



UTILITIES CO.

A Division of MDU Resources Group, Inc.

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

July 7, 2015

Executive Secretary  
North Dakota Public Service Commission  
State Capitol Building  
Bismarck, ND 58505-0480

Re: Case No. PU-15- \_\_\_\_\_  
2015-2016 Avoided Costs Updates

Montana-Dakota Utilities Co. (Montana-Dakota), a Division of MDU Resources Group Inc., herewith requests Commission approval to revise its Occasional Power Purchase Non-Time Differentiated Rate 95 and Parallel Generation Peaking Facility Purchase Rate 96 Time Differentiated. This filing is made in compliance with the Order in Case No. 10,000 and in accordance with the Cogeneration and Small Power Producer Rules, Section 69-09-07-09 of the North Dakota Administrative Code.

The methodology used to develop the proposed energy and capacity payments is consistent with the approved avoided cost rate tariffs. The proposed energy payments for Rates 95 and 96 were generated using Montana-Dakota's production costing model PLEXOS<sup>®</sup> for Power Systems (PLEXOS), reflecting a test year of July 2015 to June 2016. The proposed energy payments under Rates 95 and 96 reflect an increase in the energy payment per Kwh attributable to an increase in the forecasted Midcontinent Independent System Operators, Inc. (MISO) market prices and natural gas prices from those included in the currently approved energy payments.

The proposed capacity payments under Rate 96 reflect the projected levelized cost of a new peaking facility at an estimated cost of \$816/kW, adjusted to 2016 dollars. A lower capital cost, coupled with an updated capital structure, lowers the capacity payments applicable under Rate 96 from the authorized capacity payments. The data used to support the proposed energy and capacity payments is included as Attachment A.

Montana-Dakota has reviewed the metering charges applicable under Rates 95 and 96 and has determined no change in the daily metering charges is necessary in this annual update.

Included herein is a second set of the affected tariffs on which Montana-Dakota has indicated the revisions requested by lining through the existing language which the Company proposes to delete and clearly highlighting the new language proposed.

Montana-Dakota serves two customers under Rate 95 as of May 31, 2015. The proposed annual change in revenue, assuming the same customer loads and generation as the past twelve months, would be minimal. A monthly history of the energy purchased under Rate 95 is included as Attachment B.

Montana-Dakota respectfully requests that the rate schedules set forth herein be approved with an effective date of service rendered on and after August 15, 2015.

Please refer all inquiries regarding this filing to:

Ms. Tamie A. Aberle  
Director of Regulatory Affairs  
Montana-Dakota Utilities Co.  
400 North Fourth Street  
Bismarck, ND 58501

Also, please send copies of all written inquiries, correspondence, and pleadings to:

Mr. Daniel S. Kuntz  
Associate General Counsel  
MDU Resources Group Inc.  
P.O. Box 5650  
Bismarck, ND 58506-5650

The original and seven (7) copies of this Letter of Transmittal and tariffs have been provided to the North Dakota Public Service Commission.

Enclosed is a check for \$50.00 in accordance with North Dakota Century Code Section 49-05-05 to cover the filing fee associated with this filing.

Montana-Dakota respectfully requests that this filing be accepted as being in full compliance with the filing requirements of this Commission.

Please acknowledge receipt by stamping or initialing the duplicate copy of this letter attached hereto and returning the same in the enclosed self-addressed envelope.

Sincerely,



Tamie A. Aberle  
Director of Regulatory Affairs

Attachments

cc: D. Kuntz



# Montana-Dakota Utilities Co.

A Division of MDU Resources Group, Inc.

400 N 4<sup>th</sup> Street  
Bismarck, ND 58501

## State of North Dakota Electric Rate Schedule

NDPSC Volume 4  
14<sup>th</sup> Revised Sheet No. 44  
Canceling 13<sup>th</sup> Revised Sheet No. 44

### OCCASIONAL POWER PURCHASE Rate 95 NON-TIME DIFFERENTIATED

Page 1 of 2

#### Availability:

To any qualifying cogeneration and small power production facilities for the purpose of generating occasional electric energy in parallel with the Company's system. This schedule is applicable to cogeneration and small power production facilities with a design capacity of 100 Kw or less, that are Qualifying Facilities (QF) as defined under 18 CFR, Part 292.

#### Rate:

Metering charge for single phase service: \$0.05 per day  
With instrument transformers: \$0.15 per day

Metering charge for three phase service: \$0.11 per day  
With instrument transformers: \$0.27 per day

Energy delivered to and accepted by Company by a QF shall be paid for by Company in accordance with one of the following two options, elected by the QF:

#### 1. Simultaneous Purchase and Sale:

Energy sales to QF - Service provided to such customers by the Company shall be billed at the appropriate rate, by class of customers (i.e., residential, small and general electric service, etc.) that is currently on file with the Commission.

Energy purchases by Company:

Energy Payment = 3.296¢ per Kwh

#### 2. Net Billing:

Energy generated will be compensated on a net billing basis. The Company will install a meter to measure the energy generated by the QF. The Company will also install a meter to measure the energy consumed by the QF. Metered generation will be subtracted from the metered consumption for the billing period.

Date Filed: July 7, 2015

Effective Date:

Issued By: Tamie A. Aberle  
Director of Regulatory Affairs

Case No.:



# Montana-Dakota Utilities Co.

A Division of MDU Resources Group, Inc.

400 N 4<sup>th</sup> Street  
Bismarck, ND 58501

## State of North Dakota Electric Rate Schedule

NDPSC Volume 4  
12<sup>th</sup> Revised Sheet No. 44.1  
Canceling 11<sup>th</sup> Revised Sheet No. 44.1

### OCCASIONAL POWER PURCHASE Rate 95 NON-TIME DIFFERENTIATED

Page 2 of 2

If metered generation is less than metered consumption, the QF will be billed the applicable retail rate. If metered generation is greater than the metered consumption, the QF will be paid for each Kwh an amount equal to:  
3.296¢ per Kwh

#### General Terms and Conditions:

1. Change of Rates: This schedule shall be reviewed annually, updated if necessary, and revised upon the Commission's approval.
2. The Company shall install appropriate metering facilities to record all flows of energy necessary to bill and pay in accordance with the charges and payments contained in this rate schedule.
3. The customer shall, with prior written consent of the Company, furnish, install and wire the necessary service entrance equipment, meter sockets, meter enclosure cabinets, or meter connection cabinets that may be required by the Company to properly meter usage and sales to the Company.
4. A written contract with the Company shall be signed stipulating the terms and conditions of the interconnection and sale of the electricity to the Company. The term of the contract hereunder shall be at least one year but less than five years.
5. In order to qualify for the net billing option, the generating equipment and the load of the facility must be located at the same "physical site". "Physical site" shall mean on the same tract of land and the generator output must be physically connected to the load service entrance.
6. For general terms and conditions covering QF's, see Rate 140.
7. All services provided by the Company under this and all other schedules are governed by the rules and regulations approved by the North Dakota Public Service Commission. Rates charged hereunder may be modified by Company at any time by making a unilateral rate application with the North Dakota Public Service Commission or its successor. The new rates shall be effective upon approval by the Commission.

Date Filed: July 7, 2015

Effective Date:

Issued By: Tamie A. Aberle  
Director of Regulatory Affairs

Case No.:



# Montana-Dakota Utilities Co.

A Division of MDU Resources Group, Inc.  
400 N 4<sup>th</sup> Street  
Bismarck, ND 58501

## State of North Dakota Electric Rate Schedule

NDPSC Volume 4  
14<sup>th</sup> Revised Sheet No. 45  
Canceling 13<sup>th</sup> Revised Sheet No. 45

### PARALLEL GENERATION PEAKING FACILITY PURCHASE Rate 96 TIME DIFFERENTIATED

Page 1 of 3

#### Availability:

To any qualifying cogeneration and small power production facilities for the purpose of generating electric energy in parallel with the Company's system. This schedule is applicable to cogeneration and small power production facilities with a design capacity of 1000 Kw or less, that operate as a peaking facility (defined below), and are Qualifying Facilities (QF) as defined under 18 CFR, Part 292.

#### Rate:

Metering charge for single phase service: \$ 0.15 per day  
With instrument transformers: \$ 0.25 per day

Metering charge for three phase service: \$ 0.16 per day  
With instrument transformers: \$ 0.32 per day

1. Capacity delivered to the Company:

Levelized payment for term of contract based on Table 1 below.

TABLE 1  
Contract Length (YR.)

	5	10	15	20	25	30	35
\$/Kw-mo	8.063	8.598	9.111	9.596	10.048	10.466	10.846

Total capacity payment per month = Monthly capacity payments for a QF will be made pursuant to the applicable contract length from Table 1 presented above. Such payments shall be based upon the amount of qualifying capacity assigned to an eligible resource under BPM-011-Resource Adequacy of the MISO Tariff.

Capacity payments will be paid in the subsequent billing period.

Date Filed: July 7, 2015

Effective Date:

Issued By: Tamie A. Aberle  
Director – Regulatory Affairs

Case No.:



# Montana-Dakota Utilities Co.

A Division of MDU Resources Group, Inc.

400 N 4<sup>th</sup> Street  
Bismarck, ND 58501

## State of North Dakota Electric Rate Schedule

NDPSC Volume 4  
14<sup>th</sup> Revised Sheet No. 45.1  
Canceling 13<sup>th</sup> Revised Sheet No. 45.1

### PARALLEL GENERATION PEAKING FACILITY PURCHASE Rate 96 TIME DIFFERENTIATED

Page 2 of 3

2. Energy Payment:

ON-PEAK

2.971¢ per Kwh

OFF-PEAK

3.289¢ per Kwh

Peak Periods: The On-Peak Period is defined as those hours between 12 p.m. and 8 p.m. local time, Monday through Friday in the months of June through September. The Off-Peak Period is defined as all other hours. Definitions of On-Peak and Off-Peak periods are subject to change with change in the Company's system operating characteristics.

#### Energy Sales to Qualifying Facilities:

Service provided to such customers by the Company shall be billed at the appropriate rate, by class of customers (i.e., residential, small and general electric service, etc.) that is currently on file with the Commission.

#### General Terms and Conditions:

1. Change of Rates: This schedule shall be reviewed annually, updated if necessary, and revised upon the Commission's approval.
2. Service under this schedule shall be on a simultaneous purchase and sale basis only.
3. The Company shall install appropriate metering facilities to record all flows of energy necessary to bill and pay in accordance with the charges and payments contained in this rate schedule.
4. The customer shall, with prior written consent of the Company, furnish, install and wire the necessary service entrance equipment, meter sockets, meter enclosure cabinets, or meter connection cabinets that may be required by the Company to properly meter usage and sales to the Company.
5. A written contract with the Company shall be signed stipulating the terms and conditions of the interconnection and sale of the electricity to the Company. The term of the contract hereunder shall be five years or more.

Date Filed: July 7, 2015

Effective Date:

Issued By: Tamie A. Aberle  
Director – Regulatory Affairs

Case No.:

# Tariffs Reflecting Proposed Changes



# Montana-Dakota Utilities Co.

A Division of MDU Resources Group, Inc.

400 N 4<sup>th</sup> Street  
Bismarck, ND 58501

## State of North Dakota Electric Rate Schedule

NDPSC Volume 4  
13<sup>th</sup> Revised Sheet No. 44  
Canceling 12<sup>th</sup> Revised Sheet No. 44

### OCCASIONAL POWER PURCHASE Rate 95 NON-TIME DIFFERENTIATED

Page 1 of 2

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#### 1. Simultaneous Purchase and Sale:

Energy sales to QF - Service provided to such customers by the Company shall be billed at the appropriate rate, by class of customers (i.e., residential, small and general electric service, etc.) that is currently on file with the Commission.

Energy purchases by Company:

Energy Payment = 3.489296¢ per Kwh

#### 2. Net Billing:

Energy generated will be compensated on a net billing basis. The Company will install a meter to measure the energy generated by the QF. The Company will also install a meter to measure the energy consumed by the QF. Metered generation will be subtracted from the metered consumption for the billing period.

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Date Filed:	June 23, 2014	Effective Date:	Service rendered on and after August 1, 2014
Issued By:	Tamie A. Aberle Director of Regulatory Affairs	Case No.:	PU-14-441



# Montana-Dakota Utilities Co.

A Division of MDU Resources Group, Inc.  
400 N 4<sup>th</sup> Street  
Bismarck, ND 58501

## State of North Dakota Electric Rate Schedule

NDPSC Volume 4  
11<sup>th</sup> Revised Sheet No. 44.1  
Canceling 10<sup>th</sup> Revised Sheet No. 44.1

### OCCASIONAL POWER PURCHASE Rate 95 NON-TIME DIFFERENTIATED

Page 2 of 2

If metered generation is less than metered consumption, the QF will be billed the applicable retail rate. If metered generation is greater than the metered consumption, the QF will be paid for each Kwh an amount equal to:

3.189296¢ per Kwh

#### General Terms and Conditions:

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4. A written contract with the Company shall be signed stipulating the terms and conditions of the interconnection and sale of the electricity to the Company. The term of the contract hereunder shall be at least one year but less than five years.
5. In order to qualify for the net billing option, the generating equipment and the load of the facility must be located at the same "physical site". "Physical site" shall mean on the same tract of land and the generator output must be physically connected to the load service entrance.
6. For general terms and conditions covering QF's, see Rate 140.
7. All services provided by the Company under this and all other schedules are governed by the rules and regulations approved by the North Dakota Public Service Commission. Rates charged hereunder may be modified by Company at any time by making a unilateral rate application with the North Dakota Public Service Commission or its successor. The new rates shall be effective upon approval by the Commission.

<b>Date Filed:</b>	June 23, 2014	<b>Effective Date:</b>	Service rendered on and after August 1, 2014
<b>Issued By:</b>	Tamie A. Aberle Director of Regulatory Affairs	<b>Case No.:</b>	PU-14-441



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NDPSC Volume 4  
13<sup>th</sup> Revised Sheet No. 45  
Canceling 12<sup>th</sup> Revised Sheet No. 45

### PARALLEL GENERATION PEAKING FACILITY PURCHASE Rate 96 TIME DIFFERENTIATED

Page 1 of 3

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With instrument transformers: \$ 0.25 per day  
  
Metering charge for three phase service: \$ 0.16 per day  
With instrument transformers: \$ 0.32 per day

1. Capacity delivered to the Company:

Levelized payment for term of contract based on Table 1 below.

TABLE 1  
Contract Length (YR.)

	5	10	15	20	25	30	35
\$/Kw-mo	8.653	9.223	9.767	10.279	10.753	11.187	11.579
	<u>8.063</u>	<u>8.598</u>	<u>9.111</u>	<u>9.596</u>	<u>10.048</u>	<u>10.466</u>	<u>10.846</u>

Total capacity payment per month = Monthly capacity payments for a QF will be made pursuant to the applicable contract length from Table 1 presented above. Such payments shall be based upon the amount of qualifying capacity assigned to an eligible resource under BPM-011-Resource Adequacy of the MISO Tariff.

Capacity payments will be paid in the subsequent billing period.

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400 N 4<sup>th</sup> Street  
Bismarck, ND 58501

## State of North Dakota Electric Rate Schedule

NDPSC Volume 4  
13<sup>th</sup> Revised Sheet No. 45.1  
Canceling 12<sup>th</sup> Revised Sheet No. 45.1

### PARALLEL GENERATION PEAKING FACILITY PURCHASE Rate 96 TIME DIFFERENTIATED

Page 2 of 3

2. Energy Payment:

ON-PEAK

2.971806¢ per Kwh

OFF-PEAK

3.289482¢ per Kwh

Peak Periods: The On-Peak Period is defined as those hours between 12 p.m. and 8 p.m. local time, Monday through Friday in the months of June through September. The Off-Peak Period is defined as all other hours. Definitions of On-Peak and Off-Peak periods are subject to change with change in the Company's system operating characteristics.

#### Energy Sales to Qualifying Facilities:

Service provided to such customers by the Company shall be billed at the appropriate rate, by class of customers (i.e., residential, small and general electric service, etc.) that is currently on file with the Commission.

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Issued By: Tamie A. Aberle  
Director – Regulatory Affairs

Case No.: PU-14-441

**Montana-Dakota Utilities Co.**  
**Electric Utility - North Dakota**  
**Lambda**  
**July 2015 through June 2016**

Month	Year	Lambda		
		On-Peak \$/MWh	Off-Peak \$/MWh	Total \$/MWh
July	2015	\$30.21	\$30.03	\$30.07
August	2015	30.21	29.25	29.47
September	2015	26.87	26.87	26.87
October	2015		26.82	26.82
November	2015		26.72	26.72
December	2015		42.15	42.15
January	2016		43.59	43.59
February	2016		48.18	48.18
March	2016		30.21	30.21
April	2016		30.92	30.92
May	2016		30.58	30.58
June	2016	31.53	29.36	29.89
Average		\$29.71	\$32.89	\$32.96

**Montana-Dakota Utilities Co.  
Electric Utility - North Dakota  
Monthly Capacity Payment Levels  
Nominally Levelized \$/kW-Month  
On Line Contract Year**

<u>Contract Length</u>	<u>2015 - 2016</u>
5	\$8.063
10	8.598
15	9.111
20	9.596
25	10.048
30	10.466
35	10.846

**Montana-Dakota-Utilities Co.  
Electric Utility - North Dakota  
Monthly Capacity Payments Calculations  
Payment in \$/kW-Month by Contract Length**

Weighted Average Cost of Capital -  
(Discount Rate) - 6.984%

North Dakota

Year	Annualized Cost of Avoided Capacity (\$/kW-Year)	Present Value of ACAC (\$/kW-Year)	Cumulative Present Value of ACAC (\$/kW-Year)	Monthly Capacity Payments		
				Contract Length (Years)	Capital Recovery Factor	Levelized Capacity Payment (\$/kW-Month)
2016	\$85.52	\$85.52	\$85.52	1		
2017	88.08	82.33	167.85	2		
2018	90.73	79.27	247.12	3		
2019	93.45	76.32	323.44	4		
2020	96.25	73.47	<b>396.91</b>	<b>5</b>	0.243786	<b>\$8.063</b>
2021	99.14	70.74	467.65	6		
2022	102.11	68.10	535.75	7		
2023	105.18	65.57	601.32	8		
2024	108.33	63.12	664.44	9		
2025	111.58	60.77	<b>725.22</b>	<b>10</b>	0.142272	<b>\$8.598</b>
2026	114.93	58.51	783.73	11		
2027	118.38	56.33	840.06	12		
2028	121.93	54.24	894.30	13		
2029	125.59	52.22	946.52	14		
2030	129.35	50.27	<b>996.79</b>	<b>15</b>	0.109684	<b>\$9.111</b>
2031	133.24	48.40	1,045.19	16		
2032	137.23	46.60	1,091.78	17		
2033	141.35	44.86	1,136.64	18		
2034	145.59	43.19	1,179.84	19		
2035	149.96	41.58	<b>1,221.42</b>	<b>20</b>	0.094276	<b>\$9.596</b>
2036	154.46	40.03	1,261.45	21		
2037	159.09	38.54	1,300.00	22		
2038	163.86	37.11	1,337.10	23		
2039	168.78	35.73	1,372.83	24		
2040	173.84	34.40	<b>1,407.23</b>	<b>25</b>	0.085687	<b>\$10.048</b>
2041	179.06	33.12	1,440.34	26		
2042	184.43	31.88	1,472.22	27		
2043	189.96	30.69	1,502.92	28		
2044	195.66	29.55	1,532.47	29		
2045	201.53	28.45	<b>1,560.92</b>	<b>30</b>	0.080457	<b>\$10.466</b>
2046	207.58	27.39	1,588.31	31		
2047	213.80	26.37	1,614.68	32		
2048	220.22	25.39	1,640.07	33		
2049	226.82	24.44	1,664.51	34		
2050	233.63	23.53	<b>1,688.05</b>	<b>35</b>	0.077099	<b>\$10.846</b>

**Montana-Dakota Utilities Co.  
Electric Utility - North Dakota**

**Rate 95 Customer History  
Twelve Months Ended May 31, 2015**

	<u>Kwh Billed Customer 1/</u>	<u>Kwh Purchased under Rate 95</u>
June 2014	3,205	2,321
July	3,199	395
August	3,037	338
September	3,139	34
October	4,530	0
November	9,862	0
December	19,227	0
January 2015	22,724	2
February	18,431	5
March	16,525	14
April	10,574	19
May	6,011	14
Total	<u>120,464</u>	<u>3,142</u>

1/ Energy billed customer under other service's applicable tariff.