

BP-14 Final Rate Proposal

Power Loads and Resources Study Documentation

BP-14-FS-BPA-03A

July 2013



**LOADS AND RESOURCES STUDY DOCUMENTATION
TABLE OF CONTENTS**

	Page
COMMONLY USED ACRONYMS AND SHORT FORMS	v
1. DOCUMENTATION FOR THE LOADS AND RESOURCES STUDY	1
1.1 Bonneville Preference Customers	
Table 1.1.1 Load Following Service Customers	2
Table 1.1.2 Tier 1 Block Service Customers	4
Table 1.1.3 Slice Service Customers	5
Table 1.1.4 USBR Obligation Customers	6
1.2 BPA Sales to Preference and Legacy Customers for FY2014 and FY2015	7
Table 1.2.1 Table A-6: Preference Power Sales - Energy	8
Table 1.2.2 Table A-6: Preference Power Sales - HLH MWh	10
Table 1.2.3 Table A-6: Preference Power Sales - LLH MWh	12
1.3 BPA Exports for FY2014 and FY2015	15
Table 1.3.1 Table A-2: BPA Exports - Energy	16
Table 1.3.2 Table A-2: BPA Exports - HLH MWh	18
Table 1.3.3 Table A-2: BPA Exports - LLH MWh	20
2. RESOURCE FORECASTS FOR FY2014 AND FY2015	23
2.1 Regulated Hydro	23
Table 2.1.1 Table A-7: BPA Regulated Hydro - Energy	24
Table 2.1.2 Table A-7: BPA Regulated Hydro - HLH MWh	26
Table 2.1.3 Table A-7: BPA Regulated Hydro - LLH MWh	28
2.2 Independent Hydro	31
Table 2.2.1 Table A-8: BPA Independent Hydro - Energy	32
Table 2.2.2 Table A-8: BPA Independent Hydro - HLH MWh	34
Table 2.2.3 Table A-8: BPA Independent Hydro - LLH MWh	36
2.3 Cogeneration Resources	39
Table 2.3.1 Table A-12: BPA Cogeneration Resources - Energy	40
Table 2.3.2 Table A-12: BPA Cogeneration Resources - HLH MWh	42
Table 2.3.3 Table A-12: BPA Cogeneration Resources - LLH MWh	44

2.4	Large Thermal Resources	47
	Table 2.4.1 Table A-13: BPA Large Thermal Resources - Energy	48
	Table 2.4.2 Table A-13: BPA Large Thermal Resources - HLH MWh	50
	Table 2.4.3 Table A-13: BPA Large Thermal Resources - LLH MWh.....	52
2.5	Renewable Resources	55
	Table 2.5.1 Table A-11: BPA Renewable Resources - Energy	56
	Table 2.5.2 Table A-11: BPA Renewable Resources - HLH MWh	58
	Table 2.5.3 Table A-11: BPA Renewable Resources - LLH MWh.....	60
2.6	Small Hydro Resources.....	63
	Table 2.6.1 Table A-9: BPA Small Hydro - Energy.....	64
	Table 2.6.2 Table A-9: BPA Small Hydro - HLH MWh.....	66
	Table 2.6.3 Table A-9: BPA Small Hydro - LLH MWh	68
2.7	Imports	71
	Table 2.7.1 Table A-3: BPA Imports - Energy	72
	Table 2.7.2 Table A-3: BPA Imports - HLH MWh.....	74
	Table 2.7.3 Table A-3: BPA Imports - LLH MWh	76
2.8	Non-Federal CER Deliveries to BPA	79
	Table 2.8.1 Table A-15: Non-Federal CER Deliveries - Energy.....	80
	Table 2.8.2 Table A-15: Non-Federal CER Deliveries - HLH MWh.....	82
	Table 2.8.3 Table A-15: Non-Federal CER Deliveries - LLH MWh	84
2.9	Intra-Regional Transfers	87
	Table 2.9.1 Table A-4: BPA Intra-Regional Transfers - Energy.....	88
	Table 2.9.2 Table A-4: BPA Intra-Regional Transfers - HLH MWh.....	90
	Table 2.9.3 Table A-4: BPA Intra-Regional Transfers - LLH MWh	92
2.10	Total PNW Regional Hydro Resources By Water Year.....	95
	Table 2.10.1 FY 2014 Total PNW Regional Hydro Resources	96
	Table 2.10.2 FY 2015 Total PNW Regional Hydro Resources	99
2.11	Estimated Purchase MW Eligible For 4(h)(10)C Credit.....	103
	Table 2.11.1 FY 2014 - 4(h)(10)C Power Purchase Amount	104
	Table 2.11.2 FY 2015 - 4(h)(10)C Power Purchase Amount	107
2.12	Federal Tier 1 System Firm Critical Output	111
	Table 2.12.1 Federal Tier 1 System Firm Critical Output Projection.....	112
	Table 2.12.2 Federal System Hydro Generation for T1SFCO Calculation ...	113
	Table 2.12.3 Designated Non-Federally Owned BPA Resources for T1SFCO Calculation.....	114
	Table 2.12.4 Designated BPA Contract Purchases for T1SFCO Calculation.....	115
	Table 2.12.5 Designated BPA System Obligations for T1SFCO Calculation.....	116

3.	HYDRO REGULATION ASSUMPTIONS	117
3.1	HYDSIM Hydro Regulation Study Assumptions for 2014 and 2015	118
4.	FEDERAL LOADS AND RESOURCES FOR FY2014 AND FY2015.....	133
4.1	Federal Report Surplus Deficit	
	Table 4.1.1 Federal Report Surplus Deficit - Energy	134
	Table 4.1.2 Federal Report Surplus Deficit - HLH MWh	138
	Table 4.1.3 Federal Report Surplus Deficit - LLH MWh.....	142

This page intentionally left blank.

COMMONLY USED ACRONYMS AND SHORT FORMS

AAC	Anticipated Accumulation of Cash
AGC	Automatic Generation Control
ALF	Agency Load Forecast (computer model)
aMW	average megawatt(s)
AMNR	Accumulated Modified Net Revenues
ANR	Accumulated Net Revenues
ASC	Average System Cost
BiOp	Biological Opinion
BPA	Bonneville Power Administration
Btu	British thermal unit
CDD	cooling degree day(s)
CDQ	Contract Demand Quantity
CGS	Columbia Generating Station
CHWM	Contract High Water Mark
COE, Corps, or USACE Commission	U.S. Army Corps of Engineers Federal Energy Regulatory Commission
Corps, COE, or USACE	U.S. Army Corps of Engineers
COSA	Cost of Service Analysis
COU	consumer-owned utility
Council or NPCC	Northwest Power and Conservation Council
CP	Coincidental Peak
CRAC	Cost Recovery Adjustment Clause
CSP	Customer System Peak
CT	combustion turbine
CY	calendar year (January through December)
DDC	Dividend Distribution Clause
<i>dec</i>	decrease, decrement, or decremental
DERBS	Dispatchable Energy Resource Balancing Service
DFS	Diurnal Flattening Service
DOE	Department of Energy
DSI	direct-service industrial customer or direct-service industry
DSO	Dispatcher Standing Order
EIA	Energy Information Administration
EIS	Environmental Impact Statement
EN	Energy Northwest, Inc.
EPP	Environmentally Preferred Power
ESA	Endangered Species Act
e-Tag	electronic interchange transaction information
FBS	Federal base system
FCRPS	Federal Columbia River Power System
FCRTS	Federal Columbia River Transmission System
FELCC	firm energy load carrying capability
FHFO	Funds Held for Others
FORS	Forced Outage Reserve Service

FPS	Firm Power Products and Services (rate)
FY	fiscal year (October through September)
GARD	Generation and Reserves Dispatch (computer model)
GEP	Green Energy Premium
GRSPs	General Rate Schedule Provisions
GTA	General Transfer Agreement
GWh	gigawatthour
HDD	heating degree day(s)
HLH	Heavy Load Hour(s)
HOSS	Hourly Operating and Scheduling Simulator (computer model)
HYDSIM	Hydrosystem Simulator (computer model)
ICE	Intercontinental Exchange
<i>inc</i>	increase, increment, or incremental
IOU	investor-owned utility
IP	Industrial Firm Power (rate)
IPR	Integrated Program Review
IRD	Irrigation Rate Discount
IRM	Irrigation Rate Mitigation
IRMP	Irrigation Rate Mitigation Product
JOE	Joint Operating Entity
kW	kilowatt (1000 watts)
kWh	kilowatthour
LDD	Low Density Discount
LLH	Light Load Hour(s)
LRA	Load Reduction Agreement
Maf	million acre-feet
Mid-C	Mid-Columbia
MMBtu	million British thermal units
MNR	Modified Net Revenues
MRNR	Minimum Required Net Revenue
MW	megawatt (1 million watts)
MWh	megawatthour
NCP	Non-Coincidental Peak
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NFB	National Marine Fisheries Service (NMFS) Federal Columbia River Power System (FCRPS) Biological Opinion (BiOp)
NLSL	New Large Single Load
NMFS	National Marine Fisheries Service
NOAA Fisheries	National Oceanographic and Atmospheric Administration Fisheries
NORM	Non-Operating Risk Model (computer model)
Northwest Power Act	Pacific Northwest Electric Power Planning and Conservation Act
NPCC or Council	Pacific Northwest Electric Power and Conservation Planning Council

NPV	net present value
NR	New Resource Firm Power (rate)
NT	Network Transmission
NTSA	Non-Treaty Storage Agreement
NUG	non-utility generation
NWPP	Northwest Power Pool
OATT	Open Access Transmission Tariff
O&M	operation and maintenance
OATI	Open Access Technology International, Inc.
OMB	Office of Management and Budget
OY	operating year (August through July)
PF	Priority Firm Power (rate)
PFp	Priority Firm Public (rate)
PFx	Priority Firm Exchange (rate)
PNCA	Pacific Northwest Coordination Agreement
PNRR	Planned Net Revenues for Risk
PNW	Pacific Northwest
POD	Point of Delivery
POI	Point of Integration or Point of Interconnection
POM	Point of Metering
POR	Point of Receipt
Project Act	Bonneville Project Act
PRS	Power Rates Study
PS	BPA Power Services
PSW	Pacific Southwest
PTP	Point to Point Transmission (rate)
PUD	public or people's utility district
RAM	Rate Analysis Model (computer model)
RAS	Remedial Action Scheme
RD	Regional Dialogue
REC	Renewable Energy Certificate
Reclamation or USBR	U.S. Bureau of Reclamation
REP	Residential Exchange Program
RevSim	Revenue Simulation Model (component of RiskMod)
RFA	Revenue Forecast Application (database)
RHWM	Rate Period High Water Mark
RiskMod	Risk Analysis Model (computer model)
RiskSim	Risk Simulation Model (component of RiskMod)
ROD	Record of Decision
RPSA	Residential Purchase and Sale Agreement
RR	Resource Replacement (rate)
RRS	Resource Remarketing Service
RSS	Resource Support Services
RT1SC	RHWM Tier 1 System Capability
RTO	Regional Transmission Operator
SCADA	Supervisory Control and Data Acquisition

SCS	Secondary Crediting Service
Slice	Slice of the System (product)
T1SFCO	Tier 1 System Firm Critical Output
TCMS	Transmission Curtailment Management Service
TOCA	Tier 1 Cost Allocator
TPP	Treasury Payment Probability
TRAM	Transmission Risk Analysis Model
Transmission System Act	Federal Columbia River Transmission System Act
TRL	Total Retail Load
TRM	Tiered Rate Methodology
TS	BPA Transmission Services
TSS	Transmission Scheduling Service
UAI	Unauthorized Increase
ULS	Unanticipated Load Service
USACE, Corps, or COE	U.S. Army Corps of Engineers
USBR or Reclamation	U.S. Bureau of Reclamation
USFWS	U.S. Fish and Wildlife Service
VERBS	Variable Energy Resources Balancing Service (rate)
VOR	Value of Reserves
VR1-2014	First Vintage rate of the BP-14 rate period
WECC	Western Electricity Coordinating Council (formerly WSCC)
WIT	Wind Integration Team
WSPP	Western Systems Power Pool

1.	DOCUMENTATION FOR THE LOADS AND RESOURCES STUDY	1
1.1	Bonneville Preference Customers	
	Table 1.1.1 Load Following Service Customers.....	2
	Table 1.1.2 Tier 1 Block Service Customers	4
	Table 1.1.3 Slice Service Customers	5
	Table 1.1.4 USBR Obligation Customers.....	6

Table 1.1.1
Load Following Service Customers

Albion, City of	Ellensburg, City of	Mission Valley Power
Alder Mutual	Elmhurst Mutual P & L	Missoula Elec Coop
Ashland, City of	Energy Northwest	Modern Elec Coop
Asotin County PUD #1	Fairchild AFB	Monmouth, City of
Bandon, City of	Fall River Rural Elec Coop	Nespelem Valley Elec Coop
Benton REA	Farmers Elec Coop	Northern Lights
Big Bend Elec Coop	Ferry County PUD #1	Northern Wasco County PUD
Blachly-Lane Electric Coop	Flathead Elec Coop	Ohop Mutual Light Company
Blaine, City of	Forest Grove, City of	Okanogan County Elec Coop
Bonniers Ferry, City of	Glacier Elec Coop	Orcas P & L
Burley, City of	Grant County PUD #2	Oregon Trail Coop
Canby, City of	Harney Elec Coop	Parkland L & W
Cascade Locks, City of	Hermiston, City of	Peninsula Light Company
Central Lincoln	Heyburn, City of	Plummer, City of
Central MT Elec Power Coop	Hood River Elec Coop	Port Angeles, City of
Centralia, City of	Idaho County L & P	Port of Seattle
Cheney, City of	Inland P & L	Puget Sound Naval Shipyard (Bremerton)
Chewelah, City of	Jefferson County PUD	Raft River Rural Elec Coop
Clallam County PUD #1	Kittitas County PUD #1	Ravalli Elec Coop
Clearwater Power	Kootenai Electric Coop	Richland, City of
Columbia Basin Elec Coop	Lakeview L & P (WA)	Riverside Elec Coop
Columbia Power Coop	Lane Elec Coop	Rupert, City of
Columbia REA	Lincoln Elec Coop	Salem Elec Coop
Columbia River PUD	Lost River Elec Coop	Salmon River Elec Coop
Consol Irrig Dist #19	Lower Valley P & L	Skamania County PUD #1
Consumer's Power	Mason County PUD #1	Soda Springs, City of
Coos-Curry Electric Coop	Mason County PUD #3	South Side Elec
Coulee Dam, City of	McCleary, City of	Springfield Utiltiy Board
Declo, City of	McMinnville, City of	Steilacoom, Town of
Douglas Electric Coop	Midstate Elec Coop	Sumas, Town of
Drain, City of	Milton Freewater, City of	Surprise Valley Elec Coop
East End Mutual Electric	Milton, Town of	Tanner Elec Coop
Eatonville, City of	Minidoka, City of	Tillamook PUD #1

Table 1.1.1 - continued
Load Following Service Customers

Troy, City of	USBIA Wapato	Wasco Elec Coop
U.S. Bureau of Reclamation (Roza)	USDOE-Albany	Weiser, City of
U.S. Naval Station, Everett (Jim Creek)	USDOE-Richland	Wells Rural Elec Co
U.S. Naval Submarine Base,(Bangor)	Vera Irrigation District	West Oregon Elec Coop
Umatilla Elec Coop	Vigilante Elec Coop	Whatcom County PUD #1
Umpqua Indian Utility Cooperative	Wahkiakum County PUD #1	Yakama Power
United Electric Coop		

Table 1.1.2
Tier 1 Block Service Customers

Pend Oreille		
--------------	--	--

Table 1.1.3
Slice Service Customers

Benton PUD	Franklin	Pacific
Clark	Grays Harbor	Seattle
Clatskanie	Idaho Falls	Snohomish
Cowlitz	Klickitat	Tacoma
Emerald	Lewis	
EWEB	Okanogan PUD	

Table 1.1.4
USBR Obligation Customers

USBR Chief Joseph Project	USBR Rathdrum Prairie Project	USBR Tualatin Valley Project
USBR Columbia Basin Project	USBR Southern Idaho Projects	USBR Owyhee Project
USBR Crooked River Project	USBR Spokane Indian Development Project	USBR Umatilla Project
USBR The Dalles Reclamation Project	USBR Spokane Valley Project	USBR Yakima Project

1.2		BPA Sales to Preference and Legacy Customers for FY2014 and FY2015.....	7
Table	1.2.1	Table A-6: Preference Power Sales - Energy	8
Table	1.2.2	Table A-6: Preference Power Sales - HLH MWh	10
Table	1.2.3	Table A-6: Preference Power Sales - LLH MWh.....	12

Table 1.2.1
Table A-6: BPA Sales to Preference and Legacy Customers
Fiscal Year 2014 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Pacific Northwest															
1 DSI Obligation	311	313	311	312	313	312	312	312	312	311	312	313	312	313	312
2 Direct Service Industry	311	313	311	312	313	312	312	312	312	311	312	313	312	313	312
3 Load Following	2811	3333	3805	3801	3630	3159	3011	3011	2862	2941	3199	3117	3089	2872	3209
4 Cooperative	1548	1810	2114	2099	2014	1721	1667	1667	1655	1756	1962	1863	1847	1656	1821
5 Municipality	537	629	701	709	673	597	564	564	515	516	552	564	559	533	590
6 Public Utility District	628	768	845	847	803	714	668	668	591	574	582	586	581	589	682
7 Federal Entities	99.5	127	146	146	139	127	113	113	100	94.7	102	103	102	95.0	116
8 Slice Block	1624	1992	2216	2243	2076	1937	1636	1636	1424	1326	1561	1561	1561	1628	1767
9 Municipality	538	750	817	847	803	769	532	532	352	279	454	475	475	590	599
10 Public Utility District	1086	1242	1399	1396	1274	1168	1104	1104	1072	1047	1107	1087	1087	1038	1168
11 Slice Right to Power	1692	2138	1997	1635	1603	1817	1704	1721	2743	2221	2142	1844	1615	1760	1935
12 Municipality	568	718	671	549	538	610	572	578	921	746	719	619	542	591	650
13 Public Utility District	1124	1420	1327	1086	1065	1207	1132	1143	1822	1476	1423	1225	1073	1169	1285
14 Tier 1 Block	9.84	44.5	39.1	55.0	53.9	46.1	2.99	2.99	0	0	11.0	11.3	11.3	23.3	24.6
15 Public Utility District	9.84	44.5	39.1	55.0	53.9	46.1	2.99	2.99	0	0	11.0	11.3	11.3	23.3	24.6
16 USBR Obligation	104	30.1	29.2	27.1	25.2	65.8	250	250	327	340	402	295	304	252	180
17 USBR	104	30.1	29.2	27.1	25.2	65.8	250	250	327	340	402	295	304	252	180
Total Power Sales Contracts															
18 Cooperative	1548	1810	2114	2099	2014	1721	1667	1667	1655	1756	1962	1863	1847	1656	1821
19 Direct Service Industry	311	313	311	312	313	312	312	312	312	311	312	313	312	313	312
20 Federal Entities	99.5	126.5	145.7	146.3	139.1	127.5	112.7	112.7	100.3	94.7	102.3	103.2	102.4	95.0	115.9
21 Municipality	1643	2097	2188	2105	2014	1976	1668	1674	1789	1541	1725	1658	1576	1714	1839
22 Other	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0
23 Public Utility District	2847	3475	3609	3383	3195	3135	2907	2918	3485	3096	3123	2909	2751	2820	3160
24 USBR	104	30	29	27	25	66	250	250	327	340	402	295	304	252	180
25 Total Power Sales Contracts	6553	7852	8399	8075	7704	7342	6923	6940	7676	7147	7638	7152	6906	6862	7442

Table 1.2.1
Table A-6: BPA Sales to Preference and Legacy Customers
Fiscal Year 2015 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013
S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Pacific Northwest															
1 DSI Obligation	311	313	311	312	313	312	312	312	312	311	312	313	312	313	312
2 Direct Service Industry	311	313	311	312	313	312	312	312	312	311	312	313	312	313	312
3 Load Following	2807	3337	3816	3827	3659	3163	3015	3015	2861	2936	3203	3113	3085	2868	3214
4 Cooperative	1578	1848	2156	2156	2074	1757	1704	1704	1688	1786	2001	1893	1878	1686	1859
5 Municipality	554	645	718	725	690	613	579	579	530	532	567	580	575	548	606
6 Public Utility District	574	715	792	796	753	663	617	617	540	522	530	534	529	537	630
7 Federal Entities	102	129	149	149	142	130	115	115	102	96.6	104	105	104	96.9	118
8 Slice Block	1697	2091	2326	2355	2177	2025	1706	1706	1507	1411	1640	1634	1634	1707	1855
9 Municipality	561	782	853	884	837	806	557	557	369	294	475	496	496	622	627
10 Public Utility District	1136	1309	1473	1471	1339	1220	1150	1150	1137	1118	1165	1138	1138	1086	1228
11 Slice Right to Power	1651	2095	2006	1781	1609	1809	1726	1736	2500	1847	1962	1916	1666	1521	1861
12 Municipality	554	703	673	598	540	607	580	583	839	620	659	643	559	511	625
13 Public Utility District	1097	1391	1332	1183	1069	1202	1147	1153	1661	1227	1303	1272	1106	1010	1236
14 Tier 1 Block	10.6	47.9	42.1	59.2	58.0	49.6	3.22	3.22	0	0	11.8	12.2	12.2	25.1	26.5
15 Public Utility District	10.6	47.9	42.1	59.2	58.0	49.6	3.22	3.22	0	0	11.8	12.2	12.2	25.1	26.5
16 USBR Obligation	104	30.1	29.2	27.1	25.2	65.8	250	250	327	340	402	295	304	252	180
17 USBR	104	30.1	29.2	27.1	25.2	65.8	250	250	327	340	402	295	304	252	180
Total Power Sales Contracts															
18 Cooperative	1578	1848	2156	2156	2074	1757	1704	1704	1688	1786	2001	1893	1878	1686	1859
19 Direct Service Industry	311	313	311	312	313	312	312	312	312	311	312	313	312	313	312
20 Federal Entities	102	129	149	149	142	130	115	115	102	97	104	105	104	97	118
21 Municipality	1669	2130	2245	2208	2068	2026	1715	1718	1739	1445	1701	1719	1630	1680	1858
22 Other	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0
23 Public Utility District	2818	3464	3639	3509	3219	3134	2916	2923	3338	2867	3011	2957	2785	2658	3121
24 USBR	104	30	29	27	25	66	250	250	327	340	402	295	304	252	180
25 Total Power Sales Contracts	6581	7915	8532	8364	7844	7429	7019	7029	7515	6854	7542	7293	7026	6699	7463

Table 1.2.2
Table A-6: BPA Sales to Preference and Legacy Customers
Fiscal Year 2014 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Pacific Northwest															
1 DSI Obligation	133254	122936	127343	128589	118442	132274	64132	64132	126907	126345	127039	65709	65709	121544	1524357
2 Direct Service Industry	133254	122936	127343	128589	118442	132274	64132	64132	126907	126345	127039	65709	65709	121544	1524357
3 Load Following	1287593	1415120	1671910	1660160	1467368	1430436	661591	661591	1259348	1309059	1418944	714926	714926	1240817	16913792
4 Cooperative	707589	766529	923619	913466	810986	776245	364559	364559	723918	777421	862115	425308	425308	710512	9552132
5 Municipality	246136	266917	309796	309953	273023	270168	124743	124743	229668	231442	250779	130198	130198	233209	3130974
6 Public Utility District	289279	329782	376483	374026	328626	327677	148205	148205	262370	258099	261052	135922	135922	256873	3632522
7 Federal Entities	44589	51892	62012	62715	54734	56347	24084	24084	43393	42097	44998	23498	23498	40222	598163
8 Slice Block	701497	796838	886278	932914	797240	805719	340342	340342	592370	530214	649373	324757	324757	651192	8673834
9 Municipality	232531	299997	326832	352275	308187	319799	110734	110734	146577	111522	188845	98746	98746	235895	2941420
10 Public Utility District	468966	496841	559446	580639	489053	485920	229609	229609	445793	418692	460528	226011	226011	415297	5732414
11 Slice Right to Power	805123	955041	917319	750301	668473	840119	383052	395721	1248435	1035845	993494	446020	391466	793654	10624062
12 Municipality	270323	320659	307993	251916	224442	282073	128611	132865	419167	347789	333570	149753	131436	266472	3567070
13 Public Utility District	534800	634382	609325	498384	444031	558046	254440	262856	829268	688056	659925	296267	260030	527181	7056992
14 Tier 1 Block	4253	17807	15635	22885	20680	19177	622	622	0	0	4577	2349	2349	9335	120290
15 Public Utility District	4253	17807	15635	22885	20680	19177	622	622	0	0	4577	2349	2349	9335	120290
16 USBR Obligation	15959	1461	989	19348	1155	4497	27269	27269	119081	94280	104359	37555	37555	54977	545752
17 USBR	15959	1461	989	19348	1155	4497	27269	27269	119081	94280	104359	37555	37555	54977	545752
Total Power Sales Contracts															
18 Cooperative	707589	766529	923619	913466	810986	776245	364559	364559	723918	777421	862115	425308	425308	710512	9552132
19 Direct Service Industry	133254	122936	127343	128589	118442	132274	64132	64132	126907	126345	127039	65709	65709	121544	1524357
20 Federal Entities	44589	51892	62012	62715	54734	56347	24084	24084	43393	42097	44998	23498	23498	40222	598163
21 Municipality	748990	887573	944622	914145	805652	872040	364088	368342	795412	690753	773193	378697	360380	735577	9639464
22 Other	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0
23 Public Utility District	1297298	1478813	1560889	1475934	1282389	1390819	632877	641292	1537431	1364847	1386082	660549	624312	1208687	16542218
24 USBR	15959	1461	989	19348	1155	4497	27269	27269	119081	94280	104359	37555	37555	54977	545752
25 Total Power Sales Contracts	2947679	3309204	3619476	3514200	3073363	3232227	1477015	1489686	3346150	3095751	3297796	1591327	1536773	2871531	38402101

Table 1.2.2
Table A-6: BPA Sales to Preference and Legacy Customers
Fiscal Year 2015 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Pacific Northwest															
1 DSI Obligation	133254	122936	127343	128589	118442	132274	64132	64132	126907	126345	127039	65709	65709	121544	1524357
2 Direct Service Industry	133254	122936	127343	128589	118442	132274	64132	64132	126907	126345	127039	65709	65709	121544	1524357
3 Load Following	1287031	1413810	1683341	1671880	1479843	1433747	662777	662777	1257011	1312711	1422125	715378	715378	1240528	16958337
4 Cooperative	721267	780063	944927	937882	834831	792756	372627	372627	736420	793127	878920	432442	432442	723672	9754005
5 Municipality	253784	271197	319912	316925	279705	276882	128039	128039	234129	240196	257704	133739	133739	239537	3213527
6 Public Utility District	266465	309385	355124	353034	309451	306671	137566	137566	242066	236654	239608	125235	125235	236310	3380369
7 Federal Entities	45516	53164	63378	64039	55856	57438	24544	24544	44396	42734	45894	23962	23962	41009	610436
8 Slice Block	733030	803057	967534	979672	835913	842508	354895	354895	602600	587158	682228	339881	339881	682996	9106246
9 Municipality	242465	300354	354848	367793	321553	335131	115779	115779	147679	122153	197446	103170	103170	248777	3076098
10 Public Utility District	490565	502704	612686	611879	514360	507377	239115	239115	454921	465005	484783	236710	236710	434219	6030148
11 Slice Right to Power	782428	947316	926004	830789	676606	842264	393866	403154	1148955	857848	981336	451648	410883	667714	10320811
12 Municipality	262703	318065	310909	278941	227173	282793	132242	135361	385766	288026	329487	151643	137956	224187	3465252
13 Public Utility District	519725	629251	615095	551848	449433	559470	261624	267794	763189	569822	651849	300006	272928	443526	6855559
14 Tier 1 Block	4579	18406	17508	24641	22266	20648	670	670	0	0	4928	2529	2529	10051	129423
15 Public Utility District	4579	18406	17508	24641	22266	20648	670	670	0	0	4928	2529	2529	10051	129423
16 USBR Obligation	15959	1443	993	19348	1155	4497	27269	27269	118848	94560	104359	37555	37555	54977	545787
17 USBR	15959	1443	993	19348	1155	4497	27269	27269	118848	94560	104359	37555	37555	54977	545787
Total Power Sales Contracts															
18 Cooperative	721267	780063	944927	937882	834831	792756	372627	372627	736420	793127	878920	432442	432442	723672	9754005
19 Direct Service Industry	133254	122936	127343	128589	118442	132274	64132	64132	126907	126345	127039	65709	65709	121544	1524357
20 Federal Entities	45516	53164	63378	64039	55856	57438	24544	24544	44396	42734	45894	23962	23962	41009	610436
21 Municipality	758952	889616	985669	963659	828431	894807	376060	379179	767574	650375	784637	388552	374865	712501	9754876
22 Other	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0
23 Public Utility District	1281333	1459744	1600413	1541402	1295509	1394167	638976	645145	1460176	1271482	1381167	664480	637402	1124106	16395500
24 USBR	15959	1443	993	19348	1155	4497	27269	27269	118848	94560	104359	37555	37555	54977	545787
25 Total Power Sales Contracts	2956281	3306968	3722725	3654922	3134229	3275943	1503614	1512903	3254330	2978632	3322025	1612711	1571947	2777822	38584974

Table 1.2.3
Table A-6: BPA Sales to Preference and Legacy Customers
Fiscal Year 2014 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Pacific Northwest															
1 DSI Obligation	98499	102859	103914	103216	91703	99561	48257	48257	105075	97418	105268	46804	54195	103741	1208766
2 Direct Service Industry	98499	102859	103914	103216	91703	99561	48257	48257	105075	97418	105268	46804	54195	103741	1208766
3 Load Following	804124	988199	1159018	1167852	971696	916931	422536	422536	869846	808329	961028	407025	471292	827353	11197766
4 Cooperative	443791	538584	648960	648228	542127	502150	235496	235496	507210	486646	597896	245200	283915	481664	6397363
5 Municipality	153171	186428	211505	217691	179529	173676	78172	78172	153772	140235	159750	72978	84501	150432	2040012
6 Public Utility District	177759	223855	252171	255817	211291	202749	92388	92388	177659	155381	172239	75179	87049	167095	2343022
7 Federal Entities	29403	39331	46382	46117	38750	38355	16480	16480	31206	26067	31143	13668	15826	28162	417369
8 Slice Block	506627	639450	762212	735566	597926	633348	248710	248710	467061	424163	512005	237322	274794	520945	6808838
9 Municipality	167936	240743	281081	277756	231139	251383	80920	80920	115570	89216	148897	72160	83554	188713	2309987
10 Public Utility District	338691	398707	481131	457811	366787	381965	167789	167789	351491	334947	363108	165162	191240	332232	4498851
11 Slice Right to Power	453863	586444	568602	465828	408485	510174	230315	223660	792201	563503	600309	217923	228741	473787	6323835
12 Municipality	152386	196901	190910	156404	137151	171293	77329	75095	265985	189198	201556	73168	76801	159076	2123252
13 Public Utility District	301476	389543	377692	309424	271335	338881	152986	148565	526217	374305	398753	144754	151940	314711	4200583
14 Tier 1 Block	3071	14290	13446	18044	15510	15074	455	455	0	0	3609	1716	1987	7468	95126
15 Public Utility District	3071	14290	13446	18044	15510	15074	455	455	0	0	3609	1716	1987	7468	95126
16 USBR Obligation	61273	20209	20740	782	15782	44366	62753	62753	124408	150465	194923	68538	79359	126283	1032633
17 USBR	61273	20209	20740	782	15782	44366	62753	62753	124408	150465	194923	68538	79359	126283	1032633
Total Power Sales Contracts															
18 Cooperative	443791	538584	648960	648228	542127	502150	235496	235496	507210	486646	597896	245200	283915	481664	6397363
19 Direct Service Industry	98499	102859	103914	103216	91703	99561	48257	48257	105075	97418	105268	46804	54195	103741	1208766
20 Federal Entities	29403	39331	46382	46117	38750	38355	16480	16480	31206	26067	31143	13668	15826	28162	417369
21 Municipality	473493	624072	683496	651850	547818	596352	236422	234187	535326	418649	510203	218307	244856	498221	6473251
22 Other	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0
23 Public Utility District	820998	1026396	1124441	1041096	864923	938670	413619	409198	1055366	864633	937708	386812	432217	821506	11137582
24 USBR	61273	20209	20740	782	15782	44366	62753	62753	124408	150465	194923	68538	79359	126283	1032633
25 Total Power Sales Contracts	1927457	2351451	2627935	2491291	2101106	2219459	1013032	1006377	2358600	2043888	2377151	979339	1110380	2059590	26666978

Table 1.2.3
Table A-6: BPA Sales to Preference and Legacy Customers
Fiscal Year 2015 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Pacific Northwest															
1 DSI Obligation	98499	102859	103914	103216	91703	99561	48257	48257	105076	97418	105268	46804	54195	103741	1208767
2 Direct Service Industry	98499	102859	103914	103216	91703	99561	48257	48257	105076	97418	105268	46804	54195	103741	1208767
3 Load Following	801725	992309	1155986	1175128	978891	916109	422492	422492	871324	801480	960942	405378	469385	824173	11197814
4 Cooperative	452470	552321	659507	666153	558569	512933	240827	240827	519341	492715	609713	249209	288558	490321	6533463
5 Municipality	158238	193707	214470	222718	184079	178233	80323	80323	160516	142600	164416	75099	86956	154751	2096428
6 Public Utility District	160956	206113	234321	239076	196623	185769	84518	84518	159816	139360	155042	67122	77720	150366	2141318
7 Federal Entities	30061	40168	47689	47182	39621	39175	16824	16824	31650	26806	31771	13949	16151	28735	426605
8 Slice Block	529400	704776	762862	772433	626930	662266	259344	259344	518245	429073	537910	248374	287591	546386	7144934
9 Municipality	175110	263595	279784	289990	241163	263435	84607	84607	127006	89264	155678	75394	87298	199018	2415950
10 Public Utility District	354290	441181	483079	482442	385767	398831	174737	174737	391239	339808	382232	172980	200293	347368	4728984
11 Slice Right to Power	446134	563056	566181	494530	404416	501884	227618	221764	711260	471737	478639	237995	228750	427408	5981373
12 Municipality	149791	189048	190097	166040	135784	168509	76423	74458	238808	158388	160705	79908	76804	143504	2008269
13 Public Utility District	296342	374008	376083	328490	268632	333374	151194	147306	472452	313350	317934	158087	151946	283904	3973104
14 Tier 1 Block	3307	16153	13804	19428	16699	16230	490	490	0	0	3885	1848	2140	8040	102515
15 Public Utility District	3307	16153	13804	19428	16699	16230	490	490	0	0	3885	1848	2140	8040	102515
16 USBR Obligation	61273	20226	20735	782	15782	44366	62753	62753	124641	150184	194923	68538	79359	126283	1032598
17 USBR	61273	20226	20735	782	15782	44366	62753	62753	124641	150184	194923	68538	79359	126283	1032598
Total Power Sales Contracts															
18 Cooperative	452470	552321	659507	666153	558569	512933	240827	240827	519341	492715	609713	249209	288558	490321	6533463
19 Direct Service Industry	98499	102859	103914	103216	91703	99561	48257	48257	105076	97418	105268	46804	54195	103741	1208767
20 Federal Entities	30061	40168	47689	47182	39621	39175	16824	16824	31650	26806	31771	13949	16151	28735	426605
21 Municipality	483139	646351	684351	678748	561026	610177	241354	239389	526331	390252	480798	230400	251058	497273	6520647
22 Other	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0
23 Public Utility District	814896	1037454	1107287	1069436	867721	934205	410938	407050	1023507	792518	859093	400037	432099	789679	10945920
24 USBR	61273	20226	20735	782	15782	44366	62753	62753	124641	150184	194923	68538	79359	126283	1032598
25 Total Power Sales Contracts	1940337	2399381	2623485	2565519	2134425	2240422	1020959	1015107	2330554	1949902	2281577	1008948	1121432	2036044	26668015

This page intentionally left blank.

1.3	BPA Exports for FY2014 and FY2015.....	15
	Table 1.3.1 Table A-2: BPA Exports - Energy.....	16
	Table 1.3.2 Table A-2: BPA Exports - HLH MWh.....	18
	Table 1.3.3 Table A-2: BPA Exports - LLH MWh.....	20

Table 1.3.1
Table A-2: Bonneville Power Administration - Power Services Exports
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Canada															
Contracts	488	488	674	519	488	488	488	488	488	488	517	686	656	516	527
1 BPA-P to BCHP Trty LCADel	0	0	186	31.0	0	0	0	0	0	0	0	112	112	52.0	32.2
2 BPA-P to BCHP Trty CEA	488	488	488	488	488	488	488	488	488	488	488	479	449	464	484
3 BPA-P to BCHP NTSA Del	0	0	0	0	0	0	0	0	0	0	28.9	94.5	94.5	0	10.5
4 Total Exports to CAN	488	488	674	519	488	488	488	488	488	488	517	686	656	516	527
East Continental Divide															
Contracts															
5 BPA-P to Other Entities	6.25	7.19	8.85	9.04	8.73	7.21	6.23	6.23	6.06	6.61	8.94	8.20	8.11	6.12	7.45
6 Total Exports to ECD	6.25	7.19	8.85	9.04	8.73	7.21	6.23	6.23	6.06	6.61	8.94	8.20	8.11	6.12	7.45
Pacific Southwest															
Contracts	33.3	21.0	21.7	20.6	15.1	22.7	33.5	33.5	88.2	94.5	53.8	53.4	55.8	43.8	42.0
7 BPA-P to PASA CNX Del	0	0	0	0	0	0	0	0	0	0	4.64	4.37	4.10	4.58	1.13
8 BPA-P to PASA SNX Del	0	0	0	0	0	0	0	0	15.0	15.0	0	0	0	0	2.51
9 BPA-P to Other Entities	22.1	18.4	19.0	17.8	12.4	20.1	30.7	30.7	33.2	39.5	38.0	38.5	41.8	28.2	26.7
10 BPA-P to RVSD CNX Del	11.1	2.62	2.66	2.78	2.68	2.54	2.75	2.75	0	0	11.1	10.5	9.84	11.0	4.98
11 BPA-P to RVSD SNX Del	0	0	0	0	0	0	0	0	40.0	40.0	0	0	0	0	6.68
12 Intertie Losses	1.0	0.6	0.6	0.6	0.5	0.7	1.0	1.0	2.6	2.8	1.6	1.6	1.7	1.3	1.3
13 Total Exports to PSW	34.3	21.6	22.3	21.2	15.5	23.4	34.5	34.5	90.8	97.4	55.4	55.0	57.4	45.1	43.3
Total Exports															
14 Federal Entities	529	517	705	550	513	519	529	529	585	592	582	749	721	567	578
15 Total Exports	529	517	705	550	513	519	529	529	585	592	582	749	721	567	578

Table 1.3.1
Table A-2: Bonneville Power Administration - Power Services Exports
Fiscal Year 2015

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Canada															
Contracts	464	464	657	487	464	464	464	464	464	464	492	698	668	520	508
1 BPA-P to BCHP Trty LCADel	0	0	194	23.2	0	0	0	0	0	0	0	116	116	48.0	32.2
2 BPA-P to BCHP Trty CEA	464	464	464	464	464	464	464	464	464	464	464	488	457	472	465
3 BPA-P to BCHP NTSA Del	0	0	0	0	0	0	0	0	0	0	28.9	94.5	94.5	0	10.5
4 Total Exports to CAN	464	464	657	487	464	464	464	464	464	464	492	698	668	520	508
East Continental Divide															
Contracts															
5 BPA-P to Other Entities	6.25	7.19	8.85	9.04	8.73	7.21	6.23	6.23	6.06	6.61	8.94	8.20	8.11	6.12	7.45
6 Total Exports to ECD	6.25	7.19	8.85	9.04	8.73	7.21	6.23	6.23	6.06	6.61	8.94	8.20	8.11	6.12	7.45
Pacific Southwest															
Contracts	33.3	21.8	19.4	19.0	15.1	22.7	33.5	33.5	89.8	92.4	49.4	49.4	52.0	38.8	40.6
7 BPA-P to PASA CNX Del	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 BPA-P to PASA SNX Del	0	0	0	0	0	0	0	0	15.0	15.0	0	0	0	0	2.51
9 BPA-P to Other Entities	22.2	19.3	16.6	16.3	12.4	20.0	30.8	30.8	34.8	37.4	38.3	38.9	42.2	27.8	26.5
10 BPA-P to RVSD CNX Del	11.1	2.50	2.78	2.66	2.68	2.67	2.75	2.75	0	0	11.1	10.5	9.84	11.0	4.98
11 BPA-P to RVSD SNX Del	0	0	0	0	0	0	0	0	40.0	40.0	0	0	0	0	6.68
12 Intertie Losses	1.0	0.7	0.6	0.6	0.5	0.7	1.0	1.0	2.7	2.8	1.5	1.5	1.6	1.2	1.2
13 Total Exports to PSW	34.3	22.4	20.0	19.5	15.6	23.4	34.5	34.5	92.5	95.2	50.9	50.8	53.6	40.0	41.9
Total Exports															
14 Federal Entities	504	493	686	515	488	494	504	504	562	565	552	757	730	566	557
15 Total Exports	504	493	686	515	488	494	504	504	562	565	552	757	730	566	557

Table 1.3.2
Table A-2: Bonneville Power Administration - Power Services Exports
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Canada															
Contracts	363305	352074	436265	374825	328146	362817	175792	175792	363305	351585	375327	215075	215075	354900	4444284
1 BPA-P to BCHP Trty LCADel	0	0	72960	11520	0	0	0	0	0	0	0	23040	23040	21120	151680
2 BPA-P to BCHP Trty CEA	363305	352074	363305	363305	328146	362817	175792	175792	363305	351585	363305	172453	172453	333780	4241418
3 BPA-P to BCHP NTSA Del	0	0	0	0	0	0	0	0	0	0	12022	19582	19582	0	51187
4 Total Exports to CAN	363305	352074	436265	374825	328146	362817	175792	175792	363305	351585	375327	215075	215075	354900	4444284
East Continental Divide															
Contracts															
5 BPA-P to Other Entities	2805	2959	3726	3802	3413	3167	1340	1340	2640	3010	4035	1912	1912	2624	38684
6 Total Exports to ECD	2805	2959	3726	3802	3413	3167	1340	1340	2640	3010	4035	1912	1912	2624	38684
Pacific Southwest															
Contracts	8280	1800	1890	1980	1800	1890	990	990	22880	22000	11220	5355	5355	10710	97140
7 BPA-P to PASA CNX Del	0	0	0	0	0	0	0	0	0	0	3300	1575	1575	3150	9600
8 BPA-P to PASA SNX Del	0	0	0	0	0	0	0	0	6240	6000	0	0	0	0	12240
9 BPA-P to Other Entities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 BPA-P to RVSD CNX Del	8280	1800	1890	1980	1800	1890	990	990	0	0	7920	3780	3780	7560	42660
11 BPA-P to RVSD SNX Del	0	0	0	0	0	0	0	0	16640	16000	0	0	0	0	32640
12 Intertie Losses	248	54	57	59	54	57	30	30	686	660	337	161	161	321	2914
13 Total Exports to PSW	8529	1854	1947	2040	1854	1947	1020	1020	23566	22660	11557	5516	5516	11031	100055
Total Exports															
14 Federal Entities	374639	356887	441938	380666	333413	367931	178152	178152	389511	377255	390919	222503	222503	368555	4583024
15 Total Exports	374639	356887	441938	380666	333413	367931	178152	178152	389511	377255	390919	222503	222503	368555	4583024

Table 1.3.2
Table A-2: Bonneville Power Administration - Power Services Exports
Fiscal Year 2015

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Canada															
Contracts	344906	334244	421706	352586	311528	344443	166890	166890	344906	333780	356928	219175	219175	359100	4276258
1 BPA-P to BCHP Trty LCADel	0	0	76800	7680	0	0	0	0	0	0	0	24000	24000	19200	151680
2 BPA-P to BCHP Trty CEA	344906	334244	344906	344906	311528	344443	166890	166890	344906	333780	344906	175615	175615	339900	4073436
3 BPA-P to BCHP NTSA Del	0	0	0	0	0	0	0	0	0	0	12022	19560	19560	0	51142
4 Total Exports to CAN	344906	334244	421706	352586	311528	344443	166890	166890	344906	333780	356928	219175	219175	359100	4276258
East Continental Divide															
Contracts															
5 BPA-P to Other Entities	2805	2959	3726	3802	3413	3167	1340	1340	2640	3010	4035	1912	1912	2624	38684
6 Total Exports to ECD	2805	2959	3726	3802	3413	3167	1340	1340	2640	3010	4035	1912	1912	2624	38684
Pacific Southwest															
Contracts	8280	1710	1980	1890	1800	1980	990	990	22640	22240	8280	3780	3780	7560	87901
7 BPA-P to PASA CNX Del	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 BPA-P to PASA SNX Del	0	0	0	0	0	0	0	0	6000	6240	0	0	0	0	12240
9 BPA-P to Other Entities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 BPA-P to RVSD CNX Del	8280	1710	1980	1890	1800	1980	990	990	0	0	8280	3780	3780	7560	43021
11 BPA-P to RVSD SNX Del	0	0	0	0	0	0	0	0	16640	16000	0	0	0	0	32640
12 Intertie Losses	248	51	59	57	54	59	30	30	679	667	248	113	113	227	2637
13 Total Exports to PSW	8529	1761	2040	1947	1854	2040	1020	1020	23319	22907	8528	3893	3893	7787	90538
Total Exports															
14 Federal Entities	356240	338964	427471	358335	316795	349650	169250	169250	370865	359697	369492	224980	224980	369511	4405480
15 Total Exports	356240	338964	427471	358335	316795	349650	169250	169250	370865	359697	369492	224980	224980	369511	4405480

Table 1.3.3
Table A-2: Bonneville Power Administration - Power Services Exports
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Canada															
Contracts	0	0	65280	11520	0	0	0	0	0	0	9479	31784	36802	16320	171185
1 BPA-P to BCHP Trty LCADel	0	0	65280	11520	0	0	0	0	0	0	0	17350	20090	16320	130560
2 BPA-P to BCHP Trty CEA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 BPA-P to BCHP NTSA Del	0	0	0	0	0	0	0	0	0	0	9479	14433	16712	0	40625
4 Total Exports to CAN	0	0	65280	11520	0	0	0	0	0	0	9479	31784	36802	16320	171185
East Continental Divide															
Contracts															
5 BPA-P to Other Entities	1842	2225	2862	2925	2455	2189	903	903	1865	1746	2618	1040	1204	1779	26554
6 Total Exports to ECD	1842	2225	2862	2925	2455	2189	903	903	1865	1746	2618	1040	1204	1779	26554
Pacific Southwest															
Contracts	16464	13338	14226	13346	8344	14968	11068	11068	42736	46072	28790	13869	16059	20846	271194
7 BPA-P to PASA CNX Del	0	0	0	0	0	0	0	0	0	0	150	0	0	150	300
8 BPA-P to PASA SNX Del	0	0	0	0	0	0	0	0	4920	4800	0	0	0	0	9720
9 BPA-P to Other Entities	16464	13248	14136	13256	8344	14968	11068	11068	24696	28472	28280	13869	16059	20336	234264
10 BPA-P to RVSD CNX Del	0	89.9	90.1	89.9	0	0	0	0	0	0	360	0	0	360	990
11 BPA-P to RVSD SNX Del	0	0	0	0	0	0	0	0	13120	12800	0	0	0	0	25920
12 Intertie Losses	494	400	427	400	250	449	332	332	1282	1382	864	416	482	625	8136
13 Total Exports to PSW	16958	13738	14653	13746	8594	15417	11400	11400	44018	47454	29654	14285	16541	21471	279330
Total Exports															
14 Federal Entities	18800	15963	82794	28192	11049	17606	12303	12303	45884	49200	41751	47108	54547	39570	477070
15 Total Exports	18800	15963	82794	28192	11049	17606	12303	12303	45884	49200	41751	47108	54547	39570	477070

Table 1.3.3
Table A-2: Bonneville Power Administration - Power Services Exports
Fiscal Year 2015

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Canada															
Contracts	0	0	67200	9600	0	0	0	0	0	0	9479	32250	37342	15360	171230
1 BPA-P to BCHP Trty LCADel	0	0	67200	9600	0	0	0	0	0	0	0	17795	20605	15360	130560
2 BPA-P to BCHP Trty CEA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 BPA-P to BCHP NTSA Del	0	0	0	0	0	0	0	0	0	0	9479	14454	16737	0	40670
4 Total Exports to CAN	0	0	67200	9600	0	0	0	0	0	0	9479	32250	37342	15360	171230
East Continental Divide															
Contracts															
5 BPA-P to Other Entities	1842	2225	2862	2925	2455	2189	903	903	1866	1746	2618	1040	1204	1779	26555
6 Total Exports to ECD	1842	2225	2862	2925	2455	2189	903	903	1866	1746	2618	1040	1204	1779	26555
Pacific Southwest															
Contracts	16512	13986	12442	12210	8352	14864	11072	11072	44176	44280	28488	13991	16201	20408	268053
7 BPA-P to PASA CNX Del	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 BPA-P to PASA SNX Del	0	0	0	0	0	0	0	0	5160	4560	0	0	0	0	9720
9 BPA-P to Other Entities	16512	13896	12352	12120	8352	14864	11072	11072	25896	26920	28488	13991	16201	20048	231784
10 BPA-P to RVSD CNX Del	0	90.0	89.9	89.9	0	0	0	0	0	0	0	0	0	360	630
11 BPA-P to RVSD SNX Del	0	0	0	0	0	0	0	0	13120	12800	0	0	0	0	25920
12 Intertie Losses	495	420	373	366	251	446	332	332	1325	1328	855	420	486	612	8042
13 Total Exports to PSW	17007	14405	12815	12576	8603	15310	11404	11404	45501	45608	29342	14411	16687	21020	276095
Total Exports															
14 Federal Entities	18849	16630	82877	25102	11057	17498	12307	12307	47367	47354	41439	47700	55232	38159	473880
15 Total Exports	18849	16630	82877	25102	11057	17498	12307	12307	47367	47354	41439	47700	55232	38159	473880

This page intentionally left blank.

2. RESOURCE FORECASTS FOR FY2014 AND FY2015.....23

2.1 Regulated Hydro

Table 2.1.1 Table A-7: BPA Regulated Hydro - Energy24

Table 2.1.2 Table A-7: BPA Regulated Hydro - HLH MWh26

Table 2.1.3 Table A-7: BPA Regulated Hydro - LLH MWh28

Table 2.1.1
Table A-7: Bonneville Power Administration - Power Services: Regulated Hydro
Fiscal Year 2014 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Regulated Hydro															
1 Idle Capacity Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 Albeni Falls	32.6	19.5	19.7	14.6	12.3	12.7	26.3	19.7	38.7	43.5	35.7	25.9	20.6	23.9	25.0
3 Bonneville	420	542	551	456	462	487	370	185	445	361	273	144	139	448	405
4 Chief Joseph	908	1305	1276	956	900	918	906	1053	1577	1231	1471	1319	1086	971	1143
5 Dworshak	57.9	57.7	57.5	57.3	57.0	57.0	57.4	58.3	64.0	212	449	448	344	181	143
6 Grand Coulee	1631	2361	2262	1665	1567	1562	1491	1690	2533	2110	2687	2367	1910	1720	1989
7 Hungry Horse	81.7	86.4	86.9	88.0	87.1	84.8	64.4	26.3	27.4	78.8	114	113	113	111	83.8
8 Ice Harbor	108	104	114	122	125	178	179	180	312	255	150	96.0	121	98.8	155
9 John Day	676	926	916	730	735	814	793	730	1089	958	844	698	581	723	818
10 Libby	93.9	267	175	87.8	87.0	86.2	85.7	85.7	517	273	185	187	187	185	186
11 Little Goose	108	105	112	124	111	170	212	268	485	275	147	101	132	110	176
12 Lower Granite	102	103	113	125	112	172	205	273	496	272	91.4	104	135	115	172
13 Lower Monumental	111	106	116	125	129	183	232	292	514	291	99.2	84.5	133	104	180
14 McNary	459	598	591	475	478	508	459	398	617	501	401	332	274	496	488
15 The Dalles	537	723	744	595	604	648	602	493	730	643	566	465	386	580	612
Total Regulated Hydro															
16 Federal Entities	5327	7304	7135	5623	5466	5881	5684	5752	9445	7504	7514	6484	5561	5867	6575
17 Total Regulated Hydro	5327	7304	7135	5623	5466	5881	5684	5752	9445	7504	7514	6484	5561	5867	6575

Table 2.1.1
Table A-7: Bonneville Power Administration - Power Services: Regulated Hydro
Fiscal Year 2015 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Regulated Hydro															
1 Idle Capacity Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 Albeni Falls	32.6	19.5	19.7	14.6	12.3	12.7	26.3	19.7	38.7	43.5	35.7	25.9	20.6	24.8	25.1
3 Bonneville	415	542	551	493	462	489	368	183	411	327	238	169	138	384	395
4 Chief Joseph	893	1278	1278	1069	900	895	932	1070	1478	1125	1366	1389	1143	776	1112
5 Dworshak	57.9	57.7	57.5	57.3	57.0	57.0	57.4	58.3	64.0	212	449	448	344	181	143
6 Grand Coulee	1603	2301	2278	1887	1573	1533	1539	1722	2367	1922	2485	2506	2021	1362	1938
7 Hungry Horse	81.7	86.4	86.9	88.0	87.1	84.8	64.4	26.3	27.4	78.8	114	113	113	111	83.8
8 Ice Harbor	108	104	114	122	125	178	179	180	312	255	150	96.0	121	98.8	155
9 John Day	667	925	917	799	735	814	793	727	1041	912	799	728	605	608	804
10 Libby	93.9	267	175	87.8	87.0	86.2	85.7	85.7	517	273	185	187	187	185	186
11 Little Goose	108	105	112	124	111	170	212	268	485	275	147	101	132	110	176
12 Lower Granite	102	103	113	125	112	172	205	273	493	272	91.4	104	135	115	172
13 Lower Monumental	111	106	116	125	129	183	232	292	514	291	99.2	84.5	133	104	180
14 McNary	453	597	591	521	478	508	459	396	590	477	379	346	285	415	479
15 The Dalles	530	723	744	649	604	650	599	492	699	612	536	486	402	488	602
Total Regulated Hydro															
16 Federal Entities	5255	7216	7154	6161	5471	5833	5753	5794	9036	7074	7075	6784	5781	4963	6450
17 Total Regulated Hydro	5255	7216	7154	6161	5471	5833	5753	5794	9036	7074	7075	6784	5781	4963	6450

Table 2.1.2
Table A-7: Bonneville Power Administration - Power Services: Regulated Hydro
Fiscal Year 2014 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

	S108-RC-20130530-090439														
HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Regulated Hydro															
1 Idle Capacity Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 Albeni Falls	13871	7715	8019	6213	4705	5407	5406	4036	15756	17884	14530	5328	4527	9419	122815
3 Bonneville	177181	211359	220058	193990	177546	206636	80696	37973	193671	145212	118185	33340	33758	174777	2004383
4 Chief Joseph	487050	650568	646683	470075	397545	461502	216200	269165	797420	645736	735916	355872	289026	496910	6919667
5 Dworshak	24609	22788	23387	24344	21893	24204	11812	11972	26069	86961	182938	92083	75409	71507	699974
6 Grand Coulee	874715	1177428	1146113	819130	692611	785671	355723	432280	1280935	1106552	1344124	638825	508580	880307	12042995
7 Hungry Horse	34732	34139	35341	37420	33433	35989	13251	5403	11178	32416	46525	23343	24719	43881	411769
8 Ice Harbor	51168	46258	62741	68882	63123	90484	40611	38790	129739	107799	63978	20456	29227	43981	857239
9 John Day	325290	413250	415242	350094	321131	389054	180567	165198	506803	456853	396550	163207	137487	326627	4547353
10 Libby	39924	105688	71407	37348	33411	36611	17630	17584	210494	112256	75202	38504	41002	73064	910125
11 Little Goose	51135	46807	61777	70278	56134	86652	48060	57524	201903	116513	63034	21554	31997	48936	962304
12 Lower Granite	48304	45701	62466	70585	56710	87595	46509	58765	206658	115004	39084	22166	32721	51245	943511
13 Lower Monumental	52618	47255	63906	70696	65144	93212	52642	62832	214073	123280	42417	18021	32056	46322	984475
14 McNary	220981	266753	267634	227910	208982	242838	104583	90021	287214	239120	188508	77545	64726	224049	2710864
15 The Dalles	258311	322438	337344	285385	263794	309779	137059	111625	339629	306735	265991	108801	91298	262120	3400308
Total Regulated Hydro															
16 Federal Entities	2659887	3398146	3422118	2732350	2396161	2855634	1310749	1363167	4421544	3612323	3576980	1619045	1396532	2753147	37517781
17 Total Regulated Hydro	2659887	3398146	3422118	2732350	2396161	2855634	1310749	1363167	4421544	3612323	3576980	1619045	1396532	2753147	37517781

Table 2.1.2
Table A-7: Bonneville Power Administration - Power Services: Regulated Hydro
Fiscal Year 2015 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

	S108-RC-20130530-090439														
HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Regulated Hydro															
1 Idle Capacity Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 Albeni Falls	13841	7715	8029	6203	4705	5398	5406	4036	15756	17884	15161	5328	4527	9769	123759
3 Bonneville	175996	211679	221901	209274	177996	206977	83262	38321	173619	128689	108614	38730	31534	150903	1957494
4 Chief Joseph	473800	635379	641158	528180	403598	449805	223301	274304	752198	571962	752837	355172	312067	383833	6757595
5 Dworshak	24609	22788	23416	24305	21893	24164	11812	11972	26069	86961	190891	92083	75409	71507	707880
6 Grand Coulee	850391	1144010	1143150	932695	705617	770539	368947	441221	1204951	976878	1370101	640812	551722	674286	11775321
7 Hungry Horse	34732	34139	35386	37360	33433	35930	13251	5403	11178	32416	48547	23343	24719	43881	413718
8 Ice Harbor	51216	46258	62741	68882	63123	90450	40627	38807	131512	107756	66641	20439	28632	43981	861066
9 John Day	317651	436643	418904	391441	319791	396685	185383	167911	493116	425088	392898	172691	146149	271395	4535747
10 Libby	39924	105688	71496	37288	33411	36552	17630	17584	210494	112256	78472	38504	41002	73064	913365
11 Little Goose	51183	46807	61777	70278	56134	86620	48079	57547	204663	116467	65657	21536	31346	48936	967029
12 Lower Granite	48349	45701	62466	70585	56710	87562	46527	58790	208067	114958	40710	22147	32055	51245	945872
13 Lower Monumental	52668	47255	63906	70696	65144	93177	52663	62858	216999	123231	44182	18005	31405	46322	988511
14 McNary	215781	281848	269999	255162	208110	247601	107372	91473	279166	222266	186510	82164	68944	185280	2701677
15 The Dalles	252260	341042	339975	317861	262693	316705	140010	113458	330884	285564	263525	115203	97159	217870	3394208
Total Regulated Hydro															
16 Federal Entities	2602402	3406953	3424306	3020211	2412356	2848165	1344271	1383684	4258673	3322375	3624747	1646157	1476671	2272272	37043241
17 Total Regulated Hydro	2602402	3406953	3424306	3020211	2412356	2848165	1344271	1383684	4258673	3322375	3624747	1646157	1476671	2272272	37043241

Table 2.1.3
Table A-7: Bonneville Power Administration - Power Services: Regulated Hydro
Fiscal Year 2014 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

	S108-RC-20130530-090439														
LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Regulated Hydro															
1 Idle Capacity Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 Albeni Falls	10403	6359	6643	4660	3529	4055	4055	3042	13016	13434	12003	3996	3395	7781	96370
3 Bonneville	135110	179327	189853	145493	132898	155525	52657	28601	137658	114556	84721	18659	19678	147874	1542611
4 Chief Joseph	188692	290060	302690	241025	207028	220241	109922	109762	375619	240941	358777	118788	127860	202125	3093530
5 Dworshak	18457	18783	19373	18258	16420	18153	8859	9022	21535	65325	151122	69062	56557	59071	549996
6 Grand Coulee	338880	524963	536456	419998	360689	374944	180860	176278	603375	412883	655293	213237	224988	358078	5380921
7 Hungry Horse	26049	28139	29276	28065	25075	26992	9939	4071	9234	24351	38433	17507	18539	36250	321919
8 Ice Harbor	29163	28719	22019	21814	20764	41575	23932	26157	102118	75479	47358	14093	17241	27179	497612
9 John Day	177844	254722	266527	193313	172623	215852	104956	97580	303701	232786	231543	88045	85649	193719	2618860
10 Libby	29943	87114	59151	28011	25058	27458	13222	13251	173886	84327	62123	28878	30752	60357	723532
11 Little Goose	29144	29060	21681	22256	18465	39815	28321	38788	158919	81581	46659	14849	18875	30241	578654
12 Lower Granite	27530	28374	21922	22354	18655	40248	27407	39626	162661	80524	28930	15271	19302	31668	564471
13 Lower Monumental	29989	29338	22428	22389	21429	42829	31021	42368	168498	86318	31398	12415	18910	28626	587956
14 McNary	120816	164423	171783	125846	112338	134730	60790	53174	172113	121841	110068	41833	40322	132881	1562958
15 The Dalles	141225	198747	216527	157582	141802	171869	79667	65935	203523	156294	155310	58695	56875	155460	1959511
Total Regulated Hydro															
16 Federal Entities	1303244	1868130	1886329	1451064	1276771	1514285	735607	707655	2605856	1790641	2013739	715328	738943	1471311	20078902
17 Total Regulated Hydro	1303244	1868130	1886329	1451064	1276771	1514285	735607	707655	2605856	1790641	2013739	715328	738943	1471311	20078902

Table 2.1.3
Table A-7: Bonneville Power Administration - Power Services: Regulated Hydro
Fiscal Year 2015 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Regulated Hydro															
1 Idle Capacity Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 Albeni Falls	10381	6359	6633	4670	3529	4064	4055	3042	13016	13434	11371	3996	3395	8070	96013
3 Bonneville	132551	179007	188010	157249	132448	156052	49208	27528	132531	106511	68330	22108	21605	125509	1498647
4 Chief Joseph	190563	286105	309325	266839	201024	215218	112094	111055	347140	238331	263099	144909	126887	174529	2987117
5 Dworshak	18457	18783	19344	18296	16420	18192	8859	9022	21535	65325	143168	69062	56557	59071	542091
6 Grand Coulee	342029	515137	551510	471201	351453	368680	185206	178634	556086	407055	478818	261448	224330	306598	5198186
7 Hungry Horse	26049	28139	29232	28124	25075	27050	9939	4071	9234	24351	36411	17507	18539	36250	319970
8 Ice Harbor	29114	28719	22019	21814	20764	41609	23916	26141	100345	75522	44696	14110	17835	27179	493784
9 John Day	178679	230641	263553	202927	173963	208222	100140	93963	281686	231352	201862	89343	86182	166034	2508547
10 Libby	29943	87114	59062	28070	25058	27518	13222	13251	173886	84327	58854	28878	30752	60357	720292
11 Little Goose	29095	29060	21681	22256	18465	39847	28302	38765	156159	81627	44036	14868	19526	30241	573929
12 Lower Granite	27484	28374	21922	22354	18655	40280	27389	39601	158757	80570	27304	15290	19967	31668	559615
13 Lower Monumental	29939	29338	22428	22389	21429	42864	31001	42342	165572	86368	29633	12431	19562	28626	583920
14 McNary	121377	148876	169870	132279	113210	129967	58000	51188	159470	120967	95824	42509	40655	113350	1497542
15 The Dalles	141896	180143	213895	164782	142903	166240	75630	63491	189013	155417	135393	59601	57293	133288	1878986
Total Regulated Hydro															
16 Federal Entities	1307558	1795795	1898484	1563251	1264395	1485804	726959	702093	2464432	1771157	1638798	796059	743085	1300770	19458640
17 Total Regulated Hydro	1307558	1795795	1898484	1563251	1264395	1485804	726959	702093	2464432	1771157	1638798	796059	743085	1300770	19458640

This page intentionally left blank.

2.2	Independent Hydro.....	31
Table 2.2.1	Table A-8: BPA Independent Hydro - Energy	32
Table 2.2.2	Table A-8: BPA Independent Hydro - HLH MWh	34
Table 2.2.3	Table A-8: BPA Independent Hydro - LLH MWh.....	36

Table 2.2.1
Table A-8: Bonneville Power Administration - Power Services: Independent Hydro
Fiscal Year 2014 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Independent Hydro															
1 Anderson Ranch	4.19	4.36	4.27	4.31	4.76	4.31	9.41	9.41	11.8	37.0	33.2	20.1	20.1	8.78	12.2
2 Big Cliff	8.00	13.0	6.00	4.00	6.00	7.00	9.00	11.0	20.0	20.0	7.00	6.00	6.00	9.00	9.66
3 Black Canyon	5.45	3.61	2.98	3.27	3.53	4.19	8.53	8.53	8.53	8.53	8.53	8.53	8.53	8.31	6.18
4 Boise River Diversion	0.73	0	0	0	0	0	0.87	0.87	2.50	2.50	2.50	2.46	2.46	2.50	1.18
5 Chandler	5.70	7.34	3.38	5.51	7.47	9.80	6.06	6.06	5.97	5.80	6.09	4.60	4.60	5.59	6.10
6 Cougar	27.0	23.0	9.00	6.00	8.00	10.00	29.0	29.0	29.0	29.0	17.0	25.0	24.0	16.0	19.0
7 Cowlitz Falls	6.20	3.10	23.1	10.00	13.7	33.3	46.1	50.3	63.6	66.3	28.9	13.3	10.5	9.50	26.5
8 Detroit	44.9	47.5	20.9	21.7	17.7	25.3	34.6	37.2	102	37.9	13.0	12.0	11.8	26.0	33.8
9 Dexter	12.0	16.0	4.00	3.00	5.00	5.00	12.0	17.0	17.0	17.0	6.00	5.00	5.00	8.00	9.36
10 Foster	10.00	7.00	9.00	4.00	9.00	21.0	19.0	18.0	21.0	23.0	6.00	6.00	6.00	12.0	12.2
11 Green Peter	18.0	16.0	18.0	8.00	0	33.0	88.0	45.0	58.0	49.0	11.0	15.0	15.0	29.0	26.9
12 Green Springs	5.02	5.95	6.34	6.94	6.74	7.97	8.26	8.26	8.78	8.98	8.01	7.94	7.94	6.90	7.32
13 Hills Creek	23.0	27.0	5.00	4.00	6.00	7.00	20.0	31.0	35.0	35.0	14.0	9.00	9.00	25.0	17.9
14 Idaho Falls - City Plant	3.91	4.88	6.39	6.59	6.13	4.28	2.92	2.92	1.99	2.92	3.70	3.21	3.21	3.46	4.19
15 Idaho Falls - Lower Plant #1	3.91	4.88	6.39	6.59	6.13	4.28	2.92	2.92	1.99	2.92	3.70	3.21	3.21	3.46	4.19
16 Idaho Falls - Lower Plant #2	1.47	1.83	2.39	2.47	2.30	1.61	1.10	1.10	0.74	1.09	1.39	1.21	1.21	1.30	1.57
17 Idaho Falls - Upper Plant	3.91	4.88	6.39	6.59	6.13	4.28	2.92	2.92	1.99	2.92	3.70	3.21	3.21	3.46	4.19
18 Lookout Point	45.0	47.0	9.00	8.00	12.0	15.0	45.0	74.0	85.0	73.0	24.0	19.0	19.0	33.0	35.8
19 Lost Creek	37.0	19.0	19.0	18.0	13.0	14.0	15.0	16.0	56.0	56.0	46.0	44.0	39.0	24.0	30.1
20 Minidoka	6.48	2.39	2.32	2.32	2.57	2.32	10.3	10.3	24.6	22.7	21.7	19.0	19.0	11.5	10.7
21 Palisades	45.5	11.3	11.2	11.4	12.8	28.2	51.7	51.7	152	151	127	144	144	56.9	67.4
22 Roza	4.08	1.15	4.09	2.59	3.12	9.41	11.4	11.4	10.8	10.9	10.6	10.5	10.5	3.39	6.87
Total Independent Hydro															
23 Federal Entities	321	271	179	145	152	251	434	445	718	664	403	383	374	307	353
24 Total Independent Hydro	321	271	179	145	152	251	434	445	718	664	403	383	374	307	353

Table 2.2.1
Table A-8: Bonneville Power Administration - Power Services: Independent Hydro
Fiscal Year 2015 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Independent Hydro															
1 Anderson Ranch	4.19	4.36	4.27	4.31	4.76	4.31	9.41	9.41	11.8	37.0	33.2	20.1	20.1	8.78	12.2
2 Big Cliff	8.00	13.0	6.00	4.00	6.00	7.00	9.00	11.0	20.0	20.0	7.00	6.00	6.00	9.00	9.66
3 Black Canyon	5.45	3.61	2.98	3.27	3.53	4.19	8.53	8.53	8.53	8.53	8.53	8.53	8.53	8.31	6.18
4 Boise River Diversion	0.73	0	0	0	0	0	0.87	0.87	2.50	2.50	2.50	2.46	2.46	2.50	1.18
5 Chandler	5.70	7.34	3.38	5.51	7.47	9.80	6.06	6.06	5.97	5.80	6.09	4.60	4.60	5.59	6.10
6 Cougar	27.0	23.0	9.00	6.00	8.00	10.00	29.0	29.0	29.0	29.0	17.0	25.0	24.0	16.0	19.0
7 Cowlitz Falls	6.20	3.10	23.1	10.00	13.7	33.3	46.1	50.3	63.6	66.3	28.9	13.3	10.5	9.50	26.5
8 Detroit	44.9	47.5	20.9	21.7	17.7	25.3	34.6	37.2	102	37.9	13.0	12.0	11.8	26.0	33.8
9 Dexter	12.0	16.0	4.00	3.00	5.00	5.00	12.0	17.0	17.0	17.0	6.00	5.00	5.00	8.00	9.36
10 Foster	10.00	7.00	9.00	4.00	9.00	21.0	19.0	18.0	21.0	23.0	6.00	6.00	6.00	12.0	12.2
11 Green Peter	18.0	16.0	18.0	8.00	0	33.0	88.0	45.0	58.0	49.0	11.0	15.0	15.0	29.0	26.9
12 Green Springs	5.02	5.95	6.34	6.94	6.74	7.97	8.26	8.26	8.78	8.98	8.01	7.94	7.94	6.90	7.32
13 Hills Creek	23.0	27.0	5.00	4.00	6.00	7.00	20.0	31.0	35.0	35.0	14.0	9.00	9.00	25.0	17.9
14 Idaho Falls - City Plant	3.91	4.88	6.39	6.59	6.13	4.28	2.92	2.92	1.99	2.92	3.70	3.21	3.21	3.46	4.19
15 Idaho Falls - Lower Plant #1	3.91	4.88	6.39	6.59	6.13	4.28	2.92	2.92	1.99	2.92	3.70	3.21	3.21	3.46	4.19
16 Idaho Falls - Lower Plant #2	1.47	1.83	2.39	2.47	2.30	1.61	1.10	1.10	0.74	1.09	1.39	1.21	1.21	1.30	1.57
17 Idaho Falls - Upper Plant	3.91	4.88	6.39	6.59	6.13	4.28	2.92	2.92	1.99	2.92	3.70	3.21	3.21	3.46	4.19
18 Lookout Point	45.0	47.0	9.00	8.00	12.0	15.0	45.0	74.0	85.0	73.0	24.0	19.0	19.0	33.0	35.8
19 Lost Creek	37.0	19.0	19.0	18.0	13.0	14.0	15.0	16.0	56.0	56.0	46.0	44.0	39.0	24.0	30.1
20 Minidoka	6.48	2.39	2.32	2.32	2.57	2.32	10.3	10.3	24.6	22.7	21.7	19.0	19.0	11.5	10.7
21 Palisades	45.5	11.3	11.2	11.4	12.8	28.2	51.7	51.7	152	151	127	144	144	56.9	67.4
22 Roza	4.08	1.15	4.09	2.59	3.12	9.41	11.4	11.4	10.8	10.9	10.6	10.5	10.5	3.39	6.87
Total Independent Hydro															
23 Federal Entities	321	271	179	145	152	251	434	445	718	664	403	383	374	307	353
24 Total Independent Hydro	321	271	179	145	152	251	434	445	718	664	403	383	374	307	353

Table 2.2.2
Table A-8: Bonneville Power Administration - Power Services: Independent Hydro
Fiscal Year 2014 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Independent Hydro															
1 Anderson Ranch	1773	1814	1858	1829	1817	1848	1913	1913	5032	15312	14005	4107	4381	3585	61188
2 Big Cliff	3348	5106	2384	1641	2284	2955	1843	2253	8153	8125	2797	1204	1285	3590	46969
3 Black Canyon	2247	1476	1276	1387	1334	1788	1737	1737	3624	3499	3601	1720	1835	3423	30684
4 Boise River Diversion	295	0	0	0	0	0	0	180	1073	1033	1060	505	539	1032	5718
5 Chandler	2390	3168	1337	2297	2851	4150	1229	1229	2518	2328	2418	985	1051	2260	30211
6 Cougar	11208	9204	3564	2439	3060	4222	5779	5779	11567	11921	6867	5200	5325	6307	92441
7 Cowlitz Falls	2625	1213	9421	4112	5217	14115	9398	10254	26188	27333	11502	2693	2267	3979	130316
8 Detroit	26259	26124	9974	11046	8322	14099	9615	10337	54964	20352	7898	3706	3887	14651	221235
9 Dexter	5010	6339	1593	1224	1905	2141	2483	3518	6901	6994	2427	1023	1091	3072	45722
10 Foster	4185	2779	3627	1638	3413	8894	3922	3716	8567	9336	2423	1237	1319	4773	59827
11 Green Peter	10939	7896	8334	3836	0	17655	23178	11852	28359	25639	6619	4551	4855	16985	170697
12 Green Springs	2613	4036	4588	4776	4108	5115	2311	2311	4521	4529	3998	1958	2088	3161	50111
13 Hills Creek	9645	10643	2007	1639	2262	2967	4096	6349	14185	14303	5643	1851	1975	9800	87364
14 Idaho Falls - City Plant	1649	2020	2704	2823	2338	1830	604	604	852	1212	1579	663	708	1422	21006
15 Idaho Falls - Lower Plant #1	1649	2020	2704	2823	2338	1830	604	604	852	1212	1579	663	708	1422	21006
16 Idaho Falls - Lower Plant #2	622	753	1015	1049	881	680	225	225	316	449	589	247	264	532	7847
17 Idaho Falls - Upper Plant	1649	2020	2704	2823	2338	1830	604	604	852	1212	1579	663	708	1422	21006
18 Lookout Point	28081	26133	4414	3929	5999	9078	12540	20621	47959	43940	14303	5790	6176	18907	247870
19 Lost Creek	15443	7836	7689	7441	4917	5981	3081	3286	22942	23016	18703	9094	8598	9343	147371
20 Minidoka	2682	992	988	992	1087	986	2097	2097	10493	9332	9127	3882	4141	4759	53656
21 Palisades	19262	4630	4699	4896	4909	12059	10567	10567	65062	61993	53674	29820	31808	23344	337290
22 Roza	1679	0	1647	1090	1200	3998	2359	2359	4546	4523	4314	2206	2353	0	32273
Total Independent Hydro															
23 Federal Entities	155254	126203	78527	65728	62580	118220	100183	102393	329523	297596	176702	83771	87361	137767	1921807
24 Total Independent Hydro	155254	126203	78527	65728	62580	118220	100183	102393	329523	297596	176702	83771	87361	137767	1921807

Table 2.2.2
Table A-8: Bonneville Power Administration - Power Services: Independent Hydro
Fiscal Year 2015 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Independent Hydro															
1 Anderson Ranch	1773	1814	1858	1829	1817	1848	1913	1913	5032	15312	14005	4107	4381	3585	61188
2 Big Cliff	3348	5106	2384	1641	2284	2955	1843	2253	8153	8125	2797	1204	1285	3590	46969
3 Black Canyon	2247	1476	1276	1387	1334	1788	1737	1737	3624	3499	3601	1720	1835	3423	30684
4 Boise River Diversion	295	0	0	0	0	0	0	180	1073	1033	1060	505	539	1032	5718
5 Chandler	2390	3168	1337	2297	2851	4150	1229	1229	2518	2328	2418	985	1051	2260	30211
6 Cougar	11208	9204	3564	2439	3060	4222	5779	5779	11567	11921	6867	5200	5325	6307	92441
7 Cowlitz Falls	2625	1213	9421	4112	5217	14115	9398	10254	26188	27333	11502	2693	2267	3979	130316
8 Detroit	26259	26124	9974	11046	8322	14099	9615	10337	54964	20352	7898	3706	3887	14651	221235
9 Dexter	5010	6339	1593	1224	1905	2141	2483	3518	6901	6994	2427	1023	1091	3072	45722
10 Foster	4185	2779	3627	1638	3413	8894	3922	3716	8567	9336	2423	1237	1319	4773	59827
11 Green Peter	10939	7896	8334	3836	0	17655	23178	11852	28359	25639	6619	4551	4855	16985	170697
12 Green Springs	2613	4036	4588	4776	4108	5115	2311	2311	4521	4529	3998	1958	2088	3161	50111
13 Hills Creek	9645	10643	2007	1639	2262	2967	4096	6349	14185	14303	5643	1851	1975	9800	87364
14 Idaho Falls - City Plant	1649	2020	2704	2823	2338	1830	604	604	852	1212	1579	663	708	1422	21006
15 Idaho Falls - Lower Plant #1	1649	2020	2704	2823	2338	1830	604	604	852	1212	1579	663	708	1422	21006
16 Idaho Falls - Lower Plant #2	622	753	1015	1049	881	680	225	225	316	449	589	247	264	532	7847
17 Idaho Falls - Upper Plant	1649	2020	2704	2823	2338	1830	604	604	852	1212	1579	663	708	1422	21006
18 Lookout Point	28081	26133	4414	3929	5999	9078	12540	20621	47959	43940	14303	5790	6176	18907	247870
19 Lost Creek	15443	7836	7689	7441	4917	5981	3081	3286	22942	23016	18703	9094	8598	9343	147371
20 Minidoka	2682	992	988	992	1087	986	2097	2097	10493	9332	9127	3882	4141	4759	53656
21 Palisades	19262	4630	4699	4896	4909	12059	10567	10567	65062	61993	53674	29820	31808	23344	337290
22 Roza	1679	0	1647	1090	1200	3998	2359	2359	4546	4523	4314	2206	2353	0	32273
Total Independent Hydro															
23 Federal Entities	155254	126203	78527	65728	62580	118220	100183	102393	329523	297596	176702	83771	87361	137767	1921807
24 Total Independent Hydro	155254	126203	78527	65728	62580	118220	100183	102393	329523	297596	176702	83771	87361	137767	1921807

Table 2.2.3
Table A-8: Bonneville Power Administration - Power Services: Independent Hydro
Fiscal Year 2014 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Independent Hydro															
1 Anderson Ranch	1346	1327	1319	1377	1381	1352	1473	1473	3746	11295	10723	3140	3349	2736	46039
2 Big Cliff	2604	4267	2080	1335	1748	2246	1397	1707	6727	6275	2411	956	1019	2890	37661
3 Black Canyon	1809	1128	945	1048	1037	1323	1334	1334	2721	2641	2744	1350	1440	2558	23413
4 Boise River Diversion	250	0	0	0	0	0	315	135	785	764	797	380	405	765	4596
5 Chandler	1853	2126	1177	1805	2169	3134	952	952	1926	1848	2115	670	714	1763	23205
6 Cougar	8880	7379	3132	2025	2316	3208	4661	4661	10009	8959	5781	3800	3891	5213	73916
7 Cowlitz Falls	1988	1022	7765	3328	3990	10627	7198	7854	21130	20403	10000	2095	1765	2861	102026
8 Detroit	7146	8123	5576	5099	3572	4699	2841	3055	20627	6936	1774	614	644	4069	74774
9 Dexter	3918	5197	1383	1008	1455	1574	1837	2602	5747	5246	2037	777	829	2688	36297
10 Foster	3255	2268	3069	1338	2635	6709	2918	2764	7057	7224	2041	923	985	3867	47055
11 Green Peter	2453	3640	5058	2116	0	6864	8502	4348	14793	9641	1565	849	905	3895	64630
12 Green Springs	1121	250	128	388	425	809	662	662	2009	1937	1960	899	959	1811	14021
13 Hills Creek	7467	8824	1713	1337	1770	2234	3104	4811	11855	10897	4773	1389	1481	8200	69856
14 Idaho Falls - City Plant	1260	1502	2047	2084	1781	1351	449	449	626	890	1176	494	527	1070	15705
15 Idaho Falls - Lower Plant #1	1260	1502	2047	2084	1781	1351	449	449	626	890	1176	494	527	1070	15705
16 Idaho Falls - Lower Plant #2	469	568	766	791	664	513	170	170	238	339	444	187	199	402	5920
17 Idaho Falls - Upper Plant	1260	1502	2047	2084	1781	1351	449	449	626	890	1176	494	527	1070	15705
18 Lookout Point	5399	7754	2282	2023	2065	2067	3660	6019	15281	8620	3553	1050	1120	4853	65746
19 Lost Creek	12085	5863	6447	5951	3819	4421	2319	2474	18722	17304	15521	6746	6378	7937	115986
20 Minidoka	2142	735	736	732	637	736	1622	1622	7780	7019	6982	2944	3140	3490	40317
21 Palisades	14596	3491	3602	3573	3706	8894	8055	8055	48141	47051	40872	22171	23649	17614	253470
22 Roza	1353	829	1395	839	898	2992	1748	1748	3496	3347	3579	1579	1684	2437	27925
Total Independent Hydro															
23 Federal Entities	83916	69297	54715	42365	39632	68454	56115	57793	204669	180414	123202	53999	56138	83259	1173968
24 Total Independent Hydro	83916	69297	54715	42365	39632	68454	56115	57793	204669	180414	123202	53999	56138	83259	1173968

Table 2.2.3
Table A-8: Bonneville Power Administration - Power Services: Independent Hydro
Fiscal Year 2015 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Independent Hydro															
1 Anderson Ranch	1346	1327	1319	1377	1381	1352	1473	1473	3746	11295	10723	3140	3349	2736	46039
2 Big Cliff	2604	4267	2080	1335	1748	2246	1397	1707	6727	6275	2411	956	1019	2890	37661
3 Black Canyon	1809	1128	945	1048	1037	1323	1334	1334	2721	2641	2744	1350	1440	2558	23413
4 Boise River Diversion	250	0	0	0	0	0	315	135	785	764	797	380	405	765	4596
5 Chandler	1853	2126	1177	1805	2169	3134	952	952	1926	1848	2115	670	714	1763	23205
6 Cougar	8880	7379	3132	2025	2316	3208	4661	4661	10009	8959	5781	3800	3891	5213	73916
7 Cowlitz Falls	1988	1022	7765	3328	3990	10627	7198	7854	21130	20403	10000	2095	1765	2861	102026
8 Detroit	7146	8123	5576	5099	3572	4699	2841	3055	20627	6936	1774	614	644	4069	74774
9 Dexter	3918	5197	1383	1008	1455	1574	1837	2602	5747	5246	2037	777	829	2688	36297
10 Foster	3255	2268	3069	1338	2635	6709	2918	2764	7057	7224	2041	923	985	3867	47055
11 Green Peter	2453	3640	5058	2116	0	6864	8502	4348	14793	9641	1565	849	905	3895	64630
12 Green Springs	1121	250	128	388	425	809	662	662	2009	1937	1960	899	959	1811	14021
13 Hills Creek	7467	8824	1713	1337	1770	2234	3104	4811	11855	10897	4773	1389	1481	8200	69856
14 Idaho Falls - City Plant	1260	1502	2047	2084	1781	1351	449	449	626	890	1176	494	527	1070	15705
15 Idaho Falls - Lower Plant #1	1260	1502	2047	2084	1781	1351	449	449	626	890	1176	494	527	1070	15705
16 Idaho Falls - Lower Plant #2	469	568	766	791	664	513	170	170	238	339	444	187	199	402	5920
17 Idaho Falls - Upper Plant	1260	1502	2047	2084	1781	1351	449	449	626	890	1176	494	527	1070	15705
18 Lookout Point	5399	7754	2282	2023	2065	2067	3660	6019	15281	8620	3553	1050	1120	4853	65746
19 Lost Creek	12085	5863	6447	5951	3819	4421	2319	2474	18722	17304	15521	6746	6378	7937	115986
20 Minidoka	2142	735	736	732	637	736	1622	1622	7780	7019	6982	2944	3140	3490	40317
21 Palisades	14596	3491	3602	3573	3706	8894	8055	8055	48141	47051	40872	22171	23649	17614	253470
22 Roza	1353	829	1395	839	898	2992	1748	1748	3496	3347	3579	1579	1684	2437	27925
Total Independent Hydro															
23 Federal Entities	83916	69297	54715	42365	39632	68454	56115	57793	204669	180414	123202	53999	56138	83259	1173968
24 Total Independent Hydro	83916	69297	54715	42365	39632	68454	56115	57793	204669	180414	123202	53999	56138	83259	1173968

This page intentionally left blank.

2.3	Cogeneration Resources.....	39
Table 2.3.1	Table A-12: BPA Cogeneration Resources - Energy	40
Table 2.3.2	Table A-12: BPA Cogeneration Resources - HLH MWh	42
Table 2.3.3	Table A-12: BPA Cogeneration Resources - LLH MWh.....	44

Table 2.3.1
Table A-12: Bonneville Power Administration - Power Services: Cogeneration Resources
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Cogeneration Resources															
1 Georgia-Pacific Paper (Wauna)	18.4	19.6	22.6	24.0	23.0	23.0	22.0	22.0	19.1	14.2	18.1	12.4	12.4	14.4	19.2
Total Cogeneration Resources															
2 Federal Entities	18.4	19.6	22.6	24.0	23.0	23.0	22.0	22.0	19.1	14.2	18.1	12.4	12.4	14.4	19.2
3 Total	18.4	19.6	22.6	24.0	23.0	23.0	22.0	22.0	19.1	14.2	18.1	12.4	12.4	14.4	19.2

Table 2.3.1
Table A-12: Bonneville Power Administration - Power Services: Cogeneration Resources
Fiscal Year 2015

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Cogeneration Resources															
1 Georgia-Pacific Paper (Wauna)	18.4	19.6	22.6	24.0	23.0	23.0	22.0	22.0	19.1	14.2	18.1	12.4	12.4	14.4	19.2
Total Cogeneration Resources															
2 Federal Entities	18.4	19.6	22.6	24.0	23.0	23.0	22.0	22.0	19.1	14.2	18.1	12.4	12.4	14.4	19.2
3 Total	18.4	19.6	22.6	24.0	23.0	23.0	22.0	22.0	19.1	14.2	18.1	12.4	12.4	14.4	19.2

Table 2.3.2
Table A-12: Bonneville Power Administration - Power Services: Cogeneration Resources
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Cogeneration Resources															
1 Georgia-Pacific Paper (Wauna)	7936	7840	9044	9963	8844	9551	4574	4574	7929	5680	7538	2583	2583	5776	94415
Total Cogeneration Resources															
2 Federal Entities	7936	7840	9044	9963	8844	9551	4574	4574	7929	5680	7538	2583	2583	5776	94415
3 Total	7936	7840	9044	9963	8844	9551	4574	4574	7929	5680	7538	2583	2583	5776	94415

Table 2.3.2
Table A-12: Bonneville Power Administration - Power Services: Cogeneration Resources
Fiscal Year 2015

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Cogeneration Resources															
1 Georgia-Pacific Paper (Wauna)	7936	7526	9406	9963	8844	9551	4574	4574	7624	5907	7538	2583	2583	5776	94386
Total Cogeneration Resources															
2 Federal Entities	7936	7526	9406	9963	8844	9551	4574	4574	7624	5907	7538	2583	2583	5776	94386
3 Total	7936	7526	9406	9963	8844	9551	4574	4574	7624	5907	7538	2583	2583	5776	94386

Table 2.3.3
Table A-12: Bonneville Power Administration - Power Services: Cogeneration Resources
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Cogeneration Resources															
1 Georgia-Pacific Paper (Wauna)	5731	6292	7778	7856	6633	7508	3342	3342	6252	4544	5943	1888	2186	4621	73916
Total Cogeneration Resources															
2 Federal Entities	5731	6292	7778	7856	6633	7508	3342	3342	6252	4544	5943	1888	2186	4621	73916
3 Total	5731	6292	7778	7856	6633	7508	3342	3342	6252	4544	5943	1888	2186	4621	73916

Table 2.3.3
Table A-12: Bonneville Power Administration - Power Services: Cogeneration Resources
Fiscal Year 2015

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Cogeneration Resources															
1 Georgia-Pacific Paper (Wauna)	5731	6605	7416	7856	6633	7508	3342	3342	6557	4317	5943	1888	2186	4621	73945
Total Cogeneration Resources															
2 Federal Entities	5731	6605	7416	7856	6633	7508	3342	3342	6557	4317	5943	1888	2186	4621	73945
3 Total	5731	6605	7416	7856	6633	7508	3342	3342	6557	4317	5943	1888	2186	4621	73945

This page intentionally left blank.

2.4	Large Thermal Resources	47
Table 2.4.1	Table A-13: BPA Large Thermal Resources - Energy	48
Table 2.4.2	Table A-13: BPA Large Thermal Resources - HLH MWh	50
Table 2.4.3	Table A-13: BPA Large Thermal Resources - LLH MWh.....	52

Table 2.4.1
Table A-13: Bonneville Power Administration - Power Services: Large Thermal Resources
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Large Thermal Resources															
1 Columbia Generating Station	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030
Total Large Thermal Resources															
2 Federal Entities	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030
3 Total	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030

Table 2.4.1
Table A-13: Bonneville Power Administration - Power Services: Large Thermal Resources
Fiscal Year 2015

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Large Thermal Resources															
1 Columbia Generating Station	1030	1030	1030	1030	1030	1030	1030	1030	498	0	764	1030	1030	1030	878
Total Large Thermal Resources															
2 Federal Entities	1030	1030	1030	1030	1030	1030	1030	1030	498	0	764	1030	1030	1030	878
3 Total	1030	1030	1030	1030	1030	1030	1030	1030	498	0	764	1030	1030	1030	878

Table 2.4.2
Table A-13: Bonneville Power Administration - Power Services: Large Thermal Resources
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Large Thermal Resources															
1 Columbia Generating Station	444960	412000	412000	428480	395520	428480	214240	214240	428480	412000	428480	214240	214240	412000	5059360
Total Large Thermal Resources															
2 Federal Entities	444960	412000	412000	428480	395520	428480	214240	214240	428480	412000	428480	214240	214240	412000	5059360
3 Total	444960	412000	412000	428480	395520	428480	214240	214240	428480	412000	428480	214240	214240	412000	5059360

Table 2.4.2
Table A-13: Bonneville Power Administration - Power Services: Large Thermal Resources
Fiscal Year 2015

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Large Thermal Resources															
1 Columbia Generating Station	444960	395520	428480	428480	395520	428480	214240	214240	199200	0	317824	214240	214240	412000	4307424
Total Large Thermal Resources															
2 Federal Entities	444960	395520	428480	428480	395520	428480	214240	214240	199200	0	317824	214240	214240	412000	4307424
3 Total	444960	395520	428480	428480	395520	428480	214240	214240	199200	0	317824	214240	214240	412000	4307424

Table 2.4.3
Table A-13: Bonneville Power Administration - Power Services: Large Thermal Resources
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Large Thermal Resources															
1 Columbia Generating Station	321360	330630	354320	337840	296640	336810	156560	156560	337840	329600	337840	156560	181280	329600	3963440
Total Large Thermal Resources															
2 Federal Entities	321360	330630	354320	337840	296640	336810	156560	156560	337840	329600	337840	156560	181280	329600	3963440
3 Total	321360	330630	354320	337840	296640	336810	156560	156560	337840	329600	337840	156560	181280	329600	3963440

Table 2.4.3
Table A-13: Bonneville Power Administration - Power Services: Large Thermal Resources
Fiscal Year 2015

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Large Thermal Resources															
1 Columbia Generating Station	321360	347110	337840	337840	296640	336810	156560	156560	171312	0	250592	156560	181280	329600	3380064
Total Large Thermal Resources															
2 Federal Entities	321360	347110	337840	337840	296640	336810	156560	156560	171312	0	250592	156560	181280	329600	3380064
3 Total	321360	347110	337840	337840	296640	336810	156560	156560	171312	0	250592	156560	181280	329600	3380064

This page intentionally left blank.

2.5	Renewables Resources.....	55
Table 2.5.1	Table A-11: BPA Renewable Resources - Energy	56
Table 2.5.2	Table A-11: BPA Renewable Resources - HLH MWh	58
Table 2.5.3	Table A-11: BPA Renewable Resources - LLH MWh.....	60

Table 2.5.1
Table A-11: Bonneville Power Administration - Power Services: Renewable Resources
Fiscal Year 2014
2014 Final Rate Case Report Date: 5/15/2013
S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Renewable Resources															
1 Ashland Solar Project	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 City Council	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 N. Mountain Park	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Police Station	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Public Works	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 Condon	10.9	9.77	13.8	7.23	7.13	13.0	10.7	8.60	8.69	10.3	6.85	5.92	11.5	9.57	9.65
7 Foote Creek 1	4.19	3.63	3.16	2.15	2.34	3.75	5.50	4.10	4.58	6.00	4.94	3.08	5.00	4.76	4.04
8 Foote Creek 2	0.49	0.43	0.37	0.25	0.28	0.44	0.65	0.48	0.54	0.71	0.58	0.36	0.59	0.56	0.48
9 Foote Creek 4	4.59	3.99	3.47	2.36	2.57	4.11	6.03	4.50	5.02	6.58	5.42	3.38	5.48	5.22	4.43
10 Fourmile Hill Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 Klondike 1	6.35	4.54	4.14	3.30	3.26	6.06	7.95	6.74	8.19	10.4	9.47	7.55	10.5	9.35	6.81
12 Klondike 3	13.2	9.48	8.65	6.89	6.81	12.7	16.6	14.1	17.1	21.7	19.8	15.8	21.9	19.5	14.2
13 Stateline	22.7	14.5	17.5	12.0	7.61	29.1	26.8	18.5	24.0	35.3	14.5	15.8	34.2	22.3	20.7
14 Stateline-OR	12.5	8.01	9.68	6.61	4.20	16.1	14.8	10.2	13.3	19.5	8.03	8.74	18.9	12.3	11.4
15 Stateline-WA	10.1	6.48	7.84	5.36	3.41	13.0	12.0	8.30	10.7	15.8	6.50	7.08	15.3	9.96	9.26
16 White Bluffs Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Renewable Resources															
17 Federal Entities	62.4	46.3	51.1	34.2	30.0	69.0	74.2	57.0	68.1	91.1	61.6	51.9	89.1	71.2	60.3
18 Total	62.4	46.3	51.1	34.2	30.0	69.0	74.2	57.0	68.1	91.1	61.6	51.9	89.1	71.2	60.3

Table 2.5.1
Table A-11: Bonneville Power Administration - Power Services: Renewable Resources
Fiscal Year 2015
2014 Final Rate Case Report Date: 5/15/2013
S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Renewable Resources															
1 Ashland Solar Project	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 City Council	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 N. Mountain Park	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 Police Station	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Public Works	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 Condon	10.9	9.77	13.8	7.23	7.13	13.0	10.7	8.60	8.69	10.3	6.85	5.92	11.5	9.57	9.65
7 Foote Creek 1	4.19	3.63	3.16	2.15	2.34	3.75	5.50	4.10	4.58	6.00	4.94	3.08	5.00	4.76	4.04
8 Foote Creek 2	0.49	0.43	0.37	0.25	0.28	0.44	0.65	0.48	0.54	0.71	0.58	0.36	0.59	0.56	0.48
9 Foote Creek 4	4.59	3.99	3.47	2.36	2.57	4.11	6.03	4.50	5.02	6.58	5.42	3.38	5.48	5.22	4.43
10 Fourmile Hill Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 Klondike 1	6.35	4.54	4.14	3.30	3.26	6.06	7.95	6.74	8.19	10.4	9.47	7.55	10.5	9.35	6.81
12 Klondike 3	13.2	9.48	8.65	6.89	6.81	12.7	16.6	14.1	17.1	21.7	19.8	15.8	21.9	19.5	14.2
13 Stateline	22.7	14.5	17.5	12.0	7.61	29.1	26.8	18.5	24.0	35.3	14.5	15.8	34.2	22.3	20.7
14 Stateline-OR	12.5	8.01	9.68	6.61	4.20	16.1	14.8	10.2	13.3	19.5	8.03	8.74	18.9	12.3	11.4
15 Stateline-WA	10.1	6.48	7.84	5.36	3.41	13.0	12.0	8.30	10.7	15.8	6.50	7.08	15.3	9.96	9.26
16 White Bluffs Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Renewable Resources															
17 Federal Entities	62.4	46.3	51.1	34.2	30.0	69.0	74.2	57.0	68.1	91.1	61.6	51.9	89.1	71.2	60.3
18 Total	62.4	46.3	51.1	34.2	30.0	69.0	74.2	57.0	68.1	91.1	61.6	51.9	89.1	71.2	60.3

Table 2.5.2
Table A-11: Bonneville Power Administration - Power Services: Renewable Resources
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Renewable Resources															
1 Ashland Solar Project	1.22	0.58	0.43	0.55	0.77	1.17	0.74	0.74	1.72	1.78	2.00	0.94	0.94	1.58	15.1
2 City Council	0.09	0.04	0.03	0.04	0.06	0.09	0.05	0.05	0.13	0.13	0.15	0.07	0.07	0.12	1.11
3 N. Mountain Park	0.01	0	0	0	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.13
4 Police Station	0.24	0.11	0.08	0.11	0.15	0.23	0.15	0.15	0.34	0.35	0.39	0.18	0.18	0.31	2.97
5 Public Works	0.88	0.41	0.31	0.39	0.55	0.84	0.53	0.53	1.24	1.28	1.44	0.68	0.68	1.14	10.9
6 Condon	4383	3656	5284	3330	2415	5219	2835	1938	3414	4389	3195	1315	2559	4382	48314
7 Foote Creek 1	1786	1339	1239	1049	869	1689	1256	790	1639	2519	2150	483	1038	1963	19808
8 Foote Creek 2	209	158	145	122	104	198	148	92.4	193	298	252	56.4	123	231	2331
9 Foote Creek 4	1957	1470	1361	1150	953	1851	1376	867	1796	2762	2359	529	1138	2154	21723
10 Fourmile Hill Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 Klondike 1	2750	1774	1540	1476	1139	2670	2009	1024	2900	4029	4241	1321	2213	3851	32937
12 Klondike 3	5737	3705	3216	3082	2381	5574	4194	2137	6050	8404	8851	2757	4618	8033	68741
13 Stateline	8965	4983	6163	5459	1816	11204	5616	2564	7075	12059	5685	2391	6574	9503	90057
14 Stateline-OR	4953	2753	3405	3016	1003	6190	3103	1416	3909	6662	3141	1321	3632	5250	49754
15 Stateline-WA	4012	2230	2758	2443	813	5014	2513	1147	3166	5397	2544	1070	2942	4253	40303
16 White Bluffs Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Renewable Resources															
17 Federal Entities	25788	17086	18949	15668	9678	28407	17434	9412	23071	34462	26736	8853	18265	30118	283927
18 Total	25788	17086	18949	15668	9678	28407	17434	9412	23071	34462	26736	8853	18265	30118	283927

Table 2.5.2
Table A-11: Bonneville Power Administration - Power Services: Renewable Resources
Fiscal Year 2015

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Renewable Resources															
1 Ashland Solar Project	1.22	0.55	0.44	0.55	0.77	1.17	0.74	0.74	1.65	1.85	2.00	0.94	0.94	1.58	15.1
2 City Council	0.09	0.04	0.03	0.04	0.06	0.09	0.05	0.05	0.12	0.14	0.15	0.07	0.07	0.12	1.11
3 N. Mountain Park	0.01	0	0	0	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.13
4 Police Station	0.24	0.11	0.09	0.11	0.15	0.23	0.15	0.15	0.32	0.36	0.39	0.18	0.18	0.31	2.97
5 Public Works	0.88	0.40	0.32	0.39	0.55	0.84	0.53	0.53	1.19	1.33	1.44	0.68	0.68	1.14	10.9
6 Condon	4383	3656	5284	3330	2415	5219	2835	1938	3414	4389	3195	1315	2559	4382	48314
7 Foote Creek 1	1786	1339	1239	1049	869	1689	1256	790	1639	2519	2150	483	1038	1963	19808
8 Foote Creek 2	209	158	145	122	104	198	148	92.4	193	298	252	56.4	123	231	2331
9 Foote Creek 4	1957	1470	1361	1150	953	1851	1376	867	1796	2762	2359	529	1138	2154	21723
10 Fourmile Hill Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 Klondike 1	2750	1774	1540	1476	1139	2670	2009	1024	2900	4029	4241	1321	2213	3851	32937
12 Klondike 3	5737	3705	3216	3082	2381	5574	4194	2137	6050	8404	8851	2757	4618	8033	68741
13 Stateline	8965	4983	6163	5459	1816	11204	5616	2564	7075	12059	5685	2391	6574	9503	90057
14 Stateline-OR	4953	2753	3405	3016	1003	6190	3103	1416	3909	6662	3141	1321	3632	5250	49754
15 Stateline-WA	4012	2230	2758	2443	813	5014	2513	1147	3166	5397	2544	1070	2942	4253	40303
16 White Bluffs Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Renewable Resources															
17 Federal Entities	25788	17086	18949	15668	9678	28407	17434	9412	23071	34462	26736	8853	18265	30118	283927
18 Total	25788	17086	18949	15668	9678	28407	17434	9412	23071	34462	26736	8853	18265	30118	283927

Table 2.5.3
Table A-11: Bonneville Power Administration - Power Services: Renewable Resources
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Renewable Resources															
1 Ashland Solar Project	0.88	0.46	0.37	0.43	0.58	0.92	0.54	0.54	1.35	1.42	1.58	0.68	0.79	1.26	11.8
2 City Council	0.06	0.03	0.03	0.03	0.04	0.07	0.04	0.04	0.10	0.10	0.12	0.05	0.06	0.09	0.87
3 N. Mountain Park	0.01	0	0	0	0	0.01	0	0	0.01	0.01	0.01	0.01	0.01	0.01	0.10
4 Police Station	0.17	0.09	0.07	0.08	0.11	0.18	0.11	0.11	0.27	0.28	0.31	0.13	0.16	0.25	2.32
5 Public Works	0.63	0.33	0.26	0.31	0.42	0.66	0.39	0.39	0.98	1.02	1.14	0.49	0.57	0.91	8.51
6 Condon	3689	3388	4976	2049	2377	4410	1006	1158	3052	3012	1901	816	1853	2508	36196
7 Foote Creek 1	1331	1281	1112	553	705	1098	725	686	1769	1802	1525	627	881	1463	15557
8 Foote Creek 2	156	152	130	64.2	84.3	129	85.6	80.4	209	213	179	73.2	104	172	1831
9 Foote Creek 4	1458	1407	1221	606	774	1203	795	753	1938	1976	1673	687	966	1605	17062
10 Fourmile Hill Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 Klondike 1	1975	1499	1540	980	1052	1833	853	1402	3193	3474	2804	1397	1811	2881	26693
12 Klondike 3	4121	3131	3216	2046	2198	3826	1780	2927	6660	7246	5852	2916	3779	6011	55708
13 Stateline	7887	5464	6867	3446	3299	10384	4017	4113	10792	13382	5123	3302	6548	6522	91144
14 Stateline-OR	4357	3019	3794	1904	1823	5737	2219	2272	5962	7393	2830	1824	3617	3603	50355
15 Stateline-WA	3529	2445	3073	1542	1476	4647	1798	1841	4830	5989	2293	1478	2930	2919	40789
16 White Bluffs Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Renewable Resources															
17 Federal Entities	20616	16322	19063	9745	10489	22884	9262	11120	27614	31106	19059	9820	15942	21164	244204
18 Total	20616	16322	19063	9745	10489	22884	9262	11120	27614	31106	19059	9820	15942	21164	244204

Table 2.5.3
Table A-11: Bonneville Power Administration - Power Services: Renewable Resources
Fiscal Year 2015

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Renewable Resources															
1 Ashland Solar Project	0.88	0.48	0.35	0.43	0.58	0.92	0.54	0.54	1.42	1.35	1.58	0.68	0.79	1.26	11.8
2 City Council	0.06	0.04	0.03	0.03	0.04	0.07	0.04	0.04	0.10	0.10	0.12	0.05	0.06	0.09	0.87
3 N. Mountain Park	0.01	0	0	0	0	0.01	0	0	0.01	0.01	0.01	0.01	0.01	0.01	0.10
4 Police Station	0.17	0.10	0.07	0.08	0.11	0.18	0.11	0.11	0.28	0.26	0.31	0.13	0.16	0.25	2.32
5 Public Works	0.63	0.35	0.25	0.31	0.42	0.66	0.39	0.39	1.02	0.97	1.14	0.49	0.57	0.91	8.52
6 Condon	3689	3388	4976	2049	2377	4410	1006	1158	3052	3012	1901	816	1853	2508	36196
7 Foote Creek 1	1331	1281	1112	553	705	1098	725	686	1769	1802	1525	627	881	1463	15557
8 Foote Creek 2	156	152	130	64.2	84.3	129	85.6	80.4	209	213	179	73.2	104	172	1831
9 Foote Creek 4	1458	1407	1221	606	774	1203	795	753	1938	1976	1673	687	966	1605	17062
10 Fourmile Hill Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 Klondike 1	1975	1499	1540	980	1052	1833	853	1402	3193	3474	2804	1397	1811	2881	26693
12 Klondike 3	4121	3131	3216	2046	2198	3826	1780	2927	6660	7246	5852	2916	3779	6011	55708
13 Stateline	7887	5464	6867	3446	3299	10384	4017	4113	10792	13382	5123	3302	6548	6522	91144
14 Stateline-OR	4357	3019	3794	1904	1823	5737	2219	2272	5962	7393	2830	1824	3617	3603	50355
15 Stateline-WA	3529	2445	3073	1542	1476	4647	1798	1841	4830	5989	2293	1478	2930	2919	40789
16 White Bluffs Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Renewable Resources															
17 Federal Entities	20616	16322	19063	9745	10489	22884	9262	11120	27614	31106	19059	9820	15942	21164	244204
18 Total	20616	16322	19063	9745	10489	22884	9262	11120	27614	31106	19059	9820	15942	21164	244204

This page intentionally left blank.

2.6	Small Hydro Resources.....	63
Table 2.6.1	Table A-9: BPA Small Hydro - Energy.....	64
Table 2.6.2	Table A-9: BPA Small Hydro - HLH MWh.....	66
Table 2.6.3	Table A-9: BPA Small Hydro - LLH MWh.....	68

Table 2.6.1
Table A-9: Bonneville Power Administration - Power Services: Small Hydro
Fiscal Year 2014 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Small Hydro															
1 Dworshak-Clearwater Hatchery	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63
2 Rocky Brook	0.04	0.21	0.56	0.58	0.42	0.47	0.46	0.46	0.20	0.09	0	0	0	0	0.25
Total Small Hydro															
3 Federal Entities	2.67	2.84	3.19	3.21	3.05	3.10	3.09	3.09	2.83	2.72	2.63	2.63	2.63	2.63	2.88
4 Total Small Hydro	2.67	2.84	3.19	3.21	3.05	3.10	3.09	3.09	2.83	2.72	2.63	2.63	2.63	2.63	2.88

Table 2.6.1
Table A-9: Bonneville Power Administration - Power Services: Small Hydro
Fiscal Year 2015 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Small Hydro															
1 Dworshak-Clearwater Hatchery	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63
2 Rocky Brook	0.04	0.21	0.56	0.58	0.42	0.47	0.46	0.46	0.20	0.09	0	0	0	0	0.25
Total Small Hydro															
3 Federal Entities	2.67	2.84	3.19	3.21	3.05	3.10	3.09	3.09	2.83	2.72	2.63	2.63	2.63	2.63	2.88
4 Total Small Hydro	2.67	2.84	3.19	3.21	3.05	3.10	3.09	3.09	2.83	2.72	2.63	2.63	2.63	2.63	2.88

Table 2.6.2
Table A-9: Bonneville Power Administration - Power Services: Small Hydro
Fiscal Year 2014 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Small Hydro															
1 Dworshak-Clearwater Hatchery	1136	1052	1052	1094	1010	1094	547	547	1094	1052	1094	547	547	1052	12919
2 Rocky Brook	19.0	88.0	239	247	162	199	95.0	95.0	85.0	36.0	1.00	1.00	1.00	0	1268
Total Small Hydro															
3 Federal Entities	1155	1140	1291	1341	1172	1293	642	642	1179	1088	1095	548	548	1052	14187
4 Total Small Hydro	1155	1140	1291	1341	1172	1293	642	642	1179	1088	1095	548	548	1052	14187

Table 2.6.2
Table A-9: Bonneville Power Administration - Power Services: Small Hydro
Fiscal Year 2015 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Small Hydro															
1 Dworshak-Clearwater Hatchery	1136	1010	1094	1094	1010	1094	547	547	1052	1094	1094	547	547	1052	12919
2 Rocky Brook	19.0	88.0	239	247	162	199	95.0	95.0	85.0	36.0	1.00	1.00	1.00	0	1268
Total Small Hydro															
3 Federal Entities	1155	1098	1333	1341	1172	1293	642	642	1137	1130	1095	548	548	1052	14187
4 Total Small Hydro	1155	1098	1333	1341	1172	1293	642	642	1137	1130	1095	548	548	1052	14187

Table 2.6.3
Table A-9: Bonneville Power Administration - Power Services: Small Hydro
Fiscal Year 2014 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Small Hydro															
1 Dworshak-Clearwater Hatchery	821	844	905	863	757	860	400	400	863	842	863	400	463	842	10120
2 Rocky Brook	14.0	61.0	175	181	121	149	70.0	70.0	67.0	26.0	1.00	0	0	0	935
Total Small Hydro															
3 Federal Entities	835	905	1080	1044	878	1009	470	470	930	868	864	400	463	842	11055
4 Total Small Hydro	835	905	1080	1044	878	1009	470	470	930	868	864	400	463	842	11055

Table 2.6.3
Table A-9: Bonneville Power Administration - Power Services: Small Hydro
Fiscal Year 2015 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Small Hydro															
1 Dworshak-Clearwater Hatchery	821	886	863	863	757	860	400	400	905	800	863	400	463	842	10120
2 Rocky Brook	14.0	61.0	175	181	121	149	70.0	70.0	67.0	26.0	1.00	0	0	0	935
Total Small Hydro															
3 Federal Entities	835	947	1038	1044	878	1009	470	470	972	826	864	400	463	842	11055
4 Total Small Hydro	835	947	1038	1044	878	1009	470	470	972	826	864	400	463	842	11055

This page intentionally left blank.

2.7	Imports	71
Table 2.7.1	Table A-3: BPA Imports - Energy	72
Table 2.7.2	Table A-3: BPA Imports - HLH MWh	74
Table 2.7.3	Table A-3: BPA Imports - LLH MWh	76

Table 2.7.1
Table A-3: Bonneville Power Administration - Power Services Imports
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW - Contract	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Canada															
Contracts	93.9	1.00	1.00	1.00	1.00	218	1.00	1.00	1.00	1.00	1.00	1.00	1.00	81.0	33.9
¹ BCHP to BPA-P Trty LCALgcyRtn	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
² BCHP to BPA-P Trty LCARtn	92.9	0	0	0	0	217	0	0	0	0	0	0	0	80.0	32.9
³ Total Imports From CAN	93.9	1.00	1.00	1.00	1.00	218	1.00	1.00	1.00	1.00	1.00	1.00	1.00	81.0	33.9
Pacific Southwest															
Contracts	19.4	42.8	41.7	41.1	41.6	37.9	17.5	17.5	0.12	0	15.1	14.8	15.4	23.0	24.5
⁴ PASA to BPA-P CNX EER	3.45	3.46	3.58	3.45	3.50	1.68	0	0	0	0	0	0	0	3.47	1.87
⁵ PASA to BPA-P CNX Repl	0.20	0	0	0	0	0	0	0	0	0	4.44	4.32	4.55	4.38	1.13
⁶ PASA to BPA-P SNX Ret	4.59	4.61	4.77	4.59	4.66	2.24	0	0	0	0	0	0	0	4.61	2.49
⁷ RVSD to BPA-P CNX EER	0	16.3	16.2	15.6	16.1	16.8	7.87	7.87	0	0	0	0	0	0	7.34
⁸ RVSD to BPA-P CNX Repl	11.1	3.12	2.54	2.78	2.68	2.54	2.75	2.75	0.12	0	10.6	10.5	10.8	10.5	4.98
⁹ RVSD to BPA-P SNX Ret	0	15.3	14.7	14.7	14.6	14.7	6.88	6.88	0	0	0	0	0	0	6.68
¹⁰ Total Imports From PSW	19.4	42.8	41.7	41.1	41.6	37.9	17.5	17.5	0.12	0	15.1	14.8	15.4	23.0	24.5
Total Imports															
¹³ Federal Entities	113	44	43	42	43	256	19	19	1	1	16	16	16	104	58
¹⁴ Total Imports	113	44	43	42	43	256	19	19	1	1	16	16	16	104	58

Table 2.7.1
Table A-3: Bonneville Power Administration - Power Services Imports
Fiscal Year 2015

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW - Contract	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Canada															
Contracts	86.2	1.00	1.00	1.00	1.00	218	1.00	1.00	1.00	1.00	1.00	1.00	1.00	89.0	33.9
¹ BCHP to BPA-P Trty LCALgcyRtn	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
² BCHP to BPA-P Trty LCARtn	85.2	0	0	0	0	217	0	0	0	0	0	0	0	88.0	32.9
³ Total Imports From CAN	86.2	1.00	1.00	1.00	1.00	218	1.00	1.00	1.00	1.00	1.00	1.00	1.00	89.0	33.9
Pacific Southwest															
Contracts	19.4	44.2	40.4	42.2	41.6	37.1	17.5	17.5	0.12	0	10.6	9.98	10.3	11.0	22.8
⁴ PASA to BPA-P CNX EER	3.45	3.60	3.45	3.45	3.50	1.81	0	0	0	0	0	0	0	0	1.60
⁵ PASA to BPA-P CNX Repl	0.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0.02
⁶ PASA to BPA-P SNX Ret	4.59	4.79	4.59	4.59	4.66	2.41	0	0	0	0	0	0	0	0	2.13
⁷ RVSD to BPA-P CNX EER	0	16.9	15.6	16.2	16.1	16.2	7.87	7.87	0	0	0	0	0	0	7.34
⁸ RVSD to BPA-P CNX Repl	11.1	3.00	2.66	2.78	2.68	2.54	2.75	2.75	0.12	0	10.6	9.98	10.3	11.0	4.98
⁹ RVSD to BPA-P SNX Ret	0	15.9	14.1	15.2	14.6	14.2	6.88	6.88	0	0	0	0	0	0	6.68
¹⁰ Total Imports From PSW	19.4	44.2	40.4	42.2	41.6	37.1	17.5	17.5	0.12	0	10.6	9.98	10.3	11.0	22.8
Total Imports															
¹³ Federal Entities	106	45	41	43	43	255	19	19	1	1	12	11	11	100	57
¹⁴ Total Imports	106	45	41	43	43	255	19	19	1	1	12	11	11	100	57

Table 2.7.2
Table A-3: Bonneville Power Administration - Power Services Imports
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh - Contract	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Canada															
Contracts	42672	400	400	416	384	92576	208	208	416	400	416	208	208	31120	170032
¹ BCHP to BPA-P Trty LCALgcyRtn	432	400	400	416	384	416	208	208	416	400	416	208	208	400	4912
² BCHP to BPA-P Trty LCARtn	42240	0	0	0	0	92160	0	0	0	0	0	0	0	30720	165120
³ Total Imports From CAN	42672	400	400	416	384	92576	208	208	416	400	416	208	208	31120	170032
Pacific Southwest															
Contracts	3392	7136	5847	6336	6142	6387	1381	1381	20.0	0	2950	1610	1610	3767	47959
⁴ PASA to BPA-P CNX EER	378	350	350	364	336	182	0	0	0	0	0	0	0	350	2313
⁵ PASA to BPA-P CNX Repl	29.8	0	0	0	0	0	0	0	0	0	630	330	330	630	1950
⁶ PASA to BPA-P SNX Ret	504	466	466	485	448	243	0	0	0	0	0	0	0	466	3078
⁷ RVSD to BPA-P CNX EER	0	2906	2470	2499	2441	2935	625	625	0	0	0	0	0	0	14501
⁸ RVSD to BPA-P CNX Repl	2480	490	400	420	400	460	210	210	20.0	0	2320	1280	1280	2320	12291
⁹ RVSD to BPA-P SNX Ret	0	2923	2160	2567	2516	2567	546	546	0	0	0	0	0	0	13827
¹⁰ Total Imports From PSW	3392	7136	5847	6336	6142	6387	1381	1381	20.0	0	2950	1610	1610	3767	47959
Total Imports															
¹³ Federal Entities	46064	7536	6247	6752	6526	98963	1589	1589	436	400	3366	1818	1818	34887	217991
¹⁴ Total Imports	46064	7536	6247	6752	6526	98963	1589	1589	436	400	3366	1818	1818	34887	217991

Table 2.7.2
Table A-3: Bonneville Power Administration - Power Services Imports
Fiscal Year 2015

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh - Contract	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Canada															
Contracts	38832	384	416	416	384	92576	208	208	400	416	416	208	208	34960	170032
¹ BCHP to BPA-P Trty LCALgcyRtn	432	384	416	416	384	416	208	208	400	416	416	208	208	400	4912
² BCHP to BPA-P Trty LCARtn	38400	0	0	0	0	92160	0	0	0	0	0	0	0	34560	165120
³ Total Imports From CAN	38832	384	416	416	384	92576	208	208	400	416	416	208	208	34960	170032
Pacific Southwest															
Contracts	3392	7189	5945	7203	6142	5487	1381	1381	20.0	0	2160	1240	1240	2400	45180
⁴ PASA to BPA-P CNX EER	378	336	364	364	336	168	0	0	0	0	0	0	0	0	1948
⁵ PASA to BPA-P CNX Repl	29.8	0	0	0	0	0	0	0	0	0	0	0	0	0	29.8
⁶ PASA to BPA-P SNX Ret	504	448	485	485	448	224	0	0	0	0	0	0	0	0	2593
⁷ RVSD to BPA-P CNX EER	0	2877	2499	2935	2441	2499	625	625	0	0	0	0	0	0	14501
⁸ RVSD to BPA-P CNX Repl	2480	630	410	470	400	410	210	210	20.0	0	2160	1240	1240	2400	12281
⁹ RVSD to BPA-P SNX Ret	0	2898	2186	2948	2516	2186	546	546	0	0	0	0	0	0	13826
¹⁰ Total Imports From PSW	3392	7189	5945	7203	6142	5487	1381	1381	20.0	0	2160	1240	1240	2400	45180
Total Imports															
¹³ Federal Entities	42224	7573	6361	7619	6526	98063	1589	1589	420	416	2576	1448	1448	37360	215212
¹⁴ Total Imports	42224	7573	6361	7619	6526	98063	1589	1589	420	416	2576	1448	1448	37360	215212

Table 2.7.3
Table A-3: Bonneville Power Administration - Power Services Imports
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh - Contract	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Canada															
Contracts	27192	321	344	328	288	69447	152	152	328	320	328	152	176	27200	126728
¹ BCHP to BPA-P Trty LCALgcyRtn	312	321	344	328	288	327	152	152	328	320	328	152	176	320	3848
² BCHP to BPA-P Trty LCARtn	26880	0	0	0	0	69120	0	0	0	0	0	0	0	26880	122880
³ Total Imports From CAN	27192	321	344	328	288	69447	152	152	328	320	328	152	176	27200	126728
Pacific Southwest															
Contracts	11018	23757	25186	24213	21795	21782	4920	4920	69.9	0	8270	3707	4293	12760	166692
⁴ PASA to BPA-P CNX EER	2187	2145	2313	2201	2019	1065	0	0	0	0	0	0	0	2145	14076
⁵ PASA to BPA-P CNX Repl	120	0	0	0	0	0	0	0	0	0	2670	1223	1417	2520	7950
⁶ PASA to BPA-P SNX Ret	2911	2855	3079	2930	2687	1418	0	0	0	0	0	0	0	2855	18735
⁷ RVSD to BPA-P CNX EER	0	8863	9561	9096	8369	9532	2209	2209	0	0	0	0	0	0	49838
⁸ RVSD to BPA-P CNX Repl	5800	1760	1490	1650	1400	1430	780	780	69.9	0	5600	2484	2876	5240	31360
⁹ RVSD to BPA-P SNX Ret	0	8133	8743	8337	7320	8337	1932	1932	0	0	0	0	0	0	44734
¹⁰ Total Imports From PSW	11018	23757	25186	24213	21795	21782	4920	4920	69.9	0	8270	3707	4293	12760	166692
Total Imports															
¹³ Federal Entities	38210	24078	25530	24541	22083	91229	5072	5072	398	320	8598	3859	4469	39960	293420
¹⁴ Total Imports	38210	24078	25530	24541	22083	91229	5072	5072	398	320	8598	3859	4469	39960	293420

Table 2.7.3
Table A-3: Bonneville Power Administration - Power Services Imports
Fiscal Year 2015

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh - Contract	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Canada															
Contracts	25272	337	328	328	288	69447	152	152	344	304	328	152	176	29120	126728
¹ BCHP to BPA-P Trty LCALgcyRtn	312	337	328	328	288	327	152	152	344	304	328	152	176	320	3848
² BCHP to BPA-P Trty LCARtn	24960	0	0	0	0	69120	0	0	0	0	0	0	0	28800	122880
³ Total Imports From CAN	25272	337	328	328	288	69447	152	152	344	304	328	152	176	29120	126728
Pacific Southwest															
Contracts	11018	24660	24134	24163	21795	22093	4920	4920	69.8	0	5760	2354	2726	5520	154134
⁴ PASA to BPA-P CNX EER	2187	2257	2201	2201	2019	1178	0	0	0	0	0	0	0	0	12043
⁵ PASA to BPA-P CNX Repl	120	0	0	0	0	0	0	0	0	0	0	0	0	0	120
⁶ PASA to BPA-P SNX Ret	2911	3004	2930	2930	2687	1567	0	0	0	0	0	0	0	0	16029
⁷ RVSD to BPA-P CNX EER	0	9328	9096	9096	8369	9532	2209	2209	0	0	0	0	0	0	49838
⁸ RVSD to BPA-P CNX Repl	5800	1530	1570	1600	1400	1480	780	780	69.8	0	5760	2354	2726	5520	31370
⁹ RVSD to BPA-P SNX Ret	0	8540	8337	8337	7320	8337	1932	1932	0	0	0	0	0	0	44733
¹⁰ Total Imports From PSW	11018	24660	24134	24163	21795	22093	4920	4920	69.8	0	5760	2354	2726	5520	154134
Total Imports															
¹³ Federal Entities	36290	24997	24462	24491	22083	91540	5072	5072	414	304	6088	2506	2902	34640	280862
¹⁴ Total Imports	36290	24997	24462	24491	22083	91540	5072	5072	414	304	6088	2506	2902	34640	280862

This page intentionally left blank.

2.8	Non-Federal CER Deliveries to BPA	79
Table 2.8.1	Table A-15: Non-Federal CER Deliveries - Energy	80
Table 2.8.2	Table A-15: Non-Federal CER Deliveries - HLH MWh.....	82
Table 2.8.3	Table A-15: Non-Federal CER Deliveries - LLH MWh	84

Table 2.8.1
Table: Non-Federal CER Deliveries to BPA
Fiscal Year: 2014
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Pacific Northwest															
1 CHPD to BPA CEAEA for Rock Island	18.0	17.9	17.3	18.0	17.7	17.4	17.9	17.9	18.0	17.2	18.0	17.9	16.8	17.9	17.7
2 CHPD to BPA CEAEA for Rocky Reach	38.3	38.1	36.9	38.3	37.7	37.0	37.6	37.6	37.7	36.1	37.7	37.6	35.2	37.6	37.4
3 DOPD to BPA CEAEA for Wells	24.4	24.2	23.5	24.4	24.0	23.5	24.3	24.3	24.4	23.3	24.4	24.3	22.8	24.3	24.0
4 GCPD to BPA CEAEA for Priest Rapids	29.6	29.4	28.5	29.6	29.1	28.6	29.5	29.5	29.6	28.3	29.6	29.5	27.6	29.5	29.2
5 GCPD to BPA CEAEA for Wanpum	28.5	28.3	27.4	28.5	28.0	27.4	28.3	28.3	28.5	27.2	28.5	28.3	26.5	28.3	28.0
6 Total Imports From PNW	139	138	134	139	137	134	138	138	138	132	138	138	129	138	136
Total Imports															
7 Federal Entities	139	138	134	139	137	134	138	138	138	132	138	138	129	138	136
8 Total Imports	139	138	134	139	137	134	138	138	138	132	138	138	129	138	136

Table 2.8.1
Table: Non-Federal CER Deliveries to BPA
Fiscal Year: 2015
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Pacific Northwest															
1 CHPD to BPA CEAEA for Rock Island	18.0	17.2	18.0	18.0	17.7	17.4	17.9	17.9	17.3	17.9	18.0	17.9	16.8	17.9	17.7
2 CHPD to BPA CEAEA for Rocky Reach	37.7	36.1	37.7	37.7	37.1	36.4	37.6	37.6	36.3	37.6	37.7	37.6	35.2	37.6	37.2
3 DOPD to BPA CEAEA for Wells	24.4	23.3	24.4	24.4	24.0	23.5	23.7	23.7	22.9	23.7	23.8	23.7	22.2	23.7	23.7
4 GCPD to BPA CEAEA for Priest Rapids	29.6	28.3	29.6	29.6	29.1	28.6	29.5	29.5	28.5	29.5	29.6	29.5	27.6	29.5	29.2
5 GCPD to BPA CEAEA for Wanpum	28.5	27.2	28.5	28.5	28.0	27.4	28.3	28.3	27.4	28.3	28.5	28.3	26.5	28.3	28.0
6 Total Imports From PNW	138	132	138	138	136	133	137	137	133	137	138	137	128	137	136
Total Imports															
7 Federal Entities	138	132	138	138	136	133	137	137	133	137	138	137	128	137	136
8 Total Imports	138	132	138	138	136	133	137	137	133	137	138	137	128	137	136

Table 2.8.2
Table: Non-Federal CER Deliveries to BPA
Fiscal Year: 2014
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Pacific Northwest															
1 CHPD to BPA CEAEA for Rock Island	13392	12400	12400	12896	11904	12896	6448	6448	12896	12400	12896	6448	6448	12400	152272
2 CHPD to BPA CEAEA for Rocky Reach	28512	26400	26400	27456	25344	27456	13520	13520	27040	26000	27040	13520	13520	26000	321728
3 DOPD to BPA CEAEA for Wells	18144	16800	16800	17472	16128	17472	8736	8736	17472	16800	17472	8736	8736	16800	206304
4 GCPD to BPA CEAEA for Priest Rapids	22032	20400	20400	21216	19584	21216	10608	10608	21216	20400	21216	10608	10608	20400	250512
5 GCPD to BPA CEAEA for Wanpum	21168	19600	19600	20384	18816	20384	10192	10192	20384	19600	20384	10192	10192	19600	240688
6 Total Imports From PNW	103248	95600	95600	99424	91776	99424	49504	49504	99008	95200	99008	49504	49504	95200	1171504
Total Imports															
7 Federal Entities	103248	95600	95600	99424	91776	99424	49504	49504	99008	95200	99008	49504	49504	95200	1171504
8 Total Imports	103248	95600	95600	99424	91776	99424	49504	49504	99008	95200	99008	49504	49504	95200	1171504

Table 2.8.2
Table: Non-Federal CER Deliveries to BPA
Fiscal Year: 2015
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Pacific Northwest															
1 CHPD to BPA CEAEA for Rock Island	13392	11904	12896	12896	11904	12896	6448	6448	12400	12896	12896	6448	6448	12400	152272
2 CHPD to BPA CEAEA for Rocky Reach	28080	24960	27040	27040	24960	27040	13520	13520	26000	27040	27040	13520	13520	26000	319280
3 DOPD to BPA CEAEA for Wells	18144	16128	17472	17472	16128	17472	8528	8528	16400	17056	17056	8528	8528	16400	203840
4 GCPD to BPA CEAEA for Priest Rapids	22032	19584	21216	21216	19584	21216	10608	10608	20400	21216	21216	10608	10608	20400	250512
5 GCPD to BPA CEAEA for Wanpum	21168	18816	20384	20384	18816	20384	10192	10192	19600	20384	20384	10192	10192	19600	240688
6 Total Imports From PNW	102816	91392	99008	99008	91392	99008	49296	49296	94800	98592	98592	49296	49296	94800	1166592
Total Imports															
7 Federal Entities	102816	91392	99008	99008	91392	99008	49296	49296	94800	98592	98592	49296	49296	94800	1166592
8 Total Imports	102816	91392	99008	99008	91392	99008	49296	49296	94800	98592	98592	49296	49296	94800	1166592

Table 2.8.3
Table: Non-Federal CER Deliveries to BPA
Fiscal Year: 2014
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Pacific Northwest															
1 CHPD to BPA CEAEA for Rock Island	0	496	496	496	0	0	0	0	496	0	496	0	0	496	2976
2 CHPD to BPA CEAEA for Rocky Reach	0	1056	1056	1056	0	0	0	0	1040	0	1040	0	0	1040	6289
3 DOPD to BPA CEAEA for Wells	0	672	672	672	0	0	0	0	672	0	672	0	0	672	4032
4 GCPD to BPA CEAEA for Priest Rapids	0	816	816	816	0	0	0	0	816	0	816	0	0	816	4896
5 GCPD to BPA CEAEA for Wanpum	0	784	784	784	0	0	0	0	784	0	784	0	0	784	4704
6 Total Imports From PNW	0	3824	3824	3824	0	0	0	0	3808	0	3808	0	0	3808	22896
Total Imports															
7 Federal Entities	0	3824	3824	3824	0	0	0	0	3808	0	3808	0	0	3808	22896
8 Total Imports	0	3824	3824	3824	0	0	0	0	3808	0	3808	0	0	3808	22896

Table 2.8.3
Table: Non-Federal CER Deliveries to BPA
Fiscal Year: 2015
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Pacific Northwest															
1 CHPD to BPA CEAEA for Rock Island	0	496	496	496	0	0	0	0	496	0	496	0	0	496	2976
2 CHPD to BPA CEAEA for Rocky Reach	0	1040	1040	1040	0	0	0	0	1040	0	1040	0	0	1040	6240
3 DOPD to BPA CEAEA for Wells	0	672	672	672	0	0	0	0	656	0	656	0	0	656	3984
4 GCPD to BPA CEAEA for Priest Rapids	0	816	816	816	0	0	0	0	816	0	816	0	0	816	4896
5 GCPD to BPA CEAEA for Wanpum	0	784	784	784	0	0	0	0	784	0	784	0	0	784	4704
6 Total Imports From PNW	0	3808	3808	3808	0	0	0	0	3792	0	3792	0	0	3792	22800
Total Imports															
7 Federal Entities	0	3808	3808	3808	0	0	0	0	3792	0	3792	0	0	3792	22800
8 Total Imports	0	3808	3808	3808	0	0	0	0	3792	0	3792	0	0	3792	22800

This page intentionally left blank.

2.9	Intra-Regional Transfers	87
Table 2.9.1	Table A-4: BPA Intra-Regional Transfers - Energy	88
Table 2.9.2	Table A-4: BPA Intra-Regional Transfers - HLH MWh	90
Table 2.9.3	Table A-4: BPA Intra-Regional Transfers - LLH MWh	92

Table 2.9.1
Table A-4: Bonneville Power Administration - Power Services: Intra-Regional Transfers
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Intra-Regional Transfers															
Contracts	121	323	226	231	224	137	145	145	41.9	51.9	43.4	47.6	47.7	34.4	135
1 BPA-P to AVWP Setl WNP3 Del	0	101	101	101	101	50.6	50.5	50.5	0	0	0	0	0	0	41.7
2 BPA-P to BPA-T Ops IntrlAgmt	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
3 BPA-P to PPL SNX SprgDel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 BPA-P to PPL SNX SumrDel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 BPA-P to PSE Ops UBkr Repl	0	3.89	3.77	3.92	4.01	0	0	0	0	0	0	0	0	0	1.28
6 BPA-P to PSE Setl WNP3 Del	0	101	101	101	101	50.6	50.5	50.5	0	0	0	0	0	0	41.7
7 Other Entities to BPA-P	20.4	16.9	11.1	16.2	8.96	26.5	34.5	34.5	32.9	42.9	34.4	38.6	38.7	25.4	25.8
8 PPL to BPA-P SNX SprgRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 PPL to BPA-P SNX SumrRtn	91.6	91.5	0	0	0	0	0	0	0	0	0	0	0	0	15.3
10 Total Intra-Regional Transfers	121	323	226	231	224	137	145	145	41.9	51.9	43.4	47.6	47.7	34.4	135
Intra-Regional Contracts Out															
11 Federal Entities	9.00	215	215	215	215	110	110	110	9.00	9.00	9.00	9.00	9.00	9.00	93.6
12 Investor Owned Utilities	112	108	11.1	16.2	8.96	26.5	34.5	34.5	32.9	42.9	34.4	38.6	38.7	25.4	41.1
13 Total Regional Contracts Out	121	323	226	231	224	137	145	145	41.9	51.9	43.4	47.6	47.7	34.4	135
Intra-Regional Contracts In															
14 Federal Entities	121	117	20.1	25.2	18.0	35.5	43.5	43.5	41.9	51.9	43.4	47.6	47.7	34.4	50.1
15 Investor Owned Utilities	0	206	206	206	206	101	101	101	0	0	0	0	0	0	84.6
16 Total Regional Contracts In	121	323	226	231	224	137	145	145	41.9	51.9	43.4	47.6	47.7	34.4	135

Note: Federal Entities Intra-Regional Transfers (In) includes BPA-P to BPA-T Ops Internal Agreement (9 aMW).

Table 2.9.1
Table A-4: Bonneville Power Administration - Power Services: Intra-Regional Transfers
Fiscal Year 2015
2014 Final Rate Case Report Date: 5/15/2013
S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Intra-Regional Transfers															
Contracts	29.4	231	226	231	224	137	145	145	41.9	51.8	43.4	47.6	47.7	34.4	119
1 BPA-P to AVWP Setl WNP3 Del	0	101	101	101	101	50.6	50.5	50.5	0	0	0	0	0	0	41.7
2 BPA-P to BPA-T Ops IntrlAgmt	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
3 BPA-P to PPL SNX SprgDel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 BPA-P to PPL SNX SumrDel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 BPA-P to PSE Ops UBkr Repl	0	3.74	3.92	3.92	4.01	0	0	0	0	0	0	0	0	0	1.28
6 BPA-P to PSE Setl WNP3 Del	0	101	101	101	101	50.6	50.5	50.5	0	0	0	0	0	0	41.7
7 Other Entities to BPA-P	20.4	17.0	11.1	16.2	8.96	26.5	34.5	34.5	32.9	42.8	34.4	38.6	38.7	25.4	25.8
8 PPL to BPA-P SNX SprgRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 PPL to BPA-P SNX SumrRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 Total Intra-Regional Transfers	29.4	231	226	231	224	137	145	145	41.9	51.8	43.4	47.6	47.7	34.4	119
Intra-Regional Contracts Out															
11 Federal Entities	9.00	214	215	215	215	110	110	110	9.00	9.00	9.00	9.00	9.00	9.00	93.6
12 Investor Owned Utilities	20.4	17.0	11.1	16.2	8.96	26.5	34.5	34.5	32.9	42.8	34.4	38.6	38.7	25.4	25.8
13 Total Regional Contracts Out	29.4	231	226	231	224	137	145	145	41.9	51.8	43.4	47.6	47.7	34.4	119
Intra-Regional Contracts In															
14 Federal Entities	29.4	26.0	20.1	25.2	18.0	35.5	43.5	43.5	41.9	51.8	43.4	47.6	47.7	34.4	34.8
15 Investor Owned Utilities	0	205	206	206	206	101	101	101	0	0	0	0	0	0	84.6
16 Total Regional Contracts In	29.4	231	226	231	224	137	145	145	41.9	51.8	43.4	47.6	47.7	34.4	119

Note: Federal Entities Intra-Regional Transfers (In) includes BPA-P to BPA-T Ops Internal Agreement (9 aMW).

Table 2.9.2
Table A-4: Bonneville Power Administration - Power Services: Intra-Regional Transfers
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Intra-Regional Transfers															
Contracts	52098	117457	78266	85029	75592	50945	27218	27218	17282	19815	16966	9724	9724	14034	601368
1 BPA-P to AVWP Setl WNP3 Del	0	33988	34044	35427	32696	17726	8864	8864	0	0	0	0	0	0	171608
2 BPA-P to BPA-T Ops IntrlAgmt	3888	3600	3600	3744	3456	3744	1872	1872	3744	3600	3744	1872	1872	3600	44208
3 BPA-P to PPL SNX SprgDel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 BPA-P to PPL SNX SumrDel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 BPA-P to PSE Ops UBkr Repl	0	2800	2800	2912	2688	0	0	0	0	0	0	0	0	0	11200
6 BPA-P to PSE Setl WNP3 Del	0	33988	34044	35427	32696	17726	8864	8864	0	0	0	0	0	0	171608
7 Other Entities to BPA-P	8648	6449	3779	7520	4055	11750	7618	7618	13538	16215	13222	7852	7852	10434	126549
8 PPL to BPA-P SNX SprgRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 PPL to BPA-P SNX SumrRtn	39563	36632	0	0	0	0	0	0	0	0	0	0	0	0	76195
10 Total Intra-Regional Transfers	52098	117457	78266	85029	75592	50945	27218	27218	17282	19815	16966	9724	9724	14034	601368
Intra-Regional Contracts Out															
11 Federal Entities	3888	74376	74487	77509	71537	39196	19600	19600	3744	3600	3744	1872	1872	3600	398624
12 Investor Owned Utilities	48210	43081	3779	7520	4055	11750	7618	7618	13538	16215	13222	7852	7852	10434	202744
13 Total Regional Contracts Out	52098	117457	78266	85029	75592	50945	27218	27218	17282	19815	16966	9724	9724	14034	601368
Intra-Regional Contracts In															
14 Federal Entities	52098	46681	7379	11264	7511	15494	9490	9490	17282	19815	16966	9724	9724	14034	246952
15 Investor Owned Utilities	0	70776	70887	73765	68081	35452	17728	17728	0	0	0	0	0	0	354416
16 Total Regional Contracts In	52098	117457	78266	85029	75592	50945	27218	27218	17282	19815	16966	9724	9724	14034	601368

Note: Federal Entities Intra-Regional Transfers (In) includes BPA-P to BPA-T Ops Internal Agreement.

Table 2.9.2
Table A-4: Bonneville Power Administration - Power Services: Intra-Regional Transfers
Fiscal Year 2015
2014 Final Rate Case Report Date: 5/15/2013
S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Intra-Regional Transfers															
Contracts	12536	77583	81407	85031	75592	50948	27218	27218	16617	20607	16966	9724	9724	14034	525206
1 BPA-P to AVWP Setl WNP3 Del	0	32624	35410	35427	32696	17727	8864	8864	0	0	0	0	0	0	171614
2 BPA-P to BPA-T Ops IntrlAgmt	3888	3456	3744	3744	3456	3744	1872	1872	3600	3744	3744	1872	1872	3600	44208
3 BPA-P to PPL SNX SprgDel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 BPA-P to PPL SNX SumrDel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 BPA-P to PSE Ops UBkr Repl	0	2688	2912	2912	2688	0	0	0	0	0	0	0	0	0	11200
6 BPA-P to PSE Setl WNP3 Del	0	32624	35410	35427	32696	17727	8864	8864	0	0	0	0	0	0	171614
7 Other Entities to BPA-P	8648	6191	3930	7520	4055	11750	7618	7618	13017	16863	13222	7852	7852	10434	126570
8 PPL to BPA-P SNX SprgRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 PPL to BPA-P SNX SumrRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 Total Intra-Regional Transfers	12536	77583	81407	85031	75592	50948	27218	27218	16617	20607	16966	9724	9724	14034	525206
Intra-Regional Contracts Out															
11 Federal Entities	3888	71392	77477	77511	71537	39199	19600	19600	3600	3744	3744	1872	1872	3600	398635
12 Investor Owned Utilities	8648	6191	3930	7520	4055	11750	7618	7618	13017	16863	13222	7852	7852	10434	126570
13 Total Regional Contracts Out	12536	77583	81407	85031	75592	50948	27218	27218	16617	20607	16966	9724	9724	14034	525206
Intra-Regional Contracts In															
14 Federal Entities	12536	9647	7674	11264	7511	15494	9490	9490	16617	20607	16966	9724	9724	14034	170778
15 Investor Owned Utilities	0	67936	73733	73767	68081	35455	17728	17728	0	0	0	0	0	0	354427
16 Total Regional Contracts In	12536	77583	81407	85031	75592	50948	27218	27218	16617	20607	16966	9724	9724	14034	525206

Note: Federal Entities Intra-Regional Transfers (In) includes BPA-P to BPA-T Ops Internal Agreement.

Table 2.9.3
Table A-4: Bonneville Power Administration - Power Services: Intra-Regional Transfers
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Intra-Regional Transfers															
Contracts	37920	115411	89807	86932	74917	50620	24828	24828	13891	17555	15346	7418	8590	10725	578788
1 BPA-P to AVWP Setl WNP3 Del	0	38732	41100	39717	35176	19883	9334	9334	0	0	0	0	0	0	193276
2 BPA-P to BPA-T Ops IntrlAgmt	2808	2889	3096	2952	2592	2943	1368	1368	2952	2880	2952	1368	1584	2880	34632
3 BPA-P to PPL SNX SprgDel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 BPA-P to PPL SNX SumrDel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 BPA-P to PSE Ops UBkr Repl	0	7.06	6.88	6.89	6.91	0	0	0	0	0	0	0	0	0	27.7
6 BPA-P to PSE Setl WNP3 Del	0	38732	41100	39717	35176	19883	9334	9334	0	0	0	0	0	0	193276
7 Other Entities to BPA-P	6539	5745	4504	4539	1967	7911	4792	4792	10939	14675	12394	6050	7006	7845	99697
8 PPL to BPA-P SNX SprgRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 PPL to BPA-P SNX SumrRtn	28573	29306	0	0	0	0	0	0	0	0	0	0	0	0	57879
10 Total Intra-Regional Transfers	37920	115411	89807	86932	74917	50620	24828	24828	13891	17555	15346	7418	8590	10725	578788
Intra-Regional Contracts Out															
11 Federal Entities	2808	80360	85304	82393	72950	42709	20036	20036	2952	2880	2952	1368	1584	2880	421213
12 Investor Owned Utilities	35112	35051	4504	4539	1967	7911	4792	4792	10939	14675	12394	6050	7006	7845	157576
13 Total Regional Contracts Out	37920	115411	89807	86932	74917	50620	24828	24828	13891	17555	15346	7418	8590	10725	578788
Intra-Regional Contracts In															
14 Federal Entities	37920	37940	7600	7491	4559	10854	6160	6160	13891	17555	15346	7418	8590	10725	192208
15 Investor Owned Utilities	0	77471	82208	79441	70358	39766	18668	18668	0	0	0	0	0	0	386581
16 Total Regional Contracts In	37920	115411	89807	86932	74917	50620	24828	24828	13891	17555	15346	7418	8590	10725	578788

Note: Federal Entities Intra-Regional Transfers (In) includes BPA-P to BPA-T Ops Internal Agreement.

Table 2.9.3
Table A-4: Bonneville Power Administration - Power Services: Intra-Regional Transfers
Fiscal Year 2015
2014 Final Rate Case Report Date: 5/15/2013
S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
Intra-Regional Transfers															
Contracts	9347	89265	86720	86930	74917	50617	24828	24828	14569	16677	15346	7418	8590	10725	520778
1 BPA-P to AVWP Setl WNP3 Del	0	40096	39734	39717	35176	19882	9334	9334	0	0	0	0	0	0	193271
2 BPA-P to BPA-T Ops IntrlAgmt	2808	3033	2952	2952	2592	2943	1368	1368	3096	2736	2952	1368	1584	2880	34632
3 BPA-P to PPL SNX SprgDel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 BPA-P to PPL SNX SumrDel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 BPA-P to PSE Ops UBkr Repl	0	7.08	6.89	6.89	6.91	0	0	0	0	0	0	0	0	0	27.8
6 BPA-P to PSE Setl WNP3 Del	0	40096	39734	39717	35176	19882	9334	9334	0	0	0	0	0	0	193271
7 Other Entities to BPA-P	6539	6033	4294	4539	1967	7911	4792	4792	11473	13941	12394	6050	7006	7845	99575
8 PPL to BPA-P SNX SprgRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9 PPL to BPA-P SNX SumrRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 Total Intra-Regional Transfers	9347	89265	86720	86930	74917	50617	24828	24828	14569	16677	15346	7418	8590	10725	520778
Intra-Regional Contracts Out															
11 Federal Entities	2808	83233	82426	82392	72950	42706	20036	20036	3096	2736	2952	1368	1584	2880	421203
12 Investor Owned Utilities	6539	6033	4294	4539	1967	7911	4792	4792	11473	13941	12394	6050	7006	7845	99575
13 Total Regional Contracts Out	9347	89265	86720	86930	74917	50617	24828	24828	14569	16677	15346	7418	8590	10725	520778
Intra-Regional Contracts In															
14 Federal Entities	9347	9066	7246	7491	4559	10854	6160	6160	14569	16677	15346	7418	8590	10725	134207
15 Investor Owned Utilities	0	80200	79474	79440	70358	39763	18668	18668	0	0	0	0	0	0	386571
16 Total Regional Contracts In	9347	89265	86720	86930	74917	50617	24828	24828	14569	16677	15346	7418	8590	10725	520778

Note: Federal Entities Intra-Regional Transfers (In) includes BPA-P to BPA-T Ops Internal Agreement.

This page intentionally left blank.

2.10	Total PNW Regional Hydro Resources By Water Year.....	95
	Table 2.10.1 FY 2014 Total PNW Regional Hydro Resources.....	96
	Table 2.10.2 FY 2015 Total PNW Regional Hydro Resources.....	99

Table 2.10.1
Total Regional Hydro Resources by Water Year
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
1929	10,950.23	12,854.62	12,615.02	12,057.74	11,015.92	10,520.15	10,693.07	12,568.37	15,989.38	16,383.40	12,940.26	11,574.13	10,016.93	10,157.69	12,330.07
1930	9,719.79	11,981.84	12,270.24	10,427.74	11,593.20	10,264.94	11,175.54	14,443.82	14,921.18	12,797.67	14,039.98	11,751.48	10,190.05	10,146.80	11,827.49
1931	9,451.74	12,505.42	11,948.69	10,679.44	9,907.83	9,149.86	11,640.11	8,450.10	15,869.38	13,266.81	12,807.76	11,177.76	10,151.53	9,515.94	11,328.11
1932	8,967.51	11,657.17	12,748.00	9,529.97	8,859.83	13,746.09	20,309.89	20,262.80	21,864.83	21,921.12	14,549.99	14,134.49	11,722.51	10,806.58	14,003.56
1933	10,126.18	12,484.86	13,458.36	17,656.78	16,782.41	15,432.10	16,215.51	15,054.73	19,286.28	23,301.26	19,798.61	15,418.61	15,126.69	10,934.14	15,841.81
1934	12,602.94	18,026.67	22,436.44	24,045.12	22,103.19	18,867.04	21,034.74	19,878.00	20,426.48	17,662.00	14,643.83	11,318.79	10,566.86	9,585.67	17,625.49
1935	9,822.19	12,330.09	14,170.14	16,866.48	15,698.60	13,886.69	15,545.41	14,275.48	18,349.56	17,448.41	16,503.20	14,233.81	11,590.15	9,450.53	14,356.65
1936	9,913.99	12,117.27	12,155.46	11,560.02	10,232.57	11,016.16	12,547.22	18,421.08	21,789.12	20,580.32	14,284.85	11,794.48	10,183.12	9,275.43	13,294.32
1937	9,692.98	12,386.06	12,410.59	10,894.98	9,530.95	10,459.02	11,745.62	10,887.38	16,579.06	15,344.61	13,589.04	11,828.29	9,990.96	10,109.93	11,948.86
1938	9,817.48	12,181.84	14,612.10	16,383.02	14,941.70	15,803.25	18,644.45	21,198.77	21,326.42	18,953.33	16,156.99	12,531.49	11,334.83	10,211.36	15,185.39
1939	10,402.95	12,303.63	12,748.31	13,407.62	12,147.06	12,285.01	16,535.73	16,677.64	19,741.75	15,680.24	13,650.32	10,969.09	9,317.40	9,609.15	13,230.24
1940	10,173.37	12,991.42	14,047.96	12,382.15	12,339.39	14,643.30	16,357.17	17,173.75	18,283.41	16,429.87	12,539.27	10,425.29	9,197.67	9,651.73	13,337.76
1941	10,162.89	11,760.98	13,293.85	11,613.97	11,484.37	10,057.04	11,332.56	12,232.71	16,000.63	15,645.29	13,313.12	11,147.06	10,332.71	10,715.44	12,216.38
1942	9,570.84	12,519.68	15,494.93	15,720.42	12,270.04	10,917.32	11,899.41	16,242.39	17,361.03	20,224.50	17,482.79	13,269.71	11,783.71	11,545.58	14,150.69
1943	10,129.85	12,238.22	14,331.23	17,841.23	16,611.70	16,377.90	22,154.48	22,331.07	21,246.41	22,351.14	16,461.81	14,127.83	12,640.78	10,210.81	16,105.36
1944	10,218.67	12,646.24	12,831.88	12,409.03	11,605.31	10,893.38	10,392.79	12,923.87	14,170.86	11,955.95	12,487.14	10,940.65	9,830.70	9,585.26	11,740.10
1945	9,486.71	12,138.50	11,881.32	11,264.47	10,359.33	9,835.75	10,253.13	8,168.77	19,026.48	20,003.74	12,365.60	12,646.08	10,747.39	10,257.66	12,300.83
1946	10,002.20	12,625.91	14,573.17	16,732.12	15,166.55	15,423.34	19,240.53	21,383.25	21,455.95	20,714.06	17,331.65	15,343.31	13,072.62	10,641.87	15,763.67
1947	10,228.07	13,270.48	19,840.84	20,600.65	20,099.93	17,625.16	17,283.36	16,922.39	20,262.66	20,895.68	17,030.78	13,679.11	11,615.47	10,308.49	16,641.67
1948	15,048.78	16,186.64	16,714.67	20,391.98	16,874.20	14,222.44	16,823.13	19,681.11	22,620.79	23,175.42	18,615.45	16,469.76	15,438.83	11,413.33	17,461.61
1949	10,953.48	13,072.61	14,063.35	16,016.56	12,855.54	17,953.94	18,757.85	20,804.18	22,400.30	20,782.91	13,225.99	11,403.44	9,925.74	9,497.11	15,114.10
1950	10,201.60	13,026.41	14,101.93	20,382.21	18,252.97	19,731.73	20,656.37	19,500.98	20,907.98	22,306.00	18,465.22	16,475.24	15,747.29	11,096.57	17,048.30
1951	12,818.27	17,415.98	20,868.32	22,986.57	22,666.02	21,143.97	21,041.31	20,756.14	21,150.09	20,772.63	18,516.09	16,130.60	14,146.71	11,197.87	18,776.27
1952	14,463.35	14,947.82	17,087.71	19,168.14	17,649.33	16,897.90	20,383.24	21,277.58	22,759.51	21,333.94	16,613.50	14,488.46	12,278.60	9,621.63	17,059.16
1953	9,905.48	12,378.33	12,440.44	14,435.16	16,794.37	13,876.89	15,088.66	15,353.22	20,868.19	23,151.05	18,310.43	14,341.73	12,863.46	10,783.34	15,128.95
1954	10,704.98	13,661.32	16,359.95	19,996.41	18,891.66	17,218.14	18,138.71	17,372.26	20,979.48	21,534.18	20,700.55	16,857.58	16,535.08	15,209.05	17,467.92
1955	11,142.48	15,099.97	15,061.26	14,279.06	11,701.02	10,121.22	13,415.38	13,942.98	18,377.86	22,973.43	20,598.68	16,074.02	13,835.48	10,466.05	14,887.31
1956	11,896.24	16,488.94	20,235.70	23,190.86	21,326.78	19,396.35	20,572.79	22,214.49	22,114.53	23,379.67	19,073.74	16,003.28	14,257.60	10,870.50	18,691.27
1957	11,486.16	13,041.79	16,538.14	16,461.43	13,639.77	16,454.01	20,639.50	17,454.28	23,459.80	23,454.06	15,829.64	13,261.63	11,657.52	10,160.12	16,014.81
1958	10,321.78	12,742.61	13,795.07	17,097.79	16,206.17	15,603.38	17,607.19	18,084.87	22,176.52	21,698.46	15,012.71	12,805.37	11,534.34	10,016.09	15,379.74
1959	10,404.29	14,820.16	18,864.10	21,970.28	20,052.06	17,717.67	18,993.25	17,329.67	19,918.43	22,045.59	17,446.57	15,543.82	15,410.05	15,480.54	17,677.39
1960	16,898.31	18,284.64	18,259.50	18,444.37	15,773.02	15,623.14	22,693.40	19,766.02	19,688.92	20,292.84	16,195.18	14,020.84	11,425.47	9,879.80	16,942.13
1961	10,535.83	13,371.75	14,506.50	17,932.24	17,407.15	17,227.94	19,097.21	14,983.12	20,601.38	22,071.03	15,466.69	12,855.66	11,662.84	9,746.91	15,665.65

Table 2.10.1
Total Regional Hydro Resources by Water Year
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
1962	10,184.61	12,766.96	13,478.30	16,589.88	15,396.32	12,614.82	20,515.90	21,479.91	20,567.50	21,119.72	12,973.85	12,958.14	11,665.21	9,907.08	14,889.17
1963	11,158.07	14,993.95	17,986.26	17,108.42	16,201.50	13,218.29	14,937.71	15,237.34	19,270.55	21,431.80	16,501.86	13,038.97	12,118.96	10,671.47	15,510.39
1964	10,153.36	12,627.68	14,450.76	15,412.48	13,711.83	12,639.61	18,711.84	14,863.78	20,260.78	23,394.39	20,000.29	15,881.45	15,131.32	12,087.07	15,593.42
1965	12,097.67	14,154.56	20,377.31	24,324.41	22,879.58	20,156.38	16,828.60	21,723.70	21,794.44	20,980.43	16,685.49	15,723.70	14,722.45	10,473.82	18,183.15
1966	11,174.97	13,581.65	14,923.78	16,308.53	14,474.56	11,996.12	20,888.32	16,417.47	18,687.04	18,177.58	16,632.41	13,207.00	11,848.11	10,130.85	14,769.11
1967	10,099.97	12,442.73	15,595.31	20,102.42	20,017.04	18,629.43	15,637.58	11,769.82	19,669.75	22,386.36	18,390.11	14,496.36	13,095.39	10,633.68	16,272.00
1968	11,168.30	13,869.07	15,189.32	18,652.12	18,462.95	16,933.45	13,910.68	13,270.78	16,312.97	21,446.25	17,434.93	14,938.43	13,836.68	13,210.71	15,869.11
1969	12,831.82	16,318.17	17,225.68	21,875.27	21,104.22	16,768.96	20,877.97	20,992.20	21,914.64	20,913.12	17,169.01	14,859.98	12,807.95	10,478.93	17,587.49
1970	10,550.93	13,057.28	13,410.19	16,709.91	15,477.43	14,256.39	15,900.21	13,663.41	19,922.43	22,106.22	14,502.44	12,657.00	11,338.75	9,945.47	14,715.72
1971	10,121.78	12,879.16	14,134.89	22,757.28	23,142.00	20,529.61	20,381.34	20,007.73	22,076.74	22,882.00	20,482.49	16,686.05	15,639.44	11,762.50	18,062.77
1972	11,560.77	13,608.51	15,792.92	22,177.44	22,630.99	23,952.56	22,699.26	19,146.62	22,356.62	23,358.92	20,189.20	16,753.16	15,978.76	12,735.44	18,783.24
1973	11,469.32	13,327.61	15,540.52	16,539.91	13,035.29	11,477.63	9,363.11	12,783.60	16,207.04	16,998.19	13,325.29	11,345.02	9,782.05	10,107.79	13,310.44
1974	9,868.92	12,815.82	16,489.26	25,658.72	24,436.25	21,405.15	20,956.70	21,084.48	21,524.13	22,775.21	20,865.24	16,778.70	15,968.16	11,734.89	18,716.65
1975	10,307.76	13,055.87	14,502.03	17,050.54	17,027.44	16,219.08	15,092.68	15,330.34	20,648.06	22,877.10	20,800.61	15,870.98	14,326.10	11,721.03	16,206.18
1976	13,057.09	16,927.01	22,393.31	21,903.52	20,704.95	19,328.11	21,064.91	20,692.30	22,215.43	21,608.51	19,301.35	17,475.85	17,362.20	16,050.38	19,308.68
1977	11,210.01	12,749.89	12,542.45	12,237.28	12,067.22	10,489.04	9,620.68	12,762.27	13,438.63	11,465.74	11,827.48	10,759.11	9,841.01	8,917.32	11,536.01
1978	8,461.35	11,803.13	17,174.29	15,699.19	14,478.48	14,590.81	20,302.37	17,174.41	20,707.78	17,640.63	16,626.46	13,265.29	11,865.98	13,235.02	15,144.35
1979	11,206.85	12,771.21	13,197.50	14,099.45	11,885.95	15,098.80	13,800.86	15,187.98	21,305.33	16,205.85	12,622.93	10,490.27	9,792.26	9,672.00	13,573.97
1980	9,997.83	12,303.62	12,571.33	13,411.12	13,199.18	11,673.40	16,067.91	18,530.52	22,704.10	21,400.88	13,954.56	12,184.93	10,610.77	10,324.48	14,179.94
1981	10,326.39	12,808.43	19,389.43	19,638.39	16,142.80	13,263.53	12,150.92	16,685.39	21,185.46	22,573.41	17,748.42	15,003.81	14,745.92	10,963.82	16,120.51
1982	10,551.02	13,613.54	16,345.58	19,121.96	22,446.56	21,615.57	19,291.13	17,993.27	21,789.65	22,430.01	18,606.66	15,970.93	15,635.86	13,337.86	17,828.93
1983	12,505.76	13,959.77	17,238.26	20,774.85	19,419.52	20,803.95	19,070.04	17,389.09	21,239.26	21,442.42	18,628.34	15,906.81	15,390.67	11,338.03	17,600.85
1984	11,075.98	17,459.22	16,986.02	19,772.36	18,333.88	17,187.03	21,128.41	20,473.60	20,628.02	23,232.27	18,706.28	14,763.84	13,362.19	11,185.71	17,435.58
1985	11,188.12	14,271.85	14,772.77	15,350.95	14,260.91	13,975.21	18,048.82	18,551.88	21,247.60	18,233.38	10,710.19	9,931.69	8,764.60	9,896.26	14,285.40
1986	10,511.84	15,628.52	14,863.50	17,673.56	18,083.47	23,184.94	20,067.22	19,461.60	19,122.89	20,710.35	14,740.17	12,821.78	11,025.91	10,104.68	16,339.74
1987	10,157.15	13,064.07	15,064.39	13,977.64	11,122.96	14,027.19	13,360.82	14,666.55	19,790.85	16,515.92	12,900.52	10,048.38	8,654.41	9,624.97	13,316.73
1988	9,457.67	11,971.82	11,851.56	11,393.99	9,861.88	10,434.81	11,619.92	14,826.76	16,286.36	16,578.18	14,165.22	10,824.68	9,834.46	9,794.20	12,121.16
1989	9,211.65	11,957.86	13,432.19	13,415.02	11,311.43	12,778.61	17,794.60	20,586.77	19,849.63	17,256.95	13,196.55	11,441.53	9,934.84	9,928.50	13,522.41
1990	9,735.59	13,512.64	15,186.04	18,275.18	17,617.88	16,054.56	16,811.27	20,775.43	19,400.22	20,615.55	16,225.42	14,605.68	12,939.65	10,426.66	15,783.42
1991	9,617.91	17,281.95	17,171.93	18,698.98	19,775.51	17,034.02	18,481.06	17,061.35	20,299.18	20,129.05	18,838.77	15,505.98	14,887.40	10,326.35	16,825.35
1992	9,662.89	12,705.85	12,754.90	12,731.51	11,947.88	11,651.84	12,014.45	13,232.79	17,536.97	15,116.35	11,688.17	9,868.32	8,792.66	9,490.56	12,269.04
1993	9,417.71	12,146.34	12,500.55	10,825.04	9,709.81	12,445.32	13,303.19	15,252.98	19,386.81	18,126.62	15,093.44	12,615.60	10,976.25	10,305.83	13,019.61
1994	9,373.55	12,759.48	12,678.06	11,767.65	9,621.92	10,724.32	11,191.38	14,430.56	17,762.45	16,576.61	13,545.55	11,079.96	9,493.94	9,864.41	12,326.97

Table 2.10.1
Total Regional Hydro Resources by Water Year
Fiscal Year 2014

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
1995	9,194.32	11,758.75	12,512.94	13,459.34	16,070.84	16,682.18	17,488.24	14,835.46	18,466.63	21,364.58	15,400.78	12,929.67	11,461.42	11,263.85	14,522.68
1996	11,374.96	19,084.38	24,114.38	24,952.31	23,810.29	22,964.09	20,160.86	22,489.48	21,540.56	22,145.65	19,275.46	15,784.37	14,994.03	10,362.00	19,675.58
1997	10,576.00	13,738.62	17,117.87	24,671.81	24,288.37	23,479.23	20,840.30	22,569.91	22,368.49	23,479.78	20,280.47	16,449.64	15,890.07	13,386.14	19,241.79
1998	15,895.36	16,013.61	16,318.22	16,418.33	15,973.74	14,405.42	15,166.17	16,913.96	22,734.82	22,873.30	16,396.69	14,186.59	11,656.93	10,419.61	16,367.87
1999	10,162.05	12,568.61	16,372.76	21,738.40	21,189.26	20,227.69	18,563.73	19,727.72	21,192.31	23,400.25	20,071.91	17,101.66	16,248.93	12,000.72	17,878.54
2000	10,770.42	17,641.52	18,301.74	17,893.10	16,487.89	15,659.83	20,364.17	21,437.36	19,319.12	18,082.66	15,585.51	13,637.56	10,771.05	9,908.51	16,049.50
2001	10,165.79	12,268.13	12,334.86	11,887.23	11,375.75	10,347.96	9,951.96	13,107.56	14,858.47	10,762.22	12,390.08	10,334.79	9,435.21	9,091.59	11,412.75
2002	8,025.65	11,481.79	12,508.55	12,707.32	12,014.74	11,147.09	17,849.65	19,106.53	17,627.68	21,365.45	18,512.21	14,740.87	12,425.95	10,177.11	13,966.61
2003	9,387.28	12,573.20	12,488.85	12,319.81	11,054.19	14,896.08	16,102.02	15,610.50	17,708.26	20,130.81	12,807.46	10,425.08	8,772.66	9,680.87	13,208.86
2004	10,114.45	12,576.01	14,119.87	12,893.78	11,128.84	11,620.96	14,616.38	15,818.02	18,619.82	18,104.16	13,616.16	11,198.27	10,671.79	10,797.23	13,319.85
2005	10,642.27	12,793.48	15,396.25	15,859.08	13,436.50	11,978.97	11,793.47	13,845.35	18,749.58	18,438.14	13,843.84	11,784.62	9,901.14	9,844.88	13,722.99
2006	9,337.29	12,523.37	14,268.99	19,121.01	17,486.36	15,979.24	21,280.97	20,827.77	22,200.79	21,038.14	15,177.03	12,070.40	10,788.18	9,687.72	15,755.79
2007	9,385.20	14,052.16	14,631.04	17,587.09	13,809.44	19,255.40	17,936.65	16,696.49	19,427.62	17,539.17	15,845.39	12,195.96	9,561.52	9,663.13	14,957.77
2008	9,743.27	12,072.46	13,187.64	13,801.81	11,536.36	13,318.45	14,310.33	12,494.88	21,530.19	23,529.96	17,428.94	14,093.30	12,313.33	10,025.27	14,415.36

Table 2.10.2
Total Regional Hydro Resources by Water Year
Fiscal Year 2015
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
1929	10,732.30	12,850.65	12,623.11	12,098.86	11,506.91	10,605.95	10,720.03	13,046.39	15,282.07	16,023.16	11,710.94	11,354.81	10,457.66	9,782.61	12,166.50
1930	9,757.36	12,161.40	12,398.48	11,657.39	12,061.46	10,667.01	11,628.72	14,459.53	14,829.89	11,574.42	13,852.88	11,416.75	10,237.08	9,639.21	11,872.48
1931	9,634.14	12,329.32	12,299.91	11,064.75	9,416.04	10,077.38	11,852.48	10,669.72	15,995.79	13,350.52	12,307.91	11,524.67	9,722.43	9,384.13	11,492.33
1932	9,022.95	11,698.71	12,955.06	9,706.37	9,196.44	13,749.71	20,389.79	20,126.90	21,691.53	21,840.42	14,456.33	13,874.12	11,579.57	10,202.61	13,972.17
1933	10,178.71	12,463.77	14,275.95	17,598.60	16,804.28	15,536.73	16,209.51	14,970.93	19,317.98	23,127.56	19,811.11	15,395.18	15,152.18	10,598.11	15,877.91
1934	12,371.40	18,017.01	22,560.37	24,037.75	22,107.35	18,914.54	20,775.63	19,646.10	20,143.18	17,511.25	14,388.20	10,959.17	10,235.23	9,320.91	17,489.86
1935	9,978.46	12,016.86	15,076.11	16,899.93	16,523.31	15,429.54	14,095.35	14,180.51	18,584.26	17,305.18	16,804.02	14,571.48	12,056.02	9,602.91	14,635.09
1936	9,619.34	12,123.57	12,131.02	11,637.99	10,726.25	11,379.59	13,358.96	18,560.14	21,295.36	20,230.22	13,954.53	11,810.49	10,110.57	9,471.52	13,296.96
1937	9,512.66	12,209.07	12,386.47	11,582.82	9,709.56	10,457.71	11,542.39	10,797.86	15,914.01	14,598.73	12,966.63	12,240.39	10,304.16	9,733.89	11,806.02
1938	10,000.46	12,147.04	15,742.51	16,018.56	14,641.25	16,465.94	17,635.35	21,087.87	21,055.12	19,761.63	15,695.76	12,421.63	10,792.68	9,946.47	15,204.42
1939	10,322.23	12,288.65	12,752.98	13,919.89	13,181.42	12,961.78	15,214.30	16,730.92	19,528.45	14,322.54	13,250.80	10,859.29	9,813.79	9,757.76	13,216.52
1940	10,174.81	12,430.54	15,076.35	13,341.85	11,895.93	17,634.81	15,981.96	15,141.61	17,619.11	14,437.96	12,605.97	10,728.58	9,442.25	9,429.58	13,371.81
1941	10,001.64	11,568.14	14,308.73	11,669.20	11,712.08	10,912.00	11,522.15	12,230.20	15,972.81	13,927.26	13,520.34	11,061.20	9,733.23	8,836.88	12,065.19
1942	10,118.20	13,296.14	15,579.37	15,209.98	13,716.57	13,251.12	13,008.55	16,043.74	17,127.68	18,291.05	17,351.35	13,269.65	11,490.50	10,817.12	14,308.60
1943	10,241.95	12,217.15	14,792.47	17,534.73	17,425.15	16,722.93	21,786.39	21,894.17	20,866.11	22,236.44	16,459.91	13,848.37	12,727.26	10,529.40	16,161.47
1944	9,699.15	12,402.38	12,675.87	12,423.88	11,890.46	11,232.19	10,380.35	13,701.75	13,412.62	11,388.46	12,106.89	10,605.97	9,545.10	8,833.84	11,514.61
1945	9,544.84	11,805.07	11,877.17	11,609.71	11,280.78	10,657.61	10,610.90	8,172.79	18,995.79	19,994.31	12,159.00	12,397.83	10,927.76	10,159.06	12,431.23
1946	9,820.44	12,155.56	15,663.99	16,714.25	15,391.20	15,293.25	19,116.43	21,237.35	21,208.65	20,744.36	17,327.78	15,043.56	13,120.51	10,298.46	15,738.47
1947	9,912.49	13,415.74	20,147.28	19,896.59	19,515.03	18,670.66	17,373.75	16,795.79	20,228.36	20,864.98	17,201.88	14,186.50	11,561.58	10,130.91	16,648.36
1948	14,757.75	16,174.05	17,055.22	20,386.46	17,157.92	14,618.65	16,875.03	19,655.22	22,081.49	22,941.72	18,752.55	15,936.34	15,780.24	11,853.80	17,496.64
1949	10,699.70	13,060.44	14,428.79	15,707.29	13,949.68	17,975.45	18,786.75	20,112.28	21,665.00	20,855.32	13,012.32	11,457.49	10,019.46	9,592.24	15,094.33
1950	10,005.07	12,719.23	14,794.61	20,027.73	19,538.75	19,549.23	20,630.28	19,268.08	20,731.69	22,091.30	18,601.32	16,638.99	15,456.66	10,903.21	17,064.60
1951	12,478.60	17,373.78	21,133.78	23,152.83	23,313.69	20,539.47	20,788.21	20,586.24	20,819.79	20,107.92	18,799.19	15,668.96	14,712.24	10,987.77	18,691.55
1952	14,111.63	14,935.91	17,429.39	19,168.14	17,295.70	16,897.90	20,224.14	21,689.68	22,253.21	21,336.25	16,474.67	13,854.09	11,444.28	9,835.99	16,940.97
1953	9,568.28	11,836.58	12,502.44	17,116.37	15,194.78	14,297.68	15,088.04	15,143.16	20,638.62	22,891.36	18,412.53	13,433.46	12,361.74	10,581.62	15,084.96
1954	10,389.36	13,621.75	16,708.35	19,459.61	18,699.31	17,254.74	18,068.61	17,402.54	20,550.19	21,395.48	20,714.65	16,882.93	16,560.43	14,925.90	17,340.78
1955	10,891.15	15,088.09	15,421.15	14,303.35	13,160.63	11,547.36	14,363.14	13,945.87	18,008.56	22,509.73	20,547.79	15,921.49	13,981.38	10,249.94	15,078.18
1956	11,540.96	16,474.44	20,514.47	23,176.12	21,260.61	19,255.86	20,354.69	21,973.59	21,692.23	23,097.97	19,236.84	15,862.51	14,410.43	10,686.09	18,587.06
1957	11,101.09	13,029.69	16,881.62	16,655.07	14,190.86	16,429.14	20,802.40	16,793.38	22,810.50	23,332.36	16,182.69	13,699.46	11,251.32	9,851.76	15,986.11
1958	10,145.90	12,701.14	14,097.20	17,417.14	16,521.19	15,673.90	17,692.09	18,100.97	21,559.22	21,485.75	15,070.87	11,894.07	11,494.51	9,836.09	15,329.51
1959	10,437.60	14,428.96	19,097.18	21,965.03	20,033.14	17,672.08	18,990.25	17,339.76	19,861.13	21,893.89	17,237.67	15,569.17	15,435.40	15,197.24	17,606.14
1960	16,684.32	18,274.91	18,529.54	18,444.37	15,627.31	15,649.49	22,544.31	19,639.12	19,564.62	20,213.14	16,451.84	13,732.25	11,838.25	9,721.05	16,923.68
1961	10,334.48	13,319.28	14,842.35	17,914.80	18,087.70	17,020.32	18,145.87	14,920.97	20,328.08	21,914.33	15,815.78	13,566.01	11,430.94	9,876.54	15,687.46

Table 2.10.2
Total Regional Hydro Resources by Water Year
Fiscal Year 2015
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
1962	9,821.92	12,627.65	13,853.87	16,567.91	15,567.26	11,998.06	21,194.79	21,148.01	20,333.20	20,965.02	13,086.08	13,133.48	11,366.63	10,006.04	14,831.16
1963	10,777.05	14,719.30	18,303.04	18,179.89	16,885.32	14,740.86	14,421.50	14,740.83	18,714.25	19,016.10	16,447.25	13,432.63	11,834.04	10,436.80	15,447.27
1964	9,919.31	12,585.03	14,696.66	15,371.31	13,555.49	12,378.30	18,798.80	14,770.45	20,022.48	23,221.69	20,106.39	15,906.80	15,160.45	11,758.04	15,502.85
1965	11,849.09	14,142.50	20,692.39	24,419.62	22,799.39	19,788.88	16,526.50	21,672.80	21,429.14	20,948.03	17,478.59	15,749.05	14,728.88	10,255.07	18,161.07
1966	10,922.83	13,510.27	15,264.35	16,250.48	14,453.42	12,643.24	20,848.22	16,659.57	17,872.74	18,127.59	16,638.53	13,972.73	11,800.78	10,348.28	14,801.90
1967	9,772.80	12,248.65	15,716.83	20,492.02	19,524.45	18,006.92	15,637.17	11,975.32	19,359.45	22,387.66	18,601.21	14,944.61	13,095.39	10,433.06	16,183.11
1968	10,828.59	13,817.43	15,550.27	19,230.64	17,478.95	17,294.18	13,911.59	13,269.88	16,304.67	21,302.56	17,398.31	15,053.96	13,835.74	12,904.99	15,834.86
1969	12,583.17	16,306.40	17,566.20	21,864.41	21,022.70	16,799.46	20,440.87	20,603.30	21,521.34	20,845.42	17,378.11	14,465.73	12,848.34	10,239.48	17,500.47
1970	10,354.05	13,040.78	13,721.57	17,467.40	15,966.25	14,703.45	15,933.87	12,705.19	19,249.13	21,915.52	14,959.60	12,019.27	10,714.88	10,067.51	14,748.28
1971	9,766.18	12,690.32	14,337.47	22,684.79	23,122.27	20,499.12	20,218.24	20,164.83	21,962.44	22,894.30	20,377.59	16,711.16	15,664.79	11,572.03	17,992.61
1972	11,197.07	13,574.05	16,149.80	22,162.27	22,630.99	23,484.06	22,465.16	18,966.72	22,052.32	23,211.22	20,240.30	16,778.51	16,004.11	12,553.95	18,675.38
1973	11,125.11	13,277.25	15,906.59	16,819.19	13,920.40	11,423.01	9,363.11	12,783.60	16,169.74	14,530.28	13,057.35	11,396.32	9,671.39	9,805.46	13,138.78
1974	9,888.66	12,126.91	18,006.50	25,661.57	24,408.56	21,551.65	20,482.60	20,583.57	21,121.83	22,494.51	20,846.34	16,576.31	15,995.87	11,993.45	18,716.27
1975	10,004.99	12,971.95	14,841.90	16,943.38	17,084.26	15,937.82	15,091.85	15,329.34	20,282.76	22,529.39	20,942.71	16,069.86	14,617.13	11,387.78	16,119.75
1976	12,804.97	16,915.96	22,656.07	21,903.34	20,654.44	19,223.61	21,008.81	20,586.40	21,887.13	21,239.81	19,686.45	17,501.24	17,387.35	15,768.59	19,242.77
1977	10,955.81	12,744.37	12,544.18	12,255.11	12,162.69	10,944.53	10,426.13	12,413.55	13,472.32	9,854.63	11,860.76	10,822.48	9,391.67	8,215.44	11,378.84
1978	8,769.00	11,455.08	16,896.57	16,440.26	15,666.01	15,230.42	20,236.27	17,162.51	20,400.48	17,644.93	17,478.94	13,273.50	11,739.44	11,954.84	15,259.55
1979	10,957.22	12,770.89	13,800.42	14,896.11	12,097.07	15,238.53	13,800.68	15,174.83	20,357.03	15,515.40	12,103.55	10,581.41	9,912.51	9,650.63	13,524.97
1980	9,964.38	12,282.84	12,599.06	14,508.07	13,689.04	11,605.45	16,150.81	18,592.63	22,478.80	21,349.18	14,015.46	11,956.86	10,317.91	10,131.27	14,252.38
1981	10,157.24	12,807.71	19,499.26	19,534.72	18,214.10	15,311.85	12,000.61	15,271.32	19,092.16	22,320.71	17,723.52	15,029.16	14,771.15	11,096.32	16,187.31
1982	10,261.30	13,510.06	16,688.91	19,104.54	22,668.52	21,749.07	19,405.03	17,939.37	21,358.35	22,310.31	19,085.76	16,000.07	15,663.76	13,032.37	17,825.84
1983	12,255.44	13,947.64	17,581.20	20,732.05	19,504.53	20,614.45	19,027.94	16,789.19	20,769.96	20,989.72	19,274.45	15,938.37	15,826.88	11,003.01	17,538.84
1984	10,820.76	17,447.98	17,329.13	19,689.23	18,504.90	17,187.03	21,068.31	19,780.70	20,516.72	22,896.57	18,707.38	16,003.94	13,737.74	11,067.42	17,437.98
1985	10,948.90	14,302.41	15,124.74	15,297.30	14,203.20	13,922.03	18,039.72	18,369.98	20,955.30	17,546.68	10,735.98	9,877.12	9,201.89	9,569.67	14,187.16
1986	11,641.03	15,839.14	15,041.91	17,561.47	18,107.20	22,783.44	19,952.12	19,411.70	19,102.59	20,648.64	14,782.17	12,821.78	10,877.31	9,981.71	16,399.75
1987	9,868.82	13,028.29	15,372.83	14,878.94	11,957.51	15,090.83	13,360.82	14,672.67	18,549.55	16,260.22	12,473.87	10,360.46	9,249.73	9,606.60	13,421.27
1988	9,457.64	11,733.92	11,771.04	12,083.67	9,861.13	11,010.37	12,129.85	14,724.58	16,050.26	14,155.27	14,170.24	11,602.53	10,129.61	9,404.64	12,012.94
1989	9,453.58	11,754.41	14,427.02	12,624.61	11,493.62	13,236.69	18,063.29	20,663.52	19,885.63	17,250.22	12,487.20	11,301.42	10,421.50	9,869.25	13,563.56
1990	9,705.71	13,575.29	16,264.80	18,457.40	17,069.74	15,995.39	16,500.93	20,698.21	19,482.16	20,644.46	15,917.70	14,233.73	12,708.85	10,526.40	15,796.13
1991	9,232.12	17,111.95	17,455.50	19,297.29	18,703.17	16,811.55	18,380.66	16,296.25	20,146.88	20,431.37	19,011.87	15,531.33	14,912.04	10,394.41	16,751.13
1992	9,260.78	12,641.58	13,106.38	13,873.08	11,993.84	13,892.19	11,809.78	12,855.50	15,219.67	12,581.45	11,621.19	10,087.47	9,082.96	8,888.36	12,087.42
1993	9,556.35	11,726.40	12,823.54	11,764.07	9,517.30	12,481.65	13,341.04	15,335.30	19,373.53	18,153.65	14,226.58	12,886.00	11,370.06	9,831.57	13,014.12
1994	9,499.36	12,527.85	12,971.99	11,919.46	11,290.56	10,889.53	11,290.94	14,550.06	17,832.07	16,067.36	13,390.01	11,125.70	9,613.34	9,685.77	12,450.75

Table 2.10.2
Total Regional Hydro Resources by Water Year
Fiscal Year 2015

2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
1995	9,255.82	11,327.55	13,885.17	13,410.98	17,725.52	17,679.84	15,229.11	13,944.99	17,956.34	20,893.88	15,812.40	12,729.85	11,299.79	10,225.24	14,539.24
1996	12,027.72	19,039.39	24,146.22	24,952.30	23,852.79	22,698.59	20,033.76	22,012.58	21,040.26	22,111.95	19,316.56	15,616.23	15,141.92	10,402.70	19,647.09
1997	10,243.74	13,698.71	17,460.82	24,728.12	24,131.45	23,323.73	20,609.20	22,284.01	22,025.19	23,296.08	20,387.57	16,461.10	16,040.78	13,139.61	19,149.38
1998	15,680.18	16,001.77	16,677.27	16,566.31	16,381.85	14,629.57	14,719.76	16,194.42	21,699.52	22,461.60	16,611.79	14,854.65	12,892.92	10,229.43	16,356.59
1999	9,945.88	12,408.53	16,803.01	21,856.21	20,992.73	20,611.97	18,541.63	19,059.82	20,927.01	23,299.54	20,145.01	16,922.43	16,213.71	11,793.46	17,832.16
2000	10,627.74	17,539.33	18,599.33	17,903.21	16,660.42	15,486.29	20,218.07	21,179.45	18,754.82	18,316.96	16,133.76	13,662.76	10,552.14	9,693.13	16,028.65
2001	9,971.90	12,210.70	12,353.90	11,924.40	11,442.81	11,255.27	10,600.47	13,319.75	14,656.89	9,409.82	11,986.69	10,331.95	9,201.04	7,803.78	11,235.03
2002	8,426.34	11,084.08	14,031.97	13,399.16	12,305.92	11,853.86	16,364.56	19,092.29	17,674.62	21,300.75	18,513.32	14,288.29	11,720.17	10,194.84	14,127.40
2003	8,991.18	12,218.14	12,479.11	12,617.28	11,473.77	15,710.87	16,022.73	15,623.46	17,655.36	20,144.46	12,040.69	10,006.45	9,050.53	9,296.26	13,163.87
2004	10,148.88	12,144.99	15,359.10	12,954.83	11,113.83	14,049.32	14,518.73	14,583.01	17,720.52	18,024.46	12,382.65	10,858.70	10,444.78	11,468.64	13,391.37
2005	10,452.72	12,781.41	15,754.17	15,837.67	14,601.47	12,071.72	11,792.94	13,845.35	18,459.29	17,935.43	13,090.34	12,072.17	10,195.08	9,972.55	13,736.91
2006	9,604.50	12,035.20	14,656.15	19,100.68	17,420.21	16,015.29	20,731.92	20,665.87	21,777.48	21,138.44	14,738.48	13,082.62	9,803.39	9,846.35	15,684.74
2007	8,801.90	13,826.70	15,342.13	17,758.68	14,272.85	19,290.18	17,930.74	16,619.17	19,197.32	17,407.48	15,845.31	11,966.68	9,945.92	9,120.78	14,932.18
2008	9,853.92	11,716.12	13,981.68	14,028.18	13,065.17	12,397.41	14,523.76	12,163.58	21,073.84	23,332.22	17,479.00	13,628.25	12,565.49	9,820.67	14,440.78

This page intentionally left blank.

2.11	Estimated Purchase MW Eligible For 4(h)(10)C Credit.....	103
	Table 2.11.1 FY 2014 - 4(h)(10)C Power Purchase Amount	104
	Table 2.11.2 FY 2015 - 4(h)(10)C Power Purchase Amount	107

Table 2.11.1
4(h)(10)(C) Power Purchase Amounts
Fiscal Year 2014

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
1929	941	353	1,392	2,071	1,934	1,673	888	-56	-2	0	0	-133	-63	461	757
1930	1,228	480	1,445	3,774	1,546	1,689	326	0	24	1,245	0	-72	-58	-27	959
1931	989	158	1,985	4,034	2,465	2,162	465	2,497	-121	449	0	0	0	1,026	1,214
1932	800	574	1,644	4,041	3,914	1,268	0	0	0	0	0	0	0	-7	1,005
1933	1,102	1,047	1,212	0	0	0	0	0	0	0	0	0	0	490	323
1934	94	0	0	0	0	0	0	0	0	-596	-5	-51	0	93	-36
1935	847	1,263	1,025	179	0	0	0	1,120	0	0	0	0	0	1,273	429
1936	1,085	368	1,397	3,210	2,668	1,346	0	0	0	0	0	0	0	1,133	926
1937	1,156	0	1,239	3,215	2,742	1,546	354	1,000	-87	-204	-240	-323	-135	-85	803
1938	986	1,215	645	638	0	0	0	0	0	0	-303	-143	-127	585	303
1939	934	560	1,533	1,804	1,602	883	0	0	0	-449	0	0	158	879	649
1940	808	0	534	2,109	1,701	0	0	0	0	-55	0	667	223	-68	451
1941	504	806	1,451	2,855	1,241	1,610	640	0	0	0	0	0	0	-38	730
1942	795	51	0	0	2,048	2,815	44	0	0	0	0	0	0	-791	405
1943	644	1,222	822	0	0	0	0	0	0	0	0	0	0	918	300
1944	1,188	348	1,479	1,901	1,726	1,948	832	0	597	2,031	0	0	0	489	1,006
1945	550	173	2,137	3,256	3,447	2,157	95	2,743	0	0	-132	-1,035	-641	-350	973
1946	820	643	1,029	464	0	0	0	0	0	0	0	0	0	389	281
1947	1,254	504	0	0	0	0	0	0	0	0	0	0	0	682	204
1948	0	0	0	0	0	0	0	0	0	0	0	0	0	101	8
1949	850	472	664	0	1,224	0	0	0	0	0	-407	-178	-226	324	236
1950	862	630	896	0	0	0	0	0	0	0	0	0	0	438	237
1951	181	0	0	0	0	0	0	0	0	0	0	0	0	466	54
1952	0	0	0	0	0	0	0	0	0	0	0	0	0	1,277	105
1953	1,238	369	1,408	1,956	0	0	0	0	0	0	0	0	0	610	471
1954	948	167	0	0	0	0	0	0	0	0	0	0	0	0	94
1955	819	0	60	1,113	1,965	1,866	-199	0	0	0	0	0	0	837	539
1956	709	0	0	0	0	0	0	0	0	0	0	0	0	620	111
1957	714	531	0	0	1,163	0	0	0	0	0	0	-29	-82	656	243
1958	1,059	278	1,046	0	0	0	0	0	0	0	-125	-174	0	787	249
1959	1,077	0	0	0	0	0	0	0	0	0	0	0	0	0	91
1960	0	0	0	0	0	0	0	0	0	0	-279	0	0	993	58
1961	865	417	372	0	0	0	0	0	0	0	-346	-212	0	838	170
1962	1,112	372	1,186	0	0	408	0	0	0	0	-28	0	0	1,044	344

Table 2.11.1
4(h)(10)(C) Power Purchase Amounts
Fiscal Year 2014

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
1963	614	0	0	0	0	150	0	0	0	0	0	0	0	408	98
1964	1,148	804	431	672	639	150	0	0	0	0	0	0	0	0	319
1965	84	0	0	0	0	0	0	0	0	0	0	0	0	872	79
1966	648	0	0	0	0	1,275	0	0	0	0	0	0	0	778	227
1967	1,073	651	82	0	0	0	0	884	0	0	0	0	0	501	229
1968	843	0	4	0	0	0	0	-398	0	0	0	0	0	0	56
1969	0	0	0	0	0	0	0	0	0	0	-216	0	0	695	39
1970	1,034	162	1,181	0	0	0	0	-454	0	0	0	-172	0	953	254
1971	1,098	542	814	0	0	0	0	0	0	0	0	0	0	24	209
1972	666	346	0	0	0	0	0	0	0	0	0	0	0	0	85
1973	692	204	252	0	1,074	967	1,731	-198	0	0	-123	152	249	0	331
1974	903	778	220	0	0	0	0	0	0	0	0	0	0	0	159
1975	1,227	364	872	0	0	0	0	0	0	0	0	0	0	0	208
1976	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1977	607	242	1,316	1,933	1,226	1,513	1,135	-53	1,029	2,316	0	-244	-45	756	942
1978	1,389	929	-156	233	525	701	0	0	0	0	0	-88	0	0	297
1979	213	609	1,357	1,515	1,419	0	0	407	0	-548	-190	188	-41	400	415
1980	810	665	1,669	2,536	711	1,436	0	0	0	0	-369	-277	-271	173	617
1981	812	356	0	0	0	83	-753	0	0	0	0	0	0	264	96
1982	1,025	0	0	0	0	0	0	0	0	0	0	0	0	0	87
1983	1	0	0	0	0	0	0	0	0	0	0	0	0	158	13
1984	859	0	0	0	0	0	0	0	0	0	0	0	0	211	90
1985	872	6	175	164	91	-5	0	0	0	0	385	627	464	389	221
1986	1,094	0	158	68	0	0	0	0	0	0	-190	0	0	894	169
1987	1,204	596	15	1,252	2,352	-316	0	0	0	-292	-92	409	310	124	421
1988	995	920	2,033	4,019	2,143	2,163	-202	830	-162	-236	-281	-171	-116	-4	979
1989	1,107	1,092	1,009	2,791	1,213	598	0	0	0	-593	-444	-84	19	281	584
1990	1,025	656	333	0	0	0	0	0	0	0	0	0	0	879	242
1991	1,392	0	0	0	0	0	0	0	0	0	0	0	0	780	182
1992	1,208	421	1,441	1,871	1,940	867	-500	-148	0	0	0	749	285	-274	635
1993	840	300	1,747	3,883	2,248	347	61	-84	0	0	0	-402	0	-160	745
1994	1,150	93	1,287	3,785	2,213	1,798	45	1,223	0	-266	0	-117	-133	-229	859
1995	1,076	1,091	1,633	2,870	0	0	0	615	0	0	0	0	0	-39	586
1996	511	0	0	0	0	0	0	0	0	0	0	0	0	935	120

Table 2.11.1
4(h)(10)(C) Power Purchase Amounts
Fiscal Year 2014

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
1997	1,053	132	0	0	0	0	0	0	0	0	0	0	0	0	100
1998	0	0	0	277	0	0	0	0	0	0	0	0	0	791	89
1999	1,146	904	0	0	0	0	0	0	0	0	0	0	0	0	172
2000	877	0	0	0	0	0	0	0	0	0	0	0	-230	963	144
2001	1,088	363	1,371	1,939	1,494	1,806	956	0	48	2,741	-3	-285	-150	926	998
2002	1,544	621	1,609	2,180	1,607	2,321	0	0	0	0	0	-363	0	463	848
2003	1,308	0	1,256	2,896	2,130	0	0	0	0	0	-151	170	383	307	663
2004	603	275	369	2,796	1,610	1,265	0	-539	0	0	-5	-273	0	350	569
2005	798	253	0	0	683	-14	-121	0	0	0	0	-72	0	500	173
2006	1,399	326	455	0	0	0	0	0	0	0	-63	-256	-177	693	218
2007	1,313	195	595	0	564	0	0	0	0	0	-122	-198	19	1,008	287
2008	973	330	1,074	1,334	1,838	-422	-487	175	0	0	0	0	0	946	484
Average	844	353	640	945	739	476	66	120	17	69	-47	-30	-5	409	375
Median	890	313	402	0	0	0	0	0	0	0	0	0	0	404	251

These 4(h)(10)(C) Power Purchase Amounts are used to calculate the credit for power purchase expenses in the Risk Analysis and Mitigation Study, BP-14-E-BPA-04.

Table 2.11.2
4(h)(10)(C) Power Purchase Amounts
Fiscal Year 2015

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
1929	1,097	357	1,384	2,030	1,561	1,596	861	-56	466	0	645	-133	-63	907	862
1930	1,113	297	1,385	2,884	1,208	1,335	4	0	63	2,280	0	52	-58	314	906
1931	690	140	1,714	3,698	2,334	1,608	363	1,070	-121	421	0	0	0	1,109	1,020
1932	769	555	1,503	3,925	3,683	1,266	0	0	0	0	0	0	0	627	1,014
1933	1,017	1,041	655	0	0	0	0	0	0	0	0	0	0	728	287
1934	259	0	0	0	0	0	0	0	0	-596	-5	72	0	645	29
1935	510	1,373	359	153	0	0	0	1,187	0	0	0	0	0	1,400	363
1936	1,197	446	1,334	2,524	2,233	1,322	0	0	0	0	0	0	0	1,305	857
1937	1,227	61	1,220	2,679	2,736	1,594	286	959	-87	225	-240	-345	-135	762	870
1938	653	978	-134	900	0	0	0	0	0	0	-303	-143	-127	831	232
1939	955	560	1,513	1,430	861	412	0	0	0	301	0	1	0	1,117	595
1940	757	0	0	1,365	1,955	0	0	0	0	82	0	377	45	456	392
1941	511	639	570	2,779	1,062	991	499	0	0	296	0	0	0	1,057	678
1942	344	0	0	39	1,024	1,180	0	0	0	0	0	0	0	-618	161
1943	536	1,226	490	0	0	0	0	0	0	0	0	0	0	1,221	288
1944	1,430	432	1,471	1,878	1,497	1,657	833	0	886	2,402	0	0	0	1,515	1,128
1945	352	79	1,459	3,225	2,859	1,615	-105	2,668	0	0	-14	-1,035	-641	68	830
1946	820	640	173	464	0	0	0	0	0	0	0	0	0	715	235
1947	1,444	370	0	0	0	0	0	0	0	0	0	0	0	846	223
1948	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1949	1,030	481	402	0	443	0	0	0	0	0	-407	-216	-287	613	189
1950	904	634	393	0	0	0	0	0	0	0	0	0	0	659	216
1951	376	0	0	0	0	0	0	0	0	0	0	0	0	690	89
1952	0	0	0	0	0	0	0	0	0	0	0	0	0	1,489	122
1953	1,394	677	1,277	0	72	0	0	0	0	0	0	0	0	834	357
1954	1,142	175	0	0	0	0	0	0	0	0	0	0	0	0	111
1955	998	0	0	1,096	912	837	-199	0	0	0	0	0	0	1,082	400
1956	881	0	0	0	0	0	0	0	0	0	0	0	0	841	144
1957	909	540	0	0	761	0	0	0	0	0	0	-29	-82	940	252
1958	1,154	282	829	0	0	0	0	0	0	0	-125	-174	0	952	252
1959	1,036	0	0	0	0	0	0	0	0	0	0	0	0	0	88
1960	0	0	0	0	0	0	0	0	0	0	-279	0	0	1,144	70
1961	1,030	491	111	0	0	0	0	0	0	0	-346	-212	0	1,049	185
1962	1,254	374	832	0	0	844	0	0	0	0	-28	0	0	1,275	382

Table 2.11.2
4(h)(10)(C) Power Purchase Amounts
Fiscal Year 2015

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
1963	723	0	0	0	0	0	0	0	0	0	0	0	0	625	113
1964	1,290	800	237	688	752	339	0	0	0	0	0	0	0	0	340
1965	263	0	0	0	0	0	0	0	0	0	0	0	0	1,094	112
1966	831	0	0	0	0	813	0	0	0	0	0	0	0	961	219
1967	1,212	655	0	0	0	0	0	726	0	0	0	0	0	722	246
1968	1,034	0	0	0	0	0	0	-398	0	0	0	0	0	0	71
1969	77	0	0	0	0	0	0	0	0	0	-216	0	0	893	62
1970	1,159	162	954	0	0	0	0	-441	0	0	0	-172	0	1,115	259
1971	1,276	548	642	0	0	0	0	0	0	0	0	0	0	245	228
1972	862	355	0	0	0	0	0	0	0	0	0	0	0	0	102
1973	882	212	0	0	427	993	1,731	-198	0	581	-123	37	279	462	361
1974	647	1,091	0	0	0	0	0	0	0	0	0	0	0	0	145
1975	1,446	371	605	0	0	0	0	0	0	0	0	0	0	218	223
1976	25	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1977	787	247	1,315	1,915	1,130	1,168	1,205	-53	981	3,214	0	-244	-45	1,778	1,076
1978	951	845	-156	0	0	246	0	0	0	0	0	-88	0	0	154
1979	392	609	926	946	1,262	0	0	420	0	-135	175	126	-41	420	398
1980	834	679	1,652	1,751	364	1,486	0	0	0	0	-369	-277	-271	352	544
1981	891	357	0	0	0	0	-669	0	0	0	0	0	0	255	98
1982	1,159	0	0	0	0	0	0	0	0	0	0	0	0	0	98
1983	180	0	0	0	0	0	0	0	0	0	0	0	0	395	48
1984	1,039	0	0	0	0	0	0	0	0	0	0	0	0	400	121
1985	1,058	15	0	202	132	-5	0	0	0	0	368	664	179	687	241
1986	271	0	9	145	0	0	0	0	0	0	-190	0	0	1,077	108
1987	1,370	607	0	609	1,761	-424	0	0	0	-292	-92	197	-80	760	352
1988	909	807	2,005	3,471	2,143	1,714	-202	924	-162	814	-281	-201	-116	943	1,042
1989	766	848	257	2,962	1,230	308	0	0	0	-593	-26	2	0	633	530
1990	948	488	0	0	0	0	0	0	0	0	0	0	0	1,108	212
1991	1,582	0	0	0	0	0	0	0	0	0	0	0	0	974	214
1992	1,398	429	1,093	1,051	1,911	-183	-429	-148	0	1,256	0	519	73	603	621
1993	519	290	1,435	3,161	2,245	320	17	-84	0	0	0	-402	0	504	680
1994	1,021	82	1,044	3,306	1,158	1,724	0	1,116	0	-266	0	-117	-133	399	744
1995	810	1,078	650	2,709	0	0	0	1,253	0	0	0	0	0	694	551
1996	0	0	0	0	0	0	0	0	0	0	0	0	0	973	80

**Table 2.11.2
4(h)(10)(C) Power Purchase Amounts
Fiscal Year 2015**

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
1997	1,246	142	0	0	0	0	0	0	0	0	0	0	0	0	117
1998	0	0	0	171	0	0	0	0	0	0	0	0	0	1,016	98
1999	1,285	991	0	0	0	0	0	0	0	0	0	0	0	0	191
2000	987	0	0	0	0	0	0	0	0	0	0	0	-208	1,167	171
2001	1,210	370	1,368	1,902	1,434	1,327	1,017	0	133	3,629	-3	-285	-71	2,025	1,136
2002	1,067	538	483	1,695	1,414	1,836	0	0	0	0	0	-363	0	926	645
2003	1,491	0	1,224	2,641	1,832	0	0	0	0	0	-151	462	200	818	678
2004	580	360	-228	2,760	1,626	0	0	262	0	0	348	-36	0	0	457
2005	933	262	0	0	0	-88	-121	0	0	0	0	-72	0	982	166
2006	1,106	333	116	0	0	0	0	0	0	0	-63	-256	-42	1,203	212
2007	1,669	28	3	0	227	0	0	0	0	0	-122	-198	-239	1,576	262
2008	908	402	464	1,174	751	222	-487	398	0	0	0	0	0	1,098	412
Average	861	348	438	804	588	351	58	120	27	170	-23	-31	-23	708	360
Median	921	315	2	0	0	0	0	0	0	0	0	0	0	744	238

These 4(h)(10)(C) Power Purchase Amounts are used to calculate the credit for power purchase expenses in the Risk Analysis and Mitigation Study, BP-14-E-BPA-04.

This page intentionally left blank.

2.12	Federal Tier 1 System Firm Critical Output	111
	Table 2.12.1 Federal Tier 1 System Firm Critical Output Projection.....	112
	Table 2.12.2 Federal System Hydro Generation for T1SFCO Calculation ...	113
	Table 2.12.3 Designated Non-Federally Owned Resources for T1SFCO Calculation.....	114
	Table 2.12.4 Federal Designated BPA Contract Purchases for T1SFCO Calculation.....	115
	Table 2.12.5 Federal Designated BPA System Obligations for T1SFCO Calculation.....	116

Table 2.12.1
Federal Tier 1 System Firm Critical Output Projection - 2-Year Average
2014 RHWM Process for BP-14 Rate Period
2014-2015 Fiscal Years
S103-RC-20121029-123552

1.	T1SFCO Projections Energy in aMW	2014	2015	Average
2.	Total Federal System Hydro Generation (Table 2.12.2)	6,924	6,799	6,862
3.	Total Designated Non-Federally Owned Resources (Table 2.12.3)	1,098	946	1,022
4.	Total Designated BPA Contract Purchases (Table 2.12.4)	204	187	195
5.	Total Designated System Obligations (Table 3.12.5)	-1,029	-1,012	-1,021
6.	<i>Federal Tier 1 System Firm Critical Output</i>	7,197	6,920	7,058

Table 2.12.2
Federal System Hydro Generation for use in the T1SFCO Calculation
2014 RHWM Process for BP-14 Rate Period
PNW Loads and Resources Study

S103-RC-20121029-123552

1.	Regulated Hydro	2014	2015	Average
2.	Albeni Falls	25.0	25.1	25.1
3.	Bonneville Hydro	404.9	394.5	399.7
4.	Chief Joseph Hydro	1,143.1	1,112.4	1,127.7
5.	Dworshak Hydro	142.7	142.7	142.7
6.	Grand Coulee Hydro	1,989.0	1,937.6	1,963.3
7.	Hungry Horse	83.8	83.8	83.8
8.	Ice Harbor Hydro	154.7	154.7	154.7
9.	John Day Hydro	818.1	804.1	811.1
10.	Libby	182.1	182.1	182.1
11.	Little Goose Hydro	175.9	175.9	175.9
12.	Lower Granite Hydro	172.2	172.0	172.1
13.	Lower Monumental Hydro	179.5	179.5	179.5
14.	Mc Nary Hydro	487.9	479.4	483.6
15.	The Dalles Hydro	611.9	602.0	606.9
16.	Independent Hydro			
17.	Anderson Ranch	12.2	12.2	12.2
18.	Big Cliff	9.7	9.7	9.7
19.	Black Canyon	6.2	6.2	6.2
20.	Boise River Diversion	1.2	1.2	1.2
21.	Chandler	6.1	6.1	6.1
22.	Cougar	19.0	19.0	19.0
23.	Cowlitz Falls	26.5	26.5	26.5
24.	Detroit	33.8	33.8	33.8
25.	Dexter	9.4	9.4	9.4
26.	Foster	12.2	12.2	12.2
27.	Green Peter	26.9	26.9	26.9
28.	Green Springs - USBR	7.3	7.3	7.3
29.	Hills Creek	18.0	18.0	18.0
30.	Idaho Falls - City Plant	4.2	4.2	4.2
31.	Idaho Falls - Lower Plants #1 & #2	5.8	5.8	5.8
32.	Idaho Falls - Upper Plant	4.2	4.2	4.2
33.	Lookout Point	35.8	35.8	35.8
34.	Lost Creek	30.1	30.1	30.1
35.	Minidoka	10.7	10.7	10.7
36.	Palisades	67.4	67.4	67.4
37.	Roza	6.9	6.9	6.9
38.	Total Federal System Hydro Generation	6,924.0	6,799.2	6,861.6

Table 2.12.3
Designated Non-Federally Owned Resources for use in the T1SFCO Calculation
2014 RHWM Process for BP-14 Rate Period
PNW Loads and Resources Study
S103-RC-20121029-123552

1.	Project	2014	2015	Average
2.	Ashland Solar Project	0.0	0.0	0.0
3.	Columbia Generating Station	1,030.0	877.6	953.8
4.	Condon Wind Project	9.7	9.7	9.7
5.	Dworshak/Clearwater Small Hydropower	2.6	2.6	2.6
6.	Foote Creek 1	4.0	4.0	4.0
7.	Foote Creek 2	0.5	0.5	0.5
8.	Foote Creek 4	4.4	4.4	4.4
9.	Fourmile Hill Geothermal (Not included)	0.0	0.0	0.0
10.	Georgia-Pacific Paper (Wauna)	19.2	19.2	19.2
11.	Klondike I	6.8	6.8	6.8
12.	Stateline Wind Project	20.7	20.7	20.7
13.	White Bluffs Solar	0.0	0.0	0.0
14.	Total Designated Non-Federally Owned Resources	1,098.0	945.5	1,021.7

Table 2.12.4
Designated BPA Contract Purchases for use in the T1SFCO Calculation
2014 RHWM Process for BP-14 Rate Period
PNW Loads and Resources Study

S103-RC-20121029-123552

1.	Contract Purchases	Contract #	2014	2015	Average
2.	Priest Rapids CER for Canada	97PB-10099	29.2	29.2	29.2
3.	Rock Island #1 CER for Canada	97PB-10102	17.7	17.7	17.7
5.	Rock Reach CER for Canada	97PB-10103	37.4	37.2	37.3
6.	Wanapum CER for Canada	97PB-10100	28.0	28.0	28.0
7.	Wells CER for Canada	97PB-10101	24.0	23.7	23.9
8.	BCHP to BPA PwrS	99PB-22685	1.0	1.0	1.0
9.	BCHP to BPA LCA	99PB-22685	29.6	29.6	29.6
10.	PASA to BPA Pk Repl	94BP-93658	1.1	0.0	0.6
11.	PASA to BPA S/N/X	94BP-93658	2.5	2.1	2.3
12.	PASA to BPA Xchg Nrg	94BP-93658	1.9	1.6	1.7
13.	RVSD to BPA Pk Repl	94BP-93958	5.0	5.0	5.0
14.	RVSD to BPA Seas Xchg	94BP-93958	4.2	4.2	4.2
15.	RVSD to BPA Xchg Nrg	94BP-93958	7.3	7.3	7.3
16.	PPL to BPA SNX (Spring Return)	94BP-94332	0.0	0.0	0.0
17.	PPL to BPA SPX (Summer Return)	94BP-94332	15.3	0.0	7.7
18.	Total Designated BPA Contract Purchases		204.3	186.7	195.5

Table 2.12.5
Designated BPA System Obligations for use in the T1SFCO Calculation
2014 RHWM Process for BP-14 Rate Period
PNW Loads and Resources Study

S103-RC-20121029-123552

1.	System Obligation	Contract #	2014	2015	Average
2.	BPA to BRCJ Chief Joseph	14-03-17506; 14-03-49151	7.4	7.4	7.4
3.	BPA to BRCB Columbia Basin Project	lbp-4512; 14-03-001-12160	137.5	137.5	137.5
4.	BPA to BRCR Crooked River Project	14-03-73152	1.1	1.1	1.1
5.	BPA to BROP Owyhee Project	EW-78-Y-83-00019	3.4	3.4	3.4
6.	BPA to BRRP Rathdrum Prairie Project	14-03-49151	0.7	0.7	0.7
7.	BPA to BRSID Southern Idaho Projects	EW-78-Y-83-00019	19.6	19.6	19.6
8.	BPA to BRSIN Spokane Indian Develop.	14-03-49151	0.3	0.3	0.3
9.	BPA to BRSV Spokane Valley	14-03-63656	0.7	0.7	0.7
10.	BPA to BRTD The Dallas Reclamation Pro	14-03-32210	2.1	2.1	2.1
11.	BPA to BRTV Tualatin Project	14-03-49151	0.7	0.7	0.7
12.	BPA to BRUB Umatilla Basin Project	10GS-75345	1.2	1.2	1.2
13.	BPA to BRYK Yakima Project	DE-MS79-88BP92591	1.7	1.7	1.7
14.	BPA to BCHP LCA	99PB-22685	39.5	39.5	39.5
15.	BPA to BCHA Can Ent	99EO-40003	484.2	465.0	474.6
16.	BPA to BCHA NTSA	12PG-10002	14.4	14.2	14.3
17.	BPA to BHEC 2012PSC	97PB-10051	7.6	7.6	7.6
18.	BPA to PASA C/N/X	94BP-93658	1.1	0.0	0.6
19.	BPA to PASA S/N/X	94BP-93658	2.5	2.5	2.5
20.	BPA to RVSD C/N/X	94BP-93958	5.0	5.0	5.0
21.	BPA to RVSD Seas Xchg	94BP-93958	4.3	4.3	4.3
22.	Federal Intertie Losses (Calculated: 3.0% of Intertie Sales Table 2.12.5 lines 18-21)	n/a	0.4	0.4	0.4
23.	BPA to AVWP WP3 S	85BP-92186	41.7	41.7	41.7
24.	BPA to PPL SNX (Spring Delivery)	94BP-94332	0.0	0.0	0.0
25.	BPA to PPL SPX (Summer Delivery)	94BP-94332	0.0	0.0	0.0
26.	BPA to PSE WP3 S	85BP-92185	41.7	41.7	41.7
27.	BPA to PSE Upper Baker 2	09PB-12126	1.3	1.3	1.3
28.	BPAP to BPAT (Dittmer/Substation Service)	09PB-12128	9.0	9.0	9.0
29.	Federal Power Trans. Losses	n/a	237.5	239.0	238.2
30.	Slice Transmission Loss Returns	n/a	-36.6	-35.2	-35.9
31.	Total Designated System Obligations		1,029.5	1,011.8	1,020.6

3. HYDRO REGULATION ASSUMPTIONS117
3.1 HYDSIM Hydro Regulation Study Assumptions for 2014 and 2015118

STUDY NUMBER: 12_RateCase14_final & 12_RateCase15_final

Requested By: BPA Rates Process

Due Date: May 1, 2013

Purpose of Study: This is an 80-year continuous study of the system operation for the final proposal BP-12 Rate Case for FY 2014 and FY 2015.

Study Directories: **DOP Step:** Q:\RATES\12_RateCase14_final\DOP14\TSR80_FCST &
Q:\RATES\12_RateCase15_final\DOP15\TSR80_FCST

AER Step: Q:\RATES\12_RateCase14_final\AER &
Q:\RATES\12_RateCase15_final\AER

OPER Step: Q:\RATES\12_RateCase14_final\OPERfinal &
Q:\RATES\12_RateCase15_final\OPERfinal

Name of Regulator: Jennie Tran/Kim Fodrea

The Rate Case HYDSIM studies are run in three steps or layers. The first step determines the Canadian Treaty operations; the second step includes those Treaty operations and adds a layer that determines the U.S. non-federal operations and an approximation of the federal operations; and the third step includes those operations and adds a layer of fine-tuning to determine the federal operations.

There are two separate 80-year studies—one for Fiscal Year (FY) 2014 (October 2013 through September 2014) and one for FY 2015 (October 2014 through September 2015). For simplicity the two 80-year studies are often referred to as a singular study, and each step is often referred to as a singular step. However, in reality there are two surrogate DOP studies, an AER step for each one, and an OPER step for each one, which is a total of six studies, and these are collectively referred to as the HYDSIM study for the Rate Case.

DOP

- This Step is used to determine the Canadian Treaty project elevations following procedures from the Columbia River Treaty.
- Since the official Detailed Operating Plans (DOP) for Treaty storage operations are typically completed just 1-2 months prior to the operating year, they are not available in time for the rate case study. Therefore, surrogate DOP studies are used to reflect expected study results and determine the Canadian Treaty storage operations for the AER step.
- The surrogate DOP studies start with the official Assured Operating Plans (AOP): AOP14 and AOP15 studies. The surrogate DOP converts the AOP from perfect-knowledge to forecast-based and from operating-year to fiscal-year, and includes all the data updates that are expected to be included in the official DOP studies.
- These updates include plant data from the 2012 PNCA data submittal, 80-year 2010-level Modified Streamflow data, and the most recent flood control data provided by the Corps of Engineers.
- The study begins on October 1, 1928, and ends on September 30, 2008.

AER STEP

- This AER Step is used to determine the project minimum storage elevations using load equal to the 2012 operating year (OY12) Firm Energy Load Carrying Capability (FELCC) and unlimited secondary market. Minimum elevations from the AER Step are input into the Operational Step.
- This is a **continuous** 80-year study based on the OY12 PNCA data submittal.
- The Coordinated System generation does not include the Tacoma projects, Brownlee, Oxbow, and Hells Canyon.
- **Streamflow Data** are from “Modified Streamflows 2010 Level of Irrigation”. They contain estimated irrigation depletions from the year 2010. (See “2010 Level Modified Streamflow: Seasonal Volumes and Statistics, 1928-2008” and “2010 Level Modified Streamflow, 1928-2008” both dated August 2011.) Adjustments to these 2010 level modified stream flows are made in this study according to the Bureau of Reclamation’s updated **Grand Coulee pumping schedule** for the Columbia Basin Project in their February 1, 2012, preliminary PNCA data submittal for OY13 (since OY12 data had unusual canal maintenance scheduled in March).
- **Plant Data** are from the PNCA plant data for operating year 2012 (OY12) for all projects.
- **Loads** are from the FELCC OY12 Critical Period study run by the Northwest Power Pool (NWPP) for the PNCA. The NWPP study has a one-year critical period (August 16, 1936 through March 31, 1937). Thus, only one year of FELCC values are used for all water conditions. This study reflects coordination between PNCA parties in meeting PNCA FELCC. Therefore, generation from projects owned by non-PNCA parties (Brownlee, Oxbow, Hells Canyon, and Canadian projects) are not used to meet PNCA FELCC in these studies. Also, in this study the generation from Tacoma projects is not included in the PNCA Coordinated System FELCC computation. The PNCA hydro FELCC includes Hydro-Independent generation from 1936-37 so BPA revises the FELCC to reflect the Hydro-Independent generation for each of the 80 years and uses this modified FELCC as the hydro-residual load required for this study. There is no limit assumed in the secondary market, which is consistent with PNCA studies.
- **Unit Outages** for all projects are from the PNCA OY12 data.
- **Initial Contents** for all projects came from the September 30, 1929, storage ending content from the final Rates study for 2007 (Q:\RATES\06\04RATE_07), except Mica, Arrow, Duncan projects are initialized to the content from the surrogate DOP studies. (Q:\TREATY\DOP14\TSR80_FCST_oy13gclpump and Q:\TREATY\DOP15\TSR80_FCST). The initial conditions do not significantly affect the study results since this is a continuous study.
- **Critical Rule Curves (CRC)** are in accordance with PNCA 2012 adopted system critical rule curves where the 1st year critical rule curve = OY12 CRC1; 2nd year = empty; 3rd year = empty; and 4th year = empty.
- **Flood Control Rule Curves**, also known as Upper Rule Curves (URC), are the highest contents allowed for each reservoir and supersede all other reservoir elevation and content operating objectives. The curves are based on: forecasts (not actuals); no shift to Grand Coulee; a ratio of 3.6/4.08 Arrow/Mica split; and variable flood control (VARQ) at Hungry Horse and Libby. They were provided by the Corps of Engineers to BPA in April 2010 for 1929-1998. The 1999-2008 flood control data were provided by the Corps of Engineers on January 2012. These flood control curves include the variable flood control in December at Libby, BC Hydro’s updated storage reservation diagram for Duncan, a 1600 cfs minimum flow at Dworshak. (The unit ‘cfs’ is a common measure of flow, cubic feet per second.) The Mica, Arrow, and Duncan flood control requirements are from the TSR DOP14 study. (The Corps of Engineers provided flood control data for 1929-98 on July 2010 and 1999-2008 on Jan 2012 for DOP14 study). The flood control curves for Coulee are adjusted for the amount of storage capability available below the URC on April 30 each year for Mica, Arrow, and Duncan to more closely reflect the methodology used in real-time operations. BPA adjusts the flood control curves to shift some of Dworshak’s requirement to Grand Coulee when possible.

- **Variable Energy Content Curves (VECCs)** are calculated using OY12 Power Discharge Requirements (PDR's), distribution factors, and forecast errors, which are used in PNCA planning. The Grand Coulee ECC lower limits are 1225 feet (420.5 ksf) January through April 30 and 1240 feet (843.9 ksf) in May. (The unit 'ksfd' is a volume of water equal to 1000 cfs for one day.) The Canadian projects' TSR DOP14 VECCs are based on forecasts, the ratio of 3.6/4.08 Arrow/Mica split, non-shifted flood control, and VarQ flood control at Hungry Horse only. The VECCs for the Federal projects are based on the 80-year volume forecasts.

Project Specific Data:

- **Mica, Duncan, and Arrow** are fixed to the 80-year surrogate DOP14 and DOP15 studies run by BPA on February 9 and February 23, 2012, respectively, specifically for the BP-14 Rate Case. Mica data logic in the HYDSIM program is turned off. Mica's minimum storage content is reset to 0.0 ksf so that drafting below 2295.9 ksf (normal minimum content) can occur.
- **Libby** operates to meet coordinated system FELCC in October and November with a minimum flow of 4,000 cfs. Libby has a maximum outflow of 4,000 cfs January through April, 25,000 cfs May through August. The 25,000 cfs May through August maximum outflow is powerhouse hydraulic capacity without spill, but a higher outflow including spill can be provided to maintain the required VARQ flood control space. Libby has a minimum outflow of 6,000 cfs June through September. Libby can be drafted to meet FELCC September through November as long as it does not draft below the December Variable URC. When the December forecast at Libby for April through August is less than 5500 KAF, the flood control at Libby in December is 2426.6 feet (1804.7 ksf), When the forecast is greater than 5900 KAF, the flood control in December is 2411.0 feet (1502.2 ksf). The flood control data is interpolated between 1804.7 ksf and 1502.2 ksf when the forecast is between 5500 and 5900 KAF. Libby does violate the flood control URC at times for Corra Linn's IJC operation. Otherwise, the drafting for flood control space at Libby would actually cause downstream flooding near Corra Linn. January-April, Libby operates to minimum flow (4,000 cfs) or at the flood control URC in attempt to reach the flood control URC on April 15 (as a surrogate for the BiOp's April 10 objective). During May 1 through June 30 Libby operates for Sturgeon and during May 15 through September 30 it operates for Bull Trout. Sturgeon and Bull Trout flow requirements May through July are based on May final April-August Kuehl-Moffit forecast at Libby and are summarized as follows from the PNCA OY12 Corps of Engineers Data Submittal based on the USFWS BiOp dated February 18, 2006, where MAF is one million acre-feet and KAF is one thousand acre-feet of water volume.

<u>Libby May1 Apr-Aug</u> <u>Forecast Volume (MAF)</u>	<u>Sturgeon Flow Volume</u> <u>Provided from Libby (KAF)</u>
<4800	0
4800-5400	800
5400-6350	800-1120
6350-7400	1120-1200
7400-8500	1200
8500-8900	1200-1600
>8900	1600

<u>Libby May1 Apr-Aug</u> <u>Forecast Interval (MAF)</u>	<u>Bull Trout Minimum Flow</u> <u>May15-Sep30 (CFS)</u>
<4800	6000
4800-6000	7000
6000-6700	8000
>6700	9000

Libby can draft below the 2,439 feet (2061.3 ksf) draft limit to meet the Bull Trout flow objective. In years when the May-1 April through August volume forecast for The Dalles is less than 71.8 million acre feet (MAF), which is the lowest 20th percentile, the project attempts to operate along a computed straight line between June 30 content and a September 30 draft limit of 2439.0 feet (2061.3 ksf) during July and August to minimize occurrences of a second peak flow in the summer. In years when the forecast is greater than or equal to 71.8 MAF the September 30 draft limit is 2449 feet (2280.3 ksf). However, due to minimum flow for sturgeon and bull trout, the project often operates below the computed straight line.

- **Hungry Horse** operates to meet the following minimum flow requirements at the project and at Columbia Falls as shown in the PNCA data submittal. The minimum flows are determined each month based on the January, February, and March forecasts of April-August streamflow volumes. The March forecast also determines the minimum flows for April through December.

<u>Hungry Horse</u> <u>Apr-Aug Forecast (KAF)</u>	<u>Hungry Horse</u> <u>Minimum Flow (CFS)</u>	<u>Columbia Falls</u> <u>Minimum Flow (CFS)</u>
<1190	400	3200
1190-1790	400-900	3200-3500
>1790	900	3500

Hungry Horse will draft to 3549.2 feet (1377.7 ksf) for winter flood control and Chum flow in December. However, due to the minimum flow requirement at Columbia Falls, Hungry Horse often operates below 3549.2 feet in December. From January through March, Hungry Horse operates between the fish VECC (aka Variable Draft limit to assure 75% chance of filling to April flood control elevation) and the VarQ flood control elevation except in periods when minimum flow requirements draft the project deeper. The fish VECCs are calculated using assumed inflows that are exceeded 75 percent of the time, the minimum outflow, and the requirement to be at flood control elevation on April 10. Hungry Horse operates to the lower of 3545 feet (1330.2 ksf) or VarQ flood control upper rule curve in April. In May-June, Hungry Horse operates on flood control when possible but drafts below flood control to meet minimum flows when necessary. In years when the May 1 April-August volume forecast for The Dalles is less than 71.8 MAF (20th percentile), the project operates along the computed straight line between June 30 content and a September 30 draft limit of 3540.0 feet (1275.0 ksf) during July and August to minimize occurrences of a second peak flow in the summer. In years when the July final January-July volume forecast for The Dalles is greater than or equal to 71.8 MAF (20th percentile), the project operates along the computed straight line between June 30 content and a September 30 draft limit of 3550.0 feet (1386.7 ksf) during July and August to minimize occurrences of a second peak flow in the summer. The maximum discharge at Hungry Horse is 9,000 cfs during September through April 1-15, and 11,956 cfs in April 16-30 through August 31, unless the URC causes more discharge.

- **Albeni Falls** operates at 2062 feet (559.1 ksf) from June through August, 2061.5 feet (535.7 ksf) in September, 2056 feet (279.0 ksf) in October, 2055 feet (234.7 ksf) November through March, 2056 feet (279.0 ksf) in April, and 2060 feet (465.7 ksf) in May.
- **Grand Coulee** operates to meet FELCC September through December subject to the draft limits of 1283 feet (2332.2 ksf) in September and October, 1275 feet (2026.8 ksf) in November, and 1270 feet (1843.0 ksf) in December. January through March, Coulee can be drafted to the higher of winter draft limits [1260 feet (1492.2 ksf), 1250 feet (1155.8 ksf), 1240 feet (843.7 ksf), respectively] or the Biological Rule Curve (fish VECC). The fish VECC reflects the expected April 10th URC and storage needed for the appropriate Vernita Bar minimum flow requirement. Grand Coulee is then operated to these minimum storage points. The fish VECCs are calculated using assumed inflows which are exceeded 85 percent of the time, perfect foreknowledge of the minimum outflow, and the requirement to be at VARQ flood control elevation on April 10. On April 15, Coulee operates on flood control. From April 30 through May, Grand Coulee may be drafted to the lower of flood control or 1280 feet (2215.5 ksf) to

support Priest Rapids and McNary flow augmentation targets. In June, Grand Coulee operates to 1288 feet (2532.0 ksf) or flood control elevations. In July, Grand Coulee has a draft limit of 1285 feet (2411.4 ksf) to support Priest Rapids and McNary flow augmentation targets. In August 1-15, the draft limit for BIOP flow augmentation is 1280 feet (2215.5 ksf) if July 1 April-August runoff at The Dalles is less than 92 MAF; otherwise the draft limit is 1282 feet (2293.5 ksf). In August 16-31, the draft limit is 1278 feet (2139.8 ksf) if the July 1 forecast April through August volume runoff at The Dalles is less than 92 MAF; otherwise the draft limit is 1280 feet (2215.5 ksf). At-site minimum flow is equal to 30,000 cfs. Grand Coulee is subject to a draw down limit of 1.5 feet per day when Coulee is above 1260 feet, 1.3 feet per day when Coulee between 1260 and 1240 feet, and 1.0 feet per day when Coulee is below 1240 feet. During the flow augmentation period, Grand Coulee will release no more water than necessary to meet the minimum flow requirements.

- **Vernita Bar** minimum flows for December through May vary by water condition, with minimum flows established as the lower of a) 68 percent of the largest of the October or November flow at Wanapum or b) 70,000 cfs. Values less than 70,000 cfs are rounded to the nearest 5,000 cfs. The minimum protection level flow at Vernita Bar in any period will be no less than 36,000 cfs. These Vernita Bar flow requirements are modeled as requirements at Priest Rapids, and Grand Coulee will draft to meet them.
- **Priest Rapids** has a flow augmentation target of 135,000 cfs for Steelhead April 10 through June 30. From April 1-9 the minimum flow for Priest Rapids is the same as the Vernita Bar minimum flow.
- **Upper Snake** reservoirs and river reaches above Brownlee are not simulated in this study. Upper Snake operations are embedded in the Brownlee inflow datas, as described in the 2010 Level Modified Streamflow documentation.
- **Brownlee** operates to the 70-year rule curves provided to BPA from the Northwest Power Pool on March 15, 2007. They are 432.1 ksf in Au1, 380.7 ksf in Au2, 293.8 ksf in Sep, 491.7 ksf in Nov, 436.3 ksf in Dec, 385.4 ksf in Jan, 484.7 ksf in Jun and Jul. The rule curves vary between 226.0 ksf, 113.2 ksf, 62.9 ksf, 0.0 ksf and 74.7 ksf to full content of 491.7 ksf in Oct, Feb, Mar, Ap1, Ap2 and May, respectively. Since this is an 80-year study, the last ten years of Brownlee operations are based on a similar water year from the 70-year data.
- **Dworshak** is on minimum flow of 1500 cfs or at flood control elevations in all periods with the exception of July-September. Dworshak's outflow is limited to 14,000 cfs in July-August except when exceeded to meet the URC-- the maximum flow is 25,000 cfs for flood control operations. During the July-August flow augmentation period, Dworshak will release no more water than necessary to meet the Lower Granite flow target, though the target is rarely met and instead Dworshak most often operates to target elevations based on a straight-line draft between end of June and end of August target elevations: usually 1600 feet (1016 ksf) June 30, 1570 feet (756 ksf) July 31, 1554 feet (631 ksf) August 15, and 1535 feet (497.0 ksf) August 31. Dworshak is drafted to 1520 feet (395.8 ksf) on September 30.
- **Lower Snake projects operate at MOP** (minimum operating pool) in accordance with the PNCA data submittal. As identified in the 2008 BiOp, the Corps operates Little Goose, Lower Monumental, and Ice Harbor within one foot of minimum operating pool (MOP) during the period from approximately April 3 through August 31. Lower Granite operates within one foot of MOP from approximately April 3 through November 15 (Ap1-Oct in HYDSIM modeling). MOP for Lower Granite, Little Goose, Lower Monumental and Ice Harbor is elevation 733 (225.0 ksf), 633 (260.5 ksf), 537 (180.5 ksf) and 437 feet (193.4 ksf), respectively. During the rest of the year Lower Granite, Little Goose, Lower Monumental and Ice Harbor operate at elevation 738 (245.8 ksf), 638 (285.1 ksf), 540 (190.1 ksf) and 440 feet (204.8 ksf), respectively.
- **Turbine operations** at the four lower Snake River projects (Lower Granite, Little Goose, Lower Monumental and Ice Harbor) and the four lower Columbia River projects (McNary, John Day, The Dalles and Bonneville) are within **1 percent of peak efficiency** March through November. This requirement is reflected in the HYDSIM hydro availability file.

- **Spill for Fish Passage** is included at the eight federal mainstem projects (Lower Granite, Little Goose, Lower Monumental, Ice Harbor, McNary, John Day, The Dalles and Bonneville) based on the OY10 PNCA data, summarized below. The spill is limited at times by 120% TDG Gas Caps (shown in table at end of this document) and minimum turbine flow requirements (shown in the following table).

- **Juvenile Passage Spill and Total Dissolved Gas Caps from OY12 PNCA Planning**

SPILL CRITERIA FOR PNCA OY2012 (Feb 1, 2011 Submittal Table 9, A-23)					
	Spill	Min Turb	Days	Hour Ending	Notes
Lower Granite	20 kcfs 18 kcfs	11.5 kcfs	Apr 3 - May31; Jun 1 - Aug 15	All hours	Gas Cap: Ap1-Ap2: 30 kcfs; May 28 kcfs; June 30 kcfs; Jul- Au1: 28 kcfs
Little Goose	30% flow	11.5 kcfs Min Turbine; 8.4 kcfs Min Spill	Apr 5 - May 31, Jun 1 - Aug 15	All hours	Gas Cap: Ap1-Ap2: 30 kcfs; May 28 kcfs; June 30 kcfs; Jul- Au1: 28 kcfs
Lower Monumental	gas cap; 17 kcfs	11.5 kcfs	Apr 7 - May 31, Jun 1 - Aug 15	All hours	Gas cap: Ap1: 26 kcfs; Ap2: 25 kcfs; May 22 kcfs; Jun 19 kcfs; Jul-Au1: 24 kcfs
Ice Harbor	30% flow vs 45 kcfs day/gas cap night	9.5 kcfs	Apr 7 - Aug 17	All hours 13 hrs day/ 11 hrs night	
McNary	40% flow	50 kcfs	April 10 - Jun 15	All hours	Gas Cap: Ap1-Ap2: 117 kcfs; May 122 kcfs; Jun 125 kcfs ; Jul 138 kcfs; Au1-Au2: 148 kcfs
	50% flow		Jun 16 - Aug 31	All hours	
John Day	30% vs 40% flow	50 kcfs Min Turbine;	Apr 10 - Jun 15	All hours	Gas Cap: Ap1: 96 kcfs; Ap2: 90 kcfs; May-Jul 95 kcfs; Au1- Au2: 98 kcfs
	30% vs 40% flow	25% min spill	Jun 16 - Aug 31		
The Dalles	40% flow	50 kcfs	Apr 10 - Aug 31	All hours	Gas Cap: Ap1: 124 kcfs; Ap2: 131 kcfs; May 132; Jun 137; Jul 139 kcfs; Au1-Au2: 125 kcfs
Bonneville	lower of gas cap or 100 kcfs	30 kcfs Min Turbine: 50 kcfs Min Spill	Apr 10 - Jun 15	All hours	Gas Cap: Ap1: 106 kcfs; Ap2: 108 kcfs; May: 109 kcfs; Jun: 98 kcfs; Jul: 111 kcfs; Aug1: 116 kcfs; Aug2: 120 kcfs
	95 kcfs		Jun 16 - Aug 31	18 hrs Day/ 6 hrs night	
			Aug 1 - Aug 31	16 hrs Day/ 8 hrs night	

LWG = Lower Granite; LGS = Little Goose; LMN = Lower Monumental; IHR = Ice Harbor; MCN = McNary;
JDA = John Day; TDA = The Dalles; BON = Bonneville

- **Chum Flow Objectives at Bonneville** are from November 1 through April 10 and estimated at 125,000 cfs in the PNCA data submittal. Grand Coulee drafts for this Chum flow requirement with draft limits of 1275 feet (2027.1 ksfd) in November and 1270 feet (1843.4 ksfd) in December.
- **McNary Flow Targets** for April 10 through June 30 are 220,000 to 260,000 cfs based on The Dalles April 1, April - August volume runoff forecasts. When the forecast is 80 MAF or less the target is 220,000 cfs, and when the forecast is 92 MAF or greater the target is 260,000 cfs. Straight-line interpolation determines the flow targets for volume forecasts between 80 and 92 MAF. McNary summer flow targets are 200,000 cfs in July and August. Grand Coulee drafts for this flow augmentation target, subject to draft limits.
- **Lower Granite Flow Targets** also vary depending on the forecast. When Lower Granite April 1, April - July runoff forecast is less than 16 MAF, then the April 3 through June 20 flow target is 85,000 cfs, and the June 21 through August 31 is 50,000 cfs. When the April 1 Lower Granite

April through July forecast is greater than 20 MAF, the April 3 through June 20 target flow is 100,000 cfs. In June 21 through August 31, when the forecast is greater than 28 MAF, the flow target is 55,000 cfs. The spring flow targets are interpolated for forecasts between 16 and 20 MAF, and the summer flow targets are interpolated for forecasts between 16 and 28 MAF. Dworshak drafts to meet this flow objective, subject to draft limits.

- **John Day** is operated at 262.5 feet (127.8 ksf) from April through September. From October through March, John Day operates to elevation 265 feet (191.0 ksf).
- **The Dalles** is modeled as a reservoir instead of a run-of-river project to eliminate a minor programming bug in HYDSIM’s energy calculation. The new reservoir input data come from PNCA OY12.
- **Bonneville** second powerhouse corner collector is modeled as “other spill” in HYDSIM, using the “other spill” data from PNCA OY12.
- **Spill at non-Federal projects** is summarized below from OY12 PNCA planning data. Wells dam spills the percentage shown below if Chief Joseph’s outflow is less than 140,000 cfs; otherwise Wells spills 10,200 cfs April 12 through August 26.

Non-Federal Spill for Fish (Percent of Total Outflow or cfs)

PROJECTS:	Apr1	Apr2	May	Jun	Jul	Aug1	Aug2
Wells (%)	1.7	6.5	6.5	6.5	6.5	6.5	4.5
Rocky Reach (%)	0.0	0.0	0.0	6.3	9.0	9.0	2.8
Rock Island (%)	0.0	8.7	10.0	18.7	20.0	20.0	6.3
Wanapum (cfs)	22,000	22,000	22,000	22,000	22,000	22,000	13,000
Priest Rapids(cfs)	29,800	29,800	29,800	29,800	29,800	29,800	29,800

- **Kootenay Lake** is operated as necessary, up to free flow, to maintain the lake level below the IJC rule curve and the calculated “allowable elevation at Queens Bay”. This is implemented using the 5-step method developed by BPA and the Corps. After August 31, the lake level may rise to elevation 1745.32 at the Queens Bay gage. This maximum elevation at Queens Bay is in effect through January 7. After January 7 the lake will be lowered to elevation 1744 on February 1, elevation 1742.4 on March 1, and 1739.32 on May 1. From June 1 through August 31, after the lake exceeds elevation 1739.32 feet at the Queens Bay gage, the lake shall be operated using the “allowable elevation” calculation to determine the Queens Bay maximum allowable elevation until the elevation at the Nelson gage drafts back to elevation 1743.32 feet.

OPER STEP

- All AER step criteria apply in the OPER step unless specifically amended below.
- **Loads** in the OPER step are the 2014 and 2015 Coordinated System firm residual hydro loads from BPA’s LORA Inventory Study (Token S107) on March 7, 2013. These residual hydro loads are the total coordinated system firm load less all the other firm non-hydro resources. A variable secondary market limit based on an AURORA market analyses is also included in every period of every year. The secondary market limit is calculated as necessary to force the HYDSIM ‘overgen’ spill to equal the spill due to lack of market estimated by AURORA, except in periods when Grand Coulee is able to store water and avoid spill. The Coordinated System independent hydro generation from LORA Inventory Study (Token S107) is also used in this study to develop the residual hydro load.
- **Availability Factors** are used in HYDSIM to simulate unit outages and units held for reserve requirements. Unit outages are based on data provided by PGF. The availability factors are calculated from the 5-year average of 2007-2011 actual outages for all federal projects except Grand Coulee and Chief Joseph. Chief Joseph availability factors are based on the 2-year average of 2010-2011 actual outages. Grand Coulee availability factors are based on the year 2010 actual outages with two large 805-MW units out of service in all months. The estimates for Grand Coulee availability factors reflect the high levels of outages that are expected during the rate period for runner replacements, major overhaul work, and replacement of governors,

exciters, transformers, and high-voltage power lines. The following table shows availability factors based on these outage assumptions.

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Libby	78%	94%	100%	83%	84%	78%	80%	96%	100%	98%	78%	82%
Hungry Horse	73%	77%	80%	82%	80%	67%	75%	83%	91%	91%	87%	73%
Albeni Falls	95%	98%	92%	90%	89%	93%	93%	92%	93%	93%	83%	91%
Dworshak	58%	59%	77%	98%	99%	100%	100%	96%	94%	100%	100%	85%
Grand Coulee	65%	70%	66%	69%	70%	63%	67%	68%	67%	62%	55%	60%
Chief Joseph	76%	82%	94%	94%	95%	92%	94%	89%	89%	87%	96%	87%
Lower Granite	62%	58%	67%	71%	83%	82%	82%	86%	89%	76%	52%	59%
Little Goose	78%	81%	87%	88%	82%	81%	86%	87%	92%	85%	66%	75%
Lower Monumental	74%	80%	80%	86%	93%	90%	99%	99%	99%	87%	79%	82%
Ice Harbor	72%	73%	82%	79%	86%	87%	91%	90%	97%	80%	71%	75%
McNary	81%	83%	87%	90%	91%	93%	94%	95%	96%	79%	77%	74%
John Day	82%	85%	84%	88%	90%	85%	85%	92%	92%	91%	85%	85%
The Dalles	89%	88%	92%	89%	90%	89%	87%	92%	93%	90%	84%	88%
Bonneville	74%	74%	74%	78%	78%	80%	83%	83%	83%	78%	73%	74%

- The availability factors are also used to reflect reserve requirements because HYDSIM has no other mechanism to account for *inc* reserves, which require the system to have units available to increase generation within a few minutes. After calculating availability factors based on unit outage information, the availability factors are further decreased to reflect units needed for meeting reserve requirements. The availability factors assume the federal hydro system will provide 89 percent of the estimated reserves required. The availability factors reflect operating contingency reserve requirements at 3 percent of the total control area generation and 3 percent of the total loads. Balancing reserve requirements of 900 MW are also included in the availability factors and are consistent with the estimates provided by Transmission staff assuming the 99.5% level and self-supply. The following table shows availability factors after considering these reserve requirements in addition to the outage assumptions.

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Libby	78%	94%	100%	83%	84%	79%	80%	96%	100%	98%	78%	83%
Hungry Horse	72%	77%	81%	82%	79%	68%	75%	83%	91%	91%	88%	72%
Albeni Falls	92%	92%	92%	92%	92%	92%	92%	92%	92%	92%	82%	92%
Dworshak	58%	59%	77%	98%	99%	100%	100%	96%	94%	100%	100%	85%
Grand Coulee	56%	61%	61%	63%	64%	55%	59%	58%	57%	54%	52%	56%
Chief Joseph	70%	76%	76%	79%	80%	69%	73%	73%	72%	68%	64%	70%
Lower Granite	41%	49%	57%	61%	73%	76%	66%	69%	72%	61%	42%	39%
Little Goose	55%	72%	77%	78%	72%	76%	71%	72%	75%	70%	55%	54%
Lower Monumental	58%	71%	70%	76%	83%	84%	89%	89%	89%	78%	70%	66%
Ice Harbor	56%	61%	69%	67%	73%	79%	86%	84%	91%	75%	66%	59%
McNary	56%	75%	79%	82%	83%	85%	74%	75%	75%	62%	61%	51%
John Day	74%	76%	76%	79%	81%	81%	75%	82%	82%	81%	76%	77%
The Dalles	66%	80%	83%	80%	82%	85%	61%	65%	66%	64%	59%	65%
Bonneville	55%	64%	64%	68%	68%	73%	67%	67%	67%	62%	59%	55%

- **Initial Contents** for the major federal projects are based on the 70-yr average of September 30 storage ending content from the 08RateCase10_final study.
- **Flood Control Rule Curves** for Grand Coulee are adjusted for the amount of storage capability available below the URC on April 30 each year for Mica, Arrow, and Duncan and are also adjusted to shift some Dworshak flood control space to Grand Coulee when possible while still meeting Dworshak's local flood control requirements and following Corps procedures.
- **Non-federal projects** are run to the resulting contents from the AER step. This allows the federal projects to operate differently without causing the non-federal projects to adjust operations to meet the system load.
- **Bonneville Chum Flow Objectives** are determined each period based on 11.5 or 11.3 feet tailwater elevation requirements below Bonneville November through March and 16.5 feet tailwater in April. Grand Coulee operates to meet the chum flow objectives November through March subject to the draft limits described under Grand Coulee.
- **April 10 URC** objectives are included in the study. The BiOp objective is for the federal reservoirs to be at their April 10 URC elevations each year, as full as possible in preparation for

providing flows to meet the spring flow objectives, although minimum flow requirements and forecast errors can cause projects to miss this refill objective. The objective is for Grand Coulee to operate with an 85 percent chance of reaching the April 10 elevation and for Libby and Hungry Horse to operate with a 75 percent chance. The April 10 objectives are modeled as April 15 objectives in HYDSIM.

- **Lower Granite flow targets** are removed from the OPER step because Dworshak is the only project available to help meet them and other operating requirements determine its operation.

Project Specific Data:

- **Mica, Duncan, and Arrow** are fixed to the 80-year DOP14 and DOP15 studies for 2014 and 2015 rate case studies, respectively with the following additions: 1) One MAF of flow augmentation is stored in January and is released in March in dry years or released in May, June, and July in non-dry years. For whitefish the 1 MAF storage is not allowed to decrease Arrow February or March outflows more than 19,000 cfs below the January outflow. The TSR DOP study is not limited for whitefish, but the 1 MAF storage is not allowed to worsen the operation for whitefish. 2) The trout spawning operation is included at Arrow where April 16 through April 30 flows are at least 15,000 cfs and May and June flows are equal to or greater than the preceding month whenever possible. No more than a 10,000 cfs decrease is allowed in the April through June trout spawning period. 3) Arrow and Duncan balance operations to ensure that both projects are on TSR DOP14 or DOP15 contents by 31 July. 4) Mica balances to the TSR DOP14 or DOP15 contents July-December when Arrow and Duncan can not. 5) The Libby Coordination Agreement (LCA) Provisional Draft is included at Arrow. (The LCA provides an energy benefit to the Canadians as an offset for energy losses caused by Var-Q flood control at Libby.)
- **Duncan** targets outflow of 8,000 cfs to support Cora Linn and Brilliant flows but does not draft below 1,845 feet (316.2 ksf) in September. Duncan targets 2,000 cfs in October, 2,900 cfs in November, 4,800 cfs in December (to support Kootenay Lake elevation), and 7,000 cfs in January (to support Arrow whitefish operation). Duncan has a minimum flow of 3,000 cfs and 2,000 cfs in February-March, respectively, which often control the operation. In February and March, when not controlled by minimum flows Duncan drafts for power with a draft limit of 1812.5 feet (93.1 ksf) in February and a maximum elevation of 1807.7 feet (65.3 ksf) in March. In April, Duncan drafts to empty (elev 1794.2, 0.0 ksf) unless the March 1 May through July forecast at Duncan is less than 1,480 KAF when Duncan operates to 1,000 cfs outflow in the first half of April and 100 cfs outflow in the second half of April. In May and June Duncan operates to minimum flow of 100 cfs unless the flood control URC requires more discharge. In July and August, Duncan targets the higher of the TSR DOP elevation or 1890 feet (688.2 ksf).
- **Arrow** stores up to 1 MAF for flow augmentation in January in all years, and releases the 1 MAF (15 percent in May, 15 percent in June, and 70 percent in July) in years with a Feb-1 forecast April through August volume at The Dalles greater than 75.0 MAF. In drier years this storage of up to 1 MAF is released in March. Arrow has a minimum flow of 30,000 cfs in January if the January 1 forecast of April through August volume at The Dalles is less than 75 MAF; otherwise the minimum flow is 20,000 cfs, although in some years the project reaches empty and is unable to provide this minimum flow. The flow augmentation will all be released by July 31 allowing Arrow to be on TSR DOP14 or DOP15 elevation by 31 July. For trout spawning, Arrow outflow operates to minimum flow of 15,000 cfs in April 15, between 15,000 cfs and 25,000 cfs in April 30, between 15,000 cfs and 35,000 cfs in May-June. During April through June the outflow at Arrow can not decline unless the TSR DOP14 or DOP15 balance by June 30 is too negative. Then the outflow is allowed to reduce up to 10,000 cfs in the April through June (trout spawning period). The Outflow at Arrow can be increased in May-June to keep the July discharge below 80,000 cfs. Under the Libby Coordination Agreement (LCA) Arrow is allowed to draft below TSR DOP14 or DOP15 contents from August through December at most two times per year up to 120 ksf and return all the water by March. (Draft 60 ksf in July, 30 ksf in the

first half of August, 30 ksf in the second half of August, and return all in October. Then draft 120 ksf in December and return all in March).

- **Non-Treaty Storage Agreement (NTSA):** A total of 3 MAF NTSA storage and release is included in the study. Modeling the NTSA operations required plant data updates at Mica and Arrow to increase their maximum storage contents and their upper rule curves. The study includes the NTSA dry-year operations and spring-summer operations. The NTSA also includes operations driven by price, but this operation is not included in this study due to the complexities of incorporating price-based operating decisions.
 - **For Dry Year NTSA operation**
 - Release $\frac{1}{2}$ MAF from Mica (or Arrow) in November-June in years if the April Final April-August volume forecast at The Dalles is less than 71.8 MAF
 - Store $\frac{1}{2}$ MAF into Mica (or Arrow) in May-June in years if the April Final April-August volume forecast at The Dalles is 91.4 MAF or higher.
 - Water that is stored in May or June should not violate the minimum flow requirements at Priest Rapids, Bonneville, McNary and the Arrow trout/whitefish operation. Water that is released in May or June should not violate the Arrow trout spawning operation.
 - **For Spring-Summer NTSA operation**
 - Store up to $2\frac{1}{2}$ MAF at Mica (or Arrow) in April 16 – June 30 if meeting Arrow Trout operation and exceeding 300,000 cfs outflow at McNary and minimum flow requirement at Priest. Do not store in May-June for years that Arrow's outflow from the DOP study exceeds 80,000 cfs in August. The Canadians would not likely agree to the spring-summer provision when flows are forecasted to be that high.
 - Release in July-August the amount that was stored in April 16 – June 30 at Mica (or Arrow). If the release in July would result in McNary exceeding its flow target, then the release occurs in August without violating the 80,000 cfs maximum flow.
- **Priest Rapids** flow augmentation targets for Steelhead are modeled as 120,000 cfs during April 16-30, and 135,000 cfs in May.
- **Brownlee** drafts to 2062.0 feet (391.5 ksf) in July, 2059.0 feet (373.5 ksf) on August 15, 2055 feet (349.4 ksf) on August 31, 2048.0 feet (309.7 ksf) in September, and 2050.0 feet (320.4 ksf) in October. In November, Brownlee operates to meet the flow target of 9,000 cfs at Hells Canyon for IPC Fall Chinook operation, and Hells Canyon only exceeds the 9000 cfs flow when Brownlee drafts more due to the flood control URC. In December Brownlee targets elevation 2070.0 feet (443.2 ksf) but will draft deeper in order to meet the minimum flow of 9,000 cfs at Hells Canyon. In January Brownlee targets elevation 2060.0 feet but will draft deeper in order to meet the minimum flow of 9,000 cfs at Hells Canyon. In January, Brownlee suppose to draft to 2060.0 ft (379.5 ksf) but most often fill to the AER ending elevation of 2061.0 feet (385.4 ksf) or the flood control URC,. In February-May Brownlee maintains full content of 491.7 ksf (2077.0 ft) except when flood control URC or minimum flow at Hells Canyon of 9,000 cfs requires deeper drafts. In June Brownlee targets full except when a draft is needed to maintain a minimum flow of 7,000 cfs at Hells Canyon.
- **Dworshak** has a maximum discharge of 17,000 cfs in all periods to reflect typical actual operations and avoid exceeding 110 percent TDG level. February through June outflows are reshaped to reduce forced spill. July and August outflows are smoothed to reflect typical actual operations by using 11,000 cfs minimum in July and August 1-15, and a maximum 25 percent reduction from the first half of August to the second half of August.
- **Libby** has a September minimum flow of 6,000 cfs. In the fall, Libby minimizes October draft and maximizes December draft by targeting outflow of 4,000 cfs in October-November, and limiting outflow to 20,000 cfs maximum October-December. Libby can release above 4,000 cfs in October-November if the outflow in December exceed 20,000 cfs. Libby's outflow in May is based on a VarQ allowable refill calculation as used in actual operations. Libby's June through September operation includes the sturgeon pulse, bull trout minimum required flows, and summer flow augmentation according to the Montana Proposal.

- **Hungry Horse** will violate the flood control upper rule curve to keep its maximum outflow at 20,000 cfs or below. Hungry Horse has a maximum elevation of 3558 feet (1480.1 ksf) in June. Hungry Horse's summer draft is shaped to provide flat flows July through September where possible.
- **Albeni Falls** drafts to 2053 feet (146.1 ksf) by November 30, maintains this elevation through April 15, then fills to 2056.0 feet (279.0 ksf) by April 30, and fills to 2060.0 feet (465.7 ksf) in May.
- **Kerr** operates to elevation 2891 feet (488.6 ksf) in October and November, 2888 feet (302.8 ksf) in December, 2886.5 feet (211.0 ksf) in January, 2886.4 feet (204.9 ksf) in February, 2887 feet (241.5 ksf) in March, 2884.8 feet (107.9 ksf) in April 15, 2884.1 feet (65.7 ksf) in April 30, 2890 feet (426.3 ksf) in May, full at 2893 feet (614.7 ksf) June through August, and 2891.8 feet (538.8 ksf) in September. This operation is based on actual operations in recent past years.
- **Grand Coulee** operates at elevation 1285 feet (2411.4 ksf) in September and between 1283 feet (2332.0 ksf) and 1288 feet (2532.0 ksf) in October. Grand Coulee can not fill above 1288 feet (2532.0 ksf) in November-December and 1287 feet (2491.4 ksf) in January and February. Grand Coulee drafts to support the Chum flow target January through March subject to the draft limits of about 10 feet below the computed fish VECC. Grand Coulee can draft further if needed to support the Vernita Bar flow requirement at Priest Rapids. The deepest draft limits at Grand Coulee for Vernita Bar minimum flow requirement and for Steelhead and Chum flow targets are: 1270 feet (1843.4 ksf) in December, 1260 feet (1489.1 ksf) in January, 1250 feet (1155.8 ksf) in February, 1240 feet (843.8 ksf) in March-May. In all periods, Coulee can not draft below 1228 feet (500.1 ksf) unless it is on flood control operation. Coulee operates to the lower of 1288 feet (2532.0 ksf) or flood control in June. July through August 15, Grand Coulee can not fill above 1288 feet (2532.0 ksf). Beside drafting in April through June for WCRWMP, the Washington Columbia River Water Management Program (WCRWMP) allows Coulee to draft an additional 1 foot in August; therefore, in August 1-15, the draft limit for BIOP flow augmentation is 1279 feet (2177.7 ksf) if July 1 April-August runoff at The Dalles is less than 92 MAF; otherwise the draft limit is 1281 feet (2254.4 ksf). In August 16-31, the draft limit is 1277 feet (2101.9 ksf) if the July 1 forecast April through August volume runoff at The Dalles is less than 92 MAF, otherwise the draft limit is 1279 feet (2177.7 ksf). Also, the Bureau performs maintenance during the spring on the spillway drum gates at least one year of every three years, at least two of every five years, and at least three of every seven years. For modeling, this maintenance requires a maximum Lake Roosevelt elevation of 1277.5 feet (2120.9 ksf) at the end of February (so as not to exceed the 1.5 feet/day draft limit in drafting to 1255 feet (1319.7 ksf) by March 15, and then elevation 1255 feet (1319.7 ksf) is held through April 30. After meeting all modeling requirements, Grand Coulee's January through March operation is re-evaluated to put more generation in January and February or evenly distribute the secondary energy when possible without violating the one foot per day draft rate limit and other constraints in the study.
- **Columbia Basin Irrigation Project Pumping (Banks Lake)** is captured through the PNCA data submittal estimates of pumping, which are based on the average of the past five years actual pumping and include the equivalent of 5 feet (65.5 ksf) flow augmentation in August and the associated increase in pumping the following March-May period to return those 5 feet to Banks Lake. In years when this flow augmentation is not needed to meet the McNary flow augmentation target of 200,000 cfs, the pumping is increased by the equivalent of 5 feet in August and the following year's March-May pumping is decreased.
- **Juvenile Fish Bypass Spill** for the federal projects are summarized in the following tables. Forecasts of less than 12.8 MAF April through June at Lower Granite are used to estimate when average spring flows are likely less than 65,000 cfs and less spill will be provided at the three Snake River projects. There are 15 years in the 80-year study that meet this criterion and do not include planned spill for fish passage at the three Snake River projects.

Spill Criteria for BP14 Rate Case Final Proposal					
Projects	Spill	Min Turb	Days	Hour Ending	Notes
Lower Granite	20 kcfs(Apr3-Jun4) 18 kcfs(Jun5-Aug7)	11.5 kcfs	Apr 3 - May 6, May 21 - Jun 4; Jun 5 - Aug 7	All hours	Also see spring transport criteria.
Little Goose	30% of total flow	11.5 kcfs	Apr 5 - May 6, May 21 - Aug 12	All hours	Some years have no spring spill at the three Snake River transport projects.
Lower Monumental	gas cap(Apr7-Jun4) 17 kcfs(Jun5-Aug15)	11.5 kcfs	Apr 7 - May 6, May 21 - Jun 4; Jun 5 - Aug 15	All hours	
Ice Harbor	35% of total flow 30%of total flow	9.5 kcfs	Apr 7 - Jun 15 Jun 16 - Aug 16	All hours	
McNary	40% of total flow 50%of total flow	50 kcfs	April 10 - Jun 15 Jun 16 - Aug 31	All hours	All years
John Day	30% of total flow 30% of total flow 30% of total flow	50 kcfs	Apr 10 - 19 Apr 20 - Jul 20 Jul 21 - Aug 31	All hours	All years
The Dalles	40% of total flow	50 kcfs	Apr 10 - Aug 31	All hours	All years
Bonneville	100 kcfs alternating, every 2 days: 85 kcfs day / 121 kcfs night 95 kcfs	30 kcfs	Apr 10 - Jun 15 Jun 16 - Aug 31	All hours All hours; day/night spill hours vary	Jun1-30 day hrs are 0430-2130; Jul1-31 day hrs are 0430-2200; Aug1-15 day hrs are 0500-2145; Aug16-31 day hrs are 0500-2030.

Summary: 2008 BiOp Snake River spring spill / max transport decisions.

Lower Granite Dam				
	Apr1	Apr2	May	June*
Seasonal Average Flows < 65	no spill	no spill	no spill	spill Jun1-30
Seasonal Average Flows > 65	spill Apr3-15	spill Apr16-30	spill May1-6,21-31	spill Jun1-30
Little Goose Dam				
	Apr1	Apr2	May	June*
Seasonal Average Flows < 65	no spill	no spill	no spill	spill Jun1-30
Seasonal Average Flows > 65	spill Apr5-15	spill Apr16-30	spill May1-6,21-31	spill Jun1-30
Lower Monumental Dam				
	Apr1	Apr2	May	June*
Seasonal Average Flows < 65	no spill	no spill	no spill	spill Jun1-30
Seasonal Average Flows > 65	spill Apr7-15	spill Apr16-30	spill May1-6,21-31	spill Jun1-30

* Fed agreement that summer spill criteria starts June 5th on average.

- Overgeneration Spill Priorities and TDG Gas Caps** are summarized in the following table. One kcfs equals one thousand cfs. Spill up to the TDG gas levels in the order listed below to avoid generation levels that exceed the secondary market limit. This is called ‘overgen spill’ in HYDSIM. First, starting with McNary, spill all projects up to the 120 percent TDG gas levels in the order shown below, then spill all projects up to the 125 percent TDG gas levels in the order shown, and then up to 130 percent, etc. A variable secondary market limit is calculated in HYDSIM as needed to force the ‘overgen’ spill in each period to equal the estimated energy spilled due to lack of market from the AURORA model. The following are rough approximations of the typical amounts of spill that cause TDG to reach the specified percentage levels. (In actual operations, the spill at a certain gas level can vary significantly and operations are adjusted as necessary to manage to the appropriate gas level at the time.)

	120%	125%	130%	135%
LWG:	40 kcfs	70 kcfs	90 kcfs	150 kcfs
IHR:	97 kcfs	125 kcfs	180 kcfs	240 kcfs
LGS:	27 kcfs	80 kcfs	150 kcfs	250 kcfs
BON:	120 kcfs	150 kcfs	225 kcfs	270 kcfs
MCN:	138 kcfs	230 kcfs	310 kcfs	450 kcfs
JDA:	94 kcfs	240 kcfs	450 kcfs	600 kcfs
TDA:	128 kcfs	250 kcfs	360 kcfs	600 kcfs
LMN:	23 kcfs	95 kcfs	180 kcfs	250 kcfs
CHJ ¹ :	150 kcfs	200 kcfs	300 kcfs	450 kcfs
GCL ² :	30 kcfs	75 kcfs	120 kcfs	170 kcfs
GCL ³ :	10 kcfs	20 kcfs	35 kcfs	55 kcfs

¹ 50 kcfs minimum turbine flow for CHJ included during ‘overgen’ spill.

² During all periods except May.

³ During May when the reservoir is more likely below the spillway crest elevation 1260 feet and the regulating outlets must be used to spill.

This page intentionally left blank.

4. FEDERAL LOADS AND RESOURCES FOR FY2014 AND FY2015.....133

4.1 Federal Report Surplus Deficit

Table 4.1.1 Federal Report Surplus Deficit - Energy	134
Table 4.1.2 Federal Report Surplus Deficit - HLH MWh	138
Table 4.1.3 Federal Report Surplus Deficit - LLH MWh.....	142

Table 4.1.1
Loads and Resources - Federal System
Fiscal Year: 2014 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Firm Obligations															
1 Non-Utility Obligation	515	470	486	485	477	505	675	675	739	745	817	710	719	660	608
2 Federal Agencies	99.5	127	146	146	139	127	113	113	100	94.7	102	103	102	95.0	116
3 USBR Obligation	104	30.1	29.2	27.1	25.2	65.8	250	250	327	340	402	295	304	252	180
4 DSI Obligation	311	313	311	312	313	312	312	312	312	311	312	313	312	313	312
5 Transfers Out	6576	8113	8831	8351	7951	7461	6881	6898	7523	6994	7401	7188	6905	6765	7491
6 Load Following 2012 PSC	2712	3207	3659	3655	3490	3032	2899	2899	2762	2846	3097	3013	2987	2777	3093
7 Block 2012 PSC	9.84	44.5	39.1	55.0	53.9	46.1	2.99	2.99	0	0	11.0	11.3	11.3	23.3	24.6
8 Slice Block 2012 PSC	1624	1992	2216	2243	2076	1937	1636	1636	1424	1326	1561	1561	1561	1628	1767
9 Slice Right to Power 2012 PSC	1692	2138	1997	1635	1603	1817	1704	1721	2743	2221	2142	1844	1615	1760	1935
10 Exports	529	517	705	550	513	519	529	529	585	592	582	749	721	567	578
11 Intra-Regional Transfers (Out)	9.00	215	215	215	215	110	110	110	9.00	9.00	9.00	9.00	9.00	9.00	93.6
12 Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 Total Firm Obligations	7090	8583	9317	8836	8428	7967	7556	7573	8262	7740	8218	7899	7624	7425	8099
Net Resources															
14 Net Hydro	5648	7575	7314	5768	5618	6133	6118	6197	10163	8168	7918	6867	5935	6174	6928
15 Regulated Hydro - Net	5327	7304	7135	5623	5466	5881	5684	5752	9445	7504	7514	6484	5561	5867	6575
16 Independent Hydro - Net	321	271	179	145	152	251	434	445	718	664	403	383	374	307	353
17 Other Resources	1113	1099	1107	1091	1086	1125	1129	1112	1120	1138	1112	1097	1134	1118	1112
18 Cogeneration Resources	18.4	19.6	22.6	24.0	23.0	23.0	22.0	22.0	19.1	14.2	18.1	12.4	12.4	14.4	19.2
19 Combustion Turbines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 Large Thermal Resources	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030
21 Renewable Resources	62.4	46.3	51.1	34.2	30.0	69.0	74.2	57.0	68.1	91.1	61.6	51.9	89.1	71.2	60.3
22 Small Hydro Resources	2.67	2.84	3.19	3.21	3.05	3.10	3.09	3.09	2.83	2.72	2.63	2.63	2.63	2.63	2.88
23 Small Thermal & Misc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 Contract Purchases	417	352	246	249	239	472	244	244	245	239	250	248	236	321	293
25 Imports	113	43.8	42.7	42.1	42.6	256	18.5	18.5	1.12	1.00	16.1	15.8	16.4	104	58.4
26 Intra-Regional Transfers (In)	112	108	11.1	16.2	8.96	26.5	34.5	34.5	32.9	42.9	34.4	38.6	38.7	25.4	41.1
27 Non-Federal CER	139	138	134	139	137	134	138	138	138	132	138	138	129	138	136
28 Slice Transmission Loss Return	31.9	40.3	37.7	30.8	30.2	34.2	32.1	32.4	51.8	41.9	40.4	34.8	30.4	33.2	36.5
29 Augmentation Purchases	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1
30 Reserves & Losses	-202	-255	-244	-200	-196	-218	-211	-213	-325	-269	-262	-232	-206	-215	-235

Table 4.1.1
Loads and Resources - Federal System
Fiscal Year: 2014 Water Year: 1937

2014 Final Rate Case Report Date: **5/15/2013** *Continued*

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
³¹ Contingency Reserves (Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³² Contingency Reserves (Non-Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³³ Load Following Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³⁴ Generation Imbalance Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³⁵ Transmission Losses	-202	-255	-244	-200	-196	-218	-211	-213	-325	-269	-262	-232	-206	-215	-235
³⁶ Total Net Resources	6976	8771	8423	6908	6747	7511	7280	7340	11204	9276	9018	7980	7098	7399	8099
³⁷ Total Surplus/Deficit	-114	188	-894	-1928	-1680	-455	-276	-232	2942	1536	800	81.6	-526	-25.6	0

Table 4.1.1
Loads and Resources - Federal System
Fiscal Year: 2015 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Firm Obligations															
1 Non-Utility Obligation	517	473	489	488	480	508	677	677	741	747	819	713	721	662	611
2 Federal Agencies	102	129	149	149	142	130	115	115	102	96.6	104	105	104	96.9	118
3 USBR Obligation	104	30.1	29.2	27.1	25.2	65.8	250	250	327	340	402	295	304	252	180
4 DSI Obligation	311	313	311	312	313	312	312	312	312	311	312	313	312	313	312
5 Transfers Out	6578	8149	8941	8603	8063	7521	6950	6959	7336	6672	7274	7336	7031	6600	7489
6 Load Following 2012 PSC	2706	3208	3667	3677	3517	3033	2900	2900	2758	2840	3099	3008	2981	2771	3096
7 Block 2012 PSC	10.6	47.9	42.1	59.2	58.0	49.6	3.22	3.22	0	0	11.8	12.2	12.2	25.1	26.5
8 Slice Block 2012 PSC	1697	2091	2326	2355	2177	2025	1706	1706	1507	1411	1640	1634	1634	1707	1855
9 Slice Right to Power 2012 PSC	1651	2095	2006	1781	1609	1809	1726	1736	2500	1847	1962	1916	1666	1521	1861
10 Exports	504	493	686	515	488	494	504	504	562	565	552	757	730	566	557
11 Intra-Regional Transfers (Out)	9.00	214	215	215	215	110	110	110	9.00	9.00	9.00	9.00	9.00	9.00	93.6
12 Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 Total Firm Obligations	7095	8622	9431	9091	8543	8029	7627	7637	8078	7420	8093	8049	7753	7261	8100
Net Resources															
14 Net Hydro	5577	7487	7333	6306	5623	6084	6188	6239	9754	7738	7478	7167	6154	5270	6803
15 Regulated Hydro - Net	5255	7216	7154	6161	5471	5833	5753	5794	9036	7074	7075	6784	5781	4963	6450
16 Independent Hydro - Net	321	271	179	145	152	251	434	445	718	664	403	383	374	307	353
17 Other Resources	1113	1099	1107	1091	1086	1125	1129	1112	588	108	846	1097	1134	1118	960
18 Cogeneration Resources	18.4	19.6	22.6	24.0	23.0	23.0	22.0	22.0	19.1	14.2	18.1	12.4	12.4	14.4	19.2
19 Combustion Turbines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 Large Thermal Resources	1030	1030	1030	1030	1030	1030	1030	1030	498	0	764	1030	1030	1030	878
21 Renewable Resources	62.4	46.3	51.1	34.2	30.0	69.0	74.2	57.0	68.1	91.1	61.6	51.9	89.1	71.2	60.3
22 Small Hydro Resources	2.67	2.84	3.19	3.21	3.05	3.10	3.09	3.09	2.83	2.72	2.63	2.63	2.63	2.63	2.88
23 Small Thermal & Misc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 Contract Purchases	613	552	546	549	536	767	540	541	532	533	539	541	528	609	571
25 Imports	106	45.2	41.4	43.2	42.6	255	18.5	18.5	1.12	1.00	11.6	11.0	11.3	100.0	56.6
26 Intra-Regional Transfers (In)	20.4	17.0	11.1	16.2	8.96	26.5	34.5	34.5	32.9	42.8	34.4	38.6	38.7	25.4	25.8
27 Non-Federal CER	138	132	138	138	136	133	137	137	133	137	138	137	128	137	136
28 Slice Transmission Loss Return	31.1	39.5	37.8	33.6	30.3	34.1	32.5	32.7	47.2	34.8	37.0	36.1	31.4	28.6	35.1
29 Augmentation Purchases	318	318	318	318	318	318	318	318	318	318	318	318	318	318	318
30 Reserves & Losses	-206	-258	-253	-224	-204	-225	-222	-223	-307	-236	-250	-248	-220	-197	-235

Table 4.1.1
Loads and Resources - Federal System
Fiscal Year: 2015 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013 *Continued*

S108-RC-20130530-090439

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
³¹ Contingency Reserves (Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³² Contingency Reserves (Non-Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³³ Load Following Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³⁴ Generation Imbalance Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³⁵ Transmission Losses	-206	-258	-253	-224	-204	-225	-222	-223	-307	-236	-250	-248	-220	-197	-235
³⁶ Total Net Resources	7097	8880	8733	7722	7041	7751	7636	7669	10568	8143	8613	8556	7596	6799	8100
³⁷ Total Surplus/Deficit	2.81	258	-697	-1369	-1502	-277	8.53	32.3	2490	724	520	507	-157	-462	0

Table 4.1.2
Loads and Resources - Federal System
Fiscal Year: 2014 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Firm Obligations															
1 Non-Utility Obligation	193802	176288	190344	210652	174331	193118	115485	115485	289381	262722	276396	126762	126762	216743	2668272
2 Federal Agencies	44589	51892	62012	62715	54734	56347	24084	24084	43393	42097	44998	23498	23498	40222	598163
3 USBR Obligation	15959	1461	989	19348	1155	4497	27269	27269	119081	94280	104359	37555	37555	54977	545752
4 DSI Obligation	133254	122936	127343	128589	118442	132274	64132	64132	126907	126345	127039	65709	65709	121544	1524357
5 Transfers Out	3132404	3564178	3945554	3761720	3303978	3446230	1559275	1571945	3450016	3213876	3416053	1688929	1634374	3026931	40715463
6 Load Following 2012 PSC	1243004	1363228	1609898	1597445	1412635	1374090	637507	637507	1215956	1266962	1373946	691429	691429	1200594	16315629
7 Block 2012 PSC	4253	17807	15635	22885	20680	19177	622	622	0	0	4577	2349	2349	9335	120290
8 Slice Block 2012 PSC	701497	796838	886278	932914	797240	805719	340342	340342	592370	530214	649373	324757	324757	651192	8673834
9 Slice Right to Power 2012 PSC	805123	955041	917319	750301	668473	840119	383052	395721	1248435	1035845	993494	446020	391466	793654	10624062
10 Exports	374639	356887	441938	380666	333413	367931	178152	178152	389511	377255	390919	222503	222503	368555	4583024
11 Intra-Regional Transfers (Out)	3888	74376	74487	77509	71537	39196	19600	19600	3744	3600	3744	1872	1872	3600	398624
12 Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 Total Firm Obligations	3326206	3740466	4135899	3972373	3478309	3639348	1674761	1687430	3739397	3476598	3692449	1815690	1761136	3243674	43383735
Net Resources															
14 Net Hydro	2815142	3524348	3500646	2798078	2458741	2973854	1410932	1465560	4751066	3909919	3753682	1702815	1483893	2890913	39439588
15 Regulated Hydro - Net	2659887	3398146	3422118	2732350	2396161	2855634	1310749	1363167	4421544	3612323	3576980	1619045	1396532	2753147	37517781
16 Independent Hydro - Net	155254	126203	78527	65728	62580	118220	100183	102393	329523	297596	176702	83771	87361	137767	1921807
17 Other Resources	479839	438066	441284	455452	415213	467731	236890	228868	460659	453230	463849	226225	235636	448946	5451888
18 Cogeneration Resources	7936	7840	9044	9963	8844	9551	4574	4574	7929	5680	7538	2583	2583	5776	94415
19 Combustion Turbines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 Large Thermal Resources	444960	412000	412000	428480	395520	428480	214240	214240	428480	412000	428480	214240	214240	412000	5059360
21 Renewable Resources	25788	17086	18949	15668	9678	28407	17434	9412	23071	34462	26736	8853	18265	30118	283927
22 Small Hydro Resources	1155	1140	1291	1341	1172	1293	642	642	1179	1088	1095	548	548	1052	14187
23 Small Thermal & Misc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 Contract Purchases	221829	172705	131397	136627	123066	234774	70327	70567	145379	139838	143148	71987	70950	163942	1896536
25 Imports	46064	7536	6247	6752	6526	98963	1589	1589	436	400	3366	1818	1818	34887	217991
26 Intra-Regional Transfers (In)	48210	43081	3779	7520	4055	11750	7618	7618	13538	16215	13222	7852	7852	10434	202744
27 Non-Federal CER	103248	95600	95600	99424	91776	99424	49504	49504	99008	95200	99008	49504	49504	95200	1171504
28 Slice Transmission Loss Return	15176	18034	17317	14138	12593	15845	7219	7460	23605	19569	18760	8416	7379	14967	200477
29 Augmentation Purchases	9131	8454	8454	8793	8116	8793	4396	4396	8793	8454	8793	4396	4396	8454	103820
30 Reserves & Losses	-99174	-116610	-114868	-95602	-84516	-103673	-48452	-49773	-151070	-126984	-122971	-56429	-50491	-98807	-1319422

Table 4.1.2
Loads and Resources - Federal System
Fiscal Year: 2014 Water Year: 1937

2014 Final Rate Case Report Date: **5/15/2013** *Continued*

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
³¹ Contingency Reserves (Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³² Contingency Reserves (Non-Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³³ Load Following Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³⁴ Generation Imbalance Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³⁵ Transmission Losses	-99174	-116610	-114868	-95602	-84516	-103673	-48452	-49773	-151070	-126984	-122971	-56429	-50491	-98807	-1319422
³⁶ Total Net Resources	3417635	4018509	3958459	3294555	2912503	3572685	1669697	1715223	5206034	4376003	4237708	1944598	1739987	3404994	45468590
³⁷ Total Surplus/Deficit	91429	278043	-177440	-677818	-565805	-66663	-5063	27793	1466637	899406	545259	128907	-21149	161321	2084855

Table 4.1.2
Loads and Resources - Federal System
Fiscal Year: 2015 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Firm Obligations															
1 Non-Utility Obligation	194729	177544	191715	211976	175453	194209	115945	115945	290152	263639	277291	127226	127226	217530	2680580
2 Federal Agencies	45516	53164	63378	64039	55856	57438	24544	24544	44396	42734	45894	23962	23962	41009	610436
3 USBR Obligation	15959	1443	993	19348	1155	4497	27269	27269	118848	94560	104359	37555	37555	54977	545787
4 DSI Obligation	133254	122936	127343	128589	118442	132274	64132	64132	126907	126345	127039	65709	65709	121544	1524357
5 Transfers Out	3121680	3539780	4035956	3878789	3347104	3470578	1576513	1585801	3338635	3078425	3417959	1712326	1671561	2933390	40708496
6 Load Following 2012 PSC	1241515	1360645	1619963	1607842	1423987	1376309	638232	638232	1212615	1269978	1376231	691416	691416	1199519	16347901
7 Block 2012 PSC	4579	18406	17508	24641	22266	20648	670	670	0	0	4928	2529	2529	10051	129423
8 Slice Block 2012 PSC	733030	803057	967534	979672	835913	842508	354895	354895	602600	587158	682228	339881	339881	682996	9106246
9 Slice Right to Power 2012 PSC	782428	947316	926004	830789	676606	842264	393866	403154	1148955	857848	981336	451648	410883	667714	10320811
10 Exports	356240	338964	427471	358335	316795	349650	169250	169250	370865	359697	369492	224980	224980	369511	4405480
11 Intra-Regional Transfers (Out)	3888	71392	77477	77511	71537	39199	19600	19600	3600	3744	3744	1872	1872	3600	398635
12 Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 Total Firm Obligations	3316409	3717323	4227671	4090764	3522557	3664787	1692458	1701746	3628786	3342064	3695251	1839552	1798787	3150920	43389075
Net Resources															
14 Net Hydro	2757656	3533155	3502833	3085939	2474936	2966385	1444453	1486077	4588196	3619971	3801449	1729928	1564031	2410038	38965048
15 Regulated Hydro - Net	2602402	3406953	3424306	3020211	2412356	2848165	1344271	1383684	4258673	3322375	3624747	1646157	1476671	2272272	37043241
16 Independent Hydro - Net	155254	126203	78527	65728	62580	118220	100183	102393	329523	297596	176702	83771	87361	137767	1921807
17 Other Resources	479839	421231	458168	455452	415213	467731	236890	228868	231032	41499	353193	226225	235636	448946	4699923
18 Cogeneration Resources	7936	7526	9406	9963	8844	9551	4574	4574	7624	5907	7538	2583	2583	5776	94386
19 Combustion Turbines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 Large Thermal Resources	444960	395520	428480	428480	395520	428480	214240	214240	199200	0	317824	214240	214240	412000	4307424
21 Renewable Resources	25788	17086	18949	15668	9678	28407	17434	9412	23071	34462	26736	8853	18265	30118	283927
22 Small Hydro Resources	1155	1098	1333	1341	1172	1293	642	642	1137	1130	1095	548	548	1052	14187
23 Small Thermal & Misc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 Contract Purchases	305789	245143	259046	262084	236815	356976	132063	132239	257138	264323	265189	133254	132479	282350	3264890
25 Imports	42224	7573	6361	7619	6526	98063	1589	1589	420	416	2576	1448	1448	37360	215212
26 Intra-Regional Transfers (In)	8648	6191	3930	7520	4055	11750	7618	7618	13017	16863	13222	7852	7852	10434	126570
27 Non-Federal CER	102816	91392	99008	99008	91392	99008	49296	49296	94800	98592	98592	49296	49296	94800	1166592
28 Slice Transmission Loss Return	14744	17891	17477	15668	12747	15886	7425	7601	21719	16182	18529	8523	7748	12573	194714
29 Augmentation Purchases	137357	122095	132270	132270	122095	132270	66135	66135	127183	132270	132270	66135	66135	127183	1561802
30 Reserves & Losses	-99921	-118427	-119005	-107258	-88180	-106909	-51138	-52091	-143154	-110707	-124639	-58921	-54487	-88586	-1323422

Table 4.1.2
Loads and Resources - Federal System
Fiscal Year: 2015 Water Year: 1937

2014 Final Rate Case Report Date: **5/15/2013** *Continued*

S108-RC-20130530-090439

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
³¹ Contingency Reserves (Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³² Contingency Reserves (Non-Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³³ Load Following Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³⁴ Generation Imbalance Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³⁵ Transmission Losses	-99921	-118427	-119005	-107258	-88180	-106909	-51138	-52091	-143154	-110707	-124639	-58921	-54487	-88586	-1323422
³⁶ Total Net Resources	3443364	4081102	4101041	3696218	3038784	3684183	1762269	1795094	4933213	3815087	4295191	2030485	1877660	3052749	45606439
³⁷ Total Surplus/Deficit	126955	363779	-126630	-394546	-483773	19396	69810	93348	1304426	473022	599940	190933	78874	-98171	2217363

Table 4.1.3
Loads and Resources - Federal System
Fiscal Year: 2014 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Firm Obligations															
1 Non-Utility Obligation	189175	162399	171036	150114	146234	182282	127490	127490	260689	273950	331333	129010	149380	258186	2658768
2 Federal Agencies	29403	39331	46382	46117	38750	38355	16480	16480	31206	26067	31143	13668	15826	28162	417369
3 USBR Obligation	61273	20209	20740	782	15782	44366	62753	62753	124408	150465	194923	68538	79359	126283	1032633
4 DSI Obligation	98499	102859	103914	103216	91703	99561	48257	48257	105075	97418	105268	46804	54195	103741	1208766
5 Transfers Out	1759890	2285374	2624996	2451759	2038867	2097487	917875	911219	2146738	1822009	2090510	898795	1017119	1843842	24906478
6 Load Following 2012 PSC	774721	948867	1112636	1121735	932946	878576	406056	406056	838640	782262	929886	393357	455466	799191	10780397
7 Block 2012 PSC	3071	14290	13446	18044	15510	15074	455	455	0	0	3609	1716	1987	7468	95126
8 Slice Block 2012 PSC	506627	639450	762212	735566	597926	633348	248710	248710	467061	424163	512005	237322	274794	520945	6808838
9 Slice Right to Power 2012 PSC	453863	586444	568602	465828	408485	510174	230315	223660	792201	563503	600309	217923	228741	473787	6323835
10 Exports	18800	15963	82794	28192	11049	17606	12303	12303	45884	49200	41751	47108	54547	39570	477070
11 Intra-Regional Transfers (Out)	2808	80360	85304	82393	72950	42709	20036	20036	2952	2880	2952	1368	1584	2880	421213
12 Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 Total Firm Obligations	1949065	2447773	2796031	2601873	2185101	2279769	1045365	1038709	2407427	2095959	2421844	1027804	1166498	2102027	27565247
Net Resources															
14 Net Hydro	1387160	1937427	1941044	1493429	1316403	1582738	791722	765448	2810525	1971054	2136941	769328	795081	1554571	21252871
15 Regulated Hydro - Net	1303244	1868130	1886329	1451064	1276771	1514285	735607	707655	2605856	1790641	2013739	715328	738943	1471311	20078902
16 Independent Hydro - Net	83916	69297	54715	42365	39632	68454	56115	57793	204669	180414	123202	53999	56138	83259	1173968
17 Other Resources	348542	354149	382241	356484	314640	368210	169634	171492	372635	366118	363706	168667	199871	356226	4292615
18 Cogeneration Resources	5731	6292	7778	7856	6633	7508	3342	3342	6252	4544	5943	1888	2186	4621	73916
19 Combustion Turbines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 Large Thermal Resources	321360	330630	354320	337840	296640	336810	156560	156560	337840	329600	337840	156560	181280	329600	3963440
21 Renewable Resources	20616	16322	19063	9745	10489	22884	9262	11120	27614	31106	19059	9820	15942	21164	244204
22 Small Hydro Resources	835	905	1080	1044	878	1009	470	470	930	868	864	400	463	842	11055
23 Small Thermal & Misc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 Contract Purchases	88452	80789	51835	48594	37817	115652	17410	17283	37038	32374	43046	17220	19490	67288	674288
25 Imports	38210	24078	25530	24541	22083	91229	5072	5072	398	320	8598	3859	4469	39960	293420
26 Intra-Regional Transfers (In)	35112	35051	4504	4539	1967	7911	4792	4792	10939	14675	12394	6050	7006	7845	157576
27 Non-Federal CER	0	3824	3824	3824	0	0	0	0	3808	0	3808	0	0	3808	22896
28 Slice Transmission Loss Return	8535	11052	10706	8758	7680	9601	4333	4206	14960	10616	11313	4097	4296	8911	119065
29 Augmentation Purchases	6594	6785	7271	6933	6087	6911	3213	3213	6933	6764	6933	3213	3720	6764	81331
30 Reserves & Losses	-51441	-66901	-66978	-53538	-47062	-58278	-27601	-26909	-90810	-66821	-71732	-26937	-28607	-55782	-739398

Table 4.1.3
Loads and Resources - Federal System
Fiscal Year: 2014 Water Year: 1937

2014 Final Rate Case Report Date: **5/15/2013** *Continued*

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
³¹ Contingency Reserves (Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³² Contingency Reserves (Non-Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³³ Load Following Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³⁴ Generation Imbalance Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³⁵ Transmission Losses	-51441	-66901	-66978	-53538	-47062	-58278	-27601	-26909	-90810	-66821	-71732	-26937	-28607	-55782	-739398
³⁶ Total Net Resources	1772713	2305464	2308141	1844969	1621798	2008322	951165	927315	3129388	2302725	2471960	928277	985835	1922303	25480376
³⁷ Total Surplus/Deficit	-176352	-142309	-487891	-756904	-563303	-271447	-94200	-111394	721961	206766	50117	-99527	-180663	-179724	-2084871

Table 4.1.3
Loads and Resources - Federal System
Fiscal Year: 2015 Water Year: 1937
2014 Final Rate Case Report Date: 5/15/2013

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
Firm Obligations															
1 Non-Utility Obligation	189833	163254	172337	151179	147105	183102	127834	127834	261367	274408	331962	129291	149705	258758	2667970
2 Federal Agencies	30061	40168	47689	47182	39621	39175	16824	16824	31650	26806	31771	13949	16151	28735	426605
3 USBR Obligation	61273	20226	20735	782	15782	44366	62753	62753	124641	150184	194923	68538	79359	126283	1032598
4 DSI Obligation	98499	102859	103914	103216	91703	99561	48257	48257	105076	97418	105268	46804	54195	103741	1208767
5 Transfers Out	1772161	2335988	2616448	2521831	2071324	2117520	925462	919609	2119642	1725575	1993996	928714	1028530	1818312	24895113
6 Load Following 2012 PSC	771664	952140	1108298	1127946	939270	876935	405668	405668	839673	774674	929171	391429	453234	795438	10771209
7 Block 2012 PSC	3307	16153	13804	19428	16699	16230	490	490	0	0	3885	1848	2140	8040	102515
8 Slice Block 2012 PSC	529400	704776	762862	772433	626930	662266	259344	259344	518245	429073	537910	248374	287591	546386	7144934
9 Slice Right to Power 2012 PSC	446134	563056	566181	494530	404416	501884	227618	221764	711260	471737	478639	237995	228750	427408	5981373
10 Exports	18849	16630	82877	25102	11057	17498	12307	12307	47367	47354	41439	47700	55232	38159	473880
11 Intra-Regional Transfers (Out)	2808	83233	82426	82392	72950	42706	20036	20036	3096	2736	2952	1368	1584	2880	421203
12 Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 Total Firm Obligations	1961994	2499242	2788786	2673010	2218429	2300621	1053296	1047443	2381009	1999983	2325958	1058005	1178236	2077070	27563083
Net Resources															
14 Net Hydro	1391475	1865092	1953199	1605616	1304027	1554258	783074	759886	2669100	1951570	1762000	850059	799223	1384030	20632608
15 Regulated Hydro - Net	1307558	1795795	1898484	1563251	1264395	1485804	726959	702093	2464432	1771157	1638798	796059	743085	1300770	19458640
16 Independent Hydro - Net	83916	69297	54715	42365	39632	68454	56115	57793	204669	180414	123202	53999	56138	83259	1173968
17 Other Resources	348542	370985	365357	356484	314640	368210	169634	171492	206454	36248	276458	168667	199871	356226	3709269
18 Cogeneration Resources	5731	6605	7416	7856	6633	7508	3342	3342	6557	4317	5943	1888	2186	4621	73945
19 Combustion Turbines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 Large Thermal Resources	321360	347110	337840	337840	296640	336810	156560	156560	171312	0	250592	156560	181280	329600	3380064
21 Renewable Resources	20616	16322	19063	9745	10489	22884	9262	11120	27614	31106	19059	9820	15942	21164	244204
22 Small Hydro Resources	835	947	1038	1044	878	1009	470	470	972	826	864	400	463	842	11055
23 Small Thermal & Misc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 Contract Purchases	150420	152591	147518	146431	123224	212866	62475	62364	138473	119781	135565	61365	70164	156053	1739289
25 Imports	36290	24997	24462	24491	22083	91540	5072	5072	414	304	6088	2506	2902	34640	280862
26 Intra-Regional Transfers (In)	6539	6033	4294	4539	1967	7911	4792	4792	11473	13941	12394	6050	7006	7845	99575
27 Non-Federal CER	0	3808	3808	3808	0	0	0	0	3792	0	3792	0	0	3792	22800
28 Slice Transmission Loss Return	8388	10603	10665	9303	7602	9443	4282	4170	13417	8877	9001	4479	4296	8030	112557
29 Augmentation Purchases	99202	107151	104290	104290	91571	103972	48329	48329	109377	96659	104290	48329	55960	101746	1223496
30 Reserves & Losses	-53310	-67360	-69543	-59461	-49121	-60216	-28628	-28024	-84996	-59434	-61307	-30459	-30153	-53476	-735489

Table 4.1.3
Loads and Resources - Federal System
Fiscal Year: 2015 Water Year: 1937

2014 Final Rate Case Report Date: **5/15/2013** *Continued*

S108-RC-20130530-090439

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
³¹ Contingency Reserves (Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³² Contingency Reserves (Non-Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³³ Load Following Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³⁴ Generation Imbalance Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
³⁵ Transmission Losses	-53310	-67360	-69543	-59461	-49121	-60216	-28628	-28024	-84996	-59434	-61307	-30459	-30153	-53476	-735489
³⁶ Total Net Resources	1837126	2321308	2396531	2049070	1692769	2075118	986555	965719	2929031	2048165	2112715	1049632	1039104	1842833	25345677
³⁷ Total Surplus/Deficit	-124868	-177935	-392255	-623940	-525660	-225503	-66741	-81724	548022	48182	-213243	-8373	-139131	-234237	-2217406

This page intentionally left blank.

