

Appendix H

Xcel Energy Rate Impact Calculations

LRTP2 - Years 1 thru 20

Amounts in dollars

<u>Line No.</u>	Line (A)	Subs (B)	Total
1	90,755,344	145,146,185	235,901,530
2			
3			
4	83.9%	83.9%	83.9%
5	86.6%	86.6%	86.6%
6			
7	65,938,800	105,456,768	171,395,568

NOTE: Tax assumptions include 21% corp Fed tax rate

LRTP2 - Year 1 Revenue Requirement

Amounts in dollars

<u>Line No.</u>		Line (A)	Subs (B)	Total
1	LRTP2 - Revenue Requirement	5,921,759	9,376,996	15,298,755
2				
3				
4	FERC Interchange Agreement allocator to NSPM	83.9%	83.9%	83.9%
5	Demand Allocator - MN Jurisdiction	86.6%	86.6%	86.6%
6				
7	Net cost to MN Jurisdiction	4,302,487	6,812,909	11,115,396

NOTE: Tax assumptions include 21% corp Fed tax rate

LRTP2 - Total

Cost Assumptions			Weighted
Capital Structure	Rate	Ratio	Cost
Long Term Debt	4.4000%	47.0800%	2.0700%
Short Term Debt	4.1700%	0.4200%	0.0200%
Preferred Stock	0.0000%	0.0000%	0.0000%
Common Equity	9.2500%	52.5000%	4.8600%
Required Rate of Return			6.9500%
Tax Rate (MN)	28.7400%		

Line No.	Rate Analysis	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1	Project Spend							
2	Line		47,254,900					
3	Sub		76,300,000					
4	Total		123,554,900					
5								
6	Revenue Requirement							
7	Line	5,921,759	5,765,773	5,588,309	5,421,735	5,264,963	5,117,085	4,975,439
8	Sub	9,376,996	9,137,236	8,862,796	8,605,940	8,364,911	8,138,242	7,921,636
9								
10	Total Revenue Requirements - NSP	15,298,755	14,903,010	14,451,105	14,027,675	13,629,873	13,255,327	12,897,074
11								
12	FERC Interchange Agreement allocator to NSPM	83.9%	83.9%	83.9%	83.9%	83.9%	83.9%	83.9%
13	Demand Allocator - MN Jurisdiction	86.6%	86.6%	86.6%	86.6%	86.6%	86.6%	86.6%
14								
15	Total Revenue Requirements - MN Jurisdiction	11,115,396	10,827,865	10,499,531	10,191,885	9,902,860	9,630,731	9,370,441
16								
17								
18	Discount Rate =		0.06349334					
19								
20	Present Value of Revenue Requirements - NSP	139,175,804	14,385,379	13,176,633	12,014,252	10,965,959	10,018,852	9,161,821
21								
22								
23								
24			12.38%	12.06%	11.70%	11.35%	11.03%	10.73%
								10.44%

LRTP2 - Total

Line No.	Rate Analysis	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16
1	Project Spend									
2	Line									
3	Sub									
4	Total									
5										
6	Revenue Requirement									
7	Line	4,835,789	4,696,079	4,556,369	4,416,659	4,276,949	4,137,239	3,997,529	3,857,819	3,735,958
8	Sub	7,708,254	7,494,773	7,281,293	7,067,813	6,854,333	6,640,853	6,427,373	6,213,893	6,029,233
9										
10	Total Revenue Requirements - NSP	12,544,043	12,190,853	11,837,663	11,484,473	11,131,283	10,778,092	10,424,902	10,071,712	9,765,191
11										
12	FERC Interchange Agreement allocator to NSPM	83.9%	83.9%	83.9%	83.9%	83.9%	83.9%	83.9%	83.9%	83.9%
13	Demand Allocator - MN Jurisdiction	86.6%	86.6%	86.6%	86.6%	86.6%	86.6%	86.6%	86.6%	86.6%
14										
15	Total Revenue Requirements - MN Jurisdiction	9,113,944	8,857,332	8,600,720	8,344,107	8,087,495	7,830,883	7,574,271	7,317,659	7,094,954
16										
17										
18	Discount Rate =									
19										
20	Present Value of Revenue Requirements - NSP	7,665,832	7,005,209	6,396,144	5,834,834	5,317,750	4,841,610	4,403,370	4,000,200	3,646,904
21										
22										
23										
24		10.15%	9.87%	9.58%	9.30%	9.01%	8.72%	8.44%	8.15%	7.90%

LRTP2 - Total

Line No.	Rate Analysis	Year 17	Year 18	Year 19	Year 20
1	Project Spend				
2	Line				
3	Sub				
4	Total				
5					
6	Revenue Requirement				
7	Line	3,649,855	3,581,600	3,513,346	3,445,091
8	Sub	5,902,309	5,804,204	5,706,100	5,607,995
9					
10	Total Revenue Requirements - NSP	9,552,163	9,385,804	9,219,445	9,053,086
11					
12	FERC Interchange Agreement allocator to NSPM	83.9%	83.9%	83.9%	83.9%
13	Demand Allocator - MN Jurisdiction	86.6%	86.6%	86.6%	86.6%
14					
15	Total Revenue Requirements - MN Jurisdiction	6,940,177	6,819,308	6,698,439	6,577,570
16					
17					
18	Discount Rate =				
19					
20	Present Value of Revenue Requirements - NSP	3,354,367	3,099,171	2,862,491	2,643,024
21					
22					
23					
24		7.73%	7.60%	7.46%	7.33%

LRTP2 - Subs
Based on 56 YEAR LIFE

Cost Assumptions			
Capital Structure	Rate	Ratio	Weighted Cost
Long Term Debt	4.4000%	47.0800%	2.0700%
Short Term Debt	4.1700%	0.4200%	0.0200%
Preferred Stock	0.0000%	0.0000%	0.0000%
Common Equity	9.2500%	52.5000%	4.8600%
Required Rate of Return			6.9500%
Tax Rate (MN)	28.7400%		

Line No.	Rate Analysis	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1	Plant Investment	76,300,000	76,300,000	76,300,000	76,300,000	76,300,000	76,300,000	76,300,000
2	Depreciation Reserve	(1,545,115)	(3,090,231)	(4,635,346)	(6,180,462)	(7,725,577)	(9,270,693)	(10,815,808)
3	Removal Expense	-	-	-	-	-	-	-
4	Accumulated Deferred Taxes	(652,365)	(2,291,518)	(3,722,348)	(4,966,786)	(6,042,373)	(6,964,460)	(7,814,182)
5		74,102,520	70,918,252	67,942,305	65,152,752	62,532,050	60,064,847	57,670,010
6								
7	Average Rate Base	75,201,260	72,510,386	69,430,278	66,547,529	63,842,401	61,298,449	58,867,428
8								
9	Debt Return	1,571,706	1,515,467	1,451,093	1,390,843	1,334,306	1,281,138	1,230,329
10	Equity Return	3,654,781	3,524,005	3,374,312	3,234,210	3,102,741	2,979,105	2,860,957
11	Current Income Tax Requirement	821,652	(217,880)	(69,931)	59,958	175,785	279,421	304,135
12								
13	Book Depreciation	1,545,115	1,545,115	1,545,115	1,545,115	1,545,115	1,545,115	1,545,115
14	Annual Deferred Tax	652,365	1,639,153	1,430,831	1,244,438	1,075,587	922,087	849,722
15	ITC Flow Thru	-	-	-	-	-	-	-
16	Tax Depreciation & Removal Expense	3,815,000	7,248,500	6,523,650	5,875,100	5,287,590	4,753,490	4,501,700
17	Tax Depreciation on Easements	-	-	-	-	-	-	-
18	AFUDC Expenditure	-	-	-	-	-	-	-
19	Book Depreciation Cleared to Operating	-	-	-	-	-	-	-
20	Avoided Tax Interest	-	-	-	-	-	-	-
21	Property Tax @ 1.4828%	1,131,376	1,131,376	1,131,376	1,131,376	1,131,376	1,131,376	1,131,376
22								
23	Total Revenue Requirements - NSP	9,376,996	9,137,236	8,862,796	8,605,940	8,364,911	8,138,242	7,921,636
24								
25	Discount Rate =		0.06349334					
26								
27	Present Value of Revenue Requirements	85,546,670	8,817,165	8,078,771	7,368,285	6,727,585	6,148,758	5,624,993
28								
29	Level Annual Revenue Requirement	5,610,224						
30								
31	57 Year Life LARR %	7.35%						

LRTP2 - Subs
Based on 56 YEAR LIFE

<u>Line No.</u>	<u>Rate Analysis</u>	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16
1	Plant Investment	76,300,000	76,300,000	76,300,000	76,300,000	76,300,000	76,300,000	76,300,000	76,300,000	76,300,000
2	Depreciation Reserve	(12,360,924)	(13,906,039)	(15,451,154)	(16,996,270)	(18,541,385)	(20,086,501)	(21,631,616)	(23,176,732)	(24,721,847)
3	Removal Expense	-	-	-	-	-	-	-	-	-
4	Accumulated Deferred Taxes	(8,663,905)	(9,515,820)	(10,365,542)	(11,217,458)	(12,067,180)	(12,919,095)	(13,768,818)	(14,620,733)	(14,823,561)
5		55,275,172	52,878,141	50,483,303	48,086,272	45,691,435	43,294,404	40,899,566	38,502,535	36,754,592
6										
7	Average Rate Base	56,472,591	54,076,656	51,680,722	49,284,788	46,888,854	44,492,919	42,096,985	39,701,051	37,628,564
8										
9	Debt Return	1,180,277	1,130,202	1,080,127	1,030,052	979,977	929,902	879,827	829,752	786,437
10	Equity Return	2,744,568	2,628,125	2,511,683	2,395,241	2,278,798	2,162,356	2,045,913	1,929,471	1,828,748
11	Current Income Tax Requirement	257,194	208,039	163,269	114,114	69,344	20,188	(24,581)	(73,737)	534,728
12										
13	Book Depreciation	1,545,115	1,545,115	1,545,115	1,545,115	1,545,115	1,545,115	1,545,115	1,545,115	1,545,115
14	Annual Deferred Tax	849,722	851,915	849,722	851,915	849,722	851,915	849,722	851,915	202,828
15	ITC Flow Thru	-	-	-	-	-	-	-	-	-
16	Tax Depreciation & Removal Expense	4,501,700	4,509,330	4,501,700	4,509,330	4,501,700	4,509,330	4,501,700	4,509,330	2,250,850
17	Tax Depreciation on Easements	-	-	-	-	-	-	-	-	-
18	AFUDC Expenditure	-	-	-	-	-	-	-	-	-
19	Book Depreciation Cleared to Operating	-	-	-	-	-	-	-	-	-
20	Avoided Tax Interest	-	-	-	-	-	-	-	-	-
21	Property Tax @ 1.4828%	1,131,376	1,131,376	1,131,376	1,131,376	1,131,376	1,131,376	1,131,376	1,131,376	1,131,376
22										
23	Total Revenue Requirements - NSP	7,708,254	7,494,773	7,281,293	7,067,813	6,854,333	6,640,853	6,427,373	6,213,893	6,029,233
24										
25	Discount Rate =									
26										
27	Present Value of Revenue Requirements	4,710,617	4,306,709	3,934,239	3,590,894	3,274,522	2,983,128	2,714,855	2,467,983	2,251,675
28										
29										
30										
31										

LRTP2 - Subs
Based on 56 YEAR LIFE

<u>Line No.</u>	<u>Rate Analysis</u>	<u>Year 17</u>	<u>Year 18</u>	<u>Year 19</u>	<u>Year 20</u>
1	Plant Investment	76,300,000	76,300,000	76,300,000	76,300,000
2	Depreciation Reserve	(26,266,962)	(27,812,078)	(29,357,193)	(30,902,309)
3	Removal Expense	-	-	-	-
4	Accumulated Deferred Taxes	(14,379,495)	(13,935,429)	(13,491,363)	(13,047,296)
5		35,653,543	34,552,493	33,451,444	32,350,395
6					
7	Average Rate Base	36,204,067	35,103,018	34,001,969	32,900,919
8					
9	Debt Return	756,665	733,653	710,641	687,629
10	Equity Return	1,759,518	1,706,007	1,652,496	1,598,985
11	Current Income Tax Requirement	1,153,700	1,132,119	1,110,537	1,088,956
12					
13	Book Depreciation	1,545,115	1,545,115	1,545,115	1,545,115
14	Annual Deferred Tax	(444,066)	(444,066)	(444,066)	(444,066)
15	ITC Flow Thru	-	-	-	-
16	Tax Depreciation & Removal Expense	-	-	-	-
17	Tax Depreciation on Easements	-	-	-	-
18	AFUDC Expenditure	-	-	-	-
19	Book Depreciation Cleared to Operating	-	-	-	-
20	Avoided Tax Interest	-	-	-	-
21	Property Tax @ 1.4828%	1,131,376	1,131,376	1,131,376	1,131,376
22					
23	Total Revenue Requirements - NSP	5,902,309	5,804,204	5,706,100	5,607,995
24					
25	Discount Rate =				
26					
27	Present Value of Revenue Requirements	2,072,673	1,916,535	1,771,653	1,637,239
28					
29					
30					
31					

**L RTP2 - Line
Based on 63 YEAR LIFE**

Cost Assumptions			
Capital Structure	Rate	Ratio	Weighted Cost
Long Term Debt	4.4000%	47.0800%	2.0700%
Short Term Debt	4.1700%	0.4200%	0.0200%
Preferred Stock	0.0000%	0.0000%	0.0000%
Common Equity	9.2500%	52.5000%	4.8600%
Required Rate of Return			6.9500%
Tax Rate (MN)	28.7400%		

Line No.	Rate Analysis	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1	Plant Investment	47,254,900	47,254,900	47,254,900	47,254,900	47,254,900	47,254,900	47,254,900
2	Depreciation Reserve	(1,074,986)	(2,149,972)	(3,224,958)	(4,299,945)	(5,374,931)	(6,449,917)	(7,524,903)
3	Removal Expense	-	-	-	-	-	-	-
4	Accumulated Deferred Taxes	(370,102)	(1,351,351)	(2,203,581)	(2,940,371)	(3,572,588)	(4,109,737)	(4,602,068)
5		45,809,812	43,753,576	41,826,361	40,014,584	38,307,382	36,695,247	35,127,929
6								
7	Average Rate Base	46,532,356	44,781,694	42,789,969	40,920,472	39,160,983	37,501,314	35,911,588
8								
9	Debt Return	972,526	935,937	894,310	855,238	818,465	783,777	750,552
10	Equity Return	2,261,473	2,176,390	2,079,592	1,988,735	1,903,224	1,822,564	1,745,303
11	Current Income Tax Requirement	541,977	(103,486)	(13,505)	65,290	135,376	197,913	211,570
12								
13	Book Depreciation	1,074,986	1,074,986	1,074,986	1,074,986	1,074,986	1,074,986	1,074,986
14	Annual Deferred Tax	370,102	981,250	852,229	736,790	632,216	537,149	492,331
15	ITC Flow Thru	-	-	-	-	-	-	-
16	Tax Depreciation & Removal Expense	2,362,745	4,489,216	4,040,294	3,638,627	3,274,765	2,943,980	2,788,039
17	Tax Depreciation on Easements	-	-	-	-	-	-	-
18	AFUDC Expenditure	-	-	-	-	-	-	-
19	Book Depreciation Cleared to Operating	-	-	-	-	-	-	-
20	Avoided Tax Interest	-	-	-	-	-	-	-
21	Property Tax @ 1.4828%	700,696	700,696	700,696	700,696	700,696	700,696	700,696
22								
23	Total Revenue Requirements - NSP	5,921,759	5,765,773	5,588,309	5,421,735	5,264,963	5,117,085	4,975,439
24								
25	Discount Rate =		0.06349334					
26								
27	Present Value of Revenue Requirements	5,568,215	5,097,861	4,645,967	4,238,373	3,870,093	3,536,828	3,233,612
28								
29	Level Annual Revenue Requirement	3,477,024						
30								
31	63 Year Life LARR %	7.36%						

**L RTP2 - Line
Based on 63 YEAR LIFE**

<u>Line No.</u>	<u>Rate Analysis</u>	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
1	Plant Investment	47,254,900	47,254,900	47,254,900	47,254,900	47,254,900	47,254,900	47,254,900	47,254,900
2	Depreciation Reserve	(8,599,889)	(9,674,875)	(10,749,861)	(11,824,847)	(12,899,834)	(13,974,820)	(15,049,806)	(16,124,792)
3	Removal Expense	-	-	-	-	-	-	-	-
4	Accumulated Deferred Taxes	(5,094,399)	(5,588,089)	(6,080,420)	(6,574,110)	(7,066,441)	(7,560,131)	(8,052,462)	(8,546,152)
5		<u>33,560,612</u>	<u>31,991,936</u>	<u>30,424,618</u>	<u>28,855,943</u>	<u>27,288,625</u>	<u>25,719,949</u>	<u>24,152,632</u>	<u>22,583,956</u>
6									
7	Average Rate Base	34,344,270	32,776,274	31,208,277	29,640,281	28,072,284	26,504,287	24,936,291	23,368,294
8									
9	Debt Return	717,795	685,024	652,253	619,482	586,711	553,940	521,168	488,397
10	Equity Return	1,669,132	1,592,927	1,516,722	1,440,518	1,364,313	1,288,108	1,211,904	1,135,699
11	Current Income Tax Requirement	180,849	148,757	119,381	87,288	57,912	25,820	(3,556)	(35,649)
12									
13	Book Depreciation	1,074,986	1,074,986	1,074,986	1,074,986	1,074,986	1,074,986	1,074,986	1,074,986
14	Annual Deferred Tax	492,331	493,690	492,331	493,690	492,331	493,690	492,331	493,690
15	ITC Flow Thru	-	-	-	-	-	-	-	-
16	Tax Depreciation & Removal Expense	2,788,039	2,792,765	2,788,039	2,792,765	2,788,039	2,792,765	2,788,039	2,792,765
17	Tax Depreciation on Easements	-	-	-	-	-	-	-	-
18	AFUDC Expenditure	-	-	-	-	-	-	-	-
19	Book Depreciation Cleared to Operating	-	-	-	-	-	-	-	-
20	Avoided Tax Interest	-	-	-	-	-	-	-	-
21	Property Tax @ 1.4828%	700,696	700,696	700,696	700,696	700,696	700,696	700,696	700,696
22									
23	<u>Total Revenue Requirements - NSP</u>	<u>4,835,789</u>	<u>4,696,079</u>	<u>4,556,369</u>	<u>4,416,659</u>	<u>4,276,949</u>	<u>4,137,239</u>	<u>3,997,529</u>	<u>3,857,819</u>
24									
25	Discount Rate =								
26									
27	Present Value of Revenue Requirements	2,955,215	2,698,500	2,461,904	2,243,941	2,043,228	1,858,483	1,688,514	1,532,217
28									
29									
30									
31									

**L RTP2 - Line
Based on 63 YEAR LIFE**

<u>Line No.</u>	<u>Rate Analysis</u>	<u>Year 16</u>	<u>Year 17</u>	<u>Year 18</u>	<u>Year 19</u>	<u>Year 20</u>
1	Plant Investment	47,254,900	47,254,900	47,254,900	47,254,900	47,254,900
2	Depreciation Reserve	(17,199,778)	(18,274,764)	(19,349,750)	(20,424,736)	(21,499,723)
3	Removal Expense	-	-	-	-	-
4	Accumulated Deferred Taxes	(8,637,842)	(8,328,891)	(8,019,940)	(7,710,989)	(7,402,038)
5		21,417,280	20,651,245	19,885,210	19,119,175	18,353,139
6						
7	Average Rate Base	22,000,618	21,034,262	20,268,227	19,502,192	18,736,157
8						
9	Debt Return	459,813	439,616	423,606	407,596	391,586
10	Equity Return	1,069,230	1,022,265	985,036	947,807	910,577
11	Current Income Tax Requirement	339,543	721,243	706,228	691,213	676,198
12						
13	Book Depreciation	1,074,986	1,074,986	1,074,986	1,074,986	1,074,986
14	Annual Deferred Tax	91,690	(308,951)	(308,951)	(308,951)	(308,951)
15	ITC Flow Thru	-	-	-	-	-
16	Tax Depreciation & Removal Expense	1,394,020	-	-	-	-
17	Tax Depreciation on Easements	-	-	-	-	-
18	AFUDC Expenditure	-	-	-	-	-
19	Book Depreciation Cleared to Operating	-	-	-	-	-
20	Avoided Tax Interest	-	-	-	-	-
21	Property Tax @ 1.4828%	700,696	700,696	700,696	700,696	700,696
22						
23	Total Revenue Requirements - NSP	3,735,958	3,649,855	3,581,600	3,513,346	3,445,091
24						
25	Discount Rate =					
26						
27	Present Value of Revenue Requirements	1,395,229	1,281,694	1,182,636	1,090,838	1,005,785
28						
29						
30						
31						

Key Inputs

Line No	Capital Structure	2024		
		<u>Cost</u>	<u>Ratio</u>	<u>WACC</u>
1				
2	<u>Capital Structure</u>			
3	Long Term Debt	4.4000%	47.0800%	2.07%
4	Short Term Debt	4.1700%	0.4200%	0.02%
5	Preferred Stock	0.0000%	0.0000%	0.00%
6	Common Equity	9.2500%	52.5000%	4.86%
7	Required Rate of Return			6.95%
8	(Rates and Ratios from Settlement in Docket E002/GR-21-630)			
9				
10	Property Tax Rates			
11	Property Tax Rate			1.4828%
12	(percentage based on last TCR filing in Docket No. E002M-21-814)			
13				
14	Income Tax Rates			
15	Federal Tax Rate			21.00%
16	State Tax Rate			9.80%
17	State Composite Income Tax Rate			28.7420%
18				
19	Allocators (2024 Estimate)			
20	MN 12-month CP demand (Electric Demand)			86.6326%
21	NSPM 36-month CP demand (Interchange Electric)			83.8663%
22	Jurisdictional Allocator			<u>72.6556%</u>
23				
24	Book Depreciation Lives			
25	Land			0.00
26	Line			63.28
27	Sub			56.43
28				
29	Net Salvage %			
30	Land			0.00%
31	Line			-43.95%
32	Sub			-14.26%
33				
34	Book Depreciation Rates			
35	Land			0.00%
36	Line			2.2749%
37	Sub			2.0251%