

Exhibit 30: OY 2008-09 Monthly 50-WY Energy

*Regional Surplus/Deficit by Water Year
PNW Loads and Resource Study
2008 - 2009 Operating Year
2002 White Book*

9/9/2003

Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Avg
1929 Regional Surplus/Deficit	6783	2704	1496	2590	2103	18	317	-2930	-265	-196	275	-3807	5155	4097	1130
1930 Regional Surplus/Deficit	3418	1739	894	2331	1716	-262	-2592	-688	-247	473	298	-4380	3750	4127	634
1931 Regional Surplus/Deficit	4142	2132	1155	2301	1774	-460	-2300	-2995	-468	736	-222	-4172	2918	2885	336
1932 Regional Surplus/Deficit	3761	1215	950	1998	1544	-407	-2085	-2808	2490	6639	10326	5260	10032	6688	2886
1933 Regional Surplus/Deficit	6836	4812	1574	2569	2430	1995	5635	3784	-87	2680	3778	2461	14280	12053	4646
1934 Regional Surplus/Deficit	6477	6265	2935	5734	5515	10199	11999	9113	6738	11623	10421	4469	3364	5280	6895
1935 Regional Surplus/Deficit	3097	661	793	2339	2489	1276	5069	5747	-1063	1517	4662	1372	7975	6678	3137
1936 Regional Surplus/Deficit	5689	2794	1214	2377	1720	-396	-1426	-2632	272	475	4797	7541	7352	4339	2270
1937 Regional Surplus/Deficit	5070	1944	1095	2322	1660	-156	-2512	-2860	-371	535	250	-3869	4128	3711	587
1938 Regional Surplus/Deficit	4416	1249	967	2891	2515	783	6394	522	4136	5366	6969	6329	8629	6109	4023
1939 Regional Surplus/Deficit	4084	1564	1847	2669	2011	212	2085	-1961	899	1870	3526	3419	4217	4799	2143
1940 Regional Surplus/Deficit	5447	2087	1051	2800	1636	666	564	62	4686	3445	4842	528	4658	2820	2282
1941 Regional Surplus/Deficit	3524	1398	866	2449	1500	923	1127	-2405	-175	-465	340	-3133	4087	2050	807
1942 Regional Surplus/Deficit	3325	1505	1276	2184	953	4138	5387	-1253	-1314	887	2477	309	9973	7530	2773
1943 Regional Surplus/Deficit	6501	4703	1490	2383	2339	1367	4961	4115	5408	11829	10476	6339	10601	9092	5404
1944 Regional Surplus/Deficit	6746	4949	1749	2839	2064	312	1234	-2410	-930	-175	-19	-4556	2457	1867	865
1945 Regional Surplus/Deficit	3620	782	913	1672	1356	-256	-2002	-1626	-534	84	320	1095	8537	4831	1366
1946 Regional Surplus/Deficit	3916	2781	959	2944	2445	837	3274	3149	5868	6699	8955	7077	9528	7836	4591
1947 Regional Surplus/Deficit	6994	4391	2141	2760	2690	6296	6997	6012	6366	4296	7229	4496	8522	6689	5369
1948 Regional Surplus/Deficit	6922	3105	1856	7690	4651	3771	6857	1069	3034	4225	8074	8359	15271	8788	6042
1949 Regional Surplus/Deficit	6635	7249	3567	3458	2315	1332	2362	1042	7861	4388	9942	6741	8507	3855	4595
1950 Regional Surplus/Deficit	4094	1007	726	2900	2683	133	3906	6532	9355	8885	9016	4636	14063	9981	5535
1951 Regional Surplus/Deficit	6359	6689	2666	5379	5996	8741	9921	10922	7173	8811	9820	7051	7678	8960	7527
1952 Regional Surplus/Deficit	6555	6334	3187	6550	3032	4860	6141	4090	4478	8428	9845	8530	9050	5677	5931
1953 Regional Surplus/Deficit	6544	2833	1577	2386	1970	-98	2691	5961	883	209	3621	4472	13336	9371	4096
1954 Regional Surplus/Deficit	7072	4608	2192	3328	2730	3414	5054	6539	4020	7671	6320	5244	12351	11391	5758
1955 Regional Surplus/Deficit	8745	6984	7199	4494	3940	2945	297	-1617	-943	2237	1052	-18	14541	12937	4440
1956 Regional Surplus/Deficit	6665	6924	2070	5026	4889	7452	10906	5129	8106	9321	12744	8717	15342	9649	7926
1957 Regional Surplus/Deficit	7334	5737	2274	4070	2334	3748	4043	201	3218	9403	6662	7913	14035	5560	5164
1958 Regional Surplus/Deficit	4777	2092	1383	2846	2092	744	3727	4307	3964	2543	7420	6843	11305	4848	4206
1959 Regional Surplus/Deficit	4784	2693	1659	2803	3881	4935	9638	6929	3869	6890	5910	3585	12180	10134	5813
1960 Regional Surplus/Deficit	6457	5236	7187	8945	6564	6221	5913	1526	3751	12152	8796	2888	9557	7076	6329
1961 Regional Surplus/Deficit	6957	2889	1774	2974	3152	1388	4661	5574	5188	6311	6041	3735	13344	6031	4910
1962 Regional Surplus/Deficit	5065	3254	988	2826	2189	166	3925	-661	-201	8943	10104	3055	7540	7216	3394
1963 Regional Surplus/Deficit	6288	3987	1529	3941	3991	4922	4232	3241	2064	2466	3069	4057	8571	6683	4261
1964 Regional Surplus/Deficit	7239	4416	2300	2588	2752	778	3994	674	-133	4332	4488	2352	14721	11962	4352
1965 Regional Surplus/Deficit	6933	6263	3673	4674	2800	7805	11641	9466	7023	6027	10075	6405	10424	6444	7084
1966 Regional Surplus/Deficit	6854	5919	2462	3699	2709	2801	5845	-8.1	679	7201	4201	2738	6706	7573	3941
1967 Regional Surplus/Deficit	6785	4062	1306	2611	2359	1898	6799	8108	2088	5889	3605	990	13700	10139	5014
1968 Regional Surplus/Deficit	6506	5258	2378	3925	2809	2705	5928	5120	4414	-132	2915	474	9860	8978	4489
1969 Regional Surplus/Deficit	6701	5922	4558	5347	4777	4640	9383	6990	4849	10909	10257	8575	9750	7140	6909
1970 Regional Surplus/Deficit	6772	2957	1797	3062	2517	1024	5023	4548	852	994	4184	2831	10918	3987	3668
1971 Regional Surplus/Deficit	4517	2185	1203	2907	2775	1085	8485	11575	6471	7481	8931	8755	14188	10811	6651
1972 Regional Surplus/Deficit	7386	7372	2865	3343	3009	3249	8023	10850	12207	12880	7264	8338	14933	11498	7980
1973 Regional Surplus/Deficit	8363	6817	3750	3435	2433	3943	6285	-1791	-149	-606	751	-2861	4587	3882	2598
1974 Regional Surplus/Deficit	3634	933	645	2013	2048	5556	13092	11793	9037	10528	11587	7482	15444	14005	7871
1975 Regional Surplus/Deficit	7623	7323	3566	2349	2371	1878	5533	3183	5957	4028	4953	4723	11919	11777	5435
1976 Regional Surplus/Deficit	5341	3895	2568	4583	5530	9998	10122	7161	5120	10218	8344	7609	8488	10802	7157
1977 Regional Surplus/Deficit	10035	9059	8273	3511	1962	223	1166	-2518	-1454	-1041	-827	-3711	1714	1647	1619
1978 Regional Surplus/Deficit	3609	808	449	1283	1967	1158	3896	1113	5812	4344	6024	4031	7292	7898	3524
-Ranked Averages-															
Top Ten Percent	5877	5163	2163	4069	4295	6999	10413	9171	8329	10351	9952	7839	12377	10983	7692
Middle Eighty Percent	6028	3913	2310	3413	2738	2379	4615	2762	3014	4785	5862	3806	9806	7266	4367
Bottom Ten Percent	4580	2432	1152	2448	1743	71	-1009	-2272	-438	221	129	-4022	3468	2928	646

Exhibit 31: OY 2009-10 Monthly 50-WY Energy

*Regional Surplus/Deficit by Water Year
PNW Loads and Resource Study
2009 - 2010 Operating Year
2002 White Book*

9/9/2003

Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Avg
1929 Regional Surplus/Deficit	6492	2404	1159	2297	1747	-330	-32	-3271	-647	-1087	-549	-3031	5694	3826	920
1930 Regional Surplus/Deficit	3122	1439	557	2036	1362	-609	-2947	-1024	-628	-416	-528	-3605	4289	3858	425
1931 Regional Surplus/Deficit	3848	1834	817	2006	1420	-807	-2655	-3335	-849	-150	-1048	-3395	3459	2616	127
1932 Regional Surplus/Deficit	3467	916	613	1703	1190	-757	-2440	-3148	2112	5756	9516	6049	10579	6420	2679
1933 Regional Surplus/Deficit	6544	4517	1238	2277	2075	1648	5295	3459	-465	1797	2960	3248	14829	11789	4442
1934 Regional Surplus/Deficit	6185	5972	2603	5447	5161	9863	11661	8791	6368	10744	9612	5259	3900	5011	6693
1935 Regional Surplus/Deficit	2803	362	459	2044	2134	927	4727	5424	-1439	632	3847	2155	8518	6411	2932
1936 Regional Surplus/Deficit	5398	2498	879	2084	1367	-743	-1776	-2971	-108	-413	3982	8330	7898	4070	2063
1937 Regional Surplus/Deficit	4777	1645	758	2028	1306	-503	-2866	-3199	-752	-354	-574	-3095	4665	3441	378
1938 Regional Surplus/Deficit	4122	952	631	2598	2162	436	6052	191	3762	4483	6155	7119	9173	5841	3819
1939 Regional Surplus/Deficit	3790	1265	1513	2377	1656	-136	1741	-2297	520	985	2708	4205	4754	4529	1936
1940 Regional Surplus/Deficit	5155	1788	714	2508	1283	318	214	-275	4313	2559	4031	1311	5197	2550	2075
1941 Regional Surplus/Deficit	3230	1100	530	2157	1146	577	775	-2743	-555	-1349	-477	-2352	4627	1778	599
1942 Regional Surplus/Deficit	3030	1206	940	1891	599	3790	5049	-1589	-1695	0.9	1659	1092	10519	7264	2567
1943 Regional Surplus/Deficit	6210	4407	1154	2090	1984	1019	4620	3784	5035	10947	9664	7129	11146	8824	5200
1944 Regional Surplus/Deficit	6454	4654	1412	2546	1708	-36	885	-2751	-1313	-1066	-841	-3777	2994	1594	655
1945 Regional Surplus/Deficit	3325	482	576	1377	1001	-604	-2357	-1965	-917	-806	-507	1880	9082	4562	1157
1946 Regional Surplus/Deficit	3621	2484	623	2649	2090	490	2926	2817	5496	5816	8142	7867	10075	7568	4386
1947 Regional Surplus/Deficit	6703	4095	1806	2468	2335	5948	6659	5685	5995	3413	6416	5284	9070	6422	5165
1948 Regional Surplus/Deficit	6629	2807	1520	7403	4297	3427	6517	734	2662	3340	7261	9149	15819	8524	5839
1949 Regional Surplus/Deficit	6344	6957	3233	3167	1960	982	2018	705	7489	3503	9130	7529	9051	3584	4391
1950 Regional Surplus/Deficit	3799	706	389	2606	2328	-214	3564	6203	8986	8002	8204	5425	14611	9715	5331
1951 Regional Surplus/Deficit	6066	6395	2330	5090	5641	8401	9583	10600	6802	7928	9010	7841	8222	8694	7325
1952 Regional Surplus/Deficit	6264	6040	2853	6262	2678	4515	5800	3763	4103	7544	9032	9320	9595	5410	5728
1953 Regional Surplus/Deficit	6252	2535	1241	2092	1615	-445	2338	5636	509	-675	2803	5260	13883	9104	3891
1954 Regional Surplus/Deficit	6780	4312	1857	3038	2376	3067	4713	6215	3647	6788	5505	6035	12900	11126	5555
1955 Regional Surplus/Deficit	8455	6691	6871	4205	3587	2599	-52	-1956	-1324	1352	239	764	15090	12672	4235
1956 Regional Surplus/Deficit	6374	6631	1735	4736	4534	7111	10568	4803	7734	8440	11935	9507	15891	9384	7724
1957 Regional Surplus/Deficit	7043	5442	1938	3779	1978	3401	3700	-136	2844	8519	5849	8703	14583	5291	4959
1958 Regional Surplus/Deficit	4483	1792	1046	2553	1737	394	3383	3976	3593	1658	6606	7630	11854	4577	4001
1959 Regional Surplus/Deficit	4489	2395	1323	2511	3527	4590	9300	6606	3494	6007	5097	4375	12728	9868	5610
1960 Regional Surplus/Deficit	6166	4942	6858	8658	6210	5879	5575	1195	3375	11273	7985	3676	10102	6808	6127
1961 Regional Surplus/Deficit	6666	2590	1439	2682	2798	1039	4318	5249	4816	5428	5225	4525	13893	5762	4706
1962 Regional Surplus/Deficit	4772	2956	651	2534	1833	-183	3582	-994	-582	8059	9294	3843	8084	6949	3188
1963 Regional Surplus/Deficit	5996	3691	1193	3651	3637	4578	3892	2913	1683	1581	2254	4842	9116	6416	4057
1964 Regional Surplus/Deficit	6948	4120	1966	2296	2396	429	3651	342	-514	3445	3671	3139	15270	11697	4147
1965 Regional Surplus/Deficit	6642	5969	3340	4386	2447	7458	11303	9142	6651	5143	9264	7195	10970	6176	6881
1966 Regional Surplus/Deficit	6563	5624	2128	3408	2356	2453	5504	-338	298	6320	3386	3525	7249	7307	3736
1967 Regional Surplus/Deficit	6495	3763	970	2318	2004	1550	6459	7786	1714	5008	2788	1777	14249	9873	4811
1968 Regional Surplus/Deficit	6215	4964	2044	3634	2455	2357	5587	4794	4042	-1020	2098	1255	10408	8711	4285
1969 Regional Surplus/Deficit	6411	5628	4228	5059	4422	4295	9045	6667	4475	10028	9447	9366	10298	6873	6707
1970 Regional Surplus/Deficit	6479	2659	1461	2771	2162	675	4676	4221	475	108	3371	3617	11462	3717	3462
1971 Regional Surplus/Deficit	4224	1885	865	2614	2419	737	8144	11253	6098	6597	8120	9545	14736	10545	6447
1972 Regional Surplus/Deficit	7095	7079	2530	3052	2654	2900	7682	10527	11838	12001	6452	9128	15481	11233	7778
1973 Regional Surplus/Deficit	8073	6524	3416	3144	2077	3596	5944	-2129	-530	-1493	-68	-2083	5128	3611	2391
1974 Regional Surplus/Deficit	3341	633	307	1718	1692	5208	12754	11471	8667	9647	10777	8272	15992	13741	7668
1975 Regional Surplus/Deficit	7332	7030	3232	2056	2014	1529	5191	2856	5583	3144	4138	5511	12465	11512	5231
1976 Regional Surplus/Deficit	5048	3599	2233	4293	5175	9659	9784	6837	4748	9337	7532	8399	9032	10537	6955
1977 Regional Surplus/Deficit	9746	8767	7946	3220	1605	-125	818	-2858	-1837	-1932	-1649	-2933	2251	1374	1411
1978 Regional Surplus/Deficit	3315	508	112	988	1611	807	3549	779	5441	3463	5211	4820	7836	7631	3318
-Ranked Averages-															
Top Ten Percent	5585	4867	1827	3778	3939	6656	10074	8848	7958	9471	9141	8629	12924	10718	7490
Middle Eighty Percent	5736	3616	1976	3121	2383	2031	4272	2432	2638	3900	5048	4593	10352	6998	4162
Bottom Ten Percent	4286	2134	815	2155	1388	-276	-1361	-2610	-819	-667	-694	-3245	4007	2657	437

Exhibit 32: OY 2010-11 Monthly 50-WY Energy

*Regional Surplus/Deficit by Water Year
PNW Loads and Resource Study
2010 - 2011 Operating Year
2002 White Book*

9/9/2003

Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Avg
1929 Regional Surplus/Deficit	6178	2084	857	1978	1302	-782	-491	-3737	-1045	-1580	-921	-4005	4634	3530	427
1930 Regional Surplus/Deficit	2805	1119	254	1714	920	-1060	-3411	-1488	-1025	-908	-901	-4581	3230	3563	-69
1931 Regional Surplus/Deficit	3533	1515	514	1683	977	-1257	-3118	-3801	-1247	-640	-1422	-4369	2400	2322	-367
1932 Regional Surplus/Deficit	3152	595	310	1382	747	-1211	-2904	-3614	1717	5268	9157	5084	9526	6126	2188
1933 Regional Surplus/Deficit	6229	4200	937	1957	1633	1196	4844	3006	-860	1310	2595	2282	13777	11498	3953
1934 Regional Surplus/Deficit	5871	5658	2305	5131	4719	9422	11211	8339	5979	10259	9253	4295	2838	4717	6206
1935 Regional Surplus/Deficit	2488	42	158	1723	1691	475	4275	4971	-1832	143	3483	1185	7462	6118	2442
1936 Regional Surplus/Deficit	5083	2180	577	1763	924	-1193	-2236	-3438	-505	-905	3618	7365	6844	3776	1572
1937 Regional Surplus/Deficit	4461	1326	455	1707	864	-954	-3328	-3664	-1149	-846	-945	-4073	3603	3146	-116
1938 Regional Surplus/Deficit	3807	634	329	2277	1720	-14	5600	-267	3371	3995	5793	6156	8119	5548	3329
1939 Regional Surplus/Deficit	3474	945	1211	2057	1212	-588	1287	-2761	124	495	2342	3238	3693	4234	1445
1940 Regional Surplus/Deficit	4840	1469	412	2188	841	-133	-246	-739	3923	2069	3670	342	4137	2256	1584
1941 Regional Surplus/Deficit	2915	780	227	1837	704	127	313	-3209	-953	-1838	-842	-3323	3568	1482	107
1942 Regional Surplus/Deficit	2713	887	637	1570	157	3338	4600	-2052	-2093	-489	1294	123	9465	6971	2077
1943 Regional Surplus/Deficit	5896	4090	852	1770	1540	567	4168	3325	4645	10461	9303	6166	10092	8530	4711
1944 Regional Surplus/Deficit	6139	4337	1109	2227	1264	-488	427	-3218	-1712	-1560	-1211	-4750	1933	1297	162
1945 Regional Surplus/Deficit	3008	161	273	1055	557	-1057	-2821	-2432	-1315	-1299	-880	912	8027	4269	664
1946 Regional Surplus/Deficit	3303	2166	320	2327	1647	39	2468	2358	5106	5328	7782	6904	9022	7275	3896
1947 Regional Surplus/Deficit	6389	3778	1505	2149	1892	5496	6210	5231	5605	2925	6055	4320	8017	6129	4677
1948 Regional Surplus/Deficit	6315	2489	1218	7088	3854	2980	6067	273	2272	2851	6900	8186	14766	8233	5351
1949 Regional Surplus/Deficit	6029	6642	2933	2849	1516	530	1564	242	7100	3015	8770	6564	7997	3289	3901
1950 Regional Surplus/Deficit	3482	385	86	2285	1885	-664	3111	5747	8597	7514	7844	4461	13560	9423	4842
1951 Regional Surplus/Deficit	5751	6080	2029	4773	5198	7956	9134	10148	6412	7441	8650	6878	7168	8402	6838
1952 Regional Surplus/Deficit	5949	5724	2553	5947	2236	4065	5349	3308	3710	7057	8671	8356	8541	5117	5240
1953 Regional Surplus/Deficit	5937	2216	938	1771	1172	-896	1877	5183	117	-1164	2439	4294	12830	8812	3401
1954 Regional Surplus/Deficit	6466	3996	1556	2719	1934	2615	4261	5762	3256	6300	5143	5071	11848	10835	5067
1955 Regional Surplus/Deficit	8142	6376	6576	3888	3145	2150	-511	-2422	-1723	863	-123	-206	14038	12381	3745
1956 Regional Surplus/Deficit	6059	6316	1433	4419	4090	6665	10118	4350	7344	7954	11576	8543	14839	9092	7237
1957 Regional Surplus/Deficit	6729	5126	1637	3461	1535	2951	3246	-600	2453	8031	5488	7740	13531	4996	4470
1958 Regional Surplus/Deficit	4167	1471	744	2233	1294	-59	2929	3518	3204	1169	6244	6665	10802	4282	3511
1959 Regional Surplus/Deficit	4173	2076	1021	2193	3084	4141	8850	6154	3101	5520	4736	3411	11676	9575	5122
1960 Regional Surplus/Deficit	5852	4626	6563	8343	5768	5433	5126	736	2983	10789	7625	2710	9049	6515	5639
1961 Regional Surplus/Deficit	6352	2270	1138	2364	2355	586	3865	4795	4426	4941	4861	3562	12841	5468	4218
1962 Regional Surplus/Deficit	4457	2638	348	2215	1388	-637	3128	-1454	-981	7570	8935	2878	7030	6656	2698
1963 Regional Surplus/Deficit	5682	3373	890	3333	3194	4129	3442	2458	1286	1092	1890	3875	8063	6123	3568
1964 Regional Surplus/Deficit	6634	3803	1665	1976	1952	-24	3197	-118	-912	2955	3307	2173	14218	11406	3657
1965 Regional Surplus/Deficit	6328	5653	3040	4070	2004	7008	10853	8690	6261	4655	8903	6231	9916	5882	6394
1966 Regional Surplus/Deficit	6249	5308	1827	3090	1914	2001	5052	-796	-99	5833	3023	2560	6193	7014	3247
1967 Regional Surplus/Deficit	6181	3444	667	1998	1560	1098	6009	7334	1322	4521	2423	811	13197	9582	4322
1968 Regional Surplus/Deficit	5902	4648	1743	3316	2012	1906	5136	4341	3652	-1512	1734	284	9356	8418	3796
1969 Regional Surplus/Deficit	6098	5312	3930	4743	3980	3846	8595	6215	4084	9543	9087	8402	9246	6579	6220
1970 Regional Surplus/Deficit	6164	2340	1158	2452	1718	222	4220	3767	81	-381	3010	2650	10408	3423	2972
1971 Regional Surplus/Deficit	3908	1564	561	2293	1975	285	7693	10801	5707	6109	7760	8581	13684	10253	5959
1972 Regional Surplus/Deficit	6782	6764	2229	2732	2211	2448	7231	10075	11450	11516	6091	8164	14429	10942	7291
1973 Regional Surplus/Deficit	7760	6209	3115	2826	1634	3146	5493	-2594	-928	-1984	-435	-3057	4069	3316	1899
1974 Regional Surplus/Deficit	3025	311	3.3	1395	1248	4756	12304	11019	8278	9161	10418	7308	14940	13450	7180
1975 Regional Surplus/Deficit	7018	6715	2932	1736	1570	1076	4739	2401	5192	2657	3775	4546	11411	11221	4742
1976 Regional Surplus/Deficit	4733	3282	1933	3976	4732	9217	9335	6385	4358	8851	7172	7435	7977	10245	6468
1977 Regional Surplus/Deficit	9433	8453	7651	2902	1161	-576	359	-3324	-2236	-2426	-2018	-3906	1189	1075	918
1978 Regional Surplus/Deficit	2998	188	-191	666	1167	353	3093	317	5051	2976	4850	3855	6780	7338	2828
-Ranked Averages-															
Top Ten Percent	5270	4550	1525	3459	3496	6208	9624	8395	7568	8985	8781	7666	11870	10426	7003
Middle Eighty Percent	5421	3298	1675	2802	1940	1581	3818	1973	2245	3412	4685	3627	9297	6705	3672
Bottom Ten Percent	3971	1815	512	1834	946	-726	-1824	-3076	-1217	-1158	-1064	-4219	2947	2362	-57

Exhibit 33: OY 2011-12 Monthly 50-WY Energy

*Regional Surplus/Deficit by Water Year
PNW Loads and Resource Study
2011 - 2012 Operating Year
2002 White Book*

9/9/2003

Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Avg
1929 Regional Surplus/Deficit	5873	1776	576	1562	979	-1263	-808	-3952	-1296	-1180	-656	-3602	4614	3117	236
1930 Regional Surplus/Deficit	2499	812	-26	1297	597	-1541	-3732	-1699	-1276	-506	-636	-4179	3208	3150	-260
1931 Regional Surplus/Deficit	3229	1208	233	1266	655	-1738	-3438	-4015	-1499	-236	-1158	-3965	2378	1908	-558
1932 Regional Surplus/Deficit	2848	288	30	964	424	-1694	-3224	-3828	1470	5672	9431	5494	9509	5713	1998
1933 Regional Surplus/Deficit	5925	3895	658	1541	1311	715	4533	2800	-1109	1714	2866	2692	13760	11084	3765
1934 Regional Surplus/Deficit	5567	5353	2028	4718	4397	8948	10900	8135	5734	10663	9526	4705	2814	4303	6020
1935 Regional Surplus/Deficit	2183	-265	-120	1305	1368	-7.6	3963	4767	-2081	547	3755	1592	7444	5705	2254
1936 Regional Surplus/Deficit	4779	1875	298	1347	602	-1675	-2554	-3651	-755	-502	3892	7775	6827	3363	1383
1937 Regional Surplus/Deficit	4157	1019	175	1290	541	-1435	-3648	-3878	-1400	-445	-679	-3671	3580	2733	-307
1938 Regional Surplus/Deficit	3503	328	49	1860	1398	-495	5287	-475	3125	4399	6067	6565	8102	5134	3141
1939 Regional Surplus/Deficit	3170	639	932	1642	889	-1069	974	-2973	-125	899	2612	3647	3670	3821	1256
1940 Regional Surplus/Deficit	4536	1162	132	1772	519	-615	-564	-952	3678	2473	3944	750	4115	1842	1395
1941 Regional Surplus/Deficit	2610	474	-53	1422	383	-353	-5.5	-3422	-1204	-1434	-572	-2918	3548	1068	-83
1942 Regional Surplus/Deficit	2409	580	357	1154	-165	2857	4288	-2263	-2345	-85	1566	531	9448	6558	1888
1943 Regional Surplus/Deficit	5591	3785	573	1354	1217	85	3857	3118	4399	10865	9576	6575	10075	8117	4523
1944 Regional Surplus/Deficit	5835	4033	829	1811	940	-969	110	-3432	-1965	-1159	-944	-4346	1911	882	-29
1945 Regional Surplus/Deficit	2703	-147	-7.3	638	234	-1539	-3142	-2645	-1567	-898	-615	1321	8010	3855	473
1946 Regional Surplus/Deficit	2999	1861	40	1910	1324	-441	2152	2150	4861	5732	8055	7313	9005	6862	3708
1947 Regional Surplus/Deficit	6084	3473	1226	1733	1569	5016	5898	5026	5360	3329	6328	4729	8000	5715	4490
1948 Regional Surplus/Deficit	6010	2183	939	6675	3532	2501	5755	63	2027	3255	7173	8595	14748	7820	5164
1949 Regional Surplus/Deficit	5725	6337	2656	2434	1194	48	1250	31	6855	3419	9044	6973	7980	2876	3713
1950 Regional Surplus/Deficit	3178	77	-195	1868	1562	-1144	2798	5540	8352	7918	8117	4871	13542	9009	4654
1951 Regional Surplus/Deficit	5447	5775	1751	4360	4876	7481	8822	9944	6167	7845	8923	7287	7150	7989	6652
1952 Regional Surplus/Deficit	5645	5419	2275	5533	1914	3586	5038	3103	3463	7461	8944	8766	8524	4703	5053
1953 Regional Surplus/Deficit	5633	1910	658	1355	849	-1377	1559	4979	-131	-760	2711	4704	12813	8399	3213
1954 Regional Surplus/Deficit	6162	3691	1277	2304	1611	2134	3949	5557	3010	6704	5416	5480	11831	10422	4880
1955 Regional Surplus/Deficit	7838	6072	6300	3474	2823	1670	-828	-2635	-1975	1267	151	201	14021	11968	3557
1956 Regional Surplus/Deficit	5755	6011	1154	4005	3768	6189	9807	4145	7099	8358	11849	8953	14822	8679	7050
1957 Regional Surplus/Deficit	6425	4821	1359	3047	1212	2471	2932	-811	2207	8435	5761	8149	13514	4583	4282
1958 Regional Surplus/Deficit	3863	1164	464	1817	971	-541	2615	3310	2958	1573	6517	7075	10785	3869	3323
1959 Regional Surplus/Deficit	3869	1770	741	1778	2762	3662	8539	5950	2855	5924	5009	3820	11659	9162	4935
1960 Regional Surplus/Deficit	5548	4321	6288	7930	5446	4956	4814	528	2736	11193	7899	3120	9032	6102	5453
1961 Regional Surplus/Deficit	6048	1963	859	1948	2033	104	3552	4591	4181	5345	5133	3971	12824	5055	4030
1962 Regional Surplus/Deficit	4153	2332	68	1799	1065	-1119	2814	-1663	-1232	7974	9209	3287	7013	6243	2509
1963 Regional Surplus/Deficit	5378	3069	611	2919	2872	3650	3130	2253	1035	1497	2161	4285	8046	5709	3380
1964 Regional Surplus/Deficit	6329	3498	1386	1560	1629	-506	2883	-327	-1163	3359	3579	2582	14201	10993	3468
1965 Regional Surplus/Deficit	6023	5348	2763	3657	1682	6530	10542	8486	6016	5059	9177	6641	9898	5469	6207
1966 Regional Surplus/Deficit	5945	5003	1549	2676	1592	1520	4740	-1004	-350	6238	3295	2969	6174	6601	3059
1967 Regional Surplus/Deficit	5877	3137	387	1582	1237	617	5697	7129	1075	4925	2694	1220	13180	9168	4134
1968 Regional Surplus/Deficit	5597	4343	1464	2901	1691	1425	4824	4136	3407	-1110	2004	690	9339	8005	3608
1969 Regional Surplus/Deficit	5794	5007	3654	4330	3658	3366	8284	6011	3838	9947	9361	8811	9228	6166	6033
1970 Regional Surplus/Deficit	5860	2033	878	2037	1395	-260	3905	3563	-167	23	3282	3059	10391	3009	2784
1971 Regional Surplus/Deficit	3604	1257	281	1877	1651	-196	7381	10597	5462	6513	8033	8990	13667	9839	5771
1972 Regional Surplus/Deficit	6478	6459	1951	2317	1888	1967	6920	9871	11205	11920	6365	8573	14412	10529	7104
1973 Regional Surplus/Deficit	7456	5904	2837	2411	1311	2665	5181	-2807	-1179	-1582	-166	-2654	4048	2902	1710
1974 Regional Surplus/Deficit	2721	3.3	-278	978	926	4276	11993	10815	8033	9565	10691	7717	14922	13037	6992
1975 Regional Surplus/Deficit	6714	6411	2654	1320	1246	595	4426	2195	4947	3061	4049	4956	11394	10808	4555
1976 Regional Surplus/Deficit	4429	2977	1654	3562	4410	8743	9023	6180	4113	9255	7445	7845	7960	9832	6281
1977 Regional Surplus/Deficit	9129	8148	7376	2488	838	-1058	43	-3538	-2489	-2026	-1751	-3503	1165	659	728
1978 Regional Surplus/Deficit	2694	-120	-472	248	844	-128	2778	107	4806	3380	5123	4265	6763	6924	2640
-Ranked Averages-															
Top Ten Percent	4966	4245	1246	3044	3174	5731	9313	8191	7323	9389	9055	8075	11853	10013	6816
Middle Eighty Percent	5117	2993	1396	2387	1617	1100	3504	1765	1997	3815	4957	4035	9279	6291	3484
Bottom Ten Percent	3666	1509	232	1417	623	-1207	-2143	-3289	-1469	-756	-798	-3816	2925	1948	-247

Exhibit 34: OY 2012-13 Monthly 50-WY Energy

*Regional Surplus/Deficit by Water Year
PNW Loads and Resource Study
2012 - 2013 Operating Year
2002 White Book*

9/9/2003

Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Avg
1929 Regional Surplus/Deficit	5463	1361	220	1249	645	-1641	-1280	-4704	-1706	-1505	-997	-4654	3557	2784	-281
1930 Regional Surplus/Deficit	2087	397	-383	981	265	-1918	-4210	-2448	-1686	-829	-977	-5231	2149	2818	-777
1931 Regional Surplus/Deficit	2818	794	-124	950	322	-2115	-3915	-4768	-1910	-557	-1500	-5017	1319	1577	-1075
1932 Regional Surplus/Deficit	2437	-128	-328	649	91	-2074	-3701	-4581	1063	5353	9101	4451	8457	5382	1483
1933 Regional Surplus/Deficit	5515	3484	302	1228	979	337	4067	2059	-1516	1394	2532	1647	12708	10754	3252
1934 Regional Surplus/Deficit	5156	4942	1675	4408	4066	8581	10436	7395	5332	10346	9197	3662	1753	3972	5508
1935 Regional Surplus/Deficit	1772	-680	-476	990	1036	-386	3496	4027	-2488	226	3422	545	6389	5374	1740
1936 Regional Surplus/Deficit	4369	1463	-58	1033	270	-2052	-3027	-4404	-1164	-825	3561	6732	5774	3031	868
1937 Regional Surplus/Deficit	3746	604	-182	976	209	-1812	-4124	-4629	-1810	-768	-1018	-4725	2520	2401	-825
1938 Regional Surplus/Deficit	3092	-85	-308	1545	1067	-871	4820	-1221	2721	4079	5736	5522	7048	4803	2628
1939 Regional Surplus/Deficit	2759	224	577	1329	556	-1447	505	-3724	-533	579	2278	2602	2610	3489	740
1940 Regional Surplus/Deficit	4125	748	-225	1459	188	-993	-1037	-1701	3275	2153	3614	-296	3056	1510	880
1941 Regional Surplus/Deficit	2199	59	-409	1108	52	-729	-480	-4173	-1613	-1754	-906	-3967	2490	736	-599
1942 Regional Surplus/Deficit	1997	166	0.7	840	-496	2481	3823	-3011	-2755	-405	1233	-515	8395	6227	1374
1943 Regional Surplus/Deficit	5181	3374	217	1041	884	-292	3392	2375	3997	10547	9247	5533	9022	7786	4011
1944 Regional Surplus/Deficit	5425	3621	473	1498	607	-1347	-363	-4185	-2376	-1484	-1283	-5397	851	548	-546
1945 Regional Surplus/Deficit	2291	-562	-364	322	-99	-1917	-3619	-3396	-1979	-1222	-957	277	6957	3524	-43
1946 Regional Surplus/Deficit	2586	1449	-317	1595	992	-818	1681	1404	4459	5412	7725	6271	7952	6531	3195
1947 Regional Surplus/Deficit	5674	3062	871	1421	1237	4640	5434	4285	4957	3009	5997	3686	6947	5384	3978
1948 Regional Surplus/Deficit	5600	1769	583	6365	3201	2127	5290	-684	1624	2935	6843	7554	13697	7490	4652
1949 Regional Surplus/Deficit	5315	5926	2302	2122	861	-331	782	-718	6453	3099	8714	5931	6926	2544	3200
1950 Regional Surplus/Deficit	2766	-338	-552	1553	1230	-1521	2330	4798	7951	7600	7787	3828	12491	8679	4141
1951 Regional Surplus/Deficit	5036	5363	1395	4049	4545	7111	8358	9205	5765	7526	8594	6245	6097	7658	6141
1952 Regional Surplus/Deficit	5235	5008	1921	5224	1582	3212	4573	2362	3057	7142	8615	7724	7471	4372	4541
1953 Regional Surplus/Deficit	5223	1496	301	1041	516	-1755	1085	4239	-536	-1081	2378	3660	11761	8068	2699
1954 Regional Surplus/Deficit	5751	3279	921	1992	1279	1757	3483	4817	2606	6385	5086	4438	10779	10092	4368
1955 Regional Surplus/Deficit	7428	5660	5950	3164	2492	1294	-1301	-3387	-2386	947	-180	-846	12969	11639	3043
1956 Regional Surplus/Deficit	5345	5600	798	3694	3435	5818	9343	3405	6697	8040	11520	7911	13771	8348	6539
1957 Regional Surplus/Deficit	6014	4410	1003	2735	880	2095	2464	-1561	1803	8117	5431	7107	12463	4252	3769
1958 Regional Surplus/Deficit	3451	749	107	1504	638	-920	2147	2566	2556	1253	6187	6032	9733	3537	2810
1959 Regional Surplus/Deficit	3458	1357	385	1465	2430	3288	8075	5210	2450	5605	4678	2777	10607	8831	4422
1960 Regional Surplus/Deficit	5137	3909	5937	7620	5115	4584	4350	-218	2331	10875	7569	2076	7979	5771	4941
1961 Regional Surplus/Deficit	5637	1548	504	1636	1701	-275	3083	3851	3779	5025	4800	2928	11772	4724	3517
1962 Regional Surplus/Deficit	3742	1919	-289	1486	732	-1498	2345	-2410	-1643	7655	8879	2243	5959	5912	1995
1963 Regional Surplus/Deficit	4968	2656	254	2608	2541	3276	2665	1512	625	1176	1827	3241	6993	5378	2867
1964 Regional Surplus/Deficit	5919	3086	1031	1247	1296	-885	2415	-1073	-1573	3040	3246	1538	13150	10663	2954
1965 Regional Surplus/Deficit	5613	4937	2409	3347	1351	6156	10078	7747	5614	4739	8847	5598	8846	5137	5696
1966 Regional Surplus/Deficit	5534	4591	1195	2364	1261	1142	4274	-1749	-759	5919	2963	1925	5119	6270	2546
1967 Regional Surplus/Deficit	5467	2723	30	1268	904	239	5232	6390	671	4605	2359	176	12128	8838	3621
1968 Regional Surplus/Deficit	5187	3932	1108	2589	1359	1048	4359	3396	3004	-1433	1670	-358	8287	7674	3095
1969 Regional Surplus/Deficit	5383	4596	3302	4020	3326	2992	7820	5271	3435	9628	9031	7769	8176	5835	5522
1970 Regional Surplus/Deficit	5449	1619	522	1725	1062	-639	3436	2822	-573	-298	2951	2015	9338	2678	2271
1971 Regional Surplus/Deficit	3193	842	-76	1563	1318	-573	6917	9858	5059	6194	7703	7948	12615	9509	5259
1972 Regional Surplus/Deficit	6067	6048	1596	2004	1556	1589	6455	9132	10804	11602	6034	7531	13361	10199	6592
1973 Regional Surplus/Deficit	7046	5493	2482	2098	978	2289	4716	-3558	-1589	-1905	-502	-3705	2990	2570	1195
1974 Regional Surplus/Deficit	2310	-413	-635	662	593	3899	11529	10076	7632	9247	10362	6675	13871	12707	6480
1975 Regional Surplus/Deficit	6304	6000	2299	1006	913	216	3960	1453	4543	2741	3717	3912	10342	10478	4042
1976 Regional Surplus/Deficit	4018	2565	1300	3252	4078	8375	8559	5441	3710	8936	7115	6803	6906	9502	5770
1977 Regional Surplus/Deficit	8720	7737	7026	2176	504	-1435	-429	-4291	-2902	-2352	-2090	-4554	104	324	211
1978 Regional Surplus/Deficit	2282	-535	-829	-67	511	-506	2308	-639	4404	3061	4792	3221	5709	6593	2125
-Ranked Averages-															
Top Ten Percent	4555	3833	891	2732	2841	5359	8849	7452	6921	9070	8725	7033	10801	9683	6304
Middle Eighty Percent	4706	2580	1040	2074	1285	723	3036	1020	1592	3495	4625	2991	8226	5960	2971
Bottom Ten Percent	3255	1095	-125	1103	291	-1585	-2618	-4041	-1879	-1079	-1137	-4867	1866	1616	-764