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August 7, 2017

- Via Email and U.S. Mail -

Darrell Nitschke, Executive Secretary
North Dakota Public Service Commission
State Capitol Building, Dept 408
600 East Boulevard
Bismarck, ND 59505-0480

RE: ERRATA
APPLICATION FOR CONSIDERATION OF A RESOURCE TREATMENT
FRAMEWORK TO ADDRESS JURISDICTIONAL COST ALLOCATION ISSUES
CASE NOS. PU-12-813, PU-13-706, PU-13-707, PU-13-708, PU-13-742, PU-13-743,
PU-13-194, PU-13-195

Dear Mr. Nitschke:

Northern States Power Company, doing business as Xcel Energy, respectfully submits to the North Dakota Public Service Commission the attached errata to the Direct Testimony and Schedules filed on July 15, 2017 in the above-referenced matter.

An original and one copy of the corrected pages of the Direct Testimony of Charles Burdick and P.J. Martin are being provided via U.S. Mail.

Please contact me if you have any questions regarding this filing.

Sincerely,

DAVID H. SEDERQUIST
Sr. Consultant, Regulation & Finance
Enclosures

- 184 PU-13-194 Filed 08/07/2017 Pages: 21
Corrected pages of Prefiled Testimony of Charles Burdick and P.J. Martin
- 195 PU-13-743 Filed 08/07/2017 Pages: 21
Corrected pages of Prefiled Testimony of Charles Burdick and P.J. Martin
- 183 PU-13-742 Filed 08/07/2017 Pages: 21
Corrected pages of Prefiled Testimony of Charles Burdick and P.J. Martin
- 179 PU-13-708 Filed 08/07/2017 Pages: 21
Corrected pages of Prefiled Testimony of Charles Burdick and P.J. Martin
- 180 PU-13-707 Filed 08/07/2017 Pages: 21
Corrected pages of Prefiled Testimony of Charles Burdick and P.J. Martin
- 180 PU-13-706 Filed 08/07/2017 Pages: 21
Corrected pages of Prefiled Testimony of Charles Burdick and P.J. Martin
- 334 PU-12-813 Filed 08/07/2017 Pages: 21
Corrected pages of Prefiled Testimony of Charles Burdick and P.J. Martin

201 PU-13-195 Filed 08/07/2017 Pages: 21
Corrected pages of Prefiled Testimony of Charles Burdick
and P.J. Martin
Northern States Power Company
David Sederquist

The following list notes corrections to Xcel Energy's Direct Testimony and Schedules submitted on July 15, 2017 and provides a brief explanation and/or illustration of the correction. Corrected Direct Testimony pages are attached.

Resource Treatment Framework (RTF) to Address Jurisdictional Cost Allocation Issues

Direct Testimony of Charles Burdick and Schedules	
The following items update and correct several of Revenue Requirement Testimony Schedules. The edits align the cost of service model with other witness's assumptions.	
Location	Notes
Rev. Req. Testimony, Page 7, Table 2, Baseline Model	The incorrect numbers have been struck and the corrected numbers have been inserted.
Rev. Req. Testimony, Page 18, Lines 25-27, Page 19, Lines 1 & 2	The incorrect numbers have been struck and the corrected numbers have been inserted, clarification language.
Rev. Req. Testimony, Page 23, Line 12	The incorrect numbers have been struck and the corrected numbers have been inserted.
Rev. Req. Testimony, Page 26, Table 3	The incorrect numbers have been struck and the corrected numbers have been inserted.
Rev. Req. Testimony, Page 29, Table 4	The incorrect numbers have been struck and the corrected numbers have been inserted.
Rev. Req. Schedule 4, Page 1 of 5, Summary RTF Bridge 2020	The incorrect numbers have been struck and the corrected numbers have been inserted.
Rev. Req. Schedule 4, Page 2 of 5, North Dakota Bridge Schedule 2020	The incorrect numbers have been struck and the corrected numbers have been inserted.
Rev. Req. Schedule 4, Page 3 of 5, Minnesota Bridge Schedule 2020	The incorrect numbers have been struck and the corrected numbers have been inserted.
Rev. Req. Schedule 4, Page 4 of 5, South Dakota Bridge Schedule 2020	The incorrect numbers have been struck and the corrected numbers have been inserted.
Rev. Req. Schedule 4, Page 5 of 5, Wisconsin Bridge Schedule 2020	The incorrect numbers have been struck and the corrected numbers have been inserted.
Rev. Req. Schedule 5, Page 1 of 5, Summary RTF Bridge 2020	The incorrect numbers have been struck and the corrected numbers have been inserted.
Rev. Req. Schedule 5, Page 2 of 5, North Dakota Bridge Schedule 2020	The incorrect numbers have been struck and the corrected numbers have been inserted.
Rev. Req. Schedule 5, Page 3 of 5	The incorrect numbers have been struck and the corrected numbers

Direct Testimony of Charles Burdick and Schedules	
The following items update and correct several of Revenue Requirement Testimony Schedules. The edits align the cost of service model with other witness's assumptions.	
Location	Notes
5, Minnesota Bridge Schedule 2020	have been inserted.
Rev. Req. Schedule 5, Page 4 of 5, South Dakota Bridge Schedule 2020	The incorrect numbers have been struck and the corrected numbers have been inserted.
Rev. Req. Schedule 5, Page 5 of 5, Wisconsin Bridge Schedule 2020	The incorrect numbers have been struck and the corrected numbers have been inserted.
Rev. Req. Schedule 12, Page 1 of 1, New Wind Workpaper	The incorrect numbers have been struck and the corrected numbers have been inserted.

Direct Testimony of P. J. Martin	
The following items update and correct several of Revenue Requirement Testimony Schedules. The error occurred when the Chart was inserted into the testimony.	
Location	Notes
Resource Planning Testimony, Page 35, Chart 1, Plan Names, Descriptions and Vintages	The Chart was expanded to reveal the last two lines

1

Table 1

	ND Electric	MN Electric	SD Electric	NSPW
Baseline Model (\$ millions)	\$251	\$3,739	\$294	\$869

2

3 Q. SINCE THIS BASELINE WAS FIRST DEVELOPED A NUMBER OF MONTHS AGO,
 4 DO YOU HAVE ANY UPDATES TO THE BASELINE?

5 A. Yes. To be consistent with other models and estimates included in the
 6 Company’s direct case, the baseline calculations have been updated to a
 7 forecast as of the spring of 2017. Updates included a new capital forecast
 8 with wind project assumptions consistent with the Company’s recent filings
 9 on those proposed projects, as well as updated O&M projections.

10

11 Table 2 below presents the Company’s updated revenue requirement
 12 baseline, in a format that parallels the baseline provided in the Application.

13

14

Table 2

	ND Electric	MN Electric	SD Electric	NSPW
Baseline Model (\$ millions)	\$245	\$3,721 ↑ \$3,734	\$262	\$779 ↑ \$784

15

16 Detailed baseline amounts are included in Exhibit __ (CRB-1), Schedule 4,
 17 Column A, attached to my Direct Testimony.

18

19 Q. HOW ARE THE COMPANY’S COSTS ALLOCATED IN THE BASELINE?

20 A. Under the current integrated NSP System, the Company’s costs are allocated
 21 across jurisdictions based on each jurisdiction’s relative contributions to
 22 cost-causation as outlined in the Company’s Cost Allocation and
 23 Assignment Manual, attached to Ms. Everson’s Direct Testimony. A

1 of the Disputed Resources change and the replacement cost of energy
2 changes fluctuates with energy markets. The Company's forecast shows this
3 \$7.9 million shift will decrease from 2021 to 2030.

4
5 **2. New Wind Adjustment**

6
7 Q. PLEASE DESCRIBE THE NEW WIND ADJUSTMENT.

8 A. The Company is planning on adding 1,550 MW of wind generation to the
9 NSP System over the next several years. The new wind is among those
10 resources for which we believe that there is likely to be a near-term
11 disagreement. As outlined by Mr. Chandarana, we propose to fully allocate
12 the costs or savings related to the new wind projects to the remainder of the
13 NSP System and not to North Dakota.

14
15 Schedule 12 attached to my testimony provides a calculation of this shift in
16 2020.

17
18 The revenue requirements model reflects the costs related to both the 1,150
19 MW of owned wind and 400 MW of PPA wind. Additionally, this model
20 assumes reduced production costs (i.e., avoided fuel), changes to MISO
21 purchases and sales, and changes in wind congestion, integration, and coal
22 cycling.

23
24 Q. WHAT IS THE NET IMPACT OF THE WIND ADJUSTMENT?

* 25 A. The net ^{system} impact of the wind additions ^{in the baseline} in 2020 is estimated to be ^{\$17} ~~\$1~~ million.

26 We then reallocated what would have been North Dakota's portion to the
* 27 remainder of the NSP System. Please note, however, that ^{the} ~~this~~ estimated ^d

^{and added replacement costs.}

^{system impact}

* 1 changes in the years after 2020 and is expected to ~~increase over the period~~
* 2 ~~from 2021 through 2030.~~ reduce costs in subsequent years.

3

4 3. Sherco Units 1 & 2 Adjustment

5

6 Q. PLEASE DESCRIBE THE SHERCO UNITS 1 & 2 ADJUSTMENT.

7 A. Company witness Mr. Chandarana describes the Sherco Units 1 & 2
8 retirements, and the proposal to recover North Dakota's undepreciated
9 balance from the remainder of the System.

10

11 Schedule 13, attached to my Direct Testimony, develops this concept and
12 shows the Minnesota and North Dakota cost shift.

13

14 The current Commission-approved remaining life for Sherco Units 1 & 2 is
15 through 2034. Because we anticipate retiring Sherco Unit 2 in 2022 and Unit
16 1 in 2025, there will be unrecovered depreciation expense due to the
17 difference between the approved remaining life and the anticipated
18 retirement dates. All other NSPM states have approved remaining lives for
19 Sherco Units 1 & 2 that accommodate the Company's proposed retirement
20 dates.

21

22 In our analysis of separating Disputed Resource costs, we assumed that
23 North Dakota will continue to incur its anticipated depreciation expense at
24 the original, un-accelerated pace, as though the units would retire in 2034.
25 This would continue until each unit is actually retired in 2022 and 2025.
26 This would result in a remaining undepreciated balance of approximately \$13
27 million for North Dakota.

1 has a greater asset base and longer track record. This difference in debt cost
2 is reflected in the revenue requirement on line 32 of Column I. The
3 calculation presents the difference in debt rates times the cumulative rate
4 base in Columns A through H.

5
6 **D. Total Legal Separation Impacts**

7
8 Q. IN TOTAL, WHAT DO YOU PRESENTLY ESTIMATE AS THE POTENTIAL
9 DIFFERENCE IN REVENUE REQUIREMENT BETWEEN THE BASELINE AND
10 LEGAL SEPARATION?

11 A. We estimate that legal separation could decrease revenue requirements to the
12 North Dakota Electric jurisdiction by ~~\$1.9~~^{\$1.0} million, which is a difference of
13 less than 1 percent. This is shown in Column K of Exhibit __ (CRB-1),
14 Schedule 4, page 2. The impact to other jurisdictions is also estimated to be
15 less than 1 percent.

16
17 Q. HOW DO YOUR UPDATED ESTIMATES ABOVE COMPARE TO THE INITIAL
18 ESTIMATES PROVIDED IN THE APPLICATION?

19 A. Overall, this updated and more detailed analysis confirms many of the
20 observations provided in the Application. We see a few differences,
21 particularly related to fuel costs, service company allocations, and
22 transmission shifts. These differences are mainly due to assumptions we
23 made regarding the structure and size of NSPD. These assumptions are
24 subject to change.

25
26 The current projection of fuel costs is also lower than that used at the time
27 of the Application. Given that fuel costs are commodities that vary with

Table 3

Legal Separation change	ND Electric	MN Electric	SD Electric	NSPW
\$ millions	(\$1,903)	\$8,489	\$433	\$1,855
Percent	-0.8%	0.2%	0.2%	0.2%

(\$956)
(\$9,156)
\$483
\$191

-0.4%
0.0%

V. PSEUDO SEPARATION IMPACTS

Q. HOW WOULD THE NORTH DAKOTA ELECTRIC JURISDICTIONAL COST OF SERVICE CHANGE IF IT WERE SERVED BY A MODIFIED COST ALLOCATION AND ASSIGNMENT FOR PSEUDO SEPARATION?

A. Exhibit __ (CRB-1), Schedule 5 attached to my testimony illustrates the impacts of Pseudo Separation.

It begins with the same 2020 forecasted baseline as in the Legal Separation analysis discussed above. It then makes adjustments to recognize the treatment of the Disputed Resources, new wind, and Sherco Units 1 & 2 depreciation. Finally, it is necessary to account for additional administrative expenses associated with implementing Pseudo Separation.

Q. PLEASE DISCUSS THE POTENTIAL REVENUE REQUIREMENT IMPACT OF THE COMPANY'S PROPOSED RESOLUTION OF THE DISPUTED RESOURCES.

A. In general, we envision removing most of the Disputed Resources (Minnesota-based CBED, certain solar, and biomass resources) that have been disallowed or otherwise disfavored by the Commission from North Dakota rates. Company witnesses Mr. Chandarana and Mr. Martin describe the Company's proposal in more detail. This approach would require

1 Q. CAN YOU PROVIDE A SUMMARY OF THE TOTAL ESTIMATED COST SHIFTS
2 ASSOCIATED WITH PSEUDO SEPARATION?

3 A. Yes. Table 4 below provides a summary of the impact of both resolving the
4 resource issues described in Section IV of my Direct Testimony and
5 implementing Pseudo Separation.

6
7

Table 4

Pseudo Separation impacts	ND Electric	MN Electric	SD Electric	NSPW
\$ millions	(\$7,724)	\$8,503	\$605	\$1,830
Percent	-3.2% -2.8%	0.2%	0.2%	0.2%

8

9 These impacts are also provided in more detail in Schedule 5, page 1 to my
10 Direct Testimony.

11

12 Q. WHAT DO YOU CONCLUDE WITH RESPECT TO THE TOTAL REVENUE
13 REQUIREMENT IMPACTS OF PSEUDO SEPARATION?

14 A. The updated allocation of resources provided in Table 3 resulted in less than
15 a one percent increase to rates in the remainder of the NSP System while
16 acknowledging different states' resource choices and beginning the process
17 of separating North Dakota from the NSP System. At the same time, the
18 impact to North Dakota is savings of about three percent. Together, we
19 believe these allocations reflect one reasonable set of cost impacts in each
20 state while providing greater flexibility for state policy choices and resource
21 selections. However, for the reasons discussed by Mr. Chandarana and Mr.
22 Starkweather, a Legal Separation may be preferred to provide better certainty
23 and long-term solutions.

24

ND RTF Bridge - 2020
 \$000s

		Legal Separation															
		Production			Transmission		Service Function				Total Legal Separation	DIFFERENCE from Baseline					
Legacy System Baseline (Year 2020)		Reallocate Production	Production Formula	Reallocate Transmission	MISO Transmission Formula	XES Service Company Allocations	Dedicated Oversight & add'l A&G	Transaction Costs	Financing								
Witness	Burdick	Burdick	Burdick	Burdick	Burdick	Everson	Everson	Burdick	Starkweather								
WP Reference	CRB-1 Sch. 6	CRB-1 Sch. 7	CRB-1 Sch. 8	CRB-1 Sch. 9	KLE-1 Sch. 4	KLE-1 Sch. 2	CRB-1 Sch. 10	RDS-1									
Column	A	B	C	D	E	F	G	H	I	J	K						
1	Rate Base:																
2	Production	292,221	(292,221)	-						-	(292,221)						
3	Transmission	131,122	-	(131,122)						-	(131,122)						
4	Distribution	93,462	-	-						93,462	-						
5	Other Rate Base	111,492	-	-						111,492	-						
6	Total Rate Base	628,296	(292,221)	-	(131,122)	-	-	-	-	204,954	(423,342)						
7																	
8	Revenues:																
9	Retail	221,669	-	-						221,669	-						
10	Other	55,753	(33,381)	(18,364)						4,007	(51,745)						
11	Total Revenues	277,421	(33,381)	-	(18,364)	-	-	-	-	225,676	(51,745)						
12																	
13	Expenses:																
14	Fuel & Purchased Energy	76,255	(73,652)	152,958	153,904	-				155,560	156,507	79,305	80,252				
15	Production	49,670	(49,670)	-						-		(49,670)					
16	Transmission	27,213	-	(27,213)		32,468				32,468		5,255					
17	Distribution	8,590	-	-						8,590		-					
18	Other Operating Expenses	22,283	-	-			(8,858)	1,435	1,500	400	16,760	(5,523)					
19																	
20	Depreciation/Amortization	44,410	(25,160)	(4,301)							14,949	(29,461)					
21																	
22	Property Taxes	12,670	(7,797)	(3,208)						1,665	(11,005)						
23	Payroll & Other Taxes	1,944	(1,196)	(253)						495	(1,449)						
24	Deferred Income Taxes	5,375	(4,089)	(1,657)						(371)	(5,747)						
25	Federal & States Taxes	(4,477)	55,977	(57,820)	(58,178)	8,858	(12,273)	3,349	(542)	(567)	(608)	(8,105)	(8,462)	(3,628)	(3,986)		
26	Total Expenses	243,932	(105,587)	95,137	95,726	(27,774)	20,195	(5,510)	893	933	(208)	222,011	222,600	(21,922)	(21,333)		
27																	
28	AFUDC	-	-	-													
29																	
30	Net Income	33,489	72,207	(95,137)	(95,726)	9,409	(20,195)	5,510	(893)	(933)	208	3,665	3,076	(29,824)	(30,412)		
31																	
32	Total Revenue Requirements	244,699	(151,843)	152,956	153,904	(31,171)	32,468	(8,858)	1,435	1,500	(335)	1,609	242,796	243,743	(1,903)	(956)	
33	% of Baseline															-0.78%	-0.39%

MN RTF Bridge - 2020
 \$000s

Witness WP Reference Column	Legal Separation												
	Production			Transmission		Service Function				Total Legal Separation	DIFFERENCE from Baseline		
	Legacy System Baseline (Year 2020)	Reallocate Production	Production Formula	Reallocate Transmission	MISO Transmission Formula	XES Service Company Allocations	Dedicated Oversight & add'l A&G	Transaction Costs	Financing				
Burdick	Burdick	Burdick	Burdick	Burdick	Everson	Everson	Burdick	Starkweather	J	K			
	CRB-1 Sch. 6	CRB-1 Sch. 7	CRB-1 Sch. 8	CRB-1 Sch. 9	KLE-1 Sch. 4	KLE-1 Sch. 2	CRB-1 Sch. 10	RDS-1					
	A	B	C	D	E	F	G	H	I				
1 Rate Base:													
2 Production	4,461,511	226,519		-						4,688,030	226,519		
3 Transmission	2,063,837	-		101,641						2,165,477	101,641		
4 Distribution	2,007,554	-		-						2,007,554	-		
5 Other Rate Base	856,780	-		-						856,780	-		
6 Total Rate Base	9,389,682	226,519	-	101,641	-	-	-	-	-	9,717,841	328,159		
7													
8 Revenues:													
9 Retail	3,367,072	-		-						3,367,072	-		
10 Other	731,585	25,876	116,517	117,250	14,235	22,479			911,425	910,692	179,107 179,841		
11 Total Revenues	4,098,657	25,876	116,517	117,250	14,235	22,479	-	-	4,278,498	4,277,764	179,107 179,841		
12													
13 Expenses:													
14 Fuel & Purchased Energy	1,096,731	57,093		-						1,153,824	57,093		
15 Production	688,324	38,502		-						726,827	38,502		
16 Transmission	379,136	-		21,095	(3,277)					396,953	17,817		
17 Distribution	114,626	-		-						114,626	-		
18 Other Operating Expenses	400,796	-		-		6,854	8,254	1,500	410,550	409,149	8,354 9,754		
19													
20 Depreciation/Amortization	708,425	19,503		3,334						731,261	22,837		
21													
22 Property Taxes	208,520	6,044		2,487						217,050	8,530		
23 Payroll & Other Taxes	26,130	927		196						27,253	1,123		
24 Deferred Income Taxes	22,718	3,170		1,285						27,173	4,455		
25 Federal & States Taxes	(0)	(47,487)	48,203	48,506	(7,515)	10,656	(2,835)	(3,415)	-	(621)	125 400 400 125		
26 Total Expenses	3,645,406	77,751	48,203	48,506	20,881	7,378	4,018	(4,839)	-	879	3,805,642	3,804,517	159,111 160,236
27													
28 AFUDC	46,329	-		-						46,329	-		
29													
30 Net Income	499,580	(51,876)	68,314	68,744	(6,646)	15,101	(4,018)	(4,839)	-	(879)	-519,185	519,576	19,996 19,605
31													
32 Total Revenue Requirements	3,721,062	117,881	(116,517)	24,527	(25,757)	6,854	8,254	-	1,500	3,729,551	8,489	9,156	
33 % of Baseline											0.23%	0.25%	

3,733,736

117,250

↑
3,742,891

ND RTF Bridge - 2020
\$000s

Pseudo Separation

	Legacy System Baseline (Year 2020)	Disputed Resources	New Wind & Related Costs	Sherco Units 1 & 2 Retirements	Additional A&G	Total Pseudo Separation	DIFFERENCE from Baseline
Witness	Burdick	Burdick	Burdick	Burdick	Starkweather		
WP Reference	CRB-1 Sch. 11	CRB-1 Sch. 12	CRB-1 Sch. 13	RDS-1			
Column	L	M	N	O	P	Q	R
1 Rate Base:							
2 Production	292,221		(80,590)	(97,877)	(2,972)	208,658	191,371 (83,562) (100,849)
3 Transmission	131,122		-			131,122	-
4 Distribution	93,462		-			93,462	-
5 Other Rate Base	111,492		-			111,492	-
6 Total Rate Base	628,296	-	(80,590)	(97,877)	(2,972)	-	544,734 527,447 (83,562) (100,849)
7							
8 Revenues:							
9 Retail	221,669		-			221,669	-
10 Other	55,753		-			55,753	-
11 Total Revenues	277,421	-	-	-	-	-	277,421
12							
13 Expenses:							
14 Fuel & Purchased Energy	76,255	(7,933)	5,370	6,337		73,691	74,658 (2,563) (1,596)
15 Production	49,670		(1,243)			48,427	(1,243)
16 Transmission	27,213		-			27,213	-
17 Distribution	8,590		-			8,590	-
18 Other Operating Expenses	22,283		(1,347)	(1,367)	600	21,537	21,517 (747) (767)
19							
20 Depreciation/Amortization	44,410		(3,263)			41,147	(3,263)
21							
22 Property Taxes	12,670		(234)			12,435	(234)
23 Payroll & Other Taxes	1,944		-			1,944	-
24 Deferred Income Taxes	5,375		695			6,071	695
25 Federal & States Taxes	(4,477)	2,999	5,162	3,105	25	(227)	3,482 1,426 7,959 5,902
26 Total Expenses	243,932	(4,934)	5,140	4,031	25	373	244,537 243,427 604 (505)
27							
28 AFUDC	-		-	(1,117)		-	(1,117) - (1,117)
29							
30 Net Income	33,489	4,934	(5,140)	(5,148)	(25)	(373)	32,885 32,877 (604) (612)
31							
32 Total Revenue Requirements	244,699	(7,933)	(67)	880	(323)	600	236,975 237,922 (7,724) (6,777)
33 % of Baseline							-3.16% -2.77%

SD RTF Bridge - 2020
\$000s

Pseudo Separation

Witness WP Reference Column	Legacy System Baseline (Year 2020)	Disputed Resources	New Wind & Related Costs	Sherco Units 1 & 2 Retirements	Additional A&G	Total Pseudo Separation	DIFFERENCE from Baseline				
	Burdick L	Burdick CRB-1 Sch. 11 M	Burdick CRB-1 Sch. 12 N	Burdick CRB-1 Sch. 13 O	Starkweather RDS-1 P	Q	R				
1	Rate Base:										
2	Production	288,847		4,447	5,401		294,248	293,294	4,447	5,401	
3	Transmission	141,696		-				141,696	-		
4	Distribution	181,129		-				181,129	-		
5	Other Rate Base	82,124		-				82,124	-		
6	Total Rate Base	693,797		4,447	5,401		699,198	698,244	4,447	5,401	
7											
8	Revenues:										
9	Retail	233,626		-				233,626	-		
10	Other	53,271		-				53,271	-		
11	Total Revenues	286,897		-				286,897	-		
12											
13	Expenses:										
14	Fuel & Purchased Energy	69,755	438	(296)	(350)		69,843	69,897	141	88	
15	Production	51,244		69				51,312	69		
16	Transmission	28,489		-				28,489	-		
17	Distribution	9,313		-				9,313	-		
18	Other Operating Expenses	22,346		74	75		22,422	22,421	74	75	
19											
20	Depreciation/Amortization	52,234		180	164			52,578	344		
21											
22	Property Taxes	13,439		13				13,452	13		
23	Payroll & Other Taxes	1,942		-				1,942	-		
24	Deferred Income Taxes	7,760		(38)				7,722	(38)		
25	Federal & States Taxes	(4,221)	(3,750)	(153)	(285)	(171)	(57)	(4,603)	(4,245)	(495)	(382)
26	Total Expenses	252,301	252,773	285	(284)	(222)	106	252,470	252,880	107	168
27											
28	AFUDC	-		-	62			62	-	-	62
29											
30	Net Income	34,596	34,124	(285)	284	(106)	34,489	34,017	(107)		
31											
32	Total Revenue Requirements	262,163	438	4	(49)	164	262,715	262,768	605	553	
33	% of Baseline								0.23%	0.21%	

WI RTF Bridge - 2020
\$000s

Pseudo Separation

Witness WP Reference Column	Legacy System Baseline (Year 2020)	Disputed Resources	New Wind & Related Costs	Sherco Units 1 & 2 Retirements	Additional A&G	Total Pseudo Separation	DIFFERENCE from Baseline				
	Burdick L	Burdick CRB-1 Sch. 11 M	Burdick CRB-1 Sch. 12 N	Burdick CRB-1 Sch. 13 O	Starkweather RDS-1 P	Q	R				
1	Rate Base:										
2	Production	136,577		13,705	16,645	153,222	150,282	13,705	16,645		
3	Transmission	901,814		-			901,814	-			
4	Distribution	465,251		-			465,251	-			
5	Other Rate Base	41,144		-			41,144	-			
6	Total Rate Base	1,544,786		13,705	16,645	1,561,431	1,558,491	13,705	16,645		
7											
8	Revenues:										
9	Retail	716,155		-			716,155	-			
10	Other	2,266		-			2,266	-			
11	Total Revenues	718,421		-			718,421	-			
12											
13	Expenses:										
14	Fuel & Purchased Energy	15,942	1,349	(913)	(1,078)	16,214	16,378	436	271		
15	Production	409,559		211			409,771	211			
16	Transmission	(62,839)		-			(62,839)	-			
17	Distribution	29,596		-			29,596	-			
18	Other Operating Expenses	61,090		229	232	61,322	61,319	229	232		
19											
20	Depreciation/Amortization	120,655		555	469		121,679	1,024			
21											
22	Property Taxes	24,780		40			24,820	40			
23	Payroll & Other Taxes	4,159		-			4,159	-			
24	Deferred Income Taxes	8,717		(118)			8,599	(118)			
25	Federal & States Taxes	24,866	24,237	(541)	(878)	(528)	(188)	22,979	23,258	(1,608)	(1,258)
26	Total Expenses	636,526	635,898	808	(874)	(686)	281	636,301	636,741	215	403
27											
28	AFUDC/Other Income	50		-			50	-			
29											
30	Net Income	81,945	82,573	(808)	874	875	(281)	82,360	81,730	(215)	(213)
31											
32	Total Revenue Requirements	778,958	784,080	1,349	11	(150)	470	785,749	780,788	1,830	1,669
33	% of Baseline							0.23%	0.21%		

Revenue Requirements of New Wind:		NSP System Energy Allocators:			
		5.51%	77.48%	5.52%	17.01%
<u>Line</u>	<u>2020</u>	<u>ND</u>	<u>MN</u>	<u>SD</u>	<u>WI</u>
1 New Ownership Wind, 1150MW	74,302	(4,091)	3,169	226	696
* 2 New PPA Wind, 400MW	23,824 23,827	(1,312) (1,312)	1,016 1,016	72 72	223 223
* 3 Reduced Production Costs (Avoided Fuel)	(41,366) (38,182)	2,102 2,277	(1,629) (1,765)	(116) (126)	(358) (387)
* 4 Change in MISO Purchases & Sales	(79,998) (67,728)	3,729 4,404	(2,889) (3,412)	(206) (243)	(634) (749)
* 5 Change in Wind Congestion, Integration, Coal Cycling	24,458 24,820	(1,367) (1,347)	1,059 1,043	75 74	232 229
* 6 Total System Cost	1,220 17,040	(938) (67)	727 52	52 4	160 11
* 7 Replacement Cost		1,818	(1,408)	(100)	(309)
* 8 Net Impact of reallocation		880	(681)	(49)	(150)

1 **Chart 1: Plan Names, Descriptions and Vintages**

2

Plan Name	Brief Description	Vintage
IRP Reference Case	Sherco 1 and 2 run to 2030, 400 MW of wind by 2020, 287 MW of solar (187 MW portfolio plus Aurora), CTs for additional capacity needs with “markets off” assumption	January 2015
IRP Plan	Closure of Sherco 2 in 2023, Sherco 1 in 2026, 1,200 MW of wind by 2020, 800 MW of solar, Sherco CC, CTs for additional capacity needs with “markets off” assumption	October 2015
Original December 2016 Filing Updated Reference Case	Updated the IRP Reference Case with Fall 2016 assumptions with “markets off” assumption	December 2016
Original December 2016 Filing Updated IRP Plan	Updated the IRP Plan with Fall 2016 assumptions and 1,500 MW of wind by 2020 with “markets off” assumption	December 2016
Current Filing July 2017 Updated Reference Case	Updated the IRP Reference Case with Spring 2017 assumptions with “markets on” assumption	July 2017
Current Filing July 2017 Updated IRP Plan	Updated the IRP Reference Case with Spring 2017 assumptions and 1,550 MW of wind by 2020 with “markets on” assumption	July 2017

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20 Adjusted chart to see last two lines.

21 Q. DID YOU UPDATE THE ANALYSIS OF THE SYSTEM-WIDE IMPACT OF THE
22 VARIOUS PLANS?

23 A. Yes. The results of that analysis are shown in the Table 4 below, which
24 provides the system-wide impact of our IRP Reference Case, our Updated
25 Reference Case, our IRP plan, and our Updated IRP Plan on a PVSC and
26 PVRR basis.

27