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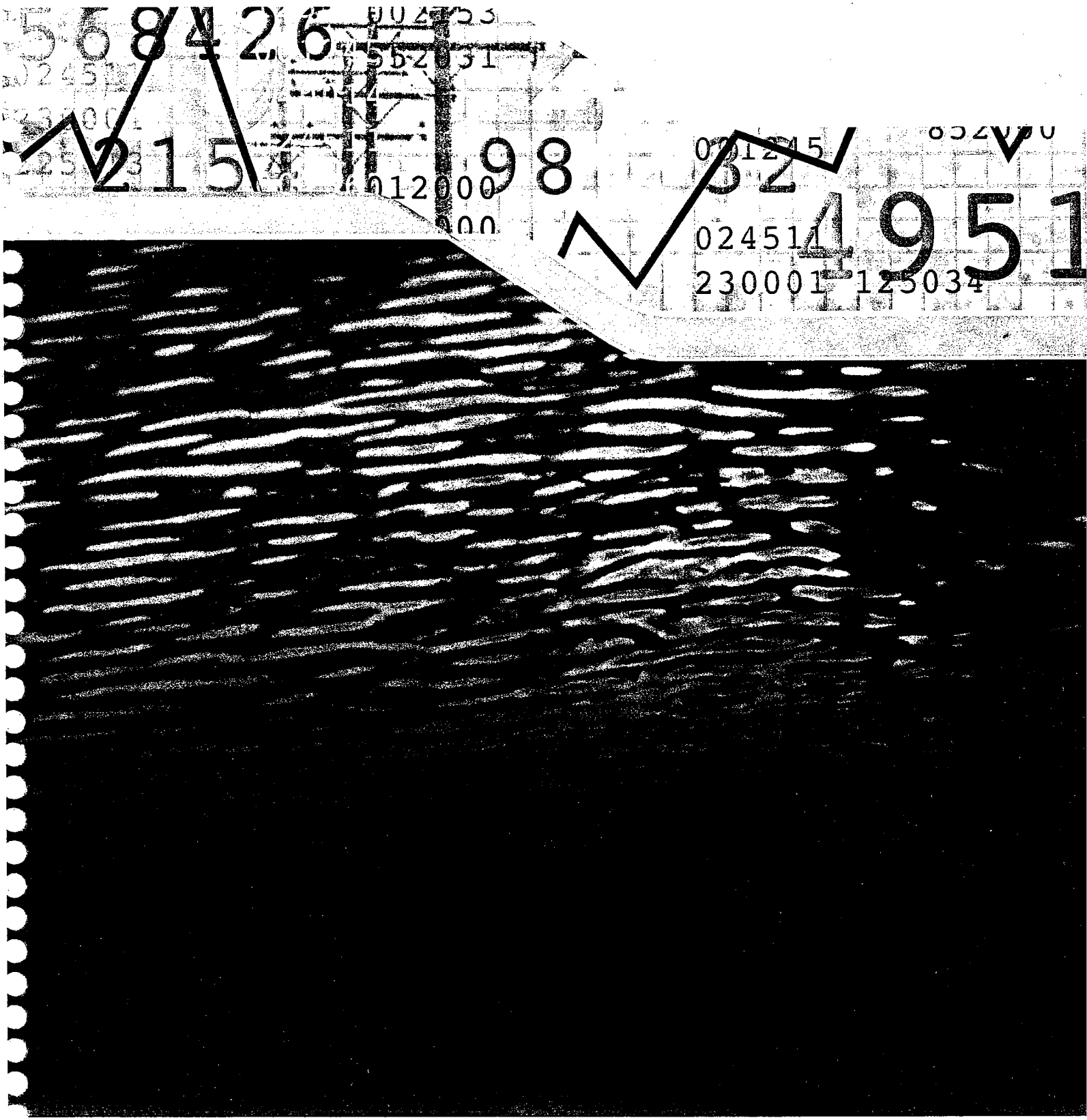
Appendix D–Technical Appendix
For the 2006 Integrated Resource Plan

IPC-E-06-24



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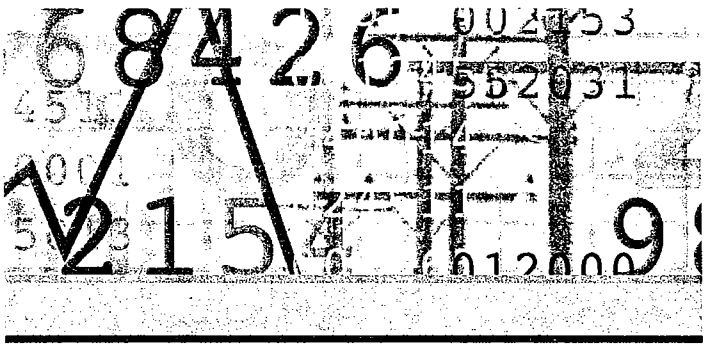

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Acknowledgement

Resource planning is a continuous process that Idaho Power Company constantly works to improve. Idaho Power prepares and publishes a resource plan every two years and expects the experience gained over the next few years will lead to modifications in the 20-year resource plan presented in this document. Idaho Power invited outside participation to help develop both the 2004 and 2006 Integrated Resource Plans.

Idaho Power values the knowledgeable input, comments, and discussion provided by the Integrated Resource Plan Advisory Council and the comments provided by other concerned citizens and customers. Idaho Power looks forward to continuing the resource planning process with its customers and other interested parties.

You can learn more about Idaho Power's resource planning process at www.idahopower.com.

Safe Harbor Statement

This document may contain forward-looking statements, and it is important to note that the future results could differ materially from those discussed. A full discussion of the factors that could cause future results to differ materially can be found in our filings with the Securities and Exchange Commission.

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GLOSSARY OF TERMS

A/C – Air Conditioning

AIR – Additional Information Request

Alliance – Northwest Energy Efficiency Alliance

aMW – Average Megawatt

BOR – Bureau of Reclamation

BPA – Bonneville Power Administration

C&RD – Conservation and Renewable Discount

CAMR – Clean Air Mercury Rule

CCCT – Combined-Cycle Combustion Turbine

CDD – Cooling Degree-Days

CFB – Circulating Fluidized Bed

CFL – Compact Fluorescent Light

CHP – Combined Heat and Power

CO_2 – Carbon Dioxide

CRC – Conservation Rate Credit

CSPP – Cogeneration and Small Power Producers

CT – Combustion Turbine

DOE – U.S. Department of Energy

DG – Distributed Generation

DSM – Demand-Side Management

EA – Environmental Assessment

EEAG – Energy Efficiency Advisory Group

EIA – Energy Information Administration

EIS – Environmental Impact Statement

ESA – Endangered Species Act

FCRPS – Federal Columbia River Power System

FERC – Federal Energy Regulatory Commission

GDD – Growing Degree-Days

HDD – Heating Degree-Days

IDWR – Idaho Department of Water Resources

IGCC – Integrated Gasification Combined Cycle

INL – Idaho National Laboratory

IOU – Investor-Owned Utility

IPC – Idaho Power Company

IPUC – Idaho Public Utilities Commission

IRP – Integrated Resource Plan

IRPAC – Integrated Resource Plan Advisory Council

kV – Kilovolt

kW – Kilowatt

kWh – Kilowatt Hour

LIWA – Low Income Weatherization Assistance

MAF – Million Acre Feet

MMBTU – Million British Thermal Units

MW – Megawatt

MWh – Megawatt Hour

NEPA – National Environmental Policy Act

NWPCC – Northwest Power and Conservation Council

NO_x – Nitrogen Oxides

OPUC – Oregon Public Utility Commission

PCA – Power Cost Adjustment

PM&E – Protection, Mitigation, and Enhancement

PPA – Power Purchase Agreement

PTC – Production Tax Credit

PUC – Public Utility Commission

PURPA – Public Utility Regulatory Policies Act of 1978

PV – Present Value

QF – Qualifying Facility

REC – Renewable Energy Credit

Rider – Energy Efficiency Rider

RFP – Request for Proposal

RPS – Renewable Portfolio Standard

RTO – Regional Transmission Organization

SO_2 – Sulfur Dioxide

SCCT – Simple-Cycle Combustion Turbine

WACC – Weighted Average Cost of Capital

WECC – Western Electricity Coordinating Council

Average Annual Forecast Growth Rates (%)

	2006–2011	2006–2016	2006–2025
Sales			
Residential Sales	2.05	1.79	1.77
Commercial Sales	2.92	2.66	2.54
Irrigation Sales	0.05	0.10	0.12
Industrial Sales	2.57	2.44	2.34
Additional Firm Sales	0.46	0.90	0.98
Firm Sales	2.02	1.90	1.87
System Sales	2.02	1.90	1.87
Firm Off-System Sales	-	-	-
Total Sales	2.02	1.90	1.87
Loads			
Residential Load	1.98	1.76	1.75
Commercial Load	2.88	2.64	2.53
Irrigation Load	-0.31	-0.20	-0.02
Industrial Load	2.26	2.22	2.25
Additional Firm Load	0.46	0.87	0.98
Firm Load Losses	1.97	1.84	1.85
Firm Load	1.90	1.81	1.83
System Load	1.90	1.81	1.83
Firm Off-System Load	-	-	-
Total Load	1.90	1.81	1.83
Firm Requirement Load	1.90	1.81	1.83
Peaks			
Firm Peak	2.08	2.08	2.09
System Peak	2.08	2.08	2.09
Firm Off-System Peak	-	-	-
Total Peak	2.08	2.08	2.09
Firm Requirement Peak	2.08	2.08	2.09
Winter Peak	0.86	1.28	1.48
Summer Peak	2.08	2.08	2.09
Customers			
Residential Customers	2.39	2.15	2.03
Commercial Customers	2.67	2.40	2.25
Irrigation Customers	1.55	1.49	1.41
Industrial Customers	1.10	1.14	1.00

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2006	Feb. 2006	Mar. 2006	Apr. 2006	May. 2006	Jun. 2006	Jul. 2006	Aug. 2006	Sep. 2006	Oct. 2006	Nov. 2006	Dec. 2006
Residential	751	676	578	454	423	469	540	540	446	461	585	755
Commercial	461	445	423	375	391	436	471	475	424	412	430	470
Irrigation	0	0	3	79	261	480	569	480	284	74	3	2
Industrial	275	270	264	267	265	277	277	279	292	294	288	275
Additional Firm	142	142	137	133	130	124	136	134	130	133	138	142
Loss	144	134	122	146	168	177	199	189	153	130	138	160
Firm Load	1,772	1,668	1,527	1,455	1,638	1,963	2,193	2,097	1,729	1,503	1,582	1,804
Light Load	1,639	1,555	1,413	1,311	1,470	1,775	1,965	1,878	1,543	1,347	1,470	1,675
Heavy Load	1,878	1,752	1,610	1,570	1,770	2,101	2,389	2,256	1,877	1,627	1,671	1,916
System Load	1,772	1,668	1,527	1,455	1,638	1,963	2,193	2,097	1,729	1,503	1,582	1,804
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,772	1,668	1,527	1,455	1,638	1,963	2,193	2,097	1,729	1,503	1,582	1,804

Peak Load (Megawatts)

	Jan. 2006	Feb. 2006	Mar. 2006	Apr. 2006	May. 2006	Jun. 2006	Jul. 2006	Aug. 2006	Sep. 2006	Oct. 2006	Nov. 2006	Dec. 2006
Energy Efficiency (MW)	-3	-3	-3	-3	-5	-8	-8	-7	-6	-4	-3	-3
Demand Response (MW)	0	0	0	0	0	-39	-37	-30	0	0	0	0
Firm Peak Load	2,439	2,359	2,193	1,915	2,639	3,098	3,121	2,922	2,610	1,987	2,264	2,684
System Peak (1 Hour)	2,439	2,359	2,193	1,915	2,639	3,098	3,121	2,922	2,610	1,987	2,264	2,684
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,439	2,359	2,193	1,915	2,639	3,098	3,121	2,922	2,610	1,987	2,264	2,684

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2007	Feb. 2007	Mar. 2007	Apr. 2007	May. 2007	Jun. 2007	Jul. 2007	Aug. 2007	Sep. 2007	Oct. 2007	Nov. 2007	Dec. 2007
Residential	773	696	595	467	436	487	564	564	464	476	603	772
Commercial	476	460	438	389	406	454	490	494	440	427	444	484
Irrigation	0	0	3	78	247	494	589	458	283	74	3	2
Industrial	282	277	271	274	272	284	284	286	300	301	295	282
Additional Firm	136	137	132	130	127	120	131	130	126	128	134	136
Loss	147	138	126	150	171	183	206	192	157	134	142	163
Firm Load	1,815	1,708	1,566	1,487	1,658	2,022	2,265	2,124	1,770	1,541	1,620	1,839
Light Load	1,678	1,592	1,449	1,340	1,488	1,828	2,030	1,902	1,580	1,380	1,505	1,707
Heavy Load	1,923	1,794	1,650	1,605	1,792	2,163	2,468	2,284	1,936	1,657	1,712	1,953
System Load	1,815	1,708	1,566	1,487	1,658	2,022	2,265	2,124	1,770	1,541	1,620	1,839
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,815	1,708	1,566	1,487	1,658	2,022	2,265	2,124	1,770	1,541	1,620	1,839

Peak Load (Megawatts)

	Jan. 2007	Feb. 2007	Mar. 2007	Apr. 2007	May. 2007	Jun. 2007	Jul. 2007	Aug. 2007	Sep. 2007	Oct. 2007	Nov. 2007	Dec. 2007
Energy Efficiency (MW)	-5	-5	-4	-5	-9	-13	-14	-12	-9	-7	-5	-5
Demand Response (MW)	0	0	0	0	0	-44	-46	-44	0	0	0	0
Firm Peak Load	2,496	2,398	2,258	1,962	2,686	3,167	3,208	2,953	2,655	2,019	2,302	2,722
System Peak (1 Hour)	2,496	2,398	2,258	1,962	2,686	3,167	3,208	2,953	2,655	2,019	2,302	2,722
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,496	2,398	2,258	1,962	2,686	3,167	3,208	2,953	2,655	2,019	2,302	2,722

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2008	Feb. 2008	Mar. 2008	Apr. 2008	May. 2008	Jun. 2008	Jul. 2008	Aug. 2008	Sep. 2008	Oct. 2008	Nov. 2008	Dec. 2008
Residential	786	707	604	473	444	500	582	581	475	486	614	784
Commercial	489	473	452	401	419	470	508	511	454	441	456	496
Irrigation	0	0	3	78	246	492	587	457	282	73	3	2
Industrial	288	283	277	280	277	290	290	292	306	308	302	288
Additional Firm	138	137	134	132	129	122	133	132	128	130	136	138
Loss	150	141	129	153	174	186	210	196	160	137	145	167
Firm Load	1,852	1,740	1,599	1,517	1,689	2,060	2,310	2,168	1,807	1,574	1,655	1,875
Light Load	1,712	1,623	1,479	1,367	1,516	1,862	2,070	1,942	1,613	1,410	1,537	1,740
Heavy Load	1,962	1,827	1,693	1,627	1,825	2,218	2,499	2,347	1,962	1,693	1,757	1,981
System Load	1,852	1,740	1,599	1,517	1,689	2,060	2,310	2,168	1,807	1,574	1,655	1,875
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,852	1,740	1,599	1,517	1,689	2,060	2,310	2,168	1,807	1,574	1,655	1,875

Peak Load (Megawatts)

	Jan. 2008	Feb. 2008	Mar. 2008	Apr. 2008	May. 2008	Jun. 2008	Jul. 2008	Aug. 2008	Sep. 2008	Oct. 2008	Nov. 2008	Dec. 2008
Energy Efficiency (MW)	-6	-6	-6	-6	-13	-19	-20	-18	-13	-10	-7	-6
Demand Response (MW)	0	0	0	0	0	-57	-59	-57	0	0	0	0
Firm Peak Load	2,533	2,422	2,294	1,984	2,742	3,217	3,268	2,996	2,709	2,050	2,337	2,748
System Peak (1 Hour)	2,533	2,422	2,294	1,984	2,742	3,217	3,268	2,996	2,709	2,050	2,337	2,748
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,533	2,422	2,294	1,984	2,742	3,217	3,268	2,996	2,709	2,050	2,337	2,748

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2009	Feb. 2009	Mar. 2009	Apr. 2009	May. 2009	Jun. 2009	Jul. 2009	Aug. 2009	Sep. 2009	Oct. 2009	Nov. 2009	Dec. 2009
Residential	797	716	612	479	451	511	597	596	486	494	623	796
Commercial	502	485	465	413	431	485	524	527	468	453	468	508
Irrigation	0	0	3	78	245	491	586	456	282	72	2	2
Industrial	294	289	283	287	284	297	297	299	314	315	309	295
Additional Firm	140	141	136	133	131	124	135	134	130	132	137	140
Loss	153	143	131	156	177	190	214	200	163	140	148	170
Firm Load	1,886	1,775	1,630	1,546	1,719	2,097	2,354	2,212	1,843	1,606	1,687	1,910
Light Load	1,743	1,655	1,508	1,393	1,543	1,896	2,110	1,981	1,645	1,439	1,567	1,773
Heavy Load	1,998	1,865	1,727	1,657	1,870	2,244	2,547	2,395	2,001	1,727	1,792	2,018
System Load	1,886	1,775	1,630	1,546	1,719	2,097	2,354	2,212	1,843	1,606	1,687	1,910
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,886	1,775	1,630	1,546	1,719	2,097	2,354	2,212	1,843	1,606	1,687	1,910

Peak Load (Megawatts)

	Jan. 2009	Feb. 2009	Mar. 2009	Apr. 2009	May. 2009	Jun. 2009	Jul. 2009	Aug. 2009	Sep. 2009	Oct. 2009	Nov. 2009	Dec. 2009
Energy Efficiency (MW)	-8	-8	-7	-8	-17	-25	-26	-23	-17	-13	-9	-8
Demand Response (MW)	0	0	0	0	0	-71	-73	-71	0	0	0	0
Firm Peak Load	2,563	2,450	2,322	1,998	2,797	3,271	3,326	3,049	2,762	2,080	2,370	2,796
System Peak (1 Hour)	2,563	2,450	2,322	1,998	2,797	3,271	3,326	3,049	2,762	2,080	2,370	2,796
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,563	2,450	2,322	1,998	2,797	3,271	3,326	3,049	2,762	2,080	2,370	2,796

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2010	Feb. 2010	Mar. 2010	Apr. 2010	May. 2010	Jun. 2010	Jul. 2010	Aug. 2010	Sep. 2010	Oct. 2010	Nov. 2010	Dec. 2010
Residential	808	726	621	485	458	524	614	613	497	503	633	805
Commercial	514	497	478	424	444	500	541	543	482	466	479	518
Irrigation	0	0	3	78	244	490	585	455	281	72	2	2
Industrial	301	296	290	293	290	304	304	306	321	322	316	301
Additional Firm	142	142	138	135	132	125	137	135	132	134	139	142
Loss	156	146	134	159	180	193	219	205	167	143	150	172
Firm Load	1,921	1,808	1,663	1,575	1,750	2,135	2,400	2,258	1,880	1,640	1,720	1,939
Light Load	1,776	1,686	1,539	1,419	1,571	1,931	2,151	2,022	1,679	1,469	1,598	1,800
Heavy Load	2,046	1,900	1,753	1,689	1,904	2,285	2,580	2,444	2,042	1,774	1,818	2,049
System Load	1,921	1,808	1,663	1,575	1,750	2,135	2,400	2,258	1,880	1,640	1,720	1,939
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,921	1,808	1,663	1,575	1,750	2,135	2,400	2,258	1,880	1,640	1,720	1,939

Peak Load (Megawatts)

	Jan. 2010	Feb. 2010	Mar. 2010	Apr. 2010	May. 2010	Jun. 2010	Jul. 2010	Aug. 2010	Sep. 2010	Oct. 2010	Nov. 2010	Dec. 2010
Energy Efficiency (MW)	-10	-9	-9	-10	-20	-30	-32	-28	-21	-15	-11	-10
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,600	2,479	2,360	2,023	2,854	3,329	3,396	3,115	2,816	2,112	2,404	2,833
System Peak (1 Hour)	2,600	2,479	2,360	2,023	2,854	3,329	3,396	3,115	2,816	2,112	2,404	2,833
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,600	2,479	2,360	2,023	2,854	3,329	3,396	3,115	2,816	2,112	2,404	2,833

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2011	Feb. 2011	Mar. 2011	Apr. 2011	May. 2011	Jun. 2011	Jul. 2011	Aug. 2011	Sep. 2011	Oct. 2011	Nov. 2011	Dec. 2011
Residential	814	731	625	488	462	532	627	626	505	508	638	809
Commercial	522	507	487	433	454	512	554	556	493	476	488	526
Irrigation	0	0	3	78	243	487	583	453	280	71	2	2
Industrial	307	302	295	299	296	310	309	312	327	328	322	307
Additional Firm	144	144	140	137	134	127	139	137	134	136	141	144
Loss	158	148	135	161	183	196	222	208	169	145	152	174
Firm Load	1,945	1,832	1,686	1,596	1,772	2,164	2,435	2,292	1,908	1,664	1,744	1,961
Light Load	1,798	1,708	1,560	1,438	1,590	1,956	2,182	2,052	1,704	1,491	1,620	1,820
Heavy Load	2,071	1,924	1,777	1,711	1,928	2,315	2,652	2,465	2,072	1,801	1,843	2,063
System Load	1,945	1,832	1,686	1,596	1,772	2,164	2,435	2,292	1,908	1,664	1,744	1,961
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,945	1,832	1,686	1,596	1,772	2,164	2,435	2,292	1,908	1,664	1,744	1,961

Peak Load (Megawatts)

	Jan. 2011	Feb. 2011	Mar. 2011	Apr. 2011	May. 2011	Jun. 2011	Jul. 2011	Aug. 2011	Sep. 2011	Oct. 2011	Nov. 2011	Dec. 2011
Energy Efficiency (MW)	-11	-11	-11	-12	-23	-35	-37	-33	-25	-18	-13	-11
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,625	2,498	2,384	2,040	2,907	3,377	3,459	3,148	2,869	2,135	2,428	2,801
System Peak (1 Hour)	2,625	2,498	2,384	2,040	2,907	3,377	3,459	3,148	2,869	2,135	2,428	2,801
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,625	2,498	2,384	2,040	2,907	3,377	3,459	3,148	2,869	2,135	2,428	2,801

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2012	Feb. 2012	Mar. 2012	Apr. 2012	May. 2012	Jun. 2012	Jul. 2012	Aug. 2012	Sep. 2012	Oct. 2012	Nov. 2012	Dec. 2012
Residential	816	732	626	488	464	538	637	636	511	511	641	817
Commercial	531	515	497	442	463	524	567	568	503	485	496	536
Irrigation	0	0	3	78	242	486	582	452	280	71	2	2
Industrial	313	308	302	305	302	316	316	319	334	335	329	313
Additional Firm	145	144	142	139	136	129	141	139	136	138	143	145
Loss	159	149	137	162	185	199	225	211	172	147	154	177
Firm Load	1,965	1,849	1,706	1,614	1,792	2,191	2,469	2,325	1,935	1,687	1,765	1,990
Light Load	1,817	1,724	1,579	1,455	1,609	1,981	2,212	2,082	1,728	1,511	1,640	1,847
Heavy Load	2,082	1,941	1,799	1,742	1,937	2,345	2,689	2,501	2,117	1,814	1,865	2,113
System Load	1,965	1,849	1,706	1,614	1,792	2,191	2,469	2,325	1,935	1,687	1,765	1,990
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,965	1,849	1,706	1,614	1,792	2,191	2,469	2,325	1,935	1,687	1,765	1,990

Peak Load (Megawatts)

	Jan. 2012	Feb. 2012	Mar. 2012	Apr. 2012	May. 2012	Jun. 2012	Jul. 2012	Aug. 2012	Sep. 2012	Oct. 2012	Nov. 2012	Dec. 2012
Energy Efficiency (MW)	-13	-13	-12	-13	-27	-41	-43	-38	-28	-21	-14	-13
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,630	2,513	2,380	2,029	2,960	3,439	3,522	3,208	2,923	2,155	2,450	2,844
System Peak (1 Hour)	2,630	2,513	2,380	2,029	2,960	3,439	3,522	3,208	2,923	2,155	2,450	2,844
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,630	2,513	2,380	2,029	2,960	3,439	3,522	3,208	2,923	2,155	2,450	2,844

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2013	Feb. 2013	Mar. 2013	Apr. 2013	May. 2013	Jun. 2013	Jul. 2013	Aug. 2013	Sep. 2013	Oct. 2013	Nov. 2013	Dec. 2013
Residential	828	742	635	494	471	551	655	653	523	521	651	829
Commercial	543	527	510	454	476	539	585	585	517	498	508	547
Irrigation	0	0	3	78	242	485	581	452	279	70	2	2
Industrial	320	315	308	312	309	323	323	325	341	342	336	320
Additional Firm	147	148	143	141	138	131	143	141	137	139	145	147
Loss	162	152	140	165	188	202	230	215	175	150	157	180
Firm Load	2,000	1,884	1,739	1,643	1,823	2,231	2,516	2,372	1,973	1,720	1,798	2,025
Light Load	1,849	1,757	1,609	1,481	1,637	2,017	2,255	2,124	1,762	1,541	1,671	1,879
Heavy Load	2,119	1,980	1,841	1,762	1,970	2,402	2,722	2,551	2,158	1,850	1,900	2,150
System Load	2,000	1,884	1,739	1,643	1,823	2,231	2,516	2,372	1,973	1,720	1,798	2,025
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,000	1,884	1,739	1,643	1,823	2,231	2,516	2,372	1,973	1,720	1,798	2,025

Peak Load (Megawatts)

	Jan. 2013	Feb. 2013	Mar. 2013	Apr. 2013	May. 2013	Jun. 2013	Jul. 2013	Aug. 2013	Sep. 2013	Oct. 2013	Nov. 2013	Dec. 2013
Energy Efficiency (MW)	-15	-14	-14	-15	-30	-45	-48	-43	-32	-23	-16	-15
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,668	2,531	2,417	2,055	3,016	3,510	3,597	3,278	2,977	2,187	2,484	2,895
System Peak (1 Hour)	2,668	2,531	2,417	2,055	3,016	3,510	3,597	3,278	2,977	2,187	2,484	2,895
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,668	2,531	2,417	2,055	3,016	3,510	3,597	3,278	2,977	2,187	2,484	2,895

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2014	Feb. 2014	Mar. 2014	Apr. 2014	May. 2014	Jun. 2014	Jul. 2014	Aug. 2014	Sep. 2014	Oct. 2014	Nov. 2014	Dec. 2014
Residential	839	752	643	500	478	563	673	671	534	530	661	841
Commercial	554	539	523	465	489	555	602	602	531	510	519	558
Irrigation	0	0	3	78	241	484	580	451	279	70	2	2
Industrial	327	321	314	318	315	329	329	332	348	349	343	326
Additional Firm	149	150	145	142	140	133	145	143	139	141	147	149
Loss	165	155	142	168	191	206	234	220	179	153	160	183
Firm Load	2,034	1,916	1,770	1,672	1,854	2,270	2,563	2,418	2,011	1,753	1,831	2,059
Light Load	1,880	1,787	1,638	1,506	1,664	2,053	2,297	2,165	1,795	1,571	1,701	1,911
Heavy Load	2,155	2,014	1,875	1,793	2,003	2,445	2,773	2,618	2,183	1,885	1,944	2,175
System Load	2,034	1,916	1,770	1,672	1,854	2,270	2,563	2,418	2,011	1,753	1,831	2,059
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,034	1,916	1,770	1,672	1,854	2,270	2,563	2,418	2,011	1,753	1,831	2,059

Peak Load (Megawatts)

	Jan. 2014	Feb. 2014	Mar. 2014	Apr. 2014	May. 2014	Jun. 2014	Jul. 2014	Aug. 2014	Sep. 2014	Oct. 2014	Nov. 2014	Dec. 2014
Energy Efficiency (MW)	-17	-16	-15	-17	-34	-50	-54	-47	-35	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,705	2,558	2,454	2,081	3,072	3,580	3,673	3,348	3,030	2,218	2,517	2,945
System Peak (1 Hour)	2,705	2,558	2,454	2,081	3,072	3,580	3,673	3,348	3,030	2,218	2,517	2,945
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,705	2,558	2,454	2,081	3,072	3,580	3,673	3,348	3,030	2,218	2,517	2,945

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2015	Feb. 2015	Mar. 2015	Apr. 2015	May. 2015	Jun. 2015	Jul. 2015	Aug. 2015	Sep. 2015	Oct. 2015	Nov. 2015	Dec. 2015
Residential	849	761	651	505	485	576	691	689	546	538	670	852
Commercial	566	551	535	477	501	570	619	618	545	523	530	569
Irrigation	0	0	3	78	242	485	581	452	279	70	2	2
Industrial	334	329	322	326	323	337	337	340	356	358	351	334
Additional Firm	151	152	147	144	141	135	147	145	141	143	149	151
Loss	168	157	145	171	194	210	239	224	182	156	163	186
Firm Load	2,068	1,949	1,803	1,701	1,887	2,313	2,613	2,468	2,051	1,788	1,864	2,094
Light Load	1,912	1,818	1,668	1,533	1,694	2,091	2,342	2,210	1,831	1,602	1,732	1,943
Heavy Load	2,191	2,048	1,909	1,824	2,053	2,475	2,827	2,671	2,227	1,923	1,980	2,212
System Load	2,068	1,949	1,803	1,701	1,887	2,313	2,613	2,468	2,051	1,788	1,864	2,094
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,068	1,949	1,803	1,701	1,887	2,313	2,613	2,468	2,051	1,788	1,864	2,094

Peak Load (Megawatts)

	Jan. 2015	Feb. 2015	Mar. 2015	Apr. 2015	May. 2015	Jun. 2015	Jul. 2015	Aug. 2015	Sep. 2015	Oct. 2015	Nov. 2015	Dec. 2015
Energy Efficiency (MW)	-17	-16	-15	-17	-34	-51	-54	-47	-35	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,743	2,587	2,492	2,108	3,132	3,655	3,754	3,423	3,088	2,251	2,552	2,996
System Peak (1 Hour)	2,743	2,587	2,492	2,108	3,132	3,655	3,754	3,423	3,088	2,251	2,552	2,996
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,743	2,587	2,492	2,108	3,132	3,655	3,754	3,423	3,088	2,251	2,552	2,996

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2016	Feb. 2016	Mar. 2016	Apr. 2016	May. 2016	Jun. 2016	Jul. 2016	Aug. 2016	Sep. 2016	Oct. 2016	Nov. 2016	Dec. 2016
Residential	860	770	659	511	492	589	709	707	558	547	680	864
Commercial	577	563	548	489	514	586	637	635	560	535	541	580
Irrigation	0	0	3	78	242	486	582	453	280	70	2	2
Industrial	342	336	329	333	330	345	345	348	364	366	359	342
Additional Firm	153	151	149	146	143	136	149	147	143	145	151	153
Loss	171	160	147	174	198	214	243	229	186	159	166	189
Firm Load	2,103	1,980	1,836	1,731	1,920	2,356	2,665	2,518	2,091	1,823	1,898	2,129
Light Load	1,944	1,847	1,698	1,560	1,723	2,130	2,388	2,254	1,867	1,633	1,763	1,976
Heavy Load	2,240	2,080	1,935	1,856	2,088	2,521	2,903	2,708	2,271	1,973	2,006	2,240
System Load	2,103	1,980	1,836	1,731	1,920	2,356	2,665	2,518	2,091	1,823	1,898	2,129
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,103	1,980	1,836	1,731	1,920	2,356	2,665	2,518	2,091	1,823	1,898	2,129

Peak Load (Megawatts)

	Jan. 2016	Feb. 2016	Mar. 2016	Apr. 2016	May. 2016	Jun. 2016	Jul. 2016	Aug. 2016	Sep. 2016	Oct. 2016	Nov. 2016	Dec. 2016
Energy Efficiency (MW)	-17	-16	-16	-17	-34	-51	-54	-48	-36	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,781	2,614	2,530	2,135	3,192	3,730	3,836	3,497	3,145	2,285	2,586	3,048
System Peak (1 Hour)	2,781	2,614	2,530	2,135	3,192	3,730	3,836	3,497	3,145	2,285	2,586	3,048
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,781	2,614	2,530	2,135	3,192	3,730	3,836	3,497	3,145	2,285	2,586	3,048

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2017	Feb. 2017	Mar. 2017	Apr. 2017	May. 2017	Jun. 2017	Jul. 2017	Aug. 2017	Sep. 2017	Oct. 2017	Nov. 2017	Dec. 2017
Residential	871	779	667	517	500	602	728	725	571	556	690	876
Commercial	589	575	561	501	527	602	655	652	574	548	553	592
Irrigation	0	0	3	78	242	486	583	453	280	70	2	2
Industrial	350	344	336	341	337	353	353	356	373	374	367	349
Additional Firm	155	155	151	148	145	138	151	149	145	147	152	155
Loss	173	163	150	177	201	218	248	233	189	162	169	192
Firm Load	2,139	2,016	1,869	1,761	1,953	2,399	2,717	2,569	2,133	1,858	1,932	2,166
Light Load	1,977	1,880	1,729	1,587	1,753	2,169	2,435	2,300	1,904	1,665	1,795	2,010
Heavy Load	2,266	2,119	1,970	1,901	2,111	2,568	2,960	2,763	2,316	2,011	2,042	2,300
System Load	2,139	2,016	1,869	1,761	1,953	2,399	2,717	2,569	2,133	1,858	1,932	2,166
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,139	2,016	1,869	1,761	1,953	2,399	2,717	2,569	2,133	1,858	1,932	2,166

Peak Load (Megawatts)

	Jan. 2017	Feb. 2017	Mar. 2017	Apr. 2017	May. 2017	Jun. 2017	Jul. 2017	Aug. 2017	Sep. 2017	Oct. 2017	Nov. 2017	Dec. 2017
Energy Efficiency (MW)	-17	-16	-16	-17	-34	-51	-54	-48	-36	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,819	2,645	2,568	2,163	3,252	3,806	3,919	3,573	3,203	2,319	2,622	3,101
System Peak (1 Hour)	2,819	2,645	2,568	2,163	3,252	3,806	3,919	3,573	3,203	2,319	2,622	3,101
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,819	2,645	2,568	2,163	3,252	3,806	3,919	3,573	3,203	2,319	2,622	3,101

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2018	Feb. 2018	Mar. 2018	Apr. 2018	May. 2018	Jun. 2018	Jul. 2018	Aug. 2018	Sep. 2018	Oct. 2018	Nov. 2018	Dec. 2018
Residential	883	789	676	522	507	616	748	745	583	566	700	888
Commercial	601	588	575	513	541	619	673	670	589	562	564	603
Irrigation	0	0	3	79	243	487	584	454	281	70	2	2
Industrial	358	352	344	349	345	361	361	364	381	383	375	357
Additional Firm	156	157	153	150	147	140	153	151	147	149	154	157
Loss	176	165	153	180	205	222	253	238	193	165	172	195
Firm Load	2,175	2,051	1,903	1,792	1,987	2,445	2,771	2,622	2,175	1,895	1,967	2,203
Light Load	2,010	1,912	1,761	1,615	1,784	2,210	2,483	2,347	1,942	1,697	1,828	2,044
Heavy Load	2,304	2,155	2,006	1,934	2,148	2,616	3,019	2,820	2,379	2,038	2,079	2,339
System Load	2,175	2,051	1,903	1,792	1,987	2,445	2,771	2,622	2,175	1,895	1,967	2,203
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,175	2,051	1,903	1,792	1,987	2,445	2,771	2,622	2,175	1,895	1,967	2,203

Peak Load (Megawatts)

	Jan. 2018	Feb. 2018	Mar. 2018	Apr. 2018	May. 2018	Jun. 2018	Jul. 2018	Aug. 2018	Sep. 2018	Oct. 2018	Nov. 2018	Dec. 2018
Energy Efficiency (MW)	-17	-16	-16	-17	-34	-51	-54	-48	-35	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,859	2,675	2,608	2,192	3,312	3,883	4,003	3,650	3,260	2,354	2,659	3,155
System Peak (1 Hour)	2,859	2,675	2,608	2,192	3,312	3,883	4,003	3,650	3,260	2,354	2,659	3,155
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,859	2,675	2,608	2,192	3,312	3,883	4,003	3,650	3,260	2,354	2,659	3,155

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2019	Feb. 2019	Mar. 2019	Apr. 2019	May. 2019	Jun. 2019	Jul. 2019	Aug. 2019	Sep. 2019	Oct. 2019	Nov. 2019	Dec. 2019
Residential	894	799	684	528	515	630	768	764	596	575	710	901
Commercial	614	600	589	526	554	636	692	689	605	575	576	615
Irrigation	0	0	3	79	243	488	585	455	281	71	2	2
Industrial	366	360	352	356	353	369	369	372	390	392	384	366
Additional Firm	158	159	154	152	149	142	154	152	149	151	156	159
Loss	179	168	156	183	208	226	258	243	197	168	175	199
Firm Load	2,211	2,086	1,938	1,824	2,022	2,491	2,826	2,675	2,218	1,932	2,003	2,240
Light Load	2,044	1,945	1,793	1,643	1,815	2,252	2,533	2,396	1,980	1,731	1,861	2,079
Heavy Load	2,343	2,192	2,052	1,955	2,185	2,682	3,058	2,878	2,426	2,077	2,116	2,378
System Load	2,211	2,086	1,938	1,824	2,022	2,491	2,826	2,675	2,218	1,932	2,003	2,240
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,211	2,086	1,938	1,824	2,022	2,491	2,826	2,675	2,218	1,932	2,003	2,240

Peak Load (Megawatts)

	Jan. 2019	Feb. 2019	Mar. 2019	Apr. 2019	May. 2019	Jun. 2019	Jul. 2019	Aug. 2019	Sep. 2019	Oct. 2019	Nov. 2019	Dec. 2019
Energy Efficiency (MW)	-17	-16	-15	-17	-34	-51	-54	-48	-35	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,899	2,705	2,648	2,221	3,372	3,961	4,088	3,728	3,318	2,390	2,696	3,209
System Peak (1 Hour)	2,899	2,705	2,648	2,221	3,372	3,961	4,088	3,728	3,318	2,390	2,696	3,209
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,899	2,705	2,648	2,221	3,372	3,961	4,088	3,728	3,318	2,390	2,696	3,209

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2020	Feb. 2020	Mar. 2020	Apr. 2020	May. 2020	Jun. 2020	Jul. 2020	Aug. 2020	Sep. 2020	Oct. 2020	Nov. 2020	Dec. 2020
Residential	906	809	693	534	522	644	788	785	610	585	720	913
Commercial	626	613	603	538	569	654	712	707	620	589	588	627
Irrigation	0	0	3	79	243	489	586	456	282	71	2	2
Industrial	374	368	360	365	361	378	377	381	399	401	393	374
Additional Firm	160	158	156	153	150	144	156	154	150	152	158	160
Loss	182	171	159	186	212	230	263	248	201	172	178	202
Firm Load	2,248	2,119	1,973	1,855	2,058	2,537	2,882	2,730	2,262	1,970	2,039	2,278
Light Load	2,078	1,976	1,826	1,672	1,847	2,294	2,583	2,445	2,020	1,764	1,894	2,114
Heavy Load	2,382	2,225	2,090	1,990	2,239	2,715	3,118	2,956	2,456	2,118	2,165	2,407
System Load	2,248	2,119	1,973	1,855	2,058	2,537	2,882	2,730	2,262	1,970	2,039	2,278
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,248	2,119	1,973	1,855	2,058	2,537	2,882	2,730	2,262	1,970	2,039	2,278

Peak Load (Megawatts)

	Jan. 2020	Feb. 2020	Mar. 2020	Apr. 2020	May. 2020	Jun. 2020	Jul. 2020	Aug. 2020	Sep. 2020	Oct. 2020	Nov. 2020	Dec. 2020
Energy Efficiency (MW)	-17	-16	-15	-17	-34	-51	-54	-47	-35	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,940	2,734	2,689	2,250	3,433	4,039	4,175	3,807	3,375	2,426	2,733	3,264
System Peak (1 Hour)	2,940	2,734	2,689	2,250	3,433	4,039	4,175	3,807	3,375	2,426	2,733	3,264
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,940	2,734	2,689	2,250	3,433	4,039	4,175	3,807	3,375	2,426	2,733	3,264

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2021	Feb. 2021	Mar. 2021	Apr. 2021	May. 2021	Jun. 2021	Jul. 2021	Aug. 2021	Sep. 2021	Oct. 2021	Nov. 2021	Dec. 2021
Residential	918	819	702	540	530	658	809	805	623	595	731	927
Commercial	639	626	617	551	583	672	732	727	636	603	600	639
Irrigation	0	0	3	79	244	489	587	456	282	71	2	2
Industrial	383	377	368	373	370	386	386	389	408	410	401	382
Additional Firm	161	162	158	155	152	145	158	156	152	154	160	162
Loss	185	174	161	190	215	234	268	253	205	175	181	205
Firm Load	2,286	2,158	2,009	1,888	2,094	2,585	2,940	2,787	2,307	2,008	2,076	2,317
Light Load	2,114	2,012	1,859	1,701	1,880	2,337	2,635	2,495	2,060	1,799	1,929	2,150
Heavy Load	2,435	2,267	2,118	2,024	2,278	2,766	3,160	3,016	2,505	2,173	2,193	2,448
System Load	2,286	2,158	2,009	1,888	2,094	2,585	2,940	2,787	2,307	2,008	2,076	2,317
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,286	2,158	2,009	1,888	2,094	2,585	2,940	2,787	2,307	2,008	2,076	2,317

Peak Load (Megawatts)

	Jan. 2021	Feb. 2021	Mar. 2021	Apr. 2021	May. 2021	Jun. 2021	Jul. 2021	Aug. 2021	Sep. 2021	Oct. 2021	Nov. 2021	Dec. 2021
Energy Efficiency (MW)	-17	-16	-16	-17	-34	-51	-54	-47	-36	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,981	2,766	2,731	2,279	3,493	4,118	4,263	3,886	3,433	2,464	2,771	3,320
System Peak (1 Hour)	2,981	2,766	2,731	2,279	3,493	4,118	4,263	3,886	3,433	2,464	2,771	3,320
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,981	2,766	2,731	2,279	3,493	4,118	4,263	3,886	3,433	2,464	2,771	3,320

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2022	Feb. 2022	Mar. 2022	Apr. 2022	May. 2022	Jun. 2022	Jul. 2022	Aug. 2022	Sep. 2022	Oct. 2022	Nov. 2022	Dec. 2022
Residential	930	829	711	546	538	674	831	827	638	605	742	940
Commercial	652	639	632	565	598	690	752	746	653	618	613	651
Irrigation	0	0	3	79	244	490	587	457	282	71	2	2
Industrial	392	385	377	382	378	395	395	398	417	419	411	391
Additional Firm	163	164	159	156	154	147	160	158	154	156	161	164
Loss	189	177	164	193	219	239	274	258	209	179	185	209
Firm Load	2,325	2,195	2,046	1,921	2,131	2,635	2,999	2,844	2,353	2,048	2,113	2,356
Light Load	2,150	2,046	1,893	1,731	1,913	2,382	2,688	2,547	2,101	1,834	1,964	2,187
Heavy Load	2,476	2,306	2,157	2,060	2,319	2,819	3,267	3,059	2,555	2,216	2,233	2,479
System Load	2,325	2,195	2,046	1,921	2,131	2,635	2,999	2,844	2,353	2,048	2,113	2,356
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,325	2,195	2,046	1,921	2,131	2,635	2,999	2,844	2,353	2,048	2,113	2,356

Peak Load (Megawatts)

	Jan. 2022	Feb. 2022	Mar. 2022	Apr. 2022	May. 2022	Jun. 2022	Jul. 2022	Aug. 2022	Sep. 2022	Oct. 2022	Nov. 2022	Dec. 2022
Energy Efficiency (MW)	-17	-16	-16	-17	-34	-51	-54	-48	-36	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	3,023	2,798	2,773	2,310	3,554	4,197	4,352	3,967	3,490	2,502	2,810	3,376
System Peak (1 Hour)	3,023	2,798	2,773	2,310	3,554	4,197	4,352	3,967	3,490	2,502	2,810	3,376
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	3,023	2,798	2,773	2,310	3,554	4,197	4,352	3,967	3,490	2,502	2,810	3,376

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023
Residential	942	840	720	553	547	689	853	849	652	616	753	953
Commercial	665	653	647	579	613	709	773	766	670	633	626	663
Irrigation	0	0	3	79	245	491	588	457	283	71	2	2
Industrial	401	394	385	390	386	404	404	407	427	429	420	400
Additional Firm	165	165	161	158	155	149	161	159	155	157	163	165
Loss	192	180	167	196	223	243	279	264	213	182	188	212
Firm Load	2,364	2,232	2,083	1,955	2,169	2,685	3,059	2,903	2,400	2,088	2,152	2,396
Light Load	2,186	2,081	1,928	1,761	1,947	2,427	2,742	2,599	2,143	1,870	1,999	2,224
Heavy Load	2,505	2,345	2,196	2,110	2,344	2,873	3,333	3,122	2,606	2,259	2,274	2,544
System Load	2,364	2,232	2,083	1,955	2,169	2,685	3,059	2,903	2,400	2,088	2,152	2,396
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,364	2,232	2,083	1,955	2,169	2,685	3,059	2,903	2,400	2,088	2,152	2,396

Peak Load (Megawatts)

	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023
Energy Efficiency (MW)	-17	-16	-16	-17	-34	-51	-54	-48	-36	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	3,066	2,830	2,816	2,340	3,615	4,277	4,443	4,048	3,547	2,540	2,850	3,433
System Peak (1 Hour)	3,066	2,830	2,816	2,340	3,615	4,277	4,443	4,048	3,547	2,540	2,850	3,433
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	3,066	2,830	2,816	2,340	3,615	4,277	4,443	4,048	3,547	2,540	2,850	3,433

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2024	Feb. 2024	Mar. 2024	Apr. 2024	May. 2024	Jun. 2024	Jul. 2024	Aug. 2024	Sep. 2024	Oct. 2024	Nov. 2024	Dec. 2024
Residential	955	850	729	559	555	705	876	871	667	626	764	967
Commercial	678	667	662	593	628	728	794	787	687	648	638	676
Irrigation	0	0	3	79	245	491	589	458	283	71	2	2
Industrial	410	403	394	399	395	413	413	417	437	438	430	409
Additional Firm	166	165	162	160	157	150	163	161	157	159	164	167
Loss	195	183	171	200	227	248	285	269	218	186	191	216
Firm Load	2,404	2,268	2,121	1,989	2,207	2,736	3,120	2,963	2,448	2,128	2,190	2,436
Light Load	2,222	2,114	1,962	1,792	1,981	2,473	2,796	2,653	2,186	1,906	2,035	2,261
Heavy Load	2,547	2,381	2,246	2,133	2,385	2,946	3,376	3,187	2,678	2,288	2,314	2,587
System Load	2,404	2,268	2,121	1,989	2,207	2,736	3,120	2,963	2,448	2,128	2,190	2,436
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,404	2,268	2,121	1,989	2,207	2,736	3,120	2,963	2,448	2,128	2,190	2,436

Peak Load (Megawatts)

	Jan. 2024	Feb. 2024	Mar. 2024	Apr. 2024	May. 2024	Jun. 2024	Jul. 2024	Aug. 2024	Sep. 2024	Oct. 2024	Nov. 2024	Dec. 2024
Energy Efficiency (MW)	-16	-16	-15	-17	-34	-51	-54	-48	-35	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	3,108	2,861	2,860	2,371	3,677	4,358	4,534	4,130	3,605	2,579	2,890	3,490
System Peak (1 Hour)	3,108	2,861	2,860	2,371	3,677	4,358	4,534	4,130	3,605	2,579	2,890	3,490
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	3,108	2,861	2,860	2,371	3,677	4,358	4,534	4,130	3,605	2,579	2,890	3,490

Expected Case Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2025	Feb. 2025	Mar. 2025	Apr. 2025	May. 2025	Jun. 2025	Jul. 2025	Aug. 2025	Sep. 2025	Oct. 2025	Nov. 2025	Dec. 2025
Residential	967	861	738	565	563	721	899	894	682	637	776	980
Commercial	691	680	677	607	644	748	816	808	704	663	651	688
Irrigation	0	0	3	79	245	492	590	459	284	71	2	2
Industrial	419	412	403	408	404	423	422	426	447	448	440	419
Additional Firm	168	168	164	161	158	152	165	162	159	160	166	168
Loss	198	186	174	203	231	253	291	275	222	189	195	220
Firm Load	2,443	2,308	2,159	2,023	2,246	2,788	3,183	3,024	2,496	2,169	2,229	2,476
Light Load	2,259	2,152	1,998	1,823	2,016	2,520	2,852	2,707	2,229	1,943	2,071	2,298
Heavy Load	2,589	2,425	2,287	2,170	2,427	3,001	3,443	3,273	2,711	2,333	2,367	2,617
System Load	2,443	2,308	2,159	2,023	2,246	2,788	3,183	3,024	2,496	2,169	2,229	2,476
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,443	2,308	2,159	2,023	2,246	2,788	3,183	3,024	2,496	2,169	2,229	2,476

Peak Load (Megawatts)

	Jan. 2025	Feb. 2025	Mar. 2025	Apr. 2025	May. 2025	Jun. 2025	Jul. 2025	Aug. 2025	Sep. 2025	Oct. 2025	Nov. 2025	Dec. 2025
Energy Efficiency (MW)	-17	-16	-15	-17	-34	-50	-54	-47	-35	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	3,152	2,895	2,904	2,401	3,738	4,440	4,627	4,213	3,662	2,619	2,930	3,547
System Peak (1 Hour)	3,152	2,895	2,904	2,401	3,738	4,440	4,627	4,213	3,662	2,619	2,930	3,547
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	3,152	2,895	2,904	2,401	3,738	4,440	4,627	4,213	3,662	2,619	2,930	3,547

Expected Case Sales and Load Forecast Annual Summary

Billed Sales (Megawatt-hours)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Residential	4,862,268	5,028,163	5,129,950	5,218,358	5,315,450	5,373,289	5,407,204	5,507,578	5,603,702	5,699,278
Commercial	3,800,997	3,938,173	4,061,269	4,177,796	4,293,773	4,384,049	4,469,715	4,587,155	4,702,480	4,818,204
Irrigation	1,643,080	1,639,190	1,633,080	1,629,431	1,626,475	1,617,721	1,615,071	1,612,422	1,609,760	1,612,308
Industrial	2,421,451	2,485,427	2,537,510	2,596,445	2,656,152	2,708,334	2,765,435	2,823,076	2,881,748	2,949,296
Additional Firm	1,182,934	1,143,360	1,162,503	1,177,194	1,194,104	1,210,114	1,227,715	1,240,656	1,257,431	1,274,235
Firm Sales	13,910,730	14,234,313	14,524,313	14,799,225	15,085,955	15,293,506	15,485,140	15,770,885	16,055,122	16,353,323
System Sales	13,910,730	14,234,313	14,524,313	14,799,225	15,085,955	15,293,506	15,485,140	15,770,885	16,055,122	16,353,323
Firm Off-System Sales	0	0	0	0	0	0	0	0	0	0
Total Sales	13,910,730	14,234,313	14,524,313	14,799,225	15,085,955	15,293,506	15,485,140	15,770,885	16,055,122	16,353,323

Generation Month Sales (Megawatt-hours)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Residential	4,872,705	5,034,133	5,151,940	5,223,934	5,318,318	5,374,513	5,430,481	5,512,941	5,608,872	5,704,471
Commercial	3,807,410	3,943,800	4,077,862	4,182,961	4,297,571	4,387,575	4,487,202	4,592,111	4,707,351	4,823,108
Irrigation	1,643,102	1,639,191	1,633,086	1,629,432	1,626,473	1,617,722	1,615,077	1,612,423	1,609,762	1,612,309
Industrial	2,425,530	2,488,836	2,548,189	2,600,283	2,659,566	2,712,026	2,776,742	2,826,856	2,885,549	2,953,105
Additional Firm	1,182,934	1,143,360	1,162,503	1,177,194	1,194,104	1,210,114	1,227,715	1,240,656	1,257,431	1,274,235
Firm Sales	13,931,681	14,249,320	14,573,580	14,813,805	15,096,033	15,301,949	15,537,217	15,784,986	16,068,965	16,367,228
System Sales	13,931,681	14,249,320	14,573,580	14,813,805	15,096,033	15,301,949	15,537,217	15,784,986	16,068,965	16,367,228
Firm Off-System Sales	0	0	0	0	0	0	0	0	0	0
Total Sales	13,931,681	14,249,320	14,573,580	14,813,805	15,096,033	15,301,949	15,537,217	15,784,986	16,068,965	16,367,228
Loss	1,360,067	1,394,827	1,427,012	1,451,237	1,479,180	1,499,115	1,521,363	1,546,529	1,574,734	1,603,795
Required Generation	15,291,747	15,644,147	16,000,592	16,265,042	16,575,213	16,801,064	17,058,580	17,331,515	17,643,699	17,971,023

Average Load (Average Megawatts)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Residential	556	575	587	596	607	614	618	629	640	651
Commercial	435	450	464	478	491	501	511	524	537	551
Irrigation	188	187	186	186	186	185	184	184	184	184
Industrial	277	284	290	297	304	310	316	323	329	337
Additional Firm	135	130	133	134	137	139	140	142	144	146
Loss	155	159	162	166	169	171	173	177	180	183
Firm Load	1,746	1,786	1,822	1,857	1,892	1,918	1,942	1,978	2,014	2,051
Light Load	1,588	1,624	1,657	1,689	1,721	1,744	1,766	1,799	1,832	1,866
Heavy Load	1,870	1,913	1,951	1,988	2,025	2,054	2,080	2,119	2,157	2,197
System Load	1,746	1,786	1,822	1,857	1,892	1,918	1,942	1,978	2,014	2,051
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0
Total Load	1,746	1,786	1,822	1,857	1,892	1,918	1,942	1,978	2,014	2,051

Peak Load (Megawatts)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Energy Efficiency (MW)	-8	-14	-20	-26	-32	-37	-43	-48	-54	-54
Demand Response	-37	-46	-59	-73	-78	-78	-78	-78	-78	-78
Firm Peak Load	3,121	3,208	3,268	3,326	3,396	3,459	3,522	3,597	3,673	3,754
System Peak (1 Hour)	3,121	3,208	3,268	3,326	3,396	3,459	3,522	3,597	3,673	3,754
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0
Total Peak Load	3,121	3,208	3,268	3,326	3,396	3,459	3,522	3,597	3,673	3,754

Expected Case Sales and Load Forecast Annual Summary

Billed Sales (Megawatt-hours)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Residential	5,795,818	5,895,126	5,997,530	6,100,905	6,206,045	6,314,869	6,427,310	6,541,021	6,655,530	6,772,209
Commercial	4,935,524	5,055,838	5,179,326	5,304,556	5,432,315	5,563,441	5,698,184	5,834,756	5,972,690	6,112,112
Irrigation	1,614,777	1,617,289	1,619,769	1,622,199	1,624,614	1,626,988	1,629,358	1,631,660	1,633,955	1,636,206
Industrial	3,016,981	3,086,155	3,156,872	3,229,166	3,303,072	3,378,626	3,455,865	3,534,826	3,615,548	3,698,070
Additional Firm	1,293,573	1,306,995	1,322,898	1,339,087	1,356,188	1,368,805	1,383,131	1,396,756	1,413,077	1,424,582
Firm Sales	16,656,674	16,961,402	17,276,395	17,595,913	17,922,235	18,252,730	18,593,847	18,939,019	19,290,800	19,643,178
System Sales	16,656,674	16,961,402	17,276,395	17,595,913	17,922,235	18,252,730	18,593,847	18,939,019	19,290,800	19,643,178
Firm Off-System Sales	0	0	0	0	0	0	0	0	0	0
Total Sales	16,656,674	16,961,402	17,276,395	17,595,913	17,922,235	18,252,730	18,593,847	18,939,019	19,290,800	19,643,178

Generation Month Sales (Megawatt-hours)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Residential	5,819,653	5,900,622	6,003,045	6,106,491	6,231,254	6,320,840	6,433,315	6,547,027	6,682,049	6,778,394
Commercial	4,954,054	5,060,951	5,184,474	5,309,777	5,452,375	5,568,897	5,703,674	5,840,255	5,994,219	6,117,660
Irrigation	1,614,783	1,617,291	1,619,771	1,622,200	1,624,620	1,626,990	1,629,359	1,631,661	1,633,962	1,636,207
Industrial	3,029,177	3,090,135	3,160,940	3,233,325	3,316,393	3,382,972	3,460,308	3,539,368	3,630,098	3,702,817
Additional Firm	1,293,573	1,306,995	1,322,898	1,339,087	1,356,188	1,368,805	1,383,131	1,396,756	1,413,077	1,424,582
Firm Sales	16,711,241	16,975,992	17,291,128	17,610,880	17,980,831	18,268,505	18,609,786	18,955,068	19,353,405	19,659,660
System Sales	16,711,241	16,975,992	17,291,128	17,610,880	17,980,831	18,268,505	18,609,786	18,955,068	19,353,405	19,659,660
Firm Off-System Sales	0	0	0	0	0	0	0	0	0	0
Total Sales	16,711,241	16,975,992	17,291,128	17,610,880	17,980,831	18,268,505	18,609,786	18,955,068	19,353,405	19,659,660
Loss	1,636,984	1,663,237	1,694,077	1,725,346	1,761,219	1,789,845	1,823,395	1,857,361	1,896,072	1,926,598
Required Generation	18,348,226	18,639,228	18,985,205	19,336,227	19,742,050	20,058,349	20,433,181	20,812,430	21,249,476	21,586,259

Average Load (Average Megawatts)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Residential	663	674	685	697	709	722	734	747	761	774
Commercial	564	578	592	606	621	636	651	667	682	698
Irrigation	184	185	185	185	185	186	186	186	186	187
Industrial	345	353	361	369	378	386	395	404	413	423
Additional Firm	147	149	151	153	155	157	158	160	161	163
Loss	186	190	193	197	201	204	208	212	216	220
Firm Load	2,089	2,128	2,167	2,207	2,248	2,290	2,333	2,376	2,419	2,464
Light Load	1,900	1,935	1,971	2,007	2,044	2,082	2,121	2,160	2,200	2,241
Heavy Load	2,237	2,279	2,322	2,364	2,407	2,451	2,498	2,545	2,591	2,639
System Load	2,089	2,128	2,167	2,207	2,248	2,290	2,333	2,376	2,419	2,464
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0
Total Load	2,089	2,128	2,167	2,207	2,248	2,290	2,333	2,376	2,419	2,464

Peak Load (Megawatts)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Energy Efficiency (MW)	-54	-54	-54	-54	-54	-54	-54	-54	-54	-54
Demand Response	-78	-78	-78	-78	-78	-78	-78	-78	-78	-78
Firm Peak Load	3,836	3,919	4,003	4,088	4,175	4,263	4,352	4,443	4,534	4,627
System Peak (1 Hour)	3,836	3,919	4,003	4,088	4,175	4,263	4,352	4,443	4,534	4,627
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0
Total Peak Load	3,836	3,919	4,003	4,088	4,175	4,263	4,352	4,443	4,534	4,627

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2006	Feb. 2006	Mar. 2006	Apr. 2006	May. 2006	Jun. 2006	Jul. 2006	Aug. 2006	Sep. 2006	Oct. 2006	Nov. 2006	Dec. 2006
Residential	774	695	592	461	431	485	557	555	460	472	601	780
Commercial	468	450	427	381	398	442	475	478	426	414	433	477
Irrigation	0	0	4	107	309	527	598	500	301	82	3	2
Industrial	275	270	264	267	265	277	277	279	292	294	288	275
Additional Firm	142	143	137	133	130	125	137	134	130	133	138	142
Loss	147	137	124	152	177	184	204	193	156	133	140	163
Firm Load	1,806	1,694	1,548	1,502	1,710	2,039	2,247	2,139	1,766	1,527	1,603	1,840
Light Load	1,669	1,579	1,432	1,353	1,535	1,844	2,014	1,916	1,577	1,368	1,489	1,708
Heavy Load	1,913	1,780	1,632	1,621	1,848	2,182	2,448	2,301	1,918	1,652	1,694	1,954
System Load	1,806	1,694	1,548	1,502	1,710	2,039	2,247	2,139	1,766	1,527	1,603	1,840
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,806	1,694	1,548	1,502	1,710	2,039	2,247	2,139	1,766	1,527	1,603	1,840

Peak Load (Megawatts)

	Jan. 2006	Feb. 2006	Mar. 2006	Apr. 2006	May. 2006	Jun. 2006	Jul. 2006	Aug. 2006	Sep. 2006	Oct. 2006	Nov. 2006	Dec. 2006
Energy Efficiency (MW)	-3	-3	-3	-3	-5	-8	-8	-7	-6	-4	-3	-3
Demand Response (MW)	0	0	0	0	0	-39	-37	-30	0	0	0	0
Firm Peak Load	2,473	2,406	2,275	1,924	2,673	3,116	3,163	2,945	2,617	2,025	2,317	2,790
System Peak (1 Hour)	2,473	2,406	2,275	1,924	2,673	3,116	3,163	2,945	2,617	2,025	2,317	2,790
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,473	2,406	2,275	1,924	2,673	3,116	3,163	2,945	2,617	2,025	2,317	2,790

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2007	Feb. 2007	Mar. 2007	Apr. 2007	May. 2007	Jun. 2007	Jul. 2007	Aug. 2007	Sep. 2007	Oct. 2007	Nov. 2007	Dec. 2007
Residential	797	715	610	474	445	504	582	579	478	488	619	798
Commercial	484	465	442	395	413	459	494	497	442	429	447	491
Irrigation	0	0	4	106	294	543	618	477	301	81	3	2
Industrial	282	277	271	274	272	284	284	286	300	301	295	282
Additional Firm	136	137	132	130	127	120	131	130	126	128	133	137
Loss	150	140	128	156	179	190	211	196	161	136	144	167
Firm Load	1,849	1,734	1,587	1,535	1,729	2,101	2,321	2,166	1,808	1,564	1,642	1,876
Light Load	1,710	1,617	1,468	1,383	1,552	1,899	2,080	1,939	1,614	1,401	1,525	1,741
Heavy Load	1,959	1,822	1,673	1,656	1,869	2,248	2,528	2,329	1,978	1,682	1,735	1,992
System Load	1,849	1,734	1,587	1,535	1,729	2,101	2,321	2,166	1,808	1,564	1,642	1,876
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,849	1,734	1,587	1,535	1,729	2,101	2,321	2,166	1,808	1,564	1,642	1,876

Peak Load (Megawatts)

	Jan. 2007	Feb. 2007	Mar. 2007	Apr. 2007	May. 2007	Jun. 2007	Jul. 2007	Aug. 2007	Sep. 2007	Oct. 2007	Nov. 2007	Dec. 2007
Energy Efficiency (MW)	-5	-5	-4	-5	-9	-13	-14	-12	-9	-7	-5	-5
Demand Response (MW)	0	0	0	0	0	-44	-46	-44	0	0	0	0
Firm Peak Load	2,530	2,445	2,342	1,971	2,721	3,186	3,251	2,975	2,662	2,056	2,355	2,832
System Peak (1 Hour)	2,530	2,445	2,342	1,971	2,721	3,186	3,251	2,975	2,662	2,056	2,355	2,832
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,530	2,445	2,342	1,971	2,721	3,186	3,251	2,975	2,662	2,056	2,355	2,832

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2008	Feb. 2008	Mar. 2008	Apr. 2008	May. 2008	Jun. 2008	Jul. 2008	Aug. 2008	Sep. 2008	Oct. 2008	Nov. 2008	Dec. 2008
Residential	810	726	619	481	453	518	600	597	490	498	630	810
Commercial	497	478	456	408	426	475	512	514	457	442	459	504
Irrigation	0	0	4	106	292	541	616	476	300	81	3	2
Industrial	288	283	277	280	277	290	290	292	306	308	302	288
Additional Firm	139	137	135	131	129	122	133	131	129	130	135	139
Loss	153	143	130	159	182	194	216	200	164	139	147	170
Firm Load	1,886	1,767	1,621	1,565	1,761	2,140	2,367	2,211	1,845	1,598	1,676	1,912
Light Load	1,744	1,648	1,500	1,410	1,581	1,934	2,121	1,980	1,648	1,431	1,557	1,774
Heavy Load	1,999	1,856	1,716	1,678	1,903	2,304	2,560	2,394	2,004	1,718	1,780	2,020
System Load	1,886	1,767	1,621	1,565	1,761	2,140	2,367	2,211	1,845	1,598	1,676	1,912
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,886	1,767	1,621	1,565	1,761	2,140	2,367	2,211	1,845	1,598	1,676	1,912

Peak Load (Megawatts)

	Jan. 2008	Feb. 2008	Mar. 2008	Apr. 2008	May. 2008	Jun. 2008	Jul. 2008	Aug. 2008	Sep. 2008	Oct. 2008	Nov. 2008	Dec. 2008
Energy Efficiency (MW)	-6	-6	-6	-6	-13	-19	-20	-18	-13	-10	-7	-6
Demand Response (MW)	0	0	0	0	0	-57	-59	-57	0	0	0	0
Firm Peak Load	2,567	2,469	2,380	1,993	2,777	3,235	3,312	3,020	2,716	2,088	2,390	2,859
System Peak (1 Hour)	2,567	2,469	2,380	1,993	2,777	3,235	3,312	3,020	2,716	2,088	2,390	2,859
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,567	2,469	2,380	1,993	2,777	3,235	3,312	3,020	2,716	2,088	2,390	2,859

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2009	Feb. 2009	Mar. 2009	Apr. 2009	May. 2009	Jun. 2009	Jul. 2009	Aug. 2009	Sep. 2009	Oct. 2009	Nov. 2009	Dec. 2009
Residential	821	735	627	487	460	530	616	613	501	506	639	822
Commercial	509	491	469	419	439	490	528	530	471	455	471	516
Irrigation	0	0	4	106	292	540	615	475	299	80	3	2
Industrial	294	289	283	287	284	297	297	299	314	315	309	295
Additional Firm	140	140	136	133	131	123	134	133	131	132	138	140
Loss	156	146	133	161	186	198	220	205	167	142	150	173
Firm Load	1,921	1,802	1,653	1,594	1,791	2,178	2,412	2,256	1,882	1,630	1,709	1,947
Light Load	1,776	1,680	1,529	1,436	1,608	1,969	2,161	2,020	1,680	1,460	1,588	1,807
Heavy Load	2,035	1,894	1,750	1,709	1,949	2,330	2,609	2,442	2,044	1,753	1,815	2,058
System Load	1,921	1,802	1,653	1,594	1,791	2,178	2,412	2,256	1,882	1,630	1,709	1,947
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,921	1,802	1,653	1,594	1,791	2,178	2,412	2,256	1,882	1,630	1,709	1,947

Peak Load (Megawatts)

	Jan. 2009	Feb. 2009	Mar. 2009	Apr. 2009	May. 2009	Jun. 2009	Jul. 2009	Aug. 2009	Sep. 2009	Oct. 2009	Nov. 2009	Dec. 2009
Energy Efficiency (MW)	-8	-8	-7	-8	-17	-25	-26	-23	-17	-13	-9	-8
Demand Response (MW)	0	0	0	0	0	-71	-73	-71	0	0	0	0
Firm Peak Load	2,596	2,497	2,410	2,007	2,834	3,289	3,372	3,073	2,769	2,118	2,423	2,909
System Peak (1 Hour)	2,596	2,497	2,410	2,007	2,834	3,289	3,372	3,073	2,769	2,118	2,423	2,909
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,596	2,497	2,410	2,007	2,834	3,289	3,372	3,073	2,769	2,118	2,423	2,909

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2010	Feb. 2010	Mar. 2010	Apr. 2010	May. 2010	Jun. 2010	Jul. 2010	Aug. 2010	Sep. 2010	Oct. 2010	Nov. 2010	Dec. 2010
Residential	833	746	636	493	468	542	634	630	513	515	649	831
Commercial	522	503	482	431	452	506	545	547	484	467	483	526
Irrigation	0	0	4	106	291	539	614	475	299	80	3	2
Industrial	301	296	290	293	290	304	304	306	321	322	316	301
Additional Firm	142	142	138	135	133	126	138	136	132	133	140	142
Loss	159	149	136	164	189	201	225	209	171	145	153	176
Firm Load	1,957	1,836	1,685	1,623	1,823	2,217	2,459	2,302	1,920	1,664	1,742	1,977
Light Load	1,809	1,712	1,559	1,463	1,636	2,005	2,203	2,061	1,714	1,490	1,619	1,835
Heavy Load	2,084	1,929	1,776	1,741	1,983	2,373	2,643	2,492	2,085	1,800	1,841	2,089
System Load	1,957	1,836	1,685	1,623	1,823	2,217	2,459	2,302	1,920	1,664	1,742	1,977
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,957	1,836	1,685	1,623	1,823	2,217	2,459	2,302	1,920	1,664	1,742	1,977

Peak Load (Megawatts)

	Jan. 2010	Feb. 2010	Mar. 2010	Apr. 2010	May. 2010	Jun. 2010	Jul. 2010	Aug. 2010	Sep. 2010	Oct. 2010	Nov. 2010	Dec. 2010
Energy Efficiency (MW)	-10	-9	-9	-10	-20	-30	-32	-28	-21	-15	-11	-10
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,634	2,526	2,450	2,032	2,891	3,348	3,442	3,140	2,823	2,149	2,457	2,948
System Peak (1 Hour)	2,634	2,526	2,450	2,032	2,891	3,348	3,442	3,140	2,823	2,149	2,457	2,948
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,634	2,526	2,450	2,032	2,891	3,348	3,442	3,140	2,823	2,149	2,457	2,948

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2011	Feb. 2011	Mar. 2011	Apr. 2011	May. 2011	Jun. 2011	Jul. 2011	Aug. 2011	Sep. 2011	Oct. 2011	Nov. 2011	Dec. 2011
Residential	839	750	640	496	472	552	647	644	521	521	655	836
Commercial	531	512	492	440	462	518	559	560	495	477	491	534
Irrigation	0	0	4	106	290	536	612	472	298	79	2	2
Industrial	307	302	295	299	296	310	309	312	327	328	322	307
Additional Firm	143	143	140	137	134	128	140	137	134	136	141	144
Loss	161	150	137	166	191	204	228	212	173	147	155	178
Firm Load	1,981	1,860	1,709	1,645	1,845	2,246	2,494	2,337	1,949	1,689	1,766	2,000
Light Load	1,832	1,734	1,581	1,482	1,657	2,031	2,235	2,093	1,740	1,513	1,641	1,856
Heavy Load	2,110	1,954	1,801	1,764	2,008	2,404	2,717	2,514	2,116	1,827	1,866	2,103
System Load	1,981	1,860	1,709	1,645	1,845	2,246	2,494	2,337	1,949	1,689	1,766	2,000
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,981	1,860	1,709	1,645	1,845	2,246	2,494	2,337	1,949	1,689	1,766	2,000

Peak Load (Megawatts)

	Jan. 2011	Feb. 2011	Mar. 2011	Apr. 2011	May. 2011	Jun. 2011	Jul. 2011	Aug. 2011	Sep. 2011	Oct. 2011	Nov. 2011	Dec. 2011
Energy Efficiency (MW)	-11	-11	-11	-12	-23	-35	-37	-33	-25	-18	-13	-11
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,659	2,545	2,475	2,049	2,945	3,396	3,506	3,173	2,877	2,172	2,481	2,918
System Peak (1 Hour)	2,659	2,545	2,475	2,049	2,945	3,396	3,506	3,173	2,877	2,172	2,481	2,918
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,659	2,545	2,475	2,049	2,945	3,396	3,506	3,173	2,877	2,172	2,481	2,918

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2012	Feb. 2012	Mar. 2012	Apr. 2012	May. 2012	Jun. 2012	Jul. 2012	Aug. 2012	Sep. 2012	Oct. 2012	Nov. 2012	Dec. 2012
Residential	841	752	642	497	474	558	658	654	527	524	658	844
Commercial	539	521	501	449	472	530	572	572	506	486	500	544
Irrigation	0	0	4	106	289	535	611	472	297	78	2	2
Industrial	313	308	302	305	302	316	316	319	334	335	329	313
Additional Firm	145	144	141	139	136	129	142	139	136	138	144	145
Loss	163	152	139	168	193	207	231	215	176	149	156	180
Firm Load	2,002	1,877	1,729	1,664	1,867	2,275	2,529	2,371	1,976	1,711	1,788	2,029
Light Load	1,850	1,750	1,600	1,499	1,676	2,057	2,266	2,123	1,764	1,533	1,661	1,883
Heavy Load	2,121	1,971	1,823	1,796	2,017	2,435	2,754	2,550	2,161	1,840	1,889	2,154
System Load	2,002	1,877	1,729	1,664	1,867	2,275	2,529	2,371	1,976	1,711	1,788	2,029
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,002	1,877	1,729	1,664	1,867	2,275	2,529	2,371	1,976	1,711	1,788	2,029

Peak Load (Megawatts)

	Jan. 2012	Feb. 2012	Mar. 2012	Apr. 2012	May. 2012	Jun. 2012	Jul. 2012	Aug. 2012	Sep. 2012	Oct. 2012	Nov. 2012	Dec. 2012
Energy Efficiency (MW)	-13	-13	-12	-13	-27	-41	-43	-38	-28	-21	-14	-13
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,664	2,560	2,472	2,037	2,999	3,458	3,570	3,234	2,931	2,193	2,503	2,963
System Peak (1 Hour)	2,664	2,560	2,472	2,037	2,999	3,458	3,570	3,234	2,931	2,193	2,503	2,963
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,664	2,560	2,472	2,037	2,999	3,458	3,570	3,234	2,931	2,193	2,503	2,963

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2013	Feb. 2013	Mar. 2013	Apr. 2013	May. 2013	Jun. 2013	Jul. 2013	Aug. 2013	Sep. 2013	Oct. 2013	Nov. 2013	Dec. 2013
Residential	853	762	651	503	482	572	676	672	540	533	668	857
Commercial	551	533	514	461	484	546	589	589	520	499	511	555
Irrigation	0	0	4	106	289	534	610	471	297	78	2	2
Industrial	320	315	308	312	309	323	323	325	341	342	336	320
Additional Firm	147	147	143	140	137	131	143	141	137	139	146	147
Loss	165	155	142	171	197	211	236	220	179	152	159	184
Firm Load	2,037	1,913	1,762	1,693	1,898	2,315	2,577	2,418	2,014	1,745	1,821	2,064
Light Load	1,883	1,783	1,630	1,526	1,704	2,093	2,309	2,165	1,798	1,563	1,692	1,916
Heavy Load	2,158	2,010	1,866	1,816	2,051	2,493	2,787	2,601	2,203	1,876	1,924	2,192
System Load	2,037	1,913	1,762	1,693	1,898	2,315	2,577	2,418	2,014	1,745	1,821	2,064
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,037	1,913	1,762	1,693	1,898	2,315	2,577	2,418	2,014	1,745	1,821	2,064

Peak Load (Megawatts)

	Jan. 2013	Feb. 2013	Mar. 2013	Apr. 2013	May. 2013	Jun. 2013	Jul. 2013	Aug. 2013	Sep. 2013	Oct. 2013	Nov. 2013	Dec. 2013
Energy Efficiency (MW)	-15	-14	-14	-15	-30	-45	-48	-43	-32	-23	-16	-15
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,702	2,578	2,511	2,064	3,056	3,529	3,647	3,304	2,984	2,224	2,537	3,016
System Peak (1 Hour)	2,702	2,578	2,511	2,064	3,056	3,529	3,647	3,304	2,984	2,224	2,537	3,016
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,702	2,578	2,511	2,064	3,056	3,529	3,647	3,304	2,984	2,224	2,537	3,016

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2014	Feb. 2014	Mar. 2014	Apr. 2014	May. 2014	Jun. 2014	Jul. 2014	Aug. 2014	Sep. 2014	Oct. 2014	Nov. 2014	Dec. 2014
Residential	864	772	659	509	490	585	695	690	552	542	678	869
Commercial	563	545	527	473	497	561	606	605	534	512	522	566
Irrigation	0	0	4	106	288	533	609	470	297	78	2	2
Industrial	327	321	314	318	315	329	329	332	348	349	343	326
Additional Firm	149	150	144	142	139	133	145	144	139	142	147	149
Loss	168	157	144	174	200	214	240	224	183	155	162	187
Firm Load	2,071	1,945	1,794	1,722	1,929	2,356	2,624	2,465	2,053	1,778	1,854	2,098
Light Load	1,915	1,814	1,660	1,552	1,732	2,130	2,352	2,207	1,832	1,593	1,723	1,948
Heavy Load	2,194	2,044	1,900	1,846	2,085	2,536	2,839	2,669	2,229	1,912	1,969	2,217
System Load	2,071	1,945	1,794	1,722	1,929	2,356	2,624	2,465	2,053	1,778	1,854	2,098
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,071	1,945	1,794	1,722	1,929	2,356	2,624	2,465	2,053	1,778	1,854	2,098

Peak Load (Megawatts)

	Jan. 2014	Feb. 2014	Mar. 2014	Apr. 2014	May. 2014	Jun. 2014	Jul. 2014	Aug. 2014	Sep. 2014	Oct. 2014	Nov. 2014	Dec. 2014
Energy Efficiency (MW)	-17	-16	-15	-17	-34	-50	-54	-47	-35	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,738	2,605	2,550	2,089	3,113	3,599	3,723	3,375	3,038	2,255	2,570	3,068
System Peak (1 Hour)	2,738	2,605	2,550	2,089	3,113	3,599	3,723	3,375	3,038	2,255	2,570	3,068
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,738	2,605	2,550	2,089	3,113	3,599	3,723	3,375	3,038	2,255	2,570	3,068

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2015	Feb. 2015	Mar. 2015	Apr. 2015	May. 2015	Jun. 2015	Jul. 2015	Aug. 2015	Sep. 2015	Oct. 2015	Nov. 2015	Dec. 2015
Residential	875	781	667	515	497	598	713	709	564	551	688	880
Commercial	575	557	540	484	510	577	624	622	548	524	534	578
Irrigation	0	0	4	106	288	534	610	471	297	78	2	2
Industrial	334	329	322	326	323	337	337	340	356	358	351	334
Additional Firm	151	152	147	144	141	134	147	145	141	144	149	150
Loss	171	160	147	177	203	218	245	229	186	158	165	190
Firm Load	2,106	1,979	1,827	1,752	1,963	2,399	2,676	2,516	2,093	1,813	1,888	2,134
Light Load	1,947	1,845	1,690	1,578	1,762	2,169	2,398	2,252	1,869	1,624	1,754	1,981
Heavy Load	2,232	2,079	1,934	1,878	2,135	2,567	2,895	2,723	2,272	1,949	2,005	2,255
System Load	2,106	1,979	1,827	1,752	1,963	2,399	2,676	2,516	2,093	1,813	1,888	2,134
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,106	1,979	1,827	1,752	1,963	2,399	2,676	2,516	2,093	1,813	1,888	2,134

Peak Load (Megawatts)

	Jan. 2015	Feb. 2015	Mar. 2015	Apr. 2015	May. 2015	Jun. 2015	Jul. 2015	Aug. 2015	Sep. 2015	Oct. 2015	Nov. 2015	Dec. 2015
Energy Efficiency (MW)	-17	-16	-15	-17	-34	-51	-54	-47	-35	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,776	2,634	2,589	2,117	3,174	3,674	3,805	3,450	3,096	2,289	2,605	3,121
System Peak (1 Hour)	2,776	2,634	2,589	2,117	3,174	3,674	3,805	3,450	3,096	2,289	2,605	3,121
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,776	2,634	2,589	2,117	3,174	3,674	3,805	3,450	3,096	2,289	2,605	3,121

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2016	Feb. 2016	Mar. 2016	Apr. 2016	May. 2016	Jun. 2016	Jul. 2016	Aug. 2016	Sep. 2016	Oct. 2016	Nov. 2016	Dec. 2016
Residential	886	791	675	520	504	612	732	727	576	560	697	892
Commercial	586	569	553	496	523	593	641	639	563	537	545	589
Irrigation	0	0	4	106	289	535	611	472	297	78	2	2
Industrial	342	336	329	333	330	345	345	348	364	366	359	342
Additional Firm	153	151	149	146	144	136	150	147	143	146	151	152
Loss	174	163	150	180	207	222	250	233	190	161	168	193
Firm Load	2,141	2,010	1,860	1,782	1,996	2,443	2,728	2,566	2,134	1,848	1,922	2,170
Light Load	1,980	1,874	1,721	1,606	1,792	2,208	2,445	2,298	1,905	1,655	1,785	2,014
Heavy Load	2,281	2,111	1,960	1,911	2,172	2,614	2,972	2,760	2,317	2,000	2,031	2,283
System Load	2,141	2,010	1,860	1,782	1,996	2,443	2,728	2,566	2,134	1,848	1,922	2,170
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,141	2,010	1,860	1,782	1,996	2,443	2,728	2,566	2,134	1,848	1,922	2,170

Peak Load (Megawatts)

	Jan. 2016	Feb. 2016	Mar. 2016	Apr. 2016	May. 2016	Jun. 2016	Jul. 2016	Aug. 2016	Sep. 2016	Oct. 2016	Nov. 2016	Dec. 2016
Energy Efficiency (MW)	-17	-16	-16	-17	-34	-51	-54	-48	-36	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,814	2,661	2,629	2,144	3,234	3,750	3,888	3,525	3,154	2,322	2,640	3,175
System Peak (1 Hour)	2,814	2,661	2,629	2,144	3,234	3,750	3,888	3,525	3,154	2,322	2,640	3,175
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,814	2,661	2,629	2,144	3,234	3,750	3,888	3,525	3,154	2,322	2,640	3,175

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2017	Feb. 2017	Mar. 2017	Apr. 2017	May. 2017	Jun. 2017	Jul. 2017	Aug. 2017	Sep. 2017	Oct. 2017	Nov. 2017	Dec. 2017
Residential	897	800	684	526	512	626	752	747	589	570	707	904
Commercial	599	582	566	508	536	609	659	657	577	550	556	601
Irrigation	0	0	4	106	289	535	612	473	298	78	2	2
Industrial	350	344	336	341	337	353	353	356	373	374	367	349
Additional Firm	154	155	151	147	145	138	152	149	145	147	153	155
Loss	177	165	152	183	210	226	254	238	194	164	171	196
Firm Load	2,177	2,046	1,893	1,812	2,030	2,487	2,781	2,618	2,176	1,884	1,956	2,207
Light Load	2,013	1,908	1,752	1,633	1,822	2,249	2,493	2,344	1,942	1,687	1,817	2,048
Heavy Load	2,307	2,150	1,996	1,956	2,194	2,662	3,030	2,816	2,362	2,038	2,067	2,343
System Load	2,177	2,046	1,893	1,812	2,030	2,487	2,781	2,618	2,176	1,884	1,956	2,207
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,177	2,046	1,893	1,812	2,030	2,487	2,781	2,618	2,176	1,884	1,956	2,207

Peak Load (Megawatts)

	Jan. 2017	Feb. 2017	Mar. 2017	Apr. 2017	May. 2017	Jun. 2017	Jul. 2017	Aug. 2017	Sep. 2017	Oct. 2017	Nov. 2017	Dec. 2017
Energy Efficiency (MW)	-17	-16	-16	-17	-34	-51	-54	-48	-36	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,853	2,692	2,669	2,172	3,295	3,826	3,972	3,602	3,211	2,357	2,675	3,230
System Peak (1 Hour)	2,853	2,692	2,669	2,172	3,295	3,826	3,972	3,602	3,211	2,357	2,675	3,230
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,853	2,692	2,669	2,172	3,295	3,826	3,972	3,602	3,211	2,357	2,675	3,230

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2018	Feb. 2018	Mar. 2018	Apr. 2018	May. 2018	Jun. 2018	Jul. 2018	Aug. 2018	Sep. 2018	Oct. 2018	Nov. 2018	Dec. 2018
Residential	909	810	692	532	520	640	772	766	602	579	717	917
Commercial	611	594	580	521	550	626	678	675	592	563	568	612
Irrigation	0	0	4	106	290	536	613	473	298	78	2	2
Industrial	358	352	344	349	345	361	361	364	381	383	375	357
Additional Firm	156	157	152	149	148	140	153	151	146	149	155	157
Loss	180	168	155	186	214	230	259	243	197	168	174	199
Firm Load	2,214	2,081	1,928	1,844	2,065	2,533	2,836	2,672	2,219	1,920	1,991	2,244
Light Load	2,047	1,941	1,784	1,661	1,854	2,290	2,542	2,392	1,981	1,720	1,850	2,083
Heavy Load	2,346	2,187	2,032	1,990	2,232	2,711	3,089	2,874	2,427	2,065	2,104	2,383
System Load	2,214	2,081	1,928	1,844	2,065	2,533	2,836	2,672	2,219	1,920	1,991	2,244
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,214	2,081	1,928	1,844	2,065	2,533	2,836	2,672	2,219	1,920	1,991	2,244

Peak Load (Megawatts)

	Jan. 2018	Feb. 2018	Mar. 2018	Apr. 2018	May. 2018	Jun. 2018	Jul. 2018	Aug. 2018	Sep. 2018	Oct. 2018	Nov. 2018	Dec. 2018
Energy Efficiency (MW)	-17	-16	-16	-17	-34	-51	-54	-48	-35	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,893	2,722	2,711	2,201	3,356	3,903	4,058	3,679	3,269	2,392	2,712	3,287
System Peak (1 Hour)	2,893	2,722	2,711	2,201	3,356	3,903	4,058	3,679	3,269	2,392	2,712	3,287
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,893	2,722	2,711	2,201	3,356	3,903	4,058	3,679	3,269	2,392	2,712	3,287

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2019	Feb. 2019	Mar. 2019	Apr. 2019	May. 2019	Jun. 2019	Jul. 2019	Aug. 2019	Sep. 2019	Oct. 2019	Nov. 2019	Dec. 2019
Residential	921	820	701	538	527	654	793	787	615	589	728	929
Commercial	623	607	594	534	564	643	697	693	608	577	580	624
Irrigation	0	0	4	106	290	537	614	474	299	78	2	2
Industrial	366	360	352	356	353	369	369	372	390	392	384	366
Additional Firm	158	159	154	151	150	142	155	154	148	151	156	158
Loss	183	171	158	189	217	235	265	248	201	171	177	203
Firm Load	2,251	2,117	1,963	1,876	2,101	2,580	2,892	2,726	2,262	1,957	2,027	2,282
Light Load	2,081	1,974	1,816	1,690	1,886	2,333	2,592	2,441	2,020	1,753	1,884	2,118
Heavy Load	2,385	2,224	2,079	2,011	2,270	2,778	3,129	2,932	2,474	2,105	2,142	2,423
System Load	2,251	2,117	1,963	1,876	2,101	2,580	2,892	2,726	2,262	1,957	2,027	2,282
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,251	2,117	1,963	1,876	2,101	2,580	2,892	2,726	2,262	1,957	2,027	2,282

Peak Load (Megawatts)

	Jan. 2019	Feb. 2019	Mar. 2019	Apr. 2019	May. 2019	Jun. 2019	Jul. 2019	Aug. 2019	Sep. 2019	Oct. 2019	Nov. 2019	Dec. 2019
Energy Efficiency (MW)	-17	-16	-15	-17	-34	-51	-54	-48	-35	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,933	2,752	2,753	2,229	3,417	3,981	4,144	3,758	3,327	2,428	2,749	3,343
System Peak (1 Hour)	2,933	2,752	2,753	2,229	3,417	3,981	4,144	3,758	3,327	2,428	2,749	3,343
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,933	2,752	2,753	2,229	3,417	3,981	4,144	3,758	3,327	2,428	2,749	3,343

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2020	Feb. 2020	Mar. 2020	Apr. 2020	May. 2020	Jun. 2020	Jul. 2020	Aug. 2020	Sep. 2020	Oct. 2020	Nov. 2020	Dec. 2020
Residential	932	830	710	544	535	669	814	807	629	599	738	942
Commercial	636	620	608	547	578	661	717	712	624	591	592	636
Irrigation	0	0	4	106	290	538	615	475	299	78	2	2
Industrial	374	368	360	365	361	378	377	381	399	401	393	374
Additional Firm	159	158	156	152	152	144	157	155	150	153	158	160
Loss	186	174	161	193	221	239	270	253	205	174	180	206
Firm Load	2,288	2,150	1,998	1,908	2,137	2,628	2,949	2,782	2,306	1,995	2,063	2,320
Light Load	2,115	2,005	1,849	1,719	1,918	2,376	2,643	2,491	2,059	1,787	1,917	2,153
Heavy Load	2,425	2,258	2,116	2,046	2,325	2,812	3,190	3,011	2,504	2,145	2,191	2,452
System Load	2,288	2,150	1,998	1,908	2,137	2,628	2,949	2,782	2,306	1,995	2,063	2,320
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,288	2,150	1,998	1,908	2,137	2,628	2,949	2,782	2,306	1,995	2,063	2,320

Peak Load (Megawatts)

	Jan. 2020	Feb. 2020	Mar. 2020	Apr. 2020	May. 2020	Jun. 2020	Jul. 2020	Aug. 2020	Sep. 2020	Oct. 2020	Nov. 2020	Dec. 2020
Energy Efficiency (MW)	-17	-16	-15	-17	-34	-51	-54	-47	-35	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	2,973	2,781	2,796	2,258	3,479	4,059	4,231	3,837	3,384	2,464	2,786	3,400
System Peak (1 Hour)	2,973	2,781	2,796	2,258	3,479	4,059	4,231	3,837	3,384	2,464	2,786	3,400
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,973	2,781	2,796	2,258	3,479	4,059	4,231	3,837	3,384	2,464	2,786	3,400

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2021	Feb. 2021	Mar. 2021	Apr. 2021	May. 2021	Jun. 2021	Jul. 2021	Aug. 2021	Sep. 2021	Oct. 2021	Nov. 2021	Dec. 2021
Residential	945	840	718	550	544	685	836	829	643	609	749	956
Commercial	649	633	622	560	593	679	737	731	640	605	605	648
Irrigation	0	0	4	107	291	538	616	475	299	78	2	2
Industrial	383	377	368	373	370	386	386	389	408	410	401	382
Additional Firm	161	162	157	154	153	146	159	157	151	154	160	162
Loss	189	177	164	196	225	243	275	258	209	178	184	210
Firm Load	2,327	2,189	2,034	1,941	2,174	2,677	3,007	2,839	2,352	2,034	2,101	2,360
Light Load	2,151	2,041	1,882	1,748	1,951	2,420	2,695	2,542	2,100	1,822	1,952	2,190
Heavy Load	2,478	2,300	2,144	2,081	2,365	2,864	3,233	3,073	2,554	2,201	2,220	2,493
System Load	2,327	2,189	2,034	1,941	2,174	2,677	3,007	2,839	2,352	2,034	2,101	2,360
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,327	2,189	2,034	1,941	2,174	2,677	3,007	2,839	2,352	2,034	2,101	2,360

Peak Load (Megawatts)

	Jan. 2021	Feb. 2021	Mar. 2021	Apr. 2021	May. 2021	Jun. 2021	Jul. 2021	Aug. 2021	Sep. 2021	Oct. 2021	Nov. 2021	Dec. 2021
Energy Efficiency (MW)	-17	-16	-16	-17	-34	-51	-54	-47	-36	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	3,015	2,813	2,839	2,288	3,540	4,138	4,321	3,917	3,442	2,501	2,824	3,458
System Peak (1 Hour)	3,015	2,813	2,839	2,288	3,540	4,138	4,321	3,917	3,442	2,501	2,824	3,458
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	3,015	2,813	2,839	2,288	3,540	4,138	4,321	3,917	3,442	2,501	2,824	3,458

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2022	Feb. 2022	Mar. 2022	Apr. 2022	May. 2022	Jun. 2022	Jul. 2022	Aug. 2022	Sep. 2022	Oct. 2022	Nov. 2022	Dec. 2022
Residential	957	851	728	557	552	700	858	851	658	619	760	969
Commercial	662	647	637	574	608	698	758	751	656	620	617	661
Irrigation	0	0	4	107	291	539	617	476	300	79	2	2
Industrial	392	385	377	382	378	395	395	398	417	419	411	391
Additional Firm	162	163	159	156	155	147	160	159	154	156	161	163
Loss	192	180	167	199	229	248	281	264	214	181	187	213
Firm Load	2,366	2,226	2,072	1,974	2,211	2,727	3,068	2,897	2,399	2,074	2,139	2,399
Light Load	2,187	2,076	1,917	1,779	1,985	2,465	2,749	2,594	2,142	1,857	1,987	2,227
Heavy Load	2,520	2,339	2,183	2,117	2,406	2,918	3,341	3,116	2,604	2,244	2,260	2,524
System Load	2,366	2,226	2,072	1,974	2,211	2,727	3,068	2,897	2,399	2,074	2,139	2,399
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,366	2,226	2,072	1,974	2,211	2,727	3,068	2,897	2,399	2,074	2,139	2,399

Peak Load (Megawatts)

	Jan. 2022	Feb. 2022	Mar. 2022	Apr. 2022	May. 2022	Jun. 2022	Jul. 2022	Aug. 2022	Sep. 2022	Oct. 2022	Nov. 2022	Dec. 2022
Energy Efficiency (MW)	-17	-16	-16	-17	-34	-51	-54	-48	-36	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	3,057	2,845	2,884	2,318	3,602	4,218	4,411	3,998	3,499	2,539	2,863	3,517
System Peak (1 Hour)	3,057	2,845	2,884	2,318	3,602	4,218	4,411	3,998	3,499	2,539	2,863	3,517
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	3,057	2,845	2,884	2,318	3,602	4,218	4,411	3,998	3,499	2,539	2,863	3,517

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023
Residential	970	861	737	563	561	716	881	874	673	630	771	983
Commercial	675	660	652	588	623	717	779	771	673	635	630	673
Irrigation	0	0	4	107	291	540	617	477	300	79	2	2
Industrial	401	394	385	390	386	404	404	407	427	429	420	400
Additional Firm	165	166	160	158	156	149	162	160	155	157	164	165
Loss	195	183	170	203	233	252	286	269	218	185	190	217
Firm Load	2,406	2,264	2,109	2,008	2,250	2,778	3,129	2,957	2,446	2,114	2,177	2,440
Light Load	2,224	2,111	1,951	1,810	2,019	2,512	2,804	2,648	2,184	1,893	2,023	2,264
Heavy Load	2,549	2,379	2,223	2,167	2,431	2,973	3,408	3,180	2,656	2,287	2,300	2,590
System Load	2,406	2,264	2,109	2,008	2,250	2,778	3,129	2,957	2,446	2,114	2,177	2,440
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,406	2,264	2,109	2,008	2,250	2,778	3,129	2,957	2,446	2,114	2,177	2,440

Peak Load (Megawatts)

	Jan. 2023	Feb. 2023	Mar. 2023	Apr. 2023	May. 2023	Jun. 2023	Jul. 2023	Aug. 2023	Sep. 2023	Oct. 2023	Nov. 2023	Dec. 2023
Energy Efficiency (MW)	-17	-16	-16	-17	-34	-51	-54	-48	-36	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	3,100	2,877	2,929	2,349	3,664	4,298	4,503	4,080	3,557	2,578	2,903	3,576
System Peak (1 Hour)	3,100	2,877	2,929	2,349	3,664	4,298	4,503	4,080	3,557	2,578	2,903	3,576
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	3,100	2,877	2,929	2,349	3,664	4,298	4,503	4,080	3,557	2,578	2,903	3,576

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2024	Feb. 2024	Mar. 2024	Apr. 2024	May. 2024	Jun. 2024	Jul. 2024	Aug. 2024	Sep. 2024	Oct. 2024	Nov. 2024	Dec. 2024
Residential	982	872	746	569	569	733	905	897	688	640	783	996
Commercial	688	674	667	602	639	736	800	792	690	650	643	686
Irrigation	0	0	4	107	292	541	618	477	301	79	2	2
Industrial	410	403	394	399	395	413	413	417	437	438	430	409
Additional Firm	166	164	162	159	158	150	163	162	157	159	165	166
Loss	199	186	173	206	236	257	292	275	222	188	194	220
Firm Load	2,445	2,300	2,147	2,043	2,288	2,830	3,191	3,018	2,494	2,154	2,216	2,480
Light Load	2,261	2,144	1,987	1,841	2,054	2,559	2,859	2,702	2,227	1,930	2,059	2,302
Heavy Load	2,591	2,415	2,274	2,190	2,473	3,047	3,452	3,246	2,729	2,316	2,341	2,633
System Load	2,445	2,300	2,147	2,043	2,288	2,830	3,191	3,018	2,494	2,154	2,216	2,480
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,445	2,300	2,147	2,043	2,288	2,830	3,191	3,018	2,494	2,154	2,216	2,480

Peak Load (Megawatts)

	Jan. 2024	Feb. 2024	Mar. 2024	Apr. 2024	May. 2024	Jun. 2024	Jul. 2024	Aug. 2024	Sep. 2024	Oct. 2024	Nov. 2024	Dec. 2024
Energy Efficiency (MW)	-16	-16	-15	-17	-34	-51	-54	-48	-35	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	3,142	2,908	2,975	2,379	3,726	4,379	4,595	4,162	3,615	2,617	2,943	3,636
System Peak (1 Hour)	3,142	2,908	2,975	2,379	3,726	4,379	4,595	4,162	3,615	2,617	2,943	3,636
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	3,142	2,908	2,975	2,379	3,726	4,379	4,595	4,162	3,615	2,617	2,943	3,636

70th Percentile Sales and Load Forecast

Average Load (Average Megawatts)

	Jan. 2025	Feb. 2025	Mar. 2025	Apr. 2025	May. 2025	Jun. 2025	Jul. 2025	Aug. 2025	Sep. 2025	Oct. 2025	Nov. 2025	Dec. 2025
Residential	995	883	756	576	578	750	929	920	703	651	794	1,010
Commercial	702	688	683	616	654	756	822	812	708	665	656	698
Irrigation	0	0	4	107	292	541	619	478	301	79	2	2
Industrial	419	412	403	408	404	423	422	426	447	448	440	419
Additional Firm	168	169	163	161	159	152	165	163	158	160	167	168
Loss	202	189	176	210	240	262	298	280	227	192	197	224
Firm Load	2,486	2,341	2,186	2,078	2,328	2,883	3,254	3,079	2,543	2,196	2,255	2,521
Light Load	2,298	2,182	2,022	1,872	2,090	2,606	2,916	2,757	2,271	1,967	2,095	2,340
Heavy Load	2,634	2,459	2,314	2,228	2,515	3,104	3,521	3,333	2,762	2,361	2,395	2,664
System Load	2,486	2,341	2,186	2,078	2,328	2,883	3,254	3,079	2,543	2,196	2,255	2,521
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,486	2,341	2,186	2,078	2,328	2,883	3,254	3,079	2,543	2,196	2,255	2,521

Peak Load (Megawatts)

	Jan. 2025	Feb. 2025	Mar. 2025	Apr. 2025	May. 2025	Jun. 2025	Jul. 2025	Aug. 2025	Sep. 2025	Oct. 2025	Nov. 2025	Dec. 2025
Energy Efficiency (MW)	-17	-16	-15	-17	-34	-50	-54	-47	-35	-26	-18	-16
Demand Response (MW)	0	0	0	0	0	-80	-78	-71	0	0	0	0
Firm Peak Load	3,185	2,942	3,021	2,410	3,788	4,461	4,689	4,246	3,672	2,656	2,983	3,696
System Peak (1 Hour)	3,185	2,942	3,021	2,410	3,788	4,461	4,689	4,246	3,672	2,656	2,983	3,696
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	3,185	2,942	3,021	2,410	3,788	4,461	4,689	4,246	3,672	2,656	2,983	3,696

70th Percentile Sales and Load Forecast Annual Summary

Billed Sales (Megawatt-hours)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Residential	4,998,197	5,167,721	5,273,003	5,364,603	5,464,619	5,525,263	5,561,958	5,665,098	5,763,903	5,862,138
Commercial	3,841,226	3,979,546	4,103,786	4,221,377	4,338,345	4,429,590	4,516,234	4,634,665	4,750,970	4,867,680
Irrigation	1,788,305	1,784,413	1,778,302	1,774,653	1,771,697	1,762,943	1,760,293	1,757,644	1,754,982	1,757,530
Industrial	2,422,952	2,485,427	2,537,510	2,596,445	2,656,152	2,708,334	2,765,435	2,823,076	2,881,748	2,949,296
Additional Firm	1,182,934	1,143,360	1,162,503	1,177,194	1,194,104	1,210,114	1,227,715	1,240,656	1,257,431	1,274,235
Firm Sales	14,233,615	14,560,466	14,855,104	15,134,273	15,424,917	15,636,244	15,831,635	16,121,137	16,409,035	16,710,880
System Sales	14,233,615	14,560,466	14,855,104	15,134,273	15,424,917	15,636,244	15,831,635	16,121,137	16,409,035	16,710,880
Firm Off-System Sales	0	0	0	0	0	0	0	0	0	0
Total Sales	14,233,615	14,560,466	14,855,104	15,134,273	15,424,917	15,636,244	15,831,635	16,121,137	16,409,035	16,710,880

Generation Month Sales (Megawatt-hours)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Residential	5,008,756	5,173,895	5,295,628	5,370,326	5,467,617	5,526,613	5,585,838	5,670,580	5,769,186	5,867,442
Commercial	3,847,698	3,985,286	4,120,615	4,226,640	4,342,236	4,433,210	4,533,961	4,639,717	4,755,936	4,872,680
Irrigation	1,788,324	1,784,413	1,778,308	1,774,655	1,771,695	1,762,944	1,760,299	1,757,645	1,754,984	1,757,531
Industrial	2,425,530	2,488,836	2,548,189	2,600,283	2,659,566	2,712,026	2,776,742	2,826,856	2,885,549	2,953,105
Additional Firm	1,182,934	1,143,360	1,162,503	1,177,194	1,194,104	1,210,114	1,227,715	1,240,656	1,257,431	1,274,235
Firm Sales	14,253,242	14,575,789	14,905,243	15,149,098	15,435,220	15,644,906	15,884,555	16,135,452	16,423,086	16,724,994
System Sales	14,253,242	14,575,789	14,905,243	15,149,098	15,435,220	15,644,906	15,884,555	16,135,452	16,423,086	16,724,994
Firm Off-System Sales	0	0	0	0	0	0	0	0	0	0
Total Sales	14,253,242	14,575,789	14,905,243	15,149,098	15,435,220	15,644,906	15,884,555	16,135,452	16,423,086	16,724,994
Loss	1,396,358	1,431,623	1,464,372	1,489,006	1,517,378	1,537,731	1,560,455	1,585,976	1,614,586	1,644,050
Required Generation	15,649,599	16,007,412	16,369,615	16,638,104	16,952,598	17,182,637	17,445,010	17,721,429	18,037,673	18,369,045

Average Load (Average Megawatts)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Residential	572	591	603	613	624	631	636	647	659	670
Commercial	439	455	469	482	496	506	516	530	543	556
Irrigation	204	204	202	203	202	201	200	201	200	201
Industrial	277	284	290	297	304	310	316	323	329	337
Additional Firm	135	130	133	134	137	139	140	142	144	146
Loss	159	163	167	170	173	176	178	181	184	188
Firm Load	1,786	1,827	1,864	1,899	1,935	1,961	1,986	2,023	2,059	2,097
Light Load	1,625	1,662	1,695	1,727	1,760	1,784	1,806	1,840	1,872	1,907
Heavy Load	1,914	1,958	1,996	2,034	2,072	2,100	2,127	2,167	2,205	2,246
System Load	1,786	1,827	1,864	1,899	1,935	1,961	1,986	2,023	2,059	2,097
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0
Total Load	1,786	1,827	1,864	1,899	1,935	1,961	1,986	2,023	2,059	2,097

Peak Load (Megawatts)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Energy Efficiency (MW)	-8	-14	-20	-26	-32	-37	-43	-48	-54	-54
Demand Response (MW)	-37	-46	-59	-73	-78	-78	-78	-78	-78	-78
Firm Peak Load	3,163	3,251	3,312	3,372	3,442	3,506	3,570	3,647	3,723	3,805
System Peak (1 Hour)	3,163	3,251	3,312	3,372	3,442	3,506	3,570	3,647	3,723	3,805
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0
Total Peak Load	3,163	3,251	3,312	3,372	3,442	3,506	3,570	3,647	3,723	3,805

70th Percentile Sales and Load Forecast Annual Summary

Billed Sales (Megawatt-hours)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Residential	5,961,354	6,063,348	6,168,444	6,274,528	6,382,438	6,494,082	6,609,379	6,725,979	6,843,410	6,963,033
Commercial	4,986,002	5,107,332	5,231,854	5,358,132	5,486,963	5,619,179	5,755,039	5,892,744	6,031,827	6,172,410
Irrigation	1,759,999	1,762,512	1,764,992	1,767,421	1,769,836	1,772,211	1,774,580	1,776,882	1,779,178	1,781,428
Industrial	3,016,981	3,086,155	3,156,872	3,229,166	3,303,072	3,378,626	3,455,865	3,534,826	3,615,548	3,698,070
Additional Firm	1,293,573	1,306,995	1,322,898	1,339,087	1,356,188	1,368,805	1,383,131	1,396,756	1,413,077	1,424,582
Firm Sales	17,017,910	17,326,341	17,645,060	17,968,334	18,298,498	18,632,903	18,977,993	19,327,187	19,683,040	20,039,523
System Sales	17,017,910	17,326,341	17,645,060	17,968,334	18,298,498	18,632,903	18,977,993	19,327,187	19,683,040	20,039,523
Firm Off-System Sales	0	0	0	0	0	0	0	0	0	0
Total Sales	17,017,910	17,326,341	17,645,060	17,968,334	18,298,498	18,632,903	18,977,993	19,327,187	19,683,040	20,039,523

Generation Month Sales (Megawatt-hours)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Residential	5,985,795	6,068,954	6,174,068	6,280,223	6,408,266	6,500,162	6,615,491	6,732,091	6,870,558	6,969,319
Commercial	5,004,786	5,112,545	5,237,103	5,363,456	5,507,297	5,624,743	5,760,638	5,898,354	6,053,651	6,178,073
Irrigation	1,760,006	1,762,513	1,764,993	1,767,423	1,769,843	1,772,212	1,774,581	1,776,884	1,779,184	1,781,429
Industrial	3,029,177	3,090,135	3,160,940	3,233,325	3,316,393	3,382,972	3,460,308	3,539,368	3,630,098	3,702,817
Additional Firm	1,293,573	1,306,995	1,322,898	1,339,087	1,356,188	1,368,805	1,383,131	1,396,756	1,413,077	1,424,582
Firm Sales	17,073,337	17,341,140	17,660,002	17,983,513	18,357,987	18,648,895	18,994,149	19,343,454	19,746,568	20,056,220
System Sales	17,073,337	17,341,140	17,660,002	17,983,513	18,357,987	18,648,895	18,994,149	19,343,454	19,746,568	20,056,220
Firm Off-System Sales	0	0	0	0	0	0	0	0	0	0
Total Sales	17,073,337	17,341,140	17,660,002	17,983,513	18,357,987	18,648,895	18,994,149	19,343,454	19,746,568	20,056,220
Loss	1,677,711	1,704,311	1,735,564	1,767,251	1,803,616	1,832,610	1,866,602	1,901,014	1,940,245	1,971,159
Required Generation	18,751,049	19,045,451	19,395,566	19,750,764	20,161,603	20,481,505	20,860,751	21,244,468	21,686,813	22,027,379

Average Load (Average Megawatts)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Residential	681	693	705	717	730	742	755	769	782	796
Commercial	570	584	598	612	627	642	658	673	689	705
Irrigation	200	201	201	202	201	202	203	203	203	203
Industrial	345	353	361	369	378	386	395	404	413	423
Additional Firm	147	149	151	153	155	157	158	160	161	163
Loss	191	195	198	202	205	209	213	217	221	225
Firm Load	2,135	2,174	2,214	2,255	2,295	2,338	2,381	2,425	2,469	2,515
Light Load	1,941	1,977	2,013	2,050	2,087	2,126	2,165	2,205	2,245	2,286
Heavy Load	2,286	2,329	2,372	2,415	2,458	2,503	2,550	2,598	2,644	2,693
System Load	2,135	2,174	2,214	2,255	2,295	2,338	2,381	2,425	2,469	2,515
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0
Total Load	2,135	2,174	2,214	2,255	2,295	2,338	2,381	2,425	2,469	2,515

Peak Load (Megawatts)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Energy Efficiency (MW)	-54	-54	-54	-54	-54	-54	-54	-54	-54	-54
Demand Response (MW)	-78	-78	-78	-78	-78	-78	-78	-78	-78	-78
Firm Peak Load	3,888	3,972	4,058	4,144	4,231	4,321	4,411	4,503	4,595	4,689
System Peak (1 Hour)	3,888	3,972	4,058	4,144	4,231	4,321	4,411	4,503	4,595	4,689
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0
Loss	0	0	0	0	0	0	0	0	0	0
Total Peak Load	3,888	3,972	4,058	4,144	4,231	4,321	4,411	4,503	4,595	4,689

Hydroelectric and Thermal Plant Data

Hydroelectric Power Plants	Nameplate kVA	Nameplate kW	Estimated Non-Coincidental Maximum kW
American Falls	102,600	92,340	112,420
Bliss	86,250	75,000	80,000
Brownlee	650,444	585,400	728,000
Cascade	13,800	12,420	14,000
Clear Lake	3,125	2,500 (1)	2,400
Hells Canyon	435,000	391,500	450,000
Lower Salmon	70,000	60,000	70,000
Malad - Lower	15,500	13,500	15,000
Malad - Upper	9,650	8,270	9,000
Milner	62,890	59,448	59,448
Oxbow	211,112	190,000	220,000
Shoshone Falls	14,900	12,500 (1)	12,500
Strike, C J	90,000	82,800	89,000
Swan Falls	28,600	25,000	25,547
Thousand Springs	11,000	8,800 (1)	8,000
Twin Falls	56,175	52,737	54,300
Upper Salmon "A"	18,000	18,000	20,000
Upper Salmon "B"	18,000	16,500	19,000
Total Hydro	1,897,046	1,706,715	

Thermal, Natural Gas, and Diesel Power Plants	Generator Nameplate Rating Gross kVA	Generator Nameplate Rating Gross kW	Estimated Maximum Dependable Capability (MDC) Net kW
Bridger (IPC Share)	811,053	770,501	706,667
Boardman (IPC Share)	59,000 (2)	56,050 (2)	58,500 (3)
Valmy (IPC Share)	315,000	283,500	260,650
Total Thermal	1,185,053	1,110,051	1,025,817
Bennett Mountain	192,000	172,800	171,900
Evander Andrews (Danskin)	105,882	90,000	100,000
Total Natural Gas	297,882	262,800	271,900
Salmon Diesel	6,880	5,000	5,500
Total IPC Generation	3,386,862	3,084,566	

(1) A power factor rating of 0.8 is assumed on four units (Clear Lake, Unit #2 at Shoshone Falls, and Units #1 and #2 at 1000 Springs) with a total kVA rating of 6,127 kVA on which there is no nameplate kW rating.

(2) The Boardman generator nameplate ratings increased from 59,000 gross kVA to 67,600 gross kVA and from 56,050 gross kW to 64,200 gross kW. This was due to a rotor rewind, addition of H2 coolers, and static exciter.

(3) The HP/IP turbine was upgraded to boost generator output to 58,500 net kW.

Idaho Power Company
Qualifying Facilities
Cogeneration and Small Power Production Projects

Project	Contract On-line Date	Contract End Date	Project	Contract On-line Date	Contract End Date
Hydro Projects					
Barber Dam	Apr-1989	Apr-2024	Lowline Canal	May-1985	Apr-2005
Birch Creek	Nov-1984	Oct-2019	Magic Reservoir	Jun-1989	May-2024
Black Canyon #3	Apr-1984	Apr-2019	Malad River	May-1984	Apr-2019
Blind Canyon	Dec-1994	Dec-2014	Marco Ranches	Aug-1985	Jul-2020
Box Canyon	Feb-1984	Feb-2019	Mile 28	Jun-1994	May-2029
Briggs Creek	Oct-1985	Oct-2020	Mitchell Butte	May-1989	May-2024
Bypass	Jun-1988	Jun-2023	Mora Drop	Oct-2006	Estimated
Canyon Springs	Oct-1984	Non firm	Mud Creek S&S	Feb-1982	Feb-2017
Cedar Draw	Jun-1984	May-2019	Mud Creek White	Jan-1986	Jan-2021
Clear Springs Trout	Nov-1983	Oct-2018	Owyhee Dam CSPP	Aug-1985	Aug-2015
Crystal Springs	Apr-1986	Mar-2021	Pigeon Cove	Oct-1984	Oct-2019
Curry Cattle Company	Jun-1983	Jun-2018	Pristine Springs	May-2005	Apr-2015
Dietrich Drop	Aug-1988	Aug-2023	Pristine Springs #3	May-2005	Apr-2015
Elk Creek	May-1986	May-2021	Reynolds Irrigation	May-1986	May-2021
Falls River	Aug-1993	Aug-2028	Rim View	Nov-2000	Non firm
Faulkner Ranch	Aug-1987	Aug-2022	Rock Creek #1	Sep-1983	Sep-2018
Fisheries Development Co	Jul-1990	Non firm	Rock Creek #2	Apr-1989	Mar-2024
Geo Bon #2	Nov-1986	Nov-2021	Sagebrush	Sep-1985	Aug-2020
Hailey CSPP	Jun-1985	Jun-2020	Sahko Hydro	Jun-2006	Non firm
Hazelton A	Jun-1990	Jun-2010	Schaffner	Aug-1986	Jul-2021
Hazelton B	May-1993	Apr-2028	Shingle Creek	Aug-1983	Jul-2018
Horseshoe Bend Hydroelectric	Sep-1995	Sep-2030	Shoshone #2	May-1996	Apr-2031
Jim Knight	Jun-1985	Jun-2020	Shoshone CSPP	Jun-1982	Jun-2017
Kasel and Witherspoon	Mar-1984	Feb-2019	Snake River Pottery	Nov-1984	Nov-2019
Koyle Small Hydro	Apr-1984	Mar-2019	Snedigar	Jan-1985	Dec-2019
Lateral #10	May-1985	Apr-2020	Sunshine Power #2	Dec-1987	Dec-2022
Lemoyne	Jun-1985	Jun-2020	Tiber Dam	Jun-2004	May-2024
Little Wood Rvr Res	Feb-1985	Feb-2020	Trout–Co	Dec-1986	Nov-2021
Littlewood–Arkoosh	Aug-1986	Jul-2021	Tunnel #1	Jun-1993	May-2028
Low Line Midway Hydro	Mar-2007	Estimated	White Water Ranch	Aug-1985	Jul-2020
Lowline #2	Apr-1988	Apr-2023	Wilson Lake Hydro	May-1993	May-2028
Total Hydro Nameplate MW Rating 141.10					
Thermal Projects					
Magic Valley	Nov-1996	Nov-2016	Simplot Pocatello	Mar-2006	Feb-2016
Magic West	Dec-1996	Nov-2016	TASCO–Nampa	Sep-2003	Aug-2008
			TASCO–Twin Falls	Aug-2001	Aug-2006
Total Thermal Nameplate MW Rating 37.00					
Biomass Projects					
CO-GEN CO	Jan-2006	Jan-2007	Pocatello Waste	Dec-1985	Dec-2020
Emmett Facility	Dec-2007	Estimated	Tamarack CSPP	Jun-1983	May-2018
Hidden Hollow Landfill Gas	Oct-2006	Sep-2026	Treasure Valley digester	May-2007	Estimated
			Vaagen Brothers Lumber Inc	Sep-1995	Aug-2010
Total Biomass Nameplate MW Rating 43.26					
Wind Projects					
Arrow Rock Wind	Dec-2007	Estimated	Lewandowski Farms	Mar-2005	Mar-2010
Burley Butte Wind	Dec-2007	Estimated	Milner Dam Wind	Dec-2007	Estimated
Cassia Farm	Dec-2007	Estimated	Notch Butte Wind	Dec-2007	Estimated
Cassia Gulch	Dec-2007	Estimated	Oregon Trail Wind	Dec-2007	Estimated
Fossil Gulch Wind	Sep-2005	Sep-2025	Pilgrim Stage Station Wind	Dec-2007	Estimated
Golden Valley Wind	Dec-2007	Estimated	Salmon Falls Wind	Dec-2007	Estimated
Horseshoe Bend Wind Park	Feb-2006	Feb-2026	Thousand Springs Wind	Dec-2007	Estimated
Lava Beds Wind	Dec-2007	Estimated	Tuana Gulch Wind	Dec-2007	Estimated
Total Wind Nameplate MW Rating 206.80					
Geothermal Projects					
Raft River Geothermal #1	Jan-2007	Estimated			
Total Geothermal Nameplate MW rating 10.00					
Total Nameplate MW Rating 438.16					

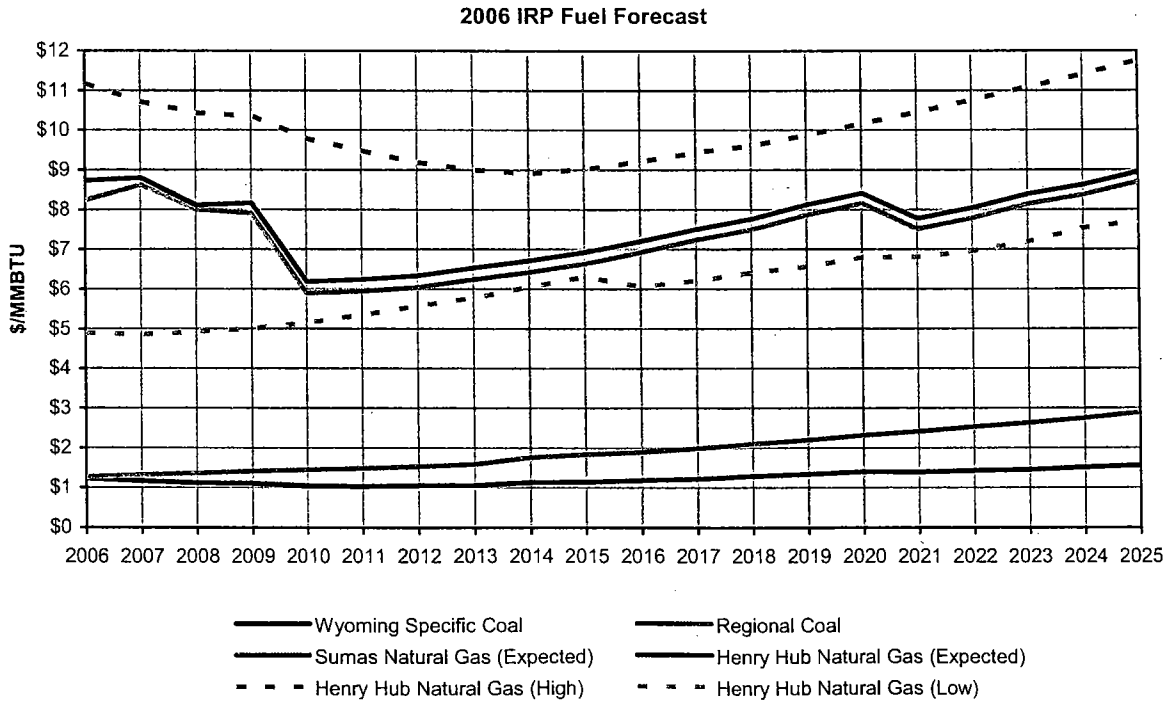
Cogeneration and Small Power Production Project (CSPP) Generation Information

The above is a summary of the Nameplate rating for the CSPP projects under contract with Idaho Power. In the case of CSPP projects, Nameplate rating of the actual generation units is not an accurate or reasonable estimate of the actual energy these projects will deliver to Idaho Power. Historical generation information, resource specific industry standard capacity factors, and other known and measurable operating characteristics are accounted for in determining a reasonable estimate of the energy these projects will produce. The application of this information to the portfolio of CSPP projects resulted in the average annual MW from CSPP projects being 130 MW.

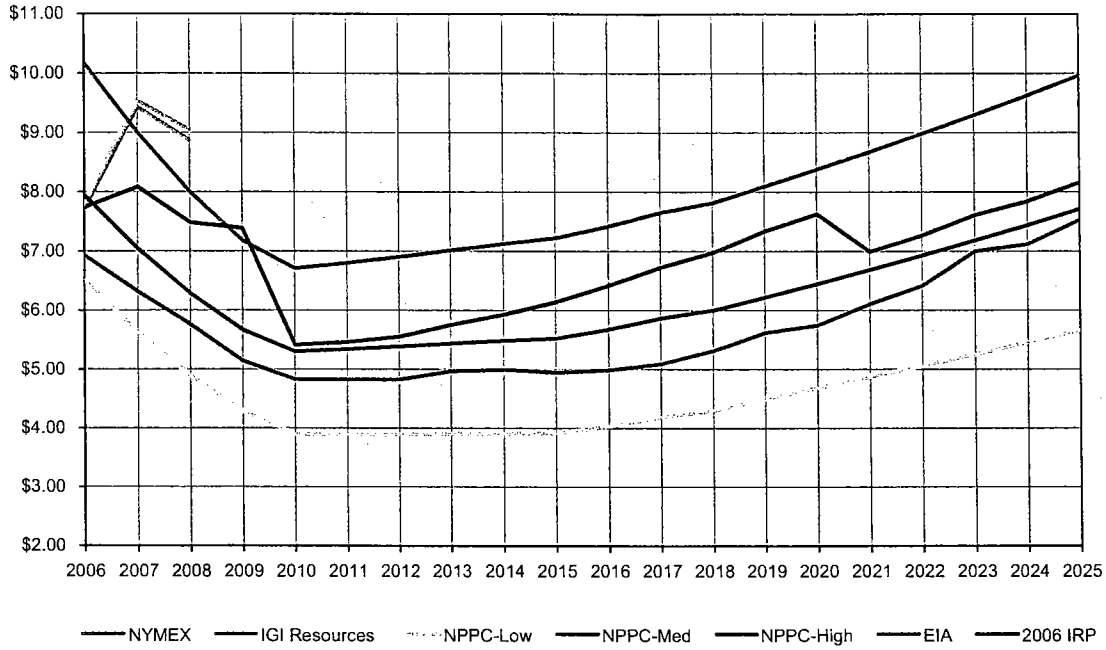
Coal and Natural Gas Price Forecasts Used in Aurora Modeling ($/MMBTU Delivered–Nominal)

Year	Wyoming Specific Coal[1]	Regional Coal[2]	Sumas Natural Gas (Expected)	Henry Hub Natural Gas (Expected)	Henry Hub Natural Gas (High)	Henry Hub Natural Gas (Low)
2006	$1.24	$1.27	$8.23	$8.73	$11.16	$4.89
2007	$1.17	$1.32	$8.62	$8.79	$10.71	$4.86
2008	$1.13	$1.37	$8.00	$8.11	$10.43	$4.92
2009	$1.11	$1.41	$7.91	$8.17	$10.36	$5.01
2010	$1.05	$1.45	$5.90	$6.19	$9.79	$5.14
2011	$1.03	$1.49	$5.95	$6.24	$9.48	$5.35
2012	$1.06	$1.53	$6.04	$6.33	$9.18	$5.57
2013	$1.07	$1.58	$6.24	$6.53	$9.00	$5.78
2014	$1.14	$1.75	$6.42	$6.71	$8.90	$6.05
2015	$1.15	$1.83	$6.64	$6.92	$9.01	$6.30
2016	$1.19	$1.90	$6.92	$7.20	$9.20	$6.05
2017	$1.22	$1.98	$7.23	$7.50	$9.43	$6.20
2018	$1.29	$2.09	$7.49	$7.75	$9.60	$6.40
2019	$1.34	$2.19	$7.86	$8.12	$9.87	$6.56
2020	$1.40	$2.31	$8.16	$8.41	$10.16	$6.79
2021	$1.39	$2.41	$7.51	$7.77	$10.45	$6.80
2022	$1.43	$2.52	$7.79	$8.04	$10.76	$6.96
2023	$1.45	$2.63	$8.14	$8.39	$11.08	$7.18
2024	$1.52	$2.74	$8.38	$8.62	$11.40	$7.54
2025	$1.56	$2.88	$8.70	$8.94	$11.74	$7.69

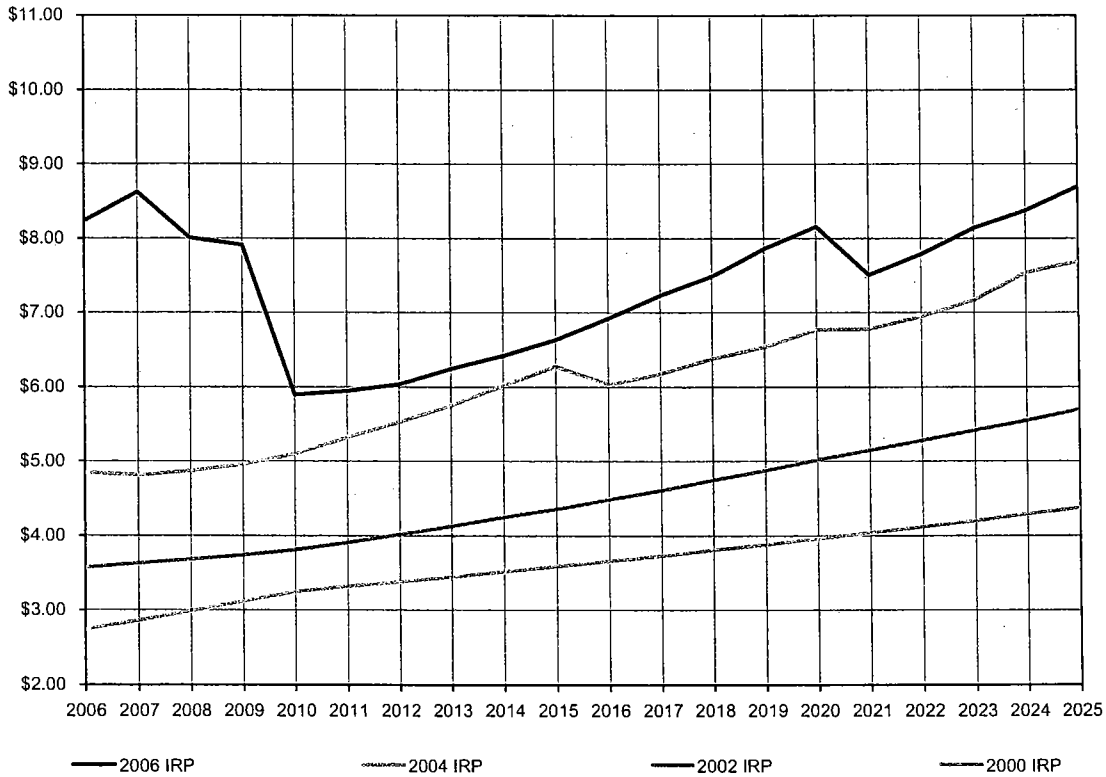
[1] Used in the Aurora analysis for a Wyoming specific coal resource.
[2] Used in the Aurora analysis for a non-location specific, regional coal resource.

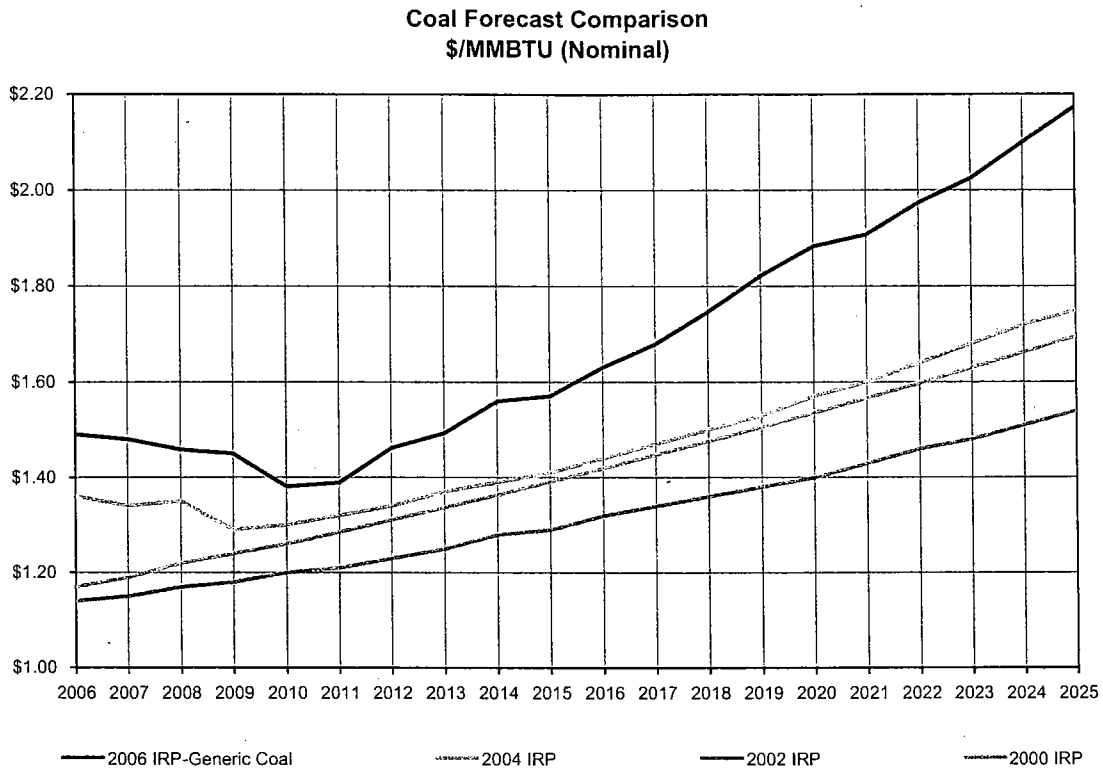


Natural Gas Forecast Source Comparison
$/MMBTU (Nominal)



Natural Gas Forecast Comparison
$/MMBTU (Nominal)




Coal Forecast Comparison
$/MMBTU (Nominal)
$2.20
$2.00
$1.80
$1.60
$1.40
$1.20
$1.00
2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025
2006 IRP-Generic Coal
2004 IRP
2002 IRP
2000 IRP

2006 Integrated Resource Plan

Key Financial and Forecast Assumptions
Resource Cost Analysis

Financing Cap Structure and Cost	
Composition	
Debt	50.54%
Preferred	0.00%
Common	49.46%
Total	100.00%
Cost	
Debt	5.65%
Preferred	0.00%
Common	10.50%
Average Weighted Cost	8.05%

Financial Assumptions and Factors	
Plant Operating (Book) Life	30 Years
Discount Rate (aka WACC)	6.93%
Composite Tax Rate	39.10%
Deferred Rate	35.00%
General O&M Esc Rate	3.00%
Emission Adder Esc Rate	2.26%
Annual Prop Tax Rate (% if Invest)	0.41%
Prop Tax Esc Rate	0.00%
Annual Insurance Prems (% of Invest)	0.25%
Insurance Esc Rate	5.00%
AFUDC Rate (Annual)	6.75%
Prod Tax Credits (First 10 years of operations)	$19/MWh[1]
Prod Tax Credits Esc Rate	3.00%

[1] For those wind and geothermal projects in service by 12-31-2008

Emission Adder Costs (2006 Dollars)	
(adders are brought into the analysis beginning in 2012)	
CO2	$13.62 per ton
NOx	$2,600 per ton during May–September
Mercury	$1,443/oz in years 2012–2017; $1,731/oz in year 2018 and beyond

Emissions Limits (pounds per MWh by technology)						
	Pulv. Coal	IGCC	IGCC w/Seq.	CFB Coal	SCCT	CCCT
CO2	1,800	1,717	258	1,800	1,164	822
NOx	0.7	1.1	1.1	1.6	0.2	0.0
Mercury	0.00002	0.00002	0.00002	0.00002	0	0

Fuel Forecast Base Case ($ per MMBTU)						
Year	Gas	Generic Coal[1]	Nuclear	Biomass	Minemouth Wyoming Coal[2]	NW Railed Coal[3]
2006	$8.23	$1.49	$0.40	$2.00	$1.12	$1.74
2007	$8.62	$1.48	$0.40	$2.00	$1.05	$1.79
2008	$8.00	$1.46	$0.40	$2.00	$1.01	$1.79
2009	$7.91	$1.45	$0.40	$2.00	$0.99	$1.79
2010	$5.90	$1.38	$0.40	$2.00	$0.98	$1.72
2011	$5.95	$1.39	$0.40	$2.00	$0.97	$1.74
2012	$6.04	$1.46	$0.40	$2.00	$1.00	$1.86
2013	$6.24	$1.49	$0.40	$2.00	$1.00	$1.92
2014	$6.42	$1.56	$0.40	$2.00	$1.08	$1.98
2015	$6.64	$1.57	$0.40	$2.00	$1.08	$1.99
2016	$6.92	$1.63	$0.40	$2.00	$1.13	$2.07
2017	$7.23	$1.68	$0.40	$2.00	$1.15	$2.14
2018	$7.49	$1.75	$0.40	$2.00	$1.22	$2.20
2019	$7.86	$1.82	$0.40	$2.00	$1.28	$2.30
2020	$8.16	$1.88	$0.40	$2.00	$1.33	$2.37
2021	$7.51	$1.91	$0.40	$2.00	$1.33	$2.42
2022	$7.79	$1.97	$0.40	$2.00	$1.37	$2.51
2023	$8.14	$2.03	$0.40	$2.00	$1.39	$2.60
2024	$8.38	$2.10	$0.40	$2.00	$1.45	$2.69
2025	$8.70	$2.17	$0.40	$2.00	$1.50	$2.78
2026	$8.09	$2.25	$0.40	$2.00	$1.55	$2.88
2027	$8.44	$2.67	$0.40	$2.00	$1.44	$3.78
2028	$8.75	$2.78	$0.40	$2.00	$1.49	$3.94
2029	$9.08	$2.89	$0.40	$2.00	$1.53	$4.11
2030	$9.48	$3.00	$0.40	$2.00	$1.58	$4.29
2031	$9.61	$3.21	$0.40	$2.00	$1.64	$4.65
2032	$9.74	$3.34	$0.40	$2.00	$1.69	$4.86
2033	$9.88	$3.47	$0.40	$2.00	$1.74	$5.07
2034	$10.01	$3.62	$0.40	$2.00	$1.80	$5.31
2035	$10.14	$3.77	$0.40	$2.00	$1.86	$5.54

[1] Used to estimate costs in the resource stack for the southern Idaho pulverized coal resource.

[2] Used to estimate costs in the resource stack for the Wyoming pulverized coal resource.

[3] Used to estimate costs in the resource stack for the regional pulverized, regional fluidized bed, regional IGCC with carbon sequestration, and regional IGCC coal projects.

2006 Integrated Resource Plan
Cost Inputs and Operating Assumptions Resource Cost Analysis
(All Costs in 2006 Dollars)

Supply Side Resources	Plant Capital $/kW [1,3]	Interconnection Capital $/kW [4]	Total Capital $/kW	Total Investment $/kW [2]	Fixed O&M $/kW	Variable O&M $/MWh	Emissions $/MWh [7]	Heat Rate
Industrial Simple Cycle CT (170 MW)	$435	$50	$485	$503	$6.96	$4.64	$8.03	10,500
Combined Cycle CT (225 MW)	$655	$38	$693	$732	$10.26	$3.25	$5.60	7,030
Aeroderivative Simple Cycle CT (47 MW)	$696	$69	$765	$793	$9.27	$9.27	$8.03	9,960
Combined Heat and Power (100 MW)	$902	$60	$962	$998	$7.24	$4.77	$0.00	5,000
Wind (100 MW)	$1,500	$110	$1,610	$1,675	$23.19	$1.16	$0.00	NA
South Idaho Pulverized Coal (600 MW)	$1,596	$42	$1,638	$1,825	$19.50	$2.58	$13.08	8,957
Regional Pulverized Coal (600 MW)	$1,596	$317	$1,913	$2,131	$19.50	$2.58	$13.08	8,957
Wyoming Pulverized Coal (600 MW)	$1,596	$317	$1,913	$2,131	$19.50	$2.58	$13.08	8,957
Small Hydro Existing Facility (10 MW)	$1,880	$60	$1,940	$2,085	$15.21	$3.23	$0.00	NA
Regional Fluidized Bed Coal (600 MW)	$1,734	$317	$2,051	$2,285	$21.35	$3.08	$13.59	9,208
Advanced Nuclear (1,000 MW)	$2,137	$34	$2,171	$2,491	$65.58	$0.48	$0.00	10,400
Geothermal Flash Steam	$2,121	$130	$2,251	$2,420	$111.29	$0.00	$0.00	NA
Regional IGCC (600 MW)	$1,974	$317	$2,291	$2,640	$22.62	$2.68	$12.75	8,131
Wood Residue Biomass (25 MW)	$2,319	$130	$2,449	$2,553	$92.74	$10.43	$0.00	14,500
Regional IGCC with Carbon Sequest. (600 MW)	$2,369	$317	$2,686	$2,993	$27.14	$3.21	$2.53	8,400
Small Hydro New Facility (10 MW)	$3,093	$60	$3,153	$3,389	$15.21	$3.23	$0.00	NA
Solar Thermal (100 MW)	$3,233	$110	$3,343	$3,503	$54.85	$0.00	$0.00	NA
Geothermal Binary Cycle (50 MW)	$3,184	$220	$3,404	$3,706	$124.00	$1.80	$0.00	NA
Solar Photovoltaic (5 MW)	$4,878	$60	$4,938	$5,130	$11.29	$0.00	$0.00	NA

Transmission Plus Market Purchase Alternatives	Capital $/kW [1,2]	Interconnection $/kW	Total Capital $/kW	Total Investment $/kW	Fixed O&M $/kW [6]	Market Purchase $/MWh [5]	Emissions $/MWh	Heat Rate
Transmission–From NW Lolo to IPC System (60 MW)	$179	NA	$179	$197	$1.00	$60.00	NA	NA
Transmission–From Wyoming to IPC System (900 MW)	$313	NA	$313	$351	$0.20	$60.00	NA	NA
Transmission–From NW McNary to IPC System (225 MW)	$340	NA	$340	$373	$0.39	$60.00	NA	NA
Transmission–From Wyoming to IPC System (525 MW)	$362	NA	$362	$406	$0.20	$60.00	NA	NA
Transmission–From Wyoming to Boise (900 MW)	$407	NA	$407	$457	$0.20	$60.00	NA	NA
Transmission–From Wyoming to Boise (525 MW)	$482	NA	$482	$540	$0.20	$60.00	NA	NA
Transmission–From NW McNary to Boise (225 MW)	$546	NA	$546	$600	$0.39	$60.00	NA	NA
Transmission–From Montana to IPC System (225 MW)	$694	NA	$694	$783	$0.31	$60.00	NA	NA
Transmission–From Montana to Boise (225 MW)	$788	NA	$788	$889	$0.20	$60.00	NA	NA
Transmission–From Wyoming to IPC System (225 MW)	$844	NA	$844	$947	$0.20	$60.00	NA	NA
Transmission–From Nevada South to IPC System (225 MW)	$851	NA	$851	$959	$0.38	$60.00	NA	NA
Transmission–From Wyoming to Boise (225 MW)	$939	NA	$939	$1,053	$0.31	$60.00	NA	NA
Transmission–From Nevada South to Boise (225 MW)	$945	NA	$945	$1,066	$0.38	$60.00	NA	NA
Transmission–From NW Lolo to Boise (60 MW)	$953	NA	$953	$1,046	$1.00	$60.00	NA	NA

[1] Plant costs include engineering development costs, generating and ancillary equipment purchase and installation costs, as well as balance of plant construction.
[2] Total Investment includes capital costs and AFUDC.
[3] Cost inputs and operating assumptions based on estimates from the Northwest Power Planning Council's Fifth Power Plan, The Department of Energy's 2006 Energy Outlook, independent consultant data, and independent power developers.
[4] Assumes a generic transmission interconnection consisting of a substation at a power plant, radial transmission line , and termination at IPC system. Power plant substation: $4M to $10M, Radial line: $200K–550K per mile depending on rating (69kV, 138kV, 230kV, 3445kV), Termination at IPC System: $200K–$1M Assumes resources sited within 25 miles of IPC's system with the exception of regional coal and Wyoming coal resources.
[5] Transmission plus market purchase alternatives assume a transmission upgrade, with a market purchase of $60 per MWh.
[6] Fixed O&M excludes property taxes and insurance (separately calculated within the levelized resource cost analysis)
[7] Emission adders assume CO_2 at $13.62/ton; NO_x at $2,600/ton; mercury at $1,443/oz.

Levelized Resource Cost Tables

Energy—Levelized Cost per MWh

At Estimated Annual Capacity Factors (Baseload Service)

Supply-Side Resources	Cost of Capital	Non-Fuel O&M	Fuel	Emission Adders	Cost per MWh	Capacity Factor
Geothermal Flash Steam with PTC (50 MW)	$26	$9	$0	$0	$35	95%
Geothermal Flash Steam without PTC (50 MW)	$26	$22	$0	$0	$47	95%
Advanced Nuclear (1,000 MW)	$33	$15	$4	$0	$53	90%
Small Hydro Existing Facility (10 MW)	$41	$12	$0	$0	$53	60%
Geothermal Binary Cycle with PTC (50 MW)	$40	$15	$0	$0	$55	95%
Combined Heat and Power (100 MW)	$13	$9	$38	$0	$60	90%
Wind with PTC (100 MW)	$54	$6	$0	$0	$61	31%
Wyoming Pulverized Coal (600 MW)	$29	$10	$11	$12	$61	88%
Regional Pulverized Coal (600 MW)	$29	$10	$17	$12	$67	88%
Geothermal Binary Cycle without PTC (50 MW)	$40	$28	$0	$0	$67	95%
South Idaho Pulverized Coal (600 MW)	$25	$9	$22	$12	$67	88%
Regional Fluidized Bed Coal (600 MW)	$31	$11	$17	$12	$71	88%
Wind without PTC (100 MW)	$54	$19	$0	$0	$73	31%
Regional IGCC with Carbon Sequest. (600 MW)	$45	$14	$16	$2	$76	80%
Regional IGCC (600 MW)	$39	$12	$15	$11	$78	80%
Combined Cycle CT (225 MW)	$10	$7	$55	$5	$78	85%
Small Hydro New Facility (10 MW)	$67	$14	$0	$0	$81	60%
Wood Residue Biomass (25 MW)	$32	$37	$30	$0	$99	80%
Industrial Simple Cycle CT (170 MW)	$10	$9	$83	$7	$109	59%
Aeroderivative Simple Cycle CT (47 MW)	$15	$17	$78	$7	$118	59%
Solar Thermal (100 MW)	$85	$34	$0	$0	$118	42%
Solar Photovoltaic (5 MW)	$174	$23	$0	$0	$197	30%

Transmission Plus Market Purchase Alternatives	Cost of Capital	Non-Fuel O&M	Energy	Emission Adders	Cost per MWh	Capacity Factor
Transmission–From NW Lolo to IPC System (60 MW)	$4	$1	$60	$0	$64	61%
Transmission–From Wyoming to IPC System (900 MW)	$7	$1	$60	$0	$67	61%
Transmission–From NW McNary to IPC System (225 MW)	$7	$1	$60	$0	$68	61%
Transmission–From Wyoming to IPC System (525 MW)	$8	$1	$60	$0	$68	61%
Transmission–From Wyoming to Boise (900 MW)	$9	$1	$60	$0	$69	61%
Transmission–From Wyoming to Boise (525 MW)	$10	$1	$60	$0	$71	61%
Transmission–From NW McNary to Boise (225 MW)	$11	$1	$60	$0	$72	61%
Transmission–From Montana to IPC System (225 MW)	$15	$1	$60	$0	$76	61%
Transmission–From Montana to Boise (225 MW)	$17	$1	$60	$0	$78	61%
Transmission–From Wyoming to IPC System (225 MW)	$18	$2	$60	$0	$79	61%
Transmission–From Nevada South to IPC System (225 MW)	$18	$2	$60	$0	$80	61%
Transmission–From Wyoming to Boise (225 MW)	$20	$2	$60	$0	$82	61%
Transmission–From NW Lolo to Boise (60 MW)	$20	$2	$60	$0	$82	61%
Transmission–From Nevada South to Boise (225 MW)	$20	$2	$60	$0	$82	61%

DSM Programs	Cost of Capital	Non-Fuel O&M	Fuel	Emission Adders	Cost per MWh	Capacity Factor
Commercial In-Place Construction (18 aMW)	$0	$35	$0	$0	$35	NA
Industrial Efficiency Expansion (41 aMW)	$0	$40	$0	$0	$40	NA
Residential In-Place Construction (29 aMW)	$0	$44	$0	$0	$44	NA

Levelized Resource Cost Tables

Energy—Levelized Cost per MWh

At Peaking Service Capacity Factors **

Supply-Side Resources	Cost of Capital	Non-Fuel O&M	Fuel	Emission Adders	Cost per MWh	Capacity Factor
Industrial Simple Cycle CT (170 MW)	$154	$50	$83	$7	$293	4%
Combined Cycle CT (225 MW)	$224	$68	$55	$5	$352	4%
Aeroderivative Simple Cycle CT (47 MW)	$242	$74	$78	$7	$402	4%
Combined Heat and Power (100 MW)	$305	$64	$38	$0	$407	4%
Wind with PTC (100 MW)	$452	$133	$0	$0	$585	4%
Wind without PTC (100 MW)	$452	$146	$0	$0	$598	4%
South Idaho Pulverized Coal (600 MW)	$579	$136	$22	$12	$748	4%
Small Hydro Existing Facility (10 MW)	$661	$125	$0	$0	$787	4%
Wyoming Pulverized Coal (600 MW)	$676	$144	$11	$12	$843	4%
Regional Pulverized Coal (600 MW)	$676	$144	$17	$12	$849	4%
Regional Fluidized Bed Coal (600 MW)	$725	$157	$17	$12	$911	4%
Regional IGCC (600 MW)	$838	$171	$15	$11	$1,035	4%
Advanced Nuclear (1,000 MW)	$790	$349	$4	$0	$1,144	4%
Regional IGCC with Carbon Sequest. (600 MW)	$949	$201	$16	$2	$1,168	4%
Geothermal Flash Steam with PTC (50 MW)	$653	$531	$0	$0	$1,183	4%
Geothermal Flash Steam without PTC (50 MW)	$653	$543	$0	$0	$1,196	4%
Wood Residue Biomass (25 MW)	$688	$482	$30	$0	$1,200	4%
Small Hydro New Facility (10 MW)	$1,075	$160	$0	$0	$1,235	4%
Solar Thermal (100 MW)	$945	$375	$0	$0	$1,320	4%
Solar Photovoltaic (5 MW)	$1,384	$185	$0	$0	$1,568	4%
Geothermal Binary Cycle with PTC (50 MW)	$1,000	$622	$0	$0	$1,622	4%
Geothermal Binary Cycle without PTC (50 MW)	$1,000	$635	$0	$0	$1,635	4%

Transmission Plus Market Purchase Alternatives	Cost of Capital	Non-Fuel O&M	Energy	Emission Adders	Cost per MWh	Capacity Factor
Transmission–From NW Lolo to IPC System (60 MW)	$60	$9	$60	$0	$130	4%
Transmission–From Wyoming to IPC System (900 MW)	$101	$9	$60	$0	$171	4%
Transmission–From NW McNary to IPC System (225 MW)	$115	$11	$60	$0	$186	4%
Transmission–From Wyoming to IPC System (525 MW)	$117	$11	$60	$0	$188	4%
Transmission–From Wyoming to Boise (900 MW)	$132	$12	$60	$0	$204	4%
Transmission–From Wyoming to Boise (525 MW)	$156	$14	$60	$0	$230	4%
Transmission–From NW McNary to Boise (225 MW)	$184	$17	$60	$0	$261	4%
Transmission–From Montana to IPC System (225 MW)	$240	$21	$60	$0	$322	4%
Transmission–From Montana to Boise (225 MW)	$273	$24	$60	$0	$356	4%
Transmission–From Wyoming to IPC System (225 MW)	$291	$25	$60	$0	$376	4%
Transmission–From Nevada South to IPC System (225 MW)	$294	$26	$60	$0	$381	4%
Transmission–From Wyoming to Boise (225 MW)	$323	$28	$60	$0	$411	4%
Transmission–From NW Lolo to Boise (60 MW)	$321	$31	$60	$0	$412	4%
Transmission–From Nevada South to Boise (225 MW)	$327	$29	$60	$0	$416	4%

**** 330 Annual Operating Hours Assumed for Peaking Service (Approximately 4% of Total Hours)**

Levelized Resource Cost Tables

Capacity—Levelized Cost per kW per Month

Cost of Capital and Fixed Operating Costs

Supply-Side Resources	Cost of Capital	Non-Fuel O&M	Fuel	Emission Adders	Total
Industrial Simple Cycle CT (170 MW)	$4	$1	$0	$0	$5
Combined Cycle CT (225 MW)	$6	$2	$0	$0	$8
Aeroderivative Simple Cycle CT (47 MW)	$7	$2	$0	$0	$8
Combined Heat and Power (100 MW)	$8	$2	$0	$0	$10
South Idaho Pulverized Coal (600 MW)	$16	$4	$0	$0	$20
Small Hydro Existing Facility (10 MW)	$18	$3	$0	$0	$22
Wyoming Pulverized Coal (600 MW)	$19	$4	$0	$0	$22
Regional Pulverized Coal (600 MW)	$19	$4	$0	$0	$22
Regional Fluidized Bed Coal (600 MW)	$20	$4	$0	$0	$24
Regional IGCC (600 MW)	$23	$5	$0	$0	$28
Advanced Nuclear (1,000 MW)	$22	$10	$0	$0	$31
Regional IGCC with Carbon Sequest. (600 MW)	$26	$5	$0	$0	$32
Wood Residue Biomass (25 MW)	$19	$13	$0	$0	$32
Geothermal Flash Steam (50 MW)	$18	$15	$0	$0	$33
Small Hydro New Facility (10 MW)	$30	$4	$0	$0	$34
Solar Thermal (100 MW)	$26	$10	$0	$0	$36
Solar Photovoltaic (5 MW)	$38	$5	$0	$0	$43
Geothermal Binary Cycle (50 MW)	$28	$17	$0	$0	$45
Wind (100 MW Nameplate; 5 MW On Peak)	$249	$79	$0	$0	$328

Transmission Plus Market Purchase Alternatives	Cost of Capital	Non-Fuel O&M	Energy	Emission Adders	Total
Transmission–From NW Lolo to IPC System (60 MW)	$2	$0	$0	$0	$2
Transmission–From Wyoming to IPC System (900 MW)	$3	$0	$0	$0	$3
Transmission–From NW McNary to IPC System (225 MW)	$3	$0	$0	$0	$3
Transmission–From Wyoming to IPC System (525 MW)	$3	$0	$0	$0	$4
Transmission–From Wyoming to Boise (900 MW)	$4	$0	$0	$0	$4
Transmission–From Wyoming to Boise (525 MW)	$5	$0	$0	$0	$5
Transmission–From NW McNary to Boise (225 MW)	$5	$0	$0	$0	$6
Transmission–From Montana to IPC System (225 MW)	$7	$1	$0	$0	$7
Transmission–From Montana to Boise (225 MW)	$8	$1	$0	$0	$8
Transmission–From Wyoming to IPC System (225 MW)	$8	$1	$0	$0	$9
Transmission–From Nevada South to IPC System (225 MW)	$8	$1	$0	$0	$9
Transmission–From Wyoming to Boise (225 MW)	$9	$1	$0	$0	$10
Transmission–From NW Lolo to Boise (60 MW)	$9	$1	$0	$0	$10
Transmission–From Nevada South to Boise (225 MW)	$9	$1	$0	$0	$10

DSM Programs	Cost of Capital	Non-Fuel O&M	Fuel	Emission Adders	Total
Residential In-Place Construction (111 MW Peak)	$0	$6	$0	$0	$6
Industrial Efficiency Expansion (49 MW Peak)	$0	$13	$0	$0	$13
Commercial In-Place Construction (27 MW Peak)	$0	$14	$0	$0	$14

2006 Integrated Resource Plan
Cost Inputs Used for Resource Cost Analysis
(All Costs in 2006 Dollars)

	Plant $/kW	Interconnection $/kW	Total $/kW	Cap Factor	Fixed O&M $/kW	Variable O&M $/MWh	Emissions $/MWh	Heat Rate
Supply Side Resources								
Industrial Simple Cycle CT (162 MW)	$435	$94	$529	59%	$6.96	$4.64	$8.03	10,500
CCCT (540 MW)	$655	$71	$726	85%	$10.26	$3.25	$5.60	7,030
Aero Simple Cycle CT (47 MW)	$696	$60	$756	59%	$9.27	$9.27	$8.03	9,960
Combined Heat and Power (6 MW)	$902	$60	$962	90%	$7.24	$4.77	$0.00	5,000
Wind (100 MW)	$1,500	$110	$1,610	31%	$23.19	$1.16	$0.00	NA
South Idaho Pulverized Coal (600 MW)	$1,596	$42	$1,638	88%	$19.50	$2.58	$12.62	8,957
Advanced Nuclear (1,100 MW)	$2,137	$63	$2,200	90%	$65.58	$0.49	$0.00	10,400
Regional Pulverized Coal (600 MW)	$1,596	$317	$1,913	88%	$19.50	$2.58	$12.62	8,957
Wyoming Pulverized Coal (575 MW)	$1,596	$330	$1,926	88%	$19.50	$2.58	$12.62	8,957
Small Hydro Existing Facility (10 MW)	$1,880	$60	$1,940	60%	$15.21	$3.23	$0.00	NA
Regional Fluidized Bed Coal (600 MW)	$1,734	$317	$2,051	88%	$21.35	$3.08	$13.12	9,208
Regional IGCC (600 MW)	$1,974	$317	$2,291	80%	$22.62	$2.68	$12.29	8,131
Geothermal Flash Steam	$2,121	$220	$2,341	95%	$111.29	$0.00	$0.00	NA
Wood Residue Biomass (25 MW)	$2,319	$60	$2,379	80%	$92.74	$10.43	$0.00	14,500
Regional IGCC with Carbon Sequest. (600 MW)	$2,369	$317	$2,686	80%	$27.14	$3.21	$2.07	8,400
Geothermal Binary Cycle (50 MW)	$3,184	$220	$3,404	95%	$132.00	$1.80	$0.00	NA
Small Hydro New Facility (10 MW)	$3,093	$60	$3,153	60%	$15.21	$3.23	$0.00	NA
Solar Thermal (100 MW)	$3,233	$60	$3,293	42%	$54.89	$0.00	$0.00	NA
Solar Photovoltaic (5 MW)	$4,878	$60	$4,938	30%	$11.30	$0.00	$0.00	NA
Transmission Plus Market Purchase Alternatives								
Transmission–From NW Lolo to IPC System (60 MW)	$179	$0	$179	61%	$1.00	$60.00	$0.00	NA
Transmission–From NW McNary to IPC System (180 MW)	$424	$0	$424	61%	$0.39	$60.00	$0.00	NA
Transmission–From Montana to IPC System (225 MW)	$694	$0	$694	61%	$0.31	$60.00	$0.00	NA
Transmission–From NW McNary to Boise (180 MW)	$706	$0	$706	61%	$0.39	$60.00	$0.00	NA
Transmission–From Montana to Boise (225 MW)	$788	$0	$788	61%	$0.20	$60.00	$0.00	NA
Transmission–From Wyoming to IPC System (225 MW)	$844	$0	$844	61%	$0.20	$60.00	$0.00	NA
Transmission–From Nevada South to IPC System (225 MW)	$851	$0	$851	61%	$0.38	$60.00	$0.00	NA
Transmission–From Wyoming to Boise (225 MW)	$939	$0	$939	61%	$0.31	$60.00	$0.00	NA
Transmission–From Nevada South to Boise (225 MW)	$945	$0	$945	61%	$0.38	$60.00	$0.00	NA
Transmission–From NW Lolo to Boise (60 MW)	$953	$0	$953	61%	$1.00	$60.00	$0.00	NA

Notes

1. Plant costs include engineering development costs, generating and ancilary equipment purchase and installation costs, as well as balance of plant construction.
2. Cost inputs and operating assumptions based on estimates from the Northwest Power Planning Council's Fifth Power Plan, The Department of Energy's 2006 Energy Outlook, independent consultant data, and independent power developers.
3. All capital costs are shown before AFUDC and investment tax credits are applied.
4. Assumes a generic transmission interconnection consisting of a substation at a power plant, radial transmission line, and termination at IPC system.
   Power plant substation: $4M to $10M, Radial line: $200K–550K per mile depending on rating (69kV, 138kV, 230kV, 3445kV), Termination at IPC System: $200K–$1M
   Assumes resources sited within 25 miles of IPC's system with the exception of regional and Wyoming coal resources.
   Transmission plus market purchase alternatives assume a general transmission upgrade, with a market purchase of $60 per MWh at the end.

Levelized Resource Cost Tables

Energy–Levelized Cost per Mwh

Supply-Side Resources	Cost of Capital	Non-Fuel O&M	Fuel	Emission Adders	Total
Geothermal Flash Steam with PTC (50 MW)	26.91	9.15	0.00	0.00	36.06
Geothermal Flash Steam without PTC (50 MW)	26.91	21.65	0.00	0.00	48.56
Advanced Nuclear (1,100 MW)	33.52	15.32	4.41	0.00	53.24
Small Hydro Existing Facility (10 MW)	41.25	12.12	0.00	0.00	53.38
Geothermal Binary Cycle with PTC (50 MW)	39.66	16.49	0.00	0.00	56.15
Combined Heat and Power (6 MW)	12.75	9.19	38.20	0.00	60.15
Wind with PTC (100 MW)	54.34	6.49	0.00	0.00	60.83
Wyoming Pulverized Coal (575 MW)	28.95	9.68	11.04	11.25	60.92
Regional Pulverized Coal (600 MW)	28.95	9.68	16.77	11.25	66.64
South Idaho Pulverized Coal (600 MW)	24.78	9.33	21.70	11.25	67.06
Geothermal Binary Cycle without PTC (50 MW)	39.66	28.99	0.00	0.00	68.65
Regional Fluidized Bed Coal (600 MW)	31.03	10.91	17.24	11.70	70.87
Wind without PTC (100 MW)	54.34	18.99	0.00	0.00	73.33
Regional IGCC with Carbon Sequest. (600 MW)	44.71	13.80	15.72	1.84	76.07
CCCT (540 MW)	10.38	7.47	53.71	4.99	76.56
Regional IGCC (600 MW)	39.44	11.68	15.22	10.95	77.29
Small Hydro New Facility (10 MW)	67.05	14.28	0.00	0.00	81.33
Wood Residue Biomass (25 MW)	31.49	36.72	29.99	0.00	98.20
Industrial Simple Cycle CT (162 MW)	10.71	9.43	80.23	7.16	107.53
Aero Simple Cycle CT (47 MW)	15.31	17.06	76.10	7.16	115.62
Solar Thermal (100 MW)	83.48	33.53	0.00	0.00	117.02
Solar Photovoltaic (5 MW)	173.73	23.19	0.00	0.00	196.93

Transmission Plus Market Purchase Alternatives	Cost of Capital	Non-Fuel O&M	Energy	Emission Adders	Total
Transmission–From NW Lolo to IPC System (60 MW)	3.73	0.57	60.00	0.00	64.30
Transmission–From NW McNary to IPC System (180 MW)	8.84	0.84	60.00	0.00	69.67
Transmission–From NW McNary to Boise (180 MW)	14.70	1.33	60.00	0.00	76.03
Transmission–From Montana to IPC System (225 MW)	14.84	1.32	60.00	0.00	76.16
Transmission–From Montana to Boise (225 MW)	16.85	1.46	60.00	0.00	78.30
Transmission–From Wyoming to IPC System (225 MW)	17.94	1.55	60.00	0.00	79.49
Transmission–From Nevada South to IPC System (225 MW)	18.19	1.62	60.00	0.00	79.80
Transmission–From Wyoming to Boise (225 MW)	19.95	1.75	60.00	0.00	81.70
Transmission–From NW Lolo to Boise (60 MW)	19.83	1.91	60.00	0.00	81.74
Transmission–From Nevada South to Boise (225 MW)	20.20	1.79	60.00	0.00	81.99

DSM Programs	Cost of Capital	Non-Fuel O&M	Fuel	Emission Adders	Total
Commercial In-Place Construction (18 aMW)	0.00	34.90	0.00	0.00	34.90
Industrial Efficiency Expansion (41 aMW)	0.00	39.70	0.00	0.00	39.70
Residential In-Place Construction (29 aMW)	0.00	43.89	0.00	0.00	43.89

Levelized Resource Cost Tables

Capacity– Levelized $/kW/month

Supply-Side Resources	Cost of Capital	Non-Fuel O&M	Fuel	Emission Adders	Total
Industrial Simple Cycle CT (162 MW)	4.61	1.22	0.00	0.00	5.83
CCCT (540 MW)	6.44	1.77	0.00	0.00	8.22
Aero Simple Cycle CT (47 MW)	6.58	1.67	0.00	0.00	8.25
Combined Heat and Power (6 MW)	8.38	1.58	0.00	0.00	9.96
Wind (100 MW)	12.43	3.97	0.00	0.00	16.40
South Idaho Pulverized Coal (600 MW)	15.92	3.64	0.00	0.00	19.56
Small Hydro Existing Facility (10 MW)	18.19	3.32	0.00	0.00	21.51
Regional Pulverized Coal (600 MW)	18.59	3.86	0.00	0.00	22.46
Wyoming Pulverized Coal (575 MW)	18.60	3.86	0.00	0.00	22.46
Regional Fluidized Bed Coal (600 MW)	19.93	4.19	0.00	0.00	24.13
Regional IGCC (600 MW)	23.03	4.60	0.00	0.00	27.63
Wood Residue Biomass (25 MW)	18.39	12.79	0.00	0.00	31.18
Regional IGCC with Carbon Sequest. (600 MW)	26.11	5.40	0.00	0.00	31.51
Advanced Nuclear (1,100 MW)	22.02	9.61	0.00	0.00	31.63
Geothermal Flash Steam (50 MW)	18.67	15.01	0.00	0.00	33.68
Small Hydro New Facility (10 MW)	29.56	4.27	0.00	0.00	33.83
Solar Thermal (100 MW)	25.60	10.28	0.00	0.00	35.88
Solar Photovoltaic (5 MW)	38.05	5.08	0.00	0.00	43.13
Geothermal Binary Cycle (50 MW)	27.51	18.33	0.00	0.00	45.84

Transmission Plus Market Purchase Alternatives	Cost of Capital	Non-Fuel O&M	Energy	Emission Adders	Total
Transmission–From NW Lolo to IPC System (60 MW)	1.66	0.25	0.00	0.00	1.91
Transmission–From NW McNary to IPC System (180 MW)	3.93	0.37	0.00	0.00	4.31
Transmission–From NW McNary to Boise (180 MW)	6.54	0.59	0.00	0.00	7.14
Transmission–From Montana to IPC System (225 MW)	6.61	0.59	0.00	0.00	7.20
Transmission–From Montana to Boise (225 MW)	7.50	0.65	0.00	0.00	8.15
Transmission–From Wyoming to IPC System (225 MW)	7.99	0.69	0.00	0.00	8.68
Transmission–From Nevada South to IPC System (225 MW)	8.10	0.72	0.00	0.00	8.82
Transmission–From Wyoming to Boise (225 MW)	8.89	0.78	0.00	0.00	9.66
Transmission–From NW Lolo to Boise (60 MW)	8.83	0.85	0.00	0.00	9.68
Transmission–From Nevada South to Boise (225 MW)	9.00	0.80	0.00	0.00	9.79

DSM Programs	Cost of Capital	Non-Fuel O&M	Fuel	Emission Adders	Total
Commercial In-Place Construction (34 MW Peak)	0.00	13.63	0.00	0.00	13.63
Industrial Efficiency Expansion (76 MW Peak)	0.00	15.50	0.00	0.00	15.50
Residential In-Place Construction (55 MW Peak)	0.00	16.66	0.00	0.00	16.66

Brownlee Reservoir Inflow Record (Million Acre-Feet)
Record Used for 2006 IRP Modeling of Idaho Power Hydropower System

Based on (1) Idaho Department of Water Resources computed Snake River Basin record for January 1928–September 2002, and (2) observed streamflow record for October 2002–December 2004.

CY	Brownlee April–July Inflow Volume (MAF)	Brownlee Annual Inflow Volume (MAF)	CY	Brownlee April–July Inflow Volume (MAF)	Brownlee Annual Inflow Volume (MAF)
1928	6.7	15.0	1967	4.7	11.3
1929	3.4	9.3	1968	3.4	10.7
1930	2.7	8.4	1969	6.8	15.3
1931	2.2	7.2	1970	6.1	14.9
1932	4.7	10.3	1971	10.3	22.8
1933	4.2	9.6	1972	7.8	20.2
1934	2.4	7.5	1973	3.9	11.4
1935	3.1	8.1	1974	9.6	20.0
1936	5.0	10.5	1975	8.1	17.6
1937	3.0	8.6	1976	7.2	16.5
1938	6.9	13.6	1977	2.1	7.8
1939	3.8	10.0	1978	5.1	12.0
1940	4.2	10.8	1979	3.9	10.7
1941	3.8	10.2	1980	5.9	13.2
1942	4.9	11.2	1981	4.2	11.5
1943	9.1	18.8	1982	9.3	21.1
1944	3.3	9.7	1983	10.0	23.6
1945	4.7	11.7	1984	11.4	24.4
1946	6.8	15.5	1985	5.5	13.8
1947	5.2	12.5	1986	8.4	20.7
1948	5.8	12.6	1987	3.0	9.4
1949	5.3	12.5	1988	2.5	7.9
1950	6.4	14.7	1989	4.3	10.6
1951	6.5	16.2	1990	2.9	8.1
1952	10.3	19.4	1991	2.7	7.8
1953	5.9	13.6	1992	1.9	6.6
1954	5.5	12.6	1993	6.0	12.9
1955	3.5	9.9	1994	2.5	8.2
1956	7.8	17.6	1995	6.6	14.0
1957	7.8	16.1	1996	8.1	19.0
1958	7.4	15.1	1997	10.0	24.0
1959	3.8	10.4	1998	8.4	17.6
1960	4.2	10.8	1999	7.7	17.8
1961	3.1	8.8	2000	4.3	11.8
1962	4.5	10.9	2001	2.4	7.6
1963	4.6	11.5	2002	3.4	8.6
1964	5.6	13.1	2003	3.6	9.0
1965	8.4	19.9	2004	3.1	9.0
1966	3.5	10.0			

Wind Distribution Profile (from NWPCC's Fifth Power Plan–2005)

Project Size (MW): 100
Annual Capacity Factor: 35%
Flat Monthly Output (aMW): 35

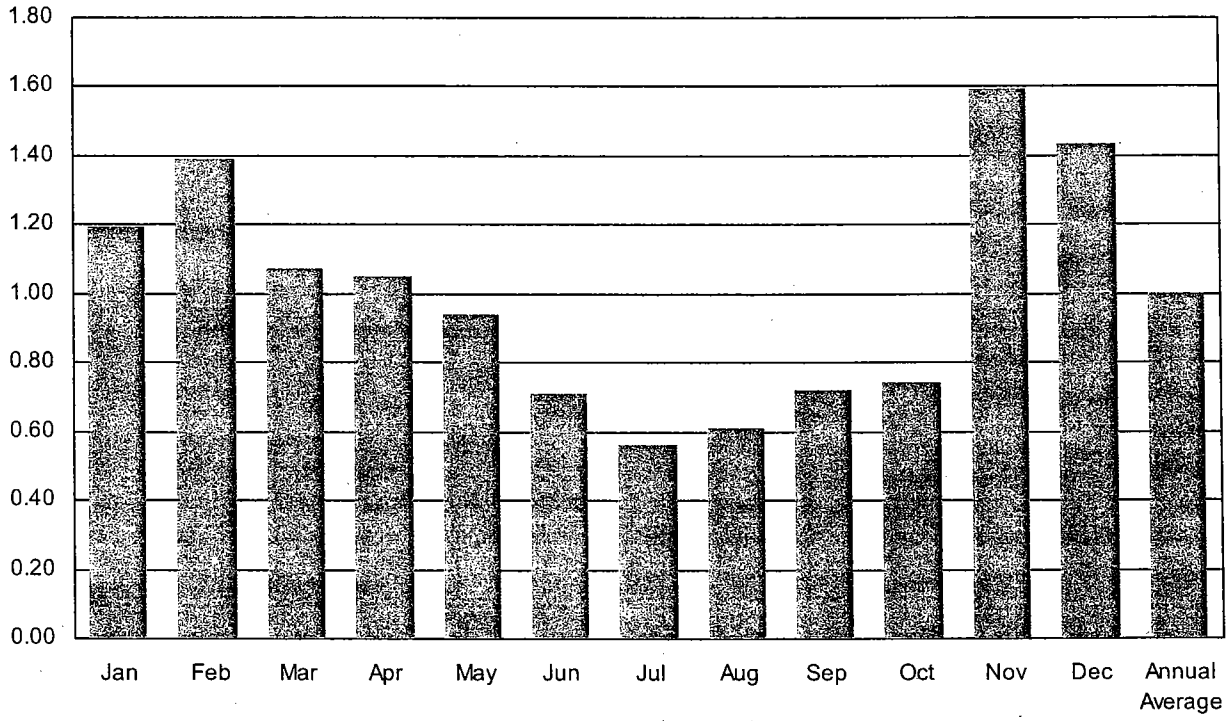
Normalized Monthly Wind Energy Distribution (Basin and Range)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Average
1.19	1.39	1.07	1.05	0.94	0.71	0.56	0.61	0.72	0.74	1.59	1.43	1.00

Estimated Monthly Output (aMW)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Average
42	49	37	37	33	25	20	21	25	26	56	50	35

Normalized Monthly Wind Energy Distribution (Basin and Range)



DSM Analysis and Screening Criteria

DSM Program Development

In November 2004, Quantum Consulting of Berkeley, California, (now Itron Inc. of Oakland, California) completed a study for Idaho Power assessing the energy savings potential within the residential and commercial sectors. The study served as the basis for the residential and commercial retrofit program options analyzed in this IRP. The Company filed the Quantum study with the IPUC in December 2004 as an addendum to the 2004 IRP. In order to meet the guidelines of the 2006 IRP, the study output was later expanded with support from Quantum for program extension from 10 to 20 years of utility operation.

The assumptions and energy estimates that support the industrial efficiency program extension were developed internally by Idaho Power's engineering staff. The industrial program expansion and the residential and commercial retrofit program options were each designed to maximize the potential energy benefits of the resource while remaining cost-effective from a total resource perspective.

All DSM program options analyzed as part of the 2006 IRP included the following cost components:

- Administrative costs
- Marketing and advertising costs
- Incentive payments
- Participant costs

Once the program design and costing phase was completed, each new program was put through a series of static screening analyses prior to being introduced into the dynamic IRP portfolio analysis in Aurora.

Screening Criteria

DSM screening criteria are designed to assess a program's potential to maximize benefits at the lowest cost for all stakeholders. In addition to the strategic criteria listed in Chapter 5 of the 2006 IRP Plan, key screening elements are:

- Programs will be **cost-effective**. From a total resource perspective, estimated program benefits must be greater than estimated program costs.
- Programs will be **customer-focused**. From the participants' perspective, programs will offer real benefits and value to customers. The Idaho Public Utilities Commission stated in Order No. 29026, "It is our hope that the programs created by the DSM rider will empower customers to exercise control over their energy consumption and reduce their bills."
- Programs will be **equitably distributed**. From the customers' perspective, programs will be selected to benefit all groups of customers. Over time, programs will be offered to customers in all sectors and in all regions of the company's service territory.
- Programs will be as close to **earnings-neutral** as possible. From the utility's perspective, programs will be selected to minimize the negative impact on shareowners.

These criteria are used as guidelines in selecting a new program or initiative. A program that doesn't meet all of these criteria is not excluded from consideration, but would have to be further evaluated for other valued characteristics. Ultimately, all programs must be cost-effective in order to be considered as ordered by the IPUC.[1]

Static Cost-Effectiveness Analysis

The cost-effectiveness analysis is the primary focus of the screening criteria. The static cost-effectiveness analysis of DSM programs at Idaho Power is performed using the methods described in the EPRI End-Use Technical Assessment Guide Manual as well as The California Standard Practices Manual: Economic Analysis of Demand-side Programs and Projects.[2] The proposed DSM programs considered for inclusion into the 2006 IRP are evaluated from Utility Cost Test and Total Resource Cost test perspectives.

Total Resource Cost Test (TRC)[3]

The TRC test is a measure of the total net resource expenditures of a DSM program from the point of view of the utility and its customers as a whole. Costs include changes in supply costs, utility costs, and participant costs. (Transfer payments between customers and the utility are ignored).

The following are the calculations performed by this test:

Net Present Value: A net present value of zero or greater indicates that the program is cost-effective from the total resource cost perspective.

Benefits-Cost Ratio: A benefit-cost ratio of 1.0 or greater indicates the program is cost-effective from the total resource cost perspective.

Levelized Cost: This measurement makes the evaluation of potential demand-side resources comparable to that of supply side resources. The cost stream of DSM resource (in this case, the stream of utility costs and participant costs) is discounted and then divided by the stream of discounted kW or kWh that is expected from the program.

Utility Cost Test[4]

The Utility Cost test is a measure of the total costs to the utility to implement a DSM program.

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[1] IPUC Order No. 29026, May 20, 2002

[2] www.cpuc.ca.gov/static/energy/electric/energy+efficiency/rulemaking/std+practice+manual.doc

[3] EPRI End-Use Technical Assessment Guide (End-Use TAG), Volume 4: Fundamentals and Methods, Barakat and Chamberlin, Inc, April 1991

[4] EPRI End-Use Technical Assessment Guide (End-Use TAG), Volume 4: Fundamentals and Methods, Barakat and Chamberlin, Inc, April 1991

The following are the calculations performed by this test:

Net Present Value: A net present value of zero or greater indicates that the program is cost-effective from the Utility Cost perspective.

Benefits-Cost Ratio: A benefit-cost ratio of 1.0 or greater indicates the program is cost-effective from the Utility Cost perspective.

Levelized Cost: This measurement attempts to put demand side resources on equal ground with supply-side resources. As with supply-side resources, the cost stream of DSM resource is discounted and then divided by the stream of kW and kWh that is expected from the program.

Payback: Number of years required for the energy benefits to equal the participants' costs for a program.

DSM Analysis Calculation Definitions

Net Present Value: Calculated as the discounted stream of program benefits minus the discounted stream of program costs using the Company's weighted average cost of capital (WACC) for resource planning.

$$\sum_{T=1}^{N} \frac{\text{Program Benefits}}{(1+\text{WACC})^{t-1}} \quad \text{(minus)} \quad \sum_{T=1}^{N} \frac{\text{Program Costs}}{(1+\text{WACC})^{t-1}}$$

Where: N = the total number of years, t = the incremental year, and WACC = the Company's weighted average cost of capital.

Benefits-Cost Ratio: Calculated as the discounted stream of program benefits divided by the discounted stream of program costs.

$$\sum_{t=1}^{N} \frac{\textbf{Program Benefits}}{(1+\text{WACC})^{t-1}} \quad \div \quad \sum_{t=1}^{N} \frac{\textbf{Program Costs}}{(1+\text{WACC})^{t-1}}$$

Levelized Costs: The present value of total costs of the resource over the life of the program in the base year divided by the discounted stream of energy or demand savings, depending on how the resource size has been defined.

$$\sum_{T=1}^{N} \frac{\textbf{Program Costs}}{(1+\text{WACC})^{t-1}} \quad \div \quad \sum_{T=1}^{N} \frac{\textbf{Energy Savings}}{(1+\text{WACC})^{t-1}}$$

Payback: Number of years from the initial program participation to the point at which the cumulative benefits exceed the cumulative undiscounted costs for participants.

Incremental Costs: The additional cost incurred by choosing to select one option over another.

Total Installed Cost of Energy Efficient Option
– Total Installed Cost of a Non-Energy Efficient Option
= Incremental Cost

Program Benefits Calculations

To quantify the "benefit" portion of the calculation five costing periods were created for the year that are consistent with the IPUC approved rate schedule 19 tariff rate pricing periods. Each costing period contains a price that reflects the alternative cost of energy and capacity at the associated time period. The alternative cost represents the cost of energy resources that would most likely be the alternative at that time period. Each time segment has a different alternative cost associated with it depending on the expected price for that period.

Two methodologies were developed, at the request of the IRPAC, to evaluate the potential benefits associated with alternative supply costs: peak oriented (gas turbine) and baseload oriented (thermal plant) resource alternatives.

The peak alternative resource methodology employs five costing periods for each year to reflect the market dynamics impacting costs associated with different times of the day or seasonally. Each costing period contains a price that reflects the alternative cost of energy and capacity at the associated time period. The alternative cost represents the cost of energy resources that would most likely be an alternative including peak plant or the market cost of energy depending upon the load profile associated with the program. Each time segment has a different alternative cost associated with it depending on the expected price for that period. The baseload alternative utilized the capacity and variable cost associated with a thermal (coal plant) alternative which applied to all hours of the year.

The results of the analyses showed all programs to be cost-effective under both the peak and the baseload alternative resource cost methodologies. All programs showed greater benefits associated using the peak resource alternative, however, the industrial efficiency program showed the showed highest benefits using the baseload analysis. This benefit differential is attributable to the unique seasonal load profiles associated with each program.

The following tables illustrate the time of day and time of year costing period definitions used in the peak static program screening analysis:

SUMMER SEASON June 1 through August 35								
Hour	**Sunday**	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**	**Holiday**
1	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP
2	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP
3	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP
4	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP
5	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP
6	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP
7	SMP	SMP	SMP	SMP	SMP	SMP	SMP	SMP
8	SMP	SMP	SMP	SMP	SMP	SMP	SMP	SMP
9	SMP	SMP	SMP	SMP	SMP	SMP	SMP	SMP
10	SMP	SMP	SMP	SMP	SMP	SMP	SMP	SMP
11	SMP	SMP	SMP	SMP	SMP	SMP	SMP	SMP
12	SMP	SMP	SMP	SMP	SMP	SMP	SMP	SMP
13	SMP	SONP	SONP	SONP	SONP	SONP	SMP	SMP
14	SMP	SONP	SONP	SONP	SONP	SONP	SMP	SMP
15	SMP	SONP	SONP	SONP	SONP	SONP	SMP	SMP
16	SMP	SONP	SONP	SONP	SONP	SONP	SMP	SMP
17	SMP	SONP	SONP	SONP	SONP	SONP	SMP	SMP
18	SMP	SONP	SONP	SONP	SONP	SONP	SMP	SMP
19	SMP	SONP	SONP	SONP	SONP	SONP	SMP	SMP
20	SMP	SONP	SONP	SONP	SONP	SONP	SMP	SMP
21	SMP	SMP	SMP	SMP	SMP	SMP	SMP	SMP
22	SMP	SMP	SMP	SMP	SMP	SMP	SMP	SMP
23	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP
24	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP

SOFP = Summer Off-Peak

SMP = Summer Mid-Peak

SONP = Summer On-Peak

NON-SUMMER SEASON September 01 through May 31								
Hour	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Holiday
1	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP
2	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP
3	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP
4	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP
5	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP
6	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP
7	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
8	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
9	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
10	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
11	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
12	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
13	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
14	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
15	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
16	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
17	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
18	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
19	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
20	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
21	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
22	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
23	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP
24	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP

NSOFP = Non-Summer Off-Peak

NSMP = Non-Summer Mid-Peak

Market prices were developed within Aurora using the Preferred Portfolio as a resource basis (May Aurora_2006IRP_P3_hrly_zone_prices_20yr So Idaho). The values beyond 20 years are extended by escalating the final year of the forward market price schedule for the additional years needed for the analysis using the Company's escalation rate of 3.0% for capital investments.

The costing period prices are calculated using the following method:

- NSMP = Average of heavy load prices in January–May and September–December.
- NSOFP = Average of light load prices in January–May and September–December.
- SOFP = Average of light load prices in June–August.
- SMP = Average of heavy load prices in June–August.
- SONP = IPC variable energy and operating cost of a 162 MW Simple-Cycle Gas Turbine
- Annual = IPC variable energy and operating cost of thermal coal plant

The following table shows the schedule of variable and market alternative costs used to calculate the benefit value of each program in the static analysis:

	Alternative Energy Cost					
	IPC Variable Peak Cost $/KW	Seasonal Market Price Forecast ($/MWh)				IPC Variable Base Load $/KW
Year	SONP	SMP	SOFP	NSMP	NSOFP	Annual
1	$91.08	$68.57	$51.54	$77.61	$65.59	$15.93
2	$95.30	$69.89	$51.61	$78.95	$65.64	$15.91
3	$88.97	$65.98	$48.07	$68.96	$55.61	$15.80
4	$88.12	$66.39	$48.52	$68.15	$55.39	$15.80
5	$67.14	$50.43	$37.03	$52.75	$42.31	$15.27
6	$67.81	$55.93	$41.28	$54.30	$42.99	$15.43
7	$68.94	$67.85	$50.72	$64.61	$51.51	$31.14
8	$71.25	$71.71	$54.18	$68.18	$54.33	$31.84
9	$73.30	$74.02	$56.01	$70.06	$56.05	$32.88
10	$75.73	$78.45	$59.19	$74.07	$59.74	$33.43
11	$78.91	$82.40	$62.08	$78.96	$63.83	$34.43
12	$82.37	$90.38	$66.94	$86.37	$69.54	$35.34
13	$85.26	$92.36	$70.70	$90.27	$72.64	$36.43
14	$89.35	$98.01	$75.25	$95.24	$76.92	$37.61
15	$92.64	$102.92	$79.15	$100.11	$80.34	$38.67
16	$86.04	$97.28	$75.60	$94.42	$76.63	$39.40
17	$89.19	$104.05	$80.51	$101.25	$81.28	$40.54
18	$93.13	$108.84	$84.94	$105.87	$85.53	$41.53
19	$95.86	$114.48	$90.26	$111.23	$90.19	$42.77
20	$99.47	$120.35	$96.05	$118.21	$95.55	$44.00
21	$93.36	$123.96	$98.93	$121.75	$98.42	$45.23
22	$97.22	$127.68	$101.90	$125.40	$101.37	$49.65
23	$100.74	$131.51	$104.95	$129.17	$104.41	$51.20
24	$104.46	$135.46	$108.10	$133.04	$107.55	$52.82
25	$108.97	$139.52	$111.35	$137.03	$110.77	$54.49
26	$110.64	$143.71	$114.69	$141.14	$114.10	$57.01
27	$112.32	$148.02	$118.13	$145.38	$117.52	$58.85
28	$114.01	$152.46	$121.67	$149.74	$121.04	$60.75
29	$115.71	$157.03	$125.32	$154.23	$124.68	$62.79
30	$117.42	$161.74	$129.08	$158.86	$128.42	$64.84

Fixed plant costs were combined with the variable costs for developing total alternative costs. For the peak alternative, a 162MW Simple Cycle Combustion Turbine plant was used as the cost basis, for the baseload alternative, a coal thermal plant served as the cost basis. The levelized capacity cost factors applied were $64.92/KW (peak) and $247.52(baseload).

DSM program analysis includes the assumption that the energy savings will continue beyond the measure life time period for each program participant. This assumption is based on the principle that it is reasonable to assume that once a person participates in the program, they will not revert back to a less efficient behavior after the measure life expires. As a result, the energy savings schedule for each program shows a ramp-up period followed by a sustained maximum level for the entire analysis period. In the 2004 IRP the total period for analysis was 20 years. For the 2006 IRP this period was 30 years.

Dynamic Modeling

The results of the levelized cost analysis showed that the proposed DSM programs had sufficiently lower costs than all but the geothermal supply-side resources. This result allowed the DSM portfolio to be included in the dynamic modeling (Aurora simulation model) as a fixed resource for all supply-side alternative portfolio analyses. This approach differs from the analysis in the 2004 IRP where the programs were introduced in an equivalent manner as were the supply-side resources to determine the beneficial impacts to the overall resource portfolio.

The following tables show the annual costs and energy savings associated with the DSM programs.

Energy Savings
MWh (Net of Transmission Losses)

Year	All Programs	Residential Retro	Commercial Retro	Industrial Expansion
2006				
2007	23,280	6,462	8,817	8,000
2008	64,753	20,639	24,451	19,663
2009	158,607	60,980	58,301	39,327
2010	244,160	99,554	85,615	58,990
2011	320,054	134,876	106,525	78,653
2012	387,019	165,874	122,828	98,316
2013	446,812	192,391	136,441	117,980
2014	499,130	214,746	146,741	137,643
2015	544,700	233,456	153,938	157,306
2016	585,249	249,083	159,197	176,970
2017	604,010	248,180	159,197	196,633
2018	624,520	248,987	159,237	216,296
2019	645,510	249,796	159,754	235,960
2020	666,299	250,483	160,193	255,623
2021	686,887	251,047	160,554	275,286
2022	707,270	251,486	160,835	294,949
2023	727,346	251,738	160,996	314,613
2024	747,319	251,926	161,116	334,276
2025	767,085	251,989	161,157	353,939
2026	786,749	251,989	161,157	373,603
2027	786,749	251,989	161,157	373,603
2028	786,749	251,989	161,157	373,603
2029	786,749	251,989	161,157	373,603
2030	786,749	251,989	161,157	373,603
2031	786,749	251,989	161,157	373,603
2032	786,749	251,989	161,157	373,603
2033	786,749	251,989	161,157	373,603
2034	786,749	251,989	161,157	373,603
2035	786,749	251,989	161,157	373,603
2036	786,749	251,989	161,157	373,603

Average Peak Reduction
aMW (Net of Transmission Losses)

Year	All Programs	Residential Retro	Commercial Retro	Industrial Expansion
2006				
2007	2.7	0.7	1.0	0.9
2008	7.4	2.4	2.8	2.2
2009	18.1	7.0	6.7	4.5
2010	27.9	11.4	9.8	6.7
2011	36.5	15.4	12.2	9.0
2012	44.2	18.9	14.0	11.2
2013	51.0	22.0	15.6	13.5
2014	57.0	24.5	16.8	15.7
2015	62.2	26.7	17.6	18.0
2016	66.8	28.4	18.2	20.2
2017	69.0	28.3	18.2	22.4
2018	71.3	28.4	18.2	24.7
2019	73.7	28.5	18.2	26.9
2020	76.1	28.6	18.3	29.2
2021	78.4	28.7	18.3	31.4
2022	80.7	28.7	18.4	33.7
2023	83.0	28.7	18.4	35.9
2024	85.3	28.8	18.4	38.2
2025	87.6	28.8	18.4	40.4
2026	89.8	28.8	18.4	42.6
2027	89.8	28.8	18.4	42.6
2028	89.8	28.8	18.4	42.6
2029	89.8	28.8	18.4	42.6
2030	89.8	28.8	18.4	42.6
2031	89.8	28.8	18.4	42.6
2032	89.8	28.8	18.4	42.6
2033	89.8	28.8	18.4	42.6
2034	89.8	28.8	18.4	42.6
2035	89.8	28.8	18.4	42.6
2036	89.8	28.8	18.4	42.6

July Peak Reduction
aMW (Net of Transmission Losses)

Year	All Programs	Residential Retro	Commercial Retro	Industrial Expansion
2006				
2007	4.4	1.9	1.5	1.1
2008	15.8	9.1	4.1	2.6
2009	44.7	29.7	9.8	5.2
2010	70.6	48.3	14.4	7.9
2011	91.8	63.4	17.9	10.5
2012	110.4	76.6	20.7	13.1
2013	126.6	88.0	22.9	15.7
2014	140.5	97.5	24.7	18.3
2015	152.3	105.5	25.9	20.9
2016	162.5	112.2	26.8	23.6
2017	165.1	112.2	26.8	26.2
2018	167.7	112.1	26.8	28.8
2019	170.7	112.4	26.9	31.4
2020	173.6	112.6	26.9	34.0
2021	176.5	112.8	27.0	36.7
2022	179.2	112.9	27.0	39.3
2023	181.9	113.0	27.1	41.9
2024	184.6	113.0	27.1	44.5
2025	187.2	113.0	27.1	47.1
2026	189.9	113.0	27.1	49.8
2027	189.9	113.0	27.1	49.8
2028	189.9	113.0	27.1	49.8
2029	189.9	113.0	27.1	49.8
2030	189.9	113.0	27.1	49.8
2031	189.9	113.0	27.1	49.8
2032	189.9	113.0	27.1	49.8
2033	189.9	113.0	27.1	49.8
2034	189.9	113.0	27.1	49.8
2035	189.9	113.0	27.1	49.8
2036	189.9	113.0	27.1	49.8

Utility Costs
(000's–2006 dollars)

Year	All Programs	Residential Retro	Commercial Retro	Industrial Expansion
2006				
2007	$3,679	$1,363	$1,408	$908
2008	$6,437	$2,860	$2,102	$1,475
2009	$19,281	$10,728	$4,723	$3,830
2010	$19,186	$10,793	$4,608	$3,785
2011	$18,753	$10,517	$4,529	$3,707
2012	$18,067	$9,898	$4,539	$3,631
2013	$17,854	$9,148	$4,655	$4,050
2014	$16,424	$8,382	$4,078	$3,964
2015	$14,923	$7,663	$3,379	$3,880
2016	$14,336	$7,021	$3,064	$4,251
2017	$5,414	$750	$505	$4,159
2018	$5,274	$750	$454	$4,069
2019	$5,104	$713	$409	$3,982
2020	$5,343	$675	$368	$4,300
2021	$5,212	$675	$331	$4,206
2022	$5,051	$638	$298	$4,115
2023	$4,895	$600	$268	$4,027
2024	$4,745	$563	$241	$3,941
2025	$4,947	$525	$217	$4,205
2026	$4,797	$488	$196	$4,114

Total Resource Cost
(000's–2006 dollars)

Year	All Programs	Residential Retro	Commercial Retro	Industrial Expansion
2006				
2007	$7,349	$2,992	$3,037	$1,320
2008	$15,496	$5,448	$4,562	$5,486
2009	$33,912	$16,185	$10,002	$7,725
2010	$32,708	$16,210	$8,931	$7,567
2011	$30,965	$15,693	$7,894	$7,378
2012	$29,068	$14,651	$7,223	$7,195
2013	$27,843	$13,405	$6,927	$7,511
2014	$25,318	$12,142	$5,852	$7,324
2015	$22,796	$10,962	$4,693	$7,142
2016	$21,407	$9,913	$4,077	$7,418
2017	$9,508	$1,550	$725	$7,233
2018	$9,044	$1,367	$622	$7,054
2019	$8,612	$1,193	$538	$6,880
2020	$8,630	$1,048	$469	$7,113
2021	$8,305	$956	$412	$6,938
2022	$7,985	$854	$363	$6,767
2023	$7,691	$768	$321	$6,602
2024	$7,426	$699	$286	$6,441
2025	$7,525	$638	$255	$6,632
2026	$7,282	$583	$228	$6,470

DSM Portfolio Options–2006 IRP

	Savings *			Present Value Costs (000s)		Levelized Costs		B/C Ratio		Payback **
	aMW	Summer Peak MW	Annual Energy MWh	Utility Cost	TRC Cost	UC ($/kWh)	TRC ($/kWh)	UC	TRC	
Residential Existing	29	113	251,926	$63,768	$96,372	$0.03	$0.04	4	2.6	3
Commercial Existing	18	27	161,157	$31,903	$54,381	$0.02	$0.04	4.3	3.1	3.4
Industrial Expansion	43	47	373,603	$48,334	$88,856	$0.02	$0.04	3.9	2.2	3.4
Total	90	187	786,686	$144,005	$239,609					

* Based on Cumulative Savings in 2025
** Based on December 2005 Rate Schedule

Monthly Average Energy Surplus/Deficiency Data

50th Percentile Water, 50th Percentile Load, 90th Percentile Peak-Hour Load[1]

Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2006	37	666	437	556	285	232	0	0	54	196	0	159
2007	30	668	505	650	263	119	0	0	34	180	0	152
2008	0	643	485	752	230	99	0	0	14	157	0	121
2009	0	572	455	724	190	84	0	0	0	125	0	86
2010	0	495	422	603	163	61	0	0	0	90	0	109
2011	0	535	413	597	134	24	0	0	0	66	0	87
2012	0	492	393	579	114	0	(21)	0	0	43	0	59
2013	0	422	359	551	82	0	(65)	0	0	9	0	24
2014	0	347	321	515	43	0	(121)	0	0	0	0	0
2015	0	255	288	485	9	0	(171)	(34)	0	0	0	0
2016	0	180	255	455	0	0	(225)	(83)	0	0	0	0
2017	0	104	222	425	0	0	(277)	(134)	0	0	0	(38)
2018	0	69	188	394	(11)	0	(331)	(187)	0	(81)	0	(75)
2019	0	34	153	362	(46)	0	(384)	(240)	(25)	(129)	(8)	(112)
2020	(65)	1	118	331	(81)	(1)	(440)	(296)	(69)	(167)	(44)	(150)
2021	(103)	(37)	82	298	(117)	(49)	(497)	(353)	(114)	(205)	(81)	(189)
2022	(142)	(74)	45	265	(154)	(99)	(559)	(409)	(160)	(245)	(118)	(228)
2023	(181)	(111)	8	231	(192)	(149)	(619)	(468)	(207)	(285)	(157)	(268)
2024	(221)	(147)	(29)	197	(230)	(201)	(678)	(528)	(255)	(325)	(195)	(308)
2025	(260)	(187)	(67)	163	(269)	(253)	(741)	(590)	(303)	(366)	(234)	(348)

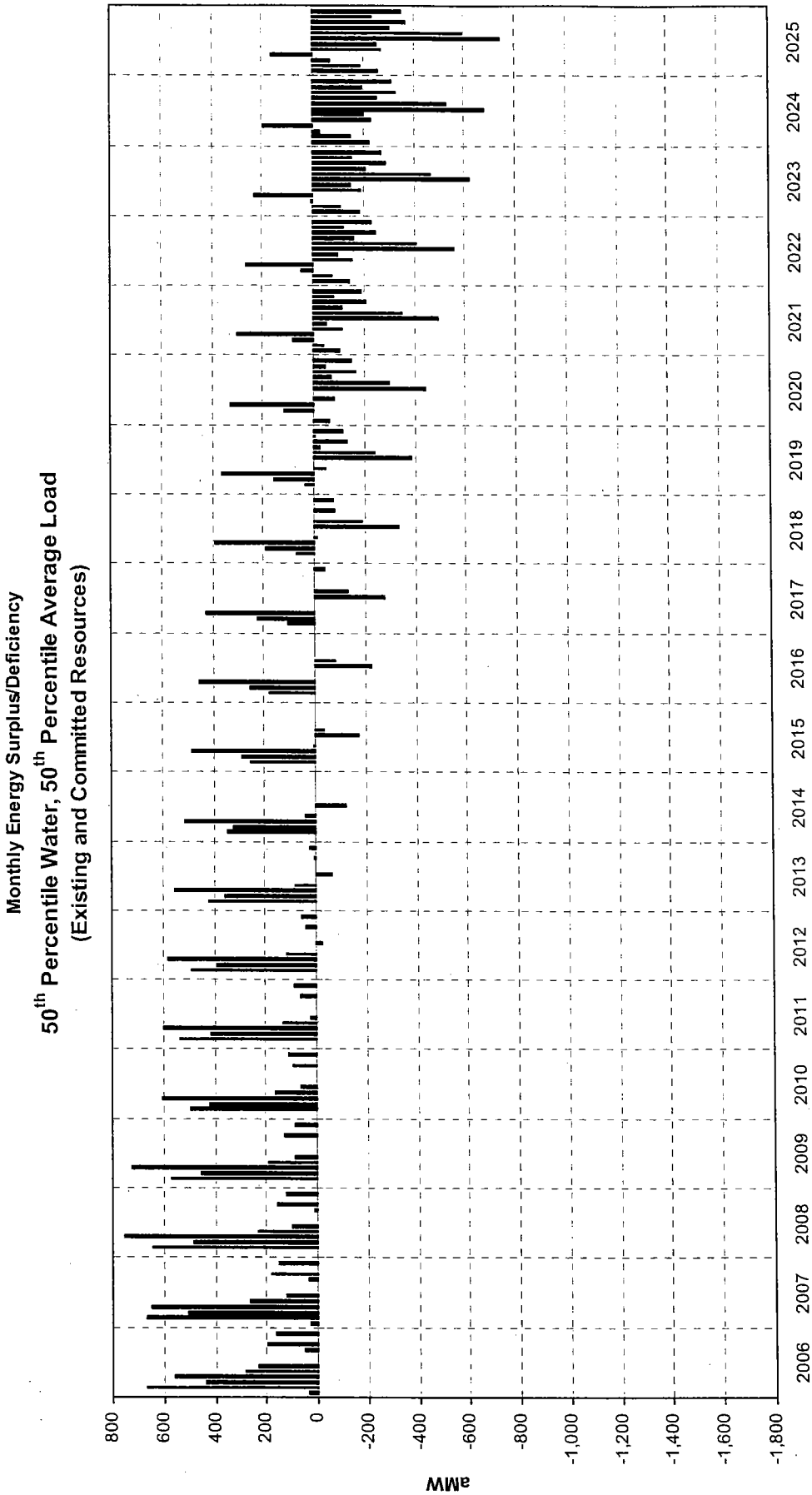
70th Percentile Water, 70th Percentile Load, 90th Percentile Peak-Hour Load[1]

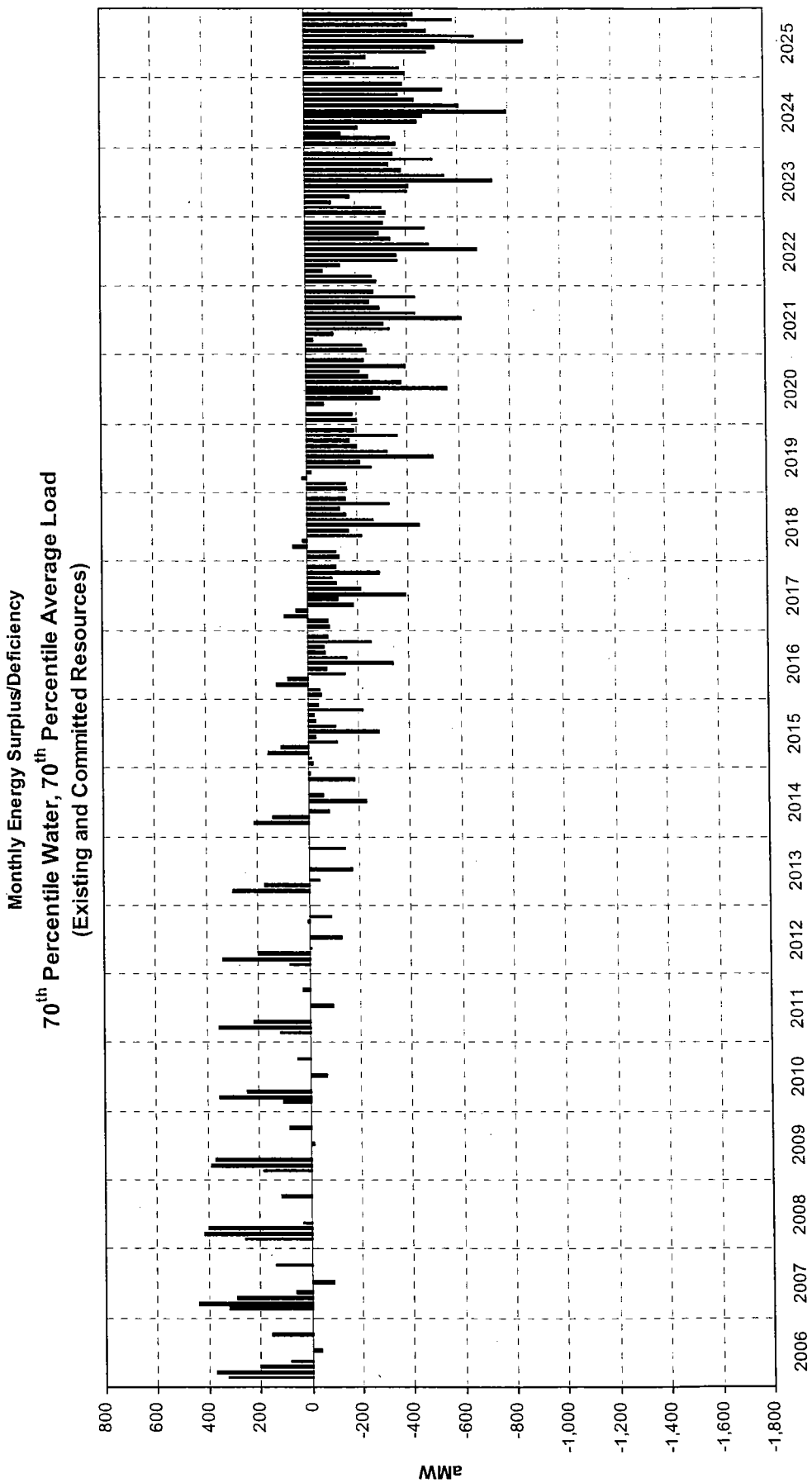
Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2006	0	326	370	201	83	0	(35)	0	0	154	0	0
2007	0	319	438	294	62	0	(88)	0	0	139	0	0
2008	0	255	417	396	29	0	0	0	0	115	0	0
2009	0	185	386	368	0	0	(15)	0	0	83	0	0
2010	0	107	354	247	0	0	(67)	0	0	48	0	0
2011	0	118	355	220	0	0	(93)	0	0	23	0	0
2012	0	75	335	201	(11)	0	(128)	0	0	1	(87)	0
2013	0	0	296	173	(43)	0	(173)	(1)	0	0	(145)	0
2014	0	0	213	137	(82)	0	(229)	(57)	0	0	(185)	(7)
2015	(18)	(15)	153	106	(117)	(32)	(281)	(109)	(31)	(28)	(219)	(43)
2016	(53)	(46)	120	76	(150)	(76)	(335)	(158)	(72)	(63)	(253)	(79)
2017	(89)	(82)	87	45	(184)	(120)	(388)	(210)	(114)	(99)	(287)	(116)
2018	(126)	(117)	52	14	(219)	(166)	(443)	(264)	(157)	(135)	(322)	(153)
2019	(163)	(153)	17	(17)	(255)	(215)	(497)	(318)	(200)	(172)	(358)	(191)
2020	(200)	(186)	0	(71)	(291)	(261)	(554)	(375)	(244)	(210)	(394)	(229)
2021	(239)	(225)	(32)	(108)	(328)	(310)	(611)	(432)	(290)	(249)	(432)	(269)
2022	(278)	(262)	(70)	(141)	(365)	(360)	(675)	(489)	(337)	(289)	(470)	(308)
2023	(318)	(300)	(107)	(175)	(404)	(411)	(736)	(549)	(384)	(329)	(508)	(349)
2024	(357)	(336)	(145)	(210)	(442)	(465)	(796)	(610)	(433)	(369)	(547)	(389)
2025	(398)	(377)	(184)	(245)	(482)	(518)	(859)	(672)	(481)	(411)	(586)	(430)

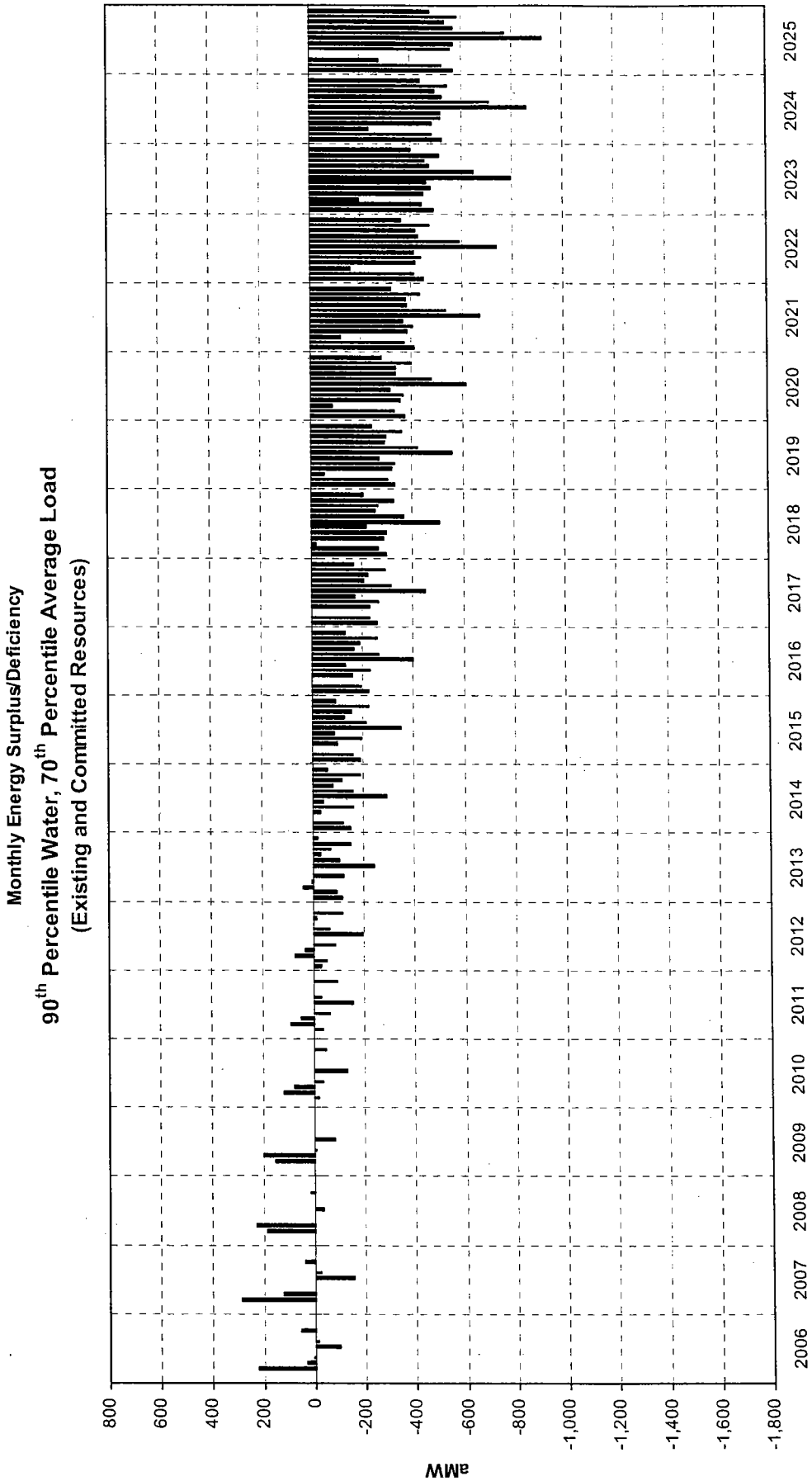
90th Percentile Water, 70th Percentile Load, 95th Percentile Peak-Hour Load[1]

Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2006	0	0	224	35	10	0	(97)	(12)	0	59	0	0
2007	0	0	285	128	0	0	(150)	(20)	0	44	0	0
2008	0	0	192	230	0	0	(32)	0	0	20	0	0
2009	0	0	153	202	(4)	0	(77)	0	0	0	0	0
2010	0	(13)	121	81	(32)	0	(129)	(0)	0	0	(42)	0
2011	0	(33)	94	53	(63)	0	(155)	(25)	0	0	(90)	0
2012	(29)	(50)	74	34	(85)	0	(190)	(59)	0	(11)	(113)	0
2013	(110)	(87)	40	6	(117)	0	(235)	(103)	(29)	(69)	(146)	(14)
2014	(144)	(119)	1	(29)	(156)	(41)	(291)	(159)	(77)	(114)	(186)	(55)
2015	(186)	(160)	0	(97)	(191)	(83)	(343)	(211)	(121)	(151)	(220)	(91)
2016	(221)	(191)	0	(159)	(224)	(127)	(397)	(260)	(162)	(188)	(254)	(127)
2017	(257)	(227)	0	(228)	(258)	(171)	(450)	(312)	(204)	(222)	(288)	(164)
2018	(294)	(262)	(13)	(285)	(293)	(217)	(505)	(366)	(247)	(258)	(323)	(201)
2019	(331)	(298)	(48)	(317)	(329)	(266)	(559)	(420)	(290)	(295)	(359)	(239)
2020	(368)	(331)	(83)	(349)	(365)	(312)	(616)	(477)	(334)	(335)	(395)	(277)
2021	(407)	(370)	(119)	(382)	(402)	(361)	(673)	(534)	(380)	(372)	(433)	(317)
2022	(446)	(407)	(157)	(415)	(439)	(411)	(737)	(591)	(427)	(412)	(471)	(356)
2023	(486)	(445)	(194)	(449)	(478)	(462)	(798)	(651)	(474)	(452)	(509)	(397)
2024	(525)	(481)	(232)	(484)	(516)	(516)	(858)	(712)	(523)	(494)	(548)	(437)
2025	(566)	(522)	(271)	(519)	(556)	(569)	(921)	(774)	(571)	(534)	(587)	(478)

[1] Final values after thermal peaking resources were applied.


Monthly Energy Surplus/Deficiency
50th Percentile Water, 50th Percentile Average Load
(Existing and Committed Resources)
aMW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Monthly Energy Surplus/Deficiency
70th Percentile Water, 70th Percentile Average Load
(Existing and Committed Resources)
aMW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Monthly Energy Surplus/Deficiency
90th Percentile Water, 70th Percentile Average Load
(Existing and Committed Resources)
aMW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025

Monthly Peak-Hour Load Deficiency Data

50th Percentile Water, 50th Percentile Average Load, 90th Percentile Peak-Hour Load[1]

Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2006	0	0	0	0	0	(64)	(175)	0	0	0	0	0
2007	0	0	0	0	0	(131)	(263)	0	0	0	0	0
2008	0	0	0	0	(42)	(177)	(319)	(13)	0	0	0	0
2009	0	0	0	0	(96)	(225)	(383)	(270)	(78)	0	0	0
2010	0	0	0	0	(159)	(287)	(467)	(187)	(105)	0	0	0
2011	0	0	0	0	(225)	(359)	(525)	(204)	(187)	0	0	0
2012	0	0	0	0	(281)	(428)	(595)	(265)	(242)	0	0	0
2013	0	0	0	0	(348)	(501)	(678)	(325)	(470)	0	0	0
2014	0	0	0	0	(417)	(588)	(770)	(427)	(371)	0	0	0
2015	0	0	0	0	(478)	(660)	(859)	(712)	(485)	0	0	0
2016	0	0	0	0	(545)	(751)	(951)	(622)	(527)	0	0	(9)
2017	0	0	0	0	(611)	(835)	(1,044)	(669)	(538)	0	0	(66)
2018	0	0	0	0	(674)	(920)	(1,170)	(785)	(646)	0	0	(127)
2019	0	0	0	0	(745)	(1,000)	(1,232)	(840)	(871)	0	(9)	(182)
2020	0	0	0	0	(671)	(1,138)	(1,323)	(961)	(771)	0	(46)	(251)
2021	(28)	0	0	0	(872)	(1,166)	(1,470)	(1,075)	(801)	0	(88)	(310)
2022	(71)	0	0	0	(940)	(1,263)	(1,522)	(1,164)	(922)	0	(130)	(360)
2023	(113)	0	0	0	(1,007)	(1,352)	(1,681)	(1,197)	(972)	0	(174)	(421)
2024	(159)	0	0	0	(1,072)	(1,435)	(1,800)	(1,313)	(1,049)	0	(332)	(491)
2025	(204)	0	0	0	(1,145)	(1,531)	(1,827)	(1,417)	(1,097)	0	(261)	(553)

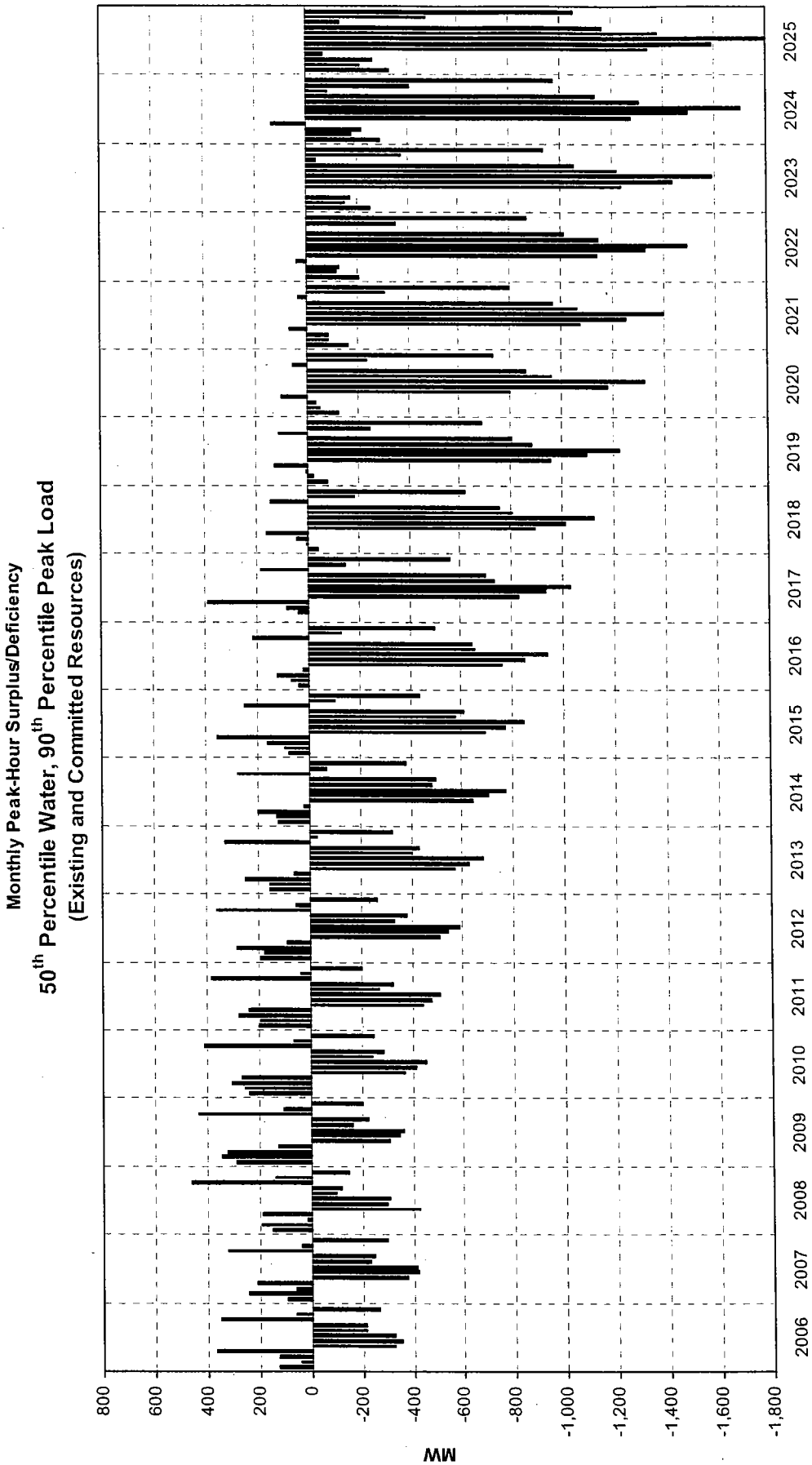
70th Percentile Water, 70th Percentile Average Load, 95th Percentile Peak-Hour Load[1]

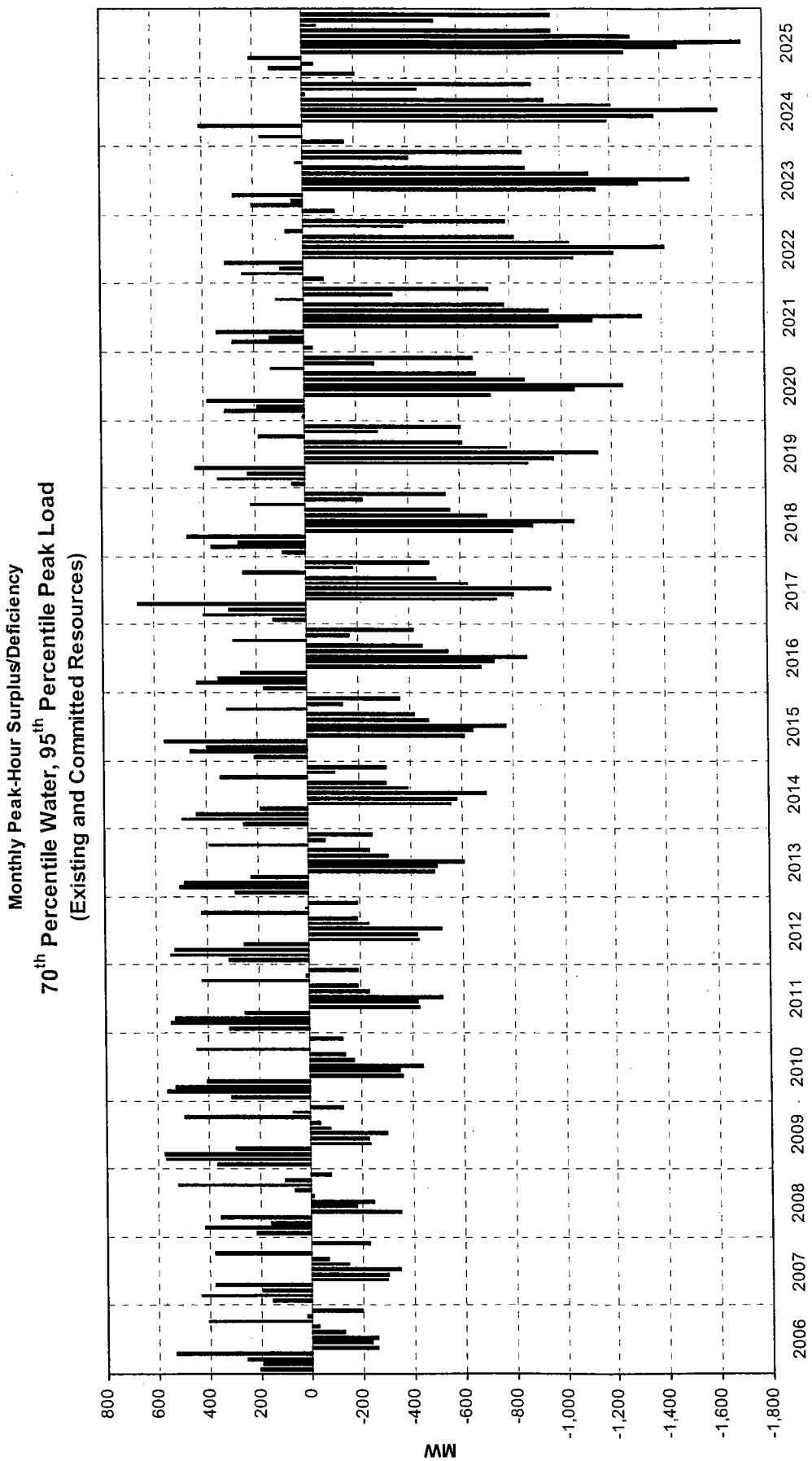
Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2006	0	0	0	0	(15)	(85)	(213)	(20)	0	0	0	0
2007	0	0	0	0	(60)	(154)	(302)	(20)	(32)	0	0	(2)
2008	0	0	0	0	(112)	(196)	(357)	(59)	(80)	0	0	(26)
2009	0	0	0	0	(173)	(256)	(426)	(324)	(152)	0	0	(78)
2010	0	0	0	0	(236)	(321)	(512)	(245)	(209)	0	0	(119)
2011	0	0	0	0	(303)	(383)	(567)	(270)	(265)	0	0	(87)
2012	0	0	0	0	(361)	(452)	(663)	(339)	(324)	0	0	(136)
2013	0	0	0	0	(422)	(528)	(723)	(364)	(543)	0	0	(195)
2014	0	0	0	0	(494)	(608)	(815)	(478)	(450)	0	0	(254)
2015	0	0	0	0	(561)	(692)	(907)	(771)	(570)	0	0	(312)
2016	0	0	0	0	(627)	(775)	(998)	(691)	(612)	0	0	(370)
2017	0	0	0	0	(692)	(859)	(1,092)	(738)	(649)	0	0	(429)
2018	0	0	0	0	(759)	(944)	(1,254)	(865)	(734)	0	(6)	(492)
2019	(36)	0	0	0	(825)	(1,028)	(1,283)	(884)	(953)	0	(47)	(550)
2020	(83)	0	0	0	(770)	(1,227)	(1,379)	(1,036)	(850)	0	(87)	(610)
2021	(129)	0	0	0	(961)	(1,200)	(1,558)	(1,143)	(907)	0	(129)	(671)
2022	(173)	0	0	0	(1,029)	(1,288)	(1,577)	(1,236)	(1,017)	0	(170)	(735)
2023	(216)	0	(5)	0	(1,094)	(1,375)	(1,773)	(1,246)	(1,064)	0	(215)	(798)
2024	(259)	0	(54)	0	(1,163)	(1,464)	(1,898)	(1,368)	(1,150)	0	(368)	(863)
2025	(306)	0	(108)	0	(1,231)	(1,553)	(1,886)	(1,478)	(1,185)	0	(301)	(927)

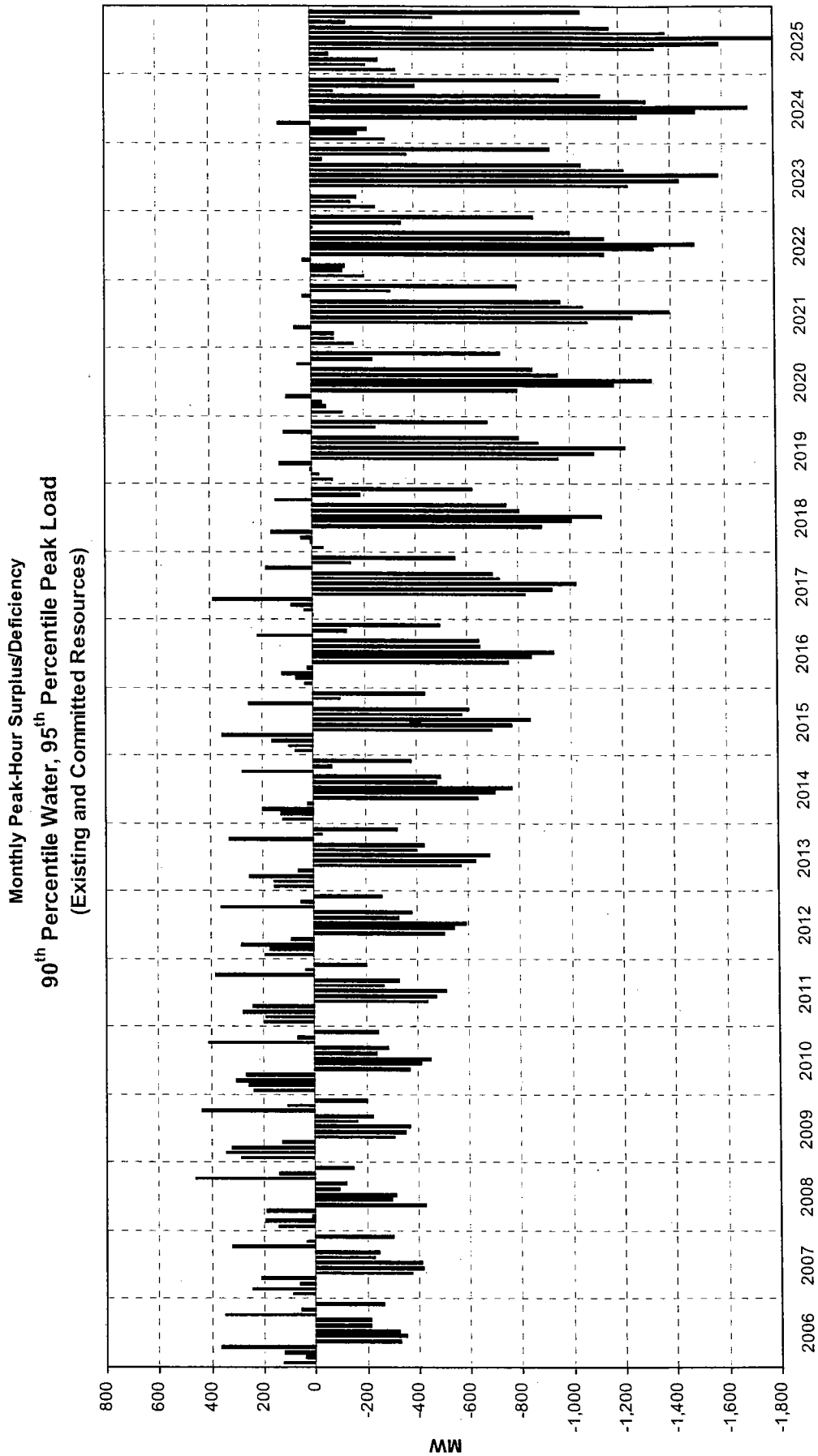
90th Percentile Water, 70th Percentile Average Load, 95th Percentile Peak-Hour Load[1]

Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2006	0	0	0	0	(32)	(116)	(243)	(74)	(102)	0	0	0
2007	0	0	0	0	(75)	(215)	(366)	(125)	(187)	0	0	(8)
2008	0	0	0	0	(129)	(231)	(387)	(161)	(232)	0	0	(32)
2009	0	0	0	0	(187)	(320)	(455)	(412)	(347)	0	0	(85)
2010	0	0	0	0	(251)	(350)	(596)	(329)	(298)	0	0	(127)
2011	0	0	0	0	(316)	(412)	(598)	(359)	(463)	0	0	(95)
2012	0	0	0	0	(376)	(538)	(747)	(424)	(520)	0	0	(144)
2013	0	0	0	0	(439)	(563)	(753)	(449)	(743)	0	0	(203)
2014	0	0	0	0	(512)	(643)	(845)	(590)	(646)	0	0	(262)
2015	0	0	0	0	(575)	(785)	(938)	(869)	(770)	0	0	(320)
2016	0	0	0	0	(641)	(805)	(1,032)	(785)	(810)	0	0	(377)
2017	(13)	0	0	0	(708)	(919)	(1,126)	(798)	(825)	0	0	(435)
2018	(54)	0	0	0	(775)	(1,052)	(1,343)	(954)	(933)	0	0	(498)
2019	(96)	0	0	0	(842)	(1,063)	(1,319)	(969)	(1,154)	0	(26)	(560)
2020	(140)	0	0	0	(776)	(1,364)	(1,417)	(1,126)	(1,050)	0	(63)	(618)
2021	(190)	0	(35)	0	(985)	(1,230)	(1,650)	(1,242)	(1,001)	0	(105)	(679)
2022	(234)	0	(82)	0	(1,042)	(1,317)	(1,621)	(1,334)	(1,214)	0	(147)	(742)
2023	(275)	(6)	(130)	0	(1,161)	(1,410)	(1,864)	(1,331)	(1,262)	0	(191)	(806)
2024	(319)	(38)	(179)	0	(1,178)	(1,499)	(1,991)	(1,433)	(1,349)	(6)	(327)	(870)
2025	(367)	(74)	(232)	0	(1,283)	(1,589)	(1,934)	(1,598)	(1,385)	(19)	(280)	(934)

[1] Final values after thermal peaking resources were applied.


Monthly Peak-Hour Surplus/Deficiency
50th Percentile Water, 90th Percentile Peak Load
(Existing and Committed Resources)
MW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Monthly Peak-Hour Surplus/Deficiency
70th Percentile Water, 95th Percentile Peak Load
(Existing and Committed Resources)
MW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Monthly Peak-Hour Surplus/Deficiency
90th Percentile Water, 95th Percentile Peak Load
(Existing and Committed Resources)
MW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025

Monthly Northwest Transmission Constraint Deficiency Data

50th Percentile Water, 50th Percentile Average Load, 90th Percentile Peak-Hour Load[1]

Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2006	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	(12)	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	(51)	0	0	0	0	0
2011	0	0	0	0	0	0	(108)	0	0	0	0	0
2012	0	0	0	0	0	(5)	(179)	0	0	0	0	0
2013	0	0	0	0	0	(78)	(262)	0	(43)	0	0	0
2014	0	0	0	0	0	(165)	(354)	(5)	0	0	0	0
2015	0	0	0	0	(46)	(237)	(443)	(290)	(58)	0	0	0
2016	0	0	0	0	(113)	(328)	(534)	(199)	(100)	0	0	0
2017	0	0	0	0	(180)	(412)	(627)	(247)	(110)	0	0	0
2018	0	0	0	0	(242)	(497)	(754)	(363)	(219)	0	0	0
2019	0	0	0	0	(314)	(577)	(815)	(418)	(444)	0	0	0
2020	0	0	0	0	(239)	(715)	(906)	(539)	(344)	0	0	0
2021	0	0	0	0	(441)	(743)	(1,054)	(652)	(374)	0	0	0
2022	0	0	0	0	(508)	(840)	(1,106)	(741)	(495)	0	0	0
2023	0	0	0	0	(576)	(929)	(1,265)	(774)	(545)	0	0	0
2024	0	0	0	0	(640)	(1,012)	(1,384)	(891)	(621)	0	0	(43)
2025	0	0	0	0	(713)	(1,108)	(1,410)	(995)	(670)	0	0	(105)

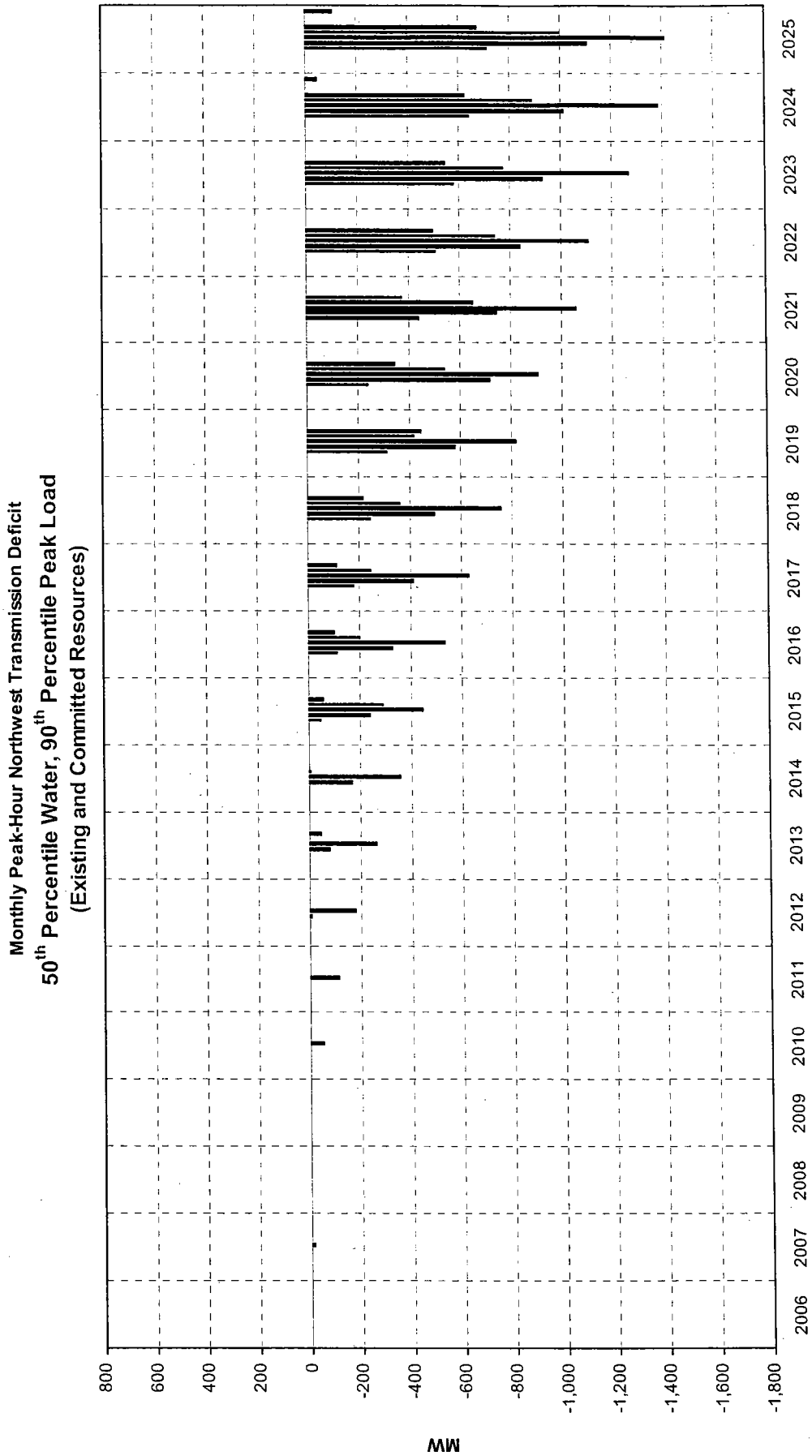
70th Percentile Water, 70th Percentile Average Load, 95th Percentile Peak-Hour Load[1]

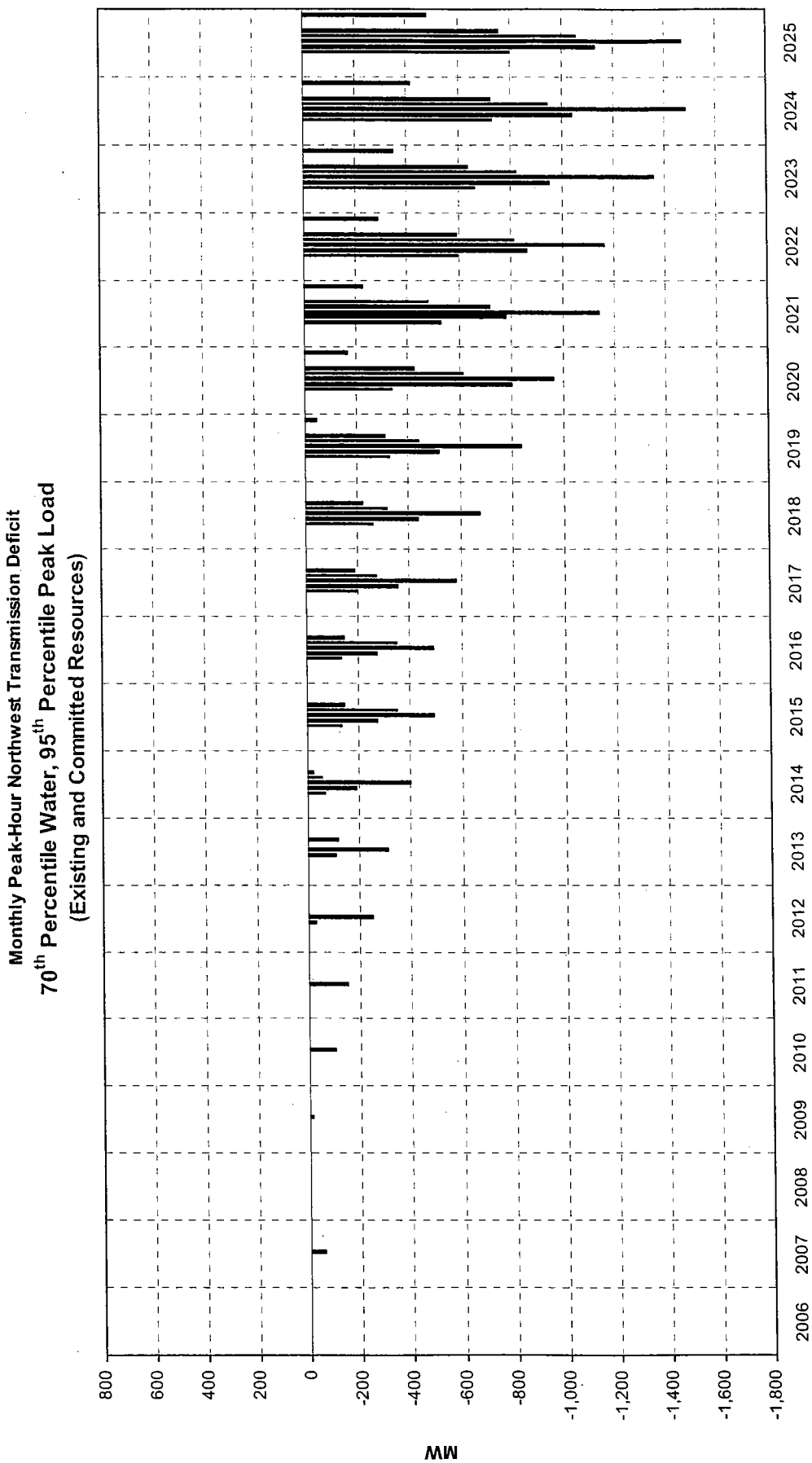
Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2006	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	(51)	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	(10)	0	0	0	0	0
2010	0	0	0	0	0	0	(96)	0	0	0	0	0
2011	0	0	0	0	0	0	(151)	0	0	0	0	0
2012	0	0	0	0	0	(29)	(247)	0	0	0	0	0
2013	0	0	0	0	0	(105)	(307)	0	(116)	0	0	0
2014	0	0	0	0	(63)	(185)	(399)	(56)	(23)	0	0	0
2015	0	0	0	0	(129)	(269)	(490)	(348)	(143)	0	0	0
2016	0	0	0	0	(196)	(353)	(582)	(268)	(185)	0	0	0
2017	0	0	0	0	(260)	(436)	(676)	(316)	(221)	0	0	0
2018	0	0	0	0	(328)	(521)	(838)	(443)	(307)	0	0	(43)
2019	0	0	0	0	(393)	(606)	(866)	(461)	(526)	0	0	(101)
2020	0	0	0	0	(338)	(804)	(963)	(614)	(423)	0	0	(162)
2021	0	0	0	0	(529)	(778)	(1,142)	(721)	(480)	0	0	(223)
2022	0	0	0	0	(597)	(865)	(1,161)	(814)	(589)	0	0	(287)
2023	0	0	0	0	(663)	(952)	(1,356)	(824)	(637)	0	0	(350)
2024	0	0	0	0	(731)	(1,042)	(1,482)	(945)	(723)	0	0	(414)
2025	0	0	0	0	(800)	(1,130)	(1,470)	(1,056)	(758)	0	0	(478)

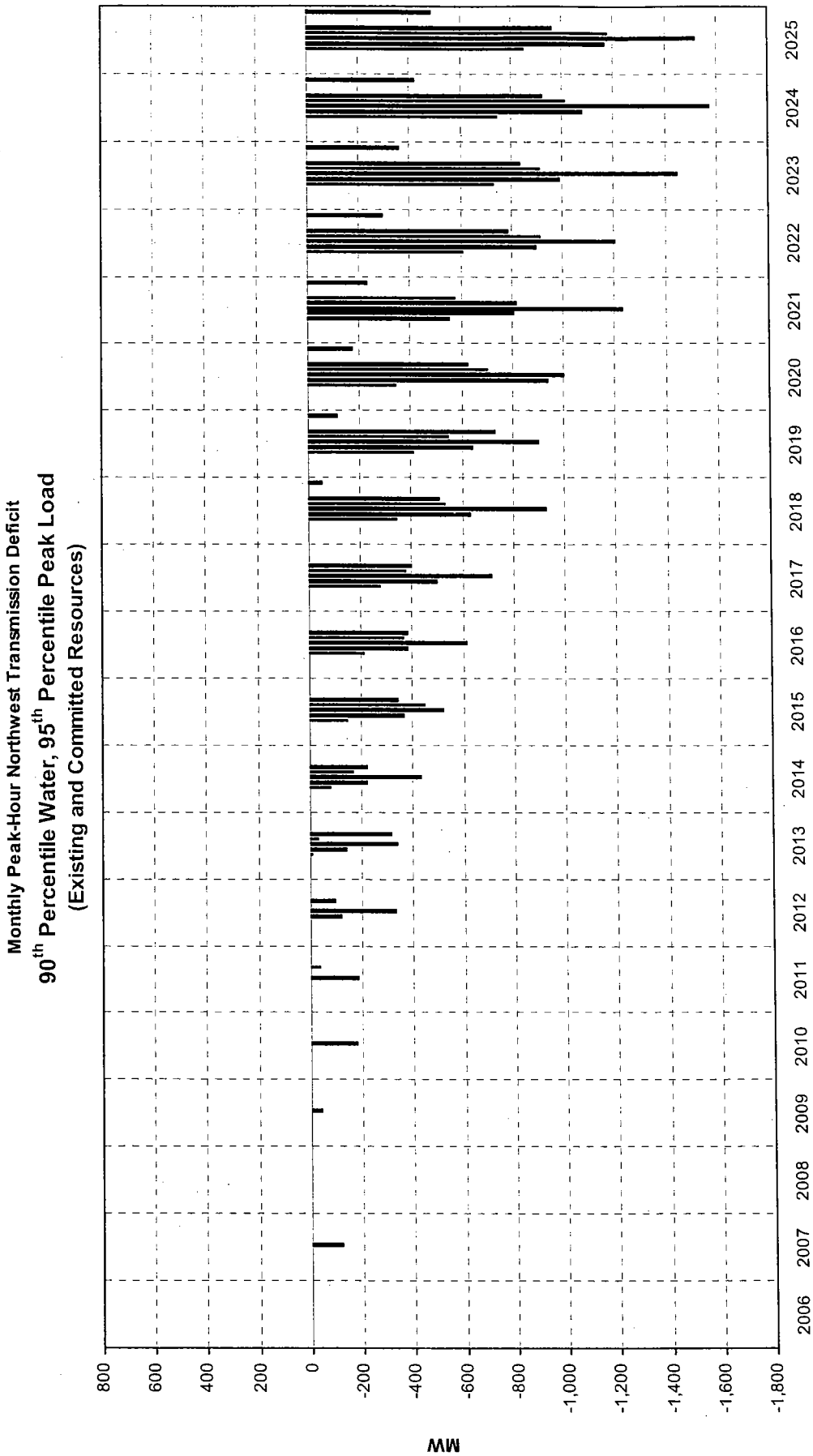
90th Percentile Water, 70th Percentile Average Load, 95th Percentile Peak-Hour Load[1]

Year	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2006	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	(115)	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	(39)	0	0	0	0	0
2010	0	0	0	0	0	0	(179)	0	0	0	0	0
2011	0	0	0	0	0	0	(181)	0	(35)	0	0	0
2012	0	0	0	0	0	(115)	(331)	(1)	(93)	0	0	0
2013	0	0	0	0	(8)	(140)	(336)	(27)	(316)	0	0	0
2014	0	0	0	0	(80)	(220)	(428)	(168)	(219)	0	0	0
2015	0	0	0	0	(144)	(362)	(522)	(446)	(343)	0	0	0
2016	0	0	0	0	(209)	(382)	(615)	(362)	(383)	0	0	0
2017	0	0	0	0	(277)	(496)	(710)	(376)	(398)	0	0	0
2018	0	0	0	0	(343)	(629)	(927)	(532)	(506)	0	0	(50)
2019	0	0	0	0	(411)	(640)	(903)	(546)	(727)	0	0	(112)
2020	0	0	0	0	(344)	(941)	(1,001)	(704)	(622)	0	0	(170)
2021	0	0	0	0	(553)	(807)	(1,234)	(820)	(574)	0	0	(231)
2022	0	0	0	0	(610)	(894)	(1,204)	(912)	(787)	0	0	(294)
2023	0	0	0	0	(729)	(987)	(1,448)	(909)	(835)	0	0	(358)
2024	0	0	0	0	(747)	(1,076)	(1,575)	(1,010)	(922)	0	0	(422)
2025	0	0	0	0	(851)	(1,166)	(1,518)	(1,176)	(958)	0	0	(486)

[1] Final values after thermal peaking resources were applied.


Monthly Peak-Hour Northwest Transmission Deficit
50th Percentile Water, 90th Percentile Peak Load
(Existing and Committed Resources)
MW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Monthly Peak-Hour Northwest Transmission Deficit
70th Percentile Water, 95th Percentile Peak Load
(Existing and Committed Resources)
MW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Monthly Peak-Hour Northwest Transmission Deficit
90th Percentile Water, 95th Percentile Peak Load
(Existing and Committed Resources)
MW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025

Monthly Northwest Transmission Constraint Deficiency Data with Peakers (2006–2015)

50th Percentile Water, 50th Percentile Load, 90th Percentile Peak-Hour Load (MW)

2006	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak-Hour Sup./Def.	0	0	0	0	0	(64)	(175)	0	0	0	0	0
Bennett Mountain	180	0	0	0	172	168	165	168	170	175	177	178
Danskin	0	0	0	0	88	87	86	87	88	89	91	92
Evander	0	0	0	0	0	0	0	0	0	0	0	0
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

2007	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak-Hour Sup./Def.	0	0	0	0	0	(131)	(263)	0	0	0	0	0
Bennett Mountain	180	178	0	0	172	168	165	168	170	175	177	178
Danskin	0	92	0	0	88	87	86	87	88	89	91	92
Evander	0	0	0	0	0	0	0	0	0	0	0	0
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**(12)**	**0**	**0**	**0**	**0**	**0**

2008	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak-Hour Sup./Def.	0	0	0	0	(42)	(177)	(319)	(13)	0	0	0	0
Bennett Mountain	180	178	0	0	172	168	165	168	170	175	177	178
Danskin	93	92	0	0	88	87	86	87	88	89	91	92
Evander	0	0	0	0	0	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(96)	(225)	(383)	(270)	(78)	0	0	0
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

2010	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(159)	(287)	(467)	(187)	(105)	0	0	0
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**(51)**	**0**	**0**	**0**	**0**	**0**

2011	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(225)	(359)	(525)	(204)	(187)	0	0	0
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**(108)**	**0**	**0**	**0**	**0**	**0**

2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(281)	(428)	(595)	(265)	(242)	0	0	0
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**(5)**	**(179)**	**0**	**0**	**0**	**0**	**0**

2013	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(348)	(501)	(678)	(325)	(470)	0	0	0
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**(78)**	**(262)**	**0**	**(43)**	**0**	**0**	**0**

2014	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(417)	(588)	(770)	(427)	(371)	0	0	0
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**(165)**	**(354)**	**(5)**	**0**	**0**	**0**	**0**

2015	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(478)	(660)	(859)	(712)	(485)	0	0	0
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(46)**	**(237)**	**(443)**	**(290)**	**(58)**	**0**	**0**	**0**

Monthly Northwest Transmission Constraint Deficiency Data with Peakers (2016–2025)

50th Percentile Water, 50th Percentile Load, 90th Percentile Peak-Hour Load (MW)

2016	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(545)	(751)	(951)	(622)	(527)	0	0	(9)
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(113)**	**(328)**	**(534)**	**(199)**	**(100)**	**0**	**0**	**0**

2017	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(611)	(835)	(1,044)	(669)	(538)	0	0	(66)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(180)**	**(412)**	**(627)**	**(247)**	**(110)**	**0**	**0**	**0**

2018	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(674)	(920)	(1,170)	(785)	(646)	0	0	(127)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(242)**	**(497)**	**(754)**	**(363)**	**(219)**	**0**	**0**	**0**

2019	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(745)	(1,000)	(1,232)	(840)	(871)	0	(9)	(182)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(314)**	**(577)**	**(815)**	**(418)**	**(444)**	**0**	**0**	**0**

2020	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(671)	(1,138)	(1,323)	(961)	(771)	0	(46)	(251)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(239)**	**(715)**	**(906)**	**(539)**	**(344)**	**0**	**0**	**0**

2021	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(28)	0	0	0	(872)	(1,166)	(1,470)	(1,075)	(801)	0	(88)	(310)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(441)**	**(743)**	**(1,054)**	**(652)**	**(374)**	**0**	**0**	**0**

2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(71)	0	0	0	(940)	(1,263)	(1,522)	(1,164)	(922)	0	(130)	(360)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(508)**	**(840)**	**(1,106)**	**(741)**	**(495)**	**0**	**0**	**0**

2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(113)	0	0	0	(1,007)	(1,352)	(1,681)	(1,197)	(972)	0	(174)	(421)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(576)**	**(929)**	**(1,265)**	**(774)**	**(545)**	**0**	**0**	**0**

2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(159)	0	0	0	(1,072)	(1,435)	(1,800)	(1,313)	(1,049)	0	(332)	(491)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(640)**	**(1,012)**	**(1,384)**	**(891)**	**(621)**	**0**	**0**	**(43)**

2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(204)	0	0	0	(1,145)	(1,531)	(1,827)	(1,417)	(1,097)	0	(261)	(553)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(713)**	**(1,108)**	**(1,410)**	**(995)**	**(670)**	**0**	**0**	**(105)**

Monthly Northwest Transmission Constraint Deficiency Data with Peakers (2006–2015)

70th Percentile Water, 70th Percentile Load, 95th Percentile Peak-Hour Load (MW)

2006	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak-Hour Sup./Def.	0	0	0	0	(15)	(85)	(213)	(20)	0	0	0	0
Bennett Mountain	180	0	0	0	172	168	165	168	170	175	177	178
Danskin	0	0	0	0	88	87	86	87	88	89	91	92
Evander	0	0	0	0	0	0	0	0	0	0	0	0
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

2007	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak-Hour Sup./Def.	0	0	0	0	(60)	(154)	(302)	(20)	(32)	0	0	(2)
Bennett Mountain	180	178	0	0	172	168	165	168	170	175	177	178
Danskin	0	92	0	0	88	87	86	87	88	89	91	92
Evander	0	0	0	0	0	0	0	0	0	0	0	0
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**(51)**	**0**	**0**	**0**	**0**	**0**

2008	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak-Hour Sup./Def.	0	0	0	0	(112)	(196)	(357)	(59)	(80)	0	0	(26)
Bennett Mountain	180	178	0	0	172	168	165	168	170	175	177	178
Danskin	93	92	0	0	88	87	86	87	88	89	91	92
Evander						168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(173)	(256)	(426)	(324)	(152)	0	0	(78)
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**(10)**	**0**	**0**	**0**	**0**	**0**

2010	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(236)	(321)	(512)	(245)	(209)	0	0	(119)
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**(96)**	**0**	**0**	**0**	**0**	**0**

2011	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(303)	(383)	(567)	(270)	(265)	0	0	(87)
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**(151)**	**0**	**0**	**0**	**0**	**0**

2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(361)	(452)	(663)	(339)	(324)	0	0	(136)
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**(29)**	**(247)**	**0**	**0**	**0**	**0**	**0**

2013	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(422)	(528)	(723)	(364)	(543)	0	0	(195)
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**(105)**	**(307)**	**0**	**(116)**	**0**	**0**	**0**

2014	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(494)	(608)	(815)	(478)	(450)	0	0	(254)
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(63)**	**(185)**	**(399)**	**(56)**	**(23)**	**0**	**0**	**0**

2015	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(561)	(692)	(907)	(771)	(570)	0	0	(312)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(129)**	**(269)**	**(490)**	**(348)**	**(143)**	**0**	**0**	**0**

Monthly Northwest Transmission Constraint Deficiency Data with Peakers (2016–2025)

70th Percentile Water, 70th Percentile Load, 95th Percentile Peak-Hour Load (MW)

2016	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(627)	(775)	(998)	(691)	(612)	0	0	(370)
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(196)**	**(353)**	**(582)**	**(268)**	**(185)**	**0**	**0**	**0**

2017	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(692)	(859)	(1,092)	(738)	(649)	0	0	(429)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(260)**	**(436)**	**(676)**	**(316)**	**(221)**	**0**	**0**	**0**

2018	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(759)	(944)	(1,254)	(865)	(734)	0	(6)	(492)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(328)**	**(521)**	**(838)**	**(443)**	**(307)**	**0**	**0**	**(43)**

2019	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(36)	0	0	0	(825)	(1,028)	(1,283)	(884)	(953)	0	(47)	(550)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(393)**	**(606)**	**(866)**	**(461)**	**(526)**	**0**	**0**	**(101)**

2020	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(83)	0	0	0	(770)	(1,227)	(1,379)	(1,036)	(850)	0	(87)	(610)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(338)**	**(804)**	**(963)**	**(614)**	**(423)**	**0**	**0**	**(162)**

2021	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(129)	0	0	0	(961)	(1,200)	(1,558)	(1,143)	(907)	0	(129)	(671)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(529)**	**(778)**	**(1,142)**	**(721)**	**(480)**	**0**	**0**	**(223)**

2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(173)	0	0	0	(1,029)	(1,288)	(1,577)	(1,236)	(1,017)	0	(170)	(735)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(597)**	**(865)**	**(1,161)**	**(814)**	**(589)**	**0**	**0**	**(287)**

2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(216)	0	(5)	0	(1,094)	(1,375)	(1,773)	(1,246)	(1,064)	0	(215)	(798)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(663)**	**(952)**	**(1,356)**	**(824)**	**(637)**	**0**	**0**	**(350)**

2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(259)	0	(54)	0	(1,163)	(1,464)	(1,898)	(1,368)	(1,150)	0	(368)	(863)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(731)**	**(1,042)**	**(1,482)**	**(945)**	**(723)**	**0**	**0**	**(414)**

2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(306)	0	(108)	0	(1,231)	(1,553)	(1,886)	(1,478)	(1,185)	0	(301)	(927)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(800)**	**(1,130)**	**(1,470)**	**(1,056)**	**(758)**	**0**	**0**	**(478)**

Monthly Northwest Transmission Constraint Deficiency Data with Peakers (2006–2015)

90th Percentile Water, 70th Percentile Load, 95th Percentile Peak-Hour Load (MW)

2006	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak-Hour Sup./Def.	0	0	0	0	(32)	(116)	(243)	(74)	(102)	0	0	0
Bennett Mountain	180	0	0	0	172	168	165	168	170	175	177	178
Danskin	0	0	0	0	88	87	86	87	88	89	91	92
Evander	0	0	0	0	0	0	0	0	0	0	0	0
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

2007	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak-Hour Sup./Def.	0	0	0	0	(75)	(215)	(366)	(125)	(187)	0	0	(8)
Bennett Mountain	180	178	0	0	172	168	165	168	170	175	177	178
Danskin	0	92	0	0	88	87	86	87	88	89	91	92
Evander	0	0	0	0	0	0	0	0	0	0	0	0
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**(115)**	**0**	**0**	**0**	**0**	**0**

2008	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak-Hour Sup./Def.	0	0	0	0	(129)	(231)	(387)	(161)	(232)	0	0	(32)
Bennett Mountain	180	178	0	0	172	168	165	168	170	175	177	178
Danskin	93	92	0	0	88	87	86	87	88	89	91	92
Evander						168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(187)	(320)	(455)	(412)	(347)	0	0	(85)
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**(39)**	**0**	**0**	**0**	**0**	**0**

2010	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(251)	(350)	(596)	(329)	(298)	0	0	(127)
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**(179)**	**0**	**0**	**0**	**0**	**0**

2011	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(316)	(412)	(598)	(359)	(463)	0	0	(95)
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**0**	**(181)**	**0**	**(35)**	**0**	**0**	**0**

2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(376)	(538)	(747)	(424)	(520)	0	0	(144)
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**0**	**(115)**	**(331)**	**(1)**	**(93)**	**0**	**0**	**0**

2013	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(439)	(563)	(753)	(449)	(743)	0	0	(203)
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(8)**	**(140)**	**(336)**	**(27)**	**(316)**	**0**	**0**	**0**

2014	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(512)	(643)	(845)	(590)	(646)	0	0	(262)
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(80)**	**(220)**	**(428)**	**(168)**	**(219)**	**0**	**0**	**0**

2015	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(575)	(785)	(938)	(869)	(770)	0	0	(320)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(144)**	**(362)**	**(522)**	**(446)**	**(343)**	**0**	**0**	**0**

Monthly Northwest Transmission Constraint Deficiency Data with Peakers (2016–2025)

90th Percentile Water, 70th Percentile Load, 95th Percentile Peak-Hour Load (MW)

2016	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	0	0	0	0	(641)	(805)	(1,032)	(785)	(810)	0	0	(377)
Bennett Mountain	180	178	176	0	172	168	165	168	170	175	177	178
Danskin	93	92	90	0	88	87	86	87	88	89	91	92
Evander	180	178	176	0	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(209)**	**(382)**	**(615)**	**(362)**	**(383)**	**0**	**0**	**0**

2017	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(13)	0	0	0	(708)	(919)	(1,126)	(798)	(825)	0	0	(435)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(277)**	**(496)**	**(710)**	**(376)**	**(398)**	**0**	**0**	**0**

2018	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(54)	0	0	0	(775)	(1,052)	(1,343)	(954)	(933)	0	0	(498)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(343)**	**(629)**	**(927)**	**(532)**	**(506)**	**0**	**0**	**(50)**

2019	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(96)	0	0	0	(842)	(1,063)	(1,319)	(969)	(1,154)	0	(26)	(560)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(411)**	**(640)**	**(903)**	**(546)**	**(727)**	**0**	**0**	**(112)**

2020	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(140)	0	0	0	(776)	(1,364)	(1,417)	(1,126)	(1,050)	0	(63)	(618)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(344)**	**(941)**	**(1,001)**	**(704)**	**(622)**	**0**	**0**	**(170)**

2021	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(190)	0	(35)	0	(985)	(1,230)	(1,650)	(1,242)	(1,001)	0	(105)	(679)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(553)**	**(807)**	**(1,234)**	**(820)**	**(574)**	**0**	**0**	**(231)**

2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(234)	0	(82)	0	(1,042)	(1,317)	(1,621)	(1,334)	(1,214)	0	(147)	(742)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(610)**	**(894)**	**(1,204)**	**(912)**	**(787)**	**0**	**0**	**(294)**

2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(275)	(6)	(130)	0	(1,161)	(1,410)	(1,864)	(1,331)	(1,262)	0	(191)	(806)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(729)**	**(987)**	**(1,448)**	**(909)**	**(835)**	**0**	**0**	**(358)**

2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(319)	(38)	(179)	0	(1,178)	(1,499)	(1,991)	(1,433)	(1,349)	(6)	(327)	(870)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(747)**	**(1,076)**	**(1,575)**	**(1,010)**	**(922)**	**0**	**0**	**(422)**

2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Hour Sup./Def.	(367)	(74)	(232)	0	(1,283)	(1,589)	(1,934)	(1,598)	(1,385)	(19)	(280)	(934)
Bennett Mountain	180	178	176	174	172	168	165	168	170	175	177	178
Danskin	93	92	90	88	88	87	86	87	88	89	91	92
Evander	180	178	176	174	172	168	165	168	170	175	177	178
Deficiency	**0**	**0**	**0**	**0**	**(851)**	**(1,166)**	**(1,518)**	**(1,176)**	**(958)**	**0**	**0**	**(486)**

Portfolio Summary and Description

Portfolio P-1 - Green

DSM 2007-2025	187	MW	Energy	926
Wind 2008, 2009, 2011	500	MW	Transmission	450
Geothermal (Binary) 2009, 2011- 2014, 2016-18, 2020	490	MW	Peak	1099
CHP 2010, 2013	150	MW	Total Name Plate	2027
Transmission McNary 2014, Montana 2018	450	MW		
Nuclear 2022	250	MW		
Total Name Plate	2027	MW		

Portfolio P1 comprises a high degree of renewable energy generating resources and a large reliance on market purchases via upgraded transmission paths to meet peak capacity needs. Portfolio P1 represents the lowest carbon exposure.

Expected Case Aurora	Years 1-20 NPV ($000)
Market Purchases	$306,212
Resource Total	$7,348,136
Market Sales	-$2,670,626
Total	$4,983,722

Portfolio P2 - Transmission

DSM 2007-2025	187	MW	Energy	394
Wind 2008	100	MW	Transmission	1260
Geothermal (Binary) 2009	50	MW	Peak	662
CT 2010	170	MW	Total Name Plate	2017
Transmission Lolo 2011, McNary 2013, Montana 2018, White Pine 2024	1260	MW		
Nuclear 2022	250	MW		
Total Name Plate	2017	MW		

Portfolio P2 explores the implications of extensive transmission upgrades and reliance on the market to provide the bulk of the new base load and peaking needs.

Expected Case Aurora	Years 1-20 NPV ($000)
Market Purchases	$958,789
Resource Total	$5,600,116
Market Sales	-$1,207,782
Total	$5,351,123

Portfolio P3 - 2004 IRP with diversified additions

DSM 2007-2025	187	MW	Energy	1139
Wind 2008, 2012,	250	MW	Transmission	285
Geothermal (Binary) 2009, 2021, 2022	225	MW	Peak	1284
CHP 2010, 2020	110	MW	Total Name Plate	1807
Transmission McNary 2012, Lolo 2019	285	MW		
Coal 2013	250	MW		
IGCC 2017	250	MW		
Nuclear 2022	250	MW		
Total Name Plate	1807			

Portfolio P3 adjusts and extends the 2004 IRP with a diversified mix of renewable, transmission, and thermal resources.

Expected Case Aurora	Years 1-20 NPV ($000)
Market Purchases	$517,744
Resource Total	$6,313,858
Market Sales	-$1,866,829
Total	$4,964,772

Portfolio P4 - Basic Thermal

DSM 2007-2025	187	MW	Energy	1187
Wind 2008	100	MW	0	
CHP 2008	50	MW	Peak	1562
Geothermal (Binary) 2009	50	MW	1657	
Coal 2012, 2016, 2020	850	MW		
CT 2018	170	MW		
Nuclear 2022	250	MW		
Total Name Plate	1657	MW		

Portfolio P4 satisfies the base load and peak growth with a heavy reliance on new pulverized coal and natural gas peaking generation. It contains no transmission upgrades. This portfolio has the greatest carbon exposure.

Expected Case Aurora	Years 1-20 NPV ($000)
Market Purchases	$270,096
Resource Total	$7,227,009
Market Sales	-$2,655,419
Total	$4,841,685

Portfolio P5 - Clean Coal Portfolio

DSM 2007-2025	187	MW	Energy	1104
Wind 2008	100	MW	Transmission	0
CHP 2008	50	MW	Peak	1537
Geothermal (Binary) 2009	50	MW	Total Name Plate	1632
IGCC 2012, 2016,	600	MW		
CT 2018	170	MW		
CCCT 2021	225	MW		
Nuclear 2022	250	MW		
Total Name Plate	1632	MW		

Portfolio P5 examines heavy thermal portfolio with IGCC coal and a large combines cycle natural gas resources.

Expected Case Aurora	Years 1-20 NPV ($000)
Market Purchases	$297,995
Resource Total	$7,431,968
Market Sales	-$2,463,595
Total	$5,266,369

Portfolio P6 - 2004 IRP with Heavy Geothermal and Combustion Turbines (CT)

DSM 2007-2025	187	MW	Energy	1042
Wind 2008	100	MW	Transmission	0
CHP 2008	100	MW	Peak	1752
Geothermal (Binary)				
2010, 2013, 2018	150	MW	Total Name Plate	1847
CT 2012, 2020, 2021	510	MW		
Coal 2013, 2017	500	MW		
IGCC 2022	300	MW		
Total Name Plate	1847	MW		

Portfolio P6 adjusts and extends the 2004 IRP with three 170 MW natural gas CT's, 220 MWs of Geothermal and a 300 MW IGCC coal plant. Idaho Power generation requirements are predominantly peak driven which requires a large capacity for a relatively few peak hours per year. CT's are one way to provide this capacity and P6, P7, P8, and P9 examines heavy CT reliance.

Expected Case Aurora	Years 1-20 NPV ($000)
Market Purchases	$289,365
Resource Total	$7,156,598
Market Sales	-$2,501,643
Total	$4,944,319

Portfolio P7 2004 IRP with Heavy Geothermal and Combustion Turbines with some Transmission				
DSM 2007-2025	187	MW	Energy	901
Wind 2007	100	MW	Transmission	225
Geothermal (Binary) 2010	50	MW	Peak	1432
CHP 2010	50	MW	Total Name Plate	1752
Transmission McNary 2011	225	MW		
Coal 2013, 2018	500	MW		
CT 2020, 2021	340	MW		
IGCC 2022	300	MW		
Total Name Plate	1752	MW		

Portfolio P7 adjusts and extends the 2004 IRP similarly to P6 but with increased transmission enabling greater import capacity and consequently market purchases to provide for some of the system peaking requirements and offsetting a CT and some geothermal and CHP generation.

Expected Case Aurora	Years 1-20 NPV ($000)
Market Purchases	$412,236
Resource Total	$6,650,659
Market Sales	-$2,065,285
Total	$4,997,609

Portfolio P8 2004 IRP with Outrageous CT's and some Geothermal				
DSM 2007-2025	187	MW	Energy	948
Wind 2007, 2011	350	MW	Transmission	0
CHP 2008	48	MW	Peak	1721
Geothermal 2010-11, 2013, 2018	250	MW	Total Name Plate	2065
Coal 2013	250	MW		
CT 2012, 2017, 2020, 2021	680	MW		
IGCC 2021	300	MW		
Total Name Plate	2065			

Portfolio P8 starts with the 2004 IRP and builds the most peaking focused portfolio. CT's are relatively cheap to build and if not run a lot of hours provide a good choice to provide capacity. P8 examines the addition of 4,170 MW CTs. Additionally, some of the pulverized coal identified in the 2004 IRP was off set with Geothermal resources.

Expected Case Aurora	Years 1-20 NPV ($000)
Market Purchases	$321,042
Resource Total	$7,026,768
Market Sales	-$2,535,129
Total	$4,812,681

Portfolio P9 2004 IRP Heavy CTs and IGCC sequestration

DSM 2007-2025	187	MW	Energy	1042
Wind 2007	100	MW	Transmission	0
CHP 2008	100	MW	Peak	1752
Geothermal (Binary) 2010, 2013, 2018	150	MW	Total Name Plate	1847
CT 2012, 2020, 2021	510	MW		
Wyo IGCC w/seq 2013	250	MW		
Coal 2017	250	MW		
IGCC 2022	300	MW		
Total Name Plate	1847			

Portfolio P9 begins with the 2004 IRP and focuses on peaking and geothermal resources with carbon sequestered coal generation.

Expected Case Aurora	Years 1-20 NPV ($000)
Market Purchases	$289,882
Resource Total	$7,182,044
Market Sales	-$2,501,215
Total	$4,970,712

Portfolio P10 – Heavy Pulverized Coal

DSM 2007-2025	187	MW	Energy	1356
Wind 2008	100	MW	Transmission	225
CHP 2009	100	MW	Peak	1592
Geothermal (Binary) 2009	50	Mw	Total Name Plate	1912
Transmission McNary 2014	225	MW		
Coal 2012, 2016, 2018, 2023	1000	MW		
Nuclear 2021	250	MW		
Total Name Plate	1912	MW		

Portfolio P10 focuses on pulverized coal with four 250 MW projects over the planning period. Pulverized coal is a proven and reliable technology with a plentiful fuel source. Portfolio P10 is distinguished as the portfolio that adds the most base load generation.

Expected Case Aurora	Years 1-20 NPV ($000)
Market Purchases	$265,690
Resource Total	$7,503,565
Market Sales	-$2,797,467
Total	$4,971,787

Portfolio P11 - Transmission Bridger to Boise with Wyoming Wind

DSM 2007-2025	187	MW	Energy	1016
Wind 2009, 2016, 2018, 2020	1100	MW	Transmission	1475
CHP 2009	100	MW	Peak	893
Geothermal (Binary) 2009	50	MW	Total Name Plate	3412
Transmission				
Wyoming 2012, McNary 2014	1475	MW		
Coal 2013	250	MW		
Nuclear 2020	250	MW		
Total Name Plate	3412	MW		

Portfolio P11 explores increasing the transmission capacity between Wyoming and Boise. There was enthusiastic support for this configuration among some of the IRPAC members. The rational is to provide a means of accessing the high capacity wind area that are located in Wyoming. This portfolio has the distinction of including the most facility nameplate.

Expected Case Aurora	Years 1-20 NPV ($000)
Market Purchases	$410,636
Resource Total	$7,860,774
Market Sales	-$2,401,375
Total	$5,870,035

Portfolio P12 Nuclear

DSM 2007-2025	187	MW	Energy	1289
Wind 2008	100	MW	Transmission	225
CHP 2009	100	MW	Peak	1492
Geothermal (Binary) 2009	50	MW	Total Name Plate	1812
Coal 2013	250	MW		
Transmission McNary 2014	225	MW		
Nuclear 2016, 2018, 2023	900	MW		
Total Name Plate	1812	MW		

Portfolio P12 incorporates a nuclear resource solution to Idaho Power generation growth requirements.

Expected Case Aurora	Years 1-20 NPV ($000)
Market Purchases	$262,189
Resource Total	$7,500,132
Market Sales	-$2,966,285
Total	$4,796,034

Summary of Initial Portfolios

Resource	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
CCCT	–	–	–	–	225	–	–	–	–	–	–	–
CHP	150	–	110	50	50	100	50	48	100	100	100	100
Coal	–	–	250	850	–	500	500	250	250	1,000	250	250
CT	–	170	–	170	170	510	340	680	510	–	–	–
DSM	187	187	187	187	187	187	187	187	187	187	187	187
Geothermal (Binary)	490	50	225	50	50	150	50	250	150	50	50	50
IGCC	–	–	–	–	600	300	300	300	300	–	–	–
Nuclear	250	250	250	250	250	–	–	–	–	250	250	900
Transmission	450	1,260	285	–	–	–	225	–	–	225	1,475	225
Wind	500	100	250	100	100	100	100	350	100	100	1,100	100
Wyo IGCC w/seq	–	–	–	–	–	–	–	–	250	–	–	–
Total Nameplate	**2,027**	**2,017**	**1,807**	**1,657**	**1,632**	**1,847**	**1,752**	**2,065**	**1,847**	**1,912**	**3,412**	**1,812**
Energy	**926**	**394**	**1,139**	**1,187**	**1,104**	**1,042**	**901**	**948**	**1,042**	**1,356**	**1,016**	**1,289**
Transmission	**450**	**1,260**	**285**	**–**	**–**	**–**	**–**	**–**	**–**	**225**	**1,475**	**225**
Peak	**1,099**	**662**	**1,284**	**1,562**	**1,537**	**1,752**	**1,432**	**1,721**	**1,752**	**1,592**	**893**	**1,492**

Coal Based Generation Technology Assessment
Executive Summary
DRAFT

With the recent increase in natural gas prices and gas delivery restrictions, coal based power generation is regaining a stronghold in the power generation industry. When considering the many common and developing coal generation technologies available for utility application, it is important to understand the relative benefits and potential pitfalls associated with various options currently being considered for new power generation facilities.

The purpose of this white paper is to present a summary level comparison of key parameters associated with each of the most prevalent commercial coal-fired generation technologies currently being considered in today's power generation market. The technologies addressed include the following:

- Sub-critical pulverized coal combustion.
- Super-critical pulverized coal combustion.
- Ultra-super-critical pulverized coal combustion.
- Circulating fluidized bed combustion.
- Integrated gasification combined cycle technologies.
- Pressurized fluidized bed combustion.

The relative performance, environmental emissions, and electrical generation costs for each of the technologies for a western coal application are compared. In addition, the sensitivity of generation cost for the most prominent technologies to unit size, capital costs, and key environmental risks for mercury control and carbon dioxide emissions are addressed.

The comparison assumes a typical 600 MW unit, located on a western US plant site, designed to utilize western bituminous and sub-bituminous coal supplies.

1.1 Overview of Technologies

The following is a brief description of each of the coal generation technologies considered in this assessment.

Pulverized Coal (PC) Boilers. PC boiler technology is a well-proven technology that is dominating the current market for large projects under development and construction. This boiler technology is characterized by firing coal which has been pulverized to a fine particle size (50 microns or smaller) and then blown into the boiler with combustion air and rapidly combusted. The combination of the fuel particle size and direct injection with combustion air results in very high combustion rates when compared to other technologies such as circulating fluidized bed boilers. Pulverized coal boilers consist of a membrane-wall furnace or combustion zone consisting of either vertical or spiral-wound water tubes. This membrane wall serves as the evaporative section of the boiler. In the furnace, fuel and combustion air are injected through wall-mounted burner assemblies with staging of combustion air to minimize the formation of NOx. Some steam superheater surface is often located in the furnace in the form of pendant heat exchange surfaces. The combustion products or flue gases flow upward through the furnace and enter a backpass, or convective section which includes steam superheaters, reheaters, economizers, selective catalytic NOx reduction systems, and air heaters. Split backpass sections,

in which the flue gas flows through two parallel gas paths, are often utilized to assist in steam temperature control and to minimize the use of water spray attemperation.

The thermodynamic steam cycle for large pulverized coal fired units have been implemented in three basic steam cycles:

- Subcritical drum type units with maximum continuous throttle pressures up to 2,400 psig and typically 1000 °F/1000 °F superheat/reheat steam temperatures. Overpressure (OP) design conditions for this cycle would typically allow for temporary operation at a throttle pressure of 2,520 psig.

- Supercritical units with throttle pressures at 3,500 psig, (3,675 psig-OP) and with 1,000 °F to 1,100 °F superheat and reheat temperatures and typically would be applicable for units greater than 400 MW class designs. Supercritical technologies operate on a once-through steam/water cycle concept with no steam drum in the steam generator flow path. Water is circulated through the boiler heat transfer surfaces, evaporated within the boiler tubes, superheated and/or reheated, and directed to the steam turbine generator. Supercritical cycles have typically been implemented with a single steam reheat system.

- Ultra-supercritical units with throttle pressures as high as 4,200 psig and 1,100 °F superheat and reheat steam temperatures that are generally applied to extremely large units (1,000 MW class). These units have been successfully implemented in Europe and Japan with little operating experience in the United States. Further development and advancement of the ultra-supercritical technologies is focusing on the development of new piping and equipment materials required to further elevate the steam cycle conditions and improve overall thermal cycle efficiency. Ultra-supercritical technologies are similar to the supercritical technologies with respect to the use of a once-through steam/water cycle. While supercritical cycles have typically been limited to single reheat systems, ultra-supercritical units may utilize double reheat steam cycles.

Circulating Fluidized Bed (CFB) Boiler. CFB boiler technology represents a mature technology in which crushed fuel and limestone (and/or other inert bed materials) are injected into the furnace where they are suspended in a fluidized bed by combustion air that flows vertically through the furnace. The elutriation of the fuel particles and bed material allows for long residence time for combustion as the gas stream moves from the bottom of the furnace, through a particulate separation device and exits through a standard convective heat transfer section at the backend of the boiler. Due to the low combustion temperatures and the use of limestone as a bed material, emissions of NOx and SO2 emissions from CFB boilers are inherently lower than those of PC boilers. The separator device located at the furnace gas outlet collects bed material entrained in the flue gas for recycle back into the furnace; thus, the term circulating fluidized bed is applied. The particle separator at the furnace exit can take many forms ranging from the typical cyclone design with a vortex finder and J-valve to internal U-Beam devices which form a tortuous path where particulate collects via impaction with the U-Beams. CFB boiler designs are adaptable to a wide range of fuels, allowing utilization of low rank coals, waste fuels, and opportunity fuels such as petroleum coke.

Selective non-catalytic reduction (SNCR) systems are typically employed to help further reduce NO_x emissions without the need for a SCR catalyst. SO2 removal efficiencies as high as 95 percent have been achieved through injection of limestone directly into the furnace.

CFB boiler technology applications to date have utilized sub-critical thermal cycles. The first supercritical, 450 MW, once-through CFB unit is currently under construction in Poland by Foster Wheeler. There are no technical concerns for this enhancement of the technology other than the threshold criteria of about 400 MW were supercritical designs become more economically viable. However, designs are offered by other suppliers for larger, supercritical once through CFB boilers up to 600 MW in size, but to date no units have been built. The current size limit of CFB boilers is 400 MW.

Integrated Gasification Combined Cycle (IGCC). IGCC is a developing clean-coal technology that combines the gasification of coal to syngas and integrates this with a standard gas turbine combined cycle power plant. Gasification processes have and are operating in the chemical industry for many years with a number of proven utility-size IGCC power plants. IGCC development projects are prevalent in today's market, but are focused on a select number of utilities and independent power producers that are funding up-front front-end engineering and design (FEED) analyses to definitively establish design, performance, and cost information. Most of the development projects are funding FEED efforts for high sulfur bituminous and petroleum coke-type fuels. Presently, there appears to be limited interest in developing western bituminous or sub-bituminous fuel designs by the prominent gasification suppliers (OEMs).

For the gasification process coal is reacted in a gasifier, producing a raw fuel gas that is cleaned and combusted in a gas turbine as part of a combined-cycle power block. Coal gasification involves the partial oxidation of coal at an elevated temperature and pressure which produces the syngas that has combustible components, including hydrogen, carbon monoxide and methane. Gasification takes place in a gasifier/reactor, where coal is processed in three steps: drying (evaporating moisture), pyrolysis (decomposition / transformation of chemical compounds) and gasification (partial oxidation). The syngas from the coal gasifier is then quenched and/or cooled through a series of integrated heat exchangers and then scrubbed for removal of particulates and sulfur.

Typical syngas compositions leaving the gasification system have low heating values compared to natural gas. Clean syngas is combusted in one or more gas turbines, which exhaust to multiple pressure, sub-critical heat recovery steam generators (HRSGs). The HRSGs produce steam for a conventional steam turbine cycle as well as steam required for the gasification process. Oxygen required for the gasifier (either air-blown or oxygen-blown) is often provided via the gas turbine compressor. For oxygen-blown designs, a cryogenic air separation unit is required.

Since the volume of the syngas produced is significantly less than the flue gas produced by the combustion turbines, removal of pollutants is generally more efficient than with other coal generation technologies. This characteristic is very attractive and has good potential for economically achieving aggressive pollutant emissions standards. The key area of future benefit is associated with the capability for carbon dioxide capture for sequestration (CCS) that can be adapted through this technology.

Pressurized Fluidized Bed Combustion (PFBC). PFBC coal technology can be characterized as a standard combined cycle facility with an external combustor for the combustion turbine. The combustor is a pressurized combustor supplied with coal and combustion air from the combustion turbine compressor. The combustion units are fairly compact and operate at pressures consistent with the combustion turbine design, typically in the range of 145 to 220 psig, and combustion temperatures in the range of 1400 to 1600°F.

Hot pressurized flue gas from the combustor is used to directly produce steam and is also sent through hot cyclones and supplied to a gas turbine for expansion and power production. Gas turbine exhaust gas is then sent through a heat recovery steam generator for additional steam production for steam turbine power generation. Ultimately the steam turbine will create approximately 80% of the plant power with the combustion turbine providing the other 20%. The key challenge to this cycle design is having a gas turbine design that can accept a flue gas with residual solid particles.

Due to the limited commercial deployment of this technology, the complexity of the various plant systems, mixed performance results from recent applications, and the limited apparent benefits of the technology (i.e. lack of significantly improved cycle efficiencies and emissions as compared to other technologies), PFBC technology is not currently considered a realistic option for a 600 MW power generating facility.

Table 1.1-1 provides a summary level side-by-side comparison of the key differentiators between the technologies included in this evaluation.

	Sub-Critical PC	Super Critical PC	Ultra-Super Critical PC	Sub Critical CFB	IGCC Moving Bed Reactors	IGCC Fluidized Bed Reactors	IGCC Entrained Flow
Commercial Operating Experience	Extensive commercial experience	Extensive commercial experience	Limited development of technology	Extensive commercial experience	Extensive commercial experience	Limited development of technology	Extensive commercial gasifier experience.
Thermal Efficiency	Lowest Thermal Efficiency	Higher Thermal Efficiency	Incrementally Higher Efficiency than SCPC	Lowest thermal efficiency	Highest IGCC Efficiency – Incrementally Higher Efficiency than USCPC	Medium IGCC Efficiency – Incrementally Higher Efficiency than USCPC	Lowest IGCC Efficiency – Incrementally Higher Efficiency than USCPC
Turndown Capability	Slow load changing response	Better load changing response.	Better load changing response.	Slow load changing response	Limited turndown capability		
Plant Size	Boiler and Power Island is relatively compact. Large AQCS train.	Boiler and Power Island is relatively compact. Large AQCS train.	Boiler and Power Island is relatively compact. Large AQCS train.	Boiler and Power Island is relatively compact. Smaller AQCS train.	Limited gasifier capacity - many trains required		Equipment is relatively compact
Syngas Quality					Relatively Low LHV syngas (260-270 btu/scf)	Moderate LHV syngas (270 to 280 Btu/scf)	Relatively High LHV syngas (280 to 310 Btu/scf)
					Produces phenols, tars and hydrocarbon liquids	Syngas relatively free of tars, high alkali contents, sticky ash particles	Syngas has low tar content
Reactor Operating Temperature						Low operating temperature	High operating temperature
Oxygen and Steam Consumption					Low oxygen consumption	Moderate oxygen and steam consumption	High oxygen consumption
Fuel Flexibility	Limited flexibility in fuels.	Limited flexibility in fuels.	Limited flexibility in fuels.	Higher fuel flexibility	Limited flexibility in fuels and changes in quality of fuel. Special requirements for coal size (design limit of maximum 5 % of coal less than ¼ inch in size); High fines, damp coal and high temperatures cause flashing in gasifiers (high carryover of solids into flue gas)	Well-suited for low grade fuels	Can process almost any type of coal.
						Large char recycle	Requires very fine coal particles
							Slag particles can be entrained into raw fuel gas
					Commercial experience with lignite		

Table 1.1-1. Key Technology Differentiators

1.2 Comparison of Performance

The relative performance of the various coal generation technologies is presented in Table 1.2-1. This includes the expected plant efficiency, water consumption, waste generation, and emissions for the various options.

		Pulverized Coal			CFB	IGCC
	Units	Sub-Critical	Super-Critical	Ultra-Super-Critical	Sub-Critical	
Plant Performance						
Gross Output	(MW)	649.0	649.0	649.0	435.0	730.0
Auxiliary Power	(MW)	49.0	49.0	49.0	35.0	130.0
Net Output	(MW)	600.0	600.0	600.0	400.0	600.0
Net Cycle Heat Rate	(Btu/kWH)-HHV	9,371	8,955	8,859	9,289	8,131
Net Cycle Efficiency	(% HHV)	36.42%	38.11%	38.53%	36.74%	41.98%
Environmental Considerations						
NOx Emissions	(lb/MMBtu)	0.07 to 0.45	0.04 to 0.07	0.04 to 0.07	0.07 to 0.18	0.03 to 0.09
SO2 Emissions	(lb/MMBtu)	0.1 to 0.35	0.06 to 0.1	0.06 to 0.1	0.1 to 0.55	0.015 to 0.08
CO2 Emissions	(T/MWH (net))	0.90	0.86	0.85	0.89	0.78
Hg Emissions	(lb/TBtu)	0.6 to 0.9	0.6 to 0.9	0.6 to 0.9	0.9 to 1.5	0.7 to 1.5
Waste / Byproduct Generation						
Fly Ash	(lb/MWH)	52.2	50.2	49.7	67.0	NA
Bottom Ash/Slag	(lb/MWH)	13.2	12.7	12.5	17.0	47.0
Gypsum	(lb/MWH)	20.3	19.7	19.3	NA	NA
Sulfur (H_2S)	(lb/MWH)	NA	NA	NA	NA	3.9
Water Consumption	(gal/MWH)	469.4	442.1	430.8	453.0	227.0

Table 1.2-1. Technology Performance Summary

In reviewing the relative performance of the various technologies, the combined cycle efficiencies of IGCC technologies are better relative to the other technologies. The expected thermal efficiency of a 600 MW IGCC plant is 3 to 4 percent better than the supercritical options (both super-critical and ultra-supercritical) for the PC and CFB technologies. The IGCC efficiency is also 5 to 6 percent greater than that of the sub-critical thermal cycles. As expected for PC and CFB combustion technologies, thermal cycle efficiencies improve as the steam cycle pressures and steam temperatures increase. The ultra-supercritical heat rates are only slightly better than those of the super-critical cycles.

With regard to emissions, both the PC and the CFB technologies have established Best Available Control Technology (BACT) standards for control of emissions from plants. It is assumed that IGCC and PFBC plants, if applicable, can easily attain comparable levels as part of a plant permitting process. The IGCC technologies appear to be capable of achieving emissions standards that are equivalent or possibly better than current BACT standards for PC and CFB technologies; although, further investigation of the total emissions from an IGCC (including emissions during process start-up and shut-down) is warranted relative to PC and CFB technologies. The approach for capture of mercury emissions for each of the technologies appears to be similar (i.e. adsorption with activated carbon) based on current technology indications; however, given the lower volumes of gas to be treated, the IGCC applications would have a significant cost advantage.

It should be noted that CO2 sequestration (i.e. permanent disposal of collected CO2) is a developing concept. If a CO2 control strategy is employed for any of the technologies, implementation of a sequestration strategy would involve a comparable level of equipment and costs for each of the technologies.

1.3 Comparative Costs

Table 1.3-1 presents a comparison of capital, fixed and variable operating and maintenance (O&M) costs, as well as estimates of the costs of electrical generation for each of the coal generation technologies. It should be noted that this analysis is based on coal firing only without any supplemental fuels. For this reason, the availability of power generated from the IGCC facility is limited to a rather aggressive value of 80 percent based upon 100 percent gasifier capacity and no spare units available. With a spare gasifier, the availability of the IGCC facility has been increased to 85 percent which is consistent with the remaining technology options.

		Pulverized Coal			CFB	IGCC	
	Units	Sub-Critical	Super-Critical	Ultra-Super-Critical	Sub-Critical	No Spare	With Spare
Capital Cost	($/kW net)	$1,814	$1,907	$1,913	$2,073	$2,290	$2,430
First Year Cost of Generation							
Capital Recovery	($/MWH)	$25.70	$27.02	$27.12	$29.36	$34.49	$34.42
Fixed O&M Costs	($/MWH)	$6.35	$6.54	$6.66	$7.01	$8.23	$8.03
Variable O&M Costs	($/MWH)	$0.42	$0.42	$0.45	$0.43	$1.24	$1.17
Consumable O&M Costs	($/MWH)	$2.17	$2.16	$2.17	$2.65	$1.48	$1.46
Fuel Costs	($/MWH)	$13.78	$13.28	$13.19	$13.81	$12.03	$12.03
Total First Year COG	($/MWH)	$48.42	$49.42	$49.59	$53.26	$57.47	$57.11
Levelized Cost of Generation							
Capital Recovery	($/MWH)	$25.70	$27.02	$27.12	$29.36	$34.49	$34.42
Fixed O&M Costs	($/MWH)	$6.14	$6.27	$6.42	$6.68	$7.85	$7.58
Variable O&M Costs	($/MWH)	$1.23	$1.26	$1.32	$0.83	$1.97	$1.86
Consumable O&M Costs	($/MWH)	$1.74	$1.77	$1.78	$2.05	$0.98	$0.96
Fuel Costs	($/MWH)	$18.37	$17.70	$17.58	$18.40	$16.04	$16.04
Total Levelized COG	($/MWH)	$53.18	$54.02	$54.22	$57.32	$61.33	$60.86

Table 1.3-1. Technology Cost Summary

1.4 Cost Sensitivity to Unit Size

As an indication of the sensitivity of generating costs to plant size, Table 1.4-1 presents estimated capital, fixed and variable O&M, and COG for 300 MW, 600 MW, and 750 MW subcritical plants and 600 MW and 750 MW supercritical PC generating facilities. As would be expected, the estimated COG decreases as unit size increases due to the economy of scale realized through the larger generating units.

		Pulverized Coal (PC)				
		300 MW Sub-Critical PC	600 MW Sub-Critical PC	750 MW Sub-Critical PC	600 MW Super-Critical PC	750 MW Super-Critical PC
		325 MW Gross	649 MW Gross	810 MW Gross	649 MW Gross	810 MW Gross
Project EPC Cost	($ million)	**531.0**	**867.6**	**1032.0**	**912**	**1083.3**
Total Project Cost	($ million)	**666.1**	**1088.4**	**1294.7**	**1144.1**	**1359.0**
First Year Costs						
Fixed O&M Costs	($/MWH)	$8.23	$6.35	$5.94	$6.54	$6.12
Variable O&M Costs	($/MWH)	$0.47	$0.42	$0.41	$0.42	$0.41
Consumable O&M Costs	($/MWH)	$2.21	$2.17	$2.18	$2.16	$2.15
Fuel Cost	($/MWH)	$13.90	$13.78	$13.78	$13.28	$13.28
Capital Recovery	($/MWH)	$31.41	$25.70	$24.49	$27.02	$25.71
Total First Year COG	**($/MWH)**	**$56.22**	**$48.42**	**$46.80**	**$49.42**	**$47.67**
Annual Levelized Costs						
Fixed O&M Costs	($/MWH)	$8.14	$6.14	$5.70	$6.27	$5.82
Variable O&M Costs	($/MWH)	$1.64	$1.23	$1.13	$1.26	$1.15
Consumable O&M Costs	($/MWH)	$1.79	$1.74	$1.75	$1.77	$1.75
Fuel Cost	($/MWH)	$18.53	$18.37	$18.37	$17.70	$17.70
Capital Recovery	($/MWH)	$31.41	$25.70	$24.49	$27.02	$25.71
Total Levelized COG	**($/MWH)**	**$61.50**	**$53.18**	**$51.44**	**$54.02**	**$52.15**

Table 1.4-1. Unit Size Cost Comparison

1.5 Impact of Environmental Risks

Two key environmental risk issues associated with coal-fueled power generation are limitations on greenhouse gas emissions (namely carbon dioxide, CO2) and limitations on mercury emissions. Technologies for removal of both constituents are rapidly developing. For mercury, air quality control equipment suppliers have offered emissions guarantees for new power projects. Technologies exist for removal of CO2; however, these technologies have not reached a level of maturity where guarantees have been offered in support of a project.

Table 1.5-1 presents the estimated costs for removal and sequestration of CO2 emissions from PC and IGCC plants. Costs for capture of mercury are also presented. The lower costs for controlling CO2 and mercury emissions from an IGCC plant are directly related to the volume of syngas that needs to be treated relative to the flue gas volumes of PC and CFB units.

		Subcritical PC	Super-Critical PC	Ultra-Super-Critical PC	Subcritical CFB	IGCC w/o Spare	IGCC w/ Spare
Mercury Emissions Control							
Total First Year Cost for Mercury Removal	$/MWH	$1.13	$1.10	$1.09	$0.91	$0.23	$0.23
Total Levelized Cost for Mercury Removal	$/MWH	$1.28	$1.25	$1.24	$2.72	$0.26	$0.26
First Year Cost of Mercury Removal	$/lb	$22,559	$22,887	$22,739	$18,266	$5,358	$5,290
CO2 Emissions Control							
Estimated Cost for CO2 Capture	$/MWH	$19 to $23	$19 to $23	$19 to $23	$19 to $23	$10 to $15	$10 to $15

Table 1.5-1. Emissions Removal Cost Expectations

CO_2 Adder Survey Data

Organization	Assumption/Targets/Source	$ Per Ton CO_2
Stanford Energy Modeling Forum	CO_2 to 1990 levels by 2010	$5.00–37.50
	CO_2 to –7% 1990 levels by 2010	$12.50–69.00
EIA	Climate Stewardship Act	$15.00–45.00
	CO_2 to –7% 1990 levels by 2012	$34.00–41.00
Interlaboratory Working Group	CO_2 to 1990 levels by 2010	$12.50
Springer Study Summaries	Kyoto—liberal trading	$1.00–22.00 $9.00 average
	Kyoto—Trading limited to Annex B countries	$4.00–74.00 $27.00 average
National Commission for Energy Policy (NCEP)	"Ending the Energy Stalemate"	$7.00 in 2010 $15.00 in 2026
NWPPC	Fifth 2005	67% likelihood $0.00–15.00 in 2008 $0.00–30.00 in 2016
CPUC	Energy and Environmental Economics Inc. report	$5.00 near-term $12.50 in 2008 $17.50 in 2013
	Reported cost of offset emission projects	$7.50 median
Dutch, UK, and World Bank trading markets		$7.50
EU ETS	June 2005 for 2006 settlement	$27.00

EPIS, Inc AURORAxmp

AURORA^{xmp} Electric Market Model

Overview of AURORA^{xmp}

AURORA^{xmp} Electric Market Model is price forecasting and analysis software for the competitive electric market. AURORA^{xmp} forecasts:

- Electric energy prices.
- The market value of electric generating units.
- The market value of contracts and portfolios; and,
- AURORA^{xmp} analyzes the effect of market uncertainty.

AURORA^{xmp} applies economic principles, dispatch simulation and bidding strategies to model the relationships of supply, transportation, and demand for electric energy.

AURORA^{xmp} forecasts market prices and operation based on forecasts of key fundamental drivers such as demand, fuel prices, and hydro conditions.

AURORA^{xmp} is able to forecast point estimates in seconds and minutes, and produce Monte Carlo stochastic analyses in minutes and a few hours.

In addition to market prices, AURORA^{xmp} provides information on resource value, portfolio value, net power cost, risk and uncertainty analysis, and resource planning. With appropriate inputs, AURORA^{xmp} can be used for near-term analysis (next day/week) to very long-term analysis (20 plus years).

Furthermore, the user can make changes to data (using spreadsheet-like grids) in the database and run scenarios and what-if cases. Users are able to add their own proprietary data to create their own databases.

Modeling Methodology

AURORA^{xmp} is specifically designed to model wholesale electricity prices in a deregulated generation market.

In a deregulated generation market, at any given time, prices should be based on the marginal cost of production. In a competitive electricity market, prices will rise to the point of the variable cost of the last generating unit needed to meet demand.

One of the principal functions of AURORA^{xmp} is to estimate this hourly market-clearing price at various locations in the national electric market. AURORA^{xmp} uses a fundamentals approach in estimating prices, reflecting the economics and physical characteristics of demand and supply.

AURORA^{xmp} estimates prices by using hourly demands and individual resource-operating characteristics in a transmission-constrained, chronological dispatch algorithm.

The operation of resources within the electric market is modeled to determine which resources are on the margin for each area in any given hour. The database includes all the NERC reliability areas in the North American national electric market.

The AURORA^{xmp} database includes long-term average demand and hourly demand shapes

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for all the areas in the database. These demand areas are connected by transmission links with specified transfer capabilities, losses, and wheeling costs.

Existing supply-side generating units are defined and modeled individually with specification of a number of cost components and physical characteristics and operating constraints. Hydro generation for each area, with instantaneous maximums, off-peak minimums, and sustained peaking constraints are also input. Demand-side resources and price-induced curtailment functions are defined, allowing the model to balance use of generation against alternatives to reducing customer demand.

AURORA^{xmp} uses this information to build an economic dispatch for the markets. Units are dispatched according to variable cost, subject to non-cycling and minimum run constraints until hourly demand is met in each area. Transmission constraints, losses, wheeling costs and unit start-up costs are reflected in the dispatch. The market-clearing price is then determined by observing the cost of meeting an incremental increase in demand in each area. All operating units in an area receive the hourly market-clearing price for the power they generate.

AURORA^{xmp} also has the capability to simulate the addition of new-generation resources and the economic retirement of existing units. New units are chosen from a set of available supply alternatives with technology and cost characteristics that can be specified through time. New resources are built only when the combination of hourly prices and frequency of operation for a resource generate enough revenue to make construction profitable; that is, when investors can recover fixed and variable costs with an acceptable return on investment.

AURORA^{xmp} uses an iterative technique in these long-term planning studies to solve the interdependencies between prices and changes in resource schedules.

Existing units that cannot generate enough revenue to cover their variable and fixed operating costs over time are identified and become candidates for economic retirement. To reflect the timing of transition to competition across all areas, the rate at which existing units can be retired for economic reasons is constrained in these studies for a number of years.

In summary, AURORA^{xmp} simulates the economic dispatch of resources to meet demand requirements. AURORA^{xmp}:

- Solves the whole system dispatch simultaneously.
- Dispatches hourly (with sampling capabilities, where appropriate).
- Determines the market-clearing prices from marginal costs.
- Values all the resources in the system.
- Provides price and value forecasts for each time period being studied.

Drivers and Inputs

AURORA^{xmp} uses the fundamental economic drivers of the electric market to make its forecast. That information includes:

- Electricity demand by geographic area; annually and monthly including hourly shapes.
- Supply-side resources (all major generating units) in the system. Resource heat rates, fuel types, resource-commitment data and other resource information. Future resource alternatives are used in long-term optimization studies.
- Demand-side resources including an interruptible price curve.

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- Fuel prices by fuel type and location.
- Hydro information for AURORA^{xmp}'s hydro-optimization logic.
- Transmission costs and constraints.
- For uncertainty analysis, Monte Carlo sampling from statistical distributions for demand, fuel prices, hydro conditions and other drivers is used to forecast price distributions.

Users manage the cases and analyze the drivers to electricity-market forecasts by selecting the underlying assumptions of the analysis. The projections are created using assumptions for the chosen inputs, such as electricity demand growth, fuel prices, and gas-fired combined-cycle generation efficiency and cost. For example, the low electricity market scenario could include low-demand growth, low fuel prices, and optimistic assumptions about combined-cycle combustion turbines. The combination of assumptions may consist of outcomes that the user believes are plausible. A user can model the conditions, cases and options a decision-maker wants to evaluate. Without any programming, you determine the assumptions used in each forecast or study.

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2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
50th Percentile Water, 50th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2006	HCC	243.4	439.0	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	289.6
OXBOW	2006	HCC	101.1	182.1	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2006	HCC	201.1	362.2	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.7
1000 SPRINGS	2006	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2006	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2006	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2006	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2006	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2006	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2006	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2006	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2006	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2006	ROR	12.0	12.0	12.0	12.0	9.7	10.1	12.0	12.0	12.0	11.2	12.0	12.0	11.6
SWAN FALLS	2006	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2006	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2006	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2006	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2006	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**545.6**	**983.3**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**665.8**
ROR TOTAL			**303.2**	**386.5**	**282.2**	**313.8**	**287.6**	**295.2**	**331.2**	**336.8**	**287.3**	**235.6**	**219.0**	**368.9**	**303.5**
TOTAL			**848.8**	**1369.8**	**1074.0**	**1293.9**	**1127.1**	**1097.6**	**935.5**	**925.8**	**747.8**	**689.7**	**577.4**	**977.8**	**969.3**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2007	HCC	243.4	439.0	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	289.6
OXBOW	2007	HCC	101.1	182.1	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2007	HCC	201.1	362.2	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.7
1000 SPRINGS	2007	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2007	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2007	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2007	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2007	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2007	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2007	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2007	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2007	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2007	ROR	12.0	12.0	12.0	12.0	9.7	10.1	12.0	12.0	12.0	11.2	12.0	12.0	11.6
SWAN FALLS	2007	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2007	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2007	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2007	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2007	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**545.6**	**983.3**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**665.8**
ROR TOTAL			**303.2**	**386.5**	**282.2**	**313.8**	**287.6**	**295.2**	**331.2**	**336.8**	**287.3**	**235.6**	**219.0**	**368.9**	**303.5**
TOTAL			**848.8**	**1369.8**	**1074.0**	**1293.9**	**1127.1**	**1097.6**	**935.5**	**925.8**	**747.8**	**689.7**	**577.4**	**977.8**	**969.3**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
50th Percentile Water, 50th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2008	HCC	243.7	438.5	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	289.6
OXBOW	2008	HCC	101.2	181.9	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2008	HCC	201.4	361.8	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.7
1000 SPRINGS	2008	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2008	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2008	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2008	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2008	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2008	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2008	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2008	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2008	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2008	ROR	12.0	12.0	12.0	12.0	9.7	10.1	12.0	12.0	12.0	11.2	12.0	12.0	11.6
SWAN FALLS	2008	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2008	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2008	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2008	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2008	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**546.3**	**982.2**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**665.7**
ROR TOTAL			**303.2**	**386.5**	**282.2**	**313.8**	**287.6**	**295.2**	**331.2**	**336.8**	**287.3**	**235.6**	**219.0**	**368.9**	**303.5**
TOTAL			**849.5**	**1368.7**	**1074.0**	**1293.9**	**1127.1**	**1097.6**	**935.5**	**925.8**	**747.8**	**689.7**	**577.4**	**977.8**	**969.3**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2009	HCC	256.3	419.7	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	289.2
OXBOW	2009	HCC	107.1	175.6	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2009	HCC	212.9	349.4	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.7
1000 SPRINGS	2009	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2009	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2009	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2009	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2009	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2009	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2009	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2009	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2009	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2009	ROR	12.0	12.0	12.0	12.0	9.7	10.1	12.0	12.0	12.0	11.2	12.0	12.0	11.6
SWAN FALLS	2009	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2009	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2009	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2009	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2009	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**576.3**	**944.7**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**665.4**
ROR TOTAL			**303.2**	**386.5**	**282.2**	**313.8**	**287.6**	**295.2**	**331.2**	**336.8**	**287.3**	**235.6**	**219.0**	**368.9**	**303.5**
TOTAL			**879.5**	**1331.2**	**1074.0**	**1293.9**	**1127.1**	**1097.6**	**935.5**	**925.8**	**747.8**	**689.7**	**577.4**	**977.8**	**968.9**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
50th Percentile Water, 50th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2010	HCC	270.9	397.8	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	288.7
OXBOW	2010	HCC	114.1	168.1	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2010	HCC	226.4	334.8	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.8
1000 SPRINGS	2010	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2010	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2010	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2010	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2010	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2010	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2010	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2010	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2010	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2010	ROR	12.0	12.0	12.0	12.0	9.7	10.1	12.0	12.0	12.0	12.1	13.8	66.9	16.5
SWAN FALLS	2010	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2010	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2010	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2010	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2010	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**611.4**	**900.7**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**665.0**
ROR TOTAL			**303.2**	**386.5**	**282.2**	**313.8**	**287.6**	**295.2**	**331.2**	**336.8**	**287.3**	**236.5**	**220.8**	**423.8**	**308.4**
TOTAL			**914.6**	**1287.2**	**1074.0**	**1293.9**	**1127.1**	**1097.6**	**935.5**	**925.8**	**747.8**	**690.6**	**579.2**	**1032.7**	**973.4**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2011	HCC	268.8	400.9	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	288.8
OXBOW	2011	HCC	113.1	169.2	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2011	HCC	224.5	336.9	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.8
1000 SPRINGS	2011	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2011	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2011	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2011	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2011	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2011	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2011	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2011	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2011	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2011	ROR	12.0	12.0	12.0	12.0	9.7	10.1	12.0	12.0	12.0	12.1	13.8	66.9	16.5
SWAN FALLS	2011	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2011	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2011	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2011	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2011	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**606.4**	**907.0**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**665.1**
ROR TOTAL			**303.2**	**386.5**	**282.2**	**313.8**	**287.6**	**295.2**	**331.2**	**336.8**	**287.3**	**236.5**	**220.8**	**423.8**	**308.4**
TOTAL			**909.6**	**1293.5**	**1074.0**	**1293.9**	**1127.1**	**1097.6**	**935.5**	**925.8**	**747.8**	**690.6**	**579.2**	**1032.7**	**973.5**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580

50th Percentile Water, 50th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2012	HCC	277.0	388.4	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	288.5
OXBOW	2012	HCC	117.1	164.9	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2012	HCC	232.2	328.4	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.8
1000 SPRINGS	2012	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2012	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2012	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2012	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2012	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2012	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2012	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2012	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2012	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2012	ROR	44.0	71.9	29.3	31.3	8.2	8.7	27.2	30.3	16.7	12.1	13.8	66.9	29.8
SWAN FALLS	2012	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2012	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2012	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2012	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2012	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**626.3**	**881.7**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**664.8**
ROR TOTAL			**335.2**	**446.4**	**299.5**	**333.1**	**286.1**	**293.8**	**346.4**	**355.1**	**292.0**	**236.5**	**220.8**	**423.8**	**321.8**
TOTAL			**961.5**	**1328.1**	**1091.3**	**1313.2**	**1125.6**	**1096.2**	**950.7**	**944.1**	**752.5**	**690.6**	**579.2**	**1032.7**	**986.6**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2013	HCC	296.8	371.2	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	288.9
OXBOW	2013	HCC	122.5	158.9	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2013	HCC	241.1	316.8	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.6
1000 SPRINGS	2013	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2013	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2013	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2013	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2013	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2013	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2013	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2013	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2013	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2013	ROR	44.0	71.9	29.3	31.3	8.2	8.7	27.2	30.3	16.7	12.1	13.8	66.9	29.8
SWAN FALLS	2013	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2013	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2013	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2013	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2013	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**660.4**	**846.9**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**665.0**
ROR TOTAL			**335.2**	**446.4**	**299.5**	**333.1**	**286.1**	**293.8**	**346.4**	**355.1**	**292.0**	**236.5**	**220.8**	**423.8**	**321.8**
TOTAL			**995.6**	**1293.3**	**1091.3**	**1313.2**	**1125.6**	**1096.2**	**950.7**	**944.1**	**752.5**	**690.6**	**579.2**	**1032.7**	**986.8**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580

50th Percentile Water, 50th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2014	HCC	311.0	350.4	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	288.5
OXBOW	2014	HCC	129.3	151.6	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2014	HCC	254.1	302.5	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.6
1000 SPRINGS	2014	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2014	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2014	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2014	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2014	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2014	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2014	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2014	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2014	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2014	ROR	44.0	71.9	29.3	31.3	8.2	8.7	27.2	30.3	16.7	12.1	13.8	66.9	29.8
SWAN FALLS	2014	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2014	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2014	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2014	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2014	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**694.4**	**804.5**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**664.7**
ROR TOTAL			**335.2**	**446.4**	**299.5**	**333.1**	**286.1**	**293.8**	**346.4**	**355.1**	**292.0**	**236.5**	**220.8**	**423.8**	**321.8**
TOTAL			**1029.6**	**1250.9**	**1091.3**	**1313.2**	**1125.6**	**1096.2**	**950.7**	**944.1**	**752.5**	**690.6**	**579.2**	**1032.7**	**986.5**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2015	HCC	327.9	325.2	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	288.0
OXBOW	2015	HCC	137.4	142.6	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2015	HCC	270.1	284.9	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.6
1000 SPRINGS	2015	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2015	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2015	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2015	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2015	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2015	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2015	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2015	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2015	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2015	ROR	44.0	71.9	29.3	31.3	8.2	8.7	27.2	30.3	16.7	12.1	13.8	66.9	29.8
SWAN FALLS	2015	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2015	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2015	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2015	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2015	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**735.4**	**752.7**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**664.2**
ROR TOTAL			**335.2**	**446.4**	**299.5**	**333.1**	**286.1**	**293.8**	**346.4**	**355.1**	**292.0**	**236.5**	**220.8**	**423.8**	**321.8**
TOTAL			**1070.6**	**1199.1**	**1091.3**	**1313.2**	**1125.6**	**1096.2**	**950.7**	**944.1**	**752.5**	**690.6**	**579.2**	**1032.7**	**986.0**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
50th Percentile Water, 50th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2016	HCC	342.0	303.7	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	287.6
OXBOW	2016	HCC	144.5	134.8	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2016	HCC	283.8	269.6	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.6
1000 SPRINGS	2016	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2016	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2016	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2016	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2016	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2016	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2016	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2016	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2016	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2016	ROR	44.0	71.9	29.3	31.3	8.2	8.7	27.2	30.3	16.7	12.1	13.8	66.9	29.8
SWAN FALLS	2016	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2016	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2016	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2016	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2016	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**770.3**	**708.1**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**663.7**
ROR TOTAL			**335.2**	**446.4**	**299.5**	**333.1**	**286.1**	**293.8**	**346.4**	**355.1**	**292.0**	**236.5**	**220.8**	**423.8**	**321.8**
TOTAL			**1105.5**	**1154.5**	**1091.3**	**1313.2**	**1125.6**	**1096.2**	**950.7**	**944.1**	**752.5**	**690.6**	**579.2**	**1032.7**	**985.5**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2017	HCC	354.3	284.7	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	287.2
OXBOW	2017	HCC	150.8	127.7	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2017	HCC	296.1	256.0	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.6
1000 SPRINGS	2017	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2017	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2017	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2017	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2017	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2017	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2017	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2017	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2017	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2017	ROR	44.0	71.9	29.3	31.3	8.2	8.7	27.2	30.3	16.7	12.1	13.8	66.9	29.8
SWAN FALLS	2017	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2017	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2017	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2017	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2017	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**801.2**	**668.4**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**663.3**
ROR TOTAL			**335.2**	**446.4**	**299.5**	**333.1**	**286.1**	**293.8**	**346.4**	**355.1**	**292.0**	**236.5**	**220.8**	**423.8**	**321.8**
TOTAL			**1136.4**	**1114.8**	**1091.3**	**1313.2**	**1125.6**	**1096.2**	**950.7**	**944.1**	**752.5**	**690.6**	**579.2**	**1032.7**	**985.1**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
50th Percentile Water, 50th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2018	HCC	354.3	284.7	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	287.2
OXBOW	2018	HCC	150.8	127.7	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2018	HCC	296.1	256.0	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.6
1000 SPRINGS	2018	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2018	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2018	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2018	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2018	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2018	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2018	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2018	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2018	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2018	ROR	44.0	71.9	29.3	31.3	8.2	8.7	27.2	30.3	16.7	12.1	13.8	66.9	29.8
SWAN FALLS	2018	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2018	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2018	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2018	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2018	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**801.2**	**668.4**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**663.3**
ROR TOTAL			**335.2**	**446.4**	**299.5**	**333.1**	**286.1**	**293.8**	**346.4**	**355.1**	**292.0**	**236.5**	**220.8**	**423.8**	**321.8**
TOTAL			**1136.4**	**1114.8**	**1091.3**	**1313.2**	**1125.6**	**1096.2**	**950.7**	**944.1**	**752.5**	**690.6**	**579.2**	**1032.7**	**985.1**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2019	HCC	354.3	284.7	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	287.2
OXBOW	2019	HCC	150.8	127.7	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2019	HCC	296.1	256.0	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.6
1000 SPRINGS	2019	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2019	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2019	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2019	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2019	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2019	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2019	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2019	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2019	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2019	ROR	44.0	71.9	29.3	31.3	8.2	8.7	27.2	30.3	16.7	12.1	13.8	66.9	29.8
SWAN FALLS	2019	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2019	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2019	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2019	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2019	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**801.2**	**668.4**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**663.3**
ROR TOTAL			**335.2**	**446.4**	**299.5**	**333.1**	**286.1**	**293.8**	**346.4**	**355.1**	**292.0**	**236.5**	**220.8**	**423.8**	**321.8**
TOTAL			**1136.4**	**1114.8**	**1091.3**	**1313.2**	**1125.6**	**1096.2**	**950.7**	**944.1**	**752.5**	**690.6**	**579.2**	**1032.7**	**985.1**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580

50th Percentile Water, 50th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2020	HCC	354.3	284.7	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	287.2
OXBOW	2020	HCC	150.8	127.7	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2020	HCC	296.1	256.0	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.6
1000 SPRINGS	2020	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2020	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2020	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2020	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2020	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2020	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2020	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2020	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2020	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2020	ROR	44.0	71.9	29.3	31.3	8.2	8.7	27.2	30.3	16.7	12.1	13.8	66.9	29.8
SWAN FALLS	2020	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2020	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2020	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2020	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2020	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**801.2**	**668.4**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**663.3**
ROR TOTAL			**335.2**	**446.4**	**299.5**	**333.1**	**286.1**	**293.8**	**346.4**	**355.1**	**292.0**	**236.5**	**220.8**	**423.8**	**321.8**
TOTAL			**1136.4**	**1114.8**	**1091.3**	**1313.2**	**1125.6**	**1096.2**	**950.7**	**944.1**	**752.5**	**690.6**	**579.2**	**1032.7**	**985.1**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2021	HCC	354.3	284.7	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	287.2
OXBOW	2021	HCC	150.8	127.7	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2021	HCC	296.1	256.0	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.6
1000 SPRINGS	2021	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2021	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2021	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2021	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2021	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2021	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2021	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2021	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2021	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2021	ROR	44.0	71.9	29.3	31.3	8.2	8.7	27.2	30.3	16.7	12.1	13.8	66.9	29.8
SWAN FALLS	2021	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2021	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2021	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2021	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2021	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**801.2**	**668.4**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**663.3**
ROR TOTAL			**335.2**	**446.4**	**299.5**	**333.1**	**286.1**	**293.8**	**346.4**	**355.1**	**292.0**	**236.5**	**220.8**	**423.8**	**321.8**
TOTAL			**1136.4**	**1114.8**	**1091.3**	**1313.2**	**1125.6**	**1096.2**	**950.7**	**944.1**	**752.5**	**690.6**	**579.2**	**1032.7**	**985.1**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580

50th Percentile Water, 50th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2022	HCC	354.3	284.7	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	287.2
OXBOW	2022	HCC	150.8	127.7	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2022	HCC	296.1	256.0	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.6
1000 SPRINGS	2022	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2022	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2022	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2022	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2022	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2022	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2022	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2022	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2022	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2022	ROR	44.0	71.9	29.3	31.3	8.2	8.7	27.2	30.3	16.7	12.1	13.8	66.9	29.8
SWAN FALLS	2022	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2022	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2022	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2022	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2022	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**801.2**	**668.4**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**663.3**
ROR TOTAL			**335.2**	**446.4**	**299.5**	**333.1**	**286.1**	**293.8**	**346.4**	**355.1**	**292.0**	**236.5**	**220.8**	**423.8**	**321.8**
TOTAL			**1136.4**	**1114.8**	**1091.3**	**1313.2**	**1125.6**	**1096.2**	**950.7**	**944.1**	**752.5**	**690.6**	**579.2**	**1032.7**	**985.1**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2023	HCC	354.3	284.7	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	287.2
OXBOW	2023	HCC	150.8	127.7	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2023	HCC	296.1	256.0	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.6
1000 SPRINGS	2023	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2023	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2023	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2023	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2023	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2023	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2023	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2023	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2023	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2023	ROR	44.0	71.9	29.3	31.3	8.2	8.7	27.2	30.3	16.7	12.1	13.8	66.9	29.8
SWAN FALLS	2023	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2023	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2023	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2023	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2023	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**801.2**	**668.4**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**663.3**
ROR TOTAL			**335.2**	**446.4**	**299.5**	**333.1**	**286.1**	**293.8**	**346.4**	**355.1**	**292.0**	**236.5**	**220.8**	**423.8**	**321.8**
TOTAL			**1136.4**	**1114.8**	**1091.3**	**1313.2**	**1125.6**	**1096.2**	**950.7**	**944.1**	**752.5**	**690.6**	**579.2**	**1032.7**	**985.1**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
50th Percentile Water, 50th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2024	HCC	354.3	284.7	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	287.2
OXBOW	2024	HCC	150.8	127.7	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2024	HCC	296.1	256.0	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.6
1000 SPRINGS	2024	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2024	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2024	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2024	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2024	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2024	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2024	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2024	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2024	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2024	ROR	44.0	71.9	29.3	31.3	8.2	8.7	27.2	30.3	16.7	12.1	13.8	66.9	29.8
SWAN FALLS	2024	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2024	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2024	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2024	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2024	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**801.2**	**668.4**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**663.3**
ROR TOTAL			**335.2**	**446.4**	**299.5**	**333.1**	**286.1**	**293.8**	**346.4**	**355.1**	**292.0**	**236.5**	**220.8**	**423.8**	**321.8**
TOTAL			**1136.4**	**1114.8**	**1091.3**	**1313.2**	**1125.6**	**1096.2**	**950.7**	**944.1**	**752.5**	**690.6**	**579.2**	**1032.7**	**985.1**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2025	HCC	354.3	284.7	338.5	418.6	367.9	359.3	266.7	251.4	192.2	190.5	151.0	269.7	287.2
OXBOW	2025	HCC	150.8	127.7	150.7	186.3	154.7	146.5	113.2	114.0	90.5	88.7	69.2	114.0	125.5
HELLS CANYON	2025	HCC	296.1	256.0	302.6	375.2	317.0	296.6	224.4	223.6	177.9	174.9	138.2	225.2	250.6
1000 SPRINGS	2025	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2025	ROR	15.0	29.4	18.3	42.0	71.6	81.5	91.1	76.2	47.1	15.8	0.0	25.3	42.9
BLISS	2025	ROR	45.9	52.8	43.6	44.0	39.7	36.4	40.1	42.4	42.2	40.9	39.2	52.2	43.2
C.J. STRIKE	2025	ROR	58.7	70.1	60.4	56.0	51.3	48.3	44.3	48.2	50.8	52.5	52.3	67.0	54.9
CASCADE	2025	ROR	1.5	2.5	3.9	5.5	9.9	14.8	6.9	12.2	9.0	3.0	1.9	1.5	6.1
CLEAR LAKE	2025	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2025	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2025	ROR	30.7	37.6	27.2	29.5	24.1	24.0	27.0	28.6	27.9	26.7	25.1	37.2	28.8
MILNER	2025	ROR	26.3	47.5	15.5	18.7	0.0	0.0	13.9	15.8	6.7	0.0	3.5	43.2	15.8
SHOSHONE FALLS	2025	ROR	44.0	71.9	29.3	31.3	8.2	8.7	27.2	30.3	16.7	12.1	13.8	66.9	29.8
SWAN FALLS	2025	ROR	19.0	22.4	20.0	18.6	16.9	15.9	15.0	15.7	16.4	17.0	17.3	21.5	17.9
TWIN FALLS	2025	ROR	28.0	46.2	18.5	21.4	6.0	6.3	18.7	20.8	11.8	7.3	8.7	43.0	19.6
UPPER MALAD	2025	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2025	ROR	19.2	19.1	17.5	19.2	15.1	14.8	17.1	18.6	17.8	16.6	15.4	19.1	17.5
UPPERSALMON 3&4	2025	ROR	17.7	17.7	16.1	17.7	14.1	13.9	15.9	17.1	16.4	15.4	14.4	17.7	16.2
HCC TOTAL			**801.2**	**668.4**	**791.8**	**980.1**	**839.5**	**802.4**	**604.3**	**589.0**	**460.5**	**454.1**	**358.4**	**608.9**	**663.3**
ROR TOTAL			**335.2**	**446.4**	**299.5**	**333.1**	**286.1**	**293.8**	**346.4**	**355.1**	**292.0**	**236.5**	**220.8**	**423.8**	**321.8**
TOTAL			**1136.4**	**1114.8**	**1091.3**	**1313.2**	**1125.6**	**1096.2**	**950.7**	**944.1**	**752.5**	**690.6**	**579.2**	**1032.7**	**985.1**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
70th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2006	HCC	259.2	314.6	317.4	326.4	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	251.6
OXBOW	2006	HCC	109.5	131.2	133.4	135.0	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2006	HCC	216.5	257.4	271.2	273.9	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2006	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2006	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2006	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2006	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2006	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2006	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2006	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2006	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2006	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2006	ROR	12.0	12.0	12.0	11.9	8.4	10.1	12.0	12.0	12.0	11.2	12.0	12.0	11.5
SWAN FALLS	2006	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2006	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2006	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2006	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2006	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**585.2**	**703.2**	**722.0**	**735.3**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**572.2**
ROR TOTAL			**260.2**	**352.6**	**305.8**	**250.5**	**260.6**	**273.7**	**326.0**	**329.0**	**277.2**	**230.3**	**213.7**	**216.9**	**274.3**
TOTAL			**845.4**	**1055.8**	**1027.8**	**985.8**	**997.0**	**893.0**	**888.8**	**899.4**	**616.3**	**671.8**	**577.0**	**710.5**	**846.5**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2007	HCC	262.1	310.3	317.4	326.4	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	251.6
OXBOW	2007	HCC	110.9	129.7	133.4	135.0	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2007	HCC	219.2	254.4	271.2	273.9	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2007	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2007	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2007	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2007	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2007	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2007	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2007	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2007	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2007	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2007	ROR	12.0	12.0	12.0	11.9	8.4	10.1	12.0	12.0	12.0	11.2	12.0	12.0	11.5
SWAN FALLS	2007	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2007	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2007	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2007	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2007	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**592.2**	**694.4**	**722.0**	**735.3**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**572.2**
ROR TOTAL			**260.2**	**352.6**	**305.8**	**250.5**	**260.6**	**273.7**	**326.0**	**329.0**	**277.2**	**230.3**	**213.7**	**216.9**	**274.3**
TOTAL			**852.4**	**1047.0**	**1027.8**	**985.8**	**997.0**	**893.0**	**888.8**	**899.4**	**616.3**	**671.8**	**577.0**	**710.5**	**846.5**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
70th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2008	HCC	274.8	291.3	317.4	326.4	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	251.2
OXBOW	2008	HCC	117.1	122.8	133.4	135.0	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2008	HCC	231.3	241.1	271.2	273.9	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2008	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2008	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2008	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2008	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2008	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2008	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2008	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2008	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2008	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2008	ROR	12.0	12.0	12.0	11.9	8.4	10.1	12.0	12.0	12.0	11.2	12.0	12.0	11.5
SWAN FALLS	2008	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2008	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2008	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2008	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2008	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**623.2**	**655.2**	**722.0**	**735.3**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**571.8**
ROR TOTAL			**260.2**	**352.6**	**305.8**	**250.5**	**260.6**	**273.7**	**326.0**	**329.0**	**277.2**	**230.3**	**213.7**	**216.9**	**274.3**
TOTAL			**883.4**	**1007.8**	**1027.8**	**985.8**	**997.0**	**893.0**	**888.8**	**899.4**	**616.3**	**671.8**	**577.0**	**710.5**	**846.1**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2009	HCC	293.2	268.5	317.4	326.4	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	251.0
OXBOW	2009	HCC	122.0	117.4	133.4	135.0	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2009	HCC	239.0	232.4	271.2	273.9	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2009	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2009	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2009	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2009	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2009	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2009	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2009	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2009	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2009	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2009	ROR	12.0	12.0	12.0	11.9	8.4	10.1	12.0	12.0	12.0	11.2	12.0	12.0	11.5
SWAN FALLS	2009	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2009	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2009	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2009	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2009	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**654.2**	**618.3**	**722.0**	**735.3**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**571.6**
ROR TOTAL			**260.2**	**352.6**	**305.8**	**250.5**	**260.6**	**273.7**	**326.0**	**329.0**	**277.2**	**230.3**	**213.7**	**216.9**	**274.3**
TOTAL			**914.4**	**970.9**	**1027.8**	**985.8**	**997.0**	**893.0**	**888.8**	**899.4**	**616.3**	**671.8**	**577.0**	**710.5**	**845.9**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
70th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2010	HCC	308.1	247.8	317.4	326.4	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	250.7
OXBOW	2010	HCC	129.1	109.4	133.4	135.0	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2010	HCC	252.9	216.8	271.2	273.9	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2010	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2010	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2010	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2010	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2010	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2010	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2010	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2010	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2010	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2010	ROR	12.0	12.0	12.0	11.9	8.4	10.1	12.0	12.0	12.0	12.1	13.8	15.9	12.0
SWAN FALLS	2010	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2010	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2010	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2010	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2010	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**690.1**	**574.0**	**722.0**	**735.3**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**571.2**
ROR TOTAL			**260.2**	**352.6**	**305.8**	**250.5**	**260.6**	**273.7**	**326.0**	**329.0**	**277.2**	**231.2**	**215.5**	**220.8**	**274.8**
TOTAL			**950.3**	**926.6**	**1027.8**	**985.8**	**997.0**	**893.0**	**888.8**	**899.4**	**616.3**	**672.7**	**578.8**	**714.4**	**846.1**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2011	HCC	311.8	242.6	317.4	326.4	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	250.6
OXBOW	2011	HCC	130.9	107.4	133.4	135.0	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2011	HCC	256.4	212.9	271.2	273.9	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2011	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2011	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2011	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2011	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2011	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2011	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2011	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2011	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2011	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2011	ROR	12.0	12.0	12.0	11.9	8.4	10.1	12.0	12.0	12.0	12.1	13.8	15.9	12.0
SWAN FALLS	2011	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2011	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2011	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2011	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2011	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**699.1**	**562.9**	**722.0**	**735.3**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**571.2**
ROR TOTAL			**260.2**	**352.6**	**305.8**	**250.5**	**260.6**	**273.7**	**326.0**	**329.0**	**277.2**	**231.2**	**215.5**	**220.8**	**274.8**
TOTAL			**959.3**	**915.5**	**1027.8**	**985.8**	**997.0**	**893.0**	**888.8**	**899.4**	**616.3**	**672.7**	**578.8**	**714.4**	**846.0**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580

70th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2012	HCC	320.4	230.5	317.4	326.4	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	250.4
OXBOW	2012	HCC	135.2	102.7	133.4	135.0	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2012	HCC	264.6	203.7	271.2	273.9	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2012	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2012	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2012	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2012	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2012	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2012	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2012	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2012	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2012	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2012	ROR	30.0	61.0	40.3	10.4	6.5	8.7	27.2	30.3	16.7	12.1	13.8	15.9	22.5
SWAN FALLS	2012	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2012	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2012	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2012	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2012	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**720.2**	**536.9**	**722.0**	**735.3**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**571.0**
ROR TOTAL			**278.2**	**401.6**	**334.1**	**249.0**	**258.7**	**272.3**	**341.2**	**347.3**	**281.8**	**231.2**	**215.5**	**220.8**	**285.4**
TOTAL			**998.4**	**938.5**	**1056.1**	**984.3**	**995.1**	**891.6**	**904.0**	**917.7**	**621.0**	**672.7**	**578.8**	**714.4**	**856.3**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2013	HCC	334.1	212.6	315.2	326.4	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	250.0
OXBOW	2013	HCC	142.0	95.8	132.7	135.0	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2013	HCC	278.1	190.3	269.7	273.9	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2013	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2013	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2013	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2013	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2013	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2013	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2013	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2013	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2013	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2013	ROR	30.0	61.0	40.3	10.4	6.5	8.7	27.2	30.3	16.7	12.1	13.8	15.9	22.5
SWAN FALLS	2013	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2013	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2013	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2013	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2013	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**754.2**	**498.7**	**717.6**	**735.3**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**570.5**
ROR TOTAL			**278.2**	**401.6**	**334.1**	**249.0**	**258.7**	**272.3**	**341.2**	**347.3**	**281.8**	**231.2**	**215.5**	**220.8**	**285.4**
TOTAL			**1032.4**	**900.3**	**1051.7**	**984.3**	**995.1**	**891.6**	**904.0**	**917.7**	**621.0**	**672.7**	**578.8**	**714.4**	**855.9**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
70th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2014	HCC	337.4	224.6	293.4	326.4	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	249.3
OXBOW	2014	HCC	143.7	102.6	124.9	135.0	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2014	HCC	281.4	203.5	254.6	273.9	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2014	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2014	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2014	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2014	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2014	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2014	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2014	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2014	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2014	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2014	ROR	30.0	61.0	40.3	10.4	6.5	8.7	27.2	30.3	16.7	12.1	13.8	15.9	22.5
SWAN FALLS	2014	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2014	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2014	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2014	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2014	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**762.5**	**530.7**	**672.9**	**735.3**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**569.9**
ROR TOTAL			**278.2**	**401.6**	**334.1**	**249.0**	**258.7**	**272.3**	**341.2**	**347.3**	**281.8**	**231.2**	**215.5**	**220.8**	**285.4**
TOTAL			**1040.7**	**932.3**	**1007.0**	**984.3**	**995.1**	**891.6**	**904.0**	**917.7**	**621.0**	**672.7**	**578.8**	**714.4**	**855.3**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2015	HCC	337.4	234.6	280.2	326.4	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	249.0
OXBOW	2015	HCC	143.7	107.9	120.2	135.0	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2015	HCC	281.4	213.8	245.4	273.9	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2015	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2015	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2015	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2015	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2015	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2015	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2015	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2015	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2015	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2015	ROR	30.0	61.0	40.3	10.4	6.5	8.7	27.2	30.3	16.7	12.1	13.8	15.9	22.5
SWAN FALLS	2015	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2015	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2015	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2015	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2015	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**762.5**	**556.3**	**645.8**	**735.3**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**569.6**
ROR TOTAL			**278.2**	**401.6**	**334.1**	**249.0**	**258.7**	**272.3**	**341.2**	**347.3**	**281.8**	**231.2**	**215.5**	**220.8**	**285.4**
TOTAL			**1040.7**	**957.9**	**979.9**	**984.3**	**995.1**	**891.6**	**904.0**	**917.7**	**621.0**	**672.7**	**578.8**	**714.4**	**854.9**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580

70th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2016	HCC	337.4	234.6	280.2	326.4	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	249.0
OXBOW	2016	HCC	143.7	107.9	120.2	135.0	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2016	HCC	281.4	213.8	245.4	273.9	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2016	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2016	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2016	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2016	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2016	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2016	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2016	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2016	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2016	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2016	ROR	30.0	61.0	40.3	10.4	6.5	8.7	27.2	30.3	16.7	12.1	13.8	15.9	22.5
SWAN FALLS	2016	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2016	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2016	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2016	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2016	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**762.5**	**556.3**	**645.8**	**735.3**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**569.6**
ROR TOTAL			**278.2**	**401.6**	**334.1**	**249.0**	**258.7**	**272.3**	**341.2**	**347.3**	**281.8**	**231.2**	**215.5**	**220.8**	**285.4**
TOTAL			**1040.7**	**957.9**	**979.9**	**984.3**	**995.1**	**891.6**	**904.0**	**917.7**	**621.0**	**672.7**	**578.8**	**714.4**	**854.9**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2017	HCC	337.4	234.6	280.2	326.4	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	249.0
OXBOW	2017	HCC	143.7	107.9	120.2	135.0	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2017	HCC	281.4	213.8	245.4	273.9	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2017	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2017	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2017	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2017	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2017	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2017	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2017	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2017	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2017	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2017	ROR	30.0	61.0	40.3	10.4	6.5	8.7	27.2	30.3	16.7	12.1	13.8	15.9	22.5
SWAN FALLS	2017	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2017	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2017	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2017	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2017	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**762.5**	**556.3**	**645.8**	**735.3**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**569.6**
ROR TOTAL			**278.2**	**401.6**	**334.1**	**249.0**	**258.7**	**272.3**	**341.2**	**347.3**	**281.8**	**231.2**	**215.5**	**220.8**	**285.4**
TOTAL			**1040.7**	**957.9**	**979.9**	**984.3**	**995.1**	**891.6**	**904.0**	**917.7**	**621.0**	**672.7**	**578.8**	**714.4**	**854.9**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
70th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2018	HCC	337.4	234.6	280.2	326.4	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	249.0
OXBOW	2018	HCC	143.7	107.9	120.2	135.0	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2018	HCC	281.4	213.8	245.4	273.9	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2018	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2018	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2018	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2018	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2018	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2018	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2018	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2018	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2018	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2018	ROR	30.0	61.0	40.3	10.4	6.5	8.7	27.2	30.3	16.7	12.1	13.8	15.9	22.5
SWAN FALLS	2018	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2018	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2018	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2018	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2018	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**762.5**	**556.3**	**645.8**	**735.3**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**569.6**
ROR TOTAL			**278.2**	**401.6**	**334.1**	**249.0**	**258.7**	**272.3**	**341.2**	**347.3**	**281.8**	**231.2**	**215.5**	**220.8**	**285.4**
TOTAL			**1040.7**	**957.9**	**979.9**	**984.3**	**995.1**	**891.6**	**904.0**	**917.7**	**621.0**	**672.7**	**578.8**	**714.4**	**854.9**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2019	HCC	337.4	234.6	280.2	326.4	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	249.0
OXBOW	2019	HCC	143.7	107.9	120.2	135.0	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2019	HCC	281.4	213.8	245.4	273.9	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2019	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2019	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2019	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2019	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2019	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2019	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2019	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2019	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2019	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2019	ROR	30.0	61.0	40.3	10.4	6.5	8.7	27.2	30.3	16.7	12.1	13.8	15.9	22.5
SWAN FALLS	2019	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2019	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2019	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2019	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2019	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**762.5**	**556.3**	**645.8**	**735.3**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**569.6**
ROR TOTAL			**278.2**	**401.6**	**334.1**	**249.0**	**258.7**	**272.3**	**341.2**	**347.3**	**281.8**	**231.2**	**215.5**	**220.8**	**285.4**
TOTAL			**1040.7**	**957.9**	**979.9**	**984.3**	**995.1**	**891.6**	**904.0**	**917.7**	**621.0**	**672.7**	**578.8**	**714.4**	**854.9**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580

70th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2020	HCC	337.4	234.6	287.5	315.9	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	248.7
OXBOW	2020	HCC	143.7	107.9	123.7	131.3	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2020	HCC	281.4	213.8	252.4	266.8	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2020	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2020	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2020	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2020	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2020	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2020	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2020	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2020	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2020	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2020	ROR	30.0	61.0	40.3	10.4	6.5	8.7	27.2	30.3	16.7	12.1	13.8	15.9	22.5
SWAN FALLS	2020	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2020	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2020	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2020	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2020	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**762.5**	**556.3**	**663.6**	**714.0**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**569.3**
ROR TOTAL			**278.2**	**401.6**	**334.1**	**249.0**	**258.7**	**272.3**	**341.2**	**347.3**	**281.8**	**231.2**	**215.5**	**220.8**	**285.4**
TOTAL			**1040.7**	**957.9**	**997.7**	**963.0**	**995.1**	**891.6**	**904.0**	**917.7**	**621.0**	**672.7**	**578.8**	**714.4**	**854.7**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2021	HCC	337.4	234.6	289.1	313.6	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	248.7
OXBOW	2021	HCC	143.7	107.9	124.6	130.5	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2021	HCC	281.4	213.8	253.9	265.1	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2021	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2021	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2021	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2021	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2021	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2021	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2021	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2021	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2021	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2021	ROR	30.0	61.0	40.3	10.4	6.5	8.7	27.2	30.3	16.7	12.1	13.8	15.9	22.5
SWAN FALLS	2021	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2021	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2021	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2021	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2021	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**762.5**	**556.3**	**667.6**	**709.2**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**569.3**
ROR TOTAL			**278.2**	**401.6**	**334.1**	**249.0**	**258.7**	**272.3**	**341.2**	**347.3**	**281.8**	**231.2**	**215.5**	**220.8**	**285.4**
TOTAL			**1040.7**	**957.9**	**1001.7**	**958.2**	**995.1**	**891.6**	**904.0**	**917.7**	**621.0**	**672.7**	**578.8**	**714.4**	**854.6**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
70th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2022	HCC	337.4	234.6	289.1	313.6	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	248.7
OXBOW	2022	HCC	143.7	107.9	124.6	130.5	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2022	HCC	281.4	213.8	253.9	265.1	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2022	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2022	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2022	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2022	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2022	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2022	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2022	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2022	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2022	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2022	ROR	30.0	61.0	40.3	10.4	6.5	8.7	27.2	30.3	16.7	12.1	13.8	15.9	22.5
SWAN FALLS	2022	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2022	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2022	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2022	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2022	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**762.5**	**556.3**	**667.6**	**709.2**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**569.3**
ROR TOTAL			**278.2**	**401.6**	**334.1**	**249.0**	**258.7**	**272.3**	**341.2**	**347.3**	**281.8**	**231.2**	**215.5**	**220.8**	**285.4**
TOTAL			**1040.7**	**957.9**	**1001.7**	**958.2**	**995.1**	**891.6**	**904.0**	**917.7**	**621.0**	**672.7**	**578.8**	**714.4**	**854.6**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2023	HCC	337.4	234.6	289.1	313.6	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	248.7
OXBOW	2023	HCC	143.7	107.9	124.6	130.5	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2023	HCC	281.4	213.8	253.9	265.1	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2023	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2023	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2023	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2023	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2023	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2023	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2023	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2023	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2023	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2023	ROR	30.0	61.0	40.3	10.4	6.5	8.7	27.2	30.3	16.7	12.1	13.8	15.9	22.5
SWAN FALLS	2023	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2023	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2023	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2023	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2023	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**762.5**	**556.3**	**667.6**	**709.2**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**569.3**
ROR TOTAL			**278.2**	**401.6**	**334.1**	**249.0**	**258.7**	**272.3**	**341.2**	**347.3**	**281.8**	**231.2**	**215.5**	**220.8**	**285.4**
TOTAL			**1040.7**	**957.9**	**1001.7**	**958.2**	**995.1**	**891.6**	**904.0**	**917.7**	**621.0**	**672.7**	**578.8**	**714.4**	**854.6**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
70th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2024	HCC	337.4	234.6	289.1	313.6	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	248.7
OXBOW	2024	HCC	143.7	107.9	124.6	130.5	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2024	HCC	281.4	213.8	253.9	265.1	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2024	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2024	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2024	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2024	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2024	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2024	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2024	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2024	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2024	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2024	ROR	30.0	61.0	40.3	10.4	6.5	8.7	27.2	30.3	16.7	12.1	13.8	15.9	22.5
SWAN FALLS	2024	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2024	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2024	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2024	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2024	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**762.5**	**556.3**	**667.6**	**709.2**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**569.3**
ROR TOTAL			**278.2**	**401.6**	**334.1**	**249.0**	**258.7**	**272.3**	**341.2**	**347.3**	**281.8**	**231.2**	**215.5**	**220.8**	**285.4**
TOTAL			**1040.7**	**957.9**	**1001.7**	**958.2**	**995.1**	**891.6**	**904.0**	**917.7**	**621.0**	**672.7**	**578.8**	**714.4**	**854.6**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2025	HCC	337.4	234.6	289.1	313.6	329.8	274.3	249.2	243.6	143.5	189.9	155.5	219.1	248.7
OXBOW	2025	HCC	143.7	107.9	124.6	130.5	133.2	113.4	105.5	110.4	65.8	84.7	69.5	92.0	106.9
HELLS CANYON	2025	HCC	281.4	213.8	253.9	265.1	273.5	231.6	208.1	216.4	130.0	166.9	138.3	182.5	213.7
1000 SPRINGS	2025	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2025	ROR	8.8	24.3	23.5	34.4	65.5	78.9	86.1	70.2	40.0	15.1	0.0	0.0	37.3
BLISS	2025	ROR	41.7	49.6	44.8	37.3	36.0	35.4	39.7	41.8	41.8	40.0	38.4	38.3	40.3
C.J. STRIKE	2025	ROR	54.7	64.3	59.8	54.6	44.8	40.0	43.3	47.8	50.0	51.3	50.2	50.3	50.8
CASCADE	2025	ROR	1.5	2.0	1.4	1.3	5.9	8.7	9.4	12.6	8.8	2.8	1.3	1.4	4.8
CLEAR LAKE	2025	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2025	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2025	ROR	27.0	34.7	29.5	23.7	23.2	23.5	26.6	28.1	27.4	25.9	24.7	24.5	26.5
MILNER	2025	ROR	15.6	39.5	23.9	3.5	0.0	0.0	13.9	15.8	6.7	0.0	3.5	6.1	10.6
SHOSHONE FALLS	2025	ROR	30.0	61.0	40.3	10.4	6.5	8.7	27.2	30.3	16.7	12.1	13.8	15.9	22.5
SWAN FALLS	2025	ROR	17.9	20.9	19.3	18.0	15.2	13.7	14.7	15.6	16.0	16.4	16.3	16.1	16.6
TWIN FALLS	2025	ROR	18.9	39.3	25.5	7.9	4.6	6.3	18.7	20.8	11.8	7.3	8.7	9.8	14.8
UPPER MALAD	2025	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2025	ROR	17.1	19.1	19.2	14.8	14.3	14.4	16.8	18.3	17.4	16.1	15.2	15.1	16.5
UPPERSALMON 3&4	2025	ROR	15.8	17.7	17.7	13.9	13.5	13.5	15.6	16.8	16.1	15.0	14.2	14.1	15.3
HCC TOTAL			**762.5**	**556.3**	**667.6**	**709.2**	**736.4**	**619.3**	**562.8**	**570.4**	**339.2**	**441.5**	**363.3**	**493.6**	**569.3**
ROR TOTAL			**278.2**	**401.6**	**334.1**	**249.0**	**258.7**	**272.3**	**341.2**	**347.3**	**281.8**	**231.2**	**215.5**	**220.8**	**285.4**
TOTAL			**1040.7**	**957.9**	**1001.7**	**958.2**	**995.1**	**891.6**	**904.0**	**917.7**	**621.0**	**672.7**	**578.8**	**714.4**	**854.6**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
90th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2006	HCC	282.0	221.7	300.2	267.2	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	227.9
OXBOW	2006	HCC	118.1	97.5	123.1	110.3	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2006	HCC	231.1	194.5	246.3	225.2	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.2
1000 SPRINGS	2006	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2006	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2006	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2006	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2006	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2006	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2006	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2006	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2006	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2006	ROR	12.0	12.0	12.0	8.1	8.4	9.8	12.0	12.0	7.4	9.7	12.0	12.0	10.6
SWAN FALLS	2006	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2006	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2006	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2006	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2006	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**631.2**	**513.7**	**669.6**	**602.7**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**518.1**
ROR TOTAL			**214.5**	**215.9**	**211.9**	**217.5**	**245.3**	**256.6**	**309.9**	**290.5**	**221.4**	**215.6**	**207.1**	**207.7**	**234.7**
TOTAL			**845.7**	**729.6**	**881.5**	**820.2**	**922.9**	**843.5**	**827.3**	**802.7**	**531.6**	**577.0**	**578.5**	**663.7**	**752.8**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2007	HCC	284.9	220.3	297.0	267.2	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	227.8
OXBOW	2007	HCC	119.4	97.2	121.9	110.3	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2007	HCC	233.8	194.0	244.1	225.2	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.2
1000 SPRINGS	2007	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2007	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2007	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2007	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2007	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2007	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2007	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2007	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2007	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2007	ROR	12.0	12.0	12.0	8.1	8.4	9.8	12.0	12.0	7.4	9.7	12.0	12.0	10.6
SWAN FALLS	2007	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2007	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2007	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2007	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2007	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**638.1**	**511.5**	**663.0**	**602.7**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**518.0**
ROR TOTAL			**214.5**	**215.9**	**211.9**	**217.5**	**245.3**	**256.6**	**309.9**	**290.5**	**221.4**	**215.6**	**207.1**	**207.7**	**234.7**
TOTAL			**852.6**	**727.4**	**874.9**	**820.2**	**922.9**	**843.5**	**827.3**	**802.7**	**531.6**	**577.0**	**578.5**	**663.7**	**752.7**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
90th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2008	HCC	297.6	227.9	257.6	267.2	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	226.1
OXBOW	2008	HCC	125.7	103.1	110.4	110.3	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2008	HCC	245.9	205.5	223.5	225.2	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.4
1000 SPRINGS	2008	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2008	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2008	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2008	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2008	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2008	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2008	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2008	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2008	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2008	ROR	12.0	12.0	12.0	8.1	8.4	9.8	12.0	12.0	7.4	9.7	12.0	12.0	10.6
SWAN FALLS	2008	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2008	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2008	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2008	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2008	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**669.2**	**536.5**	**591.5**	**602.7**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**516.4**
ROR TOTAL			**214.5**	**215.9**	**211.9**	**217.5**	**245.3**	**256.6**	**309.9**	**290.5**	**221.4**	**215.6**	**207.1**	**207.7**	**234.7**
TOTAL			**883.7**	**752.4**	**803.4**	**820.2**	**922.9**	**843.5**	**827.3**	**802.7**	**531.6**	**577.0**	**578.5**	**663.7**	**751.2**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2009	HCC	310.2	213.7	253.4	267.2	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.8
OXBOW	2009	HCC	131.9	97.8	108.9	110.3	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2009	HCC	258.1	195.2	220.5	225.2	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.4
1000 SPRINGS	2009	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2009	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2009	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2009	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2009	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2009	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2009	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2009	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2009	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2009	ROR	12.0	12.0	12.0	8.1	8.4	9.8	12.0	12.0	7.4	9.7	12.0	12.0	10.6
SWAN FALLS	2009	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2009	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2009	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2009	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2009	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**700.2**	**506.7**	**582.8**	**602.7**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**516.1**
ROR TOTAL			**214.5**	**215.9**	**211.9**	**217.5**	**245.3**	**256.6**	**309.9**	**290.5**	**221.4**	**215.6**	**207.1**	**207.7**	**234.7**
TOTAL			**914.7**	**722.6**	**794.7**	**820.2**	**922.9**	**843.5**	**827.3**	**802.7**	**531.6**	**577.0**	**578.5**	**663.7**	**750.8**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
90th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2010	HCC	310.7	213.0	253.4	267.2	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.7
OXBOW	2010	HCC	132.2	97.6	108.9	110.3	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2010	HCC	258.6	194.6	220.5	225.2	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.4
1000 SPRINGS	2010	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2010	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2010	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2010	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2010	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2010	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2010	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2010	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2010	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2010	ROR	12.0	12.0	12.0	8.1	8.4	9.8	12.0	12.0	7.4	10.9	12.5	14.4	11.0
SWAN FALLS	2010	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2010	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2010	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2010	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2010	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**701.5**	**505.2**	**582.8**	**602.7**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**516.0**
ROR TOTAL			**214.5**	**215.9**	**211.9**	**217.5**	**245.3**	**256.6**	**309.9**	**290.5**	**221.4**	**216.8**	**207.6**	**210.1**	**235.1**
TOTAL			**916.0**	**721.1**	**794.7**	**820.2**	**922.9**	**843.5**	**827.3**	**802.7**	**531.6**	**578.2**	**579.0**	**666.1**	**751.1**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2011	HCC	310.7	213.0	253.4	267.2	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.7
OXBOW	2011	HCC	132.2	97.6	108.9	110.3	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2011	HCC	258.6	194.6	220.5	225.2	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.4
1000 SPRINGS	2011	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2011	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2011	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2011	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2011	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2011	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2011	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2011	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2011	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2011	ROR	12.0	12.0	12.0	8.1	8.4	9.8	12.0	12.0	7.4	10.9	12.5	14.4	11.0
SWAN FALLS	2011	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2011	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2011	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2011	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2011	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**701.5**	**505.2**	**582.8**	**602.7**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**516.0**
ROR TOTAL			**214.5**	**215.9**	**211.9**	**217.5**	**245.3**	**256.6**	**309.9**	**290.5**	**221.4**	**216.8**	**207.6**	**210.1**	**235.1**
TOTAL			**916.0**	**721.1**	**794.7**	**820.2**	**922.9**	**843.5**	**827.3**	**802.7**	**531.6**	**578.2**	**579.0**	**666.1**	**751.1**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580

90th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2012	HCC	310.7	213.0	253.4	267.2	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.7
OXBOW	2012	HCC	132.2	97.6	108.9	110.3	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2012	HCC	258.6	194.6	220.5	225.2	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.4
1000 SPRINGS	2012	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2012	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2012	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2012	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2012	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2012	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2012	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2012	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2012	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2012	ROR	17.7	18.7	12.5	6.3	6.5	8.3	26.5	23.8	6.6	10.9	12.5	14.4	13.8
SWAN FALLS	2012	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2012	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2012	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2012	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2012	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**701.5**	**505.2**	**582.8**	**602.7**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**516.0**
ROR TOTAL			**220.2**	**222.6**	**212.4**	**215.7**	**243.4**	**255.1**	**324.4**	**302.3**	**220.6**	**216.8**	**207.6**	**210.1**	**237.9**
TOTAL			**921.7**	**727.8**	**795.2**	**818.4**	**921.0**	**842.0**	**841.8**	**814.5**	**530.8**	**578.2**	**579.0**	**666.1**	**753.9**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2013	HCC	310.7	213.0	253.4	267.2	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.7
OXBOW	2013	HCC	132.2	97.6	108.9	110.3	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2013	HCC	258.6	194.6	220.5	225.2	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.4
1000 SPRINGS	2013	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2013	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2013	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2013	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2013	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2013	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2013	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2013	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2013	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2013	ROR	17.7	18.7	12.5	6.3	6.5	8.3	26.5	23.8	6.6	10.9	12.5	14.4	13.8
SWAN FALLS	2013	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2013	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2013	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2013	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2013	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**701.5**	**505.2**	**582.8**	**602.7**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**516.0**
ROR TOTAL			**220.2**	**222.6**	**212.4**	**215.7**	**243.4**	**255.1**	**324.4**	**302.3**	**220.6**	**216.8**	**207.6**	**210.1**	**237.9**
TOTAL			**921.7**	**727.8**	**795.2**	**818.4**	**921.0**	**842.0**	**841.8**	**814.5**	**530.8**	**578.2**	**579.0**	**666.1**	**753.9**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
90th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2014	HCC	310.7	213.0	253.4	267.2	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.7
OXBOW	2014	HCC	132.2	97.6	108.9	110.3	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2014	HCC	258.6	194.6	220.5	225.2	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.4
1000 SPRINGS	2014	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2014	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2014	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2014	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2014	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2014	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2014	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2014	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2014	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2014	ROR	17.7	18.7	12.5	6.3	6.5	8.3	26.5	23.8	6.6	10.9	12.5	14.4	13.8
SWAN FALLS	2014	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2014	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2014	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2014	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2014	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**701.5**	**505.2**	**582.8**	**602.7**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**516.0**
ROR TOTAL			**220.2**	**222.6**	**212.4**	**215.7**	**243.4**	**255.1**	**324.4**	**302.3**	**220.6**	**216.8**	**207.6**	**210.1**	**237.9**
TOTAL			**921.7**	**727.8**	**795.2**	**818.4**	**921.0**	**842.0**	**841.8**	**814.5**	**530.8**	**578.2**	**579.0**	**666.1**	**753.9**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2015	HCC	310.7	213.0	266.3	249.3	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.4
OXBOW	2015	HCC	132.2	97.6	115.3	103.7	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2015	HCC	258.6	194.6	233.0	212.2	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.4
1000 SPRINGS	2015	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2015	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2015	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2015	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2015	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2015	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2015	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2015	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2015	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2015	ROR	17.7	18.7	12.5	6.3	6.5	8.3	26.5	23.8	6.6	10.9	12.5	14.4	13.8
SWAN FALLS	2015	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2015	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2015	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2015	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2015	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**701.5**	**505.2**	**614.6**	**565.2**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**515.7**
ROR TOTAL			**220.2**	**222.6**	**212.4**	**215.7**	**243.4**	**255.1**	**324.4**	**302.3**	**220.6**	**216.8**	**207.6**	**210.1**	**237.9**
TOTAL			**921.7**	**727.8**	**827.0**	**780.9**	**921.0**	**842.0**	**841.8**	**814.5**	**530.8**	**578.2**	**579.0**	**666.1**	**753.5**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580

90th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2016	HCC	310.7	213.0	285.3	234.4	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.8
OXBOW	2016	HCC	132.2	97.6	120.7	98.1	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2016	HCC	258.6	194.6	241.6	201.3	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.2
1000 SPRINGS	2016	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2016	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2016	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2016	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2016	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2016	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2016	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2016	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2016	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2016	ROR	17.7	18.7	12.5	6.3	6.5	8.3	26.5	23.8	6.6	10.9	12.5	14.4	13.8
SWAN FALLS	2016	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2016	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2016	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2016	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2016	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**701.5**	**505.2**	**647.6**	**533.8**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**515.9**
ROR TOTAL			**220.2**	**222.6**	**212.4**	**215.7**	**243.4**	**255.1**	**324.4**	**302.3**	**220.6**	**216.8**	**207.6**	**210.1**	**237.9**
TOTAL			**921.7**	**727.8**	**860.0**	**749.5**	**921.0**	**842.0**	**841.8**	**814.5**	**530.8**	**578.2**	**579.0**	**666.1**	**753.8**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2017	HCC	310.7	213.0	298.8	216.1	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.4
OXBOW	2017	HCC	132.2	97.6	127.3	91.2	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2017	HCC	258.6	194.6	254.5	187.9	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.2
1000 SPRINGS	2017	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2017	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2017	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2017	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2017	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2017	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2017	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2017	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2017	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2017	ROR	17.7	18.7	12.5	6.3	6.5	8.3	26.5	23.8	6.6	10.9	12.5	14.4	13.8
SWAN FALLS	2017	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2017	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2017	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2017	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2017	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**701.5**	**505.2**	**680.6**	**495.2**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**515.5**
ROR TOTAL			**220.2**	**222.6**	**212.4**	**215.7**	**243.4**	**255.1**	**324.4**	**302.3**	**220.6**	**216.8**	**207.6**	**210.1**	**237.9**
TOTAL			**921.7**	**727.8**	**893.0**	**710.9**	**921.0**	**842.0**	**841.8**	**814.5**	**530.8**	**578.2**	**579.0**	**666.1**	**753.4**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
90th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2018	HCC	310.7	213.0	307.5	204.1	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.2
OXBOW	2018	HCC	132.2	97.6	131.7	86.6	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2018	HCC	258.6	194.6	263.0	178.9	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.2
1000 SPRINGS	2018	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2018	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2018	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2018	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2018	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2018	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2018	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2018	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2018	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2018	ROR	17.7	18.7	12.5	6.3	6.5	8.3	26.5	23.8	6.6	10.9	12.5	14.4	13.8
SWAN FALLS	2018	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2018	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2018	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2018	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2018	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**701.5**	**505.2**	**702.2**	**469.6**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**515.2**
ROR TOTAL			**220.2**	**222.6**	**212.4**	**215.7**	**243.4**	**255.1**	**324.4**	**302.3**	**220.6**	**216.8**	**207.6**	**210.1**	**237.9**
TOTAL			**921.7**	**727.8**	**914.6**	**685.3**	**921.0**	**842.0**	**841.8**	**814.5**	**530.8**	**578.2**	**579.0**	**666.1**	**753.1**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2019	HCC	310.7	213.0	307.5	204.1	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.2
OXBOW	2019	HCC	132.2	97.6	131.7	86.6	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2019	HCC	258.6	194.6	263.0	178.9	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.2
1000 SPRINGS	2019	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2019	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2019	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2019	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2019	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2019	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2019	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2019	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2019	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2019	ROR	17.7	18.7	12.5	6.3	6.5	8.3	26.5	23.8	6.6	10.9	12.5	14.4	13.8
SWAN FALLS	2019	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2019	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2019	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2019	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2019	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**701.5**	**505.2**	**702.2**	**469.6**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**515.2**
ROR TOTAL			**220.2**	**222.6**	**212.4**	**215.7**	**243.4**	**255.1**	**324.4**	**302.3**	**220.6**	**216.8**	**207.6**	**210.1**	**237.9**
TOTAL			**921.7**	**727.8**	**914.6**	**685.3**	**921.0**	**842.0**	**841.8**	**814.5**	**530.8**	**578.2**	**579.0**	**666.1**	**753.1**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580

90th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2020	HCC	310.7	213.0	307.5	204.1	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.2
OXBOW	2020	HCC	132.2	97.6	131.7	86.6	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2020	HCC	258.6	194.6	263.0	178.9	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.2
1000 SPRINGS	2020	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2020	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2020	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2020	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2020	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2020	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2020	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2020	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2020	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2020	ROR	17.7	18.7	12.5	6.3	6.5	8.3	26.5	23.8	6.6	10.9	12.5	14.4	13.8
SWAN FALLS	2020	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2020	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2020	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2020	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2020	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**701.5**	**505.2**	**702.2**	**469.6**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**515.2**
ROR TOTAL			**220.2**	**222.6**	**212.4**	**215.7**	**243.4**	**255.1**	**324.4**	**302.3**	**220.6**	**216.8**	**207.6**	**210.1**	**237.9**
TOTAL			**921.7**	**727.8**	**914.6**	**685.3**	**921.0**	**842.0**	**841.8**	**814.5**	**530.8**	**578.2**	**579.0**	**666.1**	**753.1**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2021	HCC	310.7	213.0	307.5	204.1	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.2
OXBOW	2021	HCC	132.2	97.6	131.7	86.6	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2021	HCC	258.6	194.6	263.0	178.9	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.2
1000 SPRINGS	2021	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2021	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2021	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2021	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2021	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2021	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2021	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2021	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2021	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2021	ROR	17.7	18.7	12.5	6.3	6.5	8.3	26.5	23.8	6.6	10.9	12.5	14.4	13.8
SWAN FALLS	2021	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2021	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2021	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2021	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2021	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**701.5**	**505.2**	**702.2**	**469.6**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**515.2**
ROR TOTAL			**220.2**	**222.6**	**212.4**	**215.7**	**243.4**	**255.1**	**324.4**	**302.3**	**220.6**	**216.8**	**207.6**	**210.1**	**237.9**
TOTAL			**921.7**	**727.8**	**914.6**	**685.3**	**921.0**	**842.0**	**841.8**	**814.5**	**530.8**	**578.2**	**579.0**	**666.1**	**753.1**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
90th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2022	HCC	310.7	213.0	307.5	204.1	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.2
OXBOW	2022	HCC	132.2	97.6	131.7	86.6	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2022	HCC	258.6	194.6	263.0	178.9	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.2
1000 SPRINGS	2022	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2022	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2022	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2022	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2022	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2022	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2022	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2022	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2022	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2022	ROR	17.7	18.7	12.5	6.3	6.5	8.3	26.5	23.8	6.6	10.9	12.5	14.4	13.8
SWAN FALLS	2022	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2022	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2022	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2022	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2022	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**701.5**	**505.2**	**702.2**	**469.6**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**515.2**
ROR TOTAL			**220.2**	**222.6**	**212.4**	**215.7**	**243.4**	**255.1**	**324.4**	**302.3**	**220.6**	**216.8**	**207.6**	**210.1**	**237.9**
TOTAL			**921.7**	**727.8**	**914.6**	**685.3**	**921.0**	**842.0**	**841.8**	**814.5**	**530.8**	**578.2**	**579.0**	**666.1**	**753.1**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2023	HCC	310.7	213.0	307.5	204.1	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.2
OXBOW	2023	HCC	132.2	97.6	131.7	86.6	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2023	HCC	258.6	194.6	263.0	178.9	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.2
1000 SPRINGS	2023	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2023	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2023	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2023	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2023	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2023	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2023	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2023	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2023	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2023	ROR	17.7	18.7	12.5	6.3	6.5	8.3	26.5	23.8	6.6	10.9	12.5	14.4	13.8
SWAN FALLS	2023	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2023	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2023	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2023	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2023	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**701.5**	**505.2**	**702.2**	**469.6**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**515.2**
ROR TOTAL			**220.2**	**222.6**	**212.4**	**215.7**	**243.4**	**255.1**	**324.4**	**302.3**	**220.6**	**216.8**	**207.6**	**210.1**	**237.9**
TOTAL			**921.7**	**727.8**	**914.6**	**685.3**	**921.0**	**842.0**	**841.8**	**814.5**	**530.8**	**578.2**	**579.0**	**666.1**	**753.1**

2006 Integrated Resource Plan

Average Megawatt Hydro Output from PDR580
90th Percentile Water, 70th Percentile Load

Abbreviations:
HCC – Hells Canyon Complex
ROR – Run of River

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2024	HCC	310.7	213.0	307.5	204.1	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.2
OXBOW	2024	HCC	132.2	97.6	131.7	86.6	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2024	HCC	258.6	194.6	263.0	178.9	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.2
1000 SPRINGS	2024	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2024	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2024	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2024	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2024	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2024	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2024	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2024	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2024	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2024	ROR	17.7	18.7	12.5	6.3	6.5	8.3	26.5	23.8	6.6	10.9	12.5	14.4	13.8
SWAN FALLS	2024	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2024	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2024	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2024	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2024	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**701.5**	**505.2**	**702.2**	**469.6**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**515.2**
ROR TOTAL			**220.2**	**222.6**	**212.4**	**215.7**	**243.4**	**255.1**	**324.4**	**302.3**	**220.6**	**216.8**	**207.6**	**210.1**	**237.9**
TOTAL			**921.7**	**727.8**	**914.6**	**685.3**	**921.0**	**842.0**	**841.8**	**814.5**	**530.8**	**578.2**	**579.0**	**666.1**	**753.1**

Resource	YEAR	TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVE. MW
BROWNLEE	2025	HCC	310.7	213.0	307.5	204.1	305.3	261.7	229.6	219.0	129.2	153.0	160.3	202.6	225.2
OXBOW	2025	HCC	132.2	97.6	131.7	86.6	122.7	108.0	97.0	99.1	60.9	70.0	70.7	84.8	96.9
HELLS CANYON	2025	HCC	258.6	194.6	263.0	178.9	249.7	217.2	190.8	194.1	120.2	138.4	140.4	168.6	193.2
1000 SPRINGS	2025	ROR	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
AMERICAN FALLS	2025	ROR	0.0	0.0	8.8	32.4	63.3	74.3	77.4	54.7	25.6	9.6	0.0	0.0	29.0
BLISS	2025	ROR	37.9	37.7	36.8	35.8	34.9	34.2	38.6	39.3	37.0	39.1	37.4	36.7	37.1
C.J. STRIKE	2025	ROR	48.1	47.6	46.8	43.0	40.2	36.1	39.2	42.0	43.9	49.1	47.9	47.1	44.2
CASCADE	2025	ROR	1.4	1.4	1.3	1.2	1.4	4.3	9.7	11.5	7.7	1.9	1.3	1.4	3.7
CLEAR LAKE	2025	ROR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LOWER MALAD	2025	ROR	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
LOWER SALMON	2025	ROR	23.8	23.8	22.1	22.2	22.4	22.9	26.1	26.5	23.9	25.3	24.0	23.7	23.9
MILNER	2025	ROR	7.4	8.4	4.6	0.0	0.0	0.0	13.9	11.7	0.0	0.0	3.0	5.1	4.5
SHOSHONE FALLS	2025	ROR	17.7	18.7	12.5	6.3	6.5	8.3	26.5	23.8	6.6	10.9	12.5	14.4	13.8
SWAN FALLS	2025	ROR	15.6	15.8	15.6	14.8	14.1	12.8	13.8	14.5	14.5	15.6	15.6	15.5	14.8
TWIN FALLS	2025	ROR	10.8	11.4	8.4	4.4	4.6	6.0	18.3	16.5	3.8	6.0	8.4	9.1	9.0
UPPER MALAD	2025	ROR	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
UPPERSALMON 1&2	2025	ROR	14.6	14.8	13.5	13.6	13.8	13.9	16.4	16.9	14.7	15.6	14.6	14.4	14.7
UPPERSALMON 3&4	2025	ROR	13.7	13.8	12.8	12.8	13.0	13.1	15.3	15.7	13.8	14.5	13.7	13.5	13.8
HCC TOTAL			**701.5**	**505.2**	**702.2**	**469.6**	**677.6**	**586.9**	**517.4**	**512.2**	**310.2**	**361.4**	**371.4**	**456.0**	**515.2**
ROR TOTAL			**220.2**	**222.6**	**212.4**	**215.7**	**243.4**	**255.1**	**324.4**	**302.3**	**220.6**	**216.8**	**207.6**	**210.1**	**237.9**
TOTAL			**921.7**	**727.8**	**914.6**	**685.3**	**921.0**	**842.0**	**841.8**	**814.5**	**530.8**	**578.2**	**579.0**	**666.1**	**753.1**

Initial Portfolios Scenario Sensitivity Ranking
Total Cost–Expected, GHG $50, GHG $0, High Gas (PV 20 Years 2006–2025)

Total Cost

Portfolio	Years 1–20 Expected	GHG50	GHGZero	HighGas	Average	Average Rank
P1 Green Portfolio (F1)	**$4,983,722**	**$6,552,013**	**$4,337,781**	**$4,305,141**	**$5,044,664**	**3**
P2 Transmission Trans, CT, Nuc	$5,351,123	$7,520,496	$4,497,314	$5,297,094	$5,666,507	12
P3 2004 Preferred Portfolio (F2)	**$4,964,772**	**$7,190,763**	**$4,056,509**	**$4,511,564**	**$5,180,902**	**8**
P4 Thermal Portfolio (F3)	**$4,841,685**	**$7,455,705**	**$3,774,511**	**$4,124,336**	**$5,049,059**	**4**
P5 Thermal Clean Coal, NG, Nuc	$5,266,369	$7,609,253	$4,295,187	$4,603,822	$5,443,658	11
P6 2004 Preferred Coal, NG, Geo	$4,944,319	$7,384,550	$3,945,024	$4,416,225	$5,172,530	7
P7 2004 Preferred Coal, NG, Trans	$4,997,609	$7,525,667	$3,975,240	$4,477,690	$5,244,052	9
P8 2004 Preferredd NG, Coal, Wind	$4,812,681	$6,934,922	$3,930,606	$4,421,864	$5,025,018	2
P9 = P6 – IGCC w CS	$4,970,712	$6,993,532	$4,132,351	$4,442,368	$5,134,741	5
P10 All Coal, Nuc, Trans	$4,971,787	$7,580,152	$3,895,904	$4,242,195	$5,172,510	6
P11 Transmission Portfolio (F4)	**$5,870,035**	**$4,999,247**	**$4,999,247**	**$5,295,614**	**$5,291,036**	**10**
P12 Nuclear	$4,796,034	$6,696,660	$3,989,497	$4,008,331	$4,872,631	1

Ranking	Expected	GHG50	GHGZero	HighGas	Total Pts	Rank by Total Pts
P1 Green Portfolio (F1)	**8**	**2**	**10**	**4**	**24**	**6**
P2 Transmission Trans, CT, Nuc	11	9	11	12	43	12
P3 2004 Preferred Portfolio (F2)	**5**	**6**	**7**	**9**	**27**	**8**
P4 Thermal Portfolio (F3)	**3**	**8**	**1**	**2**	**14**	**2**
P5 Thermal Clean Coal, NG, Nuc	10	12	9	10	41	11
P6 2004 Preferred Coal, NG, Geo	4	7	4	5	20	4
P7 2004 Preferred Coal, NG, Trans	9	10	5	8	32	9
P8 2004 Preferredd NG, Coal, Wind	2	4	3	6	15	3
P9 = P6 – IGCC w CS	6	5	8	7	26	7
P10 All Coal, Nuc, Trans	7	11	2	3	23	5
P11 Transmission Portfolio (F4)	**12**	**1**	**12**	**11**	**36**	**10**
P12 Nuclear	1	3	6	1	11	1

Resource Cost (Excludes Market Purchases and Sales)

Portfolio	Years 1–20 Expected	GHG50	GHGZero	HighGas	Average	Average Rank
P1 Green Portfolio (F1)	**$7,348,136**	**$8,164,025**	**$6,509,463**	**$7,505,962**	**$7,381,896**	**8**
P2 Transmission Trans, CT, Nuc	$5,600,116	$6,368,985	$4,796,771	$5,596,582	$5,590,614	1
P3 2004 Preferred Portfolio (F2)	**$6,313,858**	**$7,531,485**	**$5,331,752**	**$6,408,199**	**$6,396,324**	**2**
P4 Thermal Portfolio (F3)	**$7,227,009**	**$8,920,298**	**$5,999,133**	**$7,330,232**	**$7,369,168**	**7**
P5 Thermal Clean Coal, NG, Nuc	$7,431,968	$8,936,119	$6,315,641	$7,531,453	$7,553,795	10
P6 2004 Preferred Coal, NG, Geo	$7,156,598	$8,723,322	$6,022,322	$7,411,142	$7,328,346	6
P7 2004 Preferred Coal, NG, Trans	$6,650,659	$8,138,429	$5,534,508	$6,742,242	$6,766,460	3
P8 2004 Preferredd NG, Coal, Wind	$7,026,768	$8,301,288	$6,015,482	$7,418,093	$7,190,408	4
P9 = P6 – IGCC w CS	$7,182,044	$8,328,189	$6,212,225	$7,438,398	$7,290,214	5
P10 All Coal, Nuc, Trans	$7,503,565	$9,299,812	$6,241,472	$7,658,642	$7,675,873	12
P11 Transmission Portfolio (F4)	**$7,860,774**	**$6,863,462**	**$6,863,462**	**$8,003,789**	**$7,397,872**	**9**
P12 Nuclear	$7,500,132	$8,748,451	$6,484,438	$7,650,356	$7,595,844	11

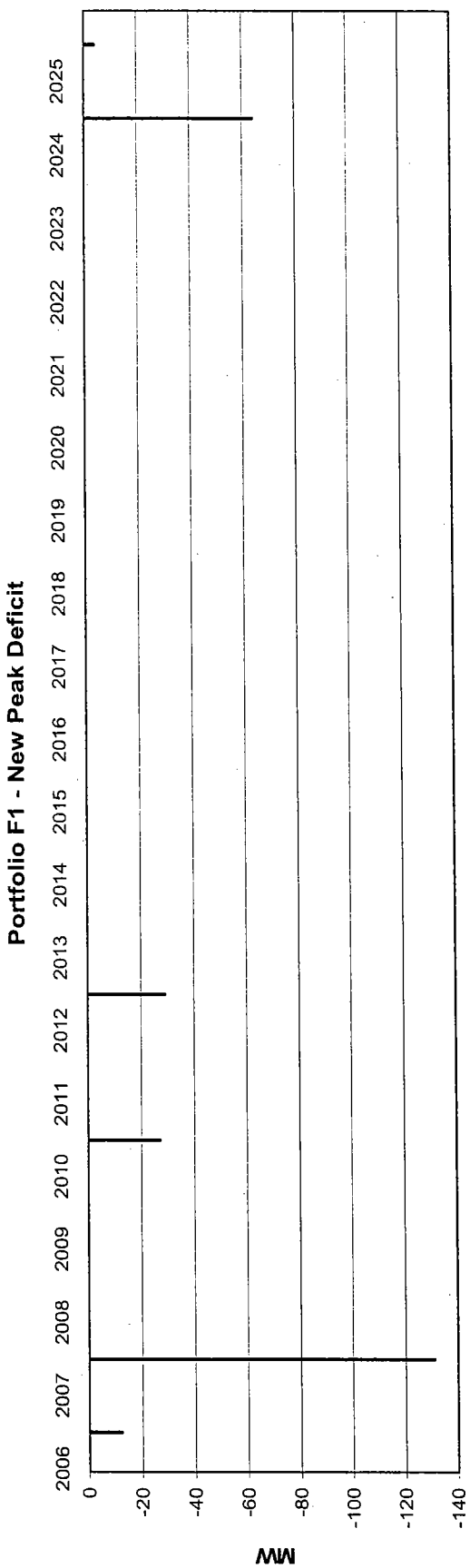
Ranking	Expected	GHG50	GHGZero	HighGas	Total Pts	Rank by Total Pts
P1 Green Portfolio (F1)	**8**	**5**	**11**	**8**	**32**	**8**
P2 Transmission Trans, CT, Nuc	1	1	1	1	4	1
P3 2004 Preferred Portfolio (F2)	**2**	**3**	**2**	**2**	**9**	**2**
P4 Thermal Portfolio (F3)	**7**	**10**	**4**	**4**	**25**	**6**
P5 Thermal Clean Coal, NG, Nuc	9	11	9	9	38	9
P6 2004 Preferred Coal, NG, Geo	5	8	6	5	24	5
P7 2004 Preferred Coal, NG, Trans	3	4	3	3	13	3
P8 2004 Preferredd NG, Coal, Wind	4	6	5	6	21	4
P9 = P6 – IGCC w CS	6	7	7	7	27	7
P10 All Coal, Nuc, Trans	11	12	8	11	42	12
P11 Transmission Portfolio (F4)	**12**	**2**	**12**	**12**	**38**	**9**
P12 Nuclear	10	9	10	10	39	11

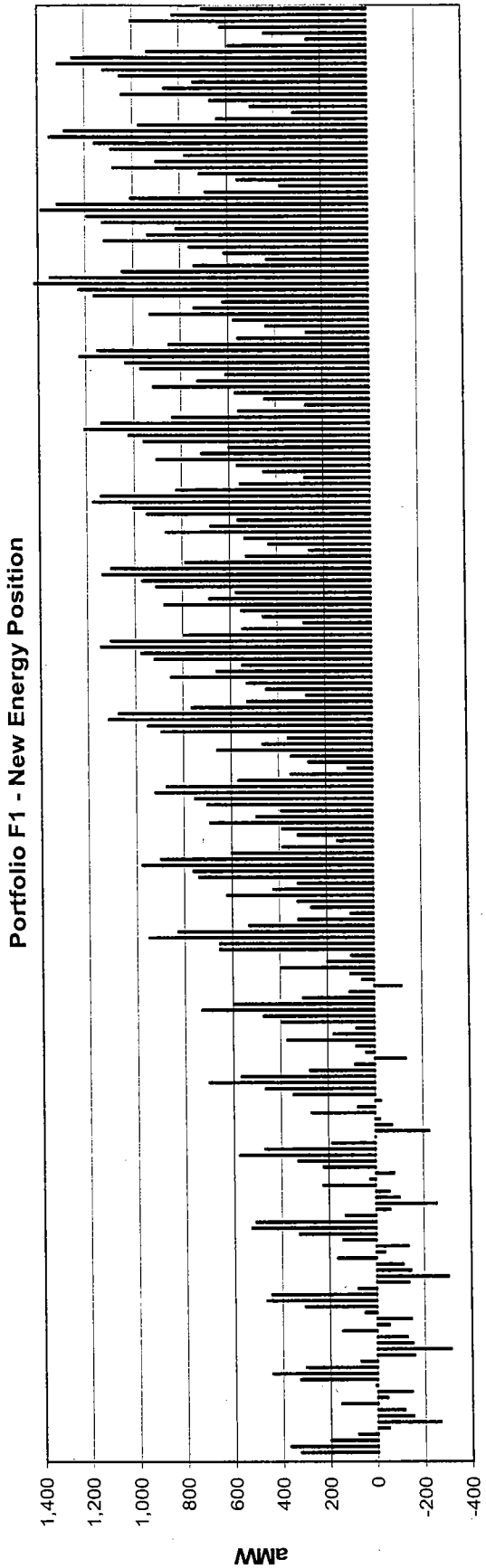
F1 Green Portfolio (originally P1)

On-Line Date	Resource	Nameplate	Peak	Average Energy	Peak DSM	Trans	Total Peak	Total Average Energy	Total Energy DSM	Total Trans
2006										
2007					4		4	7	7	0
2008	Wind	100	5	31	11		21	49	18	0
2009	Geothermal (Binary)	50	50	48	29		100	107	28	0
2009	Wind	200	10	62			110	141		0
2010	CHP	50	50	45	26		186	223	37	0
2011	Wind	200	10	62	21		217	292	44	0
2011	Geothermal (Binary)	50	50	48			267	296		0
2012	Geothermal (Binary)	50	50	48	19		335	395	51	0
2013	CHP	100	100	90	16		451	491	57	0
2013	Wyoming Pulv. Coal	250	250	220			701	654		0
2014	Geothermal (Binary)	50	50	48	14		765	764	62	0
2015					12		777	769	67	0
2016	McNary-Boise	225			10	225	787	771	69	225
2017	LoLo to IPCo	60			3	60	790	773	71	285
2018	Geothermal (Binary)	50	50	48	3		843	824	74	285
2019	Geothermal (Binary)	50	50	48	3		896	874	76	285
2020	Geothermal (Binary)	50	50	48	3		949	924	78	285
2021	Geothermal (Binary)	50	50	48	3		1,002	975	81	285
2022	INL Nuclear	250	250	230	3		1,254	1,207	83	285
2023					3		1,257	1,209	85	285
2024					3		1,259	1,212	88	285
2025					3		1,262	1,214	90	285
		1,835	1,075	1,124	187	285				

Resource Summary	MW
Wind	500
Geothermal (Binary)	400
Coal	250
CHP	150
Transmission	285
CT	0
Nuclear	250
Total Nameplate	1,835

	MW
Peak	1,262
Average Energy	1,214
Transmission	285
DSM Peak	187
DSM aMW	90
Max Energy Deficit	(312)


Portfolio F1 - New Peak Deficit
MW
0
-20
-40
-60
-80
-100
-120
-140
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025

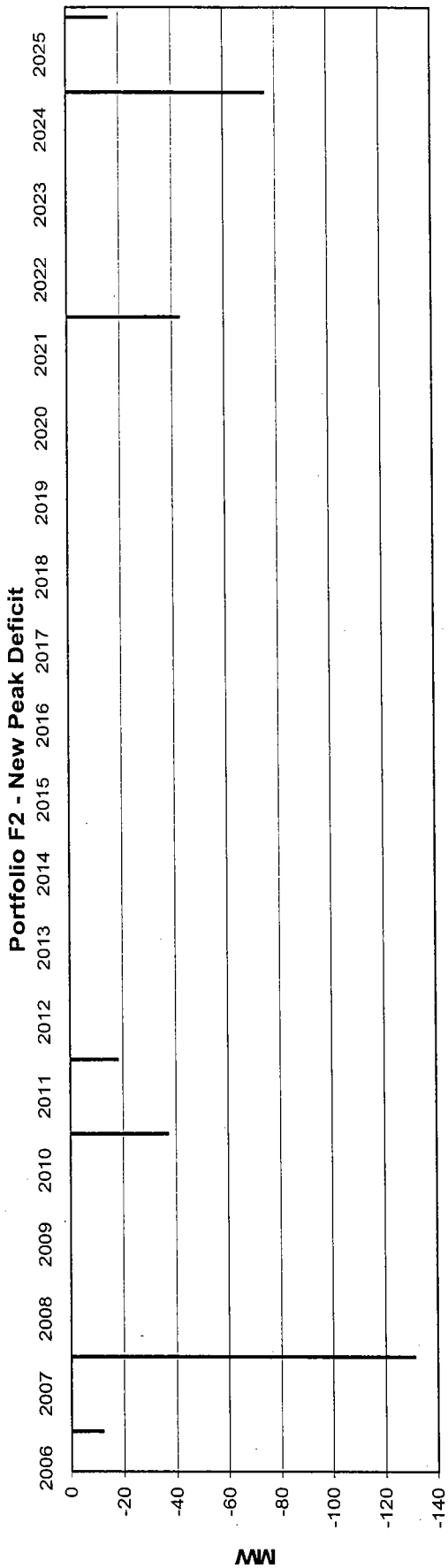

Portfolio F1 - New Energy Position
aMW
1,400
1,200
1,000
800
600
400
200
0
-200
-400

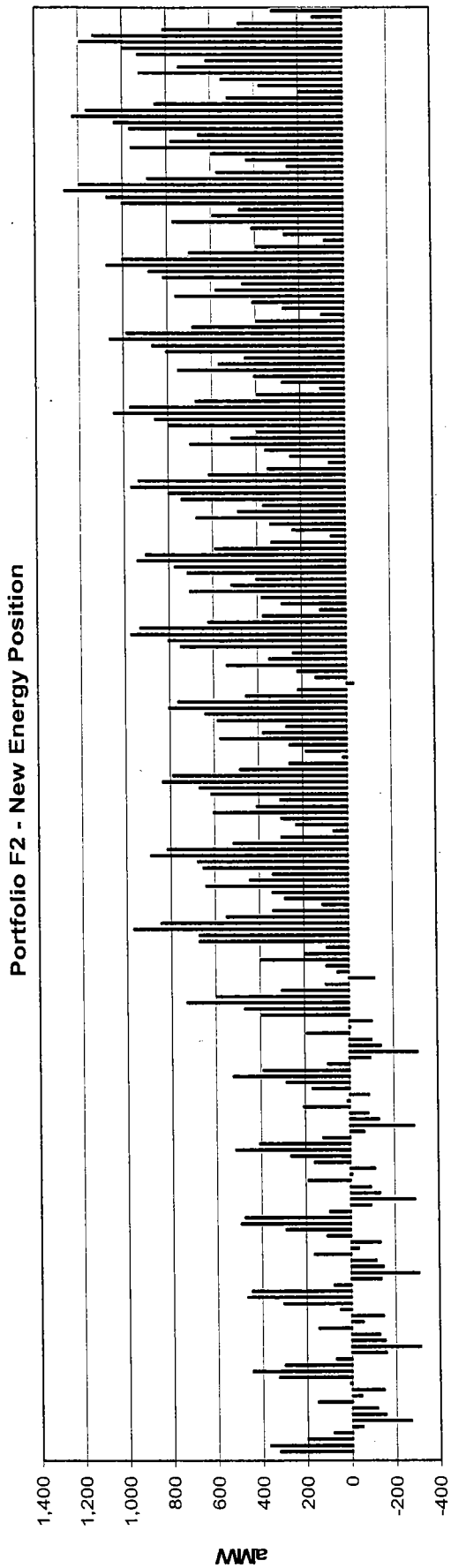
F2 2004 IRP Preferred Portfolio (originally P3)

On-Line Date	Resource	Nameplate	Peak	Average Energy	Peak DSM	Trans	Total Peak	Total Average Energy	Total Energy DSM	Total Trans
2006										
2007					4		4	7	7	0
2008	Wind	100	5	31	11		21	49	18	0
2009	Geothermal (Binary)	50	50	48	29		100	107	28	0
2010	CHP	50	50	45	26		176	161	37	0
2011					21		197	168	44	0
2012	Wind	150	8	47	19		223	222	51	0
2012	McNary-Boise	225				225	223	222	51	225
2013	Wyoming Pulv. Coal	250	250	220	16		489	448	57	225
2014					14		503	453	62	225
2015					12		515	458	67	225
2016					10		525	460	69	225
2017	Regional IGCC Coal	250	250	200	3		778	662	71	225
2018					3		780	665	74	225
2019	LoLo to IPCo	60	0		3	60	783	667	76	285
2020	CHP	100	100	90	3		886	759	78	285
2021	Geothermal (Binary)	50	50	48	3		939	809	81	285
2022	Geothermal (Binary)	50	50	48	3		992	859	83	285
2023	INL Nuclear	250	250	225	3		1,244	1,086	85	285
2024					3		1,247	1,089	88	285
2025					3		1,250	1,091	90	285
		1,585	1,063	1,001	187	285				

Resource Summary	MW
Wind	250
Geothermal (Binary)	150
Coal	500
CHP	150
Transmission	285
CT	0
Nuclear	250
Total Nameplate	1,585

	MW
Peak	1,250
Average Energy	1,091
Transmission	285
DSM Peak	187
DSM aMW	90
Max Energy Deficit	(312)


Portfolio F2 - New Peak Deficit
MW
0
-20
-40
-60
-80
-100
-120
-140
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025

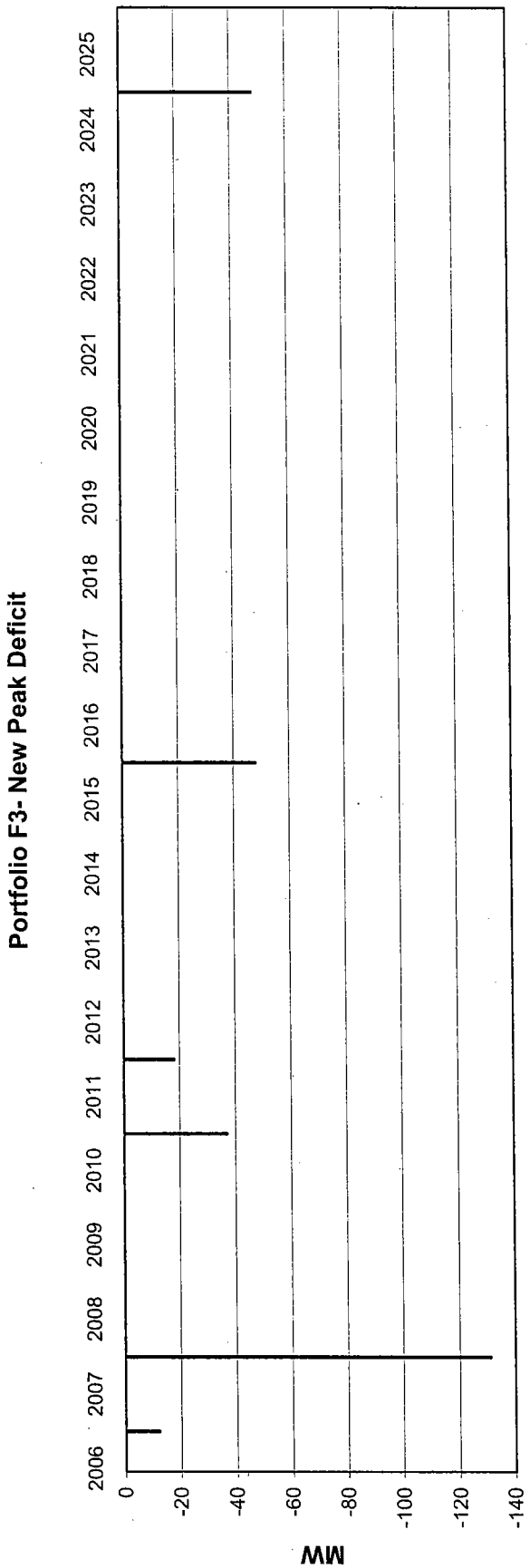

Portfolio F2 - New Energy Position
aMW
1,400
1,200
1,000
800
600
400
200
0
-200
-400

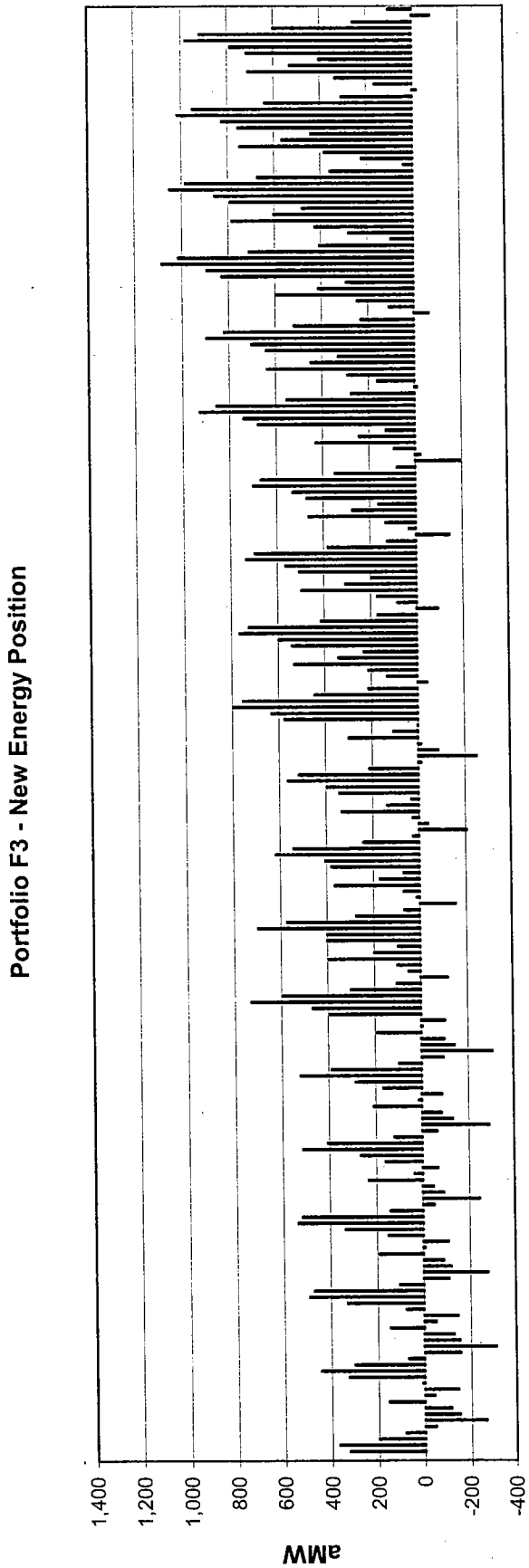
F3 Basic Thermal Portfolio (originally P4)

On-Line Date	Resource	Nameplate	Peak	Average Energy	Peak DSM	Trans	Total Peak	Total Average Energy	Total Energy DSM	Total Trans
2006										
2007					4		4	7	7	0
2008	Wind	100	5	31	11		21	49	18	0
2008	CHP	50	50	45			71	94	18	0
2009	Geothermal (Binary)	50	50	48	29		150	152	28	0
2010					26		176	161	37	0
2011					21		197	168	44	0
2012	Wyoming Pulv. Coal	250	250	220	19		465	395	51	0
2013					16		482	401	57	0
2014					14		496	406	62	0
2015					12		507	411	67	0
2016	Regional Pulv Coal	300	300	264	10		818	677	69	0
2017					3		820	679	71	0
2018	CT	170	170		3		993	682	74	0
2019					3		996	684	76	0
2020	IGCC	300	300	240	3		1,299	926	78	0
2021					3		1,301	929	81	0
2022	INL Nuclear	250	250	225	3		1,554	1,156	83	0
2023					3		1,557	1,158	85	0
2024					3		1,560	1,161	88	0
2025					3		1,562	1,163	90	0
		1,470	1,375	1,073	187	0				

Resource Summary	MW
Wind	100
Geothermal (Binary)	50
Coal	850
CHP	50
Transmission	0
CT	170
Nuclear	250
Total Nameplate	1,470

	MW
Peak	1,562
Average Energy	1,163
Transmission	0
DSM Peak	187
DSM aMW	90
Max Energy Deficit	(312)


Portfolio F3- New Peak Deficit
MW
0
-20
-40
-60
-80
-100
-120
-140
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025

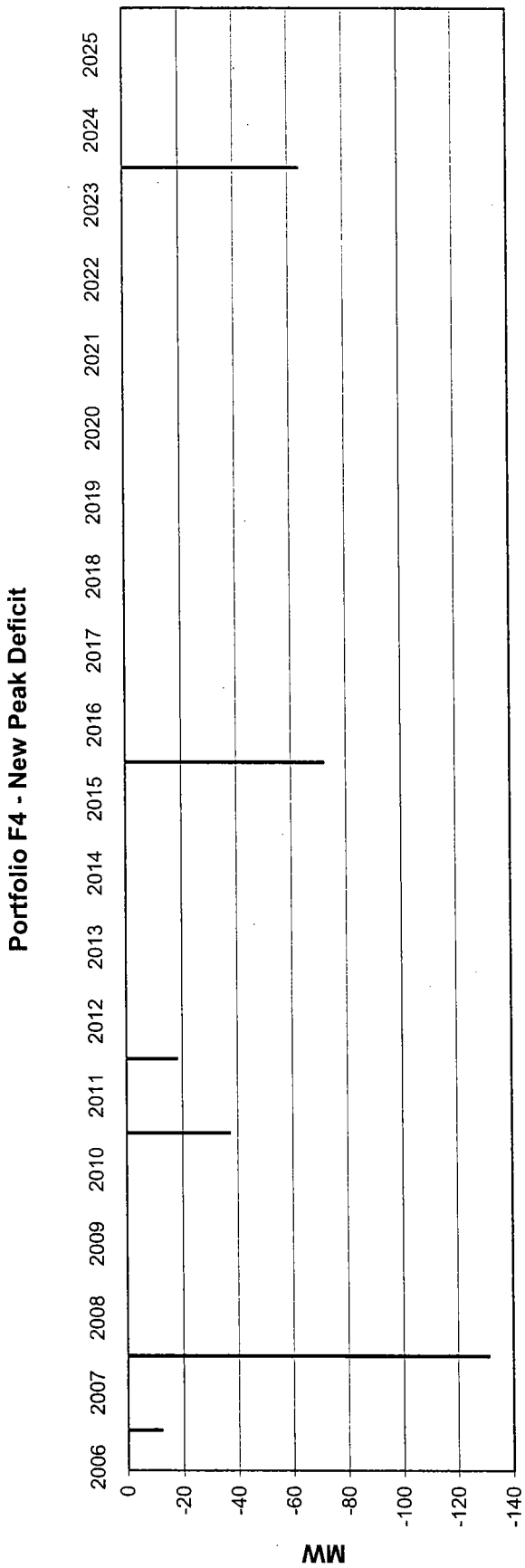

Portfolio F3 - New Energy Position
aMW
1,400
1,200
1,000
800
600
400
200
0
-200
-400

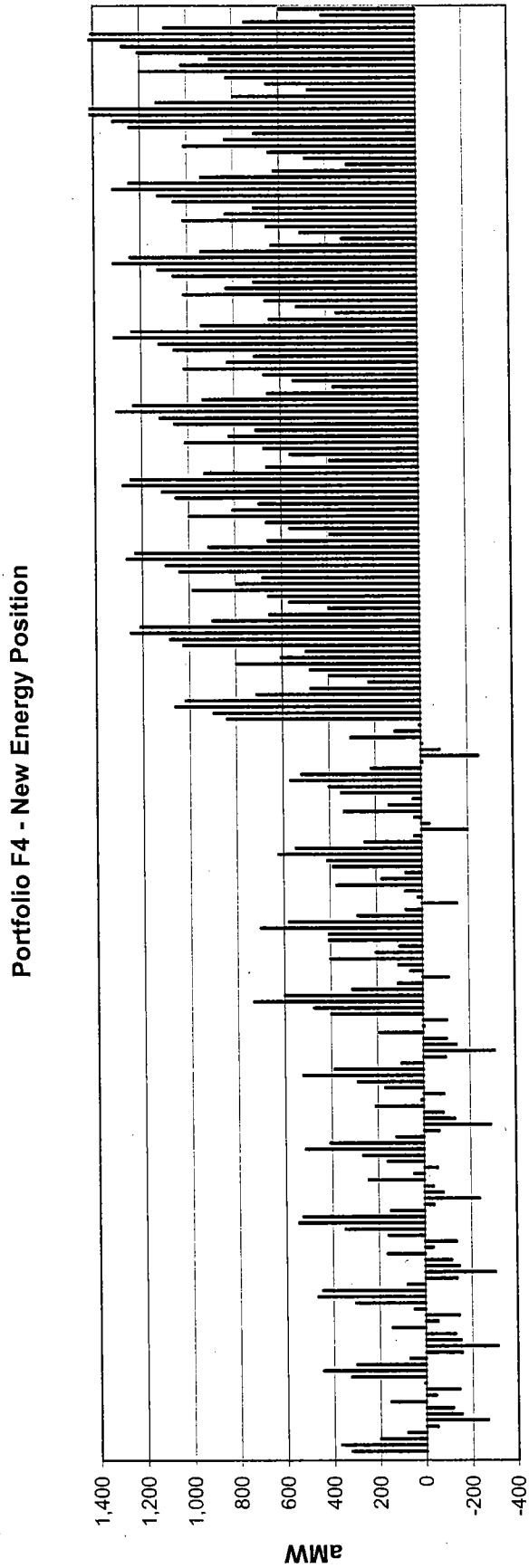
F4 Bridger to Boise Transmission Portfolio (originally P11)

On-Line Date	Resource	Nameplate	Peak	Average Energy	Peak DSM	Trans	Total Peak	Total Average Energy	Total Energy DSM	Total Trans
2006										
2007					4		4	7	7	0
2008	Wind	100	5	31	11		21	49	18	0
2009	CHP	50	50	45	29		100	104	28	0
2009	Geothermal (Binary)	50	50	48			150	124		0
2010					26		176	161	37	0
2011					21		197	168	44	0
2012	McNary-Boise	225			19	225	215	175	51	225
2013					16		232	181	57	225
2014					14		246	186	62	225
2015					12		257	191	67	225
2016	Bridger- Boise	900			10	525	268	193	69	750
2017	Wyoming Pulv. Coal	250	250	220	3		520	415	71	750
2018	Geothermal (Binary)	50	50	48	3		573	466	74	750
2019	Geothermal (Binary)	50	50	48	3		626	516	76	750
2020	Wind	100	8	39	3		636	557	78	750
2021	Wind	100	8	38	3		646	598	81	750
2022	Wind	100	8	37	3		657	637	83	750
2023	Wind	100	8	35	3		667	674	85	750
2024	INL Nuclear	250	250	225	3		920	902	88	750
2025					3		923	904	90	750
		2,325	736	814	187	750				

Resource Summary	MW
Wind	500
Geothermal (Binary)	150
Coal	250
CHP	50
Transmission	1,125
CT	0
Nuclear	250
Total Nameplate	2,325

	MW
Peak	923
Average Energy	904
Transmission	750
DSM Peak	187
DSM aMW	90
Max Energy Deficit	(312)


Portfolio F4 - New Peak Deficit
MW
0
-20
-40
-60
-80
-100
-120
-140
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Portfolio F4 - New Energy Position
aMW
1,400
1,200
1,000
800
600
400
200
0
-200
-400

Capacity Planning Reserve–Portfolio F1

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Obligations																				
Forecast System Peak (50% Load)	2,987	3,071	3,127	3,182	3,248	3,308	3,367	3,439	3,511	3,589	3,667	3,747	3,828	3,910	3,993	4,078	4,164	4,251	4,339	4,428
Existing Resources (50% Water)																				
Hells Canyon Complex	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153
Upper Snake/Cascade Hydro and Spring Plants	350	350	350	350	350	350	365	365	365	365	365	365	365	365	365	365	365	365	365	365
Montana PP&L (Renew Indefinitely 2010 -)	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Bridger	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707
Boardman	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
Valmy	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261
Danskin CT	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
Bennett Mountain CT	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
Danskin 1 CT			165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
C&SPP	144	150	160	159	153	150	150	150	142	141	141	141	141	141	141	141	141	141	141	141
Salmon Diesel	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Transmission Resources																				
Red Butte–Borah/ Brady (w/Assumed Firm Market Purchase)	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
From PAC NW–Native Load Set Asides (w/Assumed Firm Market Purchase)	223	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212
Total Existing Supply-Side Resource Capacity (50% Water)	3,305	3,013	3,188	3,187	3,181	3,178	3,193	3,193	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185
Net Position w/ Existing and Committed Resources	318	**-58**	61	5	**-67**	**-130**	**-174**	**-246**	**-326**	**-404**	**-483**	**-562**	**-643**	**-725**	**-808**	**-893**	**-979**	**-1,066**	**-1,154**	**-1,244**
Planning Margin w/ Existing and Committed Resources	10.6%	**-1.9%**	2.0%	0.2%	**-2.1%**	**-3.9%**	**-5.2%**	**-7.1%**	**-9.3%**	**-11.3%**	**-13.2%**	**-15.0%**	**-16.8%**	**-18.6%**	**-20.2%**	**-21.9%**	**-23.5%**	**-25.1%**	**-26.6%**	**-28.1%**
Portfolio F1–New Resource Capacity																				
Peak DSM		4	15	44	70	91	110	126	140	152	162	165	168	170	173	176	179	182	185	187
Idaho Wind (100 MW)			5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Geothermal–Binary (50 MW)				50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Idaho Wind (200 MW)				10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
CHP (50 MW)					50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Idaho Wind (200 MW)						10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Geothermal–Binary (50 MW)						50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Geothermal–Binary (50 MW)							50	50	50	50	50	50	50	50	50	50	50	50	50	50
CHP (100 MW)								100	100	100	100	100	100	100	100	100	100	100	100	100
Wyoming Pulverized Coal (250 MW)								250	250	250	250	250	250	250	250	250	250	250	250	250
Geothermal–Binary (50 MW)									50	50	50	50	50	50	50	50	50	50	50	50
McNary to Boise Transmission											225	225	225	225	225	225	225	225	225	225
Lolo to IPC Transmission												60	60	60	60	60	60	60	60	60
Geothermal–Binary (50 MW)													50	50	50	50	50	50	50	50
Geothermal–Binary (50 MW)														50	50	50	50	50	50	50
Geothermal–Binary (50 MW)															50	50	50	50	50	50
Geothermal–Binary (50 MW)																50	50	50	50	50
INL Nuclear (250 MW)																	250	250	250	250
Total New Resource Capacity		4	20	109	185	266	335	701	765	777	1,012	1,075	1,128	1,180	1,233	1,286	1,539	1,542	1,545	1,547
Net Position w/ New Resource Capacity	318	**-54**	81	114	118	136	161	455	439	373	529	512	484	455	425	393	560	476	390	304
Planning Margin w/ New Resource Capacity	10.6%	**-1.8%**	2.6%	3.6%	3.6%	4.1%	4.8%	13.2%	12.5%	10.4%	14.4%	13.7%	12.6%	11.6%	10.6%	9.6%	13.4%	11.2%	9.0%	6.9%

Capacity Planning Reserve–Portfolio F2

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Obligations																				
Forecast System Peak (50% Load)	2,987	3,071	3,127	3,182	3,248	3,308	3,367	3,439	3,511	3,589	3,667	3,747	3,828	3,910	3,993	4,078	4,164	4,251	4,339	4,428
Existing Resources (50% Water)																				
Hells Canyon Complex	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153
Upper Snake/Cascade Hydro and Spring Plants	350	350	350	350	350	350	365	365	365	365	365	365	365	365	365	365	365	365	365	365
Montana PP&L (Renew Indefinitely 2010 -)	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Bridger	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707
Boardman	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
Valmy	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261
Danskin CT	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
Bennett Mountain CT	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
Danskin 1 CT			165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
C&SPP	144	150	160	159	153	150	150	150	142	141	141	141	141	141	141	141	141	141	141	141
Salmon Diesel	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Transmission Resources																				
Red Butte–Borah/ Brady (w/Assumed Firm Market Purchase)	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
From PAC NW–Native Load Set Asides (w/Assumed Firm Market Purchase)	223	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212
Total Existing Supply-Side Resource Capacity (50% Water)	3,305	3,013	3,188	3,187	3,181	3,178	3,193	3,193	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185
Net Position w/ Existing and Committed Resources	318	**-58**	61	5	**-67**	**-130**	**-174**	**-246**	**-326**	**-404**	**-483**	**-562**	**-643**	**-725**	**-808**	**-893**	**-979**	**-1,066**	**-1,154**	**-1,244**
Planning Margin w/ Existing and Committed Resources	10.6%	**-1.9%**	2.0%	0.2%	**-2.1%**	**-3.9%**	**-5.2%**	**-7.1%**	**-9.3%**	**-11.3%**	**-13.2%**	**-15.0%**	**-16.8%**	**-18.6%**	**-20.2%**	**-21.9%**	**-23.5%**	**-25.1%**	**-26.6%**	**-28.1%**
Portfolio F2–New Resource Capacity																				
Peak DSM		4	15	44	70	91	110	126	140	152	162	165	168	170	173	176	179	182	185	187
Idaho Wind (100 MW)			5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Geothermal–Binary (50 MW)				50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
CHP (50 MW)					50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Idaho Wind (150 MW)							8	8	8	8	8	8	8	8	8	8	8	8	8	8
McNary to Boise Transmission							225	225	225	225	225	225	225	225	225	225	225	225	225	225
Wyoming Pulverized Coal (250 MW)								250	250	250	250	250	250	250	250	250	250	250	250	250
Regional IGCC Coal (250 MW)												250	250	250	250	250	250	250	250	250
Lolo to IPC Transmission														60	60	60	60	60	60	60
CHP (100 MW)															100	100	100	100	100	100
Geothermal–Binary (50 MW)																50	50	50	50	50
Geothermal–Binary (50 MW)																	50	50	50	50
INL Nuclear (250 MW)																		250	250	250
Total New Resource Capacity		4	20	99	175	196	448	714	728	740	750	1,003	1,006	1,068	1,171	1,224	1,277	1,530	1,533	1,535
Net Position w/ New Resource Capacity	318	**-54**	81	104	108	66	274	468	402	336	267	440	362	343	363	331	298	464	378	292
Planning Margin w/ New Resource Capacity	10.6%	**-1.8%**	2.6%	3.3%	3.3%	2.0%	8.1%	13.6%	11.4%	9.4%	7.3%	11.8%	9.5%	8.8%	9.1%	8.1%	7.2%	10.9%	8.7%	6.6%

Capacity Planning Reserve–Portfolio F3

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Obligations																				
Forecast System Peak (50% Load)	2,987	3,071	3,127	3,182	3,248	3,308	3,367	3,439	3,511	3,589	3,667	3,747	3,828	3,910	3,993	4,078	4,164	4,251	4,339	4,428
Existing Resources (50% Water)																				
Hells Canyon Complex	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153
Upper Snake/Cascade Hydro and Spring Plants	350	350	350	350	350	350	365	365	365	365	365	365	365	365	365	365	365	365	365	365
Montana PP&L (Renew Indefinitely 2010 -)	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Bridger	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707
Boardman	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
Valmy	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261
Danskin CT	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
Bennett Mountain CT	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
Danskin 1 CT			165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
C&SPP	144	150	160	159	153	150	150	150	142	141	141	141	141	141	141	141	141	141	141	141
Salmon Diesel	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Transmission Resources																				
Red Butte–Borah/ Brady (w/Assumed Firm Market Purchase)	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
From PAC NW–Native Load Set Asides (w/Assumed Firm Market Purchase)	223	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212
Total Existing Supply-Side Resource Capacity (50% Water)	3,305	3,013	3,188	3,187	3,181	3,178	3,193	3,193	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185
Net Position w/ Existing and Committed Resources	318	**-58**	61	5	**-67**	**-130**	**-174**	**-246**	**-326**	**-404**	**-483**	**-562**	**-643**	**-725**	**-808**	**-893**	**-979**	**-1,066**	**-1,154**	**-1,244**
Planning Margin w/ Existing and Committed Resources	10.6%	**-1.9%**	2.0%	0.2%	**-2.1%**	**-3.9%**	**-5.2%**	**-7.1%**	**-9.3%**	**-11.3%**	**-13.2%**	**-15.0%**	**-16.8%**	**-18.6%**	**-20.2%**	**-21.9%**	**-23.5%**	**-25.1%**	**-26.6%**	**-28.1%**
Portfolio F3–New Resource Capacity																				
Peak DSM		4	15	44	70	91	110	126	140	152	162	165	168	170	173	176	179	182	185	187
Idaho Wind (100 MW)			5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
CHP (50 MW)			50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Geothermal–Binary (50 MW)				50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Wyoming Pulverized Coal (250 MW)							250	250	250	250	250	250	250	250	250	250	250	250	250	250
Regional Pulverized Coal (300 MW)											300	300	300	300	300	300	300	300	300	300
Simple-Cycle Combustion Turbine (170													170	170	170	170	170	170	170	170
Regional IGCC Coal (300 MW)															300	300	300	300	300	300
INL Nuclear (250 MW)																	250	250	250	250
Total New Resource Capacity		4	70	149	175	196	465	481	495	507	817	820	993	995	1,298	1,301	1,554	1,557	1,560	1,562
Net Position w/ New Resource Capacity	318	**-54**	131	154	108	66	291	235	169	103	334	257	349	270	490	408	575	491	405	319
Planning Margin w/ New Resource Capacity	10.6%	**-1.8%**	4.2%	4.8%	3.3%	2.0%	8.7%	6.8%	4.8%	2.9%	9.1%	6.9%	9.1%	6.9%	12.3%	10.0%	13.8%	11.5%	9.3%	7.2%

Capacity Planning Reserve– Portfolio F4

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Obligations																				
Forecast System Peak (50% Load)	2,987	3,071	3,127	3,182	3,248	3,308	3,367	3,439	3,511	3,589	3,667	3,747	3,828	3,910	3,993	4,078	4,164	4,251	4,339	4,428
Existing Resources (50% Water)																				
Hells Canyon Complex	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153	1,153
Upper Snake/Cascade Hydro and Spring Plants	350	350	350	350	350	350	365	365	365	365	365	365	365	365	365	365	365	365	365	365
Montana PP&L (Renew Indefinitely 2010 -)	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Bridger	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707	707
Boardman	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
Valmy	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261
Danskin CT	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
Bennett Mountain CT	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
Danskin 1 CT			165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
C&SPP	144	150	160	159	153	150	150	150	142	141	141	141	141	141	141	141	141	141	141	141
Salmon Diesel	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Transmission Resources																				
Red Butte–Borah/ Brady (w/Assumed Firm Market Purchase)	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
From PAC NW–Native Load Set Asides (w/Assumed Firm Market Purchase)	223	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212
Total Existing Supply-Side Resource Capacity (50% Water)	3,305	3,013	3,188	3,187	3,181	3,178	3,193	3,193	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185	3,185
Net Position w/ Existing and Committed Resources	318	**-58**	61	5	**-67**	**-130**	**-174**	**-246**	**-326**	**-404**	**-483**	**-562**	**-643**	**-725**	**-808**	**-893**	**-979**	**-1,066**	**-1,154**	**-1,244**
Planning Margin w/ Existing and Committed Resources	10.6%	**-1.9%**	2.0%	0.2%	**-2.1%**	**-3.9%**	**-5.2%**	**-7.1%**	**-9.3%**	**-11.3%**	**-13.2%**	**-15.0%**	**-16.8%**	**-18.6%**	**-20.2%**	**-21.9%**	**-23.5%**	**-25.1%**	**-26.6%**	**-28.1%**
Portfolio F4–New Resource Capacity																				
Peak DSM		4	15	44	70	91	110	126	140	152	162	165	168	170	173	176	179	182	185	187
Idaho Wind (100 MW)			5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
CHP (50 MW)				50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Geothermal–Binary (50 MW)				50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
McNary to Boise Transmission							225	225	225	225	225	225	225	225	225	225	225	225	225	225
Bridger to Boise Transmission											525	525	525	525	525	525	525	525	525	525
Wyoming Pulverized Coal (250 MW)												250	250	250	250	250	250	250	250	250
Geothermal–Binary (50 MW)													50	50	50	50	50	50	50	50
Geothermal–Binary (50 MW)														50	50	50	50	50	50	50
Wind (100 MW)															8	8	8	8	8	8
Wind (100 MW)																8	8	8	8	8
Wind (100 MW)																	8	8	8	8
Wind (100 MW)																		8	8	8
INL Nuclear (250 MW)																			250	250
Total New Resource Capacity		4	20	149	175	196	440	456	470	482	1,017	1,270	1,323	1,375	1,386	1,397	1,408	1,419	1,672	1,674
Net Position w/ New Resource Capacity	318	**-54**	81	154	108	66	266	210	144	78	534	707	679	650	578	504	429	353	517	431
Planning Margin w/ New Resource Capacity	10.6%	**-1.8%**	2.6%	4.8%	3.3%	2.0%	7.9%	6.1%	4.1%	2.2%	14.6%	18.9%	17.7%	16.6%	14.5%	12.4%	10.3%	8.3%	11.9%	9.7%

Portfolio F1
Estimated Total Resource Investment (Including AFUDC)—By In-Service Year
(In $000s)

Resource	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Wind (100 MW)			177,691							
Geothermal (50 MW)				202,502						
Wind (200 MW)				366,043						
CHP (50 MW)					56,150					
Wind (200 MW)						388,335				
Geothermal (50 MW)						214,834				
Geothermal (50 MW)							221,280			
CHP (100 MW)								122,714		
Wyoming Coal (250 MW)								655,366		
Geothermal (50 MW)									234,755	
McNary to IPC Transmission (225 MW)										
Lolo to IPC Transmission (60 MW)										
Geothermal (50 MW)										
Geothermal (50 MW)										
Geothermal (50 MW)										
Geothermal (50 MW)										
INL Nuclear (250 MW)										
Geothermal (50 MW)										
Backbone Transmission	5,231	9,710	21,005	49,315	119,731	135,218	262,510	153,869	1,773	0
Real Dollars	5,231	9,710	198,696	617,860	175,882	738,387	483,790	931,949	236,529	0
Present Value	5,231	9,080	173,749	505,232	134,490	527,982	323,488	582,722	138,299	0
Cumulative MWs	0	0	100	350	400	650	700	1,050	1,100	1,100
Cumulative Real Dollars	5,231	14,941	213,636	831,496	1,007,378	1,745,765	2,229,555	3,161,504	3,398,033	3,398,033
Cumulative PV	5,231	14,311	188,060	693,292	827,781	1,355,763	1,679,252	2,261,973	2,400,273	2,400,273
PPA Real Dollars	0	0	177,691	568,545	56,150	603,169	221,280	122,714	234,755	0
Cumulative PPA Real Dollars	0	0	177,691	746,235	802,386	1,405,555	1,626,834	1,749,549	1,984,304	1,984,304
PV PPA Real Dollars	0	0	155,381	464,906	42,936	431,295	147,960	76,730	137,262	0
Cumulative PV PPA Real Dollars	0	0	155,381	620,288	663,224	1,094,518	1,242,478	1,319,208	1,456,470	1,456,470
Ownership Real Dollars	5,231	9,710	21,005	49,315	119,731	135,218	262,510	809,235	1,773	0
Cumulative Ownership Real Dollars	5,231	14,941	35,946	85,261	204,992	340,210	602,720	1,411,955	1,413,729	1,413,729
PV Ownership Real Dollars	5,231	9,080	18,368	40,326	91,554	96,687	175,529	505,992	1,037	0
Cumulative PV Ownership Real Dollars	5,231	14,311	32,679	73,004	164,558	261,245	436,774	942,766	943,803	943,803

Resource	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Wind (100 MW)										
Geothermal (50 MW)										
Wind (200 MW)										
CHP (50 MW)										
Wind (200 MW)										
Geothermal (50 MW)										
Geothermal (50 MW)										
CHP (100 MW)										
Wyoming Coal (250 MW)										
Geothermal (50 MW)										
McNary to IPC Transmission (225 MW)	112,904									
Lolo to IPC Transmission (60 MW)		16,332								
Geothermal (50 MW)			264,219							
Geothermal (50 MW)				272,146						
Geothermal (50 MW)					280,310					
Geothermal (50 MW)						288,720				
INL Nuclear (250 MW)							999,272			
Geothermal (50 MW)									315,492	
Backbone Transmission	0	0	3,232	3,329	4,220	34,613	45,343	0	2,383	0
Real Dollars	112,904	16,332	267,451	275,475	284,530	323,333	1,044,614	0	317,875	0
Present Value	57,727	7,809	119,577	115,173	111,241	118,210	357,131	0	95,030	0
Cumulative MWs	1,325	1,385	1,435	1,485	1,535	1,585	1,835	1,835	1,885	1,885
Cumulative Real Dollars	3,510,936	3,527,269	3,794,720	4,070,194	4,354,725	4,678,057	5,722,672	5,722,672	6,040,547	6,040,547
Cumulative PV	2,458,000	2,465,808	2,585,386	2,700,559	2,811,800	2,930,011	3,287,142	3,287,142	3,382,172	3,382,172
PPA Real Dollars	0	0	264,219	272,146	280,310	288,720	999,272	0	315,492	0
Cumulative PPA Real Dollars	1,984,304	1,984,304	2,248,523	2,520,669	2,800,979	3,089,699	4,088,971	4,088,971	4,404,463	4,404,463
PV PPA Real Dollars	0	0	118,132	113,782	109,592	105,556	341,630	0	94,318	0
Cumulative PV PPA Real Dollars	1,456,470	1,456,470	1,574,602	1,688,384	1,797,976	1,903,531	2,245,161	2,245,161	2,339,479	2,339,479
Ownership Real Dollars	112,904	16,332	3,232	3,329	4,220	34,613	45,343	0	2,383	0
Cumulative Ownership Real Dollars	1,526,632	1,542,965	1,546,196	1,549,525	1,553,745	1,588,358	1,633,701	1,633,701	1,636,084	1,636,084
PV Ownership Real Dollars	57,727	7,809	1,445	1,392	1,650	12,655	15,502	0	713	0
Cumulative PV Ownership Real Dollars	1,001,530	1,009,338	1,010,783	1,012,175	1,013,825	1,026,479	1,041,981	1,041,981	1,042,694	1,042,694

Portfolio F2

Estimated Total Resource Investment (Including AFUDC)—By In-Service Year

In $000s

Resource	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Wind (100 MW)			177,691							
Geothermal (50 MW)				202,502						
CHP (50 MW)					56,150					
Wind (150 MW)							299,988			
McNary to IPC Transmission (225 MW)							100,313			
Wyoming Coal (250 MW)								655,366		
Regional IGCC Coal (250 MW)										
Lolo to IPC System (60 MW)										
CHP (100 MW)										
Geothermal (50 MW)										
Geothermal (50 MW)										
INL Nuclear (250 MW)										
Backbone Transmission	7,237	14,074	12,003	25,278	55,583	70,023	299,931	198,893	6,433	13,859
Real Dollars	7,237	14,074	189,694	227,780	111,733	70,023	700,233	854,259	6,433	13,859
Present Value	7,237	13,161	165,878	186,258	85,438	50,069	468,214	534,144	3,761	7,578
Cumulative MWs	0	0	100	150	200	200	575	825	825	825
Cumulative Real Dollars	7,237	21,311	211,005	438,785	550,518	620,541	1,320,773	2,175,032	2,181,465	2,195,324
Cumulative PV	7,237	20,398	186,275	372,534	457,972	508,041	976,255	1,510,399	1,514,161	1,521,738
PPA Real Dollars	0	0	177,691	202,502	56,150	0	299,988	0	0	0
Cumulative PPA Real Dollars	0	0	177,691	380,193	436,343	436,343	736,332	736,332	736,332	736,332
PV PPA Real Dollars	0	0	155,381	165,589	42,936	0	200,589	0	0	0
Cumulative PV PPA Real Dollars	0	0	155,381	320,970	363,906	363,906	564,495	564,495	564,495	564,495
Ownership Real Dollars	7,237	14,074	12,003	25,278	55,583	70,023	400,244	854,259	6,433	13,859
Cumulative Ownership Real Dollars	7,237	21,311	33,314	58,592	114,175	184,198	584,442	1,438,701	1,445,133	1,458,992
PV Ownership Real Dollars	7,237	13,161	10,496	20,670	42,502	50,069	267,625	534,144	3,761	7,578
Cumulative PV Ownership Real Dollars	7,237	20,398	30,894	51,564	94,066	144,136	411,761	945,905	949,666	957,244

Resource	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Wind (100 MW)										
Geothermal (50 MW)										
CHP (50 MW)										
Wind (150 MW)										
McNary to IPC Transmission (225 MW)										
Wyoming Coal (250 MW)										
Regional IGCC Coal (250 MW)		913,616								
Lolo to IPC System (60 MW)				17,327						
CHP (100 MW)					150,923					
Geothermal (50 MW)						288,720				
Geothermal (50 MW)							297,381			
INL Nuclear (250 MW)								1,029,250		
Backbone Transmission	57,723	(46,503)	267	2,649	(3,756)	31,657	176,299	162,596	0	0
Real Dollars	57,723	867,112	267	19,976	147,167	320,376	473,680	1,191,846	0	0
Present Value	29,514	414,584	120	8,352	57,537	117,129	161,941	381,030	0	0
Cumulative MWs	825	1,075	1,075	1,135	1,235	1,285	1,355	1,585	1,585	1,585
Cumulative Real Dollars	2,253,047	3,120,159	3,120,427	3,140,403	3,287,570	3,607,947	4,081,626	5,273,473	5,273,473	5,273,473
Cumulative PV	1,551,252	1,965,836	1,965,955	1,974,307	2,031,844	2,148,973	2,310,914	2,691,944	2,691,944	2,691,944
PPA Real Dollars	0	0	0	0	150,923	288,720	297,381	1,029,250	0	0
Cumulative PPA Real Dollars	736,332	736,332	736,332	736,332	887,255	1,175,974	1,473,355	2,502,606	2,502,606	2,502,606
PV PPA Real Dollars	0	0	0	0	59,006	105,556	101,668	329,048	0	0
Cumulative PV PPA Real Dollars	564,495	564,495	564,495	564,495	623,500	729,056	830,724	1,159,772	1,159,772	1,159,772
Ownership Real Dollars	57,723	867,112	267	19,976	(3,756)	31,657	176,299	162,596	0	0
Cumulative Ownership Real Dollars	1,516,716	2,383,828	2,384,095	2,404,072	2,400,315	2,431,972	2,608,271	2,770,867	2,770,867	2,770,867
PV Ownership Real Dollars	29,514	414,584	120	8,352	(1,469)	11,574	60,273	51,982	0	0
Cumulative PV Ownership Real Dollars	986,757	1,401,341	1,401,461	1,409,813	1,408,344	1,419,918	1,480,190	1,532,172	1,532,172	1,532,172

Portfolio F3

Estimated Total Resource Investment (Including AFUDC)—By In-Service Year

In $000s

Resource	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Wind (100 MW)			177,691							
CHP (50 MW)			52,927							
Geothermal (50 MW)				202,502						
Wyoming Coal (250 MW)							636,277			
Regional Coal (300 MW)										
Industrial CT (170 MW)										
Regional IGCC Coal (300 MW)										
INL Nuclear (250 MW)										
Backbone Transmission	423	2,116	(5,260)	2,697	6,356	6,356	(88,273)	6,356	25,423	67,240
Real Dollars	423	2,116	225,358	205,199	6,356	6,356	548,004	6,356	25,423	67,240
Present Value	423	1,979	197,064	167,794	4,860	4,545	366,426	3,974	14,865	36,765
Cumulative MWs	0	0	150	200	200	200	450	450	450	450
Cumulative Real Dollars	423	2,540	227,898	433,097	439,453	445,809	993,813	1,000,169	1,025,592	1,092,833
Cumulative PV	423	2,402	199,466	367,261	372,121	376,665	743,091	747,065	761,930	798,695
PPA Real Dollars	0	0	230,618	202,502	0	0	0	0	0	0
Cumulative PPA Real Dollars	0	0	230,618	433,120	433,120	433,120	433,120	433,120	433,120	433,120
PV PPA Real Dollars	0	0	201,663	165,589	0	0	0	0	0	0
Cumulative PV PPA Real Dollars	0	0	201,663	367,252	367,252	367,252	367,252	367,252	367,252	367,252
Ownership Real Dollars	423	2,116	(5,260)	2,697	6,356	6,356	548,004	6,356	25,423	67,240
Cumulative Ownership Real Dollars	423	2,540	(2,720)	(23)	6,333	12,689	560,693	567,049	592,472	659,713
PV Ownership Real Dollars	423	1,979	(4,599)	2,206	4,860	4,545	366,426	3,974	14,865	36,765
Cumulative PV Ownership Real Dollars	423	2,402	(2,197)	9	4,869	9,413	375,839	379,813	394,678	431,443

Resource	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Wind (100 MW)										
CHP (50 MW)										
Geothermal (50 MW)										
Wyoming Coal (250 MW)										
Regional Coal (300 MW)	735,814									
Industrial CT (170 MW)			121,858							
Regional IGCC Coal (300 MW)					1,197,999					
INL Nuclear (250 MW)							999,272			
Backbone Transmission	158,156	272,737	(3,288)	22,261	(111,944)	8,767	5,106	132,465	133,566	0
Real Dollars	893,970	272,737	118,570	22,261	1,086,055	8,767	1,004,378	132,465	133,566	0
Present Value	457,081	130,401	53,012	9,307	424,610	3,205	343,375	42,349	39,930	0
Cumulative MWs	750	750	920	920	1,220	1,220	1,470	1,470	1,470	1,470
Cumulative Real Dollars	1,986,803	2,259,540	2,378,109	2,400,370	3,486,425	3,495,192	4,499,570	4,632,035	4,765,601	4,765,601
Cumulative PV	1,255,776	1,386,177	1,439,189	1,448,496	1,873,106	1,876,311	2,219,686	2,262,035	2,301,965	2,301,965
PPA Real Dollars	0	0	0	0	0	0	999,272	0	0	0
Cumulative PPA Real Dollars	433,120	433,120	433,120	433,120	433,120	433,120	1,432,392	1,432,392	1,432,392	1,432,392
PV PPA Real Dollars	0	0	0	0	0	0	341,630	0	0	0
Cumulative PV PPA Real Dollars	367,252	367,252	367,252	367,252	367,252	367,252	708,882	708,882	708,882	708,882
Ownership Real Dollars	893,970	272,737	118,570	22,261	1,086,055	8,767	5,106	132,465	133,566	0
Cumulative Ownership Real Dollars	1,553,683	1,826,420	1,944,989	1,967,250	3,053,305	3,062,072	3,067,178	3,199,643	3,333,210	3,333,210
PV Ownership Real Dollars	457,081	130,401	53,012	9,307	424,610	3,205	1,746	42,349	39,930	0
Cumulative PV Ownership Real Dollars	888,524	1,018,925	1,071,937	1,081,244	1,505,854	1,509,059	1,510,805	1,553,154	1,593,084	1,593,084

Portfolio F4

Estimated Total Resource Investment (Including AFUDC)—By In-Service Year

In $000s

Resource	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Wind (100 MW)			177,691							
Geothermal (50 MW)				202,502						
CHP (50 MW)				54,515						
McNary to IPC System (225 MW)							100,313			
Bridger to IPC Transmission (900 MW)										
Wyoming Coal (250 MW)										
Geothermal (50 MW)										
Geothermal (50 MW)										
Wind (100 MW)										
Wind (100 MW)										
Wind (100 MW)										
Wind (100 MW)										
INL Nuclear (250 MW)										
Backbone Transmission	10,515	25,953	34,251	21,994	61,781	257,419	246,485	8,225	13,893	46,723
Real Dollars	10,515	25,953	211,941	279,011	61,781	257,419	346,799	8,225	13,893	46,723
Present Value	10,515	24,269	185,332	228,151	47,242	184,067	231,889	5,143	8,123	25,547
Cumulative MWs	0	0	100	200	200	200	425	425	425	425
Cumulative Real Dollars	10,515	36,469	248,410	527,421	589,202	846,621	1,193,420	1,201,644	1,215,537	1,262,260
Cumulative PV	10,515	34,785	220,117	448,267	495,509	679,576	911,464	916,607	924,730	950,277
PPA Real Dollars	0	0	177,691	257,017	0	0	0	0	0	0
Cumulative PPA Real Dollars	0	0	177,691	434,708	434,708	434,708	434,708	434,708	434,708	434,708
PV PPA Real Dollars	0	0	155,381	210,166	0	0	0	0	0	0
Cumulative PV PPA Real Dollars	0	0	155,381	365,547	365,547	365,547	365,547	365,547	365,547	365,547
Ownership Real Dollars	10,515	25,953	34,251	21,994	61,781	257,419	346,799	8,225	13,893	46,723
Cumulative Ownership Real Dollars	10,515	36,469	70,720	92,713	154,495	411,913	758,712	766,936	780,829	827,552
PV Ownership Real Dollars	10,515	24,269	29,951	17,984	47,242	184,067	231,889	5,143	8,123	25,547
Cumulative PV Ownership Real Dollars	10,515	34,785	64,735	82,720	129,962	314,028	545,917	551,059	559,183	584,729

Resource	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Wind (100 MW)										
Geothermal (50 MW)										
CHP (50 MW)										
McNary to IPC System (225 MW)										
Bridger to IPC Transmission (900 MW)	1,144,931									
Wyoming Coal (250 MW)		615,377								
Geothermal (50 MW)			264,219							
Geothermal (50 MW)				272,146						
Wind (100 MW)					253,344					
Wind (100 MW)						260,945				
Wind (100 MW)							268,773			
Wind (100 MW)								276,836		
INL Nuclear (250 MW)									1,060,128	
Backbone Transmission	49,301	12,586	28,108	116,642	125,844	91,326	89,222	(18,181)	(14,471)	0
Real Dollars	1,194,233	627,963	292,327	388,788	379,188	352,271	357,995	258,655	1,045,657	0
Present Value	610,603	300,242	130,699	162,549	148,249	128,790	122,391	82,691	312,604	0
Cumulative MWs	1,325	1,575	1,625	1,675	1,775	1,875	1,975	2,075	2,325	2,325
Cumulative Real Dollars	2,456,493	3,084,456	3,376,783	3,765,571	4,144,759	4,497,029	4,855,024	5,113,679	6,159,336	6,159,336
Cumulative PV	1,560,880	1,861,121	1,991,821	2,154,369	2,302,619	2,431,408	2,553,799	2,636,490	2,949,095	2,949,095
PPA Real Dollars	0	0	264,219	272,146	253,344	260,945	268,773	276,836	1,060,128	0
Cumulative PPA Real Dollars	434,708	434,708	698,927	971,073	1,224,417	1,485,362	1,754,135	2,030,971	3,091,099	3,091,099
PV PPA Real Dollars	0	0	118,132	113,782	99,049	95,401	91,888	88,504	316,931	0
Cumulative PV PPA Real Dollars	365,547	365,547	483,680	597,461	696,510	791,911	883,799	972,303	1,289,233	1,289,233
Ownership Real Dollars	1,194,233	627,963	28,108	116,642	125,844	91,326	89,222	(18,181)	(14,471)	0
Cumulative Ownership Real Dollars	2,021,785	2,649,748	2,677,856	2,794,498	2,920,342	3,011,668	3,100,889	3,082,708	3,068,237	3,068,237
PV Ownership Real Dollars	610,603	300,242	12,567	48,767	49,200	33,389	30,503	(5,813)	(4,326)	0
Cumulative PV Ownership Real Dollars	1,195,332	1,495,574	1,508,141	1,556,908	1,606,108	1,639,497	1,670,000	1,664,187	1,659,861	1,659,861

SUMMARY OF NORTHWEST UTILITY PLANNING CRITERIA

Avista Corporation	**Peak Load:** The maximum one-hour load obligation on the expected average coldest day in January.[5] **Peak Resource Capability:** The maximum one-hour generation capability of company resources, plus the net contract contribution.[1] **Planning Reserve:** Ten percent (10%) of the one-hour system peak load, plus 90 MW.[1] **Confidence Interval:** Eighty percent (80%) confidence interval based on the monthly variability of load and hydroelectric generation. "This means that for each month there is only a 10% chance that the combination of load and hydro variability would exceed the planning criteria."[1]
Bonneville Power Administration	**Load and Resource Balances:** System firm energy loads are compared with Federal system energy resources for each month of Operating Year 2002–2007 (August 2001–July 2007) under 1937 water conditions. Firm capacity surpluses or deficits are determined in the same period under 1937 water conditions.[6] **Energy:** Based on current generation capability under critical stream flow conditions. The critical period is defined as historical stream flows that occurred from September 1, 1936 through April 30, 1937.[2] **Surplus Energy Analysis:** Defined as the amount of generation that can be produced in excess of firm loads under critical water conditions.[2] **Regional Firm Monthly Peak Load Projections:** The peak loads are estimated based on normal weather conditions using a 50-percent probability that the forecasted peak load will be exceeded. Total Federal peaking capacity reduced by reserves for forced outages that are calculated as fifteen percent (15%) of large thermal project output plus five percent (5%) of the output of other resources.[7] **Hydroelectric Energy Capability:** Uses OY 1937-water conditions (the 12-month period from August 1936 through July 1937) to estimate the firm hydro energy capability in low water conditions.[3] **Hydroelectric Capacity:** The monthly instantaneous capacity of hydroelectric projects is defined as the full-gate-flow maximum generation available at each project, based on the average monthly elevation resulting from 1937-water reservoir levels. BPA assumes 1937-water levels to estimate the regional hydroelectric capacity because that year approximates a peaking capability that is consistent with the reliability criteria set forth in the PNCA.[3]

[5] *2005 Integrated Resource Plan*, Avista Utilities, Chapter 2.

[6] *2002 Final Power Rate Proposal Loads and Resources Study*, Bonneville Power Administration, WP-02-FS-BPA-01, May 2000, Sections 2.3.3.2, 2.3.3.3, 2.3.3.4.

[7] *2002 Pacific Northwest Loads and Resources Study*, Bonneville Power Administration, December 2002, Section 2, Pages 4 and 38.

Idaho Power Company	**Hydro Conditions:** 70th percentile hydro conditions based upon historical data from 1928–2003.[8] **Load Forecast:** Based upon 50th percentile weather conditions.[4] **Monthly Average Energy:** Based on 70th percentile water and 70th percentile average load conditions.[4] **Capacity:** Based on monthly peak-hour Northwest transmission deficit assuming 90th percentile water, 70th percentile average load and 95th percentile peak-hour load conditions.[4]
Northwest Power and Conservation Council	**Utilizes a fully probabilistic model:** Prospective plans are tested against 20 years of future conditions defined by probabilistic simulations of principal uncertainties including hydro conditions, loads, fuel prices, CO_2 control requirements, import and export markets and resource availability. Each case is compared to the previous and ranked according to risk and cost.[9]
PacifiCorp	**Hydro Conditions:** Median water conditions.[10] **Loads:** Average energy requirements based upon normal weather conditions.[6] **Capacity:** Normal weather peak-hour loading plus a 15% planning margin.[6]
Portland General Electric Company	**Hydro Conditions:** Normal/median water conditions based upon 59 years of hydro history.[11] **Loads:** Normal/Median load conditions.[7] **Capacity:** Normal weather peak-hour loading plus 12% (6% operating margin, 6% planning margin). Then subtract 500 MW (to be filled in with short-term market purchases).[7]
Puget Sound Energy	PSE uses the expected peak load for long-term capacity planning. The expected peak load is the maximum hourly load expected to occur when the hourly temperature during the winter months (November–February) is 23 degrees at SeaTac Airport.[12] PSE uses an hourly regression equation to obtain monthly peak load forecasts. The equation provides both normal and extreme peak loads for residential and non-residential customers. The regression equation is based on data collected from January 1991 through February 2004.[8] **Design Temperatures:** 23° F for normal peak and 13° F for extreme peak, both occurring in January.[8]

[8] *2006 Integrated Resource Plan*, Idaho Power Company, September 2006.

[9] *The Fifth Northwest Electric Power and Conservation Plan*, Northwest Power and Conservation Council, 2005.

[10] *2006 Integrated Resource Plan*, PacifiCorp, due to be filed in December 2006.

[11] *Final Action Plan, 2002 IRP*, Portland General Electric, March 2004, Appendix 2.

[12] *Least Cost Plan*, Puget Sound Energy, April 2005, Appendix K.

Idaho Power Company
2006 Integrated Resource Plan Advisory Council Members

Customer Participants

Micron – Dale Eldridge
Simplot – David Hawk
INL – Tom Moriarty
Heinz Frozen Foods – Steve Munn
AARP – Joe Gallegos
Idaho Retailers – Pam Eaton
Agricultural Representative – Sid Erwin
Meridian Joint School District #2 – Wayne Hanners

Commission Participants

Idaho PUC – Rick Sterling
Oregon PUC – Bill McNamee

Environmental Participants

Natural Resource Defense Council – Devra Wang, Audrey Chang or Ralph Cavanagh
Advocates for the West – Bill Eddie

Other Participants

IDEQ – Larry Koenig
Governor's Office – Jim Yost
Idaho State Legislature – Representative Steve Smylie
Northwest Power and Conservation Council – Jim Kempton or Shirley Lindstrom
Consultant – Dan Violette – Summit Blue Consulting, LLC