

**Montana-Dakota Utilities Co.**  
**Electric Utility – South Dakota**  
**Description of Allocation Factors & Embedded Class Cost of Service Study - Details**

Factor	Title	Function	Description	Work Paper Reference
1	Energy at Generation Level (Pro Forma)	Energy	Pro Forma kWh sales by class as recorded at the meter and adjusted for energy losses	Statement I, Page 2, Statement N, Schedule N-3, Pages 1,4,7,10,13. Workpaper Page N-15
2	Average & Excess Demand – AED (Pro Forma)	Demand	AED refers to Average and Excess Demand. This factor is used to allocate production and transmission related investment and expenses based on each class's average demand and the non-coincident peak (NCP) demand for each class. The NCP demand of each rate class is determined by applying the class load factor to the pro forma sales by class. The pro forma sales (Kwh) and NCP demand (Kw) values are then adjusted for losses to determine the Energy at Generation and NCP at Generation. The average demand for each class (Energy at Generation divided by the total hours in 2014 of 8,760) is then compared to the NCP at generation. This difference of NCP over average is used to develop an allocation factor by class that is applied to the NCP Kw demand exceeding the actual peak demand. In this case the peak demand was 130,289 Kw leaving excess NCP Kw of 31,164 for allocating to each class. The total of the allocated excess and the average demand for each class provides the Average and Excess Kw Demand used to develop Factor No. 2.	Statement N, Schedule N-3, Pages 1,4,7,10,13. Workpaper Page N-15
3	AED/Energy (Pro Forma)	Demand	This factor is derived from Factors 1 & 2, by calculating 83.5% of Factor 1 and 16.5% of Factor 2. This factor is used to allocate wind related production plant.	Statement N, Schedule N-3, Pages 1,4,7,10,13. Workpaper Page N-15

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Factor	Title	Function	Description	Work Paper Reference
4	NCP – Supply Level (Pro Forma)	Demand	The Non-Coincident Kw demand represents the peak demand for each rate class and is used primarily as the allocation factor for demand related distribution plant and expenses. The load factors for each class are derived based on sample data or actual billing demand.	Statement N, Schedule N-3, Pages 1,4,7,10,13. Workpaper Page N-15
4.1	NCP KW @ Supply less Rate 35 (Pro Forma)	Demand	This factor is derived from Factor 4 by excluding the non-coincident demand of the contract services class and is used to allocate the demand related costs of poles, overhead & underground conductor & device costs that are not applicable to contract services customers.	Statement N, Schedule N-3, Pages 1,4,7,10,13. Workpaper Page N-15
5	NCP – Secondary Level (Pro Forma)	Demand	This factor is derived from Factor 4 by excluding the non-coincident demand of the primary service classes and is used to allocate distribution transformer costs that are not applicable to primary service customers.	Statement N, Schedule N-3, Pages 1,4,7,10,13.
6	Weighted Customer Meters	Customer	Meter costs by rate class weighted to represent relative costs, with the residential cost weight set equal to 1.0. For example, the average installed cost of a residential meter is \$88.80 and the average installed cost of a meter used for Rate 20 Secondary Service customers is \$203.52 resulting in a meter weight of 2.29 assigned to the Rate 20 class.	Statement N, Schedule N-3, Pages 1,4,7,10,13. Workpaper Page N-16
8	Total Customers	Customer	Number of average active pro forma customers for the 12 months ending December 31, 2014.	Statement I, Page 2, Statement N, Schedule N-3, Pages 1,4,7,10,13. Workpaper Page N-16
10	Weighted Customer Services	Customer	Service costs determined based on the typical cost of the facilities and equipment required to serve a typical customer in each rate class weighted to represent relative costs with the residential weight set equal to 1.0. For example, the average installed cost of a residential service was determined to be \$611.13 and the average installed cost of a service line for a customer under Rate 20 was determined to be \$640.55 resulting in a service weight of 1.05 assigned to the Rate 20 class.	Statement N, Schedule N-3, Pages 1,4,7,10,13. Workpaper Page N-16

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Factor	Title	Function	Description	Work Paper Reference
11	Weighted Customer Transformers	Customer	Transformer costs determined based on the typical cost of the transformer and associated equipment required to serve a typical customer in each rate class weighted to represent relative costs with the residential weight set equal to 1.0. The base costs of the transformers are determined using the zero-intercept of a regression equation comparing the costs of the various types of transformers. For example, the average installed transformer cost for a residential service was determined to be \$360.24 and the average installed transformer cost for a customer under Rate 20 was determined to be \$912.32 resulting in a transformer weight of 2.53 assigned to the Rate 20 class.	Statement N, Schedule N-3, Pages 1,4,7,10,13. Workpaper Page N-16
12	Weighted Customer Accounts	Customer	Customer related operation and maintenance expenses occurring once the customer has been attached to the system. This factor was based on the number of meter registers for class relative to the number of customers in the class. For example, the residential class has one meter register per customer so the weight is set equal to 1.0. There are 1965 Rate 20 secondary customers with 2528 registers so the weight is equal to 1.29.	Statement N, Schedule N-3, Pages 1,4,7,10,13. Workpaper Page N-16
13	Production, Transmission and Distribution Plant	Demand & Customer	Production, transmission and distribution plant as shown in Statement D, as allocated to each class based on the CCOSS –detail as allocated. This factor is based on the results of the allocations that occurred prior and is used to allocate general and common plant related costs.	Statement N, Schedule N-2, Pages 1,12,23,34,45,56,67,78,89,100. Schedule N-3, Pages 1,4,7,10,13.
14	Distribution Plant	Demand & Customer	Distribution plant value as shown in Statement D, as allocated to each class based on the CCOSS –detail. This factor is based on the results of the allocations and is used to allocate distribution plant related costs.	Statement N, Schedule N-2, Pages 1,12,23,34,45,56,67,78,89,100. Schedule N-3, Pages 2,5,8,11,14.

N-3

Factor	Title	Function	Description	Work Paper Reference
	Assignment of Distribution Plant Items	Demand & Customer	Prior to allocation to the classes Distribution Plant accounts 364-367, (poles, towers, fixtures, overhead conductors, underground conduit, underground conductors and devices) were segregated into customer and demand related cost components based on an analysis of a minimum and normal system for a typical distribution system. The customer component represents the percentage of minimum system costs as compared to the normal system costs with the remainder of the total actual investment assigned to the demand component.	Workpaper Pages N-8 & N-9
15	Poles, Overhead and Underground Conductors & Conduit	Demand & Customer	Plant balance for accounts 364, 365 & 366, with 85% assigned to the customer component allocated on Factor 8 and 15% assigned to the demand component allocated on Factor 4.1.	Workpaper Pages N-8 & N-9
19	Line Transformers	Demand & Customer	Plant balance for account 368, shown on Statement N, Schedule N-2, Page 1 with 77% assigned to the customer component allocated on Factor 11 and 23% assigned to the demand component allocated on Factor 5.	Workpaper Pages N-8 & N-10
21	All Other Distribution Operating Exp.	Demand & Customer	Distribution operation expenses (Station, Overhead Lines, Underground Lines, Street & Signal Lighting, Meters and Customer Installations) shown in Statement H, are allocated to each class based on the factors identified in Statement N, Schedule N-2 starting on Page 4. The remaining distribution expenses (Supervision & Engineering & Miscellaneous) are then allocated on this factor which is based on the percentage of the total of the above allocated expenses.	Statement N, Schedule N-2, Pages 4,15,26,37,48,59,70,81,92,103. Statement N, Schedule N-3, Pages 2,5,8,11,14.
22	All Other Distribution Maintenance Exp.	Demand & Customer	Distribution maintenance expenses (Station, Overhead Lines, Underground Lines, Line Transformers, Street & Signal Lighting and Meters) shown in Statement H are allocated to each class based on the factors identified in Statement N, Schedule N-2 starting on Page 4. The remaining distribution maintenance	Statement N, Schedule N-2, Pages 4,15,26,37,48,59,70,81,92,103. Statement N, Schedule N-2, Pages 4,15,26,37,48,59,70,81,92,103. Statement N, Schedule N-3, Pages 2,5,8,11,14.

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Factor	Title	Function	Description	Work Paper Reference
			expenses (Supervision & Engineering & Miscellaneous) are then allocated on this factor which is based on the percentage of the total of the above allocated expenses.	
23	O & M Excluding Fuel and Purch. Power	Demand & Customer	This allocator is based on Total Operation and Maintenance expenses excluding the cost of fuel and purchased power (energy and capacity) as allocated to each class based on the factors identified in Statement N, Schedule N-2, starting on Page 5.	Statement N, Schedule N-2, Pages 5,16,27,38,49,60,71,82,93,104. Statement N, Schedule N-3, Pages 2,5,8,11,14.
24	O & M Excluding Fuel, Purch. Power and A&G	Demand & Customer	This allocator is based on Total Operation and Maintenance expenses excluding the cost of fuel and purchased power expense and Administrative and General Expenses as allocated to each class based on the factors identified in the CCOS-Detail report (Statement N, Schedule N-2) starting on Page 5.	Statement N, Schedule N-2, Pages 5,16,27,38,49,60,71,82,93,104. Statement N, Schedule N-3, Pages 2,5,8,11,14.
26	Total Electric Plant in Service	Demand & Customer	Total electric plant as shown on Statement D, Page 1 as allocated to each class based on the factors identified in the CCOS-Detail report.	CCOSS – Detail as allocated
27	Net Electric Plant in Service	Demand & Customer	Total electric plant in service Statement D, Page 1 less the Accumulated Reserve for Depreciation shown on Statement E, Page 1 as allocated to each class based on the factors identified in the CCOS-Detail report.	CCOSS – Detail as allocated
29	Production Plant	Demand	Production Plant as shown on Statement D, Page 1 as allocated to each class based on the factors identified in the CCOS-Detail report.	CCOSS – Detail as allocated
30	Transmission Plant	Demand	Transmission Plant as shown on Statement D, Page 1 as allocated to each class based on the factors identified in the CCOS-Detail report.	CCOSS – Detail as allocated

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<b>Factor</b>	<b>Title</b>	<b>Function</b>	<b>Description</b>	<b>Work Paper Reference</b>
44	Taxable Income	Demand, Energy & Customer	Taxable Income before state income taxes as calculated for each class as identified in the CCOS-Detail report.	CCOSS – Detail as allocated
45	Retail Sales Revenue (Per Books)	Demand, Energy & Customer	The summation of retail sales revenue by class as shown on Statement I, Page1 assigned and allocated to Demand, Energy and Customer costs as applicable.	CCOSS – Detail as allocated
47	Total Production O&M	Demand & Energy	The sum of Fuel & Purchased Power Energy, Demand & Non-Fuel Expenses, and Other Production as shown on Statement H, Page 1 allocated to each class based on the factors identified in the CCOS-Detail report.	CCOSS – Detail as allocated
49	Wind Plant Additions	Demand	New Wind Production Plant as shown on Statement D, Page 10 allocated to each class based on Factor 3.	CCOSS – Detail as allocated
50	Non-Wind Plant Additions	Demand	New Non-Wind Production Plant as shown on Statement D, Page 10 allocated to each class based on Factor 2.	CCOSS – Detail as allocated

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**MONTANA-DAKOTA UTILITIES CO.  
ELECTRIC UTILITY - SOUTH DAKOTA  
Embedded Class Cost of Service Study**

**Plant in Service  
12-Months Ending December 31, 2014**

	<u>2013</u>	<u>2014</u>	<u>Average Plant in Service</u>
Electric Plant in Service			
Production Plant	21,677,984	23,728,652	22,703,319
Wind Production Plant	5,671,489	5,599,359	5,635,424
Total Production Plant	<u>\$27,349,473</u>	<u>\$29,328,011</u>	<u>\$28,338,743</u>
Transmission Plant	14,913,050	15,339,795	15,126,422
Distribution Plant			
Land	31,268	31,268	31,268
Rights of Way	34,047	34,047	34,047
Station Equipment	2,226,024	2,287,150	2,256,586
Poles, Towers, & Fixtures	2,297,793	2,259,746	2,278,769
Overhead Conductors & Device	1,558,126	1,560,602	1,559,363
Underground Conduit	8,651	8,652	8,652
Underground Conduit & Device	1,503,165	1,571,632	1,537,399
Line Transformers	4,026,477	4,222,808	4,124,642
Services	1,752,674	1,802,521	1,777,598
Meters	1,179,320	1,110,319	1,144,820
Installation on Customer Premise	186,304	185,288	185,796
Street Light & Signal System	741,061	725,964	733,513
Distribution Plant	<u>15,544,910</u>	<u>15,799,996</u>	<u>15,672,453</u>
General Plant	1,962,384	2,105,354	2,033,869
Intangible Plant - General	510,840	189,237	350,038
Common Plant	1,383,241	1,394,922	1,389,082
Intangible Plant - Common	942,222	697,361	819,791
Intangible Plant - Common CC&B	510,186	559,695	534,941
Acquisition Adjustment	<u>581,744</u>	<u>555,051</u>	<u>568,397</u>
Total Electric Plant	<u><u>\$63,698,050</u></u>	<u><u>\$65,969,422</u></u>	<u><u>\$64,833,736</u></u>

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**MONTANA-DAKOTA UTILITIES CO.**  
**ELECTRIC UTILITY - SOUTH DAKOTA**  
**Class Cost of Service Study**  
**12-Months Ending December 31, 2014**  
**Distribution Plant Allocation**

	Total	Allocation
360.1 Land	\$31,268	Factor No. 4
360.2 Land Rights	\$34,047	Factor No. 4
362 Station Equipment	\$2,256,586	Factor No. 4
364, 365, 366 & 367		
Poles, OH & UG Conductors & Conduit	\$5,384,183	
85% Customer Related	4,576,556	Factor No. 8
15% Demand Related	807,627	Factor No. 4.1
368 Line Transformers	\$4,124,642	
77% Customer Related	3,174,737	Factor No. 11
23% Demand Related	949,905	Factor No. 5
369 Services	\$1,777,598	Factor No. 10
370 Meters	\$1,144,820	Factor No. 6
371 Installation on Customer Premise	\$185,796	Direct to Outdoor Lighting
373 Street Light & Signal System	\$733,513	Direct to St. Lighting
Total Distribution Plant	\$15,672,453	

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### South Dakota Distribution Percentages

2013 Plant Account	Minimum System	Normal System	Customer Component
Pole (Acct 364) ~	\$16,504	\$22,914	72.0%
Overhead Conductor (Acct 365) *	\$13,021	\$14,203	91.7%
<b>Total</b>	<b>\$29,525</b>	<b>\$37,117</b>	<b>79.5%</b>
URD Conductor (Acct. 367) **	\$60,764	\$69,561	87.4%
Weighted Average	\$90,289	\$106,678	84.6%

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**MONTANA-DAKOTA UTILITIES CO.**  
**ELECTRIC UTILITY - SOUTH DAKOTA**  
**CLASS COST OF SERVICE STUDY**  
**Interconnected System Line Transformers**  
**Zero Intercept Analysis**  
**12 Months Ending December 31, 2014**

<u>Interconnected Transformer Size (KVA)</u>	<u>Interconnected Unit Cost of Transformer</u>
10	\$1,754
15	1,722
25	1,875
50	2,155

	<u># of Transformers</u>	<u>Total Capacity KVA</u>
Total Transformers	39,158	1,628,271
Less: Wyoming	<u>6,089</u>	<u>170,626</u>
Total Interconnected System	<u>33,069</u>	<u>1,457,645</u>

INTERCEPT	\$	1,604.26
SLOPE	\$	10.89

<u>Customer Component 1/</u>		<u>Demand Component 2/</u>	<u>Total</u>
53,051,274	+	15,873,754	= 68,925,028

Customer Component of Account 368: 3/

76.97%

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1/ # of Interconnected Transformers \* Intercept

2/ Total Interconnected Capacity KVA \* Slope

3/ Customer Component / Total

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**Montana-Dakota Utilities Co. Grand Totals**  
 Electric Distribution Summary - Overhead  
 Inside City Limits Totals & Grand Total  
 Year End: December 31, 2014

**Montana-Dakota Utilities Co. Grand Totals**  
 Electric Distribution Summary - Underground  
 Inside City Limits Totals & Grand Total  
 Year End: December 31, 2014

Region or District	Overhead Electric									Underground Electric				
	Pole Mi	Conductor Mi	MDU Pole	Tel Pole	OH Trans	KVA Capacity	Capacitors	KVAR Capacity	OH services	Trench Mi	Conductor Mi	Pad Trans	KVA Capacity	UG Services
Badlands Glendive, MT	248.152	718.205	9683	843	2598	73292.5	49	6775.0	8622	84.227	134.178	702	56657.0	3751
Badlands Wolfpoint, MT	118.890	375.892	4216	458	1466	35878.0	26	3275.0	3133	19.073	28.060	149	13090.0	1962
<b>Total Montana</b>	<b>367.042</b>	<b>1094.097</b>	<b>13899</b>	<b>1301</b>	<b>4064</b>	<b>109170.5</b>	<b>75</b>	<b>10050.0</b>	<b>11755</b>	<b>103.300</b>	<b>162.238</b>	<b>851</b>	<b>69747.0</b>	<b>5713</b>
Badlands Dickinson, ND	187.269	661.314	8509	519	2372	72242.5	83	9900.0	5790	185.033	339.417	1596	110647.5	9008
Badlands Glendive, ND	22.336	75.964	848	83	314	7548.0	12	600.0	629	4.823	8.237	32	2687.5	286
Badlands Williston, ND	257.007	907.401	10196	625	3092	97118.5	103	11300.0	7313	167.791	346.153	1752	158273.5	9016
Dakota Heartland Bismarck, ND	271.347	1058.391	11488	1238	3731	119628.0	175	30675.0	12593	381.000	762.417	3951	309022.0	16315
Dakota Heartland Mobridge, ND	116.072	418.798	4823	188	1238	37042.0	25	3000.0	3148	16.722	29.135	166	17632.0	1681
<b>Total North Dakota</b>	<b>854.031</b>	<b>3121.868</b>	<b>35864</b>	<b>2653</b>	<b>10747</b>	<b>333579.0</b>	<b>398</b>	<b>55475.0</b>	<b>29473</b>	<b>755.369</b>	<b>1485.359</b>	<b>7497</b>	<b>598462.5</b>	<b>36306</b>
Badlands Dickinson, SD	33.104	106.962	1459	6	386	12238.5	5	750.0	823	4.104	7.524	41	4482.5	369
Dakota Heartland Mobridge, SD	154.509	545.963	6698	279	1640	49554.0	19	3450.0	4182	27.361	44.365	215	17755.5	2932
<b>Total South Dakota</b>	<b>187.613</b>	<b>652.925</b>	<b>8157</b>	<b>285</b>	<b>2026</b>	<b>61892.5</b>	<b>24</b>	<b>4200.0</b>	<b>5005</b>	<b>31.465</b>	<b>51.889</b>	<b>256</b>	<b>22238.0</b>	<b>3301</b>
Rocky Mountain Region, WY	90.839	320.418	3703	737	1484	34569.5	17	3150.0	4397	116.566	199.669	1179	63280.5	5383
<b>Total Wyoming</b>	<b>90.839</b>	<b>320.418</b>	<b>3703</b>	<b>737</b>	<b>1484</b>	<b>34569.5</b>	<b>17</b>	<b>3150.0</b>	<b>4397</b>	<b>116.566</b>	<b>199.669</b>	<b>1179</b>	<b>63280.5</b>	<b>5383</b>
<b>Inside City Limits Totals</b>	<b>1499.525</b>	<b>5189.308</b>	<b>61623</b>	<b>4976</b>	<b>18321</b>	<b>539211.5</b>	<b>514</b>	<b>72875.0</b>	<b>50630</b>	<b>1006.700</b>	<b>1899.155</b>	<b>9783</b>	<b>753728.0</b>	<b>50703</b>
<b>Farm Line Totals (OSCL)</b>	<b>1651.674</b>	<b>4844.168</b>	<b>35531</b>	<b>63</b>	<b>7138</b>	<b>146728.4</b>	<b>80</b>	<b>9975.0</b>	<b>5235</b>	<b>819.518</b>	<b>1266.728</b>	<b>3916</b>	<b>188603.5</b>	<b>10153</b>
<b>Grand Total Electric Distribution</b>	<b>3151.199</b>	<b>10033.476</b>	<b>97154</b>	<b>5039</b>	<b>25459</b>	<b>685939.9</b>	<b>594</b>	<b>82850.0</b>	<b>55865</b>	<b>1826.218</b>	<b>3165.883</b>	<b>13699</b>	<b>942331.5</b>	<b>60856</b>

SEE ATTACHED ADDENDUMS

SEE ATTACHED ADDENDUMS

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Montana-Dakota Utilities Co. Farm Line Totals  
 Electric Distribution Summary - Overhead  
 Farm Line Totals (Outside Limits)  
 Year End: December 31, 2014

Montana-Dakota Utilities Co. Farm Line Totals  
 Electric Distribution Summary - Underground  
 Farm Line Totals (Outside Limits)  
 Year End: December 31, 2014

Region or District	Overhead Electric									Underground Electric				
	Pole Mi	Conductor Mi	MDU Pole	Tel Pole	OH Trans	KVA Capacity	Capacitors	KVAR Capacity	OH services	Trench Mi	Conductor Mi	Pad Trans	KVA Capacity	UG Services
Badlands Glendive, MT	453.054	1311.837	10380	19	2468	53699.0	32	3825.0	2062	207.907	287.263	878	51054.5	2405
Badlands Wolfpoint, MT	178.384	523.035	4272	20	913	16737.5	15	1650.0	714	64.599	125.420	245	20905.5	1111
Total Montana	631.438	1834.872	14652	39	3381	70436.5	47	5475.0	2776	272.506	412.683	1123	71960.0	3516
Badlands Dickinson, ND	105.175	279.468	1620	9	473	11855.5	1	300.0	305	20.635	39.430	124	13032.0	409
Badlands Glendive, ND	13.172	28.067	328	0	99	2328.0	0	0.0	35	10.253	14.714	29	805.0	300
Badlands Williston, ND	298.973	876.005	5789	0	715	19233.4	11	1500.0	357	41.704	82.487	225	33531.5	652
Dakota Heartland Bismarck, ND	136.988	389.463	3140	1	491	8848.5	9	450.0	425	26.570	43.638	124	7507.5	573
Dakota Heartland Mobridge, ND	143.885	468.610	2859	1	318	6046.5	0	0.0	261	25.228	53.768	54	6502.5	205
Total North Dakota	698.193	2041.613	13736	11	2096	48311.9	21	2250.0	1383	124.390	234.037	556	61378.5	2139
Badlands Dickinson, SD	6.200	13.952	162	0	36	713.0	0	0.0	38	0.736	1.567	6	195.0	256
Dakota Heartland Mobridge, SD	108.163	356.176	2127	0	345	6731.5	0	0.0	191	30.862	44.626	85	2830.0	320
Total South Dakota	114.363	370.128	2289	0	381	7444.5	0	0.0	229	31.598	46.193	91	3025.0	576
Rocky Mountain Region, WY	207.680	597.555	4854	13	1280	20535.5	12	2250.0	847	391.024	573.815	2146	52240.0	3922
Total Wyoming	207.680	597.555	4854	13	1280	20535.5	12	2250.0	847	391.024	573.815	2146	52240.0	3922
Farm Line Totals (OSCL)	1651.674	4844.168	35531	63	7138	146728.4	80	9975.0	5235	819.518	1266.728	3916	188603.5	10153

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**MONTANA-DAKOTA UTILITIES CO.  
ELECTRIC UTILITY -SOUTH DAKOTA  
Embedded Class Cost of Service Study**

**Accumulated Reserve for Depreciation  
12-Months Ending December 31, 2014**

	<u>2013</u>	<u>2014</u>	<u>Average Reserve</u>
Accumulated Reserve for Depreciation			
Production Plant	\$12,360,628	\$12,308,551	\$12,334,589
Wind Production Plant	1,147,416	1,415,961	\$1,281,689
Total Production Plant	<u>\$13,508,044</u>	<u>\$13,724,512</u>	<u>\$13,616,278</u>
Transmission Plant	8,916,022	9,152,868	9,034,445
Distribution Plant			
Rights of Way	26,284	26,744	26,514
Station Equipment	1,352,296	1,389,707	1,371,002
Poles, Towers, & Fixtures	1,483,128	1,504,446	1,493,786
Overhead Conductors & Device	1,258,485	1,316,127	1,287,305
Underground Conduit	7,190	7,351	7,271
Underground Conduit & Device	674,075	711,563	692,819
Line Transformers	1,442,567	1,463,072	1,452,819
Services	1,610,910	1,634,614	1,622,762
Meters	43,309	(34,156)	4,577
Installation on Customer Premise	83,399	83,421	83,410
Street Light & Signal System	484,181	471,320	477,751
Distribution Plant	<u>8,465,824</u>	<u>8,574,208</u>	<u>8,520,016</u>
General Plant	1,009,938	1,035,830	1,022,884
Intangible Plant - General	378,722	73,842	226,282
Common Plant	656,439	638,746	647,592
Intangible Plant - Common	659,459	456,818	558,138
Intangible Plant - Common CC&B	26,949	63,740	45,345
Acquisition Adjustment	<u>581,082</u>	<u>555,051</u>	<u>568,067</u>
Total Accumulated Reserve	<u><u>\$34,202,479</u></u>	<u><u>\$34,275,615</u></u>	<u><u>\$34,239,047</u></u>

**MONTANA-DAKOTA UTILITIES CO.  
ELECTRIC UTILITY - SOUTH DAKOTA  
Embedded Class Cost of Service Study**

**Average Rate Base Additions and Deductions  
12-Months Ending December 31, 2014**

Additions	
Materials & Supplies	\$876,827
Prepayments	9,483
Fuel Stocks	242,605
Unamortized Loss on Debt	251,553
Decommissioning of Retired Plants	0
<b>Total Additions</b>	<u>\$1,380,468</u>

Deductions	
Accumulated Deferred Income Tax	(\$9,603,359)
Accumulated Investment Tax Credit	0
Customer Advances For Construction	(73,315)
<b>Total Deductions</b>	<u>(\$9,676,674)</u>

<b>Working Capital:</b>	<u>2013</u>	<u>2014</u>	<u>Average</u>
Materials & Supplies	\$857,364	\$896,289	\$876,827
Prepayments	6,218	12,748	9,483
Fuel Stocks	252,184	233,025	242,605
Unamortized Loss on Debt	269,022	234,083	251,553
Decommissioning of Retired Plants	0	0	0
	<u>\$1,384,788</u>	<u>\$1,376,145</u>	<u>\$1,380,468</u>
Accumulated Deferred Income Tax	(\$9,090,573)	(\$10,116,144)	(\$9,603,359)
Accumulated Investment Tax Credit	0	0	\$0
Customer Advances For Construction	(72,172)	(74,458)	(\$73,315)
	<u>(\$9,162,745)</u>	<u>(\$10,190,602)</u>	<u>(\$9,676,674)</u>

MONTANA-DAKOTA UTILITIES CO.  
ELECTRIC UTILITY - SOUTH DAKOTA  
CLASS COST OF SERVICE STUDY  
12 Months Ending December 31, 2014  
Demand and Energy Responsibility

Rate	Customer Class	Class Level At Meter					Class Level At Supply						
		Pro Forma KWH Sales	Load Factor (%)	Peak NCP KW	Loss Factors Energy Demand (%) (%)		Energy @ Generation KWH	Average Demand KW	Peak NCP KW	Excess Demand KW	Class % Excess Demand	Allocated Excess Demand	Average & Excess Demand
	<u>Residential</u>												
10	- Residential Electric Service	73,989,166	35.56%	23,752	7.74%	12.98%	80,196,365	9,155	27,295	18,140	53.39%	2,734	11,889
20/26/27/50	- Small General Electric Service												
	Primary	5,333	43.23%	1	6.69%	10.57%	5,715	1	1	0	0.00%	0	1
	Secondary - Demand	22,707,301	43.23%	5,996	7.74%	12.98%	24,612,292	2,810	6,890	4,080	12.01%	615	3,425
	Secondary - Non-Demand	9,587,871	43.23%	2,532	7.74%	12.98%	10,392,230	1,186	2,910	1,724	5.07%	259	1,445
	Total Rate 20/26/27/50	<u>32,300,505</u>		<u>8,529</u>			<u>35,010,237</u>	<u>3,997</u>	<u>9,801</u>	<u>5,804</u>	<u>17.08%</u>	<u>874</u>	<u>4,871</u>
25	- Irrigation Power Service	155,439	13.67%	130	7.74%	12.98%	168,479	19	149	130	0.38%	19	38
	Total Small General	<u>32,455,944</u>		<u>8,659</u>			<u>35,178,716</u>	<u>4,016</u>	<u>9,950</u>	<u>5,934</u>	<u>17.46%</u>	<u>893</u>	<u>4,909</u>
30	- Large General Electric Service												
	Primary	0	0.00%	0			0	0	0	0	0.00%	0	0
	Secondary	37,625,195	40.72%	10,548	7.74%	12.98%	40,781,698	4,655	12,121	7,466	21.97%	1,124	5,779
	Total Rate 30	<u>37,625,195</u>		<u>10,548</u>			<u>40,781,698</u>	<u>4,655</u>	<u>12,121</u>	<u>7,466</u>	<u>21.97%</u>	<u>1,124</u>	<u>5,779</u>
32	- General Electric Space Heating	4,960,901	31.96%	1,772	7.74%	12.98%	5,377,088	614	2,036	1,422	4.18%	214	828
48	- Municipal Pumping	1,431,970	40.61%	403	7.74%	12.98%	1,552,103	177	463	286	0.84%	43	220
24	- Area Lighting Service												
	Private Lighting	818,111	45.66%	205	7.74%	12.98%	886,745	101	236	135	0.40%	20	121
	Total Rate 24	<u>818,111</u>		<u>205</u>			<u>886,745</u>	<u>101</u>	<u>236</u>	<u>135</u>	<u>0.40%</u>	<u>20</u>	<u>121</u>
41	- Street Lighting Service												
	Company Owned	2,307,221	37.47%	703	7.74%	12.98%	2,500,781	285	808	523	1.54%	79	364
	Municipal Owned	332,891	37.47%	101	7.74%	12.98%	360,818	41	116	75	0.22%	11	52
	Total Rate 41	<u>2,640,112</u>		<u>804</u>			<u>2,861,599</u>	<u>326</u>	<u>924</u>	<u>598</u>	<u>1.76%</u>	<u>90</u>	<u>416</u>
	<b>TOTAL SOUTH DAKOTA</b>	<u>153,921,399</u>		<u>46,143</u>			<u>166,834,314</u>	<u>19,044</u>	<u>53,025</u>	<u>33,981</u>	<u>100.00%</u>	<u>5,118</u>	<u>24,162</u>

Hours in the Year                   8,760  
Allocated Peak July1/               24,162  
Excess Demand to Allocate         5,118

1/ Peak based on 2013 Integrated System Peak allocated to the state of South Dakota using a three year average.

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MONTANA-DAKOTA UTILITIES CO.  
ELECTRIC UTILITY - SOUTH DAKOTA  
EMBEDDED CLASS COST OF SERVICE STUDY  
WEIGHTED CUSTOMERS  
Twelve Months Ending December 31, 2014

Rate	Customer Class	Pro Forma	Meters 2/		Services 3/		Transformers 4/		Customer Accounts 5/	
		Billing Units 1/	Weight	Customers	Weight	Customers	Weight	Customers	Weight	Customers
Rate 10	- Residential Electric Service	6,616	1.00	6,616	1.00	6,616	1.00	6,616	1.00	6,616
Rate 53	- Residential Dual Fuel Service	339	3.73	1,264	0.00	0	1.17	397	1.00	339
	Total Residential	<u>6,955</u>		<u>7,880</u>		<u>6,616</u>		<u>7,013</u>		<u>6,955</u>
Rate 20	- Small General Electric Service									
	Primary	1	14.68	15	0.81	1	0.00	0	1.00	1
	Total Rate 20 Primary	<u>1</u>		<u>15</u>		<u>1</u>		<u>0</u>		<u>1</u>
	Secondary - Demand	528	2.29	1,209	1.23	649	2.53	1,336	1.29	681
	Secondary - Non-Demand	1,441	2.29	3,300	0.98	1,412	2.53	3,646	1.29	1,859
	Total Rate 20 Secondary	<u>1,969</u>		<u>4,509</u>		<u>2,061</u>		<u>4,982</u>		<u>2,540</u>
	Total Rate 20	<u>1,970</u>		<u>4,524</u>		<u>2,062</u>		<u>4,982</u>		<u>2,541</u>
Rate 25	- Irrigation Power Service	5	2.98	15	2.24	11	14.17	71	1.20	6
	Total Small General	<u>1,975</u>		<u>4,539</u>		<u>2,073</u>		<u>5,053</u>		<u>2,547</u>
Rate 30	- Large General Electric Service									
	Primary	0	0.00	0	0.00	0	0.00	0	0	0
	Secondary	112	10.71	1,200	2.03	227	8.68	972	2.87	321
	Total Rate 30	<u>112</u>		<u>1,200</u>		<u>227</u>		<u>972</u>		<u>321</u>
Rate 54	- Dual Fuel Space Heat Rate									
	Single Phase	0	0.00	0	0.00	0	0.00	0	0.00	0
	Three Phase	103	3.73	384	0.00	0	2.32	239	1.00	103
	Total Rate 54	<u>103</u>		<u>384</u>		<u>0</u>		<u>239</u>		<u>103</u>
Rate 56	- Space Heating Rate									
	Primary	0	0.00	0	0.00	0	0.00	0	0.00	0
	Secondary	32	1.50	48	0.00	0	2.32	74	1.00	32
	Total Rate 56	<u>32</u>		<u>48</u>		<u>0</u>		<u>74</u>		<u>32</u>
Rate 48	- Municipal Pumping	50	3.63	182	0.96	48	4.66	233	1.66	83
Rate 24	- Private Lighting Service									
	Private Lighting	576	0.98	564	0.00	0	0.00	0	1.00	576
	Total Rate 24	<u>576</u>		<u>564</u>		<u>0</u>		<u>0</u>		<u>576</u>
Rate 41	- Street Lighting Service									
	Company Owned	33	0.98	32	1.91	63	3.48	115	1.00	33
	Municipal Owned	21	0.98	21	1.91	40	3.48	73	1.00	21
	Total Rate 41	<u>54</u>		<u>53</u>		<u>103</u>		<u>188</u>		<u>54</u>
	TOTAL SOUTH DAKOTA	<u>9,857</u>		<u>14,850</u>		<u>9,067</u>		<u>13,772</u>		<u>10,671</u>

1/ Average billing units derived from number of days billed divided by number of days in month.

2/ Meters calculated using average meter costs for each class.

3/ Services calculated using average service costs for each class.

4/ Transformers calculated using average transformer costs for each class

5/ Customer Accounts calculated using average number of meter dials for each class



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South Dakota Meter Weights - Year 2015				
Rate Class Description	Count of Rate Class	Sum of Total Cst	Cost per Meter	Cost per Meter
Residential	6590	\$ 585,214.62	\$ 88.80	1.00
Small Comm, Primary, rate 201	1	\$ 1,304.05	\$ 1,304.05	14.68
Small Comm, Secondary, rate 202,203	1965	\$ 399,909.38	\$ 203.52	2.29
Irrigation, rate 250	5	\$ 1,321.42	\$ 264.28	2.98
TOD, secondary, rate 260	1	\$ 663.10	\$ 663.10	7.47
Large Comm, Secondary, rate 301	113	\$ 107,453.78	\$ 950.92	10.71
Municipal Lighting, rate 411	15	\$ 1,305.60	\$ 87.04	0.98
Municipal Pumping, rate 480, 481	50	\$ 16,122.70	\$ 322.45	3.63
Feed Grinding, rate 270	2	\$ 1,003.88	\$ 501.94	5.65
Dual Fuel, rate 530, 542, 543	448	\$ 148,402.44	\$ 331.26	3.73
Water/Space Heating, rate 500, 560	38	\$ 5,055.70	\$ 133.04	1.50
Grand Total	9228	\$ 1,267,756.67		

# South Dakota Service Weights

Updated: 4/3/201

**Notes:**

- 1) Weighting for electric service lines is based on a ~80% model representation of the actual service lines. Service lines are not fully represented in the company's GIS because not all premise ID's are present and additionally, some premise ID's are not connected to transformers.
- 2) All primary metered and non-metered accounts do not have services associated with them.

RATENUMBER2	RATENUMBER	Values			Weights
		Count of Customers	Total Value of Services	Cost Per Service	
Group1	100	6255	\$3,822,746	\$611.15	1.0
	106	1	\$219	\$218.99	1.0
	180	2	\$1,461	\$730.60	1.0
<b>Group1 Total</b>		<b>6258</b>	<b>\$3,824,426</b>	<b>\$611.13</b>	<b>1.0</b>
Group2	201	7	\$3,483	\$497.61	0.8
	202	469	\$352,899	\$752.45	1.2
	203	1255	\$754,198	\$600.95	0.9
	260	1	\$219	\$218.99	0.3
	500	7	\$2,932	\$418.81	0.6
	270	2	\$1,461	\$730.60	1.2
<b>Group2 Total</b>		<b>1741</b>	<b>\$1,115,192</b>	<b>\$640.55</b>	<b>1.0</b>
	<b>250</b>	<b>250</b>	<b>\$1,367</b>	<b>\$1,367.11</b>	<b>2.2</b>
<b>250 Total</b>		<b>1</b>	<b>\$1,367</b>	<b>\$1,367.11</b>	<b>2.2</b>
	<b>301</b>	<b>301</b>	<b>\$123,080</b>	<b>\$1,243.24</b>	<b>2.0</b>
<b>301 Total</b>		<b>99</b>	<b>\$123,080</b>	<b>\$1,243.24</b>	<b>2.0</b>
	<b>530</b>	<b>530</b>	<b>\$188,842</b>	<b>\$813.98</b>	<b>1.3</b>
<b>530 Total</b>		<b>232</b>	<b>\$188,842</b>	<b>\$813.98</b>	<b>1.3</b>
Group4	542	49	\$42,409	\$865.48	1.4
	543	14	\$14,504	\$1,036.03	1.7
	560	23	\$11,147	\$484.67	0.7
<b>Group4 Total</b>		<b>86</b>	<b>\$68,060</b>	<b>\$791.40</b>	<b>1.2</b>
	<b>411</b>	<b>411</b>	<b>\$4,658</b>	<b>\$1,164.48</b>	<b>1.9</b>
<b>411 Total</b>		<b>4</b>	<b>\$4,658</b>	<b>\$1,164.48</b>	<b>1.9</b>
Group3	480	19	\$8,800	\$463.14	0.7
	481	28	\$18,713	\$668.30	1.0
<b>Group3 Total</b>		<b>47</b>	<b>\$27,512</b>	<b>\$585.36</b>	<b>0.9</b>
<b>Grand Total</b>		<b>8468</b>	<b>\$5,353,139</b>	<b>\$632.16</b>	

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# South Dakota Transformer Weighting by Customer Rate

Updated: 4/11/2020

RATE AND DESCRIPTION	Sample Size	Sample Fraction of Rate	Zero Intercept Cost	Customers Per Transformer	Cost Per Transformer	Weighted Average	Weighting
<b>RATE 10: 100, 106, 180 (Residential)</b>							
Single Phase	6221	0.99409	1701	4.73	\$359.87	\$357.74	
Three Phase	37	0.00591	4790	11.32	\$423.24	\$2.50	
<b>Total</b>	<b>6258</b>	<b>1</b>				<b>\$360.24</b>	<b>1.0</b>
<b>RATE 20: 201, 202, 203, 260, 270, 500 (Small General)</b>							
Single Phase	1719	0.98736	1701	1.98	\$858.33	\$847.48	
Three Phase	22	0.01264	4790	0.93	\$5,130.62	\$64.83	
<b>Total</b>	<b>1741</b>	<b>1</b>				<b>\$912.32</b>	<b>2.5</b>
<b>RATE 250 (Irrigation - Demand Metered)</b>							
Single Phase	1	1	1701	0.33	\$5,104.21	\$5,104.21	
Three Phase	0	0	4790	0.00	\$0.00	\$0.00	
<b>Total</b>	<b>1</b>	<b>1</b>				<b>\$5,104.21</b>	<b>14.1</b>
<b>RATE 30: 301 (Large General)</b>							
Single Phase	70	0.70707	1701	0.65	\$2,630.91	\$1,860.24	
Three Phase	29	0.29293	4790	1.11	\$4,322.07	\$1,266.06	
<b>Total</b>	<b>99</b>	<b>1</b>				<b>\$3,126.30</b>	<b>8.6</b>
<b>RATE 53: 530 (Special - Dual Fuel)</b>							
Single Phase	231	0.99569	1701	4.12	\$412.87	\$411.09	
Three Phase	1	0.00431	4790	2.00	\$2,395.03	\$10.32	
<b>Total</b>	<b>232</b>	<b>1</b>				<b>\$421.41</b>	<b>1.1</b>
<b>RATE 54 &amp; 56: 321, 322, 325 (Space Heating)</b>							
Single Phase	82	0.95349	1701	2.53	\$672.00	\$640.74	
Three Phase	4	0.04651	4790	1.14	\$4,191.31	\$194.94	
<b>Total</b>	<b>86</b>	<b>1</b>				<b>\$835.69</b>	<b>2.3</b>
<b>RATE 41: 411 (Lighting)</b>							
Single Phase	4	1	1701	1.36	\$1,254.78	\$1,254.78	
Three Phase	0	0	4790	0.00	\$0.00	\$0.00	
<b>Total</b>	<b>4</b>	<b>1</b>				<b>\$1,254.78</b>	<b>3.4</b>
<b>RATE 48: 480 &amp; 481 (Municipal Pumping)</b>							
Single Phase	47	1	1701	1.01	\$1,677.61	\$1,677.61	
Three Phase	0	0	4790	0.00	\$0.00	\$0.00	
<b>Total</b>	<b>47</b>	<b>1</b>				<b>\$1,677.61</b>	<b>4.6</b>

**Notes:**

- 1) The relatively high number of customers per three-phase transformer for Residential reflects large apartment dwellings
- 2) Three Phase - reflects only three-phase padmount transformers. Customers using 3, single-phase transformers configured to provide a three-phase service would fall under the single-phase weighting.

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South Dakota Customer Weights - Year 2015

Rate Class Description	Count of Rate Class	Sum of Registers	Registers per Meter	Customer Weights
Residential	6590	6591	1.00	1.00
Small Comm, Primary, rate 201	1	1	1.00	1.00
Small Comm, Secondary, rate 202,203	1965	2528	1.29	1.29
Irrigation, rate 250	5	6	1.20	1.20
TOD, secondary, rate 260	1	4	4.00	4.00
Large Comm, Secondary, rate 301	113	324	2.87	2.87
Municipal Lighting, rate 411	15	15	1.00	1.00
Municipal Pumping, rate 480, 481	50	83	1.66	1.66
Feed Grinding, rate 270	2	2	1.00	1.00
Dual Fuel, rate 530, 542, 543	448	448	1.00	1.00
Water/Space Heating, rate 500, 560	38	38	1.00	1.00
Grand Total	9228	10040		

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MONTANA-DAKOTA UTILITIES CO.  
ELECTRIC UTILITY - SOUTH DAKOTA  
CLASS COST OF SERVICE STUDY  
12-Months Ending December 31, 2014  
Allocation Factors

Rate	Customer Class	Factor No. 1 Pro Forma Energy @ Generation Level	Factor No. 2 Pro Forma AED @ Supply	Factor No. 3 Pro Forma AED/ Energy	Factor No. 4 Pro Forma NCP KW @ Supply	Factor No. 5 Pro Forma NCP KW @ Supply (Secondary)	Factor No. 6 Weighted Customer Meters	Factor No. 8 Total Customers	Factor No. 10 Weighted Customer Services	Factor No. 11 Weighted Customers (Transformers)	Factor No. 12 Weighted Customers (Customer Accounts)
Rate 10	- Residential Electric Service	80,196,365	11,889	64,159,470	27,295	27,295	7,880	6,955	6,616	7,013	6,955
Rate 20	- Small General Electric Service										
	Primary - Demand	0	0	0	0	0	0	0	0	0	0
	Primary Non-Demand	5,715	1	4,572	1	0	15	1	1	0	1
	Total Rate 20 Primary	5,715	1	4,572	1	0	15	1	1	0	1
	Secondary - Demand	24,612,292	3,425	19,690,519	6,890	6,890	1,209	528	649	1,336	681
	Secondary - Non-Demand	10,392,230	1,445	8,314,073	2,910	2,910	3,300	1,441	1,412	3,646	1,859
	Total Rate 20 Secondary	35,004,522	4,870	28,004,592	9,800	9,800	4,509	1,969	2,061	4,982	2,540
	Small General	35,010,237	4,871	28,009,164	9,801	9,800	4,524	1,970	2,062	4,982	2,541
Rate 25	- Irrigation Power Service	168,479	38	134,791	149	149	15	5	11	71	6
	Total Small General	35,178,716	4,909	28,143,955	9,950	9,949	4,539	1,975	2,073	5,053	2,547
Rate 30	- Large General Electric Service										
	Primary	0	0	0	0	0	0	0	0	0	0
	Secondary	40,781,698	5,779	32,626,514	12,121	12,121	1,200	112	227	972	321
	Total Large General	40,781,698	5,779	32,626,514	12,121	12,121	1,200	112	227	972	321
Rate 32	- General Space Heating Service	5,377,088	828	4,301,836	2,036	2,036	432	135	0	313	135
Rate 48	- Municipal Pumping	1,552,103	220	1,241,726	463	463	182	50	48	233	83
Rate 24	- Private Lighting Service										
	Private Lighting	886,745	121	709,420	236	236	564	576	0	0	576
	Total Rate 24	886,745	121	709,420	236	236	564	576	0	0	576
Rate 41	- Street Lighting Service										
	Company Owned	2,500,781	364	2,000,698	808	808	32	33	63	115	33
	Municipal Owned	360,818	52	288,665	116	116	21	21	40	73	21
	Total Rate 41	2,861,599	416	2,289,363	924	924	53	54	103	188	54
	TOTAL SOUTH DAKOTA	166,834,314	24,162	133,472,284	53,025	53,024	14,850	9,857	9,067	13,772	10,671

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MONTANA-DAKOTA UTILITIES CO.  
ELECTRIC UTILITY - SOUTH DAKOTA  
CLASS COST OF SERVICE STUDY  
12 MONTHS ENDING DECEMBER 31, 2014  
CUSTOMER ADVANCES FOR CONSTRUCTION WORKPAPER

	Per Books			Pro Forma Adjustment-DIT			Pro Forma Adjustment		
	Demand	Customer	Total	Demand	Customer	Total	Demand	Customer	Total
Residential - Rate 10	(\$1,909)	(\$6,134)	(\$8,043)	(\$10)	(\$33)	(\$43)	\$30	\$96	\$126
Small General - Rate 20	(739)	(2,759)	(3,498)	(4)	(15)	(19)	12	43	55
Irrigation - Rate 25	0	0	-	0	0	-	0	0	-
Large General - Rate 30 Primary	0	0	-	0	0	-	0	0	-
Large General - Rate 30 Secondary	(42,810)	(18,965)	(61,775)	(235)	(103)	(338)	667	296	963
	(\$45,458)	(\$27,858)	(\$73,316)	(\$249)	(\$151)	(\$400)	\$709	\$435	\$1,144

	Information from South Dakota		Distribution Plant 1/					
	Balance	% of Total	Plant Balances			% of Total		
	12/31/2013		Demand	Customer	Total	Demand	Customer	
Residential - Rate 10	(8,043)	10.97%	\$2,099,926	\$6,750,380	\$8,850,306	23.73%	76.27%	100.00%
Small General - Rate 20	(3,498)	4.77%	754,018	2,816,140	3,570,158	21.12%	78.88%	100.00%
Irrigation - Rate 25	-	0.00%	0	-	-	0.00%	0.00%	0.00%
Large General - Rate 30 Primary	-	0.00%	0	-	-	0.00%	0.00%	0.00%
Large General - Rate 30 Secondary	(61,775)	84.26%	932,524	413,083	1,345,607	69.30%	30.70%	100.00%
	(73,315)	100.00%	\$3,786,468	\$9,979,603	\$13,766,071			

1/ Based on Allocation Factor 14.

Distribution Plant	Total		
	15,672,453		
	Demand	Customer	Total
Residential Rate 10	2,099,926	6,750,380	8,850,306
Small General Rate 20	754,018	2,816,140	3,570,158
Irrigation Power Rate 25	11,463	22,001	33,464
Large General Primary Rate 30	0	0	0
Large General Secondary Rate 30	932,524	413,083	1,345,607
	0	0	0
Space & Water Heating Rate 32	156,638	168,137	324,775
Municipal Pumping Rate 48	35,620	100,367	135,987
Private Lighting Rate 52	18,157	496,710	514,867
Street Lighting Co. Owned Rate 41	62,163	790,163	852,326
Street Lighting Municipal Rate 41	8,924	36,039	44,963
	4,079,433	11,593,020	15,672,453

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MONTANA-DAKOTA UTILITIES CO.  
 ELECTRIC UTILITY - SOUTH DAKOTA  
 CLASS COST OF SERVICE STUDY  
 12 MONTHS ENDING DECEMBER 31, 2014  
 CUSTOMER ADVANCES FOR CONSTRUCTION WORKPAPER

<b>Work Order</b>	<b>Work</b>	<b>Tariff Rate</b>	<b>Average Balance</b>
165413	Install 1/O UG primary Akaska	20	-1,546.00
177819	Install 900' urd pri billable	10	-3,402.00
182206	Convert Seneca&6 mi Distr. To Y	30	-61,775.00
192831	Install urd pri, Sec. & peds.	10	-1,951.50
192831	Install urd pri, Sec. & peds.	20	-1,951.50
204762	Unstall URD Primary Ext. Mobri	10	-2,689.07
			<b>-73,315.07</b>
<b>Residential</b>			-8,042.57
<b>Schedule 20</b>			-3,497.50
<b>Schedule 30</b>			-61,775.00
			<b>-73,315.07</b>

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MONTANA-DAKOTA UTILITIES CO.  
CALCULATION OF FACTOR 3  
SOUTH DAKOTA ELECTRIC RATE CASE

Facility	Size	Capacity Credit		
Cedar Hills	19.5	23.16%	4.5162	
Diamond Willow	30.0	18.42%	5.5266	
Thunder Spirit	<u>107.5</u>	14.70%	15.8025	
	157.0		25.8453	16.462%

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MONTANA-DAKOTA UTILITIES CO.  
ELECTRIC UTILITY - SOUTH DAKOTA  
CLASS COST OF SERVICE STUDY  
12 MONTHS ENDING DECEMBER 31, 2014  
SALES REVENUES ALLOCATION  
PER BOOKS

Rate	Total Sales Revenue	Base Rate	Fuel & Purch. Power 1/		Energy	Demand
			Energy 2/	Demand 3/		
Residential - Rate 10	\$6,979,925	\$496,496	1,872,108	\$114,335	\$4,496,986	\$0
Small General Service - Rate 20 Primary	768	331	133	10	294	\$0
Small General Service - Rate 20 Secondary	3,074,301	279,232	817,147	46,834	1,699,895	231,193
Irrigation Power - Rate 25	15,767	-	3,933	365	2,071	9,398
Large General Service - Rate 30 Primary	-	0	-	0	-	0
Large General Service - Rate 30 Secondary	2,810,503	19,985	952,010	55,576	1,067,638	715,294
General Electric Space Heating Rate 32	312,150	11,610	125,523	7,963	167,054	0
Municipal Pumping - Rate 48	104,300	7,903	36,232	2,116	19,116	38,933
Private Lighting - Rate 24	66,613	0	20,700	1,164	44,749	0
Street Lighting - Rate 41 Company Owned	203,895	0	58,378	3,501	142,016	0
Street Lighting - Rate 41 Municipal Owned	27,153	0	8,423	500	18,230	0
<b>Total</b>	<b>\$13,595,375</b>	<b>\$815,557</b>	<b>\$3,894,587</b>	<b>\$232,364</b>	<b>\$7,658,049</b>	<b>\$994,818</b>

1/ Energy/Demand split based on Per Books Fuel & Purchased Power Costs.

2/ Allocated to customer class on Allocation Factor 1 - Energy at Customer Level Kwh Sales.

3/ Allocated to customer class on Allocation Factor 2 - AED.

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MONTANA-DAKOTA UTILITIES CO.  
ELECTRIC UTILITY - SOUTH DAKOTA  
CLASS COST OF SERVICE STUDY  
12 MONTHS ENDING DECEMBER 31, 2014  
SALES REVENUES ALLOCATION  
PRO FORMA ADJUSTMENT

Rate	Total Sales Revenue	Base Rate	Fuel & Purch. Power 1/		Energy	Demand
			Energy 2/	Demand 3/		
Residential - Rate 10	\$121,801	\$4,895	(\$50,986)	(\$98,274)	\$266,166	\$0
Small General Service - Rate 20 Primary	(\$158)	(\$194)	(4)	(8)	48	\$0
Small General Service - Rate 20 Secondary	\$73,029	\$3,170	(22,255)	(40,256)	128,841	\$3,529
Irrigation Power - Rate 25	(\$8,242)	\$0	(107)	(314)	2	(\$7,823)
Large General Service - Rate 30 Primary	\$0	\$0	0	0	0	\$0
Large General Service - Rate 30 Secondary	\$83,430	\$175	(25,927)	(47,770)	151,712	\$5,240
General Electric Space Heating Rate 32	(\$36,260)	\$88	(3,419)	(6,844)	(26,085)	\$0
Municipal Pumping - Rate 48	(\$3,498)	(\$671)	(987)	(1,819)	11,886	(\$11,907)
Private Lighting - Rate 24	\$1,672	\$0	(564)	(1,000)	3,236	\$0
Street Lighting - Rate 41 Company Owned	\$7,876	\$0	(1,590)	(3,009)	12,475	\$0
Street Lighting - Rate 41 Municipal Owned	\$1,117	\$0	(229)	(430)	1,776	\$0
<b>Total</b>	<b>\$240,767</b>	<b>\$7,463</b>	<b>(\$106,068)</b>	<b>(\$199,724)</b>	<b>\$550,057</b>	<b>(\$10,961)</b>

1/ Energy/Demand split based on Pro Forma Fuel & Purchased Power Costs..

2/ Allocated to customer class on Allocation Factor 1 - Energy at Customer Level Kwh Sales.

3/ Allocated to customer class on Allocation Factor 2 - AED.

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