

2018 Frequency Bias Settings

5/3/2018

Eastern Interconnection

BA	Bias Type	Receive Overlap Reg	Provide Overlap Reg	Final 2018 FBS MW/0.1Hz	2016 Peak Demand (MW)	2018 L ₁₀	OY 2018 BA FRO MW/0.1Hz
FMPP	Fixed	No	No	-29.6	3,549	37.5	-5.6
FPC	Fixed	No	No	-81.5	11,186	62.2	-15.5
FPL	Fixed	No	No	-246.9	23,725	108.3	-40.6
GVL	Fixed	No	No	-3.2	429	12.3	-0.6
HST	Fixed	No	No	-0.5	105	4.9	-0.1
JEA	Fixed	No	No	-21.2	2,763	31.7	-4.0
NSB	Fixed	No	No	-1.4	101	8.2	-0.1
SEC	Fixed	No	No	-11.0	359	22.9	-2.1
TAL	Fixed	No	No	-4.6	597	14.8	-0.9
TEC	Fixed	No	No	-36.0	4,101	41.4	-6.9
MHEB	Fixed	No	No	-55.7	4,654	51.4	-10.4
SPC	Fixed	No	No	-41.3	3,740	44.3	-7.9
IESO	Fixed	No	No	-248.2	23,213	108.6	-47.3
ISNE	Fixed	No	No	-197.6	25,596	96.9	-37.6
NYIS	Fixed	No	No	-258.6	32,075	110.8	-49.2
NBSO	Fixed	No	Yes	-27.7	3,384	36.3	-5.3
NSPI	Fixed	Yes	No	-17.8	1,999	29.1	-3.4
MISO	Fixed	No	No	-1,101.9	115,510	228.8	-209.8
OVEC	Fixed	No	No	-9.7	98	21.5	-1.7
PJM	Fixed	No	No	-1,350.2	152,170	253.3	-257.1
AEC	Fixed	No	No	-10.8	1,916	22.7	-2.0
AECI	Fixed	No	No	-35.3	4,521	41.0	-6.7
CHC	Fixed	No	No	-2.9	10	11.7	-0.1
CPL	Fixed	No	No	-116.8	13,298	74.5	-22.2
DUK	Fixed	No	No	-183.2	20,671	93.3	-34.9
EI	Fixed	No	No	-4.1	-	14.0	-0.5
LGEE	Fixed	No	No	-64.7	7,068	55.4	-12.3
SC	Fixed	No	No	-37.3	4,794	42.1	-7.1
SCEG	Fixed	No	No	-44.6	4,807	46.0	-8.5
SEPA	Fixed	No	No	-1.6	-	8.7	-0.3
SOCO	Fixed	No	No	-388.0	45,488	135.8	-73.9
TVA	Fixed	No	No	-281.2	29,824	115.6	-53.5
SPA	Fixed	No	No	-6.1	132	17.0	-1.2
SWPP	Fixed	No	No	-450.1	50,499	146.2	-85.7
Total EI FBS				-5,371	Total EI FRO		-1,015

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BA	Bias Type	Receive Overlap Reg	Provide Overlap Reg	Final 2018 FBS MW/0.1Hz	2016 Peak Demand (MW)	2018 L ₁₀	OY 2018 BA FRO MW/0.1Hz
AVA	Fixed	No	No	-37.4	2,273	31.2	-11.8
AZPS	Fixed	No	No	-55.1	7,275	37.8	-30.8
BANC	Fixed	No	No	-43.2	4,426	33.5	-15.3
BPAT	Variable	No	No	-177.7	9,739	68.0	-80.7
CHPD	Fixed	No	No	-26.5	437	26.2	-3.7
CISO	Fixed	No	No	-348.0	46,008	95.1	-194.2
DEAA	Fixed	No	No	-1.7	-	6.6	-0.90
DOPD	Fixed	No	No	-5.1	386	11.5	-2.0
EPE	Fixed	No	No	-15.4	1,877	20.0	-6.1
GCPD	Fixed	No	No	-32.0	779	28.8	-6.5
GRID	Fixed	No	No	-12.6	-	18.1	-3.5
GRIF	Fixed	No	No	-1.9	-	7.0	-1.0
GRMA	Fixed	No	No	0.0	-	0.0	-0.9
GWA	Fixed	No	No	-0.5	-	3.6	-0.3
HGMA	Fixed	No	No	-3.0	-	8.8	-1.7
IID	Fixed	No	No	-7.5	1,060	14.0	-2.6
IPCO	Variable	No	No	-42.1	3,657	33.1	-16.2
LDWP	Fixed	No	No	-55.0	6,692	37.8	-26.0
NEVP	Fixed	No	No	-59.4	9,059	39.3	-33.1
NWMT	Fixed	No	No	-30.9	1,808	28.3	-10.6
PACE	Fixed	No	No	-92.7	8,628	49.1	-48.1
PACW	Fixed	No	No	-49.7	3,700	35.9	-19.4
PGE	Fixed	No	No	-29.7	3,713	27.8	-16.6
PNM	Fixed	No	No	-25.8	2,608	25.9	-14.4
PSCO	Fixed	No	No	-72.3	7,980	43.3	-40.4
PSEI	Fixed	No	No	-35.3	4,574	30.3	-19.7
SCL	Fixed	No	No	-46.8	1,783	34.9	-8.3
SRP	Fixed	No	No	-51.3	6,954	36.5	-28.2
TEPC	Fixed	No	No	-40.5	3,200	32.4	-14.5
TIDC	Fixed	No	No	-6.4	619	12.9	-2.1
TPWR	Fixed	No	No	-15.4	912	20.0	-4.1
WACM	Fixed	No	No	-57.8	4,057	38.8	-31.1
WALC	Fixed	No	No	-23.5	1,363	24.7	-7.6
WAUW	Fixed	No	No	-2.0	147	7.2	-0.6
WWA	Fixed	No	No	-0.6	-	3.9	-0.3
AESO	Fixed	No	No	-141.8	-	60.7	-79.1
BCHA	Variable	No	No	-116.7	-	55.1	-64.5
CFE	Fixed	No	No	-28.0	-	27.0	-12.9

Total WI FBS -1,791

Total WI IFRO -860

2018 Frequency Bias Settings**5/3/2018****ERCOT Interconnection**

BA	Bias Type	Receive Overlap Reg	Provide Overlap Reg	Final 2018 FBS MW/0.1Hz	2016 Peak Demand (MW)	2018 L₁₀	OY 2018 BA FRO MW/0.1Hz
ERCOT	N/A	N/A	N/A	-759.0	71,109	N/A	-381.0

Québec Interconnection

BA	Bias Type	Receive Overlap Reg	Provide Overlap Reg	Final 2018 FBS MW/0.1Hz		2018 L₁₀	OY 2018 BA FRO MW/0.1Hz
HQT	N/A	N/A	N/A	N/A		N/A	-179.0

2018 Comparison of Frequency Bias Settings and L₁₀

5/3/2018

Eastern Interconnection

BA	2018 FBS (MW/0.1 Hz)	2017 FBS (MW/0.1 Hz)	Change (MW/0.1 Hz)	Percent Change	2018 L ₁₀	2017 L ₁₀	Percent Change
FMPP	-29.6	-29.1	-0.5	2%	37.5	37.1	1%
FPC	-81.5	-80.4	-1.1	1%	62.2	61.7	1%
FPL	-246.9	-213.1	-33.8	16%	108.3	100.4	8%
GVL	-3.2	-3.3	0.1	-3%	12.3	12.5	-1%
HST	-0.5	-0.5	0.0	0%	4.9	4.9	0%
JEA	-21.2	-24.0	2.8	-12%	31.7	33.7	-6%
NSB	-1.4	-0.4	-1.0	250%	8.2	4.3	88%
SEC	-11.0	-10.7	-0.3	3%	22.9	22.5	2%
TAL	-4.6	-4.7	0.1	-2%	14.8	14.9	-1%
TEC	-36.0	-36.4	0.4	-1%	41.4	41.5	0%
MHEB	-55.7	-56.4	0.7	-1%	51.4	51.6	0%
SPC	-41.3	-40.6	-0.7	2%	44.3	43.8	1%
IESO	-248.2	-250.3	2.1	-1%	108.6	108.8	0%
ISNE	-197.6	-200.9	3.3	-2%	96.9	97.5	-1%
NYIS	-258.6	-261.7	3.1	-1%	110.8	111.2	0%
NBSO	-27.7	-27.1	-0.6	2%	36.3	35.8	1%
NSPI	-17.8	-18.1	0.3	-2%	29.1	29.3	-1%
MISO	-1,101.9	-1,101.3	-0.6	0%	228.8	228.2	0%
OVEC	-9.7	-8.1	-1.6	20%	21.5	19.6	10%
PJM	-1,350.2	-1,355.2	5.0	0%	253.3	253.1	0%
AEC	-10.8	-11.5	0.7	-6%	22.7	23.3	-3%
AECI	-35.3	-34.6	-0.7	2%	41.0	40.4	1%
CHC	-2.9	-3.0	0.1	-3%	11.7	11.9	-1%
CPLE	-116.8	-115.4	-1.4	1%	74.5	88.7	-16%
DUK	-183.2	-177.6	-5.6	3%	93.3	91.6	2%
EEL	-4.1	-5.3	1.2	-23%	14.0	15.8	-12%
LGEE	-64.7	-64.9	0.2	0%	55.4	55.4	0%
SC	-37.3	-40.4	3.1	-8%	42.1	43.7	-4%
SCEG	-44.6	-43.7	-0.9	2%	46.0	45.5	1%
SEPA	-1.6	-1.4	-0.2	14%	8.7	8.1	7%
SOCO	-388.0	-422.6	34.6	-8%	135.8	141.4	-4%
TVA	-281.2	-277.5	-3.7	1%	115.6	114.5	1%
SPA	-6.1	-16.4	10.3	-63%	17.0	27.8	-39%
SWPP	-450.1	-409.0	-41.1	10%	146.2	139.1	5%
EI Totals	-5,371	-5,346	-25.70	0.5%			

2018 Comparison of Frequency Bias Settings and L₁₀

5/3/2018

Western Interconnection

BA	2018 FBS (MW/0.1 Hz)	2017 FBS (MW/0.1 Hz)	Change (MW/0.1 Hz)	Percent Change	2018 L ₁₀	2017 L ₁₀	Percent Change
AVA	-37.4	-20.6	-16.8	-82%	31.2	22.2	41%
AZPS	-55.1	-55.6	0.5	1%	37.8	36.4	4%
BANC	-43.2	-26.7	-16.5	-62%	33.5	25.3	33%
BPAT	-177.7	-162.0	-15.7	-10%	68.0	62.2	9%
CHPD	-26.5	-26.5	0.0	0%	26.2	25.2	4%
CISO	-348.0	-344.1	-3.9	-1%	95.1	90.7	5%
DEAA	-1.7	-1.6	-0.1	-6%	6.6	6.2	8%
DOPD	-5.1	-6.6	1.6	23%	11.5	12.6	-9%
EPE	-15.4	-20.7	5.3	26%	20.0	22.2	-10%
GCPD	-32.0	-28.0	-4.0	-14%	28.8	25.9	12%
GRID	-12.6	-10.7	-1.9	-18%	18.1	16.0	13%
GRIF	-1.9	-1.8	-0.1	-6%	7.0	6.6	7%
GRMA	0.0	-5.6	5.6	100%	0.0	11.6	-100%
GWA	-0.5	-0.5	0.0	0%	3.6	3.5	4%
HGMA	-3.0	-4.5	1.5	33%	8.8	10.4	-15%
IID	-7.5	-4.9	-2.6	-53%	14.0	10.8	29%
IPCO	-42.1	-40.6	-1.5	-4%	33.1	31.1	6%
LDWP	-55.0	-43.7	-11.3	-26%	37.8	32.3	17%
NEVP	-59.4	-44.2	-15.2	-34%	39.3	32.5	21%
NWMT	-30.9	-19.7	-11.2	-57%	28.3	21.7	31%
PACE	-92.7	-85.7	-7.0	-8%	49.1	45.2	8%
PACW	-49.7	-34.2	-15.5	-45%	35.9	28.6	26%
PGE	-29.7	-29.0	-0.7	-2%	27.8	26.3	6%
PNM	-25.8	-24.4	-1.4	-6%	25.9	24.1	7%
PSCO	-72.3	-78.0	5.7	7%	43.3	43.2	0%
PSEI	-35.3	-35.3	0.0	0%	30.3	29.0	4%
SCL	-46.8	-32.0	-14.8	-46%	34.9	27.6	26%
SRP	-51.3	-54.9	3.6	7%	36.5	36.2	1%
TEPC	-40.5	-24.6	-15.9	-65%	32.4	24.2	34%
TIDC	-6.4	-4.1	-2.3	-56%	12.9	9.9	30%
TPWR	-15.4	-10.8	-4.6	-43%	20.0	16.1	25%
WACM	-57.8	-55.9	-1.9	-3%	38.8	36.5	6%
WALC	-23.5	-16.5	-7.0	-42%	24.7	19.9	24%
WAUW	-2.0	-1.1	-0.9	-82%	7.2	5.1	41%
WWA	-0.6	-0.5	-0.1	-20%	3.9	3.5	14%
AESO	-141.8	-138.7	-3.1	-0.02	60.7	57.6	0.05
BCHA	-116.7	-130.0	13.3	0.10	55.1	55.7	-0.01
CEN	-28.0	-22.2	-5.8	-0.26	27.0	23.0	0.17
WI Totals	-1,791	-1,647	144.79	-8.8%			

2017 Comparison of Frequency Bias Settings and L₁₀

5/3/2018

ERCOT Interconnection

BA	2018 FBS (MW/0.1 Hz)	2017 FBS (MW/0.1 Hz)	Change (MW/0.1 Hz)	Percent Change	2018 L ₁₀	2017 L ₁₀	Percent Change
ERCOT	-759.0	-764.0	5.00	-1%	N/A	N/A	N/A

Québec Interconnection

BA	2018 FBS (MW/0.1 Hz)	2017 FBS (MW/0.1 Hz)	Change (MW/0.1 Hz)	Percent Change	2018 L ₁₀	2017 L ₁₀	Percent Change
HQT	N/A	N/A	N/A		N/A	N/A	N/A