

Base Resource Scheduling Flexibility Enhancements Benefits Report

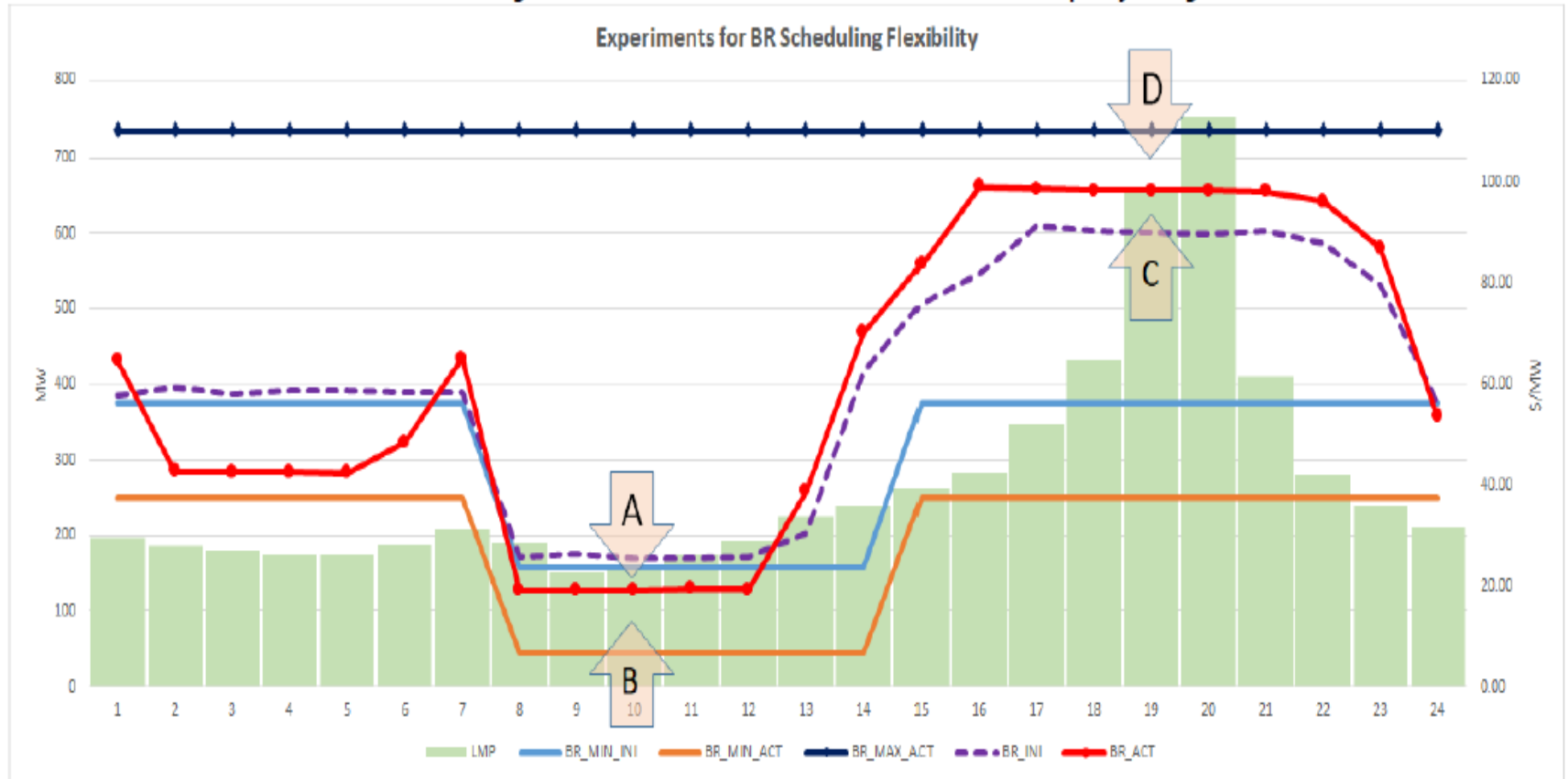
TABLE 1. Summary of Benefits, All Enhancements, All Customers, January 1, 2020 - December 31, 2020

YEAR_MO	ENHANCEMENT	LVH_MWH	LVH_AVE_LMP	HVH_AVE_LMP	RESCHEDULING_BENEFITS, \$	RESIDUAL_LVH_MWH	RESIDUAL_POTENTIAL_BENEFITS, \$	RESIDUAL_LVH_MWH_CAPPED	RESIDUAL_CAPPED_BENEFITS, \$
2020_01	0	0	21.6981	41.5936	0	0	0	0	0
	1	7,302	22.8250	40.7313	132,363	2,580	46,158	2,579	46,135
	2	211	26.3815	48.9993	4,761	62	1,393	62	1,393
2020_02	0	0	17.3394	39.8150	0	0	0	0	0
	1	5,742	15.2783	38.1071	130,475	5,102	113,406	5,078	112,884
	2	1,873	12.1962	36.9749	47,020	2,846	71,069	2,796	69,980
2020_03	1	356	25.0890	42.6739	6,257	306	5,373	299	5,253
	2	8,244	17.5499	36.9351	163,600	13,681	266,883	13,327	260,563
2020_04	1	356	13.9759	31.7753	6,188	1,848	33,351	1,768	31,836
	2	5,005	15.7678	30.7810	75,727	17,535	271,667	16,927	261,031
2020_05	1	7,925	7.4920	31.7526	188,664	24,691	586,249	23,403	556,266
2020_06	0	90	12.8297	39.1146	2,396	5,928	153,941	5,330	138,294
	1	1,448	19.6699	55.1861	47,517	2,094	69,248	2,003	65,997
	2	10,030	11.2625	33.8919	225,541	16,741	386,239	13,900	321,005
2020_07	2	10,869	16.4768	39.1267	242,842	20,091	444,674	17,717	391,579
2020_08	2	9,984	24.6701	104.3977	676,636	17,018	1,033,506	13,598	789,894
2020_09	2	5,867	26.0840	71.1480	208,002	10,526	358,853	9,774	337,724
2020_10	2	10,438	28.8299	67.7808	407,972	7,887	261,313	7,719	256,590
2020_11	2	5,308	28.1312	53.4942	140,543	4,191	110,992	4,140	109,755
2020_12	2	4,868	27.9817	55.0497	131,848	4,016	109,775	3,939	107,723
		95,916			2,838,351	157,143	4,324,091	144,358	3,863,902

- LVH_MWH = Total Initial BR Min MW less Total Scheduled BR MW by ALL Customers for the 6 lowest-priced hours in the day
- LVH_AVE_LMP = Average Day Ahead MEEA LMP for the 6 lowest-priced hours in the day
- HVH_AVE_LMP = Average Day Ahead MEEA LMP for the 6 highest-priced hours in the day
- RESCHEDULING_BENEFITS, \$ = $LVH_MWH * (HVH_AVE_LMP - LVH_AVE_LMP)$
- RESIDUAL_LVH_MWH = Total Scheduled BR MW by ALL Customers less Total Actual BR Min MW for the 6 lowest-priced hours in the day
- RESIDUAL_POTENTIAL_BENEFITS, \$ = $RESIDUAL_LVH_MWH * (HVH_AVE_LMP - LVH_AVE_LMP)$
- RESIDUAL_LVH_MWH_CAPPED = $\min(RESIDUAL_LVH_MWH, Total\ Actual\ BR\ Max\ MW\ less\ Total\ Scheduled\ BR\ MW\ by\ Customer\ for\ the\ 6\ highest-priced\ hours\ in\ the\ day)$, calculated for each customer
- RESIDUAL_CAPPED_BENEFITS, \$ = $RESIDUAL_LVH_MWH_CAPPED * (HVH_AVE_LMP - LVH_AVE_LMP)$



CHART 1. Illustration of BR made available for Higher-Value Hours: MWh Rescheduled and Available Capacity at Higher-Value Hours



LVH_MWH = "A" = Total Initial BR Min MW less Total Scheduled BR MW by ALL Customers for the 6 lowest-priced hours in the day
RESCHEDULING_BENEFITS, \$ = LVH_MWH * (HVH_AVE_LMP - LVH_AVE_LMP), benefits realized by rescheduling "A" into higher value hours in "C"
RESIDUAL_LVH_MWH = "B" = Total Scheduled BR MW by ALL Customers less Total Actual BR Min MW for the 6 lowest-priced hours in the day
RESIDUAL_LVH_MWH_CAPPED = min(RESIDUAL_LVH_MWH, Total Actual BR Max MW less Total Scheduled BR MW by Customer for the 6 highest-priced hours in the day), calculated for each customer
 = min("B", "D"), calculated for each customer



Impact of BR Scheduling Flexibility Enhancements to the Max Peaking Program

TABLE 2. Estimate of Impact of BR Rescheduling to the Max Peaking Program

YEAR_MO	ENHANCEMENT	MAXPK_MWH	LVH_AVE_LMP	HVH_AVE_LMP	AVERAGE_MAXPK_BENEFIT, \$/MWH	BR_RESCHEDULING_IMPACT, \$
2020_01	0	0	20.6835	46.5091	10.9401	0
	1	3,937	21.2438	43.0268	10.9401	-43,074
	2	122	25.3586	52.1288	10.9401	-1,336
2020_02	0	0	15.5276	42.2105	11.3506	0
	1	2,968	12.7944	40.4558	11.3506	-33,691
	2	1,045	10.6295	40.2665	11.3506	-11,859
2020_03	1	204	24.4672	45.5831	8.3467	-1,704
	2	4,439	15.9227	39.9461	8.3467	-37,049
2020_04	1	180	12.9470	38.1482	5.6507	-1,018
	2	2,808	14.8632	34.2890	5.6507	-15,868
2020_05	1	4,246	6.5251	37.2267	15.7039	-66,671
2020_06	0	42	11.7477	47.0523	27.6489	-1,172
	1	971	18.0965	69.5662	27.6489	-26,837
	2	5,459	9.9151	38.9074	27.6489	-150,936
2020_07	2	6,733	14.5251	47.0823	21.8691	-147,247
2020_08	2	5,441	22.5947	152.2437	84.0846	-457,528
2020_09	2	3,083	24.1864	95.1035	45.4373	-140,078
2020_10	2	5,798	27.3743	87.8169	63.2435	-366,696
2020_11	2	2,784	26.9498	60.2339	28.6223	-79,689
2020_12	2	2,663	26.5181	59.5798	26.3783	-70,235
		<u>52,923</u>				<u>-1,652,688</u>

MAXPK_MWH

= Total Initial BR Min MW less Total Scheduled BR MW by ALL Customers for the 3 lowest-priced hours in the day

LVH_AVE_LMP

= Average Day Ahead MEEA LMP for the 3 lowest-priced hours in the day

HVH_AVE_LMP

= Average Day Ahead MEEA LMP for the 3 highest-priced hours in the day

AVERAGE_MAXPK_BENEFIT, \$/MWH

= Max Peaking Monthly Average Difference of Sale Price and Purchase Price

BR_RESCHEDULING_IMPACT, \$

= MAXPK_MWH * (AVERAGE_MAXPK_BENEFIT, \$/MWH) * -1

