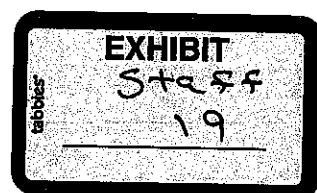


Exhibit 19

No. 1



- 4-17) For the period 2017-2037, on a year by year basis, please provide the following:
- on and off peak MWhs for each of the three situations that the Company considered when calculating the avoided costs regarding the Juhl projects— Company is short and makes market purchases, Company is long but can back down its resources, Company is long and cannot further back down its own resources.
 - Please also provide the confidence bands for each of these three situations and also explain on a relative basis whether these bands are wider or narrower than other variables in the model
 - Please also provide the hourly LMPs for when the Company is long and cannot further back down its own resources.
 - Please explain what analysis leads the Company to have confidence in the three situations it simulated, given that this is a 20 year projection?

Response:

- See attachment 4-17a.
- See attached file 4-17a and b. The confidence bands are slightly wider on the electric prices than the wind generation.
- See the table below detailing the lowest variable cost of NorthWestern's dispatchable resources based upon the pricing inputs that were used in this avoided cost analysis:

2017	\$ 20.25
2018	\$ 20.88
2019	\$ 23.27
2020	\$ 21.80
2021	\$ 23.70
2022	\$ 24.26
2023	\$ 24.74
2024	\$ 25.21
2025	\$ 25.74
2026	\$ 26.24
2027	\$ 26.78
2028	\$ 27.24
2029	\$ 27.85
2030	\$ 28.37
2031	\$ 28.95
2032	\$ 29.47
2033	\$ 30.08
2034	\$ 30.66
2035	\$ 31.31
2036	\$ 31.97
2037	\$ 32.63

d) NorthWestern has confidence in the simulated results because of the validation that has been performed on the PowerSimm model. Ascend and NorthWestern have performed independent validation. The Montana Public Service Commission hired Evergreen Economics to validate PowerSimm as well. Because NorthWestern uses the average results of 100 simulations the avoided cost calculations envelope the extreme events (p5 and p95).

17A	Purchases		Sales		Forced Sale	
	HL	LL	HL	LL	HL	LL
2017	67,481	83,720	51,786	33,109	5,338	35,722
2018	79,966	90,386	41,161	29,806	5,381	30,491
2019	88,136	94,669	36,843	31,385	4,185	21,972
2020	83,638	83,521	43,064	39,751	4,627	22,589
2021	90,188	87,611	38,980	38,208	3,553	18,651
2022	88,583	97,141	39,058	36,053	1,963	14,393
2023	91,046	96,189	37,451	38,208	2,001	12,295
2024	88,067	91,451	41,623	40,799	1,830	13,420
2025	95,329	97,147	35,962	38,959	685	9,107
2026	91,648	97,063	40,921	37,773	881	8,904
2027	96,783	101,381	33,786	36,601	518	8,122
2028	99,540	110,402	30,776	31,023	218	5,231
2029	99,195	107,461	31,892	32,406	249	5,986
2030	100,128	108,472	30,826	32,084	227	5,453
2031	103,971	112,636	26,842	29,787	79	3,875
2032	108,701	113,138	24,216	28,087	61	2,987
2033	106,277	110,615	26,283	31,104	58	2,854
2034	109,732	114,210	22,474	28,954	18	1,801
2035	102,129	119,891	27,059	25,078	30	3,002
2036	104,647	122,847	25,172	21,879	26	2,619
2037	104,843	123,076	22,709	24,114	37	2,412

17B	Purchases				Sales				Forced	
	P5 HL	P95 HL	P5 LL	P95 LL	P5 HL	P95 HL	P5 LL	P95 LL	P5 HL	P95 HL
2017	35,090	97,142	69,487	100,071	37,804	71,414	21,190	43,726	1,868	8,867
2018	42,382	123,294	76,828	111,494	15,229	65,702	17,586	39,153	2,045	9,778
2019	39,661	136,095	75,736	122,026	6,263	65,962	10,671	45,972	1,088	7,085
2020	36,801	137,735	65,147	116,283	7,321	70,546	17,491	53,747	1,110	8,259
2021	37,879	142,535	66,584	118,093	6,237	73,314	13,755	53,331	888	7,161
2022	44,292	134,400	76,741	126,861	11,717	64,623	16,224	49,632	550	4,613

2023	33,687	144,261	77,913	128,337	5,243	71,648	15,283	51,818	280	4,587
2024	30,823	144,969	68,588	125,772	7,908	78,785	17,952	57,794	128	4,156
2025	39,085	149,103	71,889	129,743	1,798	68,900	15,973	53,116	89	1,658
2026	34,826	137,130	74,739	125,520	4,092	79,491	17,753	53,712	106	1,888
2027	43,552	140,344	78,063	135,344	5,068	70,849	14,640	53,583	78	1,161
2028	43,798	138,445	92,738	140,755	2,462	65,591	11,478	47,367	-	660
2029	44,638	145,086	88,118	134,170	3,508	67,568	15,879	44,869	-	594
2030	57,073	134,952	90,032	134,489	7,706	64,282	15,400	46,806	-	586
2031	60,303	140,917	93,487	135,621	2,416	59,252	15,489	43,174	-	216
2032	64,134	141,217	95,036	137,862	3,390	52,512	13,201	39,542	-	181
2033	51,013	147,671	91,810	138,782	788	63,694	15,863	44,483	-	192
2034	65,839	144,265	95,937	137,466	674	52,727	12,161	41,317	-	81
2035	61,278	136,940	69,537	153,815	812	57,477	10,533	63,219	-	85
2036	68,021	136,876	52,824	157,942	503	55,197	4,595	71,441	-	149
2037	58,712	139,481	59,077	159,999	227	56,034	4,340	69,929	-	185

d Sale

P5 LL	P95 LL
27,863	44,535
23,783	36,787
15,820	30,148
16,490	29,410
12,683	25,625
9,067	21,237

8,115	18,023
8,589	19,598
5,555	14,091
5,253	13,563
4,223	12,655
2,930	8,477
3,292	9,381
3,163	8,141
1,976	7,084
1,224	5,177
1,170	5,465
739	3,643
420	5,836
498	5,527
410	4,897