

## 2014 Wholesale Power Rate Case Initial Proposal

# POWER LOADS AND RESOURCES STUDY DOCUMENTATION

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November 2012

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BP-14-E-BPA-03A





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**LOADS AND RESOURCES STUDY DOCUMENTATION  
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## COMMONLY USED ACRONYMS

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
dec	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	IntercontinentalExchange
inc	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 Fisheries	National Oceanographic and Atmospheric Administration
NORM	Non-Operating Risk Model (computer model)
Northwest Power Act Act	Pacific Northwest Electric Power Planning and Conservation
NPCC or Council Council	Pacific Northwest Electric Power and Conservation Planning
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
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

<b>1.</b>	<b>DOCUMENTATION FOR THE LOADS AND RESOURCES STUDY .....</b>	<b>1</b>
1.1	Bonneville Preference Customers	
	Table 1.1.1 Load Following Service Customers.....	2
	Table 1.1.2 Slice Service Customers .....	4
	Table 1.1.3 USBR Obligation Customers.....	5

**Table 1.1.1  
Load Following Service Customers**

Albion, City of	Flathead Elec Coop	Plummer, City of
Alder Mutual	Forest Grove, City of	Port Angeles, City of
Ashland, City of	Glacier Elec Coop	Port of Seattle
Asotin County PUD #1	Grant County PUD #2	Puget Sound Naval Shipyard (Bremerton)
Bandon, City of	Harney Elec Coop	Raft River Rural Elec Coop
Benton REA	Hermiston, City of	Ravalli Elec Coop
Big Bend Elec Coop	Heyburn, City of	Richland, City of
Blachly-Lane Electric Coop	Hood River Elec Coop	Riverside Elec Coop
Blaine, City of	Idaho County L & P	Rupert, City of
Bonnars Ferry, City of	Inland P & L	Salem Elec Coop
Burley, City of	Jefferson County PUD	Salmon River Elec Coop
Canby, City of	Kittitas County PUD #1	Skamania County PUD #1
Cascade Locks, City of	Kootenai Electric Coop	Soda Springs, City of
Central Lincoln	Lakeview L & P (WA)	South Side Elec
Central MT Elec Power Coop	Lane Elec Coop	Springfield Utiltiy Board
Centralia, City of	Lincoln Elec Coop	Steilacoom, Town of
Cheney, City of	Lost River Elec Coop	Sumas, Town of
Chewelah, City of	Lower Valley P & L	Surprise Valley Elec Coop
Clallam County PUD #1	Mason County PUD #1	Tanner Elec Coop
Clearwater Power	Mason County PUD #3	Tillamook PUD #1
Columbia Basin Elec Coop	McCleary, City of	Troy, City of
Columbia Power Coop	McMinnville, City of	U.S. Bureau of Reclamation (Roza)
Columbia REA	Midstate Elec Coop	U.S. Naval Station, Everett (Jim Creek)
Columbia River PUD	Milton Freewater, City of	U.S. Naval Submarine Base,(Bangor)
Consol Irrig Dist #19	Milton, Town of	Umatilla Elec Coop
Consumer's Power	Minidoka, City of	Umpqua Indian Utility Cooperative
Coos-Curry Electric Coop	Mission Valley Power	United Electric Coop
Coulee Dam, City of	Missoula Elec Coop	USBIA Wapato
Declo, City of	Modern Elec Coop	USDOE-Albany
Douglas Electric Coop	Monmouth, City of	USDOE-Richland
Drain, City of	Nespelem Valley Elec Coop	Vera Irrigation District
East End Mutual Electric	Northern Lights	Vigilante Elec Coop
Eatonville, City of	Northern Wasco County PUD	Wahkiakum County PUD #1

**Table 1.1.1 - continued**  
**Load Following Service Customers**

Ellensburg, City of	Ohop Mutual Light Company	Wasco Elec Coop
Elmhurst Mutual P & L	Okanogan County Elec Coop	Weiser, City of
Energy Northwest	Orcas P & L	Wells Rural Elec Co
Fairchild AFB	Oregon Trail Coop	West Oregon Elec Coop
Fall River Rural Elec Coop	Parkland L & W	Whatcom County PUD #1
Farmers Elec Coop	Peninsula Light Company	Yakama Power
Ferry County PUD #1		

**Table 1.1.2**  
**Slice Service Customers**

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



**Table 1.1.3**  
**USBR Obligation Customers**

USBR Chief Joseph Project	USBR East Green Acres	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

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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  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Pacific Northwest</b>															
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	2947	3427	3872	3827	3645	3248	3113	3113	2991	3110	3370	3308	3281	3040	3323
4 Cooperative	1594	1814	2090	2045	1946	1724	1685	1685	1699	1831	2030	1958	1943	1730	1845
5 Municipality	541	634	701	702	672	597	564	564	518	520	557	569	564	539	592
6 Public Utility District	705	846	926	928	887	793	750	750	671	654	664	666	660	668	762
7 Federal Entities	107	132	154	151	140	135	113	113	104	105	119	115	114	103	123
8 Slice Right to Power	1617	2151	2118	1655	1579	1742	1715	1732	2764	2227	2154	1907	1676	1764	1943
9 Municipality	539	717	706	552	526	581	572	578	922	743	718	636	559	588	648
10 Public Utility District	1078	1434	1412	1103	1052	1161	1143	1154	1843	1485	1436	1271	1117	1176	1295
11 Tier 1 Block	1655	2046	2274	2310	2137	1989	1663	1663	1454	1351	1592	1593	1593	1661	1809
12 Municipality	547	758	827	858	813	778	541	541	359	287	462	483	483	596	608
13 Public Utility District	1108	1288	1447	1452	1324	1211	1122	1122	1094	1063	1130	1110	1110	1065	1201
14 USBR Obligation	100	27.6	32.8	13.5	16.9	57.8	246	246	327	335	402	286	296	254	176
15 USBR	100	27.6	32.8	13.5	16.9	57.8	246	246	327	335	402	286	296	254	176
<b>Total Power Sales Contracts</b>															
16 Cooperative	1594	1814	2090	2045	1946	1724	1685	1685	1699	1831	2030	1958	1943	1730	1845
17 Direct Service Industry	311	313	311	312	313	312	312	312	312	311	312	313	312	313	312
18 Municipality	1627	2110	2235	2112	2012	1956	1677	1683	1799	1550	1737	1689	1607	1724	1849
19 Public Utility District	2891	3568	3785	3484	3264	3165	3015	3027	3608	3202	3230	3047	2887	2909	3258
20 Federal Entities	107	132	154	151	140	135	113	113	104	105	119	115	114	103	123
21 USBR	100	27.6	32.8	13.5	16.9	57.8	246	246	327	335	402	286	296	254	176
<b>22 Total Power Sales Contracts</b>	<b>6631</b>	<b>7965</b>	<b>8608</b>	<b>8117</b>	<b>7691</b>	<b>7349</b>	<b>7049</b>	<b>7066</b>	<b>7848</b>	<b>7334</b>	<b>7831</b>	<b>7407</b>	<b>7158</b>	<b>7033</b>	<b>7563</b>

**Table 1.2.1 - continued**  
**Table A-6: BPA Sales to Preference and Legacy Customers**  
 Fiscal Year 2015 Water Year: 1937  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Pacific Northwest</b>															
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	3016	3499	3938	3887	3705	3305	3165	3165	3041	3162	3420	3363	3335	3096	3381
4 Cooperative	1642	1863	2133	2082	1981	1759	1716	1716	1727	1860	2064	1997	1982	1771	1883
5 Municipality	555	649	715	716	686	609	577	577	530	534	570	583	578	552	606
6 Public Utility District	711	853	933	935	895	799	756	756	677	660	670	671	666	674	769
7 Federal Entities	108	134	157	155	143	138	116	116	106	107	116	111	110	99.4	124
8 Slice Right to Power	1576	2105	2127	1799	1583	1732	1736	1745	2519	1848	1971	1978	1727	1518	1867
9 Municipality	525	702	709	600	528	577	579	582	840	616	657	660	576	506	622
10 Public Utility District	1051	1403	1418	1199	1055	1154	1157	1163	1679	1232	1314	1319	1151	1012	1244
11 Tier 1 Block	1736	2147	2387	2424	2243	2088	1746	1746	1526	1419	1671	1672	1672	1743	1899
12 Municipality	572	793	866	897	851	814	567	567	378	303	485	507	507	624	637
13 Public Utility District	1164	1354	1521	1527	1393	1274	1179	1179	1149	1116	1186	1165	1165	1119	1262
14 USBR Obligation	100	27.6	32.8	13.5	16.9	57.8	246	246	327	335	402	286	296	254	176
15 USBR	100	27.6	32.8	13.5	16.9	57.8	246	246	327	335	402	286	296	254	176
<b>Total Power Sales Contracts</b>															
16 Cooperative	1642	1863	2133	2082	1981	1759	1716	1716	1727	1860	2064	1997	1982	1771	1883
17 Direct Service Industry	311	313	311	312	313	312	312	312	312	311	312	313	312	313	312
18 Municipality	1653	2144	2290	2212	2064	2001	1723	1727	1748	1453	1712	1749	1660	1682	1865
19 Public Utility District	2926	3610	3872	3661	3342	3227	3092	3099	3505	3008	3170	3155	2982	2805	3275
20 Federal Entities	108	134	157	155	143	138	116	116	106	107	116	111	110	99.4	124
21 USBR	100	27.6	32.8	13.5	16.9	57.8	246	246	327	335	402	286	296	254	176
<b>22 Total Power Sales Contracts</b>	<b>6740</b>	<b>8092</b>	<b>8795</b>	<b>8435</b>	<b>7861</b>	<b>7494</b>	<b>7205</b>	<b>7214</b>	<b>7725</b>	<b>7075</b>	<b>7776</b>	<b>7612</b>	<b>7341</b>	<b>6924</b>	<b>7635</b>

**Table 1.2.2**  
**Table A-6: BPA Sales to Preference and Legacy Customers**  
 Fiscal Year 2014 Water Year: 1937  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Pacific Northwest</b>															
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	1353232	1451406	1693713	1678378	1476913	1464908	684652	684652	1314992	1379712	1499174	753922	753922	1314804	17504381
4 Cooperative	732943	768211	911349	896016	787633	776191	370018	370018	743442	809674	897377	444481	444481	746189	9698023
5 Municipality	249283	268695	308785	309123	272959	269116	125125	125125	231297	233297	253745	131154	131154	236012	3144870
6 Public Utility District	322938	360411	408033	408462	361030	359962	165271	165271	295406	290085	295457	152294	152294	288826	4025740
7 Federal Entities	48069	54090	65546	64777	55290	59639	24238	24238	44847	46656	52596	25994	25994	43777	635749
8 Slice Right to Power	768056	958560	967756	760195	658745	807822	384793	398331	1255884	1027423	1003647	458949	404165	796288	10650614
9 Municipality	256096	319617	322684	253475	219648	269356	128303	132817	418755	342578	334651	153030	134763	265510	3551285
10 Public Utility District	511959	638943	645073	506719	439097	538466	256489	265514	837129	684844	668996	305920	269402	530778	7099329
11 Tier 1 Block	714817	818546	909748	960952	820727	827610	346005	346005	604717	540230	662383	331381	331381	664545	8879047
12 Municipality	236168	303300	330954	356819	312298	323786	112544	112544	149432	114942	192348	100541	100541	238576	2984791
13 Public Utility District	478649	515246	578794	604134	508429	503825	233461	233461	455285	425288	470035	230840	230840	425969	5894256
14 USBR Obligation	15103	1178	1052	9222	1156	4384	26969	26969	119061	92756	104344	36536	36536	55514	530779
15 USBR	15103	1178	1052	9222	1156	4384	26969	26969	119061	92756	104344	36536	36536	55514	530779
<b>Total Power Sales Contracts</b>															
16 Cooperative	732943	768211	911349	896016	787633	776191	370018	370018	743442	809674	897377	444481	444481	746189	9698023
17 Direct Service Industry	133254	122936	127343	128589	118442	132274	64132	64132	126907	126345	127039	65709	65709	121544	1524357
18 Municipality	741547	891612	962422	919417	804906	862257	365972	370486	799484	690818	780743	384724	366457	740098	9680946
19 Public Utility District	1313546	1514601	1631900	1519314	1308555	1402253	655222	664246	1587820	1400217	1434488	689053	652536	1245573	17019325
20 Federal Entities	48069	54090	65546	64777	55290	59639	24238	24238	44847	46656	52596	25994	25994	43777	635749
21 USBR	15103	1178	1052	9222	1156	4384	26969	26969	119061	92756	104344	36536	36536	55514	530779
<b>22 Total Power Sales Contracts</b>	<b>2984462</b>	<b>3352626</b>	<b>3699612</b>	<b>3537336</b>	<b>3075983</b>	<b>3236998</b>	<b>1506550</b>	<b>1520089</b>	<b>3421562</b>	<b>3166466</b>	<b>3396588</b>	<b>1646498</b>	<b>1591713</b>	<b>2952695</b>	<b>39089178</b>

**Table 1.2.2 - continued**  
**Table A-6: BPA Sales to Preference and Legacy Customers**  
 Fiscal Year 2015 Water Year: 1937  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Pacific Northwest</b>															
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	1384824	1472276	1732816	1704736	1501022	1490447	696149	696149	1329517	1410052	1521475	766460	766460	1338964	17811349
4 Cooperative	754764	783204	936343	912207	802102	792049	376770	376770	751740	827308	912664	453269	453269	763810	9896270
5 Municipality	255476	272432	317401	314915	278444	274657	127925	127925	234898	241158	259624	134274	134274	241514	3214916
6 Public Utility District	325854	361661	412673	411435	364006	362903	166727	166727	296942	294143	298211	153690	153690	291507	4060167
7 Federal Entities	48730	54979	66399	66179	56471	60837	24728	24728	45936	47444	50976	25228	25228	42133	639996
8 Slice Right to Power	748143	948371	976968	839812	665488	810092	394336	403824	1150878	848619	989974	464527	423063	665435	10329529
9 Municipality	249457	316220	325755	280023	221897	270113	131485	134649	383743	282959	330092	154889	141064	221879	3444224
10 Public Utility District	498686	632151	651213	559790	443591	539979	262851	269175	767135	565660	659882	309638	281999	443556	6885305
11 Tier 1 Block	750104	824465	992991	1008299	861386	868629	363254	363254	610560	590461	695109	347683	347683	697252	9321131
12 Municipality	247150	304349	360094	373123	326595	338707	118003	118003	151097	126058	201728	105362	105362	249573	3125204
13 Public Utility District	502953	520116	632897	635176	534792	529922	245251	245251	459464	464403	493381	242322	242322	447679	6195927
14 USBR Obligation	15103	1171	1056	9222	1156	4384	26969	26969	118809	93059	104344	36536	36536	55514	530828
15 USBR	15103	1171	1056	9222	1156	4384	26969	26969	118809	93059	104344	36536	36536	55514	530828
<b>Total Power Sales Contracts</b>															
16 Cooperative	754764	783204	936343	912207	802102	792049	376770	376770	751740	827308	912664	453269	453269	763810	9896270
17 Direct Service Industry	133254	122936	127343	128589	118442	132274	64132	64132	126907	126345	127039	65709	65709	121544	1524357
18 Municipality	752083	893001	1003249	968061	826936	883477	377414	380577	769738	650175	791444	394525	380699	712967	9784345
19 Public Utility District	1327493	1513928	1696783	1606400	1342388	1432805	674828	681152	1523540	1324207	1451474	705649	678010	1182741	17141399
20 Federal Entities	48730	54979	66399	66179	56471	60837	24728	24728	45936	47444	50976	25228	25228	42133	639996
21 USBR	15103	1171	1056	9222	1156	4384	26969	26969	118809	93059	104344	36536	36536	55514	530828
<b>22 Total Power Sales Contracts</b>	<b>3031429</b>	<b>3369219</b>	<b>3831174</b>	<b>3690658</b>	<b>3147494</b>	<b>3305826</b>	<b>1544840</b>	<b>1554328</b>	<b>3336671</b>	<b>3068538</b>	<b>3437941</b>	<b>1680916</b>	<b>1639452</b>	<b>2878709</b>	<b>39517194</b>

**Table 1.2.3**  
**Table A-6: BPA Sales to Preference and Legacy Customers**  
 Fiscal Year 2014 Water Year: 1937  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Pacific Northwest</b>															
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	839591	1019736	1186723	1168772	972781	948687	435864	435864	910611	859713	1008039	436869	505848	874249	11603347
4 Cooperative	453197	539979	643756	625654	519795	504618	236563	236563	520292	508581	612731	260426	301546	499579	6463282
5 Municipality	153358	188765	212720	213372	178684	174206	78073	78073	153837	141436	160536	73848	85508	152008	2044423
6 Public Utility District	201493	249616	281016	282070	235318	229178	104621	104621	203912	180963	198598	87325	101113	192036	2651879
7 Federal Entities	31543	41375	49230	47676	38985	40685	16607	16607	32570	28733	36174	15270	17681	30627	443763
8 Slice Right to Power	435091	592240	608373	471464	402267	486316	232662	225180	800701	576142	599003	227593	239546	473802	6370379
9 Municipality	145074	197474	202853	157202	134130	162155	77578	75083	266981	192106	199728	75887	79873	157982	2124106
10 Public Utility District	290016	394767	405520	314261	268137	324161	155085	150097	533719	384037	399275	151705	159673	315820	4246273
11 Tier 1 Block	516256	656883	782383	757674	615545	650549	252850	252850	476796	432184	522264	242163	280400	531636	6970434
12 Municipality	170566	243398	284620	281338	234223	254514	82244	82244	117821	91954	151659	73472	85073	190861	2343987
13 Public Utility District	345691	413485	497763	476336	381322	396035	170606	170606	358975	340230	370605	168691	195326	340775	4626447
14 USBR Obligation	59348	18701	23388	825	10187	38542	61453	61453	124148	148788	194805	66484	76982	127332	1012435
15 USBR	59348	18701	23388	825	10187	38542	61453	61453	124148	148788	194805	66484	76982	127332	1012435
<b>Total Power Sales Contracts</b>															
16 Cooperative	453197	539979	643756	625654	519795	504618	236563	236563	520292	508581	612731	260426	301546	499579	6463282
17 Direct Service Industry	98499	102859	103914	103216	91703	99561	48257	48257	105075	97418	105268	46804	54195	103741	1208766
18 Municipality	468998	629636	700193	651912	547037	590875	237894	235399	538640	425495	511923	223208	250454	500851	6512515
19 Public Utility District	837200	1057868	1184300	1072667	884776	949375	430312	425325	1096606	905230	968477	407721	456112	848630	11524599
20 Federal Entities	31543	41375	49230	47676	38985	40685	16607	16607	32570	28733	36174	15270	17681	30627	443763
21 USBR	59348	18701	23388	825	10187	38542	61453	61453	124148	148788	194805	66484	76982	127332	1012435
<b>22 Total Power Sales Contracts</b>	<b>1948785</b>	<b>2390420</b>	<b>2704781</b>	<b>2501950</b>	<b>2092482</b>	<b>2223655</b>	<b>1031086</b>	<b>1023604</b>	<b>2417332</b>	<b>2114246</b>	<b>2429379</b>	<b>1019913</b>	<b>1156970</b>	<b>2110759</b>	<b>27165360</b>



**Table 1.2.3 - continued**  
**Table A-6: BPA Sales to Preference and Legacy Customers**  
 Fiscal Year 2015 Water Year: 1937  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Pacific Northwest</b>															
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	859444	1050536	1196763	1187360	988784	964967	443126	443126	933115	866304	1022827	444168	514300	890137	11804957
4 Cooperative	467042	560159	650964	637162	529357	514668	240829	240829	533389	512252	623277	265714	307669	511466	6594776
5 Municipality	157382	195487	214537	217467	182460	177860	79903	79903	159695	143264	164392	75652	87597	155660	2091257
6 Public Utility District	203039	253023	281171	283949	237112	230877	105430	105430	206937	181249	200185	88013	101910	193608	2671934
7 Federal Entities	31981	41867	50092	48781	39856	41563	16965	16965	33095	29538	34973	14789	17124	29404	446991
8 Slice Right to Power	424396	569663	605545	498736	398280	476415	230577	224555	723012	481766	476668	247704	240001	427412	6024730
9 Municipality	141508	189945	201910	166296	132801	158853	76882	74875	241077	160637	158938	82593	80025	142514	2008854
10 Public Utility District	282887	379717	403635	332440	265480	317562	153694	149681	481935	321128	317730	165111	159977	284898	4015876
11 Tier 1 Block	541742	723553	782935	795005	646040	682793	265455	265455	525082	431491	548066	254076	294194	557802	7313688
12 Municipality	178497	267098	283920	294193	244946	266243	86233	86233	129943	92119	159055	76995	89152	199659	2454288
13 Public Utility District	363244	456456	499015	500812	401094	416549	179222	179222	395139	339372	389011	177081	205042	358143	4859401
14 USBR Obligation	59348	18707	23383	825	10187	38542	61453	61453	124400	148485	194805	66484	76982	127332	1012385
15 USBR	59348	18707	23383	825	10187	38542	61453	61453	124400	148485	194805	66484	76982	127332	1012385
<b>Total Power Sales Contracts</b>															
16 Cooperative	467042	560159	650964	637162	529357	514668	240829	240829	533389	512252	623277	265714	307669	511466	6594776
17 Direct Service Industry	98499	102859	103914	103216	91703	99561	48257	48257	105076	97418	105268	46804	54195	103741	1208767
18 Municipality	477387	652530	700366	677956	560206	602956	243018	241010	530716	396021	482384	235241	256774	497832	6554399
19 Public Utility District	849171	1089196	1183821	1117201	903686	964988	438346	434332	1084010	841749	906927	430206	466928	836649	11547210
20 Federal Entities	31981	41867	50092	48781	39856	41563	16965	16965	33095	29538	34973	14789	17124	29404	446991
21 USBR	59348	18707	23383	825	10187	38542	61453	61453	124400	148485	194805	66484	76982	127332	1012385
<b>22 Total Power Sales Contracts</b>	<b>1983428</b>	<b>2465319</b>	<b>2712540</b>	<b>2585141</b>	<b>2134994</b>	<b>2262278</b>	<b>1048867</b>	<b>1042846</b>	<b>2410685</b>	<b>2025464</b>	<b>2347634</b>	<b>1059237</b>	<b>1179671</b>	<b>2106422</b>	<b>27364527</b>

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**Table 1.3.1**  
**Table A-2: Bonneville Power Administration - Power Services Exports**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Canada</b>															
1 BPA-P to BCHP Trty LCADel	232	0	0	0	129	116	0	0	0	0	0	0	0	0	39.5
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	33.7	136	136	0	14.4
<b>4 Total Exports to CAN</b>	<b>720</b>	<b>488</b>	<b>488</b>	<b>488</b>	<b>617</b>	<b>604</b>	<b>488</b>	<b>488</b>	<b>488</b>	<b>488</b>	<b>522</b>	<b>615</b>	<b>585</b>	<b>464</b>	<b>538</b>
<b>East Continental Divide</b>															
5 BPA-P to Other Entities	6.38	7.54	9.23	9.04	8.73	7.18	6.55	6.55	6.13	6.56	8.90	8.28	8.20	6.26	7.56
<b>6 Total Exports to ECD</b>	<b>6.38</b>	<b>7.54</b>	<b>9.23</b>	<b>9.04</b>	<b>8.73</b>	<b>7.18</b>	<b>6.55</b>	<b>6.55</b>	<b>6.13</b>	<b>6.56</b>	<b>8.90</b>	<b>8.28</b>	<b>8.20</b>	<b>6.26</b>	<b>7.56</b>
<b>Pacific Southwest</b>															
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 PG&E NSP SOut	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	25.5	25.4	0	0	0	0	4.25
12 Intertie Losses	1.0	0.6	0.6	0.6	0.5	0.7	1.0	1.0	2.2	2.4	1.6	1.6	1.7	1.3	1.2
<b>13 Total Exports to PSW</b>	<b>34.3</b>	<b>21.6</b>	<b>22.3</b>	<b>21.2</b>	<b>15.5</b>	<b>23.4</b>	<b>34.5</b>	<b>34.5</b>	<b>75.9</b>	<b>82.3</b>	<b>55.4</b>	<b>55.0</b>	<b>57.4</b>	<b>45.1</b>	<b>40.8</b>
<b>Total Exports</b>															
14 Federal Entities	761	517	520	519	642	635	529	529	570	577	586	679	651	515	586
<b>15 Total Exports</b>	<b>761</b>	<b>517</b>	<b>520</b>	<b>519</b>	<b>642</b>	<b>635</b>	<b>529</b>	<b>529</b>	<b>570</b>	<b>577</b>	<b>586</b>	<b>679</b>	<b>651</b>	<b>515</b>	<b>586</b>

**Table 1.3.1 - continued**  
**Table A-2: Bonneville Power Administration - Power Services Exports**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Canada</b>															
1 BPA-P to BCHP Trty LCADel	232	0	0	0	129	116	0	0	0	0	0	0	0	0	39.5
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	32.5	135	135	0	14.2
<b>4 Total Exports to CAN</b>	<b>696</b>	<b>464</b>	<b>464</b>	<b>464</b>	<b>593</b>	<b>580</b>	<b>464</b>	<b>464</b>	<b>464</b>	<b>464</b>	<b>496</b>	<b>622</b>	<b>592</b>	<b>472</b>	<b>519</b>
<b>East Continental Divide</b>															
5 BPA-P to Other Entities	6.38	7.54	9.23	9.04	8.73	7.18	6.55	6.55	6.13	6.56	8.90	8.28	8.20	6.26	7.56
<b>6 Total Exports to ECD</b>	<b>6.38</b>	<b>7.54</b>	<b>9.23</b>	<b>9.04</b>	<b>8.73</b>	<b>7.18</b>	<b>6.55</b>	<b>6.55</b>	<b>6.13</b>	<b>6.56</b>	<b>8.90</b>	<b>8.28</b>	<b>8.20</b>	<b>6.26</b>	<b>7.56</b>
<b>Pacific Southwest</b>															
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 PG&E NSP SOut	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	25.1	25.7	0	0	0	0	4.25
12 Intertie Losses	1.0	0.7	0.6	0.6	0.5	0.7	1.0	1.0	2.2	2.3	1.5	1.5	1.6	1.2	1.1
<b>13 Total Exports to PSW</b>	<b>34.3</b>	<b>22.4</b>	<b>20.0</b>	<b>19.5</b>	<b>15.6</b>	<b>23.4</b>	<b>34.5</b>	<b>34.5</b>	<b>77.2</b>	<b>80.4</b>	<b>50.9</b>	<b>50.8</b>	<b>53.6</b>	<b>40.0</b>	<b>39.3</b>
<b>Total Exports</b>															
14 Federal Entities	736	494	493	492	617	610	505	505	547	551	556	682	654	518	566
<b>15 Total Exports</b>	<b>736</b>	<b>494</b>	<b>493</b>	<b>492</b>	<b>617</b>	<b>610</b>	<b>505</b>	<b>505</b>	<b>547</b>	<b>551</b>	<b>556</b>	<b>682</b>	<b>654</b>	<b>518</b>	<b>566</b>

**Table 1.3.2**  
**Table A-2: Bonneville Power Administration - Power Services Exports**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Canada</b>															
1 BPA-P to BCHP Trty LCADel	100224	0	0	0	49536	48256	0	0	0	0	0	0	0	0	198016
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	14019	28226	28226	0	70470
<b>4 Total Exports to CAN</b>	<b>463529</b>	<b>352074</b>	<b>363305</b>	<b>363305</b>	<b>377682</b>	<b>411073</b>	<b>175792</b>	<b>175792</b>	<b>363305</b>	<b>351585</b>	<b>377324</b>	<b>200679</b>	<b>200679</b>	<b>333780</b>	<b>4509904</b>
<b>East Continental Divide</b>															
5 BPA-P to Other Entities	2862	3098	3909	3802	3413	3151	1406	1406	2657	2974	4018	1917	1917	2694	39223
<b>6 Total Exports to ECD</b>	<b>2862</b>	<b>3098</b>	<b>3909</b>	<b>3802</b>	<b>3413</b>	<b>3151</b>	<b>1406</b>	<b>1406</b>	<b>2657</b>	<b>2974</b>	<b>4018</b>	<b>1917</b>	<b>1917</b>	<b>2694</b>	<b>39223</b>
<b>Pacific Southwest</b>															
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 PG&E NSP SOut	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	12780	12492	0	0	0	0	25272
12 Intertie Losses	248	54	57	59	54	57	30	30	571	555	337	161	161	321	2693
<b>13 Total Exports to PSW</b>	<b>8529</b>	<b>1854</b>	<b>1947</b>	<b>2040</b>	<b>1854</b>	<b>1947</b>	<b>1020</b>	<b>1020</b>	<b>19591</b>	<b>19047</b>	<b>11557</b>	<b>5516</b>	<b>5516</b>	<b>11031</b>	<b>92466</b>
<b>Total Exports</b>															
14 Federal Entities	474920	357026	369161	369146	382949	416171	178218	178218	385552	373606	392899	208111	208111	347505	4641593
<b>15 Total Exports</b>	<b>474920</b>	<b>357026</b>	<b>369161</b>	<b>369146</b>	<b>382949</b>	<b>416171</b>	<b>178218</b>	<b>178218</b>	<b>385552</b>	<b>373606</b>	<b>392899</b>	<b>208111</b>	<b>208111</b>	<b>347505</b>	<b>4641593</b>

**Table 1.3.2 - continued**  
**Table A-2: Bonneville Power Administration - Power Services Exports**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-I	Apr-II	May	Jun	Jul	Aug-I	Aug-II	Sep	Sum
<b>Canada</b>															
1 BPA-P to BCHP Trty LCADel	100224	0	0	0	49536	48256	0	0	0	0	0	0	0	0	198016
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	13520	27872	27872	0	69264
<b>4 Total Exports to CAN</b>	<b>445130</b>	<b>334244</b>	<b>344906</b>	<b>344906</b>	<b>361064</b>	<b>392699</b>	<b>166890</b>	<b>166890</b>	<b>344906</b>	<b>333780</b>	<b>358426</b>	<b>203487</b>	<b>203487</b>	<b>339900</b>	<b>4340716</b>
<b>East Continental Divide</b>															
5 BPA-P to Other Entities	2862	3098	3909	3802	3413	3151	1406	1406	2656	2974	4018	1917	1917	2694	39223
<b>6 Total Exports to ECD</b>	<b>2862</b>	<b>3098</b>	<b>3909</b>	<b>3802</b>	<b>3413</b>	<b>3151</b>	<b>1406</b>	<b>1406</b>	<b>2656</b>	<b>2974</b>	<b>4018</b>	<b>1917</b>	<b>1917</b>	<b>2694</b>	<b>39223</b>
<b>Pacific Southwest</b>															
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 PG&E NSP SOut	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	12240	13032	0	0	0	0	25272
12 Intertie Losses	248	51	59	57	54	59	30	30	547	578	248	113	113	227	2416
<b>13 Total Exports to PSW</b>	<b>8529</b>	<b>1761</b>	<b>2040</b>	<b>1947</b>	<b>1854</b>	<b>2040</b>	<b>1020</b>	<b>1020</b>	<b>18787</b>	<b>19850</b>	<b>8528</b>	<b>3893</b>	<b>3893</b>	<b>7787</b>	<b>82949</b>
<b>Total Exports</b>															
14 Federal Entities	456520	339104	350855	350654	366331	397890	169315	169315	366350	356604	370973	209297	209297	350381	4462888
<b>15 Total Exports</b>	<b>456520</b>	<b>339104</b>	<b>350855</b>	<b>350654</b>	<b>366331</b>	<b>397890</b>	<b>169315</b>	<b>169315</b>	<b>366350</b>	<b>356604</b>	<b>370973</b>	<b>209297</b>	<b>209297</b>	<b>350381</b>	<b>4462888</b>

**Table 1.3.3**  
**Table A-2: Bonneville Power Administration - Power Services Exports**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-I	Apr-II	May	Jun	Jul	Aug-I	Aug-II	Sep	Sum
<b>Canada</b>															
1 BPA-P to BCHP Trty LCADel	72384	0	0	0	37152	38048	0	0	0	0	0	0	0	0	147584
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	11054	20804	24089	0	55947
<b>4 Total Exports to CAN</b>	<b>72384</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>37152</b>	<b>38048</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11054</b>	<b>20804</b>	<b>24089</b>	<b>0</b>	<b>203531</b>
<b>East Continental Divide</b>															
5 BPA-P to Other Entities	1883	2340	2960	2925	2455	2183	951	951	1905	1752	2603	1065	1233	1815	27020
<b>6 Total Exports to ECD</b>	<b>1883</b>	<b>2340</b>	<b>2960</b>	<b>2925</b>	<b>2455</b>	<b>2183</b>	<b>951</b>	<b>951</b>	<b>1905</b>	<b>1752</b>	<b>2603</b>	<b>1065</b>	<b>1233</b>	<b>1815</b>	<b>27020</b>
<b>Pacific Southwest</b>															
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 PG&E NSP SOut	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	6156	5760	0	0	0	0	11916
12 Intertie Losses	494	400	427	400	250	449	332	332	1073	1171	864	416	482	625	7716
<b>13 Total Exports to PSW</b>	<b>16958</b>	<b>13738</b>	<b>14653</b>	<b>13746</b>	<b>8594</b>	<b>15417</b>	<b>11400</b>	<b>11400</b>	<b>36845</b>	<b>40203</b>	<b>29654</b>	<b>14285</b>	<b>16541</b>	<b>21471</b>	<b>264906</b>
<b>Total Exports</b>															
14 Federal Entities	91225	16078	17613	16672	48201	55648	12351	12351	38750	41955	43311	36155	41863	23286	495458
<b>15 Total Exports</b>	<b>91225</b>	<b>16078</b>	<b>17613</b>	<b>16672</b>	<b>48201</b>	<b>55648</b>	<b>12351</b>	<b>12351</b>	<b>38750</b>	<b>41955</b>	<b>43311</b>	<b>36155</b>	<b>41863</b>	<b>23286</b>	<b>495458</b>



**Table 1.3.3 - continued**  
**Table A-2: Bonneville Power Administration - Power Services Exports**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-I	Apr-II	May	Jun	Jul	Aug-I	Aug-II	Sep	Sum
<b>Canada</b>															
1 BPA-P to BCHP Trty LCADel	72384	0	0	0	37152	38048	0	0	0	0	0	0	0	0	147584
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	10660	20597	23849	0	55106
<b>4 Total Exports to CAN</b>	<b>72384</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>37152</b>	<b>38048</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10660</b>	<b>20597</b>	<b>23849</b>	<b>0</b>	<b>202690</b>
<b>East Continental Divide</b>															
5 BPA-P to Other Entities	1883	2340	2960	2925	2455	2183	951	951	1905	1752	2603	1065	1233	1815	27020
<b>6 Total Exports to ECD</b>	<b>1883</b>	<b>2340</b>	<b>2960</b>	<b>2925</b>	<b>2455</b>	<b>2183</b>	<b>951</b>	<b>951</b>	<b>1905</b>	<b>1752</b>	<b>2603</b>	<b>1065</b>	<b>1233</b>	<b>1815</b>	<b>27020</b>
<b>Pacific Southwest</b>															
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 PG&E NSP SOut	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	6444	5472	0	0	0	0	11916
12 Intertie Losses	495	420	373	366	251	446	332	332	1125	1109	855	420	486	612	7621
<b>13 Total Exports to PSW</b>	<b>17007</b>	<b>14405</b>	<b>12815</b>	<b>12576</b>	<b>8603</b>	<b>15310</b>	<b>11404</b>	<b>11404</b>	<b>38625</b>	<b>38060</b>	<b>29342</b>	<b>14411</b>	<b>16687</b>	<b>21020</b>	<b>261671</b>
<b>Total Exports</b>															
14 Federal Entities	91274	16745	15775	15502	48209	55541	12355	12355	40530	39812	42606	36073	41769	22835	491382
<b>15 Total Exports</b>	<b>91274</b>	<b>16745</b>	<b>15775</b>	<b>15502</b>	<b>48209</b>	<b>55541</b>	<b>12355</b>	<b>12355</b>	<b>40530</b>	<b>39812</b>	<b>42606</b>	<b>36073</b>	<b>41769</b>	<b>22835</b>	<b>491382</b>

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<b>2.</b>	<b>RESOURCE FORECASTS FOR FY2014 AND FY2015.....</b>	<b>23</b>
2.1	Regulated Hydro	
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
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**Table 2.1.1**  
**Table A-7: Bonneville Power Administration - Power Services: Regulated Hydro**  
 Fiscal Year 2014  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Regulated Hydro</b>															
1 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
2 Bonneville	420	542	551	456	462	487	370	185	445	361	273	144	139	448	405
3 Chief Joseph	908	1305	1276	956	900	918	906	1053	1577	1231	1471	1319	1086	971	1143
4 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
5 Grand Coulee	1631	2361	2262	1665	1567	1562	1491	1690	2533	2110	2687	2367	1910	1720	1989
6 Hunarv 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
7 Ice Harbor	108	104	114	122	125	178	179	180	312	255	150	96.0	121	98.8	155
8 John Dav	676	926	916	730	735	814	793	730	1089	958	844	698	581	723	818
9 Libbv	93.9	267	175	87.8	87.0	86.2	85.7	85.7	517	220	185	187	187	185	182
10 Little Goose	108	105	112	124	111	170	212	268	485	275	147	101	132	110	176
11 Lower Granite	102	103	113	125	112	172	205	273	496	272	91.4	104	135	115	172
12 Lower Monumental	111	106	116	125	129	183	232	292	514	291	99.2	84.5	133	104	180
13 McNarv	459	598	591	475	478	508	459	398	617	501	401	332	274	496	488
14 The Dalles	537	723	744	595	604	648	602	493	730	643	566	465	386	580	612
<b>Idle Capacity Adjustment</b>															
15 Idle Capacitv Adiustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Regulated Hydro</b>															
16 Federal Entities	5327	7304	7135	5623	5466	5881	5684	5752	9445	7451	7514	6484	5561	5867	6571
<b>17 Total Regulated Hydro</b>	<b>5327</b>	<b>7304</b>	<b>7135</b>	<b>5623</b>	<b>5466</b>	<b>5881</b>	<b>5684</b>	<b>5752</b>	<b>9445</b>	<b>7451</b>	<b>7514</b>	<b>6484</b>	<b>5561</b>	<b>5867</b>	<b>6571</b>

**Table 2.1.1 - continued**  
**Table A-7: Bonneville Power Administration - Power Services: Regulated Hydro**  
 Fiscal Year 2015  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Regulated Hydro</b>															
1 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
2 Bonneville	415	542	551	493	462	489	368	183	411	327	238	169	138	384	395
3 Chief Joseph	893	1278	1278	1069	900	895	932	1070	1478	1125	1366	1389	1143	776	1112
4 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
5 Grand Coulee	1603	2301	2278	1887	1573	1533	1539	1722	2367	1922	2485	2506	2021	1362	1938
6 Hunarv 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
7 Ice Harbor	108	104	114	122	125	178	179	180	312	255	150	96.0	121	98.8	155
8 John Dav	667	925	917	799	735	814	793	727	1041	912	799	728	605	608	804
9 Libbv	93.9	267	175	87.8	87.0	86.2	85.7	85.7	517	220	185	187	187	185	182
10 Little Goose	108	105	112	124	111	170	212	268	485	275	147	101	132	110	176
11 Lower Granite	102	103	113	125	112	172	205	273	495	272	91.4	104	135	115	172
12 Lower Monumental	111	106	116	125	129	183	232	292	514	291	99.2	84.5	133	104	180
13 McNarv	453	597	591	521	478	508	459	396	590	477	379	346	285	415	479
14 The Dalles	530	723	744	649	604	650	599	492	699	612	536	486	402	488	602
<b>Idle Capacity Adjustment</b>															
15 Idle Capacitv Adujstment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Regulated Hydro</b>															
16 Federal Entities	5255	7216	7154	6161	5471	5833	5753	5794	9039	7021	7075	6784	5780	4963	6446
<b>17 Total Regulated Hydro</b>	<b>5255</b>	<b>7216</b>	<b>7154</b>	<b>6161</b>	<b>5471</b>	<b>5833</b>	<b>5753</b>	<b>5794</b>	<b>9039</b>	<b>7021</b>	<b>7075</b>	<b>6784</b>	<b>5780</b>	<b>4963</b>	<b>6446</b>

**Table 2.1.2**  
**Table A-7: Bonneville Power Administration - Power Services: Regulated Hydro**  
 Fiscal Year 2014  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Regulated Hydro</b>															
1 Albeni Falls	13871	7715	8029	6213	4705	5407	5406	4044	15745	17884	14530	5328	4527	9419	122822
2 Bonneville	177341	211199	220051	194158	177696	205394	81194	37834	186200	143691	119294	32962	33011	173512	1993536
3 Chief Joseph	483500	650237	648579	469945	397705	460680	216446	269503	806171	637296	737230	355392	288599	496647	6917929
4 Dworshak	24609	22788	23416	24344	21893	24204	11812	11997	26051	86961	182937	92083	75382	71507	699982
5 Grand Coulee	868339	1176829	1149472	818902	692891	784273	356128	432823	1294992	1092088	1346523	637964	507830	879841	12038896
6 Hunarv Horse	34732	34139	35386	37420	33433	35989	13251	5414	11170	32416	46525	23343	24719	43881	411817
7 Ice Harbor	51216	46258	62741	68567	63123	90229	40627	38790	129739	107799	64035	20458	29181	44024	856789
8 John Dav	322890	410353	414719	350520	320801	390781	179122	165199	497335	449567	402242	163478	138233	327894	4533134
9 Libbv	322890	410353	414719	350520	320801	390781	179122	165199	497335	449567	402242	163478	138233	327894	4533134
10 Little Goose	51183	46807	61777	69956	56134	86408	48079	57524	201903	116513	63090	21556	31948	48984	961862
11 Lower Granite	48349	45701	62466	70262	56710	87348	46527	58765	206670	115004	39120	22168	32670	51295	943056
12 Lower Monumental	52668	47255	63906	70373	65144	92949	52663	62832	214073	123280	42456	18021	32007	46368	983994
13 McNarv	219351	264883	267297	228187	208767	243916	103746	90022	281849	235306	191214	77674	65077	224918	2702206
14 The Dalles	256406	320177	336919	285732	263523	311154	135962	111626	333285	301843	269809	108982	91793	263137	3390346
<b>Idle Capacity Adjustment</b>															
15 Idle Capacitv	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Regulated Hydro</b>															
16 Federal Entities	2644379	3390028	3426254	2731926	2395935	2855343	1308595	1363992	4415529	3550034	3594206	1617912	1395979	2754491	37444601
<b>17 Total Regulated Hydro</b>	<b>2644379</b>	<b>3390028</b>	<b>3426254</b>	<b>2731926</b>	<b>2395935</b>	<b>2855343</b>	<b>1308595</b>	<b>1363992</b>	<b>4415529</b>	<b>3550034</b>	<b>3594206</b>	<b>1617912</b>	<b>1395979</b>	<b>2754491</b>	<b>37444601</b>

**Table 2.1.2 - continued**  
**Table A-7: Bonneville Power Administration - Power Services: Regulated Hydro**  
 Fiscal Year 2015  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Regulated Hydro</b>															
1 Albeni Falls	13841	7715	8029	6213	4705	5398	5406	4036	15745	17884	15161	5328	4527	9769	123758
2 Bonneville	176154	211354	222585	209274	178147	205895	82860	37560	172765	127815	109117	38731	31329	150282	1953869
3 Chief Joseph	472122	634511	642106	527060	402353	450639	222787	273314	752125	565831	758533	354854	311669	382120	6750024
4 Dworshak	24609	22788	23416	24344	21893	24164	11812	11972	26051	86961	190891	92083	75382	71507	707872
5 Grand Coulee	847380	1142447	1144839	930718	703440	771968	368098	439629	1204835	966407	1380468	640237	551018	671277	11762762
6 Hunarv Horse	34732	34139	35386	37420	33433	35930	13251	5403	11170	32416	48547	23343	24719	43881	413770
7 Ice Harbor	51216	46258	62741	68627	63123	90229	40627	38807	130670	107799	66643	20459	28627	43938	859765
8 John Dav	317533	431803	418181	393601	319972	397868	183693	167077	485565	417079	391895	172503	145473	271532	4513775
9 Libbv	39924	105688	71496	37348	33411	36552	17630	17584	210345	90386	78472	38504	41002	73064	891405
10 Little Goose	51183	46807	61777	70017	56134	86408	48079	57547	203351	116513	65659	21557	31342	48888	965263
11 Lower Granite	48349	45701	62466	70323	56710	87348	46527	58790	207614	115004	40713	22169	32050	51194	944960
12 Lower Monumental	52668	47255	63906	70434	65144	92949	52663	62858	215609	123280	44185	18022	31400	46277	986649
13 McNarv	215701	278724	269534	256571	208228	248339	106393	91018	274891	218078	186034	82075	68625	185373	2689584
14 The Dalles	252166	337261	339389	319615	262842	317650	138734	112894	325817	280184	262852	115077	96710	217979	3379169
<b>Idle Capacity Adjustment</b>															
15 Idle Capacitv	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Regulated Hydro</b>															
16 Federal Entities	2597580	3392450	3425850	3021565	2409534	2851338	1338561	1378489	4236555	3265638	3639171	1644942	1473874	2267080	36942625
<b>17 Total Regulated Hydro</b>	<b>2597580</b>	<b>3392450</b>	<b>3425850</b>	<b>3021565</b>	<b>2409534</b>	<b>2851338</b>	<b>1338561</b>	<b>1378489</b>	<b>4236555</b>	<b>3265638</b>	<b>3639171</b>	<b>1644942</b>	<b>1473874</b>	<b>2267080</b>	<b>36942625</b>

**Table 2.1.3**  
**Table A-7: Bonneville Power Administration - Power Services: Regulated Hydro**  
 Fiscal Year 2014  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Regulated Hydro</b>															
1 Albeni Falls	10403	6359	6633	4660	3529	4055	4055	3033	13027	13434	12003	3996	3395	7781	96362
2 Bonneville	134950	179487	189860	145325	132748	156767	52158	28741	145129	116078	83616	19038	20425	149139	1553463
3 Chief Joseph	192242	290390	300794	241156	206867	221062	109676	109424	366868	249382	357463	119268	128287	202389	3095268
4 Dworshak	18457	18783	19344	18258	16420	18153	8859	8998	21554	65325	151122	69062	56536	59071	549940
5 Grand Coulee	345256	525562	533096	420226	360409	376341	180455	175735	589318	427348	652894	214098	225738	358544	5385020
6 Hungry Horse	26049	28139	29232	28065	25075	26992	9939	4060	9242	24351	38433	17507	18539	36250	321872
7 Ice Harbor	29114	28719	22019	22129	20764	41831	23916	26157	102118	75479	47305	14094	17278	27136	498060
8 John Day	180243	257620	267050	192887	172953	214125	106401	97579	313169	240072	225854	87775	84898	192453	2633079
9 Libby	29943	87114	59062	28011	25058	27458	13222	13215	174035	67898	62123	28878	30752	60357	707127
10 Little Goose	29095	29060	21681	22578	18465	40059	28302	38788	158919	81581	46607	14850	18917	30193	579095
11 Lower Granite	27484	28374	21922	22676	18655	40495	27389	39626	162671	80524	28899	15272	19344	31618	564949
12 Lower Monumental	29939	29338	22428	22712	21429	43092	31001	42368	168498	86318	31364	12415	18951	28581	588434
13 McNary	122446	166293	172120	125569	112552	133652	61626	53174	177479	125655	107364	41705	39968	132012	1571616
14 The Dalles	143130	201007	216952	157235	142073	170494	80764	65935	209867	161186	151494	58515	56376	154444	1969473
<b>Idle Capacity Adjustment</b>															
15 Idle Capacity Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Regulated Hydro</b>															
16 Federal Entities	1318752	1876247	1882193	1451488	1276997	1514575	737761	706831	2611894	1814631	1996542	716474	739405	1469967	20113757
<b>17 Total Regulated Hydro</b>	<b>1318752</b>	<b>1876247</b>	<b>1882193</b>	<b>1451488</b>	<b>1276997</b>	<b>1514575</b>	<b>737761</b>	<b>706831</b>	<b>2611894</b>	<b>1814631</b>	<b>1996542</b>	<b>716474</b>	<b>739405</b>	<b>1469967</b>	<b>20113757</b>



**Table 2.1.3 - continued**  
**Table A-7: Bonneville Power Administration - Power Services: Regulated Hydro**  
 Fiscal Year 2015  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Regulated Hydro</b>															
1 Albeni Falls	10381	6359	6633	4660	3529	4064	4055	3042	13027	13434	11371	3996	3395	8070	96015
2 Bonneville	132393	179332	187326	157249	132298	157135	49609	28291	133385	107385	67830	22108	21809	126130	1502280
3 Chief Joseph	192241	286973	308378	267958	202269	214384	112608	112053	347213	244461	257403	145227	127285	176242	2994695
4 Dworshak	18457	18783	19344	18258	16420	18192	8859	9022	21554	65325	143168	69062	56536	59071	542051
5 Grand Coulee	345040	516700	549821	473178	353630	367251	186056	180239	556203	417526	468452	262023	225034	309607	5210760
6 Hunarv Horse	26049	28139	29232	28065	25075	27050	9939	4071	9242	24351	36411	17507	18539	36250	319919
7 Ice Harbor	29114	28719	22019	22070	20764	41831	23916	26141	101188	75479	44697	14093	17832	27222	495084
8 John Dav	178796	235481	264276	200767	173782	207038	101830	94800	289237	239361	202869	89533	86852	165898	2530521
9 Libbv	29943	87114	59062	28011	25058	27518	13222	13251	174035	67898	58854	28878	30752	60357	703953
10 Little Goose	29095	29060	21681	22517	18465	40059	28302	38765	157470	81581	44038	14849	19523	30289	575693
11 Lower Granite	27484	28374	21922	22615	18655	40495	27389	39601	160771	80524	27306	15270	19964	31718	562090
12 Lower Monumental	29939	29338	22428	22651	21429	43092	31001	42342	166962	86318	29635	12414	19559	28672	585779
13 McNarv	121457	152001	170336	130871	113092	129228	58979	51644	163745	125155	96302	42599	40972	113257	1509637
14 The Dalles	141990	183924	214482	163028	142754	165295	76907	64057	194080	160797	136068	59728	57739	133179	1894026
<b>Idle Capacity Adjustment</b>															
15 Idle Capacitv Adiustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Regulated Hydro</b>															
16 Federal Entities	1312380	1810298	1896939	1561897	1267218	1482632	732670	707318	2488112	1789595	1624403	797288	745791	1305962	19522502
<b>17 Total Regulated Hydro</b>	<b>1312380</b>	<b>1810298</b>	<b>1896939</b>	<b>1561897</b>	<b>1267218</b>	<b>1482632</b>	<b>732670</b>	<b>707318</b>	<b>2488112</b>	<b>1789595</b>	<b>1624403</b>	<b>797288</b>	<b>745791</b>	<b>1305962</b>	<b>19522502</b>

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**Table 2.2.1**  
**Table A-8: Bonneville Power Administration - Power Services: Independent Hydro**  
 Fiscal Year 2014  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Independent Hydro</b>															
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	28.8	28.8	9.23	13.0
2 Bio 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 Canvon	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	8.53	6.19
4 Boise River Diversion	0.73	0	0	0	0	0	0.87	0.87	2.50	2.50	2.50	1.83	1.83	2.47	1.12
5 Chandler	5.70	7.34	3.38	5.51	7.47	9.80	6.06	6.06	5.97	5.80	6.09	2.21	2.21	2.00	5.60
6 Couaar	27.0	23.0	9.00	6.00	8.00	10.00	29.0	29.0	29.0	29.0	17.0	23.0	22.0	16.0	18.8
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	11.9	8.50	7.90	26.2
8 Detroit	44.9	47.5	20.9	21.7	17.7	25.3	34.6	37.2	102	37.9	13.0	11.7	11.5	20.2	33.3
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	7.00	6.00	9.29
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 Sprinas	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	23.0	17.8
14 Idaho Falls - Citv Plant	3.91	4.88	6.39	6.59	6.13	4.28	2.92	2.92	1.99	2.92	3.70	2.89	2.89	3.14	4.14
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	2.89	2.89	3.14	4.14
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	1.08	1.08	1.18	1.55
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	2.89	2.89	3.14	4.14
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	21.0	26.0	22.0	35.3
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	23.0	30.0
20 Minidoka	6.48	2.39	2.32	2.32	2.57	2.32	10.3	10.3	24.6	22.7	21.7	20.7	20.7	15.2	11.2
21 Palisades	45.5	11.3	11.2	11.4	12.8	28.2	51.7	51.7	152	151	127	118	118	105	69.2
22 Roza	4.08	1.15	4.09	2.59	3.12	9.41	11.4	11.4	10.8	10.9	10.6	10.6	10.6	3.46	6.88
<b>Total Independent Hydro</b>															
23 Federal Entities	321	271	179	145	152	251	434	445	718	664	403	361	358	332	354
<b>24 Total Independent Hydro</b>	<b>321</b>	<b>271</b>	<b>179</b>	<b>145</b>	<b>152</b>	<b>251</b>	<b>434</b>	<b>445</b>	<b>718</b>	<b>664</b>	<b>403</b>	<b>361</b>	<b>358</b>	<b>332</b>	<b>354</b>

**Table 2.2.1 - continued**  
**Table A-8: Bonneville Power Administration - Power Services: Regulated Hydro**  
 Fiscal Year 2015  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Independent Hydro</b>															
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	28.8	28.8	9.23	13.0
2 Bia 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 Canvon	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	8.53	6.19
4 Boise River Diversion	0.73	0	0	0	0	0	0.87	0.87	2.50	2.50	2.50	1.83	1.83	2.47	1.12
5 Chandler	5.70	7.34	3.38	5.51	7.47	9.80	6.06	6.06	5.97	5.80	6.09	2.21	2.21	2.00	5.60
6 Couaar	27.0	23.0	9.00	6.00	8.00	10.00	29.0	29.0	29.0	29.0	17.0	23.0	22.0	16.0	18.8
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	11.9	8.50	7.90	26.2
8 Detroit	44.9	47.5	20.9	21.7	17.7	25.3	34.6	37.2	102	37.9	13.0	11.7	11.5	20.2	33.3
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	7.00	6.00	9.29
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 Sprinas	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	23.0	17.8
14 Idaho Falls - Citv Plant	3.91	4.88	6.39	6.59	6.13	4.28	2.92	2.92	1.99	2.92	3.70	2.89	2.89	3.14	4.14
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	2.89	2.89	3.14	4.14
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	1.08	1.08	1.18	1.55
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	2.89	2.89	3.14	4.14
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	21.0	26.0	22.0	35.3
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	23.0	30.0
20 Minidoka	6.48	2.39	2.32	2.32	2.57	2.32	10.3	10.3	24.6	22.7	21.7	20.7	20.7	15.2	11.2
21 Palisades	45.5	11.3	11.2	11.4	12.8	28.2	51.7	51.7	152	151	127	118	118	105	69.2
22 Roza	4.08	1.15	4.09	2.59	3.12	9.41	11.4	11.4	10.8	10.9	10.6	10.6	10.6	3.46	6.88
<b>Total Independent Hydro</b>															
23 Federal Entities	321	271	179	145	152	251	434	445	718	664	403	361	358	332	354
<b>24 Total Independent Hydro</b>	<b>321</b>	<b>271</b>	<b>179</b>	<b>145</b>	<b>152</b>	<b>251</b>	<b>434</b>	<b>445</b>	<b>718</b>	<b>664</b>	<b>403</b>	<b>361</b>	<b>358</b>	<b>332</b>	<b>354</b>

**Table 2.2.2**  
**Table A-8: Bonneville Power Administration - Power Services: Independent Hydro**  
 Fiscal Year 2014  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Independent Hydro</b>															
1 Anderson Ranch	1773	1814	1858	1829	1817	1848	1913	1913	5032	15312	14005	5875	6267	3770	65026
2 Bio Cliff	3348	5106	2384	1641	2284	2955	1843	2253	8153	8125	2797	1204	1285	3590	46969
3 Black Canvon	2247	1476	1276	1387	1334	1788	1737	1737	3624	3499	3601	1720	1835	3514	30775
4 Boise River Diversion	295	0	0	0	0	0	0	180	1073	1033	1060	377	402	1023	5444
5 Chandler	2390	3168	1337	2297	2851	4150	1229	1229	2518	2328	2418	473	504	811	27703
6 Couaar	11208	9204	3564	2439	3060	4222	5779	5779	11567	11921	6867	4784	4881	6307	91582
7 Cowlitz Falls	2625	1213	9421	4112	5217	14115	9398	10254	26188	27333	11502	2409	1835	3308	128931
8 Detroit	26259	26124	9974	11046	8322	14099	9615	10337	54964	20352	7898	3614	3789	11383	217776
9 Dexter	5010	6339	1593	1224	1905	2141	2483	3518	6901	6994	2427	1023	1527	2304	45390
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 Sprinas	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	9016	86580
14 Idaho Falls - Citv Plant	1649	2020	2704	2823	2338	1830	604	604	852	1212	1579	596	635	1292	20736
15 Idaho Falls - Lower Plant #1	1649	2020	2704	2823	2338	1830	604	604	852	1212	1579	596	635	1292	20736
16 Idaho Falls - Lower Plant #2	622	753	1015	1049	881	680	225	225	316	449	589	222	237	484	7746
17 Idaho Falls - Upper Plant	1649	2020	2704	2823	2338	1830	604	604	852	1212	1579	596	635	1292	20736
18 Lookout Point	28081	26133	4414	3929	5999	9078	12540	20621	47959	43940	14303	6400	8451	12605	244453
19 Lost Creek	15443	7836	7689	7441	4917	5981	3081	3286	22942	23016	18703	9094	8598	8954	146981
20 Minidoka	2682	992	988	992	1087	986	2097	2097	10493	9332	9127	4238	4521	6310	55942
21 Palisades	19262	4630	4699	4896	4909	12059	10567	10567	65062	61993	53674	24350	25973	43131	345771
22 Roza	1679	0	1647	1090	1200	3998	2359	2359	4546	4523	4314	2215	2363	0	32292
<b>Total Independent Hydro</b>															
23 Federal Entities	155254	126203	78527	65728	62580	118220	100183	102393	329523	297596	176702	79382	84611	145303	1922204
<b>24 Total Independent Hydro</b>	<b>155254</b>	<b>126203</b>	<b>78527</b>	<b>65728</b>	<b>62580</b>	<b>118220</b>	<b>100183</b>	<b>102393</b>	<b>329523</b>	<b>297596</b>	<b>176702</b>	<b>79382</b>	<b>84611</b>	<b>145303</b>	<b>1922204</b>

**Table 2.2.2 - continued**  
**Table A-8: Bonneville Power Administration - Power Services: Independent Hydro**  
 Fiscal Year 2015  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Independent Hydro</b>															
1 Anderson Ranch	1773	1814	1858	1829	1817	1848	1913	1913	5032	15312	14005	5875	6267	3770	65026
2 Bio Cliff	3348	5106	2384	1641	2284	2955	1843	2253	8153	8125	2797	1204	1285	3590	46969
3 Black Canvon	2247	1476	1276	1387	1334	1788	1737	1737	3624	3499	3601	1720	1835	3514	30775
4 Boise River Diversion	295	0	0	0	0	0	0	180	1073	1033	1060	377	402	1023	5444
5 Chandler	2390	3168	1337	2297	2851	4150	1229	1229	2518	2328	2418	473	504	811	27703
6 Couaar	11208	9204	3564	2439	3060	4222	5779	5779	11567	11921	6867	4784	4881	6307	91582
7 Cowlitz Falls	2625	1213	9421	4112	5217	14115	9398	10254	26188	27333	11502	2409	1835	3308	128931
8 Detroit	26259	26124	9974	11046	8322	14099	9615	10337	54964	20352	7898	3614	3789	11383	217776
9 Dexter	5010	6339	1593	1224	1905	2141	2483	3518	6901	6994	2427	1023	1527	2304	45390
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 Sprinas	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	9016	86580
14 Idaho Falls - Citv Plant	1649	2020	2704	2823	2338	1830	604	604	852	1212	1579	596	635	1292	20736
15 Idaho Falls - Lower Plant #1	1649	2020	2704	2823	2338	1830	604	604	852	1212	1579	596	635	1292	20736
16 Idaho Falls - Lower Plant #2	622	753	1015	1049	881	680	225	225	316	449	589	222	237	484	7746
17 Idaho Falls - Upper Plant	1649	2020	2704	2823	2338	1830	604	604	852	1212	1579	596	635	1292	20736
18 Lookout Point	28081	26133	4414	3929	5999	9078	12540	20621	47959	43940	14303	6400	8451	12605	244453
19 Lost Creek	15443	7836	7689	7441	4917	5981	3081	3286	22942	23016	18703	9094	8598	8954	146981
20 Minidoka	2682	992	988	992	1087	986	2097	2097	10493	9332	9127	4238	4521	6310	55942
21 Palisades	19262	4630	4699	4896	4909	12059	10567	10567	65062	61993	53674	24350	25973	43131	345771
22 Roza	1679	0	1647	1090	1200	3998	2359	2359	4546	4523	4314	2215	2363	0	32292
<b>Total Independent Hydro</b>															
23 Federal Entities	155254	126203	78527	65728	62580	118220	100183	102393	329523	297596	176702	79382	84611	145303	1922204
<b>24 Total Independent Hydro</b>	<b>155254</b>	<b>126203</b>	<b>78527</b>	<b>65728</b>	<b>62580</b>	<b>118220</b>	<b>100183</b>	<b>102393</b>	<b>329523</b>	<b>297596</b>	<b>176702</b>	<b>79382</b>	<b>84611</b>	<b>145303</b>	<b>1922204</b>

**Table 2.2.3**  
**Table A-8: Bonneville Power Administration - Power Services: Independent Hydro**  
 Fiscal Year 2014  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Independent Hydro</b>															
1 Anderson Ranch	1346	1327	1319	1377	1381	1352	1473	1473	3746	11295	10723	4491	4791	2878	48973
2 Bio Cliff	2604	4267	2080	1335	1748	2246	1397	1707	6727	6275	2411	956	1019	2890	37661
3 Black Canvon	1809	1128	945	1048	1037	1323	1334	1334	2721	2641	2744	1350	1440	2626	23481
4 Boise River Diversion	250	0	0	0	0	0	315	135	785	764	797	283	302	758	4390
5 Chandler	1853	2126	1177	1805	2169	3134	952	952	1926	1848	2115	321	343	632	21355
6 Coudar	8880	7379	3132	2025	2316	3208	4661	4661	10009	8959	5781	3496	3567	5213	73287
7 Cowlitz Falls	1988	1022	7765	3328	3990	10627	7198	7854	21130	20403	10000	1875	1429	2380	100988
8 Detroit	7146	8123	5576	5099	3572	4699	2841	3055	20627	6936	1774	598	627	3161	73835
9 Dexter	3918	5197	1383	1008	1455	1574	1837	2602	5747	5246	2037	777	1161	2016	35957
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 Sprinas	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	7544	69200
14 Idaho Falls - Citv Plant	1260	1502	2047	2084	1781	1351	449	449	626	890	1176	444	473	972	15504
15 Idaho Falls - Lower Plant #1	1260	1502	2047	2084	1781	1351	449	449	626	890	1176	444	473	972	15504
16 Idaho Falls - Lower Plant #2	469	568	766	791	664	513	170	170	238	339	444	168	179	365	5844
17 Idaho Falls - Upper Plant	1260	1502	2047	2084	1781	1351	449	449	626	890	1176	444	473	972	15504
18 Lookout Point	5399	7754	2282	2023	2065	2067	3660	6019	15281	8620	3553	1160	1533	3235	64651
19 Lost Creek	12085	5863	6447	5951	3819	4421	2319	2474	18722	17304	15521	6746	6378	7606	115656
20 Minidoka	2142	735	736	732	637	736	1622	1622	7780	7019	6982	3214	3428	4628	42012
21 Palisades	14596	3491	3602	3573	3706	8894	8055	8055	48141	47051	40872	18103	19310	32545	259995
22 Roza	1353	829	1395	839	898	2992	1748	1748	3496	3347	3579	1585	1691	2492	27993
<b>Total Independent Hydro</b>															
23 Federal Entities	83916	69297	54715	42365	39632	68454	56115	57793	204669	180414	123202	50516	52948	93459	1177493
<b>24 Total Independent Hydro</b>	<b>83916</b>	<b>69297</b>	<b>54715</b>	<b>42365</b>	<b>39632</b>	<b>68454</b>	<b>56115</b>	<b>57793</b>	<b>204669</b>	<b>180414</b>	<b>123202</b>	<b>50516</b>	<b>52948</b>	<b>93459</b>	<b>1177493</b>



**Table 2.2.3 -continued**  
**Table A-8: Bonneville Power Administration - Power Services: Independent Hydro**  
 Fiscal Year 2015  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Independent Hydro</b>															
1 Anderson Ranch	1346	1327	1319	1377	1381	1352	1473	1473	3746	11295	10723	4491	4791	2878	48973
2 Bio Cliff	2604	4267	2080	1335	1748	2246	1397	1707	6727	6275	2411	956	1019	2890	37661
3 Black Canvon	1809	1128	945	1048	1037	1323	1334	1334	2721	2641	2744	1350	1440	2626	23481
4 Boise River Diversion	250	0	0	0	0	0	315	135	785	764	797	283	302	758	4390
5 Chandler	1853	2126	1177	1805	2169	3134	952	952	1926	1848	2115	321	343	632	21355
6 Coudar	8880	7379	3132	2025	2316	3208	4661	4661	10009	8959	5781	3496	3567	5213	73287
7 Cowlitz Falls	1988	1022	7765	3328	3990	10627	7198	7854	21130	20403	10000	1875	1429	2380	100988
8 Detroit	7146	8123	5576	5099	3572	4699	2841	3055	20627	6936	1774	598	627	3161	73835
9 Dexter	3918	5197	1383	1008	1455	1574	1837	2602	5747	5246	2037	777	1161	2016	35957
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 Sprinas	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	7544	69200
14 Idaho Falls - Citv Plant	1260	1502	2047	2084	1781	1351	449	449	626	890	1176	444	473	972	15504
15 Idaho Falls - Lower Plant #1	1260	1502	2047	2084	1781	1351	449	449	626	890	1176	444	473	972	15504
16 Idaho Falls - Lower Plant #2	469	568	766	791	664	513	170	170	238	339	444	168	179	365	5844
17 Idaho Falls - Upper Plant	1260	1502	2047	2084	1781	1351	449	449	626	890	1176	444	473	972	15504
18 Lookout Point	5399	7754	2282	2023	2065	2067	3660	6019	15281	8620	3553	1160	1533	3235	64651
19 Lost Creek	12085	5863	6447	5951	3819	4421	2319	2474	18722	17304	15521	6746	6378	7606	115656
20 Minidoka	2142	735	736	732	637	736	1622	1622	7780	7019	6982	3214	3428	4628	42012
21 Palisades	14596	3491	3602	3573	3706	8894	8055	8055	48141	47051	40872	18103	19310	32545	259995
22 Roza	1353	829	1395	839	898	2992	1748	1748	3496	3347	3579	1585	1691	2492	27993
<b>Total Independent Hydro</b>															
23 Federal Entities	83916	69297	54715	42365	39632	68454	56115	57793	204669	180414	123202	50516	52948	93459	1177493
<b>24 Total Independent Hydro</b>	<b>83916</b>	<b>69297</b>	<b>54715</b>	<b>42365</b>	<b>39632</b>	<b>68454</b>	<b>56115</b>	<b>57793</b>	<b>204669</b>	<b>180414</b>	<b>123202</b>	<b>50516</b>	<b>52948</b>	<b>93459</b>	<b>1177493</b>

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**Table 2.3.1**  
**Table A-12: Bonneville Power Administration - Power Services: Cogeneration Resources**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Cogeneration Resources</b>															
1 Georgia-Pacific Paper	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
<b>Total Cogeneration Resources</b>															
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
<b>3 Total</b>	<b>18.4</b>	<b>19.6</b>	<b>22.6</b>	<b>24.0</b>	<b>23.0</b>	<b>23.0</b>	<b>22.0</b>	<b>22.0</b>	<b>19.1</b>	<b>14.2</b>	<b>18.1</b>	<b>12.4</b>	<b>12.4</b>	<b>14.4</b>	<b>19.2</b>

**Table 2.3.1 - continued**  
**Table A-12: Bonneville Power Administration - Power Services: Cogeneration Resources**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Cogeneration Resources</b>															
1 Georgia-Pacific Paper	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
<b>Total Cogeneration Resources</b>															
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
<b>3 Total</b>	<b>18.4</b>	<b>19.6</b>	<b>22.6</b>	<b>24.0</b>	<b>23.0</b>	<b>23.0</b>	<b>22.0</b>	<b>22.0</b>	<b>19.1</b>	<b>14.2</b>	<b>18.1</b>	<b>12.4</b>	<b>12.4</b>	<b>14.4</b>	<b>19.2</b>

**Table 2.3.2**  
**Table A-12: Bonneville Power Administration - Power Services: Cogeneration Resources**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Cogeneration Resources</b>															
1 Georgia-Pacific Paper	7936	7840	9044	9963	8844	9551	4574	4574	7929	5680	7538	2583	2583	5776	94415
<b>Total Cogeneration Resources</b>															
2 Federal Entities	7936	7840	9044	9963	8844	9551	4574	4574	7929	5680	7538	2583	2583	5776	94415
<b>3 Total</b>	<b>7936</b>	<b>7840</b>	<b>9044</b>	<b>9963</b>	<b>8844</b>	<b>9551</b>	<b>4574</b>	<b>4574</b>	<b>7929</b>	<b>5680</b>	<b>7538</b>	<b>2583</b>	<b>2583</b>	<b>5776</b>	<b>94415</b>

**Table 2.3.2 - continued**  
**Table A-12: Bonneville Power Administration - Power Services: Cogeneration Resources**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Cogeneration Resources</b>															
1 Georgia-Pacific Paper	7936	7526	9406	9963	8844	9551	4574	4574	7624	5907	7538	2583	2583	5776	94386
<b>Total Cogeneration Resources</b>															
2 Federal Entities	7936	7526	9406	9963	8844	9551	4574	4574	7624	5907	7538	2583	2583	5776	94386
<b>3 Total</b>	<b>7936</b>	<b>7526</b>	<b>9406</b>	<b>9963</b>	<b>8844</b>	<b>9551</b>	<b>4574</b>	<b>4574</b>	<b>7624</b>	<b>5907</b>	<b>7538</b>	<b>2583</b>	<b>2583</b>	<b>5776</b>	<b>94386</b>

**Table 2.3.3**  
**Table A-12: Bonneville Power Administration - Power Services: Cogeneration Resources**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Cogeneration Resources</b>															
1 Georgia-Pacific Paper	5731	6292	7778	7856	6633	7508	3342	3342	6252	4544	5943	1888	2186	4621	73916
<b>Total Cogeneration Resources</b>															
2 Federal Entities	5731	6292	7778	7856	6633	7508	3342	3342	6252	4544	5943	1888	2186	4621	73916
<b>3 Total</b>	<b>5731</b>	<b>6292</b>	<b>7778</b>	<b>7856</b>	<b>6633</b>	<b>7508</b>	<b>3342</b>	<b>3342</b>	<b>6252</b>	<b>4544</b>	<b>5943</b>	<b>1888</b>	<b>2186</b>	<b>4621</b>	<b>73916</b>



**Table 2.3.3 - continued**  
**Table A-12: Bonneville Power Administration - Power Services: Cogeneration Resources**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Cogeneration Resources</b>															
1 Georgia-Pacific Paper	5731	6605	7416	7856	6633	7508	3342	3342	6557	4317	5943	1888	2186	4621	73945
<b>Total Cogeneration Resources</b>															
2 Federal Entities	5731	6605	7416	7856	6633	7508	3342	3342	6557	4317	5943	1888	2186	4621	73945
<b>3 Total</b>	<b>5731</b>	<b>6605</b>	<b>7416</b>	<b>7856</b>	<b>6633</b>	<b>7508</b>	<b>3342</b>	<b>3342</b>	<b>6557</b>	<b>4317</b>	<b>5943</b>	<b>1888</b>	<b>2186</b>	<b>4621</b>	<b>73945</b>

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**Table 2.4.1**  
**Table A-13: Bonneville Power Administration - Power Services: Large Thermal Resources**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Large Thermal Resources</b>															
1 Columbia Generating Station	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030
<b>Total Large Thermal Resources</b>															
2 Federal Entities	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030
<b>3 Total</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>

**Table 2.4.1 - continued**  
**Table A-13: Bonneville Power Administration - Power Services: Large Thermal Resources**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Large Thermal Resources</b>															
1 Columbia Generating Station	1030	1030	1030	1030	1030	1030	1030	1030	498	0	764	1030	1030	1030	878
<b>Total Large Thermal Resources</b>															
2 Federal Entities	1030	1030	1030	1030	1030	1030	1030	1030	498	0	764	1030	1030	1030	878
<b>3 Total</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>498</b>	<b>0</b>	<b>764</b>	<b>1030</b>	<b>1030</b>	<b>1030</b>	<b>878</b>

**Table 2.4.2**  
**Table A-13: Bonneville Power Administration - Power Services: Large Thermal Resources**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Large Thermal Resources</b>															
1 Columbia Generating	444960	412000	412000	428480	395520	428480	214240	214240	428480	412000	428480	214240	214240	412000	5059360
<b>Total Large Thermal Resources</b>															
2 Federal Entities	444960	412000	412000	428480	395520	428480	214240	214240	428480	412000	428480	214240	214240	412000	5059360
<b>3 Total</b>	<b>444960</b>	<b>412000</b>	<b>412000</b>	<b>428480</b>	<b>395520</b>	<b>428480</b>	<b>214240</b>	<b>214240</b>	<b>428480</b>	<b>412000</b>	<b>428480</b>	<b>214240</b>	<b>214240</b>	<b>412000</b>	<b>5059360</b>

**Table 2.4.2 - continued**  
**Table A-13: Bonneville Power Administration - Power Services: Large Thermal Resources**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Large Thermal Resources</b>															
1 Columbia Generating	444960	395520	428480	428480	395520	428480	214240	214240	199200	0	317824	214240	214240	412000	4307424
<b>Total Large Thermal Resources</b>															
2 Federal Entities	444960	395520	428480	428480	395520	428480	214240	214240	199200	0	317824	214240	214240	412000	4307424
<b>3 Total</b>	<b>444960</b>	<b>395520</b>	<b>428480</b>	<b>428480</b>	<b>395520</b>	<b>428480</b>	<b>214240</b>	<b>214240</b>	<b>199200</b>	<b>0</b>	<b>317824</b>	<b>214240</b>	<b>214240</b>	<b>412000</b>	<b>4307424</b>

**Table 2.4.3**  
**Table A-13: Bonneville Power Administration - Power Services: Large Thermal Resources**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Large Thermal Resources</b>															
1 Columbia Generating	321360	330630	354320	337840	296640	336810	156560	156560	337840	329600	337840	156560	181280	329600	3963440
<b>Total Large Thermal Resources</b>															
2 Federal Entities	321360	330630	354320	337840	296640	336810	156560	156560	337840	329600	337840	156560	181280	329600	3963440
<b>3 Total</b>	<b>321360</b>	<b>330630</b>	<b>354320</b>	<b>337840</b>	<b>296640</b>	<b>336810</b>	<b>156560</b>	<b>156560</b>	<b>337840</b>	<b>329600</b>	<b>337840</b>	<b>156560</b>	<b>181280</b>	<b>329600</b>	<b>3963440</b>



**Table 2.4.3 - continued**  
**Table A-13: Bonneville Power Administration - Power Services: Large Thermal Resources**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Large Thermal Resources</b>															
1 Columbia Generating	321360	347110	337840	337840	296640	336810	156560	156560	171312	0	250592	156560	181280	329600	3380064
<b>Total Large Thermal Resources</b>															
2 Federal Entities	321360	347110	337840	337840	296640	336810	156560	156560	171312	0	250592	156560	181280	329600	3380064
<b>3 Total</b>	<b>321360</b>	<b>347110</b>	<b>337840</b>	<b>337840</b>	<b>296640</b>	<b>336810</b>	<b>156560</b>	<b>156560</b>	<b>171312</b>	<b>0</b>	<b>250592</b>	<b>156560</b>	<b>181280</b>	<b>329600</b>	<b>3380064</b>

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**Table 2.5.1**  
**Table A-11: Bonneville Power Administration - Power Services: Renewable Resources**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Renewable Resources</b>															
1 Ashland Solar Proiect	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 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
3 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
4 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
5 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
6 Fourmile Hill Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 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
8 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
9 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
10 White Bluffs Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Renewable Resources</b>															
11 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
<b>12 Total</b>	<b>62.4</b>	<b>46.3</b>	<b>51.1</b>	<b>34.2</b>	<b>30.0</b>	<b>69.0</b>	<b>74.2</b>	<b>57.0</b>	<b>68.1</b>	<b>91.1</b>	<b>61.6</b>	<b>51.9</b>	<b>89.1</b>	<b>71.2</b>	<b>60.3</b>

**Table 2.5.1 - continued**  
**Table A-11: Bonneville Power Administration - Power Services: Renewable Resources**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Renewable Resources</b>															
1 Ashland Solar Project	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 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
3 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
4 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
5 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
6 Fourmile Hill Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 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
8 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
9 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
10 White Bluffs Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Renewable Resources</b>															
11 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
<b>12 Total</b>	<b>62.4</b>	<b>46.3</b>	<b>51.1</b>	<b>34.2</b>	<b>30.0</b>	<b>69.0</b>	<b>74.2</b>	<b>57.0</b>	<b>68.1</b>	<b>91.1</b>	<b>61.6</b>	<b>51.9</b>	<b>89.1</b>	<b>71.2</b>	<b>60.3</b>

**Table 2.5.2**  
**Table A-11: Bonneville Power Administration - Power Services: Renewable Resources**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Renewable Resources</b>															
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 Condon	4383	3656	5284	3330	2415	5219	2835	1938	3414	4389	3195	1315	2559	4382	48314
3 Foote Creek 1	1786	1339	1239	1049	869	1689	1256	790	1639	2519	2150	483	1038	1963	19808
4 Foote Creek 2	209	158	145	122	104	198	148	92.4	193	298	252	56.4	123	231	2331
5 Foote Creek 4	1957	1470	1361	1150	953	1851	1376	867	1796	2762	2359	529	1138	2154	21723
6 Fourmile Hill Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 Klondike 1	2750	1774	1540	1476	1139	2670	2009	1024	2900	4029	4241	1321	2213	3851	32937
8 Klondike 3	5737	3705	3216	3082	2381	5574	4194	2137	6050	8404	8851	2757	4618	8033	68741
9 Stateline	8965	4983	6163	5459	1816	11204	5616	2564	7075	12059	5685	2391	6574	9503	90057
10 White Bluffs Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Renewable Resources</b>															
11 Federal Entities	25788	17086	18949	15668	9678	28407	17434	9412	23071	34462	26736	8853	18265	30118	283927
<b>12 Total</b>	<b>25788</b>	<b>17086</b>	<b>18949</b>	<b>15668</b>	<b>9678</b>	<b>28407</b>	<b>17434</b>	<b>9412</b>	<b>23071</b>	<b>34462</b>	<b>26736</b>	<b>8853</b>	<b>18265</b>	<b>30118</b>	<b>283927</b>

**Table 2.5.2 - continued**  
**Table A-11: Bonneville Power Administration - Power Services: Renewable Resources**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Renewable Resources</b>															
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 Condon	4383	3656	5284	3330	2415	5219	2835	1938	3414	4389	3195	1315	2559	4382	48314
3 Foote Creek 1	1786	1339	1239	1049	869	1689	1256	790	1639	2519	2150	483	1038	1963	19808
4 Foote Creek 2	209	158	145	122	104	198	148	92.4	193	298	252	56.4	123	231	2331
5 Foote Creek 4	1957	1470	1361	1150	953	1851	1376	867	1796	2762	2359	529	1138	2154	21723
6 Fourmile Hill Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 Klondike 1	2750	1774	1540	1476	1139	2670	2009	1024	2900	4029	4241	1321	2213	3851	32937
8 Klondike 3	5737	3705	3216	3082	2381	5574	4194	2137	6050	8404	8851	2757	4618	8033	68741
9 Stateline	8965	4983	6163	5459	1816	11204	5616	2564	7075	12059	5685	2391	6574	9503	90057
10 White Bluffs Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Renewable Resources</b>															
11 Federal Entities	25788	17086	18949	15668	9678	28407	17434	9412	23071	34462	26736	8853	18265	30118	283927
<b>12 Total</b>	<b>25788</b>	<b>17086</b>	<b>18949</b>	<b>15668</b>	<b>9678</b>	<b>28407</b>	<b>17434</b>	<b>9412</b>	<b>23071</b>	<b>34462</b>	<b>26736</b>	<b>8853</b>	<b>18265</b>	<b>30118</b>	<b>283927</b>

**Table 2.5.3**  
**Table A-11: Bonneville Power Administration - Power Services: Renewable Resources**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Renewable Resources</b>															
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 Condon	3689	3388	4976	2049	2377	4410	1006	1158	3052	3012	1901	816	1853	2508	36196
3 Foote Creek 1	1331	1281	1112	553	705	1098	725	686	1769	1802	1525	627	881	1463	15557
4 Foote Creek 2	156	152	130	64.2	84.3	129	85.6	80.4	209	213	179	73.2	104	172	1831
5 Foote Creek 4	1458	1407	1221	606	774	1203	795	753	1938	1976	1673	687	966	1605	17062
6 Fourmile Hill Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 Klondike 1	1975	1499	1540	980	1052	1833	853	1402	3193	3474	2804	1397	1811	2881	26693
8 Klondike 3	4121	3131	3216	2046	2198	3826	1780	2927	6660	7246	5852	2916	3779	6011	55708
9 Stateline	7887	5464	6867	3446	3299	10384	4017	4113	10792	13382	5123	3302	6548	6522	91144
10 White Bluffs Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Renewable Resources</b>															
11 Federal Entities	20616	16322	19063	9745	10489	22884	9262	11120	27614	31106	19059	9820	15942	21164	244204
<b>12 Total</b>	<b>20616</b>	<b>16322</b>	<b>19063</b>	<b>9745</b>	<b>10489</b>	<b>22884</b>	<b>9262</b>	<b>11120</b>	<b>27614</b>	<b>31106</b>	<b>19059</b>	<b>9820</b>	<b>15942</b>	<b>21164</b>	<b>244204</b>



**Table 2.5.3 - continued**  
**Table A-11: Bonneville Power Administration - Power Services: Renewable Resources**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Renewable Resources</b>															
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 Condon	3689	3388	4976	2049	2377	4410	1006	1158	3052	3012	1901	816	1853	2508	36196
3 Foote Creek 1	1331	1281	1112	553	705	1098	725	686	1769	1802	1525	627	881	1463	15557
4 Foote Creek 2	156	152	130	64.2	84.3	129	85.6	80.4	209	213	179	73.2	104	172	1831
5 Foote Creek 4	1458	1407	1221	606	774	1203	795	753	1938	1976	1673	687	966	1605	17062
6 Fourmile Hill Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 Klondike 1	1975	1499	1540	980	1052	1833	853	1402	3193	3474	2804	1397	1811	2881	26693
8 Klondike 3	4121	3131	3216	2046	2198	3826	1780	2927	6660	7246	5852	2916	3779	6011	55708
9 Stateline	7887	5464	6867	3446	3299	10384	4017	4113	10792	13382	5123	3302	6548	6522	91144
10 White Bluffs Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Renewable Resources</b>															
11 Federal Entities	20616	16322	19063	9745	10489	22884	9262	11120	27614	31106	19059	9820	15942	21164	244204
<b>12 Total</b>	<b>20616</b>	<b>16322</b>	<b>19063</b>	<b>9745</b>	<b>10489</b>	<b>22884</b>	<b>9262</b>	<b>11120</b>	<b>27614</b>	<b>31106</b>	<b>19059</b>	<b>9820</b>	<b>15942</b>	<b>21164</b>	<b>244204</b>

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**Table 2.6.1**  
**Table A-9: Bonneville Power Administration - Power Services: Small Hydro**  
 Fiscal Year 2014  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Small Hydro</b>															
1 Dworshak-Clearwater Hatcherv	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 Rockv 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
<b>Total Small Hydro</b>															
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
<b>4 Total Small Hydro</b>	<b>2.67</b>	<b>2.84</b>	<b>3.19</b>	<b>3.21</b>	<b>3.05</b>	<b>3.10</b>	<b>3.09</b>	<b>3.09</b>	<b>2.83</b>	<b>2.72</b>	<b>2.63</b>	<b>2.63</b>	<b>2.63</b>	<b>2.63</b>	<b>2.88</b>

**Table 2.6.1 - continued**  
**Table A-9: Bonneville Power Administration - Power Services: Small Hydro**  
 Fiscal Year 2015  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Small Hydro</b>															
1 Dworshak-Clearwater Hatcherv	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 Rockv 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
<b>Total Small Hydro</b>															
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
<b>4 Total Small Hydro</b>	<b>2.67</b>	<b>2.84</b>	<b>3.19</b>	<b>3.21</b>	<b>3.05</b>	<b>3.10</b>	<b>3.09</b>	<b>3.09</b>	<b>2.83</b>	<b>2.72</b>	<b>2.63</b>	<b>2.63</b>	<b>2.63</b>	<b>2.63</b>	<b>2.88</b>

**Table 2.6.2**  
**Table A-9: Bonneville Power Administration - Power Services: Small Hydro**  
 Fiscal Year 2014  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Small Hydro</b>															
1 Dworshak-Clearwater Hatcherv	1136	1052	1052	1094	1010	1094	547	547	1094	1052	1094	547	547	1052	12919
2 Rockv 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
<b>Total Small Hydro</b>															
3 Federal Entities	1155	1140	1291	1341	1172	1293	642	642	1179	1088	1095	548	548	1052	14187
<b>4 Total Small Hydro</b>	<b>1155</b>	<b>1140</b>	<b>1291</b>	<b>1341</b>	<b>1172</b>	<b>1293</b>	<b>642</b>	<b>642</b>	<b>1179</b>	<b>1088</b>	<b>1095</b>	<b>548</b>	<b>548</b>	<b>1052</b>	<b>14187</b>

**Table 2.6.2 - continued**  
**Table A-9: Bonneville Power Administration - Power Services: Small Hydro**  
 Fiscal Year 2015  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Small Hydro</b>															
1 Dworshak-Clearwater Hatcherv	1136	1010	1094	1094	1010	1094	547	547	1052	1094	1094	547	547	1052	12919
2 Rockv 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
<b>Total Small Hydro</b>															
3 Federal Entities	1155	1098	1333	1341	1172	1293	642	642	1137	1130	1095	548	548	1052	14187
<b>4 Total Small Hydro</b>	<b>1155</b>	<b>1098</b>	<b>1333</b>	<b>1341</b>	<b>1172</b>	<b>1293</b>	<b>642</b>	<b>642</b>	<b>1137</b>	<b>1130</b>	<b>1095</b>	<b>548</b>	<b>548</b>	<b>1052</b>	<b>14187</b>

**Table 2.6.3**  
**Table A-9: Bonneville Power Administration - Power Services: Small Hydro**  
 Fiscal Year 2014  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Small Hydro</b>															
1 Dworshak-Clearwater Hatcherv	821	844	905	863	757	860	400	400	863	842	863	400	463	842	10120
2 Rockv Brook	14.0	61.0	175	181	121	149	70.0	70.0	67.0	26.0	1.00	0	0	0	935
<b>Total Small Hydro</b>															
3 Federal Entities	835	905	1080	1044	878	1009	470	470	930	868	864	400	463	842	11055
<b>4 Total Small Hydro</b>	<b>835</b>	<b>905</b>	<b>1080</b>	<b>1044</b>	<b>878</b>	<b>1009</b>	<b>470</b>	<b>470</b>	<b>930</b>	<b>868</b>	<b>864</b>	<b>400</b>	<b>463</b>	<b>842</b>	<b>11055</b>



**Table 2.6.3 - continued**  
**Table A-9: Bonneville Power Administration - Power Services: Small Hydro**  
 Fiscal Year 2015  
 1937 Water Year  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Small Hydro</b>															
1 Dworshak-Clearwater Hatcherv	821	886	863	863	757	860	400	400	905	800	863	400	463	842	10120
2 Rockv Brook	14.0	61.0	175	181	121	149	70.0	70.0	67.0	26.0	1.00	0	0	0	935
<b>Total Small Hydro</b>															
3 Federal Entities	835	947	1038	1044	878	1009	470	470	972	826	864	400	463	842	11055
<b>4 Total Small Hydro</b>	<b>835</b>	<b>947</b>	<b>1038</b>	<b>1044</b>	<b>878</b>	<b>1009</b>	<b>470</b>	<b>470</b>	<b>972</b>	<b>826</b>	<b>864</b>	<b>400</b>	<b>463</b>	<b>842</b>	<b>11055</b>

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**Table 2.7.1**  
**Table A-3: Bonneville Power Administration - Power Services: Imports**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Canada</b>															
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	0	0	232	0	0	0	0	0	0	0	0	116	116	0	29.6
<b>3 Total Imports From CAN</b>	<b>1.00</b>	<b>1.00</b>	<b>233</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>117</b>	<b>117</b>	<b>1.00</b>	<b>30.6</b>
<b>Pacific Southwest</b>															
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	9.43	9.34	9.00	9.29	9.69	4.55	4.55	0	0	0	0	0	0	4.24
<b>10 Total Imports From PSW</b>	<b>19.4</b>	<b>36.9</b>	<b>36.4</b>	<b>35.4</b>	<b>36.2</b>	<b>32.9</b>	<b>15.2</b>	<b>15.2</b>	<b>0.12</b>	<b>0</b>	<b>15.1</b>	<b>14.8</b>	<b>15.4</b>	<b>23.0</b>	<b>22.1</b>
<b>Total Imports</b>															
11 Federal Entities	20.4	37.9	269	36.4	37.2	33.9	16.2	16.2	1.12	1.00	16.1	132	133	24.0	52.7
<b>12 Total Imports</b>	<b>20.4</b>	<b>37.9</b>	<b>269</b>	<b>36.4</b>	<b>37.2</b>	<b>33.9</b>	<b>16.2</b>	<b>16.2</b>	<b>1.12</b>	<b>1.00</b>	<b>16.1</b>	<b>132</b>	<b>133</b>	<b>24.0</b>	<b>52.7</b>

**Table 2.7.1 - continued**  
**Table A-3: Bonneville Power Administration - Power Services: Imports**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Canada</b>															
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	0	0	232	0	0	0	0	0	0	0	0	116	116	0	29.6
<b>3 Total Imports From CAN</b>	<b>1.00</b>	<b>1.00</b>	<b>233</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>117</b>	<b>117</b>	<b>1.00</b>	<b>30.6</b>
<b>Pacific Southwest</b>															
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	9.78	9.00	9.34	9.29	9.36	4.55	4.55	0	0	0	0	0	0	4.24
<b>10 Total Imports From PSW</b>	<b>19.4</b>	<b>38.1</b>	<b>35.3</b>	<b>36.3</b>	<b>36.2</b>	<b>32.3</b>	<b>15.2</b>	<b>15.2</b>	<b>0.12</b>	<b>0</b>	<b>10.6</b>	<b>9.98</b>	<b>10.3</b>	<b>11.0</b>	<b>20.3</b>
<b>Total Imports</b>															
11 Federal Entities	20.4	39.1	268	37.3	37.2	33.3	16.2	16.2	1.12	1.00	11.6	127	128	12.0	50.9
<b>12 Total Imports</b>	<b>20.4</b>	<b>39.1</b>	<b>268</b>	<b>37.3</b>	<b>37.2</b>	<b>33.3</b>	<b>16.2</b>	<b>16.2</b>	<b>1.12</b>	<b>1.00</b>	<b>11.6</b>	<b>127</b>	<b>128</b>	<b>12.0</b>	<b>50.9</b>

**Table 2.7.2**  
**Table A-3: Bonneville Power Administration - Power Services: Imports**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Canada</b>															
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	0	0	92800	0	0	0	0	0	0	0	0	24232	24232	0	141264
<b>3 Total Imports From CAN</b>	<b>432</b>	<b>400</b>	<b>93200</b>	<b>416</b>	<b>384</b>	<b>416</b>	<b>208</b>	<b>208</b>	<b>416</b>	<b>400</b>	<b>416</b>	<b>24440</b>	<b>24440</b>	<b>400</b>	<b>146176</b>
<b>Pacific Southwest</b>															
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	1679	1427	1444	1410	1696	361	361	0	0	0	0	0	0	8379
<b>10 Total Imports From PSW</b>	<b>3392</b>	<b>5892</b>	<b>5114</b>	<b>5213</b>	<b>5036</b>	<b>5515</b>	<b>1196</b>	<b>1196</b>	<b>20.0</b>	<b>0</b>	<b>2950</b>	<b>1610</b>	<b>1610</b>	<b>3767</b>	<b>42511</b>
<b>Total Imports</b>															
11 Federal Entities	3824	6292	98314	5629	5420	5931	1404	1404	436	400	3366	26050	26050	4167	188687
<b>12 Total Imports</b>	<b>3824</b>	<b>6292</b>	<b>98314</b>	<b>5629</b>	<b>5420</b>	<b>5931</b>	<b>1404</b>	<b>1404</b>	<b>436</b>	<b>400</b>	<b>3366</b>	<b>26050</b>	<b>26050</b>	<b>4167</b>	<b>188687</b>

**Table 2.7.2 - continued**  
**Table A-3: Bonneville Power Administration - Power Services: Imports**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Canada</b>															
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	0	0	96512	0	0	0	0	0	0	0	0	24232	24232	0	144976
<b>3 Total Imports From CAN</b>	<b>432</b>	<b>384</b>	<b>96928</b>	<b>416</b>	<b>384</b>	<b>416</b>	<b>208</b>	<b>208</b>	<b>400</b>	<b>416</b>	<b>416</b>	<b>24440</b>	<b>24440</b>	<b>400</b>	<b>149888</b>
<b>Pacific Southwest</b>															
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	1662	1444	1696	1410	1444	361	361	0	0	0	0	0	0	8378
<b>10 Total Imports From PSW</b>	<b>3392</b>	<b>5954</b>	<b>5203</b>	<b>5950</b>	<b>5036</b>	<b>4745</b>	<b>1196</b>	<b>1196</b>	<b>20.0</b>	<b>0</b>	<b>2160</b>	<b>1240</b>	<b>1240</b>	<b>2400</b>	<b>39732</b>
<b>Total Imports</b>															
11 Federal Entities	3824	6338	102131	6366	5420	5161	1404	1404	420	416	2576	25680	25680	2800	189620
<b>12 Total Imports</b>	<b>3824</b>	<b>6338</b>	<b>102131</b>	<b>6366</b>	<b>5420</b>	<b>5161</b>	<b>1404</b>	<b>1404</b>	<b>420</b>	<b>416</b>	<b>2576</b>	<b>25680</b>	<b>25680</b>	<b>2800</b>	<b>189620</b>

**Table 2.7.3**  
**Table A-3: Bonneville Power Administration - Power Services: Imports**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Canada</b>															
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	0	0	79808	0	0	0	0	0	0	0	0	17669	20459	0	117936
<b>3 Total Imports From CAN</b>	<b>312</b>	<b>321</b>	<b>80152</b>	<b>328</b>	<b>288</b>	<b>327</b>	<b>152</b>	<b>152</b>	<b>328</b>	<b>320</b>	<b>328</b>	<b>17821</b>	<b>20635</b>	<b>320</b>	<b>121784</b>
<b>Pacific Southwest</b>															
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	5121	5524	5255	4836	5507	1276	1276	0	0	0	0	0	0	28795
<b>10 Total Imports From PSW</b>	<b>11018</b>	<b>20744</b>	<b>21967</b>	<b>21132</b>	<b>19311</b>	<b>18952</b>	<b>4265</b>	<b>4265</b>	<b>69.9</b>	<b>0</b>	<b>8270</b>	<b>3707</b>	<b>4293</b>	<b>12760</b>	<b>150753</b>
<b>Total Imports</b>															
11 Federal Entities	11330	21065	102119	21460	19599	19279	4417	4417	398	320	8598	21528	24928	13080	272537
<b>12 Total Imports</b>	<b>11330</b>	<b>21065</b>	<b>102119</b>	<b>21460</b>	<b>19599</b>	<b>19279</b>	<b>4417</b>	<b>4417</b>	<b>398</b>	<b>320</b>	<b>8598</b>	<b>21528</b>	<b>24928</b>	<b>13080</b>	<b>272537</b>



**Table 2.7.3 - continued**  
**Table A-3: Bonneville Power Administration - Power Services: Imports**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Canada</b>															
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	0	0	76096	0	0	0	0	0	0	0	0	17669	20459	0	114224
<b>3 Total Imports From CAN</b>	<b>312</b>	<b>337</b>	<b>76424</b>	<b>328</b>	<b>288</b>	<b>327</b>	<b>152</b>	<b>152</b>	<b>344</b>	<b>304</b>	<b>328</b>	<b>17821</b>	<b>20635</b>	<b>320</b>	<b>118072</b>
<b>Pacific Southwest</b>															
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	5390	5255	5255	4836	5507	1276	1276	0	0	0	0	0	0	28795
<b>10 Total Imports From PSW</b>	<b>11018</b>	<b>21509</b>	<b>21052</b>	<b>21082</b>	<b>19311</b>	<b>19264</b>	<b>4265</b>	<b>4265</b>	<b>69.8</b>	<b>0</b>	<b>5760</b>	<b>2354</b>	<b>2726</b>	<b>5520</b>	<b>138195</b>
<b>Total Imports</b>															
11 Federal Entities	11330	21846	97476	21410	19599	19591	4417	4417	414	304	6088	20175	23361	5840	256267
<b>12 Total Imports</b>	<b>11330</b>	<b>21846</b>	<b>97476</b>	<b>21410</b>	<b>19599</b>	<b>19591</b>	<b>4417</b>	<b>4417</b>	<b>414</b>	<b>304</b>	<b>6088</b>	<b>20175</b>	<b>23361</b>	<b>5840</b>	<b>256267</b>

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**Table 2.8.1**  
**Table A-15: Non-Federal CER Deliveries to BPA**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
<b>Pacific Northwest</b>															
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
<b>6 Total Imports From PNW</b>	<b>139</b>	<b>138</b>	<b>134</b>	<b>139</b>	<b>137</b>	<b>134</b>	<b>138</b>	<b>138</b>	<b>138</b>	<b>132</b>	<b>138</b>	<b>138</b>	<b>129</b>	<b>138</b>	<b>136</b>
<b>Total Imports</b>															
7 Federal Entities	139	138	134	139	137	134	138	138	138	132	138	138	129	138	136
<b>8 Total Imports</b>	<b>139</b>	<b>138</b>	<b>134</b>	<b>139</b>	<b>137</b>	<b>134</b>	<b>138</b>	<b>138</b>	<b>138</b>	<b>132</b>	<b>138</b>	<b>138</b>	<b>129</b>	<b>138</b>	<b>136</b>

**Table 2.8.1 - continued**  
**Table A-15: Non-Federal CER Deliveries to BPA**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
<b>Pacific Northwest</b>															
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
<b>6 Total Imports From PNW</b>	<b>138</b>	<b>132</b>	<b>138</b>	<b>138</b>	<b>136</b>	<b>133</b>	<b>137</b>	<b>137</b>	<b>133</b>	<b>137</b>	<b>138</b>	<b>137</b>	<b>128</b>	<b>137</b>	<b>136</b>
<b>Total Imports</b>															
7 Federal Entities	138	132	138	138	136	133	137	137	133	137	138	137	128	137	136
<b>8 Total Imports</b>	<b>138</b>	<b>132</b>	<b>138</b>	<b>138</b>	<b>136</b>	<b>133</b>	<b>137</b>	<b>137</b>	<b>133</b>	<b>137</b>	<b>138</b>	<b>137</b>	<b>128</b>	<b>137</b>	<b>136</b>

**Table 2.8.2**  
**Table A-15: Non-Federal CER Deliveries to BPA**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
<b>Pacific Northwest</b>															
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
<b>6 Total Imports From PNW</b>	<b>103248</b>	<b>95600</b>	<b>95600</b>	<b>99424</b>	<b>91776</b>	<b>99424</b>	<b>49504</b>	<b>49504</b>	<b>99008</b>	<b>95200</b>	<b>99008</b>	<b>49504</b>	<b>49504</b>	<b>95200</b>	<b>1171504</b>
<b>Total Imports</b>															
7 Federal Entities	103248	95600	95600	99424	91776	99424	49504	49504	99008	95200	99008	49504	49504	95200	1171504
<b>8 Total Imports</b>	<b>103248</b>	<b>95600</b>	<b>95600</b>	<b>99424</b>	<b>91776</b>	<b>99424</b>	<b>49504</b>	<b>49504</b>	<b>99008</b>	<b>95200</b>	<b>99008</b>	<b>49504</b>	<b>49504</b>	<b>95200</b>	<b>1171504</b>

**Table 2.8.2 - continued**  
**Table A-15: Non-Federal CER Deliveries to BPA**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
<b>Pacific Northwest</b>															
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
<b>6 Total Imports From PNW</b>	<b>102816</b>	<b>91392</b>	<b>99008</b>	<b>99008</b>	<b>91392</b>	<b>99008</b>	<b>49296</b>	<b>49296</b>	<b>94800</b>	<b>98592</b>	<b>98592</b>	<b>49296</b>	<b>49296</b>	<b>94800</b>	<b>1166592</b>
<b>Total Imports</b>															
7 Federal Entities	102816	91392	99008	99008	91392	99008	49296	49296	94800	98592	98592	49296	49296	94800	1166592
<b>8 Total Imports</b>	<b>102816</b>	<b>91392</b>	<b>99008</b>	<b>99008</b>	<b>91392</b>	<b>99008</b>	<b>49296</b>	<b>49296</b>	<b>94800</b>	<b>98592</b>	<b>98592</b>	<b>49296</b>	<b>49296</b>	<b>94800</b>	<b>1166592</b>

**Table 2.8.3**  
**Table A-15: Non-Federal CER Deliveries to BPA**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
<b>Pacific Northwest</b>															
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
<b>6 Total Imports From PNW</b>	<b>0</b>	<b>3824</b>	<b>3824</b>	<b>3824</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3808</b>	<b>0</b>	<b>3808</b>	<b>0</b>	<b>0</b>	<b>3808</b>	<b>22896</b>
<b>Total Imports</b>															
7 Federal Entities	0	3824	3824	3824	0	0	0	0	3808	0	3808	0	0	3808	22896
<b>8 Total Imports</b>	<b>0</b>	<b>3824</b>	<b>3824</b>	<b>3824</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3808</b>	<b>0</b>	<b>3808</b>	<b>0</b>	<b>0</b>	<b>3808</b>	<b>22896</b>



**Table 2.8.3 - continued**  
**Table A-15: Non-Federal CER Deliveries to BPA**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Sum
<b>Pacific Northwest</b>															
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
<b>6 Total Imports From PNW</b>	<b>0</b>	<b>3808</b>	<b>3808</b>	<b>3808</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3792</b>	<b>0</b>	<b>3792</b>	<b>0</b>	<b>0</b>	<b>3792</b>	<b>22800</b>
<b>Total Imports</b>															
7 Federal Entities	0	3808	3808	3808	0	0	0	0	3792	0	3792	0	0	3792	22800
<b>8 Total Imports</b>	<b>0</b>	<b>3808</b>	<b>3808</b>	<b>3808</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3792</b>	<b>0</b>	<b>3792</b>	<b>0</b>	<b>0</b>	<b>3792</b>	<b>22800</b>

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**Table 2.9.1**  
**Table A-4: Bonneville Power Administration - Power Services: Intra-Regional Transfers**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Intra-Regional Transfers</b>															
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 BPA-P to Unk_PNW_GPU PCRED LF	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7
8 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
9 PPL to BPA-P SNX SprgRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 PPL to BPA-P SNX SumrRtn	91.6	91.5	0	0	0	0	0	0	0	0	0	0	0	0	15.3
<b>11 Total Intra-Regional Transfers</b>	<b>151</b>	<b>353</b>	<b>256</b>	<b>261</b>	<b>254</b>	<b>166</b>	<b>174</b>	<b>174</b>	<b>71.6</b>	<b>81.6</b>	<b>73.1</b>	<b>77.3</b>	<b>77.4</b>	<b>64.1</b>	<b>164</b>
<b>Intra-Regional Contracts Out</b>															
12 Federal Entities	38.7	244	244	245	245	140	140	140	38.7	38.7	38.7	38.7	38.7	38.7	123
13 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
<b>14 Total Regional Contracts Out</b>	<b>151</b>	<b>353</b>	<b>256</b>	<b>261</b>	<b>254</b>	<b>166</b>	<b>174</b>	<b>174</b>	<b>71.6</b>	<b>81.6</b>	<b>73.1</b>	<b>77.3</b>	<b>77.4</b>	<b>64.1</b>	<b>164</b>
<b>Intra-Regional Contracts In</b>															
15 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
16 Investor Owned Utilities	0	206	206	206	206	101	101	101	0	0	0	0	0	0	84.6
17 Public Utility District	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7
<b>18 Total Regional Contracts In</b>	<b>151</b>	<b>353</b>	<b>256</b>	<b>261</b>	<b>254</b>	<b>166</b>	<b>174</b>	<b>174</b>	<b>71.6</b>	<b>81.6</b>	<b>73.1</b>	<b>77.3</b>	<b>77.4</b>	<b>64.1</b>	<b>164</b>

**Table 2.9.1 - continued**  
**Table A-4: Bonneville Power Administration - Power Services: Intra-Regional Transfers**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Avg
<b>Intra-Regional Transfers</b>															
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 BPA-P to Unk_PNW_GPU PCRED LF	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7
8 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
9 PPL to BPA-P SNX SprgRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 PPL to BPA-P SNX SumrRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>11 Total Intra-Regional Transfers</b>	<b>59.1</b>	<b>261</b>	<b>256</b>	<b>261</b>	<b>254</b>	<b>166</b>	<b>174</b>	<b>174</b>	<b>71.6</b>	<b>81.5</b>	<b>73.1</b>	<b>77.3</b>	<b>77.4</b>	<b>64.1</b>	<b>149</b>
<b>Intra-Regional Contracts Out</b>															
12 Federal Entities	38.7	244	245	245	245	140	140	140	38.7	38.7	38.7	38.7	38.7	38.7	123
13 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
<b>14 Total Regional Contracts Out</b>	<b>59.1</b>	<b>261</b>	<b>256</b>	<b>261</b>	<b>254</b>	<b>166</b>	<b>174</b>	<b>174</b>	<b>71.6</b>	<b>81.5</b>	<b>73.1</b>	<b>77.3</b>	<b>77.4</b>	<b>64.1</b>	<b>149</b>
<b>Intra-Regional Contracts In</b>															
15 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
16 Investor Owned Utilities	0	205	206	206	206	101	101	101	0	0	0	0	0	0	84.6
17 Public Utility District	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7
<b>18 Total Regional Contracts In</b>	<b>59.1</b>	<b>261</b>	<b>256</b>	<b>261</b>	<b>254</b>	<b>166</b>	<b>174</b>	<b>174</b>	<b>71.6</b>	<b>81.5</b>	<b>73.1</b>	<b>77.3</b>	<b>77.4</b>	<b>64.1</b>	<b>149</b>

**Table 2.9.2**  
**Table A-4: Bonneville Power Administration - Power Services: Intra-Regional Transfers**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Intra-Regional Transfers</b>															
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 BPA-P to Unk_PNW_GPU PCRED LF	12838	11887	11887	12362	11411	12362	6181	6181	12362	11887	12362	6181	6181	11887	145970
8 Other Entities to BPA-P	8648	6449	3779	7520	4055	11750	7618	7618	13538	16215	13222	7852	7852	10434	126549
9 PPL to BPA-P SNX SprgRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 PPL to BPA-P SNX SumrRtn	39563	36632	0	0	0	0	0	0	0	0	0	0	0	0	76195
<b>11 Total Intra-Regional Transfers</b>	<b>64936</b>	<b>129344</b>	<b>90153</b>	<b>97391</b>	<b>87003</b>	<b>63307</b>	<b>33399</b>	<b>33399</b>	<b>29644</b>	<b>31702</b>	<b>29328</b>	<b>15905</b>	<b>15905</b>	<b>25921</b>	<b>747338</b>
<b>Intra-Regional Contracts Out</b>															
12 Federal Entities	16726	86263	86374	89871	82948	51558	25781	25781	16106	15487	16106	8053	8053	15487	544594
13 Investor Owned Utilities	48210	43081	3779	7520	4055	11750	7618	7618	13538	16215	13222	7852	7852	10434	202744
<b>14 Total Regional Contracts Out</b>	<b>64936</b>	<b>129344</b>	<b>90153</b>	<b>97391</b>	<b>87003</b>	<b>63307</b>	<b>33399</b>	<b>33399</b>	<b>29644</b>	<b>31702</b>	<b>29328</b>	<b>15905</b>	<b>15905</b>	<b>25921</b>	<b>747338</b>
<b>Intra-Regional Contracts In</b>															
15 Federal Entities	52098	46681	7379	11264	7511	15494	9490	9490	17282	19815	16966	9724	9724	14034	246952
16 Investor Owned Utilities	0	70776	70887	73765	68081	35452	17728	17728	0	0	0	0	0	0	354416
17 Public Utility District	12838	11887	11887	12362	11411	12362	6181	6181	12362	11887	12362	6181	6181	11887	145970
<b>18 Total Regional Contracts In</b>	<b>64936</b>	<b>129344</b>	<b>90153</b>	<b>97391</b>	<b>87003</b>	<b>63307</b>	<b>33399</b>	<b>33399</b>	<b>29644</b>	<b>31702</b>	<b>29328</b>	<b>15905</b>	<b>15905</b>	<b>25921</b>	<b>747338</b>

**Table 2.9.2 - continued**  
**Table A-4: Bonneville Power Administration - Power Services: Intra-Regional Transfers**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Intra-Regional Transfers</b>															
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 BPA-P to Unk_PNW_GPU PCRED LF	12838	11411	12362	12362	11411	12362	6181	6181	11887	12362	12362	6181	6181	11887	145970
8 Other Entities to BPA-P	8648	6191	3930	7520	4055	11750	7618	7618	13017	16863	13222	7852	7852	10434	126570
9 PPL to BPA-P SNX SprgRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 PPL to BPA-P SNX SumrRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>11 Total Intra-Regional Transfers</b>	<b>25374</b>	<b>88994</b>	<b>93769</b>	<b>97393</b>	<b>87003</b>	<b>63311</b>	<b>33399</b>	<b>33399</b>	<b>28504</b>	<b>32970</b>	<b>29328</b>	<b>15905</b>	<b>15905</b>	<b>25921</b>	<b>671176</b>
<b>Intra-Regional Contracts Out</b>															
12 Federal Entities	16726	82803	89839	89873	82948	51561	25781	25781	15487	16106	16106	8053	8053	15487	544605
13 Investor Owned Utilities	8648	6191	3930	7520	4055	11750	7618	7618	13017	16863	13222	7852	7852	10434	126570
<b>14 Total Regional Contracts Out</b>	<b>25374</b>	<b>88994</b>	<b>93769</b>	<b>97393</b>	<b>87003</b>	<b>63311</b>	<b>33399</b>	<b>33399</b>	<b>28504</b>	<b>32970</b>	<b>29328</b>	<b>15905</b>	<b>15905</b>	<b>25921</b>	<b>671176</b>
<b>Intra-Regional Contracts In</b>															
15 Federal Entities	12536	9647	7674	11264	7511	15494	9490	9490	16617	20607	16966	9724	9724	14034	170778
16 Investor Owned Utilities	0	67936	73733	73767	68081	35455	17728	17728	0	0	0	0	0	0	354427
17 Public Utility District	12838	11411	12362	12362	11411	12362	6181	6181	11887	12362	12362	6181	6181	11887	145970
<b>18 Total Regional Contracts In</b>	<b>25374</b>	<b>88994</b>	<b>93769</b>	<b>97393</b>	<b>87003</b>	<b>63311</b>	<b>33399</b>	<b>33399</b>	<b>28504</b>	<b>32970</b>	<b>29328</b>	<b>15905</b>	<b>15905</b>	<b>25921</b>	<b>671176</b>

**Table 2.9.3**  
**Table A-4: Bonneville Power Administration - Power Services: Intra-Regional Transfers**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Intra-Regional Transfers</b>															
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 BPA-P to Unk_PNW_GPU PCRED LF	9272	9539	10223	9747	8558	9717	4517	4517	9747	9509	9747	4517	5230	9509	114351
8 Other Entities to BPA-P	6539	5745	4504	4539	1967	7911	4792	4792	10939	14675	12394	6050	7006	7845	99697
9 PPL to BPA-P SNX SprgRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 PPL to BPA-P SNX SumrRtn	28573	29306	0	0	0	0	0	0	0	0	0	0	0	0	57879
<b>11 Total Intra-Regional Transfers</b>	<b>47192</b>	<b>124950</b>	<b>100030</b>	<b>96679</b>	<b>83476</b>	<b>60338</b>	<b>29345</b>	<b>29345</b>	<b>23638</b>	<b>27064</b>	<b>25093</b>	<b>11935</b>	<b>13820</b>	<b>20235</b>	<b>693139</b>
<b>Intra-Regional Contracts Out</b>															
12 Federal Entities	12080	89899	95526	92140	81509	52427	24553	24553	12699	12389	12699	5885	6814	12389	535564
13 Investor Owned Utilities	35112	35051	4504	4539	1967	7911	4792	4792	10939	14675	12394	6050	7006	7845	157576
<b>14 Total Regional Contracts Out</b>	<b>47192</b>	<b>124950</b>	<b>100030</b>	<b>96679</b>	<b>83476</b>	<b>60338</b>	<b>29345</b>	<b>29345</b>	<b>23638</b>	<b>27064</b>	<b>25093</b>	<b>11935</b>	<b>13820</b>	<b>20235</b>	<b>693139</b>
<b>Intra-Regional Contracts In</b>															
15 Federal Entities	37920	37940	7600	7491	4559	10854	6160	6160	13891	17555	15346	7418	8590	10725	192208
16 Investor Owned Utilities	0	77471	82208	79441	70358	39766	18668	18668	0	0	0	0	0	0	386581
17 Public Utility District	9272	9539	10223	9747	8558	9717	4517	4517	9747	9509	9747	4517	5230	9509	114351
<b>18 Total Regional Contracts In</b>	<b>47192</b>	<b>124950</b>	<b>100030</b>	<b>96679</b>	<b>83476</b>	<b>60338</b>	<b>29345</b>	<b>29345</b>	<b>23638</b>	<b>27064</b>	<b>25093</b>	<b>11935</b>	<b>13820</b>	<b>20235</b>	<b>693139</b>



**Table 2.9.3 - continued**  
**Table A-4: Bonneville Power Administration - Power Services: Intra-Regional Transfers**  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr-1	Apr-16	May	Jun	Jul	Aug-1	Aug-16	Sep	Sum
<b>Intra-Regional Transfers</b>															
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 BPA-P to Unk_PNW_GPU PCRED LF	9272	10015	9747	9747	8558	9717	4517	4517	10223	9034	9747	4517	5230	9509	114351
8 Other Entities to BPA-P	6539	6033	4294	4539	1967	7911	4792	4792	11473	13941	12394	6050	7006	7845	99575
9 PPL to BPA-P SNX SprgRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 PPL to BPA-P SNX SumrRtn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>11 Total Intra-Regional Transfers</b>	<b>18619</b>	<b>99280</b>	<b>96467</b>	<b>96678</b>	<b>83476</b>	<b>60334</b>	<b>29345</b>	<b>29345</b>	<b>24791</b>	<b>25711</b>	<b>25093</b>	<b>11935</b>	<b>13820</b>	<b>20235</b>	<b>635129</b>
<b>Intra-Regional Contracts Out</b>															
12 Federal Entities	12080	93247	92173	92139	81509	52424	24553	24553	13319	11770	12699	5885	6814	12389	535554
13 Investor Owned Utilities	6539	6033	4294	4539	1967	7911	4792	4792	11473	13941	12394	6050	7006	7845	99575
<b>14 Total Regional Contracts Out</b>	<b>18619</b>	<b>99280</b>	<b>96467</b>	<b>96678</b>	<b>83476</b>	<b>60334</b>	<b>29345</b>	<b>29345</b>	<b>24791</b>	<b>25711</b>	<b>25093</b>	<b>11935</b>	<b>13820</b>	<b>20235</b>	<b>635129</b>
<b>Intra-Regional Contracts In</b>															
15 Federal Entities	9347	9066	7246	7491	4559	10854	6160	6160	14569	16677	15346	7418	8590	10725	134207
16 Investor Owned Utilities	0	80200	79474	79440	70358	39763	18668	18668	0	0	0	0	0	0	386571
17 Public Utility District	9272	10015	9747	9747	8558	9717	4517	4517	10223	9034	9747	4517	5230	9509	114351
<b>18 Total Regional Contracts In</b>	<b>18619</b>	<b>99280</b>	<b>96467</b>	<b>96678</b>	<b>83476</b>	<b>60334</b>	<b>29345</b>	<b>29345</b>	<b>24791</b>	<b>25711</b>	<b>25093</b>	<b>11935</b>	<b>13820</b>	<b>20235</b>	<b>635129</b>

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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 .....98

**Table 2.10.1**  
**Total Regional Hydro Resources by Water Year**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	1-Apr	16-Apr	May	Jun	Jul	1-Aug	16-Aug	Sep	Avg
1929	9768	11425	11278	10803	9988	9382	9437	11343	13941	13945	11347	10588	9166	9269	10954
1930	8871	11042	10950	8638	10254	9152	9778	12881	13277	11313	12836	11003	9547	9439	10614
1931	8543	11323	10020	8845	8577	8939	10446	7667	14608	12027	12194	9517	8314	8654	10152
1932	8637	10650	10730	8494	7975	11977	18330	18164	19644	19308	13596	12757	11664	9754	12618
1933	9186	10608	12608	14219	14970	13851	14402	13407	17574	20762	17797	14098	14084	9729	14105
1934	10934	15688	19552	20919	19741	16967	18908	17994	18377	15905	13611	10697	10083	9283	15796
1935	8944	10645	12301	14868	13661	12522	14099	12818	16460	14991	15063	13287	10412	8371	12759
1936	9070	11177	11051	9580	8767	9825	10812	16491	19594	18311	12797	11002	9463	8341	11879
1937	8887	11373	11265	9188	8647	9404	10321	9766	14892	13394	12407	10603	9139	9365	10740
1938	8884	10602	12136	14185	13920	13097	16491	18558	19031	16520	14686	11268	10340	9326	13386
1939	9398	11312	11156	11687	11781	10304	13652	14342	17708	13685	12329	10307	8796	8800	11806
1940	9387	11758	12254	10845	10662	12635	14572	15498	16303	14993	11521	9775	8657	9011	11970
1941	9197	10633	11649	10167	9118	8871	10105	11341	14712	14742	12430	10479	9029	9734	10986
1942	9333	11014	13261	13803	10746	9643	10282	14283	15503	17890	15444	12153	10771	10341	12570
1943	9176	10588	12080	15496	14075	14234	19482	19963	18998	19859	14146	12367	11300	8838	14078
1944	9180	11359	11254	11134	10568	9179	9239	11912	12842	10328	11639	10703	9187	9196	10601
1945	8783	11161	9224	9464	9742	8799	8981	7582	16705	17645	11181	11615	9799	9148	10904
1946	8996	11039	12510	14076	13643	12516	16991	18870	19301	18303	15292	13588	11835	9568	13818
1947	9123	11413	17020	18863	17029	15083	15427	14871	18127	18549	15435	12398	10547	9245	14699
1948	13383	14085	14494	17818	15100	12614	14947	17568	20543	20580	16736	15132	15122	11166	15665
1949	9811	11347	12218	15138	10928	15221	16699	18749	19919	18458	11535	10283	9077	8624	13394
1950	9227	11333	12075	17837	15274	17336	18412	17393	19058	19783	16076	15183	14594	9743	15045
1951	11243	14932	17821	20080	19558	18988	18648	18336	19243	18050	16583	14927	13110	9824	16555
1952	12645	12876	14756	16774	15452	15187	18259	18886	20435	18703	15080	13151	11158	8619	15103
1953	9000	11407	11194	13070	13037	12378	13474	13696	18716	20694	16297	13228	11807	9495	13447
1954	9658	12036	14010	17132	16231	15901	15869	15351	18882	18876	18307	15996	15825	13776	15526
1955	9945	13168	13206	12487	10326	9024	10944	12830	16627	20509	18215	14577	13427	9297	13242
1956	10459	14107	17312	19884	19008	17105	18280	20040	20395	21089	17086	14925	13894	9465	16609
1957	10202	11367	14195	14551	12597	13252	18350	15474	20943	20861	14499	12090	10703	9313	14180
1958	9307	11452	11826	15280	13551	13971	15620	16101	19743	19409	13803	11736	10547	9051	13696
1959	9313	12760	16183	19111	17781	15914	17040	15546	17944	19695	15372	14895	14235	13960	15724
1960	14745	15801	15953	16298	14470	13409	20262	17726	17705	17988	14831	12555	10343	9073	15057
1961	9555	11672	12629	16238	14572	15466	17301	13508	18578	19670	14143	11590	10935	8795	13994
1962	9233	11244	11572	14475	13759	10726	19115	19206	18518	18799	11343	11643	10597	8720	13203
1963	10069	13161	15622	14486	14730	11858	13361	13724	17095	18919	14891	12101	10960	9572	13780
1964	9149	10990	12563	13344	12262	11184	16477	13192	18233	20618	17731	14509	14349	10708	13845
1965	10904	12388	17419	20191	20941	17818	14818	19258	19537	17659	14942	15307	14805	9335	16083
1966	9972	12078	12996	14329	12851	10545	18510	14870	16710	16013	15163	12490	10723	9235	13179
1967	9133	10943	13269	17491	17085	17113	13972	10404	17904	19723	16501	14222	12596	9446	14509
1968	9840	12098	13113	16250	16215	15041	12534	12024	14530	18852	15799	13884	12733	11717	14071
1969	11260	14137	14924	18908	18761	15038	18520	18841	19813	18421	15512	13632	11601	9350	15595
1970	9489	11599	11709	14334	13507	12579	14317	12360	17608	19419	12865	11329	10233	8801	12993
1971	9106	11242	11938	20072	19059	18042	17956	17842	20143	20183	17960	15458	14282	10355	15888
1972	10119	11743	13558	19884	18922	20813	20043	16954	20153	20386	18002	15982	15288	11551	16596
1973	10037	11495	13282	14344	12239	9725	8084	11567	14458	15050	11991	10593	9200	9441	11814
1974	8858	11044	13886	22021	21310	18954	19077	19266	19805	20009	18468	15437	14772	11005	16611
1975	9176	11533	12222	14679	15005	14373	13198	13522	18625	20433	18375	14474	12900	10361	14315
1976	11306	14682	19124	18836	18321	17095	18549	18456	19962	19115	17332	16095	16097	14535	17069
1977	9911	11324	11100	10949	11057	9475	8553	11546	12311	10000	10957	10156	8923	8277	10411
1978	8692	10249	13742	14219	12970	12364	18113	15103	18435	15549	14847	11673	10455	11672	13367
1979	10107	11403	11536	13141	10310	12847	12476	13736	19100	14131	11361	9848	9174	8880	12136
1980	9088	11198	10899	11331	11644	9645	14728	15759	20160	18822	12274	11239	9733	9253	12496
1981	9355	11342	16657	17206	13923	11865	10765	15066	19195	20248	16094	13842	13779	9821	14382
1982	9473	11963	14085	17344	18444	19704	17160	15982	19607	20030	16204	15348	14517	12367	15878
1983	11082	12158	14639	18584	16868	17856	17045	15422	18840	18460	16493	15188	14208	10093	15501
1984	9682	15143	14482	16911	16389	14799	18986	18437	18197	20746	16790	13383	11793	9909	15343
1985	9818	12322	12768	13542	12748	12381	15778	16340	18976	16081	9548	9435	8373	8853	12657

**Table 2.10.1**  
**Total Regional Hydro Resources by Water Year**  
 Fiscal Year 2014  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	1-Apr	16-Apr	May	Jun	Jul	1-Aug	16-Aug	Sep	Avg
1986	9439	13655	12391	16130	15524	20526	17724	17307	16505	18302	13332	11688	9939	8876	14403
1987	9094	11238	13001	12347	9642	12244	11833	13047	17793	15110	11706	9389	8084	8967	11876
1988	8645	10978	10576	9338	8892	9243	10077	13230	14473	15010	12968	10095	9095	9074	10877
1989	8316	10539	11706	11358	9937	11008	15717	18233	17655	15238	11661	10385	8922	8740	11902
1990	8753	11649	12995	15729	15029	15017	14944	18857	17489	18311	14554	13570	11913	9089	14011
1991	8599	14887	15025	16640	17011	15449	16602	15416	18325	17792	17000	14291	13837	9125	14983
1992	8776	11110	10905	11150	10421	10426	10740	11960	16172	13959	10739	9411	8432	8991	11078
1993	8521	11033	11167	8829	8404	10813	11379	13086	17259	15956	13309	10925	9456	8859	11396
1994	8497	11553	11404	9722	8741	9524	9794	12803	15856	15179	12387	10382	8967	9297	11104
1995	8324	10485	10554	11945	13686	13753	15728	13154	16064	18719	14140	11311	10087	9953	12713
1996	10042	16425	20832	21428	20022	20722	17836	19891	19520	19208	17284	14705	14041	9364	17332
1997	9441	11885	14596	21147	21098	20810	18608	20129	20019	20910	18043	15654	14701	12217	17034
1998	14176	14031	14229	14255	14178	12651	13649	15381	20946	20798	14978	13486	10689	9383	14686
1999	9153	11005	14017	18870	18365	18270	16833	17923	19638	21205	18172	15876	15236	11277	16064
2000	9617	15485	15977	16041	14621	14101	18534	19420	17576	16390	14511	13082	9906	9160	14485
2001	9253	11063	11072	10786	10500	9126	9076	11605	13881	9656	11654	10082	9174	8622	10470
2002	7370	10431	10794	10646	10424	9685	16311	17523	16158	19451	16825	13348	11348	9148	12515
2003	8615	11478	11291	10367	10102	13347	14643	14335	15905	18658	11615	9784	8251	8691	11963
2004	9234	11304	12476	11511	10555	10027	11790	14594	16987	16572	12284	10235	9637	9764	11990
2005	9652	11438	13769	14203	12420	10763	10669	12706	16886	17023	12588	10844	9061	9006	12449
2006	8601	11139	12398	15552	16696	14219	19566	19192	20472	19190	14011	11066	10011	8831	14226
2007	8592	11951	12561	15743	13082	16412	16616	15182	17861	16036	14559	11256	8861	8702	13458
2008	8996	10928	11547	12238	11037	10915	12826	11273	19943	21505	15941	12698	11549	8845	13017

**Table 2.10.2**  
 Total Regional Hydro Resources by Water Year  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	1-Apr	16-Apr	May	Jun	Jul	1-Aug	16-Aug	Sep	Avg
1929	9550	11421	11286	10845	10480	9468	9464	11820	13235	13585	10118	10369	9607	8754	10779
1930	8962	11269	11039	9882	10725	9593	10221	12933	13199	9943	12753	10776	9596	8614	10646
1931	8831	11207	11194	9060	8554	9186	10747	9634	14637	11466	11975	9778	8264	8683	10346
1932	8637	10671	10950	8504	8327	13140	16776	18101	19573	19224	13446	12280	11842	9014	12600
1933	9263	10597	13449	14125	15324	13567	14402	13322	17628	20563	17812	14049	14084	9392	14133
1934	10698	15679	19651	20912	19746	17013	18665	17800	18129	15756	13356	10337	9752	8738	15640
1935	9218	10481	13210	14918	14583	13965	12612	12723	16607	15032	15270	13583	10878	8326	13041
1936	8820	11106	11089	10341	9463	9925	11425	16561	19146	18080	12441	10987	9343	8288	11912
1937	8734	11165	11273	9929	8699	9364	10255	9764	14273	12774	11785	11024	9463	8533	10578
1938	9190	10792	13527	14443	13443	12643	16456	18504	18892	17379	14251	11158	9798	9019	13457
1939	9350	11293	11166	12704	11858	10628	13724	14397	17621	12326	11930	10197	9293	8689	11781
1940	9415	11259	13364	12555	10255	14923	14197	13462	15660	12725	11742	10165	8926	8400	11989
1941	9103	10541	12815	10283	10284	9741	10349	11339	14651	12175	12625	10520	9234	8110	10930
1942	9171	11855	13408	13291	12608	11583	11392	14084	15282	15890	15444	12153	10478	9592	12682
1943	9306	10580	12544	15269	15164	14225	19262	19675	18749	19536	14145	12417	11184	8732	14111
1944	8724	11114	11216	11156	10860	9573	9237	12237	12323	9759	11260	10377	8919	8144	10375
1945	8921	10954	10175	9644	9934	9434	9331	9062	16759	17651	10867	11332	9939	8615	11067
1946	8894	10786	13468	14220	13448	12967	16973	18849	19162	18275	15292	13598	11815	9164	13857
1947	8826	11577	17330	17609	16990	16484	15520	14747	18111	18476	15661	12905	10493	9039	14735
1948	13095	14072	14834	17813	15385	13031	15006	17551	20172	20296	16874	14925	14856	10858	15638
1949	9556	11335	12583	14873	12113	15147	16762	18093	19192	18501	11376	10337	9171	8460	13362
1950	9071	11241	12775	17856	16768	16420	18469	17240	18996	19577	16216	15226	14326	9469	15075
1951	10950	14902	18086	20149	20443	18330	18508	18296	19155	17384	16869	14440	13674	9548	16505
1952	12355	12864	15097	16774	16264	13966	18244	19450	20241	19200	14591	12525	10465	8528	15007
1953	8705	10886	11343	14201	13206	13014	13473	13486	18643	20505	16401	12319	11306	9217	13451
1954	9361	12023	14359	16883	16232	15299	15809	15393	18927	19057	18413	15639	15461	13493	15430
1955	9694	13156	13565	12512	11786	10449	11893	12833	16269	20003	18191	14577	13026	8994	13408
1956	10178	14093	17590	20614	18054	16973	18237	19976	20203	20737	17180	14959	14004	9189	16527
1957	9889	11354	14538	14746	13251	13124	18502	14824	20425	20620	14997	12653	11261	8960	14214
1958	9150	11429	12130	15477	13814	14245	15725	16137	19471	19272	13617	10997	10596	8845	13677
1959	9534	12393	16354	19107	18068	15466	17040	15559	17943	19543	15164	15012	14236	13922	15682
1960	14531	15791	16224	16299	14428	13332	20168	17666	17582	17922	15088	12694	10524	8886	15050
1961	9334	11566	12977	16298	14794	15611	16350	13446	18403	19596	14674	12290	11176	8640	14039
1962	8930	11216	12068	14454	13931	10629	19223	19138	18455	18779	11456	11819	10299	8583	13207
1963	9967	12834	15942	15881	15300	13214	12845	13222	16567	16397	14926	12286	10784	9303	13736
1964	8928	10977	12831	13322	12106	10922	16565	13099	18041	20319	17866	14509	14350	10378	13755
1965	10655	12376	17734	21141	19915	17453	14518	19208	19423	17651	15751	15264	14800	8956	16070
1966	9710	12034	13349	14295	12922	11175	18556	15064	15918	15972	15171	13231	10676	9140	13200
1967	8854	10886	13515	17772	17183	16150	13972	10622	17713	19558	16715	14403	12596	9173	14433
1968	9546	12067	13474	16318	15257	16133	12534	12025	14523	18656	15819	13914	12879	11410	14067
1969	11011	14126	15264	18898	18680	15071	18338	18707	19489	18372	15646	13749	11507	9095	15544
1970	9295	11592	12024	14425	14777	13027	14351	11401	16955	19140	13491	10691	9610	8706	13022
1971	8775	11197	12187	19082	20279	18047	17937	18095	19910	19983	17861	15458	14283	10084	15830
1972	9804	11731	13920	19873	18922	20701	19955	16920	19999	20119	18056	15982	15288	11281	16531
1973	9749	11478	13648	14624	12724	10055	8084	11567	14423	12419	11767	10736	9149	8791	11620
1974	9017	10544	15478	22018	21205	19159	18976	19143	19541	19747	18474	15484	14840	10756	16659
1975	8869	11505	12587	14573	14970	14186	13198	13522	18374	20172	18553	14647	13191	10027	14255
1976	11054	14671	19386	18836	18271	16993	18531	18403	19794	18653	17692	15914	15914	14252	16993
1977	9656	11318	11101	10967	11153	9930	8763	11435	12369	8567	11347	10044	8883	7882	10322
1978	8052	10442	14518	14635	13885	12362	18094	15158	18418	15553	15700	11681	10329	10401	13463
1979	9857	11402	12139	13504	11327	12724	12476	13722	18214	13441	10842	9939	9295	8855	12095
1980	9054	11180	10926	12468	11706	10039	14831	15743	20029	18769	12372	11046	9473	9030	12588
1981	9214	11341	16766	17103	16198	13702	10615	13652	17046	20042	16068	14094	13779	9945	14455
1982	9242	11880	14428	17329	18744	19979	17300	15955	19520	19937	16687	14980	14339	11625	15872
1983	10831	12145	14982	18543	16924	17759	17044	14864	18563	18155	17156	15107	14678	10199	15511
1984	9427	15131	14825	16829	16425	14949	18966	17804	18166	20344	16790	14653	12333	9714	15356

**Table 2.10.2**  
 Total Regional Hydro Resources by Water Year  
 Fiscal Year 2015  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	1-Apr	16-Apr	May	Jun	Jul	1-Aug	16-Aug	Sep	Avg
1985	9552	12309	13128	13489	12691	12328	15779	16168	18890	15398	9573	9380	8811	8474	12568
1986	10633	13735	12657	16021	15633	20403	17682	17306	16506	18304	13330	11688	9791	8681	14498
1987	8827	11217	13343	13249	11610	12240	11833	13053	16542	14855	11279	9701	8679	8494	11944
1988	8688	10856	10543	10099	8893	9872	10595	13135	14362	12588	13174	10755	9315	8170	10774
1989	8664	10613	12723	11388	9474	11423	15841	18174	17616	15246	10912	10231	9396	8413	11950
1990	8784	12132	13876	15629	15387	14439	14622	18790	17573	18369	14247	13116	11747	9020	14036
1991	8274	14473	15327	16591	17016	15256	16501	14651	18182	18118	17177	14291	13837	8985	14909
1992	8418	11091	11372	12301	11536	11630	10536	11582	13854	11229	10750	9725	8753	7951	10868
1993	8812	10721	11567	9174	8440	10883	11441	13209	17371	16380	12666	11195	9850	8124	11433
1994	8630	11387	11730	10211	10348	9627	9867	12910	15931	14524	12179	10428	9087	8742	11207
1995	8507	10291	11942	11954	14173	15682	13225	12280	15623	18611	14192	11311	10293	8805	12766
1996	10744	16380	20929	21448	20892	20439	18034	19727	19195	19241	17338	14839	14042	8960	17394
1997	9138	11862	14939	21197	20928	20853	18585	20052	19990	20816	18175	15508	14701	11993	17003
1998	13960	14019	14588	15071	13801	12651	13663	14661	20284	20521	15364	14377	11607	9127	14718
1999	8935	10866	14461	18988	18489	18361	16832	17277	19467	21014	18294	15795	15339	10976	16029
2000	9466	15383	16275	16053	14611	14121	18468	19255	17061	16632	15059	13082	9687	8906	14474
2001	9068	11031	11081	10823	10563	9835	9202	11988	13720	8324	11296	10127	8995	7258	10270
2002	7879	10337	12099	11508	11114	10305	14650	17513	16209	19450	16825	12895	10642	8782	12696
2003	8268	11271	11333	11318	10648	13424	14639	14341	15904	18724	10859	9365	8529	8154	11941
2004	9274	10962	13802	12279	9745	11632	13359	13359	16092	15932	11613	9895	9410	10435	12076
2005	9462	11426	14127	14183	13335	11099	10668	12706	16661	16563	12003	11065	9273	8712	12446
2006	9094	10835	12701	15465	16703	14256	19180	19199	20331	19295	13809	11285	10010	8516	14212
2007	8036	12337	12991	15921	13067	16849	16610	15105	17674	15906	14559	11027	9246	8046	13453
2008	9105	10639	12390	12452	11578	10949	13039	10942	19721	21324	15994	12234	11742	8627	13074

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2.11 Estimated Purchase MW Eligible For 4(h)(10)C Credit.....101

Table 2.11.1 FY 2014 - 4(h)(10)C Power Purchase Amount .....102

Table 2.11.2 FY 2015 - 4(h)(10)C Power Purchase Amount .....104

**Table 2.11.1**  
**4(h)(10)(C) Power Purchase Amounts**  
**Fiscal Year 2014**  
**Energy in Average Megawatts**

	Oct	Nov	Dec	Jan	Feb	Mar	Ap1	Ap2	May	Jun	Jul	Ag1	Ag2	Sep	Avg
1929	941	353	1392	2071	1934	1673	888	-56	-2	0	0	-133	-63	461	757
1930	1228	480	1445	3780	1553	1689	326	0	24	1300	0	-72	-58	-27	965
1931	989	158	2566	4022	2439	1650	459	2363	-121	449	0	0	291	934	1216
1932	491	498	1657	3668	3488	1060	0	0	0	0	0	0	0	-7	892
1933	1102	1047	405	0	0	0	0	0	0	0	0	0	0	490	254
1934	94	0	0	0	0	0	0	0	0	-596	-5	-51	0	93	-36
1935	847	1263	1025	179	0	0	0	1120	0	0	0	0	0	1273	429
1936	1085	368	1397	3210	2668	1346	0	0	0	0	0	0	0	1133	926
1937	1156	0	1239	3215	2742	1546	354	1000	-87	-151	-240	-323	-135	-85	807
1938	986	1238	810	619	0	0	0	0	0	0	-303	-143	-127	585	318
1939	934	560	1533	1804	892	1076	0	0	0	-449	0	0	158	879	611
1940	808	0	534	2109	1701	0	0	0	0	-55	0	667	223	-68	451
1941	504	806	1451	2873	1896	1610	672	0	0	0	0	0	0	-38	783
1942	270	51	0	0	2048	2815	44	0	0	0	0	0	0	-791	360
1943	644	1222	822	0	0	0	0	0	0	0	0	0	0	918	300
1944	1188	348	1479	1901	1726	1948	832	0	597	2031	0	0	58	488	1009
1945	550	173	2845	3231	2942	2016	95	2305	0	0	-132	-1035	-641	-350	962
1946	820	643	876	612	0	0	0	0	0	0	0	0	0	389	281
1947	1254	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	0	0
1949	850	472	664	0	1285	0	0	0	0	0	-407	-178	-226	324	241
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	1277	105
1953	1238	369	1408	1086	0	0	0	0	0	0	0	0	0	610	397
1954	948	167	0	0	0	0	0	0	0	0	0	0	0	0	94
1955	819	0	60	1113	1965	1745	-79	0	0	0	0	0	0	837	534
1956	709	0	0	0	0	0	0	0	0	0	0	0	0	620	111
1957	714	531	0	0	473	0	0	0	0	0	0	-29	-82	656	190
1958	1059	278	1046	0	0	0	0	0	0	0	-125	-174	0	787	249
1959	1077	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	1112	372	1186	0	0	775	0	0	0	0	-28	0	0	1044	375
1963	614	0	0	0	0	150	0	0	0	0	0	0	0	408	98
1964	1148	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	800	73
1966	648	0	0	0	0	1275	0	0	0	0	0	0	0	778	227
1967	1073	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

**Table 2.11.1 - continued**  
**4(h)(10)(C) Power Purchase Amounts**  
**Fiscal Year 2014**  
**Energy in Average Megawatts**

	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Ap1</b>	<b>Ap2</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Ag1</b>	<b>Ag2</b>	<b>Sep</b>	<b>Avg</b>
1970	1034	162	1181	0	0	0	0	-454	0	0	0	-172	0	953	254
1971	1098	542	814	0	0	0	0	0	0	0	0	0	0	0	207
1972	666	346	0	0	0	0	0	0	0	0	0	0	0	0	85
1973	692	204	252	0	623	1409	1731	-198	0	0	-123	152	249	0	334
1974	903	778	220	0	0	0	0	0	0	0	0	0	0	0	159
1975	1227	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	1316	1933	1226	1513	1135	-53	1029	2316	0	-244	184	1091	980
1978	636	929	-156	0	131	906	0	0	0	0	0	-88	0	0	201
1979	213	609	1357	1206	1439	0	0	407	0	-548	-190	188	-41	400	391
1980	810	665	1669	2569	420	1767	0	0	0	0	-369	-277	-271	173	625
1981	812	356	0	0	0	83	-753	0	0	0	0	0	0	264	96
1982	1025	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	881	0	494	0	0	0	0	0	0	0	-190	0	0	894	174
1987	1204	596	15	1252	2352	-316	0	0	0	-292	-92	409	310	124	421
1988	995	920	2033	4019	2143	2163	-202	830	-162	-236	-281	-189	-116	-4	978
1989	1107	1092	1009	2813	1340	610	0	0	0	-593	-444	-84	19	281	597
1990	1025	656	333	0	0	0	0	0	0	0	0	0	0	879	242
1991	1392	0	0	0	0	0	0	0	0	0	0	0	0	780	182
1992	1208	421	1441	1871	1932	875	-500	-148	0	0	0	749	285	-274	635
1993	840	300	1759	3973	2286	365	58	-84	0	0	0	-402	0	-160	758
1994	1149	93	1287	3785	2213	1798	45	1223	0	-266	0	-117	-133	-229	859
1995	1076	1091	1633	2264	0	0	0	626	0	0	0	0	0	-39	535
1996	511	0	0	0	0	0	0	0	0	0	0	0	0	781	108
1997	1053	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	1146	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	1088	363	1371	1939	1494	1806	956	0	48	2741	-3	-285	-150	926	998
2002	1544	621	1701	2196	1603	2317	0	0	0	0	0	-363	0	463	856
2003	1308	0	1256	2823	1980	0	0	0	0	0	-151	170	383	307	646
2004	603	275	369	2660	1025	1416	0	-539	0	0	-5	-273	0	350	525
2005	798	253	0	0	504	161	-121	0	0	0	0	-72	0	500	174
2006	1399	326	455	0	0	0	0	0	0	0	-63	-256	-177	693	218
2007	1313	195	595	0	0	0	0	0	0	0	-122	-198	20	1008	243
2008	973	330	1074	1346	1248	181	-487	175	0	0	0	0	0	946	491
<b>Averag</b>	<b>821</b>	<b>352</b>	<b>652</b>	<b>916</b>	<b>681</b>	<b>495</b>	<b>68</b>	<b>113</b>	<b>17</b>	<b>71</b>	<b>-47</b>	<b>-30</b>	<b>2</b>	<b>408</b>	<b>369</b>
<b>Median</b>	<b>875</b>	<b>313</b>	<b>418</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>404</b>	<b>242</b>

**Table 2.11.2**  
**4(h)(10)(C) Power Purchase Amounts**  
**Fiscal Year 2015**  
**Energy in Average Megawatts**

	Oct	Nov	Dec	Jan	Feb	Mar	Ap1	Ap2	May	Jun	Jul	Ag1	Ag2	Sep	Avg
1929	1097	357	1384	2030	1561	1596	861	-56	466	0	645	-133	-63	907	862
1930	1113	297	1385	2884	1208	1335	4	0	63	2334	0	52	-58	314	910
1931	690	140	1720	3858	2331	1505	256	1070	-121	856	0	0	348	904	1055
1932	494	493	1504	3665	3242	257	0	0	0	0	0	0	0	627	844
1933	1017	1041	0	0	0	0	0	0	0	0	0	0	0	728	232
1934	259	0	0	0	0	0	0	0	0	-596	-5	72	0	645	29
1935	510	1373	359	153	0	0	0	1187	0	0	0	0	0	1400	363
1936	1197	446	1334	2524	2233	1322	0	0	0	0	0	0	0	1305	857
1937	1227	61	1220	2679	2736	1594	286	959	-87	278	-240	-345	-135	762	874
1938	653	993	-134	435	0	0	0	0	0	0	-303	-143	-127	831	194
1939	955	560	1513	1075	836	847	0	0	0	301	0	1	0	1117	600
1940	757	0	0	875	1983	0	0	0	0	182	0	377	45	456	361
1941	511	639	570	2783	1065	991	499	0	0	297	0	0	0	1057	678
1942	344	0	0	39	733	1462	0	0	0	0	0	0	0	-618	162
1943	536	1226	490	0	0	0	0	0	0	0	0	0	0	1221	288
1944	1430	432	1471	1878	1497	1657	833	0	886	2402	0	0	208	1515	1138
1945	352	79	1983	3209	2826	1578	-143	1274	0	0	-118	-1035	-641	68	800
1946	820	640	173	513	0	0	0	0	0	0	0	0	0	715	239
1947	1444	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	1030	481	402	0	443	0	0	0	0	0	-394	-216	-287	613	191
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	1489	122
1953	1394	677	1277	283	0	0	0	0	0	0	0	0	0	834	375
1954	1142	175	0	0	0	0	0	0	0	0	0	0	0	0	111
1955	998	0	0	1096	912	716	-199	0	0	0	0	0	0	1082	389
1956	881	0	0	0	0	0	0	0	0	0	0	0	0	841	144
1957	909	540	0	0	0	0	0	0	0	0	0	-29	-82	940	194
1958	1154	282	829	0	0	0	0	0	0	0	-125	-174	0	952	252
1959	908	0	0	0	0	0	0	0	0	0	0	0	0	0	77
1960	0	0	0	0	0	0	0	0	0	0	-279	0	0	1144	70
1961	1030	491	111	0	0	0	0	0	0	0	-346	-212	0	1049	185
1962	1254	374	832	0	0	844	0	0	0	0	-28	0	0	1275	382
1963	577	0	0	0	0	0	0	0	0	0	0	0	0	625	100
1964	1290	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	1094	112
1966	831	0	0	0	0	806	0	0	0	0	0	0	0	961	218
1967	1212	655	0	0	0	0	0	726	0	0	0	0	0	722	246
1968	1034	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

**Table 2.11.2 - continued**  
**4(h)(10)(C) Power Purchase Amounts**  
**Fiscal Year 2015**  
**Energy in Average Megawatts**

	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Ap1</b>	<b>Ap2</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Ag1</b>	<b>Ag2</b>	<b>Sep</b>	<b>Avg</b>
1970	1159	162	954	0	0	0	0	-441	0	0	0	-172	0	1115	259
1971	1276	548	642	0	0	0	0	0	0	0	0	0	0	88	215
1972	862	355	0	0	0	0	0	0	0	0	0	0	0	0	102
1973	882	212	0	0	257	1160	1731	-198	0	581	-123	37	279	462	363
1974	647	1091	0	0	0	0	0	0	0	0	0	0	0	0	145
1975	1446	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	1315	1915	1130	1168	1205	-53	981	3214	0	-244	210	1639	1076
1978	951	657	-156	0	0	907	0	0	0	0	0	-88	0	0	195
1979	392	609	926	946	712	0	0	420	0	-80	175	126	-41	420	360
1980	834	679	1651	1751	364	1486	0	0	0	0	-369	-277	-271	352	544
1981	891	357	0	0	0	0	-669	0	0	0	0	0	0	202	94
1982	1159	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	81	22
1984	1039	0	0	0	0	0	0	0	0	0	0	0	0	400	121
1985	1058	15	0	202	132	-5	0	0	0	0	368	664	179	687	241
1986	17	0	296	0	0	0	0	0	0	0	-190	0	0	1077	99
1987	1370	607	0	609	959	-311	0	0	0	-292	-92	197	-80	760	300
1988	909	807	2005	3471	2143	1714	-202	924	-162	870	-281	-201	-116	943	1046
1989	766	848	257	2716	1727	319	0	0	0	-593	-25	2	0	633	548
1990	948	252	0	0	0	0	0	0	0	0	0	0	0	1108	192
1991	1582	0	0	0	0	0	0	0	0	0	0	0	0	974	214
1992	1398	429	1093	1051	1150	41	-429	-148	0	1256	0	519	73	603	581
1993	519	290	1435	3717	2235	298	-5	-84	0	0	0	-402	0	504	723
1994	1021	82	1044	3306	1158	1724	0	1116	0	-266	0	-117	-133	399	744
1995	810	1078	650	2233	0	0	0	1253	0	0	0	0	0	694	511
1996	0	0	0	0	0	0	0	0	0	0	0	0	0	1096	90
1997	1246	142	0	0	0	0	0	0	0	0	0	0	0	0	117
1998	0	0	0	0	0	0	0	0	0	0	0	0	0	1016	84
1999	1285	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	1167	171
2001	1210	370	1368	1902	1434	1327	1017	0	133	3629	-3	-285	-68	2025	1136
2002	1067	538	803	1577	1117	1894	0	0	0	0	0	-363	0	926	645
2003	1491	0	1224	2139	1601	0	0	0	0	0	-137	462	201	818	618
2004	580	360	-228	2129	1611	293	0	262	0	0	-5	-36	0	0	398
2005	933	262	0	0	0	-88	-121	0	0	0	0	-72	0	982	166
2006	988	334	232	0	0	0	0	0	0	0	-63	-256	-177	1203	206
2007	1669	0	226	0	0	0	0	0	0	0	-122	-198	-238	1576	262
2008	908	402	464	1199	858	146	-487	398	0	0	0	0	0	1098	416
<b>Averag</b>	<b>850</b>	<b>342</b>	<b>448</b>	<b>769</b>	<b>537</b>	<b>362</b>	<b>55</b>	<b>103</b>	<b>27</b>	<b>180</b>	<b>-28</b>	<b>-31</b>	<b>-15</b>	<b>699</b>	<b>352</b>
<b>Median</b>	<b>909</b>	<b>294</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>744</b>	<b>227</b>

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**Table 2.12.1**  
**Federal Tier 1 System Firm Critical Output Projection - 2-Year Average**  
**PNW Loads and Resource Study**  
**2014-2015 Fiscal Years**  
**103 - 2014 Initial Rate Case 10-29-2012**

1.	<b>T1SFCO Projections Energy in aMW</b>	<b>2014</b>	<b>2015</b>	<b>Average</b>
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
<b>6.</b>	<b><i>Federal Tier 1 System Firm Critical Output</i></b>	<b>7,197</b>	<b>6,920</b>	<b>7,058</b>



**Table 2.12.2**  
**Federal System Hydro Generation for use in the T1SFCO Calculation**  
**Corresponds with TRM Table 3.1**  
**PNW Loads and Resources Study**  
**2014-2015 Fiscal Years**  
**103 - 2014 Initial Rate Case 10-29-2012**

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
<b>38.</b>	<b>Total Federal System Hydro Generation</b>	<b>6,924.0</b>	<b>6,799.2</b>	<b>6,861.6</b>

**Table 2.12.3**  
**Designated Non-Federally Owned Resources for use in the T1SFCO Calculation**  
**Corresponds with TRM Table 3.2**  
**PNW Loads and Resources Study**  
**2014-2015 Fiscal Years**  
**103 - 2014 Initial Rate Case 10-29-2012**

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
<b>14.</b>	<b>Total Designated Non-Federally Owned Resources</b>	<b>1,098.0</b>	<b>945.5</b>	<b>1,021.7</b>

**Table 2.12.4**  
**Designated BPA Contract Purchases for use in the T1SFCO Calculation**  
**Corresponds with TRM Table 3.3**  
**PNW Loads and Resources Study**  
**2014-2015 Fiscal Years**  
**103 - 2014 Initial Rate Case 10-29-2012**

<b>1.</b>	<b>Contract Purchases</b>	<b>Contract #</b>	<b>2014</b>	<b>2015</b>	<b>Average</b>
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
<b>18.</b>	<b>Total Designated BPA Contract Purchases</b>		<b>204.3</b>	<b>186.7</b>	<b>195.5</b>

**Table 2.12.5**  
**Designated BPA System Obligations for use in the T1SFCO Calculation**  
**Corresponds with TRM Table 3.4**  
**PNW Loads and Resources Study**  
**2014-2015 Fiscal Years**  
**103 - 2014 Initial Rate Case 10-29-2012**

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
<b>31.</b>	<b>Total Designated System Obligations</b>		<b>1,029.5</b>	<b>1,011.8</b>	<b>1,020.6</b>

**3. HYDRO REGULATION ASSUMPTIONS .....113**  
3.1 HYDSIM Hydro Regulation Study Assumptions for 2014 and 2015 .....114

**STUDY NUMBER:** 12\_RateCase14\_initial & 12\_RateCase15\_initial

**Requested By:** BPA Rates Process

**Due Date:** July 31, 2012

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

**Study Directories:** **DOP Step:** Q:\RATES\12\_RateCase14\_initial\DOP14 &  
Q:\RATES\12\_RateCase15\_initial\DOP15

**AER Step:** Q:\RATES\12\_RateCase14\_initial\AER &  
Q:\RATES\12\_RateCase15\_initial\AER

**OPER Step:** Q:\RATES\12\_RateCase14\_initial\OPERfinal &  
Q:\RATES\12\_RateCase15\_initial\OPERfinal

**Name of Regulator:** Jennie Tran

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 studies are often referred to as ‘the 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, 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 has 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\_oy13gelpump 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 ‘ksf’ is a volume of water equal to 1000 cfs for 1 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 1 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.

<u>Libby May1 Apr-Aug Forecast Volume (MAF)</u>	<u>Sturgeon Flow Volume 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 Forecast Interval (MAF)</u>	<u>Bull Trout Minimum Flow May15-Sep30 (KCFS)</u>
<4800	6.0
4800-6000	7.0
6000-6700	8.0
>6700	9.0

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 20<sup>th</sup> 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 (20<sup>th</sup> 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 1 January-July volume forecast for The Dalles is greater than or equal to 71.8 MAF (20<sup>th</sup> 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.
- **Brownlee** operates to the 70-yr 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.
- **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** 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
<b>Lower Granite</b>	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
<b>Little Goose</b>	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
<b>Lower Monumental</b>	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
<b>Ice Harbor</b>	30% flow vs 45 kcfs day/gas cap night	9.5 kcfs	Apr 7 - Aug 17	All hours 13 hrs day/ 11 hrs night	
<b>McNary</b>	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	
<b>John Day</b>	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		
<b>The Dalles</b>	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
<b>Bonneville</b>	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.

PROJECT SPILL FOR FISH IN  
PERCENT OF REGULATED FLOW (%) 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 unless specifically amended below.
- Loads in the OPER step are the 2014 and 2015 Coordinated System firm residual hydro loads from BPA's 2012 LORA Study 80 on June 19, 2012. 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. The Coordinated System independent hydro generation from LORA Study 80 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 2-year average of 2010-2011 and then further reduced due to large planned outages. 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 Grand Coulee availability factors generally assume two large 805-MW units out of service at all times during the rate period. The following table shows availability factors after considering 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. 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 800-900 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. These reserve assumptions do not exactly match the final decisions in the rate case proposal, because those final decisions are not available in time for incorporation in the HYDSIM studies and would not have a significant effect on HYDSIM's month-average generation estimates.
- **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 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 error can cause projects to miss this refill objective. The objective is for Grand Coulee to operate with an 85 percent chance of reaching this April 10 elevation and for Libby and Hungry Horse to operate with a 75 percent chance. This April 10 objective is modeled at April 15 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 in July when Arrow and Duncan can not. 5) The Libby Coordination Agreement Provisional Draft is included at Arrow.
- **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 less 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 ½ 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 ½ 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 2½ 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
  - Release in July-August the amount stored in April 16 – June 30 at Mica (or Arrow). If release in July resulting McNary exceeds its flow targets then release in August
- **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) in August 15, 2055 feet (349.4 ksf) in 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 ft (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 with 7 days of 10,000 cfs spill during June, 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). 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.



<b>Spill Criteria for BP14 Rate Case Final Proposal</b>					
<b>Projects</b>	<b>Spill</b>	<b>Min Turb</b>	<b>Days</b>	<b>Hour Ending</b>	<b>Notes</b>
<b>Lower Granite</b>	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.
<b>Little Goose</b>	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.
<b>Lower Monumental</b>	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	
<b>Ice Harbor</b>	35% of total flow 30%of total flow	9.5 kcfs	Apr 7 - Jun 15 Jun 16 - Aug 16	All hours	
<b>McNary</b>	40% of total flow 50%of total flow	50 kcfs	April 10 - Jun 15 Jun 16 - Aug 31	All hours	All years
<b>John Day</b>	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
<b>The Dalles</b>	40% of total flow	50 kcfs	Apr 10 - Aug 31	All hours	All years
<b>Bonneville</b>	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.**

<b>Lower Granite Dam</b>				
	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
<b>Little Goose Dam</b>				
	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
<b>Lower Monumental Dam</b>				
	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.)

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

<sup>1</sup> 50 kcfs minimum turbine flow for CHJ included during ‘overgen’ spill.

<sup>2</sup> During all periods except May.

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

**4. FEDERAL LOADS AND RESOURCES FOR FY2014 AND FY2015.....127**

4.1 Federal Report Surplus Deficit

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**Table 4.1.1**  
**Federal Report Surplus Deficit**  
Fiscal Year 2014 Water Year: 1937  
103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
<b>Firm Obligations</b>															
<b>1 Non-Utility Obligation</b>	519	473	498	476	470	505	671	671	743	751	834	713	722	670	611
2 Federal Agencies	107	132	154	151	140	135	113	113	104	105	119	115	114	103	123
3 USBR Obligation	100	27.6	32.8	13.5	16.9	57.8	246	246	327	335	402	286	296	254	176
4 DSI Obligation	311	313	311	312	313	312	312	312	312	311	312	313	312	313	312
<b>5 Transfers Out</b>	6823	8165	8785	8315	8018	7530	6958	6975	7625	7110	7533	7321	7037	6827	7572
6 Load Following 2012 PSC	2781	3236	3658	3616	3446	3054	2940	2940	2828	2946	3191	3134	3107	2878	3140
7 Slice Block 2012 PSC	1655	2046	2274	2310	2137	1989	1663	1663	1454	1351	1592	1593	1593	1661	1809
8 Slice Right to Power 2012 PSC	1617	2151	2118	1655	1579	1742	1715	1732	2764	2227	2154	1907	1676	1764	1943
9 Exports	761	517	520	519	642	635	529	529	570	577	586	679	651	515	586
10 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
11 Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>12 Total Firm Obligations</b>	<b>7341</b>	<b>8638</b>	<b>9283</b>	<b>8791</b>	<b>8488</b>	<b>8035</b>	<b>7629</b>	<b>7646</b>	<b>8368</b>	<b>7861</b>	<b>8366</b>	<b>8035</b>	<b>7759</b>	<b>7497</b>	<b>8184</b>
<b>Net Resources</b>															
<b>13 Net Hydro</b>	5648	7575	7314	5768	5618	6133	6118	6197	10163	8115	7918	6867	5935	6174	6924
14 Regulated Hydro - Net	5327	7304	7135	5623	5466	5881	5684	5752	9445	7451	7514	6484	5561	5867	6571
15 Independent Hydro - Net	321	271	179	145	152	251	434	445	718	664	403	361	358	332	354
<b>16 Other Resources</b>	1113	1099	1107	1091	1086	1125	1129	1112	1120	1138	1112	1097	1134	1118	1112
17 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
18 Combustion Turbines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19 Large Thermal Resources	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030	1030
20 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
21 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
22 Small Thermal & Misc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Table 4.1.1 - continued**  
**Federal Report Surplus Deficit**  
 Fiscal Year 2014 Water Year: 1937  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
<b>23 Contract Purchases</b>	420	443	572	341	331	345	339	339	343	336	348	462	450	338	385
24 Imports	20.4	37.9	269	36.4	37.2	33.9	16.2	16.2	1.12	1.00	16.1	132	133	24.0	52.7
25 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
26 Non-Federal CER	139	138	134	139	137	134	138	138	138	132	138	138	129	138	136
27 Slice Transmission Loss Return	30.4	40.6	40.0	31.2	29.7	32.8	32.3	32.6	52.2	42.0	40.6	35.9	31.6	33.2	36.6
28 Augmentation Purchases	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118
<b>29 Reserves &amp; Losses</b>	-203	-257	-254	-203	-198	-214	-214	-216	-328	-270	-264	-238	-212	-215	-237
30 Contingency Reserves (Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31 Contingency Reserves (Non-Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32 Load Following Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33 Generation Imbalance Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34 Transmission Losses	-203	-257	-254	-203	-198	-214	-214	-216	-328	-270	-264	-238	-212	-215	-237
<b>35 Total Net Resources</b>	<b>6979</b>	<b>8860</b>	<b>8740</b>	<b>6997</b>	<b>6836</b>	<b>7389</b>	<b>7372</b>	<b>7433</b>	<b>11298</b>	<b>9319</b>	<b>9113</b>	<b>8189</b>	<b>7307</b>	<b>7416</b>	<b>8184</b>
<b>36 Total Surplus/Deficit</b>	<b>-362</b>	<b>222</b>	<b>-544</b>	<b>-1794</b>	<b>-1652</b>	<b>-647</b>	<b>-257</b>	<b>-213</b>	<b>2930</b>	<b>1458</b>	<b>747</b>	<b>154</b>	<b>-452</b>	<b>-81.4</b>	<b>0</b>

**Table 4.1.1 -continued**  
**Federal Report Surplus Deficit**  
 Fiscal Year 2015 Water Year: 1937  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
<b>Firm Obligations</b>															
<b>1 Non-Utility Obligation</b>	520	475	500	480	473	508	674	674	745	753	830	710	718	666	612
2 Federal Agencies	108	134	157	155	143	138	116	116	106	107	116	111	110	99.4	124
3 USBR Obligation	100	27.6	32.8	13.5	16.9	57.8	246	246	327	335	402	286	296	254	176
4 DSI Obligation	311	313	311	312	313	312	312	312	312	311	312	313	312	313	312
<b>5 Transfers Out</b>	6906	8266	8943	8603	8160	7648	7086	7096	7476	6822	7452	7533	7227	6726	7622
6 Load Following 2012 PSC	2849	3305	3722	3673	3502	3107	2989	2989	2876	2995	3245	3192	3166	2937	3197
7 Slice Block 2012 PSC	1736	2147	2387	2424	2243	2088	1746	1746	1526	1419	1671	1672	1672	1743	1899
8 Slice Right to Power 2012 PSC	1576	2105	2127	1799	1583	1732	1736	1745	2519	1848	1971	1978	1727	1518	1867
9 Exports	736	494	493	492	617	610	505	505	547	551	556	682	654	518	566
10 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
11 Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>12 Total Firm Obligations</b>	<b>7426</b>	<b>8741</b>	<b>9444</b>	<b>9083</b>	<b>8633</b>	<b>8155</b>	<b>7760</b>	<b>7770</b>	<b>8221</b>	<b>7575</b>	<b>8282</b>	<b>8243</b>	<b>7945</b>	<b>7392</b>	<b>8235</b>
<b>Net Resources</b>															
<b>13 Net Hydro</b>	5577	7487	7333	6306	5623	6084	6188	6239	9757	7685	7478	7167	6154	5270	6799
14 Regulated Hydro - Net	5255	7216	7154	6161	5471	5833	5753	5794	9039	7021	7075	6784	5780	4963	6446
15 Independent Hydro - Net	321	271	179	145	152	251	434	445	718	664	403	361	358	332	354
<b>16 Other Resources</b>	1113	1099	1107	1091	1086	1125	1129	1112	588	108	846	1097	1134	1118	960
17 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
18 Combustion Turbines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19 Large Thermal Resources	1030	1030	1030	1030	1030	1030	1030	1030	498	0	764	1030	1030	1030	878
20 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
21 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
22 Small Thermal & Misc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Table 4.1.1 -continued**  
**Federal Report Surplus Deficit**  
 Fiscal Year 2015 Water Year: 1937  
 103 - 2014 Initial Rate Case 10-29-2012

Energy-aMW	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
<b>23 Contract Purchases</b>	675	695	924	692	679	692	687	687	681	682	688	807	794	670	714
24 Imports	20.4	39.1	268	37.3	37.2	33.3	16.2	16.2	1.12	1.00	11.6	127	128	12.0	50.9
25 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
26 Non-Federal CER	138	132	138	138	136	133	137	137	133	137	138	137	128	137	136
27 Slice Transmission Loss Return	29.7	39.7	40.1	33.9	29.8	32.6	32.7	32.9	47.6	34.8	37.2	37.3	32.5	28.6	35.2
28 Augmentation Purchases	467	467	467	467	467	467	467	467	467	467	467	467	467	467	467
<b>29 Reserves &amp; Losses</b>	-208	-262	-264	-228	-208	-223	-226	-227	-311	-239	-254	-256	-228	-199	-239
30 Contingency Reserves (Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31 Contingency Reserves (Non-Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32 Load Following Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33 Generation Imbalance Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34 Transmission Losses	-208	-262	-264	-228	-208	-223	-226	-227	-311	-239	-254	-256	-228	-199	-239
<b>35 Total Net Resources</b>	<b>7158</b>	<b>9019</b>	<b>9101</b>	<b>7861</b>	<b>7180</b>	<b>7679</b>	<b>7778</b>	<b>7812</b>	<b>10714</b>	<b>8236</b>	<b>8758</b>	<b>8815</b>	<b>7854</b>	<b>6858</b>	<b>8235</b>
<b>36 Total Surplus/Deficit</b>	<b>-268</b>	<b>278</b>	<b>-343</b>	<b>-1221</b>	<b>-1453</b>	<b>-476</b>	<b>18.1</b>	<b>41.8</b>	<b>2493</b>	<b>661</b>	<b>476</b>	<b>572</b>	<b>-90.5</b>	<b>-533</b>	<b>0</b>

**Table 4.1.2**  
**Federal Report Surplus Deficit**  
 Fiscal Year 2014 Water Year: 1937  
 103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
<b>Firm Obligations</b>															
<b>1 Non-Utility Obligation</b>	196426	178203	193941	202589	174889	196297	115338	115338	290816	265757	283979	128239	128239	220834	2690885
2 Federal Agencies	48069	54090	65546	64777	55290	59639	24238	24238	44847	46656	52596	25994	25994	43777	635749
3 USBR Obligation	15103	1178	1052	9222	1156	4384	26969	26969	119061	92756	104344	36536	36536	55514	530779
4 DSI Obligation	133254	122936	127343	128589	118442	132274	64132	64132	126907	126345	127039	65709	65709	121544	1524357
<b>5 Transfers Out</b>	3241168	3582052	3925546	3756678	3332758	3471343	1576667	1590206	3495318	3254141	3484527	1715880	1661095	3059192	41146571
6 Load Following 2012 PSC	1279488	1373543	1604394	1588876	1398800	1380545	648052	648052	1245420	1309282	1421854	715566	715566	1247254	16576692
7 Slice Block 2012 PSC	714817	818546	909748	960952	820727	827610	346005	346005	604717	540230	662383	331381	331381	664545	8879047
8 Slice Right to Power 2012 PSC	768056	958560	967756	760195	658745	807822	384793	398331	1255884	1027423	1003647	458949	404165	796288	10650614
9 Exports	474920	357026	369161	369146	382949	416171	178218	178218	385552	373606	392899	208111	208111	347505	4641593
10 Intra-Regional Transfers (Out)	3888	74376	74487	77509	71537	39196	19600	19600	3744	3600	3744	1872	1872	3600	398624
11 Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>12 Total Firm Obligations</b>	<b>3437594</b>	<b>3760255</b>	<b>4119487</b>	<b>3959267</b>	<b>3507646</b>	<b>3667640</b>	<b>1692006</b>	<b>1705544</b>	<b>3786134</b>	<b>3519898</b>	<b>3768506</b>	<b>1844118</b>	<b>1789334</b>	<b>3280026</b>	<b>43837456</b>
<b>Net Resources</b>															
<b>13 Net Hydro</b>	2799634	3516231	3504781	2797654	2458515	2973563	1408777	1466385	4745051	3847630	3770908	1701683	1483339	2892257	39366408
14 Regulated Hydro - Net	2644379	3390028	3426254	2731926	2395935	2855343	1308595	1363992	4415529	3550034	3594206	1617912	1395979	2754491	37444601
15 Independent Hydro - Net	155254	126203	78527	65728	62580	118220	100183	102393	329523	297596	176702	79382	84611	145303	1922204
<b>16 Other Resources</b>	479839	438066	441284	455452	415213	467731	236890	228868	460659	453230	463849	226225	235636	448946	5451888
17 Cogeneration Resources	7936	7840	9044	9963	8844	9551	4574	4574	7929	5680	7538	2583	2583	5776	94415
18 Combustion Turbines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19 Large Thermal Resources	444960	412000	412000	428480	395520	428480	214240	214240	428480	412000	428480	214240	214240	412000	5059360
20 Renewable Resources	25788	17086	18949	15668	9678	28407	17434	9412	23071	34462	26736	8853	18265	30118	283927
21 Small Hydro Resources	1155	1140	1291	1341	1172	1293	642	642	1179	1088	1095	548	548	1052	14187
22 Small Thermal & Misc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



**Table 4.1.2 - continued**  
**Federal Report Surplus Deficit**  
Fiscal Year 2014 Water Year: 1937  
103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
<b>23 Contract Purchases</b>	220825	210362	263256	176079	159055	181516	90368	90625	185907	178512	183728	116658	115617	172106	2344615
24 Imports	3824	6292	98314	5629	5420	5931	1404	1404	436	400	3366	26050	26050	4167	188687
25 Intra-Regional Transfers (In)	48210	43081	3779	7520	4055	11750	7618	7618	13538	16215	13222	7852	7852	10434	202744
26 Non-Federal CER	103248	95600	95600	99424	91776	99424	49504	49504	99008	95200	99008	49504	49504	95200	1171504
27 Slice Transmission Loss Return	14470	18099	18274	14325	12406	15230	7252	7509	23744	19408	18951	8661	7620	15016	200965
28 Augmentation Purchases	51073	47290	47290	49181	45398	49181	24591	24591	49181	47290	49181	24591	24591	47290	580716
<b>29 Reserves &amp; Losses</b>	-98708	-117443	-118703	-96703	-85524	-102163	-48956	-50362	-152044	-126318	-124601	-57657	-51736	-99075	-1329994
30 Contingency Reserves (Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31 Contingency Reserves (Non-Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32 Load Following Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33 Generation Imbalance Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34 Transmission Losses	-98708	-117443	-118703	-96703	-85524	-102163	-48956	-50362	-152044	-126318	-124601	-57657	-51736	-99075	-1329994
<b>35 Total Net Resources</b>	<b>3401589</b>	<b>4047216</b>	<b>4090618</b>	<b>3332482</b>	<b>2947259</b>	<b>3520647</b>	<b>1687080</b>	<b>1735516</b>	<b>5239574</b>	<b>4353054</b>	<b>4293884</b>	<b>1986908</b>	<b>1782857</b>	<b>3414234</b>	<b>45832917</b>
<b>36 Total Surplus/Deficit</b>	<b>-36005</b>	<b>286961</b>	<b>-28869</b>	<b>-626785</b>	<b>-560388</b>	<b>-146993</b>	<b>-4926</b>	<b>29972</b>	<b>1453440</b>	<b>833155</b>	<b>525378</b>	<b>142790</b>	<b>-6477</b>	<b>134208</b>	<b>1995461</b>

**Table 4.1.2 - continued**  
**Federal Report Surplus Deficit**  
Fiscal Year 2015 Water Year: 1937  
103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
<b>Firm Obligations</b>															
<b>1 Non-Utility Obligation</b>	197088	179086	194799	203990	176069	197494	115829	115829	291652	266849	282359	127473	127473	219191	2695181
2 Federal Agencies	48730	54979	66399	66179	56471	60837	24728	24728	45936	47444	50976	25228	25228	42133	639996
3 USBR Obligation	15103	1171	1056	9222	1156	4384	26969	26969	118809	93059	104344	36536	36536	55514	530828
4 DSI Obligation	133254	122936	127343	128589	118442	132274	64132	64132	126907	126345	127039	65709	65709	121544	1524357
<b>5 Transfers Out</b>	3269074	3577805	4039982	3890109	3386471	3520696	1605565	1615053	3391194	3137313	3505574	1752250	1710786	2989726	41391597
6 Load Following 2012 PSC	1310418	1394474	1641692	1613832	1421729	1404886	659059	659059	1259807	1337884	1445775	728870	728870	1273058	16879413
7 Slice Block 2012 PSC	750104	824465	992991	1008299	861386	868629	363254	363254	610560	590461	695109	347683	347683	697252	9321131
8 Slice Right to Power 2012 PSC	748143	948371	976968	839812	665488	810092	394336	403824	1150878	848619	989974	464527	423063	665435	10329529
9 Exports	456520	339104	350855	350654	366331	397890	169315	169315	366350	356604	370973	209297	209297	350381	4462888
10 Intra-Regional Transfers (Out)	3888	71392	77477	77511	71537	39199	19600	19600	3600	3744	3744	1872	1872	3600	398635
11 Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>12 Total Firm Obligations</b>	<b>3466162</b>	<b>3756892</b>	<b>4234781</b>	<b>4094099</b>	<b>3562540</b>	<b>3718190</b>	<b>1721394</b>	<b>1730882</b>	<b>3682847</b>	<b>3404161</b>	<b>3787933</b>	<b>1879723</b>	<b>1838259</b>	<b>3208917</b>	<b>44086778</b>
<b>Net Resources</b>															
<b>13 Net Hydro</b>	2752835	3518653	3504377	3087293	2472114	2969558	1438743	1480882	4566077	3563234	3815873	1728712	1561234	2404847	38864432
14 Regulated Hydro - Net	2597580	3392450	3425850	3021565	2409534	2851338	1338561	1378489	4236555	3265638	3639171	1644942	1473874	2267080	36942625
15 Independent Hydro - Net	155254	126203	78527	65728	62580	118220	100183	102393	329523	297596	176702	79382	84611	145303	1922204
<b>16 Other Resources</b>	479839	421231	458168	455452	415213	467731	236890	228868	231032	41499	353193	226225	235636	448946	4699923
17 Cogeneration Resources	7936	7526	9406	9963	8844	9551	4574	4574	7624	5907	7538	2583	2583	5776	94386
18 Combustion Turbines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19 Large Thermal Resources	444960	395520	428480	428480	395520	428480	214240	214240	199200	0	317824	214240	214240	412000	4307424
20 Renewable Resources	25788	17086	18949	15668	9678	28407	17434	9412	23071	34462	26736	8853	18265	30118	283927
21 Small Hydro Resources	1155	1098	1333	1341	1172	1293	642	642	1137	1130	1095	548	548	1052	14187
22 Small Thermal & Misc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Table 4.1.2 - continued**  
**Federal Report Surplus Deficit**  
Fiscal Year 2015 Water Year: 1937  
103 - 2014 Initial Rate Case 10-29-2012

HLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
<b>23 Contract Purchases</b>	331012	301060	417678	322897	292630	325357	162833	163014	316688	326041	327246	188678	187890	307260	3970282
24 Imports	3824	6338	102131	6366	5420	5161	1404	1404	420	416	2576	25680	25680	2800	189620
25 Intra-Regional Transfers (In)	8648	6191	3930	7520	4055	11750	7618	7618	13017	16863	13222	7852	7852	10434	126570
26 Non-Federal CER	102816	91392	99008	99008	91392	99008	49296	49296	94800	98592	98592	49296	49296	94800	1166592
27 Slice Transmission Loss Return	14091	17910	18444	15838	12535	15273	7433	7613	21754	16005	18691	8767	7979	12529	194863
28 Augmentation Purchases	201633	179229	194165	194165	179229	194165	97082	97082	186697	194165	194165	97082	97082	186697	2292637
<b>29 Reserves &amp; Losses</b>	-100496	-119595	-123522	-109011	-89675	-106107	-51845	-52812	-144209	-110848	-126796	-60450	-55970	-89142	-1340477
30 Contingency Reserves (Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31 Contingency Reserves (Non-Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32 Load Following Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33 Generation Imbalance Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34 Transmission Losses	-100496	-119595	-123522	-109011	-89675	-106107	-51845	-52812	-144209	-110848	-126796	-60450	-55970	-89142	-1340477
<b>35 Total Net Resources</b>	<b>3463189</b>	<b>4121349</b>	<b>4256701</b>	<b>3756631</b>	<b>3090282</b>	<b>3656539</b>	<b>1786622</b>	<b>1819952</b>	<b>4969587</b>	<b>3819927</b>	<b>4369516</b>	<b>2083164</b>	<b>1928790</b>	<b>3071911</b>	<b>46194161</b>
<b>36 Total Surplus/Deficit</b>	<b>-2972</b>	<b>364457</b>	<b>21920</b>	<b>-337468</b>	<b>-472258</b>	<b>-61651</b>	<b>65228</b>	<b>89070</b>	<b>1286741</b>	<b>415766</b>	<b>581583</b>	<b>203441</b>	<b>90531</b>	<b>-137005</b>	<b>2107383</b>

**Table 4.1.3**  
**Federal Report Surplus Deficit**  
 Fiscal Year 2014 Water Year: 1937  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
<b>Firm Obligations</b>															
<b>1 Non-Utility Obligation</b>	189389	162935	176532	151716	140874	178788	126317	126317	261794	274940	336247	128558	148857	261699	2664964
2 Federal Agencies	31543	41375	49230	47676	38985	40685	16607	16607	32570	28733	36174	15270	17681	30627	443763
3 USBR Obligation	59348	18701	23388	825	10187	38542	61453	61453	124148	148788	194805	66484	76982	127332	1012435
4 DSI Obligation	98499	102859	103914	103216	91703	99561	48257	48257	105075	97418	105268	46804	54195	103741	1208766
<b>5 Transfers Out</b>	1834885	2304843	2610721	2429804	2055643	2123789	928122	920640	2177745	1865122	2119900	919844	1041100	1856207	25188365
6 Load Following 2012 PSC	789505	959282	1117048	1101602	916680	888566	410223	410223	858546	811961	952370	412565	477707	824604	10930882
7 Slice Block 2012 PSC	516256	656883	782383	757674	615545	650549	252850	252850	476796	432184	522264	242163	280400	531636	6970434
8 Slice Right to Power 2012 PSC	435091	592240	608373	471464	402267	486316	232662	225180	800701	576142	599003	227593	239546	473802	6370379
9 Exports	91225	16078	17613	16672	48201	55648	12351	12351	38750	41955	43311	36155	41863	23286	495458
10 Intra-Regional Transfers (Out)	2808	80360	85304	82393	72950	42709	20036	20036	2952	2880	2952	1368	1584	2880	421213
11 Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>12 Total Firm Obligations</b>	<b>2024274</b>	<b>2467779</b>	<b>2787252</b>	<b>2581520</b>	<b>2196516</b>	<b>2302578</b>	<b>1054439</b>	<b>1046957</b>	<b>2439539</b>	<b>2140061</b>	<b>2456147</b>	<b>1048402</b>	<b>1189957</b>	<b>2117906</b>	<b>27853328</b>
<b>Net Resources</b>															
<b>13 Net Hydro</b>	1402668	1945544	1936908	1493853	1316629	1583029	793876	764624	2816562	1995045	2119744	770473	795543	1553227	21287725
14 Regulated Hydro - Net	1318752	1876247	1882193	1451488	1276997	1514575	737761	706831	2611894	1814631	1996542	716474	739405	1469967	20113757
15 Independent Hydro - Net	83916	69297	54715	42365	39632	68454	56115	57793	204669	180414	123202	50516	52948	93459	1177493
<b>16 Other Resources</b>	348542	354149	382241	356484	314640	368210	169634	171492	372635	366118	363706	168667	199871	356226	4292615
17 Cogeneration Resources	5731	6292	7778	7856	6633	7508	3342	3342	6252	4544	5943	1888	2186	4621	73916
18 Combustion Turbines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19 Large Thermal Resources	321360	330630	354320	337840	296640	336810	156560	156560	337840	329600	337840	156560	181280	329600	3963440
20 Renewable Resources	20616	16322	19063	9745	10489	22884	9262	11120	27614	31106	19059	9820	15942	21164	244204
21 Small Hydro Resources	835	905	1080	1044	878	1009	470	470	930	868	864	400	463	842	11055
22 Small Thermal & Misc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Table 4.1.3 - continued**  
**Federal Report Surplus Deficit**  
 Fiscal Year 2014 Water Year: 1937  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
<b>23 Contract Purchases</b>	91506	109051	162576	77464	63174	74996	31556	31414	69043	63682	74865	49829	57241	71476	1027872
<b>24 Imports</b>	11330	21065	102119	21460	19599	19279	4417	4417	398	320	8598	21528	24928	13080	272537
<b>25 Intra-Regional Transfers (In)</b>	35112	35051	4504	4539	1967	7911	4792	4792	10939	14675	12394	6050	7006	7845	157576
<b>26 Non-Federal CER</b>	0	3824	3824	3824	0	0	0	0	3808	0	3808	0	0	3808	22896
<b>27 Slice Transmission Loss Return</b>	8177	11161	11461	8864	7561	9146	4377	4235	15120	10855	11287	4281	4501	8911	119937
<b>28 Augmentation Purchases</b>	36886	37950	40669	38777	34048	38659	17970	17970	38777	37832	38777	17970	20807	37832	454926
<b>29 Reserves &amp; Losses</b>	-51965	-67927	-69985	-54364	-47783	-57140	-28061	-27284	-91882	-68381	-72144	-27889	-29685	-55862	-750352
<b>30 Contingency Reserves (Spinning)</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>31 Contingency Reserves (Non-Spinning)</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>32 Load Following Reserves</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>33 Generation Imbalance Reserves</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>34 Transmission Losses</b>	-51965	-67927	-69985	-54364	-47783	-57140	-28061	-27284	-91882	-68381	-72144	-27889	-29685	-55862	-750352
<b>35 Total Net Resources</b>	<b>1790751</b>	<b>2340818</b>	<b>2411741</b>	<b>1873437</b>	<b>1646660</b>	<b>1969095</b>	<b>967005</b>	<b>940245</b>	<b>3166358</b>	<b>2356463</b>	<b>2486170</b>	<b>961081</b>	<b>1022971</b>	<b>1925066</b>	<b>25857861</b>
<b>36 Total Surplus/Deficit</b>	<b>-233523</b>	<b>-126961</b>	<b>-375512</b>	<b>-708084</b>	<b>-549856</b>	<b>-333482</b>	<b>-87434</b>	<b>-106711</b>	<b>726819</b>	<b>216402</b>	<b>30022</b>	<b>-87321</b>	<b>-166986</b>	<b>-192840</b>	<b>-1995468</b>

**Table 4.1.3 - continued**  
**Federal Report Surplus Deficit**  
 Fiscal Year 2015 Water Year: 1937  
 103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
<b>Firm Obligations</b>															
<b>1 Non-Utility Obligation</b>	189828	163433	177389	152822	141745	179666	126675	126675	262570	275442	335045	128077	148300	260476	2668142
2 Federal Agencies	31981	41867	50092	48781	39856	41563	16965	16965	33095	29538	34973	14789	17124	29404	446991
3 USBR Obligation	59348	18707	23383	825	10187	38542	61453	61453	124400	148485	194805	66484	76982	127332	1012385
4 DSI Obligation	98499	102859	103914	103216	91703	99561	48257	48257	105076	97418	105268	46804	54195	103741	1208767
<b>5 Transfers Out</b>	1869139	2381834	2613859	2510719	2097291	2161424	945549	939528	2171296	1774502	2038652	959568	1064264	1852643	25380267
6 Load Following 2012 PSC	808920	988640	1127177	1119084	931811	903969	417127	417127	879576	818698	968360	420346	486716	841714	11129264
7 Slice Block 2012 PSC	541742	723553	782935	795005	646040	682793	265455	265455	525082	431491	548066	254076	294194	557802	7313688
8 Slice Right to Power 2012 PSC	424396	569663	605545	498736	398280	476415	230577	224555	723012	481766	476668	247704	240001	427412	6024730
9 Exports	91274	16745	15775	15502	48209	55541	12355	12355	40530	39812	42606	36073	41769	22835	491382
10 Intra-Regional Transfers (Out)	2808	83233	82426	82392	72950	42706	20036	20036	3096	2736	2952	1368	1584	2880	421203
11 Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>12 Total Firm Obligations</b>	<b>2058967</b>	<b>2545267</b>	<b>2791247</b>	<b>2663541</b>	<b>2239036</b>	<b>2341089</b>	<b>1072224</b>	<b>1066203</b>	<b>2433866</b>	<b>2049944</b>	<b>2373697</b>	<b>1087645</b>	<b>1212564</b>	<b>2113118</b>	<b>28048409</b>
<b>Net Resources</b>															
<b>13 Net Hydro</b>	1396296	1879595	1951654	1604262	1306850	1551086	788785	765111	2692781	1970009	1747605	851287	801929	1389221	20696471
14 Regulated Hydro - Net	1312380	1810298	1896939	1561897	1267218	1482632	732670	707318	2488112	1789595	1624403	797288	745791	1305962	19522502
15 Independent Hydro - Net	83916	69297	54715	42365	39632	68454	56115	57793	204669	180414	123202	50516	52948	93459	1177493
<b>16 Other Resources</b>	348542	370985	365357	356484	314640	368210	169634	171492	206454	36248	276458	168667	199871	356226	3709269
17 Cogeneration Resources	5731	6605	7416	7856	6633	7508	3342	3342	6557	4317	5943	1888	2186	4621	73945
18 Combustion Turbines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19 Large Thermal Resources	321360	347110	337840	337840	296640	336810	156560	156560	171312	0	250592	156560	181280	329600	3380064
20 Renewable Resources	20616	16322	19063	9745	10489	22884	9262	11120	27614	31106	19059	9820	15942	21164	244204
21 Small Hydro Resources	835	947	1038	1044	878	1009	470	470	972	826	864	400	463	842	11055
22 Small Thermal & Misc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Table 4.1.3 - continued**  
**Federal Report Surplus Deficit**  
Fiscal Year 2015 Water Year: 1937  
103 - 2014 Initial Rate Case 10-29-2012

LLH-MWh	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug1	Aug16	Sep	Avg
<b>23 Contract Purchases</b>	171467	199706	270081	192230	163472	189084	84491	84377	189877	165201	184328	101833	117023	174864	2288035
24 Imports	11330	21846	97476	21410	19599	19591	4417	4417	414	304	6088	20175	23361	5840	256267
25 Intra-Regional Transfers (In)	6539	6033	4294	4539	1967	7911	4792	4792	11473	13941	12394	6050	7006	7845	99575
26 Non-Federal CER	0	3808	3808	3808	0	0	0	0	3792	0	3792	0	0	3792	22800
27 Slice Transmission Loss Return	7974	10727	11412	9382	7485	8958	4337	4223	13639	9067	8963	4663	4510	8029	113369
28 Augmentation Purchases	145624	157292	153091	153091	134422	152625	70945	70945	160559	141890	153091	70945	82147	149357	1796024
<b>29 Reserves &amp; Losses</b>	-54040	-69098	-72956	-60714	-50336	-59456	-29410	-28792	-87113	-61235	-62277	-31634	-31551	-54153	-752764
30 Contingency Reserves (Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31 Contingency Reserves (Non-Spinning)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32 Load Following Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33 Generation Imbalance Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34 Transmission Losses	-54040	-69098	-72956	-60714	-50336	-59456	-29410	-28792	-87113	-61235	-62277	-31634	-31551	-54153	-752764
<b>35 Total Net Resources</b>	<b>1862266</b>	<b>2381188</b>	<b>2514136</b>	<b>2092262</b>	<b>1734626</b>	<b>2048924</b>	<b>1013500</b>	<b>992189</b>	<b>3001999</b>	<b>2110223</b>	<b>2146114</b>	<b>1090153</b>	<b>1087271</b>	<b>1866158</b>	<b>25941009</b>
<b>36 Total Surplus/Deficit</b>	<b>-196701</b>	<b>-164080</b>	<b>-277111</b>	<b>-571278</b>	<b>-504411</b>	<b>-292165</b>	<b>-58724</b>	<b>-74014</b>	<b>568134</b>	<b>60279</b>	<b>-227583</b>	<b>2508</b>	<b>-125293</b>	<b>-246960</b>	<b>-2107400</b>

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