Montana-Dakota Utilities Co.
Electric Utility - South Dakota
Lambda and Capacity Costs
2027

Month		Lambda On-Peak $/MWh	Lambda Off-Peak $/MWh	Lambda Total $/MWh
January	2027		$36.22	$36.22
February	2027		38.40	38.40
March	2027		31.61	31.61
April	2027		25.20	25.20
May	2027		29.60	29.60
June	2027	$29.79	28.63	29.50
July	2027	40.51	40.50	40.51
August	2027	38.95	38.26	38.79
September	2027	30.52	30.39	30.49
October	2027		26.26	26.26
November	2027		32.10	32.10
December	2027		33.23	33.23
Average		$34.94	$32.53	$32.66

Montana-Dakota Utilities Co.
Electric Utility - South Dakota
Calculation of Capacity Payments
2033

Rate 96		
Capital cost of combustion turbine	$2,230	1/
Levelized Fixed Charge	9.373%	2/
Monthly Capacity Payments:	$17.417	$/kW-Month 3/

1/ Cost of combustion turbine based on the projected cost of a GE 7E.03 simple cycle unit in 2024 dollars of $1,709 escalated at a rate of 3.0% per year to
2/ See Attachment A pages 2-6.
3/ Rate 96 Capacity Payment formula = $1,709 x 1.030^(2033-2024) x .09373 / 12.

Montana-Dakota Utilities Co.
Electric Utility - South Dakota
2027 Avoided Cost Rate Update
Levelized Fixed Charge Rate - CT

Summary of Results	
Sum of Present Values 1/	1.229815
Capital Recovery Factor 2/	0.076214
Levelized Fixed Charge 3/	9.373%

1/ Sum of annual net present values.
2/ ((+ROR*(1+ROR)^book life)/((1+ROR)^book life-1).
3/ Product of annual present value x capital recovery factor.

Montana-Dakota Utilities Co.
Electric Utility - South Dakota
2027 Avoided Cost Rate Update
Levelized Fixed Charge Rate - CT

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Year	Net Investment	Return	Book Depr.	O&M	Ad Valorem Tax	Total Charge	Present Value Factor	Present Value	Accum. Present Value	LFCR	Tax Depr. Accel.	Deferred Income Tax
1	1	1.000	0.08366	0.02500	0.01000	0.00400	0.12266	0.93338	0.11449	0.11449	0.12266	0.05000	0.00525
2	2	0.970	0.08113	0.02500	0.01000	0.00400	0.12013	0.87119	0.10466	0.21914	0.12144	0.09500	0.01470
3	3	0.930	0.07781	0.02500	0.01000	0.00400	0.11681	0.81315	0.09498	0.31413	0.12000	0.08550	0.01271
4	4	0.892	0.07465	0.02500	0.01000	0.00400	0.11365	0.75897	0.08626	0.40039	0.11857	0.07700	0.01092
5	5	0.856	0.07165	0.02500	0.01000	0.00400	0.11065	0.70841	0.07838	0.47877	0.11720	0.06930	0.00930
6	6	0.822	0.06878	0.02500	0.01000	0.00400	0.10778	0.66121	0.07126	0.55003	0.11589	0.06230	0.00783
7	7	0.789	0.06603	0.02500	0.01000	0.00400	0.10503	0.61716	0.06482	0.61485	0.11464	0.05900	0.00714
8	8	0.757	0.06334	0.02500	0.01000	0.00400	0.10234	0.57604	0.05895	0.67381	0.11345	0.05900	0.00714
9	9	0.725	0.06065	0.02500	0.01000	0.00400	0.09965	0.53766	0.05358	0.72739	0.11230	0.05910	0.00716
10	10	0.693	0.05796	0.02500	0.01000	0.00400	0.09696	0.50184	0.04866	0.77605	0.11120	0.05900	0.00714
11	11	0.661	0.05527	0.02500	0.01000	0.00400	0.09427	0.46840	0.04416	0.82021	0.11013	0.05910	0.00716
12	12	0.629	0.05258	0.02500	0.01000	0.00400	0.09158	0.43720	0.04004	0.86025	0.10910	0.05900	0.00714
13	13	0.596	0.04990	0.02500	0.01000	0.00400	0.08890	0.40807	0.03628	0.89652	0.10811	0.05910	0.00716
14	14	0.564	0.04720	0.02500	0.01000	0.00400	0.08620	0.38088	0.03283	0.92936	0.10715	0.05900	0.00714
15	15	0.532	0.04452	0.02500	0.01000	0.00400	0.08352	0.35551	0.02969	0.95905	0.10622	0.05910	0.00716
16	16	0.500	0.04183	0.02500	0.01000	0.00400	0.08083	0.33182	0.02682	0.98587	0.10532	0.02950	0.00094
17	17	0.474	0.03965	0.02500	0.01000	0.00400	0.07865	0.30971	0.02436	1.01023	0.10446	0.00000	(0.00525)
18	18	0.454	0.03800	0.02500	0.01000	0.00400	0.07700	0.28908	0.02226	1.03249	0.10367	0.00000	(0.00525)
19	19	0.435	0.03635	0.02500	0.01000	0.00400	0.07535	0.26982	0.02033	1.05282	0.10292	0.00000	(0.00525)
20	20	0.415	0.03470	0.02500	0.01000	0.00400	0.07370	0.25184	0.01856	1.07138	0.10222	0.00000	(0.00525)
21	21	0.395	0.03305	0.02500	0.01000	0.00400	0.07205	0.23506	0.01694	1.08831	0.10156	0.00000	(0.00525)
22	22	0.375	0.03139	0.02500	0.01000	0.00400	0.07039	0.21940	0.01544	1.10376	0.10093	0.00000	(0.00525)
23	23	0.355	0.02974	0.02500	0.01000	0.00400	0.06874	0.20479	0.01408	1.11784	0.10034	0.00000	(0.00525)
24	24	0.336	0.02809	0.02500	0.01000	0.00400	0.06709	0.19114	0.01282	1.13066	0.09978	0.00000	(0.00525)
25	25	0.316	0.02644	0.02500	0.01000	0.00400	0.06544	0.17841	0.01167	1.14233	0.09925	0.00000	(0.00525)

Montana-Dakota Utilities Co.
Electric Utility - South Dakota
2027 Avoided Cost Rate Update
Levelized Fixed Charge Rate - CT

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Year	Net Investment	Return	Book Depr.	O&M	Ad Valorem Tax	Total Charge	Present Value Factor	Present Value	Accum. Present Value	LFCR	Tax Depr. Accel.	Deferred Income Tax
26	26	0.296	0.02478	0.02500	0.01000	0.00400	0.06378	0.16652	0.01062	1.15295	0.09874	0.00000	(0.00525)
27	27	0.276	0.02313	0.02500	0.01000	0.00400	0.06213	0.15543	0.00966	1.16261	0.09826	0.00000	(0.00525)
28	28	0.257	0.02148	0.02500	0.01000	0.00400	0.06048	0.14507	0.00877	1.17139	0.09780	0.00000	(0.00525)
29	29	0.237	0.01983	0.02500	0.01000	0.00400	0.05883	0.13541	0.00797	1.17935	0.09737	0.00000	(0.00525)
30	30	0.217	0.01818	0.02500	0.01000	0.00400	0.05718	0.12638	0.00723	1.18658	0.09695	0.00000	(0.00525)
31	31	0.197	0.01652	0.02500	0.01000	0.00400	0.05552	0.11796	0.00655	1.19313	0.09656	0.00000	(0.00525)
32	32	0.178	0.01487	0.02500	0.01000	0.00400	0.05387	0.11010	0.00593	1.19906	0.09618	0.00000	(0.00525)
33	33	0.158	0.01322	0.02500	0.01000	0.00400	0.05222	0.10277	0.00537	1.20442	0.09582	0.00000	(0.00525)
34	34	0.138	0.01157	0.02500	0.01000	0.00400	0.05057	0.09592	0.00485	1.20928	0.09548	0.00000	(0.00525)
35	35	0.118	0.00991	0.02500	0.01000	0.00400	0.04891	0.08953	0.00438	1.21365	0.09515	0.00000	(0.00525)
36	36	0.099	0.00826	0.02500	0.01000	0.00400	0.04726	0.08357	0.00395	1.21760	0.09484	0.00000	(0.00525)
37	37	0.079	0.00661	0.02500	0.01000	0.00400	0.04561	0.07800	0.00356	1.22116	0.09454	0.00000	(0.00525)
38	38	0.059	0.00496	0.02500	0.01000	0.00400	0.04396	0.07280	0.00320	1.22436	0.09426	0.00000	(0.00525)
39	39	0.039	0.00330	0.02500	0.01000	0.00400	0.04230	0.06795	0.00287	1.22724	0.09399	0.00000	(0.00525)
40	40	0.020	0.00165	0.02500	0.01000	0.00400	0.04065	0.06342	0.00258	1.22981	0.09373	0.00000	(0.00525)

Montana-Dakota Utilities Co.
Electric Utility - South Dakota
2027 Avoided Cost Rate Update
Levelized Fixed Charge Rate - CT

Year	(1) Net Investment	(2) Return	(3) Book Depr.	(4) O&M	(5) Ad Valorem Tax	(6) Total Charge	(7) Present Value Factor	(8) Present Value	(9) Accum. Present Value	(10) LFCR	(11) Tax Depr. Accel.	(12) Deferred Income Tax

(1) Prior year's Net investment - Book Depreciation - Deferred Income Tax.
(2) Return (adjusted for taxes) x Net Investment.
(3) Depreciation rate based on the life of the investment.
(4) Distribution O&M expense as percent of distribution plant.
(5) Ad valorem tax rate on distribution plant.
(6) Sum of return, depreciation, O&M and ad valorem taxes.
(7) Present value factor reflecting overall rate of return.
(8) Present value factor x total charge.
(9) Accumulated present value.
(10) Levelized fixed charge rate = accumulated present value x ((+ROR*(1+ROR)^book life)/((1+ROR)^book life-1)
(11) Tax depreciation rates for a CT uses a 15 year tax life.
(12) (Tax life - book life) x tax rate.

Assumptions	
ROR	7.138%
ROR with taxes	8.366%
Federal Tax Rate	21.000%
State Tax Rate	
Combined Federal/State Tax Rate	21.0000%
1 - Tax Rate	79.0000%
Service Life of Asset (in years)	40
Tax Life (in years - 5, 7, 10, 15, 20 , or 39)	15
Property Tax Rate	0.400%