

SUMMARY OF PACIFIC NORTHWEST REGIONAL LOADS AND RESOURCES
 UNDER THE PACIFIC NORTHWEST ELECTRIC POWER PLANNING AND CONSERVATION ACT

MEDIUM LOADS

1999 WHITE BOOK: 12/31/99

2000- 1 OPERATING YEAR

RUN DATE: 12/31/99

1937 WATER YEAR

PEAK IN MEGAWATTS		AUG 1-15	AUG 16-31	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR 1-15	APR 16-30	MAY	JUN	JUL
FIRM LOADS															
1 REGIONAL FIRM LOADS	1/	25559	25559	25374	27909	30088	32266	33023	32488	30221	28480	28480	26859	26105	25642
2 EXPORTS	2/	4313	4313	4233	3076	2723	2734	2809	2767	2744	2810	2810	2951	3690	3751
3 FED DIVERSITY	3/	-917	-911	-920	-972	-917	-691	-701	-716	-924	-841	-841	-913	-932	-899
4 FIRM LOADS		28954	28961	28687	30013	31893	34308	35131	34539	32041	30448	30449	28897	28864	28494
NON-FIRM LOADS															
5 REGIONAL NON-FIRM LOADS	4/	111	111	101	72	133	83	154	141	153	120	120	90	145	122
6 TOTAL LOADS		29065	29072	28788	30085	32026	34392	35284	34680	32194	30569	30569	28987	29008	28616
HYDRO RESOURCES															
7 REGULATED HYDRO	5/	26986	26955	26390	26721	27017	28343	28216	28118	27490	27630	27596	27185	28288	26982
8 INDEPENDENT HYDRO	6/	1945	1928	1907	1888	1845	1825	1769	1884	1981	2017	2042	2138	2172	2011
9 SUS. PKNG. ADJUSTMENT	7/	-100	-1452	-2300	-1282	-2330	-1483	-5372	-3804	-4422	-4128	-5470	-1320	-4065	-700
10 TOTAL HYDRO		28831	27431	25997	27327	26532	28685	24613	26198	25049	25519	24168	28003	26395	28293
OTHER RESOURCES															
11 SMALL THERMAL & MISC	8/	54	54	45	48	131	128	129	126	36	33	33	48	1	55
12 COMBUSTION TURBINES	9/	1052	1052	1053	1060	1518	1520	1518	1517	1062	1059	1059	315	1059	1054
13 RENEWABLES	10/	81	81	81	82	83	85	86	85	85	84	84	33	81	81
14 COGENERATION	11/	775	775	775	775	775	755	775	775	775	775	775	306	775	755
15 IMPORTS	12/	2075	2075	1633	2064	2400	2697	2988	3012	2743	1930	1657	1948	2125	2012
16 CENTRALIA		1340	1340	1340	1340	1340	1340	1340	1340	1340	1340	1340	670	1340	1340
17 JIM BRIDGER		707	707	707	707	706	707	706	707	707	530	530	530	707	707
18 COLSTRIP 1 & 2		414	414	396	402	387	381	383	376	378	371	371	202	431	417
19 BOARDMAN		546	546	546	546	546	546	546	546	546	546	546	546	546	546
20 VALMY		242	242	242	242	242	242	242	242	242	242	242	242	242	242
21 COLSTRIP 3		595	595	583	586	576	571	573	568	569	564	564	587	0	598
22 WNP 2		1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	0	0	1162	1162
23 COLSTRIP 4		740	740	740	740	740	740	740	740	740	740	740	740	740	740
24 NON-UTILITY GENERATION	13/	1432	1432	1340	1237	1185	1170	1155	1180	1217	1366	1366	933	1341	1481
25 FED RESOURCE ACQUIS	14/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26 TOTAL RESOURCES		40046	38646	36640	38318	38323	40729	36956	38574	36651	36261	33475	35103	36945	39483

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1937 WATER YEAR

PEAK IN MEGAWATTS	AUG 1-15	AUG 16-31	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR 1-15	APR 16-30	MAY	JUN	JUL
RESERVES & MAINTENANCE	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
27 HYD SM THRM & MISC RES 15/	-1613	-1611	-1577	-1588	-1625	-1688	-1680	-1682	-1630	-1645	-1645	-1546	-1683	-1617
28 LARGE THERMAL RESERVES 16/	-1030	-1030	-969	-994	-973	-1002	-1004	-1009	-1018	-948	-773	-721	-963	-1028
29 REG SPINNING RESERVES 17/	-815	-794	-764	-809	-807	-880	-790	-811	-762	-770	-709	-741	-791	-825
30 HYDRO MAINTENANCE 18/	-4607	-4044	-3787	-3208	-2935	-2037	-1561	-2288	-2631	-2751	-2483	-2360	-2202	-3721
31 REG TRANSMISSION LOSSES 19/	-1071	-1044	-990	-1063	-1071	-1177	-1069	-1098	-1025	-1010	-933	-996	-1049	-1082
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32 NET RESOURCES	30910	30123	28553	30657	30913	33946	30851	31686	29585	29138	26932	28738	30257	31210

SURPLUS/DEFICITS

33 FIRM SURPLUS/DEFICIT	1956	1162	-134	644	-980	-362	-4279	-2853	-2456	-1311	-3517	-159	1394	2717
34 TOTAL SURPLUS/DEFICIT	1845	1051	-235	572	-1113	-446	-4433	-2993	-2609	-1431	-3637	-249	1249	2595

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1999 WHITE BOOK: 12/31/99

2004- 5 OPERATING YEAR

RUN DATE: 12/31/99

1937 WATER YEAR

PEAK IN MEGAWATTS		AUG 1-15	AUG 16-31	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR 1-15	APR 16-30	MAY	JUN	JUL
FIRM LOADS															
1 REGIONAL FIRM LOADS	1/	26193	26193	26015	28585	30729	32934	33816	33245	30952	29207	29207	27582	26767	26360
2 EXPORTS	2/	3809	3809	3748	3335	2729	2726	2547	2523	2504	2613	2613	2735	3188	3148
3 FED DIVERSITY	3/	-988	-988	-1103	-1049	-943	-784	-855	-833	-941	-933	-933	-843	-866	-938
4 FIRM LOADS		29014	29014	28660	30871	32515	34876	35508	34935	32514	30887	30887	29474	29089	28570
NON-FIRM LOADS															
5 REGIONAL NON-FIRM LOADS	4/	131	131	104	71	134	84	151	101	148	109	109	94	135	122
6 TOTAL LOADS		29146	29146	28763	30942	32649	34960	35659	35035	32663	30996	30996	29568	29223	28692
HYDRO RESOURCES															
7 REGULATED HYDRO	5/	26969	26938	26390	26720	27016	28352	28225	28127	27490	27630	27596	27184	28269	26966
8 INDEPENDENT HYDRO	6/	1944	1927	1919	1892	1844	1839	1791	1894	1981	2024	2049	2153	2163	2010
9 SUS. PKNG. ADJUSTMENT	7/	-100	-1332	-2217	-1180	-2202	-1376	-5402	-3720	-4440	-4151	-5494	-1278	-3985	-700
10 TOTAL HYDRO		28813	27533	26092	27432	26658	28815	24614	26301	25031	25503	24151	28059	26447	28276
OTHER RESOURCES															
11 SMALL THERMAL & MISC	8/	44	44	45	47	130	134	134	132	35	32	32	48	1	47
12 COMBUSTION TURBINES	9/	1056	1056	1057	1064	1522	1524	1522	1521	1066	1063	1063	315	1059	1054
13 RENEWABLES	10/	82	82	82	83	84	86	87	86	86	85	85	34	82	82
14 COGENERATION	11/	775	775	775	775	775	755	775	775	775	775	775	306	775	755
15 IMPORTS	12/	1791	1791	1246	1214	1528	2054	2127	2154	1638	1423	1423	1682	1856	1851
16 CENTRALIA		1340	1340	1340	1340	1340	1340	1340	1340	1340	670	670	1340	1340	1340
17 JIM BRIDGER		707	707	707	707	707	707	707	707	706	530	354	707	707	706
18 COLSTRIP 1 & 2		395	395	395	400	385	392	393	388	377	371	371	201	407	400
19 BOARDMAN		546	546	546	546	546	546	546	546	546	546	546	546	546	546
20 VALMY		242	242	242	242	242	242	242	242	242	121	121	242	242	242
21 COLSTRIP 3		582	582	582	585	575	579	580	576	569	564	564	587	590	585
22 WNP 2		1162	1162	1162	1162	1162	1162	1162	1162	1162	0	0	1162	1162	1162
23 COLSTRIP 4		740	740	740	740	740	740	740	740	740	740	740	740	740	740
24 NON-UTILITY GENERATION	13/	1364	1364	1276	1173	1119	1106	1088	1114	1157	1307	1307	898	1298	1410
25 FED RESOURCE ACQUIS	14/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26 TOTAL RESOURCES		39639	38359	36287	37510	37513	40182	36057	37784	35470	34892	32202	35705	37252	39196

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RESERVES & MAINTENANCE	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
27 HYD SM THRM & MISC RES 15/	-1610	-1606	-1575	-1585	-1622	-1687	-1678	-1680	-1627	-1644	-1643	-1545	-1679	-1613
28 LARGE THERMAL RESERVES 16/	-1008	-1008	-938	-940	-919	-987	-990	-995	-968	-813	-612	-832	-1032	-1005
29 REG SPINNING RESERVES 17/	-813	-795	-766	-812	-811	-883	-790	-814	-762	-745	-679	-767	-809	-822
30 HYDRO MAINTENANCE 18/	-4605	-4042	-3787	-3208	-2935	-2037	-1561	-2288	-2631	-2751	-2483	-2360	-2202	-3721
31 REG TRANSMISSION LOSSES 19/	-1059	-1035	-979	-1037	-1046	-1159	-1040	-1072	-988	-969	-897	-1012	-1056	-1073
32 NET RESOURCES	30545	29873	28242	29927	30181	33430	29998	30935	28495	27970	25888	29189	30473	30962
SURPLUS/DEFICITS														
33 FIRM SURPLUS/DEFICIT	1531	859	-418	-944	-2334	-1446	-5509	-3999	-4019	-2917	-4999	-286	1385	2392
34 TOTAL SURPLUS/DEFICIT	1400	727	-521	-1015	-2468	-1530	-5660	-4100	-4168	-3026	-5108	-379	1250	2270

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MEDIUM LOADS

1999 WHITE BOOK: 12/31/99

2009-10 OPERATING YEAR

RUN DATE: 12/31/99

1937 WATER YEAR		AUG	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	APR	MAY	JUN	JUL
PEAK IN MEGAWATTS		1-15	16-31								1-15	16-30			
FIRM LOADS															
1 REGIONAL FIRM LOADS	1/	27289	27289	27109	29734	31852	34102	35035	34456	32134	30351	30351	28721	27721	27432
2 EXPORTS	2/	2165	2165	2069	1964	1938	1972	1981	1964	1936	1937	1937	2024	2151	2209
3 FED DIVERSITY	3/	-1228	-1228	-1331	-1277	-1138	-934	-1004	-975	-1110	-1107	-1107	-1054	-1112	-1175
4 FIRM LOADS		28226	28226	27847	30420	32653	35140	36011	35445	32960	31180	31180	29691	28759	28466
NON-FIRM LOADS															
5 REGIONAL NON-FIRM LOADS	4/	111	111	103	77	124	51	153	101	148	106	106	94	133	118
6 TOTAL LOADS		28337	28337	27951	30497	32777	35190	36164	35546	33108	31287	31287	29785	28893	28583
HYDRO RESOURCES															
7 REGULATED HYDRO	5/	26971	26940	26392	26722	27018	28355	28228	28130	27491	27633	27599	27200	28292	26968
8 INDEPENDENT HYDRO	6/	1947	1930	1922	1894	1846	1841	1794	1897	1985	2026	2051	2168	2189	2014
9 SUS. PKNG. ADJUSTMENT	7/	-100	-1266	-2147	-1121	-2122	-1307	-5402	-3665	-4440	-4151	-5494	-1244	-3939	-700
10 TOTAL HYDRO		28818	27604	26167	27495	26742	28889	24620	26362	25036	25508	24156	28124	26542	28282
OTHER RESOURCES															
11 SMALL THERMAL & MISC	8/	46	46	46	48	132	135	136	133	37	34	34	57	1	48
12 COMBUSTION TURBINES	9/	1050	1050	1051	1058	1516	1518	1516	1515	1060	1057	1057	315	1061	1056
13 RENEWABLES	10/	82	82	82	83	84	86	87	86	86	85	85	34	82	82
14 COGENERATION	11/	775	775	775	775	775	755	775	775	775	775	775	306	775	755
15 IMPORTS	12/	1595	1595	1152	1266	1616	1538	1612	1638	1643	1260	1260	1578	1763	1646
16 CENTRALIA		1340	1340	1340	1340	1340	1340	1340	1340	1340	670	670	1340	1340	1340
17 JIM BRIDGER		706	706	707	707	707	707	707	706	707	530	707	530	707	707
18 COLSTRIP 1 & 2		398	398	398	402	388	395	396	391	380	374	374	0	434	403
19 BOARDMAN		546	546	546	546	546	546	546	546	546	546	546	546	546	546
20 VALMY		242	242	242	242	242	242	242	242	242	121	121	242	242	242
21 COLSTRIP 3		584	584	584	587	576	581	583	579	571	566	566	600	0	587
22 WNP 2		1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162
23 COLSTRIP 4		740	740	740	740	740	740	740	740	740	740	740	740	740	740
24 NON-UTILITY GENERATION	13/	1357	1357	1269	1167	1112	1100	1082	1107	1138	1288	1288	886	1288	1403
25 FED RESOURCE ACQUIS	14/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26 TOTAL RESOURCES		39441	38227	36261	37618	37678	39734	35544	37322	35463	34716	33541	36460	36683	38999

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PEAK IN MEGAWATTS	AUG 1-15	AUG 16-31	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR 1-15	APR 16-30	MAY	JUN	JUL
RESERVES & MAINTENANCE	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
27 HYD SM THRM & MISC RES 15/	-1609	-1606	-1574	-1584	-1622	-1686	-1678	-1680	-1626	-1643	-1641	-1546	-1682	-1614
28 LARGE THERMAL RESERVES 16/	-990	-990	-936	-961	-990	-968	-971	-975	-982	-795	-821	-934	-929	-985
29 REG SPINNING RESERVES 17/	-813	-797	-768	-813	-810	-885	-790	-816	-762	-746	-724	-793	-795	-823
30 HYDRO MAINTENANCE 18/	-4605	-4042	-3787	-3208	-2935	-2037	-1561	-2288	-2631	-2751	-2483	-2360	-2202	-3721
31 REG TRANSMISSION LOSSES 19/	-1053	-1032	-978	-1040	-1049	-1144	-1023	-1057	-987	-964	-934	-1033	-1041	-1067
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32 NET RESOURCES	30372	29760	28218	30012	30272	33014	29520	30506	28476	27818	26939	29795	30034	30789
SURPLUS/DEFICITS														
33 FIRM SURPLUS/DEFICIT	2145	1534	371	-408	-2380	-2126	-6491	-4939	-4484	-3363	-4242	103	1275	2323
34 TOTAL SURPLUS/DEFICIT	2034	1423	267	-485	-2505	-2177	-6644	-5040	-4632	-3469	-4348	10	1141	2205

REGIONAL FOOTNOTES

Regional Table 1

1. Firm loads for the region include the sum of the estimated firm loads of Federal agencies, public agencies, direct service industries (DSIs), investor-owned utilities (IOUs), and associated transmission losses. Peak loads represent non-coincidental capacity demands adjusted to account for Federal system diversity; they are based on the prediction of normal weather and have a 50-percent chance of being exceeded.
2. Regional exports include: BPA to Azusa, capacity sale and power sale; BPA to Banning, capacity sale and power sale; BPA to BART, power sale; BPA to Burbank, power sale and capacity/energy exchange; BPA to Colton, power exchange and capacity sale; BPA to ECD entities, power sales; BPA to Farmington, power sale; BPA to Federal agencies, power sale; BPA to Glendale, power sale and capacity/energy exchange; BPA to M-S-R, power sale; BPA to other entities, power sales; BPA to Pasadena, power sale, capacity/energy exchange and seasonal energy exchange; BPA to Riverside, capacity/energy exchange, capacity sale and seasonal exchange; BPA to SCE, power sale, environmental storage and option capacity; BPA to Sierra Pacific for Harney and Wells; BPA to BC Hydro for Canadian Entitlement; and BPA's Northwest-Southwest Intertie losses; AVWP to Modesto, power sale; AVWP to West Kootenai, capacity sale; City of Idaho Falls to UPC for Gem State; IPC to ABC, power sale; IPC to Sierra Pacific, power sale; IPC to UAMPS, power sale; IPC to the city of Washington, Utah, power sale; IPC to Truckee/Donner, power sale; PP&L to CDWR, power sale; PP&L to PP&L (Northern California), transfer to PP&L's Northern California load; PP&L to Redding, power sale; PP&L to SMUD, power sale; PP&L to SCE, power sale; PP&L to WAPA, power sale; PGE to Burbank, power sale; PGE to Glendale, power sale and seasonal power exchange; PSE to PG&E, seasonal power exchange; SCL to NCPA, seasonal power exchange; Snohomish County PUD to SMUD, power sale; and TPU to WAPA, power sale.
Also included in exports are resources purchased by utilities outside the region. These include Longview Fibre to WAPA; 14.8 percent of the Boardman coal plant sold to San Diego Gas and Electric; and 10.0 percent of the Boardman coal plant sold to the City of Turlock, CA.
This analysis assumes that BPA's power sales and capacity/energy exchange agreements with the cities of Burbank, Glendale, Pasadena, and with SCE, are in power sales mode throughout the study period.
3. Federal diversity is a percentage reduction applied to the Federal system non-coincidental peak utility allocation requirements. This is because all peaking electrical loads do not occur simultaneously throughout the region.
4. Total loads for the region include system firm loads plus Utah Power Company's interruptible load.
5. Regulated hydro includes those hydro dams where the firm energy generation of the dam is affected by the release of stored water from upstream reservoirs. Regulated hydro generation is determined by completing a hydro regulation study of the Pacific Northwest hydro system.

REGIONAL FOOTNOTES (continued)

Regional Table 1

6. Independent hydro includes those hydro dams where no reservoirs exist upstream to release stored water and the firm energy is based on fixed historical flows. Hydro independents are not changed as a part of the hydro regulation study.
7. Sustained peaking adjustment is a percentage reduction applied to the Federal hydro system to meet a capacity load of 50 hours per week. This adjustment also includes reductions for Federal hydro maintenance, spinning reserves, forced outage reserves, and summer flow augmentation on the Lower Snake River and John Day hydro projects.
8. Small thermal and miscellaneous resources include: IPC: Energy Management Systems; MPC: regional Corette; PSE: Crystal Mountain and Shuffleton; and SCL: Boundary.
9. Combustion turbines include: AVWP: Northeast units 1 and 2; Clark: River Road (Cogentrix); PGE: Beaver; and PSE: Whidbey Island, Whitehorn, Fredrickson, and Fredonia units 1 and 2.
10. Renewables include: AVWP: Kettle Falls; BPA: James River Wauna; Consumers: Coffin Butte; and Emerald County PUD: Short Mountain.
11. Cogeneration includes: EWEB: Weyerhaeuser's WEYCO Energy Center; PGE: Coyote Springs; and PP&L: Hermiston. Longview Fibre output is sold outside the region to WAPA.
12. Regional imports include: Colton to BPA, power exchange; other entities to BPA, power sales; PP&L (Wyoming Division) to BPA, for Southern Idaho; Pasadena to BPA, exchange energy, peak replacement energy, and seasonal replacement energy; Riverside to BPA, exchange energy, peak replacement energy, and seasonal exchange energy; Sierra Pacific to BPA for Harney and Wells; SCE to BPA, environmental storage, option energy, and option capacity peak replacement; and PowerEx to BPA for Azusa, Banning and Colton, peak replacement; BC Hydro to PSE, power sale; BC Hydro to SCL, for Ross; Basin Electric Cooperative to MPC, power sale; Glendale to PGE, seasonal power exchange; NCPA to SCL, seasonal power exchange; PG&E to PSE, seasonal power exchange; PowerEx to Benton REA, power sale; PowerEx to Clearwater Power Company, power sale; PowerEx to Cowlitz County PUD, power sale; PowerEx to EWEB, power sale; SCE to PP&L, power sale; and West Kootenai to AVWP, peak replacement energy. In addition, imports include the following intra-company transfers: PP&L (Wyoming) to PP&L and Utah Power Company.

This analysis assumes that BPA's power sales and capacity/energy exchange agreements with the cities of Burbank, Glendale and Pasadena, and with SCE are in power sale mode, so exchanges and supplemental energy with these utilities are zero through the study horizon.
13. Non-utility generation (NUG) resources include generation provided to utilities by independent power producers and resources included under the Public Utility Regulatory Policies Act (PURPA). This study included 180 Individual NUGs.
14. Resource acquisitions are resources BPA has identified and contracted for future purchase. When new Federal resource acquisitions are contracted for and/or on-line, they will be included in the loads and resources balance.

REGIONAL FOOTNOTES (continued)

Regional Table 1

15. Hydro, small thermal and miscellaneous resources, and combustion turbine reserve requirements are estimated at 5 percent of the capacity of these resources for all utilities in the region.
16. Large thermal reserve requirements are estimated at 15 percent of the total capacity of the Pacific Power and Light thermal import into the region plus the large thermal resources owned by utilities in the region.
17. Federal spinning reserves equal the reserve generating capacity maintained to provide a regulating margin for the automatic generation and frequency control of power generation.
18. Hydro maintenance is the sum of individual Federal system, public agency, and IOU hydro project maintenance, based on the average of the 1983-84 through 1988-89 schedules submitted to the Northwest Power Pool.
19. Regional transmission losses are estimated for the region assuming the total resources, less hydro reserves, thermal reserves, spinning reserves and hydro maintenance, multiplied by .0335 for peak and .0282 for energy.

SUMMARY OF FEDERAL SYSTEM LOADS AND RESOURCES IN THE PACIFIC NORTHWEST REGION
UNDER THE PACIFIC NORTHWEST ELECTRIC POWER PLANNING AND CONSERVATION ACT

MEDIUM LOADS

1999 WHITE BOOK: 12/31/99

2000- 1 OPERATING YEAR

RUN DATE: 12/31/99

1937 WATER YEAR

PEAK IN MEGAWATTS	AUG 1-15	AUG 16-31	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR 1-15	APR 16-30	MAY	JUN	JUL
NON-UTILITY LOADS														
1 FED AGENCIES 1981 PSC 1/	197	197	187	198	206	236	220	228	216	200	200	190	192	193
2 USBR 1981 PSC 1/	27	27	16	22	0	0	0	0	30	47	47	53	30	40
3 DSI 1981 PSC 1/	2496	2496	1970	2276	2275	2275	2170	1460	778	925	925	2221	2228	2687
4 FED AGENCIES 2002 PSC 2/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 USBR 2002 PSC 2/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 DSI 2002 PSC 2/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 FIRM NON-UTILITY LOADS	2720	2720	2173	2496	2481	2511	2390	1688	1024	1172	1172	2464	2450	2920
UTILITY TRANSFERS OUT														
8 NGP 1981 PSC SALES 1/	3177	3177	3150	3320	3771	3994	4252	4354	3919	3796	3796	3364	3174	3134
9 GPU 1981 PSC SALES 1/	1408	1357	1494	2066	2386	2684	2771	2805	2385	2116	2115	1934	1542	1358
10 IOU 1981 PSC SALES 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 PUB 2002 PSC SALES 2/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 IOU 2002 PSC SALES 2/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 EXPORTS 3/	3004	3004	2978	2221	1887	1894	1974	1977	1964	2027	2027	2138	2447	2460
14 INTRA-REG TRANSFERS OUT 4/	1997	1997	1968	2240	2533	2681	2498	2567	2441	2032	2032	1849	1990	1963
15 SUPP & ENTITLE CAP OUT 5/	86	86	86	86	86	86	86	86	86	84	84	84	84	84
16 CSPE TO WEST GROUP UTIL 6/	192	192	192	192	192	192	192	192	192	186	186	186	186	186
17 FED DIVERSITY 7/	-917	-911	-920	-972	-917	-691	-701	-716	-924	-841	-841	-913	-932	-899
18 FIRM LOADS	11667	11622	11120	11649	12419	13351	13461	12952	11087	10572	10571	11107	10940	11206
HYDRO RESOURCES														
19 REGULATED HYDRO	16253	16247	16285	16279	16594	18093	18139	17973	17484	17349	17335	17450	17702	16303
20 INDEPENDENT HYDRO	742	754	736	750	718	680	643	771	831	850	850	881	882	760
21 SUS. PKNG. ADJUSTMENT 8/	-100	-1452	-2300	-1282	-2330	-1483	-5372	-3804	-4422	-4128	-5470	-1320	-4065	-700
22 NFD CER(CSPE) TO BPA 9/	43	43	43	43	43	43	43	43	43	42	42	42	42	42
23 NFD CER(CAN) TO BPA 10/	141	139	146	146	146	151	145	142	140	149	138	142	138	148
24 RESTORATION 11/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 TOTAL HYDRO	17079	15731	14910	15936	15171	17484	13598	15125	14076	14262	12895	17195	14699	16553
OTHER RESOURCES														
26 SMALL THERMAL & MISC	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27 COMBUSTION TURBINES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28 RENEWABLES 12/	27	27	27	28	29	31	32	31	31	30	30	27	27	27
29 COGENERATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 IMPORTS 13/	209	209	239	153	209	263	467	423	435	438	165	75	93	109
31 INTRA-REG TRANSFERS IN 14/	475	475	566	341	341	250	0	0	0	25	25	25	25	100
32 SUPP & ENTITLE CAP IN 15/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33 LARGE THERMAL 16/	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	0	0	1162	1162
34 NON-UTILITY GENERATION 17/	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35 RESOURCE ACQUISITIONS 18/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36 TOTAL RESOURCES	18953	17605	16905	17621	16913	19191	15260	16742	15705	15918	13116	17323	16007	17952

SUMMARY OF FEDERAL SYSTEM LOADS AND RESOURCES IN THE PACIFIC NORTHWEST REGION
 UNDER THE PACIFIC NORTHWEST ELECTRIC POWER PLANNING AND CONSERVATION ACT

MEDIUM LOADS

1999 WHITE BOOK: 12/31/99

2000- 1 OPERATING YEAR

RUN DATE: 12/31/99

1937 WATER YEAR

PEAK IN MEGAWATTS	AUG 1-15	AUG 16-31	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR 1-15	APR 16-30	MAY	JUN	JUL
RESERVES MAINTENANCE AND TRANSMISSION LOSSES	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
37 HYD SM THRM & MISC RES 19/	-851	-851	-852	-853	-867	-940	-941	-939	-917	-911	-911	-918	-931	-854
38 LARGE THERMAL RESERVES 20/	-174	-174	-174	-174	-174	-174	-174	-174	-174	-174	0	0	-174	-174
39 SPINNING RESERVES 21/	-355	-334	-313	-339	-321	-397	-312	-338	-312	-313	-251	-359	-334	-353
40 FED HYDRO MAINTENANCE 22/	-3263	-2761	-2770	-2752	-2705	-1866	-1408	-1883	-1915	-2061	-1805	-1756	-1635	-2785
41 FED TRANSMISSION LOSSES 23/	-479	-452	-429	-452	-430	-530	-416	-449	-415	-417	-340	-479	-433	-462
42 NET RESOURCES	13830	13034	12367	13051	12416	15283	12009	12958	11972	12042	9809	13810	12500	13324

SURPLUS/DEFICITS

43 FIRM SURPLUS/DEFICIT	2163	1412	1247	1403	-3	1932	-1453	6	885	1469	-762	2704	1559	2118
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NOTE: 1. THE FOLLOWING CONTRACTS ARE SHOWN AS POWER SALES THROUGH THE STUDY HORIZON.

- A. BPA TO BURBANK: PS & C/N/X
- B. BPA TO GLENDALE: PS & C/N/X
- C. BPA TO PASADENA: PS & C/N/X
- D. BPA TO SCE: PS & C/N/X

2. SCE TO BPA: OPTION ENERGY IS INCLUDED THROUGH 10/31/2004.

3. BPA TO SCE: OPTION CAPACITY IS INCLUDED THROUGH 10/31/2004.

4. THE FOLLOWING CONTRACTS ARE RESOURCE OPTIONS AND NOT INCLUDED THROUGH THE STUDY HORIZON.

- A. BGP TO BPA: SUPPLEMENTAL ENERGY
- B. SCE TO BPA: SUPPLEMENTAL ENERGY

SUMMARY OF FEDERAL SYSTEM LOADS AND RESOURCES IN THE PACIFIC NORTHWEST REGION
UNDER THE PACIFIC NORTHWEST ELECTRIC POWER PLANNING AND CONSERVATION ACT

MEDIUM LOADS

1999 WHITE BOOK: 12/31/99

2004- 5 OPERATING YEAR

RUN DATE: 12/31/99

1937 WATER YEAR

PEAK IN MEGAWATTS

	AUG 1-15	AUG 16-31	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR 1-15	APR 16-30	MAY	JUN	JUL
NON-UTILITY LOADS														
1 FED AGENCIES 1981 PSC 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 USBR 1981 PSC 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 DSI 1981 PSC 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 FED AGENCIES 2002 PSC 2/	148	148	138	149	152	182	186	175	130	135	135	129	133	155
5 USBR 2002 PSC 2/	27	27	16	22	0	0	0	0	30	47	47	53	30	40
6 DSI 2002 PSC 2/	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440
7 FIRM NON-UTILITY LOADS	1615	1615	1594	1611	1592	1622	1626	1615	1600	1622	1622	1622	1603	1635
UTILITY TRANSFERS OUT														
8 NGP 1981 PSC SALES 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 GPU 1981 PSC SALES 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 IOU 1981 PSC SALES 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 PUB 2002 PSC SALES 2/	4635	4635	5637	5747	6069	7650	8621	8344	6138	6152	6152	3984	3507	4027
12 IOU 2002 PSC SALES 2/	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
13 EXPORTS 3/	2620	2620	2612	2557	1967	1975	1979	1982	1967	2079	2079	2191	2217	2129
14 INTRA-REG TRANSFERS OUT 4/	1817	1817	1710	1847	2207	2370	2411	2383	2143	2040	2040	1909	2022	2036
15 SUPP & ENTITLE CAP OUT 5/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 CSPE TO WEST GROUP UTIL 6/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 FED DIVERSITY 7/	-988	-988	-1103	-1049	-943	-784	-855	-833	-941	-933	-933	-843	-866	-938
18 FIRM LOADS	10699	10699	11450	11713	11892	13833	14782	14491	11907	11960	11960	9863	9483	9889
HYDRO RESOURCES														
19 REGULATED HYDRO	16253	16247	16285	16279	16594	18093	18139	17973	17484	17349	17335	17450	17702	16303
20 INDEPENDENT HYDRO	775	787	768	774	738	703	674	790	850	875	875	914	915	793
21 SUS. PKNG. ADJUSTMENT 8/	-100	-1332	-2217	-1180	-2202	-1376	-5402	-3720	-4440	-4151	-5494	-1278	-3985	-700
22 NFD CER(CSPE) TO BPA 9/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23 NFD CER(CAN) TO BPA 10/	266	243	256	254	256	254	264	248	245	242	243	261	243	261
24 RESTORATION 11/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 TOTAL HYDRO	17194	15945	15092	16127	15386	17674	13675	15291	14139	14315	12959	17347	14875	16657
OTHER RESOURCES														
26 SMALL THERMAL & MISC	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27 COMBUSTION TURBINES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28 RENEWABLES 12/	27	27	27	28	29	31	32	31	31	30	30	27	27	27
29 COGENERATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 IMPORTS 13/	188	188	217	253	306	360	334	290	262	215	215	75	93	209
31 INTRA-REG TRANSFERS IN 14/	350	350	441	441	441	350	350	350	350	150	150	0	0	350
32 SUPP & ENTITLE CAP IN 15/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33 LARGE THERMAL 16/	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	0	0	1162	1162
34 NON-UTILITY GENERATION 17/	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35 RESOURCE ACQUISITIONS 18/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36 TOTAL RESOURCES	18922	17673	16940	18012	17325	19578	15554	17125	15945	15873	13355	17450	16158	18406

SUMMARY OF FEDERAL SYSTEM LOADS AND RESOURCES IN THE PACIFIC NORTHWEST REGION
 UNDER THE PACIFIC NORTHWEST ELECTRIC POWER PLANNING AND CONSERVATION ACT

M E D I U M L O A D S

1999 WHITE BOOK: 12/31/99

2004- 5 OPERATING YEAR

RUN DATE: 12/31/99

1937 WATER YEAR

PEAK IN MEGAWATTS	AUG 1-15	AUG 16-31	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR 1-15	APR 16-30	MAY	JUN	JUL
RESERVES MAINTENANCE AND TRANSMISSION LOSSES	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
37 HYD SM THRM & MISC RES 19/	-853	-853	-854	-854	-868	-941	-942	-940	-918	-913	-912	-920	-932	-856
38 LARGE THERMAL RESERVES 20/	-174	-174	-174	-174	-174	-174	-174	-174	-174	-174	0	0	-174	-174
39 SPINNING RESERVES 21/	-356	-337	-316	-342	-324	-401	-312	-341	-312	-313	-251	-361	-337	-354
40 FED HYDRO MAINTENANCE 22/	-3263	-2761	-2770	-2752	-2705	-1866	-1408	-1883	-1915	-2061	-1805	-1756	-1635	-2785
41 FED TRANSMISSION LOSSES 23/	-478	-454	-430	-465	-444	-543	-426	-462	-423	-416	-348	-483	-438	-477
42 NET RESOURCES	13798	13094	12397	13424	12809	15653	12292	13325	12203	11996	10039	13930	12641	13760

SURPLUS/DEFICITS

43 FIRM SURPLUS/DEFICIT	3099	2395	947	1712	917	1820	-2490	-1166	296	36	-1921	4066	3158	3871
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NOTE: 1. THE FOLLOWING CONTRACTS ARE SHOWN AS POWER SALES THROUGH THE STUDY HORIZON.

- A. BPA TO BURBANK: PS & C/N/X C. BPA TO PASADENA: PS & C/N/X
- B. BPA TO GLENDALE: PS & C/N/X D. BPA TO SCE: PS & C/N/X

2. SCE TO BPA: OPTION ENERGY IS INCLUDED THROUGH 10/31/2004.

3. BPA TO SCE: OPTION CAPACITY IS INCLUDED THROUGH 10/31/2004.

4. THE FOLLOWING CONTRACTS ARE RESOURCE OPTIONS AND NOT INCLUDED THROUGH THE STUDY HORIZON.

- A. BGP TO BPA: SUPPLEMENTAL ENERGY B. SCE TO BPA: SUPPLEMENTAL ENERGY

SUMMARY OF FEDERAL SYSTEM LOADS AND RESOURCES IN THE PACIFIC NORTHWEST REGION
 UNDER THE PACIFIC NORTHWEST ELECTRIC POWER PLANNING AND CONSERVATION ACT

MEDIUM LOADS

1999 WHITE BOOK: 12/31/99

2009-10 OPERATING YEAR

RUN DATE: 12/31/99

1937 WATER YEAR

PEAK IN MEGAWATTS

	AUG 1-15	AUG 16-31	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR 1-15	APR 16-30	MAY	JUN	JUL
NON-UTILITY LOADS														
1 FED AGENCIES 1981 PSC 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 USBR 1981 PSC 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 DSI 1981 PSC 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 FED AGENCIES 2002 PSC 2/	151	151	141	153	156	187	190	179	133	138	138	132	136	159
5 USBR 2002 PSC 2/	27	27	16	22	0	0	0	0	30	47	47	53	30	40
6 DSI 2002 PSC 2/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 FIRM NON-UTILITY LOADS	178	178	157	175	156	187	190	179	163	185	185	185	166	199
UTILITY TRANSFERS OUT														
8 NGP 1981 PSC SALES 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 GPU 1981 PSC SALES 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 IOU 1981 PSC SALES 1/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 PUB 2002 PSC SALES 2/	6280	6280	7075	7406	7843	9700	10710	10337	7691	7706	7706	5667	5284	5726
12 IOU 2002 PSC SALES 2/	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
13 EXPORTS 3/	1670	1670	1661	1604	1593	1604	1606	1612	1594	1597	1597	1674	1681	1694
14 INTRA-REG TRANSFERS OUT 4/	813	813	824	885	1176	1262	1243	1216	1079	1027	1027	785	934	953
15 SUPP & ENTITLE CAP OUT 5/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 CSPE TO WEST GROUP UTIL 6/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17 FED DIVERSITY 7/	-1228	-1228	-1331	-1277	-1138	-934	-1004	-975	-1110	-1107	-1107	-1054	-1112	-1175
18 FIRM LOADS	9913	9913	10586	10993	11830	14019	14945	14569	11617	11608	11608	9457	9153	9597
HYDRO RESOURCES														
19 REGULATED HYDRO	16253	16247	16285	16279	16594	18093	18139	17973	17484	17349	17335	17450	17702	16303
20 INDEPENDENT HYDRO	775	787	768	774	738	703	674	790	850	875	875	914	915	793
21 SUS. PKNG. ADJUSTMENT 8/	-100	-1266	-2147	-1121	-2122	-1307	-5402	-3665	-4440	-4151	-5494	-1244	-3939	-700
22 NFD CER(CSPE) TO BPA 9/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23 NFD CER(CAN) TO BPA 10/	236	252	246	235	256	244	254	239	235	234	235	253	235	243
24 RESTORATION 11/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 TOTAL HYDRO	17164	16020	15152	16167	15466	17733	13665	15337	14129	14307	12951	17373	14913	16639
OTHER RESOURCES														
26 SMALL THERMAL & MISC	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27 COMBUSTION TURBINES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28 RENEWABLES 12/	27	27	27	28	29	31	32	31	31	30	30	27	27	27
29 COGENERATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 IMPORTS 13/	88	88	117	153	206	260	234	190	162	165	165	75	93	109
31 INTRA-REG TRANSFERS IN 14/	0	0	91	92	91	0	0	0	0	0	0	0	0	0
32 SUPP & ENTITLE CAP IN 15/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33 LARGE THERMAL 16/	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162
34 NON-UTILITY GENERATION 17/	1	1	1	1	1	1	1	1	1	1	1	1	1	1
35 RESOURCE ACQUISITIONS 18/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36 TOTAL RESOURCES	18442	17298	16550	17603	16955	19187	15094	16721	15485	15665	14309	18638	16196	17938

SUMMARY OF FEDERAL SYSTEM LOADS AND RESOURCES IN THE PACIFIC NORTHWEST REGION
UNDER THE PACIFIC NORTHWEST ELECTRIC POWER PLANNING AND CONSERVATION ACT

MEDIUM LOADS

1999 WHITE BOOK: 12/31/99

2009-10 OPERATING YEAR

RUN DATE: 12/31/99

1937 WATER YEAR

PEAK IN MEGAWATTS	AUG 1-15	AUG 16-31	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR 1-15	APR 16-30	MAY	JUN	JUL
RESERVES MAINTENANCE AND TRANSMISSION LOSSES	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
37 HYD SM THRM & MISC RES 19/	-853	-853	-854	-854	-868	-941	-942	-940	-918	-913	-912	-920	-932	-856
38 LARGE THERMAL RESERVES 20/	-174	-174	-174	-174	-174	-174	-174	-174	-174	-174	-174	-174	-174	-174
39 SPINNING RESERVES 21/	-356	-339	-317	-343	-326	-402	-312	-342	-312	-313	-285	-396	-338	-354
40 FED HYDRO MAINTENANCE 22/	-3263	-2761	-2770	-2752	-2705	-1866	-1408	-1883	-1915	-2061	-1805	-1756	-1635	-2785
41 FED TRANSMISSION LOSSES 23/	-462	-441	-417	-452	-432	-529	-411	-448	-408	-409	-373	-516	-439	-461
42 NET RESOURCES	13334	12729	12018	13028	12450	15273	11847	12933	11758	11795	10760	14875	12677	13308

SURPLUS/DEFICITS

43 FIRM SURPLUS/DEFICIT	3420	2816	1432	2036	619	1255	-3098	-1636	142	187	-848	5419	3524	3711
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NOTE: 1. THE FOLLOWING CONTRACTS ARE SHOWN AS POWER SALES THROUGH THE STUDY HORIZON.

- A. BPA TO BURBANK: PS & C/N/X C. BPA TO PASADENA: PS & C/N/X
- B. BPA TO GLENDALE: PS & C/N/X D. BPA TO SCE: PS & C/N/X

2. SCE TO BPA: OPTION ENERGY IS INCLUDED THROUGH 10/31/2004.

3. BPA TO SCE: OPTION CAPACITY IS INCLUDED THROUGH 10/31/2004.

4. THE FOLLOWING CONTRACTS ARE RESOURCE OPTIONS AND NOT INCLUDED THROUGH THE STUDY HORIZON.

- A. BGP TO BPA: SUPPLEMENTAL ENERGY B. SCE TO BPA: SUPPLEMENTAL ENERGY

FEDERAL SYSTEM FOOTNOTES

Federal Table 2

1. BPA's Federal agency, USBR, DSI, and public agency purchases under their 1981 power sales contracts. These contracts expire between June 30 and September 30, 2001.
2. BPA's Federal agency, USBR, DSI, IOU, and public agency estimated purchases under new 2002 power sales contracts. These contracts begin October 1, 2001, and area assumed to continue through the study horizon.
3. BPA's exports include: BPA to Azusa, capacity sale and power sale; BPA to Banning, capacity sale and power sale; BPA to BART, power sale; BPA to Burbank, power sale and capacity/energy exchange; BPA to Colton, power exchange and capacity sale; BPA to ECD entities, power sales; BPA to Farmington, power sale; BPA to Federal agencies, power sale; BPA to Glendale, power sale and capacity/energy exchange; BPA to M-S-R, power sale; BPA to other entities, power sales; BPA to Pasadena, power sale, capacity/energy exchange and seasonal energy exchange; BPA to Riverside, capacity/energy exchange, capacity sale and seasonal exchange; BPA to SCE, power sale, environmental storage and option capacity; BPA to Sierra Pacific for Harney and Wells; BPA to BC Hydro for Canadian Entitlement; and BPA's Northwest-Southwest Intertie losses.
4. BPA's intraregional transfers out include: BPA to AVWP, power sale, energy sale, deferred power exchange and WNP-3 settlement; BPA to Bandon, power sale; BPA to Big Bend Electric Cooperative, power sale and summer seasonal product; BPA to Central Electric Cooperative, summer seasonal product; BPA to the City of Ashland, power sale; BPA to Clatskanie, power sale; BPA to Columbia Basin Electric Cooperative, summer seasonal product; BPA to Columbia River PUD, power sale; BPA to Columbia Rural Electric Association, summer seasonal product; BPA to Cowlitz County PUD, power sale and presubscription power sale; BPA to Douglas County PUD, power sale; BPA to Eugene Water and Electric Board, power sale and presubscription power sale; BPA to City of Forest Grove, power sale; BPA to Harney Electric Cooperative, summer seasonal product; BPA to Inland Power and Light, summer seasonal product; BPA to the City of Idaho Falls, power sale; BPA to Lewis County PUD, power sale; BPA to Lower Valley, power sale; BPA to Mason County PUD #3, power sale; BPA to City of McMinnville, power sale; BPA to Midstate Electric Cooperative, summer seasonal product; BPA to Milton-Freewater, power sale; BPA to Mission Valley, summer seasonal product; BPA to Modern Electric Cooperative, power sale; BPA to Monmouth, power sale; BPA to Nespelem Valley Electric Cooperative, summer seasonal product; BPA to Northern Wasco Electric Cooperative, power sale; BPA to Okanogan, summer seasonal product; BPA to other entities, power sales; BPA to small and nongenerating public agencies, summer seasonal product and power sales; BPA to PP&L, capacity sale, seasonal power exchange, seasonal energy exchange, Southern Idaho exchange, and Centralia standby; BPA to PGE, capacity sale and power sale; BPA to PSE, Baker Head loss, power sale and WNP-3 settlement; BPA to Ravalli Electric Cooperative, power sale; BPA to Richland, Ormet power sale; BPA to Salem Electric Cooperative, green power sale; BPA to Snohomish County PUD, power sale; BPA to Springfield Utility Board, power sale and presubscription power sale; BPA to Surprise Valley, summer seasonal product; BPA to TPU, power sale; BPA to Tillamook County PUD, power sale; BPA to United Electric Cooperative, power sale; BPA to Umatilla Electric Cooperative, summer seasonal product; BPA to U.S. Bureau of Indian Affairs-Wapato, summer seasonal product; BPA to Vigilante Electric Cooperative, summer seasonal product; BPA to Wasco Electric Cooperative, summer seasonal product; and BPA to Western Oregon Cooperative, power sale.

FEDERAL SYSTEM FOOTNOTES (continued)

Federal Table 2

5. BPA's supplemental and entitlement capacity sales consist of a capacity sale to a group of northwest utilities that expires April 1, 2003.
6. Columbia Storage Power Exchange (CSPE) is the sale of the Canadian share of downstream benefits under the Columbia River Treaty with Canada to a group of Northwest utilities, expiring April 1, 2003.
7. Federal diversity is a percentage reduction applied to the Federal system non-coincidental peak utility requirements. This is due to the fact that all peaking electrical loads do not occur simultaneously throughout the region.
8. Sustained peaking adjustment is a percentage reduction applied to the Federal hydrosystem to meet a capacity load of 50 hours per week. This adjustment also includes reductions for Federal hydro maintenance, spinning reserves, forced outage reserves, and summer flow augmentation on the Snake River and John Day hydro projects.
9. Canadian Entitlement Return non-Federal to the Columbia River Storage Exchange (CSPE) reflects the public agencies' and IOUs' obligation of Canadian Entitlement allocation to the Northwest entities of the CSPE, which expires March 31, 2003.
10. Canadian Entitlement Return non-Federal to Canada reflects the Federal system, public agencies' and IOUs' obligation of Canadian Entitlement allocation to Canada, which began April 1, 1998.
11. Restoration adjustments for the losses and gains of the hydro system due to Canadian storage under the terms of the Pacific Northwest Coordination Agreement. It is an obligation to those utilities that gained generation from the addition of Canadian storage, and a resource gain to utilities that lost generation from Canadian storage.
12. Federal renewable resources include: James River Wauna.
13. BPA's imports include: Colton to BPA, power exchange; other entities to BPA, power sales; PP&L (Wyoming Division) to BPA, for Southern Idaho; Pasadena to BPA, exchange energy, peak replacement energy, and seasonal replacement energy; Riverside to BPA, exchange energy, peak replacement energy, and seasonal exchange energy; Sierra Pacific to BPA for Harney and Wells; SCE to BPA, environmental storage, option energy, and option capacity peak replacement; and PowerEx to BPA for Azusa, Banning and Colton, peak replacement.
14. Federal intraregional transfers in include: AVWP to BPA, WNP-3 settlement; other entities to BPA, power sale; PP&L to BPA, seasonal power exchange, surplus energy exchange and peak replacement; PGE to BPA, peak replacement; and PSE to BPA, WNP-3 settlement.
15. BPA supplemental and entitlement capacity in is the off-peak replacement energy component of BPA's supplemental and entitlement capacity sale to a group of Northwest utilities, which expires April 1, 2001.
16. Federal large thermal includes the generation from WNP-2, operated by ENW.
17. Non-utility generation (NUG) resources include generation provided to BPA by independent power producers and resources included under the Public Utility Regulatory Policies Act (PURPA).
18. Resource acquisitions are resources BPA has identified and contracted for future purchase. When new Federal resource acquisitions are contracted for and/or on-line, they will be included in the loads and resources balance.
19. Hydro, small thermal and miscellaneous resources, and combustion turbine reserve requirements are estimated at 5 percent of the Federal capacity of these resources.
20. Large thermal reserve requirements are estimated at 15 percent of the WNP-2 nuclear project.

FEDERAL SYSTEM FOOTNOTES (continued)

Federal Table 2

21. Federal spinning reserve is the reserve generating capacity maintained to provide a regulating margin for the automatic generation and frequency control of power generation.
22. Hydro maintenance is the sum of all Federal hydro project maintenance based on the mean of the 1983-84 through 1988-89 schedules submitted to the Northwest Power Pool.
23. Federal transmission losses are estimated assuming the total Federal resources less hydro reserves, thermal reserves, spinning reserves, and hydro maintenance multiplied by .0282 for energy and .0335 for peak.

TABLE 3: TOTAL PUBLIC AGENCIES

SUMMARY OF PUBLIC AGENCIES LOADS AND RESOURCES IN THE PACIFIC NORTHWEST REGION
UNDER THE PACIFIC NORTHWEST ELECTRIC POWER PLANNING AND CONSERVATION ACT

MEDIUM LOADS		1999 WHITE BOOK: 12/31/99														
2004- 5 OPERATING YEAR		RUN DATE: 12/31/99														
1937 WATER YEAR	PEAK IN MEGAWATTS	AUG 1-15	AUG 16-31	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR 1-15	APR 16-30	MAY	JUN	JUL	
LOADS																
1	SYSTEM LOADS	9707	9707	10008	11329	12439	13140	13442	13466	12557	11831	11831	11050	10150	9778	
2	EXPORTS 1/	157	157	170	129	100	67	26	26	26	26	26	26	114	115	
3	INTRA-REG TRANSFERS OUT 2/	223	223	223	225	178	184	183	180	178	176	176	174	223	223	
4	TOTAL LOADS	10087	10087	10401	11683	12717	13391	13651	13672	12761	12033	12033	11250	10487	10116	
RESOURCES																
5	REGULATED HYDRO	4335	4268	3948	4058	4209	4145	4025	4124	3873	4054	4029	3721	4285	4174	
6	INDEPENDENT HYDRO	237	237	260	260	263	263	260	266	296	300	300	305	300	261	
7	CAN. ENT. RETURN (CSPE) 3/	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8	CAN. ENT. RETURN (CANADA)4/	-105	-94	-100	-98	-100	-98	-103	-95	-93	-96	-94	-102	-94	-102	
9	RESTORATION 5/	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	TOTAL HYDRO	4467	4411	4108	4220	4372	4310	4182	4295	4076	4258	4235	3924	4491	4333	
11	SMALL THERMAL & MISC 6/	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
12	COMBUSTION TURBINES 7/	241	241	242	249	253	255	253	252	251	248	248	0	244	239	
13	CSPE PURCHASE 8/	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14	RENEWABLES 9/	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
15	COGENERATION 10/	20	20	20	20	20	0	20	20	20	20	20	20	20	0	
16	IMPORTS 11/	143	143	143	143	122	164	195	228	254	155	155	143	143	143	
17	INTRA-REG TRANSFERS IN 12/	1322	1322	1181	1252	1349	1461	1522	1533	1396	1324	1324	1412	1373	1366	
18	LARGE THERMAL 13/	375	375	375	375	375	375	375	375	375	188	188	375	375	375	
19	NON-UTILITY GENERATION 14/	239	239	171	96	50	49	51	53	81	196	196	287	300	274	
20	TOTAL RESOURCES	6815	6759	6248	6363	6549	6622	6606	6764	6461	6397	6374	6169	6954	6738	
21	HYD SM THRM & MISC RES 15/	-254	-250	-232	-234	-240	-236	-230	-236	-226	-241	-240	-217	-257	-247	
22	LARGE THERMAL RESERVES 16/	-56	-56	-56	-56	-56	-56	-56	-56	-56	-28	-28	-56	-56	-56	
23	PUBLIC HYDRO MAINT 17/	-578	-538	-482	-114	-81	-59	-74	-101	-212	-242	-245	-240	-249	-254	
24	NET RESOURCES	5927	5915	5478	5959	6172	6271	6246	6371	5967	5886	5861	5656	6392	6181	
25	SURPLUS/DEFICIT	-4160	-4172	-4923	-5724	-6545	-7120	-7405	-7301	-6794	-6147	-6172	-5594	-4095	-3935	
26	BPA PSC DIVERSIFICATION 18/	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
27	DEDICATED RESOURCES 19/	6235	6177	5705	5852	6035	6113	6073	6237	5919	5879	5857	5617	6370	6165	
28	BPA 1981 PSC SALES 20/	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
29	BPA 2002 PSC SALES 21/	4635	4635	5637	5747	6069	7650	8621	8344	6138	6152	6152	3984	3507	4027	
30	SURPLUS/DEFICIT W/PURCHASE	475	463	714	23	-476	530	1216	1043	-656	5	-20	-1610	-588	92	

TABLE 3: TOTAL PUBLIC AGENCIES

SUMMARY OF PUBLIC AGENCIES LOADS AND RESOURCES IN THE PACIFIC NORTHWEST REGION
UNDER THE PACIFIC NORTHWEST ELECTRIC POWER PLANNING AND CONSERVATION ACT

		MEDIUM LOADS													
		1999 WHITE BOOK: 12/31/99													
1937 WATER YEAR PEAK IN MEGAWATTS		2009-10 OPERATING YEAR							RUN DATE: 12/31/99						
		AUG 1-15	AUG 16-31	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR 1-15	APR 16-30	MAY	JUN	JUL
LOADS		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
1	SYSTEM LOADS	10109	10109	10439	11787	12845	13508	13795	13867	12982	12276	12276	11509	10583	10179
2	EXPORTS 1/	80	80	60	29	0	0	0	0	0	0	0	0	81	82
3	INTRA-REG TRANSFERS OUT 2/	233	233	233	233	183	184	183	183	163	162	162	163	212	223
4	TOTAL LOADS	10422	10422	10732	12049	13028	13692	13978	14050	13145	12438	12438	11672	10876	10484
RESOURCES		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
5	REGULATED HYDRO	4712	4645	4325	4435	5099	5035	4915	5014	4763	4944	4919	4611	5175	5064
6	INDEPENDENT HYDRO	237	237	260	260	263	263	260	266	296	300	300	305	300	261
7	CAN. ENT. RETURN (CSPE) 3/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	CAN. ENT. RETURN (CANADA)4/	-115	-121	-117	-114	-153	-145	-151	-143	-141	-140	-141	-151	-141	-145
9	RESTORATION 5/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	TOTAL HYDRO	4834	4761	4468	4581	5209	5153	5024	5137	4918	5104	5078	4765	5334	5180
11	SMALL THERMAL & MISC 6/	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	COMBUSTION TURBINES 7/	235	235	236	243	247	249	247	246	245	242	242	0	246	241
13	CSPE PURCHASE 8/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	RENEWABLES 9/	7	7	7	7	7	7	7	7	7	7	7	7	7	7
15	COGENERATION 10/	20	20	20	20	20	0	20	20	20	20	20	20	20	0
16	IMPORTS 11/	143	143	143	143	122	164	195	228	254	155	155	143	143	143
17	INTRA-REG TRANSFERS IN 12/	323	323	300	295	323	358	359	371	337	316	316	293	290	288
18	LARGE THERMAL 13/	375	375	375	375	375	375	375	375	375	188	188	375	375	375
19	NON-UTILITY GENERATION 14/	231	231	163	89	42	42	43	45	73	188	188	279	292	266
20	TOTAL RESOURCES	6169	6096	5713	5754	6346	6349	6271	6430	6230	6221	6195	5883	6708	6501
21	HYD SM THRM & MISC RES 15/	-272	-268	-250	-252	-284	-279	-274	-280	-270	-285	-283	-261	-302	-292
22	LARGE THERMAL RESERVES 16/	-56	-56	-56	-56	-56	-56	-56	-56	-56	-28	-28	-56	-56	-56
23	PUBLIC HYDRO MAINT 17/	-578	-538	-482	-114	-81	-59	-74	-101	-212	-242	-245	-240	-249	-254
24	NET RESOURCES	5263	5234	4925	5332	5925	5955	5867	5993	5692	5666	5639	5326	6101	5899
25	SURPLUS/DEFICIT	-5159	-5188	-5807	-6717	-7103	-7737	-8111	-8057	-7453	-6772	-6799	-6346	-4775	-4585
26	BPA PSC DIVERSIFICATION 18/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	DEDICATED RESOURCES 19/	5184	5110	4765	4844	4860	4869	4766	4933	4716	4731	4706	4360	5160	4965
28	BPA 1981 PSC SALES 20/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	BPA 2002 PSC SALES 21/	6280	6280	7075	7406	7843	9700	10710	10337	7691	7706	7706	5667	5284	5726
30	SURPLUS/DEFICIT W/PURCHASE	1121	1092	1268	689	740	1963	2599	2280	238	934	907	-679	509	1141

PUBLIC AGENCIES FOOTNOTES

Public Agencies Table 3

1. Public agencies' exports include: AVWP to Modesto, power sale; AVWP to West Kootenai, capacity sale; SCL to NCPA, seasonal power exchange; Snohomish County PUD to SMUD, power sale; and TPU to WAPA, power sale.
2. Public agencies' intraregional transfers out include: AVWP to BPA, WNP-3 settlement; AVWP to Cheney, power sale; AVWP to Clark Public Utility, power sale; AVWP to Eugene Water and Electric Board, power sale; AVWP to Montana Power Company, power sale; AVWP to other entities, power sale; AVWP to PP&L, power sale and seasonal power exchange; AVWP to Pend Oreille, power sale; AVWP to PGE, power sale and capacity sale; AVWP to PSE, power sale; AVWP to Snohomish County PUD, power sale; Chelan County PUD to PGE, capacity/energy exchange; Colockum to PP&L, capacity/energy exchange; Douglas County PUD to PGE, power sale; EWEB to PGE, capacity sale; Grant County PUD to PP&L, power sale; Grays Harbor PUD to PSE, Centralia exchange; Lewis County PUD to PSE, power sale; Mason County PUD #3 to PSE, power sale; Northern Wasco PUD to PSE, power sale; other entities to EWEB, power sale; other entities to AVWP, power sale; Pend Oreille to Pondaray Mill, power sale; Pend Oreille to SCL, power sale; SCL to IPC, seasonal power exchange; SCL to Pend Oreille, power sale; SCL to TPU, energy sale; Snohomish County PUD to PSE, power sale; and TPU to SCL, energy sale.
3. Canadian Entitlement Return non-Federal to the Columbia River Power Exchange (CSPE) reflects the public agencies' obligation of Canadian Entitlement allocation to CSPE, which expires April 1, 2003.
4. Canadian Entitlement Return non-Federal to Canada reflects the public agencies' obligation of Canadian Entitlement allocation to Canada, which begins April 1, 1998.
5. Restoration is the obligation of the public agencies that gained generation from the addition of Canadian storage to utilities that lost generation from it, according to the terms of the Pacific Northwest Coordination Agreement.
6. Public agencies' small thermal and miscellaneous resources include: SCL: Boundary.
7. Public agencies' combustion turbines include: Clark County PUD: River Road (Cogentrix).
8. Columbia Storage Power Exchange (CSPE) is the sale to Northwest utilities through April 1, 2003, of the Canadian share of downstream benefits under the Treaty with Canada.
9. Public agencies' renewable resources include: Emerald PUD: Short Mountain; and Consumers Power Incorporated: Coffin Butte.
10. Public agencies' cogeneration includes: EWEB: Weyerhaeuser's WEYCO Energy Center.
11. Public agencies' imports include: BC Hydro to SCL, Ross replacement; PowerEx to EWEB, power sale; and NCPA to SCL, seasonal power exchange.

PUBLIC AGENCIES FOOTNOTES (continued)

Public Agencies Table 3

12. Public agencies' intraregional transfers include: AVWP to the city of Cheney, Washington, power sale; AVWP to Clark Public Utilities, power sale; AVWP to EWEB, Cooperative, summer seasonal product; BPA to city of Ashland, power sale; BPA to city of Idaho Falls, power sale; BPA to Clatskanie, power sale; BPA to Columbia Basin Electric Cooperative, summer seasonal product; BPA to Columbia River PUD, power sale; BPA to Columbia Rural Electric Cooperative, summer seasonal product; BPA to Cowlitz County PUD, power sale and presubscription power sale; BPA to Douglas County PUD, power sale; BPA to EWEB, power sale and presubscription power sale; BPA to city of Forest Grove, power sale; BPA to Harney Electric Cooperative, summer seasonal product; BPA to Inland Power and Light, summer seasonal product; BPA to Lewis County PUD, power sale; BPA to Lower Valley, power sale; BPA to Mason County PUD #3, power sale; BPA to city of McMinnville, power sale; BPA to Midstate Electric Cooperative, summer seasonal product; BPA to city of Milton-Freewater, power sale; BPA to Modern Electric Cooperative, power sale; BPA to Monmouth, power sale; BPA to Nespelem Valley, summer seasonal product; BPA to Northern Wasco PUD, power sale; BPA to Okanogan, summer seasonal product; BPA to other entities, power sales; BPA to Ravalli County Electric Cooperative, power sale; BPA to Richland, Ormet power sale; BPA to Salem Electric Cooperative, power sale; BPA to small and nongenerating public agencies, summer seasonal product and power sales including Hungry Horse power sale; BPA to Snohomish County PUD, power sale; BPA to Springfield Utility Board, power sale and presubscription power sale; BPA to Surprise Valley Electric Corporation, summer seasonal product; BPA to Tillamook, power sale; BPA to TPU, power sale; BPA to United Electric Cooperative, power sale; BPA to Umatilla Electric Cooperative, summer seasonal product; BPA to Vigilante Electric Cooperative, summer seasonal product; BPA to Wasco County Electric Cooperative, summer seasonal product; BPA to Western Oregon Electric Cooperative, power sale; IPC to Oregon Trail Cooperative, power sale; IPC to city of Richland, power sale; IPC to SCL, seasonal power exchange; MPC to Glacier Electric Cooperative, power sale; Northern Wasco County PUD to PSE, power sale; other entities to EWEB, power sale; PP&L to Clark Public Utilities, power sale; PP&L to Colockum, exchange energy and peak replacement; PP&L to small, nongenerating public utilities, power sales; PP&L to Springfield Utility Board, power sale; Pend Oreille to Ponderay Mill, power sale; Pend Oreille to SCL, power sale; PGE to Canby, power sale; PGE to Chelan County PUD, exchange energy and peak replacement; PGE to Clallam, power sale; PGE to EWEB, power sale and peak replacement; PGE to PNGC, power sale; PGE to Snohomish County PUD, power sale; PSE to Grays Harbor PUD, Centralia exchange; SCL to Pend Oreille, power sale; SCL to TPU, energy sale; and TPU to SCL, energy sale.
13. Public agencies' large thermal includes: Grays Harbor PUD, SCL, Snohomish County PUD, and TPU shares of Centralia.
14. Public agencies' non-utility generating resources are from independent power producers, power brokers, and qualified facilities under the Public Utilities Regulatory Act (PURPA). These resources are summarized for the following public agencies: Chelan County PUD, Cowlitz County PUD, Douglas County PUD, Eugene Water and Electric Board, Grant County PUD, Pend Oreille County PUD, Seattle City Light, Small and Non-Generating Utilities, Snohomish County PUD, and Tacoma Public Utilities.

PUBLIC AGENCIES FOOTNOTES (continued)

Public Agencies Table 3

15. Hydro, small thermal and miscellaneous resources, and combustion turbine reserve requirements are 5 percent of the public agencies' share of capacity from these resources.
16. Large thermal reserve requirements are 15 percent of the public agencies' share of Pacific Northwest thermal resources.
17. Hydro maintenance is the sum of all public agency hydro project maintenance based on the mean of the 1983-84 through 1988-89 schedules submitted to the Northwest Power Pool.
18. BPA Power Sales Contract Diversification is the amount of resource a utility could add to serve its own load as part of BPA's Load Commitment exercise under the 1981 power sales contract. This reduces each utility's power sales contract purchase from BPA, and expires between June 30 and September 30, 2001.
19. Dedicated resources are the actual resources used in the operating year prior to the signing of the Pacific Northwest Electric Power Planning and Conservation Act (Public Law 96-501) and other resources the utility dedicates to serve its load.
20. BPA 1981 power sales contract purchases include public agencies' firm power purchases under their 1981 power sales contracts. This requirement is defined as the sum of the differences between each utility's firm load and its dedicated resources.
21. BPA's 2002 power sales contract purchases are estimates from the 2002 BPA Rate Case. These contracts begin October 1, 2001, and were not disaggregated to the utility level for this analysis.

TABLE 4: TOTAL INVESTOR-OWNED UTILITIES

SUMMARY OF INVESTOR-OWNED UTILITIES LOADS AND RESOURCES IN THE PACIFIC NORTHWEST REGION
 UNDER THE PACIFIC NORTHWEST ELECTRIC POWER PLANNING AND CONSERVATION ACT

MEDIUM LOADS														
1999 WHITE BOOK: 12/31/99														
2000-1 OPERATING YEAR														
RUN DATE: 12/31/99														
1937 WATER YEAR	AUG		SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	APR	MAY	JUN	JUL
PEAK IN MEGAWATTS	1-15	16-31								1-15	16-30			
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
LOADS														
1 SYSTEM LOADS	12490	12490	12052	13276	14320	15744	16203	15668	14315	13314	13314	12485	12624	12505
2 EXPORTS 1/	972	972	905	546	556	593	588	543	533	536	536	566	908	955
3 INTRA-REG TRANSFERS OUT 2/	2103	2103	2130	2081	2317	2350	2224	2216	1988	1927	1927	1853	1966	1940
4 TOTAL LOADS	15565	15565	15087	15903	17193	18687	19015	18427	16836	15777	15777	14904	15498	15400
RESOURCES														
5 REGULATED HYDRO	6257	6298	6016	6244	6074	5964	5912	5880	5993	6087	6092	5874	6160	6324
6 INDEPENDENT HYDRO	966	937	911	878	863	882	866	847	854	867	892	952	990	990
7 CAN. ENT. RETURN (CSPE) 3/	-24	-24	-24	-24	-24	-24	-24	-24	-24	-23	-23	-23	-23	-23
8 CAN. ENT. RETURN (CANADA)4/	-81	-79	-86	-85	-86	-89	-84	-82	-80	-87	-79	-82	-79	-85
9 RESTORATION 5/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 TOTAL HYDRO	7118	7132	6817	7013	6827	6733	6670	6621	6743	6844	6882	6721	7048	7206
11 SMALL THERMAL & MISC 6/	53	53	44	47	130	127	128	125	35	32	32	47	0	54
12 COMBUSTION TURBINES 7/	815	815	815	815	1269	1269	1269	1269	815	815	815	315	815	815
13 CSPE PURCHASE 8/	96	96	96	96	96	96	96	96	96	93	93	93	93	93
14 RENEWABLES 9/	48	48	48	48	48	48	48	48	48	48	48	0	48	48
15 COGENERATION 10/	710	710	710	710	710	710	710	710	710	710	710	241	710	710
16 IMPORTS 11/	1540	1540	1067	1578	1866	2053	2112	2142	1857	1145	1145	1548	1710	1580
17 INTRA-REG TRANSFERS IN 12/	2731	2731	2663	2826	3051	3209	2950	2901	2694	2409	2409	2181	2581	2682
18 LARGE THERMAL 13/	4074	4074	4044	4053	4027	4017	4020	4010	4012	3823	3823	3194	3496	4080
19 NON-UTILITY GENERATION 14/	1192	1192	1168	1140	1134	1120	1103	1126	1135	1169	1169	645	1040	1206
20 TOTAL RESOURCES	18377	18391	17473	18326	19158	19382	19106	19048	18145	17088	17126	14985	17541	18475
21 HYD SM THRM & MISC RES 15/	-502	-503	-486	-494	-511	-506	-502	-500	-480	-486	-488	-404	-488	-507
22 LARGE THERMAL RESERVES 16/	-779	-779	-718	-743	-722	-751	-753	-758	-767	-697	-697	-673	-712	-777
23 IOU HYDRO MAINTENANCE 17/	-745	-724	-520	-333	-142	-106	-79	-304	-488	-427	-411	-336	-302	-657
24 NET RESOURCES	16352	16385	15749	16756	17783	18020	17772	17486	16410	15478	15531	13572	16039	16534
25 SURPLUS/DEFICIT	787	820	662	853	591	-667	-1243	-941	-426	-299	-246	-1332	541	1134
26 BPA PSC DIVERSIFICATION 18/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27 DEDICATED RESOURCES 19/	12993	13007	12336	12699	12569	12682	12620	12650	12677	12335	12373	11364	12844	13088
28 BPA 1981 PSC SALES 20/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29 BPA 2002 PSC SALES 21/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 SURPLUS/DEFICIT W/PURCHASE	787	820	662	853	591	-667	-1243	-941	-426	-299	-246	-1332	541	1134

TABLE 4: TOTAL INVESTOR-OWNED UTILITIES

SUMMARY OF INVESTOR-OWNED UTILITIES LOADS AND RESOURCES IN THE PACIFIC NORTHWEST REGION
UNDER THE PACIFIC NORTHWEST ELECTRIC POWER PLANNING AND CONSERVATION ACT

M E D I U M L O A D S														
1999 WHITE BOOK: 12/31/99														
2009-10 OPERATING YEAR														
RUN DATE: 12/31/99														
1937 WATER YEAR	AUG		SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	APR	MAY	JUN	JUL
PEAK IN MEGAWATTS	1-15	16-31								1-15	16-30			
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LOADS														
1 SYSTEM LOADS	13552	13552	13063	14322	15401	16957	17600	16960	15539	14440	14440	13577	13522	13604
2 EXPORTS 1/	235	235	168	151	165	188	195	172	162	160	160	170	209	253
3 INTRA-REG TRANSFERS OUT 2/	300	300	386	387	391	300	295	290	290	290	290	285	285	282
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4 TOTAL LOADS	14087	14087	13617	14860	15957	17445	18090	17422	15991	14890	14890	14032	14016	14139
RESOURCES														
5 REGULATED HYDRO	5707	5749	5484	5710	5027	4928	4876	4845	4946	5042	5047	4840	5116	5302
6 INDEPENDENT HYDRO	935	906	894	860	845	875	860	841	839	851	876	949	974	960
7 CAN. ENT. RETURN (CSPE) 3/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 CAN. ENT. RETURN (CANADA)4/	-106	-115	-114	-106	-87	-84	-87	-81	-79	-79	-79	-86	-79	-83
9 RESTORATION 5/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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10 TOTAL HYDRO	6536	6540	6264	6464	5785	5719	5649	5605	5706	5814	5844	5703	6011	6179
11 SMALL THERMAL & MISC 6/	45	45	45	47	131	134	135	132	36	33	33	56	0	47
12 COMBUSTION TURBINES 7/	815	815	815	815	1269	1269	1269	1269	815	815	815	315	815	815
13 CSPE PURCHASE 8/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14 RENEWABLES 9/	48	48	48	48	48	48	48	48	48	48	48	0	48	48
15 COGENERATION 10/	710	710	710	710	710	710	710	710	710	710	710	241	710	710
16 IMPORTS 11/	1364	1364	892	970	1288	1114	1183	1220	1227	940	940	1360	1527	1394
17 INTRA-REG TRANSFERS IN 12/	958	958	987	1053	1271	1323	1297	1253	1130	1098	1098	875	1076	1105
18 LARGE THERMAL 13/	4046	4046	4047	4054	4029	4041	4045	4034	4016	3224	3401	3488	3499	4055
19 NON-UTILITY GENERATION 14/	1125	1125	1105	1077	1069	1057	1038	1061	1064	1099	1099	606	995	1136
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20 TOTAL RESOURCES	15647	15651	14913	15238	15600	15415	15374	15332	14752	13781	13988	12644	14681	15489
21 HYD SM THRM & MISC RES 15/	-469	-470	-455	-463	-455	-451	-447	-445	-423	-430	-431	-350	-433	-451
22 LARGE THERMAL RESERVES 16/	-739	-739	-685	-710	-739	-717	-720	-724	-731	-572	-598	-683	-678	-734
23 IOU HYDRO MAINTENANCE 17/	-743	-723	-520	-333	-142	-106	-79	-304	-488	-427	-411	-336	-302	-657
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24 NET RESOURCES	13696	13719	13253	13733	14264	14141	14127	13859	13110	12352	12548	11275	13268	13647
25 SURPLUS/DEFICIT	-391	-367	-364	-1127	-1693	-3304	-3962	-3563	-2881	-2538	-2341	-2757	-748	-492
26 BPA PSC DIVERSIFICATION 18/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27 DEDICATED RESOURCES 19/	11827	11831	11178	11514	11227	11002	10937	10950	10982	10181	10388	10031	11195	11463
28 BPA 1981 PSC SALES 20/	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29 BPA 2002 PSC SALES 21/	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
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30 SURPLUS/DEFICIT W/PURCHASE	1809	1833	1836	1073	507	-1104	-1762	-1363	-681	-338	-141	-557	1452	1708

INVESTOR-OWNED UTILITIES FOOTNOTES

Investor-Owned Utilities Table 4

1. IOUs' exports include: AVWP to Modesto, power sale; AVWP to West Kootenai, capacity sale; IPC to ABC, power sale; IPC to Sierra Pacific, power sale and for Harney and Wells; IPC to Truckee/Donner, power sale; IPC to City of Washington, Utah, power sale; IPC to UAMPS, power sale; PP&L to CDWR, power sale; PP&L to PP&L (Northern California), transfer to PP&L's Northern California load; PP&L to City of Redding, power sale; PP&L to SCE, power sale; PP&L to SMUD, power sale; PP&L to WAPA, power sale; PGE to Burbank, power sale; PGE to Glendale, power sale and seasonal power exchange; and PSE to PG&E, seasonal power exchange.
2. IOUs' intraregional transfers out include: AVWP to BPA, WNP-3 settlement; AVWP to City of Cheney, Washington, power sale; AVWP to Clark Public Utilities, power sale; AVWP to EWEB, power sale; AVWP to MPC, power sale; AVWP to other entities, power sale; AVWP to PP&L, power sale and seasonal power exchange; AVWP to Pend Oreille, power sale; AVWP to PGE, power sale and capacity sale; AVWP to PSE, power sale; AVWP to Snohomish County PUD, power sale; IPC to AVWP, power sale; IPC to Energy Services, power sale; IPC to Oregon Trail, power sale; IPC to PGE, power sale; IPC to MPC, seasonal power exchange; IPC to City of Richland, power sale; IPC to SCL, seasonal power exchange; MPC to Glacier, power sale; MPC to IPC, seasonal power exchange; MPC to PSE, power sale; other entities to AVWP, power sale; other entities to BPA, power sale; other entities to EWEB, power sale; PGE to BPA, peak replacement; PP&L to AVWP, seasonal power exchange; PP&L to BPA, seasonal power exchange, seasonal energy exchange and peak replacement; PP&L to Clark Public Utilities, power sale; PP&L to Colockum, exchange energy and peak replacement; PP&L to PSE, power sale; PP&L to small, nongenerating utilities, power sales; PP&L to Springfield Utility Board, power sale; PGE to AVWP, peak replacement; PGE to BPA, peak replacement; PGE to Canby, power sale; PGE to Chelan, exchange energy and peak replacement; PGE to Clallam, power sale; PGE to EWEB, power sale and peak replacement; PGE to PNGC, power sale; PGE to PP&L, Cove replacement; PGE to Snohomish County PUD, power sale; PSE to AVWP, power sale; PSE to BPA, WNP-3 settlement; and PSE to Grays Harbor PUD, Centralia exchange.
3. Canadian Entitlement Return non-Federal to the Columbia River Power Exchange (CSPE) reflects the IOUs' obligation of Canadian Entitlement allocation to CSPE, which expires April 1, 2003.
4. Canadian Entitlement Return non-Federal to Canada reflects the IOUs' obligation of Canadian Entitlement allocation to Canada, which begins April 1, 1998.
5. Restoration is the obligation of the IOUs that gained generation from the addition of Canadian storage to utilities that lost generation from it, according to the terms of the Pacific Northwest Coordination Agreement.

INVESTOR-OWNED UTILITIES FOOTNOTES (continued)

Investor-Owned Utilities Table 4

6. IOUs' existing small thermal and miscellaneous resources include: IPC: Energy Management Systems; PSE: Shuffleton and Crystal Mountain; and MPC: its portion of Corette in the region.
7. IOUs' combustion turbines include: AVWP: Northeastern units 1 and 2; PGE: Beaver; and PSE: Whidbey Island, Whitehorn, Fredrickson, and Fredonia 1 and 2.
8. Columbia Storage Power Exchange (CSPE) is the sale to Northwest utilities through April 1, 2003, of the Canadian share of downstream benefits under the Treaty with Canada.
9. IOUs' renewable resources include AVWP: Kettle Falls.
10. IOUs' cogeneration resources include PGE: Coyote Springs; and PP&L, Hermiston.
11. IOUs' imports include: BC Hydro to PSE, power sale; SCE to PP&L, power sale; Glendale to PGE, seasonal power exchange; PG&E to PSE, seasonal power exchange; PP&L Wyoming division to PP&L, intra-company transfer, and Utah Power Company import for their load within the region; and West Kootenai to AVWP, peak replacement.
12. IOUs' intraregional transfers in include: AVWP to MPC, power sale; AVWP to PP&L, power sale and seasonal power exchange; AVWP to PGE, capacity sale and power sale; AVWP to PSE, power sale; BPA to AVWP, power sale, deferred power exchange, energy sale, and WNP-3 settlement; BPA to PP&L, capacity sale, Southern Idaho exchange, seasonal power exchange, seasonal energy exchange, and Centralia standby; BPA to PGE, capacity sale and power sale including Canby; BPA to PSE, power sale, Baker Head loss, and WNP-3 settlement; Chelan to PGE, capacity/energy exchange; Colockum to PP&L, capacity/energy exchange; Douglas County PUD to PGE, power sale; EWEB to PGE, capacity sale; Grant to PP&L, power sale; Grays Harbor to PSE, Centralia exchange; IPC to AVWP, power sale; IPC to Energy Service, power sale; IPC to MPC, seasonal power exchange; IPC to PGE, power sale; Lewis County PUD to PSE, power sale; Mason County PUD #3 to PSE, power sale; MPC to IPC, seasonal power exchange; MPC to PSE, power sale; Northern Wasco County PUD to PSE, power sale; other entities to AVWP, power sale; PP&L to AVWP, seasonal power exchange; PP&L to PSE, power sale; PGE to AVWP, peak replacement; PGE to PP&L, Cove replacement; PSE to AVWP, power sale; SCL to IPC, seasonal power exchange; and Snohomish County PUD to PSE, power sale.
13. IOUs' large thermal includes the IOUs' shares of Centralia, Jim Bridger, Colstrip 1 and 2, Colstrip 3 and 4, Boardman Coal, and Valmy.
14. IOUs' non-utility generating resources from independent power producers, power brokers, and qualifying facilities under the Public Utilities Regulatory Act (PURPA). These resources are summarized for the following IOUs: Idaho Power Company, Montana Power Company, Pacific Power and Light, Portland General Electric, Puget Sound Power and Light, and Avista Corporation, Washington Water Power Division (AVWP).
15. Hydro, small thermal and miscellaneous resources, and combustion turbine reserve requirements are 5 percent of the IOUs' share in the capacity of these resources.
16. Large thermal reserve requirements are 15 percent of the IOUs' share of Pacific Northwest thermal resources and the Pacific Power and Light import from Wyoming.

INVESTOR-OWNED UTILITIES FOOTNOTES (continued)

Investor-Owned Utilities Table 4

17. Hydro maintenance is the sum of all IOU hydro project maintenance based on the mean of the 1983-84 through 1988-89 schedules submitted to the Northwest Power Pool.
18. BPA Power Sales Contract Diversification is the amount of resource a utility could add to serve its own load as part of BPA's Load Commitment exercise. For this study, no IOU diversification from the existing power sales contract is assumed.
19. Dedicated resources are the actual resources used in the operating year prior to the signing of the Pacific Northwest Electric Power Planning and Conservation Act (Public Law 96-501) and other resources the utility dedicates to serve its load.
20. BPA 1981 power sales contract sales include the IOUs' contracted firm energy or firm capacity purchases under their power sales contracts and BPA's partnership program. Currently, no IOU places load on BPA through a power sales contract.
21. BPA 2002 power sales contract purchases are estimated from the 2002 BPA Rate Case. These contracts begin October 1, 2001, and were not disaggregated to utility levels for this analysis.