

Eastern Interconnection Average Frequency Error

Enter BIAS in MW/0.1 HZ -> **-100**

Year	2003	2002	2001	2000	1999	1998	1997	1996
Bias Inadvertent	-58903	-40665	-23017	-24639	-2398	-3338	-7337	-6632

Average
Hourly
MWh
Payback

	ON_PEAK		OFF-PEAK		ON_PEAK		OFF-PEAK		
	Hours	Avg. Error (Hz)	Hours	Avg. Error (Hz)	Error (Hz)	Bias Inadv (MWh)	Error (Hz)	Bias Inadv (MWh)	
2003 January	416	0.006497	328	0.003706	2.702752	-2703	1.215568	-1216	5.3
February	384	0.003698	288	0.009097	1.420032	-1420	2.619936	-2620	6.0
March	416	0.007534	328	0.005629	3.134144	-3134	1.846312	-1846	6.7
April	416	0.006428	303	0.006296	2.674048	-2674	1.907688	-1908	6.4
May	416	0.007611	328	0.009096	3.166176	-3166	2.983488	-2983	8.3
June	400	0.00519	320	0.009054	2.076	-2076	2.89728	-2897	6.9
July	416	0.005021	328	0.007512	2.088736	-2089	2.463936	-2464	6.1
August	416	0.007563	328	0.01211	3.146208	-3146	3.97208	-3972	9.6
September	400	0.006534	320	0.007173	2.6136	-2614	2.29536	-2295	6.8
October	432	0.00547	313	0.004384	2.36304	-2363	1.372192	-1372	5.0
November	384	0.007073	336	0.004356	2.716032	-2716	1.463616	-1464	5.8
December	416	0.009555	328	0.005456	3.97488	-3975	1.789568	-1790	7.7
					32.07565	-32076	26.82702	-26827	
							58.90267	-58903	
2002 January	416	0.004052	328	0.001503	1.685632	-1686	0.492984	-493	2.9
February	384	0.006389	288	0.003604	2.453376	-2453	1.037952	-1038	5.2
March	416	0.002852	328	0.003027	1.186432	-1186	0.992856	-993	2.9
April	416	0.001209	303	0.003565	0.502944	-503	1.080195	-1080	2.2
May	416	0.003509	328	0.008286	1.459744	-1460	2.717808	-2718	5.6
June	400	0.002632	320	0.009185	1.0528	-1053	2.9392	-2939	5.5
July	416	0.001503	328	0.005645	0.625248	-625	1.85156	-1852	3.3
August	432	0.004262	312	0.007774	1.841184	-1841	2.425488	-2425	5.7
September	384	0.00532	336	0.007419	2.04288	-2043	2.492784	-2493	6.3
October	432	0.005519	313	0.004813	2.384208	-2384	1.506469	-1506	5.2
November	400	0.006198	320	0.005667	2.4792	-2479	1.81344	-1813	6.0
December	400	0.004556	344	0.005169	1.8224	-1822	1.778136	-1778	4.8
					19.53605	-19536	21.12887	-21129	

						40.66492	-40665			
2001	January	416	0.009791	328	0.004785	4.073056	-4073	1.56948	-1569	7.6
	February	384	0.005966	288	0.003418	2.290944	-2291	0.984384	-984	4.9
	March	432	0.005331	312	0.002265	2.302992	-2303	0.70668	-707	4.0
	April	400	0.001309	319	0.003377	0.5236	-524	1.077263	-1077	2.2
	May	416	-0.001127	328	0.00315	-0.468832	469	1.0332	-1033	0.8
	June	416	-0.000529	304	0.004391	-0.220064	220	1.334864	-1335	1.5
	July	400	0.00037	344	0.004561	0.148	-148	1.568984	-1569	2.3
	August	432	0.000637	312	0.003328	0.275184	-275	1.038336	-1038	1.8
	September	384	0.000948	336	0.000911	0.364032	-364	0.306096	-306	0.9
	October	432	0.000345	313	0.000846	0.14904	-149	0.264798	-265	0.6
	November	400	0.002816	320	0.002282	1.1264	-1126	0.73024	-730	2.6
	December	400	0.003225	344	0.001594	1.29	-1290	0.548336	-548	2.5
					11.85435		-11854	11.16266	-11163	
								23.01701	-23017	
2000	January	400	0.002827	344	-0.001188	1.1308	-1131	-0.408672	409	1.0
	February	400	0.002308	296	-0.002252	0.9232	-923	-0.666592	667	0.4
	March	432	0.003782	312	0.000788	1.633824	-1634	0.245856	-246	2.5
	April	400	0.003642	319	0.002993	1.4568	-1457	0.954767	-955	3.4
	May	416	0.004149	328	0.00579	1.725984	-1726	1.89912	-1899	4.9
	June	416	0.001789	304	0.006633	0.744224	-744	2.016432	-2016	3.8
	July	400	0.000448	344	0.004105	0.1792	-179	1.41212	-1412	2.1
	August	432	-0.000748	312	0.00162	-0.323136	323	0.50544	-505	0.2
	September	400	0.00337	320	0.003365	1.348	-1348	1.0768	-1077	3.4
	October	416	0.003477	329	0.001444	1.446432	-1446	0.475076	-475	2.6
	November	400	0.006798	320	0.001674	2.7192	-2719	0.53568	-536	4.5
	December	400	0.00574	344	0.003816	2.296	-2296	1.312704	-1313	4.9
					15.28053		-15281	9.358731	-9359	
								24.63926	-24639	
1999	January	400	0.001474	344	-0.001967	0.5896	-590	-0.676648	677	-0.1
	February	384	0.001428	288	-0.002108	0.548352	-548	-0.607104	607	-0.1
	March	432	0.001864	312	-0.001878	0.805248	-805	-0.585936	586	0.3
	April	416	-0.000145	303	-0.000295	-0.06032	60	-0.089385	89	-0.2
	May	400	-0.000808	344	0.001844	-0.3232	323	0.634336	-634	0.4

June	416	-0.001457	304	0.003184	-0.606112	606	0.967936	-968	0.5
July	416	-0.004063	328	0.003374	-1.690208	1690	1.106672	-1107	-0.8
August	416	-0.002556	328	0.004404	-1.063296	1063	1.444512	-1445	0.5
September	400	-0.000548	320	-0.000803	-0.2192	219	-0.25696	257	-0.7
October	416	0.000686	329	-0.00188	0.285376	-285	-0.61852	619	-0.4
November	400	0.002045	320	0.000563	0.818	-818	0.18016	-180	1.4
December	416	0.002972	328	0.001763	1.236352	-1236	0.578264	-578	2.4
					0.320592	-321	2.077327	-2077	
						2.397919	-2398		
1998 January	416	0.00069	328	-0.000582	0.28704	-287	-0.190896	191	0.1
February	384	0.002181	288	0.000388	0.837504	-838	0.111744	-112	1.4
March	416	0.001992	328	0.000375	0.828672	-829	0.123	-123	1.3
April	416	0.001431	303	0.000672	0.595296	-595	0.203616	-204	1.1
May	400	-0.000816	344	0.0018	-0.3264	326	0.6192	-619	0.4
June	416	-0.000565	304	0.00397	-0.23504	235	1.20688	-1207	1.3
July	416	-0.000336	328	0.002843	-0.139776	140	0.932504	-933	1.1
August	416	0.000462	328	-0.001579	0.192192	-192	-0.517912	518	-0.4
September	400	0.000262	320	-0.000983	0.1048	-105	-0.31456	315	-0.3
October	432	0.001671	313	-0.003006	0.721872	-722	-0.940878	941	-0.3
November	384	0.002164	336	-0.005066	0.830976	-831	-1.702176	1702	-1.2
December	416	0.002682	328	-0.003064	1.115712	-1116	-1.004992	1005	0.1
					4.812848	-4813	-1.47447	1474	
						3.338378	-3338		
1997 January	416	0.00281	328	-0.001935	1.16896	-1169	-0.63468	635	0.7
February	384	0.002597	288	-0.00138	0.997248	-997	-0.39744	397	0.9
March	416	0.002776	328	-0.000183	1.154816	-1155	-0.060024	60	1.5
April	416	0.001536	303	0.000786	0.638976	-639	0.238158	-238	1.2
May	416	0.000134	328	0.001214	0.055744	-56	0.398192	-398	0.6
June	400	0.0007	320	0.00498	0.28	-280	1.5936	-1594	2.6
July	416	-0.000967	328	0.002439	-0.402272	402	0.799992	-800	0.5
August	416	0.000272	328	0.001956	0.113152	-113	0.641568	-642	1.0
September	400	-0.000587	320	0.000774	-0.2348	235	0.24768	-248	0.0
October	432	0.001355	313	-0.001122	0.58536	-585	-0.351186	351	0.3
November	384	0.001977	336	-0.001099	0.759168	-759	-0.369264	369	0.5
December	416	0.001526	328	-0.001588	0.634816	-635	-0.520864	521	0.2

					5.751168	-5751	1.585732	-1586		
							7.3369	-7337		
1996	January	416	0.001147	328	0.00061	0.477152	-477	0.20008	-200	0.9
	February	400	0.002357	296	0.00244	0.9428	-943	0.72224	-722	2.4
	March	416	0.001782	328	-0.00006	0.741312	-741	-0.01968	20	1.0
	April	416	0.001213	303	0.000244	0.504608	-505	0.073932	-74	0.8
	May	416	-0.00051	328	0.0029	-0.21216	212	0.9512	-951	1.0
	June	400	-0.00142	320	0.003005	-0.568	568	0.9616	-962	0.5
	July	416	-0.000738	328	0.003409	-0.307008	307	1.118152	-1118	1.1
	August	432	-0.000264	312	0.001601	-0.114048	114	0.499512	-500	0.5
	September	384	0.001381	336	-0.001825	0.530304	-530	-0.6132	613	-0.1
	October	432	0.001932	313	-0.002755	0.834624	-835	-0.862315	862	0.0
	November	400	0.003141	320	-0.003279	1.2564	-1256	-1.04928	1049	0.3
	December	400	0.001871	344	-0.000538	0.7484	-748	-0.185072	185	0.8
					4.834384		-4834	1.797169	-1797	
							6.631553	-6632		