
Exhibits 19 – 21

***Regional Monthly Energy Analysis Under The 2002 BPA White Book Load
Forecast for 1937-Water Conditions***

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit 19: OY 2003-04 Monthly Energy

*Loads and Resources - Pacific Northwest Region
PNW Loads and Resource Study
2003 - 2004 Operating Year
1937 Water 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
Firm Regional Loads															
Regional Firm Loads	19591	19591	18294	18873	20878	22886	23342	22407	20639	19687	19664	19031	19525	20240	20449
Exports	1980	1974	1919	1561	1521	1573	1449	1443	1401	1420	1420	1390	1725	1751	1594
Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Firm Regional Loads	21571	21565	20214	20434	22399	24460	24792	23849	22040	21107	21084	20421	21250	21991	22043
Non-Firm Regional Loads															
Regional Non-Firm Loads	153	153	158	149	163	150	147	158	124	165	165	141	150	149	151
Total Non-Firm Regional Loads	153	153	158	149	163	150	147	158	124	165	165	141	150	149	151
Total Loads	21724	21718	20372	20583	22562	24610	24938	24008	22163	21272	21249	20562	21400	22140	22193
Hydro Resources															
Regulated Hydro	13458	10443	8439	10385	11572	11738	9942	8603	9783	9568	9381	9841	12987	12457	10598
Independent Hydro	1048	1075	1010	982	902	969	783	797	944	1212	1266	1553	1603	1160	1084
Sustained Peaking Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro Resources	14506	11518	9449	11367	12473	12706	10724	9400	10728	10779	10647	11394	14589	13617	11681
Other Resources															
Small Thermal & Misc.	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Combustion Turbines	2194	2194	2060	1902	2101	2239	2239	2234	2214	1927	1927	1193	1726	2189	2018
Renewables	77	77	77	78	79	81	82	81	81	80	80	55	77	77	77
Cogeneration	2117	1914	2120	2123	2129	2126	2134	2131	1508	2124	2124	920	2119	2109	1963
Imports	819	819	720	732	1130	1184	1077	1027	819	709	671	478	655	786	843
Large Thermal	6410	6410	6359	5963	6410	6410	6410	6410	6283	5729	5673	4013	6002	6410	6065
Non-Utility Generation	1347	1346	1275	1215	1230	1242	1237	1240	1254	1434	1434	1178	1569	1497	1310
Resource Acquisition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Resources	12981	12776	12628	12030	13094	13299	13195	13140	12176	12020	11926	7853	12165	13084	12293
Total Resources	27487	24294	22077	23398	25568	26005	23920	22540	22903	22799	22573	19247	26754	26701	23974
Reserves & Maintenance															
Hydro Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Thermal & Misc. Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Contract Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Large Thermal Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Hydro Maintenance	-30	-25	-8.6	-9	-3.8	0	0	0	-5.2	-7.4	-7.6	-20	-14	-49	-12
Spinning Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Transmission Losses	-774	-684	-622	-660	-721	-733	-675	-636	-646	-643	-636	-542	-754	-752	-676
Total Reserves, Maintenance & Losses	-804	-709	-631	-669	-725	-733	-675	-636	-651	-650	-644	-562	-768	-801	-688
Total Net Resources	26683	23585	21446	22729	24843	25272	23245	21904	22252	22149	21929	18685	25986	25900	23286
Surplus/Deficits															
Firm Surplus/Deficit	5111	2020	1233	2295	2444	812	-1546	-1945	212	1042	845	-1736	4736	3909	1244
Total Surplus/Deficit	4959	1868	1075	2146	2281	662	-1693	-2103	89	876	679	-1877	4586	3760	1093

Exhibit 20: OY 2007-08 Monthly Energy

*Loads and Resources - Pacific Northwest Region
PNW Loads and Resource Study
2007 - 2008 Operating Year
1937 Water 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
Firm Regional Loads															
Regional Firm Loads	21008	21008	19680	20192	22324	24529	25053	23948	22167	21130	21106	20431	20940	21693	21924
Exports	993	993	982	889	879	895	893	889	881	903	895	862	970	967	917
Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Firm Regional Loads	22001	22001	20663	21081	23202	25424	25946	24837	23048	22033	22001	21292	21910	22659	22840
Non-Firm Regional Loads															
Regional Non-Firm Loads	153	153	158	149	163	150	147	158	124	165	165	141	150	149	151
Total Non-Firm Regional Loads	153	153	158	149	163	150	147	158	124	165	165	141	150	149	151
Total Loads	22154	22154	20820	21230	23365	25574	26092	24996	23171	22198	22166	21433	22060	22808	22991
Hydro Resources															
Regulated Hydro	13587	10544	8518	10484	11698	11863	10034	8690	9862	9650	9416	9853	13068	12560	10686
Independent Hydro	1049	1076	1011	983	903	969	783	798	945	1213	1267	1555	1605	1161	1085
Sustained Peaking Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro Resources	14635	11620	9528	11468	12601	12832	10818	9488	10807	10863	10683	11408	14673	13721	11770
Other Resources															
Small Thermal & Misc.	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Combustion Turbines	3114	3114	2980	2827	3025	3163	3164	3159	3139	2198	2198	1846	2651	3114	2865
Renewables	77	77	77	78	79	81	82	81	81	80	80	55	77	77	77
Cogeneration	2117	1914	2120	2123	2129	2126	2134	2131	1508	2124	2124	920	2119	2109	1963
Imports	637	637	533	525	736	781	831	810	732	662	609	465	646	732	672
Large Thermal	6368	6368	6368	6368	6368	6368	6368	6368	6308	6358	6258	3206	6318	6368	6091
Non-Utility Generation	1448	1448	1336	1278	1281	1259	1250	1258	1272	1432	1431	1185	1577	1520	1341
Resource Acquisition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Resources	13778	13575	13431	13216	13635	13796	13847	13824	13057	12871	12718	7694	13406	13937	13026
Total Resources	28413	25195	22959	24683	26236	26628	24665	23312	23864	23734	23401	19102	28078	27659	24796
Reserves & Maintenance															
Hydro Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Thermal & Misc. Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Contract Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Large Thermal Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Hydro Maintenance	-30	-25	-8.6	-9	-3.8	0	0	0	-5.2	-7.4	-7.6	-20	-14	-49	-12
Spinning Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Transmission Losses	-800	-710	-647	-696	-740	-751	-696	-657	-673	-669	-660	-538	-791	-779	-699
Total Reserves, Maintenance & Losses	-830	-734	-656	-705	-744	-751	-696	-657	-678	-676	-667	-558	-806	-828	-711
Total Net Resources	27583	24460	22303	23978	25493	25877	23969	22654	23186	23057	22734	18544	27272	26831	24085
Surplus/Deficits															
Firm Surplus/Deficit	5582	2459	1641	2898	2290	453	-1977	-2183	138	1025	733	-2749	5362	4171	1245
Total Surplus/Deficit	5429	2307	1483	2748	2127	303	-2123	-2341	14	859	568	-2890	5212	4022	1095

Exhibit 21: OY 2012-13 Monthly Energy

*Loads and Resources - Pacific Northwest Region
PNW Loads and Resource Study
2012 - 2013 Operating Year
1937 Water 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
Firm Regional Loads															
Regional Firm Loads	22841	22841	21447	22045	24240	26637	27030	26195	23974	22710	22685	22042	22610	23448	23767
Exports	937	937	925	861	861	881	878	873	863	884	884	845	946	944	892
Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Firm Regional Loads	23778	23778	22372	22906	25101	27518	27908	27069	24838	23594	23569	22888	23556	24393	24659
Non-Firm Regional Loads															
Regional Non-Firm Loads	153	153	158	149	163	150	147	158	124	165	165	141	150	149	151
Total Non-Firm Regional Loads	153	153	158	149	163	150	147	158	124	165	165	141	150	149	151
Total Loads	23931	23931	22530	23055	25264	27668	28055	27227	24961	23759	23734	23029	23706	24542	24810
Hydro Resources															
Regulated Hydro	13693	10630	8580	10559	11784	11951	10105	8755	9934	9727	9474	9908	13141	12663	10762
Independent Hydro	1049	1076	1011	983	903	970	783	798	945	1213	1267	1555	1605	1161	1085
Sustained Peaking Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro Resources	14742	11706	9590	11542	12687	12920	10888	9553	10879	10940	10741	11463	14746	13824	11846
Other Resources															
Small Thermal & Misc.	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Combustion Turbines	3114	3114	2980	2827	3025	3163	3164	3159	3139	2198	2198	1846	2651	3114	2865
Renewables	77	77	77	78	79	81	82	81	81	80	80	55	77	77	77
Cogeneration	2117	1914	2120	2123	2129	2126	2134	2131	1508	2124	2124	920	2119	2109	1963
Imports	626	626	517	504	622	662	712	678	620	549	524	464	652	741	611
Large Thermal	6369	6369	6369	6369	6369	6369	6369	6369	6306	6318	6259	2906	5155	6369	5967
Non-Utility Generation	1449	1449	1335	1278	1288	1267	1259	1266	1279	1439	1439	1185	1586	1522	1346
Resource Acquisition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Resources	13768	13565	13415	13195	13530	13686	13736	13700	12949	12726	12641	7392	12256	13949	12847
Total Resources	28510	25272	23005	24737	26216	26606	24625	23253	23829	23666	23382	18855	27002	27774	24693
Reserves & Maintenance															
Hydro Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Thermal & Misc. Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Contract Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Large Thermal Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Hydro Maintenance	-30	-25	-8.6	-9	-3.8	0	0	0	-5.2	-7.4	-7.6	-20	-14	-49	-12
Spinning Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Transmission Losses	-803	-712	-649	-697	-739	-750	-694	-656	-672	-667	-659	-531	-761	-782	-696
Total Reserves, Maintenance & Losses	-833	-737	-657	-706	-743	-750	-694	-656	-677	-675	-667	-551	-775	-831	-708
Total Net Resources	27677	24535	22348	24031	25473	25856	23930	22598	23152	22991	22716	18304	26227	26942	23985
Surplus/Deficits															
Firm Surplus/Deficit	3899	757	-24	1125	372	-1662	-3978	-4471	-1686	-603	-853	-4584	2671	2550	-674
Total Surplus/Deficit	3746	604	-182	976	209	-1812	-4124	-4629	-1810	-768	-1018	-4725	2520	2401	-825

THIS PAGE INTENTIONALLY LEFT BLANK