



Western Area Power Administration (WAPA)
Upper Great Plains Region (WAPA-UGP)
Transmission and Ancillary Services
Rate Calculation
Effective October 1, 2020

WAPA-UGP 2020 Rate Estimate Calculation

(Rate Order No. WAPA-188)

WAPA-UGP

Transmission and Ancillary Services List of Workpapers and Schedules

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WAPA-UGP 2020 Rate Estimate Calculation

Summary-ATRR - Calculation of ATRRs (Sched 9, Sched 11)

12 Months Ending 09/30/2020 ESTIMATE

						TRANSMISSION
Line No.	(1)	REFERENCE (2)	COMPANY TOTAL (3)	ALLOCATOR (4)	ALLOCATION (4)	ALLOCATED AMOUNT (5)
1	Gross Zonal Revenue Requirement	Sch 9				157,207,635
2	REVENUE CREDITS					
3	Firm Point-to-Point Revenue Credit	Sch 7	4,837,343	NA	100%	4,837,343
4	Non-Firm Point-to-Point Revenue Credit	Sch 8	2,255,482	NA	100%	2,255,482
5	Revenue from Existing Transmission Agreements		1,141,626	NA	100%	1,141,626
6	Scheduling, System Control, and Dispatch Service Credit	Sch 1	10,681,455	NA	100%	10,681,455
7	Account No. 454		79,567	TP	100%	79,567
8	Z2 Nonfirm Point-to-Point Revenue Credit		(231,453)	NA	100%	(231,453)
9	TOTAL REVENUE CREDITS		18,764,020			18,764,020
10	TRUE-UP ADJUSTMENT		(1,753,159)			(1,753,159)
11	Net Revenue Requirement	Sch 9				136,690,456
12						
13						
14	SPP Upgrades - Zonal Gross Revenue Requirement	Sch 11	703,531			703,531
15	REVENUE CREDITS					
16	Point-to Point Revenue Credit	Sch 11	18,333			
17	TOTAL ZONAL REVENUE CREDITS				86.21%	15,805
18	TRUE-UP ADJUSTMENT		-			0
19	Net Revenue Requirement SPP Upgrades - Zonal	Sch 11				687,726
20						
21	SPP Upgrades - Regional Gross Revenue Requirement	Sch 11	112,533			112,533
22	REVENUE CREDITS					
23	Point-to Point Revenue Credit	Sch 11	18,333			
24	TOTAL REGIONAL REVENUE CREDITS				13.79%	2,528
25	TRUE-UP ADJUSTMENT		-			0
26	Net Revenue Requirement SPP Upgrades - Regional	Sch 11				110,005
27						
28	Total Schedule 11 Revenue Requirement	L19 + L26				\$ 797,731

WAPA-UGP 2020 Rate Estimate Calculation					
Worksheet 1 - Schedule 9 Revenue Requirement - Non-Levelized					
Utilizing Financial Statement Results of Operations					
12 Months Ending 09/30/2020 ESTIMATE					
Line No.	REFERENCE	COMPANY TOTAL	ALLOCATOR		TRANSMISSION ALLOCATED AMOUNT
(1)	(2)	(3)		(4)	(5)
1	GROSS REVENUE REQUIREMENT	(line 75)	157,207,635		\$ 157,207,635
2	REVENUE CREDITS		18,764,020		18,764,020
3	PRIOR PERIOD TRUE-UP (Under-collection)		(1,753,159)		(1,753,159)
10	NET REVENUE REQUIREMENT	(line 1 - line 2 + line 3)	\$ 136,690,456		\$ 136,690,456
RATE BASE:					(Col 3 times Col 4)
GROSS PLANT IN SERVICE					
11	Production	Schedule 1A Total	1,109,513,660	NA	
12	Transmission	Schedule 1A Total	1,522,421,803	TP	1.00000
13	Distribution	Schedule 1A Total	55,291,887	NA	
Bal Sheet - Other Assets - SGL					
14	General & Intangible	175002	-	W/S	1.00000
15	Common		-	CE	0.00000
16	TOTAL GROSS PLANT	(sum lines 11 to 15)	2,687,227,350	GP=	56.654%
ACCUMULATED DEPRECIATION					
17	Production	Schedule 4	575,084,959	NA	
18	Transmission	Schedule 4	761,487,844	TP	1.00000
19	Distribution	Schedule 4	27,592,797	NA	
Bal Sheet - Other Assets - SGL					
20	General & Intangible	175902	0	W/S	1.00000
21	Common		0	CE	0.00000
22	TOTAL ACCUM. DEPRECIATION	(sum lines 17 to 21)	1,364,165,600		
NET PLANT IN SERVICE					
23	Production	(line 11 - line 17)	534,428,701		
24	Transmission	(line 12 - line 18)	760,933,959		
25	Distribution	(line 13 - line 19)	27,699,090		
26	General & Intangible	(line 14 - line 20)	0		
27	Common	(line 15 - line 21)	0		
28	TOTAL NET PLANT	(sum lines 23 to 27)	1,323,061,750	NP=	57.513%
ADJUSTMENTS TO RATE BASE					
(Note B)					
29	Account No. 281	(enter negative)	0		0.00000
30	Account No. 282	(enter negative)	0	NP	0.57513
31	Account No. 283	(enter negative)	0	NP	0.57513
32	Account No. 190		0	NP	0.57513
33	Account No. 255	(enter negative)	0	NP	0.57513
34	TOTAL ADJUSTMENTS	(sum lines 29 to 33)	0		
LAND HELD FOR FUTURE USE					
(Note C)					
35	WORKING CAPITAL		0	TP	1.00000
(Note D)					
36	CWC	calculated	23,395,797		
Bal Sheet - Other Assets - SGL					
37	Materials & Supplies	151191 (Note C)	0	TE	0.00000
38	Prepayments	Bal Sheet Other Assets	0	GP	0.56654
39	TOTAL WORKING CAPITAL	(sum lines 36 to 38)	23,395,797		
40	RATE BASE	(sum lines 28, 34, 35, 39)	1,346,457,547		
O&M					
Transmission					
41	Western-UGP	Schedule 11 (Note E)	64,251,178	PTP/UGP	0.95041
42	Western-RMR		46,417,099	PTP/RMR	0.01246
43	COE	COE Financial Strmts	46,743,530	PTP/COE	0.07896
44	Less Account 565	(Note E)	0	NA	1.00000
A&G					
Schedule 11 (Note F)					
45	Western-UGP		19,840,517	PTP/UGP	0.95041
46	Western-RMR		9,914,052	PTP/RMR	0.01246
47	Less FERC Annual Fees		0	W/S	1.00000
48	Less EPRI & Reg. Comm. Exp. & Non-safety Ad	(Note G)	0	W/S	1.00000
49	Plus Transmission Related Reg. Comm. Exp	(Note G)	0	TE	0.00000
50	Common		0	CE	0.00000
51	Transmission Lease Payments		0	NA	1.00000
52	TOTAL O&M	(sum lines 41, 42, 43, 45, 46, 49, 50 less 44, 47, 48)	187,166,376		
DEPRECIATION EXPENSE					
Transmission					
53	Western-UGP	Schedule 4	35,378,568	PTP/UGP	0.95041
54	Western-RMR		19,115,399	PTP/RMR	0.01246
55	COE		15,118,338	PTP/COE	0.07896
56	General		0	W/S	1.00000
57	Common		0	CE	0.00000
58	TOTAL DEPRECIATION	(sum lines 53 to 58)	69,612,305		
TAXES OTHER THAN INCOME TAXES					
(Note H)					
LABOR RELATED					
60	Payroll		0	W/S	1.00000
61	Highway and vehicle		0	W/S	1.00000
PLANT RELATED					
62	Property		0	GP	0.56654
63	Gross Receipts		0	GP	0.00000
64	Other		0	GP	0.56654
65	Payments in lieu of taxes		0	GP	0.56654
66	TOTAL OTHER TAXES	(sum lines 60 to 65)	0		
INCOME TAXES					
(Note I)					
67	T=1 - [(1 - SIT) * (1 - FIT)] / (1 - SIT * FIT * p) =		0.00%		
68	CIT=(T/1-T) * (1-(WCLTD/R)) = where WCLTD= (line 106) and R= (line 108) and FIT, SIT & p are as given in footnote I.		0.00%		
69	1 / (1 - T) = (from line 67)		0.0000		
70	Amortized Investment Tax Credit	(enter negative)	0		
71	Income Tax Calculation	(line 68 * line 74)	0	NA	
72	ITC adjustment	(line 69 * line 70)	0	NP	0.57513
73	Total Income Taxes	(line 71 + line 72)	0		
74	RETURN [Rate Base * Rate of Return]	(line 40 * line 105)	66,951,069	NA	
75	REV. REQUIREMENT	(sum lines 52, 59, 66, 73, 74)	323,729,750		

SUPPORTING CALCULATIONS AND NOTES

TRANSMISSION PLANT INCLUDED IN UMZ RATES						
76	Total transmission plant	(line 12, column 3)				1,522,421,803
77	Less transmission plant excluded from UMZ rates	(Note K)				0
78	Less transmission plant included in OATT Ancillary Services	(Note L)				0
79	Transmission plant included in UMZ rates	(line 76 less line 77 and 78)				1,522,421,803
80	Percentage of transmission plant included in UMZ Rates	(line 79 / line 76)		TP=		1.00000
TRANSMISSION EXPENSES						
81	Total transmission expenses	(sum lines 41 to 43, column 3)				
82	Less transmission expenses included in OATT Ancillary Services	(Note J)				0
83	Included transmission expenses	(line 81 - line 82)				0
	Percentage of transmission expenses after adjustment (line 8 divided by line 6)	(line 83 / line 81)				0.00000
84		(line 80)		TP		1.00000
85	Percentage of transmission plant included in UMZ Rates	(line 80)		TE=		0.00000
86	Percentage of transmission expenses included in UMZ Rates	(line 85 * line 84)				0.00000
WAGES & SALARY ALLOCATOR (W&S)						
			\$	TP	Allocation	
87	Production		0	0.00	0	
88	Transmission		22,760,814	1.00	22,760,814	
89	Distribution		0	0.00	0	
90	Other		0	0.00	0	W&S Allocator (\$ / Allocation)
91	Total	(sum lines 87 to 90)	22,760,814		22,760,814	= 1.00000
PERCENTAGE OF TOTAL PLANT ALLOCATOR PTP		(Note M)	\$			
92	Transmission Plant in Service Western-UGP		1,418,874,523			
93	Total Plant in Service Western-UGP		1,492,902,586			
94	UGP Percentage of Transmission Plant to Total Plant	(line 92 / line 93)			PTP/UGP	= 0.95041
95	Transmission Plant in Service Western-RMR		10,034,426			
96	Total Plant in Service Western-RMR		805,173,863			
97	RMR Percentage of Transmission Plant to Total Plant	(line 95 / line 96)			PTP/RMR	= 0.01246
98	Transmission Plant in Service COE		93,512,853			
99	Total Plant in Service COE		1,184,290,338			
100	COE Percentage of Transmission Plant to Total Plant	(line 98 / line 99)			PTP/COE	= 0.07896
COMMON PLANT ALLOCATOR (CE)		(Note N)	\$		% Electric	Labor Ratio =
101	Electric		0		(line 101 / line 104)	(line 91)
102	Gas		0		0.00000	* 1.00000
103	Water		0			
104	Total	(sum lines 101 to 103)	0			
RETURN (R)			\$			
105	Long Term Interest Schedule 5		\$44,417,468			
			\$	%	Cost (Note O)	Weighted =WCLTD
106	Long Term Debt	HFD Sch's 21RX & 21X Col 8 Lines 23,25,26,29,30	893,282,736	100%	0.0497	0.0497 =R
107	Proprietary Capital		0	0%	0.1238	0.0000
108	Total (sum lines 31-32)	(sum lines 106 to 107)	893,282,736	100%		0.0497
109					Proprietary Capital Cost Rate =	12.38%
110					TIER =	1.00
REVENUE CREDITS						
ACCOUNT 447 (SALES FOR RESALE)						Load
111	a. Bundled Non-RQ Sales for Resale	(Note P)				0
112	b. Bundled Sales for Resale included in Divisor on page 1					0
113	Total of (a)-(b)					0
114	ACCOUNT 454 (RENT FROM ELECTRIC PROPERTY)	(Note Q)				79,567
115	ACCOUNT 456 (OTHER ELECTRIC REVENUES)					0
116	a. Transmission charges for all transmission transactions					0
117	b. Transmission charges for all transmission transactions included in Divisor on page 1					0
118	Total of (a)-(b)					0

Note Letter General Note: References to Results of Operations in this revenue requirement template indicate the Financial Statement Results of Operations (ROOs) Schedule where data is located. To the extent the references to ROOs data are missing, the entity will include a "Notes" section to provide this data.

A Combines plant data for both the Western-Upper Great Plains Region (Western-UGP) and Western-Rocky Mountain Region (Western-RMR).

B Does not apply to Western. For others, the balances in Accounts 190, 281, 282 and 283, as adjusted by any contra accounts identified as regulatory assets amounts in or liabilities related to FASB 106 or 109. Balance of Account 255 is reduced by prior flow throughs and excluded if the utility chose to utilize amortization of tax credits against taxable income as discussed in Note K. Account 281 is not allocated.

C Transmission related only.

D Cash Working Capital assigned to transmission is one-eighth of O&M allocated to transmission at line 52 column 5. Prepayments are the electric related prepayments booked to Account No. 165 and reported in the Other Assets Section of the Balance Sheet.

E For O&M Expense. Calculated as Total O&M from Results of Operations less Purchase Power, Transmission Service Provided by Others (FERC 565), O&M Expense Fort Peck Powerhouse, Prior Year Adjustments, A&G Expense from Schedule 11, plus CME and Warehouse Interest from Schedule 5. Depreciation Expense from Results of Operations Schedule 4.

F Totals of Results of Operations Schedule 11A Object Classes 1411, 1412, 1415, 1416, 1421, 1422, 1425, 1426, 1431, 1432, 1441, 1442.

G Line 48 - EPRI Annual Membership Dues, all Regulatory Commission Expenses, and non-safety related advertising. Line 49 - Regulatory Commission Expenses directly related to transmission service, ISO filings, or transmission siting.

H Includes only FICA, unemployment, highway, property, gross receipts, and other assessments charged in the current year. Taxes related to income are excluded. Gross receipts taxes are not included in transmission revenue requirement in the Rate Formula Template, since they are recovered elsewhere.

I Western is not subject to Federal or State Income Tax.

Inputs Required:

FIT =	0.00%	
SIT=	0.00%	(State Income Tax Rate or Composite SIT)
p =	0.00%	(percent of federal income tax deductible for state purposes)

J Removes dollar amount of transmission expenses included in the OATT ancillary services rates, including Act No. 561. Western does not include transmission expenses in ancillary service rates.

K Removes transmission plant determined by Commission order to be state-jurisdictional according to the seven-factor test (until RUS 12 balances are adjusted to reflect application of seven-factor test).

L Removes dollar amount of transmission plant included in the development of OATT ancillary services rates and generation step-up facilities, which are deemed to be included in OATT ancillary services. For these purposes, generation step-up facilities are those facilities at a generator substation on which there is no through-flow when the generator is shut down.

M Percentage of Total Plant Allocators are developed separately for Western-UGP and Western-RMR to allocate O&M, A&G, and Depreciation Expenses between Transmission and Generation.

N Western does not have Common Plant.

O Debt cost rate = long-term interest (line 105) / long term debt (line 106). The Proprietary Capital Cost rate is implicit, a residual calculation after TIER is determined. TIER will be supported in the filing and no change in TIER may be made absent a filing with the ISO and the FERC, if the entity is under FERC's jurisdiction.

P Line 111 must equal zero since all short-term power sales must be unbundled and the transmission component reflected in Account No. 456 and all other uses are to be included in the divisor.

Q Includes income related only to transmission facilities, such as pole attachments, rentals and special use.

R The revenues credited shall include only the amounts received directly reflecting the Transmission Owner's integrated transmission facilities. They do not include revenues associated with FERC annual charges, gross receipts taxes, facilities not included in this template (e.g., direct assignment facilities and GSUs) which are not recovered under this Revenue Requirement Template.

WAPA-UGP 2020 Rate Estimate Calculation

Worksheet 2 - Determination of Pick-Sloan Missouri Basin Program, Eastern Division Annual Costs

Line No.	DESCRIPTION (1)	TRANSMISSION (2)	GENERATION (3)	COE GENERATION (5)	BASE PLAN UPGRADES- REGIONAL (4)	BASE PLAN UPGRADES- ZONAL (5)	REFERENCE (6)
1	A. Operation and Maintenance Expense						
2	O&M Expense	\$65,334,567	\$86,475,951	\$43,052,610	\$46,276	\$289,720	O&M Expenses Worksheet
3	Transmission of Electricity by Others	\$0	\$0	\$0	\$0	\$0	
4	Total O&M Expense	\$65,334,567	\$86,475,951	\$43,052,610	\$46,276	\$289,720	L2 + L3
5	Net Plant Investment	\$760,933,959	\$697,810,962	\$525,042,604	\$538,649	\$3,372,355	Net Plant Investment Worksheet
6	O&M as % of Net Plant Investment	8.586%	12.392%	8.200%	8.591%	8.591%	L4/L5
7	B. A&G Expense						
8	A&G Expense	\$18,980,245	\$249,002	\$0	\$14,290	\$89,465	A&G Expenses Worksheet
9	Net Plant Investment	\$760,933,959	\$697,810,962	\$525,042,604	\$538,649	\$3,372,355	L5
10	A&G as % of Net Plant Investment	2.494%	0.036%	0.000%	2.653%	2.653%	L8/L9
11	C. Depreciation Expense						
12	Depreciation Expense	\$35,056,248	\$17,592,617	\$13,924,578	\$25,481	\$159,528	Depreciation Expense Worksheet
13	Net Plant Investment	\$760,933,959	\$697,810,962	\$525,042,604	\$538,649	\$3,372,355	L5
14	Depreciation as a % of Net Plant Investment	4.607%	2.521%	2.652%	4.730%	4.730%	L12/L13
15	D. Taxes Other than Income Taxes for Transmission						
16	Not applicable.						
17	E. Allocation of General Plant						
18	No General Plant identified at this time, all plant is identified as either generation or transmission related.						
19	F. Cost of Capital						
20	Weighted Transmission Composite Interest Rate	4.917%	3.494%	3.494%	4.917%	4.917%	Cost of Capital Worksheet
21	G. Fixed Charge Rate						
22	Operation and Maintenance Expense	8.586%	12.392%	8.200%	8.591%	8.591%	L6
23	A&G Expense	2.494%	0.036%	0.000%	2.653%	2.653%	L10
24	Depreciation Expense	4.607%	2.521%	2.652%	4.730%	4.730%	L14
25	Taxes Other than Income Taxes	0.000%	0.000%	0.000%	0.000%	0.000%	
26	Allocation of General Plant to Transmission	0.000%	0.000%	0.000%	0.000%	0.000%	
27	Cost of Capital	4.917%	3.494%	3.494%	4.917%	4.917%	L20
28	Total	20.605%	18.444%	14.346%	20.892%	20.892%	
29	H. Revenue Requirement						
30	Fixed Charge Rate	20.605%	18.444%	14.346%	20.892%	20.892%	L28
31	Net Plant Investment	\$760,933,959	\$697,810,962	\$525,042,604	\$538,649	\$3,372,355	L5
32	Annual Western-UGPR Cost	\$156,788,637	\$128,702,306	\$75,324,599	\$112,533	\$704,543	L30 * L31

WAPA-UGP 2020 Rate Estimate Calculation
 Worksheet 3 - Revenue Credit Calculation
 12 Months Ending 09/30/2020 ESTIMATE

Line No.	ACCOUNT	MONTH (1)	REFERENCE (2)	COMPANY TOTAL (3)	ALLOCATOR (4)	TRANSMISSION	
						ALLOCATED AMOUNT (5)	
1	Z2 Sch 7/8		Z2	(231,453)	NA	100%	(231,453)
2	Z2 Sch 7/8 Adjustments			-		100%	0
3	Subtotal			(231,453)			(231,453)
4	45644		OTHER ELE	4,837,343	TP	100%	4,837,343
5	45644 Adjustments			-		100%	0
6	Subtotal			4,837,343			4,837,343
7	45645		OTHER ELE	2,255,482	TP	100%	2,255,482
8	45645 Adjustments			-	TP	100%	0
9	Subtotal			2,255,482			2,255,482
10	Sch 7/8		MISO SEAM	1,141,626	TP	100%	1,141,626
11	Sch 7/8 Adjustments			-	TP	100%	0
12	Subtotal			1,141,626			1,141,626
13	7088		SSCD	10,681,455	NA	100%	10,681,455
14	7088 Adjustments			-	NA	100%	0
15	Subtotal			10,681,455			10,681,455
16	45420		RENT FROM	79,567	TP	100%	79,567
17	45420 Adjustments			-	TP	100%	0
18	Subtotal			79,567			79,567
19	45643		REVENUE F	-	TP	100%	0
20	45643 Adjustments		REVENUE F	-	TP	100%	0
21	Subtotal			-			0
22	7080		RESRV-SUP	-	NA	100%	0
23	7080 Adjustments			-	NA	100%	0
24	Subtotal			-			0
25	7089		RESRV-SPIN	-	NA	100%	0
26	7089 Adjustments			-	NA	100%	0
27				-			0
28	7091		REGULATIO	-	NA	100%	0
29	7091 Adjustments			-	NA	100%	0
30				-			0
31	Sch 11		PTP	-	NA	100%	0
32	Adjustments			-	NA	100%	0
33				-			0
34	NOTES:	Includes twelve months of revenue credits from January-December or February-January depending on when WAPA began receiving revenue credits from SPP.					
35		Revenue credit sheet may be updated or adjusted as necessary to include all revenue credits received.					
36							
37							
38							
39							
40							

WAPA-UGP 2020 Rate Estimate Calculation
Worksheet 4 - Cost Support Data
12 Months Ending 09/30/2020 ESTIMATE

Line No.	(1)	WESTERN-UGP (2)	WESTERN-RMR (3)	COE (5)	BOR (6)	TOTAL (7)				
1	Net Plant Investment Worksheet									
2	Total PS Plant-in-Service	1,492,902,586	1/	805,173,863	2/	1,184,290,338	3/	530,109,730	12/	4,012,476,517
3	PS-ED Transmission Plant-in-Service	1,418,874,523	4/	10,034,426	5/	93,512,853	6/	0		1,522,421,803
4	PS-ED Generation Plant-in-Service	18,736,176	7/	0		1,090,777,485	L2-L3	530,109,730	L2-L3	1,639,623,390
5	PS-ED SSCD Plant-in-Service	13,029,266	8/							13,029,266
6	BPU-Regional Plant-in-Service	1,075,230								1,075,230
7	BPU-Zonal Plant-in-Service	6,731,770								6,731,770
8	Generation Plant to Total Plant	0.01255	L4/L2	0.00000	L4/L2	0.92104	L4/L2	1.00000	L4/L2	
9	Transmission Plant to Total Plant	0.95041	L3/L2	0.01246	L3/L2	0.07896	L3/L2	0.00000	L3/L2	
10	SSCD Plant to Total Plant	0.00873	L5/L2							
11	BPU-Regional Plant to Total Plant	0.00072								
12	BPU-Zonal Plant to Total Plant	0.00451								
13	PS Accumulated Depreciation	745,016,307	9/	394,281,087	10/	614,235,591	11/	366,727,469	13/	2,120,260,454
14	PS-ED Trans. Accumulated Depreciation	708,073,432	L7*L9	4,913,702	L7*L9	48,500,710	L7*L9	0	L7*L9	761,487,844
15	PS-ED Gen. Accumulated Depreciation	9,350,078	L6*L9	0	L6*L9	565,734,881	L9-L10	366,727,469	L6*L9	941,812,428
16	PS-ED SSCD Accumulated Depreciation	6,502,109								6,502,109
17	BPU-Regional Accumulated Depreciation	536,582								536,582
18	BPU-Zonal Accumulated Depreciation	3,359,414								3,359,414
19	PS-ED Net Transmission Plant	710,801,091	L3-L10	5,120,724	L3-L9	45,012,143	L3-L10	0	L3-L10	760,933,959
20	PS-ED Net Generation Plant	9,386,097	L4-L11	0	L4-L10	525,042,604	L4-L11	163,382,261	L4-L11	697,810,962
21	PS-ED Net SSCD Plant	6,527,157	L5-L12							6,527,157
22	Regional Net Plant	538,649								538,649
23	Base Plan Upgrade Net Plant	3,372,355								3,372,355
24	1/ Transmission Plant-in-Service Worksheet, C2L498									
25	2/ FY RMCSR - Pick-Sloan Missouri River Basin Results of Operations, Schedule 1									
26	3/ FY Corps of Engineers Financial Statements, Electric and Power Multi-Purpose Plant in Service									
27	4/ Transmission Plant-in-Service Worksheet, C5L498									
28	5/ Transmission Plant-in-Service Worksheet, C5L489									
29	6/ Transmission Plant-in-Service Worksheet, C5L496									
30	7/ Transmission Plant-in-Service Worksheet, C4L498									
31	8/ SSCD Plant-in-Service is based on a percentage of Watertown Operations Centers cost, based on FTE									
32	9/ FY UGPCSR - Pick-Sloan Missouri River Basin and UGPCSR - Ft. Peck Power System Results of Operations, Schedule 4									
33	10/ FY RMCSR - Pick-Sloan Missouri River Basin Results of Operations, Schedule 4									
34	11/ FY Corps of Engineers Financial Statements, Statement of Assets and Liabilities									
35	12/ FY Historical Financial Data in Support of the Power Repayment Study for the P-SMBP, Schedule 15									
36	13/ FY Historical Financial Data in Support of the Power Repayment Study for the P-SMBP, Schedule 17									

WAPA-UGP 2020 Rate Estimate Calculation										
Line No.	(1)	WESTERN-UGP (2)		WESTERN-RMR (3)		COE (5)		BOR (6)		TOTAL (7)
1	Depreciation Worksheet									
2	PS Depreciation Expense	35,378,568	1/	19,115,399	2/	15,118,338	3/	3,224,033	4/	72,836,338
3	PS-ED Transmission Depreciation 5/	33,624,263		238,224		1,193,760		0		35,056,248
4	PS-ED Generation Depreciation 6/	444,007		0		13,924,578		3,224,033		17,592,617
5	PS-ED SSCD Depreciation 7/	308,765								308,765
6	BPU-Regional Depreciation	25,481								25,481
7	BPU-Zonal Depreciation	159,528								159,528
8	1/ FY UGPCSR - Pick-Sloan Missouri River Basin and UGPCSR - Ft. Peck Power System Results of Operations, Schedule 4									
9	2/ FY RMCSR - Pick-Sloan Missouri River Basin Results of Operations, Schedule 4									
10	3/ FY Corps of Engineers Statement of Revenues and Expenses									
11	4/ From data provided by BOR									
12	5/ For Western-UGP, Western-RMR, COE, and BOR the portion of depreciation expense allocated to PS-ED transmission is based on the ratio of transmission plant-in-service to total									
13	plant-in-service, calculated on L7 of the Net Plant Investment Worksheet									
14	6/ For Western-UGP, Western-RMR and BOR the portion of depreciation expense allocated to PS-ED generation is based on the ratio of generation plant-in-service to total plant-in-service,									
15	calculated on L6 of the Net Plant Investment Worksheet. COE generation depreciation is COE total depreciation less transmission depreciation									
16	7/ For Western-UGP, the portion of depreciation expense allocated to PS-ED SSCD is based on the ratio of SSCD plant-in-service to total plant in service, calculated on L8 of the Net Plant									
17	Investment Worksheet									

WAPA-UGP 2020 Rate Estimate Calculation										
Line No.	(1)	WESTERN-UGP (2)		WESTERN-RMR (3)		COE (5)		BOR (6)		TOTAL (7)
1	Cost of Capital Worksheet									
2	Long Term Debt:									
3	FY Balances	890,868,593	1/	414,497,509	1/	629,217,755	1/	219,568,497	1/	2,154,152,354
4	Interest Expenses:									
5	FY Interest	44,653,166	13/	26,616,546	13/	20,855,793	2/	8,367,734	2/	100,493,239
6	Average Interest Rate	5.012%	L6/L3	6.421%	L6/L3	3.315%	L6/L3	3.811%	L6/L3	
7	Transmission Plant Factor	0.9320	3/	0.0066	4/	0.0614	5/	0.0000	6/	
8	Weighted Trans. Composite Rate									4.917% 7/
9	Generation Plant Factor	0.0114	8/	0.0000	9/	0.6653	10/	0.3233	11/	
10	Weighted Gen. Composite Rate									3.494% 12/
11	1/ FY Historical Financial Data in Support of the Power Repayment Study for the P-SMBP, Schedules 21X and 21RX									
12	2/ FY Historical Financial Data in Support of the Power Repayment Study for the P-SMBP, Schedule 33, 33A and ROOs Schedule 5									
13	3/ C2L3, Net Plant Investment Worksheet/C6L3, Net Plant Investment Worksheet									
14	4/ C3L3, Net Plant Investment Worksheet/C6L3, Net Plant Investment Worksheet									
15	5/ C4L3, Net Plant Investment Worksheet/C6L3, Net Plant Investment Worksheet									
16	6/ C5L3, Net Plant Investment Worksheet/C6L3, Net Plant Investment Worksheet									
17	7/ (C2L6*C2L7)+(C3L6*C3L7)+(C4L6*C4L7)+(C5L6*C5L7)									
18	8/ C2L4, Net Plant Investment Worksheet/C6L4, Net Plant Investment Worksheet									
19	9/ C3L4, Net Plant Investment Worksheet/C6L4, Net Plant Investment Worksheet									
20	10/ C4L4, Net Plant Investment Worksheet/C6L4, Net Plant Investment Worksheet									
21	11/ C5L4, Net Plant Investment Worksheet/C6L4, Net Plant Investment Worksheet									
22	12/ (C2L6*C2L9)+(C3L6*C3L9)+(C4L6*C4L9)+(C5L6*C5L9)									
23	13/ Interest from Results of Operations Schedule 5									

WAPA-UGP 2020 Rate Estimate Calculation						
Line No.	(1)	WESTERN-UGP (2)	WESTERN-RMR (3)	COE (5)	BOR (6)	TOTAL (7)
1	A&G Expenses Worksheet					
2		WESTERN-UGP 1/	WESTERN-RMR 2/	COE 3/	BOR 3/	Total
3	PS Total Est. A&G	19,840,517	9,914,052	0	0	29,754,569
4	PS-ED Est. Transmission A&G 4/	18,856,692	123,553	0	0	18,980,245
5	PS-ED Generation A&G 5/	249,002	0	0	0	249,002
6	PS-ED SSCD A&G 6/	173,158	0	0	0	173,158
7	BPU-Regional A&G	14,290	0	0	0	14,290
8	BPU-Zonal A&G	89,465	0	0	0	89,465
9	1/ Western-UGP A&G Est. Expenses are from the FY UGPCSR - Pick-Sloan Missouri River Basin and UGPCSR - Ft. Peck Power System Budget					
10	2/ Western RMR A&G Expenses are from the FY RMCSR - Pick-Sloan Missouri River Basin Budget					
11	3/ A&G Expenses for COE and BOR are unavailable. All COE and BOR A&G expenses are included in O&M Expenses					
12	4/ The portion of A&G expenses allocated to PS-ED transmission is based on the ratio of transmission plant-in-service to total plant-in-service, calculated on L7 of the Net Plant Investment Worksheet					
13	Investment Worksheet					
14	5/ The portion of A&G expenses allocated to PS-ED generation is based on the ratio of generation plant-in-service to total plant-in-service, calculated on L6 of the Net Plant Investment Worksheet					
15	Investment Worksheet					
16	6/ The portion of A&G expenses allocated to PS-ED SSCD is based on the ratio of SSCD plant-in-service to total plant-in-service, calculated on L8 of the Net Plant Investment Worksheet					

WAPA-UGP 2020 Rate Estimate Calculation

Line No.	(1)	WESTERN-UGP (2)	WESTERN-RMR (3)	COE (5)	BOR (6)	TOTAL (7)
1	O&M Expenses Worksheet					
2		WESTERN-UGP 1/	WESTERN-RMR 2/	COE 3/	BOR 4/	
3	Total Electric Operating Expense	76,219,000				76,219,000
4	Less:					
5	Other Power Supply Expenses					0
6	A&G Expenses	19,840,517				19,840,517
7	Prior Year Adjustments					0
8	Annual Reserve Sharing Group Cost	68,305				68,305
9	Plus:					
10	Moveable Property Interest	7,941,000				7,941,000
11	Warehouse Stores Interest					0
12	Scheduling, System Control & Dispatch	9,878,571				9,878,571
13	COE/BOR Total			46,743,530	42,616,978	89,360,508
14	PS Total O&M	64,251,178	46,417,099	46,743,530	42,616,978	163,558,562
15	PS-ED Transmission O&M 5/	61,065,177	578,470	3,690,920	0	65,334,567
16	PS-ED Generation O&M 6/	806,363	0	43,052,610	42,616,978	86,475,951
17	BPU-Regional O&M	46,276				46,276
18	BPU-Zonal O&M	289,720				289,720
19	1/ All Western-UGP O&M Expenses are from the FY UGPCSR - Pick-Sloan Missouri River Basin and UGPCSR - Ft. Peck Power System Budget					
20	2/ All Western RMR O&M Expenses are from the FY RMCSR - Pick-Sloan Missouri River Basin Results of Operations, Schedule 11; except Moveable Property and Warehouse					
21	Stores Interest, which are from Schedule 5					
22	3/ Total Corps O&M Expenses are from the FY Corps of Engineers Financial Statements					
23	4/ Total BOR O&M Expenses are from the FY Historical Financial Data in Support of the Power Repayment Study for the Pick-Sloan Missouri Basin Program, Schedule 14					
24	5/ The portion of O&M expenses allocated to PS-ED transmission is based on the ratio of transmission plant-in-service to total plant-in-service, calculated on L7 of the					
25	Net Plant Investment Worksheet					
26	6/ The portion of O&M expenses allocated to PS-ED generation is based on the ratio of generation plant-in-service to total plant-in-service, calculated on L6 of the					
27	Net Plant Investment Worksheet					

WAPA-UGP 2020 Rate Estimate Calculation
 Worksheet 5 - Zonal SPP Upgrade Calculations
 12 Months Ending 09/30/2020 ESTIMATE

Line No.	Project Name and # (1)	Type (2)	Project Gross Plant (3)	Allocation Factor % (4)	Project Accumulated Depreciation (5)	Allocation for Transmission O&M (6)	Allocation for General Plant Depreciation (7)	Allocation for A&G (8)	Cost of Capital (9)	Project Net Plant (10)	Cost of Capital (11)	Project ATRR (12)
1	Lewis & Clark-Richland	TL	90,576	1.346%	45,201	\$3,898	2,146	\$192	4.917%	45,375	\$ 2,231	\$ 8,468
2	Roberts County Substation	SUB	6,641,194	98.654%	3,314,213	\$285,822	157,382	\$88,261	4.917%	3,326,980	\$ 163,598	\$ 695,063
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14	Total		6,731,770		3,359,414	289,720	159,528	88,453		3,372,355	165,830	703,531

WAPA-UGP 2020 Rate Estimate Calculation
 Worksheet 6 - Base Plan Upgrades-Regional
 12 Months Ending 09/30/2020 ESTIMATE

Line No.	Project Name and # (1)	Type (2)	Project Gross Plant (3)	Allocation Factor % (4)	Project Accumulated Depreciation (5)	Allocation for Transmission O&M (6)	Allocation for General Plant Depreciation (7)	Allocation for A&G (8)	Cost of Capital (9)	Project Net Plant (10)	Cost of Capital (11)	Project ATRR (12)
1	Lewis & Clark-Richland	TL	45,424	4.225%	22,668	\$1,955	1,076	\$604	4.917%	22,756	\$ 1,119	\$ 4,754
2	Roberts County Substation	SUB	1,029,806	95.775%	513,913	\$44,321	24,404	\$13,686	4.917%	515,893	\$ 25,368	\$ 107,779
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14	Total		1,075,230		536,582	\$46,276	25,481	14,290		538,649	26,487	112,533

WAPA-UGP 2020 Rate Estimat Western-UGP 2020 Estimate
 Worksheet 7 - SPP Base Plan Upgrades-Facilities
 12 Months Ending 09/30/2020 ESTIMATE

2020 SPP ESTIMATE SUMMARY	FID	DESCRIPTION	PRIOR YEAR FACILITY	FY2019-20 ESTIMATE	BASE PLAN	BASE PLAN	FY2020 EST SPP
			TOTALS (\$)	ADD/REPL/RETIRE (\$)	UPGRADES-REGIONAL	UPGRADES-ZONAL	TOTALS (\$)
	RCO	ROBERTS COUNTY SUBSTATION	-	7,671,000	1,029,806	6,641,194	7,671,000
	LC-RH	LEWIS & CLARK - RICHLAND	-	136,000	45,424	90,576	136,000
		TOTAL	-	7,807,000	1,075,230	6,731,770	7,807,000
2020 SPP ESTIMATE DETAIL:	FID	DESCRIPTION	FID COST DETAIL (\$)	REG %	REG TOTAL (\$)	ZONAL %	ZONAL TOTAL (\$)
	LC-RH	WOOD POLE	20,000	33.40%	6,680	66.60%	13,320
	LC-RH	CONDUCTOR	116,000	33.40%	38,744	66.60%	77,256
		SUBTOTAL	136,000		45,424		90,576
	RCO	115-kV BREAKERS	456,211	33.40%	152,374	66.60%	303,836
	RCO	115-kV SWITCHES	261,537	33.40%	87,353	66.60%	174,184
	RCO	115-kV INSTRUMENT TRANSFORMERS	92,393	33.40%	30,859	66.60%	61,534
	RCO	115-kV RELAYS AND PANELS	368,805	33.40%	123,181	66.60%	245,624
	RCO	CONCRETE FOR 115-kV	428,624	33.40%	143,161	66.60%	285,464
	RCO	LAND FOR 115-kV	1,475,683	33.40%	492,878	66.60%	982,805
	RCO	69-kV BREAKERS	440,315	0.00%	0	100.00%	440,315
	RCO	69-kV SWITCHES	176,085	0.00%	0	100.00%	176,085
	RCO	69-kV INSTRUMENT TRANSFORMERS	29,461	0.00%	0	100.00%	29,461
	RCO	69-kV RELAYS AND PANELS	614,722	0.00%	0	100.00%	614,722
	RCO	115/69-kV TRANSFORMER	1,363,301	0.00%	0	100.00%	1,363,301
	RCO	CONCRETE FOR 69-kV	581,533	0.00%	0	100.00%	581,533
	RCO	LAND FOR 69-kV	1,382,331	0.00%	0	100.00%	1,382,331
		SUBTOTAL	7,671,000	0.00%	1,029,806		6,641,194
		TOTAL SPP UPGRADES	7,807,000		1,075,230		6,731,770

WAPA-UGP 2020 Rate Estimate Calculation
 Worksheet 8 - Transmission Facilities
 12 Months Ending 09/30/2020 ESTIMATE

Line No.	FID	DESCRIPTION	PRIOR YEAR	EST	ESTIMATED	ATTACHMENT	GENERATION	BASE UPGRADE	FY2020 EST SPP TOTALS (\$)
			FACILITY TOTALS (\$)	ADD/REPL/RETIRE (\$)	FACILITY TOTAL (\$)	AI ADJUSTMENTS (\$)	ADJUSTMENTS (\$)	ADJUSTMENTS (\$)	
1	TL	AUR BR	AURORA- BROOKINGS 115-KV T/L	133,158		133,158	-	-	133,158
2	TL	AUR FL	AURORA-FLANDREAU 115-KV T/L	96,623		96,623	-	-	96,623
3	TL	BK HET	BAKER-HETTINGER	459,778		459,778	-	-	459,778
4	TL	BU GA	BEULAH-GARRISON	357,312		357,312	-	-	357,312
5	TL	BS GH	BISMARCK-GLENHAM	5,076,897		5,076,897	-	-	5,076,897
6	TL	BS JT 1	BISMARCK-JAMESTOWN NO. 1	9,755,200		9,755,200	-	-	9,755,200
7	TL	BS JT 2	BISMARCK-JAMESTOWN NO. 2	4,229,572		4,229,572	-	-	4,229,572
8	TL	BS MDR	BISMARCK-MEDORA	12,764,457	-	12,764,457	-	-	12,764,457
9	TL	BR SF	BROOKINGS-SIOUX FALLS	2,587,518		2,587,518	-	-	2,587,518
10	TL	BR WT 1	BROOKINGS-WATERTOWN NO. 1	1,718,240		1,718,240	-	-	1,718,240
11	TL	BR WT 2	BROOKINGS-WATERTOWN NO. 2	3,318,558		3,318,558	-	-	3,318,558
12	TL	BR WHT	BROOKINGS-WHITE 115/230KV	2,952,237		2,952,237	-	-	2,952,237
13	TL	CF EH A	CANYON FERRY-EAST HELENA "A"	141,044		141,044	-	-	141,044
14	TL	CF EH B	CANYON FERRY-EAST HELENA "B"	141,044		141,044	-	-	141,044
15	TL	CA JT	CARRINGTON-JAMESTOWN	1,259,668		1,259,668	-	-	1,259,668
16	TL	WC BU	CHARLIE CREEK - WATFORD CITY	13,451,446		13,451,446	-	-	13,451,446
17	TL	CCRBEF	CHARLIE CREEK-BELFIELD	14,513,308		14,513,308	-	-	14,513,308
18	TL	CONSH2	CONRAD-SHELBY #2	5,804,318		5,804,318	-	-	5,804,318
19	TL	CS MY	CRESTON-MARYVILLE	1,366,481		1,366,481	-	-	1,366,481
20	TL	DC MC	DAWSON COUNTY - MILES CITY	2,605,678		2,605,678	-	-	2,605,678
21	TL	DC GL	DAWSON-GLENDIVE	553,800		553,800	-	-	553,800
22	TL	DC MDR	DAWSON-MEDORA	3,464,064		3,464,064	-	-	3,464,064
23	TL	DC OF	DAWSON-O'FALLON CREEK	918,676		918,676	-	-	918,676
24	TL	DC WN	DAWSON-WILLISTON	1,258,900		1,258,900	-	-	1,258,900
25	TL	DN CS	DENISON-CRESTON	20,977,731		20,977,731	-	-	20,977,731
26	TL	DL CA	DEVILS LAKE-CARRINGTON	7,672,600		7,672,600	-	-	7,672,600
27	TL	DL LA	DEVILS LAKE-LAKOTA	1,872,142		1,872,142	-	-	1,872,142
28	TL	ED FO	EDGELEY-FORMAN	375,316		375,316	-	-	375,316
29	TL	ED GR	EDGELEY-GROTON	771,572		771,572	-	-	771,572
30	TL	ELCMA	ELK CREEK-NEWELL-MAURINE 115-	60,704		60,704	-	-	60,704
31	TL	FA GK	FARGO-GRAND FORKS	2,369,098		2,369,098	-	-	2,369,098
32	TL	FA MO	FARGO-MORRIS	7,305,876		7,305,876	-	-	7,305,876
33	TL	FO SU D	FORMAN-SUMMIT (BISMARCK)	922,098		922,098	-	-	922,098
34	TL	FO SU C	FORMAN-SUMMIT (HURON)	4,465,037		4,465,037	-	-	4,465,037
35	TL	FP DC 1	FORT PECK-DAWSON 1	261,417		261,417	-	-	261,417
36	TL	FP DC 2	FORT PECK-DAWSON 2	8,301,710		8,301,710	-	-	8,301,710
37	TL	FP HV	FORT PECK-HAVRE	28,806,330		28,806,330	-	-	28,806,330
38	TL	FP WH	FORT PECK-WHATELY	157,876		157,876	-	-	157,876
39	TL	FP WN	FORT PECK-WILLISTON	10,096,097		10,096,097	-	-	10,096,097
40	TL	FP WP 2	FORT PECK-WOLF POINT #2	7,554,492		7,554,492	-	-	7,554,492

41	TL	FR FT D	FORT RANDALL-FORT THOMPSON	7,782,247		7,782,247	-	-	7,782,247
42	TL	FR GP	FORT RANDALL-GAVIN'S POINT	2,319,939		2,319,939	-	-	2,319,939
43	TL	FR GY	FORT RANDALL-GREGORY	777,327		777,327	-	-	777,327
44	TL	FR MV	FORT RANDALL-MT VERNON	1,308,562		1,308,562	-	-	1,308,562
45	TL	FR ON	FORT RANDALL-O'NEILL	679,540		679,540	-	-	679,540
46	TL	FR SC D	FORT RANDALL-SIOUX CITY 1&2	11,019,006		11,019,006	-	-	11,019,006
47	TL	FT GI	FORT THOMPSON-GRAND ISLAND	16,397,505		16,397,505	-	-	16,397,505
48	TL	FT HU D	FORT THOMPSON-HURON 230-KV	6,788,951	471,477	7,260,428	-	-	7,260,428
49	TL	FT SF D	FORT THOMPSON-SIOUX FALLS 1&	10,455,917		10,455,917	-	-	10,455,917
50	TL	GA BS D	GARRISON-BISMARCK 230KV 1&2	10,713,977		10,713,977	-	-	10,713,977
51	TL	GA JT	GARRISON-JAMESTOWN	4,763,399		4,763,399	-	-	4,763,399
52	TL	GA ML	GARRISON-MALLARD	1,948,079		1,948,079	-	-	1,948,079
53	TL	GA WJ	GARRISON-WM. J. NEAL	1,521,174		1,521,174	-	-	1,521,174
54	TL	GP BN	GAVINS POINT-BELDEN	455,727		455,727	-	-	455,727
55	TL	GP SF	GAVINS POINT-SIOUX FALLS	3,361,449		3,361,449	-	-	3,361,449
56	TL	GF MO	GRANITE FALLS- MORRIS	3,279,089		3,279,089	-	-	3,279,089
57	TL	GF MNV	GRANITE FALLS-MINNESOTA VALLE	156,778		156,778	-	-	156,778
58	TL	GTFCON	GREAT FALLS-CONRAD	12,744,945		12,744,945	-	-	12,744,945
59	TL	GY MS	GREGORY-MISSION	10,110,752		10,110,752	-	-	10,110,752
60	TL	GR HU	GROTON-HURON	2,869,906		2,869,906	-	-	2,869,906
61	TL	GR SU	GROTON-SUMMIT	3,255,847		3,255,847	-	-	3,255,847
62	TL	HV RB	HAVRE-RAINBOW	8,681,332		8,681,332	-	-	8,681,332
63	TL	HV SH2	HAVRE-SHELBY#2	5,561,905		5,561,905	-	-	5,561,905
64	TL	HE DV	HESKETT-DEVAUL	3,647,666		3,647,666	-	-	3,647,666
65	TL	HETNU	HETTINGER-NEW UNDERWOOD	11,263,708		11,263,708	-	-	11,263,708
66	TL	HU MV	HURON-MT VERNON	617,623		617,623	-	-	617,623
67	TL	HU WT D	HURON-WATERTOWN 230KV 1&3	6,319,622		6,319,622	-	-	6,319,622
68	TL	JT ED	JAMESTOWN-EDGELEY	1,189,520		1,189,520	-	-	1,189,520
69	TL	JT FA 1	JAMESTOWN-FARGO NO. 1	4,941,649		4,941,649	-	-	4,941,649
70	TL	JT FA 2	JAMESTOWN-FARGO NO. 2	3,155,850		3,155,850	-	-	3,155,850
71	TL	JT GK	JAMESTOWN-GRAND FORKS	28,751,577		28,751,577	-	-	28,751,577
72	TL	JT VC	JAMESTOWN-VALLEY CITY	1,055,414		1,055,414	-	-	1,055,414
73	TL	LE DL	LEEDS-DEVILS LAKE	8,982,948		8,982,948	-	-	8,982,948
74	TL	LE RL	LEEDS-ROLLA	5,274,134		5,274,134	-	-	5,274,134
75	TL	LC RH	LEWIS & CLARK-RICHLAND	-	136,000	136,000	-	(136,000)	-
76	TL	ML RG	MALLARD-RUGBY	1,089,083		1,089,083	-	-	1,089,083
77	TL	MR MS	MARTIN-MISSION	1,816,904		1,816,904	-	-	1,816,904
78	TL	MR PL	MARTIN-PHILIP	1,790,108		1,790,108	-	-	1,790,108
79	TL	MA RC	MAURINE-RAPID CITY	6,346,265		6,346,265	-	-	6,346,265
80	TL	MC BK	MILES CITY-BAKER	10,569,338		10,569,338	-	-	10,569,338
81	TL	MC CU	MILES CITY-CUSTER	3,750,704		3,750,704	-	-	3,750,704
82	TL	NU PL	NEW UNDERWOOD-PHILIP	2,915,316		2,915,316	-	-	2,915,316
83	TL	NU RC 1	NEW UNDERWOOD-RAPID CITY NC	1,132,486		1,132,486	-	-	1,132,486
84	TL	NU RC 2	NEW UNDERWOOD-RAPID CITY NC	309,991		309,991	-	-	309,991
85	TL	NU SG C	NEW UNDERWOOD-STEGALL (HUR	2,651,860		2,651,860	-	-	2,651,860
86	TL	OA FT N	OAHE-FORT THOMPSON 230KV 1&	3,973,416		3,973,416	-	-	3,973,416
87	TL	OA FT S	OAHE-FORT THOMPSON 230KV 3&	5,563,296		5,563,296	-	-	5,563,296
88	TL	OA GH	OAHE-GLENHAM	5,949,648		5,949,648	-	-	5,949,648

89	TL	OA MA	OAHE-MAURINE	1,967,901		1,967,901	-	-	1,967,901
90	TL	OA NU	OAHE-NEW UNDERWOOD	6,683,770		6,683,770	-	-	6,683,770
91	TL	OA PI	OAHE-PIERRE	388,816		388,816	-	-	388,816
92	TL	OF MC	O'FALLON CREEK-MILES CITY	2,488,318		2,488,318	-	-	2,488,318
93	TL	PI PL	PIERRE-PHILIP	2,140,436		2,140,436	-	-	2,140,436
94	TL	RC DRY	RAPID CITY-DRY CREEK	9,269,194		9,269,194			9,269,194
95	TL	ELCRC	RAPID CITY-ELK CREEK 115-KV T/L	52,064		52,064	-	-	52,064
96	TL	RG LE	RUGBY-LEEDS	2,235,655		2,235,655	-	-	2,235,655
97	TL	SH SH2	SHELBY-SHELBY #2	576,090		576,090	(576,090)	-	(0)
98	TL	SC DN	SIOUX CITY-DENISON	7,485,606		7,485,606	-	-	7,485,606
99	TL	SC SP	SIOUX CITY-SPENCER	1,938,353		1,938,353	-	-	1,938,353
100	TL	SC SF	SIOUX FALLS- SIOUX CITY	3,217,192		3,217,192	-	-	3,217,192
101	TL	SF VFO	SIOUX FALLS-VIRGIL FODNESS 230I	277,897		277,897	-	-	277,897
102	TL	SU WT	SUMMIT-WATERTOWN	6,743,203		6,743,203	-	-	6,743,203
103	TL	TT TI	TIBER TAP-TIBER	1,084,858		1,084,858	-	-	1,084,858
104	TL	UJ SF	UTICA JCT-SIOUX FALLS	3,485,236		3,485,236	-	-	3,485,236
105	TL	VC FO	VALLEY CITY-FORMAN	1,527,895		1,527,895	-	-	1,527,895
106	TL	VR GTF	VERONA GREAT FALLS 161-KV LINE	5,110,115		5,110,115	-	-	5,110,115
107	TL	UJ VFO	VIRGIL FODNESS-UTICA JUNCTION	312,931		312,931	-	-	312,931
108	TL	WT GF D	WATERTOWN-GRANITE FALLS 1&2	7,488,154		7,488,154	-	-	7,488,154
109	TL	WT SC	WATERTOWN-SIOUX CITY	26,924,889		26,924,889	-	-	26,924,889
110	TL	WC BU	WATFORD CITY-BEULAH	349,954		349,954	-	-	349,954
111	TL	WN WC	WILLISTON-WATFORD CITY	17,627,868		17,627,868	-	-	17,627,868
112	TL	WP CR	WOLF POINT-CIRCLE	11,035,514		11,035,514	-	-	11,035,514
113	TL	WJ RG	WM. J. NEAL-RUGBY	4,629,316		4,629,316	-	-	4,629,316
114	TL	YT CU	YELLOWTAIL-CUSTER	2,265,163		2,265,163	-	-	2,265,163
115		TL Total	TRANSMISSION LINES	568,215,935	607,477	568,823,412	(576,090)	-	568,111,322
116	SUB	AN	ANITA	6,259		6,259	-	-	6,259
117	SUB	APD	APPELDORN SUBSTATION	5,878,984		5,878,984	-	-	5,878,984
118	SUB	AR	ARMOUR SUBSTATION	2,318,295		2,318,295	(800,024)	-	1,518,271
119	SUB	AHS	ASH SUBSTATION	63,325		63,325	-	-	63,325
120	SUB	AB	ASSINNIBOINE	35,005		35,005	(35,005)	-	(0)
121	SUB	AUR	AURORA SUBSTATION	2,899,881		2,899,881	(124,344)	-	2,775,537
122	SUB	BK	BAKER	279,691		279,691	-	-	279,691
123	SUB	BN	BELDEN SUBSTATION	309,701		309,701	-	-	309,701
124	SUB	BEF	BELFIELD SUBSTATION	13,779,308		13,779,308	(163,836)	-	13,615,472
125	SUB	BE	BERESFORD SUBSTATION	4,706,447		4,706,447	(231,321)	-	4,475,126
126	SUB	BB	BISBEE SUBSTATION	272,529		272,529	(218,122)	-	54,407
127	SUB	BS	BISMARCK SUBSTATION	17,751,915	4,338,955	22,090,870	(187,218)	-	21,903,652
128	SUB	BI	BISON	12,472		12,472	-	-	12,472
129	SUB	BOL	BOLE SUB	2,997,082		2,997,082	(630,455)	-	2,366,627
130	SUB	BO	BONESTEEL SUBSTATION	3,398,446		3,398,446	(1,226,623)	-	2,171,823
131	SUB	BR	BROOKINGS SUBSTATION	4,460,377	9,024,920	13,485,297	-	-	13,485,297
132	SUB	CB	CAMPBELL COUNTY SWITCHING ST	-	4,765,826	4,765,826	-	-	4,765,826
133	SUB	CF	CANYON FERRY	45,210		45,210	-	-	45,210
134	SUB	CRP	CARPENTER SUBSTATION	2,463,312		2,463,312	-	-	2,463,312
135	SUB	CA	CARRINGTON SUBSTATION	3,819,873		3,819,873	(1,007,873)	-	2,812,000
136	SUB	CCR	CHARLIE CREEK	1,376,076		1,376,076	-	-	1,376,076

137	SUB	CR	CIRCLE SUBSTATION	9,139,054		9,139,054	(2,140,670)	-	6,998,384
138	SUB	CON	CONRAD SUB	5,986,123		5,986,123	(315,045)	-	5,671,078
139	SUB	CS	CRESTON SUBSTATION	8,453,084		8,453,084	-	-	8,453,084
140	SUB	CRO	CROSSOVER SUB	11,630,045		11,630,045	-	-	11,630,045
141	SUB	CQE	CULBERTSON EAST SWITCHING ST/	2,390,851		2,390,851	-	-	2,390,851
142	SUB	CU	CUSTER SUBSTATION	4,633,608		4,633,608	(346,142)	-	4,287,466
143	SUB	CT	CUSTER TRAIL SUBSTATION	1,484,722		1,484,722	(1,484,722)	-	0
144	SUB	DC	DAWSON COUNTY SUBSTATION	10,478,271		10,478,271	(2,305)	-	10,475,966
145	SUB	DNT	DENBIGH TAP	848,872		848,872	(109,673)	-	739,199
146	SUB	DN	DENISON SUBSTATION	16,188,021		16,188,021	(183,385)	-	16,004,636
147	SUB	DV	DEVAUL SUBSTATION	1,602,554		1,602,554	(1,602,554)	-	0
148	SUB	DL	DEVILS LAKE SUBSTATION	2,918,979		2,918,979	(81,504)	-	2,837,475
149	SUB	DK	DICKINSON	23,704		23,704	-	-	23,704
150	SUB	EJ	E. J. MANNING	49,112		49,112	-	-	49,112
151	SUB	EA	EAGLE	66,108		66,108	-	-	66,108
152	SUB	EB	EAGLE BUTTE SUBSTATION	1,347,433		1,347,433	(351,323)	-	996,110
153	SUB	ED	EDGELEY SUBSTATION	6,878,146		6,878,146	(1,197,122)	-	5,681,024
154	SUB	ELC	ELK CREEK SUBSTATION	2,099,907		2,099,907	(17,147)	-	2,082,760
155	SUB	EL	ELLENDALE SUBSTATION	579		579	(579)	-	0
156	SUB	ELI	ELLIOTT SWITCHING STATION	3,507,129		3,507,129	(41,652)	-	3,465,477
157	SUB	END	ENDERLIN TAP STATION	749,768		749,768	(247,423)	-	502,345
158	SUB	EXI	EXIRA SWITCHING STATION	5,530,495		5,530,495	(164,229)	-	5,366,266
159	SUB	FVW	FAIRVIEW WEST SWITCHING STATI	4,296,873		4,296,873	-	-	4,296,873
160	SUB	FH	FAITH SUBSTATION	1,270,127		1,270,127	(572,275)	-	697,852
161	SUB	FA	FARGO SUBSTATION	27,656,157	1,411,015	29,067,172	-	-	29,067,172
162	SUB	FL	FLANDREAU SUBSTATION	4,266,040		4,266,040	(40,435)	-	4,225,605
163	SUB	FO	FORMAN SUBSTATION	7,744,394		7,744,394	(1,030,790)	-	6,713,604
164	SUB	FR	FORT RANDALL	253,710		253,710	-	-	253,710
165	SUB	FT2	FORT THOMPSON #2	10,832,303		10,832,303	-	-	10,832,303
166	SUB	FT	FORT THOMPSON SUBSTATION	17,698,960	1,892,000	19,590,960	(163,144)	-	19,427,816
167	SUB	GL	GLENDIVE SUBSTATION	1,725,310		1,725,310	-	-	1,725,310
168	SUB	GK	GRAND FORKS SUBSTATION	10,645,252		10,645,252	-	-	10,645,252
169	SUB	GI	GRAND ISLAND SUBSTATION	17,791,351	-	17,791,351	-	-	17,791,351
170	SUB	GRP	GRAND PRAIRIE SUBSTATION /1	0		0	-	-	0
171	SUB	GF	GRANITE FALLS SUBSTATION	23,855,781		23,855,781	(2,224,203)	-	21,631,578
172	SUB	GTF	GREAT FALLS SUB	8,439,044		8,439,044	-	-	8,439,044
173	SUB	GY	GREGORY SUBSTATION	1,510,561		1,510,561	(43,752)	-	1,466,809
174	SUB	GR	GROTON SUBSTATION	5,578,082	-	5,578,082	(326,877)	-	5,251,205
175	SUB	GSO	GROTON SOUTH SUBSTATION	9,869,842	9,626,000	19,495,842	-	-	19,495,842
176	SUB	HA	HARLEM	98,534		98,534	-	-	98,534
177	SUB	HV	HAVRE SUBSTATION	11,868,241		11,868,241	(62,475)	-	11,805,766
178	SUB	HBN	HEBRON SUBSTATION /1	-	6,841,034	6,841,034	-	-	6,841,034
179	SUB	HET	HETTINGER	10,832		10,832	-	-	10,832
180	SUB	HLK	HILKEN SUBSTATION	3,894,020		3,894,020	(143,716)	-	3,750,304
181	SUB	HU	HURON SUBSTATION	11,683,545		11,683,545	(320,531)	-	11,363,014
182	SUB	JT	JAMESTOWN SUBSTATION	23,290,588	3,152,063	26,442,651	(1,837,674)	-	24,604,977
183	SUB	KD	KILLDEER SUBSTATION	7,092,854	551,423	7,644,277	(1,180,480)	-	6,463,797
184	SUB	LA	LAKOTA SUBSTATION	2,861,375		2,861,375	(1,307,837)	-	1,553,538

185	SUB	LE	LEEDS SUBSTATION	3,943,917		3,943,917	(158,722)	-	3,785,195
186	SUB	LET	LETCHER SUBSTATION	11,108,748		11,108,748	-	-	11,108,748
187	SUB	ML	MALLARD	29,969		29,969	-	-	29,969
188	SUB	MT	MALTA	340,848		340,848	-	-	340,848
189	SUB	MDN	MANDAN SUBSTATION	19,476		19,476	-	-	19,476
190	SUB	MR	MARTIN SUBSTATION	1,829,481	3,928,000	5,757,481	(1,134,120)	-	4,623,361
191	SUB	MA	MAURINE SUBSTATION	7,925,435		7,925,435	(593,801)	-	7,331,634

192	SUB	MD	MIDLAND SUBSTATION	838,166		838,166	(154,097)	-	684,069
193	SUB	MC2	MILES CITY SUB #2	6,920,614		6,920,614	-	-	6,920,614
194	SUB	MC3	MILES CITY SUB #3	1,895,702		1,895,702	-	-	1,895,702
195	SUB	MC	MILES CITY SUBSTATION	1,202,099		1,202,099	-	-	1,202,099
196	SUB	MGV	MINGUSVILLE	5,351,152	-	5,351,152	-	-	5,351,152
197	SUB	MS	MISSION SUBSTATION	3,473,710		3,473,710	(586,992)	-	2,886,718
198	SUB	MO	MORRIS SUBSTATION	7,254,341		7,254,341	(1,095,435)	-	6,158,906
199	SUB	MV	MT VERNON SUBSTATION	2,030,824		2,030,824	(139,236)	-	1,891,588
200	SUB	NA	NASHUA SUB	72,368		72,368	(72,368)	-	(0)
201	SUB	NEL	NELSON SUBSTATION	1,944,817		1,944,817	(33,744)	-	1,911,073
202	SUB	NU	NEW UNDERWOOD SUBSTATION	18,333,139	-	18,333,139	-	-	18,333,139
203	SUB	NL	NEWELL SUBSTATION	1,152,964	1,827,144	2,980,108	(287,497)	-	2,692,611
204	SUB	OF	O'FALLON CREEK SUBSTATION	3,242,234		3,242,234	(58,595)	-	3,183,639
205	SUB	ON	O'NEILL SUB (NPP)	180,660		180,660	-	-	180,660
206	SUB	PET	PENN TAP	890,607		890,607	(108,485)	-	782,122
207	SUB	PL	PHILIP SUBSTATION	2,037,148		2,037,148	(209,290)	-	1,827,858
208	SUB	PI	PIERRE SUBSTATION	4,284,664		4,284,664	(699,890)	-	3,584,774
209	SUB	PLL	PLEASANT LAKE TAP	992,415		992,415	(101,191)	-	891,224
210	SUB	RB	RAINBOW SUBSTATION	250,629		250,629	(250,629)	-	(0)
211	SUB	RC	RAPID CITY SUBSTATION	5,739,051		5,739,051	(556,793)	-	5,182,258
212	SUB	RH	RICHLAND SUBSTATION	1,733,528		1,733,528	(1,733,528)	-	(0)
213	SUB	RCO	ROBERTS COUNTY SUBSTATION	-	7,671,000	7,671,000	-	(7,671,000)	-
214	SUB	RL	ROLLA SUBSTATION	623,513		623,513	-	-	623,513
215	SUB	RY	RUDYARD SUBSTATION	3,193,683		3,193,683	(1,380,449)	-	1,813,234
216	SUB	RG	RUGBY SUBSTATION	8,722,780		8,722,780	(570,712)	-	8,152,068
217	SUB	SA	SAVAGE SUB	74,403		74,403	-	-	74,403
218	SUB	SH	SHELBY SUBSTATION	861,699		861,699	(861,699)	-	0
219	SUB	SH2	SHELBY SUBSTATION #2	5,490,902		5,490,902	(169,696)	-	5,321,206
220	SUB	SL	SHIRLEY TAP	22,102		22,102	-	-	22,102
221	SUB	SC2	SIoux CITY #2	13,019,488	2,251,474	15,270,962	-	-	15,270,962
222	SUB	SC	SIoux CITY SUBSTATION	17,196,541	2,409,316	19,605,857	-	-	19,605,857
223	SUB	SF	SIoux FALLS SUBSTATION	14,952,320		14,952,320	(516,513)	-	14,435,807
224	SUB	SP	SPENCER	8,021,789	3,413,767	11,435,556	(245,264)	-	11,190,292
225	SUB	SNY	STANLEY	49,735		49,735	-	-	49,735
226	SUB	SB	SULLY BUTTES	74,428		74,428	-	-	74,428
227	SUB	SU	SUMMIT SUBSTATION	2,881,761		2,881,761	(373,848)	-	2,507,913
228	SUB	TR	TERRY TAP	606,044		606,044	(103,121)	-	502,923
229	SUB	TT	TIBER TAP	166,306		166,306	-	-	166,306
230	SUB	TN	TOWNER SUBSTATION	5,187,463	5,014,000	10,201,463	-	-	10,201,463
231	SUB	TY	TYNDALL SUBSTATION	948,490		948,490	(125,594)	-	822,896
232	SUB	UJ	UTICA JCT.	12,974,150		12,974,150	-	-	12,974,150
233	SUB	VH	V. T. HANLON	12,390,931	5,700,000	18,090,931	-	-	18,090,931
234	SUB	VC	VALLEY CITY SUBSTATION	6,819,468		6,819,468	(176,541)	-	6,642,927
235	SUB	VR	VERONA	108,751		108,751	-	-	108,751
236	SUB	VE	VETAL TAP	232,375		232,375	-	-	232,375
237	SUB	VFO	VIRGIL FODNESS SUBSTATION	3,206,763		3,206,763	-	-	3,206,763
238	SUB	WL	WALL SUBSTATION	1,571,437		1,571,437	(654,299)	-	917,138
239	SUB	WDD	WARD SUBSTATION	3,453,847		3,453,847	(45,361)	-	3,408,486

240	SUB	WB	WASHBURN SUBSTATION	2,075,909	2,075,909	(938,020)	-	1,137,889
241	SUB	WT2	WATERTOWN #2	3,609,306	3,609,306	-	-	3,609,306

242	SUB	WTS	WATERTOWN STATIC VAR SYSTEM	11,778,775	11,778,775	-	-	11,778,775	
243	SUB	WT	WATERTOWN SUBSTATION	16,007,533	16,007,533	-	-	16,007,533	
244	SUB	WC	WATFORD CITY SUB	7,600,294	7,600,294	(108,365)	-	7,491,929	
245	SUB	WSG	WESSINGTON SPRINGS SUBSTATIO	5,141,440	5,141,440	(181,849)	-	4,959,591	
246	SUB	WH2	WHATELY (NORTHERN)	40,860	40,860	-	-	40,860	
247	SUB	WH	WHATELY SUBSTATION	109,910	109,910	(54,083)	-	55,827	
248	SUB	WHT	WHITE 345/115 SUB	11,047,497	11,047,497	-	-	11,047,497	
249	SUB	WV	WICKSVILLE SUBSTATION	831,304	831,304	(250,593)	-	580,711	
250	SUB	WN2	WILLISTON 2 SUBSTATION	15,594,604	15,594,604	-	-	15,594,604	
251	SUB	WN	WILLISTON SUBSTATION	8,198,987	8,198,987	(97,320)	-	8,101,667	
252	SUB	WI	WINNER SUBSTATION	3,234,614	3,234,614	(101,869)	-	3,132,745	
253	SUB	WJ	WM. J. NEAL	183,222	183,222	-	-	183,222	
254	SUB	WP	WOLF POINT SUBSTATION	7,181,905	7,181,905	(1,346,899)	-	5,835,006	
255	SUB	WO	WOONSOCKET SUBSTATION	2,775,992	2,775,992	(1,579,680)	-	1,196,312	
256	SUB	YJ	YANKTON JCT.	76,396	76,396	-	-	76,396	
257	SUB	YA	YANKTON SUBSTATION	2,935	2,935	-	-	2,935	
258	SUB Total	SUBSTATIONS		690,475,891	73,817,937	764,293,828	(40,020,673)	(7,671,000)	716,602,155
259	O&M	ARC	ARMOUR O&M SER. CEN.	3,488,667	3,488,667	-	-	3,488,667	
260	O&M	BSM	BISMARCK O&M SER. CEN.	9,917,899	9,917,899	-	-	9,917,899	
261	O&M	DCF	DAWSON SER. CEN.	6,845,966	6,845,966	-	-	6,845,966	
262	O&M	DLM	DEVILS LAKE O&M SER. CEN.	3,852,064	3,852,064	-	-	3,852,064	
263	O&M	FAO	FARGO LINE MAINTENANCE FACILI	2,040,287	2,040,287	-	-	2,040,287	
264	O&M	FAM	FARGO O&M SER. CEN.	794,673	794,673	-	-	794,673	
265	O&M	FPM	FORT PECK SER. CEN.	8,351,982	8,351,982	-	-	8,351,982	
266	O&M	FTM	FORT THOMPSON O&M S. C.	2,435,619	2,435,619	-	-	2,435,619	
267	O&M	HVM	HAVRE SERVICE CENTER	493,999	493,999	-	-	493,999	
268	O&M	HUM	HURON O&M SER. CEN.	2,709,639	2,709,639	-	-	2,709,639	
269	O&M	JTM	JAMESTOWN O&M SER. CEN.	3,841,398	3,841,398	-	-	3,841,398	
270	O&M	MCM	MILES CITY MTCE FAC.	1,025,254	1,025,254	-	-	1,025,254	
271	O&M	NUM	NEW UNDERWOOD SER. CEN.	96,884	96,884	-	-	96,884	
272	O&M	PLM	PHILIP O&M SER. CENT.	1,679,674	1,679,674	-	-	1,679,674	
273	O&M	PIM	PIERRE O&M SER. CEN.	1,051,383	1,051,383	-	-	1,051,383	
274	O&M	RCM	RAPID CITY GARAGE & STOR.	2,221,967	2,221,967	-	-	2,221,967	
275	O&M	SCM	SIoux CITY O&M SER. CEN.	3,007,882	3,007,882	-	-	3,007,882	
276	O&M	SFC	SIoux FALLS O&M SER. CEN.	239,920	239,920	-	-	239,920	
277	O&M	WTM	WATERTOWN MAINT. CEN.	7,452,151	7,452,151	-	-	7,452,151	
278	O&M Total	O&M SERVICE & MAINT. CENTERS		61,547,306	-	61,547,306	-	61,547,306	
279	OPS	WAO	WATERTOWN ALTERNATE OPERAT	6,006,058	6,006,058	-	(1,501,515)	-	4,504,544
280	OPS	WTO	WATERTOWN OPERATIONS CENT	2,542,600	2,542,600	-	(412,326)	-	2,130,274
281	OPS	WTO F	WATERTOWN OPER CTR (BFPS)	12,430,495	12,430,495	-	(3,161,797)	-	9,268,699
282	OPS Total	OPERATION CENTERS		20,979,153	-	20,979,153	(5,075,637)	-	15,903,516

283	MOB	MOBW2	MOB 115KV SWITCH TRAILER	69,741	69,741	-	-	69,741	
284	MOB	MOBT13	MOB TRANSF 111KV 15MVA	213,000	213,000	-	-	213,000	
285	MOB	MOBT2	MOB TRANSF 115KV 10MVA	218,493	218,493	-	-	218,493	
286	MOB	MOBT12	MOB TRANSF 115KV 25MVA	813,860	813,860	-	-	813,860	
287	MOB	MOBT4	MOB TRANSF 115KV 40MVA	526,201	526,201	-	-	526,201	
288	MOB	MOBT6	MOB TRANSF 230KV 1-33MVA	170,278	170,278	-	-	170,278	
289	MOB	MOBB2	MOBILE BY PASS KIT (BISMARCK)	35,071	35,071	-	-	35,071	
290	MOB	MOBB1	MOBILE BY PASS KIT (HURON)	163,695	163,695	-	-	163,695	
291	MOB	MOBC4	MOBILE CAPACITOR BANK	19,075	19,075	-	-	19,075	
292	MOB	MOBS6	MOBILE SUB 110KV	127,144	127,144	-	-	127,144	
293	MOB	MOBS9	MOBILE SUB 115KV 20MVA	404,166	404,166	-	-	404,166	
294	MOB	MOBS7	MOBILE SUB 41.8 KV	192,498	192,498	(192,498)	-	0	
295	MOB	MOBS5	MOBILE SUB 69KV	71,118	71,118	-	-	71,118	
296	MOB	MOBR2	MOB SH.REACTOR	179,328	179,328	-	-	179,328	
297	MOB Total		MOBILE EQUIPMENT	3,203,667	-	3,203,667	(192,498)	-	3,011,169
298	GEN	BG FT L	BIG BEND-FORT THOMPSON (LOW	81,944	81,944	-	(81,944)	-	
299	GEN	FP	FORT PECK POWERPLANT (COE)	64,611	64,611	-	(64,611)	0	
300	GEN	FT BG 1	FORT THOMPSON-BIG BEND NO. 1	922,164	922,164	-	-	922,164	
301	GEN	FT BG 2	FORT THOMPSON-BIG BEND NO. 2	690,735	690,735	-	-	690,735	
302	GEN Total		TRANSMISSION-RELATED GEN. FA	1,759,454	-	1,759,454	(146,555)	1,612,899	
303	COM	ATC	ATLANTIC COMMUNICATION SITE	17,199	17,199	-	(5,495)	11,704	
304	COM	BK2	BAKER RELAY	246,175	246,175	-	(78,653)	167,522	
305	COM	BTY	BANTRY	421,019	421,019	-	(134,516)	286,503	
306	COM	BAE	BARRETT	99,835	99,835	-	(31,897)	67,937	
307	COM	BMW	BATTLE MT. MICROWAVE	324,151	324,151	-	(103,566)	220,585	
308	COM	BPR	BELLE PRAIRIE	255,498	255,498	-	(81,632)	173,866	
309	COM	BET	BENEDICT	196,601	196,601	-	(62,814)	133,787	
310	COM	BU	BEULAH	10,679	10,679	-	(3,412)	7,267	
311	COM	BG	BIG BEND	113,362	113,362	-	(36,219)	77,143	
312	COM	BJR	BIJOU REPEATER	568,562	568,562	-	(181,655)	386,906	
313	COM	BAO	BILLINGS AREA OFFICE	158,946	158,946	-	(136,495)	22,451	
314	COM	BSR	BISMARCK REPEATER	396,674	396,674	-	(126,737)	269,936	
315	COM	BIR	BISON REPEATER	227,955	227,955	-	(72,832)	155,124	
316	COM	BON	BOLE NORTH REPEATER	149,228	149,228	-	(47,678)	101,550	
317	COM	BRI	BRINSMADE	147,129	147,129	-	(47,008)	100,121	
318	COM	BSL	BRISTOL	11,441	11,441	-	(3,655)	7,786	
319	COM	BRV	BRUNSVILLE REPEATER	92,595	92,595	-	(29,584)	63,011	
320	COM	BFF	BUFFALO	107,342	107,342	-	(34,296)	73,046	
321	COM	CAH	CAHOON	194,709	194,709	-	(62,209)	132,499	
322	COM	CAZ	CARRINGTON REPEATER	693,236	693,236	-	(221,489)	471,747	
323	COM	CHK	CHARTER OAK REPEATER	15,667	15,667	-	(5,006)	10,661	
324	COM	CHI F	CHINOOK (BEFP)	284,048	284,048	-	(90,753)	193,295	
325	COM	CHR	CHINOOK REPEATER	15,293	15,293	-	(4,886)	10,407	
326	COM	CKR	CLARK MW REPEATER	735,399	735,399	-	(234,960)	500,439	
327	COM	CLV	CLEVELAND REPEATER, N.D.	66,872	66,872	-	(21,366)	45,507	
328	COM	CMR	COLEMAN REPEATER	105,281	105,281	-	(33,637)	71,644	
329	COM	CME	COLOME REPEATER	293,101	293,101	-	(93,646)	199,455	

330	COM	CBR	CONRAD BUTTE REPEATER	1,159,070	1,159,070	-	(370,323)	788,747
331	COM	CNN	COTTON	1,399	1,399	-	(447)	952
332	COM	CSR	CRESTON REPEATER	11,107	11,107	-	(3,549)	7,558
333	COM	CLR	CROW LAKE REPEATER	251,029	251,029	-	(80,204)	170,825
334	COM	CBT	CROWN BUTTE	52,565	52,565	-	(16,795)	35,770
335	COM	CRR	CULBERTSON RADIO RELAY SITE	1,926	1,926	-	(615)	1,311
336	COM	CUL	CUSTER LOOKOUT	80,620	80,620	-	(25,758)	54,862
337	COM	DAL	DALTON (WES)	63,660	63,660	-	(20,339)	43,321
338	COM	DLC	DEVILS LAKE FIBER REGEN	273,047	273,047	-	(87,239)	185,809
339	COM	DLZ	DEVILS LAKE REPEATER	518,898	518,898	-	(165,788)	353,110
340	COM	DOD	DODSON REPEATER	882,795	882,795	-	(282,053)	600,742
341	COM	DO	DOGDEN BUTTE	399,367	399,367	-	(127,598)	271,769
342	COM	DRS	DRISCOLL	79,113	79,113	-	(25,277)	53,837
343	COM	DU	DUPREE REPEATER	1,821	1,821	-	(582)	1,239
344	COM	DUT	DUTTON REPEATER (BEFP)	75,190	75,190	-	(24,023)	51,167
345	COM	ERB	EAST RAINY BUTTE	147,041	147,041	-	(46,980)	100,061
346	COM	ECK	ECKELSON	231,893	231,893	-	(74,090)	157,803
347	COM	EKR	ELKTON	165,481	165,481	-	(52,871)	112,610
348	COM	ELZ	ELLEDALE REPEATER	962,213	962,213	-	(307,427)	654,786
349	COM	EWA	ELLSWORTH AIR BASE	204,548	204,548	-	(65,353)	139,195
350	COM	ERH	ERHARD	99,569	99,569	-	(31,812)	67,757
351	COM	EX	EXIRA REPEATER	2,527	2,527	-	(807)	1,720
352	COM	FB	F. L. BLAIR	76,407	76,407	-	(24,412)	51,995
353	COM	FAP	FAIRPOINT REPEATER	206,550	206,550	-	(65,993)	140,557
354	COM	FNR	FALLON REPEATER	212,944	212,944	-	(68,036)	144,908
355	COM	FAC	FARGO MICROWAVE	21,003	21,003	-	(6,711)	14,293
356	COM	FCS	FERGUS FALLS COMMUNICATIONS	507,270	507,270	-	(162,073)	345,197
357	COM	FLW	FLOWING WELLS	68,763	68,763	-	(21,970)	46,793
358	COM	FBS	FORBES COMMUNICATION SITE	114,124	114,124	-	(36,463)	77,662
359	COM	FTH	FORSYTH	130,348	130,348	-	(41,646)	88,702
360	COM	FP1	FORT PECK RELAY (WES)	326,153	326,153	-	(104,206)	221,947
361	COM	FPC	FORT PECK COMMUNICATIONS BU	380,212	380,212	-	(121,478)	258,734
362	COM	FPR	FORT PECK REPEATER	109,069	109,069	-	(34,847)	74,221
363	COM	FPI	FORT PIERRE POLE YARD	785,698	785,698	-	(251,031)	534,668
364	COM	FTR	FORT THOMPSON REPEATER	99,223	99,223	-	(31,702)	67,521
365	COM	FTP	FORT THOMPSON REPEATER (EAST)	301,614	301,614	-	(96,366)	205,248
366	COM	FCR	FOX CREEK MICROWAVE	423,094	423,094	-	(135,179)	287,915
367	COM	FRY	FRYBURG SUB & MICROWAVE	61,204	61,204	-	(19,555)	41,649
368	COM	GA	GARRISON	303,954	303,954	-	(97,113)	206,841
369	COM	GRR	GARY REPEATER	80,799	80,799	-	(25,815)	54,983
370	COM	GP	GAVIN'S POINT	148,752	148,752	-	(47,526)	101,226
371	COM	GPR	GAVINS POINT REPEATER	315,049	315,049	-	(100,658)	214,391
372	COM	GET	GETTYSBURG REPEATER	368,771	368,771	-	(117,822)	250,949
373	COM	GH	GLENHAM	272,857	272,857	-	(87,178)	185,679
374	COM	GKM	GRAND FORKS MINNKOTA (MPC)	23,847	23,847	-	(7,619)	16,228
375	COM	GWN	GWINNER COMMUNICATIONS SITE	736,184	736,184	-	(235,211)	500,974
376	COM	HSB	HAILSTONE BUTTE	74,835	74,835	-	(23,910)	50,926
377	COM	HOY	HALLOWAY REPEATER	109,706	109,706	-	(35,051)	74,655

378	COM	HRT	HARLEM REPEATER	882,588	882,588	-	(281,987)	600,601
379	COM	HTH	HATHAWAY	68,891	68,891	-	(22,011)	46,880
380	COM	HMW	HERMOSA MICROWAVE	302,701	302,701	-	(96,713)	205,988
381	COM	HLR	HIGHLAND REPEATER	22,884	22,884	-	(7,311)	15,572
382	COM	HMR	HIGHMORE REPEATER	145,723	145,723	-	(46,559)	99,165
383	COM	HIW	HIGHWOOD	22,896	22,896	-	(7,315)	15,581
384	COM	HI	HINSDALE	201,837	201,837	-	(64,487)	137,350
385	COM	HIR	HINSDALE REPEATER	66,495	66,495	-	(21,245)	45,250
386	COM	HOE	HOPEWELL REPEATER	231,172	231,172	-	(73,860)	157,313
387	COM	HNT	HUNTER MICROWAVE	210,227	210,227	-	(67,168)	143,060
388	COM	HUD	HURON DISTRICT OFFICE	768,139	768,139	-	(245,420)	522,718
389	COM	HYS	HYSHAM	90,227	90,227	-	(28,827)	61,399
390	COM	JTR	JAMESTOWN REPEATER	46,981	46,981	-	(15,011)	31,971
391	COM	JCK	JONES CREEK	267,395	267,395	-	(85,433)	181,962
392	COM	KCK	KELLY CREEK	202,226	202,226	-	(64,611)	137,614
393	COM	KDZ	KILLDEER REPEATER	536,504	536,504	-	(171,413)	365,091
394	COM	KNE	KNEE HILL MW	1,051,554	1,051,554	-	(335,972)	715,583
395	COM	LAC	LAC QUI PARLE	751,513	751,513	-	(240,108)	511,404
396	COM	LKR	LAKE ANDES REPEATER	723,452	723,452	-	(231,143)	492,309
397	COM	LEF	LEFOR	48,470	48,470	-	(15,486)	32,984
398	COM	LI	LINDSAY RIDGE	79,074	79,074	-	(25,264)	53,810
399	COM	LCS	LINTON COMMUNICATIONS SITE	330,604	330,604	-	(105,628)	224,976
400	COM	LMO	LITTLE MISSOURI SUBSTATION	54,516	54,516	-	(17,418)	37,098
401	COM	LDP	LODGEPOLE REPEATER	32,445	32,445	-	(10,366)	22,079
402	COM	MRP	MALTA REPEATER	793,844	793,844	-	(253,633)	540,211
403	COM	MNM	MANDAN MICROWAVE SITE	69,988	69,988	-	(22,361)	47,627
404	COM	MPR	MAPLE RIVER	172,792	172,792	-	(55,207)	117,585
405	COM	MRR	MARTIN REPEATER	300,728	300,728	-	(96,083)	204,646
406	COM	MAV	MAYVILLE	196,624	196,624	-	(62,821)	133,802
407	COM	MLR	MIDLAND REPEATER	516,515	516,515	-	(165,026)	351,488
408	COM	MOX	MOE REPEATER	15,012	15,012	-	(4,796)	10,215

409	COM	MH	MOORHEAD	125,057	125,057	-	(39,956)	85,101
410	COM	MSR	MORRIS REPEATER & MICROWAVE	128,242	128,242	-	(40,973)	87,268
411	COM	NWC	NEWCASTLE REPEATER	216,330	216,330	-	(69,117)	147,213
412	COM	OA	OAHE	577,874	577,874	-	(184,631)	393,243
413	COM	OK	O'KREEK REPEATER	367,630	367,630	-	(117,458)	250,172
414	COM	OR	ORCHARD REPEATER	578,066	578,066	-	(184,692)	393,374
415	COM	OTO	OTO MICROWAVE	16,445	16,445	-	(5,254)	11,191
416	COM	OTW	OTTUMWA ROAD REPEATER SITE	7,685	7,685	-	(2,455)	5,229
417	COM	PGE	PAGE N.D.	1,646	1,646	-	(526)	1,120
418	COM	PAH	PAHOJA SUB	107,003	107,003	-	(34,187)	72,816
419	COM	PEK	PEAK	83,844	83,844	-	(26,788)	57,056
420	COM	PLJ	PHILIP JCT. REPEATER	530,459	530,459	-	(169,482)	360,977
421	COM	PIR	PINE RIDGE	186,735	186,735	-	(59,662)	127,073
422	COM	PO	POPLAR (MDU)	3,758	3,758	-	(1,201)	2,558
423	COM	PRR	PRIMGHAR REPEATER	27,264	27,264	-	(8,711)	18,553
424	COM	PUR	PUKWANNA REPEATER	4,772	4,772	-	(1,525)	3,247
425	COM	RCR	RAPID CITY REPEATER	340,932	340,932	-	(108,928)	232,004
426	COM	RE	RICHARDSON COULEE	161,748	161,748	-	(51,679)	110,070
427	COM	RER	RICHARDSON COULEE REPEATER	166,315	166,315	-	(53,138)	113,177
428	COM	RHM	RICHLAND MW REPEATER (BEPS)	267,563	267,563	-	(85,487)	182,077
429	COM	RRR	ROCKY RIDGE REPEATER	226,934	226,934	-	(72,505)	154,428
430	COM	ROG	ROLLAG	172,922	172,922	-	(55,248)	117,673
431	COM	RGZ	RUGBY REPEATER	396,722	396,722	-	(126,753)	269,969
432	COM	RI	RUTLAND	1,164,374	1,164,374	-	(372,018)	792,357
433	COM	SAO	SACO	1,237	1,237	-	(395)	842
434	COM	SNB	SENTINEL BUTTE	87,667	87,667	-	(28,010)	59,657
435	COM	SRE	SHEEP COULEE REPEATER	1,052,566	1,052,566	-	(336,295)	716,271
436	COM	SCQ	SIOUX CITY REPEATER	427,162	427,162	-	(136,478)	290,684
437	COM	SFR	SIOUX FALLS REPEATER	330,718	330,718	-	(105,664)	225,054
438	COM	SI	SIOUX PASS	1,366	1,366	-	(436)	930
439	COM	SNA	SNAKE BUTTE REPEATER	532,435	532,435	-	(170,113)	362,322
440	COM	SPN	SPALDING REPEATER	549,514	549,514	-	(175,570)	373,945
441	COM	SM	SPIRIT MOUND	295,982	295,982	-	(94,566)	201,416
442	COM	STR	STRASBERG	1,853	1,853	-	(592)	1,261
443	COM	SMR	SUMMIT REPEATER	50,053	50,053	-	(15,992)	34,061
444	COM	TCS	TAPPEN COMMUNICATIONS SITE	469,050	469,050	-	(149,862)	319,189
445	COM	TA	TAPPEN REPEATER	459,861	459,861	-	(146,926)	312,936
446	COM	TEN	TENNANT COMMUNICATIONS SITE	8,782	8,782	-	(2,806)	5,976
447	COM	TOR	TORONTO REPEATER	106,096	106,096	-	(33,898)	72,198
448	COM	TFR	TRIPP REPEATER	216,887	216,887	-	(69,295)	147,592
449	COM	TU	TURKEY RIDGE REPEATER	588,190	588,190	-	(187,927)	400,263
450	COM	TYE	TYLER REPEATER	1,239,694	1,239,694	-	(396,082)	843,612
451	COM	VIC	VICTOR (EREC)	145,956	145,956	-	(46,633)	99,323

452	COM	VIA	VIDA	98,597	98,597	-	(31,502)	67,095
453	COM	WLR	WALL REPEATER	479,343	479,343	-	(153,150)	326,193
454	COM	WTR	WATERTOWN REPEATER	721,884	721,884	-	(230,642)	491,242
455	COM	WS	WAYSIDE	17,781	17,781	-	(5,681)	12,100
456	COM	WSR	WESSINGTON SPGS. REPEATER	682,469	682,469	-	(218,049)	464,420
457	COM	WEF	WESTFIELD	19,003	19,003	-	(6,071)	12,932
458	COM	WSW	WHITE SWAN	91,987	91,987	-	(29,390)	62,597
459	COM	WK C	WHITLOCK (BCPS)	165,594	165,594	-	(52,907)	112,687
460	COM	WOB	WOLBACH REPEATER	28,280	28,280	-	(9,035)	19,244
461	COM	YT P	YELLOWTAIL SWITCHYARD (BEPS)	223,367	223,367	-	(71,366)	152,001
462	COM Total		COMMUNICATION FACILITIES	42,029,019	42,029,019	-	(13,513,984)	28,515,036
463	MCCS	MC4	MILES CITY CONVERTER STATION -	19,890,752	19,890,752	-	-	19,890,752
464	MCCS	MC4	MILES CITY CONVERTER STATION -	3,680,369	3,680,369	-	-	3,680,369
465	MCCS Total		MILES CITY CONVERTER STATION	23,571,121	23,571,121	-	-	23,571,121
466	DIST	BFTBP	BUFORD TRENTON TAP - BUFORD	650,001	650,001	(650,001)	-	(0)
467	DIST	BP	BUFORD TRENTON PUMP SUB	184,827	184,827	(184,827)	-	0
468	DIST	FN	FALLON PUMPING PLANT SUBS	223,594	223,594	(223,594)	-	0
469	DIST	FE	FALLON RELIFT PUMPING PLA	171,257	171,257	(171,257)	-	(0)
470	DIST	FN GG	FALLON-GLENDIVE PUMP #4	25,506	25,506	(25,506)	-	(0)
471	DIST	FP WP	FORT PECK-WOLF POINT	297,423	297,423	(297,423)	-	-
472	DIST	FG	FRAZER PUMP SUB	253,597	253,597	(253,597)	-	0
473	DIST	GA SK	GARRISON-SNAKE CREEK	1,079,092	1,079,092	(1,079,092)	-	(0)
474	DIST	GG	GLENDIVE P.P. #1 SUB.	425,706	425,706	(425,706)	-	0
475	DIST	IN	INTAKE SUBSTATION	108,040	108,040	(108,040)	-	0
476	DIST	IN INP	INTAKE-INTAKE PUMP	6,494	6,494	(6,494)	-	-
477	DIST	SV	SAVAGE PUMPING PLANT SUBS	102,283	102,283	(102,283)	-	(0)
478	DIST	SY	SHIRLEY PUMP SUBSTATION	1,237,730	1,237,730	(1,237,730)	-	0
479	DIST	SK	SNAKE CREEK PUMP SUBSTATION	920,941	920,941	(920,941)	-	0
480	DIST	TE	TERRY PUMPING PLANT SWITCH	474,404	474,404	(474,404)	-	(0)
481	DIST	TI	TIBER DAM SUBSTATION	318,568	318,568	(318,568)	-	(0)
482	DIST	VA	WIOTA SUBSTATION	216,163	216,163	(216,163)	-	(0)
483	DIST Total		DISTRIBUTION FACILITIES	6,695,626	6,695,626	(6,695,626)	-	(0)

484	RMR	NU SG	NEW UNDERWOOD-STEGALL	287,835		287,835	-	-	287,835	
485	RMR	SG	STEGALL SUBSTATION	11,422,174		11,422,174	(8,728,156)	-	2,694,018	
486	RMR	SG WY	STEGALL-WAYSIDE	2,978,205		2,978,205	-	-	2,978,205	
487	RMR	WY	WAYSIDE	237,296		237,296			237,296	
488	RMR	YT PY	YELLOWTAIL SWITCHYARD-YELLOV	121,495		121,495	(91,121)		30,374	
489	RMR	PY	YELLOWTAIL (PPL)	692,335		692,335	(519,251)		173,084	
490	RMR	YT P	YELLOWTAIL SWITCHYARD	12,752,527		12,752,527	(9,564,395)	-	3,188,132	
491	RMR	YT	YELLOWTAIL SWITCHYARD (YT)	445,483		445,483			445,483	
492	RMR Total		ROCKY MOUNTAIN REGION FACIL	28,937,350	-	28,937,350	(18,902,924)	-	10,034,426	
493	COE		BIG BEND	2,370,873		2,370,873	(1,772,523)		598,350	
494	COE		FORT PECK	6,186,445	1,273,100	7,459,545	(933,623)		6,525,922	
495	COE		FORT RANDALL	10,953,006	9,187,100	20,140,106	(2,565,236)		17,574,870	
496	COE		GARRISON	85,427,859	3,851,000	89,278,859	(42,372,683)		46,906,176	
497	COE		GAVINS POINT	10,079,123	1,289,400	11,368,523	(7,015,929)		4,352,594	
498	COE		OAHE	10,234,031	10,665,000	20,899,031	(3,344,088)		17,554,943	
499	COE Total		CORPS OF ENGINEERS FACILITIES	125,251,335	26,265,600	151,516,935	(58,004,082)	-	93,512,853	
500	Grand Total		TOTAL	1,572,665,857	100,691,014	1,673,356,871	(124,391,893)	(18,736,176)	(7,807,000)	1,522,421,803
501			SUBTOTAL WESTERN-UGP ONLY	1,418,477,172	74,425,414	1,492,902,586	(47,484,887)	18,736,176	7,807,000	1,418,874,523
502			1/ Plant balance does not include customer liability for network upgrades. Investment is only brought							
503			into plant balance as WAPA incurs expense (e.g. if transmission credits are provided to customer)							

WAPA-UGP 2020 Rate Estimate Calculation
 Worksheet 9 - WAPA-UGP Facilities Included per SPP Tariff Attachment AI*
 12 Months Ending 09/30/2020 ESTIMATE

Line No.	Facility	Specific Plant Included	Attachment AI Criteria						Further Description
			1	1(b)	2	3	4	5	
1	Substations								
2	Appeldorn	230-kV breakers 482, 586, 682 and assoc. switches and switch 487	x						
3		station service KW4A, KW30A and switches	x						
4	Armour	115-kV switches 16x, 26x, 76x	x						
5		12.47-kV switches 172x, KW1A	x						maintenance building SS
6		station service KZ1A, KX2A and switches	x						
7		115/69 kV transformer KY1A		x					Three East River members are served through KY1A (Charles Mix, Douglas and Southeastern)
8		69 kV breaker 1052 and assoc switches		x					Two East River members are served through 1052 (Douglas and Southeastern)
9	Ash Tap	115-kV switches 1161, 1261, 1361	x						
10	Aurora	115-kV breakers 266, 464, 562, 662 and assoc. switches	x						
11		capacitor PY4A	x						
12		station service KY2A and KW2A	x						
13	Belden (NPPD)	115-kV breaker 1106 and assoc. switches	x						
14	Belfield	230-kV breakers 1282, 1382, 1582 and assoc. switches	x						
15		345/230-kV transformer KU1A	x						
16		345-kV breakers 292, 396, 492 and assoc. switches	x						
17		station service KW1B and assoc. switches	x						
18		reactor KW2A, 13.8 breaker 3224 and assoc. switches	x						
19	Beresford	115-kV breakers 262, 362, 462, 566, 764, 864 and assoc. switches	x						
20		capacitors PY7A, PY8A	x						
21		station service KZ1A and switch 1451	x						
22		115/69kV transformer KY1A		x					Two East River members are served through KY1A (Clay-Union and Southeastern)
23		69kV breaker 1652 and assoc. switches		x					Two East River members are served through 1652 (Clay-Union and Southeastern)
24	Bisbee	69-kV switches 247, 347	x						
25	Bismarck	230-kV breakers 182, 282, 382, 386, 482, 582, 682, 782, 882, 986, 9182 and assoc. switches	x						
26		230/115-kV transformers KV3A, KV8A	x						
27		115-kV breakers 3062, 3162, 3362, 3562 and assoc. switches	x						
28		station service KW4A, KW4E, KW4F and assoc. switches	x						
29		12.47-kV breaker 1422, switches 142x, 152x, 1221, 1829	x						maintenance buildings ss
30	Bole	230-kV switches 182, 282, 481, 482	x						
31		station service KW21A, switch 2123	x						
32		230/69-kV transformer KV1A	x						
33		69-kV switches 1351, 1355	x						
34		69-kV breaker 1152 and assoc. switches		x					Sun River Electric Cooperative and NorthWestern MT
35	Bonesteel	115-kV breakers 664, 764 and assoc. switches	x						
36		capacitors PY6A, PY7A	x						
37		115-kV switches 46x, 26x	x						
38		station service KW1A, switch 1521	x						
39	Brookings	115-kV breakers 1166, 1562, 1462, 1762, 1362, 1861, 1932 and assoc. switches	x						
40		capacitors PY11A and PY20A, breakers 1164, 2064	x						
41		station service KW1A, KZ1A and assoc. switches	x						
42		115/69kV transformer KY1A		x					One East River member and two municipal customers served through KY1A (Sioux Valley Energy, City of White, and City of Volga)
43		115 kV switches 161, 361, 461		x					One East River member and two municipal customers served through KY1A (Sioux Valley Energy, City of White, and City of Volga)
44		69 kV breaker 1052 and assoc. switches		x					One East River member and two municipal customers served through 1052 (Sioux Valley Energy, City of White, and City of Volga)
45	Campbell County	230-kV breakers 182, 282, 382 and assoc. switches	x						
46	Cando Tap	69-kV switches 1751, 1753	x						
47	Canyon Ferry	100-kV breakers 162, 262, 362, 366 and assoc. switches	x						
48	Carpenter	230-kV breakers 182, 382, 486 and assoc. switches	x	x					Two East River members (Coddington Clark and Kingsbury)
49		station service KW1A, KW3A and assoc. switches	x						
50	Carrington	115-kV breakers 262, 362 and assoc. switches, switch 161	x						
51		capacitor PX3A	x						
52		station service KW9A and assoc. switches	x						
53	Charlie Creek	345-kV breakers 4096, 4192 and assoc switches	x						
54	Circle	115-kV breakers 1462, 1562, 1666, 1764, 1864 and assoc. switches	x						
55		capacitors PY17A, PY18A	x						
56		reactor KY17A	x						
57		station service KX9A, switches 94x	x						
58	Conrad	230-kV breakers 182, 382, 482 and assoc. switches	x						
59		230/115-kV transformer KV1A	x						
60		reactor KW31A, breaker 3124, switch 3123	x						
61		115-kV breaker 1162, 1362, 1452, and assoc. switches / switches 1263, 1265	x						
62		station service KW30A, switch 3023	x						
63	Creston	161 kV breakers 162, 262, 362, 466, 562, 662, 762, 964, 8161, 8262 and assoc. switches	x						
64		161/69-kV transformer KY3A	x						
65		capacitors PZ21A and PY9A	x						
66		69-kV breakers 2252, 2352, 2456 and assoc. switches	x						
67		station service KW3A, KW6A, Breakers 323, 623 and assoc. switches	x						
68	Crossover	230-kV breakers 582, 586, 786, 882 and assoc. switches			x				to NWMT
69		230-kV switches 981, 983, 985, 987, 989, 990	x						
70		phase shifter KV8A	x						
71	Culbertson East	115-kV switches 16x, 26x, 36x	x	x					two customers (Oreg Generation and Basin Generation)
72	Custer	230-kV breakers 182, 382, 482 and assoc. switches	x						
73		station service KW2A and assoc. switches	x						
74		reactor KW1B and assoc. switches	x						
75		230/69/12.47-kV transformer KV1A	x						
76		reactor KZ2A, 69-kV breaker 2152 and assoc. switches	x						
77	Dawson County	115-kV breakers 162, 262, 362, 462, 662, 762, 862 and assoc. switches	x						
78		230-kV breakers 2282, 2382, 2482, 2582, 2682 and assoc switches	x						
79		230/115-kV transformer KU5A	x						
80		capacitors PY7A, PY8A	x						
81		reactor KY8A	x						
82		station service KZ2B, KW2B and assoc. switches	x						
83		reactors KZ1A, KZ2A, KZ3A, breakers 3122, 3222, 3322 and assoc. switches	x						
84	Denison	161-kV breakers 1362, 1566, 1662 and assoc. switches / switches 1461, 1465	x						
85		230-kV breakers 186, 282, 382, 386 and assoc. switches	x						
86		230/161-kV transformer KV1A	x						
87		reactor KW30A and assoc. switches	x						
88		230/69-kV transformers KV2A and KV3A	x						

89	69-kV breakers 2156, 2254, 2352, 2452, 2652, 2754, 2952, 5152 and assoc. switches	x							
90	capacitors PZ27A, PZ22A	x							
91	reactors KZ27A, KZ22A	x							
92	station service KW30B, KW20C and assoc. switches	x							
93	Devils Lake 115-kV breakers 162, 262, 462, 562, 662, 2062 and assoc. switches	x							
94	115-kV switches 361, 365	x							
95	50 percent of 115/41.8-kV transformer KY1A	x							capacitors and maintenance building
96	41.8-kV breaker 1042 and assoc. switches	x							
97	capacitors PX5A, PX5B and assoc. switches	x							
98	station service KX3A and KW4A and assoc. switches	x							
99	transformers KX3B, KW4B and assoc. switches	x							warehouse and maintenance buildings
100	Eagle Butte 115-kV breakers 162, 362 and assoc. switches / switch 763	x							
101	Station Service KW1A	x							
102	Edgeley 115-kV breakers 462, 562, 662, 762 and assoc. switches	x							
103	115/69-kV transformer KY6A	x							
104	69-kV breaker 1352 and assoc. switches	x							
105	capacitor KW31A, breaker 3124 and assoc. switches	x							
106	Elk Creek 115-kV breakers 1162, 1262, 1462 and assoc switches	x							
107	station service KY22A, switches 2261, 2221	x							
108	Elliot 115-kV breakers 262, 362, 462 and assoc switches	x							
109	Enderlin Tap 115-kV switches 176x, 196x	x							
110	Exira 161-kV breakers 162, 166, 262, 362, 366, 462, 562, 662 and assoc. switches	x							
111	station service KHA	x							
112	Fairview West 115-kV breakers 162, 262, 362, 462 and assoc. switches	x							
113	transformer KY20A for station service, switches 2011, 2061	x							
114	Faith 115-kV switches 16x and 26x	x							
115	Fargo 230-kV breakers 182, 282, 382, 582, 682, 782, 882, 9182 and assoc. switches	x							
116	115-kV breakers 1162, 1262, 1362, 1462, 1662, 1862, 1962, 2362, 2462, 2764, 2864, 2964 and assoc switches	x							
117	115-kV switch 5461	x							
118	capacitors PY14A, PY14B, PY14C	x							
119	230/115-kV transformers KV1A, KV2A	x							
120	115/69-kV transformers KY3A and KY3B	x		x					to Minnkota
121	69-kV breakers 3552, 3652 and assoc switches	x		x					to Minnkota
122	69-kV switches 315x, 335x, 345x	x		x					to Minnkota
123	station service KY4A, KSB, KSA, switches 5447, 552x	x							
124	13.2-kV breakers 4122, 4322, 4622, 4722, 4822 and assoc. switches	x							
125	reactors KW6A, KW7A, KW8A	x							
126	SVC and associated equipment	x							
127	Flandreau 115-kV breakers 1162, 1262, 1362, 1662 and assoc. switches	x							
128	capacitor PY3A	x							
129	station service KZ1A, KW1C switches 302x, 205x, 401x	x							
130	115/69-kV transformer KY1A	x	x						One East River member, two municipal customers and Basin generation served through KY1A (Sioux Valley Energy, City of Colman, and City of Madison) One East River member, two municipal customers and Basin generation served through 2152 (Sioux Valley Energy, City of Colman, and City of Madison)
131	69-kV breaker 2152 and assoc. switches	x							
132	Forman 115-kV breakers 1162, 1362, 1462, 1562, 1764 and assoc switches	x							
133	capacitor PY7A	x							
134	station service KW9A, switches 92x	x							
135	115/69-kV transformer KY1A, switches 126x	x							
136	69-kV breakers 152, 252, 452 and assoc. switches	x							
137	69-kV switches 353, 355	x							
138	Fort Thompson 230-kV breakers 582, 586, 682, 782, 786, 882, 1182, 1186, 1282, 1382, 1386, 1482, 1582, 1586, 1682, 1782, 1786, 1882, 2382, 2386, 2482 and assoc. switches	x							
139	230-kV switches 181, 281, 381, 2583, 2683	x							
140	230/69-kV transformers KV1B, KV1A	x							
141	13.8-kV switches 121, 221, 253, 153, 6323, 6321, 6022, 3121, 3221	x							
142	station service KW1A, KW1B and assoc switches	x							
143	69-kV breakers 4352	x							
144	Fort Thompson 2 345-kV breakers 3392, 3396 and assoc. switches	x							
145	reactor KU4A, switch 3991	x							
146	345/230-kV transformers KU1A, KU1B and 345-kV switches 2391, 2491	x							
147	reactors KW2A, KW2B, breakers 6422, 6822 and assoc. switches	x							
148	capacitor PW2A	x							
149	reactor KW3A, breaker 6522 and assoc. switches	x							
150	capacitor PW3A	x							
151	station service KW1D, KW1C, switches 662x, 6611, 6311, 632x	x							
152	Glendive 115-kV switch 362	x							
153	115/57-kV transformer KY1A	x	x						2 customers - MDU and Lower Yellowstone
154	57-kV breaker 342 and assoc. switches	x	x						2 customers - MDU and Lower Yellowstone
155	Grand Forks 230-kV breakers 286, 382, 486 and associated switches / switches 183 and 580	x							
156	230/115-kV transformer KV1A	x							
157	reactor KW43A, breaker 4324 and assoc. switches	x							
158	station service KW41A, KW42A and associated switches	x							
159	115-kV breakers 1462, 1562, 1662, 1862, 1962 and assoc. switches	x							
160	115/69-kV transformer KY2B, switch 3261 and 3259	x							
161	69-kV breakers 2252, 2352, 2452, 2552 and assoc. switches / switches 2151, 2153	x		x					2452 to MPC, 2552 to NSP
162	capacitors PZ3A, PZ3B, switches 335x, 345x	x							
163	Grand Island 345-kV breakers 1092, 1192, 1196, 1292, 1596, 1592, 1692, 1796 and assoc. switches	x							
164	reactor KU4A, switch 1098	x							
165	reactors KW1B, KW1A, breakers 5122, 5022 and assoc. switches	x							
166	345/230-kV transformers KU1A, KU1B and switch 293	x							
167	reactors KW2A, breakers 6022 and assoc. switches	x							
168	station service KHA, KHB and assoc switches	x							
169	Grande Prairie 345-kV breakers 196, 292, 396, 298, 198 and assoc. switches	x							
170	reactors KU1A and KU2A	x							
171	Granite Falls 230-kV breakers 184, 282, 382, 486, 582, 682, 782, 882, 1082, 1184, 9182 and assoc. switches	x							
172	capacitors PV1A, PV11A	x							
173	reactors KV1A, KV11A	x							
174	230/115-kV transformers KV3A, KV8A	x							
175	reactors KW3A, KW54A, KW55A, KW56A, KW57A	x							
176	13.8-kV breakers 5424, 5524, 5624, 5724 with assoc. switches and switches 5121, 5123	x							
177	115-kV breakers 2062, 2262, 2366, 2762, 3162, 8162 and assoc. switches	x							
178	115-kV switches 246x, 296x	x							
179	capacitors PY25A, PY26A, breakers 2564, 2664 and assoc. switches	x							
180	reactors KY25A, KY26A	x							
181	station service KW50A, KW51A and assoc switches	x							

277		115/69-kV transformer KY1A	x							2 customers: Buffalo Rapids Irrigation and Tongue River Electric
278		69kV breaker 452 and assoc switches	x							2 customers: Buffalo Rapids Irrigation and Tongue River Electric
279		Station Service KW1B	x							
280	Pace Yellowtail	230-kV breakers IH278, IH296 and assoc switches	x							
281	Philip	115-kV breakers 1462, 1562, 1762, 1862 and assoc switches	x							
282		station service KW32A, KW31A and assoc switches	x							
283	Pierre	115-kV breakers 162, 362, 662, 862 and assoc switches	x							
284		115-kV switches 563, 565, 761	x							
285		station service KW1A, KW2A, KW1B, switches 271x, 281x, 302x	x							
286		69kV breaker 1252 and assoc breakers	x							One East River member and two irrigation districts served through KY2A and 1252 (Dahe, Grey Goose Irrigation and Crow Creek Irrigation)
287		Station Service KW1D, KW1E, KW1F and assoc switches	x							
288	Rapid City	115-kV breakers 162, 262, 362, 462, 562, 664, 766, 862, 2164 and assoc switches	x							
289		reactors KY10A, KY21A	x							
290		capacitors PY6A, PY21A	x							
291		station service KW20A, KW43A KW42A, switches 202x, 422x, 432x, 431x	x							
	Roberts County	115-kV breakers 2162, 2262, 2362, 2462 and assoc switches	x							
		69-kV breakers 5152, 5252 and assoc switches	x							
		station service Ky21A	x							
292	Rolla	115-kV breaker 1162 and assoc switches	x							
293	Rudyard	115-kV switches 260, 261, 160, 161	x							
294		station service KW1A, switches 521, 523	x							
295	Rugby	115-kV breakers 1262, 1362, 1462, 1566, 1662, 1762, 1864, 1966 and assoc switches	x							
296		capacitor PY8A	x							
297		reactor KY2A	x							
298		Station Service KX2A, KW1A and assoc. switches and equipment	x							
299	Shelby 2	115-kV breakers 1062, 1362, 1462 and assoc. switches, switches 1263, 1265	x							
300		230/115-kV transformer KV3A	x							
301		reactor KW3A, breaker 3124 and assoc switches	x							
302		station service KW2A and assoc. switches	x							
303		230-kV breakers 482, switches 481, 383, 281, 183	x							
304	Sioux City	230-kV breakers 182, 282, 382, 482, 582, 682, 9182 and assoc switches, switch 7283	x							
305		230/161-kV transformers KV1A and KV5A	x							
306		161-kV breakers 1062, 1162, 1262, 1362, 1562, 1662, 8162	x							
307		reactors KW53A, KW54A, breakers 5324, 5424 and assoc switches	x							
308		station service KW1B, KW1C, switches 502x, 512x, 522x	x							
309		69-kV breakers 2156, 2352, 2852, 2952, 3052, 3152 and assoc switches	x	x						to NIPCO (looped) and MEC
310	Sioux City 2	345-kV breakers 8498, 8592, 8692, 8696 and assoc switches	x							
311		reactor KU6A	x							
312		345/230-kV transformers KU1A, KU1B, switches 8091, 8081, 8291, 8281	x							
313		230-kV breakers 7382, 7482 and assoc switches	x							
314		reactors KW10A, KW10B, breakers 5522, 5622 and assoc switches	x							
315		station service K1, K2 and assoc switches	x							
316	Sioux Falls	230-kV breakers 2182, 2282, 2382, 2482, 2582, 2682, 2782, 9182 and assoc switches	x							
317		230/115-kV transformers KV3A, KV5A	x							
318		reactors KW31A, KW51A	x							
319		breakers 3124, 5124 and assoc switches	x							
320		station service KW33A, KW53A, KZ1A, switches 33xx, 53xx, 1851	x							
321		115-kV breakers 162, 262, 362, 462, 562, 662, 762, 966, 7162 and assoc switches	x							
322	Spencer	161-kV breakers 162,462,562, 662 and assoc switches	x							
323		Reactor PY6A	x							
324		161/69-kV transformer KY1A	x							
325		69-kV breakers 1142, 1242, 1342, 1442, 1542 and assoc switches	x	x						to NIPCO and Wisdom Sub
326		station service KW10A and assoc switches	x							
327	Stegall	230 kV main and transfer bus, breaker 382 and assoc switches	x							
328		Reactor KV3A, breaker 384 and assoc. switches	x							
329	Summit	115-kV breakers 262, 362, 462, 562, 762, and assoc switches , switch 163	x							
330		station service KZ1A, switch 1351	x							
331		115/69 kV transformer KY1A	x							
332		69 kV breaker 1152 and assoc. switches	x							Four East River members served through KY1A (Whetstone, Lake Region, Traverse, and Codington-Clark) Three East River members served through 1152 (Whetstone, Lake Region, and Traverse) 2 customers (generator and Marias)
333	Tiber	115-kV switches 1260, 1261	x							
334	Towner	115-kV breakers 2166, 2262, 2362 and assoc switches	x							
		station service KY1A1	x							
335	Tyndall	115-kV switches 16x, 26x, 361	x							
336		Station Service KZ1A and switches 351 and 751	x							
337	Utica Junction	230-kV breakers 382, 486, 582, 686 and assoc switches	x							
338		230/115-kV transformer KV3A	x							
339		115-kV breakers 1266, 1362, 1562, 1762 and assoc switches	x							
340		station service KW3A and assoc switches	x							
341	Valley City	115-kV 162, 262, 362, 462, 562 and assoc switches	x							
342		115/69-kV transformer KY1A	x							
343		station service KW2A and switch 321	x	x	x					2 customers (Minnkota Power and City of Valley City)
344	Virgil Fodness	230-kV breakers 382, 386, 482, 486 and assoc switches	x							
345		230-kV switches 185 and 283	x							
346	VT Hanlon	230-kV breakers 382, 482, 582, 682, 686 and assoc switches	x							
		Reactor KW70A and breaker 7024	x							
		69-kV breaker 5053 and assoc switch	x							
		station service KW60A, KW24A, breaker 7423 and assoc switches	x							
347	Wall	115-kV switches 16x, 26x, 36x, 461	x							
348		station service KW1B, switch 821	x							
349	Wanblee Tap	115-kV interrupters 162 and 262 and assoc. switches	x							Zero costs, customer funded
350	Ward	230-kV breakers 182, 282, 286 and assoc switches	x							
351		new 230-kV breaker in ring bus	x							Zero costs, customer funded
352	Washburn	230-kV switches 18x, 28x	x							
353		station service KX3A, KW9A and assoc switches	x							
354	Watertown	230-kV breakers 182, 282, 382, 482, 582, 682, 882, 984, 1182, 9182 and assoc switches	x							
355		reactor KV9A	x							
356		capacitor PV9A	x							
357		230/115-kV transformers KV2A, KV8A	x							
358		115-kV breakers 862, 1162, 1262, 1362, 1562, 1762, 1862, 1962, 8162 and assoc switches	x	x						1762 - two customers MRES and NorthWestern Energy
359		station service KY3A, KHA, KHB, K1, K2 and assoc switches	x							
360		reactor KW1A, breaker 3122 and assoc switches	x							
361		13.2-kV switches 372x, 362x, 82x	x							
362		115/69 kV transformer KY3A	x							Two East River members are served through KY3A (Codington-Clark and H-D)
363		69 kV breaker 2752 and assoc switches	x							Two East River members served through 2752 (Codington-Clark and H-D)
364	Watertown 2	345-kV breakers 7296, 7292, 7398 and assoc switches	x							

533	FORT THOMPSON O&M S. C.						x			
534	HAVRE SERVICE CENTER						x			
535	HURON O&M SER. CEN.						x			
536	JAMESTOWN O&M SER. CEN.						x			
537	MILES CITY MTCE FAC.						x			
538	MILES CITY MTCE FAC.						x			
539	NEW UNDERWOOD SER. CEN.						x			
540	PHILIP O&M SER. CENT.						x			
541	PIERRE O&M SER. CEN.						x			
542	RAPID CITY GARAGE & STOR.						x			
543	SIOUX CITY O&M SER. CEN.						x			
544	SIOUX FALLS O&M SER. CEN.						x			
545	WATERTOWN MAINT. CEN.						x			
546										
547	Operation Centers									
548	WATERTOWN ALTERNATE OPERATIONS CENTER						x			
549	WATERTOWN OPERATIONS CENT						x			
550	WATERTOWN OPER CTR (BFPS)						x			
551										
552	Mobile Equipment									
553	MOB 115KV SWITCH TRAILER					x				
554	MOB 115KV SWITCH TRAILER					x				
555	MOB TRANSF 111KV 15MVA					x				
556	MOB TRANSF 115KV 10MVA					x				
557	MOB TRANSF 115KV 10MVA					x				
558	MOB TRANSF 115KV 25MVA					x				
559	MOB TRANSF 115KV 40MVA					x				
560	MOB TRANSF 230KV 1-33MVA					x				
561	MOBILE BY PASS KIT (BISMARCK)					x				
562	MOBILE BY PASS KIT (HURON)					x				
563	MOBILE CAPACITOR BANK					x				
564	MOBILE SUB 110KV					x				
565	MOBILE SUB 115KV 20MVA					x				
566	MOBILE SUB 41.8 KV					x				
567	MOBILE SUB 69KV					x				
568	MOB SH.REACTOR					x				
569										
570	Transmission-Related Generation Facilities									
571	FORT THOMPSON-BIG BEND NO. 1					x				
572	FORT THOMPSON-BIG BEND NO. 2					x				
573										
574	Communication Facilities									
575	ANITA	SCADA					x			
576	ASSINNIBOINE	meters for NWMT NITS from Havre					x			
577	BAKER	microwave, RTU					x			
578	ATLANTIC COMMUNICATION SITE						x			
579	BAKER RELAY						x			
580	BANTRY						x			
581	BARRETT						x			
582	BATTLE MT. MICROWAVE						x			
583	BELLE PRAIRIE						x			
584	BENEDICT						x			
585	BEULAH						x			
586	BIG BEND						x			
587	BIIOU REPEATER						x			
588	BISMARCK REPEATER						x			
589	Bison	microwave alarm system					x			
590	BISON REPEATER						x			
591	BOLE NORTH REPEATER						x			
592	BRINSMADE						x			
593	BRISTOL						x			
594	BRUNSVILLE REPEATER						x			
595	BUFFALO						x			
596	CAHOON						x			
597	CARRINGTON REPEATER						x			
598	CHARTER OAK REPEATER						x			
599	CHINOOK (BEFP)						x			
600	CHINOOK REPEATER						x			
601	CLARK MW REPEATER						x			
602	CLEVELAND REPEATER, N.D.						x			
603	COLEMAN REPEATER						x			
604	COLOME REPEATER						x			
605	CONRAD BUTTE REPEATER						x			
606	COTTON	meters for Central MT (Basin NITS)					x			
607	CRESTON REPEATER						x			
608	CROW LAKE REPEATER						x			
609	CROWN BUTTE						x			
610	CULBERTSON RADIO RELAY SITE						x			
611	CUSTER LOOKOUT						x			
612	DALTON (WES)						x			
613	DEVILS LAKE FIBER REGEN						x			
614	DEVILS LAKE REPEATER						x			
615	DICKINSON	communications equipment					x			
616	DODSON REPEATER						x			
617	DOGSDEN BUTTE						x			
618	DRISCOLL						x			
619	DUPREE REPEATER						x			
620	DUTTON REPEATER (BEFP)						x			
621	EAGLE	microwave, RTU, SCADA					x			
622	EAST RAINY BUTTE						x			
623	ECKELSON						x			
624	E. J. MANNING	fiber, microwave, SCADA					x			
625	ELKTON						x			
626	ELLENDALE REPEATER						x			
627	ELLSWORTH AIR BASE						x			
628	ERHARD						x			

629	EXIRA REPEATER			x					
630	F. L. BLAIR			x					
631	FAIRPOINT REPEATER			x					
632	FALLON REPEATER			x					
633	FERGUS FALLS COMMUNICATIONS SITE			x					
634	FLOWING WELLS			x					
635	FORBES COMMUNICATION SITE			x					
636	FORSYTH	radio, quarters, fence		x					
637	FORT PECK RELAY (WES)			x					
638	FORT PECK COMMUNICATIONS BUILDING			x					
639	FORT PECK REPEATER			x					
640	Fort Randall	Multiplexer, Termination Equipment		x					
641	FORT THOMPSON REPEATER			x					
642	FORT THOMPSON REPEATER (EAST RIVER)			x					
643	FOX CREEK MICROWAVE			x					
644	FRYBURG SUB & MICROWAVE			x					
645	GARRISON			x					
646	GARY REPEATER			x					
647	GAVIN'S POINT			x					
648	GAVIN'S POINT REPEATER			x					
649	GETTYSBURG REPEATER			x					
650	GLENHAM			x					
651	GRAND FORKS MINNKOTA (MPC)			x					
652	HAILSTONE BUTTE			x					
653	HALLOWAY REPEATER			x					
654	HARLEM	microwave, RTU		x					
655	HARLEM REPEATER			x					
656	HATHAWAY			x					
657	HERMOSA MICROWAVE			x					
658	HETTINGER	RTU, PTs		x					
659	HIGHLAND REPEATER			x					
660	HIGHMORE REPEATER			x					
661	HIGHWOOD	meters NWMT NITS from Great Falls		x					
662	HINSDALE			x					
663	HINSDALE REPEATER			x					
664	HOPEWELL REPEATER			x					
665	HUNTER MICROWAVE			x					
666	HURON DISTRICT OFFICE			x					
667	HYSHAM			x					
668	JAMESTOWN REPEATER			x					
669	JONES CREEK			x					
670	KELLY CREEK			x					
671	KILLDEER REPEATER			x					
672	KNEE HILL MW			x					
673	LAC QUI PARLE			x					
674	LAKE ANDES REPEATER			x					
675	LEFOR			x					
676	LINDSAY RIDGE			x					
677	LINTON COMMUNICATIONS SITE			x					
678	LITTLE MISSOURI SUBSTATION			x					
679	LODGEPOLE REPEATER			x					
680	MALLARD	RTU, SCADA		x					
681	MALTA	microwave, RTU		x					
682	MALTA REPEATER			x					
683	Mandan	multiplexer		x					
684	MANDAN MICROWAVE SITE			x					
685	MAPLE RIVER			x					
686	MARTIN REPEATER			x					
687	MAYVILLE			x					
688	MIDLAND REPEATER			x					
689	MILES CITY SUB (BEFP)			x					
690	MOE REPEATER			x					
691	MOORHEAD			x					
692	MORRIS REPEATER & MICROWAVE			x					
693	NEWCASTLE REPEATER			x					
694	OAHE			x					
695	O'KREEK REPEATER			x					
696	ORCHARD REPEATER			x					
697	OTO MICROWAVE			x					
698	OTTUMWA ROAD REPEATER SITE			x					
699	PAGE N.D.			x					
700	PAHOJA SUB			x					
701	PEAK			x					
702	PHILIP JCT. REPEATER			x					
703	PINE RIDGE			x					
704	POPLAR (MDU)	antenna, meters for MDU		x					
705	PRIMGHAR REPEATER			x					
706	PUKWANNA REPEATER			x					
707	RAPID CITY REPEATER			x					
708	RICHARDSON COULEE			x					
709	RICHARDSON COULEE REPEATER			x					
710	RICHLAND MW REPEATER (BEPS)			x					
711	ROCKY RIDGE REPEATER			x					
712	ROLLAG			x					
713	RUGBY REPEATER			x					
714	RUTLAND			x					
715	SACO			x					
716	SAVAGE	land, steel structure, meter equipment		x					
717	SENTINEL BUTTE			x					
718	SHEEP COULEE REPEATER			x					
719	SIOUX CITY REPEATER			x					
720	SIOUX FALLS REPEATER			x					
721	SIOUX PASS			x					

722	SNAKE BUTTE REPEATER								x									
723	SPALDING REPEATER								x									
724	SPIRIT MOUND								x									
725	STANLEY	meters to MDU							x									
726	STRASBERG								x									
727	SULLY BUTTES	fiber termination equipment							x									
728	SUMMIT REPEATER								x									
729	TAPPEN COMMUNICATIONS SITE								x									
730	TAPPEN REPEATER								x									
731	TENNANT COMMUNICATIONS SITE								x									
732	TORONTO REPEATER								x									
733	TRIPP REPEATER								x									
734	TURKEY RIDGE REPEATER								x									
735	TYLER REPEATER								x									
736	Verona	comm, multiplex, battery							x									
737	VICTOR (EREC)								x									
738	VIDA								x									
739	V. T. HANLON	SCADA							x									
740	WALL REPEATER								x									
741	WATERTOWN REPEATER								x									
742	WAYSIDE								x									
743	WESSINGTON SPGS. REPEATER								x									
744	WESTFIELD								x									
745	Whately (Northern)	Instrument Transformer							x									
746	WHITE SWAN								x									
747	WHITLOCK (BCPS)								x									
748	WM. J. NEAL	multiplexer							x									
749	WOLBACH REPEATER								x									
750	YANKTON JCT.	multiplexer, channel bank, SCADA							x									
751	YELLOWTAIL SWITCHYARD (BEPS)								x									
752	Miles City Converter Station																	
753	MILES CITY CONVERTER STATION - BEPS		x															
754	MILES CITY CONVERTER STATION - BEFP		x															
755	Rocky Mountain Region Facilities																	
756	NEW UNDERWOOD-STEGALL		x															
757	STEGALL SUBSTATION		x															
758	STEGALL-WAYSIDE		x															
759	YELLOWTAIL SWITCHYARD	230-kV breakers 182, 282, 9182 and assoc switches	x															
760																		
761	Corps Switchyard Facilities																	
762	Big Bend	230-kV interrupters 1083, 7089, 4083 and assoc. switches	x															
763	Fort Peck	69-kV breaker 1142 and assoc. switches	x															
764		161-kV breaker 762	x															
765		115-kV breakers 772, 776, 1572, 1576, 1672, 1676 and assoc switches	x															
766		230-kV breaker 1382 and associated switches	x															
767		230/115-kV transformer	x															
768		161/115-kV transformer KV7A	x															
769	Fort Randall	230-kV breakers 1182, 1186, 1282, 1286, 1382, 1386, 1982, 1986, 2182, 2186, 2282, 2286, 2382, 2386, 2482, 2486, 2682, 2686 and assoc breakers	x															
770		115-kV breakers 962, 966, 1562, 1556, 1662, 1666, 1762, 1766, 1862, 1866, 1962, 1966 and assoc switches	x															
771		2 - 230/115-kV transformers	x															
772	Garrison	115-kV breakers 2062, 2066, 2162, 2166, 2262, 2266, 2362, 2366, 2462, 2466, 2562, 2566, 2662, 2666, 2769 and assoc switches	x															
773		230-kV breakers 3389, 3482, 3486, 3682, 3686, 3782, 3786, 3882, 3886, 3982, 3986, 4082, 4086, 4182, 4186 and assoc switches, switches 33xx	x															
774		230/115-kV transformer	x															
775	Gavins Point	115-kV breakers 462, 562, 662, 762, 862 and assoc switches	x															
776	Oahe	230-kV breakers 2182, 2282, 2286, 2382, 2482, 2486, 2582, 2682, 2782, 2982, 3082 and assoc switches	x															
777		115-kV breakers 1062, 1262, 1362, 1386, 1462, 1562, 1566 and assoc switches	x															
778		2 - 230/115-kV transformers	x															

One-Line Diagrams showing these included facilities are available upon request.
The diagrams include CEII material and therefore require execution of a Non-Disclosure Agreement with Western Area Power Administration - Upper Great Plains Region.

- Criteria 1: Non-Radial above 60-kV / (b) Two or More Eligible Customers
- Criteria 2: Interconnect Zones / Surrounding Entities
- Criteria 3: Control and Protection
- Criteria 4: High Side of Transformer
- Criteria 5: DC Interconnection
- Criteria 6: 7 Factor Test

* Based upon Attachment AI of SPP's Tariff and consistent with criteria set forth in the "Zone 19 (Upper Missouri Zone) - Attachment AI Guidance Document", dated 06/14/2016, as prepared by the Attachment AI Working Group in FERC docket ER15-1775-000.

WAPA-UGP 2020 Rate Estimate Calculation
Worksheet 10 - WAPA-UGP Facilities Excluded under SPP Tariff Attachment A1*
12 Months Ending 09/30/2020 ESTIMATE

Line No.	Facility	Specific Plant NOT Included	Further Description
1	Substations		
2			
3	Armour	34.5-kV breaker 542 and assoc. switches	NWPS
4		115/34.5-kV transformer KY2A	
5		115-kV interrupter 462 and assoc. switches	
6	Aurora	115-kV breaker 162, 362 and assoc. switches	
7	Belfield	230-kV breaker 1482 and assoc switches	
8	Beresford	69-kV breaker 1552 and assoc. switches	East River
9		12.47-kV switch 821, 823, 829	City of Beresford
10	Big Bend	230-kV interrupters 1081, 2081, 2081, 4081 and assoc switches	
11	Bisbee	69/12.5-kV transformer KZ1A and switch 145	
12		12.5-kV breaker 124 and assoc. switches	CPEC
13	Bismarck	115-kV breaker 3462 and assoc. switches	Capitol Electric
14		12.5-kV switches 1527, 1529	USBR
15	Bole	69-kV breaker 1452 and 1252 and assoc. switches	NWMT
16	Bonesteel	115-kV breaker 362 and assoc. switches	
17		115/12.47-kV transformer KY1A	
18		12.47-kV breaker 1422 and assoc. switches	Rosebud Electric
19	Buford Trenton Tap	All Not Included	
20	Buford Trenton Pumping	All Not Included	
21	Carrington	115-kV interrupter 162	protection for non-included transformer (transformer not owned by Western)
22		41.8-kV breakers 142, 242, 342, 442, 542, 642, 842 and assoc. switches	Otter Tail and CPE
23	Circle	115-kV breaker 1162 and assoc. switches	Keystone
24		115-kV breaker 1262, 1362 and assoc. switches	McCone
25		115/34.5-kV transformer KY12A	
26		34.5-kV breaker 142 and assoc. switches	McCone
27	Conrad	115-kV breaker 1062 and assoc. switches	Sun River
28	Custer	69-kV breakers 2252, 2352 and assoc. switches	Yellowstone Valley and Mid-Yellowstone
29	Custer Trail	All Not Included	
30	Dawson County	115-kV switch 1061	protection for non-included transformer (transformer not owned by Western)
31	Denbigh Tap	Switches 1460, 1461	
32	Denison	69-kV breaker 2552 and assoc. switches	City of Denison
33	Deval	All Not Included	
34	Devils Lake	41.8-kV breaker 1442 and assoc. switches	Otter Tail normally open-emergency tie
35		12.5-kV breaker 1122 and assoc. switches	Minnkota
36	Eagle Butte	115/69-kV transformer KY1A and 115-kV interrupter 762	
37		69-kV breaker 1752 and assoc. switches	Moreau Grand
38	Edgeley	115/41.8-kV transformer KY2A	
39		115-kV breaker 362	
40		41.8-kV breaker 2342 and assoc. switches	Otter Tail
41		69-kV breaker 1252 and assoc. switches	
42	Elk Creek	115-kV ground switch 1160	
43	Elliot	115-kV interrupter 2063 and assoc. switches, 115-kV switch 369	
44	Enderlin Tap	Interrupter 1862 and assoc. switches	
45	Exira	Switches 169, 369, 569	Generator Lead
46	Faith	115/12.47-kV transformer KY1A and 115-kV interrupter 362	
47		12.47-kV breaker 1022 and assoc. switches	City of Faith
48	Fallon Pumping	All Not Included	
49	Fallon Relift	All Not Included	
50	Flandreau	12.47-kV switches 3121, 3122, 3123, 3129, 3223	City of Flandreau
51	Forman	69-kV breaker 452 and assoc. switches	
52		69/41.8-kV transformer KZ3A and 69-kV switches 353, 355	
53		115-kV breaker 1662 and assoc. switches	
54		41.8-kV breaker 2142 and assoc. switches	Otter Tail
55		41.8/12.5-kV transformer KX6A and switch 1443	
56		12.5-kV breaker 2222 and assoc. switches	Dakota Valley
57	Fort Randall	115-kV breaker 962 and assoc. switches	
58	Fort Thompson	69-kV breaker 4452 and assoc. switches	West Central
59	Frazier Pumping	All Not Included	
60	Garrison	115-kV breakers 462, 562 and assoc switches	generator leads
61	Gavins Point	115-kV breakers 162, 262, 362 and assoc. switches	generator leads
62	Glendive Pumping No. 1 Tap	All Not Included	
63	Glendive Pumping No. 1	All Not Included	
64	Granite Falls	69-kV breakers 4352, 4452, 4552, 4652 and assoc. switches	GRE normally open and Minn. Valley
65		115/69-kV transformer KY2A	
66		115-kV breaker 3262 and assoc. switches	
67	Gregory	115-kV Disconnect Switch 463	protection for non-included transformer (transformer not owned by Western)
68		12.47-kV breaker 422 and assoc. switches	
69	Groton	69-kV breaker 1552 and assoc. switches	East River
70	Havre	12.5-kV breaker 822 and assoc. switches	Hill County
71	Hilken	take-off structure to Baldwin Wind	generator lead
72	Huron	115-kV switches 1261, 1265	
73		115/69-kV transformer KY1A	
74		69-kV breakers 1952, 2052 and assoc. switches	East River
75	Intake	All Not Included	
76	Intake Pumping	All Not Included	
77	Jamestown	115/41.8-kV transformers KY1A and KY2A	
78		115-kV breaker 662 and assoc. switches	
79		41.8-kV breaker 1142 and assoc. switches	Otter Tail, Normally Open - emergency tie
80		12.47-kV breaker 1522, 1722 and assoc. switches	
81	Killdeer	115/41.8-kV transformer KY4A and switch 469	
82		41.8-kV breaker 442, 642 and switches 343, 345	MDU and Upper Mo.
83	Lakota	12.5-kV breaker 1022 and assoc. switches	City of Lakota
84		69-kV breaker 152 and assoc. switches	
85		115/69-kV transformer KY1A, switches 362, 363	
86	Leeds	69/12.5-kV transformer KZ3A and switch 645	
87		12.5-kV breaker 624 and assoc. switches	CPEC
88	Martin	115/34.5-kV transformer KY1A and interrupter 962	
89		34.5-kV breaker 1242 and assoc. switches	LaCreek
90	Maurine	115/69-kV transformer KY1A and switches 1263, 1265	
91		115-kV breaker 1762	
92		69-kV breaker 2252 and assoc. switches	Grand Electric
93	Midland	Capacity Rights in 115/69 kV Transformer KY1A	
94	Mission	115/24.9-kV transformer KY1A and interrupter 362	Cherry-Todd
95	Morris	41.8-kV breakers 3132, 3232, 3332 and assoc switches	
96		115/41.8-kV transformer KY3A	
97		115-kV breaker 1362 and assoc switches	
98	Mount Vernon	69-kV breaker 1852 and assoc. switches	East River
99	Nashua Tap	All Not Included	
99	Nelson Tap	Switch 1861	

100	Newell	69-kV breakers 2252, 2452 and assoc. switches	Rushmore
101	New Underwood	13.8 kV interrupter 4423 and assoc. switch	
102	Oahe	230-kV breakers 2882, 2482, 2486, 2082, 1162 and assoc. switches	generator lead
103		115-kV breaker 1162 and assoc. switches	generator lead
104	O'Fallon Creek	12.47-kV breaker 522 and assoc. switches and equipment	MDU
105	Penn Tap	Switches 1860, 1861	
106	Philip	115/69-kV transformer KY1A and switches 1963	
107		69-kV breaker 2152 and assoc. switches	West Central
108	Pierre	115/12.47-kV transformer KY1A and 115-kV interrupter 762	
109		12.47-kV breakers 2212, 2312, 2412 and assoc. switches	City of Pierre
110	Pleasant Lake Tap	Switched 760, 761	
111	Rapid City	115/12.47-kV transformer KY1A	
112	Richland	All Not Included	
	Roberts County	69-kV breakers 5456, 5652 and assoc switches	
113	Rudyard	115/69/12.5-kV transformer KY1A and interrupter 362	
114		69-kV breaker 752 and assoc. switches	Hill County
115		12.5-kV breaker 422 and assoc. switches	Hill County
116	Rugby	115/41.8-kV transformer KY1A and breaker 1162 and assoc. switches	
117		41.8-kV breaker 2142 and assoc. switches	Otter Tail
118	Savage Pumping	All Not Included	
119	Shelby	All Not Included	
120	Shelby 2	115-kV breaker 1162 and assoc. switches	to Shelby
121	Shirley Pumping	All Not Included	
122	Sioux Falls	115-kV breaker 862 and assoc. switches	East River
123		69-kV breaker 1552 and assoc. switches	East River
124	Spencer	69-kV breaker 1642 and assoc. switches	City of Spencer
125	Summit	41.8-kV breakers 2142, 2242 and assoc. switches	
126		115/41.8-kV transformer KY1B	
127		115-kV interrupter 862 and switch 861	
128	Terry Pumping	All Not Included	
129	Terry Tap	115/34.5-kV transformer KY1A and switch 363	
130		34.5-kV breaker 342 and assoc. switches	Buffalo Rapids and MDU
131	Tiber	115/12.5-kV transformer KY1A and breaker 1262	
132		12.5-kV breaker 122 and assoc. switches	USBR
133	Tyndall	69-kV breaker 452 and assoc. switches	East River
134		115-kV interrupter 362	protection for non-included transformer (transformer not owned by Western)
135	Valley City	69-kV breakers 344, 1144 and assoc. switches	City of Valley City
136	Wall	115/12.47-kV transformer KY1B and interrupters 461 and 562	
137		12.47-kV breaker 622 and assoc. switches	West River
	Wanblee	Interrupter 462 and assoc. switches	
138	Ward	230-kV switch 889	
139	Washburn	230/41.8-kV transformer KU1A and breaker 282	
140		41.8-kV breaker 342 and assoc. switches	Otter Tail - emergency tie
141	Watford City	115-kV interrupter 162	protection for non-included transformer (transformer not owned by Western)
142	Wessington Springs	230-kV switch 989	generator outlet
143	Whately	69/12.5-kV transformer KYA and switches 253, 257	
144		12.5-kV breaker 224 and assoc. switches	Norval
145	Wicksville	115-kV interrupter 362	protection for non-included transformer (transformer not owned by Western)
146		24.9-kV breaker 1032 and assoc. switches	West River
147	Williston	60-kV breaker 3552 and assoc. switches	MDU non-credited line
148	Williston 2	115-kV breaker 2562 and assoc. switches	
149	Winner	12.47-kV breakers 2222, 2422, 2523 and assoc. switches	City of Winner and Rosebud Electric
150	Wiota	All Not Included	
151	Wiota Tap	All Not Included	
152	Wolf Point	115/34.5-kV transformer KY1A and switches 1963, 1965	
153		34.5-kV breakers 2142, 2242, 2342, 2442 and assoc. switches	MDU and Norval
154		12.5-kV breakers 3222, 3322, 3422 and assoc. switches	Norval and McCone
155	Woonsocket	34.5-kV breakers 442 and 542 and assoc. switches	NWPS and City of Wessington Springs
156		115/69-kV transformer KY1B and 115-kV breaker 862	
157		Mobile Transformer 115/34.5-kV	
158		115-kV interrupters 362 and 862 and assoc. switches, switch M263, M261	
159	Transmission Lines		
160	SHELBY-SHELBY2	115-kV	
161	Corps Switchyard Facilities		
162	Big Bend	230-kV interrupters 1081, 2081, 3081, 4081 and assoc switches	
163	Fort Peck	230-kV interrupters 481, 581 and assoc switches	
164		115-kV switches 861, 961	
165	Fort Randall	115-kV switch 960	
166		230-kV switches 1180, 1280, 1380	
167	Garrison	230-kV breakers 182, 282, 382 and assoc switches	
168		115-kV breakers 462, 561, 1762 and assoc switches	
169		13.8-kV breaker 2722 and assoc switches	
170	Gavins Point	115-kV breakers 162, 262, 362 and assoc. switches	
171	Oahe	115-kV breaker 1162 and assoc. switches	
172		230-kV breakers 2082, 2882 and assoc. switches	

* Based upon Attachment AI of SPP's Tariff and consistent with criteria set forth in the "Zone 19 (Upper Missouri Zone) - Attachment AI Guidance Document", dated 06/14/2016, as prepared by the Attachment AI Working Group in FERC docket ER15-1775-000.

WAPA-UGP 2020 Rate Estimate Calculation Worksheet 11 - Facility Changes 12 Months Ending 09/30/2020 ESTIMATE	
Roberts County	New 115/69-kV substation added due to 2017 ITP. NTC ID 200452. 115-kV portion will be regionally shared.
Lewis & Clark-Richland	Reconductor 0.1 miles of 115-kV Transmission Line to increase rating due to 2018 ITP. NTC ID 210497. This project will be regionally shared.

WAPA-UGP 2020 Rate Estimate Calculation

Worksheet 12 - Scheduling, System Control, and Dispatch Service

12 Months Ending 09/30/2020 ESTIMATE

Line No.	DESCRIPTION (1)	SSCD (2)	REFERENCE (3)
1	A. Operation and Maintenance Expense	\$9,878,571	O&M Expenses Worksheet
2	B. A&G Expense	\$173,158	A&G Expenses Worksheet
3	C. Depreciation Expense	\$308,765	Depreciation Expense Worksheet
4	D. Taxes Other than Income Taxes for Transmission	\$0	Not Applicable
5	E. Allocation of General Plant	\$0	No General Plant identified at this time, all plant is identified as either generation or transmission related
6	F. Cost of Capital		
7	Weighted Transmission Composite Interest Rate	4.917%	Cost of Capital Worksheet
8	Net Plant Investment	\$6,527,157	
9	Cost of Capital	\$320,961	L7*L8
10	H. Revenue Requirement		
11	Annual Western-UGPR Cost	\$10,681,455	L1+L2+L3+L9
12	Estimated SSCD Revenue from non-Transmission facilities	\$ 742,107	
13	Prior Year True-Up	\$ 1,594,814	
14	Revenue Requirement for SSCD for Transmission facilities	\$11,534,163	L11-L12+L13

2020 SPP ESTIMATE SUMMARY		FID	DESCRIPTION	PRIOR YEAR FACILITY TOTALS (\$)	FY2019-20 ESTIMATE ADD/REPL/RETIRE (\$)	ATTACHMENT AI ADJUSTMENTS (\$)	GENERATION ADJUSTMENTS (\$)	FY2020 EST SPP TOTALS (\$)
	WAO		WATERTOWN ALTERNATE OPERATIONS CENTER	6,006,058	-	0	(1,501,515)	4,504,544
	WTO		WATERTOWN OPERATIONS CENTER	1,311,373	-	0	(412,326)	899,047
	WTO F		WATERTOWN OPERATIONS CENTER (BFPS)	12,647,186	-	0	(3,161,797)	9,485,390
				19,964,617	-	0	(5,075,637)	14,888,980
2020 SPP ESTIMATE DETAIL:		FID	DESCRIPTION	FID COST DETAIL (\$)	SSCD %	SSCD TOTAL (\$)	TRANS %	TRANS TOTAL (\$)
	WAO		IDC	299	75.00%	224	75.00%	224
	WAO		LAND & RIGHTS	9,790	75.00%	7,342	75.00%	7,342
	WAO		LAND AT KCR	1,539	75.00%	1,154	75.00%	1,154
	WAO		MICROWAVE TOWER	295,486	75.00%	221,614	75.00%	221,614
	WAO		IDC	57,816	75.00%	43,362	75.00%	43,362
	WAO		IDC	5,246	75.00%	3,935	75.00%	3,935
	WAO		ANTENNA	17,480	75.00%	13,110	75.00%	13,110
	WAO		MICROWAVE SYSTEM	122,582	75.00%	91,937	75.00%	91,937
	WAO		MICROWAVE SYSTEM	12,407	75.00%	9,305	75.00%	9,305
	WAO		SCADA COMMUNICATION EQUIPMENT	20,217	75.00%	15,163	75.00%	15,163
	WAO		LAND & RIGHTS	54,138	75.00%	40,603	75.00%	40,603
	WAO		BUILDINGS	531,049	75.00%	398,287	75.00%	398,287
	WAO		BUILDINGS	90,309	75.00%	67,732	75.00%	67,732
	WAO		OTHER STRUCTURES AND IMPROVEMENTS	54,257	75.00%	40,693	75.00%	40,693
	WAO		OTHER STRUCTURES AND IMPROVEMENTS	475,746	75.00%	356,809	75.00%	356,809
	WAO		STATION EQUIPMENT	95,962	75.00%	71,972	75.00%	71,972
	WAO		SCADA COMMUNICATION EQUIPMENT	12,679	75.00%	9,510	75.00%	9,510
	WAO		SCADA COMMUNICATION EQUIPMENT	1,022,154	75.00%	766,616	75.00%	766,616
	WAO		MICROWAVE COMMUNICATION EQUIPMENT	122,476	75.00%	91,857	75.00%	91,857
	WAO		MICROWAVE COMMUNICATION EQUIPMENT	733,679	75.00%	550,260	75.00%	550,260
	WAO		MICROWAVE COMMUNICATION EQUIPMENT	35,292	75.00%	26,469	75.00%	26,469
	WAO		MICROWAVE COMMUNICATION EQUIPMENT	13,959	75.00%	10,470	75.00%	10,470
	WAO		TELEPHONE COMMUNICATION EQUIPMENT	53,112	75.00%	39,834	75.00%	39,834
	WAO		FIBER OPTIC EQUIPMENT	184,307	75.00%	138,230	75.00%	138,230
	WAO		FIBER OPTIC EQUIPMENT	97,180	75.00%	72,885	75.00%	72,885
	WAO		FIBER OPTIC EQUIPMENT	28,885	75.00%	21,663	75.00%	21,663
	WAO		FIBER OPTIC EQUIPMENT	41,066	75.00%	30,799	75.00%	30,799
	WAO		BUILDINGS	1,320,913	75.00%	990,685	75.00%	990,685
	WAO		IDC	454,813	75.00%	341,110	75.00%	341,110
	WAO		PLANT COMM SYSTEM	40,642	75.00%	30,481	75.00%	30,481
	WAO		IDC	577	75.00%	433	75.00%	433
			TOTAL	6,006,058		4,504,544		4,504,544
	WTO		TELEPHONE COMMUNICATION EQUIPMENT	559,892	52.30%	292,824	66.78%	373,896
	WTO		IDC	33,280	52.30%	17,405	66.78%	22,224
	WTO		WALLS	276,284	52.30%	144,496	66.78%	184,502
	WTO		SIDEWALKS	153,428	52.30%	80,243	66.78%	102,459
	WTO		IDC	2,052	52.30%	1,073	66.78%	1,370
	WTO		IDC	2,835	52.30%	1,483	66.78%	1,893
			TOTAL	1,027,770		537,524		686,345
	WTO		FIBER OPTICS EQUIPMENT	267,249	75.00%	200,437	75.00%	200,437
	WTO		IDC	16,354	75.00%	12,265	75.00%	12,265
			TOTAL	283,603		212,702		212,702
	WTO F		ALCATEL 5620 FIBER TERMINAL EQUIP (PART 2 OF 2)	134,174	75.00%	100,631	75.00%	100,631
	WTO F		ADD DROP MULTIPLEXER (PART 2 OF 2)	59,005	75.00%	44,254	75.00%	44,254
	WTO F		POWER SYSTEM DISPATCH CONSOLES	119,667	75.00%	89,751	75.00%	89,751
	WTO F		MICROWAVE ALARM SYSTEM MASTER STATION	19,292	75.00%	14,469	75.00%	14,469
	WTO F		FIBER OPTIC EQUIPMENT	53,165	75.00%	39,873	75.00%	39,873
	WTO F		FIBER OPTIC EQUIPMENT	307,465	75.00%	230,599	75.00%	230,599
	WTO F		FIBER OPTIC EQUIPMENT	12,820	75.00%	9,615	75.00%	9,615
	WTO F		FIBER OPTIC EQUIPMENT	415,983	75.00%	311,987	75.00%	311,987

WTO F	IDC	150,136	75.00%	112,602	75.00%	112,602
WTO F	IDC	2,533	75.00%	1,900	75.00%	1,900
WTO F	TELEPHONE COMMUNICATION EQUIPMENT	31,658	75.00%	23,743	75.00%	23,743
WTO F	MICROWAVE COMMUNICATION EQUIPMENT	85,009	75.00%	63,757	75.00%	63,757
WTO F	FIBER OPTICS EQUIPMENT	108,685	75.00%	81,513	75.00%	81,513
WTO F	FIBER OPTICS EQUIPMENT	1,934	75.00%	1,450	75.00%	1,450
WTO F	FIBER OPTICS EQUIPMENT	38,123	75.00%	28,592	75.00%	28,592
WTO F	IDC	23,486	75.00%	17,614	75.00%	17,614
WTO F	MULTIPLEXER EXPANDED CAPABILITY ASSET 166934 - PROJECT WTO 0025C (PART 2)	25,032	75.00%	18,774	75.00%	18,774
WTO F	IDC - ASSET 166934 MULTIPLEXER EXPANSION (PART 2)	514	75.00%	385	75.00%	385
WTO F	IDC	18,650	75.00%	13,987	75.00%	13,987
WTO F	ADD DROP MULTIPLEXER (PART 1 OF 2)	2,850	75.00%	2,137	75.00%	2,137
WTO F	ALCATEL 5620 FIBER TERMINAL EQUIP (PART 1 OF 2)	6,625	75.00%	4,968	75.00%	4,968
WTO F	VHF RADIO COMPARATOR	98,003	75.00%	73,502	75.00%	73,502
WTO F	IDC	3,248	75.00%	2,436	75.00%	2,436
WTO F	MICROWAVE COMMUNICATION EQUIPMENT	226,333	75.00%	169,750	75.00%	169,750
WTO F	IDC	13,471	75.00%	10,103	75.00%	10,103
WTO F	TELEPHONE SYSTEM - 40 CHANNEL RECORDER & CRASH KIT	70,115	75.00%	52,586	75.00%	52,586
WTO F	INTEREST DURING CONSTRUCTION	1,421	75.00%	1,066	75.00%	1,066
WTO F	VOICE RECORDER SYSTEM	61,005	75.00%	45,754	75.00%	45,754
WTO F	SCADA SYSTEM HISTORIAN SOFTWARE	202,050	75.00%	151,538	75.00%	151,538
WTO F	IDC	6,761	75.00%	5,071	75.00%	5,071
WTO F	IDC	10,395	75.00%	7,796	75.00%	7,796
WTO F	SCADA MAPBOARD	506,493	75.00%	379,870	75.00%	379,870
WTO F	SCADA	121,027	75.00%	90,771	75.00%	90,771
WTO F	IDC	2,484	75.00%	1,863	75.00%	1,863
WTO F	AUX PWR SYS - BACKUP GENERATOR	454,504	75.00%	340,878	75.00%	340,878
WTO F	IDC	12,877	75.00%	9,658	75.00%	9,658
WTO F	(5) DIGITAL VOICE RECORDERS - WTO F	20,217	75.00%	15,163	75.00%	15,163
WTO F	IDC	1,979	75.00%	1,484	75.00%	1,484
WTO F	BATTERY BANK FOR UPS	36,320	75.00%	27,240	75.00%	27,240
WTO F	IDC	631	75.00%	473	75.00%	473
WTO F	DIGITAL TRANS & REC EQUIP	23,847	75.00%	17,885	75.00%	17,885
WTO F	FREQUENCY CONTROL ADDITIONS	57,731	75.00%	43,298	75.00%	43,298
WTO F	TELEPHONE COMMUNICATION EQUIPMENT	144,190	75.00%	108,143	75.00%	108,143
WTO F	SCADA COMMUNICATION EQUIPMENT	1,233,220	75.00%	924,915	75.00%	924,915
WTO F	IDC	15,694	75.00%	11,770	75.00%	11,770
WTO F	PLANT COMM SYSTEM	167,020	75.00%	125,265	75.00%	125,265
WTO F	IDC	2,373	75.00%	1,780	75.00%	1,780
	TOTAL	5,110,212		3,832,659		3,832,659
WTO F	WATERTOWN OPERATIONS BUILDING	636,802	52.30%	333,047	75.00%	477,601
WTO F	IDC	3,422	52.30%	1,790	75.00%	2,567
WTO F	RESURFACE PARKING LOT AT WATERTOWN OPS OFFICE	152,204	52.30%	79,603	75.00%	114,153
WTO F	REPLACE ROOF AT WATERTOWN OPS OFFICE	41,538	52.30%	21,725	75.00%	31,154
WTO F	IDC	6,304	52.30%	3,297	75.00%	4,728
WTO F	MICROWAVE COMMUNICATION EQUIPMENT	20,893	52.30%	10,927	75.00%	15,670
WTO F	MICROWAVE COMMUNICATION EQUIPMENT	20,482	52.30%	10,712	75.00%	15,361
WTO F	IDC	405,078	52.30%	211,856	75.00%	303,809
WTO F	VEHICLE/STORAGE BUILDING	651,816	52.30%	340,900	75.00%	488,862
WTO F	IDC	39,508	52.30%	20,663	75.00%	29,631
WTO F	IDC	1,654	52.30%	865	75.00%	1,240
WTO F	OTHER STRUCTURES AND IMPROVEMENTS	15,703	52.30%	8,213	75.00%	11,777
WTO F	IDC	8,042	52.30%	4,206	75.00%	6,032
WTO F	IDC	8,042	52.30%	4,206	75.00%	6,032
WTO F	BUILDINGS	81,569	52.30%	42,661	75.00%	61,177
WTO F	BUILDINGS	81,569	52.30%	42,661	75.00%	61,177
WTO F	BUILDINGS	818,051	52.30%	427,841	75.00%	613,538
WTO F	IDC	66,517	52.30%	34,788	75.00%	49,887
WTO F	TELEPHONE COMMUNICATION EQUIPMENT	146,115	52.30%	76,418	75.00%	109,586
WTO F	IDC - REPLACEMENTS	1,845	52.30%	965	75.00%	1,384
WTO F	IDC - ADDITIONS	3,845	52.30%	2,011	75.00%	2,883
WTO F	BUILDINGS	220,908	52.30%	115,535	75.00%	165,681
WTO F	IDC	5,015	52.30%	2,623	75.00%	3,761
WTO F	PSOO-WATER SYSTEM	219,050	52.30%	114,563	75.00%	164,288
WTO F	IDC	285,734	52.30%	149,439	75.00%	214,301

	WTO F	PWR SYS OPERATIONS OFFICE BUILDING (PART 1 OF 2)	1,929,776	52.30%	1,009,273	75.00%	1,447,332
	WTO F	WATERTOWN OPS BLDG EXPANSION (PSOO)	303,096	52.30%	158,519	75.00%	227,322
	WTO F	WATERTOWN OPS BLDG EXPANSION	1,362,395	52.30%	712,532	75.00%	1,021,796
		TOTAL	7,536,974		3,941,837		5,652,730

WAPA-UGP 2020 Rate Estimate Calculation
 Worksheet 14 - Rate for Regulation and Frequency Response
 12 Months Ending 09/30/2020 ESTIMATE

Line No.	DESCRIPTION (1)	REGULATION and FREQUENCY RESPONSE (2)	REFERENCE (3)
1	Western Regulation Revenue Requirement	\$291,973	(1)
2	Under Collection - 2018 Regulation Revenue Rqmt	\$108,955	(2)
3	Average WAUW Control Area Load in 2018	168,000	
4	Average Total Control Area(s) Load in 2018 True-up	168,000	(3)
5	Ratio WAUW Control Area to Total Control Area(s)	1.0000	L3 / L4
6	Under Collection - 2018 WAUW Regulation Revenue Rqmt	\$108,955	L2 * L5
7	Total Regulation Revenue Rqmt with True-up	400,928	L1 + L6
(1)	Regulation and Frequency Response Service from "Regulation and Frequency Response for 2020, Western's Costs"		
(2)	Over/Under Collection "True-up of Regulation and Frequency Response Rate for 2018"		
(3)	Average of monthly peaks for 2018 Control Area(s)		
	Regulation and Frequency Response (Western's Costs)		
11	Fixed Charge Rate	14.346%	(4)
12	Corps Generation Net Plant Costs (\$)	\$ 525,042,604	(5)
13	Annual Corps Generation Cost (\$)	\$ 75,324,599	L1 * L2
14	Plant Capacity (kW)	2,286,000	
15	Cost/kW (\$/kW)	\$ 32.95	L3/L4
16	Capacity Used for Regulation (kW)	8,861	
17	Regulation Revenue Requirement (\$) - Capacity	\$291,973	
18	Regulation Revenue Requirement (\$) - Purchases	\$0	(6)
19	Total Regulation Revenue Requirement (\$)	\$291,973	
(4)	Determination of Pick-Sloan Missouri Basin Program, Eastern Division Annual Corps Revenue Requirement for 2020 Rate		
(5)	Corps Generation Net Plant is Total Electric Plant in Service less Depreciation Reserve		
(6)	Cost of Purchases Required to Regulate for Intermittent Resources		

WAPA-UGP 2020 Rate Estimate Calculation
 Worksheet 15 - Rate for Reserves
 12 Months Ending 09/30/2020 ESTIMATE

Line No.	DESCRIPTION (1)	RESERVES (2)	REFERENCE (3)
1	Fixed Charge Rate	14.346%	(1)
2	Corps Generation Net Plant Costs (\$)	\$ 525,042,604	(2)
3	Annual Corps Generation Cost (\$)	\$ 75,324,599	L1*L2
4	Plant Capacity (kW)	2,286,000	
5	Cost/kW (\$/kW-Yr)	\$ 32.95	L3/L4
6	Monthly Charge (\$/kW-mo)	\$ 2.75	
7	Western's Maximum Load in WAUW Control Area (kW)	168,000	(3)
8	Maximum Generation in WAUW Control Area (kW)	97,500	(4)
9	Capacity used for Reserves (kW) -- 3% Load + 3% Gen	7,965	L7*3% + L8*3%
10	Annual Reserves Revenue Requirement	\$ 262,450	L9*L5
11	Under Collection - 2018 WAUW Reserve Revenue Rqmt	\$ 93,011	
12	Annual Reserve Sharing Group Cost	\$ 68,305	(5)
13	Total Regulation Reserves Rqmt with True-up	\$ 423,765	L10+L11+L12
(1)	Determination of Pick-Sloan Missouri Basin Program, Eastern Division Annual Generation Revenue Requirement for 2020 Rate		
(2)	Generation Net Plant Costs include the total Corps Generation Plant-in-Service less total Corps Generation Plant depreciation		
(3)	WAUW load monthly peaks for 2018		
(4)	Northwest Power Pool Reserve Sharing System		
(5)	Annual cost associated with Western-UGP's current reserve sharing group membership		