ARM 38.5.8619

Dear Mr. Rosquist:

Montana-Dakota Utilities Co. (Montana-Dakota) herewith electronically submits 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 2021. Historical data for calendar years 2020 and 2019 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 2019-2021 is provided in Attachment A, pages 1 and 2 with a categorization of the causes associated with service interruptions in 2019 through 2021 shown on Attachment A, page 3. Overall, outages increased from 2020 with planned outages comprising 47% of the increase from the previous year. Please refer to Attachment B, page 1 for the index data.

Montana-Dakota's system did experience three storms in the Glendive district that were classified as major storm events in 2021 where more than 10% of a major town's circuits were affected. The storm related outages in the Glendive district occurred on 1/13/2021, 6/10/2021 through 6/11/2021 and 10/12/2021 through 10/13/2021 and all three storms affected the Company's transmission system. There were no major storm events in the Wolf Point district in 2021. Please refer to Attachment B, page 2 for an explanation of the storms related outages classified as a major storm.

An explanation of storm related outages not classified as major storm events is provided in Attachment B, page 3.

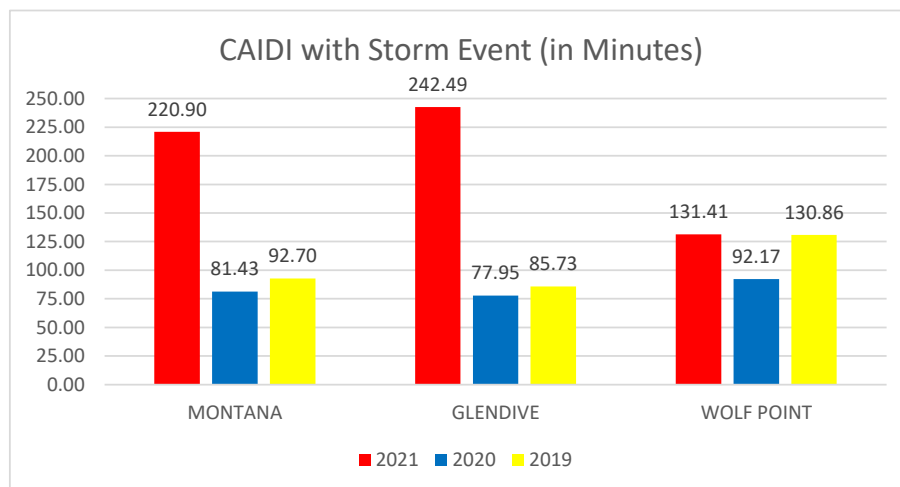
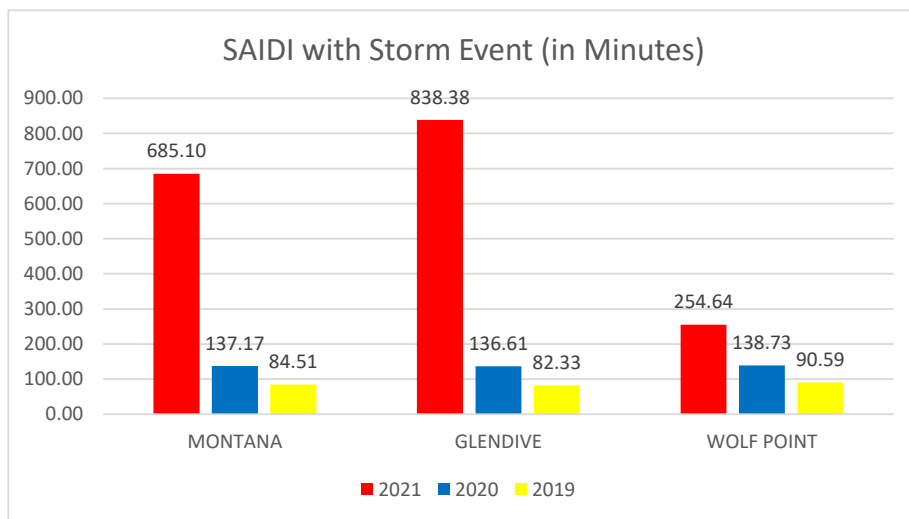
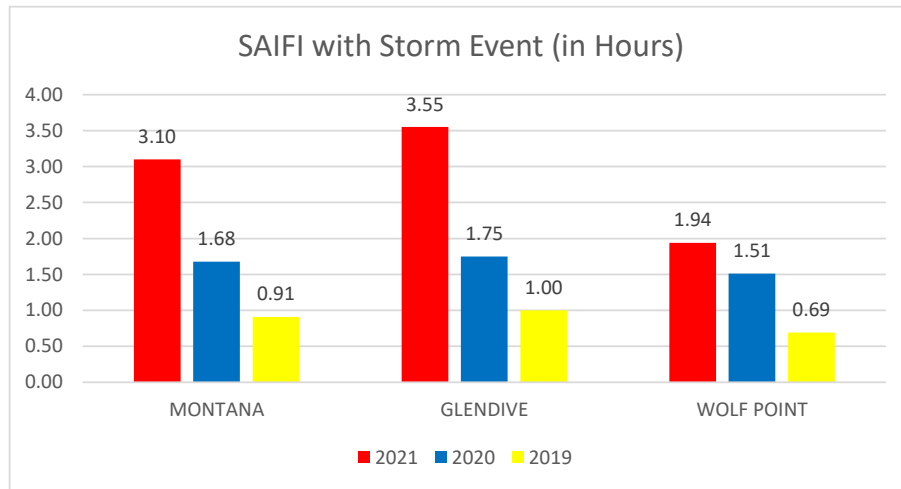
Please contact me with any questions regarding this report.

Sincerely,

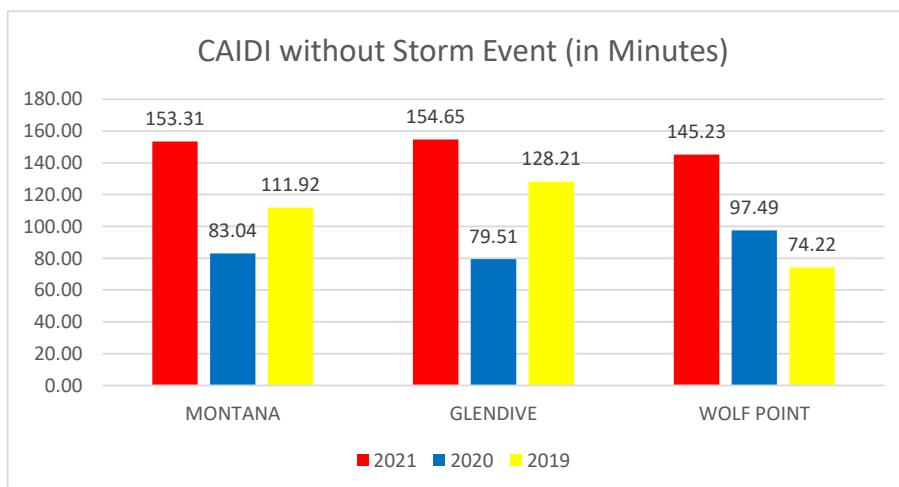
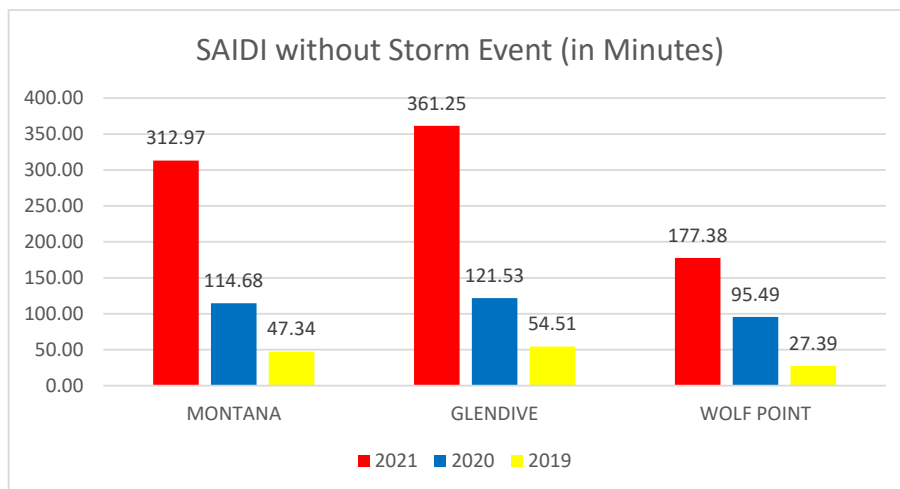
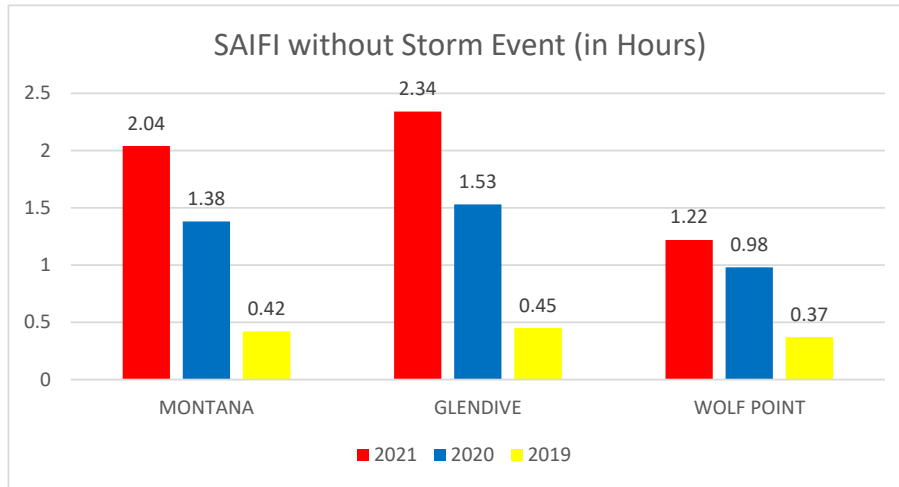
/s/ Travis R. Jacobson

Travis R. Jacobson
Director of Regulatory Affairs

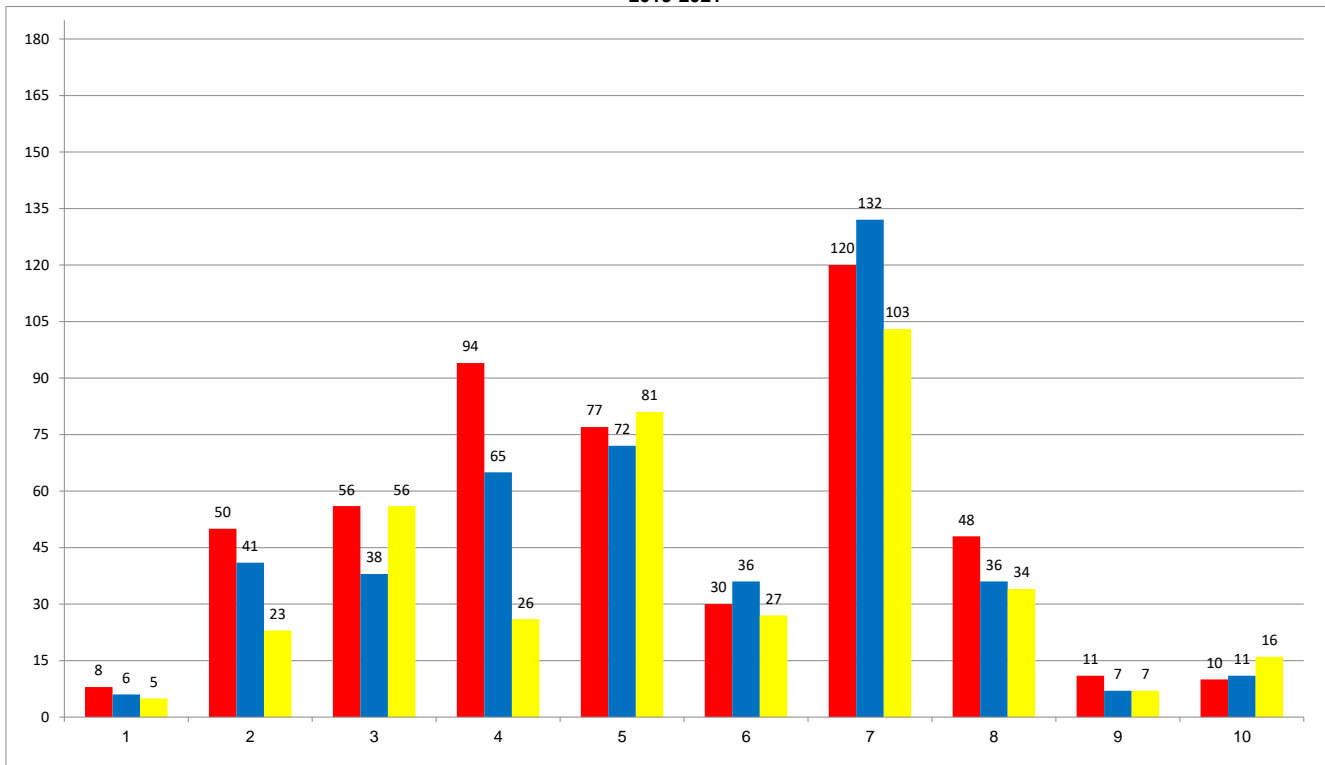
**MONTANA-DAKOTA UTILITIES CO.
RELIABILITY INDEX WITH IDENTIFIED STORM EVENT(S)
ELECTRIC UTILITY - MONTANA
2019-2021**



**MONTANA-DAKOTA UTILITIES CO.
RELIABILITY INDEX WITHOUT IDENTIFIED STORM EVENT(S)
ELECTRIC UTILITY - MONTANA
2019-2021**



MONTANA-DAKOTA UTILITIES CO.
ELECTRIC UTILITY MONTANA
OUTAGES BY CAUSE
2019-2021



Distribution and Transmission Outages:

	2021	2020	2019
1) Customer	8	6	5
2) Equipment	50	41	23
3) Other	56	38	56
4) Planned	94	65	26
5) Storms	77	72	81
6) Trees/Vegetation	30	36	27
7) Unknown	120	132	103
8) Wildlife	48	36	34
9) Vehicle Collison	11	7	7
10) Improper Construction/Dig In	10	11	16
	504	444	378

**MONTANA-DAKOTA UTILITIES CO.
ANNUAL ELECTRIC RELIABILITY REPORT-MONTANA
CALENDAR YEAR 2021
MONTANA RULE 38.5.8619**

* Reliability Index with all Identified Storm Event(s)	Montana			Glendive District			Wolf Point District		
	2021	2020	2019	2021	2020	2019	2021	2020	2019
SAIFI (System Average Interruption Frequency Index)	3.10	1.68	2.65	3.55	1.75	1.00	1.94	1.51	0.69
SAIDI (System Average Interruption Duration Index)	685.10	137.17	262.87	838.38	136.61	82.33	254.64	138.73	90.59
CAIDI (Customer Average Interruption Duration Index)	220.90	81.43	99.20	242.49	77.95	85.73	131.41	92.17	130.86

Reliability Index-Without Identified Storm Event(s)	Montana			Glendive District			Wolf Point District		
	2021	2020	2019	2021	2020	2019	2021	2020	2019
SAIFI (System Average Interruption Frequency Index)	2.04	1.38	0.42	2.34	1.53	0.45	1.22	0.98	0.37
SAIDI (System Average Interruption Duration Index)	312.97	114.68	47.34	361.25	121.53	54.51	177.38	95.49	27.39
CAIDI (Customer Average Interruption Duration Index)	153.31	83.04	111.92	154.65	79.51	128.21	145.23	97.49	74.22

* Include all Storm Related outage Major or Minor

2021 MAJOR STORM EVENTS.
(Distribution and Transmission)

NO.	Reported Element	Start Data	Est. Start Time	End Data	Est. End Time	Est. Duration (hh:mm)	Region	District	Event Cause	Substation	Community	Total Customer
1.a	Transmission	1/13/2021	16:30	1/13/2021	17:52	1:22	Badland	Glendive	High Winds and Gusts up to 100 Mph	Forsyth 4 kV	Forsyth	959
										Forsyth 12 kV	Forsyth	497
										Hathaway	Hathaway	78
										Rosebud	Rosebud	92
										Miles City Ulmer	N/A	10
										Miles City Radar Base	N/A	12
										Hatchway Cemex Pumping	N/A	2
1.b	Transmission	1/13/2021	21:19	1/13/2021	21:29	0:10	Badland	Glendive	High Winds and Gusts up to 100 Mph	Forsyth 4 kV	Forsyth	959
										Forsyth 12 kV	Forsyth	497
										Hathaway	Hathaway	78
										Rosebud	Rosebud	92
										Miles City Ulmer	N/A	10
										Miles City Radar Base	N/A	12
										Hatchway Cemex Pumping	N/A	2
2.a	Transmission	6/10/2021	15:37	6/11/2021	16:09	24:32	Badland	Glendive	Sever Thunderstoom with High Winds.	Sidney West	Sidney	1,737
										Holly Suger 1534	N/A	1
										Sidney East	Sidney	2,005
2.b	Transmission	6/10/2021	22:03	6/11/2021	16:09	16:09	Badland	Glendive	Sever Thunderstoom with High Winds.	Sidney-South	N/A	6
2.c	Transmission	6/10/2021	22:48	6/11/2021	8:48	10:00	Badland	Glendive	Sever Thunderstoom with High Winds.	Savage-WM	N/A	0
										Savage	Savage	196
										Fletcher	Fletcher	4
									Intake	Intake	23	
2.d	Transmission	6/10/2021	22:59	6/11/2021	16:09	16:10	Badland	Glendive	Sever Thunderstoom with High Winds.	Fairview	Fairview, Mt	591
2.e	Transmission	6/11/2021	16:16	6/11/2021	23:00	6:44	Badland	Glendive	High Winds	Sidey - East	Sidney	2,005
										Sidney - West	Sidney	1,737
										Fairview	Fairview, Mt	591
										Sidney-Holly_2	N/A	1
3.a	Transmission	10/12/2021	13:05	10/12/2021	14:03	0:58	Badland	Glendive	Early Fall Snow Storm	Kinsey	Keney	241
										Miles City Valley	N/a	300
3.b	Transmission	10/12/2021	13:05	10/12/2021	14:06	1:01	Badland	Glendive	Early Fall Snow Storm	Forsyth -4KV	Forsyth	959
										Forsyth-12KV	Forsyth	497
										Rosebud	Rosebud	92
										Hathaway	Hathaway	78
										Hathaway - Cenex	N/A	2
										Miles City - Rader	N/A	12
										Miles City - Ulmer	N/A	10
3.c	Transmission	10/13/2021	9:03	13/13/2021	10:56	1:53	Badland	Glendive	Early Fall Snow Storm	Glendive - Clough	Glendive	1,884
3.d	Transmission	10/13/2021	9:03	13/13/2021	12:13	3:10	Badland	Glendive	Early Fall Snow Storm	Glendive - Wesco	N/A	1
3.e	Transmission	10/13/2021	9:03	13/13/2021	12:31	3:28	Badland	Glendive	Early Fall Snow Storm	Glendive - West	Glendive	1,744
3.f	Transmission	10/13/2021	12:14	13/13/2021	12:31	0:17	Badland	Glendive	Early Fall Snow Storm	Glendive - Wesco	N/A	1

**Montana-Dakota Utilities Co.
Electric Utility – Montana
Outage Data Information
2021**

The following storm outages, while not classified as a major storm events by definition, did affect reliability indices in calendar year 2021.

Specific storm related outages on the transmission system not classified as a major storm event affecting distribution substations included:

Storm Related Weather and Wind – Glendive District

- 05/07/2021 Hathaway, Rosebud, Miles City Radar Base, Miles City Ulmer, Hathaway-Cenex
- 05/08/2021 Kinsey, Miles City Valley, Rosebud, Hathaway-Cenex, MC Radar Base, Hathaway
- 06/08/2021 Fletcher, Savage-WM, Intake, Sidney-Jet Fuel, Fairview
- 07/07/2021 Plevna-Sandstone, Hiland-Crude, Plevna, Baker-Monarch, Baker-Cabin Creek I&II
- 07/20/2021 Wibaux and Wibaux-Phil

Storm Related Weather and Wind – Wolf Point District

- 01/14/2021 Culbertson and Bainville
- 04/04/2021 Poplar
- 05/20/2021 Poplar Oil Field
- 05/21/2021 Poplar Oil Field
- 06/08/2021 Culbertson and Bainville
- 06/10/2021 Culbertson and Bainville
- 07/08/2021 Poplar Sprole and Brockton