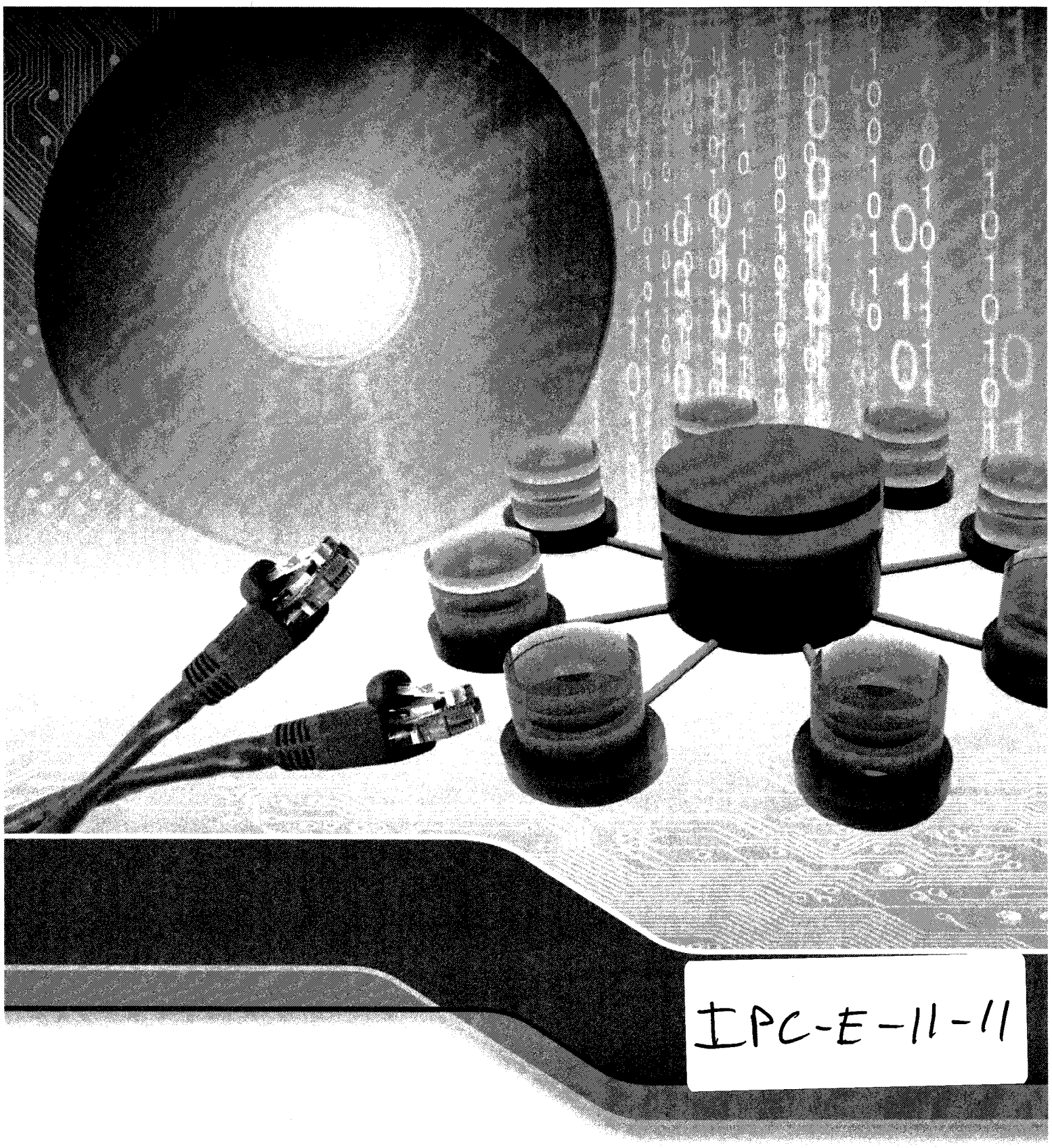

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Appendix C—Technical Appendix

For the 2011 Integrated Resource Plan

June 2011

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INTRODUCTION

Appendix C—Technical Appendix contains supporting data and explanatory materials used to develop Idaho Power's *2011 Integrated Resource Plan* (IRP).

The main document, the IRP, contains a full narrative of Idaho Power's resource planning process. Additional information regarding the 2011 IRP sales and load forecast is contained in *Appendix A—Sales and Load Forecast*, and details on Idaho Power's demand-side management efforts are explained in *Appendix B—Demand-Side Management 2010 Annual Report*. The IRP, including the three appendices, was filed with the Idaho and Oregon public utility commissions in June 2011.

For information or questions concerning the resource plan or the resource planning process, contact Idaho Power:

Idaho Power—Resource Planning
1221 West Idaho Street
Boise, Idaho 83702
208-388-2483

IRP Advisory Council Roster

Idaho Power has involved representatives of the public in the IRP planning process since the early 1990s. This public forum has come to be known as the IRP Advisory Council (IRPAC). The IRPAC generally meets monthly during the development of the IRP and the meetings are open to the public. Members of the council include political, environmental, and customer representatives, as well as representatives of other public-interest groups.

As part of preparing the 2011 IRP, Idaho Power hosted a field trip covering wind, hydro, and natural gas resources, two portfolio-design workshops, and nine monthly IRPAC meetings. The IRPAC meetings served as an open forum for discussions related to the development of the IRP and the IRPAC members and the public have made significant contributions to this plan.

Idaho Power believes working with members of the IRPAC and the public is very rewarding and the IRP is better because of the public involvement. Idaho Power and the members of the IRPAC recognize that outside perspective is valuable, but also recognize that final decisions on the IRP are made by Idaho Power.

Customer Representatives

Agricultural Representative ..... Sid Erwin
Boise State University ..... John Gardner
Heinz Frozen Foods ..... Steve Munn
INL ..... Tom Moriarty
Micron ..... Michael Bick
Simplot ..... Don Sturtevant

Public Interest Representatives

Boise Metro Chamber of Commerce ..... Bill Connors
Idaho Conservation League ..... Ben Otto
Idaho Department of Commerce ..... Lane Packwood
Idaho Office of Energy Resources ..... John Chatburn
Idaho State House of Representatives ..... Representative Elaine Smith
Idaho State Senate ..... Senator Russ Fulcher
Northwest Power and Conservation Council ..... Jim Yost/Shirley Lindstrom
Oil/Gas Industry Advisor ..... David Hawk
Snake River Alliance ..... Ken Miller
Water Issues Advisor ..... Vince Alberdi

Regulatory Commission Representatives

Idaho Public Utilities Commission ..... Rick Sterling
Public Utility Commission of Oregon ..... Erik Colville

SALES AND LOAD FORECAST DATA

Average Annual Forecast Growth Rates

	2011–2016	2011–2021	2011–2030
Sales			
Residential Sales	1.31%	1.51%	1.47%
Commercial Sales	1.30%	1.13%	1.31%
Irrigation Sales	0.31%	0.30%	0.26%
Industrial Sales	1.81%	1.61%	1.66%
Additional Firm Sales	7.40%	3.65%	2.03%
System Sales	1.95%	1.53%	1.39%
Total Sales	1.95%	1.53%	1.39%
Loads			
Residential Load	1.35%	1.52%	1.48%
Commercial Load	1.29%	1.13%	1.30%
Irrigation Load	0.26%	0.30%	0.26%
Industrial Load	1.74%	1.60%	1.66%
Additional Firm Sales	7.40%	3.65%	2.03%
System Load Losses	1.47%	1.33%	1.32%
System Load	1.89%	1.51%	1.38%
Total Load	1.89%	1.51%	1.38%
Peaks			
System Peak	2.23%	1.93%	1.76%
Total Peak	2.23%	1.93%	1.76%
Winter Peak	1.09%	1.10%	1.13%
Summer Peak	2.23%	1.93%	1.76%
Customers			
Residential Customers	1.72%	1.59%	1.37%
Commercial Customers	2.31%	2.17%	1.95%
Irrigation Customers	1.48%	1.43%	1.35%
Industrial Customers	1.60%	1.47%	1.35%

Expected-Case Load Forecast

Monthly Summary[1]	1/2011	2/2011	3/2011	4/2011	5/2011	6/2011	7/2011	8/2011	9/2011	10/2011	11/2011	12/2011
Average Load (aMW)–50th Percentile												
Residential	810	684	575	490	450	490	636	614	494	479	596	819
Commercial	474	432	405	387	398	430	503	487	433	400	418	493
Irrigation	2	1	1	59	286	524	611	501	314	50	1	1
Industrial	261	261	253	244	250	271	269	270	266	268	265	271
Additional Firm	136	155	172	181	176	153	146	154	170	175	180	185
Loss	165	148	133	128	150	184	217	201	163	129	138	171
System Load	1,848	1,682	1,540	1,489	1,709	2,054	2,381	2,228	1,839	1,501	1,598	1,941
Light Load	1,702	1,553	1,416	1,355	1,535	1,846	2,154	1,976	1,674	1,358	1,468	1,804
Heavy Load	1,974	1,778	1,629	1,588	1,858	2,205	2,577	2,409	1,972	1,613	1,703	2,048
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,848	1,682	1,540	1,489	1,709	2,054	2,381	2,228	1,839	1,501	1,598	1,941
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,499	2,394	2,090	1,888	2,833	3,325	3,494	3,171	3,004	2,053	2,169	2,693
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,499	2,394	2,090	1,888	2,833	3,325	3,494	3,171	3,004	2,053	2,169	2,693
	1/2012	**2/2012**	**3/2012**	**4/2012**	**5/2012**	**6/2012**	**7/2012**	**8/2012**	**9/2012**	**10/2012**	**11/2012**	**12/2012**
Average Load (aMW)–50th Percentile												
Residential	806	679	571	487	448	491	640	618	495	478	594	819
Commercial	480	437	410	392	404	438	512	494	440	405	423	500
Irrigation	1	1	1	59	287	527	614	504	315	50	0	1
Industrial	266	257	259	250	256	277	275	276	272	275	271	276
Additional Firm	199	195	194	189	185	162	154	163	182	193	200	206
Loss	169	149	135	129	151	186	219	204	164	130	140	173
System Load	1,921	1,719	1,569	1,506	1,731	2,082	2,414	2,259	1,868	1,531	1,629	1,975
Light Load	1,769	1,587	1,443	1,370	1,555	1,871	2,184	2,004	1,700	1,386	1,497	1,836
Heavy Load	2,052	1,816	1,659	1,615	1,869	2,236	2,612	2,443	2,015	1,636	1,736	2,094
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,921	1,719	1,569	1,506	1,731	2,082	2,414	2,259	1,868	1,531	1,629	1,975
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,497	2,387	2,086	1,867	2,876	3,377	3,555	3,205	3,056	2,084	2,183	2,676
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,497	2,387	2,086	1,867	2,876	3,377	3,555	3,205	3,056	2,084	2,183	2,676

[1] The sales and load forecast considers and reflects the impact of existing energy efficiency programs on average load and peak demand. The new energy efficiency programs, proposed as part of the 2011 IRP, are accounted for in the load and resource balance. The peak load forecast does not include the impact of existing or new demand response programs, which are both accounted for in the load and resource balance.

Monthly Summary[1]	1/2013	2/2013	3/2013	4/2013	5/2013	6/2013	7/2013	8/2013	9/2013	10/2013	11/2013	12/2013
Average Load (aMW)–50th Percentile												
Residential	807	679	571	486	448	495	648	626	500	480	596	833
Commercial	485	441	415	397	410	445	520	502	446	411	429	507
Irrigation	1	1	0	59	286	526	613	503	315	50	0	1
Industrial	271	271	264	255	261	283	281	282	277	280	276	280
Additional Firm	213	211	207	202	198	193	202	200	201	206	213	219
Loss	170	151	136	130	153	189	224	207	167	132	141	176
System Load	1,948	1,753	1,593	1,529	1,756	2,130	2,487	2,319	1,906	1,559	1,656	2,016
Light Load	1,794	1,619	1,465	1,391	1,578	1,915	2,250	2,058	1,734	1,411	1,522	1,875
Heavy Load	2,069	1,854	1,693	1,630	1,897	2,303	2,674	2,508	2,056	1,666	1,765	2,138
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,948	1,753	1,593	1,529	1,756	2,130	2,487	2,319	1,906	1,559	1,656	2,016
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,506	2,395	2,101	1,866	2,924	3,478	3,662	3,298	3,130	2,113	2,202	2,690
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,506	2,395	2,101	1,866	2,924	3,478	3,662	3,298	3,130	2,113	2,202	2,690
	1/2014	**2/2014**	**3/2014**	**4/2014**	**5/2014**	**6/2014**	**7/2014**	**8/2014**	**9/2014**	**10/2014**	**11/2014**	**12/2014**
Average Load (aMW)–50th Percentile												
Residential	827	693	583	497	460	510	671	648	516	493	612	851
Commercial	491	445	420	402	416	452	528	510	453	416	434	514
Irrigation	1	1	1	59	287	526	613	503	315	50	0	1
Industrial	276	276	269	259	266	288	286	287	282	285	281	285
Additional Firm	224	223	219	214	209	204	214	211	213	218	225	231
Loss	174	154	138	133	155	192	228	211	170	135	144	180
System Load	1,993	1,792	1,629	1,563	1,793	2,173	2,540	2,370	1,949	1,597	1,697	2,061
Light Load	1,836	1,655	1,499	1,422	1,610	1,953	2,298	2,103	1,774	1,446	1,559	1,916
Heavy Load	2,117	1,895	1,732	1,666	1,936	2,349	2,731	2,581	2,090	1,707	1,818	2,175
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,993	1,792	1,629	1,563	1,793	2,173	2,540	2,370	1,949	1,597	1,697	2,061
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,566	2,439	2,146	1,915	2,980	3,556	3,747	3,383	3,197	2,152	2,252	2,766
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,566	2,439	2,146	1,915	2,980	3,556	3,747	3,383	3,197	2,152	2,252	2,766
Monthly Summary	**1/2015**	**2/2015**	**3/2015**	**4/2015**	**5/2015**	**6/2015**	**7/2015**	**8/2015**	**9/2015**	**10/2015**	**11/2015**	**12/2015**
Average Load (aMW)–50th Percentile												
Residential	841	704	592	505	468	522	690	667	529	503	623	865
Commercial	497	449	424	406	421	459	537	517	460	422	439	520
Irrigation	2	1	1	59	289	530	617	507	317	50	1	1
Industrial	280	280	273	263	270	293	290	291	287	290	286	289
Additional Firm	236	234	230	225	221	216	225	223	224	229	237	243
Loss	176	156	141	135	158	195	232	215	173	137	147	182
System Load	2,032	1,824	1,661	1,594	1,827	2,215	2,591	2,420	1,990	1,632	1,732	2,100
Light Load	1,871	1,685	1,528	1,450	1,641	1,991	2,344	2,147	1,811	1,477	1,591	1,952
Heavy Load	2,158	1,929	1,766	1,699	1,987	2,379	2,786	2,635	2,134	1,744	1,856	2,216
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,032	1,824	1,661	1,594	1,827	2,215	2,591	2,420	1,990	1,632	1,732	2,100
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,606	2,470	2,180	1,945	3,035	3,629	3,831	3,459	3,260	2,188	2,290	2,815
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,606	2,470	2,180	1,945	3,035	3,629	3,831	3,459	3,260	2,188	2,290	2,815

[1] The sales and load forecast considers and reflects the impact of existing energy efficiency programs on average load and peak demand. The new energy efficiency programs, proposed as part of the 2011 IRP, are accounted for in the load and resource balance. The peak load forecast does not include the impact of existing or new demand response programs, which are both accounted for in the load and resource balance.

Monthly Summary[1]	1/2016	2/2016	3/2016	4/2016	5/2016	6/2016	7/2016	8/2016	9/2016	10/2016	11/2016	12/2016
Average Load (aMW)–50th Percentile												
Residential	851	711	598	510	474	532	706	683	540	511	632	880
Commercial	501	453	428	410	426	465	544	523	466	426	443	525
Irrigation	2	2	1	60	290	532	620	509	319	51	1	1
Industrial	284	274	277	267	274	297	295	295	291	295	290	293
Additional Firm	248	244	241	235	230	224	232	229	229	233	240	245
Loss	179	157	142	136	160	198	235	218	175	139	149	185
System Load	2,065	1,840	1,687	1,618	1,854	2,248	2,631	2,458	2,020	1,654	1,754	2,128
Light Load	1,901	1,699	1,552	1,472	1,665	2,021	2,380	2,180	1,838	1,497	1,612	1,979
Heavy Load	2,205	1,944	1,785	1,725	2,016	2,414	2,847	2,658	2,165	1,778	1,869	2,246
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,065	1,840	1,687	1,618	1,854	2,248	2,631	2,458	2,020	1,654	1,754	2,128
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,636	2,497	2,205	1,962	3,084	3,693	3,902	3,519	3,314	2,211	2,312	2,843
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,636	2,497	2,205	1,962	3,084	3,693	3,902	3,519	3,314	2,211	2,312	2,843
	1/2017	**2/2017**	**3/2017**	**4/2017**	**5/2017**	**6/2017**	**7/2017**	**8/2017**	**9/2017**	**10/2017**	**11/2017**	**12/2017**
Average Load (aMW)–50th Percentile												
Residential	865	720	606	517	482	544	725	701	553	521	643	893
Commercial	505	455	432	413	431	471	550	529	471	430	447	530
Irrigation	2	2	1	60	291	533	621	510	320	51	1	1
Industrial	288	288	281	271	279	302	299	300	295	299	294	297
Additional Firm	248	246	241	235	230	223	232	229	229	233	240	244
Loss	181	160	144	138	161	200	238	221	178	141	151	187
System Load	2,089	1,869	1,704	1,634	1,873	2,274	2,666	2,491	2,046	1,675	1,775	2,153
Light Load	1,924	1,726	1,568	1,487	1,682	2,044	2,412	2,210	1,861	1,516	1,631	2,002
Heavy Load	2,231	1,977	1,803	1,752	2,023	2,442	2,885	2,694	2,193	1,800	1,891	2,283
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,089	1,869	1,704	1,634	1,873	2,274	2,666	2,491	2,046	1,675	1,775	2,153
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,662	2,510	2,223	1,978	3,124	3,751	3,967	3,579	3,365	2,232	2,335	2,879
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,662	2,510	2,223	1,978	3,124	3,751	3,967	3,579	3,365	2,232	2,335	2,879
	1/2018	**2/2018**	**3/2018**	**4/2018**	**5/2018**	**6/2018**	**7/2018**	**8/2018**	**9/2018**	**10/2018**	**11/2018**	**12/2018**
Average Load (aMW)–50th Percentile												
Residential	876	727	613	522	488	554	741	718	564	529	652	908
Commercial	509	457	435	417	435	477	557	536	476	434	451	535
Irrigation	2	2	1	60	292	535	624	512	321	51	1	1
Industrial	292	291	284	275	282	306	303	304	299	303	298	301
Additional Firm	249	246	241	235	230	224	233	229	230	234	240	245
Loss	183	161	145	139	163	203	242	224	180	143	152	190
System Load	2,110	1,885	1,720	1,649	1,891	2,299	2,700	2,523	2,070	1,693	1,795	2,180
Light Load	1,943	1,741	1,582	1,500	1,699	2,066	2,442	2,238	1,884	1,533	1,648	2,027
Heavy Load	2,241	1,993	1,819	1,768	2,042	2,469	2,921	2,729	2,233	1,809	1,912	2,312
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,110	1,885	1,720	1,649	1,891	2,299	2,700	2,523	2,070	1,693	1,795	2,180
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,678	2,521	2,236	1,984	3,163	3,806	4,031	3,634	3,414	2,251	2,354	2,906
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,678	2,521	2,236	1,984	3,163	3,806	4,031	3,634	3,414	2,251	2,354	2,906

[1] The sales and load forecast considers and reflects the impact of existing energy efficiency programs on average load and peak demand. The new energy efficiency programs, proposed as part of the 2011 IRP, are accounted for in the load and resource balance. The peak load forecast does not include the impact of existing or new demand response programs, which are both accounted for in the load and resource balance.

Monthly Summary[1]	1/2019	2/2019	3/2019	4/2019	5/2019	6/2019	7/2019	8/2019	9/2019	10/2019	11/2019	12/2019
Average Load (aMW)–50th Percentile												
Residential	890	737	621	530	496	567	761	738	578	539	663	924
Commercial	513	460	439	420	440	482	564	542	482	438	455	540
Irrigation	2	2	1	60	292	536	625	513	321	51	1	1
Industrial	295	295	288	279	287	310	308	308	304	308	303	305
Additional Firm	249	247	242	236	231	224	233	230	230	234	241	245
Loss	185	163	147	140	165	205	245	228	183	145	154	192
System Load	2,134	1,903	1,738	1,665	1,911	2,326	2,736	2,558	2,097	1,715	1,817	2,208
Light Load	1,966	1,758	1,599	1,515	1,716	2,090	2,475	2,269	1,909	1,552	1,669	2,053
Heavy Load	2,267	2,013	1,847	1,775	2,064	2,514	2,942	2,766	2,263	1,832	1,935	2,341
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,134	1,903	1,738	1,665	1,911	2,326	2,736	2,558	2,097	1,715	1,817	2,208
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,704	2,538	2,255	2,000	3,203	3,865	4,098	3,695	3,464	2,273	2,378	2,943
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,704	2,538	2,255	2,000	3,203	3,865	4,098	3,695	3,464	2,273	2,378	2,943
	1/2020	**2/2020**	**3/2020**	**4/2020**	**5/2020**	**6/2020**	**7/2020**	**8/2020**	**9/2020**	**10/2020**	**11/2020**	**12/2020**
Average Load (aMW)–50th Percentile												
Residential	902	746	629	536	504	579	780	756	591	549	674	937
Commercial	516	464	442	424	445	488	570	547	487	442	459	545
Irrigation	2	2	1	60	293	538	627	515	322	51	1	1
Industrial	299	289	292	283	291	315	312	312	308	312	307	309
Additional Firm	248	243	241	235	230	224	233	230	230	234	240	245
Loss	187	163	148	142	166	207	248	231	185	146	156	194
System Load	2,155	1,907	1,753	1,680	1,929	2,351	2,771	2,591	2,123	1,734	1,836	2,231
Light Load	1,985	1,761	1,613	1,528	1,733	2,113	2,506	2,299	1,932	1,569	1,687	2,075
Heavy Load	2,290	2,015	1,864	1,790	2,097	2,525	2,979	2,822	2,276	1,852	1,967	2,355
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,155	1,907	1,753	1,680	1,929	2,351	2,771	2,591	2,123	1,734	1,836	2,231
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,726	2,549	2,271	2,013	3,242	3,922	4,164	3,753	3,514	2,293	2,400	2,976
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,726	2,549	2,271	2,013	3,242	3,922	4,164	3,753	3,514	2,293	2,400	2,976
	1/2021	**2/2021**	**3/2021**	**4/2021**	**5/2021**	**6/2021**	**7/2021**	**8/2021**	**9/2021**	**10/2021**	**11/2021**	**12/2021**
Average Load (aMW)–50th Percentile												
Residential	912	752	634	541	510	589	797	773	602	557	682	951
Commercial	520	465	446	427	449	494	577	554	493	446	463	550
Irrigation	2	2	1	61	294	540	628	516	323	51	1	1
Industrial	303	303	296	287	295	319	316	317	312	316	311	313
Additional Firm	249	246	242	236	231	225	234	230	230	234	241	245
Loss	189	165	150	143	168	210	251	234	187	148	158	197
System Load	2,176	1,934	1,769	1,694	1,947	2,376	2,804	2,624	2,148	1,753	1,856	2,258
Light Load	2,004	1,786	1,627	1,541	1,749	2,136	2,537	2,328	1,955	1,586	1,705	2,099
Heavy Load	2,324	2,045	1,871	1,806	2,117	2,552	3,015	2,857	2,303	1,884	1,977	2,383
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,176	1,934	1,769	1,694	1,947	2,376	2,804	2,624	2,148	1,753	1,856	2,258
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,743	2,563	2,285	2,021	3,282	3,978	4,229	3,809	3,564	2,312	2,418	3,004
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,743	2,563	2,285	2,021	3,282	3,978	4,229	3,809	3,564	2,312	2,418	3,004

[1] The sales and load forecast considers and reflects the impact of existing energy efficiency programs on average load and peak demand. The new energy efficiency programs, proposed as part of the 2011 IRP, are accounted for in the load and resource balance. The peak load forecast does not include the impact of existing or new demand response programs, which are both accounted for in the load and resource balance.

Monthly Summary[1]	1/2022	2/2022	3/2022	4/2022	5/2022	6/2022	7/2022	8/2022	9/2022	10/2022	11/2022	12/2022
Average Load (aMW)–50th Percentile												
Residential	925	760	641	547	517	601	817	792	615	566	693	967
Commercial	525	469	450	431	455	501	585	561	499	451	467	556
Irrigation	2	2	1	61	295	541	630	517	324	51	1	1
Industrial	308	308	301	291	299	324	321	322	317	321	316	317
Additional Firm	249	247	242	237	232	225	235	231	231	235	241	246
Loss	191	167	151	145	170	212	255	237	190	150	160	200
System Load	2,201	1,953	1,787	1,711	1,967	2,404	2,842	2,660	2,176	1,775	1,878	2,287
Light Load	2,027	1,804	1,644	1,557	1,767	2,161	2,571	2,360	1,980	1,606	1,725	2,126
Heavy Load	2,350	2,065	1,890	1,824	2,139	2,582	3,075	2,876	2,333	1,907	2,001	2,413
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,201	1,953	1,787	1,711	1,967	2,404	2,842	2,660	2,176	1,775	1,878	2,287
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,768	2,580	2,304	2,037	3,323	4,038	4,296	3,871	3,617	2,334	2,443	3,042
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,768	2,580	2,304	2,037	3,323	4,038	4,296	3,871	3,617	2,334	2,443	3,042
	1/2023	**2/2023**	**3/2023**	**4/2023**	**5/2023**	**6/2023**	**7/2023**	**8/2023**	**9/2023**	**10/2023**	**11/2023**	**12/2023**
Average Load (aMW)–50th Percentile												
Residential	939	770	650	554	525	614	838	813	629	576	704	981
Commercial	530	473	454	436	460	508	593	568	506	456	472	562
Irrigation	2	2	1	61	295	542	631	519	325	52	1	1
Industrial	313	312	305	295	304	329	326	326	322	326	321	322
Additional Firm	250	248	243	238	233	226	235	232	232	236	242	247
Loss	194	169	153	146	172	215	259	241	192	152	162	202
System Load	2,227	1,973	1,807	1,730	1,989	2,434	2,881	2,698	2,206	1,798	1,902	2,315
Light Load	2,051	1,822	1,662	1,574	1,786	2,188	2,607	2,394	2,007	1,627	1,747	2,153
Heavy Load	2,379	2,087	1,911	1,854	2,148	2,614	3,118	2,918	2,365	1,932	2,026	2,455
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,227	1,973	1,807	1,730	1,989	2,434	2,881	2,698	2,206	1,798	1,902	2,315
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,800	2,601	2,326	2,060	3,365	4,100	4,367	3,938	3,671	2,358	2,471	3,089
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,800	2,601	2,326	2,060	3,365	4,100	4,367	3,938	3,671	2,358	2,471	3,089
	1/2024	**2/2024**	**3/2024**	**4/2024**	**5/2024**	**6/2024**	**7/2024**	**8/2024**	**9/2024**	**10/2024**	**11/2024**	**12/2024**
Average Load (aMW)–50th Percentile												
Residential	949	776	655	559	531	624	856	831	641	585	713	992
Commercial	535	478	459	441	466	515	601	576	514	462	477	568
Irrigation	2	2	1	61	296	544	634	520	326	52	1	1
Industrial	317	306	310	299	308	334	331	331	326	331	325	327
Additional Firm	250	246	243	238	233	227	236	232	232	236	242	247
Loss	196	170	155	148	173	218	262	244	195	154	164	204
System Load	2,250	1,978	1,824	1,746	2,008	2,462	2,919	2,734	2,234	1,819	1,923	2,340
Light Load	2,072	1,827	1,677	1,588	1,804	2,213	2,641	2,426	2,033	1,646	1,767	2,176
Heavy Load	2,390	2,090	1,938	1,861	2,169	2,661	3,138	2,957	2,410	1,944	2,049	2,481
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,250	1,978	1,824	1,746	2,008	2,462	2,919	2,734	2,234	1,819	1,923	2,340
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,822	2,614	2,343	2,073	3,407	4,160	4,435	3,999	3,725	2,380	2,493	3,124
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,822	2,614	2,343	2,073	3,407	4,160	4,435	3,999	3,725	2,380	2,493	3,124

[1] The sales and load forecast considers and reflects the impact of existing energy efficiency programs on average load and peak demand. The new energy efficiency programs, proposed as part of the 2011 IRP, are accounted for in the load and resource balance. The peak load forecast does not include the impact of existing or new demand response programs, which are both accounted for in the load and resource balance.

Monthly Summary[1]	1/2025	2/2025	3/2025	4/2025	5/2025	6/2025	7/2025	8/2025	9/2025	10/2025	11/2025	12/2025
Average Load (aMW)–50th Percentile												
Residential	956	780	658	562	535	633	871	846	650	591	720	1,002
Commercial	541	482	465	446	473	524	610	584	522	468	483	576
Irrigation	2	2	1	61	297	545	635	522	327	52	1	1
Industrial	323	323	315	305	313	339	336	337	332	336	331	333
Additional Firm	251	249	244	239	234	228	237	233	234	237	243	248
Loss	198	172	156	149	175	220	265	247	198	156	166	207
System Load	2,271	2,007	1,840	1,762	2,028	2,489	2,954	2,769	2,262	1,840	1,944	2,367
Light Load	2,092	1,854	1,693	1,603	1,822	2,237	2,673	2,457	2,058	1,665	1,786	2,201
Heavy Load	2,413	2,122	1,956	1,878	2,190	2,690	3,176	3,015	2,425	1,966	2,083	2,498
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,271	2,007	1,840	1,762	2,028	2,489	2,954	2,769	2,262	1,840	1,944	2,367
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,837	2,628	2,356	2,079	3,448	4,218	4,501	4,056	3,779	2,401	2,512	3,150
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,837	2,628	2,356	2,079	3,448	4,218	4,501	4,056	3,779	2,401	2,512	3,150
	1/2026	**2/2026**	**3/2026**	**4/2026**	**5/2026**	**6/2026**	**7/2026**	**8/2026**	**9/2026**	**10/2026**	**11/2026**	**12/2026**
Average Load (aMW)–50th Percentile												
Residential	965	785	663	566	541	643	888	863	662	599	728	1,011
Commercial	548	488	471	453	480	533	620	594	531	475	490	584
Irrigation	2	2	1	61	298	546	636	523	327	52	1	1
Industrial	329	329	321	310	319	345	342	343	338	342	337	339
Additional Firm	253	250	246	240	235	229	238	235	235	238	245	249
Loss	200	174	158	151	177	223	269	251	200	158	168	209
System Load	2,297	2,028	1,860	1,781	2,050	2,519	2,994	2,808	2,293	1,864	1,968	2,393
Light Load	2,116	1,873	1,711	1,620	1,841	2,264	2,709	2,491	2,087	1,687	1,808	2,225
Heavy Load	2,441	2,144	1,977	1,898	2,229	2,705	3,219	3,057	2,458	1,992	2,109	2,526
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,297	2,028	1,860	1,781	2,050	2,519	2,994	2,808	2,293	1,864	1,968	2,393
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,861	2,645	2,375	2,093	3,491	4,280	4,571	4,119	3,836	2,426	2,536	3,183
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,861	2,645	2,375	2,093	3,491	4,280	4,571	4,119	3,836	2,426	2,536	3,183
	1/2027	**2/2027**	**3/2027**	**4/2027**	**5/2027**	**6/2027**	**7/2027**	**8/2027**	**9/2027**	**10/2027**	**11/2027**	**12/2027**
Average Load (aMW)–50th Percentile												
Residential	968	786	664	566	543	649	901	875	669	603	732	1,026
Commercial	556	494	478	460	488	543	631	604	541	483	497	593
Irrigation	2	2	1	61	298	547	638	524	328	52	1	1
Industrial	336	335	327	316	324	351	348	349	344	348	343	346
Additional Firm	252	250	246	240	236	229	239	235	235	239	245	249
Loss	202	175	159	152	179	225	272	254	203	160	170	212
System Load	2,316	2,042	1,875	1,796	2,068	2,545	3,028	2,841	2,320	1,884	1,987	2,427
Light Load	2,133	1,886	1,725	1,634	1,858	2,287	2,739	2,520	2,111	1,705	1,825	2,257
Heavy Load	2,473	2,159	1,983	1,914	2,248	2,733	3,255	3,093	2,487	2,025	2,117	2,561
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,316	2,042	1,875	1,796	2,068	2,545	3,028	2,841	2,320	1,884	1,987	2,427
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,865	2,650	2,382	2,088	3,532	4,336	4,635	4,169	3,890	2,446	2,549	3,197
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,865	2,650	2,382	2,088	3,532	4,336	4,635	4,169	3,890	2,446	2,549	3,197

[1] The sales and load forecast considers and reflects the impact of existing energy efficiency programs on average load and peak demand. The new energy efficiency programs, proposed as part of the 2011 IRP, are accounted for in the load and resource balance. The peak load forecast does not include the impact of existing or new demand response programs, which are both accounted for in the load and resource balance.

Monthly Summary[1]	1/2028	2/2028	3/2028	4/2028	5/2028	6/2028	7/2028	8/2028	9/2028	10/2028	11/2028	12/2028
Average Load (aMW)–50th Percentile												
Residential	988	799	676	577	554	667	928	902	688	617	747	1,041
Commercial	564	503	486	467	497	554	643	615	552	492	506	602
Irrigation	2	2	1	61	298	547	637	524	328	52	1	1
Industrial	343	331	333	322	330	357	354	356	350	354	349	352
Additional Firm	252	248	246	241	236	230	239	236	236	239	245	249
Loss	205	177	162	154	181	229	277	259	207	163	173	216
System Load	2,354	2,060	1,904	1,823	2,097	2,583	3,079	2,891	2,360	1,917	2,021	2,462
Light Load	2,168	1,902	1,751	1,658	1,884	2,322	2,786	2,565	2,148	1,735	1,856	2,289
Heavy Load	2,514	2,176	2,013	1,954	2,265	2,774	3,331	3,127	2,530	2,060	2,153	2,610
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,354	2,060	1,904	1,823	2,097	2,583	3,079	2,891	2,360	1,917	2,021	2,462
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,919	2,675	2,420	2,131	3,582	4,409	4,718	4,253	3,952	2,480	2,593	3,267
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,919	2,675	2,420	2,131	3,582	4,409	4,718	4,253	3,952	2,480	2,593	3,267
	1/2029	**2/2029**	**3/2029**	**4/2029**	**5/2029**	**6/2029**	**7/2029**	**8/2029**	**9/2029**	**10/2029**	**11/2029**	**12/2029**
Average Load (aMW)–50th Percentile												
Residential	995	803	679	579	559	676	944	918	698	623	754	1,053
Commercial	573	510	494	476	506	565	655	627	563	502	514	613
Irrigation	2	2	1	62	300	550	641	526	330	52	1	1
Industrial	350	350	340	328	336	364	361	362	357	360	356	359
Additional Firm	252	250	246	241	237	230	240	237	236	239	245	249
Loss	208	180	163	156	184	232	281	263	210	165	175	219
System Load	2,379	2,094	1,923	1,842	2,121	2,617	3,122	2,933	2,394	1,942	2,045	2,495
Light Load	2,191	1,934	1,769	1,676	1,905	2,352	2,824	2,602	2,179	1,758	1,879	2,320
Heavy Load	2,528	2,214	2,034	1,975	2,291	2,810	3,378	3,172	2,583	2,075	2,179	2,645
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,379	2,094	1,923	1,842	2,121	2,617	3,122	2,933	2,394	1,942	2,045	2,495
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,936	2,702	2,435	2,138	3,628	4,472	4,792	4,315	4,010	2,505	2,614	3,293
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,936	2,702	2,435	2,138	3,628	4,472	4,792	4,315	4,010	2,505	2,614	3,293
	1/2030	**2/2030**	**3/2030**	**4/2030**	**5/2030**	**6/2030**	**7/2030**	**8/2030**	**9/2030**	**10/2030**	**11/2030**	**12/2030**
Average Load (aMW)–50th Percentile												
Residential	1,006	810	685	585	566	688	965	939	712	632	764	1,069
Commercial	583	518	503	485	516	577	669	640	576	512	524	624
Irrigation	2	2	1	62	300	550	641	527	330	52	1	1
Industrial	357	357	347	335	342	370	368	369	364	367	362	367
Additional Firm	252	250	246	242	238	231	241	238	237	240	246	250
Loss	211	182	166	158	186	235	285	267	213	168	178	222
System Load	2,412	2,120	1,948	1,866	2,147	2,653	3,169	2,979	2,432	1,972	2,075	2,534
Light Load	2,221	1,958	1,792	1,698	1,929	2,384	2,867	2,643	2,213	1,785	1,906	2,356
Heavy Load	2,562	2,242	2,071	1,989	2,319	2,867	3,407	3,222	2,624	2,107	2,210	2,686
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,412	2,120	1,948	1,866	2,147	2,653	3,169	2,979	2,432	1,972	2,075	2,534
Peak Load (MW)–90th Percentile												
System Peak (1 Hour)	2,968	2,726	2,460	2,159	3,676	4,539	4,870	4,386	4,071	2,536	2,646	3,336
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,968	2,726	2,460	2,159	3,676	4,539	4,870	4,386	4,071	2,536	2,646	3,336

[1] The sales and load forecast considers and reflects the impact of existing energy efficiency programs on average load and peak demand. The new energy efficiency programs, proposed as part of the 2011 IRP, are accounted for in the load and resource balance. The peak load forecast does not include the impact of existing or new demand response programs, which are both accounted for in the load and resource balance.

Annual Summary

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Billed Sales (MWh)–50th Percentile										
Residential	5,212,406	5,203,339	5,225,209	5,368,280	5,478,414	5,563,357	5,669,304	5,757,369	5,869,128	5,970,745
Commercial	3,838,581	3,892,057	3,946,012	3,999,968	4,052,337	4,093,919	4,134,970	4,175,514	4,215,706	4,255,106
Irrigation	1,726,426	1,733,923	1,730,933	1,732,192	1,745,054	1,753,457	1,758,741	1,765,002	1,768,786	1,774,046
Industrial	2,294,027	2,346,083	2,391,684	2,434,390	2,472,828	2,509,361	2,545,600	2,580,387	2,616,525	2,653,140
Additional Firm	1,449,272	1,627,180	1,798,947	1,901,753	2,002,406	2,070,809	2,065,176	2,069,629	2,074,558	2,073,248
System Sales	14,520,712	14,802,582	15,092,784	15,436,583	15,751,039	15,990,903	16,173,791	16,347,900	16,544,703	16,726,284
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0
Total Sales	14,520,712	14,802,582	15,092,784	15,436,583	15,751,039	15,990,903	16,173,791	16,347,900	16,544,703	16,726,284
Generation Month Sales (MWh)–50th Percentile										
Residential	5,211,472	5,220,832	5,234,696	5,375,496	5,483,894	5,587,315	5,674,976	5,764,646	5,875,700	5,994,114
Commercial	3,842,581	3,906,684	3,949,996	4,003,861	4,055,659	4,108,526	4,138,224	4,178,743	4,218,887	4,269,976
Irrigation	1,726,429	1,733,968	1,730,933	1,732,196	1,745,056	1,753,504	1,758,743	1,765,003	1,768,788	1,774,094
Industrial	2,299,135	2,350,458	2,395,812	2,438,153	2,476,427	2,512,935	2,549,050	2,583,953	2,620,131	2,656,639
Additional Firm	1,449,272	1,627,180	1,798,947	1,901,753	2,002,406	2,070,809	2,065,176	2,069,629	2,074,558	2,073,248
System Sales	14,528,890	14,839,122	15,110,383	15,451,458	15,763,442	16,033,088	16,186,169	16,361,973	16,558,065	16,768,071
Firm Off-System Sales	0	0	0	0	0	0	0	0	0	0
Total Sales	14,528,890	14,839,122	15,110,383	15,451,458	15,763,442	16,033,088	16,186,169	16,361,973	16,558,065	16,768,071
Loss	1,409,072	1,428,282	1,444,136	1,471,939	1,496,894	1,519,773	1,535,352	1,552,758	1,572,301	1,593,865
Required Generation	15,937,962	16,267,403	16,554,519	16,923,397	17,260,337	17,552,861	17,721,520	17,914,731	18,130,365	18,361,936
Average Load (aMW)–50th Percentile										
Residential	595	594	598	614	626	636	648	658	671	682
Commercial	439	445	451	457	463	468	472	477	482	486
Irrigation	197	197	198	198	199	200	201	201	202	202
Industrial	262	268	273	278	283	286	291	295	299	302
Additional Firm	165	185	205	217	229	236	236	236	237	236
Loss	161	163	165	168	171	173	175	177	179	181
System Load	1,819	1,852	1,890	1,932	1,970	1,998	2,023	2,045	2,070	2,090
Light Load	1,655	1,685	1,719	1,758	1,793	1,818	1,840	1,860	1,883	1,902
Heavy Load	1,948	1,984	2,023	2,069	2,110	2,140	2,167	2,190	2,216	2,238
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0
Total Load	1,819	1,852	1,890	1,932	1,970	1,998	2,023	2,045	2,070	2,090
Peak Load (MW)–90th Percentile										
System Peak (1 Hour)	3,494	3,555	3,662	3,747	3,831	3,902	3,967	4,031	4,098	4,164
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0
Total Peak Load	3,494	3,555	3,662	3,747	3,831	3,902	3,967	4,031	4,098	4,164

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Billed Sales (MWh)–50th Percentile										
Residential	6,056,407	6,158,656	6,271,445	6,361,683	6,426,776	6,510,492	6,553,819	6,707,410	6,776,381	6,877,650
Commercial	4,296,755	4,343,256	4,394,013	4,447,644	4,508,307	4,576,705	4,649,243	4,732,314	4,818,303	4,912,860
Irrigation	1,778,962	1,782,409	1,787,374	1,793,802	1,798,253	1,800,997	1,804,775	1,804,427	1,813,588	1,814,979
Industrial	2,690,609	2,732,262	2,771,129	2,811,827	2,859,873	2,911,643	2,964,041	3,021,185	3,078,753	3,139,413
Additional Firm	2,074,887	2,081,619	2,088,963	2,096,186	2,101,203	2,111,939	2,112,515	2,119,494	2,118,995	2,125,092
System Sales	16,897,620	17,098,202	17,312,925	17,511,142	17,694,413	17,911,776	18,084,393	18,384,830	18,606,020	18,869,995
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0
Total Sales	16,897,620	17,098,202	17,312,925	17,511,142	17,694,413	17,911,776	18,084,393	18,384,830	18,606,020	18,869,995
Generation Month Sales (MWh)–50th Percentile										
Residential	6,062,999	6,165,952	6,277,197	6,384,350	6,432,065	6,513,037	6,563,818	6,730,858	6,782,814	6,885,381
Commercial	4,299,700	4,346,120	4,396,725	4,462,767	4,511,182	4,579,493	4,652,274	4,748,002	4,821,327	4,915,869
Irrigation	1,778,963	1,782,411	1,787,376	1,793,851	1,798,254	1,800,998	1,804,775	1,804,477	1,813,589	1,814,980
Industrial	2,694,287	2,735,521	2,774,365	2,815,511	2,863,696	2,915,340	2,967,964	3,024,964	3,082,617	3,143,429
Additional Firm	2,074,887	2,081,619	2,088,963	2,096,186	2,101,203	2,111,939	2,112,515	2,119,494	2,118,995	2,125,092
System Sales	16,910,836	17,111,622	17,324,626	17,552,664	17,706,401	17,920,807	18,101,346	18,427,795	18,619,341	18,884,751
Firm Off-System Sales	0	0	0	0	0	0	0	0	0	0
Total Sales	16,910,836	17,111,622	17,324,626	17,552,664	17,706,401	17,920,807	18,101,346	18,427,795	18,619,341	18,884,751
Loss	1,607,831	1,627,748	1,649,127	1,672,210	1,687,095	1,708,185	1,726,396	1,760,025	1,779,484	1,806,546
Required Generation	18,518,667	18,739,370	18,973,754	19,224,874	19,393,496	19,628,991	19,827,743	20,187,820	20,398,825	20,691,297
Average Load (aMW)–50th Percentile										
Residential	692	704	717	727	734	743	749	766	774	786
Commercial	491	496	502	508	515	523	531	541	550	561
Irrigation	203	203	204	204	205	206	206	205	207	207
Industrial	308	312	317	321	327	333	339	344	352	359
Additional Firm	237	238	238	239	240	241	241	241	242	243
Loss	184	186	188	190	193	195	197	200	203	206
System Load	2,114	2,139	2,166	2,189	2,214	2,241	2,263	2,298	2,329	2,362
Light Load	1,923	1,946	1,970	1,991	2,014	2,038	2,059	2,091	2,118	2,149
Heavy Load	2,264	2,291	2,320	2,343	2,371	2,400	2,424	2,462	2,494	2,529
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0
Total Load	2,114	2,139	2,166	2,189	2,214	2,241	2,263	2,298	2,329	2,362
Peak Load (MW)–90th Percentile										
System Peak (1 Hour)	4,229	4,296	4,367	4,435	4,501	4,571	4,635	4,718	4,792	4,870
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0
Total Peak Load	4,229	4,296	4,367	4,435	4,501	4,571	4,635	4,718	4,792	4,870

70th Percentile Load Forecast

Monthly Summary[1]	1/2011	2/2011	3/2011	4/2011	5/2011	6/2011	7/2011	8/2011	9/2011	10/2011	11/2011	12/2011
Average Load (aMW)–70th Percentile												
Residential	835	713	593	499	465	512	656	625	502	490	611	837
Commercial	482	440	408	391	403	436	509	490	435	403	421	498
Irrigation	2	1	1	75	339	572	633	517	336	57	1	1
Industrial	261	261	253	244	250	271	269	270	266	268	265	271
Additional Firm	136	155	172	181	176	153	146	154	170	175	180	185
Loss	169	152	136	131	158	193	222	205	166	131	140	174
System Load	1,885	1,722	1,563	1,521	1,790	2,137	2,434	2,262	1,876	1,525	1,619	1,965
Light Load	1,736	1,590	1,438	1,384	1,608	1,921	2,202	2,007	1,707	1,380	1,487	1,827
Heavy Load	2,013	1,821	1,653	1,621	1,947	2,295	2,634	2,446	2,011	1,639	1,724	2,074
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,885	1,722	1,563	1,521	1,790	2,137	2,434	2,262	1,876	1,525	1,619	1,965
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,553	2,440	2,147	1,901	2,863	3,377	3,515	3,185	3,019	2,068	2,231	2,815
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,553	2,440	2,147	1,901	2,863	3,377	3,515	3,185	3,019	2,068	2,231	2,815
	1/2012	**2/2012**	**3/2012**	**4/2012**	**5/2012**	**6/2012**	**7/2012**	**8/2012**	**9/2012**	**10/2012**	**11/2012**	**12/2012**
Average Load (aMW)–70th Percentile												
Residential	832	708	589	496	463	513	660	629	504	489	610	837
Commercial	488	445	413	396	409	444	518	498	442	409	427	505
Irrigation	1	1	1	75	340	574	636	520	338	57	0	1
Industrial	266	257	259	250	256	277	275	276	272	275	271	276
Additional Firm	199	195	194	189	185	162	154	163	182	193	200	206
Loss	172	153	137	132	159	194	225	207	168	133	142	176
System Load	1,959	1,760	1,592	1,538	1,812	2,165	2,468	2,293	1,905	1,556	1,650	2,000
Light Load	1,804	1,625	1,465	1,399	1,628	1,946	2,232	2,035	1,733	1,408	1,515	1,860
Heavy Load	2,092	1,859	1,684	1,649	1,958	2,325	2,670	2,480	2,055	1,663	1,757	2,121
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,959	1,760	1,592	1,538	1,812	2,165	2,468	2,293	1,905	1,556	1,650	2,000
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,551	2,433	2,143	1,880	2,906	3,430	3,577	3,219	3,071	2,099	2,245	2,800
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,551	2,433	2,143	1,880	2,906	3,430	3,577	3,219	3,071	2,099	2,245	2,800

[1] The sales and load forecast considers and reflects the impact of existing energy efficiency programs on average load and peak demand. The new energy efficiency programs, proposed as part of the 2011 IRP, are accounted for in the load and resource balance. The peak load forecast does not include the impact of existing or new demand response programs, which are both accounted for in the load and resource balance.

Monthly Summary[1]	1/2013	2/2013	3/2013	4/2013	5/2013	6/2013	7/2013	8/2013	9/2013	10/2013	11/2013	12/2013
Average Load (aMW)–70th Percentile												
Residential	833	708	589	495	464	517	668	637	508	491	612	851
Commercial	494	449	418	400	415	451	526	506	449	414	432	512
Irrigation	1	1	1	75	339	574	635	519	337	57	0	1
Industrial	271	271	264	255	261	283	281	282	277	280	276	280
Additional Firm	213	211	207	202	198	193	202	200	201	206	213	219
Loss	174	155	138	133	161	197	229	211	170	135	143	179
System Load	1,986	1,795	1,617	1,561	1,838	2,214	2,541	2,354	1,943	1,584	1,677	2,042
Light Load	1,829	1,658	1,487	1,420	1,652	1,990	2,299	2,088	1,768	1,433	1,541	1,899
Heavy Load	2,110	1,898	1,718	1,664	1,986	2,394	2,732	2,546	2,096	1,692	1,787	2,165
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	1,986	1,795	1,617	1,561	1,838	2,214	2,541	2,354	1,943	1,584	1,677	2,042
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,561	2,441	2,157	1,879	2,955	3,533	3,684	3,312	3,146	2,127	2,264	2,817
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,561	2,441	2,157	1,879	2,955	3,533	3,684	3,312	3,146	2,127	2,264	2,817
	1/2014	**2/2014**	**3/2014**	**4/2014**	**5/2014**	**6/2014**	**7/2014**	**8/2014**	**9/2014**	**10/2014**	**11/2014**	**12/2014**
Average Load (aMW)–70th Percentile												
Residential	853	723	602	506	475	533	692	660	525	505	627	870
Commercial	500	453	423	405	421	458	535	514	456	420	438	519
Irrigation	1	1	1	75	340	574	635	519	337	57	0	1
Industrial	276	276	269	259	266	288	286	287	282	285	281	285
Additional Firm	224	223	219	214	209	204	214	211	213	218	225	231
Loss	177	158	141	136	163	201	233	215	174	137	146	182
System Load	2,032	1,834	1,654	1,596	1,875	2,258	2,594	2,406	1,986	1,622	1,718	2,087
Light Load	1,872	1,694	1,521	1,452	1,685	2,030	2,347	2,134	1,807	1,468	1,578	1,941
Heavy Load	2,159	1,940	1,758	1,701	2,026	2,441	2,789	2,619	2,129	1,734	1,841	2,203
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,032	1,834	1,654	1,596	1,875	2,258	2,594	2,406	1,986	1,622	1,718	2,087
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,620	2,485	2,203	1,928	3,011	3,611	3,770	3,398	3,213	2,167	2,314	2,895
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,620	2,485	2,203	1,928	3,011	3,611	3,770	3,398	3,213	2,167	2,314	2,895
	1/2015	**2/2015**	**3/2015**	**4/2015**	**5/2015**	**6/2015**	**7/2015**	**8/2015**	**9/2015**	**10/2015**	**11/2015**	**12/2015**
Average Load (aMW)–70th Percentile												
Residential	868	735	611	514	484	546	711	679	538	515	639	885
Commercial	506	458	428	410	427	466	543	521	463	425	443	525
Irrigation	2	1	1	76	342	577	639	523	340	58	1	1
Industrial	280	280	273	263	270	293	290	291	287	290	286	289
Additional Firm	236	234	230	225	221	216	225	223	224	229	237	243
Loss	180	161	143	138	166	204	237	219	177	140	149	185
System Load	2,072	1,868	1,686	1,627	1,910	2,301	2,646	2,455	2,028	1,657	1,754	2,127
Light Load	1,908	1,725	1,551	1,480	1,716	2,068	2,394	2,179	1,845	1,500	1,611	1,978
Heavy Load	2,201	1,975	1,792	1,734	2,077	2,471	2,845	2,674	2,174	1,771	1,879	2,244
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,072	1,868	1,686	1,627	1,910	2,301	2,646	2,455	2,028	1,657	1,754	2,127
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,661	2,517	2,236	1,958	3,067	3,685	3,854	3,474	3,277	2,203	2,352	2,948
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,661	2,517	2,236	1,958	3,067	3,685	3,854	3,474	3,277	2,203	2,352	2,948

[1] The sales and load forecast considers and reflects the impact of existing energy efficiency programs on average load and peak demand. The new energy efficiency programs, proposed as part of the 2011 IRP, are accounted for in the load and resource balance. The peak load forecast does not include the impact of existing or new demand response programs, which are both accounted for in the load and resource balance.

Monthly Summary[1]	1/2016	2/2016	3/2016	4/2016	5/2016	6/2016	7/2016	8/2016	9/2016	10/2016	11/2016	12/2016
Average Load (aMW)–70th Percentile												
Residential	879	742	617	520	490	556	728	695	549	523	648	899
Commercial	510	461	432	414	432	472	550	527	468	429	447	530
Irrigation	2	2	1	76	343	580	642	525	341	58	1	1
Industrial	284	274	277	267	274	297	295	295	291	295	290	293
Additional Firm	248	244	241	235	230	224	232	229	229	233	240	245
Loss	183	162	145	140	168	206	241	222	179	142	151	188
System Load	2,106	1,885	1,713	1,652	1,938	2,334	2,687	2,493	2,057	1,681	1,777	2,156
Light Load	1,939	1,741	1,576	1,503	1,741	2,098	2,431	2,212	1,872	1,521	1,632	2,005
Heavy Load	2,249	1,991	1,812	1,760	2,107	2,507	2,907	2,697	2,205	1,806	1,893	2,275
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,106	1,885	1,713	1,652	1,938	2,334	2,687	2,493	2,057	1,681	1,777	2,156
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,691	2,543	2,261	1,975	3,116	3,750	3,925	3,535	3,331	2,226	2,374	2,978
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,691	2,543	2,261	1,975	3,116	3,750	3,925	3,535	3,331	2,226	2,374	2,978
	1/2017	**2/2017**	**3/2017**	**4/2017**	**5/2017**	**6/2017**	**7/2017**	**8/2017**	**9/2017**	**10/2017**	**11/2017**	**12/2017**
Average Load (aMW)–70th Percentile												
Residential	893	752	626	527	499	569	747	714	562	534	660	914
Commercial	515	464	436	417	437	478	557	534	474	434	451	535
Irrigation	2	2	1	76	344	581	643	526	342	58	1	1
Industrial	288	288	281	271	279	302	299	300	295	299	294	297
Additional Firm	248	246	241	235	230	223	232	229	229	233	240	244
Loss	185	164	147	141	170	209	244	225	182	144	153	190
System Load	2,131	1,915	1,731	1,668	1,957	2,361	2,723	2,527	2,083	1,701	1,798	2,182
Light Load	1,963	1,769	1,592	1,517	1,758	2,122	2,463	2,242	1,896	1,540	1,652	2,029
Heavy Load	2,276	2,025	1,831	1,788	2,114	2,536	2,946	2,733	2,233	1,828	1,916	2,313
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,131	1,915	1,731	1,668	1,957	2,361	2,723	2,527	2,083	1,701	1,798	2,182
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,716	2,556	2,280	1,991	3,156	3,809	3,991	3,595	3,382	2,247	2,397	3,017
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,716	2,556	2,280	1,991	3,156	3,809	3,991	3,595	3,382	2,247	2,397	3,017
	1/2018	**2/2018**	**3/2018**	**4/2018**	**5/2018**	**6/2018**	**7/2018**	**8/2018**	**9/2018**	**10/2018**	**11/2018**	**12/2018**
Average Load (aMW)–70th Percentile												
Residential	905	760	633	532	505	579	764	731	573	542	669	929
Commercial	519	467	439	421	442	484	564	540	479	438	455	540
Irrigation	2	2	1	77	345	583	646	528	343	59	1	1
Industrial	292	291	284	275	282	306	303	304	299	303	298	301
Additional Firm	249	246	241	235	230	224	233	229	230	234	240	245
Loss	187	166	148	142	171	211	247	228	184	145	155	193
System Load	2,153	1,932	1,747	1,683	1,976	2,387	2,757	2,560	2,108	1,720	1,818	2,209
Light Load	1,983	1,784	1,607	1,531	1,775	2,145	2,494	2,271	1,919	1,557	1,670	2,054
Heavy Load	2,287	2,042	1,847	1,804	2,134	2,563	2,983	2,768	2,274	1,838	1,937	2,342
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,153	1,932	1,747	1,683	1,976	2,387	2,757	2,560	2,108	1,720	1,818	2,209
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,733	2,567	2,293	1,997	3,195	3,865	4,056	3,650	3,431	2,266	2,416	3,046
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,733	2,567	2,293	1,997	3,195	3,865	4,056	3,650	3,431	2,266	2,416	3,046

[1] The sales and load forecast considers and reflects the impact of existing energy efficiency programs on average load and peak demand. The new energy efficiency programs, proposed as part of the 2011 IRP, are accounted for in the load and resource balance. The peak load forecast does not include the impact of existing or new demand response programs, which are both accounted for in the load and resource balance.

Monthly Summary[1]	1/2019	2/2019	3/2019	4/2019	5/2019	6/2019	7/2019	8/2019	9/2019	10/2019	11/2019	12/2019
Average Load (aMW)–70th Percentile												
Residential	919	771	642	540	514	592	785	751	587	553	681	945
Commercial	523	469	443	424	447	490	571	546	485	442	459	546
Irrigation	2	2	1	77	345	584	647	529	344	59	1	1
Industrial	295	295	288	279	287	310	308	308	304	308	303	305
Additional Firm	249	247	242	236	231	224	233	230	230	234	241	245
Loss	189	167	150	144	173	214	251	231	186	147	157	195
System Load	2,178	1,951	1,765	1,700	1,996	2,415	2,794	2,595	2,136	1,742	1,841	2,237
Light Load	2,006	1,802	1,624	1,546	1,793	2,170	2,528	2,302	1,943	1,577	1,691	2,081
Heavy Load	2,314	2,063	1,877	1,812	2,156	2,610	3,004	2,806	2,304	1,861	1,961	2,372
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,178	1,951	1,765	1,700	1,996	2,415	2,794	2,595	2,136	1,742	1,841	2,237
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,759	2,584	2,312	2,013	3,236	3,924	4,123	3,711	3,482	2,288	2,440	3,086
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,759	2,584	2,312	2,013	3,236	3,924	4,123	3,711	3,482	2,288	2,440	3,086
	1/2020	**2/2020**	**3/2020**	**4/2020**	**5/2020**	**6/2020**	**7/2020**	**8/2020**	**9/2020**	**10/2020**	**11/2020**	**12/2020**
Average Load (aMW)–70th Percentile												
Residential	933	780	650	546	522	605	804	770	600	562	692	959
Commercial	527	473	446	428	451	495	578	552	490	446	463	550
Irrigation	2	2	1	77	346	586	649	531	345	59	1	1
Industrial	299	289	292	283	291	315	312	312	308	312	307	309
Additional Firm	248	243	241	235	230	224	233	230	230	234	240	245
Loss	191	168	151	145	175	216	254	234	189	149	158	197
System Load	2,200	1,956	1,781	1,714	2,015	2,441	2,829	2,629	2,161	1,761	1,861	2,261
Light Load	2,026	1,806	1,639	1,560	1,810	2,194	2,560	2,332	1,967	1,594	1,709	2,103
Heavy Load	2,338	2,066	1,894	1,827	2,191	2,621	3,042	2,863	2,317	1,882	1,994	2,386
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,200	1,956	1,781	1,714	2,015	2,441	2,829	2,629	2,161	1,761	1,861	2,261
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,781	2,595	2,328	2,026	3,276	3,983	4,190	3,770	3,532	2,307	2,462	3,121
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,781	2,595	2,328	2,026	3,276	3,983	4,190	3,770	3,532	2,307	2,462	3,121
	1/2021	**2/2021**	**3/2021**	**4/2021**	**5/2021**	**6/2021**	**7/2021**	**8/2021**	**9/2021**	**10/2021**	**11/2021**	**12/2021**
Average Load (aMW)–70th Percentile												
Residential	943	787	656	551	528	615	822	787	612	570	701	973
Commercial	531	475	450	431	456	502	585	558	496	450	467	556
Irrigation	2	2	1	77	347	587	650	532	346	59	1	1
Industrial	303	303	296	287	295	319	316	317	312	316	311	313
Additional Firm	249	246	242	236	231	225	234	230	230	234	241	245
Loss	193	170	152	146	176	219	257	238	191	151	160	200
System Load	2,222	1,984	1,797	1,729	2,033	2,467	2,864	2,662	2,187	1,781	1,881	2,288
Light Load	2,046	1,832	1,653	1,573	1,827	2,217	2,591	2,361	1,990	1,612	1,727	2,128
Heavy Load	2,373	2,098	1,901	1,843	2,211	2,649	3,079	2,898	2,344	1,914	2,003	2,415
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,222	1,984	1,797	1,729	2,033	2,467	2,864	2,662	2,187	1,781	1,881	2,288
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,797	2,609	2,341	2,033	3,316	4,040	4,254	3,826	3,582	2,327	2,481	3,152
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,797	2,609	2,341	2,033	3,316	4,040	4,254	3,826	3,582	2,327	2,481	3,152

[1] The sales and load forecast considers and reflects the impact of existing energy efficiency programs on average load and peak demand. The new energy efficiency programs, proposed as part of the 2011 IRP, are accounted for in the load and resource balance. The peak load forecast does not include the impact of existing or new demand response programs, which are both accounted for in the load and resource balance.

Monthly Summary[1]	1/2022	2/2022	3/2022	4/2022	5/2022	6/2022	7/2022	8/2022	9/2022	10/2022	11/2022	12/2022
Average Load (aMW)–70th Percentile												
Residential	956	796	663	558	536	628	842	806	625	580	712	989
Commercial	536	479	454	436	462	508	592	565	502	455	471	561
Irrigation	2	2	1	77	348	588	652	533	346	59	1	1
Industrial	308	308	301	291	299	324	321	322	317	321	316	317
Additional Firm	249	247	242	237	232	225	235	231	231	235	241	246
Loss	196	172	154	148	178	221	261	241	194	153	162	203
System Load	2,248	2,004	1,816	1,747	2,054	2,495	2,902	2,698	2,215	1,803	1,904	2,318
Light Load	2,070	1,851	1,671	1,589	1,845	2,243	2,625	2,394	2,016	1,632	1,749	2,155
Heavy Load	2,400	2,119	1,921	1,862	2,234	2,680	3,140	2,918	2,375	1,938	2,028	2,446
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,248	2,004	1,816	1,747	2,054	2,495	2,902	2,698	2,215	1,803	1,904	2,318
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,823	2,626	2,360	2,049	3,357	4,100	4,323	3,889	3,635	2,349	2,505	3,193
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,823	2,626	2,360	2,049	3,357	4,100	4,323	3,889	3,635	2,349	2,505	3,193
	1/2023	**2/2023**	**3/2023**	**4/2023**	**5/2023**	**6/2023**	**7/2023**	**8/2023**	**9/2023**	**10/2023**	**11/2023**	**12/2023**
Average Load (aMW)–70th Percentile												
Residential	971	806	672	565	544	641	863	827	639	591	723	1,004
Commercial	541	483	459	440	467	516	600	573	509	460	476	567
Irrigation	2	2	1	77	348	590	653	535	347	59	1	1
Industrial	313	312	305	295	304	329	326	326	322	326	321	322
Additional Firm	250	248	243	238	233	226	235	232	232	236	242	247
Loss	198	174	156	150	180	224	265	245	196	155	165	205
System Load	2,275	2,025	1,836	1,765	2,076	2,526	2,942	2,737	2,246	1,827	1,928	2,347
Light Load	2,095	1,871	1,689	1,606	1,865	2,270	2,662	2,428	2,043	1,653	1,771	2,182
Heavy Load	2,430	2,142	1,942	1,893	2,243	2,712	3,184	2,960	2,407	1,963	2,054	2,489
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,275	2,025	1,836	1,765	2,076	2,526	2,942	2,737	2,246	1,827	1,928	2,347
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,855	2,647	2,383	2,072	3,400	4,163	4,393	3,956	3,690	2,373	2,533	3,243
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,855	2,647	2,383	2,072	3,400	4,163	4,393	3,956	3,690	2,373	2,533	3,243
	1/2024	**2/2024**	**3/2024**	**4/2024**	**5/2024**	**6/2024**	**7/2024**	**8/2024**	**9/2024**	**10/2024**	**11/2024**	**12/2024**
Average Load (aMW)–70th Percentile												
Residential	982	814	678	570	551	653	882	845	651	599	733	1,015
Commercial	546	489	464	445	473	523	609	581	517	466	482	574
Irrigation	2	2	1	78	349	592	656	536	348	59	1	1
Industrial	317	306	310	299	308	334	331	331	326	331	325	327
Additional Firm	250	246	243	238	233	227	236	232	232	236	242	247
Loss	200	175	158	151	182	227	268	248	199	157	167	208
System Load	2,299	2,031	1,854	1,782	2,097	2,554	2,981	2,774	2,274	1,848	1,950	2,373
Light Load	2,117	1,876	1,705	1,621	1,884	2,296	2,696	2,461	2,069	1,673	1,791	2,206
Heavy Load	2,442	2,146	1,971	1,899	2,265	2,761	3,205	3,000	2,453	1,975	2,077	2,516
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,299	2,031	1,854	1,782	2,097	2,554	2,981	2,774	2,274	1,848	1,950	2,373
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,877	2,660	2,400	2,086	3,442	4,224	4,462	4,017	3,745	2,394	2,555	3,280
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,877	2,660	2,400	2,086	3,442	4,224	4,462	4,017	3,745	2,394	2,555	3,280

[1] The sales and load forecast considers and reflects the impact of existing energy efficiency programs on average load and peak demand. The new energy efficiency programs, proposed as part of the 2011 IRP, are accounted for in the load and resource balance. The peak load forecast does not include the impact of existing or new demand response programs, which are both accounted for in the load and resource balance.

Monthly Summary[1]	1/2025	2/2025	3/2025	4/2025	5/2025	6/2025	7/2025	8/2025	9/2025	10/2025	11/2025	12/2025
Average Load (aMW)–70th Percentile												
Residential	989	818	682	573	555	662	897	860	661	606	739	1,026
Commercial	553	493	470	451	480	532	618	589	525	472	488	582
Irrigation	2	2	1	78	350	593	657	538	349	60	1	1
Industrial	323	323	315	305	313	339	336	337	332	336	331	333
Additional Firm	251	249	244	239	234	228	237	233	234	237	243	248
Loss	202	177	159	153	184	229	271	251	202	159	168	210
System Load	2,321	2,061	1,871	1,798	2,117	2,582	3,017	2,809	2,302	1,869	1,971	2,401
Light Load	2,138	1,904	1,721	1,636	1,901	2,321	2,729	2,492	2,095	1,692	1,810	2,232
Heavy Load	2,466	2,180	1,989	1,917	2,286	2,791	3,244	3,058	2,468	1,998	2,112	2,533
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,321	2,061	1,871	1,798	2,117	2,582	3,017	2,809	2,302	1,869	1,971	2,401
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,892	2,674	2,413	2,092	3,483	4,283	4,528	4,075	3,799	2,415	2,574	3,309
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,892	2,674	2,413	2,092	3,483	4,283	4,528	4,075	3,799	2,415	2,574	3,309
	1/2026	**2/2026**	**3/2026**	**4/2026**	**5/2026**	**6/2026**	**7/2026**	**8/2026**	**9/2026**	**10/2026**	**11/2026**	**12/2026**
Average Load (aMW)–70th Percentile												
Residential	999	824	687	578	561	672	915	878	673	614	748	1,035
Commercial	560	499	476	457	488	541	628	599	534	480	495	590
Irrigation	2	2	1	78	351	594	658	539	350	60	1	1
Industrial	329	329	321	310	319	345	342	343	338	342	337	339
Additional Firm	253	250	246	240	235	229	238	235	235	238	245	249
Loss	205	179	161	154	186	232	275	255	204	161	171	213
System Load	2,348	2,083	1,892	1,818	2,139	2,613	3,057	2,848	2,334	1,894	1,996	2,427
Light Load	2,163	1,924	1,740	1,654	1,922	2,349	2,766	2,526	2,123	1,714	1,833	2,257
Heavy Load	2,495	2,203	2,011	1,937	2,326	2,806	3,287	3,101	2,502	2,024	2,138	2,561
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,348	2,083	1,892	1,818	2,139	2,613	3,057	2,848	2,334	1,894	1,996	2,427
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,916	2,691	2,431	2,106	3,527	4,346	4,599	4,137	3,856	2,440	2,598	3,345
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,916	2,691	2,431	2,106	3,527	4,346	4,599	4,137	3,856	2,440	2,598	3,345
	1/2027	**2/2027**	**3/2027**	**4/2027**	**5/2027**	**6/2027**	**7/2027**	**8/2027**	**9/2027**	**10/2027**	**11/2027**	**12/2027**
Average Load (aMW)–70th Percentile												
Residential	1,003	825	688	578	564	679	928	890	680	618	752	1,051
Commercial	568	505	483	464	496	551	639	609	544	488	502	599
Irrigation	2	2	1	78	351	595	660	540	350	60	1	1
Industrial	336	335	327	316	324	351	348	349	344	348	343	346
Additional Firm	252	250	246	240	236	229	239	235	235	239	245	249
Loss	207	180	162	156	188	234	278	258	207	163	172	216
System Load	2,367	2,098	1,907	1,833	2,158	2,640	3,092	2,881	2,360	1,914	2,015	2,461
Light Load	2,180	1,938	1,754	1,667	1,938	2,372	2,797	2,556	2,148	1,733	1,851	2,289
Heavy Load	2,528	2,219	2,017	1,953	2,346	2,835	3,324	3,137	2,530	2,058	2,146	2,598
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,367	2,098	1,907	1,833	2,158	2,640	3,092	2,881	2,360	1,914	2,015	2,461
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,920	2,696	2,438	2,101	3,568	4,403	4,664	4,188	3,910	2,460	2,611	3,361
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,920	2,696	2,438	2,101	3,568	4,403	4,664	4,188	3,910	2,460	2,611	3,361

[1] The sales and load forecast considers and reflects the impact of existing energy efficiency programs on average load and peak demand. The new energy efficiency programs, proposed as part of the 2011 IRP, are accounted for in the load and resource balance. The peak load forecast does not include the impact of existing or new demand response programs, which are both accounted for in the load and resource balance.

Monthly Summary[1]	1/2028	2/2028	3/2028	4/2028	5/2028	6/2028	7/2028	8/2028	9/2028	10/2028	11/2028	12/2028
Average Load (aMW)–70th Percentile												
Residential	1,023	840	700	589	575	697	956	918	699	633	768	1,066
Commercial	576	514	491	472	504	562	651	621	555	497	511	609
Irrigation	2	2	1	78	351	595	659	540	350	60	1	1
Industrial	343	331	333	322	330	357	354	356	350	354	349	352
Additional Firm	252	248	246	241	236	230	239	236	236	239	245	249
Loss	210	183	165	158	190	238	283	263	211	166	176	219
System Load	2,407	2,117	1,936	1,860	2,188	2,679	3,144	2,932	2,401	1,948	2,049	2,497
Light Load	2,217	1,955	1,781	1,692	1,965	2,408	2,844	2,601	2,185	1,763	1,882	2,322
Heavy Load	2,570	2,237	2,048	1,994	2,363	2,877	3,401	3,171	2,574	2,093	2,183	2,647
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,407	2,117	1,936	1,860	2,188	2,679	3,144	2,932	2,401	1,948	2,049	2,497
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,974	2,721	2,476	2,144	3,618	4,476	4,747	4,273	3,972	2,494	2,655	3,434
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,974	2,721	2,476	2,144	3,618	4,476	4,747	4,273	3,972	2,494	2,655	3,434
	1/2029	**2/2029**	**3/2029**	**4/2029**	**5/2029**	**6/2029**	**7/2029**	**8/2029**	**9/2029**	**10/2029**	**11/2029**	**12/2029**
Average Load (aMW)–70th Percentile												
Residential	1,031	844	704	592	580	707	972	934	710	639	775	1,079
Commercial	586	521	499	481	514	574	664	633	567	506	519	619
Irrigation	2	2	1	78	353	598	663	542	352	60	1	1
Industrial	350	350	340	328	336	364	361	362	357	360	356	359
Additional Firm	252	250	246	241	237	230	240	237	236	239	245	249
Loss	213	185	167	160	193	241	287	267	214	168	178	222
System Load	2,433	2,152	1,957	1,880	2,212	2,713	3,187	2,974	2,435	1,973	2,074	2,530
Light Load	2,241	1,987	1,800	1,710	1,987	2,439	2,883	2,639	2,216	1,786	1,905	2,353
Heavy Load	2,585	2,275	2,070	2,016	2,389	2,914	3,449	3,217	2,627	2,109	2,210	2,683
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,433	2,152	1,957	1,880	2,212	2,713	3,187	2,974	2,435	1,973	2,074	2,530
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	2,991	2,748	2,491	2,151	3,665	4,541	4,822	4,335	4,031	2,520	2,677	3,463
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	2,991	2,748	2,491	2,151	3,665	4,541	4,822	4,335	4,031	2,520	2,677	3,463
	1/2030	**2/2030**	**3/2030**	**4/2030**	**5/2030**	**6/2030**	**7/2030**	**8/2030**	**9/2030**	**10/2030**	**11/2030**	**12/2030**
Average Load (aMW)–70th Percentile												
Residential	1,043	852	710	597	587	719	994	955	724	649	786	1,095
Commercial	596	530	508	490	524	586	677	646	580	517	529	631
Irrigation	2	2	1	78	353	598	663	543	352	60	1	1
Industrial	357	357	347	335	342	370	368	369	364	367	362	367
Additional Firm	252	250	246	242	238	231	241	238	237	240	246	250
Loss	216	188	169	162	195	245	292	271	217	171	181	226
System Load	2,466	2,179	1,982	1,904	2,239	2,750	3,235	3,021	2,474	2,004	2,104	2,570
Light Load	2,271	2,012	1,823	1,733	2,011	2,472	2,927	2,680	2,251	1,813	1,933	2,389
Heavy Load	2,620	2,304	2,107	2,030	2,418	2,972	3,478	3,267	2,668	2,141	2,242	2,725
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0	0	0
Total Load	2,466	2,179	1,982	1,904	2,239	2,750	3,235	3,021	2,474	2,004	2,104	2,570
Peak Load (MW)–95th Percentile												
System Peak (1 Hour)	3,023	2,772	2,516	2,172	3,713	4,609	4,900	4,406	4,092	2,550	2,708	3,509
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0	0	0
Total Peak Load	3,023	2,772	2,516	2,172	3,713	4,609	4,900	4,406	4,092	2,550	2,708	3,509

[1] The sales and load forecast considers and reflects the impact of existing energy efficiency programs on average load and peak demand. The new energy efficiency programs, proposed as part of the 2011 IRP, are accounted for in the load and resource balance. The peak load forecast does not include the impact of existing or new demand response programs, which are both accounted for in the load and resource balance.

Annual Summary

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Billed Sales (MWh)–70th Percentile										
Residential	5,357,421	5,350,025	5,374,565	5,521,030	5,634,806	5,723,417	5,833,019	5,924,726	6,040,115	6,145,352
Commercial	3,880,072	3,934,333	3,989,337	4,044,412	4,097,916	4,140,627	4,182,801	4,224,463	4,265,773	4,306,283
Irrigation	1,861,930	1,869,427	1,866,437	1,867,696	1,880,558	1,888,961	1,894,245	1,900,506	1,904,290	1,909,550
Industrial	2,294,027	2,346,083	2,391,684	2,434,390	2,472,828	2,509,361	2,545,600	2,580,387	2,616,525	2,653,140
Additional Firm	1,449,272	1,627,180	1,798,947	1,901,753	2,002,406	2,070,809	2,065,176	2,069,629	2,074,558	2,073,248
System Sales	14,842,722	15,127,047	15,420,970	15,769,281	16,088,513	16,333,175	16,520,841	16,699,711	16,901,261	17,087,573
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0
Total Sales	14,842,722	15,127,047	15,420,970	15,769,281	16,088,513	16,333,175	16,520,841	16,699,711	16,901,261	17,087,573
Generation Month Sales (MWh)–70th Percentile										
Residential	5,356,552	5,368,321	5,384,199	5,528,413	5,640,457	5,748,305	5,838,861	5,932,173	6,046,857	6,169,719
Commercial	3,884,105	3,949,205	3,993,381	4,048,367	4,101,300	4,155,506	4,186,117	4,227,754	4,269,015	4,321,445
Irrigation	1,861,934	1,869,472	1,866,438	1,867,700	1,880,561	1,889,009	1,894,248	1,900,508	1,904,292	1,909,598
Industrial	2,299,135	2,350,458	2,395,812	2,438,153	2,476,427	2,512,935	2,549,050	2,583,953	2,620,131	2,656,639
Additional Firm	1,449,272	1,627,180	1,798,947	1,901,753	2,002,406	2,070,809	2,065,176	2,069,629	2,074,558	2,073,248
System Sales	14,850,998	15,164,636	15,438,777	15,784,386	16,101,150	16,376,563	16,533,451	16,714,015	16,914,853	17,130,649
Firm Off-System Sales	0	0	0	0	0	0	0	0	0	0
Total Sales	14,850,998	15,164,636	15,438,777	15,784,386	16,101,150	16,376,563	16,533,451	16,714,015	16,914,853	17,130,649
Loss	1,444,182	1,463,763	1,479,931	1,508,228	1,533,705	1,557,212	1,573,206	1,591,131	1,611,191	1,633,386
Required Generation	16,295,180	16,628,399	16,918,708	17,292,614	17,634,855	17,933,775	18,106,657	18,305,146	18,526,044	18,764,035
Average Load (aMW)–70th Percentile										
Residential	611	611	615	631	644	654	667	677	690	702
Commercial	443	450	456	462	468	473	478	483	487	492
Irrigation	213	213	213	213	215	215	216	217	217	217
Industrial	262	268	273	278	283	286	291	295	299	302
Additional Firm	165	185	205	217	229	236	236	236	237	236
Loss	165	167	169	172	175	177	180	182	184	186
System Load	1,860	1,893	1,931	1,974	2,013	2,042	2,067	2,090	2,115	2,136
Light Load	1,692	1,722	1,757	1,796	1,831	1,857	1,880	1,901	1,924	1,943
Heavy Load	1,992	2,028	2,068	2,114	2,156	2,186	2,214	2,238	2,264	2,287
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0
Total Load	1,860	1,893	1,931	1,974	2,013	2,042	2,067	2,090	2,115	2,136
Peak Load (MW)–95th Percentile										
System Peak (1 Hour)	3,515	3,577	3,684	3,770	3,854	3,925	3,991	4,056	4,123	4,190
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0
Total Peak Load	3,515	3,577	3,684	3,770	3,854	3,925	3,991	4,056	4,123	4,190

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Billed Sales (MWh)–70th Percentile										
Residential	6,234,625	6,340,476	6,456,861	6,550,687	6,619,355	6,706,622	6,753,472	6,910,560	6,983,002	7,087,720
Commercial	4,349,042	4,396,651	4,448,515	4,503,254	4,565,023	4,634,525	4,708,162	4,792,331	4,879,416	4,975,065
Irrigation	1,914,466	1,917,913	1,922,878	1,929,306	1,933,757	1,936,501	1,940,279	1,939,931	1,949,092	1,950,483
Industrial	2,690,609	2,732,262	2,771,129	2,811,827	2,859,873	2,911,643	2,964,041	3,021,185	3,078,753	3,139,413
Additional Firm	2,074,887	2,081,619	2,088,963	2,096,186	2,101,203	2,111,939	2,112,515	2,119,494	2,118,995	2,125,092
System Sales	17,263,629	17,468,921	17,688,347	17,891,260	18,079,212	18,301,230	18,478,470	18,783,502	19,009,257	19,277,774
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0
Total Sales	17,263,629	17,468,921	17,688,347	17,891,260	18,079,212	18,301,230	18,478,470	18,783,502	19,009,257	19,277,774
Generation Month Sales (MWh)–70th Percentile										
Residential	6,241,386	6,347,940	6,462,780	6,574,419	6,624,811	6,709,331	6,763,635	6,935,136	6,989,597	7,095,612
Commercial	4,352,048	4,399,576	4,451,288	4,518,688	4,567,958	4,637,373	4,711,254	4,808,349	4,882,499	4,978,134
Irrigation	1,914,468	1,917,915	1,922,881	1,929,355	1,933,758	1,936,503	1,940,279	1,939,982	1,949,093	1,950,485
Industrial	2,694,287	2,735,521	2,774,365	2,815,511	2,863,696	2,915,340	2,967,964	3,024,964	3,082,617	3,143,429
Additional Firm	2,074,887	2,081,619	2,088,963	2,096,186	2,101,203	2,111,939	2,112,515	2,119,494	2,118,995	2,125,092
System Sales	17,277,075	17,482,570	17,700,277	17,934,159	18,091,427	18,310,486	18,495,648	18,827,925	19,022,801	19,292,751
Firm Off-System Sales	0	0	0	0	0	0	0	0	0	0
Total Sales	17,277,075	17,482,570	17,700,277	17,934,159	18,091,427	18,310,486	18,495,648	18,827,925	19,022,801	19,292,751
Loss	1,647,751	1,668,181	1,690,073	1,713,793	1,729,063	1,750,660	1,769,375	1,803,639	1,823,461	1,851,018
Required Generation	18,924,826	19,150,752	19,390,350	19,647,952	19,820,490	20,061,146	20,265,023	20,631,564	20,846,262	21,143,769
Average Load (aMW)–70th Percentile										
Residential	712	725	738	748	756	766	772	790	798	810
Commercial	497	502	508	514	521	529	538	547	557	568
Irrigation	219	219	220	220	221	221	221	221	222	223
Industrial	308	312	317	321	327	333	339	344	352	359
Additional Firm	237	238	238	239	240	241	241	241	242	243
Loss	188	190	193	195	197	200	202	205	208	211
System Load	2,160	2,186	2,214	2,237	2,263	2,290	2,313	2,349	2,380	2,414
Light Load	1,965	1,989	2,014	2,035	2,058	2,083	2,104	2,137	2,165	2,196
Heavy Load	2,314	2,341	2,371	2,395	2,423	2,452	2,478	2,516	2,548	2,584
Firm Off-System Load	0	0	0	0	0	0	0	0	0	0
Total Load	2,160	2,186	2,214	2,237	2,263	2,290	2,313	2,349	2,380	2,414
Peak Load (MW)–95th Percentile										
System Peak (1 Hour)	4,254	4,323	4,393	4,462	4,528	4,599	4,664	4,747	4,822	4,900
Firm Off-System Peak	0	0	0	0	0	0	0	0	0	0
Total Peak Load	4,254	4,323	4,393	4,462	4,528	4,599	4,664	4,747	4,822	4,900

LOAD AND RESOURCE BALANCE DATA

Monthly Average Energy Load and Resource Balance

	1/2011	2/2011	3/2011	4/2011	5/2011	6/2011	7/2011	8/2011	9/2011	10/2011	11/2011	12/2011
Forecast DSM	14	13	13	14	16	17	17	17	15	14	13	13
Load Forecast (70th% w/DSM)	(1,885)	(1,722)	(1,563)	(1,521)	(1,790)	(2,137)	(2,434)	(2,262)	(1,876)	(1,525)	(1,619)	(1,965)
Existing Resources												
Coal	933	933	863	669	646	914	932	932	932	931	932	932
Gas (Langley Gulch)	0	0	0	0	0	0	0	0	0	0	0	0
Hydro (70th%)—HCC	571	700	590	668	823	714	499	364	410	435	364	473
Hydro (70th%)—Other	217	253	245	240	334	346	278	235	229	224	198	211
Shoshone Falls Upgrade	0	0	0	0	0	0	0	0	0	0	0	0
Sho-Ban Water Lease	0	0	0	0	0	0	71	0	0	0	0	0
Total Hydro (70th%)	787	953	836	908	1,156	1,060	849	599	639	658	562	684
CSPP (PURPA)	93	97	129	151	185	193	207	210	211	187	163	168
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange–Take	5	6	7	9	10	11	10	7	4	1	3	4
Clatskanie Exchange– Return	0	0	(20)	(20)	0	0	0	0	0	(20)	(20)	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	48	45	48	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	42	42	0	0	0	0
Total PPAs	49	49	31	34	50	106	144	140	43	26	25	58
Firm Pacific NW Import Capability	133	32	0	0	320	254	126	186	197	0	115	325
Gas Peakers	224	0	0	0	0	240	224	242	0	0	0	233
Existing Resource Subtotal	2,219	2,065	1,859	1,762	2,357	2,767	2,482	2,309	2,021	1,802	1,798	2,400
Monthly Surplus/Deficit	334	343	296	241	566	630	47	47	146	277	179	435
2011 IRP DSM												
Industrial	2	2	2	2	2	2	2	2	2	2	2	2
Commercial	1	1	1	1	1	1	0	1	1	1	1	1
Residential	0	0	0	0	0	1	1	1	0	0	0	0
Total New DSM (aMW)	3	3	3	3	3	3	3	3	3	3	3	3
Monthly Surplus/Deficit	336	345	299	244	569	634	51	50	148	279	182	437
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	0	0	0	0	0	0	0	0	0	0	0	0
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Surplus/Deficit	336	345	299	244	569	634	51	50	148	279	182	437

Monthly Average Energy Load and Resource Balance (continued)

	1/2012	2/2012	3/2012	4/2012	5/2012	6/2012	7/2012	8/2012	9/2012	10/2012	11/2012	12/2012
Forecast DSM	27	26	26	28	31	34	34	33	30	27	27	27
Load Forecast (70th% w/DSM)	(1,959)	(1,760)	(1,592)	(1,538)	(1,812)	(2,165)	(2,468)	(2,293)	(1,905)	(1,556)	(1,650)	(2,000)
Existing Resources												
Coal	932	932	886	776	735	851	931	931	931	930	931	931
Gas (Langley Gulch)	0	0	0	0	0	0	251	251	251	251	251	251
Hydro (70th%)—HCC	571	698	590	666	823	713	499	363	410	433	364	471
Hydro (70th%)—Other	216	252	246	240	333	346	278	235	229	223	198	211
Shoshone Falls Upgrade	0	0	0	0	0	0	0	0	0	0	0	0
Sho-Ban Water Lease	0	0	0	0	0	0	71	0	0	0	0	0
Total Hydro (70th%)	787	950	835	906	1,156	1,059	848	598	639	656	562	682
CSPP (PURPA)	155	162	179	199	228	229	217	210	211	187	163	170
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	0	0	0	0	0	0	0	0	0	20	20	20
Clatskanie Exchange–Take	5	6	7	9	10	11	10	7	4	1	3	4
Clatskanie Exchange– Return	0	0	(20)	(20)	0	0	0	0	0	(20)	(20)	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	45	48	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	49	49	31	34	50	58	102	98	43	46	45	78
Firm Pacific NW Import Capability	122	30	0	0	444	360	233	294	304	0	129	322
Gas Peakers	224	0	0	0	0	240	224	242	0	0	0	224
Existing Resource Subtotal	2,269	2,124	1,932	1,915	2,612	2,798	2,806	2,624	2,378	2,070	2,082	2,657
Monthly Surplus/Deficit	310	364	339	377	799	633	338	331	474	514	433	657
2011 IRP DSM												
Industrial	3	3	3	3	3	3	3	3	3	3	3	3
Commercial	1	1	1	1	1	1	1	1	1	1	1	1
Residential	1	1	1	1	1	2	2	2	1	1	1	1
Total New DSM (aMW)	5	5	5	5	5	6	6	7	5	5	5	5
Monthly Surplus/Deficit	315	369	344	382	804	640	345	337	479	519	438	662
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	0	0	0	0	0	0	0	0	0	0	0	0
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Surplus/Deficit	315	369	344	382	804	640	345	337	479	519	438	662

Monthly Average Energy Load and Resource Balance (continued)

	1/2013	2/2013	3/2013	4/2013	5/2013	6/2013	7/2013	8/2013	9/2013	10/2013	11/2013	12/2013
Forecast DSM	39	39	39	41	46	49	50	48	44	40	39	40
Load Forecast (70th% w/DSM)	(1,986)	(1,795)	(1,617)	(1,561)	(1,838)	(2,214)	(2,541)	(2,354)	(1,943)	(1,584)	(1,677)	(2,042)
Existing Resources												
Coal	931	931	852	558	612	931	931	931	931	930	931	931
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	572	695	589	666	823	713	499	363	411	431	364	471
Hydro (70th%)—Other	216	252	244	239	332	345	278	235	229	223	198	211
Shoshone Falls Upgrade	0	0	0	0	0	0	0	0	0	0	0	0
Sho-Ban Water Lease	0	0	0	0	0	0	72	0	0	0	0	0
Total Hydro (70th%)	787	947	834	905	1,155	1,058	848	597	639	654	562	681
CSPP (PURPA)	161	169	189	209	238	239	225	218	219	196	173	178
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	5	6	7	9	10	11	10	7	4	1	3	4
Clatskanie Exchange– Return	0	0	(20)	(20)	0	0	0	0	0	(20)	(20)	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	69	69	51	54	70	78	77	70	63	46	45	78
Firm Pacific NW Import Capability	131	37	0	0	443	357	229	291	302	0	148	319
Gas Peakers	233	0	0	0	0	231	233	242	0	0	0	224
Existing Resource Subtotal	2,564	2,404	2,177	1,977	2,769	3,146	2,794	2,600	2,405	2,078	2,110	2,662
Monthly Surplus/Deficit	577	609	561	416	930	932	253	246	462	494	433	620
2011 IRP DSM												
Industrial	5	5	5	5	5	5	5	5	5	5	5	5
Commercial	1	1	1	1	1	1	1	1	1	1	1	1
Residential	1	1	1	1	1	4	4	4	1	1	1	1
Total New DSM (aMW)	8	8	8	8	8	10	10	10	8	8	8	8
Monthly Surplus/Deficit	585	617	569	424	938	942	264	257	470	502	440	628
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	0	0	0	0	0	0	0	0	0	0	0	0
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Surplus/Deficit	585	617	569	424	938	942	264	257	470	502	440	628

Monthly Average Energy Load and Resource Balance (continued)

	1/2014	2/2014	3/2014	4/2014	5/2014	6/2014	7/2014	8/2014	9/2014	10/2014	11/2014	12/2014
Forecast DSM	52	52	52	54	60	65	65	63	57	53	52	52
Load Forecast (70th% w/DSM)	(2,032)	(1,835)	(1,654)	(1,596)	(1,875)	(2,258)	(2,594)	(2,406)	(1,986)	(1,623)	(1,718)	(2,087)
Existing Resources												
Coal	931	931	880	584	722	921	931	931	931	930	931	931
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	574	682	587	663	823	710	497	362	405	428	365	467
Hydro (70th%)—Other	214	246	241	226	331	345	277	234	228	222	197	209
Shoshone Falls Upgrade	0	0	0	0	0	0	0	0	0	0	0	0
Sho-Ban Water Lease	0	0	0	0	0	0	72	0	0	0	0	0
Total Hydro (70th%)	787	928	828	889	1,154	1,055	845	595	632	650	561	676
CSPP (PURPA)	164	172	189	209	238	239	225	218	219	196	173	178
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	5	6	7	9	10	11	10	7	4	1	3	4
Clatskanie Exchange– Return	0	0	(20)	(20)	0	0	0	0	0	(20)	(20)	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	69	69	51	54	70	78	77	70	63	46	45	78
Firm Pacific NW Import Capability	190	81	0	0	441	353	225	288	301	0	198	318
Gas Peakers	233	0	0	0	0	231	233	233	0	0	0	233
Existing Resource Subtotal	2,625	2,432	2,200	1,987	2,875	3,128	2,787	2,585	2,397	2,073	2,159	2,664
Monthly Surplus/Deficit	593	596	546	391	1,000	870	193	180	411	450	441	577
2011 IRP DSM												
Industrial	6	6	6	6	6	6	6	6	6	6	6	6
Commercial	2	2	2	2	2	2	2	2	2	2	2	2
Residential	2	2	2	2	2	6	6	6	2	2	2	2
Total New DSM (aMW)	10	10	10	10	10	14	14	14	10	10	10	10
Monthly Surplus/Deficit	603	606	556	401	1,010	884	207	194	421	460	451	587
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	0	0	0	0	0	0	0	0	0	0	0	0
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Surplus/Deficit	603	606	556	401	1,010	884	207	194	421	460	451	587

Monthly Average Energy Load and Resource Balance (continued)

	1/2015	2/2015	3/2015	4/2015	5/2015	6/2015	7/2015	8/2015	9/2015	10/2015	11/2015	12/2015
Forecast DSM	64	64	64	66	74	79	79	77	70	65	64	64
Load Forecast (70th% w/DSM)	(2,072)	(1,868)	(1,686)	(1,627)	(1,910)	(2,301)	(2,646)	(2,456)	(2,028)	(1,657)	(1,754)	(2,127)
Existing Resources												
Coal	931	931	834	634	715	814	931	931	931	930	931	931
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	576	671	586	659	822	708	495	360	406	421	364	464
Hydro (70th%)—Other	212	236	237	223	331	344	276	233	227	221	195	207
Shoshone Falls Upgrade	0	0	0	0	0	0	0	0	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	72	0	0	0	0	0
Total Hydro (70th%)	787	907	823	882	1,153	1,052	843	592	632	642	560	682
CSPP (PURPA)	164	172	189	209	238	239	225	218	219	196	173	178
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	5	6	7	9	10	11	10	7	4	1	3	4
Clatskanie Exchange– Return	0	0	(20)	(20)	0	0	0	0	0	(20)	(20)	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	69	69	51	54	70	78	77	70	63	46	45	78
Firm Pacific NW Import Capability	231	113	0	0	440	350	222	286	299	0	237	316
Gas Peakers	233	0	0	0	0	240	233	233	0	0	0	233
Existing Resource Subtotal	2,666	2,443	2,149	2,030	2,865	3,025	2,782	2,581	2,395	2,065	2,197	2,669
Monthly Surplus/Deficit	594	575	463	403	955	724	135	125	367	408	442	542
2011 IRP DSM												
Industrial	7	7	7	7	7	7	7	7	7	7	7	7
Commercial	2	2	2	2	2	2	2	2	2	2	2	2
Residential	3	3	3	3	3	8	8	8	3	3	3	3
Total New DSM (aMW)	12	12	12	12	12	17	17	17	12	12	12	12
Monthly Surplus/Deficit	606	587	475	415	967	741	152	142	379	420	454	554
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	45	48	0	0	0	0
2016 Boardman to Hemingway	0	0	0	0	0	0	0	0	0	0	0	0
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	0	0	0	0	0	0	45	48	0	0	0	0
Monthly Surplus/Deficit	606	587	475	415	967	741	197	190	379	420	454	554

Monthly Average Energy Load and Resource Balance (continued)

	1/2016	2/2016	3/2016	4/2016	5/2016	6/2016	7/2016	8/2016	9/2016	10/2016	11/2016	12/2016
Forecast DSM	77	76	76	79	88	93	93	91	83	78	76	76
Load Forecast (70th% w/DSM)	(2,106)	(1,885)	(1,713)	(1,652)	(1,938)	(2,334)	(2,687)	(2,493)	(2,057)	(1,681)	(1,777)	(2,156)
Existing Resources												
Coal	931	931	898	823	715	888	937	937	937	936	937	937
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	578	668	585	656	821	705	494	358	410	420	365	468
Hydro (70th%)—Other	210	255	240	232	330	343	275	232	227	221	195	205
Shoshone Falls Upgrade	7	34	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (70th%)	794	957	840	888	1,166	1,067	771	590	636	641	560	684
CSPP (PURPA)	164	172	189	209	238	239	225	218	219	196	173	178
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	64	63	64	65	60	67	67	63	59	65	62	74
Firm Pacific NW Import Capability	254	105	0	0	437	346	218	283	297	0	258	314
Gas Peakers	224	0	0	0	0	240	224	242	0	0	0	233
Existing Resource Subtotal	2,682	2,479	2,243	2,237	2,866	3,099	2,693	2,584	2,399	2,089	2,241	2,671
Monthly Surplus/Deficit	576	594	530	585	929	764	6	90	342	408	464	515
2011 IRP DSM												
Industrial	8	7	7	7	8	8	8	8	7	7	7	7
Commercial	3	3	3	3	3	3	3	3	3	3	3	3
Residential	3	3	3	3	3	10	10	10	3	3	3	3
Total New DSM (aMW)	14	14	14	14	14	20	20	20	14	14	14	14
Monthly Surplus/Deficit	590	608	544	599	942	785	26	111	355	422	478	529
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	0	0	0	0	0	287	232	196	123	110	128	123
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	0	0	0	0	0	287	232	196	123	110	128	123
Monthly Surplus/Deficit	590	608	544	599	942	1,071	258	307	478	531	606	652

Monthly Average Energy Load and Resource Balance (continued)

	1/2017	2/2017	3/2017	4/2017	5/2017	6/2017	7/2017	8/2017	9/2017	10/2017	11/2017	12/2017
Forecast DSM	88	88	88	92	101	107	108	105	96	90	88	89
Load Forecast (70th% w/DSM)	(2,131)	(1,915)	(1,731)	(1,668)	(1,957)	(2,361)	(2,723)	(2,527)	(2,083)	(1,701)	(1,798)	(2,182)
Existing Resources												
Coal	937	937	904	840	705	916	943	943	943	942	943	943
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	580	660	583	651	817	702	492	356	404	415	364	465
Hydro (70th%)—Other	208	246	237	220	329	342	274	227	226	220	194	204
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (70th%)	794	941	835	871	1,162	1,063	768	584	630	635	558	681
CSPP (PURPA)	164	172	189	209	238	239	225	218	219	196	173	178
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	64	63	64	65	60	67	67	63	59	65	62	74
Firm Pacific NW Import Capability	280	117	0	0	435	343	214	281	295	0	281	311
Gas Peakers	224	0	0	0	0	240	224	242	0	0	0	224
Existing Resource Subtotal	2,714	2,482	2,244	2,237	2,850	3,120	2,692	2,582	2,397	2,088	2,268	2,661
Monthly Surplus/Deficit	583	567	513	569	892	759	(30)	54	313	387	470	479
2011 IRP DSM												
Industrial	8	8	8	8	8	8	8	8	8	8	8	8
Commercial	3	3	3	3	3	3	3	3	3	3	3	3
Residential	4	4	4	4	4	12	12	12	4	4	4	4
Total New DSM (aMW)	16	16	16	16	16	24	24	24	16	16	16	16
Monthly Surplus/Deficit	598	582	529	584	908	782	(7)	78	329	403	485	495
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	95	8	46	136	247	290	235	192	135	114	128	152
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	95	8	46	136	247	290	235	192	135	114	128	152
Monthly Surplus/Deficit	693	590	575	720	1,154	1,072	228	270	464	517	613	646

Monthly Average Energy Load and Resource Balance (continued)

	1/2018	2/2018	3/2018	4/2018	5/2018	6/2018	7/2018	8/2018	9/2018	10/2018	11/2018	12/2018
Forecast DSM	100	100	100	104	114	121	122	119	109	101	100	101
Load Forecast (70th% w/DSM)	(2,153)	(1,932)	(1,747)	(1,683)	(1,976)	(2,387)	(2,757)	(2,560)	(2,108)	(1,720)	(1,818)	(2,209)
Existing Resources												
Coal	943	947	943	841	726	900	944	944	944	943	944	944
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	582	649	580	649	813	700	490	355	411	399	364	461
Hydro (70th%)—Other	206	240	235	218	328	341	273	226	221	219	193	203
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (70th%)	794	925	830	867	1,156	1,060	766	582	632	618	557	675
CSPP (PURPA)	164	172	189	209	238	239	225	218	219	196	173	178
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	64	63	64	65	60	67	67	63	59	65	62	74
Firm Pacific NW Import Capability	296	128	0	0	433	339	209	278	293	0	300	309
Gas Peakers	233	0	0	0	0	240	224	242	0	0	0	224
Existing Resource Subtotal	2,745	2,486	2,278	2,234	2,864	3,096	2,686	2,577	2,398	2,073	2,287	2,654
Monthly Surplus/Deficit	592	554	531	551	888	709	(71)	17	289	353	469	445
2011 IRP DSM												
Industrial	9	9	9	9	9	9	9	9	9	9	9	9
Commercial	4	4	4	4	4	3	3	4	4	4	4	4
Residential	5	5	5	5	5	15	15	15	5	5	5	5
Total New DSM (aMW)	17	17	17	17	17	27	27	27	17	17	17	17
Monthly Surplus/Deficit	609	572	549	569	906	736	(44)	45	307	370	486	463
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	89	7	41	89	230	275	262	211	127	108	171	158
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	89	7	41	89	230	275	262	211	127	108	171	158
Monthly Surplus/Deficit	699	578	590	658	1,135	1,011	218	256	434	478	657	621

Monthly Average Energy Load and Resource Balance (continued)

	1/2019	2/2019	3/2019	4/2019	5/2019	6/2019	7/2019	8/2019	9/2019	10/2019	11/2019	12/2019
Forecast DSM	112	112	112	116	127	135	136	133	123	114	112	113
Load Forecast (70th% w/DSM)	(2,178)	(1,951)	(1,765)	(1,700)	(1,996)	(2,415)	(2,794)	(2,595)	(2,136)	(1,742)	(1,841)	(2,237)
Existing Resources												
Coal	944	944	944	843	728	901	950	950	950	949	950	950
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	583	638	579	646	810	697	489	354	411	394	364	459
Hydro (70th%)—Other	205	228	232	217	328	340	273	225	220	218	192	202
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (70th%)	794	902	827	864	1,153	1,056	764	580	632	612	556	673
CSPP (PURPA)	164	172	189	209	238	239	225	218	219	196	173	178
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	64	63	64	65	60	67	67	63	59	65	62	74
Firm Pacific NW Import Capability	100	145	0	0	432	335	205	275	291	0	324	307
Gas Peakers	233	0	0	0	0	231	233	242	0	0	0	224
Existing Resource Subtotal	2,550	2,478	2,276	2,231	2,860	3,081	2,695	2,578	2,402	2,073	2,316	2,656
Monthly Surplus/Deficit	372	526	511	532	864	1,666	(99)	(17)	266	331	475	418
2011 IRP DSM												
Industrial	9	9	9	9	9	10	10	10	9	9	9	9
Commercial	4	4	4	4	4	4	4	4	4	4	4	4
Residential	6	6	6	6	6	17	17	17	6	6	6	6
Total New DSM (aMW)	19	19	19	19	19	31	31	31	19	19	19	19
Monthly Surplus/Deficit	391	546	530	551	884	697	(68)	14	285	351	495	438
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	88	8	28	40	214	291	280	151	119	118	154	149
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	88	8	28	40	214	291	280	151	119	118	154	149
Monthly Surplus/Deficit	479	553	558	591	1,097	988	212	165	404	469	649	587

Monthly Average Energy Load and Resource Balance (continued)

	1/2020	2/2020	3/2020	4/2020	5/2020	6/2020	7/2020	8/2020	9/2020	10/2020	11/2020	12/2020
Forecast DSM	125	124	125	128	141	149	150	147	134	126	125	125
Load Forecast (70th% w/DSM)	(2,200)	(1,956)	(1,781)	(1,714)	(2,015)	(2,441)	(2,830)	(2,629)	(2,161)	(1,761)	(1,861)	(2,261)
Existing Resources												
Coal	944	946	944	838	730	896	954	955	949	956	951	959
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	584	630	579	645	808	696	489	353	411	391	365	457
Hydro (70th%)—Other	204	221	230	213	327	340	272	225	220	218	191	201
Shoshone Falls Upgrade	7	34	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (70th%)	794	885	824	858	1,150	1,054	763	578	631	609	556	670
CSPP (PURPA)	164	172	189	209	238	239	225	218	219	196	173	178
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	64	63	64	65	60	67	67	63	59	65	62	74
Firm Pacific NW Import Capability	100	157	0	0	430	333	201	272	289	0	346	305
Gas Peakers	233	0	0	0	0	240	233	233	0	0	0	233
Existing Resource Subtotal	2,550	2,474	2,273	2,221	2,858	3,081	2,694	2,570	2,397	2,077	2,338	2,669
Monthly Surplus/Deficit	349	519	491	507	843	640	(136)	(59)	236	316	478	408
2011 IRP DSM												
Industrial	10	10	10	10	10	10	10	10	10	10	10	10
Commercial	5	5	5	5	5	4	4	4	5	5	5	5
Residential	7	7	7	7	7	20	20	19	7	7	7	7
Total New DSM (aMW)	21	21	21	21	21	34	34	34	21	21	21	21
Monthly Surplus/Deficit	371	540	512	528	865	674	(101)	(25)	257	337	499	429
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	97	12	32	95	230	282	280	171	136	138	146	132
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	97	12	32	95	230	282	280	171	136	138	146	132
Monthly Surplus/Deficit	468	551	544	623	1,094	956	179	146	393	475	645	562

Monthly Average Energy Load and Resource Balance (continued)

	1/2021	2/2021	3/2021	4/2021	5/2021	6/2021	7/2021	8/2021	9/2021	10/2021	11/2021	12/2021
Forecast DSM	136	134	135	139	154	162	163	159	146	137	135	135
Load Forecast (70th% w/DSM)	(2,222)	(1,984)	(1,797)	(1,729)	(2,033)	(2,467)	(2,864)	(2,662)	(2,187)	(1,781)	(1,881)	(2,288)
Existing Resources												
Coal	889	881	889	788	728	841	899	900	893	901	895	904
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	585	622	578	637	807	695	488	352	411	390	364	457
Hydro (70th%)—Other	203	219	227	213	327	339	272	224	219	217	191	201
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (70th%)	794	876	820	850	1,149	1,053	762	577	630	607	555	669
CSPP (PURPA)	164	172	189	209	238	239	225	218	219	196	173	178
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	64	63	64	65	60	67	67	63	59	65	62	74
Firm Pacific NW Import Capability	90	170	0	0	489	389	257	328	347	0	365	364
Gas Peakers	224	0	0	0	0	240	242	233	0	0	0	233
Existing Resource Subtotal	2,476	2,413	2,213	2,163	2,914	3,080	2,702	2,569	2,399	2,020	2,301	2,672
Monthly Surplus/Deficit	254	429	416	434	881	613	(162)	(92)	212	239	420	383
2011 IRP DSM												
Industrial	11	10	10	10	11	11	11	11	11	11	11	11
Commercial	5	5	5	5	5	5	5	5	5	5	5	5
Residential	8	8	8	8	7	22	22	22	8	8	8	8
Total New DSM (aMW)	23	23	23	23	23	38	38	38	23	23	23	23
Monthly Surplus/Deficit	277	452	439	457	904	651	(124)	(55)	235	262	443	406
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	97	12	32	95	230	282	280	171	136	138	146	132
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	149	64	84	147	282	334	332	223	188	190	198	184
Monthly Surplus/Deficit	426	515	523	604	1,186	985	208	169	423	452	642	591

Monthly Average Energy Load and Resource Balance (continued)

	1/2022	2/2022	3/2022	4/2022	5/2022	6/2022	7/2022	8/2022	9/2022	10/2022	11/2022	12/2022
Forecast DSM	146	144	144	149	165	173	174	170	157	147	145	144
Load Forecast (70th% w/DSM)	(2,248)	(2,004)	(1,816)	(1,747)	(2,054)	(2,495)	(2,902)	(2,698)	(2,215)	(1,803)	(1,904)	(2,318)
Existing Resources												
Coal	887	891	887	791	724	844	889	889	889	887	889	889
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	585	620	577	636	806	694	487	352	410	389	365	455
Hydro (70th%)—Other	202	218	224	212	327	339	272	224	219	217	190	200
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (70th%)	794	873	816	848	1,147	1,051	761	577	630	606	555	667
CSPP (PURPA)	164	172	189	209	238	239	225	218	219	196	173	178
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	64	63	64	65	60	67	67	63	59	65	62	74
Firm Pacific NW Import Capability	116	187	0	0	487	386	254	326	346	0	389	361
Gas Peakers	224	0	0	0	0	240	224	242	0	0	0	242
Existing Resource Subtotal	2,500	2,438	2,208	2,164	2,907	3,079	2,671	2,565	2,393	2,005	2,318	2,661
Monthly Surplus/Deficit	252	434	392	418	853	584	(231)	(133)	177	202	415	343
2011 IRP DSM												
Industrial	11	11	11	11	11	11	11	11	11	11	11	11
Commercial	5	5	5	5	5	5	5	5	5	5	5	5
Residential	8	8	8	8	8	25	24	25	8	8	8	8
Total New DSM (aMW)	25	25	25	25	25	41	41	41	25	25	25	25
Monthly Surplus/Deficit	277	458	417	443	878	625	(190)	(92)	202	227	439	368
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	97	12	32	95	230	282	280	171	136	138	146	132
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	98	92	99	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	149	64	84	147	282	432	424	322	188	190	198	184
Monthly Surplus/Deficit	426	522	501	590	1,159	1,057	233	230	390	417	638	552

Monthly Average Energy Load and Resource Balance (continued)

	1/2023	2/2023	3/2023	4/2023	5/2023	6/2023	7/2023	8/2023	9/2023	10/2023	11/2023	12/2023
Forecast DSM	153	152	153	159	173	183	184	180	166	156	153	154
Load Forecast (70th% w/DSM)	(2,275)	(2,025)	(1,837)	(1,765)	(2,076)	(2,526)	(2,943)	(2,737)	(2,246)	(1,827)	(1,928)	(2,347)
Existing Resources												
Coal	889	889	889	793	726	845	895	895	895	893	895	895
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	585	619	577	636	806	693	487	352	410	388	365	454
Hydro (70th%)—Other	202	217	222	212	327	339	271	224	219	217	190	200
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (70th%)	794	872	814	848	1,147	1,051	761	577	629	605	556	666
CSPP (PURPA)	164	172	189	209	238	239	225	218	219	196	173	178
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	64	63	64	65	60	67	67	63	59	65	62	74
Firm Pacific NW Import Capability	148	208	0	0	485	382	250	323	344	0	410	359
Gas Peakers	233	0	0	0	0	240	224	242	0	0	0	224
Existing Resource Subtotal	2,543	2,455	2,208	2,166	2,906	3,076	2,672	2,568	2,397	2,010	2,346	2,646
Monthly Surplus/Deficit	267	430	371	401	830	550	(270)	(169)	151	184	418	299
2011 IRP DSM												
Industrial	11	11	11	11	12	12	12	12	11	11	11	12
Commercial	6	6	6	6	6	5	5	5	6	6	6	6
Residential	9	9	9	9	9	27	27	27	9	9	9	9
Total New DSM (aMW)	26	27	27	26	26	45	44	45	26	26	26	26
Monthly Surplus/Deficit	294	456	398	427	856	595	(226)	(125)	177	210	444	326
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	97	12	32	95	230	282	280	171	136	138	146	132
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	98	92	99	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	149	64	84	147	282	432	424	322	188	190	198	184
Monthly Surplus/Deficit	443	520	481	574	1,138	1,027	198	197	365	400	643	510

Monthly Average Energy Load and Resource Balance (continued)

	1/2024	2/2024	3/2024	4/2024	5/2024	6/2024	7/2024	8/2024	9/2024	10/2024	11/2024	12/2024
Forecast DSM	161	160	161	165	181	192	193	188	174	162	161	162
Load Forecast (70th% w/DSM)	(2,299)	(2,031)	(1,854)	(1,782)	(2,097)	(2,554)	(2,981)	(2,774)	(2,274)	(1,848)	(1,950)	(2,373)
Existing Resources												
Coal	889	889	889	788	728	841	899	900	893	901	895	904
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	585	619	577	636	806	693	487	352	410	388	365	454
Hydro (70th%)—Other	202	217	222	212	327	339	271	224	219	217	190	200
Shoshone Falls Upgrade	7	34	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (70th%)	794	871	814	848	1,147	1,051	761	577	629	605	556	666
CSPP (PURPA)	164	172	189	209	238	239	225	218	219	196	173	178
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	64	63	64	65	60	67	67	63	59	65	62	74
Firm Pacific NW Import Capability	170	222	5	2	484	378	246	320	342	0	407	357
Gas Peakers	233	0	0	0	0	231	233	242	0	0	0	224
Existing Resource Subtotal	2,565	2,468	2,213	2,163	2,907	3,058	2,681	2,570	2,393	2,018	2,343	2,653
Monthly Surplus/Deficit	266	437	359	381	810	504	(299)	(204)	119	170	394	281
2011 IRP DSM												
Industrial	12	12	12	12	12	12	12	12	12	12	12	12
Commercial	6	6	6	6	6	6	6	6	6	6	6	6
Residential	10	10	10	10	10	30	30	30	10	10	10	10
Total New DSM (aMW)	28	28	28	28	28	47	48	48	28	28	28	28
Monthly Surplus/Deficit	294	465	387	409	838	552	(252)	(156)	147	198	422	309
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	97	12	32	95	230	282	280	171	136	138	146	132
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	98	92	99	0	0	0	0
2024 Solar Power Tower	3	7	10	13	17	20	29	25	20	13	6	1
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	152	71	94	160	299	452	453	347	208	203	205	186
Monthly Surplus/Deficit	446	535	481	569	1,138	1,003	201	190	355	400	626	494

Monthly Average Energy Load and Resource Balance (continued)

	1/2025	2/2025	3/2025	4/2025	5/2025	6/2025	7/2025	8/2025	9/2025	10/2025	11/2025	12/2025
Forecast DSM	167	166	167	172	187	199	200	195	180	168	168	167
Load Forecast (70th% w/DSM)	(2,321)	(2,061)	(1,871)	(1,798)	(2,117)	(2,582)	(3,017)	(2,809)	(2,302)	(1,870)	(1,971)	(2,401)
Existing Resources												
Coal	889	881	889	788	728	841	899	900	893	901	895	904
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	585	619	577	636	806	693	487	352	410	388	365	454
Hydro (70th%)—Other	202	217	222	212	327	339	271	224	219	217	190	200
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (70th%)	794	872	814	848	1,147	1,051	761	577	629	605	556	666
CSPP (PURPA)	164	172	189	209	238	239	225	218	219	196	173	178
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	64	63	64	65	60	67	67	63	59	65	62	74
Firm Pacific NW Import Capability	185	235	18	18	482	375	243	318	340	0	405	355
Gas Peakers	233	0	0	0	0	231	233	233	0	0	0	233
Existing Resource Subtotal	2,580	2,474	2,226	2,179	2,905	3,055	2,678	2,559	2,391	2,018	2,341	2,660
Monthly Surplus/Deficit	258	413	355	381	788	473	(339)	(250)	89	148	371	260
2011 IRP DSM												
Industrial	12	12	12	12	12	13	13	13	12	12	12	12
Commercial	6	6	6	6	6	6	6	6	6	6	6	6
Residential	11	11	11	11	11	32	32	32	11	11	11	11
Total New DSM (aMW)	29	29	29	29	29	51	51	51	29	29	29	29
Monthly Surplus/Deficit	288	442	384	411	816	524	(288)	(199)	118	178	400	289
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	97	12	32	95	230	282	280	171	136	138	146	132
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	98	92	99	0	0	0	0
2024 Solar Power Tower	3	7	10	13	17	20	29	25	20	13	6	1
2025 CCCT	0	0	0	0	0	251	251	251	251	251	251	251
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	152	71	94	160	299	703	704	598	459	454	456	437
Monthly Surplus/Deficit	440	513	478	570	1,117	1,227	416	398	577	632	856	726

Monthly Average Energy Load and Resource Balance (continued)

	1/2026	2/2026	3/2026	4/2026	5/2026	6/2026	7/2026	8/2026	9/2026	10/2026	11/2026	12/2026
Forecast DSM	172	170	172	177	194	204	206	201	184	173	173	172
Load Forecast (70th% w/DSM)	(2,348)	(2,083)	(1,892)	(1,818)	(2,139)	(2,613)	(3,057)	(2,848)	(2,334)	(1,894)	(1,996)	(2,427)
Existing Resources												
Coal	887	891	887	791	724	844	889	889	889	887	889	889
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	585	619	577	636	806	693	487	352	410	388	365	454
Hydro (70th%)—Other	202	217	222	212	327	339	271	224	219	217	190	200
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (70th%)	794	872	814	848	1,147	1,051	761	577	629	605	556	666
CSPP (PURPA)	164	172	189	209	238	239	225	218	219	196	173	178
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	64	63	64	65	60	67	67	63	59	65	62	74
Firm Pacific NW Import Capability	209	252	36	38	480	371	238	315	339	4	404	353
Gas Peakers	233	0	0	0	0	240	233	233	0	0	0	233
Existing Resource Subtotal	2,602	2,502	2,242	2,202	2,900	3,064	2,663	2,545	2,386	2,008	2,334	2,643
Monthly Surplus/Deficit	254	418	350	385	760	451	(394)	(303)	52	114	338	216
2011 IRP DSM												
Industrial	12	12	12	12	13	13	13	13	12	12	13	12
Commercial	6	6	6	6	6	6	6	6	6	6	6	6
Residential	12	12	12	12	12	35	35	35	12	12	12	12
Total New DSM (aMW)	31	31	31	31	31	54	54	54	31	31	31	31
Monthly Surplus/Deficit	285	449	381	415	791	504	(340)	(250)	83	145	369	247
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	97	12	32	95	230	282	280	171	136	138	146	132
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	98	92	99	0	0	0	0
2024 Solar Power Tower	3	7	10	13	17	20	29	25	20	13	6	1
2025 CCCT	251	251	251	251	251	251	251	251	251	251	251	251
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	403	322	345	411	550	703	704	598	459	454	456	437
Monthly Surplus/Deficit	688	771	726	826	1,341	1,207	364	348	542	599	825	684

Monthly Average Energy Load and Resource Balance (continued)

	1/2027	2/2027	3/2027	4/2027	5/2027	6/2027	7/2027	8/2027	9/2027	10/2027	11/2027	12/2027
Forecast DSM	176	174	174	180	198	209	210	205	189	178	175	175
Load Forecast (70th% w/DSM)	(2,367)	(2,098)	(1,907)	(1,833)	(2,158)	(2,640)	(3,092)	(2,881)	(2,360)	(1,914)	(2,015)	(2,461)
Existing Resources												
Coal	889	889	889	793	726	845	895	895	895	893	895	895
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	585	619	577	636	806	693	487	352	410	388	365	454
Hydro (70th%)—Other	202	217	222	212	327	339	271	224	219	217	190	200
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (70th%)	794	872	814	848	1,147	1,051	761	577	629	605	556	666
CSPP (PURPA)	164	172	189	209	238	239	225	218	219	196	173	178
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	64	63	64	65	60	67	67	63	59	65	62	74
Firm Pacific NW Import Capability	213	257	43	53	478	368	234	313	335	24	401	349
Gas Peakers	224	0	0	0	0	240	242	233	0	0	0	233
Existing Resource Subtotal	2,599	2,504	2,251	2,219	2,899	3,062	2,674	2,549	2,388	2,034	2,337	2,645
Monthly Surplus/Deficit	231	406	344	386	741	422	(417)	(332)	27	120	322	184
2011 IRP DSM												
Industrial	13	13	13	13	13	13	13	13	13	13	13	13
Commercial	6	7	7	7	6	6	6	6	7	7	7	7
Residential	13	13	13	13	13	38	38	38	13	13	13	13
Total New DSM (aMW)	32	32	32	32	32	57	57	57	32	32	32	32
Monthly Surplus/Deficit	263	438	376	418	773	479	(361)	(276)	59	152	354	216
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	97	12	32	95	230	282	280	171	136	138	146	132
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	98	92	99	0	0	0	0
2024 Solar Power Tower	3	7	10	13	17	20	29	25	20	13	6	1
2025 CCCT	251	251	251	251	251	251	251	251	251	251	251	251
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	403	322	345	411	550	703	704	598	459	454	456	437
Monthly Surplus/Deficit	666	759	721	829	1,323	1,182	343	322	518	606	810	652

Monthly Average Energy Load and Resource Balance (continued)

	1/2028	2/2028	3/2028	4/2028	5/2028	6/2028	7/2028	8/2028	9/2028	10/2028	11/2028	12/2028
Forecast DSM	178	176	176	183	200	212	213	208	191	180	177	178
Load Forecast (70th% w/DSM)	(2,407)	(2,117)	(1,936)	(1,860)	(2,188)	(2,679)	(3,144)	(2,932)	(2,401)	(1,948)	(2,049)	(2,497)
Existing Resources												
Coal	889	889	889	788	728	841	899	900	893	901	895	904
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	585	619	577	636	806	693	487	352	410	388	365	454
Hydro (70th%)—Other	202	217	222	212	327	339	271	224	219	217	190	200
Shoshone Falls Upgrade	7	34	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (70th%)	794	871	814	848	1,147	1,051	761	577	629	605	556	666
CSPP (PURPA)	203	263	231	233	218	219	196	167	184	164	160	189
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	64	63	64	65	60	67	67	63	59	65	62	74
Firm Pacific NW Import Capability	267	68	81	80	477	364	231	310	333	58	399	348
Gas Peakers	224	0	0	0	0	240	224	242	0	0	0	224
Existing Resource Subtotal	2,691	2,405	2,331	2,265	2,880	3,034	2,628	2,509	2,348	2,044	2,323	2,656
Monthly Surplus/Deficit	284	288	394	405	693	355	(515)	(423)	(53)	96	274	159
2011 IRP DSM												
Industrial	13	13	13	13	13	13	13	13	13	13	13	13
Commercial	7	7	7	7	7	6	6	6	7	7	7	7
Residential	14	14	14	14	14	40	40	40	14	14	14	14
Total New DSM (aMW)	33	33	33	33	33	60	59	60	33	33	33	33
Monthly Surplus/Deficit	317	321	428	438	726	415	(456)	(364)	(20)	129	307	192
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	97	12	32	95	230	282	280	171	136	138	146	132
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	98	92	99	0	0	0	0
2024 Solar Power Tower	3	7	10	13	17	20	29	25	20	13	6	1
2025 CCCT	251	251	251	251	251	251	251	251	251	251	251	251
2028 Small Hydro	0	0	0	8	40	47	52	48	37	12	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	403	322	345	419	590	750	756	646	496	466	456	437
Monthly Surplus/Deficit	720	643	772	857	1,316	1,164	299	282	476	595	763	629

Monthly Average Energy Load and Resource Balance (continued)

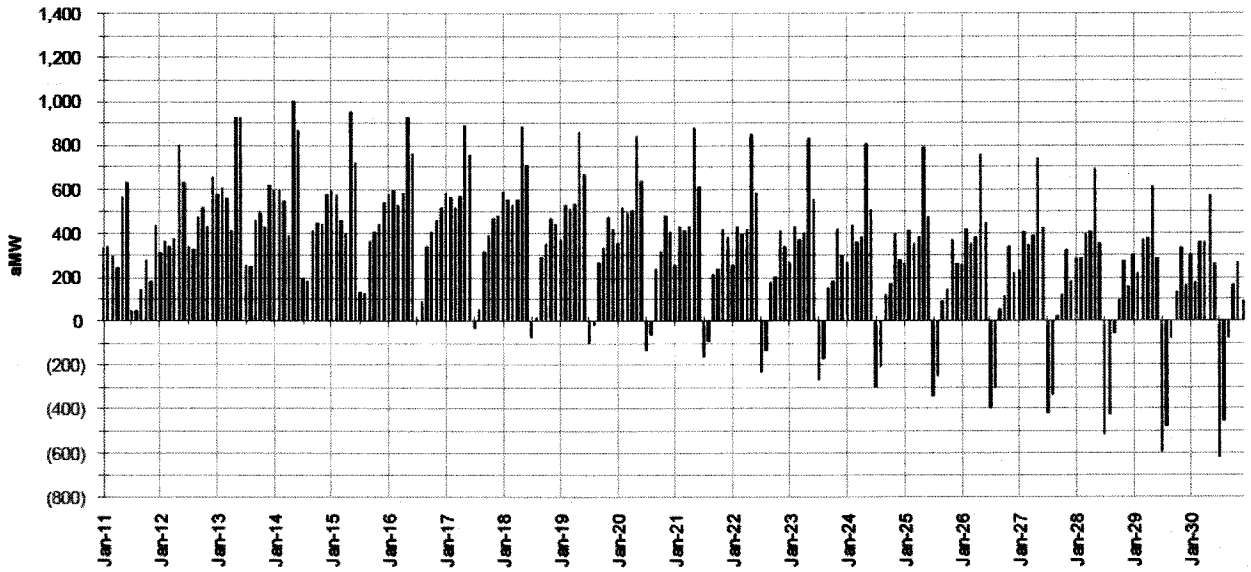
	1/2029	2/2029	3/2029	4/2029	5/2029	6/2029	7/2029	8/2029	9/2029	10/2029	11/2029	12/2029
Forecast DSM	179	177	178	185	201	213	214	209	194	180	179	180
Load Forecast (70th% w/DSM)	(2,433)	(2,152)	(1,957)	(1,880)	(2,212)	(2,713)	(3,187)	(2,974)	(2,435)	(1,973)	(2,074)	(2,530)
Existing Resources												
Coal	889	881	889	788	728	841	899	900	893	901	895	904
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	585	619	577	636	806	693	487	352	410	388	365	454
Hydro (70th%)—Other	202	217	222	212	327	339	271	224	219	217	190	200
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (70th%)	794	872	814	848	1,147	1,051	761	577	629	605	556	666
CSPP (PURPA)	225	241	212	203	167	184	164	155	196	203	246	231
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	64	63	64	65	60	67	67	63	59	65	62	74
Firm Pacific NW Import Capability	284	59	97	100	476	362	227	308	331	84	397	346
Gas Peakers	233	0	0	0	0	240	224	242	0	0	0	224
Existing Resource Subtotal	2,740	2,368	2,328	2,255	2,829	2,996	2,592	2,495	2,358	2,108	2,406	2,696
Monthly Surplus/Deficit	307	216	371	375	617	283	(595)	(480)	(77)	135	332	166
2011 IRP DSM												
Industrial	13	13	13	13	13	13	13	13	13	13	13	13
Commercial	7	7	7	7	7	6	6	6	7	7	7	7
Residential	15	15	15	15	15	43	43	43	15	15	15	15
Total New DSM (aMW)	34	34	34	34	34	62	62	62	34	34	34	34
Monthly Surplus/Deficit	341	250	405	409	651	345	(533)	(417)	(43)	169	366	200
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	97	12	32	95	230	282	280	171	136	138	146	132
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	98	92	99	0	0	0	0
2024 Solar Power Tower	3	7	10	13	17	20	29	25	20	13	6	1
2025 CCCT	251	251	251	251	251	251	251	251	251	251	251	251
2028 Small Hydro	0	0	0	8	40	47	52	48	37	12	0	0
2029 SCCT Frame	0	0	0	0	0	98	92	99	0	0	0	0
New Resource Subtotal	403	322	345	419	590	848	847	744	496	466	456	437
Monthly Surplus/Deficit	744	571	750	828	1,240	1,193	314	327	453	635	822	636

Monthly Average Energy Load and Resource Balance (continued)

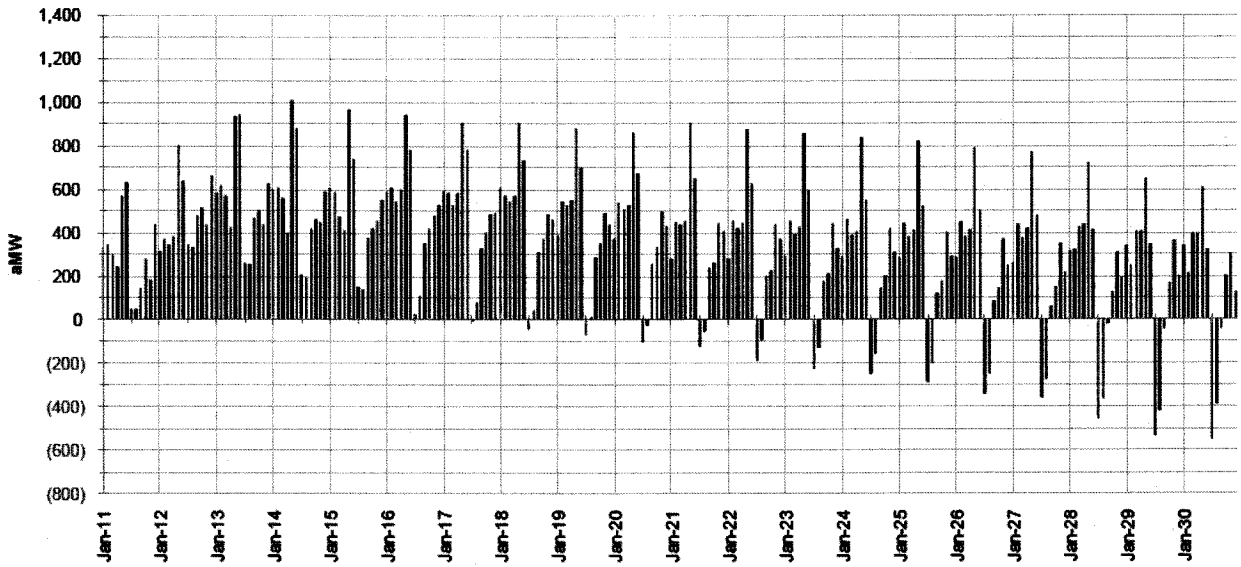
	1/2030	2/2030	3/2030	4/2030	5/2030	6/2030	7/2030	8/2030	9/2030	10/2030	11/2030	12/2030
Forecast DSM	179	177	179	184	201	213	214	209	194	180	179	180
Load Forecast (70th% w/DSM)	(2,466)	(2,179)	(1,982)	(1,904)	(2,239)	(2,750)	(3,235)	(3,021)	(2,474)	(2,004)	(2,104)	(2,570)
Existing Resources												
Coal	887	891	887	791	724	844	889	889	889	887	889	889
Gas (Langley Gulch)	251	251	251	251	251	251	251	251	251	251	251	251
Hydro (70th%)—HCC	585	619	577	636	806	693	487	352	410	388	365	454
Hydro (70th%)—Other	202	217	222	212	327	339	271	224	219	217	190	200
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (70th%)	794	872	814	848	1,147	1,051	761	577	629	605	556	666
CSPP (PURPA)	196	185	178	170	155	196	203	238	239	225	225	212
PPAs												
Elkhorn Valley Wind	34	33	34	35	30	37	37	33	29	35	32	44
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	64	63	64	65	60	67	67	63	59	65	62	74
Firm Pacific NW Import Capability	344	94	147	138	475	359	224	306	330	134	388	344
Gas Peakers	233	0	0	0	0	240	224	242	0	0	0	224
Existing Resource Subtotal	2,769	2,357	2,342	2,263	2,812	3,008	2,618	2,564	2,396	2,167	2,371	2,660
Monthly Surplus/Deficit	303	178	359	358	573	258	(617)	(457)	(77)	164	267	90
2011 IRP DSM												
Industrial	13	13	13	13	13	13	13	13	13	13	13	13
Commercial	7	7	7	7	7	6	6	6	7	7	7	7
Residential	15	16	15	16	15	45	45	45	15	16	15	15
Total New DSM (aMW)	35	35	35	35	35	65	65	65	35	35	35	35
Monthly Surplus/Deficit	338	213	394	393	608	323	(552)	(392)	(42)	199	302	125
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	97	12	32	95	230	282	280	171	136	138	146	132
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	98	92	99	0	0	0	0
2024 Solar Power Tower	3	7	10	13	17	20	29	25	20	13	6	1
2025 CCCT	251	251	251	251	251	251	251	251	251	251	251	251
2028 Small Hydro	0	0	0	8	40	47	52	48	37	12	0	0
2029 SCCT Frame	0	0	0	0	0	98	92	99	0	0	0	0
New Resource Subtotal	403	322	345	419	590	848	847	744	496	466	456	437
Monthly Surplus/Deficit	741	534	739	812	1,198	1,170	295	353	453	664	757	562

Monthly Average Energy Surplus/Deficit Charts

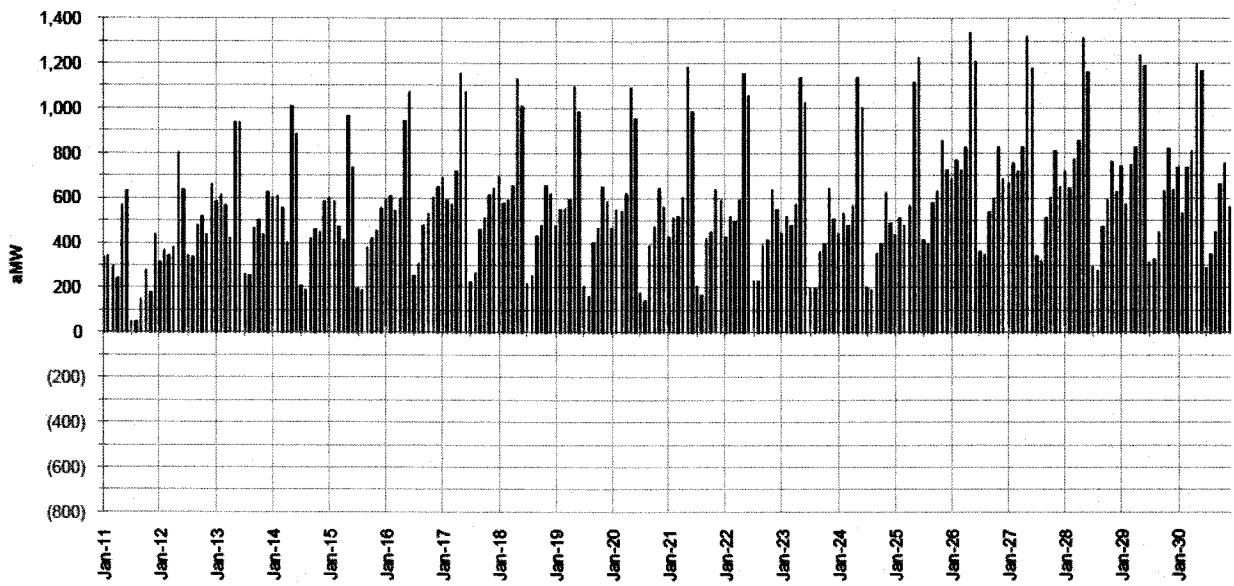
Average energy monthly surpluses and deficits with existing DSM and resources



Average energy monthly surpluses and deficits with existing resources and new DSM



Average energy monthly surpluses and deficits with existing resources, new DSM, and IRP resources



Peak-Hour Load and Resource Balance

	1/2011	2/2011	3/2011	4/2011	5/2011	6/2011	7/2011	8/2011	9/2011	10/2011	11/2011	12/2011
Load Forecast (95th% w/EE)	(2,553)	(2,440)	(2,147)	(1,901)	(2,863)	(3,377)	(3,515)	(3,185)	(3,019)	(2,068)	(2,231)	(2,815)
Existing Demand Response	0	0	0	0	0	330	330	255	0	0	0	0
Peak-Hour Forecast w/DR	(2,553)	(2,440)	(2,147)	(1,901)	(2,863)	(3,047)	(3,185)	(2,930)	(3,019)	(2,068)	(2,231)	(2,815)
Existing Resources												
Coal	963	963	963	963	963	963	963	963	963	963	963	963
Gas (Langley Gulch)	0	0	0	0	0	0	0	0	0	0	0	0
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	200	202	192	193	299	307	263	216	210	209	191	200
Shoshone Falls Upgrade	0	0	0	0	0	0	0	0	0	0	0	0
Sho-Ban Water Lease	0	0	0	0	0	0	47	0	0	0	0	0
Total Hydro (90th%)	1,300	1,202	1,262	1,313	1,449	1,337	1,330	1,206	1,190	1,089	1,101	1,230
CSPP (PURPA)	47	48	54	81	129	143	160	152	136	97	67	63
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange–Take	4	4	4	6	6	7	6	4	3	1	2	3
Clatskanie Exchange– Return	0	0	(10)	(15)	0	0	0	0	0	(10)	(15)	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	83	83	83	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	75	75	0	0	0	0
Total PPAs	19	19	9	6	21	105	179	177	18	6	2	18
Firm Pacific NW Import Capability	180	35	0	0	320	254	126	186	197	0	115	325
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	2,924	2,683	2,705	2,779	3,298	3,219	3,173	3,100	2,919	2,571	2,665	3,015
Monthly Surplus/Deficit	0	0	0	0	0	0	(12)	0	(100)	0	0	0
2011 IRP DSM												
Industrial	2	2	2	2	2	2	2	2	2	2	2	2
Commercial	1	1	1	1	1	1	0	1	1	1	1	1
Residential	0	0	0	0	0	1	1	1	0	0	0	0
Total New DSM Peak Reduction	3	3	3	3	3	3	3	3	3	3	3	3
Remaining Monthly Surplus/Deficit	0	0	0	0	0	0	(8)	0	(98)	0	0	0
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	0	0	0	0	0	0	0	0	0	0	0	0
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Surplus/Deficit	0	0	0	0	0	0	(8)	0	(98)	0	0	0
Remaining Monthly Surplus/Deficit	373	246	561	880	437	175	(8)	174	(98)	506	436	203

Peak-Hour Load and Resource Balance (continued)

	1/2012	2/2012	3/2012	4/2012	5/2012	6/2012	7/2012	8/2012	9/2012	10/2012	11/2012	12/2012
Load Forecast (95th% w/EE)	(2,551)	(2,433)	(2,143)	(1,880)	(2,906)	(3,430)	(3,577)	(3,220)	(3,071)	(2,099)	(2,245)	(2,800)
Existing Demand Response	0	0	0	0	0	310	310	243	0	0	0	0
Peak-Hour Forecast w/DR	(2,551)	(2,433)	(2,143)	(1,880)	(2,906)	(3,120)	(3,267)	(2,977)	(3,071)	(2,099)	(2,245)	(2,800)
Existing Resources												
Coal	963	963	963	963	963	963	963	963	963	963	963	963
Gas (Langley Gulch)	0	0	0	0	0	0	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	199	201	192	192	299	307	262	216	209	209	191	200
Shoshone Falls Upgrade	0	0	0	0	0	0	0	0	0	0	0	0
Sho-Ban Water Lease	0	0	0	0	0	0	48	0	0	0	0	0
Total Hydro (90th%)	1,299	1,201	1,262	1,312	1,449	1,337	1,330	1,206	1,189	1,089	1,101	1,230
CSPP (PURPA)	59	61	65	92	141	150	161	152	136	98	68	64
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	0	0	0	0	0	0	0	0	0	20	20	20
Clatskanie Exchange–Take	4	4	4	6	6	7	6	4	3	1	2	3
Clatskanie Exchange– Return	0	0	(10)	(15)	0	0	0	0	0	(10)	(15)	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	83	83	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	19	19	9	6	21	22	104	102	18	26	22	38
Firm Pacific NW Import Capability	122	30	0	0	444	360	233	294	304	0	129	322
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	2,878	2,690	2,715	2,789	3,433	3,248	3,507	3,433	3,326	2,892	2,999	3,333
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
2011 IRP DSM												
Industrial	3	3	3	3	3	3	3	3	3	3	3	3
Commercial	1	1	1	1	1	1	1	1	1	1	1	1
Residential	1	1	1	1	1	2	2	2	1	1	1	1
Total New DSM Peak Reduction	5	5	5	5	5	6	6	7	5	5	5	5
Remaining Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	0	0	0	0	0	0	0	0	0	0	0	0
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
Remaining Monthly Surplus/Deficit	332	262	577	914	532	134	247	463	259	798	759	538

Peak-Hour Load and Resource Balance (continued)

	1/2013	2/2013	3/2013	4/2013	5/2013	6/2013	7/2013	8/2013	9/2013	10/2013	11/2013	12/2013
Load Forecast (95th% w/EE)	(2,561)	(2,441)	(2,157)	(1,879)	(2,955)	(3,533)	(3,684)	(3,312)	(3,146)	(2,127)	(2,264)	(2,817)
Existing Demand Response	0	0	0	0	0	315	315	248	0	0	0	0
Peak-Hour Forecast w/DR	(2,561)	(2,441)	(2,157)	(1,879)	(2,955)	(3,218)	(3,370)	(3,065)	(3,146)	(2,127)	(2,264)	(2,817)
Existing Resources												
Coal	963	963	963	963	963	963	963	963	963	963	963	963
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	199	201	192	192	298	307	262	216	209	209	191	199
Shoshone Falls Upgrade	0	0	0	0	0	0	0	0	0	0	0	0
Sho-Ban Water Lease	0	0	0	0	0	0	48	0	0	0	0	0
Total Hydro (90th%)	1,299	1,201	1,262	1,312	1,448	1,337	1,330	1,206	1,189	1,089	1,101	1,229
CSPP (PURPA)	63	65	69	96	145	154	166	157	140	101	72	67
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	4	4	4	6	6	7	6	4	3	1	2	3
Clatskanie Exchange– Return	0	0	(10)	(15)	0	0	0	0	0	(10)	(15)	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	39	39	29	26	41	42	41	39	38	26	22	38
Firm Pacific NW Import Capability	131	51	0	0	383	357	229	291	302	0	148	319
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,210	3,035	3,040	3,113	3,696	3,569	3,444	3,371	3,348	2,895	3,022	3,332
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
2011 IRP DSM												
Industrial	5	5	5	5	5	5	5	5	5	5	5	5
Commercial	1	1	1	1	1	1	1	1	1	1	1	1
Residential	1	1	1	1	1	4	4	4	1	1	1	1
Total New DSM Peak Reduction	8	8	8	8	8	10	10	10	8	8	8	8
Remaining Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	0	0	0	0	0	0	0	0	0	0	0	0
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
Remaining Monthly Surplus/Deficit	658	601	890	1,242	750	361	85	317	209	775	765	523

Peak-Hour Load and Resource Balance (continued)

	1/2014	2/2014	3/2014	4/2014	5/2014	6/2014	7/2014	8/2014	9/2014	10/2014	11/2014	12/2014
Load Forecast (95th% w/EE)	(2,620)	(2,485)	(2,203)	(1,928)	(3,011)	(3,611)	(3,770)	(3,398)	(3,213)	(2,167)	(2,314)	(2,895)
Existing Demand Response	0	0	0	0	0	315	315	248	0	0	0	0
Peak-Hour Forecast w/DR	(2,620)	(2,485)	(2,203)	(1,928)	(3,011)	(3,296)	(3,455)	(3,150)	(3,213)	(2,167)	(2,314)	(2,895)
Existing Resources												
Coal	963	963	963	963	963	963	963	963	963	963	963	963
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	197	198	191	191	297	305	261	214	208	207	190	197
Shoshone Falls Upgrade	0	0	0	0	0	0	0	0	0	0	0	0
Sho-Ban Water Lease	0	0	0	0	0	0	48	0	0	0	0	0
Total Hydro (90th%)	1,297	1,198	1,261	1,311	1,447	1,335	1,329	1,204	1,188	1,087	1,100	1,227
CSPP (PURPA)	63	66	69	96	145	154	166	157	140	101	72	67
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	4	4	4	6	6	7	6	4	3	1	2	3
Clatskanie Exchange– Return	0	0	(10)	(15)	0	0	0	0	0	(10)	(15)	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	39	39	29	26	41	42	41	39	38	26	22	38
Firm Pacific NW Import Capability	190	86	0	12	439	353	225	288	301	0	198	318
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,268	3,068	3,039	3,124	3,751	3,563	3,440	3,367	3,346	2,894	3,071	3,329
Monthly Surplus/Deficit	0	0	0	0	0	0	(15)	0	0	0	0	0
2011 IRP DSM												
Industrial	6	6	6	6	6	6	6	6	6	6	6	6
Commercial	2	2	2	2	2	2	2	2	2	2	2	2
Residential	2	2	2	2	2	6	6	6	2	2	2	2
Total New DSM Peak Reduction	10	10	10	10	10	14	14	14	10	10	10	10
Remaining Monthly Surplus/Deficit	0	0	0	0	0	0	(1)	0	0	0	0	0
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	0	0	0	0	0	0	0	0	0	0	0	0
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Surplus/Deficit	0	0	0	0	0	0	(1)	0	0	0	0	0
Remaining Monthly Surplus/Deficit	658	593	846	1,206	750	281	(1)	231	143	737	767	444

Peak-Hour Load and Resource Balance (continued)

	1/2015	2/2015	3/2015	4/2015	5/2015	6/2015	7/2015	8/2015	9/2015	10/2015	11/2015	12/2015
Load Forecast (95th% w/EE)	(2,661)	(2,517)	(2,236)	(1,958)	(3,067)	(3,685)	(3,854)	(3,474)	(3,277)	(2,203)	(2,353)	(2,948)
Existing Demand Response	0	0	0	0	0	321	321	252	0	0	0	0
Peak-Hour Forecast w/DR	(2,661)	(2,517)	(2,236)	(1,958)	(3,067)	(3,364)	(3,533)	(3,222)	(3,277)	(2,203)	(2,353)	(2,948)
Existing Resources												
Coal	963	963	963	963	963	963	963	963	963	963	963	963
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	195	196	190	190	296	304	260	213	207	206	189	195
Shoshone Falls Upgrade	0	0	0	0	0	0	0	0	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	48	0	0	0	0	0
Total Hydro (90th%)	1,295	1,196	1,260	1,310	1,446	1,334	1,328	1,203	1,187	1,086	1,099	1,237
CSPP (PURPA)	63	66	69	96	145	154	166	157	140	101	72	67
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	4	4	4	6	6	7	6	4	3	1	2	3
Clatskanie Exchange– Return	0	0	(10)	(15)	0	0	0	0	0	(10)	(15)	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	39	39	29	26	41	42	41	39	38	26	22	38
Firm Pacific NW Import Capability	231	114	0	38	440	350	222	286	299	14	237	316
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,307	3,094	3,037	3,149	3,751	3,559	3,436	3,364	3,342	2,906	3,109	3,337
Monthly Surplus/Deficit	0	0	0	0	0	0	(97)	0	0	0	0	0
2011 IRP DSM												
Industrial	7	7	7	7	7	7	7	7	7	7	7	7
Commercial	2	2	2	2	2	2	2	2	2	2	2	2
Residential	3	3	3	3	3	8	8	8	3	3	3	3
Total New DSM Peak Reduction	12	12	12	12	12	17	17	17	12	12	12	12
Remaining Monthly Surplus/Deficit	0	0	0	0	0	0	(80)	0	0	0	0	0
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	83	0	0	0	0	0
2016 Boardman to Hemingway	0	0	0	0	0	0	0	0	0	0	0	0
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	0	0	0	0	0	0	83	0	0	0	0	0
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
Remaining Monthly Surplus/Deficit	658	590	813	1,203	696	212	3	159	78	715	768	401

Peak-Hour Load and Resource Balance (continued)

	1/2016	2/2016	3/2016	4/2016	5/2016	6/2016	7/2016	8/2016	9/2016	10/2016	11/2016	12/2016
Load Forecast (95th% w/EE)	(2,691)	(2,543)	(2,261)	(1,975)	(3,116)	(3,750)	(3,925)	(3,535)	(3,331)	(2,226)	(2,374)	(2,978)
Existing Demand Response	0	0	0	0	0	351	351	273	0	0	0	0
Peak-Hour Forecast w/DR	(2,691)	(2,543)	(2,261)	(1,975)	(3,116)	(3,399)	(3,574)	(3,262)	(3,331)	(2,226)	(2,374)	(2,978)
Existing Resources												
Coal	963	963	963	963	963	963	963	963	963	963	963	963
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	193	195	189	189	295	303	260	211	207	206	188	194
Shoshone Falls Upgrade	7	34	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (90th%)	1,300	1,229	1,275	1,309	1,460	1,352	1,282	1,202	1,187	1,086	1,098	1,236
CSPP (PURPA)	63	66	69	96	145	154	166	157	140	101	72	67
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	35	35	35	35	35	35	35	35	35	35	35	35
Firm Pacific NW Import Capability	37	139	0	57	437	346	218	283	297	49	258	314
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,114	3,148	3,058	3,176	3,756	3,566	3,379	3,355	3,338	2,951	3,142	3,331
Monthly Surplus/Deficit	0	0	0	0	0	0	(196)	0	0	0	0	0
2011 IRP DSM												
Industrial	8	7	7	7	8	8	8	8	7	7	7	7
Commercial	3	3	3	3	3	3	3	3	3	3	3	3
Residential	3	3	3	3	3	10	10	10	3	3	3	3
Total New DSM Peak Reduction	14	14	14	14	14	20	20	20	14	14	14	14
Remaining Monthly Surplus/Deficit	0	0	0	0	0	0	(175)	0	0	0	0	0
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	0	0	0	0	0	450	450	450	450	450	450	450
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	0	0	0	0	0	450	450	450	450	450	450	450
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
Remaining Monthly Surplus/Deficit	437	619	810	1,215	654	637	275	563	470	1,188	1,232	817

Peak-Hour Load and Resource Balance (continued)

	1/2017	2/2017	3/2017	4/2017	5/2017	6/2017	7/2017	8/2017	9/2017	10/2017	11/2017	12/2017
Load Forecast (95th% w/EE)	(2,717)	(2,556)	(2,280)	(1,991)	(3,156)	(3,809)	(3,991)	(3,595)	(3,382)	(2,247)	(2,397)	(3,017)
Existing Demand Response	0	0	0	0	0	351	351	273	0	0	0	0
Peak-Hour Forecast w/DR	(2,717)	(2,556)	(2,280)	(1,991)	(3,156)	(3,458)	(3,641)	(3,322)	(3,382)	(2,247)	(2,397)	(3,017)
Existing Resources												
Coal	963	963	963	963	963	963	963	963	963	963	963	963
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	192	193	188	188	291	299	259	210	206	205	187	192
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (90th%)	1,299	1,228	1,274	1,308	1,456	1,348	1,281	1,201	1,186	1,085	1,097	1,234
CSPP (PURPA)	63	66	69	96	145	154	166	157	140	101	72	67
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	35	35	35	35	35	35	35	35	35	35	35	35
Firm Pacific NW Import Capability	36	157	14	85	435	343	214	281	295	71	281	311
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,112	3,165	3,071	3,203	3,750	3,559	3,374	3,352	3,335	2,971	3,164	3,326
Monthly Surplus/Deficit	0	0	0	0	0	0	(267)	0	(47)	0	0	0
2011 IRP DSM												
Industrial	8	8	8	8	8	8	8	8	8	8	8	8
Commercial	3	3	3	3	3	3	3	3	3	3	3	3
Residential	4	4	4	4	4	12	12	12	4	4	4	4
Total New DSM Peak Reduction	16	16	16	16	16	24	24	24	16	16	16	16
Remaining Monthly Surplus/Deficit	0	0	0	0	0	0	(243)	0	(32)	0	0	0
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	450	450	450	450	450	450	450	450	450	450	450	450
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	450	450	450	450	450	450	450	450	450	450	450	450
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
Remaining Monthly Surplus/Deficit	861	1,074	1,257	1,578	1,059	575	207	504	418	1,190	1,232	774

Peak-Hour Load and Resource Balance (continued)

	1/2018	2/2018	3/2018	4/2018	5/2018	6/2018	7/2018	8/2018	9/2018	10/2018	11/2018	12/2018
Load Forecast (95th% w/EE)	(2,733)	(2,567)	(2,293)	(1,997)	(3,195)	(3,865)	(4,056)	(3,650)	(3,431)	(2,266)	(2,416)	(3,046)
Existing Demand Response	0	0	0	0	0	351	351	273	0	0	0	0
Peak-Hour Forecast w/DR	(2,733)	(2,567)	(2,293)	(1,997)	(3,195)	(3,514)	(3,705)	(3,377)	(3,431)	(2,266)	(2,416)	(3,046)
Existing Resources												
Coal	963	963	963	963	963	963	963	963	963	963	963	963
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	191	191	187	187	286	295	258	209	205	204	186	190
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (90th%)	1,298	1,226	1,272	1,307	1,451	1,343	1,280	1,200	1,185	1,084	1,096	1,232
CSPP (PURPA)	63	66	69	96	145	154	166	157	140	101	72	67
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	35	35	35	35	35	35	35	35	35	35	35	35
Firm Pacific NW Import Capability	41	175	30	101	433	339	209	278	293	81	300	309
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,116	3,181	3,085	3,218	3,743	3,550	3,368	3,348	3,331	2,980	3,182	3,322
Monthly Surplus/Deficit	0	0	0	0	0	0	(337)	(29)	(100)	0	0	0
2011 IRP DSM												
Industrial	9	9	9	9	9	9	9	9	9	9	9	9
Commercial	4	4	4	4	4	3	3	4	4	4	4	4
Residential	5	5	5	5	5	15	15	15	5	5	5	5
Total New DSM Peak Reduction	17	17	17	17	17	27	27	27	17	17	17	17
Remaining Monthly Surplus/Deficit	0	0	0	0	0	0	(310)	(2)	(82)	0	0	0
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	450	450	450	450	450	450	450	450	450	450	450	450
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	450	450	450	450	450	450	450	450	450	450	450	450
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
Remaining Monthly Surplus/Deficit	851	1,082	1,260	1,688	1,015	513	140	448	368	1,182	1,233	743

Peak-Hour Load and Resource Balance (continued)

	1/2019	2/2019	3/2019	4/2019	5/2019	6/2019	7/2019	8/2019	9/2019	10/2019	11/2019	12/2019
Load Forecast (95th% w/EE)	(2,759)	(2,584)	(2,312)	(2,013)	(3,236)	(3,924)	(4,123)	(3,711)	(3,482)	(2,288)	(2,440)	(3,086)
Existing Demand Response	0	0	0	0	0	351	351	273	0	0	0	0
Peak-Hour Forecast w/DR	(2,759)	(2,584)	(2,312)	(2,013)	(3,236)	(3,574)	(3,772)	(3,438)	(3,482)	(2,288)	(2,440)	(3,086)
Existing Resources												
Coal	963	963	963	963	963	963	963	963	963	963	963	963
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	190	190	185	186	283	291	257	208	204	203	186	189
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (90th%)	1,297	1,225	1,271	1,306	1,448	1,339	1,279	1,199	1,184	1,083	1,096	1,230
CSPP (PURPA)	63	66	69	96	145	154	166	157	140	101	72	67
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	35	35	35	35	35	35	35	35	35	35	35	35
Firm Pacific NW Import Capability	59	195	60	109	432	335	205	275	291	104	117	307
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,133	3,200	3,114	3,225	3,738	3,542	3,363	3,344	3,329	3,002	2,998	3,318
Monthly Surplus/Deficit	0	0	0	0	0	(31)	(409)	(94)	(153)	0	0	0
2011 IRP DSM												
Industrial	9	9	9	9	9	10	10	10	9	9	9	9
Commercial	4	4	4	4	4	4	4	4	4	4	4	4
Residential	6	6	6	6	6	17	17	17	6	6	6	6
Total New DSM Peak Reduction	19	19	19	19	19	31	31	31	19	19	19	19
Remaining Monthly Surplus/Deficit	0	0	0	0	0	(1)	(378)	(63)	(134)	0	0	0
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	450	450	450	450	450	450	450	450	450	450	450	450
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	450	450	450	450	450	450	450	450	450	450	450	450
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
Remaining Monthly Surplus/Deficit	843	1,086	1,272	1,681	972	449	72	387	316	1,184	1,027	702

Peak-Hour Load and Resource Balance (continued)

	1/2020	2/2020	3/2020	4/2020	5/2020	6/2020	7/2020	8/2020	9/2020	10/2020	11/2020	12/2020
Load Forecast (95th% w/EE)	(2,781)	(2,595)	(2,328)	(2,026)	(3,276)	(3,983)	(4,190)	(3,770)	(3,532)	(2,307)	(2,462)	(3,121)
Existing Demand Response	0	0	0	0	0	351	351	273	0	0	0	0
Peak-Hour Forecast w/DR	(2,781)	(2,595)	(2,328)	(2,026)	(3,276)	(3,632)	(3,839)	(3,498)	(3,532)	(2,307)	(2,462)	(3,121)
Existing Resources												
Coal	963	963	963	963	963	963	963	963	963	963	963	963
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	190	189	185	185	280	288	256	207	204	203	185	188
Shoshone Falls Upgrade	7	34	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (90th%)	1,297	1,223	1,270	1,305	1,445	1,336	1,278	1,198	1,184	1,083	1,095	1,230
CSPP (PURPA)	63	66	69	96	145	154	166	157	140	101	72	67
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	35	35	35	35	35	35	35	35	35	35	35	35
Firm Pacific NW Import Capability	81	198	77	124	430	333	201	272	289	125	106	305
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,155	3,201	3,131	3,239	3,734	3,538	3,358	3,341	3,326	3,023	2,986	3,316
Monthly Surplus/Deficit	0	0	0	0	0	(94)	(480)	(157)	(205)	0	0	0
2011 IRP DSM												
Industrial	10	10	10	10	10	10	10	10	10	10	10	10
Commercial	5	5	5	5	5	4	4	4	5	5	5	5
Residential	7	7	7	7	7	20	20	19	7	7	7	7
Total New DSM Peak Reduction	21	21	21	21	21	34	34	34	21	21	21	21
Remaining Monthly Surplus/Deficit	0	0	0	0	0	(60)	(446)	(123)	(184)	0	0	0
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	450	450	450	450	450	450	450	450	450	450	450	450
2021 Geothermal	0	0	0	0	0	0	0	0	0	0	0	0
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	450	450	450	450	450	450	450	450	450	450	450	450
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
Remaining Monthly Surplus/Deficit	845	1,077	1,274	1,685	929	390	4	327	266	1,187	996	666

Peak-Hour Load and Resource Balance (continued)

	1/2021	2/2021	3/2021	4/2021	5/2021	6/2021	7/2021	8/2021	9/2021	10/2021	11/2021	12/2021
Load Forecast (95th% w/EE)	(2,797)	(2,609)	(2,341)	(2,034)	(3,316)	(4,040)	(4,254)	(3,826)	(3,582)	(2,327)	(2,481)	(3,152)
Existing Demand Response	0	0	0	0	0	351	351	273	0	0	0	0
Peak-Hour Forecast w/DR	(2,797)	(2,609)	(2,341)	(2,034)	(3,316)	(3,689)	(3,904)	(3,554)	(3,582)	(2,327)	(2,481)	(3,152)
Existing Resources												
Coal	908	908	908	908	908	908	908	908	908	908	908	908
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	189	189	184	185	278	286	256	207	203	202	184	188
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (90th%)	1,296	1,224	1,270	1,305	1,443	1,335	1,278	1,198	1,184	1,082	1,094	1,229
CSPP (PURPA)	63	66	69	96	145	154	166	157	140	101	72	67
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	35	35	35	35	35	35	35	35	35	35	35	35
Firm Pacific NW Import Capability	138	20	144	200	489	389	257	328	347	0	95	364
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,156	2,969	3,142	3,260	3,736	3,537	3,359	3,341	3,329	2,843	2,920	3,319
Monthly Surplus/Deficit	0	0	0	0	0	(152)	(545)	(212)	(254)	0	0	0
2011 IRP DSM												
Industrial	11	10	10	10	11	11	11	11	11	11	11	11
Commercial	5	5	5	5	5	5	5	5	5	5	5	5
Residential	8	8	8	8	7	22	22	22	8	8	8	8
Total New DSM Peak Reduction	23	23	23	23	23	38	38	38	23	23	23	23
Remaining Monthly Surplus/Deficit	0	0	0	0	0	(114)	(507)	(175)	(230)	0	0	0
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	450	450	450	450	450	450	450	450	450	450	450	450
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	502	502	502	502	502	502	502	502	502	502	502	502
Monthly Surplus/Deficit	0	0	0	0	0	0	(5)	0	0	0	0	0
Remaining Monthly Surplus/Deficit	884	885	1,326	1,752	946	388	(5)	327	272	1,041	964	692

Peak-Hour Load and Resource Balance (continued)

	1/2022	2/2022	3/2022	4/2022	5/2022	6/2022	7/2022	8/2022	9/2022	10/2022	11/2022	12/2022
Load Forecast (95th% w/EE)	(2,823)	(2,626)	(2,360)	(2,050)	(3,357)	(4,100)	(4,323)	(3,889)	(3,635)	(2,349)	(2,505)	(3,193)
Existing Demand Response	0	0	0	0	0	351	351	273	0	0	0	0
Peak-Hour Forecast w/DR	(2,823)	(2,626)	(2,360)	(2,050)	(3,357)	(3,749)	(3,972)	(3,616)	(3,635)	(2,349)	(2,505)	(3,193)
Existing Resources												
Coal	908	908	908	908	908	908	908	908	908	908	908	908
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	189	188	184	185	277	285	256	207	203	202	184	187
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (90th%)	1,296	1,224	1,270	1,305	1,442	1,333	1,278	1,198	1,183	1,082	1,094	1,229
CSPP (PURPA)	63	66	69	96	145	154	166	157	140	101	72	67
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	35	35	35	35	35	35	35	35	35	35	35	35
Firm Pacific NW Import Capability	166	41	164	0	487	386	254	326	346	0	119	361
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,184	2,989	3,162	3,060	3,733	3,532	3,356	3,339	3,328	2,842	2,943	3,316
Monthly Surplus/Deficit	0	0	0	0	0	(217)	(616)	(277)	(307)	0	0	0
2011 IRP DSM												
Industrial	11	11	11	11	11	11	11	11	11	11	11	11
Commercial	5	5	5	5	5	5	5	5	5	5	5	5
Residential	8	8	8	8	8	25	24	25	8	8	8	8
Total New DSM Peak Reduction	25	25	25	25	25	41	41	41	25	25	25	25
Remaining Monthly Surplus/Deficit	0	0	0	0	0	(176)	(575)	(235)	(283)	0	0	0
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	450	450	450	450	450	450	450	450	450	450	450	450
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	170	170	170	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	502	502	502	502	502	672	672	672	502	502	502	502
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
Remaining Monthly Surplus/Deficit	888	891	1,329	1,537	902	496	97	437	219	1,020	965	650

Peak-Hour Load and Resource Balance (continued)

	1/2023	2/2023	3/2023	4/2023	5/2023	6/2023	7/2023	8/2023	9/2023	10/2023	11/2023	12/2023
Load Forecast (95th% w/EE)	(2,855)	(2,647)	(2,383)	(2,072)	(3,400)	(4,163)	(4,394)	(3,956)	(3,690)	(2,373)	(2,533)	(3,243)
Existing Demand Response	0	0	0	0	0	351	351	273	0	0	0	0
Peak-Hour Forecast w/DR	(2,855)	(2,647)	(2,383)	(2,072)	(3,400)	(3,812)	(4,043)	(3,683)	(3,690)	(2,373)	(2,533)	(3,243)
Existing Resources												
Coal	908	908	908	908	908	908	908	908	908	908	908	908
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	189	188	184	185	277	284	256	207	203	202	184	187
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (90th%)	1,296	1,224	1,270	1,305	1,442	1,333	1,278	1,198	1,183	1,082	1,094	1,229
CSPP (PURPA)	63	66	69	96	145	154	166	157	140	101	72	67
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	35	35	35	35	35	35	35	35	35	35	35	35
Firm Pacific NW Import Capability	195	64	185	0	485	382	250	323	344	0	147	359
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,213	3,012	3,183	3,060	3,730	3,528	3,352	3,336	3,326	2,842	2,971	3,314
Monthly Surplus/Deficit	0	0	0	0	0	(284)	(691)	(347)	(365)	0	0	0
2011 IRP DSM												
Industrial	11	11	11	11	12	12	12	12	11	11	11	12
Commercial	6	6	6	6	6	5	5	5	6	6	6	6
Residential	9	9	9	9	9	27	27	27	9	9	9	9
Total New DSM Peak Reduction	26	27	27	26	26	45	44	45	26	26	26	26
Remaining Monthly Surplus/Deficit	0	0	0	0	0	(240)	(647)	(302)	(338)	0	0	0
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	450	450	450	450	450	450	450	450	450	450	450	450
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	170	170	170	0	0	0	0
2024 Solar Power Tower	0	0	0	0	0	0	0	0	0	0	0	0
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	502	502	502	502	502	672	672	672	502	502	502	502
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
Remaining Monthly Surplus/Deficit	886	894	1,329	1,516	859	432	25	370	164	998	967	600

Peak-Hour Load and Resource Balance (continued)

	1/2024	2/2024	3/2024	4/2024	5/2024	6/2024	7/2024	8/2024	9/2024	10/2024	11/2024	12/2024
Load Forecast (95th% w/EE)	(2,877)	(2,660)	(2,400)	(2,086)	(3,442)	(4,224)	(4,462)	(4,017)	(3,745)	(2,394)	(2,555)	(3,280)
Existing Demand Response	0	0	0	0	0	351	351	273	0	0	0	0
Peak-Hour Forecast w/DR	(2,877)	(2,660)	(2,400)	(2,086)	(3,442)	(3,873)	(4,111)	(3,745)	(3,745)	(2,394)	(2,555)	(3,280)
Existing Resources												
Coal	908	908	908	908	908	908	908	908	908	908	908	908
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	189	188	184	185	277	284	256	207	203	202	184	187
Shoshone Falls Upgrade	7	34	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (90th%)	1,296	1,222	1,270	1,305	1,442	1,333	1,278	1,198	1,183	1,082	1,094	1,229
CSPP (PURPA)	63	66	69	96	145	154	166	157	140	101	72	67
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	35	35	35	35	35	35	35	35	35	35	35	35
Firm Pacific NW Import Capability	207	68	(0)	0	484	378	246	320	342	8	169	357
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,225	3,015	2,997	3,060	3,729	3,524	3,348	3,333	3,324	2,850	2,993	3,312
Monthly Surplus/Deficit	0	0	0	0	0	(349)	(764)	(412)	(421)	0	0	0
2011 IRP DSM												
Industrial	12	12	12	12	12	12	12	12	12	12	12	12
Commercial	6	6	6	6	6	6	6	6	6	6	6	6
Residential	10	10	10	10	10	30	30	30	10	10	10	10
Total New DSM Peak Reduction	28	28	28	28	28	47	48	48	28	28	28	28
Remaining Monthly Surplus/Deficit	0	0	0	0	0	(302)	(716)	(364)	(393)	0	0	0
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	450	450	450	450	450	450	450	450	450	450	450	450
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	170	170	170	0	0	0	0
2024 Solar Power Tower	8	15	20	25	31	36	44	41	36	25	15	4
2025 CCCT	0	0	0	0	0	0	0	0	0	0	0	0
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	510	517	522	527	533	708	716	713	538	527	517	506
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
Remaining Monthly Surplus/Deficit	886	900	1,148	1,529	848	406	0	349	145	1,011	983	566

Peak-Hour Load and Resource Balance (continued)

	1/2025	2/2025	3/2025	4/2025	5/2025	6/2025	7/2025	8/2025	9/2025	10/2025	11/2025	12/2025
Load Forecast (95th% w/EE)	(2,892)	(2,674)	(2,413)	(2,092)	(3,483)	(4,283)	(4,529)	(4,075)	(3,799)	(2,415)	(2,574)	(3,309)
Existing Demand Response	0	0	0	0	0	351	351	273	0	0	0	0
Peak-Hour Forecast w/DR	(2,892)	(2,674)	(2,413)	(2,092)	(3,483)	(3,932)	(4,178)	(3,802)	(3,799)	(2,415)	(2,574)	(3,309)
Existing Resources												
Coal	908	908	908	908	908	908	908	908	908	908	908	908
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	189	188	184	185	277	284	256	207	203	202	184	187
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (90th%)	1,296	1,224	1,270	1,305	1,442	1,333	1,278	1,198	1,183	1,082	1,094	1,229
CSPP (PURPA)	63	66	69	96	145	154	166	157	140	101	72	67
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	35	35	35	35	35	35	35	35	35	35	35	35
Firm Pacific NW Import Capability	231	102	(0)	4	482	375	243	318	340	31	188	355
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,249	3,050	2,997	3,064	3,727	3,521	3,345	3,331	3,322	2,873	3,012	3,310
Monthly Surplus/Deficit	0	0	0	0	0	(411)	(833)	(471)	(477)	0	0	0
2011 IRP DSM												
Industrial	12	12	12	12	12	13	13	13	12	12	12	12
Commercial	6	6	6	6	6	6	6	6	6	6	6	6
Residential	11	11	11	11	11	32	32	32	11	11	11	11
Total New DSM Peak Reduction	29	29	29	29	29	51	51	51	29	29	29	29
Remaining Monthly Surplus/Deficit	0	0	0	0	0	(361)	(782)	(420)	(448)	0	0	0
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	450	450	450	450	450	450	450	450	450	450	450	450
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	170	170	170	0	0	0	0
2024 Solar Power Tower	8	15	20	25	31	36	44	41	36	25	15	4
2025 CCCT	0	0	0	0	0	300	300	300	300	300	300	300
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	510	517	522	527	533	1,008	1,016	1,013	838	827	817	806
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
Remaining Monthly Surplus/Deficit	896	923	1,136	1,528	806	647	234	592	390	1,314	1,285	836

Peak-Hour Load and Resource Balance (continued)

	1/2026	2/2026	3/2026	4/2026	5/2026	6/2026	7/2026	8/2026	9/2026	10/2026	11/2026	12/2026
Load Forecast (95th% w/EE)	(2,916)	(2,691)	(2,431)	(2,106)	(3,527)	(4,346)	(4,599)	(4,137)	(3,856)	(2,440)	(2,598)	(3,345)
Existing Demand Response	0	0	0	0	0	351	351	273	0	0	0	0
Peak-Hour Forecast w/DR	(2,916)	(2,691)	(2,431)	(2,106)	(3,527)	(3,995)	(4,248)	(3,865)	(3,856)	(2,440)	(2,598)	(3,345)
Existing Resources												
Coal	908	908	908	908	908	908	908	908	908	908	908	908
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	189	188	184	185	277	284	256	207	203	202	184	187
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (90th%)	1,296	1,224	1,270	1,305	1,442	1,333	1,278	1,198	1,183	1,082	1,094	1,229
CSPP (PURPA)	63	66	69	96	145	154	166	157	140	101	72	67
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	35	35	35	35	35	35	35	35	35	35	35	35
Firm Pacific NW Import Capability	260	125	(0)	24	480	371	238	315	339	57	212	353
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,278	3,073	2,997	3,084	3,725	3,517	3,340	3,328	3,321	2,899	3,036	3,308
Monthly Surplus/Deficit	0	0	0	0	0	(478)	(908)	(537)	(535)	0	0	(37)
2011 IRP DSM												
Industrial	12	12	12	12	13	13	13	13	12	12	13	12
Commercial	6	6	6	6	6	6	6	6	6	6	6	6
Residential	12	12	12	12	12	35	35	35	12	12	12	12
Total New DSM Peak Reduction	31	31	31	31	31	54	54	54	31	31	31	31
Remaining Monthly Surplus/Deficit	0	0	0	0	0	(424)	(855)	(483)	(504)	0	0	(7)
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	450	450	450	450	450	450	450	450	450	450	450	450
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	170	170	170	0	0	0	0
2024 Solar Power Tower	8	15	20	25	31	36	44	41	36	25	15	4
2025 CCCT	300	300	300	300	300	300	300	300	300	300	300	300
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	810	817	822	827	833	1,008	1,016	1,013	838	827	817	806
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
Remaining Monthly Surplus/Deficit	1,203	1,230	1,419	1,835	1,062	583	162	529	333	1,316	1,286	799

Peak-Hour Load and Resource Balance (continued)

	1/2027	2/2027	3/2027	4/2027	5/2027	6/2027	7/2027	8/2027	9/2027	10/2027	11/2027	12/2027
Load Forecast (95th% w/EE)	(2,920)	(2,696)	(2,438)	(2,101)	(3,568)	(4,403)	(4,664)	(4,188)	(3,910)	(2,460)	(2,611)	(3,361)
Existing Demand Response	0	0	0	0	0	351	351	273	0	0	0	0
Peak-Hour Forecast w/DR	(2,920)	(2,696)	(2,438)	(2,101)	(3,568)	(4,052)	(4,313)	(3,915)	(3,910)	(2,460)	(2,611)	(3,361)
Existing Resources												
Coal	908	908	908	908	908	908	908	908	908	908	908	908
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	189	188	184	185	277	284	256	207	203	202	184	187
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (90th%)	1,296	1,224	1,270	1,305	1,442	1,333	1,278	1,198	1,183	1,082	1,094	1,229
CSPP (PURPA)	63	66	69	96	145	154	166	157	140	101	72	67
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	35	35	35	35	35	35	35	35	35	35	35	35
Firm Pacific NW Import Capability	293	141	(0)	40	478	368	234	313	335	91	225	349
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,311	3,089	2,997	3,100	3,723	3,514	3,336	3,326	3,317	2,933	3,049	3,304
Monthly Surplus/Deficit	0	0	0	0	0	(538)	(977)	(589)	(593)	0	0	(57)
2011 IRP DSM												
Industrial	13	13	13	13	13	13	13	13	13	13	13	13
Commercial	6	7	7	7	6	6	6	6	7	7	7	7
Residential	13	13	13	13	13	38	38	38	13	13	13	13
Total New DSM Peak Reduction	32	32	32	32	32	57	57	57	32	32	32	32
Remaining Monthly Surplus/Deficit	0	0	0	0	0	(481)	(921)	(533)	(561)	0	0	(25)
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	450	450	450	450	450	450	450	450	450	450	450	450
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	170	170	170	0	0	0	0
2024 Solar Power Tower	8	15	20	25	31	36	44	41	36	25	15	4
2025 CCCT	300	300	300	300	300	300	300	300	300	300	300	300
2028 Small Hydro	0	0	0	0	0	0	0	0	0	0	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	810	817	822	827	833	1,008	1,016	1,013	838	827	817	806
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
Remaining Monthly Surplus/Deficit	1,233	1,242	1,414	1,858	1,020	527	96	480	277	1,331	1,287	781

Peak-Hour Load and Resource Balance (continued)

	1/2028	2/2028	3/2028	4/2028	5/2028	6/2028	7/2028	8/2028	9/2028	10/2028	11/2028	12/2028
Load Forecast (95th% w/EE)	(2,974)	(2,721)	(2,476)	(2,144)	(3,618)	(4,476)	(4,747)	(4,273)	(3,972)	(2,494)	(2,655)	(3,434)
Existing Demand Response	0	0	0	0	0	351	351	273	0	0	0	0
Peak-Hour Forecast w/DR	(2,974)	(2,721)	(2,476)	(2,144)	(3,618)	(4,126)	(4,396)	(4,000)	(3,972)	(2,494)	(2,655)	(3,434)
Existing Resources												
Coal	908	908	908	908	908	908	908	908	908	908	908	908
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	189	188	184	185	277	284	256	207	203	202	184	187
Shoshone Falls Upgrade	7	34	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (90th%)	1,296	1,222	1,270	1,305	1,442	1,333	1,278	1,198	1,183	1,082	1,094	1,229
CSPP (PURPA)	94	158	150	171	157	139	101	70	68	63	63	69
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	35	35	35	35	35	35	35	35	35	35	35	35
Firm Pacific NW Import Capability	335	159	21	81	477	364	231	310	333	126	269	348
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,383	3,198	3,100	3,215	3,735	3,496	3,268	3,236	3,243	2,930	3,085	3,306
Monthly Surplus/Deficit	0	0	0	0	0	(630)	(1,128)	(764)	(729)	0	0	(129)
2011 IRP DSM												
Industrial	13	13	13	13	13	13	13	13	13	13	13	13
Commercial	7	7	7	7	7	6	6	6	7	7	7	7
Residential	14	14	14	14	14	40	40	40	14	14	14	14
Total New DSM Peak Reduction	33	33	33	33	33	60	59	60	33	33	33	33
Remaining Monthly Surplus/Deficit	0	0	0	0	0	(570)	(1,069)	(704)	(696)	0	0	(96)
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	450	450	450	450	450	450	450	450	450	450	450	450
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	170	170	170	0	0	0	0
2024 Solar Power Tower	8	15	20	25	31	36	44	41	36	25	15	4
2025 CCCT	300	300	300	300	300	300	300	300	300	300	300	300
2028 Small Hydro	0	0	0	8	40	47	52	48	37	12	0	0
2029 SCCT Frame	0	0	0	0	0	0	0	0	0	0	0	0
New Resource Subtotal	810	817	822	835	872	1,054	1,068	1,060	875	839	817	806
Monthly Surplus/Deficit	0	0	0	0	0	0	(1)	0	0	0	0	0
Remaining Monthly Surplus/Deficit	1,253	1,327	1,479	1,939	1,021	484	(1)	356	178	1,307	1,280	710

Peak-Hour Load and Resource Balance (continued)

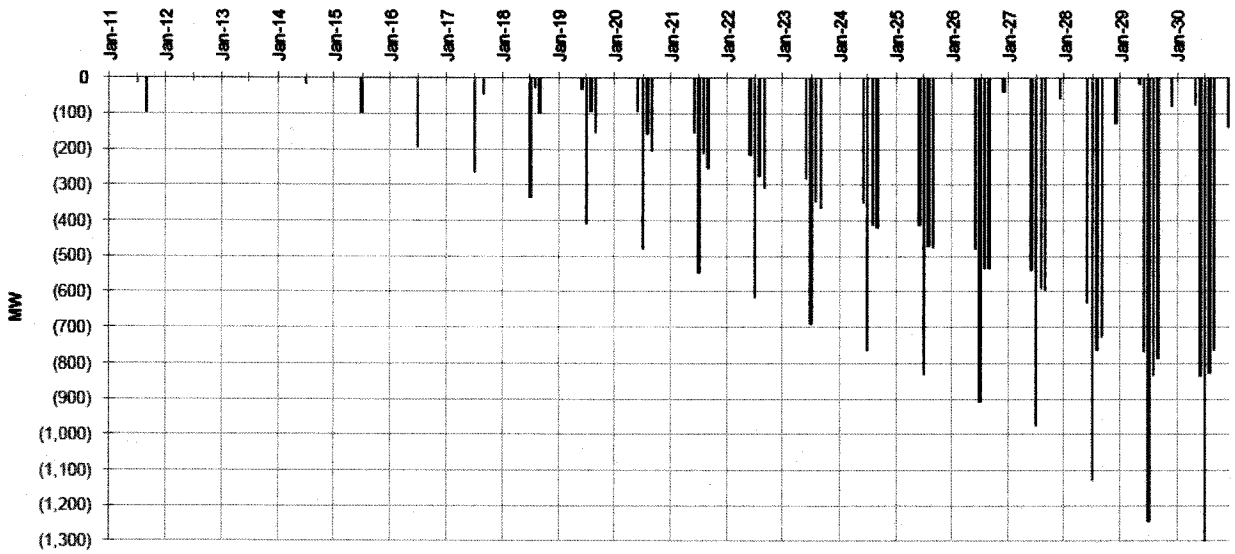
	1/2029	2/2029	3/2029	4/2029	5/2029	6/2029	7/2029	8/2029	9/2029	10/2029	11/2029	12/2029
Load Forecast (95th% w/EE)	(2,991)	(2,748)	(2,492)	(2,151)	(3,665)	(4,541)	(4,822)	(4,335)	(4,031)	(2,520)	(2,677)	(3,463)
Existing Demand Response	0	0	0	0	0	351	351	273	0	0	0	0
Peak-Hour Forecast w/DR	(2,991)	(2,748)	(2,492)	(2,151)	(3,665)	(4,190)	(4,471)	(4,062)	(4,031)	(2,520)	(2,677)	(3,463)
Existing Resources												
Coal	908	908	908	908	908	908	908	908	908	908	908	908
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	189	188	184	185	277	284	256	207	203	202	184	187
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (90th%)	1,296	1,224	1,270	1,305	1,442	1,333	1,278	1,198	1,183	1,082	1,094	1,229
CSPP (PURPA)	166	171	136	104	70	68	63	61	71	94	149	150
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	35	35	35	35	35	35	35	35	35	35	35	35
Firm Pacific NW Import Capability	350	197	43	103	476	362	227	308	331	142	291	346
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,470	3,251	3,108	3,171	3,647	3,422	3,226	3,226	3,244	2,976	3,193	3,384
Monthly Surplus/Deficit	0	0	0	0	(18)	(768)	(1,245)	(836)	(787)	0	0	(78)
2011 IRP DSM												
Industrial	13	13	13	13	13	13	13	13	13	13	13	13
Commercial	7	7	7	7	7	6	6	6	7	7	7	7
Residential	15	15	15	15	15	43	43	43	15	15	15	15
Total New DSM Peak Reduction	34	34	34	34	34	62	62	62	34	34	34	34
Remaining Monthly Surplus/Deficit	0	0	0	0	0	(705)	(1,183)	(774)	(753)	0	0	(44)
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	450	450	450	450	450	450	450	450	450	450	450	450
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	170	170	170	0	0	0	0
2024 Solar Power Tower	8	15	20	25	31	36	44	41	36	25	15	4
2025 CCCT	300	300	300	300	300	300	300	300	300	300	300	300
2028 Small Hydro	0	0	0	8	40	47	52	48	37	12	0	0
2029 SCCT Frame	0	0	0	0	0	170	170	170	0	0	0	0
New Resource Subtotal	810	817	822	835	872	1,224	1,238	1,230	875	839	817	806
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
Remaining Monthly Surplus/Deficit	1,324	1,354	1,473	1,888	888	519	55	456	122	1,329	1,367	762

Peak-Hour Load and Resource Balance (continued)

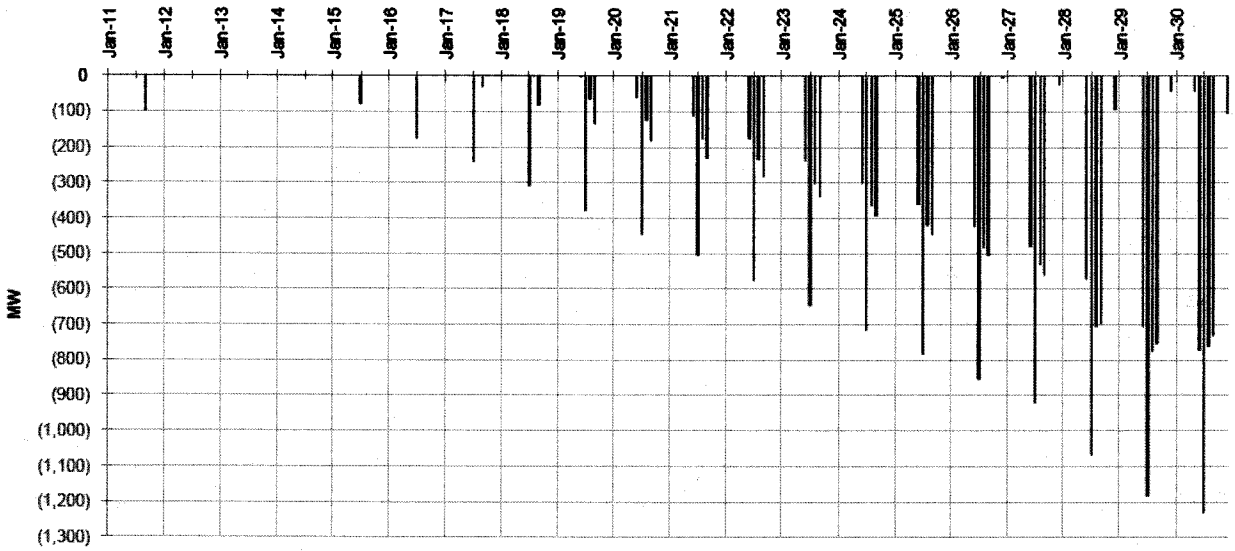
	1/2030	2/2030	3/2030	4/2030	5/2030	6/2030	7/2030	8/2030	9/2030	10/2030	11/2030	12/2030
Load Forecast (95th% w/EE)	(3,023)	(2,772)	(2,516)	(2,172)	(3,713)	(4,609)	(4,901)	(4,406)	(4,092)	(2,550)	(2,708)	(3,509)
Existing Demand Response	0	0	0	0	0	351	351	273	0	0	0	0
Peak-Hour Forecast w/DR	(3,023)	(2,772)	(2,516)	(2,172)	(3,713)	(4,258)	(4,550)	(4,133)	(4,092)	(2,550)	(2,708)	(3,509)
Existing Resources												
Coal	908	908	908	908	908	908	908	908	908	908	908	908
Gas (Langley Gulch)	300	300	300	300	300	300	300	300	300	300	300	300
Hydro (90th%)—HCC	1,100	1,000	1,070	1,120	1,150	1,030	1,020	990	980	880	910	1,030
Hydro (90th%)—Other	189	188	184	185	277	284	256	207	203	202	184	187
Shoshone Falls Upgrade	7	35	16	0	15	19	2	1	0	0	0	12
Sho-Ban Water Lease	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro (90th%)	1,296	1,224	1,270	1,305	1,442	1,333	1,278	1,198	1,183	1,082	1,094	1,229
CSPP (PURPA)	101	75	67	64	62	70	93	144	154	166	162	136
PPAs												
Elkhorn Valley Wind	5	5	5	5	5	5	5	5	5	5	5	5
Raft River Geothermal	10	10	10	10	10	10	10	10	10	10	10	10
Neal Hot Springs Geothermal	20	20	20	20	20	20	20	20	20	20	20	20
Clatskanie Exchange–Take	0	0	0	0	0	0	0	0	0	0	0	0
Clatskanie Exchange– Return	0	0	0	0	0	0	0	0	0	0	0	0
PPL Montana–Jefferson (83 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Eastside Purchase (50 MW)	0	0	0	0	0	0	0	0	0	0	0	0
Mead Purchase	0	0	0	0	0	0	0	0	0	0	0	0
Total PPAs	35	35	35	35	35	35	35	35	35	35	35	35
Firm Pacific NW Import Capability	370	243	85	143	475	359	224	306	330	184	345	344
Gas Peakers	416	416	416	416	416	416	416	416	416	416	416	416
Existing Resource Subtotal	3,426	3,201	3,080	3,171	3,637	3,422	3,253	3,307	3,326	3,091	3,259	3,368
Monthly Surplus/Deficit	0	0	0	0	(76)	(837)	(1,296)	(826)	(766)	0	0	(141)
2011 IRP DSM												
Industrial	13	13	13	13	13	13	13	13	13	13	13	13
Commercial	7	7	7	7	7	6	6	6	7	7	7	7
Residential	15	16	15	16	15	45	45	45	15	16	15	15
Total New DSM Peak Reduction	35	35	35	35	35	65	65	65	35	35	35	35
Remaining Monthly Surplus/Deficit	0	0	0	0	(41)	(772)	(1,232)	(761)	(731)	0	0	(106)
2011 IRP Resources												
2015 Eastside Purchase	0	0	0	0	0	0	0	0	0	0	0	0
2016 Boardman to Hemingway	450	450	450	450	450	450	450	450	450	450	450	450
2021 Geothermal	52	52	52	52	52	52	52	52	52	52	52	52
2022 SCCT Frame	0	0	0	0	0	170	170	170	0	0	0	0
2024 Solar Power Tower	8	15	20	25	31	36	44	41	36	25	15	4
2025 CCCT	300	300	300	300	300	300	300	300	300	300	300	300
2028 Small Hydro	0	0	0	8	40	47	52	48	37	12	0	0
2029 SCCT Frame	0	0	0	0	0	170	170	170	0	0	0	0
New Resource Subtotal	810	817	822	835	872	1,224	1,238	1,230	875	839	817	806
Monthly Surplus/Deficit	0	0	0	0	0	0	0	0	0	0	0	0
Remaining Monthly Surplus/Deficit	1,248	1,280	1,421	1,869	831	452	6	469	143	1,414	1,403	700

Peak-Hour Surplus/Deficit Charts

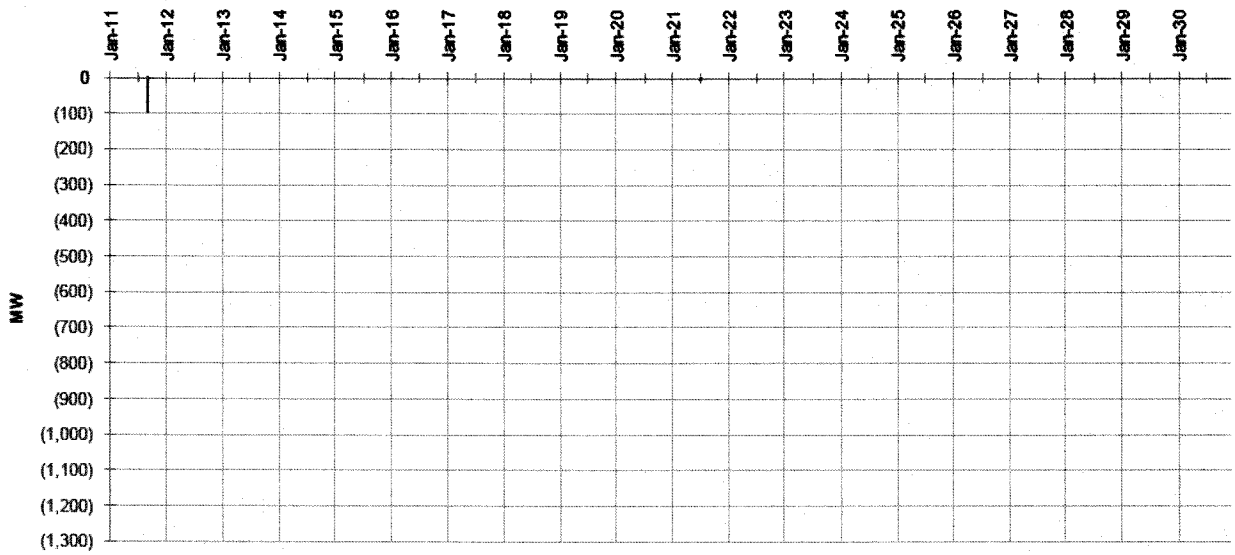
Peak-hour monthly deficits with existing DSM and resources



Peak-hour monthly deficits with existing resources and new DSM



Peak-hour monthly deficits with existing resources, new DSM, and IRP resources



DEMAND-SIDE RESOURCE DATA

Cost Effectiveness

The majority of Idaho Power's energy efficiency programs are preliminarily identified through the integrated resource planning process. Similar to the 2009 IRP, a majority of the anticipated new energy efficiency future commitments for the 2011 IRP come through additional measures added to existing programs and existing program expansion as opposed to new program offerings.

Idaho Power considers cost-effectiveness to be the primary screening tool prior to demand-side management (DSM) program implementation. Idaho Power primarily uses the total resource cost (TRC) test and the utility cost (UC) test to develop benefit cost (B/C) ratios to determine the cost-effectiveness of DSM programs for inclusion in resource planning. The two tests insure that the program benefits will exceed costs from both the perspective of Idaho Power (UC) and its customers (TRC). For ongoing programs, tests are also run to look at cost-effectiveness from the point of view of the program participant.

Incorporated into the cost-effectiveness analysis are inputs from various sources that represent the most current and reliable information available. For the 2011 IRP, program administration costs were derived from actual 2010 program performance. Measure savings, measure life, and participant cost assumptions for prescriptive programs are usually sourced from the Regional Technical Forum (RTF), which is the regional advisory group and technical arm of the Northwest Power and Conservation Council (NPCC). For custom and non-prescriptive programs, annual energy savings can be derived from engineering estimates or regionally deemed values. Participant costs for non-prescriptive programs are often actual costs from customer submitted information. Other inputs used in the cost-effectiveness models are obtained from the IRP process including the financial assumptions along with the forecasted value of avoided costs.

Idaho Power determines cost-effectiveness on both a program basis and also on a measure-by-measure basis. Demand response program B/C ratios for the residential A/C Cool Credit, Irrigation Peak Rewards, and the commercial and industrial FlexPeak Management program are calculated over a 20-year period which allows for a better comparison with supply-side resource costs. In all cases, whether cost-effectiveness is looked at from the point of view of one measure, as a program, or a 20-year life, for a program to be considered cost-effective the program must have B/C ratios greater than one for both the TRC and UC tests.

The cost-effective analysis methods used at Idaho Power are consistent with published methods and standard practices. Idaho Power relies on the *Electric Power Research Institute End Use Technical Assessment Guide* (TAG) and the *California Standard Practice Manual* for the cost-effectiveness methodology. As defined in the TAG and *California Standard Practice Manual*, the TRC and UC tests are most similar to supply-side cost analysis and provide a useful basis to compare demand-side and supply-side resources.

When developing energy efficiency and demand response resources including program design, Idaho Power uses actual data and experiences from other companies in the region, or throughout the country, to help identify specific program parameters. The regional program review is typically accomplished through discussions with other utilities' program managers and research staff. Other program development resources include; E Source, Edison Electrical Institute (EEI), Consortium for Energy Efficiency (CEE), American Council for an Energy Efficient Economy (ACEEE), Advanced Load Control Alliance (ALCA). For other assumptions, including estimated cost,

savings, Idaho Power relies on sources, such as the NPCC, the RTF, NEEA, the Database for Energy Efficiency Resources (DEER), third-party consultants, and other regional utilities.

Idaho Power may choose to launch a pilot or limited-scale program to evaluate estimates or assumptions in the cost-effectiveness model. Pilot programs are designed to measure actual program experiences, including program expenses, savings, and participation. Following implementation of a program, the cost-effectiveness models are reviewed as data from actual program activity becomes available. The program design may be re-examined after program implementation.

The financial assumptions used in the analysis are consistent with the 2011 IRP, including the discount rate and cost escalation rates. The IRP is also the source of the DSM alternative cost, which is the value of energy savings and demand reduction resulting from the DSM programs. The DSM alternative costs vary by season and time-of-day. The DSM alternative energy costs are based on either projected fuel costs of a natural gas peaking unit for peak summer hours or forward market prices as determined by the AURORAxmp® Electric Market Model. The avoided capacity resource for peak summer hours and for demand response programs is based on a 170 MW natural gas-fired, simple-cycle combustion turbine (SCCT).

Alternate Costs

The prices of avoided energy throughout the 20-year planning period were simulated using the Preferred Portfolio module within the AURORA model. The preferred portfolio module considers the energy capacity and resource costs of the current preferred mix of IRP resources along with regional transmission resources in the Western Electricity Coordinating Council (WECC) region to project forward electric market prices. The forward prices are placed into five homogenous pricing categories that follow the pattern of heavy- and light-load pricing throughout each year of the planning period. The resulting categories are:

- Summer On-Peak (SONP)—Average of Idaho Power variable energy and operating costs of a 170 MW SCCT, which is the marginal resource for peak hour load deficits during summertime heavy load hours

- Summer Mid-Peak (SMP)—Average of heavy load prices from June–August

- Summer Off-Peak (SOFP)—Average of light load prices from June–August

- Non-Summer Mid-Peak (NSMP)—Average of heavy load prices in January–May and September–December

- Non-Summer Off-Peak (NSOFP)—Average of light load prices in January–May and September–December

The SONP is treated differently than the other four pricing periods. During the SONP, additional purchases from the regional power market are not an option due to currently existing transmission constraints. The marginal resource Idaho Power is trying to avoid with DSM efforts for SONP hours is the construction of SCCT. The estimated levelized capacity cost of building a new SCCT is approximately $94 per kW over a 30-year expected plant life. For demand response or direct load

control DSM programs operating during the summer peak, the $94 per kW becomes the cost threshold for program cost-effectiveness.

The avoided capacity value is spread across the annual SONP hours to value the energy efficiency savings occurring during the hours. The total SONP hours vary between 512 to 528 depending on the calendar year. Table DSM-1 lists the financial assumptions used for the cost-effectiveness analysis and new program screening.

Table DSM-2 shows the results of averaging forward energy prices over the 20-year planning period that were used to screen new energy efficiency and demand response programs for cost-effectiveness along with the forecast of operation and maintenance (O&M) costs, including fuel for peak summer hours (SONP). The forward energy prices for measures that have a life longer than 20 years, which is typical for weatherization and building shell measures, are escalated at 3 percent annually as needed.

Tables DSM-3 and DSM-4 show the distribution of the three summer and two non-summer pricing periods across the hours and days of the week and for holidays.

Tables DSM-5 through DSM-7 show the 20-year forecasted impact of energy efficiency by customer class for existing programs, along with the corresponding forecasted UC, and the TRC.

Table DSM-8 outlines the 20-year flow of avoided generation and the benefits attributed to the existing energy efficiency portfolio of programs.

Table DSM-9 summarizes the cost-effectiveness analysis for the existing energy efficiency portfolio of programs through the 20-year IRP planning period.

Table DSM-10 shows the 20-year annual forecasted impact of energy efficiency by customer class for new program measures and existing program expansions.

Table DSM-11 shows the 20-year annual forecast of UC or the costs to administer new program measures and existing program expansions.

Table DSM-12 shows the 20-year flow of resource costs that combines the program participant costs with the costs to administer the program for new program measures and existing program expansions.

Table DSM-13 outlines the 20-year flow of avoided generation and the benefits attributed to new program measures and existing program expansions.

Table DSM-14 summarizes the cost-effectiveness analysis for new program measures and existing program expansions through the 20-year IRP planning period.

Table DSM-15 shows the 20 year annual forecasted operational targets from all existing and new energy efficiency programs.

Tables DSM-16 through DSM-19 show the 20-year flow of demand reduction targets, UC, TRC, and the value of avoided generation for demand response programs, similar to those presented for energy efficiency programs.

Table DSM-20 summarizes the cost-effectiveness for demand response programs and the forecasted impact of the demand response operational targets through the IRP planning horizon.

Table DSM-1. IRP financial assumptions

DSM Analysis Assumptions	
Avoided Capacity Costs	
SCCT	$94/kW
Financial Assumptions	
Weighted average cost of capital (2008 year ending after tax)	7.00%
Financial escalation factor	3.00%
Transmission Losses	
Non-summer secondary losses	10.90%
Summer peak loss	13.00%

Table DSM-2. DSM alternate costs by pricing period

Year	Summer On-Peak* (SONP)	Summer Mid-Peak (SMP)	Summer Off-Peak (SOFP)	Non-Summer Mid-Peak (NSMP)	Non-Summer Off-Peak (NSOFP)
2011	$60.89	$54.42	$36.25	$55.21	$38.22
2012	$69.32	$60.74	$40.77	$61.61	$42.87
2013	$76.15	$65.06	$44.41	$64.89	$45.74
2014	$81.13	$70.10	$48.16	$69.41	$48.81
2015	$102.02	$83.09	$63.18	$82.13	$61.71
2016	$107.46	$87.44	$66.55	$85.69	$64.88
2017	$112.71	$92.77	$71.14	$90.50	$69.13
2018	$117.79	$96.80	$75.64	$95.88	$73.50
2019	$122.76	$102.71	$80.62	$101.44	$78.51
2020	$128.32	$109.45	$86.52	$107.53	$84.34
2021	$134.04	$114.80	$90.59	$113.45	$89.30
2022	$137.67	$119.64	$94.79	$117.74	$92.35
2023	$142.80	$130.75	$102.71	$128.30	$100.59
2024	$148.73	$134.44	$104.67	$133.70	$105.39
2025	$155.25	$143.49	$109.80	$140.64	$109.95
2026	$161.87	$149.37	$113.29	$147.30	$114.66
2027	$168.70	$154.60	$111.26	$153.26	$118.05
2028	$176.12	$160.39	$119.72	$158.69	$124.71
2029	$183.85	$166.21	$125.48	$165.50	$131.51
2030	$191.80	$171.20	$129.24	$170.46	$135.45

* Estimated variable operations and management costs of a 170 MW capacity SCCT.

Table DSM-3. DSM alternate cost summer pricing periods (June 1–August 31)

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

Table DSM-4. DSM alternate cost non-summer pricing periods (September 1–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

Table DSM-5. Cumulative existing energy efficiency portfolio forecast 2011-2030
(aMW w/transmission losses)

Year	Industrial	Irrigation	Commercial	Residential	Total
2011	5	1	6	2	15
2012	10	2	12	5	29
2013	15	3	18	7	43
2014	19	4	24	10	57
2015	23	5	30	11	69
2016	28	6	36	13	82
2017	32	6	42	15	95
2018	37	7	48	16	108
2019	41	8	54	18	121
2020	46	8	60	20	133
2021	50	9	65	22	145
2022	53	9	70	23	155
2023	56	10	74	24	164
2024	59	10	77	25	172
2025	61	11	80	26	178
2026	63	11	83	27	183
2027	64	11	85	27	187
2028	65	11	86	28	190
2029	66	11	86	28	191
2030	66	11	86	28	191

Table DSM-6. Existing energy efficiency portfolio UC 2011-2030

Year	Industrial	Irrigation	Commercial	Residential	Total All Sectors
2011	$5,305,131	$2,066,694	$5,428,863	$6,086,795	$18,887,483
2012	$5,008,928	$1,915,825	$5,709,427	$6,116,523	$18,750,703
2013	$4,690,178	$1,754,044	$5,956,945	$6,071,831	$18,472,998
2014	$4,830,883	$1,580,832	$6,135,653	$6,269,750	$18,817,119
2015	$4,975,810	$1,209,563	$6,319,723	$5,958,083	$18,463,179
2016	$5,125,084	$1,245,849	$6,509,314	$6,154,123	$19,034,371
2017	$5,278,837	$1,283,225	$6,704,594	$6,356,866	$19,623,522
2018	$5,437,202	$1,321,722	$6,905,732	$6,566,552	$20,231,207
2019	$5,600,318	$1,361,373	$7,112,904	$6,763,617	$20,838,212
2020	$5,768,327	$1,402,215	$7,326,291	$6,966,526	$21,463,358
2021	$5,347,239	$1,299,853	$6,791,471	$6,457,969	$19,896,533
2022	$4,895,695	$1,190,088	$6,217,969	$5,912,630	$18,216,381
2023	$4,412,245	$1,072,566	$5,603,945	$5,328,757	$16,417,514
2024	$3,895,382	$946,923	$4,947,483	$4,704,532	$14,494,319
2025	$3,343,536	$812,775	$4,246,589	$4,038,056	$12,440,957
2026	$2,755,074	$669,727	$3,499,190	$3,327,358	$10,251,349
2027	$2,128,295	$517,364	$2,703,124	$2,570,384	$7,919,167
2028	$1,461,429	$355,257	$1,856,145	$1,764,997	$5,437,828
2029	$752,636	$182,957	$955,915	$908,974	$2,800,481
2030	$0	$0	$0	$0	$0
20-Year NPV	**49398585.63**	**14229457.72**	**60885631.38**	**60023977.7**	**184537652.4**

Table DSM-7. Existing energy efficiency portfolio TRC 2011-2030

Year	Industrial	Irrigation	Commercial	Residential	Total All Sectors
2011	$10,378,144	$5,613,834	$10,688,073	$10,369,974	$37,050,025
2012	$9,798,697	$5,204,024	$11,235,421	$10,391,021	$36,629,164
2013	$9,175,144	$4,764,573	$11,739,780	$10,478,055	$36,157,552
2014	$9,450,398	$4,294,071	$12,091,974	$10,811,816	$36,648,259
2015	$9,733,910	$3,285,578	$12,454,733	$10,335,755	$35,809,976
2016	$10,025,928	$3,384,145	$12,828,375	$10,667,137	$36,905,585
2017	$10,326,705	$3,485,670	$13,213,226	$11,009,472	$38,035,073
2018	$10,636,507	$3,590,240	$13,609,623	$11,363,138	$39,199,507
2019	$10,955,602	$3,697,947	$14,017,912	$11,704,116	$40,375,577
2020	$11,284,270	$3,808,885	$14,438,449	$12,055,240	$41,586,844
2021	$10,460,518	$3,530,837	$13,384,442	$11,175,207	$38,551,004
2022	$9,577,185	$3,232,677	$12,254,200	$10,231,523	$35,295,586
2023	$8,631,438	$2,913,450	$11,044,098	$9,221,160	$31,810,147
2024	$7,620,327	$2,572,160	$9,750,361	$8,140,967	$28,083,816
2025	$6,540,781	$2,207,771	$8,369,060	$6,987,663	$24,105,275
2026	$5,389,603	$1,819,203	$6,896,105	$5,757,835	$19,862,747
2027	$4,163,469	$1,405,335	$5,327,241	$4,447,927	$15,343,972
2028	$2,858,915	$964,996	$3,658,039	$3,054,243	$10,536,194
2029	$1,472,341	$496,973	$1,883,890	$1,572,935	$5,426,140
2030	$0	$0	$0	$0	$0
20-Year NPV	**$96,635,806**	**$38,651,984**	**$119,966,128**	**$103,519,281**	**$358,773,200**

Table DSM-8. Existing energy efficiency portfolio avoided energy costs 2011-2030

Year	Industrial	Irrigation	Commercial	Residential	Total All Sectors
2011	$32,844,311	$7,358,378	$35,697,627	$21,464,719	$97,365,035
2012	$30,107,285	$6,622,540	$36,479,634	$21,068,162	$94,277,622
2013	$27,370,259	$5,886,702	$36,870,638	$20,711,920	$90,839,519
2014	$27,370,259	$5,150,864	$36,870,638	$20,735,849	$90,127,610
2015	$27,370,259	$3,826,356	$36,870,638	$19,035,142	$87,102,396
2016	$27,370,259	$3,826,356	$36,870,638	$19,059,891	$87,127,145
2017	$27,370,259	$3,826,356	$36,870,638	$19,085,062	$87,152,315
2018	$27,370,259	$3,826,356	$36,870,638	$19,110,660	$87,177,913
2019	$27,370,259	$3,826,356	$36,870,638	$19,110,749	$87,178,003
2020	$27,370,259	$3,826,356	$36,870,638	$19,110,749	$87,178,003
2021	$24,633,233	$3,443,721	$33,183,574	$17,199,674	$78,460,202
2022	$21,896,207	$3,061,085	$29,496,510	$15,288,599	$69,742,402
2023	$19,159,182	$2,678,449	$25,809,447	$13,377,524	$61,024,602
2024	$16,422,156	$2,295,814	$22,122,383	$11,466,449	$52,306,802
2025	$13,685,130	$1,913,178	$18,435,319	$9,555,375	$43,589,001
2026	$10,948,104	$1,530,543	$14,748,255	$7,644,300	$34,871,201
2027	$8,211,078	$1,147,907	$11,061,191	$5,733,225	$26,153,401
2028	$5,474,052	$765,271	$7,374,128	$3,822,150	$17,435,601
2029	$2,737,026	$382,636	$3,687,064	$1,911,075	$8,717,800
2030	$0	$0	$0	$0	$0
20-Year NPV	$257,704,824	$43,667,373	$335,208,357	$181,086,911	$817,667,465

Table DSM-9. Existing energy efficiency portfolio cost-effectiveness summary

	Impact	20-Year NPV Costs			UC		TRC	
	2030 Load (aMW)	Utility	Resource	Avoided Energy	B/C Ratio	Levelized ($/kWh)	B/C Ratio	Levelized Costs ($/kWh)
Industrial	66	$49,398,586	$96,635,806	$257,704,824	5.2	$0.015	2.7	$0.028
Irrigation	11	$14,229,458	$38,651,984	$43,667,373	3.1	$0.023	1.1	$0.061
Commercial	86	$60,885,631	$119,966,128	$335,208,357	5.5	$0.014	2.8	$0.027
Residential	28	$60,023,978	$103,519,281	$181,086,911	3.0	$0.040	1.7	$0.069
Total	191	$184,537,652	$358,773,200	$817,667,465	4.4	$0.019	2.3	$0.036

Table DSM-10. Cumulative new energy efficiency portfolio forecast 2011-2030
(aMW w/transmission losses)

Year	Industrial	Commercial	Residential	Total
2011	2	1	1	3
2012	3	1	1	5
2013	5	1	2	8
2014	6	2	3	11
2015	7	2	4	13
2016	8	3	5	15
2017	8	3	6	18
2018	9	4	7	20
2019	9	4	9	22
2020	10	5	10	25
2021	11	5	11	27
2022	11	5	13	29
2023	12	6	14	31
2024	12	6	15	33
2025	12	6	16	35
2026	13	6	18	37
2027	13	6	19	38
2028	13	7	20	40
2029	13	7	22	41
2030	13	7	23	42

Table DSM-11. New energy efficiency UC 2011-2030

Year	Industrial	Commercial	Residential	Total All Sectors
2011	$1,642,064	$479,932	$1,622,645	$3,744,641
2012	$1,496,173	$453,136	$1,873,579	$3,822,888
2013	$2,010,076	$424,300	$2,112,145	$4,546,521
2014	$1,380,252	$437,029	$2,666,461	$4,483,742
2015	$710,830	$450,140	$2,909,628	$4,070,597
2016	$732,155	$463,644	$3,173,904	$4,369,702
2017	$754,120	$477,553	$3,404,458	$4,636,130
2018	$776,743	$491,880	$3,554,156	$4,822,778
2019	$800,045	$506,636	$3,706,560	$5,013,242
2020	$824,047	$521,835	$3,889,291	$5,235,173
2021	$763,891	$483,741	$4,017,933	$5,265,565
2022	$699,385	$442,892	$4,076,109	$5,218,385
2023	$630,321	$399,156	$4,134,669	$5,164,146
2024	$556,483	$352,398	$4,193,613	$5,102,494
2025	$477,648	$302,475	$4,252,937	$5,033,060
2026	$393,582	$249,239	$4,312,642	$4,955,463
2027	$304,042	$192,537	$4,372,729	$4,869,308
2028	$208,776	$132,209	$4,433,200	$4,774,184
2029	$107,519	$68,088	$4,417,298	$4,592,905
2030	$0	$0	$4,396,453	$4,396,453
20-Year NPV	$10,293,124	$4,468,872	$35,582,870	$50,344,865

Table DSM-12. New energy efficiency TRC 2011-2030

Year	Industrial	Commercial	Residential	Total All Sectors
2011	$3,212,283	$924,431	$2,671,501	$6,808,215
2012	$2,926,884	$872,817	$3,190,869	$6,990,570
2013	$3,932,205	$817,274	$3,694,416	$8,443,895
2014	$2,700,114	$841,792	$4,903,200	$8,445,106
2015	$1,390,559	$867,046	$5,415,211	$7,672,816
2016	$1,432,275	$893,058	$5,973,476	$8,298,809
2017	$1,475,244	$919,849	$6,455,345	$8,850,437
2018	$1,519,501	$947,445	$6,755,376	$9,222,322
2019	$1,565,086	$975,868	$7,060,418	$9,601,373
2020	$1,612,039	$1,005,144	$7,432,207	$10,049,389
2021	$1,494,360	$931,769	$7,812,294	$10,238,423
2022	$1,368,169	$853,086	$8,041,475	$10,262,731
2023	$1,233,063	$768,844	$8,278,518	$10,280,425
2024	$1,088,618	$678,779	$8,523,748	$10,291,146
2025	$934,397	$582,619	$8,777,506	$10,294,522
2026	$769,943	$480,078	$9,040,150	$10,290,171
2027	$594,781	$370,860	$9,312,055	$10,277,696
2028	$408,416	$254,657	$9,593,615	$10,256,689
2029	$210,334	$131,149	$9,713,579	$10,055,061
2030	$0	$0	$9,832,105	$9,832,105
20-Year NPV	$20,135,886	$8,607,815	$69,027,549	$97,771,250

Table DSM-13. New energy efficiency avoided energy costs 2011-2030

Year	Industrial	Commercial	Residential	Total All Sectors
2011	$10,166,096	$3,284,431	$9,688,235	$23,138,763
2012	$8,993,085	$3,010,729	$11,886,107	$23,889,920
2013	$11,730,111	$2,737,026	$13,741,375	$28,208,512
2014	$7,820,074	$2,737,026	$18,590,724	$29,147,824
2015	$3,910,037	$2,737,026	$20,155,510	$26,802,573
2016	$3,910,037	$2,737,026	$21,803,334	$28,450,397
2017	$3,910,037	$2,737,026	$23,026,680	$29,673,743
2018	$3,910,037	$2,737,026	$23,444,101	$30,091,164
2019	$3,910,037	$2,737,026	$23,834,165	$30,481,227
2020	$3,910,037	$2,737,026	$24,425,904	$31,072,967
2021	$3,519,033	$2,463,323	$25,296,694	$31,279,050
2022	$3,128,030	$2,189,621	$25,585,141	$30,902,792
2023	$2,737,026	$1,915,918	$25,877,455	$30,530,399
2024	$2,346,022	$1,642,216	$26,173,719	$30,161,956
2025	$1,955,019	$1,368,513	$26,474,018	$29,797,549
2026	$1,564,015	$1,094,810	$26,778,442	$29,437,267
2027	$1,173,011	$821,108	$27,087,083	$29,081,202
2028	$782,007	$547,405	$27,400,039	$28,729,452
2029	$391,004	$273,703	$27,230,745	$27,895,451
2030	$0	$0	$27,061,451	$27,061,451
20-Year NPV	$56,034,905	$25,770,482	$228,851,046	$310,656,434

Table DSM-14. New energy efficiency cost-effectiveness summary 2011-2030

	Impact	20-Year NPV Costs			UC		TRC	
	2030 Load (aMW)	Utility	Resource	Avoided Energy	B/C Ratio	Levelized ($/kWh)	B/C Ratio	Levelized Costs ($/kWh)
Industrial	13	$10,293,124	$20,135,886	$56,034,905	5.4	$0.013	2.8	$0.026
Commercial	7	$4,468,872	$8,607,815	$25,770,482	5.8	$0.013	3.0	$0.025
Residential	23	$35,582,870	$69,027,549	$228,851,046	6.4	$0.045	3.3	$0.086
Total	42	$50,344,865	$97,771,250	$310,656,434	6.2	$0.026	3.2	$0.051

Table DSM-15. Total energy efficiency portfolio forecasted impact existing and new 2011-2030
(aMW w/transmission losses)

Year	Industrial	Irrigation	Commercial	Residential	Total
2011	7	1	6	3	18
2012	13	2	13	6	34
2013	20	3	19	9	51
2014	25	4	26	12	68
2015	30	5	32	15	83
2016	35	6	38	18	98
2017	41	6	45	21	113
2018	46	7	51	24	128
2019	51	8	58	27	143
2020	56	8	64	30	158
2021	60	9	70	33	172
2022	64	9	75	35	184
2023	68	10	79	38	195
2024	71	10	83	40	205
2025	73	11	87	42	213
2026	75	11	89	45	220
2027	77	11	91	46	225
2028	78	11	92	48	229
2029	78	11	93	50	232
2030	78	11	93	51	233

Table DSM-16. Demand response portfolio forecasted impact 2011-2030
(MW w/transmission losses)

Year	Commercial/Industrial	Irrigation	Residential	Total
2011	35	250	45	330
2012	35	224	51	310
2013	40	224	51	315
2014	40	224	51	315
2015	40	230	51	321
2016	40	260	51	351
2017	40	260	51	351
2018	40	260	51	351
2019	40	260	51	351
2020	40	260	51	351
2021	40	260	51	351
2022	40	260	51	351
2023	40	260	51	351
2024	40	260	51	351
2025	40	260	51	351
2026	40	260	51	351
2027	40	260	51	351
2028	40	260	51	351
2029	40	260	51	351
2030	40	260	51	351

Table DSM-17. Demand response portfolio UC 2011-2030

Year	Commercial/Industrial	Irrigation	Residential	Total All Sectors
2011	$2,247,361	$11,295,980	$2,836,308	$16,379,648
2012	$2,257,055	$10,142,226	$1,973,958	$14,373,239
2013	$2,554,314	$9,960,104	$2,007,751	$14,522,170
2014	$2,561,526	$9,990,770	$2,042,659	$14,594,955
2015	$2,568,688	$10,262,003	$2,078,732	$14,909,422
2016	$2,576,064	$10,303,688	$2,116,026	$14,995,779
2017	$2,583,662	$10,331,152	$2,153,998	$15,068,812
2018	$2,591,487	$10,421,500	$2,193,073	$15,206,060
2019	$2,599,548	$10,404,669	$2,233,853	$15,238,070
2020	$2,607,850	$10,423,523	$2,275,028	$15,306,401
2021	$2,616,401	$10,457,730	$2,317,860	$15,391,991
2022	$2,625,209	$10,510,168	$2,362,467	$15,497,844
2023	$2,634,281	$10,550,924	$2,408,035	$15,593,240
2024	$2,643,626	$10,582,001	$2,454,658	$15,680,285
2025	$2,653,250	$10,631,069	$2,503,167	$15,787,487
2026	$2,663,164	$10,675,465	$2,552,956	$15,891,585
2027	$2,673,374	$10,707,573	$2,603,851	$15,984,798
2028	$2,683,891	$10,851,976	$2,657,019	$16,192,886
2029	$2,694,724	$10,828,235	$2,711,791	$16,234,750
2030	$2,705,882	$10,891,789	$2,768,217	$16,365,887
20-Year NPV	$29,797,258	$122,250,426	$25,242,292	$177,289,977

Table DSM-18. Demand response portfolio TRC 2011-2030

Year	Commercial/Industrial	Irrigation	Residential	Total All Sectors
2011	$2,247,361	$11,295,980	$2,836,308	$16,379,648
2012	$2,257,055	$10,142,226	$1,973,958	$14,373,239
2013	$2,554,314	$9,960,104	$2,007,751	$14,522,170
2014	$2,561,526	$9,990,770	$2,042,659	$14,594,955
2015	$2,568,688	$10,262,003	$2,078,732	$14,909,422
2016	$2,576,064	$10,303,688	$2,116,026	$14,995,779
2017	$2,583,662	$10,331,152	$2,153,998	$15,068,812
2018	$2,591,487	$10,421,500	$2,193,073	$15,206,060
2019	$2,599,548	$10,404,669	$2,233,853	$15,238,070
2020	$2,607,850	$10,423,523	$2,275,028	$15,306,401
2021	$2,616,401	$10,457,730	$2,317,860	$15,391,991
2022	$2,625,209	$10,510,168	$2,362,467	$15,497,844
2023	$2,634,281	$10,550,924	$2,408,035	$15,593,240
2024	$2,643,626	$10,582,001	$2,454,658	$15,680,285
2025	$2,653,250	$10,631,069	$2,503,167	$15,787,487
2026	$2,663,164	$10,675,465	$2,552,956	$15,891,585
2027	$2,673,374	$10,707,573	$2,603,851	$15,984,798
2028	$2,683,891	$10,851,976	$2,657,019	$16,192,886
2029	$2,694,724	$10,828,235	$2,711,791	$16,234,750
2030	$2,705,882	$10,891,789	$2,768,217	$16,365,887
20-Year NPV	$29,797,258	$122,250,426	$25,242,292	$177,289,977

Table DSM-19. Demand response avoided capacity costs 2011-2030

Year	Commercial/Industrial	Irrigation	Residential	Total All Sectors
2011	$3,450,064	$21,808,244	$4,304,426	$29,562,735
2012	$3,467,767	$19,640,451	$4,847,528	$27,955,745
2013	$3,979,560	$19,721,715	$4,851,697	$28,552,973
2014	$3,991,512	$19,780,945	$4,854,736	$28,627,192
2015	$4,041,649	$20,029,412	$4,867,483	$28,938,545
2016	$4,054,703	$20,094,105	$4,870,802	$29,019,610
2017	$4,067,303	$20,156,544	$4,874,005	$29,097,853
2018	$4,079,498	$20,216,981	$4,877,106	$29,173,585
2019	$4,091,417	$20,276,049	$4,880,136	$29,247,603
2020	$4,104,769	$20,342,220	$4,883,531	$29,330,520
2021	$4,118,497	$20,410,249	$4,887,021	$29,415,767
2022	$4,127,211	$20,453,436	$4,889,237	$29,469,884
2023	$4,139,508	$20,514,376	$4,892,364	$29,546,248
2024	$4,153,749	$20,584,950	$4,895,984	$29,634,684
2025	$4,169,405	$20,662,540	$4,899,965	$29,731,910
2026	$4,185,278	$20,741,199	$4,904,001	$29,830,477
2027	$4,201,677	$20,822,471	$4,908,170	$29,932,318
2028	$4,219,495	$20,910,773	$4,912,700	$30,042,968
2029	$4,238,051	$21,002,731	$4,917,418	$30,158,200
2030	$4,257,124	$21,097,253	$4,922,268	$30,276,645
20-Year NPV	$46,640,850	$238,224,468	$52,905,340	$337,770,658

Table DSM-20. Demand response cost-effectiveness summary

		20-Year NPV Costs		TRC	
	2030 Load Impact(MW)	Resource	Avoided Energy	B/C Ratio	Levelized Costs ($/kWh)
Commercial/Industrial	40	$29,797,258	$46,640,850	1.6	$65
Irrigation	260	$122,250,426	$238,224,468	2.0	$45
Residential	51	$25,242,292	$52,905,340	2.1	$46
Total	351	$177,289,977	$337,770,659	1.9	$48

SUPPLY-SIDE RESOURCE DATA

Key Financial and Forecast Assumptions

Financing Cap Structure and Cost	
Composition	
Debt	50.73%
Preferred	0.00%
Common	49.27%
Total	100.00%
Cost	
Debt	5.93%
Preferred	0.00%
Common	10.50%
Average Weighted Cost	8.18%

Financial Assumptions and Factors	
Plant operating (book) life	30 Years
Discount rate (AKA WACC)	7.00%
Composite tax rate	39.10%
Deferred rate	35.00%
General O&M escalation rate	3.00%
Emissions adder escalation rate	2.50%
Annual property tax rate (% of investment)	0.29%
Property tax escalation rate	3.00%
Annual insurance premiums (% of investment)	0.31%
Insurance escalation rate	2.00%
AFUDC rate (annual)	7.00%
Production tax credits escalation rate	3.00%

Tax Credits (2011$)	
Wind and geothermal	$21/MWh first 10 Years of Operation
Hydro and in-stream generation	$10/MWh first 10 Years of Operation
Solar investment tax credit (ITC)	30% of depreciable investment

Emissions Adder Rates	
Carbon Dioxide (CO_2)	$20 per ton (2015 $)
Nitrogen Oxide (NO_x)	$2,600 per ton (2015 $)
Mercury (Hg)	$1,443 per ounce (2015 $)
Sulfur Oxide (SO_2)	$1.75 per ton (2011 $)

Emissions Limits (lbs per MWh by technology, adders brought into the analysis beginning in 2015)				
	CO_2	NO_x	HG	SO_2
Small aeroderivative SCCT	1,115	1.07052	N/A	0.0096
Large aeroderivative SCCT	1,047	1.00540	N/A	0.0090
Large frame SCCT	1,413	1.35615	N/A	0.0122
CCCT 1x1	809	0.77690	N/A	0.0070
CCCT 2x1	809	0.77690	N/A	0.0070
Combined heat and power (CHP)	1,047	1.00540	N/A	0.0090
Distributed generation–gas fired	1,115	1.07052	N/A	0.0096
Pulverized coal	1,901	3.38192	0.000050	8.5339
IGCC	2,279	0.21036	0.000006	0.1490
IGCC w/carbon sequestration	421	0.25874	0.000006	0.1833

Fuel Forecast Base Case (Nominal, $ per MMBtu)			
Year	Gas	Generic Coal	Nuclear
2011	$5.00	$2.26	$0.66
2012	$5.79	$2.38	$0.66
2013	$6.42	$2.43	$0.67
2014	$6.87	$2.54	$0.67
2015	$7.27	$2.50	$0.67
2016	$7.68	$2.53	$0.68
2017	$8.08	$2.63	$0.68
2018	$8.45	$2.67	$0.69
2019	$8.80	$2.69	$0.69
2020	$9.21	$2.81	$0.69
2021	$9.62	$2.90	$0.70
2022	$9.83	$2.99	$0.70
2023	$10.18	$3.08	$0.71
2024	$10.59	$3.18	$0.71
2025	$11.06	$3.28	$0.72
2026	$11.53	$3.39	$0.72
2027	$12.01	$3.49	$0.72
2028	$12.54	$3.61	$0.73
2029	$13.09	$3.72	$0.73
2030	$13.66	$3.84	$0.74
2031	$13.74	$3.86	$0.74
2032	$13.82	$3.89	$0.75
2033	$13.91	$3.91	$0.75
2034	$13.99	$3.93	$0.75
2035	$14.07	$3.96	$0.76
2036	$14.16	$3.98	$0.76
2037	$14.24	$4.00	$0.77
2038	$14.33	$4.03	$0.78
2039	$14.41	$4.05	$0.78
2040	$14.50	$4.08	$0.79

Cost Inputs and Operating Assumptions

(All costs in 2011 dollars)

Supply-Side Resources	Plant Capacity (MW)	Plant Capital ($/kW)[1,3]	Tranmission Capital $/kW	Total Capital $/kW	Total Investment $/kW[2]	Fixed O&M $/kW[3]	Varibale O&M $/kW	Emissions $/MWh	Heat Rate Btu/kWh
Wind	100	$1,450	$283	$1,733	$1,840	$35	$1	$0	NA
Wind Magic Valley	100	$1,450	$298	$1,748	$1,856	$35	$1	$0	NA
Wind Eastern Oregon	100	$1,450	$672	$2,122	$2,253	$35	$1	$0	NA
Geothermal Nevada	26	$6,250	$231	$6,481	$7,115	$136	$5	$0	NA
Geothermal Oregon	26	$6,250	$135	$6,385	$7,010	$136	$5	$0	NA
Geothermal Idaho	26	$6,250	$665	$6,915	$7,592	$136	$5	$0	NA
Solar–Parabolic Trough	150	$2,115	$258	$2,373	$2,737	$122	$0	$0	NA
Solar–Parabolic Trough, 12 hrs energy storage	150	$3,562	$258	$3,820	$4,407	$79	$0	$0	NA
Solar–Molten Salt Power Tower, 6.9 hrs energy storage	100	$3,220	$258	$3,478	$4,012	$55	$0	$0	NA
Solar–Flat Plate PV (Distributed)	1	$3,750	$0	$3,750	$3,816	$25	$0	$0	NA
Solar–Concentrating PV	5	$6,171	$50	$6,221	$6,443	$12	$0	$0	NA
Low Drop/Small Hydro New	10	$4,000	$50	$4,050	$4,672	$14	$3	$0	NA
Pumped Storage	25	$5,000	$0	$5,000	$5,768	$10	$6	$0	NA
SCCT–Small Aeroderivative	47	$1,050	$13	$1,063	$1,126	$13	$4	$15	9,370
SCCT–Large Aeroderivative	100	$1,130	$111	$1,241	$1,314	$8	$5	$11	8,800
SCCT–Industrial Frame	170	$610	$136	$746	$790	$4	$2	$19	11,870
CCCT (1x1) F Class	270	$1,120	$96	$1,216	$1,380	$7	$2	$11	6,800
CCCT (2x1) F Class	540	$1,050	$78	$1,128	$1,280	$12	$2	$11	6,800
CHP/Co-Generation	100	$1,860	$28	$1,888	$2,008	$8	$5	$0	9,200
Reciprocating Engines	25	$1,150	$134	$1,284	$1,354	$13	$10	$13	9,700
Distributed Generation (Option # 1) Load shed	10	$0	$0	$0	$0	$60	$0	$0	9,050
Distributed Generation (Option # 2) Grid synchronized	15	$0	$160	$160	$160	$60	$0	$0	9,050
Conventional Scrubbed Coal	600	$2,223	$730	$2,953	$3,499	$5	$28	$34	9,200
IGCC	550	$2,569	$730	$3,299	$4,026	$3	$40	$34	8,765
IGCC w/carbon sequestration	380	$3,776	$730	$4,506	$5,498	$5	$47	$7	10,781
Advanced Nuclear	250	$3,820	$283	$4,103	$5,965	$1	$92	$0	10,488
Boardman to Hemingway	450	$0	$510	$510	$580	$1	$0	$0	NA
Solar–Flat Plate PV (Utility)	1	$3,750	$0	$3,750	$3,816	$25	$0	$0	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] Fixed O&M excludes property taxes and insurance (separately calculated within the levelized resource cost analysis)

Levelized Cost of Production

30-Year Levelized Cost of Production (at stated capacity factors)

Supply-Side Resources	Cost of Capital	Non-Fuel O&M[1]	Fuel	Wholesale Energy	Emission Adders	Total Cost per MWh[1]	Capacity Factor
Advanced Nuclear (380 MW)	$85	$137	$8	$0	$0	$229	85%
CCCT 1x1 (270 MW)	$26	$6	$65	$0	$11	$108	65%
CCCT 2x1 (540 MW)	$24	$7	$65	$0	$11	$107	65%
CHP (100 MW)	$26	$10	$74	$0	$0	$111	93%
Distributed Generation–Grid Sync (15 MW)	$1,690	$8,478	$0	$0	$0	$10,168	0%
Distributed Generation–Load Shed (10 MW)	$0	$8,478	$0	$0	$0	$8,478	0%
Geothermal Idaho (26 MW)	$99	$25	$0	$0	$0	$124	92%
Geothermal Nevada (26 MW)	$93	$24	$0	$0	$0	$117	92%
Geothermal Oregon (26 MW)	$92	$24	$0	$0	$0	$116	92%
IGCC (550 MW)	$57	$61	$27	$0	$34	$179	85%
IGCC w/Carbon Sequestration (380 MW)	$78	$74	$33	$0	$7	$191	85%
Low Drop/Small Hydro New (10 MW)	$125	$19	$0	$0	$0	$144	45%
Pulverized Coal (750 MW)	$48	$44	$28	$0	$34	$154	88%
Pumped Storage (25 MW)	$134	$21	$0	$0	$0	$155	52%
Reciprocating Engines (25 MW)	$272	$70	$93	$0	$13	$449	6%
SCCT–Industrial Frame (170 MW)	$159	$25	$114	$0	$19	$316	6%
SCCT–Large Aero (100 MW)	$158	$32	$85	$0	$11	$286	10%
SCCT–Small Aero (47 MW)	$170	$45	$90	$0	$15	$319	8%
Solar–Concentrating PV (1 MW)	$135	$36	$0	$0	$0	$171	22%
Solar–Flat Plate PV (1 MW)	$105	$46	$0	$0	$0	$150	17%
Solar–Parabolic Trough No Storage (150 MW)	$56	$122	$0	$0	$0	$177	18%
Solar–Parabolic Trough, with Energy Storage (150 MW)	$70	$60	$0	$0	$0	$130	28%
Solar–Salt Power Tower (100 MW)	$64	$45	$0	$0	$0	$109	28%
Transmission–Boardman to Hemingway (450 MW)	$19	$1	$0	$64	$0	$83	32%
Wind (100 MW)	$69	$20	$0	$0	$0	$89	32%
Wind Eastern Oregon (100 MW)	$85	$21	$0	$0	$0	$106	32%
Wind Magic Valley (100 MW)	$70	$20	$0	$0	$0	$90	32%

[1] Includes emissions costs.

Supply-Side Resources	30-Year Levelized Capacity (fixed) Cost per kW/Month				
	Cost of Capital	Non-Fuel O&M[1]	Fuel	Emission Adders	Total Cost per kW/Month
Advanced Nuclear (380 MW)	$52	$4	$0	$0	$57
CCCT 1x1 (270 MW)	$12	$2	$0	$0	$14
CCCT 2x1 (540 MW)	$11	$2	$0	$0	$14
CHP (100 MW)	$18	$2	$0	$0	$20
Distributed Generation–Grid Sync (15 MW)	$1	$7	$0	$0	$8
Distributed Generation–Load Shed (10 MW)	$0	$7	$0	$0	$7
Geothermal Idaho (26 MW)	$67	$21	$0	$0	$88
Geothermal Nevada (26 MW)	$63	$21	$0	$0	$83
Geothermal Oregon (26 MW)	$62	$21	$0	$0	$82
IGCC (550 MW)	$35	$3	$0	$0	$38
IGCC w/Carbon Sequestration (380 MW)	$48	$4	$0	$0	$53
Low Drop/Small Hydro New (10 MW)	$41	$5	$0	$0	$46
Pulverized Coal (750 MW)	$31	$3	$0	$0	$34
Pumped Storage (25 MW)	$51	$5	$0	$0	$56
Reciprocating Engines (25 MW)	$12	$2	$0	$0	$14
SCCT–Industrial Frame (170 MW)	$7	$1	$0	$0	$8
SCCT–Large Aero (100 MW)	$12	$2	$0	$0	$13
SCCT–Small Aero (47 MW)	$10	$2	$0	$0	$12
Solar–Concentrating PV (1 MW)	$57	$6	$0	$0	$62
Solar–Flat Plate PV (1 MW)	$34	$6	$0	$0	$39
Solar–Parabolic Trough No Storage (150 MW)	$24	$16	$0	$0	$40
Solar–Parabolic Trough, with Energy Storage (150 MW)	$39	$12	$0	$0	$51
Solar–Salt Power Tower (100 MW)	$35	$9	$0	$0	$45
Transmission–Boardman to Hemingway (450 MW)	$4	$0	$0	$0	$5
Wind (100 MW)	$16	$5	$0	$0	$22
Wind Eastern Oregon (100 MW)	$20	$6	$0	$0	$25
Wind Magic Valley (100 MW)	$16	$5	$0	$0	$22

Resource Advantages and Disadvantages

Resource Type	Advantages	Disadvantages
Geothermal	• Renewable resource • No harmful emissions • Minimum fuel risk (once developed) • Low, variable operating costs • Baseload generation (90%+ capacity factor)	• Limited number of sites • High exploration costs due to drilling risks • Uncertainty surrounding future tax incentives
Wind	• Renewable resource • No fuel cost • No harmful emissions • Low, variable operating costs	• Limited number of good sites in southern Idaho • Intermittent and non-dispatchable resource • Inefficient use of limited firm transmission capacity • Avian and aesthetic impacts • Uncertainty surrounding future tax incentives
Hydro	• Renewable resource • No fuel cost • No harmful emissions • Low, variable operating costs	• Limited number of sites • Future development is limited to small sites or at existing dams without power generation • Fish and other environmental issues

Resource Type	Advantages	Disadvantages
Solar (General)	• Renewable resource • No fuel cost • No harmful emissions • Low, variable operating costs • Generation would match well with summer peak loads.	• More expensive than other resource options • Poor generation during winter months • Intermittent and non-dispatchable resource • Inefficient use of limited firm transmission capacity • Limited utility scale projects exist
Parabolic Trough	• Can be built with thermal storage	• Utility scale production is limited
Power Tower	• By using molten salt, thermal storage can be built integrally into the system	• Utility scale production is unproven • Requires land slope of 1 percent of less
Parabolic Dish	• Off-grid electricity production in remote areas	• Not suitable for storage options • Unproven technology
Photovoltaic	• Proven & reliable technology • Suitable for distributed generation	• Cloud cover creates a rapid power drop-off • Utility scale projects are only practical up to 10 MW
Biomass	• Renewable resource • No harmful emissions • Minimum fuel risk • Low, variable operating costs • Baseload generation (90%+ capacity factor)	• Limited number of sites • Uncertainty surrounding future tax incentives • Fuel supply risk
In-stream Generation	• Renewable resource • No harmful emissions • No fuel cost	• Small size, many sites would be required • Environmental impact and permitting • High maintenance cost
Distributed Generation	• Utilize existing backup generators at customer sites • Dispatchable resource • Provides operating reserves	• More expensive than other resource options • Limited number of sites • Fuel price risk and volatility • Existing air quality permits may need to be modified • Small size, many sites would be required
Natural Gas		
Combined-Cycle Combustion Turbines (CCCT)	• Proven and reliable technology • Dispatchable resource • Provides operating reserves necessary for integration of renewable generation • More efficient than a SCCT • Greater than 50% reduction in CO_2 emissions per MWh of output compared to conventional pulverized coal technology	• Fuel price risk and volatility • Potential fuel supply and transportation issues
Simple-Cycle Combustion Turbines (SCCT)	• Dispatchable resource • Proven, reliable resource • Low capital cost • Short construction lead times • Ideal for peaking service	• High variable operating cost • Fuel price risk and volatility • Less efficient than a CCCT

Resource Type	Advantages	Disadvantages
Coal		
Pulverized	• Abundant, low cost fuel • Less price volatility than natural gas • Proven and reliable technology • Dispatchable resource • Well suited for baseload operations	• Potential lack of public acceptance • Significant particulate and gas emissions, particularly CO_2 • Significant capital investment • Long construction lead times • Lengthy environmental permitting and siting processes
Advanced Technology	• Abundant, low cost fuel • Potentially lower greenhouse gas emissions if CO_2 is sequestered • Potential for financial incentives • Dispatchable resource	• New, unproven technologies • Higher capital costs than pulverized coal • Long construction lead times
Nuclear	• Forecasted low fuel costs • Forecasted adequate fuel availability • Lack of greenhouse gas emissions • Potential low cost of production • Proven technology (existing reactor types)	• Lack of public acceptance • Safety concerns • Waste disposal • Construction cost uncertainties and the potential for construction cost overruns • Security concerns

Camp Process

The Eastern Snake Plain Aquifer (ESPA) serves nearly one million acres of ground water irrigated land, cities, industries, and thousands of domestic wells. Above American Falls, the ESPA supports spring discharge that provides natural flow for irrigated lands in the Magic Valley. The ESPA has experienced serious declines that began in the late 1970s and appear to be ongoing. Those declines have impacted spring discharge to the Snake River, including springs that provide irrigation water and flows of cold water that support fish hatcheries from Twin Falls to Hagerman. Flow from the ESPA also provides a significant portion of the flow in the Snake River at King Hill and below.

Declining spring discharge has created numerous water shortages resulting in water calls pitting senior spring and surface water users against junior ground water appropriators. Many of those water calls are still pending or have been only partially resolved through orders from the director of the Idaho Department of Water Resources (IDWR). Continued declines in spring flows are likely to exacerbate these ongoing conflicts over water use on the Eastern Snake River Plain (ESRP).

The 2007 Idaho Legislature tasked the Idaho Water Resource Board (IWRB) with developing an ESPA Comprehensive Aquifer Management Plan (CAMP). The charge of the legislature was to "establish public policy as a settlement framework for future management of the ESPA." To meet legislative goals, the IWRB established a 15-member committee representing various water user groups and other parties interested in the management of the ESPA. The goal of the committee was to develop an aquifer management plan to "sustain the economic viability and social and environmental health of the eastern Snake Plain by adaptively managing a balance between water use and supplies."

Table CAMP-1. Phase I Measures Included in the CAMP

Measure	Target (Acft)
Ground Water to Surface Water Conversions	100,000
Managed Aquifer Recharge	100,000
Demand Reduction	
Surface Water Conservation	50,000
Crop Mix Modification	5,000
Rotating Fallowing, Dry-Year Lease, CREP	40,000
Weather Modification	50,000

The committee met monthly starting in May 2007 continuing through September 2008. The CAMP committee first established a goal of producing an annual 600,000 acre-feet adjustment in the water budget of the ESRP. This water balance adjustment was adopted as the long-term hydrologic target; however, committee members recognized this adjustment would be achieved only after many years of implementation. The committee adopted an interim plan called Phase I that targets an annual water budget change of 200,000–300,000 acre-feet/year. The committee's goal is to have Phase I fully implemented in 10 years. Table CAMP-1 shows the measures anticipated under Phase I. The Phase I plan includes the implementation of a variety of measures to change the overall water budget of the ESRP.

CAMP was submitted to the 2009 Idaho Legislature for approval. Upon legislative approval of the plan, the IWRB began a process of selecting an implementation committee. The charge of that committee will be to "assist the Board in the prioritization, development, implementation, and monitoring and evaluation of management actions." The implementation committee will also develop a mechanism to fund measures implemented under CAMP. The successful implementation of any CAMP-recommended measure is dependent upon securing a long-term funding source. As such, the specific practices, their extent or location is unknown at this time. Additionally, some practices are likely to change as the feasibility and impact of specific practices is evaluated over the next five years. The legislative approval of CAMP was only the first step in implementing management practices on the ESPA.

Idaho Power recognizes the potential for declining spring flow below Milner Dam to impact generation capabilities. Idaho Power also recognizes the potential for management practices recommended and implemented through CAMP to impact generation capabilities. Those impacts could be either positive or negative. As such, Idaho Power has been an active member of the CAMP committee. Idaho Power was represented at every CAMP committee meeting, and the company representatives participated in several sub-committees. Idaho Power also developed the appropriate modeling techniques to assess the potential impacts of CAMP on river flows and spring discharge. The results of the modeling was provided to the CAMP committee and used during the decision-making process. Idaho Power has also suggested management alternatives and has agreed to provide technical and material support for a pilot weather modification program in the upper Snake River basin.

CAMP committee members recognize that the failure of proposed management practices to increase aquifer levels or improve spring discharge to the Snake River could result in continued legal action against junior ground water appropriators. Implementation of CAMP was not to supplant the need for litigation but to manage the aquifer such that water calls would be lessened. Ground water appropriators could be subjected to increased mitigation requirements or potential curtailment if CAMP fails to produce desired results.

Potential Impact of CAMP Implementation on Idaho Power

The implementation of CAMP practices impact hydropower generation in three different ways.

1) Managed recharge can increase spring discharge below Milner Dam, but those increases can occur only if water is diverted above Milner Dam and directed onto the ESRP and recharged to the aquifer. Conversions of ground water supplied irrigated land to surface supplied can also improve spring flow, but would require diversions of water from the Snake River above Milner Dam as well. Diversion for managed recharge and conversion projects have the potential to reduce the volume of water passing through numerous Idaho Power projects. Those diversions may have a negative impact to hydropower production on those facilities located between Milner Dam and King Hill. Additionally, while most of the water diverted for these projects comes back to the river as spring discharge, up to 10% of the water remains in the aquifer as long-term storage. These practices essentially shift water from one compartment, surface water, to another compartment, ground water. The net effect on the overall water budget is zero, but the diversions from the Snake River can have negative impacts to hydropower production.

2) Weather modification and practices that reduce consumptive use of ground water can increase water flowing through those generation facilities located on the Snake River above King Hill. These measures actually change the water budget by reducing consumptive demand or by increasing water supply in the basin. They can increase spring flow or tributary flow into the Snake River, but, unlike managed recharge or conversion projects, they require no diversions from the Snake River. These projects increase flows in the Snake River and could potentially benefit power generation.

3) Practices described in 1) and 2) are likely to be implemented in some combination. The relative extent of those practices will ultimately determine whether the impact is positive or negative for hydropower production. Diversions and increases in spring discharge may eventually balance, but the first five to ten years of implementation may produce a net negative effect on hydropower production.

The actual impact to hydropower production resulting from the implementation of the CAMP plan is uncertain. The availability of funding could drastically alter the implementation of the CAMP Phase I plan and long-standing water calls may eventually trump any plan proffered. Changing economic conditions may also alter decisions made by agriculture producers and their participation in current mitigation plans and other programs, such as the Conservation Reserve Enhancement Program (CREP). In evaluating the potential impacts of CAMP on hydropower production, the Phase I targets provide a basis for modeling and evaluation.

Modeled CAMP Scenario

Idaho Power developed modeling capabilities to help determine the potential impacts of CAMP on spring discharge and flows in the Snake River. Idaho Power modeled several different scenarios for the CAMP committee. The modeling incorporates the Enhanced Snake Plain Aquifer Model (ESPAM) and the Snake River Planning Modeling (SRPM). The modeling also incorporates information on canal capacities and sets limits for managed recharge, system conversions, and demand reduction activities. The modeling also includes estimates on increased water from weather-modification activities.

The scenario modeled for the IRP was the Phase I implementation plan proposed in CAMP. The parameters entered into the model were done to try and match the goals of the Phase I plan. Table CAMP-2 compares the results of the Phase I CAMP with the modeled results. The modeled scenario provides close approximation of the planned Phase I and allows for the examination of the impacts of CAMP on spring discharge and flows in the Snake River.

Table CAMP-2. CAMP Phase I Goals and Results of Modeling

Action	CAMP Goal (Average thousand acre-feet/year)	Modeled (Average thousand acre-feet/year)
Ground to Surface Water Conversions	100	81
Managed Recharge	100	140**
Demand Reduction	95*	45
Weather Modification	50	50

*Some demand reduction includes the purchase of subordination agreements from spring owners that cannot be modeled, but would have no impact on spring flows or Snake River Flows.

**This recharge also includes approximately 20 KAF/yr recharge on the Wood River system.

The SRPM uses a variety of data inputs to determine water availability for irrigation diversions as well as providing information on reservoir storage and river flows. The model allows for present conditioning of historic data. In other words, it applies today's level of development (irrigation diversions and storage), reach gains, and diversions to historic water availability. The model is currently calibrated to run from 1928 through 2005. This mode of operation allows for the comparison of a base case scenario to a variety of management scenarios. This provides a perspective on the degree to which different management scenarios may impact reservoir storage and river flows.

Table CAMP-3. Average Difference Between the CAMP Scenario and the Base Case Scenario for Flow at King Hill

July (acre-feet)	December (acre-feet)	Yearly (acre-feet)
7,700	10,900	66,600

A comparison was made for the months of July and December and total yearly flows for the base case scenario and the CAMP scenario. July and December were selected because they are critical months for power generation. The comparison of modeled data was for the King Hill gage on the Snake River (Table CAMP-3). The average flows for July increased 7,670 acre-feet/month, and December flows increased 10,880 acre-feet/month. The yearly average flows increased by 66,580 acre-feet/year, which is about 1 percent of the yearly average flow at the King Hill gage. These small increases reflect the nature of changes in the water budget for the upper Snake Basin as proposed through CAMP. The CAMP Phase I plan contains only 95,000 acft in new or additional water to the system. CAMP may increase spring discharge tributary to the Snake River, but those increases are dependent upon large diversion from the Snake River for managed recharge or system conversions. The overall increase in Snake River flow is dependent upon a reduction in consumptive use of water or increases related to water modification activities.

Brownlee Reservoir Inflow Record

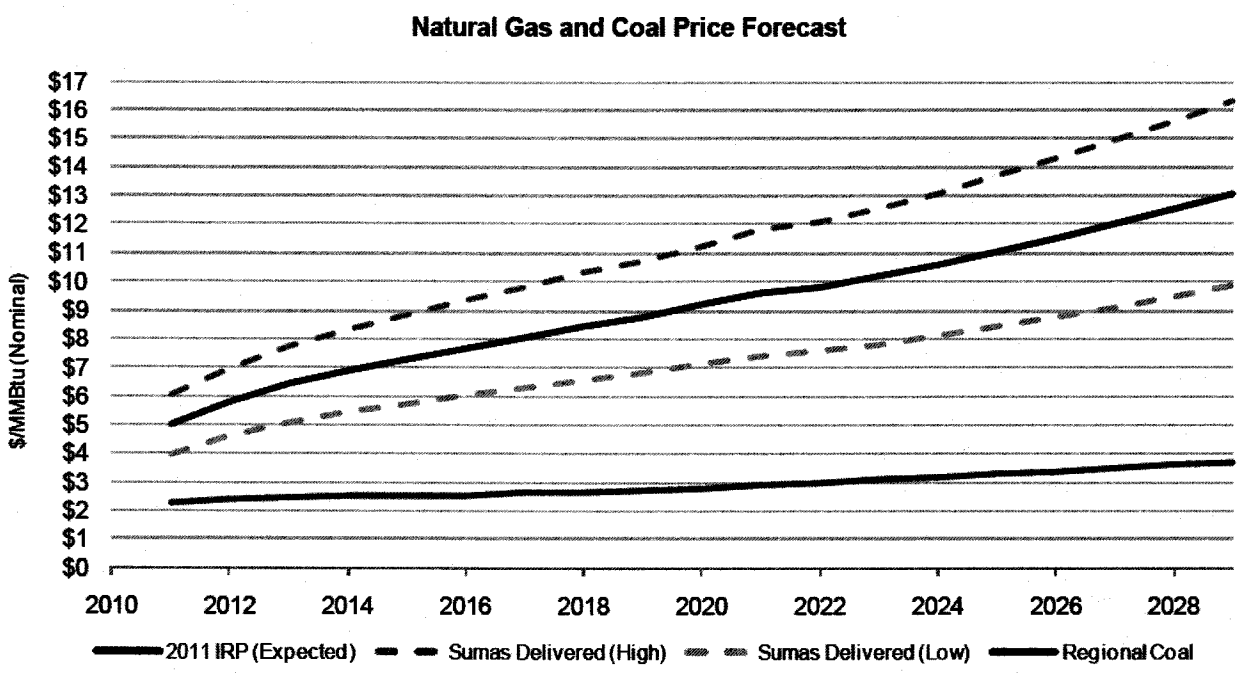
Record used for 2011 IRP Modeling of Idaho Power Hydropower System (Million Acre-Feet [MAF])					
CY	Brownlee April–July Inflow Volume (MAF)	Brownlee Annual Inflow Volume (MAF)	CY	Brownlee April–July Inflow Volume (MAF)	Brownlee Annual Inflow Volume (MAF)
1928	6.8	14.8	1969	6.9	15.3
1929	3.5	9.1	1970	6.3	14.9
1930	2.8	8.3	1971	10.3	22.8
1931	2.3	7.2	1972	7.9	20.2
1932	4.8	10.2	1973	4.0	11.4
1933	4.3	9.4	1974	9.8	20.1
1934	2.3	7.4	1975	8.1	17.6
1935	3.1	8.0	1976	7.3	16.5
1936	5.1	10.4	1977	2.2	7.8
1937	3.0	8.5	1978	5.3	12.0
1938	7.1	13.7	1979	4.0	10.7
1939	3.9	10.0	1980	6.1	13.3
1940	4.3	10.7	1981	4.4	11.5
1941	3.9	10.2	1982	9.3	21.2
1942	5.0	11.2	1983	10.0	23.5
1943	9.4	18.9	1984	11.5	24.3
1944	3.4	9.6	1985	5.5	13.5
1945	4.9	11.7	1986	8.6	20.7
1946	6.9	15.4	1987	3.0	9.3
1947	5.4	12.6	1988	2.7	7.9
1948	5.9	12.5	1989	4.4	10.7
1949	5.5	12.5	1990	3.2	8.7
1950	6.6	14.7	1991	2.9	8.2
1951	6.7	16.2	1992	2.0	6.8
1952	10.4	19.3	1993	6.3	13.0
1953	6.1	13.6	1994	2.8	8.5
1954	5.7	12.7	1995	6.9	14.1
1955	3.6	9.8	1996	8.3	19.0
1956	8.0	17.7	1997	10.5	24.0
1957	7.9	16.2	1998	8.6	17.7
1958	7.6	15.0	1999	7.9	17.8
1959	4.0	10.5	2000	4.7	12.1
1960	4.4	10.8	2001	2.6	7.8
1961	3.2	8.7	2002	3.5	8.8
1962	4.9	11.1	2003	3.7	9.2
1963	4.7	11.5	2004	3.3	8.8
1964	5.8	13.2	2005	3.8	8.9
1965	8.6	19.9	2006	8.8	16.8
1966	3.6	10.0	2007	2.8	8.5
1967	5.0	11.4	2008	4.5	10.0
1968	3.5	10.7	2009	5.6	11.3

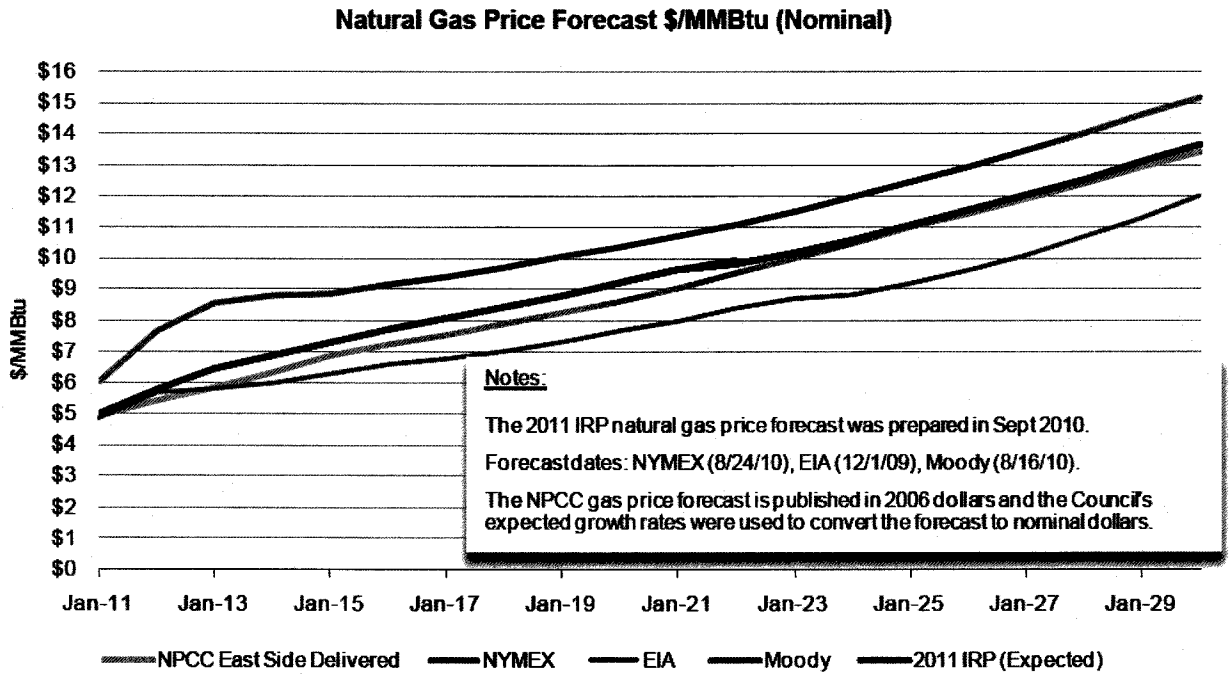
Note: Based on normalized historical flows for 1928–2009 using the Snake River Planning Model.

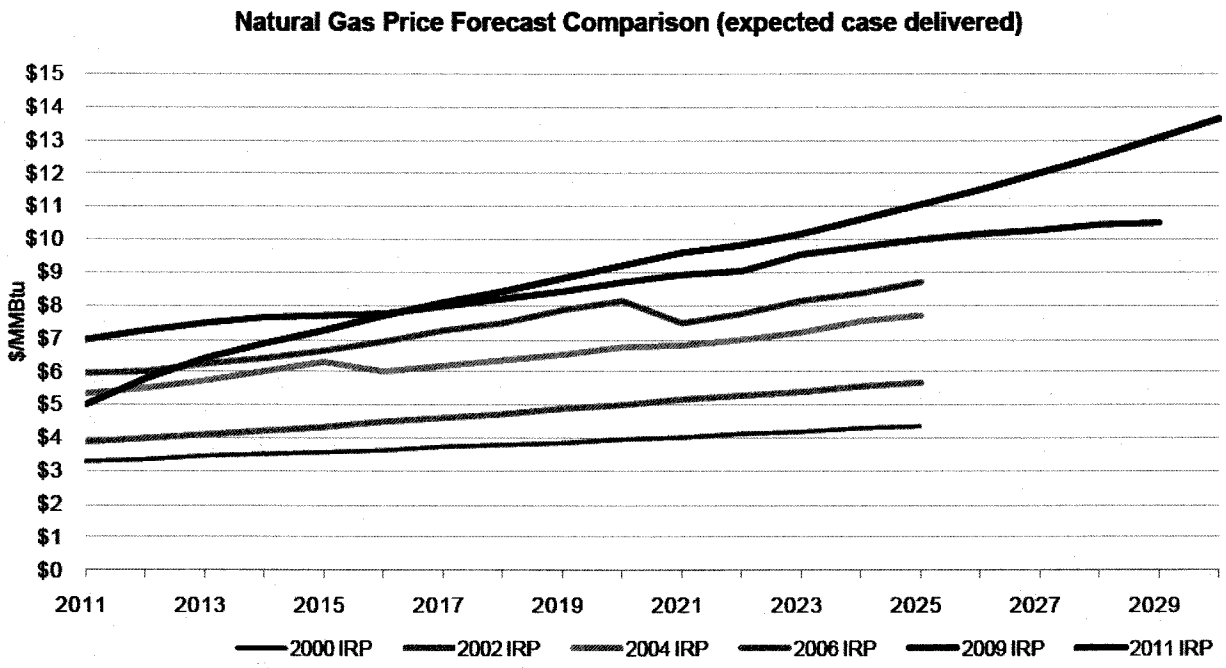
FUEL DATA

Natural Gas and Coal Price Forecast

Year	Sumas	Sumas Delivered (Expected)	Sumas Delivered (High)	Sumas Delivered (Low)	Regional Coal
2011	$4.51	$5.00	$6.02	$3.99	$2.26
2012	$5.28	$5.79	$6.97	$4.60	$2.38
2013	$5.90	$6.42	$7.75	$5.09	$2.43
2014	$6.34	$6.87	$8.31	$5.43	$2.54
2015	$6.73	$7.27	$8.81	$5.72	$2.50
2016	$7.14	$7.68	$9.34	$6.03	$2.53
2017	$7.52	$8.08	$9.83	$6.32	$2.63
2018	$7.89	$8.45	$10.30	$6.59	$2.67
2019	$8.24	$8.80	$10.76	$6.84	$2.69
2020	$8.64	$9.21	$11.28	$7.14	$2.81
2021	$9.04	$9.62	$11.81	$7.43	$2.90
2022	$9.25	$9.83	$12.09	$7.57	$2.99
2023	$9.59	$10.18	$12.54	$7.81	$3.08
2024	$10.00	$10.59	$13.08	$8.10	$3.18
2025	$10.46	$11.06	$13.69	$8.43	$3.28
2026	$10.92	$11.53	$14.30	$8.76	$3.39
2027	$11.39	$12.01	$14.92	$9.10	$3.49
2028	$11.91	$12.54	$15.62	$9.47	$3.61
2029	$12.45	$13.09	$16.34	$9.85	$3.72
2030	$13.01	$13.66	$17.07	$10.24	$3.84




Natural Gas Price Forecast $/MMBtu (Nominal)
$/MMBtu
$16
$15
$14
$13
$12
$11
$10
$9
$8
$7
$6
$5
$4
$3
$2
$1
$0
Jan-11
Jan-13
Jan-15
Jan-17
Jan-19
Jan-21
Jan-23
Jan-25
Jan-27
Jan-29
Notes:
The 2011 IRP natural gas price forecast was prepared in Sept 2010.
Forecast dates: NYMEX (8/24/10), EIA (12/1/09), Moody (8/16/10).
The NPCC gas price forecast is published in 2006 dollars and the Council's expected growth rates were used to convert the forecast to nominal dollars.
NPCC East Side Delivered
NYMEX
EIA
Moody
2011 IRP (Expected)


Natural Gas Price Forecast Comparison (expected case delivered)
$/MMBtu
$15
$14
$13
$12
$11
$10
$9
$8
$7
$6
$5
$4
$3
$2
$1
$0
2011
2013
2015
2017
2019
2021
2023
2025
2027
2029
2000 IRP
2002 IRP
2004 IRP
2006 IRP
2009 IRP
2011 IRP

EXISTING RESOURCE DATA

Hydroelectric and Thermal Plant Data

Hydroelectric Power Plans	Nameplate kVA	Nameplate kW	Normal Rating kW[4]	Emergency Rating kW[5]
American Falls	102,600	92,340	92,340	108,850
Bliss	86,250	75,000	75,000	76,470
Brownlee	650,444	585,400	585,400	746,570
Cascade	13,800	12,420	12,420	14,800
C.J. Strike	90,000	82,800	82,800	90,720
Clear Lake	3,125	2,500[1]	2,420	2,420
Hells Canyon	435,000	391,500	391,500	444,830
Lower Salmon	70,000	60,000	60,000	64,340
Malad–Lower	15,500	13,500	13,500	16,520
Malad–Upper	9,650	8,270	8,270	8,540
Milner	62,890	59,448	59,448	61,090
Oxbow	211,112	190,000	190,000	221,410
Shoshone Falls	14,900	12,500[1]	12,500	14,040
Swan Falls	28,600	27,170	24,170[3]	24,170
Thousand Springs	11,000	8,800	6,380[2]	6,380
Twin Falls	56,175	52,897	52,561	53,060
Upper Salmon "A"	18,000	18,000	18,000	18,930
Upper Salmon "B"	18,000	16,500	16,500	17,510
Total Hydro	**1,897,046**	**1,709,045**		

Thermal, Natural Gas, and Diesel Power Plans	Generator Nameplate Rating Gross kVA	Generator Nameplate Rating Gross kW	Net Dependable Capability (NDC)[6,7] kW	Net Dependable Capability (NDC)[6,7] Summer kW	Net Dependable Capability (NDC)[6,7] Winter kW
Bridger (Idaho Power share)	811,053	770,501		706,000	706,000
Boardman (Idaho Power share)	67,600	64,200		58,600	59,100
Valmy (Idaho Power share)	315,000	283,500		258,250	239,000
Total Thermal	**1,193,653**	**1,118,201**		1,022,850	1,004,100
Bennett Mountain	192,000	172,800	164,159		
Evander Andrews Unit 1	199,000	179,100	170,955		
Evander Andrews Unit 2	51,000	45,900	45,236		
Evander Andrews Unit 3	51,000	45,900	45,236		
Total Natural Gas	**493,000**	**443,700**	**425,586**		
Salmon Diesel	6,880	5,000	5,500		
Total IPC Generation	**3,590,579**	**3,275,946**			

[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 Thousand Springs) with a total kVA rating of 6,127 kVA on which there is no nameplate kW rating.

[2] The two smaller units, 1 and 2, both having nameplate ratings of 1.25 MVA and 1 MW, have been taken out of service due to reduced flows from the springs and penstock integrity.

[3] The Swan Falls units have been limited to 24,170 kW as a result of vibration issues.

[4] Normal Rating is defined as the normal kW output of the facility with all units on-line. This rating includes all equipment limitations and may be lower than the nameplate rating. To operate at the Normal Rating, appropriate water conditions must exist and the FERC license requirements permit.

[5] Emergency Rating is defined as the maximum kW output of the facility with all units on-line. The Emergency Rating is based on manufacturer guidelines, ANSI standards, and limited by auxiliary equipment ratings. To operate at the Emergency Rating, appropriate water conditions must exist and the FERC license requirements permit.

[6] Ratings for coal-fired generators are provided by Idaho Power's thermal partners who operate these plants.

[7] NDC is defined in the NERC Generating Availability Data System (GADS) as Gross Dependable Capacity (GDC) less the unit capacity utilized for that unit's station service or auxiliaries. GDC is the Gross Maximum Capacity (GMC) modified for seasonal limitations over a specified period of time. The GDC and Maximum Dependable Capacity (MDC) used in previous GADS reports are the same in intent and purpose. GMC is the maximum capacity a unit can sustain over a specified period of time when not restricted by seasonal or other de-ratings.

Qualifying Facility Data (PURPA)

Cogeneration and Small Power Production Projects
Projects under contract at time 2011 Forecast was prepared.

Project	MW	Contract On-line Date	Contract End Date	Project	MW	Contract On-line Date	Contract End Date
Hydro Projects							
Arena Drop	0.45	Sep-2010	Sep-2030	Lowline #2	2.79	Apr-1988	Apr-2023
Barber Dam	3.70	Apr-1989	Apr-2024	Lowline Canal	2.50	May-1985	Apr-2005
Birch Creek	0.05	Nov-1984	Oct-2019	Magic Reservoir	9.07	Jun-1989	May-2024
Black Canyon #3	0.14	Apr-1984	Apr-2019	Malad River	0.62	May-1984	Apr-2019
Blind Canyon	1.50	Dec-1994	Dec-2014	Marco Ranches	1.20	Aug-1985	Jul-2020
Box Canyon	0.36	Feb-1984	Feb-2019	Mile 28	1.50	Jun-1994	May-2029
Briggs Creek	0.60	Oct-1985	Oct-2020	Mitchell Butte	2.09	May-1989	May-2024
Bypass	9.96	Jun-1988	Jun-2023	Mora Drop	1.90	Oct-2006	Sep-2026
Canyon Springs	0.13	Oct-1984	Non firm	Mud Creek S&S	0.52	Feb-1982	Feb-2017
Cedar Draw	1.55	Jun-1984	May-2019	Mud Creek White	0.21	Jan-1986	Jan-2021
Clear Springs Trout	0.52	Nov-1983	Oct-2018	Owyhee Dam CSPP	5.00	Aug-1985	Aug-2015
Crystal Springs	2.44	Apr-1986	Mar-2021	Pigeon Cove	1.89	Oct-1984	Oct-2019
Curry Cattle Company	0.22	Jun-1983	Jun-2018	Pristine Springs	0.13	May-2005	Apr-2015
Dietrich Drop	4.50	Aug-1988	Aug-2023	Pristine Springs #3	0.20	May-2005	Apr-2015
Elk Creek	2.00	May-1986	May-2021	Reynolds Irrigation	0.26	May-1986	May-2021
Falls River	9.10	Aug-1993	Aug-2028	Rim View	0.20	Nov-2000	Non firm
Faulkner Ranch	0.87	Aug-1987	Aug-2022	Rock Creek #1	2.05	Sep-1983	Sep-2018
Fisheries Development Co	0.26	Jul-1990	Non firm	Rock Creek #2	1.90	Apr-1989	Mar-2024
Geo Bon #2	0.93	Nov-1986	Nov-2021	Sagebrush	0.43	Sep-1985	Aug-2020
Hailey CSPP	0.06	Jun-1985	Jun-2020	Sahko Hydro	0.50	Jun-2006	Feb-2021
Hazelton A	7.70	Jun-1990	Jun-2010	Schaffner	0.53	Aug-1986	Jul-2021
Hazelton B	7.60	May-1993	Apr-2028	Shingle Creek	0.22	Aug-1983	Jul-2018
Horseshoe Bend Hydroelectric	9.50	Sep-1995	Sep-2030	Shoshone #2	0.58	May-1996	Apr-2031
Jim Knight	0.34	Jun-1985	Jun-2020	Shoshone CSPP	0.37	Jun-1982	Jun-2017
Kasel and Witherspoon	0.90	Mar-1984	Feb-2019	Snake River Pottery	0.07	Nov-1984	Nov-2019
Koyle Small Hydro	1.25	Apr-1984	Mar-2019	Snedigar	0.54	Jan-1985	Dec-2019
Lateral # 10	2.06	May-1985	Apr-2020	Tiber Dam	7.50	Jun-2004	May-2024
Lemoyne	0.08	Jun-1985	Jun-2020	Trout—Co	0.24	Dec-1986	Nov-2021
Little Wood Rvr Res	2.85	Feb-1985	Feb-2020	Tunnel #1	7.00	Jun-1993	May-2028
Littlewood–Arkoosh	0.87	Aug-1986	Jul-2021	White Water Ranch	0.16	Aug-1985	Jul-2020
Lowline Midway Hydro	7.97	Aug-2007	Aug-2027	Wilson Lake Hydro	8.40	May-1993	May-2028
Total Hydro Nameplate Rating 141.0 MW							
Thermal Projects							
Magic Valley Natural Gas	10.00	Nov-1996	Nov-2016	TASCO—Nampa Natural Gas	2.00	Sep-2003	Auto Renewal
Magic West Natural Gas	10.00	Dec-1996	Nov-2016	TASCO—Twin Falls Natural Gas	2.00	Aug-2001	Auto Renewal
Simplot Pocatello Cogen	12.00	Mar-2006	Feb-2016				
Total Thermal Nameplate Rating 37.0 MW							

Project	MW	Contract On-line Date	Contract End Date	Project	MW	Contract On-line Date	Contract End Date
Biomass Projects							
B6 Anaerobic Digester	2.28	Aug-2009	Aug-2019	Pocatello Waste	0.46	Dec-1985	Dec-2020
Bettencourt Dry Creek	2.25	Aug-2008	Aug-2018	Rock Creek Dairy	4.00	May-2012	Estimated
Big Sky West Dairy Digester	1.50	Jan-2009	Jan-2029	Swager Farms	2.00	Oct-2011	Estimated
Double B Dairy	2.00	Dec-2012	Estimated	Tamarack CSPP	5.00	Jun-1983	May-2018
Hidden Hollow Landfill Gas	3.20	Oct-2006	Jan-2027				
Total Biomass Nameplate Rating 22.69 MW							
Wind Projects							
Bennett Creek Wind Farm	21.00	Dec-2008	Dec-2028	Notch Butte Wind	18.00	Aug-2011	Estimated
Burley Butte Wind	21.30	Feb-2011	Feb-2031	Oregon Trail Wind	13.50	Jan-2011	Jan-2031
Camp Reed Wind Park	22.50	Dec-2010	Dec-2030	Payne's Ferry Wind Park	21.00	Dec-2010	Dec-2030
Cassia Wind Farm	10.50	Mar-2009	Mar-2029	Pilgrim Stage Station Wind	10.50	Jan-2011	Jan-2031
Fossil Gulch Wind	10.50	Sep-2005	Sep-2025	Rockland Wind Project	80.00	Dec-2011	Estimated
Golden Valley Wind	12.00	Feb-2011	Feb-2031	Salmon Falls Wind	22.00	Jan-2011	Jan-2031
Horseshoe Bend Wind Park	9.00	Feb-2006	Feb-2026	Sawtooth Wind Project	21.00	Dec-2012	Estimated
Hot Springs Wind Farm	21.00	Dec-2008	Dec-2028	Thousand Springs Wind	12.00	Jan-2011	Jan-2031
Lava Beds Wind	18.00	Aug-2011	Estimated	Tuana Gulch Wind	10.50	Jan-2011	Jan-2031
Magic Wind Park	19.50	Aug-2011	Estimated	Tuana Springs Expansion	35.70	May-2010	Jun-2030
Milner Dam Wind	19.92	Feb-2011	Feb-2031	Yahoo Creek Wind Park	21.00	Dec-2010	Dec-2030
Total Wind Nameplate Rating 450.42 MW							
Solar Projects							
Grand View Solar	20.00	Dec-2012	Estimated				
Total Solar Nameplate Rating 20.00 MW							
Total Nameplate Rating 671.11 MW							

The above is a summary of the nameplate rating for the CSPP projects under contract with Idaho Power as of September 2010. 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 167 MW in 2011.

Power Purchase Agreement Data

Idaho Power Company Power Purchase Agreements Status as of April 1, 2011

Project	MW	Contract On-Line Date	Contract End Date
Wind projects			
Elkhorn Wind Project	101	December 2007	December 2027
Total wind nameplate MW rating	101		
Geothermal Projects			
Raft River Unit 1	13	April 2008	April 2033
Neal Hot Springs	22	September 2012	September 2037
Total geothermal nameplate MW rating	35		
Total nameplate MW rating	136		

Above is a summary of the nameplate ratings for the Power Purchase Agreements under contract with Idaho Power. Nameplate ratings of the actual generation units are 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 the projects will produce.

Hydro Modeling Results (PDR580)

Average Megawatt (aMW) 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2011**	**2/2011**	**3/2011**	**4/2011**	**5/2011**	**6/2011**	**7/2011**	**8/2011**	**9/2011**	**10/2011**	**11/2011**	**12/2011**	**aMW**
Brownlee	HCC*	269.4	434.9	343.4	413.6	386.3	386.2	244.8	186.0	209.3	193.7	152.8	252.3	289.4
Oxbow	HCC	111.8	181.3	154.9	180.0	158.6	157.2	103.9	81.7	95.4	88.5	69.3	106.3	124.1
Hells Canyon	HCC	222.1	359.4	312.3	369.3	327.9	318.2	206.0	160.7	187.2	174.7	138.1	210.7	248.9
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.9	25.9	56.9	84.6	101.1	82.4	68.0	40.7	18.1	0.0	16.9	45.7
Bliss	ROR	49.7	52.3	45.9	51.3	49.3	48.6	36.3	37.7	37.8	40.4	38.2	46.9	44.5
C.J. Strike	ROR	66.4	69.5	60.5	68.4	62.5	61.1	39.4	42.3	45.3	51.5	50.2	61.2	56.5
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	36.2	37.2	30.6	35.9	34.3	34.9	23.6	24.4	23.9	26.2	24.5	32.5	30.4
Milner	ROR	42.4	45.5	27.1	40.5	35.5	36.7	6.7	6.7	0.0	0.0	1.9	30.0	22.8
Shoshone Falls	ROR	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	7.4	11.2	12.0	12.0	11.6
Swan Falls	ROR	21.3	22.3	20.0	22.0	20.1	19.6	13.6	14.1	14.8	16.4	16.3	19.7	18.4
Twin Falls	ROR	42.4	44.5	28.3	40.4	36.2	38.2	11.5	11.8	3.8	7.3	8.2	31.5	25.3
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	18.8	13.7	19.1	19.1	19.1	14.5	15.4	14.7	16.3	15.0	19.2	17.0
Upper Salmon 3&4	ROR	17.7	17.7	16.5	16.8	17.4	17.7	13.6	14.3	13.8	15.1	14.0	17.7	16.0
HCC Total		**603.3**	**975.6**	**810.6**	**962.9**	**872.8**	**861.6**	**554.7**	**428.4**	**491.8**	**456.9**	**360.2**	**569.3**	**662.3**
ROR Total		**359.8**	**375.9**	**311.4**	**396.1**	**405.9**	**427.5**	**286.4**	**283.4**	**239.6**	**232.8**	**206.5**	**314.9**	**320.0**
Total		**963.1**	**1351.5**	**1122.0**	**1359.0**	**1278.7**	**1289.1**	**841.1**	**711.8**	**731.3**	**689.7**	**566.7**	**884.2**	**982.3**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2012**	**2/2012**	**3/2012**	**4/2012**	**5/2012**	**6/2012**	**7/2012**	**8/2012**	**9/2012**	**10/2012**	**11/2012**	**12/2012**	**aMW**
Brownlee	HCC*	269.2	434.7	343.2	413.2	386.5	386.0	244.7	185.9	208.9	193.9	152.6	251.9	289.2
Oxbow	HCC	111.7	181.2	154.9	179.8	158.6	157.1	103.8	81.7	95.2	88.6	69.3	106.1	124.0
Hells Canyon	HCC	221.9	359.2	312.1	368.9	328.1	318.0	205.9	160.6	186.8	174.8	138.0	210.3	248.7
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.8	25.9	56.9	84.6	101.1	82.4	68.0	40.8	18.2	0.0	16.8	45.7
Bliss	ROR	51.2	52.2	45.8	51.2	49.3	48.6	36.2	37.7	37.8	40.4	38.2	46.8	44.6
C.J. Strike	ROR	66.3	69.4	60.4	68.3	62.5	61.0	39.3	42.2	45.2	51.4	50.2	61.0	56.4
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	36.2	37.1	30.6	35.8	34.2	34.8	23.5	24.4	23.9	26.2	24.4	32.3	30.3
Milner	ROR	42.4	45.4	27.1	40.4	35.5	36.7	6.7	6.7	0.0	0.0	1.9	29.7	22.7
Shoshone Falls	ROR	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	7.3	11.2	12.0	12.0	11.5
Swan Falls	ROR	21.3	22.3	19.9	21.9	20.1	19.6	13.5	14.2	14.8	16.4	16.3	19.6	18.3
Twin Falls	ROR	42.3	44.4	28.3	40.3	36.2	38.2	11.5	11.7	3.8	7.3	8.0	31.2	25.3
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	19.2	19.1	17.6	19.1	14.5	15.3	14.6	16.3	14.9	19.2	17.3
Upper Salmon 3&4	ROR	17.7	17.7	17.7	17.7	17.7	16.2	13.6	14.3	13.7	15.1	14.0	17.7	16.1
HCC Total		**602.8**	**975.1**	**810.2**	**961.9**	**873.1**	**861.1**	**554.4**	**428.2**	**490.8**	**457.3**	**359.9**	**568.3**	**661.9**
ROR Total		**361.1**	**375.6**	**317.8**	**396.4**	**404.7**	**425.8**	**286.0**	**283.2**	**239.3**	**232.8**	**206.1**	**313.6**	**320.2**
Total		**963.9**	**1350.7**	**1128.0**	**1358.3**	**1277.8**	**1286.9**	**840.4**	**711.4**	**730.1**	**690.1**	**566.0**	**881.9**	**982.1**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2013**	**2/2013**	**3/2013**	**4/2013**	**5/2013**	**6/2013**	**7/2013**	**8/2013**	**9/2013**	**10/2013**	**11/2013**	**12/2013**	**aMW**
Brownlee	HCC*	268.9	434.3	343.1	413.0	386.3	385.7	244.6	185.7	208.5	193.8	152.9	251.4	289.0
Oxbow	HCC	111.6	181.1	154.8	179.8	158.5	157.0	103.8	81.6	95.0	88.5	69.4	105.9	123.9
Hells Canyon	HCC	221.7	359.0	312.0	368.7	328.0	317.8	205.8	160.5	186.4	174.6	138.2	210.0	248.6
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.7	25.9	56.9	84.6	101.1	82.5	68.0	40.8	18.2	0.0	16.6	45.6
Bliss	ROR	51.1	52.1	45.8	51.2	49.2	48.6	36.2	37.7	37.8	40.3	38.1	46.6	44.6
C.J. Strike	ROR	66.3	69.3	60.4	68.2	62.4	61.0	39.3	42.2	45.1	51.4	50.1	60.8	56.4
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	36.1	37.1	30.5	35.8	34.2	34.8	23.5	24.4	23.8	26.1	24.4	32.2	30.2
Milner	ROR	42.3	45.2	27.0	40.3	35.5	36.6	6.7	6.7	0.0	0.0	1.9	29.4	22.6
Shoshone Falls	ROR	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	7.3	11.2	12.0	12.0	11.5
Swan Falls	ROR	21.3	22.2	19.9	21.9	20.1	19.5	13.5	14.2	14.7	16.4	16.3	19.6	18.3
Twin Falls	ROR	42.3	44.2	28.2	40.3	36.2	38.2	11.5	11.7	3.8	7.3	8.0	30.9	25.2
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	19.2	19.1	17.6	19.1	14.4	15.3	14.6	16.2	14.9	19.2	17.3
Upper Salmon 3&4	ROR	17.7	17.7	17.7	17.7	17.7	16.2	13.5	14.3	13.7	15.1	13.9	17.7	16.1
HCC Total		**602.2**	**974.4**	**809.9**	**961.5**	**872.7**	**860.5**	**554.2**	**427.8**	**489.9**	**456.9**	**360.5**	**567.3**	**661.5**
ROR Total		**360.8**	**374.8**	**317.5**	**396.2**	**404.5**	**425.6**	**285.9**	**283.2**	**239.0**	**232.5**	**205.8**	**312.3**	**319.8**
Total		**963.0**	**1349.2**	**1127.4**	**1357.7**	**1277.2**	**1286.1**	**840.1**	**711.0**	**728.8**	**689.4**	**566.3**	**879.6**	**981.3**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2014**	**2/2014**	**3/2014**	**4/2014**	**5/2014**	**6/2014**	**7/2014**	**8/2014**	**9/2014**	**10/2014**	**11/2014**	**12/2014**	**aMW**
Brownlee	HCC*	267.8	433.1	341.9	412.3	385.7	384.5	243.8	185.0	206.3	193.9	153.0	249.6	288.1
Oxbow	HCC	111.1	180.6	154.3	179.4	158.3	156.6	103.4	81.3	93.8	88.4	69.3	105.1	123.5
Hells Canyon	HCC	220.8	358.0	311.0	368.0	327.5	316.9	205.2	159.9	184.2	174.4	138.1	208.4	247.7
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.6	25.9	56.9	84.8	101.1	82.6	68.1	40.8	18.3	0.0	15.8	45.6
Bliss	ROR	50.9	51.5	45.5	50.8	49.0	48.3	36.0	37.5	37.6	40.1	37.9	45.8	44.2
C.J. Strike	ROR	65.9	68.6	60.1	67.8	62.5	60.7	39.0	41.9	44.9	51.1	49.9	59.7	56.0
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	35.9	36.4	30.3	35.5	34.0	34.5	23.3	24.2	23.7	26.0	24.2	31.4	30.0
Milner	ROR	42.0	44.8	26.7	40.3	35.4	36.5	6.7	6.7	0.0	0.0	1.8	27.8	22.4
Shoshone Falls	ROR	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	7.3	11.2	11.8	12.0	11.5
Swan Falls	ROR	21.2	22.1	19.8	21.8	20.0	19.5	13.4	14.1	14.7	16.4	16.2	19.3	18.2
Twin Falls	ROR	42.0	43.9	27.9	40.0	36.1	38.1	11.4	11.7	3.8	7.2	7.8	29.4	24.9
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	19.2	19.1	17.6	19.1	14.3	15.2	14.5	16.1	14.8	19.2	17.3
Upper Salmon 3&4	ROR	17.7	17.7	17.7	17.7	17.7	16.2	13.4	14.2	13.6	15.0	13.8	17.7	16.0
HCC Total		**599.7**	**971.7**	**807.2**	**959.7**	**871.5**	**858.0**	**552.4**	**426.2**	**484.3**	**456.7**	**360.4**	**563.1**	**659.2**
ROR Total		**359.3**	**371.9**	**316.0**	**394.7**	**404.0**	**424.5**	**284.9**	**282.3**	**238.3**	**231.7**	**204.4**	**305.4**	**318.1**
Total		**959.0**	**1343.6**	**1123.2**	**1354.4**	**1275.5**	**1282.5**	**837.3**	**708.5**	**722.6**	**688.4**	**564.8**	**868.5**	**977.4**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2015**	**2/2015**	**3/2015**	**4/2015**	**5/2015**	**6/2015**	**7/2015**	**8/2015**	**9/2015**	**10/2015**	**11/2015**	**12/2015**	**aMW**
Brownlee	HCC*	266.5	431.6	341.4	410.0	387.2	383.3	243.1	184.3	204.2	194.3	153.0	247.8	287.2
Oxbow	HCC	110.6	180.0	154.0	186.2	158.9	156.1	103.1	81.0	92.7	88.4	69.3	104.3	123.7
Hells Canyon	HCC	219.8	356.8	310.5	376.1	328.6	316.0	204.5	159.3	182.0	174.5	138.1	206.9	247.8
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.6	25.9	56.8	84.9	101.2	82.7	68.2	40.9	18.4	0.0	14.9	45.6
Bliss	ROR	50.6	51.2	45.2	50.5	48.8	48.0	35.8	37.3	37.4	39.9	37.6	44.9	43.9
C.J. Strike	ROR	65.5	67.9	59.7	67.4	62.1	60.5	38.8	41.7	44.6	50.9	49.6	58.5	55.6
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	35.6	36.0	30.0	35.3	33.8	34.3	23.2	24.0	23.5	25.8	24.0	30.6	29.7
Milner	ROR	41.7	44.5	26.4	40.0	35.4	36.4	6.7	6.7	0.0	0.0	1.8	25.9	22.1
Shoshone Falls	ROR	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	7.2	11.1	11.3	12.0	11.5
Swan Falls	ROR	21.1	21.8	19.7	21.7	19.9	19.4	13.4	14.0	14.6	16.3	16.1	18.9	18.1
Twin Falls	ROR	41.8	43.6	27.6	39.7	36.0	38.0	11.4	11.7	3.7	7.2	7.3	27.7	24.6
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	19.2	19.1	17.6	19.1	14.2	15.1	14.4	16.0	14.6	19.2	17.2
Upper Salmon 3&4	ROR	17.7	17.7	17.7	17.7	17.7	16.2	13.3	14.1	13.5	14.9	13.7	17.7	16.0
HCC Total		**596.9**	**968.4**	**805.9**	**972.3**	**874.6**	**855.4**	**550.7**	**424.6**	**478.8**	**457.2**	**360.4**	**559.0**	**658.7**
ROR Total		**357.7**	**369.6**	**314.3**	**393.0**	**403.1**	**423.6**	**284.3**	**281.5**	**237.1**	**230.8**	**202.2**	**297.6**	**316.2**
Total		**954.6**	**1338.0**	**1120.2**	**1365.3**	**1277.7**	**1279.0**	**835.0**	**706.1**	**715.9**	**688.0**	**562.6**	**856.6**	**974.9**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2016**	**2/2016**	**3/2016**	**4/2016**	**5/2016**	**6/2016**	**7/2016**	**8/2016**	**9/2016**	**10/2016**	**11/2016**	**12/2016**	**aMW**
Brownlee	HCC*	265.4	430.4	340.3	411.1	383.6	382.1	242.3	163.9	205.0	194.1	152.9	250.7	285.2
Oxbow	HCC	110.2	179.5	153.5	187.0	157.5	155.6	102.8	74.9	93.2	88.5	69.3	105.6	123.1
Hells Canyon	HCC	218.9	355.8	309.5	377.6	325.8	315.0	203.9	147.3	183.0	174.6	138.1	209.4	246.6
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	28.1	25.9	56.7	85.1	101.3	82.8	64.2	41.7	18.8	0.0	19.2	45.8
Bliss	ROR	50.3	51.5	45.0	50.2	48.6	47.7	35.6	33.6	37.2	39.8	38.0	47.2	43.7
C.J. Strike	ROR	65.1	68.2	59.4	67.1	61.4	60.1	38.5	36.8	44.5	50.8	49.8	61.8	55.3
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	35.4	36.4	29.7	35.0	33.7	34.2	23.0	20.9	23.4	25.7	24.0	32.7	29.5
Milner	ROR	41.5	44.9	26.3	39.6	35.3	36.4	6.7	0.0	0.0	0.0	3.1	32.7	22.2
Shoshone Falls	ROR	12.0	12.0	12.0	12.0	12.0	12.0	12.0	7.1	7.2	11.1	12.0	40.0	13.5
Swan Falls	ROR	21.0	21.9	19.6	21.6	19.8	19.3	13.3	12.5	14.6	16.2	16.2	19.9	18.0
Twin Falls	ROR	41.5	43.8	27.5	39.4	36.0	37.9	11.4	3.7	3.7	7.2	8.2	33.8	24.5
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	19.2	19.1	17.6	19.1	14.0	12.6	14.2	15.9	14.6	19.2	17.0
Upper Salmon 3&4	ROR	17.7	17.7	17.7	17.7	17.7	16.2	13.2	12.0	13.4	14.8	13.7	17.7	15.8
HCC Total		**594.5**	**965.7**	**803.3**	**975.7**	**866.9**	**852.7**	**549.0**	**386.1**	**481.2**	**457.2**	**360.3**	**565.7**	**654.9**
ROR Total		**356.2**	**371.8**	**313.2**	**391.2**	**402.1**	**422.7**	**283.3**	**240.1**	**237.3**	**230.6**	**205.8**	**351.5**	**317.2**
Total		**950.7**	**1337.5**	**1116.5**	**1366.9**	**1269.0**	**1275.4**	**832.3**	**626.2**	**718.5**	**687.8**	**566.1**	**917.2**	**972.0**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2017**	**2/2017**	**3/2017**	**4/2017**	**5/2017**	**6/2017**	**7/2017**	**8/2017**	**9/2017**	**10/2017**	**11/2017**	**12/2017**	**aMW**
Brownlee	HCC*	264.2	429.3	339.2	409.0	385.4	380.9	241.6	163.2	203.1	194.2	152.9	249.7	284.4
Oxbow	HCC	109.7	179.0	153.0	185.7	158.2	155.1	102.5	74.6	92.2	88.4	69.3	105.1	122.7
Hells Canyon	HCC	217.9	354.9	308.4	375.1	327.2	314.1	203.3	146.7	181.1	174.4	138.0	208.5	245.8
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	28.1	25.9	56.6	85.2	101.5	82.9	64.3	41.8	18.9	0.0	18.3	45.7
Bliss	ROR	50.0	51.3	44.7	49.9	48.3	47.5	35.4	33.4	37.0	39.6	37.6	46.3	43.4
C.J. Strike	ROR	64.7	67.8	59.1	66.7	61.3	59.8	38.3	36.6	44.3	50.5	49.5	60.6	54.9
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	35.1	36.2	29.5	34.7	33.4	34.0	22.8	20.7	23.2	25.5	23.8	31.9	29.2
Milner	ROR	41.2	44.6	26.0	39.1	35.3	36.4	6.7	0.0	0.0	0.0	3.0	30.9	21.9
Shoshone Falls	ROR	55.0	58.0	35.0	51.0	48.0	50.0	16.0	7.1	7.2	11.1	12.0	40.0	32.4
Swan Falls	ROR	20.9	21.8	19.5	21.5	19.7	19.2	13.2	12.5	14.5	16.2	16.1	19.5	17.9
Twin Falls	ROR	41.3	43.6	27.2	39.0	35.9	37.9	11.3	3.6	3.7	7.1	8.1	32.2	24.2
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	19.2	19.1	17.6	19.1	13.9	12.5	14.1	15.7	14.5	19.2	16.9
Upper Salmon 3&4	ROR	17.7	17.7	17.7	17.7	17.7	16.2	13.1	11.9	13.3	14.7	13.6	17.7	15.8
HCC Total		**591.8**	**963.2**	**800.6**	**969.8**	**870.7**	**850.1**	**547.4**	**384.5**	**476.3**	**457.0**	**360.2**	**563.3**	**652.9**
ROR Total		**397.6**	**416.4**	**334.7**	**428.1**	**437.3**	**460.1**	**286.4**	**239.3**	**236.4**	**229.6**	**204.4**	**343.9**	**334.3**
Total		**989.4**	**1379.6**	**1135.3**	**1397.9**	**1308.0**	**1310.2**	**833.8**	**623.8**	**712.7**	**686.6**	**564.6**	**907.2**	**987.2**

*HCC=Hells Canyon Complex,**ROR=Run of River

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2018**	**2/2018**	**3/2018**	**4/2018**	**5/2018**	**6/2018**	**7/2018**	**8/2018**	**9/2018**	**10/2018**	**11/2018**	**12/2018**	**aMW**
Brownlee	HCC*	263.0	427.8	338.6	408.1	384.5	379.7	240.8	162.5	200.2	194.8	153.1	247.9	283.4
Oxbow	HCC	109.2	178.4	152.7	185.3	157.8	154.7	102.2	74.3	90.6	88.4	69.3	104.3	122.3
Hells Canyon	HCC	216.9	353.7	307.9	374.3	326.4	313.2	202.7	146.1	178.0	174.4	138.0	207.0	244.9
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.7	25.9	56.4	85.3	101.6	83.1	64.4	41.8	19.0	0.0	17.3	45.7
Bliss	ROR	49.8	50.8	44.4	49.7	48.0	47.4	35.2	33.3	36.8	39.4	37.3	45.4	43.1
C.J. Strike	ROR	64.3	67.4	58.7	66.3	61.0	59.4	38.0	36.4	43.9	50.3	49.2	59.4	54.5
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	34.9	35.9	29.2	34.4	33.2	33.8	22.7	20.5	23.0	25.3	23.6	31.1	29.0
Milner	ROR	40.9	43.7	25.6	38.7	35.2	36.4	6.7	0.0	0.0	0.0	2.3	29.2	21.6
Shoshone Falls	ROR	55.0	58.0	35.0	51.0	48.0	50.0	16.0	7.1	7.2	11.1	12.0	40.0	32.4
Swan Falls	ROR	20.8	21.7	19.4	21.4	19.6	19.1	13.1	12.4	14.4	16.1	16.0	19.2	17.8
Twin Falls	ROR	41.0	42.9	26.8	38.6	35.8	37.8	11.3	0.0	3.6	7.1	8.0	30.6	23.6
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	19.1	19.1	17.6	19.1	13.8	12.3	14.0	15.6	14.3	19.2	16.9
Upper Salmon 3&4	ROR	17.7	17.7	17.5	17.7	17.7	16.2	13.0	11.7	13.2	14.6	13.5	17.7	15.7
HCC Total		**589.1**	**959.9**	**799.2**	**967.7**	**868.7**	**847.6**	**545.7**	**382.9**	**468.7**	**457.6**	**360.4**	**559.2**	**650.6**
ROR Total		**396.1**	**413.1**	**332.5**	**426.1**	**436.3**	**459.3**	**285.7**	**234.8**	**235.3**	**228.8**	**202.4**	**336.4**	**332.0**
Total		**985.2**	**1373.0**	**1131.7**	**1393.8**	**1305.0**	**1306.9**	**831.4**	**617.7**	**704.0**	**686.4**	**562.8**	**895.6**	**982.6**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2019**	**2/2019**	**3/2019**	**4/2019**	**5/2019**	**6/2019**	**7/2019**	**8/2019**	**9/2019**	**10/2019**	**11/2019**	**12/2019**	**aMW**
Brownlee	HCC*	262.1	425.8	339.2	407.8	383.8	378.8	240.2	162.1	197.9	195.0	153.1	246.6	282.7
Oxbow	HCC	108.8	177.5	152.8	185.1	157.5	154.3	101.9	74.0	89.4	88.3	69.2	103.8	121.9
Hells Canyon	HCC	216.2	351.9	308.1	374.0	325.9	312.5	202.2	145.7	175.6	174.2	137.9	205.9	244.2
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.6	25.8	56.3	85.4	101.7	83.2	64.4	41.9	19.1	0.0	16.6	45.6
Bliss	ROR	49.6	50.6	44.2	49.4	47.7	47.2	35.1	33.1	36.7	39.3	37.1	44.7	42.9
C.J. Strike	ROR	64.0	66.8	58.5	66.0	60.6	59.1	37.8	36.2	43.7	50.1	48.7	58.5	54.2
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	34.7	35.5	29.0	34.2	33.1	33.7	22.6	20.4	22.9	25.2	23.4	30.5	28.8
Milner	ROR	40.7	43.5	25.4	38.4	35.2	36.3	6.7	0.0	0.0	0.0	1.8	27.8	21.3
Shoshone Falls	ROR	55.0	58.0	35.0	51.0	48.0	50.0	16.0	7.1	7.2	11.1	12.0	40.0	32.4
Swan Falls	ROR	20.4	21.5	19.3	21.3	19.5	19.0	13.1	12.3	14.3	16.1	15.9	18.9	17.6
Twin Falls	ROR	40.8	42.7	26.6	38.3	35.8	37.7	11.3	0.0	0.0	7.1	7.9	29.3	23.1
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	18.9	19.1	17.6	19.1	13.7	12.2	13.9	15.5	14.2	19.2	16.8
Upper Salmon 3&4	ROR	17.7	17.7	17.4	17.7	17.7	16.2	12.9	11.7	13.1	14.5	13.3	17.7	15.6
HCC Total		**587.1**	**955.2**	**800.1**	**966.9**	**867.2**	**845.6**	**544.3**	**381.8**	**462.9**	**457.5**	**360.2**	**556.3**	**648.8**
ROR Total		**394.6**	**411.2**	**331.0**	**424.5**	**435.5**	**458.5**	**285.2**	**234.1**	**231.0**	**228.3**	**200.5**	**330.5**	**330.2**
Total		**981.7**	**1366.4**	**1131.1**	**1391.4**	**1302.7**	**1304.1**	**829.5**	**615.9**	**693.9**	**685.8**	**560.7**	**886.8**	**979.0**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2020**	**2/2020**	**3/2020**	**4/2020**	**5/2020**	**6/2020**	**7/2020**	**8/2020**	**9/2020**	**10/2020**	**11/2020**	**12/2020**	**aMW**
Brownlee	HCC*	261.4	425.2	338.7	407.3	383.3	378.1	239.8	161.7	196.5	195.1	153.6	245.1	282.2
Oxbow	HCC	108.5	177.2	152.6	184.9	157.3	154.0	101.7	73.9	88.6	88.3	69.4	103.1	121.6
Hells Canyon	HCC	215.7	351.4	307.7	373.6	325.5	312.0	201.9	145.4	174.2	174.1	138.3	204.7	243.7
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.6	25.8	56.2	85.4	101.8	83.2	64.5	41.9	19.1	0.0	16.0	45.6
Bliss	ROR	49.4	50.5	44.0	49.3	47.4	47.1	35.0	33.0	36.6	39.2	36.9	44.2	42.7
C.J. Strike	ROR	63.8	66.3	58.3	65.8	60.4	58.9	37.7	36.0	43.6	49.9	48.6	57.9	53.9
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	34.5	35.3	28.9	34.0	33.0	33.5	22.5	20.3	22.8	25.1	23.3	30.0	28.6
Milner	ROR	40.6	43.3	25.2	38.2	35.1	36.3	6.7	0.0	0.0	0.0	1.8	26.7	21.2
Shoshone Falls	ROR	55.0	58.0	35.0	51.0	48.0	50.0	16.0	7.1	7.2	11.1	12.0	40.0	32.4
Swan Falls	ROR	20.4	21.4	19.2	21.3	19.4	18.9	13.0	12.3	14.3	16.0	15.9	18.7	17.6
Twin Falls	ROR	40.7	42.6	26.5	38.1	35.7	37.7	11.2	0.0	0.0	7.0	7.6	28.2	22.9
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	18.8	19.1	17.6	19.1	13.6	12.2	13.8	15.4	14.1	19.2	16.8
Upper Salmon 3&4	ROR	17.7	17.7	17.3	17.7	17.7	16.2	12.9	11.6	13.0	14.4	13.3	17.7	15.6
HCC Total		**585.6**	**953.8**	**799.0**	**965.8**	**866.1**	**844.1**	**543.4**	**381.0**	**459.3**	**457.5**	**361.3**	**552.9**	**647.5**
ROR Total		**393.8**	**410.0**	**329.9**	**423.5**	**434.7**	**458.0**	**284.6**	**233.7**	**230.5**	**227.5**	**199.7**	**325.9**	**329.1**
Total		**979.4**	**1363.8**	**1128.9**	**1389.3**	**1300.8**	**1302.1**	**828.0**	**614.7**	**689.8**	**685.0**	**561.0**	**878.8**	**976.6**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2021**	**2/2021**	**3/2021**	**4/2021**	**5/2021**	**6/2021**	**7/2021**	**8/2021**	**9/2021**	**10/2021**	**11/2021**	**12/2021**	**aMW**
Brownlee	HCC*	261.0	424.8	338.2	407.4	383.0	377.7	239.5	161.5	195.8	195.3	153.4	244.6	281.8
Oxbow	HCC	108.4	177.1	152.3	184.9	157.2	153.9	101.6	73.8	88.3	88.3	69.3	102.9	121.5
Hells Canyon	HCC	215.3	351.1	307.2	373.6	325.3	311.7	201.6	145.1	173.4	174.1	138.0	204.2	243.4
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.4	25.8	56.3	85.5	101.8	83.3	64.5	41.9	19.2	0.0	15.7	45.6
Bliss	ROR	49.3	50.4	43.9	49.2	47.3	47.0	34.9	32.9	36.5	39.1	36.8	43.9	42.6
C.J. Strike	ROR	63.6	66.2	58.1	65.6	60.2	58.7	37.6	35.9	43.5	49.7	48.5	57.4	53.8
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	34.4	35.1	28.8	33.9	32.9	33.5	22.4	20.3	22.7	25.1	23.3	29.7	28.5
Milner	ROR	40.5	42.9	25.1	38.0	35.1	36.3	6.7	0.0	0.0	0.0	1.8	26.0	21.0
Shoshone Falls	ROR	55.0	58.0	35.0	51.0	48.0	50.0	16.0	7.1	7.2	11.1	12.0	40.0	32.4
Swan Falls	ROR	20.3	21.4	19.1	21.2	19.4	18.9	13.0	12.2	14.2	15.9	15.8	18.6	17.5
Twin Falls	ROR	40.6	42.2	26.4	38.0	35.7	37.6	11.2	0.0	0.0	7.0	7.3	27.6	22.8
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	18.7	19.1	17.6	19.1	13.6	12.1	13.8	15.4	14.1	19.2	16.7
Upper Salmon 3&4	ROR	17.7	17.7	17.2	17.7	17.7	16.2	12.8	11.6	13.0	14.4	13.2	17.6	15.6
HCC Total		**584.7**	**953.0**	**797.7**	**965.9**	**865.5**	**843.3**	**542.7**	**380.4**	**457.4**	**457.7**	**360.7**	**551.7**	**646.7**
ROR Total		**393.1**	**408.6**	**329.0**	**422.8**	**434.4**	**457.6**	**284.3**	**233.3**	**230.1**	**227.2**	**199.0**	**323.0**	**328.3**
Total		**977.8**	**1361.6**	**1126.7**	**1388.7**	**1299.9**	**1300.9**	**827.0**	**613.7**	**687.5**	**684.9**	**559.7**	**874.7**	**975.1**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2022**	**2/2022**	**3/2022**	**4/2022**	**5/2022**	**6/2022**	**7/2022**	**8/2022**	**9/2022**	**10/2022**	**11/2022**	**12/2022**	**aMW**
Brownlee	HCC*	260.7	424.5	337.4	407.5	383.5	377.4	239.3	161.3	195.3	195.2	153.5	244.0	281.6
Oxbow	HCC	108.2	176.9	151.9	184.8	157.4	153.8	101.5	73.7	88.0	88.2	69.3	102.7	121.4
Hells Canyon	HCC	215.1	350.8	306.3	373.4	325.6	311.4	201.5	145.0	173.0	173.9	138.1	203.7	243.1
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.2	25.8	56.3	85.5	101.9	83.3	64.5	41.9	19.2	0.0	15.4	45.5
Bliss	ROR	49.2	50.3	43.9	49.1	47.2	47.0	34.9	32.9	36.5	39.1	36.8	43.6	42.5
C.J. Strike	ROR	63.5	66.1	57.9	65.5	60.0	58.6	37.5	35.9	43.4	49.7	48.4	57.1	53.6
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	34.4	34.9	28.7	33.8	32.9	33.4	22.4	20.2	22.7	25.0	23.2	29.5	28.4
Milner	ROR	40.4	42.7	25.0	37.9	35.1	36.2	6.7	0.0	0.0	0.0	1.8	25.4	20.9
Shoshone Falls	ROR	55.0	58.0	35.0	51.0	48.0	50.0	16.0	7.1	7.2	11.1	12.0	40.0	32.4
Swan Falls	ROR	20.3	21.3	19.1	21.2	19.3	18.9	13.0	12.2	14.2	15.9	15.8	18.5	17.5
Twin Falls	ROR	40.5	41.9	26.3	37.9	35.7	37.6	11.2	0.0	0.0	7.0	7.3	27.2	22.7
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	18.7	19.1	17.6	19.1	13.6	12.1	13.7	15.4	14.0	19.0	16.7
Upper Salmon 3&4	ROR	17.7	17.7	17.2	17.7	17.7	16.2	12.8	11.5	13.0	14.3	13.2	17.5	15.5
HCC Total		**584.0**	**952.2**	**795.6**	**965.7**	**866.4**	**842.6**	**542.3**	**380.0**	**456.3**	**457.3**	**360.9**	**550.4**	**646.1**
ROR Total		**392.7**	**407.4**	**328.5**	**422.3**	**434.0**	**457.4**	**284.2**	**233.1**	**230.0**	**227.0**	**198.7**	**320.5**	**327.8**
Total		**976.7**	**1359.6**	**1124.1**	**1388.0**	**1300.4**	**1300.0**	**826.5**	**613.1**	**686.2**	**684.3**	**559.6**	**870.9**	**973.9**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2023**	**2/2023**	**3/2023**	**4/2023**	**5/2023**	**6/2023**	**7/2023**	**8/2023**	**9/2023**	**10/2023**	**11/2023**	**12/2023**	**aMW**
Brownlee	HCC*	260.6	424.3	337.2	407.4	383.4	377.3	239.3	161.2	195.0	195.4	153.5	243.8	281.5
Oxbow	HCC	108.2	176.9	151.8	184.8	157.4	153.7	101.5	73.7	87.9	88.3	69.3	102.6	121.3
Hells Canyon	HCC	215.0	350.7	306.2	373.3	325.5	311.3	201.4	144.9	172.7	174.1	138.1	203.5	243.1
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.1	25.8	56.3	85.5	101.8	83.3	64.5	41.9	19.2	0.0	15.3	45.5
Bliss	ROR	49.2	50.2	43.8	49.1	47.1	46.9	34.9	32.9	36.5	39.0	36.8	43.5	42.5
C.J. Strike	ROR	63.5	66.0	57.8	65.5	59.9	58.6	37.5	35.9	43.4	49.6	48.4	57.0	53.6
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	34.4	34.9	28.7	33.8	32.8	33.4	22.4	20.2	22.7	25.0	23.2	29.4	28.4
Milner	ROR	40.3	42.6	25.0	37.9	35.1	36.2	6.7	0.0	0.0	0.0	1.8	25.2	20.9
Shoshone Falls	ROR	55.0	58.0	35.0	51.0	48.0	50.0	16.0	7.1	7.2	11.1	12.0	40.0	32.4
Swan Falls	ROR	20.3	21.3	19.0	21.2	19.3	18.9	13.0	12.2	14.2	15.9	15.8	18.5	17.5
Twin Falls	ROR	40.5	41.8	26.2	37.8	35.7	37.6	11.2	0.0	0.0	7.0	7.3	27.0	22.7
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	18.7	19.1	17.6	19.1	13.5	12.1	13.7	15.4	14.0	18.9	16.7
Upper Salmon 3&4	ROR	17.7	17.7	17.2	17.7	17.7	16.2	12.8	11.5	12.9	14.3	13.2	17.4	15.5
HCC Total		**583.8**	**951.9**	**795.2**	**965.5**	**866.2**	**842.3**	**542.2**	**379.8**	**455.5**	**457.8**	**360.9**	**549.9**	**645.9**
ROR Total		**392.6**	**406.9**	**328.1**	**422.2**	**433.6**	**457.2**	**284.1**	**233.1**	**229.9**	**226.8**	**198.7**	**319.5**	**327.5**
Total		**976.4**	**1358.8**	**1123.3**	**1387.7**	**1299.8**	**1299.5**	**826.3**	**612.9**	**685.3**	**684.6**	**559.6**	**869.4**	**973.5**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2024**	**2/2024**	**3/2024**	**4/2024**	**5/2024**	**6/2024**	**7/2024**	**8/2024**	**9/2024**	**10/2024**	**11/2024**	**12/2024**	**aMW**
Brownlee	HCC*	260.6	424.3	337.2	407.4	383.4	377.3	239.3	161.2	195.0	195.4	153.5	243.8	281.5
Oxbow	HCC	108.2	176.9	151.8	184.8	157.4	153.7	101.5	73.7	87.9	88.3	69.3	102.6	121.3
Hells Canyon	HCC	215.0	350.7	306.2	373.3	325.5	311.3	201.4	144.9	172.7	174.1	138.1	203.5	243.1
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.1	25.8	56.3	85.5	101.8	83.3	64.5	41.9	19.2	0.0	15.3	45.5
Bliss	ROR	49.2	50.2	43.8	49.1	47.1	46.9	34.9	32.9	36.5	39.0	36.8	43.5	42.5
C.J. Strike	ROR	63.5	66.0	57.8	65.5	59.9	58.6	37.5	35.9	43.4	49.6	48.4	57.0	53.6
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	34.4	34.9	28.7	33.8	32.8	33.4	22.4	20.2	22.7	25.0	23.2	29.4	28.4
Milner	ROR	40.3	42.6	25.0	37.9	35.1	36.2	6.7	0.0	0.0	0.0	1.8	25.2	20.9
Shoshone Falls	ROR	55.0	58.0	35.0	51.0	48.0	50.0	16.0	7.1	7.2	11.1	12.0	40.0	32.4
Swan Falls	ROR	20.3	21.3	19.0	21.2	19.3	18.9	13.0	12.2	14.2	15.9	15.8	18.5	17.5
Twin Falls	ROR	40.5	41.8	26.2	37.8	35.7	37.6	11.2	0.0	0.0	7.0	7.3	27.0	22.7
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	18.7	19.1	17.6	19.1	13.5	12.1	13.7	15.4	14.0	18.9	16.7
Upper Salmon 3&4	ROR	17.7	17.7	17.2	17.7	17.7	16.2	12.8	11.5	12.9	14.3	13.2	17.4	15.5
HCC Total		**583.8**	**951.9**	**795.2**	**965.5**	**866.2**	**842.3**	**542.2**	**379.8**	**455.5**	**457.8**	**360.9**	**549.9**	**645.9**
ROR Total		**392.6**	**406.9**	**328.1**	**422.2**	**433.6**	**457.2**	**284.1**	**233.1**	**229.9**	**226.8**	**198.7**	**319.5**	**327.5**
Total		**976.4**	**1358.8**	**1123.3**	**1387.7**	**1299.8**	**1299.5**	**826.3**	**612.9**	**685.3**	**684.6**	**559.6**	**869.4**	**973.5**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2025**	**2/2025**	**3/2025**	**4/2025**	**5/2025**	**6/2025**	**7/2025**	**8/2025**	**9/2025**	**10/2025**	**11/2025**	**12/2025**	**aMW**
Brownlee	HCC*	260.6	424.3	337.2	407.4	383.4	377.3	239.3	161.2	195.0	195.4	153.5	243.8	281.5
Oxbow	HCC	108.2	176.9	151.8	184.8	157.4	153.7	101.5	73.7	87.9	88.3	69.3	102.6	121.3
Hells Canyon	HCC	215.0	350.7	306.2	373.3	325.5	311.3	201.4	144.9	172.7	174.1	138.1	203.5	243.1
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.1	25.8	56.3	85.5	101.8	83.3	64.5	41.9	19.2	0.0	15.3	45.5
Bliss	ROR	49.2	50.2	43.8	49.1	47.1	46.9	34.9	32.9	36.5	39.0	36.8	43.5	42.5
C.J. Strike	ROR	63.5	66.0	57.8	65.5	59.9	58.6	37.5	35.9	43.4	49.6	48.4	57.0	53.6
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	34.4	34.9	28.7	33.8	32.8	33.4	22.4	20.2	22.7	25.0	23.2	29.4	28.4
Milner	ROR	40.3	42.6	25.0	37.9	35.1	36.2	6.7	0.0	0.0	0.0	1.8	25.2	20.9
Shoshone Falls	ROR	55.0	58.0	35.0	51.0	48.0	50.0	16.0	7.1	7.2	11.1	12.0	40.0	32.4
Swan Falls	ROR	20.3	21.3	19.0	21.2	19.3	18.9	13.0	12.2	14.2	15.9	15.8	18.5	17.5
Twin Falls	ROR	40.5	41.8	26.2	37.8	35.7	37.6	11.2	0.0	0.0	7.0	7.3	27.0	22.7
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	18.7	19.1	17.6	19.1	13.5	12.1	13.7	15.4	14.0	18.9	16.7
Upper Salmon 3&4	ROR	17.7	17.7	17.2	17.7	17.7	16.2	12.8	11.5	12.9	14.3	13.2	17.4	15.5
HCC Total		**583.8**	**951.9**	**795.2**	**965.5**	**866.2**	**842.3**	**542.2**	**379.8**	**455.5**	**457.8**	**360.9**	**549.9**	**645.9**
ROR Total		**392.6**	**406.9**	**328.1**	**422.2**	**433.6**	**457.2**	**284.1**	**233.1**	**229.9**	**226.8**	**198.7**	**319.5**	**327.5**
Total		**976.4**	**1358.8**	**1123.3**	**1387.7**	**1299.8**	**1299.5**	**826.3**	**612.9**	**685.3**	**684.6**	**559.6**	**869.4**	**973.5**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2026**	**2/2026**	**3/2026**	**4/2026**	**5/2026**	**6/2026**	**7/2026**	**8/2026**	**9/2026**	**10/2026**	**11/2026**	**12/2026**	**aMW**
Brownlee	HCC*	260.6	424.3	337.2	407.4	383.4	377.3	239.3	161.2	195.0	195.4	153.5	243.8	281.5
Oxbow	HCC	108.2	176.9	151.8	184.8	157.4	153.7	101.5	73.7	87.9	88.3	69.3	102.6	121.3
Hells Canyon	HCC	215.0	350.7	306.2	373.3	325.5	311.3	201.4	144.9	172.7	174.1	138.1	203.5	243.1
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.1	25.8	56.3	85.5	101.8	83.3	64.5	41.9	19.2	0.0	15.3	45.5
Bliss	ROR	49.2	50.2	43.8	49.1	47.1	46.9	34.9	32.9	36.5	39.0	36.8	43.5	42.5
C.J. Strike	ROR	63.5	66.0	57.8	65.5	59.9	58.6	37.5	35.9	43.4	49.6	48.4	57.0	53.6
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	34.4	34.9	28.7	33.8	32.8	33.4	22.4	20.2	22.7	25.0	23.2	29.4	28.4
Milner	ROR	40.3	42.6	25.0	37.9	35.1	36.2	6.7	0.0	0.0	0.0	1.8	25.2	20.9
Shoshone Falls	ROR	55.0	58.0	35.0	51.0	48.0	50.0	16.0	7.1	7.2	11.1	12.0	40.0	32.4
Swan Falls	ROR	20.3	21.3	19.0	21.2	19.3	18.9	13.0	12.2	14.2	15.9	15.8	18.5	17.5
Twin Falls	ROR	40.5	41.8	26.2	37.8	35.7	37.6	11.2	0.0	0.0	7.0	7.3	27.0	22.7
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	18.7	19.1	17.6	19.1	13.5	12.1	13.7	15.4	14.0	18.9	16.7
Upper Salmon 3&4	ROR	17.7	17.7	17.2	17.7	17.7	16.2	12.8	11.5	12.9	14.3	13.2	17.4	15.5
HCC Total		**583.8**	**951.9**	**795.2**	**965.5**	**866.2**	**842.3**	**542.2**	**379.8**	**455.5**	**457.8**	**360.9**	**549.9**	**645.9**
ROR Total		**392.6**	**406.9**	**328.1**	**422.2**	**433.6**	**457.2**	**284.1**	**233.1**	**229.9**	**226.8**	**198.7**	**319.5**	**327.5**
Total		**976.4**	**1358.8**	**1123.3**	**1387.7**	**1299.8**	**1299.5**	**826.3**	**612.9**	**685.3**	**684.6**	**559.6**	**869.4**	**973.5**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2027**	**2/2027**	**3/2027**	**4/2027**	**5/2027**	**6/2027**	**7/2027**	**8/2027**	**9/2027**	**10/2027**	**11/2027**	**12/2027**	**aMW**
Brownlee	HCC*	260.6	424.3	337.2	407.4	383.4	377.3	239.3	161.2	195.0	195.4	153.5	243.8	281.5
Oxbow	HCC	108.2	176.9	151.8	184.8	157.4	153.7	101.5	73.7	87.9	88.3	69.3	102.6	121.3
Hells Canyon	HCC	215.0	350.7	306.2	373.3	325.5	311.3	201.4	144.9	172.7	174.1	138.1	203.5	243.1
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.1	25.8	56.3	85.5	101.8	83.3	64.5	41.9	19.2	0.0	15.3	45.5
Bliss	ROR	49.2	50.2	43.8	49.1	47.1	46.9	34.9	32.9	36.5	39.0	36.8	43.5	42.5
C.J. Strike	ROR	63.5	66.0	57.8	65.5	59.9	58.6	37.5	35.9	43.4	49.6	48.4	57.0	53.6
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	34.4	34.9	28.7	33.8	32.8	33.4	22.4	20.2	22.7	25.0	23.2	29.4	28.4
Milner	ROR	40.3	42.6	25.0	37.9	35.1	36.2	6.7	0.0	0.0	0.0	1.8	25.2	20.9
Shoshone Falls	ROR	55.0	58.0	35.0	51.0	48.0	50.0	16.0	7.1	7.2	11.1	12.0	40.0	32.4
Swan Falls	ROR	20.3	21.3	19.0	21.2	19.3	18.9	13.0	12.2	14.2	15.9	15.8	18.5	17.5
Twin Falls	ROR	40.5	41.8	26.2	37.8	35.7	37.6	11.2	0.0	0.0	7.0	7.3	27.0	22.7
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	18.7	19.1	17.6	19.1	13.5	12.1	13.7	15.4	14.0	18.9	16.7
Upper Salmon 3&4	ROR	17.7	17.7	17.2	17.7	17.7	16.2	12.8	11.5	12.9	14.3	13.2	17.4	15.5
HCC Total		**583.8**	**951.9**	**795.2**	**965.5**	**866.2**	**842.3**	**542.2**	**379.8**	**455.5**	**457.8**	**360.9**	**549.9**	**645.9**
ROR Total		**392.6**	**406.9**	**328.1**	**422.2**	**433.6**	**457.2**	**284.1**	**233.1**	**229.9**	**226.8**	**198.7**	**319.5**	**327.5**
Total		**976.4**	**1358.8**	**1123.3**	**1387.7**	**1299.8**	**1299.5**	**826.3**	**612.9**	**685.3**	**684.6**	**559.6**	**869.4**	**973.5**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2028**	**2/2028**	**3/2028**	**4/2028**	**5/2028**	**6/2028**	**7/2028**	**8/2028**	**9/2028**	**10/2028**	**11/2028**	**12/2028**	**aMW**
Brownlee	HCC*	260.6	424.3	337.2	407.4	383.4	377.3	239.3	161.2	195.0	195.4	153.5	243.8	281.5
Oxbow	HCC	108.2	176.9	151.8	184.8	157.4	153.7	101.5	73.7	87.9	88.3	69.3	102.6	121.3
Hells Canyon	HCC	215.0	350.7	306.2	373.3	325.5	311.3	201.4	144.9	172.7	174.1	138.1	203.5	243.1
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.1	25.8	56.3	85.5	101.8	83.3	64.5	41.9	19.2	0.0	15.3	45.5
Bliss	ROR	49.2	50.2	43.8	49.1	47.1	46.9	34.9	32.9	36.5	39.0	36.8	43.5	42.5
C.J. Strike	ROR	63.5	66.0	57.8	65.5	59.9	58.6	37.5	35.9	43.4	49.6	48.4	57.0	53.6
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	34.4	34.9	28.7	33.8	32.8	33.4	22.4	20.2	22.7	25.0	23.2	29.4	28.4
Milner	ROR	40.3	42.6	25.0	37.9	35.1	36.2	6.7	0.0	0.0	0.0	1.8	25.2	20.9
Shoshone Falls	ROR	55.0	58.0	35.0	51.0	48.0	50.0	16.0	7.1	7.2	11.1	12.0	40.0	32.4
Swan Falls	ROR	20.3	21.3	19.0	21.2	19.3	18.9	13.0	12.2	14.2	15.9	15.8	18.5	17.5
Twin Falls	ROR	40.5	41.8	26.2	37.8	35.7	37.6	11.2	0.0	0.0	7.0	7.3	27.0	22.7
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	18.7	19.1	17.6	19.1	13.5	12.1	13.7	15.4	14.0	18.9	16.7
Upper Salmon 3&4	ROR	17.7	17.7	17.2	17.7	17.7	16.2	12.8	11.5	12.9	14.3	13.2	17.4	15.5
HCC Total		**583.8**	**951.9**	**795.2**	**965.5**	**866.2**	**842.3**	**542.2**	**379.8**	**455.5**	**457.8**	**360.9**	**549.9**	**645.9**
ROR Total		**392.6**	**406.9**	**328.1**	**422.2**	**433.6**	**457.2**	**284.1**	**233.1**	**229.9**	**226.8**	**198.7**	**319.5**	**327.5**
Total		**976.4**	**1358.8**	**1123.3**	**1387.7**	**1299.8**	**1299.5**	**826.3**	**612.9**	**685.3**	**684.6**	**559.6**	**869.4**	**973.5**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2029**	**2/2029**	**3/2029**	**4/2029**	**5/2029**	**6/2029**	**7/2029**	**8/2029**	**9/2029**	**10/2029**	**11/2029**	**12/2029**	**aMW**
Brownlee	HCC*	260.6	424.3	337.2	407.4	383.4	377.3	239.3	161.2	195.0	195.4	153.5	243.8	281.5
Oxbow	HCC	108.2	176.9	151.8	184.8	157.4	153.7	101.5	73.7	87.9	88.3	69.3	102.6	121.3
Hells Canyon	HCC	215.0	350.7	306.2	373.3	325.5	311.3	201.4	144.9	172.7	174.1	138.1	203.5	243.1
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.1	25.8	56.3	85.5	101.8	83.3	64.5	41.9	19.2	0.0	15.3	45.5
Bliss	ROR	49.2	50.2	43.8	49.1	47.1	46.9	34.9	32.9	36.5	39.0	36.8	43.5	42.5
C.J. Strike	ROR	63.5	66.0	57.8	65.5	59.9	58.6	37.5	35.9	43.4	49.6	48.4	57.0	53.6
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	34.4	34.9	28.7	33.8	32.8	33.4	22.4	20.2	22.7	25.0	23.2	29.4	28.4
Milner	ROR	40.3	42.6	25.0	37.9	35.1	36.2	6.7	0.0	0.0	0.0	1.8	25.2	20.9
Shoshone Falls	ROR	55.0	58.0	35.0	51.0	48.0	50.0	16.0	7.1	7.2	11.1	12.0	40.0	32.4
Swan Falls	ROR	20.3	21.3	19.0	21.2	19.3	18.9	13.0	12.2	14.2	15.9	15.8	18.5	17.5
Twin Falls	ROR	40.5	41.8	26.2	37.8	35.7	37.6	11.2	0.0	0.0	7.0	7.3	27.0	22.7
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	18.7	19.1	17.6	19.1	13.5	12.1	13.7	15.4	14.0	18.9	16.7
Upper Salmon 3&4	ROR	17.7	17.7	17.2	17.7	17.7	16.2	12.8	11.5	12.9	14.3	13.2	17.4	15.5
HCC Total		**583.8**	**951.9**	**795.2**	**965.5**	**866.2**	**842.3**	**542.2**	**379.8**	**455.5**	**457.8**	**360.9**	**549.9**	**645.9**
ROR Total		**392.6**	**406.9**	**328.1**	**422.2**	**433.6**	**457.2**	**284.1**	**233.1**	**229.9**	**226.8**	**198.7**	**319.5**	**327.5**
Total		**976.4**	**1358.8**	**1123.3**	**1387.7**	**1299.8**	**1299.5**	**826.3**	**612.9**	**685.3**	**684.6**	**559.6**	**869.4**	**973.5**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 50th Percentile Water, 50th Percentile Load														
Resource	**Type**	**1/2030**	**2/2030**	**3/2030**	**4/2030**	**5/2030**	**6/2030**	**7/2030**	**8/2030**	**9/2030**	**10/2030**	**11/2030**	**12/2030**	**aMW**
Brownlee	HCC*	260.6	424.3	337.2	407.4	383.4	377.3	239.3	161.2	195.0	195.4	153.5	243.8	281.5
Oxbow	HCC	108.2	176.9	151.8	184.8	157.4	153.7	101.5	73.7	87.9	88.3	69.3	102.6	121.3
Hells Canyon	HCC	215.0	350.7	306.2	373.3	325.5	311.3	201.4	144.9	172.7	174.1	138.1	203.5	243.1
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	25.4	27.1	25.8	56.3	85.5	101.8	83.3	64.5	41.9	19.2	0.0	15.3	45.5
Bliss	ROR	49.2	50.2	43.8	49.1	47.1	46.9	34.9	32.9	36.5	39.0	36.8	43.5	42.5
C.J. Strike	ROR	63.5	66.0	57.8	65.5	59.9	58.6	37.5	35.9	43.4	49.6	48.4	57.0	53.6
Cascade	ROR	1.5	2.6	4.6	7.5	7.3	11.9	6.9	10.1	9.1	2.7	2.2	1.5	5.7
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	34.4	34.9	28.7	33.8	32.8	33.4	22.4	20.2	22.7	25.0	23.2	29.4	28.4
Milner	ROR	40.3	42.6	25.0	37.9	35.1	36.2	6.7	0.0	0.0	0.0	1.8	25.2	20.9
Shoshone Falls	ROR	55.0	58.0	35.0	51.0	48.0	50.0	16.0	7.1	7.2	11.1	12.0	40.0	32.4
Swan Falls	ROR	20.3	21.3	19.0	21.2	19.3	18.9	13.0	12.2	14.2	15.9	15.8	18.5	17.5
Twin Falls	ROR	40.5	41.8	26.2	37.8	35.7	37.6	11.2	0.0	0.0	7.0	7.3	27.0	22.7
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	19.1	19.1	18.7	19.1	17.6	19.1	13.5	12.1	13.7	15.4	14.0	18.9	16.7
Upper Salmon 3&4	ROR	17.7	17.7	17.2	17.7	17.7	16.2	12.8	11.5	12.9	14.3	13.2	17.4	15.5
HCC Total		**583.8**	**951.9**	**795.2**	**965.5**	**866.2**	**842.3**	**542.2**	**379.8**	**455.5**	**457.8**	**360.9**	**549.9**	**645.9**
ROR Total		**392.6**	**406.9**	**328.1**	**422.2**	**433.6**	**457.2**	**284.1**	**233.1**	**229.9**	**226.8**	**198.7**	**319.5**	**327.5**
Total		**976.4**	**1358.8**	**1123.3**	**1387.7**	**1299.8**	**1299.5**	**826.3**	**612.9**	**685.3**	**684.6**	**559.6**	**869.4**	**973.5**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 70th Percentile Water, 70th Percentile Load														
Resource	Type	1/2011	2/2011	3/2011	4/2011	5/2011	6/2011	7/2011	8/2011	9/2011	10/2011	11/2011	12/2011	aMW
Brownlee	HCC*	253.3	311.8	252.9	295.1	370.0	322.8	221.1	166.7	177.0	187.7	156.4	210.3	243.8
Oxbow	HCC	106.5	130.5	111.0	123.0	149.1	129.5	93.5	76.2	78.7	83.1	69.6	88.0	103.2
Hells Canyon	HCC	210.8	257.4	226.4	249.8	303.7	261.2	184.7	149.4	154.5	163.9	138.1	174.4	206.2
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	9.4	15.1	36.5	72.9	87.6	77.8	62.0	33.8	13.9	0.0	0.0	34.1
Bliss	ROR	38.6	40.7	39.7	37.3	42.0	41.3	35.7	37.4	37.0	39.3	37.2	38.0	38.7
C.J. Strike	ROR	50.0	52.6	53.5	50.1	53.7	49.1	38.2	41.2	44.2	50.3	48.4	49.9	48.4
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	24.2	26.6	24.8	22.6	28.4	28.7	23.2	24.0	23.5	25.6	23.9	24.1	25.0
Milner	ROR	8.6	16.5	11.5	3.7	17.9	18.5	6.7	6.7	0.0	0.0	1.8	6.1	8.2
Shoshone Falls	ROR	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	7.3	11.2	11.3	12.0	11.5
Swan Falls	ROR	16.1	17.3	17.6	16.9	17.5	16.3	13.2	13.8	14.4	16.0	15.8	16.2	15.9
Twin Falls	ROR	11.9	19.2	14.5	8.1	21.0	22.7	11.5	11.7	3.8	7.3	7.4	9.8	12.4
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	14.9	16.9	13.8	14.0	18.4	18.5	14.2	15.0	14.3	15.8	14.5	14.8	15.4
Upper Salmon 3&4	ROR	13.9	15.6	14.5	13.2	17.0	17.0	13.3	14.1	13.5	14.7	13.6	13.8	14.5
HCC Total		**570.6**	**699.7**	**590.3**	**667.9**	**822.8**	**713.5**	**499.3**	**392.3**	**410.2**	**434.7**	**364.1**	**472.7**	**553.2**
ROR Total		**217.4**	**253.9**	**245.9**	**241.4**	**333.2**	**346.2**	**278.6**	**274.6**	**229.0**	**223.9**	**199.3**	**211.9**	**254.6**
Total		**788.0**	**953.6**	**836.2**	**909.3**	**1156.0**	**1059.7**	**777.9**	**666.9**	**639.2**	**658.6**	**563.4**	**684.6**	**807.8**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 70th Percentile Water, 70th Percentile Load														
Resource	Type	1/2012	2/2012	3/2012	4/2012	5/2012	6/2012	7/2012	8/2012	9/2012	10/2012	11/2012	12/2012	aMW
Brownlee	HCC*	253.4	310.8	252.7	294.4	370.3	322.6	221.0	166.5	177.1	186.9	156.6	209.5	243.5
Oxbow	HCC	106.6	130.1	110.9	122.7	149.2	129.4	93.5	76.1	78.7	82.8	69.6	87.7	103.1
Hells Canyon	HCC	211.0	256.6	226.2	249.2	303.9	261.1	184.6	149.2	154.6	163.2	138.2	173.8	206.0
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	9.4	14.8	36.5	72.9	87.7	77.8	62.0	33.7	13.9	0.0	0.0	34.1
Bliss	ROR	38.5	40.6	39.6	37.2	41.9	41.3	35.6	37.3	37.0	39.2	37.1	37.9	38.6
C.J. Strike	ROR	49.9	52.5	53.5	50.0	53.6	49.0	38.1	41.2	44.1	50.2	48.4	49.8	48.4
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	24.2	26.5	24.6	22.6	28.4	28.7	23.1	24.0	23.5	25.5	23.9	24.1	24.9
Milner	ROR	8.6	16.2	11.2	3.7	17.9	18.5	6.7	6.7	0.0	0.0	1.8	6.0	8.1
Shoshone Falls	ROR	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	7.3	11.2	11.3	12.0	11.5
Swan Falls	ROR	16.0	17.3	17.6	16.9	17.4	16.3	13.1	13.8	14.4	15.9	15.8	16.2	15.9
Twin Falls	ROR	11.8	19.1	14.1	8.0	21.0	22.7	11.5	11.7	3.8	7.3	7.4	9.8	12.4
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	14.9	16.8	15.4	13.9	17.7	18.5	14.1	15.0	14.3	15.8	14.5	14.7	15.5
Upper Salmon 3&4	ROR	13.9	15.6	14.4	13.1	17.0	16.2	13.3	14.0	13.5	14.7	13.6	13.8	14.4
HCC Total		**571.0**	**697.5**	**589.8**	**666.3**	**823.3**	**713.1**	**499.1**	**391.8**	**410.4**	**432.9**	**364.4**	**471.0**	**552.5**
ROR Total		**217.0**	**253.1**	**246.1**	**240.9**	**332.2**	**345.4**	**278.1**	**274.4**	**228.9**	**223.5**	**199.2**	**211.5**	**254.2**
Total		**788.0**	**950.6**	**835.9**	**907.2**	**1155.5**	**1058.5**	**777.2**	**666.2**	**639.2**	**656.4**	**563.6**	**682.5**	**806.7**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 70th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2013**	**2/2013**	**3/2013**	**4/2013**	**5/2013**	**6/2013**	**7/2013**	**8/2013**	**9/2013**	**10/2013**	**11/2013**	**12/2013**	**aMW**
Brownlee	HCC*	253.6	309.6	252.5	294.2	370.1	322.4	220.9	166.4	177.1	186.2	156.4	209.4	243.2
Oxbow	HCC	106.7	129.7	110.8	122.6	149.2	129.3	93.4	76.0	78.8	82.5	69.5	87.6	103.0
Hells Canyon	HCC	211.2	255.8	226.0	249.0	303.7	260.9	184.4	149.1	154.7	162.6	138.0	173.7	205.8
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	9.4	14.5	36.6	73.0	87.7	77.8	62.1	33.8	13.9	0.0	0.0	34.1
Bliss	ROR	38.4	40.4	39.6	37.0	41.9	41.3	35.6	37.3	37.0	39.2	37.1	37.8	38.6
C.J. Strike	ROR	49.8	52.4	53.4	49.9	53.5	48.9	38.1	41.1	44.1	50.2	48.3	49.7	48.3
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	24.1	26.5	24.4	22.5	28.3	28.7	23.1	23.9	23.4	25.5	23.8	24.0	24.9
Milner	ROR	8.5	16.0	10.9	3.6	17.9	18.5	6.7	6.7	0.0	0.0	1.8	6.0	8.1
Shoshone Falls	ROR	12.0	12.0	12.0	11.9	12.0	12.0	12.0	12.0	7.3	11.2	11.3	12.0	11.5
Swan Falls	ROR	16.0	17.3	17.5	16.8	17.4	16.3	13.1	13.8	14.4	15.9	15.8	16.1	15.9
Twin Falls	ROR	11.8	18.9	14.0	7.9	21.0	22.7	11.5	11.7	3.8	7.2	7.4	9.8	12.3
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	14.8	16.8	15.3	13.8	17.7	18.4	14.1	15.0	14.3	15.7	14.5	14.7	15.4
Upper Salmon 3&4	ROR	13.9	15.6	14.3	13.0	16.9	16.2	13.3	14.0	13.4	14.7	13.6	13.8	14.4
HCC Total		**571.5**	**695.1**	**589.3**	**665.8**	**822.9**	**712.6**	**498.7**	**391.5**	**410.6**	**431.3**	**363.9**	**470.7**	**552.0**
ROR Total		**216.5**	**252.4**	**244.8**	**240.0**	**332.0**	**345.2**	**278.1**	**274.3**	**228.7**	**223.3**	**199.0**	**211.1**	**253.8**
Total		**788.0**	**947.5**	**834.1**	**905.8**	**1154.9**	**1057.8**	**776.8**	**665.8**	**639.3**	**654.6**	**562.9**	**681.8**	**805.8**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 70th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2014**	**2/2014**	**3/2014**	**4/2014**	**5/2014**	**6/2014**	**7/2014**	**8/2014**	**9/2014**	**10/2014**	**11/2014**	**12/2014**	**aMW**
Brownlee	HCC*	254.3	303.2	251.6	292.9	370.1	321.3	220.1	165.8	172.7	184.8	156.8	207.8	241.8
Oxbow	HCC	107.2	127.2	110.3	122.0	149.1	128.9	93.1	75.7	78.4	81.8	69.6	86.9	102.5
Hells Canyon	HCC	212.1	251.1	225.2	247.8	303.8	260.1	183.8	148.6	153.8	161.2	138.2	172.4	204.8
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	9.0	14.4	35.6	73.1	87.8	77.9	62.1	33.8	14.0	0.0	0.0	34.0
Bliss	ROR	38.0	39.6	39.3	36.2	41.7	41.1	35.4	37.1	36.8	39.0	36.9	37.5	38.2
C.J. Strike	ROR	49.4	51.6	53.0	49.1	53.1	48.6	37.8	40.8	43.8	49.9	48.1	49.3	47.9
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	23.8	25.9	23.9	22.0	28.2	28.5	22.9	23.8	23.2	25.3	23.6	23.8	24.6
Milner	ROR	8.2	15.0	10.5	0.0	17.9	18.5	6.7	6.7	0.0	0.0	1.8	5.7	7.6
Shoshone Falls	ROR	12.0	12.0	12.0	8.9	12.0	12.0	12.0	12.0	7.3	11.1	11.3	12.0	11.2
Swan Falls	ROR	15.9	17.1	17.4	16.7	17.3	16.2	13.0	13.7	14.3	15.9	15.7	16.0	15.8
Twin Falls	ROR	11.5	17.9	13.6	5.3	20.9	22.7	11.4	11.7	3.7	7.2	7.4	9.6	11.9
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	14.6	16.4	14.9	13.5	17.7	18.3	14.0	14.8	14.2	15.6	14.3	14.5	15.2
Upper Salmon 3&4	ROR	13.7	15.2	14.0	12.7	16.8	16.2	13.2	13.9	13.3	14.6	13.4	13.6	14.2
HCC Total		**573.6**	**681.5**	**587.1**	**662.7**	**823.0**	**710.3**	**497.0**	**390.1**	**404.9**	**427.8**	**364.6**	**467.1**	**549.1**
ROR Total		**214.3**	**246.8**	**241.9**	**227.0**	**331.1**	**344.4**	**277.1**	**273.3**	**227.7**	**222.4**	**197.9**	**209.2**	**251.1**
Total		**787.9**	**928.3**	**829.0**	**889.7**	**1154.1**	**1054.7**	**774.1**	**663.4**	**632.5**	**650.2**	**562.5**	**676.3**	**800.2**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 70th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2015**	**2/2015**	**3/2015**	**4/2015**	**5/2015**	**6/2015**	**7/2015**	**8/2015**	**9/2015**	**10/2015**	**11/2015**	**12/2015**	**aMW**
Brownlee	HCC*	255.1	298.3	251.2	291.2	369.7	320.1	219.4	165.0	173.1	181.8	156.7	206.3	240.7
Oxbow	HCC	107.6	125.3	110.1	121.3	149.0	128.4	92.8	75.4	78.6	80.4	69.6	86.3	102.1
Hells Canyon	HCC	213.0	247.4	224.7	246.4	303.4	259.2	183.2	147.9	154.2	158.7	138.1	171.1	203.9
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	7.7	14.0	35.6	73.2	87.9	78.0	62.2	33.9	14.1	0.0	0.0	33.9
Bliss	ROR	37.7	38.9	39.0	36.0	41.5	40.9	35.2	36.8	36.6	38.8	36.7	37.2	37.9
C.J. Strike	ROR	49.0	50.6	52.5	47.9	52.7	48.3	37.6	40.6	43.5	49.7	47.7	48.9	47.4
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	23.6	25.0	23.5	21.8	28.0	28.4	22.8	23.6	23.1	25.2	23.4	23.6	24.3
Milner	ROR	8.0	12.4	9.6	0.0	17.9	18.5	6.7	6.7	0.0	0.0	1.8	5.3	7.2
Shoshone Falls	ROR	12.0	12.0	12.0	8.4	12.0	12.0	12.0	12.0	7.2	11.1	11.2	12.0	11.2
Swan Falls	ROR	15.8	16.8	17.3	16.4	17.2	16.1	13.0	13.7	14.2	15.8	15.6	15.9	15.7
Twin Falls	ROR	11.1	15.7	12.6	4.7	20.9	22.6	11.4	11.6	3.7	7.2	7.3	9.3	11.5
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	14.4	15.7	14.6	13.3	17.7	18.2	13.9	14.7	14.0	15.5	14.1	14.3	15.0
Upper Salmon 3&4	ROR	13.5	14.6	13.7	12.6	16.7	16.2	13.1	13.8	13.2	14.5	13.3	13.5	14.1
HCC Total		**575.7**	**671.0**	**586.0**	**658.9**	**822.1**	**707.7**	**495.4**	**388.3**	**405.8**	**420.9**	**364.4**	**463.7**	**546.7**
ROR Total		**212.3**	**236.5**	**237.7**	**223.7**	**330.2**	**343.6**	**276.5**	**272.4**	**226.6**	**221.7**	**196.5**	**207.2**	**248.7**
Total		**788.0**	**907.5**	**823.7**	**882.6**	**1152.3**	**1051.3**	**771.9**	**660.7**	**632.4**	**642.6**	**560.9**	**670.9**	**795.4**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 70th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2016**	**2/2016**	**3/2016**	**4/2016**	**5/2016**	**6/2016**	**7/2016**	**8/2016**	**9/2016**	**10/2016**	**11/2016**	**12/2016**	**aMW**
Brownlee	HCC*	255.9	296.7	250.6	290.0	369.1	319.0	218.7	152.2	176.7	181.4	156.7	208.1	239.6
Oxbow	HCC	108.0	124.7	109.8	120.7	148.7	128.0	92.5	69.3	78.6	80.3	69.6	87.1	101.4
Hells Canyon	HCC	213.7	246.1	224.2	245.4	302.9	258.3	182.6	136.4	154.4	158.4	138.2	172.6	202.8
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	10.6	15.0	36.6	73.4	88.1	78.1	58.7	34.6	14.5	0.0	0.0	34.1
Bliss	ROR	37.4	40.2	38.7	36.1	41.4	40.7	35.0	33.3	36.5	38.7	36.6	36.9	37.6
C.J. Strike	ROR	48.6	52.3	52.2	49.0	52.4	48.0	37.3	35.9	43.3	49.4	47.8	48.5	47.1
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	23.3	26.5	23.8	21.8	27.9	28.2	22.6	20.4	22.9	25.0	23.4	23.3	24.1
Milner	ROR	7.7	17.4	10.6	2.6	17.9	18.5	6.7	0.0	0.0	0.0	1.8	5.0	7.4
Shoshone Falls	ROR	12.0	12.0	12.0	10.9	12.0	12.0	12.0	7.1	7.2	11.1	11.2	23.9	12.0
Swan Falls	ROR	15.7	17.1	17.2	16.4	17.1	16.1	12.9	12.2	14.2	15.7	15.6	15.8	15.5
Twin Falls	ROR	10.8	20.2	13.4	7.0	20.9	22.6	11.3	3.6	3.7	7.1	7.3	9.1	11.4
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	14.2	16.8	14.9	13.3	17.7	18.1	13.7	12.3	13.9	15.4	14.1	14.2	14.9
Upper Salmon 3&4	ROR	13.4	15.6	13.9	12.6	16.6	16.2	13.0	11.7	13.1	14.3	13.3	13.3	13.9
HCC Total		**577.6**	**667.5**	**584.6**	**656.1**	**820.7**	**705.3**	**493.8**	**357.9**	**409.7**	**420.1**	**364.5**	**467.8**	**543.8**
ROR Total		**210.3**	**255.8**	**240.6**	**233.3**	**329.7**	**343.0**	**275.4**	**231.9**	**226.7**	**221.0**	**196.5**	**217.2**	**248.5**
Total		**787.9**	**923.3**	**825.2**	**889.4**	**1150.4**	**1048.3**	**769.2**	**589.8**	**636.3**	**641.1**	**561.0**	**685.0**	**792.3**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 70th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2017**	**2/2017**	**3/2017**	**4/2017**	**5/2017**	**6/2017**	**7/2017**	**8/2017**	**9/2017**	**10/2017**	**11/2017**	**12/2017**	**aMW**
Brownlee	HCC*	256.7	293.3	249.8	287.9	367.6	317.7	218.0	151.5	172.4	179.2	156.7	206.9	238.1
Oxbow	HCC	108.4	123.4	109.5	119.8	148.1	127.4	92.2	69.0	78.3	79.3	69.5	86.5	101.0
Hells Canyon	HCC	214.5	243.6	223.5	243.6	301.7	257.3	182.0	135.8	153.6	156.4	138.0	171.6	201.8
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	9.5	14.6	35.7	73.6	88.2	78.2	58.8	34.7	14.5	0.0	0.0	34.0
Bliss	ROR	37.1	39.6	38.4	35.7	41.2	40.5	34.8	33.1	36.3	38.5	36.4	36.7	37.4
C.J. Strike	ROR	48.3	51.2	51.8	48.0	52.1	47.7	37.1	35.6	43.1	49.2	47.3	48.2	46.6
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	23.0	25.6	23.4	21.3	27.7	27.9	22.4	20.3	22.8	24.9	23.2	23.1	23.8
Milner	ROR	7.4	15.2	10.1	0.0	17.9	18.5	6.7	0.0	0.0	0.0	1.8	5.0	6.9
Shoshone Falls	ROR	18.8	47.4	27.6	7.8	27.0	30.6	14.1	8.2	7.2	11.0	11.3	23.9	19.4
Swan Falls	ROR	15.6	16.9	17.1	16.3	17.0	16.0	12.8	12.1	14.1	15.6	15.5	15.7	15.4
Twin Falls	ROR	10.5	18.3	13.0	4.1	20.9	22.5	11.3	0.0	3.7	7.1	7.2	9.1	10.6
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	14.0	16.1	14.5	13.0	17.7	17.8	13.6	12.1	13.8	15.2	14.0	14.0	14.7
Upper Salmon 3&4	ROR	13.2	15.0	13.6	12.3	16.5	16.2	12.8	11.6	13.0	14.2	13.2	13.2	13.7
HCC Total		**579.6**	**660.3**	**582.8**	**651.3**	**817.4**	**702.4**	**492.2**	**356.3**	**404.3**	**414.9**	**364.2**	**465.0**	**540.9**
ROR Total		**215.1**	**281.9**	**253.0**	**221.1**	**344.0**	**360.4**	**276.5**	**228.4**	**226.0**	**220.0**	**195.2**	**216.1**	**253.0**
Total		**794.7**	**942.2**	**835.8**	**872.4**	**1161.4**	**1062.8**	**768.7**	**584.7**	**630.2**	**634.9**	**559.4**	**681.1**	**793.9**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 70th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2018**	**2/2018**	**3/2018**	**4/2018**	**5/2018**	**6/2018**	**7/2018**	**8/2018**	**9/2018**	**10/2018**	**11/2018**	**12/2018**	**aMW**
Brownlee	HCC*	257.4	288.0	248.7	287.0	365.6	316.3	217.2	150.8	177.0	168.4	156.7	205.0	236.5
Oxbow	HCC	108.9	121.4	108.9	119.4	147.3	126.9	91.8	68.7	78.8	77.6	69.4	85.7	100.4
Hells Canyon	HCC	215.4	239.6	222.4	242.8	300.2	256.3	181.4	135.2	154.9	152.9	137.9	170.0	200.7
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	9.2	14.5	36.2	73.7	88.4	78.3	58.8	34.7	14.6	0.0	0.0	34.0
Bliss	ROR	36.9	38.9	38.1	35.5	41.0	40.3	34.6	32.9	36.1	38.3	36.2	36.5	37.1
C.J. Strike	ROR	47.9	50.3	51.4	47.2	51.7	47.5	36.8	35.3	42.8	48.9	47.1	48.0	46.2
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.8	25.1	23.2	21.1	27.5	27.7	22.3	20.1	22.6	24.7	23.0	22.9	23.6
Milner	ROR	7.1	14.3	9.7	0.0	17.9	18.5	6.7	0.0	0.0	0.0	1.8	5.0	6.8
Shoshone Falls	ROR	18.8	47.4	27.6	7.8	27.0	30.6	14.1	8.2	7.2	11.0	11.3	23.9	19.4
Swan Falls	ROR	15.4	16.7	17.0	16.1	17.0	15.9	12.8	12.0	14.1	15.6	15.4	15.6	15.3
Twin Falls	ROR	10.2	17.1	12.6	3.8	20.8	22.5	11.3	0.0	0.0	7.1	7.2	9.1	10.1
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.8	15.7	14.4	12.8	17.7	17.7	13.5	12.0	13.7	15.1	13.8	13.8	14.5
Upper Salmon 3&4	ROR	13.0	14.7	13.5	12.1	16.4	16.2	12.7	11.5	12.9	14.1	13.0	13.0	13.6
HCC Total		**581.7**	**649.0**	**580.0**	**649.2**	**813.0**	**699.5**	**490.4**	**354.7**	**410.6**	**398.9**	**364.0**	**460.7**	**537.6**
ROR Total		**213.1**	**276.5**	**250.9**	**219.5**	**343.1**	**359.8**	**275.8**	**227.4**	**221.4**	**219.2**	**194.1**	**215.0**	**251.2**
Total		**794.8**	**925.5**	**830.9**	**868.7**	**1156.1**	**1059.3**	**766.2**	**582.1**	**632.0**	**618.1**	**558.1**	**675.7**	**788.8**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 70th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2019**	**2/2019**	**3/2019**	**4/2019**	**5/2019**	**6/2019**	**7/2019**	**8/2019**	**9/2019**	**10/2019**	**11/2019**	**12/2019**	**aMW**
Brownlee	HCC*	257.8	283.1	248.4	285.6	364.2	315.2	216.7	150.4	177.2	166.4	156.8	204.3	235.5
Oxbow	HCC	109.1	119.4	108.8	118.8	146.7	126.5	91.6	68.5	79.0	76.7	69.5	85.4	100.0
Hells Canyon	HCC	216.0	235.9	222.2	241.7	299.0	255.4	181.0	134.8	155.2	151.1	138.0	169.4	200.0
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	7.5	14.2	36.8	73.8	88.4	78.3	58.8	34.7	14.7	0.0	0.0	33.9
Bliss	ROR	36.7	38.1	37.9	35.3	40.9	40.0	34.5	32.7	35.9	38.1	36.0	36.4	36.9
C.J. Strike	ROR	47.6	49.7	51.0	47.0	51.4	47.3	36.6	35.1	42.6	48.8	46.9	47.8	46.0
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.7	24.0	22.9	20.9	27.4	27.5	22.2	20.0	22.5	24.6	22.8	22.7	23.4
Milner	ROR	6.9	11.4	9.3	0.0	17.9	18.5	6.7	0.0	0.0	0.0	1.8	5.0	6.5
Shoshone Falls	ROR	18.8	47.4	27.6	7.8	27.0	30.6	14.1	8.2	7.2	11.0	11.3	23.9	19.4
Swan Falls	ROR	15.4	16.3	16.9	16.0	16.9	15.8	12.7	12.0	14.1	15.5	15.3	15.6	15.2
Twin Falls	ROR	10.1	14.2	12.1	3.7	20.8	22.5	11.2	0.0	0.0	7.0	7.2	9.0	9.8
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.7	14.9	14.2	12.6	17.7	17.5	13.4	11.9	13.6	15.0	13.7	13.7	14.3
Upper Salmon 3&4	ROR	12.9	13.9	13.3	12.0	16.3	16.2	12.7	11.4	12.8	14.0	12.9	12.9	13.4
HCC Total		**582.9**	**638.4**	**579.4**	**646.1**	**809.9**	**697.1**	**489.3**	**353.7**	**411.3**	**394.2**	**364.3**	**459.1**	**535.5**
ROR Total		**212.0**	**264.5**	**248.3**	**219.0**	**342.5**	**358.8**	**275.1**	**226.7**	**220.7**	**218.5**	**193.2**	**214.2**	**249.3**
Total		**794.9**	**902.9**	**827.7**	**865.1**	**1152.4**	**1055.9**	**764.4**	**580.4**	**631.9**	**612.7**	**557.5**	**673.3**	**784.8**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 70th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2020**	**2/2020**	**3/2020**	**4/2020**	**5/2020**	**6/2020**	**7/2020**	**8/2020**	**9/2020**	**10/2020**	**11/2020**	**12/2020**	**aMW**
Brownlee	HCC*	258.2	279.4	248.1	285.0	363.3	314.4	216.3	150.0	177.1	165.0	157.1	203.4	234.8
Oxbow	HCC	109.4	117.9	108.6	118.5	146.4	126.2	91.5	68.3	79.0	76.0	69.6	85.1	99.7
Hells Canyon	HCC	216.4	232.9	221.8	241.1	298.4	254.9	180.7	134.5	155.2	149.9	138.2	168.8	199.4
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	5.9	14.0	36.9	73.8	88.4	78.3	58.8	34.8	14.7	0.0	0.0	33.8
Bliss	ROR	36.6	37.6	37.6	35.2	40.8	39.9	34.4	32.6	35.8	38.0	35.9	36.3	36.7
C.J. Strike	ROR	47.3	49.1	50.6	46.9	51.3	47.2	36.5	34.9	42.5	48.6	46.8	47.7	45.8
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.6	23.4	22.7	20.8	27.3	27.4	22.1	19.9	22.4	24.5	22.7	22.6	23.2
Milner	ROR	6.7	9.6	8.8	0.0	17.9	18.5	6.7	0.0	0.0	0.0	1.8	5.0	6.3
Shoshone Falls	ROR	18.8	47.4	27.6	7.8	27.0	30.6	14.1	8.2	7.2	11.0	11.3	23.9	19.4
Swan Falls	ROR	15.3	16.2	16.8	16.0	16.8	15.7	12.7	11.9	14.0	15.5	15.3	15.5	15.1
Twin Falls	ROR	9.9	12.6	11.6	0.0	20.8	22.4	11.2	0.0	0.0	7.0	7.1	9.0	9.3
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.6	14.4	14.0	12.5	17.6	17.4	13.3	11.8	13.5	14.9	13.6	13.6	14.2
Upper Salmon 3&4	ROR	12.9	13.5	13.2	11.9	16.3	16.1	12.6	11.3	12.7	14.0	12.8	12.8	13.3
HCC Total		**584.0**	**630.2**	**578.5**	**644.6**	**808.1**	**695.5**	**488.5**	**352.8**	**411.2**	**390.9**	**364.9**	**457.3**	**533.9**
ROR Total		**210.9**	**256.8**	**245.8**	**214.9**	**342.0**	**358.1**	**274.6**	**226.0**	**220.2**	**218.0**	**192.6**	**213.6**	**247.6**
Total		**794.9**	**887.0**	**824.3**	**859.5**	**1150.1**	**1053.6**	**763.1**	**578.8**	**631.4**	**608.9**	**557.5**	**670.9**	**781.5**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 70th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2021**	**2/2021**	**3/2021**	**4/2021**	**5/2021**	**6/2021**	**7/2021**	**8/2021**	**9/2021**	**10/2021**	**11/2021**	**12/2021**	**aMW**
Brownlee	HCC*	258.4	270.2	247.7	276.1	363.0	314.0	216.0	149.7	176.9	164.5	156.9	203.1	233.0
Oxbow	HCC	109.5	117.5	108.4	118.2	146.3	126.0	91.3	68.2	78.9	75.8	69.5	84.9	99.5
Hells Canyon	HCC	216.6	233.9	221.5	242.3	298.1	254.5	180.4	134.3	154.9	149.3	137.9	168.5	199.4
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	5.7	13.9	36.9	73.8	88.5	78.3	58.7	34.7	14.7	0.0	0.0	33.8
Bliss	ROR	36.5	37.5	37.5	35.2	40.7	39.8	34.3	32.6	35.7	37.9	35.8	36.2	36.6
C.J. Strike	ROR	47.2	48.9	49.6	46.8	51.2	47.1	36.4	34.8	42.4	48.5	46.7	47.6	45.6
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.5	23.2	22.6	20.7	27.3	27.3	22.0	19.8	22.3	24.4	22.6	22.5	23.1
Milner	ROR	6.6	9.3	8.4	0.0	17.9	18.5	6.7	0.0	0.0	0.0	1.8	5.0	6.2
Shoshone Falls	ROR	18.8	47.4	27.6	7.8	27.0	30.6	14.1	8.2	7.2	11.0	11.3	23.9	19.4
Swan Falls	ROR	15.3	16.1	16.3	15.9	16.8	15.6	12.7	11.9	14.0	15.4	15.3	15.4	15.1
Twin Falls	ROR	9.9	12.3	11.3	0.0	20.8	22.4	11.2	0.0	0.0	7.0	7.1	9.0	9.3
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.6	14.3	13.9	12.5	17.5	17.4	13.3	11.8	13.4	14.9	13.5	13.5	14.1
Upper Salmon 3&4	ROR	12.8	13.4	13.1	11.9	16.2	16.1	12.6	11.3	12.7	13.9	12.8	12.8	13.3
HCC Total		**584.5**	**621.6**	**577.6**	**636.6**	**807.4**	**694.5**	**487.7**	**352.2**	**410.6**	**389.6**	**364.3**	**456.5**	**531.9**
ROR Total		**210.4**	**255.2**	**243.1**	**214.6**	**341.7**	**357.8**	**274.3**	**225.7**	**219.7**	**217.5**	**192.2**	**213.1**	**247.0**
Total		**794.9**	**876.8**	**820.7**	**851.2**	**1149.0**	**1052.3**	**762.0**	**577.9**	**630.3**	**607.1**	**556.5**	**669.6**	**778.9**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 70th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2022**	**2/2022**	**3/2022**	**4/2022**	**5/2022**	**6/2022**	**7/2022**	**8/2022**	**9/2022**	**10/2022**	**11/2022**	**12/2022**	**aMW**
Brownlee	HCC*	258.6	269.4	247.5	275.7	362.3	313.6	215.8	149.6	176.7	164.1	157.0	202.4	232.7
Oxbow	HCC	109.6	117.2	108.4	118.0	146.0	125.9	91.3	68.1	78.8	75.6	69.5	84.6	99.4
Hells Canyon	HCC	216.8	233.3	221.3	242.0	297.6	254.2	180.3	134.1	154.7	148.9	138.0	167.9	199.1
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	5.6	13.6	37.0	73.9	88.5	78.3	58.7	34.7	14.8	0.0	0.0	33.8
Bliss	ROR	36.5	37.4	37.5	35.1	40.7	39.8	34.3	32.5	35.7	37.9	35.8	36.2	36.6
C.J. Strike	ROR	47.1	48.7	48.8	46.7	51.1	47.0	36.4	34.8	42.3	48.5	46.6	47.4	45.5
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.4	23.1	22.4	20.6	27.2	27.3	22.0	19.8	22.3	24.4	22.5	22.5	23.0
Milner	ROR	6.5	9.1	7.7	0.0	17.9	18.5	6.7	0.0	0.0	0.0	1.8	5.0	6.1
Shoshone Falls	ROR	18.8	47.4	27.6	7.8	27.0	30.6	14.1	8.2	7.2	11.0	11.3	23.9	19.4
Swan Falls	ROR	15.2	16.1	16.1	15.9	16.8	15.6	12.6	11.9	14.0	15.4	15.3	15.3	15.0
Twin Falls	ROR	9.8	12.0	10.5	0.0	20.7	22.4	11.2	0.0	0.0	7.0	7.1	9.0	9.1
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.5	14.2	13.7	12.4	17.5	17.3	13.2	11.8	13.4	14.9	13.5	13.5	14.1
Upper Salmon 3&4	ROR	12.8	13.3	13.0	11.8	16.2	16.0	12.5	11.3	12.7	13.9	12.7	12.8	13.3
HCC Total		**585.0**	**619.9**	**577.2**	**635.7**	**805.8**	**693.7**	**487.4**	**351.8**	**410.1**	**388.6**	**364.5**	**454.9**	**531.2**
ROR Total		**209.8**	**254.0**	**239.8**	**214.2**	**341.4**	**357.5**	**274.0**	**225.6**	**219.6**	**217.6**	**191.9**	**212.8**	**246.4**
Total		**794.8**	**873.9**	**817.0**	**849.9**	**1147.2**	**1051.2**	**761.4**	**577.4**	**629.7**	**606.2**	**556.4**	**667.7**	**777.6**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 70th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2023**	**2/2023**	**3/2023**	**4/2023**	**5/2023**	**6/2023**	**7/2023**	**8/2023**	**9/2023**	**10/2023**	**11/2023**	**12/2023**	**aMW**
Brownlee	HCC*	258.6	269.1	247.4	275.6	362.2	313.5	215.8	149.5	176.6	163.7	157.3	202.1	232.6
Oxbow	HCC	109.6	117.1	108.3	118.0	145.9	125.8	91.2	68.1	78.8	75.4	69.6	84.5	99.4
Hells Canyon	HCC	216.9	233.1	221.2	241.9	297.5	254.1	180.2	134.1	154.7	148.6	138.2	167.7	199.0
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	5.5	13.4	37.0	73.9	88.5	78.3	58.7	34.7	14.8	0.0	0.0	33.7
Bliss	ROR	36.4	37.4	37.4	35.1	40.6	39.8	34.3	32.5	35.7	37.9	35.8	36.1	36.6
C.J. Strike	ROR	47.1	48.7	48.7	46.7	51.1	47.0	36.3	34.8	42.3	48.4	46.6	47.3	45.4
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.4	23.0	22.2	20.6	27.2	27.3	21.9	19.8	22.3	24.4	22.5	22.5	23.0
Milner	ROR	6.5	9.0	7.3	0.0	17.9	18.5	6.7	0.0	0.0	0.0	1.8	5.0	6.1
Shoshone Falls	ROR	18.8	47.4	27.6	7.8	27.0	30.6	14.1	8.2	7.2	11.0	11.3	23.9	19.4
Swan Falls	ROR	15.2	16.1	16.1	15.9	16.8	15.6	12.6	11.9	14.0	15.4	15.3	15.3	15.0
Twin Falls	ROR	9.8	12.0	10.1	0.0	20.7	22.4	11.2	0.0	0.0	7.0	7.1	9.0	9.1
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.5	14.1	13.6	12.4	17.5	17.3	13.2	11.7	13.4	14.9	13.5	13.5	14.1
Upper Salmon 3&4	ROR	12.8	13.3	12.8	11.8	16.2	16.0	12.5	11.2	12.7	13.9	12.7	12.7	13.2
HCC Total		**585.1**	**619.3**	**576.9**	**635.5**	**805.5**	**693.4**	**487.2**	**351.7**	**410.0**	**387.7**	**365.1**	**454.3**	**531.0**
ROR Total		**209.7**	**253.6**	**238.1**	**214.2**	**341.4**	**357.5**	**273.8**	**225.4**	**219.6**	**217.5**	**191.9**	**212.5**	**246.1**
Total		**794.8**	**872.9**	**815.0**	**849.7**	**1146.9**	**1050.9**	**761.0**	**577.1**	**629.5**	**605.2**	**557.0**	**666.8**	**777.1**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 70th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2024**	**2/2024**	**3/2024**	**4/2024**	**5/2024**	**6/2024**	**7/2024**	**8/2024**	**9/2024**	**10/2024**	**11/2024**	**12/2024**	**aMW**
Brownlee	HCC*	258.6	269.1	247.4	275.6	362.2	313.5	215.8	149.5	176.6	163.7	157.3	202.1	232.6
Oxbow	HCC	109.6	117.1	108.3	118.0	145.9	125.8	91.2	68.1	78.8	75.4	69.6	84.5	99.4
Hells Canyon	HCC	216.9	233.1	221.2	241.9	297.5	254.1	180.2	134.1	154.7	148.6	138.2	167.7	199.0
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	5.5	13.4	37.0	73.9	88.5	78.3	58.7	34.7	14.8	0.0	0.0	33.7
Bliss	ROR	36.4	37.4	37.4	35.1	40.6	39.8	34.3	32.5	35.7	37.9	35.8	36.1	36.6
C.J. Strike	ROR	47.1	48.7	48.7	46.7	51.1	47.0	36.3	34.8	42.3	48.4	46.6	47.3	45.4
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.4	23.0	22.2	20.6	27.2	27.3	21.9	19.8	22.3	24.4	22.5	22.5	23.0
Milner	ROR	6.5	9.0	7.3	0.0	17.9	18.5	6.7	0.0	0.0	0.0	1.8	5.0	6.1
Shoshone Falls	ROR	18.8	47.4	27.6	7.8	27.0	30.6	14.1	8.2	7.2	11.0	11.3	23.9	19.4
Swan Falls	ROR	15.2	16.1	16.1	15.9	16.8	15.6	12.6	11.9	14.0	15.4	15.3	15.3	15.0
Twin Falls	ROR	9.8	12.0	10.1	0.0	20.7	22.4	11.2	0.0	0.0	7.0	7.1	9.0	9.1
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.5	14.1	13.6	12.4	17.5	17.3	13.2	11.7	13.4	14.9	13.5	13.5	14.1
Upper Salmon 3&4	ROR	12.8	13.3	12.8	11.8	16.2	16.0	12.5	11.2	12.7	13.9	12.7	12.7	13.2
HCC Total		**585.1**	**619.3**	**576.9**	**635.5**	**805.5**	**693.4**	**487.2**	**351.7**	**410.0**	**387.7**	**365.1**	**454.3**	**531.0**
ROR Total		**209.7**	**253.6**	**238.1**	**214.2**	**341.4**	**357.5**	**273.8**	**225.4**	**219.6**	**217.5**	**191.9**	**212.5**	**246.1**
Total		**794.8**	**872.9**	**815.0**	**849.7**	**1146.9**	**1050.9**	**761.0**	**577.1**	**629.5**	**605.2**	**557.0**	**666.8**	**777.1**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 70th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2025**	**2/2025**	**3/2025**	**4/2025**	**5/2025**	**6/2025**	**7/2025**	**8/2025**	**9/2025**	**10/2025**	**11/2025**	**12/2025**	**aMW**
Brownlee	HCC*	258.6	269.1	247.4	275.6	362.2	313.5	215.8	149.5	176.6	163.7	157.3	202.1	232.6
Oxbow	HCC	109.6	117.1	108.3	118.0	145.9	125.8	91.2	68.1	78.8	75.4	69.6	84.5	99.4
Hells Canyon	HCC	216.9	233.1	221.2	241.9	297.5	254.1	180.2	134.1	154.7	148.6	138.2	167.7	199.0
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	5.5	13.4	37.0	73.9	88.5	78.3	58.7	34.7	14.8	0.0	0.0	33.7
Bliss	ROR	36.4	37.4	37.4	35.1	40.6	39.8	34.3	32.5	35.7	37.9	35.8	36.1	36.6
C.J. Strike	ROR	47.1	48.7	48.7	46.7	51.1	47.0	36.3	34.8	42.3	48.4	46.6	47.3	45.4
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.4	23.0	22.2	20.6	27.2	27.3	21.9	19.8	22.3	24.4	22.5	22.5	23.0
Milner	ROR	6.5	9.0	7.3	0.0	17.9	18.5	6.7	0.0	0.0	0.0	1.8	5.0	6.1
Shoshone Falls	ROR	18.8	47.4	27.6	7.8	27.0	30.6	14.1	8.2	7.2	11.0	11.3	23.9	19.4
Swan Falls	ROR	15.2	16.1	16.1	15.9	16.8	15.6	12.6	11.9	14.0	15.4	15.3	15.3	15.0
Twin Falls	ROR	9.8	12.0	10.1	0.0	20.7	22.4	11.2	0.0	0.0	7.0	7.1	9.0	9.1
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.5	14.1	13.6	12.4	17.5	17.3	13.2	11.7	13.4	14.9	13.5	13.5	14.1
Upper Salmon 3&4	ROR	12.8	13.3	12.8	11.8	16.2	16.0	12.5	11.2	12.7	13.9	12.7	12.7	13.2
HCC Total		**585.1**	**619.3**	**576.9**	**635.5**	**805.5**	**693.4**	**487.2**	**351.7**	**410.0**	**387.7**	**365.1**	**454.3**	**531.0**
ROR Total		**209.7**	**253.6**	**238.1**	**214.2**	**341.4**	**357.5**	**273.8**	**225.4**	**219.6**	**217.5**	**191.9**	**212.5**	**246.1**
Total		**794.8**	**872.9**	**815.0**	**849.7**	**1146.9**	**1050.9**	**761.0**	**577.1**	**629.5**	**605.2**	**557.0**	**666.8**	**777.1**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 70th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2026**	**2/2026**	**3/2026**	**4/2026**	**5/2026**	**6/2026**	**7/2026**	**8/2026**	**9/2026**	**10/2026**	**11/2026**	**12/2026**	**aMW**
Brownlee	HCC*	258.6	269.1	247.4	275.6	362.2	313.5	215.8	149.5	176.6	163.7	157.3	202.1	232.6
Oxbow	HCC	109.6	117.1	108.3	118.0	145.9	125.8	91.2	68.1	78.8	75.4	69.6	84.5	99.4
Hells Canyon	HCC	216.9	233.1	221.2	241.9	297.5	254.1	180.2	134.1	154.7	148.6	138.2	167.7	199.0
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	5.5	13.4	37.0	73.9	88.5	78.3	58.7	34.7	14.8	0.0	0.0	33.7
Bliss	ROR	36.4	37.4	37.4	35.1	40.6	39.8	34.3	32.5	35.7	37.9	35.8	36.1	36.6
C.J. Strike	ROR	47.1	48.7	48.7	46.7	51.1	47.0	36.3	34.8	42.3	48.4	46.6	47.3	45.4
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.4	23.0	22.2	20.6	27.2	27.3	21.9	19.8	22.3	24.4	22.5	22.5	23.0
Milner	ROR	6.5	9.0	7.3	0.0	17.9	18.5	6.7	0.0	0.0	0.0	1.8	5.0	6.1
Shoshone Falls	ROR	18.8	47.4	27.6	7.8	27.0	30.6	14.1	8.2	7.2	11.0	11.3	23.9	19.4
Swan Falls	ROR	15.2	16.1	16.1	15.9	16.8	15.6	12.6	11.9	14.0	15.4	15.3	15.3	15.0
Twin Falls	ROR	9.8	12.0	10.1	0.0	20.7	22.4	11.2	0.0	0.0	7.0	7.1	9.0	9.1
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.5	14.1	13.6	12.4	17.5	17.3	13.2	11.7	13.4	14.9	13.5	13.5	14.1
Upper Salmon 3&4	ROR	12.8	13.3	12.8	11.8	16.2	16.0	12.5	11.2	12.7	13.9	12.7	12.7	13.2
HCC Total		**585.1**	**619.3**	**576.9**	**635.5**	**805.5**	**693.4**	**487.2**	**351.7**	**410.0**	**387.7**	**365.1**	**454.3**	**531.0**
ROR Total		**209.7**	**253.6**	**238.1**	**214.2**	**341.4**	**357.5**	**273.8**	**225.4**	**219.6**	**217.5**	**191.9**	**212.5**	**246.1**
Total		**794.8**	**872.9**	**815.0**	**849.7**	**1146.9**	**1050.9**	**761.0**	**577.1**	**629.5**	**605.2**	**557.0**	**666.8**	**777.1**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 70th Percentile Water, 70th Percentile Load														
Resource	Type	1/2027	2/2027	3/2027	4/2027	5/2027	6/2027	7/2027	8/2027	9/2027	10/2027	11/2027	12/2027	aMW
Brownlee	HCC*	258.6	269.1	247.4	275.6	362.2	313.5	215.8	149.5	176.6	163.7	157.3	202.1	232.6
Oxbow	HCC	109.6	117.1	108.3	118.0	145.9	125.8	91.2	68.1	78.8	75.4	69.6	84.5	99.4
Hells Canyon	HCC	216.9	233.1	221.2	241.9	297.5	254.1	180.2	134.1	154.7	148.6	138.2	167.7	199.0
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	5.5	13.4	37.0	73.9	88.5	78.3	58.7	34.7	14.8	0.0	0.0	33.7
Bliss	ROR	36.4	37.4	37.4	35.1	40.6	39.8	34.3	32.5	35.7	37.9	35.8	36.1	36.6
C.J. Strike	ROR	47.1	48.7	48.7	46.7	51.1	47.0	36.3	34.8	42.3	48.4	46.6	47.3	45.4
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.4	23.0	22.2	20.6	27.2	27.3	21.9	19.8	22.3	24.4	22.5	22.5	23.0
Milner	ROR	6.5	9.0	7.3	0.0	17.9	18.5	6.7	0.0	0.0	0.0	1.8	5.0	6.1
Shoshone Falls	ROR	18.8	47.4	27.6	7.8	27.0	30.6	14.1	8.2	7.2	11.0	11.3	23.9	19.4
Swan Falls	ROR	15.2	16.1	16.1	15.9	16.8	15.6	12.6	11.9	14.0	15.4	15.3	15.3	15.0
Twin Falls	ROR	9.8	12.0	10.1	0.0	20.7	22.4	11.2	0.0	0.0	7.0	7.1	9.0	9.1
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.5	14.1	13.6	12.4	17.5	17.3	13.2	11.7	13.4	14.9	13.5	13.5	14.1
Upper Salmon 3&4	ROR	12.8	13.3	12.8	11.8	16.2	16.0	12.5	11.2	12.7	13.9	12.7	12.7	13.2
HCC Total		**585.1**	**619.3**	**576.9**	**635.5**	**805.5**	**693.4**	**487.2**	**351.7**	**410.0**	**387.7**	**365.1**	**454.3**	**531.0**
ROR Total		**209.7**	**253.6**	**238.1**	**214.2**	**341.4**	**357.5**	**273.8**	**225.4**	**219.6**	**217.5**	**191.9**	**212.5**	**246.1**
Total		**794.8**	**872.9**	**815.0**	**849.7**	**1146.9**	**1050.9**	**761.0**	**577.1**	**629.5**	**605.2**	**557.0**	**666.8**	**777.1**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 70th Percentile Water, 70th Percentile Load														
Resource	Type	1/2028	2/2028	3/2028	4/2028	5/2028	6/2028	7/2028	8/2028	9/2028	10/2028	11/2028	12/2028	aMW
Brownlee	HCC*	258.6	269.1	247.4	275.6	362.2	313.5	215.8	149.5	176.6	163.7	157.3	202.1	232.6
Oxbow	HCC	109.6	117.1	108.3	118.0	145.9	125.8	91.2	68.1	78.8	75.4	69.6	84.5	99.4
Hells Canyon	HCC	216.9	233.1	221.2	241.9	297.5	254.1	180.2	134.1	154.7	148.6	138.2	167.7	199.0
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	5.5	13.4	37.0	73.9	88.5	78.3	58.7	34.7	14.8	0.0	0.0	33.7
Bliss	ROR	36.4	37.4	37.4	35.1	40.6	39.8	34.3	32.5	35.7	37.9	35.8	36.1	36.6
C.J. Strike	ROR	47.1	48.7	48.7	46.7	51.1	47.0	36.3	34.8	42.3	48.4	46.6	47.3	45.4
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.4	23.0	22.2	20.6	27.2	27.3	21.9	19.8	22.3	24.4	22.5	22.5	23.0
Milner	ROR	6.5	9.0	7.3	0.0	17.9	18.5	6.7	0.0	0.0	0.0	1.8	5.0	6.1
Shoshone Falls	ROR	18.8	47.4	27.6	7.8	27.0	30.6	14.1	8.2	7.2	11.0	11.3	23.9	19.4
Swan Falls	ROR	15.2	16.1	16.1	15.9	16.8	15.6	12.6	11.9	14.0	15.4	15.3	15.3	15.0
Twin Falls	ROR	9.8	12.0	10.1	0.0	20.7	22.4	11.2	0.0	0.0	7.0	7.1	9.0	9.1
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.5	14.1	13.6	12.4	17.5	17.3	13.2	11.7	13.4	14.9	13.5	13.5	14.1
Upper Salmon 3&4	ROR	12.8	13.3	12.8	11.8	16.2	16.0	12.5	11.2	12.7	13.9	12.7	12.7	13.2
HCC Total		**585.1**	**619.3**	**576.9**	**635.5**	**805.5**	**693.4**	**487.2**	**351.7**	**410.0**	**387.7**	**365.1**	**454.3**	**531.0**
ROR Total		**209.7**	**253.6**	**238.1**	**214.2**	**341.4**	**357.5**	**273.8**	**225.4**	**219.6**	**217.5**	**191.9**	**212.5**	**246.1**
Total		**794.8**	**872.9**	**815.0**	**849.7**	**1146.9**	**1050.9**	**761.0**	**577.1**	**629.5**	**605.2**	**557.0**	**666.8**	**777.1**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 70th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2029**	**2/2029**	**3/2029**	**4/2029**	**5/2029**	**6/2029**	**7/2029**	**8/2029**	**9/2029**	**10/2029**	**11/2029**	**12/2029**	**aMW**
Brownlee	HCC*	258.6	269.1	247.4	275.6	362.2	313.5	215.8	149.5	176.6	163.7	157.3	202.1	232.6
Oxbow	HCC	109.6	117.1	108.3	118.0	145.9	125.8	91.2	68.1	78.8	75.4	69.6	84.5	99.4
Hells Canyon	HCC	216.9	233.1	221.2	241.9	297.5	254.1	180.2	134.1	154.7	148.6	138.2	167.7	199.0
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	5.5	13.4	37.0	73.9	88.5	78.3	58.7	34.7	14.8	0.0	0.0	33.7
Bliss	ROR	36.4	37.4	37.4	35.1	40.6	39.8	34.3	32.5	35.7	37.9	35.8	36.1	36.6
C.J. Strike	ROR	47.1	48.7	48.7	46.7	51.1	47.0	36.3	34.8	42.3	48.4	46.6	47.3	45.4
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.4	23.0	22.2	20.6	27.2	27.3	21.9	19.8	22.3	24.4	22.5	22.5	23.0
Milner	ROR	6.5	9.0	7.3	0.0	17.9	18.5	6.7	0.0	0.0	0.0	1.8	5.0	6.1
Shoshone Falls	ROR	18.8	47.4	27.6	7.8	27.0	30.6	14.1	8.2	7.2	11.0	11.3	23.9	19.4
Swan Falls	ROR	15.2	16.1	16.1	15.9	16.8	15.6	12.6	11.9	14.0	15.4	15.3	15.3	15.0
Twin Falls	ROR	9.8	12.0	10.1	0.0	20.7	22.4	11.2	0.0	0.0	7.0	7.1	9.0	9.1
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.5	14.1	13.6	12.4	17.5	17.3	13.2	11.7	13.4	14.9	13.5	13.5	14.1
Upper Salmon 3&4	ROR	12.8	13.3	12.8	11.8	16.2	16.0	12.5	11.2	12.7	13.9	12.7	12.7	13.2
HCC Total		**585.1**	**619.3**	**576.9**	**635.5**	**805.5**	**693.4**	**487.2**	**351.7**	**410.0**	**387.7**	**365.1**	**454.3**	**531.0**
ROR Total		**209.7**	**253.6**	**238.1**	**214.2**	**341.4**	**357.5**	**273.8**	**225.4**	**219.6**	**217.5**	**191.9**	**212.5**	**246.1**
Total		**794.8**	**872.9**	**815.0**	**849.7**	**1146.9**	**1050.9**	**761.0**	**577.1**	**629.5**	**605.2**	**557.0**	**666.8**	**777.1**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 70th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2030**	**2/2030**	**3/2030**	**4/2030**	**5/2030**	**6/2030**	**7/2030**	**8/2030**	**9/2030**	**10/2030**	**11/2030**	**12/2030**	**aMW**
Brownlee	HCC*	258.6	269.1	247.4	275.6	362.2	313.5	215.8	149.5	176.6	163.7	157.3	202.1	232.6
Oxbow	HCC	109.6	117.1	108.3	118.0	145.9	125.8	91.2	68.1	78.8	75.4	69.6	84.5	99.4
Hells Canyon	HCC	216.9	233.1	221.2	241.9	297.5	254.1	180.2	134.1	154.7	148.6	138.2	167.7	199.0
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	5.5	13.4	37.0	73.9	88.5	78.3	58.7	34.7	14.8	0.0	0.0	33.7
Bliss	ROR	36.4	37.4	37.4	35.1	40.6	39.8	34.3	32.5	35.7	37.9	35.8	36.1	36.6
C.J. Strike	ROR	47.1	48.7	48.7	46.7	51.1	47.0	36.3	34.8	42.3	48.4	46.6	47.3	45.4
Cascade	ROR	1.5	1.5	2.6	1.7	4.8	7.9	6.9	10.1	9.0	2.2	1.4	1.4	4.2
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.4	23.0	22.2	20.6	27.2	27.3	21.9	19.8	22.3	24.4	22.5	22.5	23.0
Milner	ROR	6.5	9.0	7.3	0.0	17.9	18.5	6.7	0.0	0.0	0.0	1.8	5.0	6.1
Shoshone Falls	ROR	18.8	47.4	27.6	7.8	27.0	30.6	14.1	8.2	7.2	11.0	11.3	23.9	19.4
Swan Falls	ROR	15.2	16.1	16.1	15.9	16.8	15.6	12.6	11.9	14.0	15.4	15.3	15.3	15.0
Twin Falls	ROR	9.8	12.0	10.1	0.0	20.7	22.4	11.2	0.0	0.0	7.0	7.1	9.0	9.1
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.5	14.1	13.6	12.4	17.5	17.3	13.2	11.7	13.4	14.9	13.5	13.5	14.1
Upper Salmon 3&4	ROR	12.8	13.3	12.8	11.8	16.2	16.0	12.5	11.2	12.7	13.9	12.7	12.7	13.2
HCC Total		**585.1**	**619.3**	**576.9**	**635.5**	**805.5**	**693.4**	**487.2**	**351.7**	**410.0**	**387.7**	**365.1**	**454.3**	**531.0**
ROR Total		**209.7**	**253.6**	**238.1**	**214.2**	**341.4**	**357.5**	**273.8**	**225.4**	**219.6**	**217.5**	**191.9**	**212.5**	**246.1**
Total		**794.8**	**872.9**	**815.0**	**849.7**	**1146.9**	**1050.9**	**761.0**	**577.1**	**629.5**	**605.2**	**557.0**	**666.8**	**777.1**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2011**	**2/2011**	**3/2011**	**4/2011**	**5/2011**	**6/2011**	**7/2011**	**8/2011**	**9/2011**	**10/2011**	**11/2011**	**12/2011**	**aMW**
Brownlee	HCC*	258.2	159.9	202.7	242.6	273.2	222.4	205.5	155.3	165.0	148.7	158.7	195.0	198.9
Oxbow	HCC	110.9	72.6	85.3	99.9	112.8	91.6	86.5	70.8	75.1	67.8	69.8	81.2	85.4
Hells Canyon	HCC	218.5	144.8	173.9	203.2	231.5	184.2	170.1	138.7	147.1	134.0	138.2	160.6	170.4
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.3	68.4	78.6	69.6	50.5	25.8	9.4	0.0	0.0	28.1
Bliss	ROR	35.6	36.0	34.6	33.1	38.9	38.4	34.7	36.3	35.9	38.2	36.2	36.2	36.2
C.J. Strike	ROR	45.2	45.2	44.9	41.3	44.9	40.8	34.9	38.4	42.2	47.6	45.7	45.6	43.1
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.7	23.3	21.2	20.4	26.3	26.5	22.5	23.4	22.7	24.8	23.0	23.1	23.3
Milner	ROR	6.1	6.5	2.0	0.0	13.9	14.4	6.7	6.2	0.0	0.0	1.8	5.1	5.2
Shoshone Falls	ROR	12.0	12.0	10.2	4.9	12.0	12.0	12.0	12.0	6.9	9.7	11.2	12.0	10.6
Swan Falls	ROR	15.2	15.3	15.2	14.2	15.3	14.6	12.3	13.2	14.0	15.4	15.4	15.4	14.6
Twin Falls	ROR	9.6	9.5	6.4	0.0	17.4	18.9	10.8	11.2	0.0	5.9	7.3	9.1	8.8
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.7	14.3	12.8	12.2	16.8	16.7	13.6	14.6	13.7	15.2	13.8	14.0	14.3
Upper Salmon 3&4	ROR	13.0	13.4	12.2	11.7	15.6	15.5	12.9	13.7	13.0	14.2	13.0	13.2	13.5
HCC Total		**587.6**	**377.3**	**461.9**	**545.7**	**617.5**	**498.2**	**462.1**	**364.8**	**387.1**	**350.5**	**366.7**	**436.8**	**454.7**
ROR Total		**200.2**	**202.5**	**192.9**	**193.7**	**298.7**	**307.2**	**262.9**	**255.9**	**209.7**	**209.5**	**192.7**	**200.9**	**227.2**
Total		**787.8**	**579.8**	**654.8**	**739.4**	**916.1**	**805.4**	**725.0**	**620.7**	**596.8**	**560.0**	**559.4**	**637.7**	**681.9**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2012**	**2/2012**	**3/2012**	**4/2012**	**5/2012**	**6/2012**	**7/2012**	**8/2012**	**9/2012**	**10/2012**	**11/2012**	**12/2012**	**aMW**
Brownlee	HCC*	258.4	160.0	201.2	242.4	273.0	222.3	205.4	155.2	164.8	148.5	158.6	194.8	198.7
Oxbow	HCC	111.0	72.7	84.8	99.8	112.7	91.6	86.5	70.7	75.0	67.7	69.7	81.1	85.3
Hells Canyon	HCC	218.7	145.1	172.8	203.0	231.3	184.1	170.0	138.6	146.9	133.9	138.1	160.4	170.2
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.3	68.4	78.6	69.5	50.4	25.8	9.4	0.0	0.0	28.1
Bliss	ROR	35.6	35.9	34.6	33.0	38.8	38.4	34.7	36.3	35.9	38.2	36.2	36.1	36.1
C.J. Strike	ROR	45.1	45.1	44.8	41.3	44.8	40.7	34.9	38.3	42.2	47.5	45.7	45.5	43.0
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.7	23.2	21.2	20.4	26.3	26.4	22.5	23.4	22.7	24.8	23.0	23.0	23.3
Milner	ROR	6.1	6.4	2.0	0.0	13.9	14.4	6.7	6.2	0.0	0.0	1.8	5.0	5.2
Shoshone Falls	ROR	12.0	12.0	10.2	4.9	12.0	12.0	12.0	12.0	6.9	9.6	11.2	12.0	10.6
Swan Falls	ROR	15.2	15.3	15.2	14.2	15.2	14.6	12.3	13.2	13.9	15.4	15.3	15.4	14.6
Twin Falls	ROR	9.5	9.4	6.4	0.0	17.4	18.8	10.8	11.2	0.0	5.9	7.3	9.0	8.8
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.7	14.3	12.8	12.2	16.8	16.7	13.6	14.6	13.7	15.2	13.8	13.9	14.3
Upper Salmon 3&4	ROR	12.9	13.4	12.2	11.6	15.6	15.5	12.8	13.7	12.9	14.2	13.0	13.1	13.4
HCC Total		**588.1**	**377.8**	**458.8**	**545.2**	**617.0**	**498.0**	**461.9**	**364.5**	**386.7**	**350.1**	**366.4**	**436.3**	**454.2**
ROR Total		**199.9**	**202.0**	**192.8**	**193.5**	**298.4**	**306.9**	**262.7**	**255.7**	**209.5**	**209.3**	**192.6**	**200.2**	**227.0**
Total		**788.0**	**579.8**	**651.6**	**738.7**	**915.4**	**804.9**	**724.6**	**620.2**	**596.2**	**559.4**	**559.0**	**636.5**	**681.2**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2013**	**2/2013**	**3/2013**	**4/2013**	**5/2013**	**6/2013**	**7/2013**	**8/2013**	**9/2013**	**10/2013**	**11/2013**	**12/2013**	**aMW**
Brownlee	HCC*	258.5	160.1	200.0	242.1	272.8	222.2	205.2	155.1	164.7	148.0	158.9	194.5	198.5
Oxbow	HCC	111.1	72.8	84.3	99.7	112.7	91.5	86.4	70.6	74.9	67.5	69.8	81.0	85.2
Hells Canyon	HCC	218.8	145.2	171.9	202.8	231.2	184.0	169.9	138.5	146.8	133.4	138.3	160.2	170.1
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.3	68.5	78.6	69.5	50.4	25.8	9.4	0.0	0.0	28.1
Bliss	ROR	35.5	35.8	34.6	33.0	38.8	38.4	34.6	36.3	35.9	38.1	36.1	36.1	36.1
C.J. Strike	ROR	45.0	45.1	44.8	41.2	44.8	40.7	34.9	38.2	42.1	47.5	45.7	45.4	43.0
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.6	23.1	21.2	20.3	26.2	26.4	22.4	23.4	22.6	24.8	22.9	23.0	23.2
Milner	ROR	6.0	6.4	2.0	0.0	13.9	14.4	6.7	6.2	0.0	0.0	1.8	4.9	5.2
Shoshone Falls	ROR	12.0	12.0	10.2	4.9	12.0	12.0	12.0	12.0	6.9	9.5	11.2	12.0	10.6
Swan Falls	ROR	15.2	15.2	15.2	14.1	15.2	14.5	12.3	13.1	13.9	15.3	15.3	15.3	14.6
Twin Falls	ROR	9.5	9.4	6.4	0.0	17.4	18.8	10.7	11.2	0.0	5.8	7.3	9.0	8.8
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.7	14.2	12.8	12.1	16.7	16.6	13.6	14.5	13.7	15.2	13.8	13.9	14.2
Upper Salmon 3&4	ROR	12.9	13.4	12.2	11.6	15.5	15.4	12.8	13.6	12.9	14.2	13.0	13.1	13.4
HCC Total		**588.4**	**378.1**	**456.2**	**544.6**	**616.6**	**497.7**	**461.5**	**364.2**	**386.4**	**348.9**	**367.0**	**435.7**	**453.8**
ROR Total		**199.5**	**201.6**	**192.8**	**193.1**	**298.1**	**306.6**	**262.4**	**255.3**	**209.3**	**208.9**	**192.4**	**199.9**	**226.7**
Total		**787.9**	**579.7**	**649.0**	**737.7**	**914.7**	**804.3**	**723.9**	**619.5**	**595.7**	**557.8**	**559.4**	**635.6**	**680.4**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2014**	**2/2014**	**3/2014**	**4/2014**	**5/2014**	**6/2014**	**7/2014**	**8/2014**	**9/2014**	**10/2014**	**11/2014**	**12/2014**	**aMW**
Brownlee	HCC*	257.3	161.0	195.7	241.4	272.1	221.4	204.5	154.4	164.0	146.2	158.6	193.8	197.5
Oxbow	HCC	110.6	73.4	82.5	99.4	112.4	91.2	86.1	70.3	74.6	66.6	69.7	80.7	84.8
Hells Canyon	HCC	217.9	146.2	168.5	202.2	230.6	183.3	169.3	137.9	146.2	131.8	138.0	159.6	169.3
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.3	68.5	78.7	69.6	50.2	25.6	9.5	0.0	0.0	28.1
Bliss	ROR	35.2	35.5	34.4	32.8	38.6	38.2	34.5	36.1	35.7	37.9	35.9	35.7	35.9
C.J. Strike	ROR	44.6	44.6	44.5	41.0	44.4	40.3	34.6	38.0	41.9	47.2	45.6	45.1	42.7
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.3	22.9	21.0	20.1	26.1	26.2	22.3	23.2	22.5	24.6	22.8	22.7	23.1
Milner	ROR	5.7	5.8	2.0	0.0	13.9	14.4	6.7	6.2	0.0	0.0	1.8	4.4	5.1
Shoshone Falls	ROR	12.0	12.0	10.2	4.9	12.0	12.0	12.0	12.0	6.8	9.3	11.2	12.0	10.5
Swan Falls	ROR	15.1	15.1	15.1	14.2	15.1	14.2	12.2	13.1	13.8	15.3	15.3	15.2	14.5
Twin Falls	ROR	9.3	9.1	6.4	0.0	17.3	18.6	10.7	11.1	0.0	5.6	7.3	8.8	8.7
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.5	14.0	12.7	12.0	16.6	16.5	13.5	14.4	13.6	15.0	13.6	13.7	14.1
Upper Salmon 3&4	ROR	12.7	13.2	12.0	11.5	15.4	15.3	12.7	13.5	12.8	14.0	12.9	12.9	13.2
HCC Total		**585.8**	**380.6**	**446.7**	**543.0**	**615.1**	**495.9**	**459.9**	**362.6**	**384.8**	**344.6**	**366.3**	**434.1**	**451.6**
ROR Total		**197.5**	**199.2**	**191.7**	**192.4**	**297.1**	**305.2**	**261.7**	**254.2**	**208.2**	**207.5**	**191.7**	**197.7**	**225.3**
Total		**783.3**	**579.8**	**638.4**	**735.4**	**912.1**	**801.1**	**721.6**	**616.8**	**592.9**	**552.1**	**558.0**	**631.8**	**676.9**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2015**	**2/2015**	**3/2015**	**4/2015**	**5/2015**	**6/2015**	**7/2015**	**8/2015**	**9/2015**	**10/2015**	**11/2015**	**12/2015**	**aMW**
Brownlee	HCC*	256.2	161.7	191.0	240.7	271.4	220.6	203.8	153.7	163.2	144.5	158.7	192.6	196.5
Oxbow	HCC	110.1	73.8	80.6	99.1	112.1	90.9	85.8	70.0	74.3	65.8	69.7	80.2	84.4
Hells Canyon	HCC	217.0	147.1	164.8	201.6	230.0	182.7	168.7	137.3	145.5	130.2	138.0	158.6	168.5
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.3	68.6	78.7	69.7	50.2	25.5	9.6	0.0	0.0	28.1
Bliss	ROR	34.9	35.2	34.2	32.4	38.4	38.0	34.3	35.9	35.5	37.7	35.7	35.4	35.6
C.J. Strike	ROR	44.4	44.3	44.3	40.7	44.1	40.1	34.4	37.7	41.6	46.9	45.2	44.9	42.4
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	22.1	22.6	20.9	19.9	25.9	25.9	22.1	23.0	22.3	24.4	22.6	22.4	22.8
Milner	ROR	5.4	5.5	2.0	0.0	13.9	14.4	6.7	6.2	0.0	0.0	1.8	4.0	5.0
Shoshone Falls	ROR	12.0	12.0	10.1	4.8	12.0	12.0	12.0	12.0	6.7	9.0	11.2	12.0	10.5
Swan Falls	ROR	15.0	15.0	15.0	14.1	15.0	14.1	12.1	13.0	13.8	15.4	15.2	15.1	14.4
Twin Falls	ROR	9.1	8.8	6.3	0.0	17.3	18.4	10.6	11.1	0.0	5.4	7.2	8.5	8.6
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.3	13.8	12.5	11.9	16.5	16.3	13.3	14.3	13.4	14.8	13.5	13.4	13.9
Upper Salmon 3&4	ROR	12.5	13.0	11.9	11.4	15.3	15.1	12.6	13.4	12.7	13.9	12.8	12.7	13.1
HCC Total		**583.3**	**382.6**	**436.4**	**541.4**	**613.4**	**494.2**	**458.3**	**361.0**	**383.0**	**340.5**	**366.4**	**431.4**	**449.3**
ROR Total		**195.8**	**197.2**	**190.6**	**191.1**	**296.2**	**303.8**	**260.7**	**253.2**	**207.0**	**206.2**	**190.5**	**195.6**	**224.0**
Total		**779.1**	**579.8**	**627.0**	**732.5**	**909.5**	**798.0**	**719.0**	**614.2**	**590.0**	**546.7**	**556.9**	**627.0**	**673.3**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2016**	**2/2016**	**3/2016**	**4/2016**	**5/2016**	**6/2016**	**7/2016**	**8/2016**	**9/2016**	**10/2016**	**11/2016**	**12/2016**	**aMW**
Brownlee	HCC*	255.1	162.2	189.8	239.5	270.6	219.9	203.1	140.7	162.9	143.0	158.8	191.9	194.8
Oxbow	HCC	109.6	74.1	80.2	98.6	111.7	90.6	85.5	63.9	74.1	65.0	69.7	79.9	83.6
Hells Canyon	HCC	216.0	147.6	163.9	200.7	229.4	182.2	168.1	125.7	145.2	128.7	138.0	158.0	167.0
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.2	68.7	78.9	69.8	48.1	26.5	9.8	0.0	0.0	28.1
Bliss	ROR	34.6	35.0	34.0	32.3	38.2	37.8	34.1	32.3	35.3	37.5	35.5	35.2	35.2
C.J. Strike	ROR	44.0	43.9	44.0	40.5	43.9	39.8	34.1	33.1	41.4	46.8	45.1	44.6	41.8
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	21.8	22.4	20.7	19.8	25.7	25.8	21.9	19.8	22.1	24.3	22.4	22.3	22.4
Milner	ROR	5.1	5.7	2.0	0.0	13.5	14.3	6.7	0.0	0.0	0.0	1.8	3.9	4.4
Shoshone Falls	ROR	12.0	12.0	10.1	4.8	12.0	12.0	12.0	6.8	6.9	9.4	11.1	12.0	10.1
Swan Falls	ROR	14.8	14.9	15.0	14.0	14.9	14.1	12.1	11.5	13.7	15.4	15.2	15.0	14.2
Twin Falls	ROR	9.0	8.8	6.3	0.0	17.2	18.3	10.6	0.0	0.0	5.7	7.2	8.3	7.6
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	13.1	13.6	12.4	11.7	16.4	16.2	13.2	11.8	13.3	14.8	13.4	13.3	13.6
Upper Salmon 3&4	ROR	12.4	12.8	11.8	11.2	15.2	15.0	12.5	11.3	12.6	13.8	12.7	12.6	12.8
HCC Total		**580.7**	**383.9**	**433.9**	**538.8**	**611.7**	**492.7**	**456.7**	**330.3**	**382.1**	**336.7**	**366.5**	**429.8**	**445.3**
ROR Total		**193.9**	**196.1**	**189.7**	**190.1**	**294.9**	**303.0**	**259.9**	**211.1**	**207.3**	**206.6**	**189.7**	**194.4**	**219.7**
Total		**774.6**	**580.0**	**623.6**	**728.9**	**906.5**	**795.7**	**716.6**	**541.4**	**589.4**	**543.3**	**556.2**	**624.2**	**665.0**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2017**	**2/2017**	**3/2017**	**4/2017**	**5/2017**	**6/2017**	**7/2017**	**8/2017**	**9/2017**	**10/2017**	**11/2017**	**12/2017**	**aMW**
Brownlee	HCC*	253.9	163.1	179.0	238.4	269.9	219.1	202.3	140.1	158.6	141.7	158.9	190.7	193.0
Oxbow	HCC	109.1	74.6	78.7	98.2	111.4	90.3	85.2	63.6	73.8	64.4	69.7	79.4	83.2
Hells Canyon	HCC	215.0	148.6	160.6	199.7	228.8	181.5	167.5	125.2	144.4	127.5	138.0	157.0	166.1
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.3	68.7	78.6	70.0	47.9	26.2	9.9	0.0	0.0	28.0
Bliss	ROR	34.4	34.7	33.8	32.0	37.8	37.5	33.9	32.1	35.1	37.3	35.4	35.0	34.9
C.J. Strike	ROR	43.7	43.4	43.8	40.2	43.6	39.6	33.8	32.8	41.1	46.5	44.8	44.3	41.5
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	21.6	22.1	20.5	19.6	25.3	25.5	21.8	19.7	22.0	24.1	22.3	22.1	22.2
Milner	ROR	5.1	5.1	2.0	0.0	12.3	12.8	6.7	0.0	0.0	0.0	1.8	3.4	4.1
Shoshone Falls	ROR	12.0	12.0	10.0	4.7	20.0	22.0	14.0	6.8	6.9	9.2	11.1	12.0	11.7
Swan Falls	ROR	14.8	14.7	14.9	13.9	14.8	14.0	12.0	11.4	13.6	15.3	15.1	14.9	14.1
Twin Falls	ROR	8.9	8.5	6.2	0.0	16.0	17.5	10.5	0.0	0.0	5.6	7.1	8.0	7.4
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	12.9	13.4	12.3	11.6	16.0	15.9	13.1	11.7	13.2	14.6	13.3	13.2	13.4
Upper Salmon 3&4	ROR	12.2	12.7	11.7	11.1	14.9	14.8	12.4	11.2	12.5	13.7	12.5	12.5	12.7
HCC Total		**578.0**	**386.3**	**418.3**	**536.3**	**610.0**	**490.9**	**455.0**	**328.9**	**376.7**	**333.6**	**366.6**	**427.1**	**442.3**
ROR Total		**192.7**	**193.6**	**188.6**	**189.0**	**298.5**	**309.0**	**261.1**	**210.0**	**206.1**	**205.3**	**188.7**	**192.6**	**219.6**
Total		**770.7**	**579.9**	**606.9**	**725.3**	**908.5**	**799.9**	**716.1**	**538.9**	**582.7**	**538.9**	**555.3**	**619.7**	**661.9**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2018**	**2/2018**	**3/2018**	**4/2018**	**5/2018**	**6/2018**	**7/2018**	**8/2018**	**9/2018**	**10/2018**	**11/2018**	**12/2018**	**aMW**
Brownlee	HCC*	252.8	163.7	174.1	238.1	269.1	218.4	201.6	139.4	157.8	140.0	159.0	189.9	192.0
Oxbow	HCC	108.6	75.0	76.6	98.0	111.1	90.0	84.9	63.3	73.4	63.6	69.7	79.0	82.8
Hells Canyon	HCC	214.0	149.2	156.6	199.5	228.2	181.0	166.9	124.6	143.7	126.0	138.0	156.4	165.3
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.3	68.7	78.4	70.1	48.0	26.1	9.9	0.0	0.0	28.0
Bliss	ROR	34.3	34.4	33.4	31.7	37.1	36.8	33.7	31.9	34.9	37.1	35.2	34.7	34.6
C.J. Strike	ROR	43.5	43.0	43.3	39.8	43.4	39.3	33.6	32.5	40.9	46.3	44.6	44.0	41.2
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	21.5	21.8	20.3	19.4	24.7	24.9	21.6	19.5	21.8	23.9	22.1	21.9	22.0
Milner	ROR	5.1	5.0	2.0	0.0	11.5	11.9	6.7	0.0	0.0	0.0	1.8	3.1	3.9
Shoshone Falls	ROR	12.0	12.0	10.0	4.7	20.0	22.0	14.0	6.8	6.9	9.2	11.1	12.0	11.7
Swan Falls	ROR	14.7	14.6	14.7	13.8	14.7	14.0	11.9	11.3	13.5	15.2	15.0	14.8	14.0
Twin Falls	ROR	8.7	8.4	6.2	0.0	14.7	16.3	10.5	0.0	0.0	5.3	7.1	7.6	7.1
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	12.8	13.2	12.2	11.5	15.5	15.5	13.0	11.5	13.0	14.5	13.1	13.1	13.2
Upper Salmon 3&4	ROR	12.1	12.5	11.6	11.0	14.5	14.5	12.3	11.1	12.4	13.6	12.4	12.4	12.5
HCC Total		**575.4**	**387.9**	**407.3**	**535.6**	**608.4**	**489.4**	**453.4**	**327.3**	**374.9**	**329.6**	**366.7**	**425.3**	**440.1**
ROR Total		**191.8**	**191.9**	**187.1**	**187.8**	**294.0**	**304.4**	**260.3**	**209.0**	**205.0**	**204.1**	**187.7**	**190.8**	**217.8**
Total		**767.2**	**579.8**	**594.4**	**723.4**	**902.3**	**793.8**	**713.7**	**536.3**	**579.9**	**533.7**	**554.4**	**616.1**	**657.9**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2019**	**2/2019**	**3/2019**	**4/2019**	**5/2019**	**6/2019**	**7/2019**	**8/2019**	**9/2019**	**10/2019**	**11/2019**	**12/2019**	**aMW**
Brownlee	HCC*	251.9	164.1	171.9	237.5	268.6	217.8	201.0	138.9	157.3	138.9	159.3	189.2	191.4
Oxbow	HCC	108.3	75.2	75.6	97.8	110.9	89.8	84.6	63.0	73.1	63.0	69.8	78.7	82.5
Hells Canyon	HCC	213.4	149.7	154.9	199.0	227.8	180.5	166.4	124.1	143.2	124.9	138.2	155.7	164.8
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.4	68.8	78.3	70.2	48.0	26.2	10.0	0.0	0.0	28.0
Bliss	ROR	34.1	34.2	33.2	31.5	36.6	36.3	33.5	31.8	34.8	37.0	35.0	34.4	34.4
C.J. Strike	ROR	43.3	42.7	42.8	39.5	43.1	39.1	33.4	32.2	40.7	46.1	44.4	43.8	40.9
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	21.3	21.6	20.2	19.3	24.2	24.4	21.5	19.4	21.7	23.8	22.0	21.7	21.8
Milner	ROR	5.1	5.0	2.0	0.0	10.6	11.0	6.7	0.0	0.0	0.0	1.8	3.1	3.8
Shoshone Falls	ROR	12.0	12.0	10.0	4.7	20.0	22.0	14.0	6.8	6.9	9.2	11.1	12.0	11.7
Swan Falls	ROR	14.6	14.6	14.6	13.7	14.6	13.9	11.8	11.2	13.5	15.2	14.9	14.7	13.9
Twin Falls	ROR	8.6	8.3	6.1	0.0	13.8	15.3	10.5	0.0	0.0	5.3	7.1	7.5	6.9
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	12.7	13.0	12.0	11.4	15.2	15.1	12.9	11.4	13.0	14.4	13.0	12.9	13.1
Upper Salmon 3&4	ROR	12.0	12.4	11.5	10.9	14.2	14.1	12.2	11.0	12.3	13.5	12.4	12.3	12.4
HCC Total		**573.6**	**389.0**	**402.4**	**534.3**	**607.3**	**488.1**	**452.0**	**326.0**	**373.5**	**326.8**	**367.3**	**423.6**	**438.7**
ROR Total		**190.8**	**190.8**	**185.8**	**187.0**	**290.2**	**300.3**	**259.6**	**208.2**	**204.6**	**203.6**	**187.0**	**189.6**	**216.5**
Total		**764.4**	**579.8**	**588.2**	**721.3**	**897.5**	**788.4**	**711.6**	**534.2**	**578.1**	**530.4**	**554.3**	**613.2**	**655.1**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2020**	**2/2020**	**3/2020**	**4/2020**	**5/2020**	**6/2020**	**7/2020**	**8/2020**	**9/2020**	**10/2020**	**11/2020**	**12/2020**	**aMW**
Brownlee	HCC*	251.3	164.5	170.3	237.0	268.1	217.4	200.6	138.6	156.9	138.2	159.3	188.7	190.9
Oxbow	HCC	108.0	75.4	74.9	97.6	110.7	89.6	84.5	62.9	73.0	62.7	69.8	78.5	82.3
Hells Canyon	HCC	212.8	150.1	153.6	198.6	227.5	180.2	166.1	123.8	142.9	124.3	138.2	155.4	164.5
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.4	68.8	78.2	70.1	48.1	26.2	10.1	0.0	0.0	28.1
Bliss	ROR	34.0	34.1	33.1	31.4	36.2	35.9	33.4	31.7	34.7	36.9	34.9	34.2	34.2
C.J. Strike	ROR	43.2	42.5	42.6	39.3	42.8	39.0	33.2	32.1	40.6	45.9	44.2	43.7	40.8
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	21.2	21.5	20.1	19.2	23.9	24.1	21.4	19.3	21.6	23.7	21.9	21.7	21.6
Milner	ROR	5.1	4.7	2.0	0.0	10.0	10.4	6.7	0.0	0.0	0.0	1.8	3.0	3.6
Shoshone Falls	ROR	12.0	12.0	10.0	4.7	20.0	22.0	14.0	6.8	6.9	9.2	11.1	12.0	11.7
Swan Falls	ROR	14.6	14.5	14.6	13.7	14.6	13.7	11.6	11.2	13.4	15.1	14.9	14.7	13.9
Twin Falls	ROR	8.6	8.3	6.1	0.0	13.1	14.6	10.3	0.0	0.0	5.3	7.1	7.5	6.7
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	12.6	12.9	12.0	11.3	14.9	14.9	12.8	11.4	12.9	14.4	13.0	12.9	13.0
Upper Salmon 3&4	ROR	12.0	12.3	11.4	10.9	13.9	13.9	12.1	10.9	12.2	13.5	12.3	12.2	12.3
HCC Total		**572.1**	**390.0**	**398.8**	**533.2**	**606.3**	**487.2**	**451.2**	**325.3**	**372.7**	**325.2**	**367.3**	**422.6**	**437.7**
ROR Total		**190.4**	**189.8**	**185.3**	**186.5**	**287.4**	**297.5**	**258.5**	**207.9**	**204.0**	**203.2**	**186.5**	**189.1**	**215.5**
Total		**762.5**	**579.8**	**584.1**	**719.7**	**893.6**	**784.7**	**709.7**	**533.2**	**576.7**	**528.4**	**553.8**	**611.7**	**653.2**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 90th Percentile Water, 70th Percentile Load														
Resource	Type	1/2021	2/2021	3/2021	4/2021	5/2021	6/2021	7/2021	8/2021	9/2021	10/2021	11/2021	12/2021	aMW
Brownlee	HCC*	250.9	164.6	169.3	236.7	267.9	217.1	200.4	138.3	156.7	137.7	159.4	188.4	190.6
Oxbow	HCC	107.8	75.5	74.5	97.5	110.6	89.5	84.4	62.8	72.8	62.4	69.8	78.4	82.2
Hells Canyon	HCC	212.5	150.3	152.8	198.4	227.3	179.9	165.9	123.6	142.6	123.7	138.3	155.1	164.2
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.5	68.8	78.2	70.1	48.1	26.3	10.1	0.0	0.0	28.1
Bliss	ROR	33.9	34.0	33.1	31.3	36.0	35.7	33.4	31.6	34.6	36.8	34.9	34.1	34.1
C.J. Strike	ROR	43.1	42.4	42.5	39.2	42.8	38.9	32.9	32.0	40.5	45.8	43.9	43.6	40.6
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	21.2	21.4	20.1	19.1	23.7	23.9	21.3	19.2	21.5	23.7	21.8	21.6	21.5
Milner	ROR	5.1	4.7	2.0	0.0	9.6	10.0	6.7	0.0	0.0	0.0	1.8	3.0	3.6
Shoshone Falls	ROR	12.0	12.0	10.0	4.7	20.0	22.0	14.0	6.8	6.9	9.2	11.1	12.0	11.7
Swan Falls	ROR	14.6	14.5	14.5	13.7	14.5	13.6	11.6	11.1	13.4	15.1	14.9	14.6	13.8
Twin Falls	ROR	8.6	8.3	6.1	0.0	12.7	14.2	10.3	0.0	0.0	5.2	7.0	7.5	6.7
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	12.5	12.9	11.9	11.2	14.8	14.7	12.7	11.3	12.8	14.3	12.9	12.8	12.9
Upper Salmon 3&4	ROR	11.9	12.2	11.4	10.8	13.8	13.8	12.1	10.9	12.2	13.4	12.2	12.2	12.2
HCC Total		**571.2**	**390.4**	**396.6**	**532.6**	**605.8**	**486.5**	**450.7**	**324.7**	**372.1**	**323.8**	**367.5**	**421.9**	**437.0**
ROR Total		**190.0**	**189.4**	**185.0**	**186.1**	**285.9**	**295.8**	**258.0**	**207.4**	**203.7**	**202.7**	**185.8**	**188.6**	**214.9**
Total		**761.2**	**579.8**	**581.6**	**718.7**	**891.6**	**782.3**	**708.7**	**532.1**	**575.7**	**526.5**	**553.3**	**610.5**	**651.8**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 90th Percentile Water, 70th Percentile Load														
Resource	Type	1/2022	2/2022	3/2022	4/2022	5/2022	6/2022	7/2022	8/2022	9/2022	10/2022	11/2022	12/2022	aMW
Brownlee	HCC*	250.6	164.7	168.7	236.5	267.7	217.0	200.2	138.1	156.4	137.5	159.3	181.1	189.8
Oxbow	HCC	107.7	75.6	74.3	97.4	110.5	89.4	84.3	62.7	72.7	62.3	69.8	78.3	82.1
Hells Canyon	HCC	212.2	150.5	152.3	198.2	227.1	179.8	165.7	123.4	142.4	123.6	138.1	154.6	164.0
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.6	68.9	78.3	70.2	48.1	26.3	10.1	0.0	0.0	28.1
Bliss	ROR	33.9	33.9	33.0	31.3	35.8	35.5	33.3	31.5	34.6	36.8	34.8	34.0	34.0
C.J. Strike	ROR	43.0	42.4	42.5	39.1	42.7	38.8	32.8	31.9	40.4	45.7	43.8	43.5	40.6
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	21.1	21.3	20.0	19.1	23.5	23.7	21.3	19.2	21.5	23.6	21.8	21.6	21.5
Milner	ROR	5.1	4.7	2.0	0.0	9.3	9.6	6.7	0.0	0.0	0.0	1.8	3.0	3.5
Shoshone Falls	ROR	12.0	12.0	10.0	4.7	20.0	22.0	14.0	6.8	6.9	9.2	11.1	12.0	11.7
Swan Falls	ROR	14.5	14.5	14.5	13.6	14.5	13.6	11.6	11.1	13.4	15.1	14.8	14.6	13.8
Twin Falls	ROR	8.5	8.3	6.1	0.0	12.3	13.8	10.3	0.0	0.0	5.2	6.9	7.5	6.6
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	12.5	12.8	11.9	11.2	14.6	14.6	12.7	11.3	12.8	14.3	12.9	12.8	12.9
Upper Salmon 3&4	ROR	11.9	12.2	11.4	10.8	13.7	13.7	12.1	10.9	12.2	13.4	12.2	12.1	12.2
HCC Total		**570.5**	**390.8**	**395.3**	**532.1**	**605.3**	**486.2**	**450.2**	**324.2**	**371.5**	**323.4**	**367.2**	**414.0**	**435.9**
ROR Total		**189.6**	**189.1**	**184.8**	**186.0**	**284.5**	**294.4**	**257.9**	**207.2**	**203.6**	**202.5**	**185.4**	**188.3**	**214.4**
Total		**760.1**	**579.9**	**580.1**	**718.1**	**889.7**	**780.6**	**708.1**	**531.4**	**575.1**	**525.9**	**552.6**	**602.3**	**650.3**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2023**	**2/2023**	**3/2023**	**4/2023**	**5/2023**	**6/2023**	**7/2023**	**8/2023**	**9/2023**	**10/2023**	**11/2023**	**12/2023**	**aMW**
Brownlee	HCC*	250.5	164.8	168.4	236.4	267.6	216.9	200.1	138.1	156.4	137.4	159.1	181.0	189.7
Oxbow	HCC	107.7	75.6	74.2	97.4	110.5	89.4	84.2	62.7	72.7	62.3	69.7	78.3	82.1
Hells Canyon	HCC	212.2	150.5	152.1	198.2	227.0	179.7	165.6	123.4	142.4	123.5	138.0	154.5	163.9
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.6	68.9	78.3	70.2	48.1	26.3	10.1	0.0	0.0	28.1
Bliss	ROR	33.9	33.9	33.0	31.3	35.8	35.4	33.3	31.5	34.5	36.7	34.8	34.0	34.0
C.J. Strike	ROR	43.0	42.4	42.4	39.0	42.7	38.8	32.8	31.9	40.4	45.7	43.8	43.5	40.5
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	21.1	21.3	20.0	19.0	23.5	23.7	21.3	19.2	21.5	23.6	21.7	21.5	21.5
Milner	ROR	5.1	4.7	2.0	0.0	9.2	9.5	6.7	0.0	0.0	0.0	1.8	3.0	3.5
Shoshone Falls	ROR	12.0	12.0	10.0	4.7	20.0	22.0	14.0	6.8	6.9	9.2	11.1	12.0	11.7
Swan Falls	ROR	14.5	14.5	14.5	13.6	14.5	13.5	11.6	11.1	13.4	15.1	14.8	14.6	13.8
Twin Falls	ROR	8.5	8.3	6.1	0.0	12.2	13.8	10.3	0.0	0.0	5.2	6.9	7.5	6.6
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	12.5	12.8	11.9	11.2	14.6	14.6	12.7	11.3	12.8	14.2	12.9	12.8	12.9
Upper Salmon 3&4	ROR	11.9	12.1	11.4	10.8	13.7	13.7	12.1	10.8	12.1	13.4	12.2	12.1	12.2
HCC Total		**570.4**	**390.9**	**394.7**	**532.0**	**605.1**	**486.0**	**449.9**	**324.2**	**371.4**	**323.2**	**366.8**	**413.8**	**435.7**
ROR Total		**189.6**	**189.0**	**184.7**	**185.8**	**284.3**	**294.1**	**257.9**	**207.1**	**203.4**	**202.3**	**185.3**	**188.2**	**214.3**
Total		**760.0**	**579.9**	**579.4**	**717.8**	**889.4**	**780.1**	**707.8**	**531.3**	**574.8**	**525.5**	**552.1**	**602.0**	**650.0**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2024**	**2/2024**	**3/2024**	**4/2024**	**5/2024**	**6/2024**	**7/2024**	**8/2024**	**9/2024**	**10/2024**	**11/2024**	**12/2024**	**aMW**
Brownlee	HCC*	250.5	164.8	168.4	236.4	267.6	216.9	200.1	138.1	156.4	137.4	159.1	181.0	189.7
Oxbow	HCC	107.7	75.6	74.2	97.4	110.5	89.4	84.2	62.7	72.7	62.3	69.7	78.3	82.1
Hells Canyon	HCC	212.2	150.5	152.1	198.2	227.0	179.7	165.6	123.4	142.4	123.5	138.0	154.5	163.9
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.6	68.9	78.3	70.2	48.1	26.3	10.1	0.0	0.0	28.1
Bliss	ROR	33.9	33.9	33.0	31.3	35.8	35.4	33.3	31.5	34.5	36.7	34.8	34.0	34.0
C.J. Strike	ROR	43.0	42.4	42.4	39.0	42.7	38.8	32.8	31.9	40.4	45.7	43.8	43.5	40.5
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	21.1	21.3	20.0	19.0	23.5	23.7	21.3	19.2	21.5	23.6	21.7	21.5	21.5
Milner	ROR	5.1	4.7	2.0	0.0	9.2	9.5	6.7	0.0	0.0	0.0	1.8	3.0	3.5
Shoshone Falls	ROR	12.0	12.0	10.0	4.7	20.0	22.0	14.0	6.8	6.9	9.2	11.1	12.0	11.7
Swan Falls	ROR	14.5	14.5	14.5	13.6	14.5	13.5	11.6	11.1	13.4	15.1	14.8	14.6	13.8
Twin Falls	ROR	8.5	8.3	6.1	0.0	12.2	13.8	10.3	0.0	0.0	5.2	6.9	7.5	6.6
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	12.5	12.8	11.9	11.2	14.6	14.6	12.7	11.3	12.8	14.2	12.9	12.8	12.9
Upper Salmon 3&4	ROR	11.9	12.1	11.4	10.8	13.7	13.7	12.1	10.8	12.1	13.4	12.2	12.1	12.2
HCC Total		**570.4**	**390.9**	**394.7**	**532.0**	**605.1**	**486.0**	**449.9**	**324.2**	**371.4**	**323.2**	**366.8**	**413.8**	**435.7**
ROR Total		**189.6**	**189.0**	**184.7**	**185.8**	**284.3**	**294.1**	**257.9**	**207.1**	**203.4**	**202.3**	**185.3**	**188.2**	**214.3**
Total		**760.0**	**579.9**	**579.4**	**717.8**	**889.4**	**780.1**	**707.8**	**531.3**	**574.8**	**525.5**	**552.1**	**602.0**	**650.0**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2025**	**2/2025**	**3/2025**	**4/2025**	**5/2025**	**6/2025**	**7/2025**	**8/2025**	**9/2025**	**10/2025**	**11/2025**	**12/2025**	**aMW**
Brownlee	HCC*	250.5	164.8	168.4	236.4	267.6	216.9	200.1	138.1	156.4	137.4	159.1	181.0	189.7
Oxbow	HCC	107.7	75.6	74.2	97.4	110.5	89.4	84.2	62.7	72.7	62.3	69.7	78.3	82.1
Hells Canyon	HCC	212.2	150.5	152.1	198.2	227.0	179.7	165.6	123.4	142.4	123.5	138.0	154.5	163.9
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.6	68.9	78.3	70.2	48.1	26.3	10.1	0.0	0.0	28.1
Bliss	ROR	33.9	33.9	33.0	31.3	35.8	35.4	33.3	31.5	34.5	36.7	34.8	34.0	34.0
C.J. Strike	ROR	43.0	42.4	42.4	39.0	42.7	38.8	32.8	31.9	40.4	45.7	43.8	43.5	40.5
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	21.1	21.3	20.0	19.0	23.5	23.7	21.3	19.2	21.5	23.6	21.7	21.5	21.5
Milner	ROR	5.1	4.7	2.0	0.0	9.2	9.5	6.7	0.0	0.0	0.0	1.8	3.0	3.5
Shoshone Falls	ROR	12.0	12.0	10.0	4.7	20.0	22.0	14.0	6.8	6.9	9.2	11.1	12.0	11.7
Swan Falls	ROR	14.5	14.5	14.5	13.6	14.5	13.5	11.6	11.1	13.4	15.1	14.8	14.6	13.8
Twin Falls	ROR	8.5	8.3	6.1	0.0	12.2	13.8	10.3	0.0	0.0	5.2	6.9	7.5	6.6
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	12.5	12.8	11.9	11.2	14.6	14.6	12.7	11.3	12.8	14.2	12.9	12.8	12.9
Upper Salmon 3&4	ROR	11.9	12.1	11.4	10.8	13.7	13.7	12.1	10.8	12.1	13.4	12.2	12.1	12.2
HCC Total		**570.4**	**390.9**	**394.7**	**532.0**	**605.1**	**486.0**	**449.9**	**324.2**	**371.4**	**323.2**	**366.8**	**413.8**	**435.7**
ROR Total		**189.6**	**189.0**	**184.7**	**185.8**	**284.3**	**294.1**	**257.9**	**207.1**	**203.4**	**202.3**	**185.3**	**188.2**	**214.3**
Total		**760.0**	**579.9**	**579.4**	**717.8**	**889.4**	**780.1**	**707.8**	**531.3**	**574.8**	**525.5**	**552.1**	**602.0**	**650.0**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2026**	**2/2026**	**3/2026**	**4/2026**	**5/2026**	**6/2026**	**7/2026**	**8/2026**	**9/2026**	**10/2026**	**11/2026**	**12/2026**	**aMW**
Brownlee	HCC*	250.5	164.8	168.4	236.4	267.6	216.9	200.1	138.1	156.4	137.4	159.1	181.0	189.7
Oxbow	HCC	107.7	75.6	74.2	97.4	110.5	89.4	84.2	62.7	72.7	62.3	69.7	78.3	82.1
Hells Canyon	HCC	212.2	150.5	152.1	198.2	227.0	179.7	165.6	123.4	142.4	123.5	138.0	154.5	163.9
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.6	68.9	78.3	70.2	48.1	26.3	10.1	0.0	0.0	28.1
Bliss	ROR	33.9	33.9	33.0	31.3	35.8	35.4	33.3	31.5	34.5	36.7	34.8	34.0	34.0
C.J. Strike	ROR	43.0	42.4	42.4	39.0	42.7	38.8	32.8	31.9	40.4	45.7	43.8	43.5	40.5
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	21.1	21.3	20.0	19.0	23.5	23.7	21.3	19.2	21.5	23.6	21.7	21.5	21.5
Milner	ROR	5.1	4.7	2.0	0.0	9.2	9.5	6.7	0.0	0.0	0.0	1.8	3.0	3.5
Shoshone Falls	ROR	12.0	12.0	10.0	4.7	20.0	22.0	14.0	6.8	6.9	9.2	11.1	12.0	11.7
Swan Falls	ROR	14.5	14.5	14.5	13.6	14.5	13.5	11.6	11.1	13.4	15.1	14.8	14.6	13.8
Twin Falls	ROR	8.5	8.3	6.1	0.0	12.2	13.8	10.3	0.0	0.0	5.2	6.9	7.5	6.6
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	12.5	12.8	11.9	11.2	14.6	14.6	12.7	11.3	12.8	14.2	12.9	12.8	12.9
Upper Salmon 3&4	ROR	11.9	12.1	11.4	10.8	13.7	13.7	12.1	10.8	12.1	13.4	12.2	12.1	12.2
HCC Total		**570.4**	**390.9**	**394.7**	**532.0**	**605.1**	**486.0**	**449.9**	**324.2**	**371.4**	**323.2**	**366.8**	**413.8**	**435.7**
ROR Total		**189.6**	**189.0**	**184.7**	**185.8**	**284.3**	**294.1**	**257.9**	**207.1**	**203.4**	**202.3**	**185.3**	**188.2**	**214.3**
Total		**760.0**	**579.9**	**579.4**	**717.8**	**889.4**	**780.1**	**707.8**	**531.3**	**574.8**	**525.5**	**552.1**	**602.0**	**650.0**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2027**	**2/2027**	**3/2027**	**4/2027**	**5/2027**	**6/2027**	**7/2027**	**8/2027**	**9/2027**	**10/2027**	**11/2027**	**12/2027**	**aMW**
Brownlee	HCC*	250.5	164.8	168.4	236.4	267.6	216.9	200.1	138.1	156.4	137.4	159.1	181.0	189.7
Oxbow	HCC	107.7	75.6	74.2	97.4	110.5	89.4	84.2	62.7	72.7	62.3	69.7	78.3	82.1
Hells Canyon	HCC	212.2	150.5	152.1	198.2	227.0	179.7	165.6	123.4	142.4	123.5	138.0	154.5	163.9
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.6	68.9	78.3	70.2	48.1	26.3	10.1	0.0	0.0	28.1
Bliss	ROR	33.9	33.9	33.0	31.3	35.8	35.4	33.3	31.5	34.5	36.7	34.8	34.0	34.0
C.J. Strike	ROR	43.0	42.4	42.4	39.0	42.7	38.8	32.8	31.9	40.4	45.7	43.8	43.5	40.5
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	21.1	21.3	20.0	19.0	23.5	23.7	21.3	19.2	21.5	23.6	21.7	21.5	21.5
Milner	ROR	5.1	4.7	2.0	0.0	9.2	9.5	6.7	0.0	0.0	0.0	1.8	3.0	3.5
Shoshone Falls	ROR	12.0	12.0	10.0	4.7	20.0	22.0	14.0	6.8	6.9	9.2	11.1	12.0	11.7
Swan Falls	ROR	14.5	14.5	14.5	13.6	14.5	13.5	11.6	11.1	13.4	15.1	14.8	14.6	13.8
Twin Falls	ROR	8.5	8.3	6.1	0.0	12.2	13.8	10.3	0.0	0.0	5.2	6.9	7.5	6.6
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	12.5	12.8	11.9	11.2	14.6	14.6	12.7	11.3	12.8	14.2	12.9	12.8	12.9
Upper Salmon 3&4	ROR	11.9	12.1	11.4	10.8	13.7	13.7	12.1	10.8	12.1	13.4	12.2	12.1	12.2
HCC Total		**570.4**	**390.9**	**394.7**	**532.0**	**605.1**	**486.0**	**449.9**	**324.2**	**371.4**	**323.2**	**366.8**	**413.8**	**435.7**
ROR Total		**189.6**	**189.0**	**184.7**	**185.8**	**284.3**	**294.1**	**257.9**	**207.1**	**203.4**	**202.3**	**185.3**	**188.2**	**214.3**
Total		**760.0**	**579.9**	**579.4**	**717.8**	**889.4**	**780.1**	**707.8**	**531.3**	**574.8**	**525.5**	**552.1**	**602.0**	**650.0**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2028**	**2/2084**	**3/2028**	**4/2028**	**5/2028**	**6/2028**	**7/2028**	**8/2028**	**9/2028**	**10/2028**	**11/2028**	**12/2028**	**aMW**
Brownlee	HCC*	250.5	164.8	168.4	236.4	267.6	216.9	200.1	138.1	156.4	137.4	159.1	181.0	189.7
Oxbow	HCC	107.7	75.6	74.2	97.4	110.5	89.4	84.2	62.7	72.7	62.3	69.7	78.3	82.1
Hells Canyon	HCC	212.2	150.5	152.1	198.2	227.0	179.7	165.6	123.4	142.4	123.5	138.0	154.5	163.9
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.6	68.9	78.3	70.2	48.1	26.3	10.1	0.0	0.0	28.1
Bliss	ROR	33.9	33.9	33.0	31.3	35.8	35.4	33.3	31.5	34.5	36.7	34.8	34.0	34.0
C.J. Strike	ROR	43.0	42.4	42.4	39.0	42.7	38.8	32.8	31.9	40.4	45.7	43.8	43.5	40.5
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	21.1	21.3	20.0	19.0	23.5	23.7	21.3	19.2	21.5	23.6	21.7	21.5	21.5
Milner	ROR	5.1	4.7	2.0	0.0	9.2	9.5	6.7	0.0	0.0	0.0	1.8	3.0	3.5
Shoshone Falls	ROR	12.0	12.0	10.0	4.7	20.0	22.0	14.0	6.8	6.9	9.2	11.1	12.0	11.7
Swan Falls	ROR	14.5	14.5	14.5	13.6	14.5	13.5	11.6	11.1	13.4	15.1	14.8	14.6	13.8
Twin Falls	ROR	8.5	8.3	6.1	0.0	12.2	13.8	10.3	0.0	0.0	5.2	6.9	7.5	6.6
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	12.5	12.8	11.9	11.2	14.6	14.6	12.7	11.3	12.8	14.2	12.9	12.8	12.9
Upper Salmon 3&4	ROR	11.9	12.1	11.4	10.8	13.7	13.7	12.1	10.8	12.1	13.4	12.2	12.1	12.2
HCC Total		**570.4**	**390.9**	**394.7**	**532.0**	**605.1**	**486.0**	**449.9**	**324.2**	**371.4**	**323.2**	**366.8**	**413.8**	**435.7**
ROR Total		**189.6**	**189.0**	**184.7**	**185.8**	**284.3**	**294.1**	**257.9**	**207.1**	**203.4**	**202.3**	**185.3**	**188.2**	**214.3**
Total		**760.0**	**579.9**	**579.4**	**717.8**	**889.4**	**780.1**	**707.8**	**531.3**	**574.8**	**525.5**	**552.1**	**602.0**	**650.0**

*HCC=Hells Canyon Complex,**ROR= Run of River

Hydro Modeling Results (PDR 580) (continued)

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2029**	**2/2029**	**3/2029**	**4/2029**	**5/2029**	**6/2029**	**7/2029**	**8/2029**	**9/2029**	**10/2029**	**11/2029**	**12/2029**	**aMW**
Brownlee	HCC*	250.5	164.8	168.4	236.4	267.6	216.9	200.1	138.1	156.4	137.4	159.1	181.0	189.7
Oxbow	HCC	107.7	75.6	74.2	97.4	110.5	89.4	84.2	62.7	72.7	62.3	69.7	78.3	82.1
Hells Canyon	HCC	212.2	150.5	152.1	198.2	227.0	179.7	165.6	123.4	142.4	123.5	138.0	154.5	163.9
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.6	68.9	78.3	70.2	48.1	26.3	10.1	0.0	0.0	28.1
Bliss	ROR	33.9	33.9	33.0	31.3	35.8	35.4	33.3	31.5	34.5	36.7	34.8	34.0	34.0
C.J. Strike	ROR	43.0	42.4	42.4	39.0	42.7	38.8	32.8	31.9	40.4	45.7	43.8	43.5	40.5
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	21.1	21.3	20.0	19.0	23.5	23.7	21.3	19.2	21.5	23.6	21.7	21.5	21.5
Milner	ROR	5.1	4.7	2.0	0.0	9.2	9.5	6.7	0.0	0.0	0.0	1.8	3.0	3.5
Shoshone Falls	ROR	12.0	12.0	10.0	4.7	20.0	22.0	14.0	6.8	6.9	9.2	11.1	12.0	11.7
Swan Falls	ROR	14.5	14.5	14.5	13.6	14.5	13.5	11.6	11.1	13.4	15.1	14.8	14.6	13.8
Twin Falls	ROR	8.5	8.3	6.1	0.0	12.2	13.8	10.3	0.0	0.0	5.2	6.9	7.5	6.6
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	12.5	12.8	11.9	11.2	14.6	14.6	12.7	11.3	12.8	14.2	12.9	12.8	12.9
Upper Salmon 3&4	ROR	11.9	12.1	11.4	10.8	13.7	13.7	12.1	10.8	12.1	13.4	12.2	12.1	12.2
HCC Total		**570.4**	**390.9**	**394.7**	**532.0**	**605.1**	**486.0**	**449.9**	**324.2**	**371.4**	**323.2**	**366.8**	**413.8**	**435.7**
ROR Total		**189.6**	**189.0**	**184.7**	**185.8**	**284.3**	**294.1**	**257.9**	**207.1**	**203.4**	**202.3**	**185.3**	**188.2**	**214.3**
Total		**760.0**	**579.9**	**579.4**	**717.8**	**889.4**	**780.1**	**707.8**	**531.3**	**574.8**	**525.5**	**552.1**	**602.0**	**650.0**

*HCC=Hells Canyon Complex,**ROR= Run of River

aMW 90th Percentile Water, 70th Percentile Load														
Resource	**Type**	**1/2030**	**2/2030**	**3/2030**	**4/2030**	**5/2030**	**6/2030**	**7/2030**	**8/2030**	**9/2030**	**10/2030**	**11/2030**	**12/2030**	**aMW**
Brownlee	HCC*	250.5	164.8	168.4	236.4	267.6	216.9	200.1	138.1	156.4	137.4	159.1	181.0	189.7
Oxbow	HCC	107.7	75.6	74.2	97.4	110.5	89.4	84.2	62.7	72.7	62.3	69.7	78.3	82.1
Hells Canyon	HCC	212.2	150.5	152.1	198.2	227.0	179.7	165.6	123.4	142.4	123.5	138.0	154.5	163.9
1000 Springs	ROR**	6.0	5.8	5.7	5.3	5.6	6.0	5.8	6.0	6.4	6.4	5.4	6.1	5.9
American Falls	ROR	0.0	0.0	5.7	29.6	68.9	78.3	70.2	48.1	26.3	10.1	0.0	0.0	28.1
Bliss	ROR	33.9	33.9	33.0	31.3	35.8	35.4	33.3	31.5	34.5	36.7	34.8	34.0	34.0
C.J. Strike	ROR	43.0	42.4	42.4	39.0	42.7	38.8	32.8	31.9	40.4	45.7	43.8	43.5	40.5
Cascade	ROR	1.4	1.4	1.4	1.3	1.5	4.2	7.0	9.8	7.2	1.5	1.3	1.4	3.3
Clear Lake	ROR	1.7	1.7	1.7	1.4	1.6	1.4	1.4	1.6	1.6	1.7	1.6	1.7	1.6
Lower Malad	ROR	11.4	11.5	12.1	11.7	12.9	11.9	11.8	12.1	13.0	12.9	10.6	11.5	12.0
Lowe Salmon	ROR	21.1	21.3	20.0	19.0	23.5	23.7	21.3	19.2	21.5	23.6	21.7	21.5	21.5
Milner	ROR	5.1	4.7	2.0	0.0	9.2	9.5	6.7	0.0	0.0	0.0	1.8	3.0	3.5
Shoshone Falls	ROR	12.0	12.0	10.0	4.7	20.0	22.0	14.0	6.8	6.9	9.2	11.1	12.0	11.7
Swan Falls	ROR	14.5	14.5	14.5	13.6	14.5	13.5	11.6	11.1	13.4	15.1	14.8	14.6	13.8
Twin Falls	ROR	8.5	8.3	6.1	0.0	12.2	13.8	10.3	0.0	0.0	5.2	6.9	7.5	6.6
Upper Malad	ROR	6.6	6.7	6.9	6.8	7.6	7.2	6.8	6.9	7.2	6.6	6.3	6.5	6.8
Upper Salmon 1&2	ROR	12.5	12.8	11.9	11.2	14.6	14.6	12.7	11.3	12.8	14.2	12.9	12.8	12.9
Upper Salmon 3&4	ROR	11.9	12.1	11.4	10.8	13.7	13.7	12.1	10.8	12.1	13.4	12.2	12.1	12.2
HCC Total		**570.4**	**390.9**	**394.7**	**532.0**	**605.1**	**486.0**	**449.9**	**324.2**	**371.4**	**323.2**	**366.8**	**413.8**	**435.7**
ROR Total		**189.6**	**189.0**	**184.7**	**185.8**	**284.3**	**294.1**	**257.9**	**207.1**	**203.4**	**202.3**	**185.3**	**188.2**	**214.3**
Total		**760.0**	**579.9**	**579.4**	**717.8**	**889.4**	**780.1**	**707.8**	**531.3**	**574.8**	**525.5**	**552.1**	**602.0**	**650.0**

*HCC=Hells Canyon Complex,**ROR= Run of River

PORTFOLIO ANALYSIS, RESULTS, AND SUPPORTING DOCUMENTATION

Initial Resource Portfolios (2011–2020)

1-1 Sun & Steam		1-2 Solar		1-3 B2H		1-4 SCCT		1-5 CCCT	
2011		2011		2011		2011		2011	
2012	Solar PV-1	2012		2012		2012		2012	
2013	Solar PV-5	2013		2013		2013		2013	
2014	CHP-75	2014	Solar PV-5	2014		2014		2014	
2015	Solar PV-30	2015	Solar PT-100	2015	Eastside Purchase	2015	SCCT Frame	2015	CCCT
2016	CHP-100	2016	Solar PT-100	2016	B2H-450	2016		2016	
2017	Geothermal-52	2017	Solar PT-125	2017		2017	SCCT Frame	2017	
2018	Solar PT-125	2018	Solar PV-50	2018		2018		2018	
2019	Solar PV-30	2019	Solar PT-100	2019		2019	SCCT S Aero-94	2019	SCCT Frame
2020	Solar PT-75	2020	Solar PV-50	2020		2020		2020	
MW	**493**	**MW**	**530**	**MW**	**450**	**MW**	**434**	**MW**	**470**

1-6 CHP		1-7 Balanced		1-8 Pumped Storage		1-9 Distributed Gen	
2011		2011		2011		2011	
2012		2012		2012		2012	Dist Gen-10
2013		2013		2013		2013	
2014		2014		2014		2014	
2015	CHP-100	2015	CHP-100	2015	Pump St-80	2015	SCCT Frame
2016	SCCT Frame	2016	SCCT Frame	2016	SCCT Frame	2016	
2017		2017	Solar PV-10	2017		2017	SCCT Frame
2018	CHP-50	2018	Solar PT-100	2018	Pump St-80	2018	
2019	CHP-50	2019	Geothermal-26	2019	SCCT S Aero-47	2019	SCCT S Aero-94
2020	SCCT S Aero-94	2020	SCCT S Aero-47	2020	Pump St-80	2020	
MW	**464**	**MW**	**453**	**MW**	**457**	**MW**	**444**

Initial Resource Portfolios (2021–2030)

2-1 Nuclear		2-2 IGCC		2-3 SCCT/Wind		2-4 CCCT/Wind		2-5 Hydro/CHP	
2021	Solar PT-100	2021	Geothermal-52	2021	SCCT S Aero-141	2021	CCCT	2021	Hydro Sm-60
2022	Pump St-50	2022	SCCT Frame	2022	Wind-100	2022	Wind-150	2022	CHP-75
2023	Solar PT-100	2023		2023	SCCT S Aero-141	2023		2023	Pump St-80
2024	Nuclear	2024	CHP-50	2024	Wind-100	2024		2024	CHP-100
2025		2025	Solar PT-75	2025	SCCT S Aero-94	2025		2025	Hydro-40
2026		2026	IGCC w/CS	2026	Wind-100	2026	CCCT	2026	Pump St-80
2027		2027		2027	SCCT S Aero-141	2027		2027	Hydro Sm-100
2028	Nuclear	2028	Solar PT-75	2028	SCCT S Aero-141	2028	Wind-150	2028	SCCT S Aero-141
2029	Pump St-50	2029		2029	SCCT S Aero-94	2029	SCCT Frame	2029	Hydro Sm-80
2030		2030		2030		2030		2030	Hydro Sm-60
MW	**800**	**MW**	**802**	**MW**	**1,052**	**MW**	**1,070**	**MW**	**816**

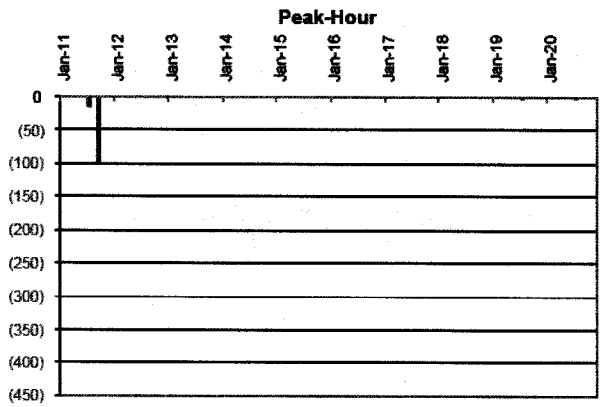
2-6 Balanced 1		2-7 Balanced 2		2-8 PNW Transmission		2-9 E/S Transmission		2-10 Renewable	
2021	Geothermal-52	2021	Geothermal-52	2021	Geothermal-52	2021	Geothermal-52	2021	CHP-75
2022	SCCT Frame	2022	CHP-75	2022	PNW Purchase	2022	E/S Purchase	2022	Pump St-80
2023		2023	SCCT Frame	2023		2023		2023	Solar PT-150
2024	Solar PT-50	2024		2024		2024		2024	
2025	CCCT	2025	Geothermal-52	2025		2025		2025	CHP-75
2026		2026	CHP-75	2026		2026		2026	Solar PT-150
2027		2027	Hydro Sm-60	2027	Solar PV-20	2027	Solar PV-20	2027	Solar PV-150
2028	Hydro Sm-60	2028	CCCT	2028	Geothermal-52	2028	Geothermal-52	2028	Geothermal-52
2029	SCCT Frame	2029		2029	SCCT Frame	2029	SCCT Frame	2029	Hydro Sm-100
2030		2030		2030		2030		2030	Solar PV-200
MW	**802**	**MW**	**784**	**MW**	**794**	**MW**	**794**	**MW**	**1,032**

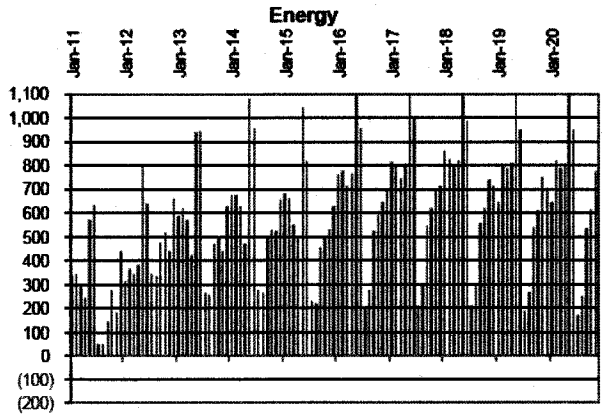
Detailed Resource Portfolio Design Sheets

1-1 Sun and Steam

						Cumm.							Capital Cost	
Year	Resource	MW	E	P	Type	E	P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	$/kW	Total $
2011		0	0	0		0	0	–	44	0	44	44		
2012	Solar PV-1	1	0	1	R*	0	1	26	69	0	70	44	$3,750	$3,750,000
2013	Solar PV-5	5	1	3	R	1	3	27	70	1	71	43	$3,750	$18,750,000
2014	CHP-75	75	70	75		71	78	57	78	1	79	21	$1,888	$141,600,000
2015	Solar PV-30	30	4	17	R	75	95	60	104	5	109	49	$3,750	$112,500,000
2016	CHP-100	100	93	100		168	195	62	104	5	109	48	$1,888	$188,800,000
2017	Geothermal-52	52	48	52	R	216	247	95	113	53	166	71	$6,385	$332,020,000
2018	Solar PT-125	125	35	114	R	251	361	97	119	88	207	109	$3,220	402,500,000
2019	Solar PV-30	30	4	17	R	255	377	133	128	92	220	87	$3,750	$112,500,000
2020	Solar PT-75	75	21	68	R	276	445	136	129	113	242	106	$3,220	$241,500,000
	Total	**193**	**276**	**445**										**$1,553,920,000**

* R=Renewable Resource

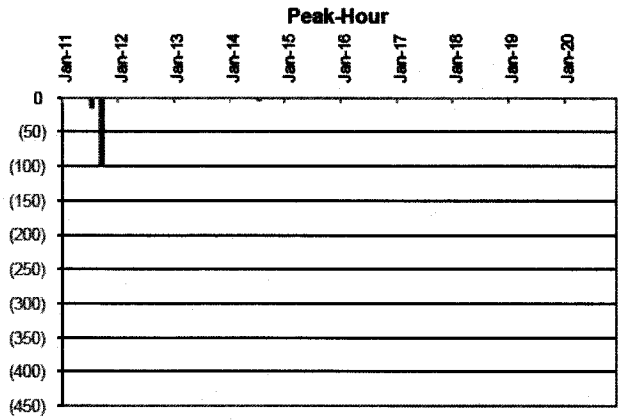


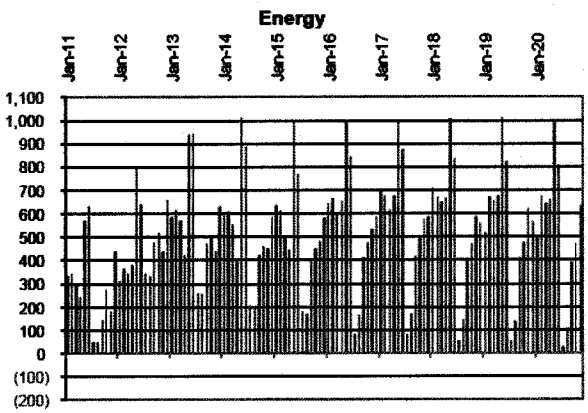


1-2 Solar

						Cumm.							Capital Cost	
Year	Resource	MW	E	P	Type	E	P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	$/kW	Total $
2011		0	0	0		0	0	–	44	0	44	44		
2012		0	0	0		0	0	26	69	0	69	43		
2013		0	0	0		0	0	27	70	0	70	43		
2014	Solar PV-5	5	1	3	R	1	3	57	78	1	78	21	$3,750	$18,750,000
2015	Solar PT-100	100	28	91	R	29	94	60	104	29	132	73	$3,220	$322,000,000
2016	Solar PT-100	100	28	91	R	57	185	62	104	57	161	99	$3,220	$322,000,000
2017	Solar PT-125	125	35	114	R	92	299	95	113	92	205	110	$3,220	$402,500,000
2018	Solar PV-50	50	7	28	R	99	326	97	119	99	217	120	$3,750	$187,500,000
2019	Solar PT-100	100	28	91	R	127	417	133	128	127	255	122	$3,220	$322,000,000
2020	Solar PV-50	50	7	28	R	134	445	136	129	134	263	127	$3,750	$187,500,000
	Total	**530**	**134**	**445**										**$1,762,250,000**

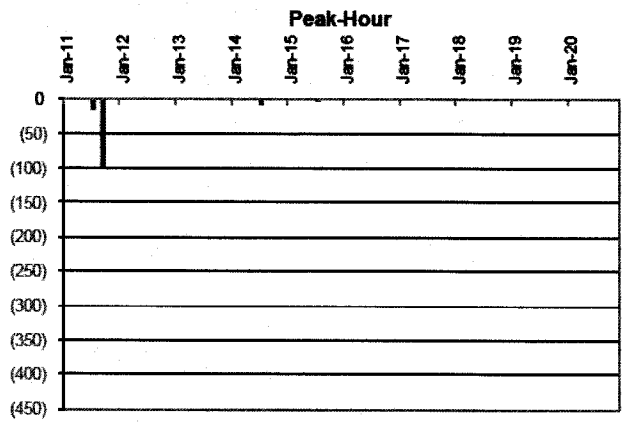
* R=Renewable Resource

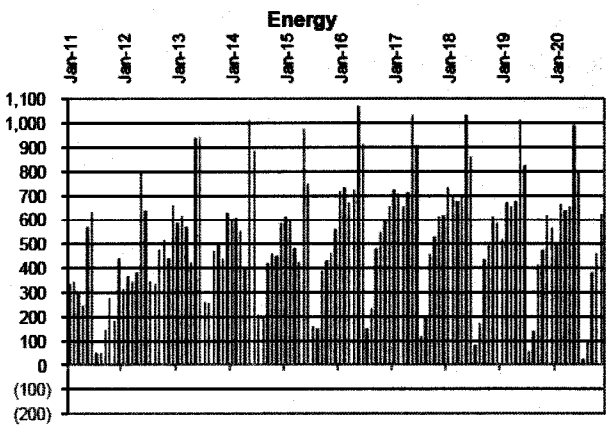




1-3 Boardman to Hemingway

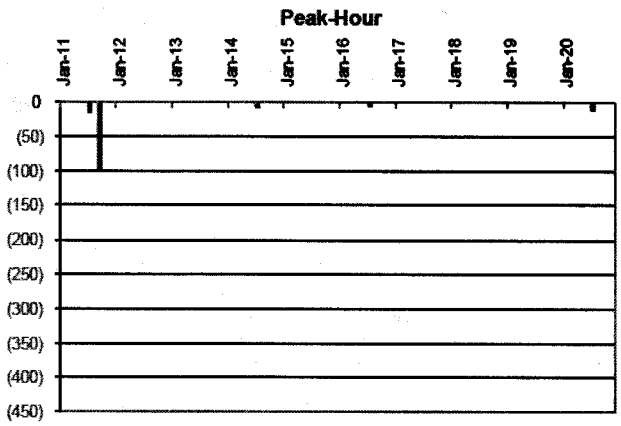
Year	Resource	MW	E	P	Type	Cumm. E	Cumm. P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	Capital Cost $/kW	Capital Cost Total $
2011		0	0	0		0	0	–	44	0	44	44		
2012		0	0	0		0	0	26	69	0	69	43		
2013		0	0	0		0	0	27	70	0	70	43		
2014		0	0	0		0	0	57	78	0	78	21		
2015	Eastside Purchase	83	8	83		8	83	60	104	0	104	44	$–	$–
2016	B2H-450	367	117	367		126	450	62	104	0	104	43	$381	$247,214,209
2017		0	0	0		126	450	95	113	0	113	18		
2018		0	0	0		126	450	97	119	0	119	21		
2019		0	0	0		126	450	133	128	0	128	(5)		
2020		0	0	0		126	450	136	129	0	129	(7)		
	Total	450	126	450										$247,214,209

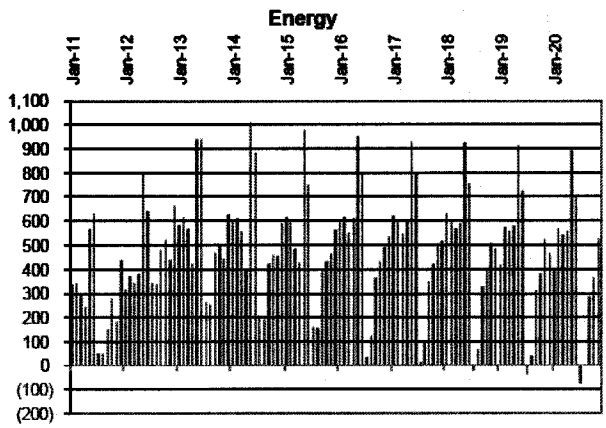




1-4 SCCT

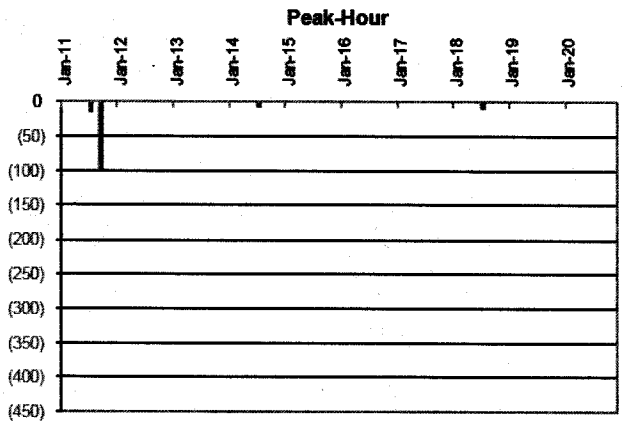
						Cumm.							Capital Cost	
Year	Resource	MW	E	P	Type	E	P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	$/kW	Total $
2011		0	0	0		0	0	–	44	0	44	44		
2012		0	0	0		0	0	26	69	0	69	43		
2013		0	0	0		0	0	27	70	0	70	43		
2014		0	0	0		0	0	57	78	0	78	21		
2015	SCCT Frame	170	10	170		10	170	60	104	0	104	44	$746	$126,820,000
2016		0	0	0		10	170	62	104	0	104	43		
2017	SCCT Frame	170	10	170		20	340	95	113	0	113	18	$746	$126,820,000
2018		0	0	0		20	340	97	119	0	119	21		
2019	SCCT S Aero-94	94	8	94		28	434	133	128	0	128	(5)	$1,063	$99,922,000
2020		0	0	0		28	434	136	129	0	129	(7)		
	Total	434	28	434										$353,562,000

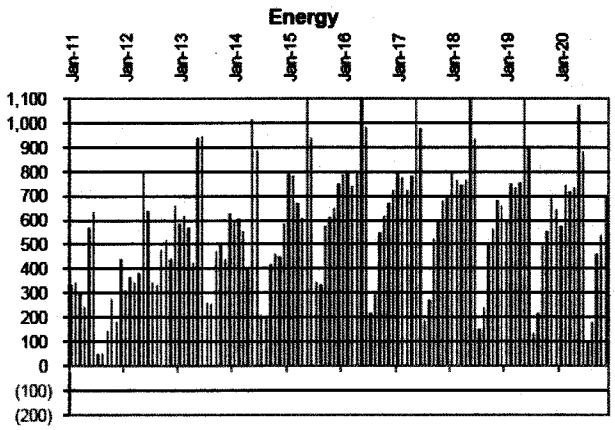




1-5 CCCT

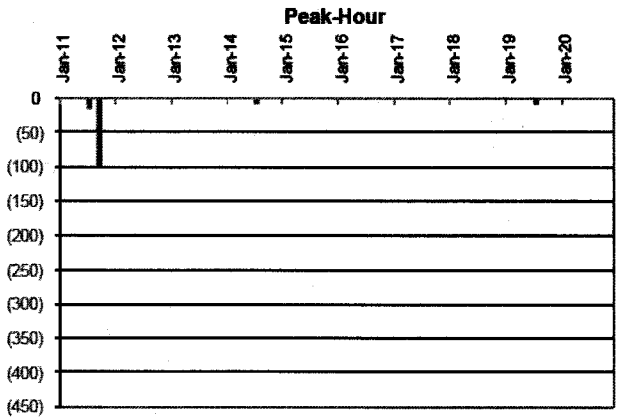
Year	Resource	MW	E	P	Type	Cumm. E	Cumm. P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	Capital Cost $/kW	Capital Cost Total $
2011		0	0	0		0	0	–	44	0	44	44		
2012		0	0	0		0	0	26	69	0	69	43		
2013		0	0	0		0	0	27	70	0	70	43		
2014		0	0	0		0	0	57	78	0	78	21		
2015	CCCT	300	195	300		195	300	60	104	0	104	44	$1,216	$364,800,000
2016		0	0	0		195	300	62	104	0	104	43		
2017		0	0	0		195	300	95	113	0	113	18		
2018		0	0	0		195	300	97	119	0	119	21		
2019	SCCT Frame	170	10	170		205	470	133	128	0	128	(5)	$746	$126,820,000
2020		0	0	0		205	470	136	129	0	129	(7)		
	Total	**470**	**205**	**470**										**$491,620,000**

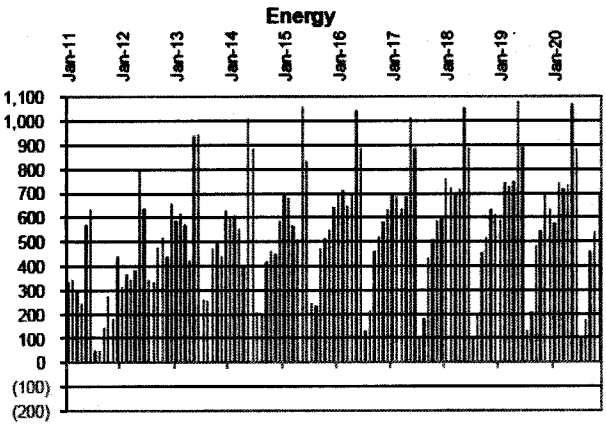




1-6 CHP

						Cumm.							Capital Cost	
Year	Resource	MW	E	P	Type	E	P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	$/kW	Total $
2011		0	0	0		0	0	–	44	0	44	44		
2012		0	0	0		0	0	26	69	0	69	43		
2013		0	0	0		0	0	27	70	0	70	43		
2014		0	0	0		0	0	57	78	0	78	21		
2015	CHP-100	100	93	100		93	100	60	104	0	104	44	$1,888	$188,800,000
2016	SCCT Frame	170	10	170		103	270	62	104	0	104	43	$746	$126,820,000
2017		0	0	0		103	270	95	113	0	113	18		
2018	CHP-50	50	47	50		150	320	97	119	0	119	21	$1,888	$94,400,000
2019	CHP-50	50	47	50		196	370	133	128	0	128	(5)	$1,888	$94,400,000
2020	SCCT S Aero-94	94	8	94		204	464	136	129	0	129	(7)	$1,063	$99,922,000
	Total	464	204	464										$604,342,000

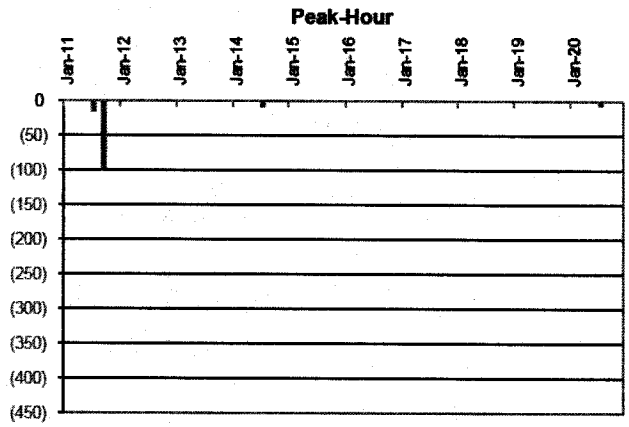


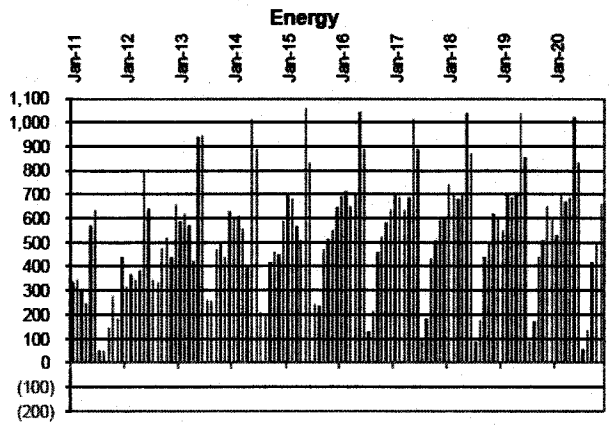


1-7 Balanced

Year	Resource	MW	E	P	Type	Cumm. E	Cumm. P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	Capital Cost $/kW	Capital Cost Total $
2011		0	0	0		0	0	–	44	0	44	44		
2012		0	0	0		0	0	26	69	0	69	43		
2013		0	0	0		0	0	27	70	0	70	43		
2014		0	0	0		0	0	57	78	0	78	21		
2015	CHP-100	100	93	100		93	100	60	104	0	104	44	$1,888	$188,800,000
2016	SCCT Frame	170	10	170		103	270	62	104	0	104	43	$746	$126,820,000
2017	Solar PV-10	10	1	6	R	105	276	95	113	1	114	19	$3,750	$37,500,000
2018	Solar PT-100	100	28	91	R	133	367	97	119	29	148	51	$3,220	$322,000,000
2019	Geothermal-26	26	24	26	R	157	393	133	128	53	182	48	$6,385	$166,010,000
2020	SCCT S Aero-47	47	4	47		160	440	136	129	53	182	46	$1,063	$49,961,000
	Total	**453**	**160**	**440**										**$891,091,000**

* R=Renewable Resource

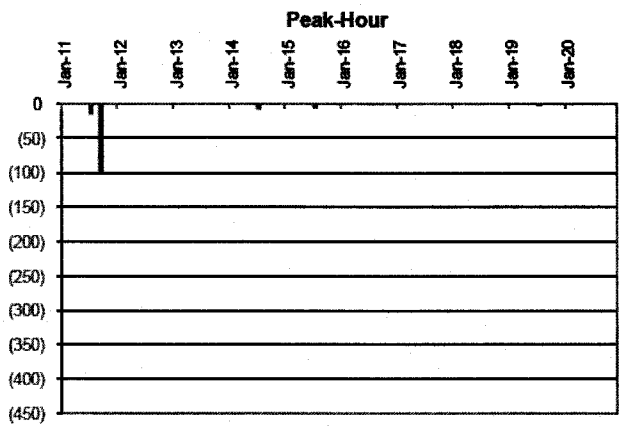


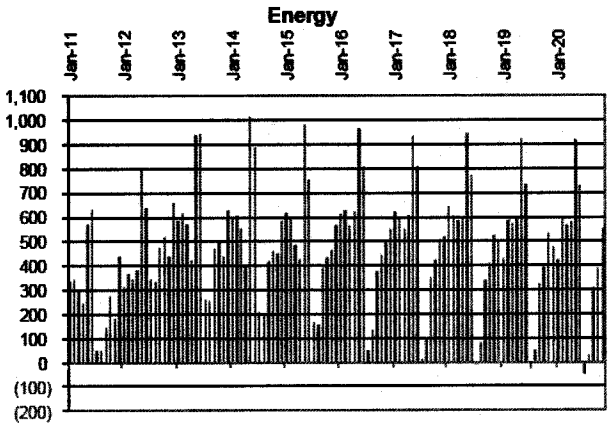


1-8 Pumped Storage

						Cumm.							Capital Cost	
Year	Resource	MW	E	P	Type	E	P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	$/kW	Total $
2011		0	0	0		0	0	–	44	0	44	44		
2012		0	0	0		0	0	26	69	0	69	43		
2013		0	0	0		0	0	27	70	0	70	43		
2014		0	0	0		0	0	57	78	0	78	21		
2015	Pump St-80	80	13	80	R	13	80	60	104	13	116	57	$5,000	$400,000,000
2016	SCCT Frame	170	10	170		23	250	62	104	13	117	55	$746	$126,820,000
2017		0	0	0		23	250	95	113	13	126	31		
2018	Pump St-80	80	13	80	R	36	330	97	119	26	144	47	$5,000	$400,000,000
2019	SCCT S Aero-47	47	4	47		40	377	133	128	26	154	21	$1,063	$49,961,000
2020	Pump St-80	80	13	80	R	52	457	136	129	38	167	31	$5,000	$400,000,000
	Total	**457**	**52**	**457**										**$1,376,781,000**

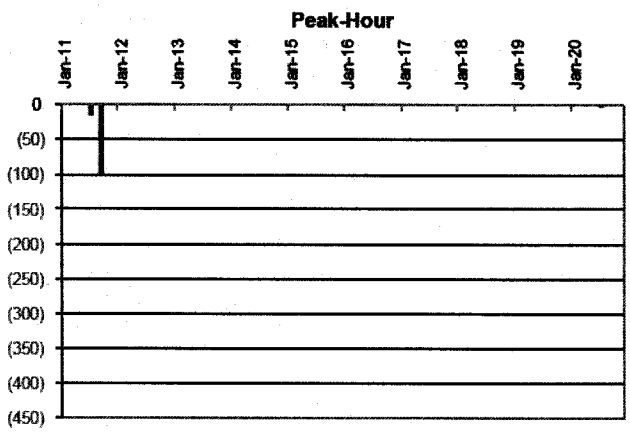
* R=Renewable Resource

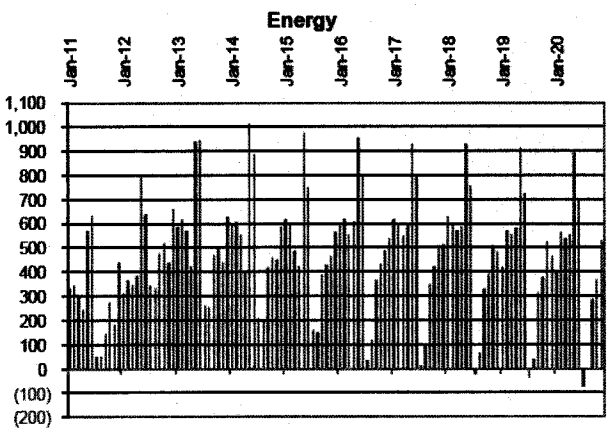




1-9 Distributed Generation

						Cumm.							Capital Cost	
Year	Resource	MW	E	P	Type	E	P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	$/kW	Total $
2011		0	0	0		0	0	–	44	0	44	44		
2012	Dist Gen-10	10	0	10		0	10	26	69	0	69	43	$–	$–
2013		0	0	0		0	10	27	70	0	70	43		
2014		0	0	0		0	10	57	78	0	78	21		
2015	SCCT Frame	170	10	170		10	180	60	104	0	104	44	$746	$126,820,000
2016		0	0	0		10	180	62	104	0	104	43		
2017	SCCT Frame	170	10	170		20	350	95	113	0	113	18	$746	$126,820,000
2018		0	0	0		20	350	97	119	0	119	21		
2019	SCCT S Aero-94	94	8	94		28	444	133	128	0	128	(5)	$1,063	$99,922,000
2020		0	0	0		28	444	136	129	0	129	(7)		
	Total	444	28	444										$353,562,000

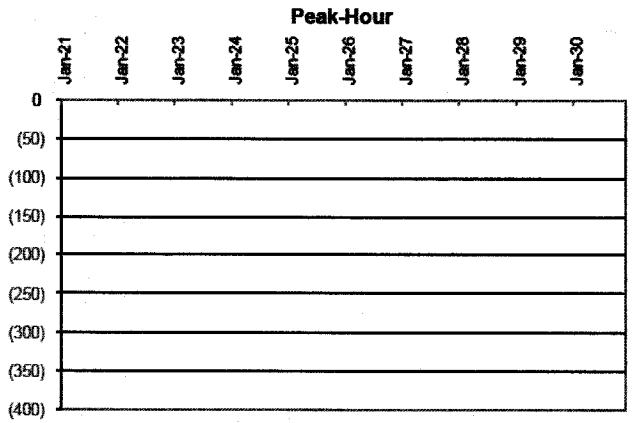


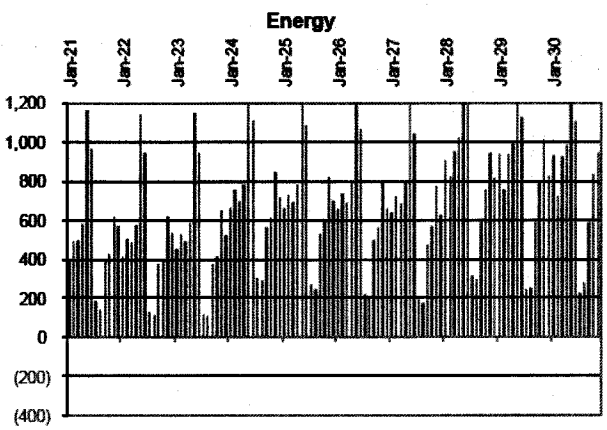


2-1 Nuclear

						Cumm.							Capital Cost	
Year	Resource	MW	E	P	Type	E	P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	$/kW	Total $
2021	Solar PT-100	100	28	91	R	28	91	174	139	28	167	(7)	$3,220	$322,000,000
2022	Pump St-50	50	8	50	R	36	141	178	140	36	176	(2)	$5,000	$250,000,000
2023	Solar PT-100	100	28	91	R	64	232	182	141	64	205	23	$3,220	$322,000,000
2024	Nuclear	250	213	250		277	482	185	142	64	206	21	$4,103	$1,025,750,000
2025		0	0	0		277	482	189	143	64	207	18		
2026		0	0	0		277	482	193	144	64	208	15		
2027		0	0	0		277	482	196	145	64	209	13		
2028	Nuclear	250	213	250		489	732	202	113	64	177	(25)	$4,103	$1,025,750,000
2029	Pump St-50	50	8	50	R	497	782	206	114	72	186	(20)	$5,000	$250,000,000
2030		0	0	0		497	782	211	115	72	187	(24)		
	Total	800	497	782										$3,195,500,000

* R=Renewable Resource

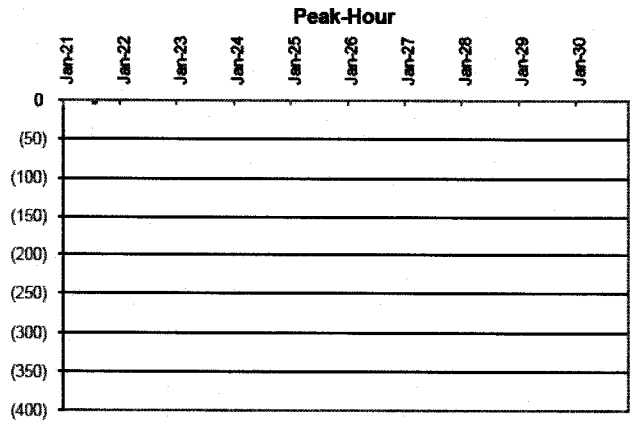


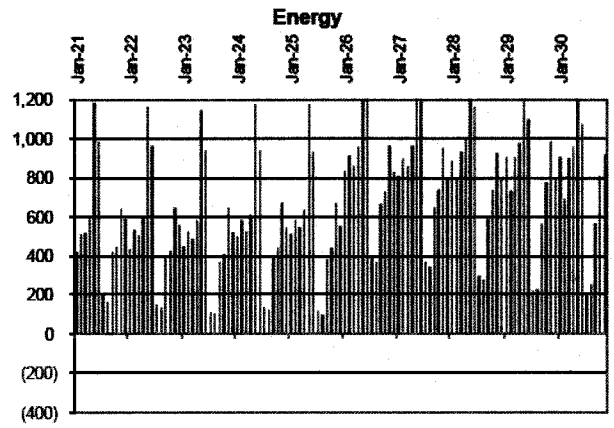


2-2 IGCC

Year	Resource	MW	E	P	Type	Cumm. E	Cumm. P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	Capital Cost $/kW	Capital Cost Total $
2021	Geothermal-52	52	48	52	R	48	52	174	139	48	187	13	$6,385	$332,020,000
2022	SCCT Frame	170	10	170		58	222	178	140	48	188	10	$746	$126,820,000
2023		0	0	0		58	222	182	141	48	189	7		
2024	CHP-50	50	47	50		105	272	185	142	48	190	5	$1,888	$94,400,000
2025	Solar PT-75	75	21	68	R	126	340	189	143	69	212	23	$3,220	$241,500,000
2026	IGCC w/CS	380	323	380		449	720	193	144	69	213	20	$4,506	$1,712,280,000
2027		0	0	0		449	720	196	145	69	214	18		
2028	Solar PT-75	75	21	68	R	470	789	202	113	90	202	1	$3,220	$241,500,000
2029		0	0	0		470	789	206	114	90	204	(3)		
2030		0	0	0		470	789	211	115	90	205	(6)		
	Total	**802**	**470**	**789**										**$2,748,520,000**

* R=Renewable Resource

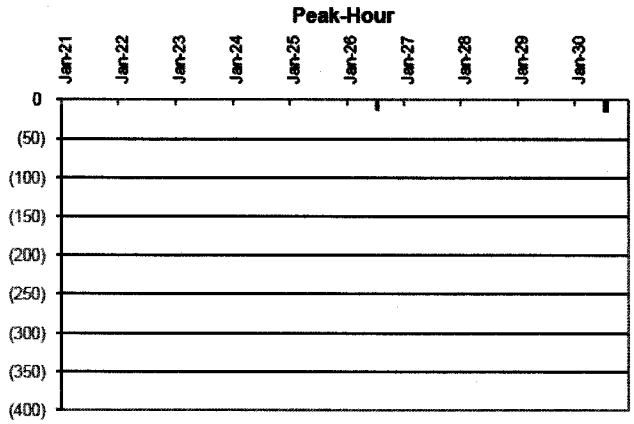


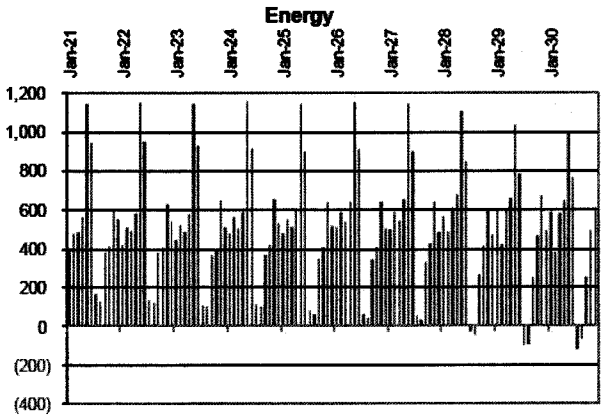


2-3 SCCT/Wind

						Cumm.							Capital Cost	
Year	Resource	MW	E	P	Type	E	P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	$/kW	Total $
2021	SCCT S Aero-141	141	11	141		11	141	174	139	0	139	(35)	$1,063	$149,883,000
2022	Wind-100	100	32	5	R	43	146	178	140	32	172	(6)	$1,733	$173,300,000
2023	SCCT S Aero-141	141	11	141		55	287	182	141	32	173	(9)	$1,063	$149,883,000
2024	Wind-100	100	32	5	R	87	292	185	142	64	206	21	$1,733	$173,300,000
2025	SCCT S Aero-94	94	8	94		94	386	189	143	64	207	18	$1,063	$99,922,000
2026	Wind-100	100	32	5	R	126	391	193	144	96	240	47	$1,733	$173,300,000
2027	SCCT S Aero-141	141	11	141		137	532	196	145	96	241	45	$1,063	$149,883,000
2028	SCCT S Aero-141	141	11	141		149	673	202	113	96	209	7	$1,063	$149,883,000
2029	SCCT S Aero-94	94	8	94		156	767	206	114	96	210	4	$1,063	$99,922,000
2030		0	0	0		156	767	211	115	96	211	(0)		
	Total	1,052	156	767										$1,319,276,000

* R=Renewable Resource

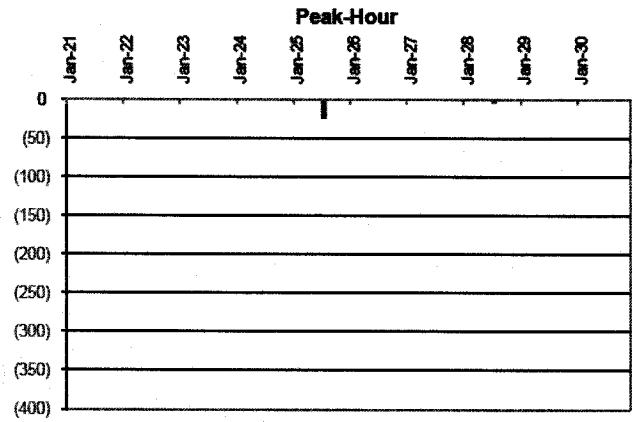


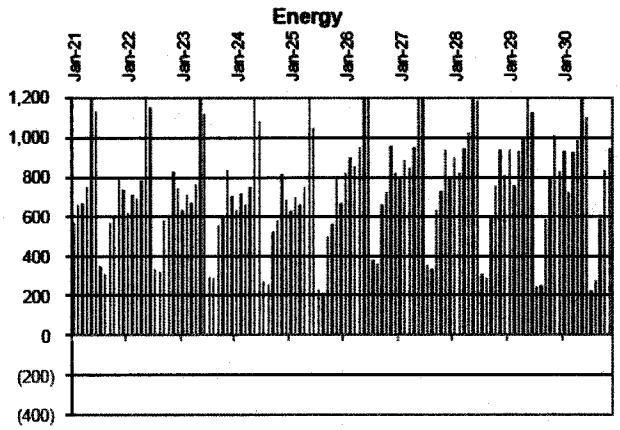


2-4 CCCT/Wind

						Cumm.							Capital Cost	
Year	Resource	MW	E	P	Type	E	P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	$/kW	Total $
2021	CCCT	300	195	300		195	300	174	139	0	139	(35)	$1,216	$364,800,000
2022	Wind-150	150	48	8	R	243	308	178	140	48	188	10	$1,733	$259,950,000
2023		0	0	0		243	308	182	141	48	189	7		
2024		0	0	0		243	308	185	142	48	190	5		
2025		0	0	0		243	308	189	143	48	191	2		
2026	CCCT	300	195	300		438	608	193	144	48	192	(1)	$1,216	$364,800,000
2027		0	0	0		438	608	196	145	48	193	(3)		
2028	Wind-150	150	48	8	R	486	615	202	113	96	209	7	$1,733	$259,950,000
2029	SCCT Frame	170	10	170		496	785	206	114	96	210	4	$746	$126,820,000
2030		0	0	0		496	785	211	115	96	211	(0)		
	Total	1,070	496	785										$1,376,320,000

* R=Renewable Resource

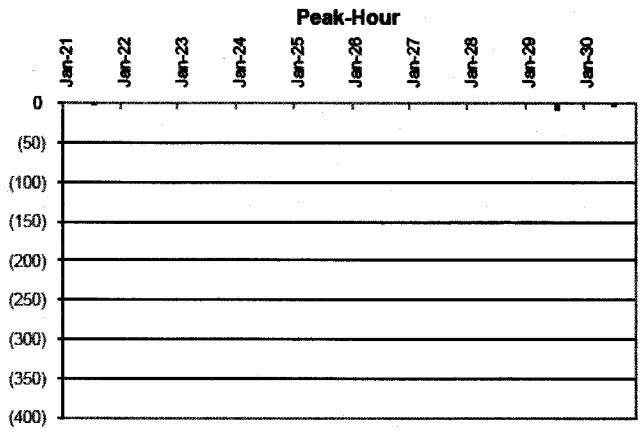


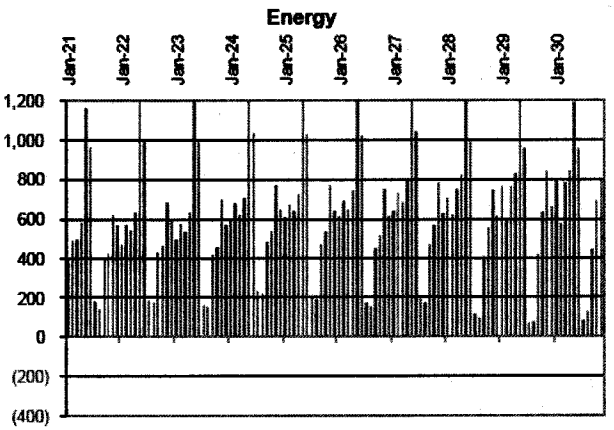


2-5 Hydro/CHP

						Cumm.							Capital Cost	
Year	Resource	MW	E	P	Type	E	P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	$/kW	Total $
2021	Hydro Sm-60	60	27	54	R	27	54	174	139	27	166	(8)	$4,000	$240,000,000
2022	CHP-75	75	70	75		97	129	178	140	27	167	(11)	$1,888	$141,600,000
2023	Pump St-80	80	13	80	R	110	209	182	141	40	181	(1)	$5,000	$400,000,000
2024	CHP-100	100	93	100		203	309	185	142	40	182	(3)	$1,888	$188,800,000
2025	Hydro-40	40	18	32	R	221	341	189	143	58	201	12	$4,000	$160,000,000
2026	Pump St-80	80	13	80	R	233	421	193	144	71	215	22	$5,000	$400,000,000
2027	Hydro Sm-100	100	45	90	R	278	511	196	145	116	261	64	$4,000	$400,000,000
2028	SCCT S Aero-141	141	11	141		290	652	202	113	116	228	26	$1,063	$149,883,000
2029	Hydro Sm-80	80	36	72	R	326	724	206	114	152	265	59	$4,000	$320,000,000
2030	Hydro Sm-60	60	27	54	R	353	778	211	115	179	294	83	$4,000	$240,000,000
	Total	816	353	778										$2,640,283,000

* R=Renewable Resource

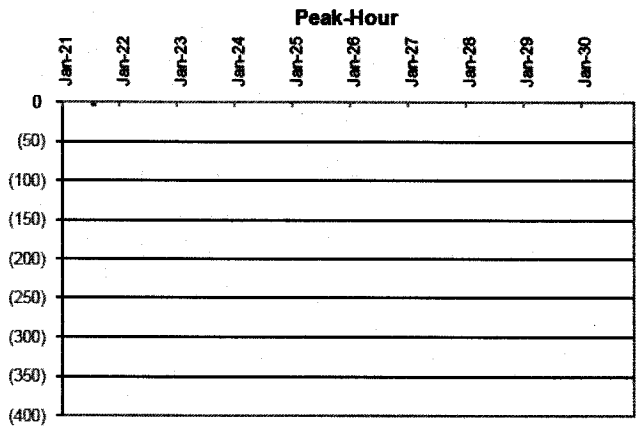


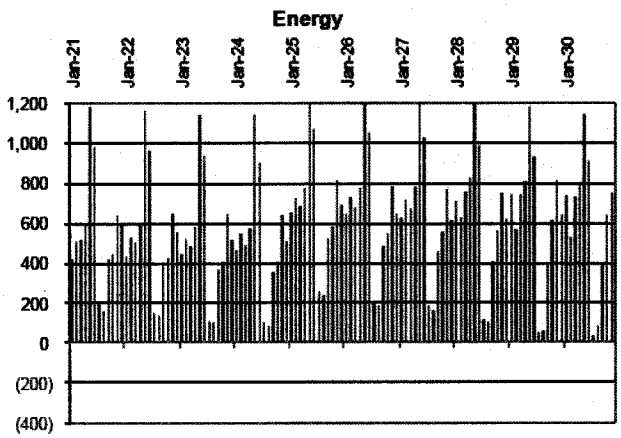


2-6 Balanced 1

						Cumm.							Capital Cost	
Year	Resource	MW	E	P	Type	E	P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	$/kW	Total $
2021	Geothermal-52	52	48	52	R	48	52	174	139	48	187	13	$6,385	$332,020,000
2022	SCCT Frame	170	10	170		58	222	178	140	48	188	10	$746	$126,820,000
2023		0	0	0		58	222	182	141	48	189	7		
2024	Solar PT-50	50	14	46	R	72	268	185	142	62	204	19	$3,220	$161,000,000
2025	CCCT	300	195	300		267	568	189	143	62	205	16	$1,216	$364,800,000
2026		0	0	0		267	568	193	144	62	206	13		
2027		0	0	0		267	568	196	145	62	207	11		
2028	Hydro Sm-60	60	27	54	R	294	622	202	113	89	201	(0)	$4,000	$240,000,000
2029	SCCT Frame	170	10	170		304	792	206	114	89	203	(4)	$746	$126,820,000
2030		0	0	0		304	792	211	115	89	204	(7)		
	Total	**802**	**304**	**792**										**$1,351,460,000**

* R=Renewable Resource

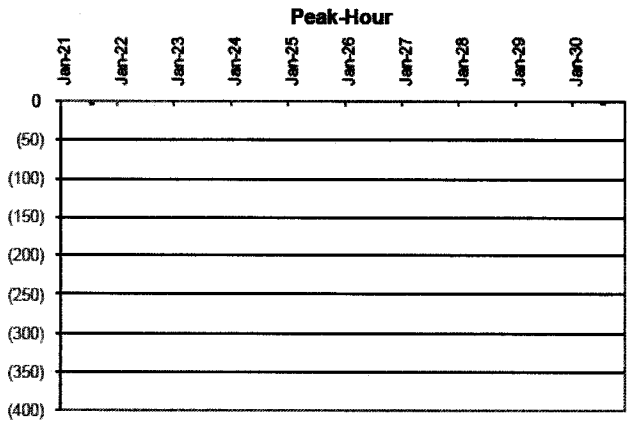


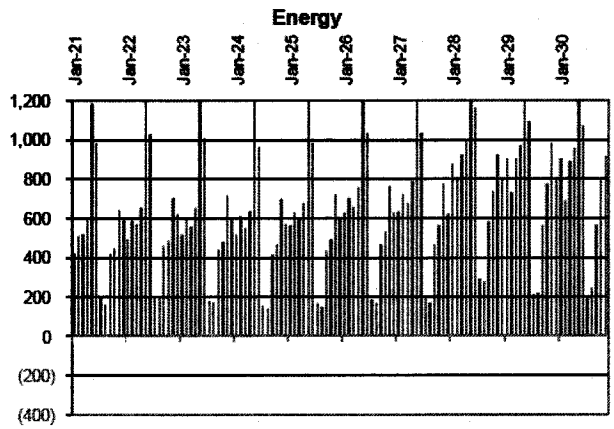


2-7 Balanced 2

						Cumm.							Capital Cost	
Year	Resource	MW	E	P	Type	E	P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	$/kW	Total $
2021	Geothermal-52	52	48	52	R	48	52	174	139	48	187	13	$6,385	$332,020,000
2022	CHP-75	75	70	75		118	127	178	140	48	188	10	$1,888	$141,600,000
2023	SCCT Frame	170	10	170		128	297	182	141	48	189	7	$746	$126,820,000
2024		0	0	0		128	297	185	142	48	190	5		
2025	Geothermal-52	52	48	52	R	176	349	189	143	96	239	50	$6,385	$332,020,000
2026	CHP-75	75	70	75		245	424	193	144	96	240	47	$1,888	$141,600,000
2027	Hydro Sm-60	60	27	54	R	272	478	196	145	123	268	71	$4,000	$240,000,000
2028	CCCT	300	195	300		467	778	202	113	123	235	34	$1,216	$364,800,000
2029		0	0	0		467	778	206	114	123	236	30		
2030		0	0	0		467	778	211	115	123	238	27		
	Total	784	467	778										$1,678,860,000

* R=Renewable Resource

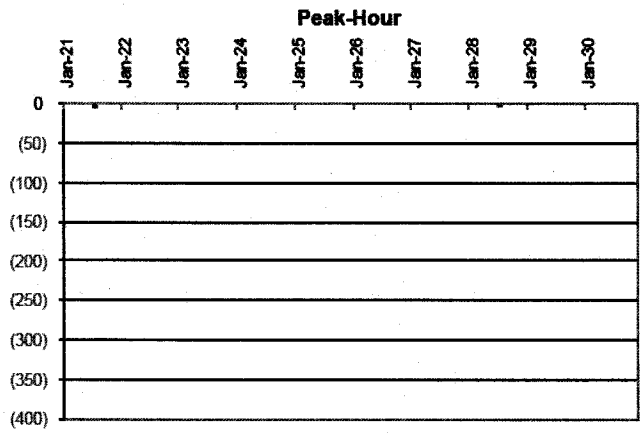


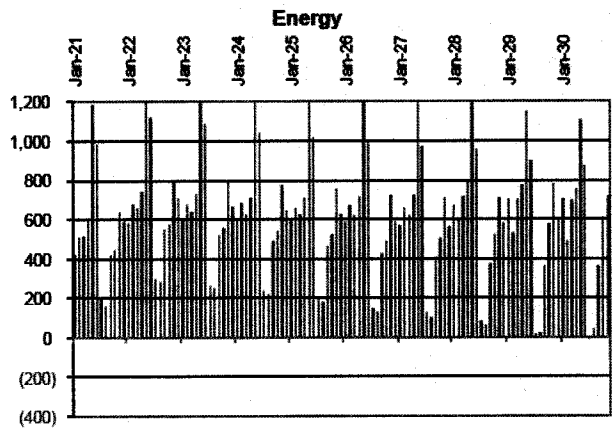


2-8 Pacific Northwest Transmission

						Cumm.							Capital Cost	
Year	Resource	MW	E	P	Type	E	P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	$/kW	Total $
2021	Geothermal-52	52	48	52	R	48	52	174	139	48	187	13	$6,385	$332,020,000
2022	PNW Purchase	500	160	500		208	552	178	140	48	188	10	$381	$190,500,000
2023		0	0	0		208	552	182	141	48	189	7		
2024		0	0	0		208	552	185	142	48	190	5		
2025		0	0	0		208	552	189	143	48	191	2		
2026		0	0	0		208	552	193	144	48	192	(1)		
2027	Solar PV-20	20	3	11	R	211	563	196	145	51	196	(1)	$3,750	$75,000,000
2028	Geothermal-52	52	48	52	R	258	615	202	113	98	211	9	$6,385	$332,020,000
2029	SCCT Frame	170	10	170		269	785	206	114	98	212	6	$746	$126,820,000
2030		0	0	0		269	785	211	115	98	214	2		
	Total	**794**	**269**	**785**										**$1,056,360,000**

* R=Renewable Resource

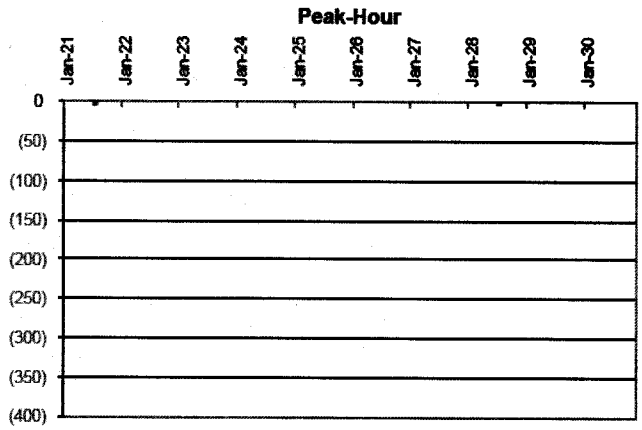


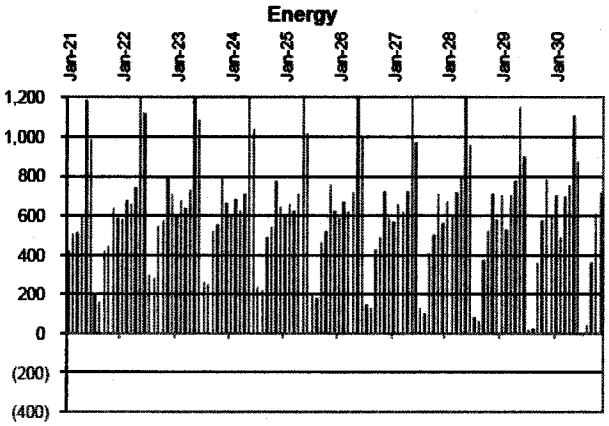


2-9 Eastside Transmission

						Cumm.							Capital Cost	
Year	Resource	MW	E	P	Type	E	P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	$/kW	Total $
2021	Geothermal-52	52	48	52	R	48	52	174	139	48	187	13	$6,385	$332,020,000
2022	E/S Purchase	500	160	500		208	552	178	140	48	188	10	$381	$190,500,000
2023		0	0	0		208	552	182	141	48	189	7		
2024		0	0	0		208	552	185	142	48	190	5		
2025		0	0	0		208	552	189	143	48	191	2		
2026		0	0	0		208	552	193	144	48	192	(1)		
2027	Solar PV-20	20	3	11	R	211	563	196	145	51	196	(1)	$3,750	$75,000,000
2028	Geothermal-52	52	48	52	R	258	615	202	113	98	211	9	$6,385	$332,020,000
2029	SCCT Frame	170	10	170		269	785	206	114	98	212	6	$746	$126,820,000
2030		0	0	0		269	785	211	115	98	214	2		
	Total	794	269	785										$1,056,360,000

* R=Renewable Resource

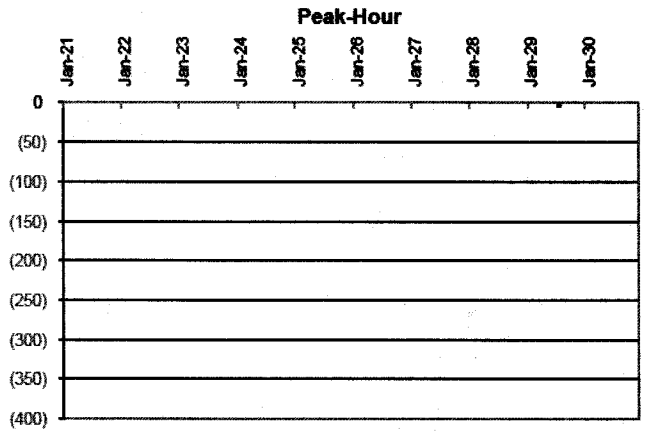


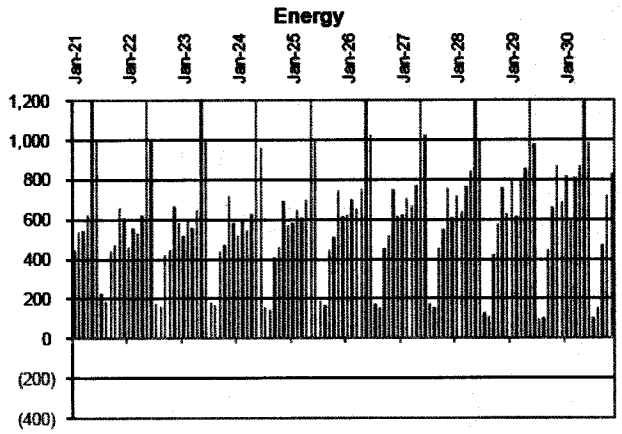


2-10 Renewable

Year	Resource	MW	E	P	Type	Cumm. E	Cumm. P	REC Req.	Existing RECs	New RECs	Total RECs	REC Position	Capital Cost $/kW	Capital Cost Total $
2021	CHP-75	75	70	75		70	75	174	139	0	139	(35)	$1,888	$141,600,000
2022	Pump St-80	80	13	80	R	83	155	178	140	13	153	(25)	$5,000	$400,000,000
2023	Solar PT-150	150	42	137	R	125	292	182	141	55	196	14	$3,220	$483,000,000
2024		0	0	0		125	292	185	142	55	197	12		
2025	CHP-75	75	70	75		194	367	189	143	55	198	9	$1,888	$141,600,000
2026	Solar PT-150	150	42	137	R	236	503	193	144	97	241	48	$3,220	$483,000,000
2027	Solar PV-150	150	21	83	R	257	586	196	145	118	263	67	$3,750	$562,500,000
2028	Geothermal-52	52	48	52	R	305	638	202	113	166	278	77	$6,385	$332,020,000
2029	Hydro Sm-100	100	45	90	R	350	728	206	114	211	324	118	$4,000	$400,000,000
2030	Solar PV-200	200	28	110	R	378	838	211	115	239	354	143	$3,750	$750,000,000
	Total	**1,032**	**378**	**838**										**$3,693,720,000**

* R=Renewable Resource





Stochastic Analysis Results

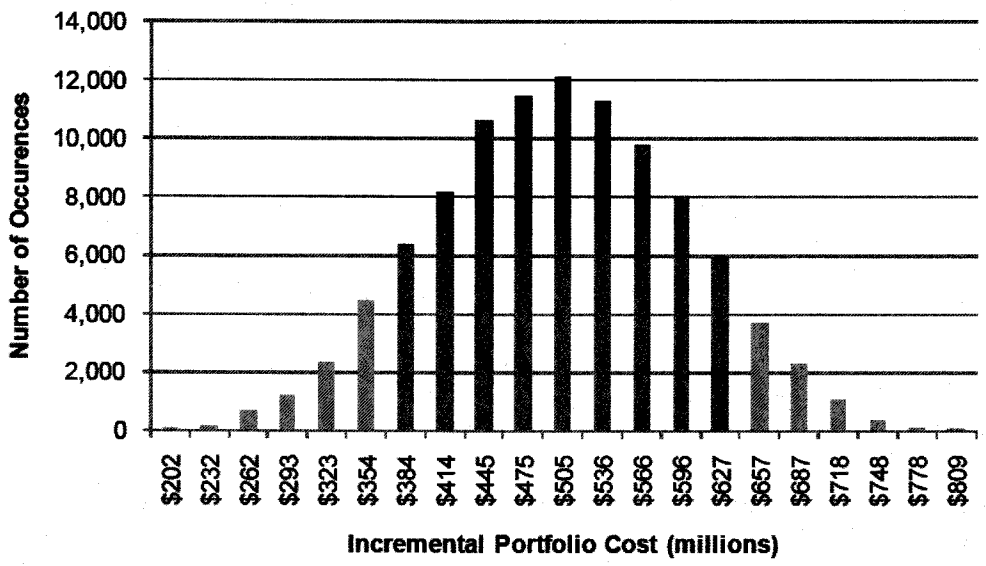
1-1 Sun and Steam (2011–2020)

Base Portfolio Cost[1]=$496,198[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	-$54,445	$61,186	$441,753	$557,384
REC	-$47,738	$23,869	$448,460	$520,067
Carbon	-$5,748	$31,584	$490,450	$527,782
Load	-$2,281	$2,516	$493,917	$498,714
DSM	-$48,508	$100,453	$447,690	$596,651
Capital	-$135,692	$92,944	$360,506	$589,142
Total	**-$294,412**	**$312,552**	**$201,786**	**$808,750**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



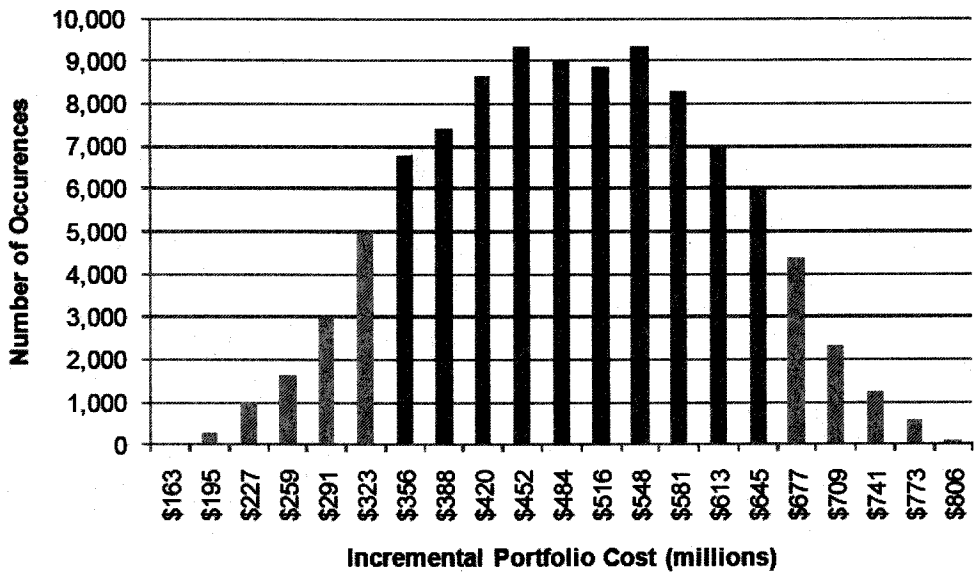
1-2 Solar (2011–2020)

Base Portfolio Cost[1]=$505,407[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	-$742	$515	$504,665	$505,922
REC	-$63,012	$31,506	$442,395	$536,913
Carbon	-$12,519	$36,499	$492,888	$541,906
Load	-$3,623	$2,122	$501,784	$507,529
DSM	-$50,344	$100,172	$455,063	$605,579
Capital	-$212,449	$129,300	$292,958	$634,707
Total	**-$342,689**	**$300,114**	**$162,718**	**$805,521**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



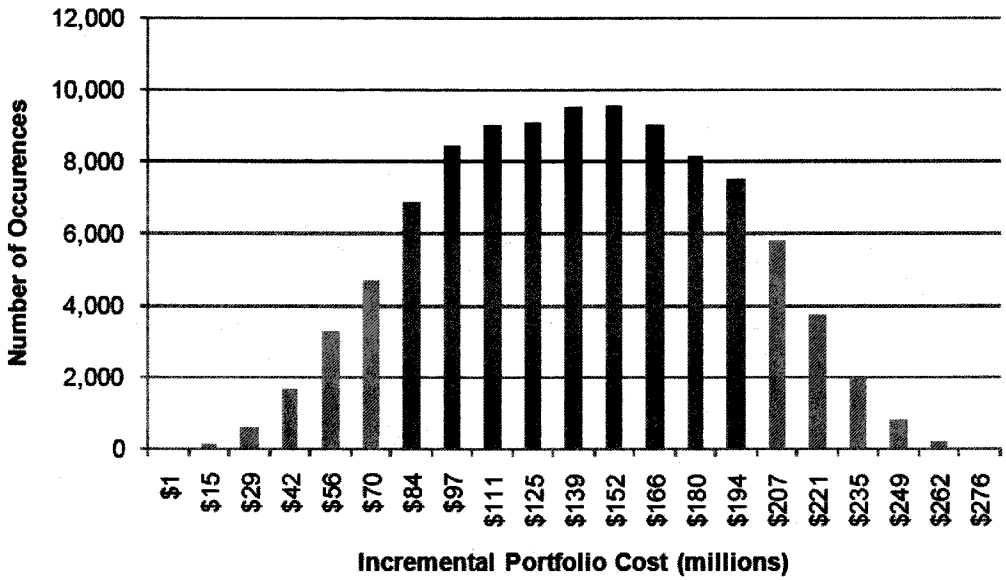
1-3 Boardman to Hemingway (2011–2020)

Base Portfolio Cost[1]=$86,079[2]

	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
Risk Factor Adjustments	**Low**	**High**	**Low**	**High**
Natural gas	$0	$21,793	$86,079	$107,872
REC	-$18,827	$9,413	$67,252	$95,492
Carbon	-$3,542	$20,399	$82,537	$106,478
Load	$0	$19,089	$86,079	$105,168
DSM	-$47,727	$99,606	$38,352	$185,685
Capital	-$14,840	$19,785	$71,239	$105,864
Total	**-$84,936**	**$190,085**	**$1,143**	**$276,164**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



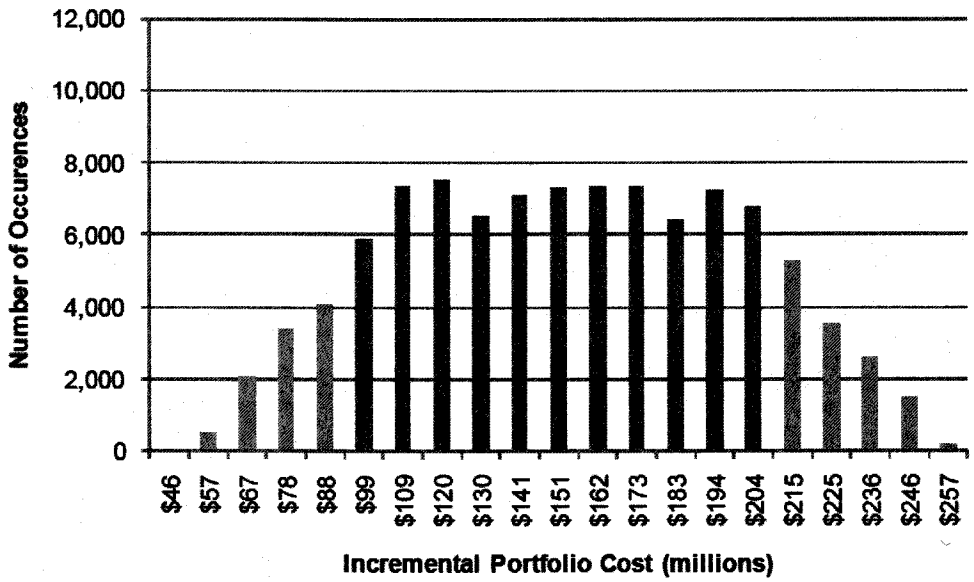
1-4 SCCT (2011–2020)

Base Portfolio Cost[1]=$129,443[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	$0	$1,853	$129,443	$131,296
REC	-$18,826	$9,413	$110,617	$138,856
Carbon	$0	$3,473	$129,443	$132,916
Load	-$337	$1,639	$129,106	$131,082
DSM	-$47,895	$100,184	$81,548	$229,627
Capital	-$16,325	$10,884	$113,118	$140,327
Total	**-$83,383**	**$127,446**	**$46,060**	**$256,889**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



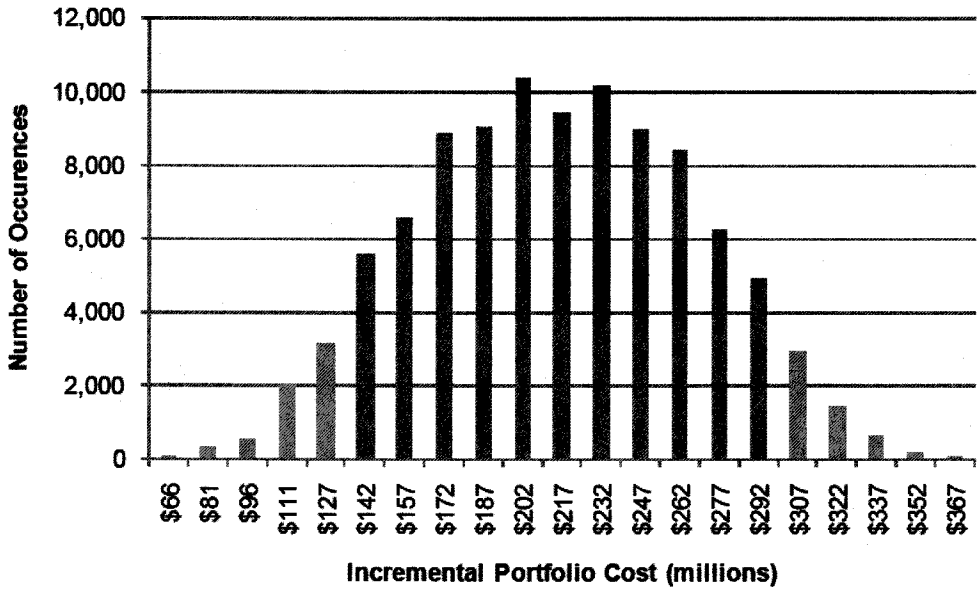
1-5 CCCT (2011–2020)

Base Portfolio Cost[1]=$222,177[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	-$55,246	$3,167	$166,931	$225,344
REC	-$18,827	$9,413	$203,350	$231,590
Carbon	-$3,158	$3,282	$219,019	$225,459
Load	-$1,364	$2,170	$220,813	$224,347
DSM	-$48,975	$101,023	$173,202	$323,200
Capital	-$28,262	$27,371	$193,915	$249,548
Total	**-$155,832**	**$146,426**	**$66,345**	**$368,603**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



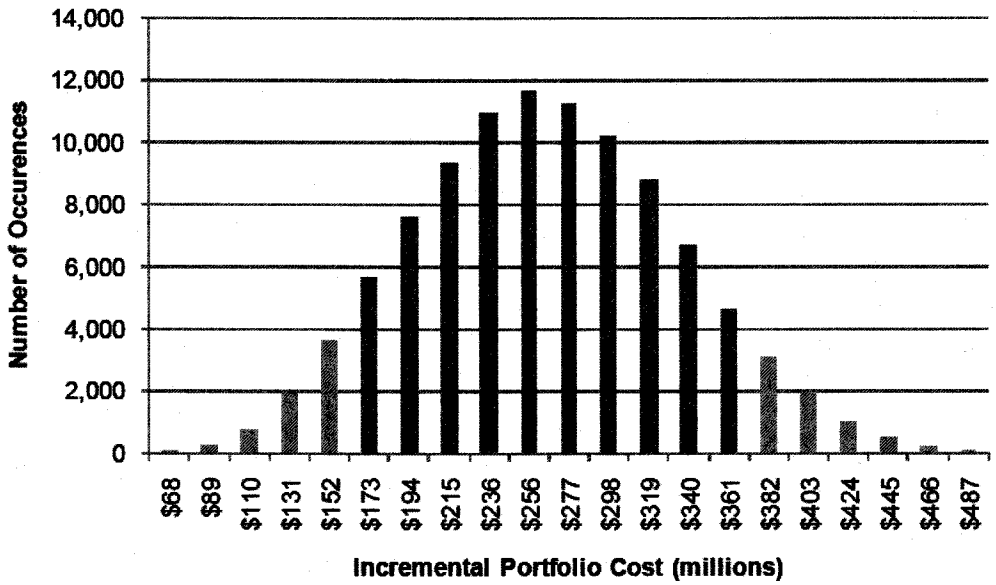
1-6 CHP (2011–2020)

Base Portfolio Cost[1]=$267,462[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	-$63,805	$66,362	$203,657	$333,824
REC	-$18,827	$9,413	$248,635	$276,875
Carbon	-$412	$11,109	$267,050	$278,571
Load	-$1,632	$3,561	$265,830	$271,023
DSM	-$49,437	$103,010	$218,025	$370,472
Capital	-$28,566	$25,850	$238,896	$293,312
Total	**-$162,679**	**$219,305**	**$104,783**	**$486,767**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



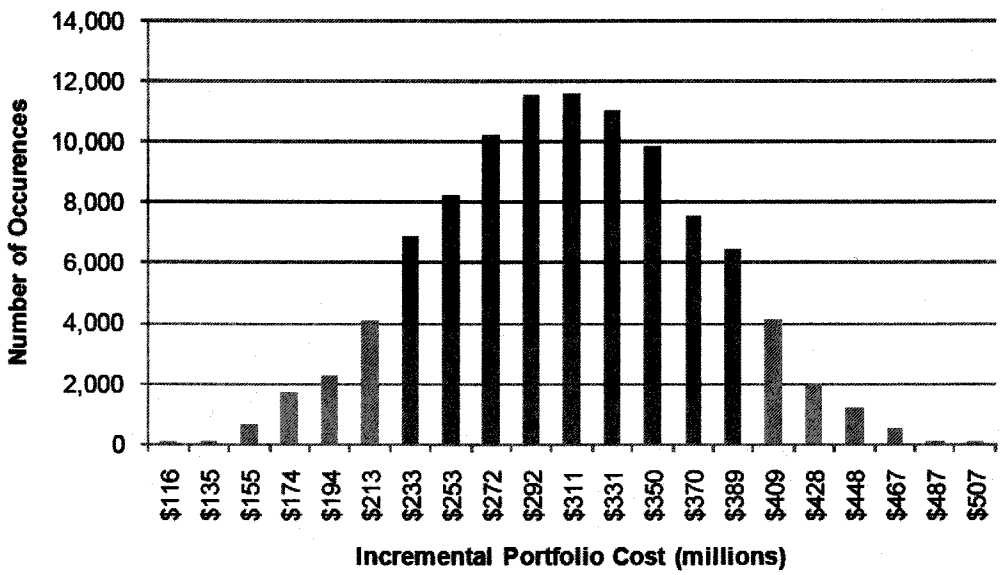
1-7 Balanced (2011–2020)

Base Portfolio Cost[1]=$288,613[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	-$30,861	$37,401	$257,752	$326,014
REC	-$29,714	$14,858	$258,899	$303,471
Carbon	$0	$15,355	$288,613	$303,968
Load	-$190	$2,437	$288,423	$291,050
DSM	-$48,139	$100,745	$240,474	$389,358
Capital	-$63,931	$47,593	$224,682	$336,206
Total	**-$172,835**	**$218,389**	**$115,778**	**$507,002**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



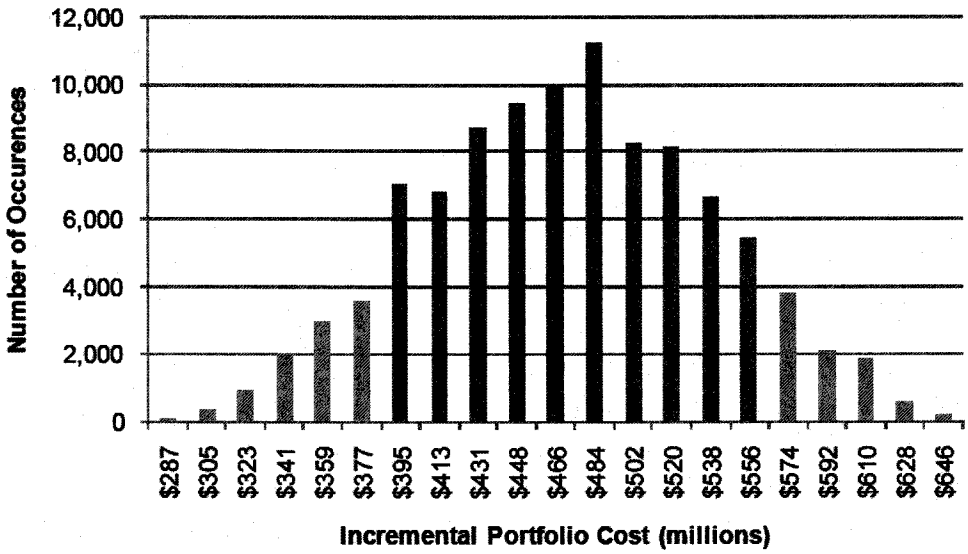
1-8 Pumped Storage (2011–2020)

Base Portfolio Cost[1]=$426,601[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	$0	$2,111	$426,601	$428,712
REC	-$29,358	$14,680	$397,243	$441,281
Carbon	-$609	$2,871	$425,992	$429,472
Load	-$177	$2,289	$426,424	$428,890
DSM	-$46,741	$100,939	$379,860	$527,540
Capital	-$62,533	$96,069	$364,068	$522,670
Total	**-$139,418**	**$218,959**	**$287,183**	**$645,560**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



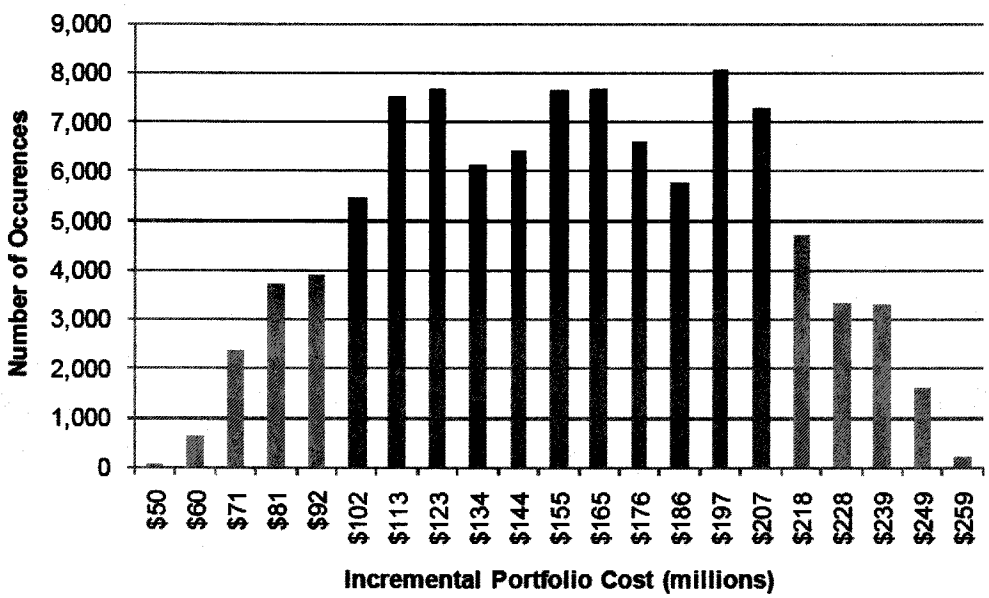
1-9 Distributed Gen (2011–2020)

Base Portfolio Cost[1]=$135,055[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	$0	$1,043	$135,055	$136,098
REC	-$18,827	$9,413	$116,228	$144,468
Carbon	$0	$2,678	$135,055	$137,733
Load	-$424	-$123	$134,631	$134,932
DSM	-$49,333	$100,263	$85,722	$235,318
Capital	-$16,592	$11,149	$118,463	$146,204
Total	**-$85,176**	**$124,423**	**$49,879**	**$259,478**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



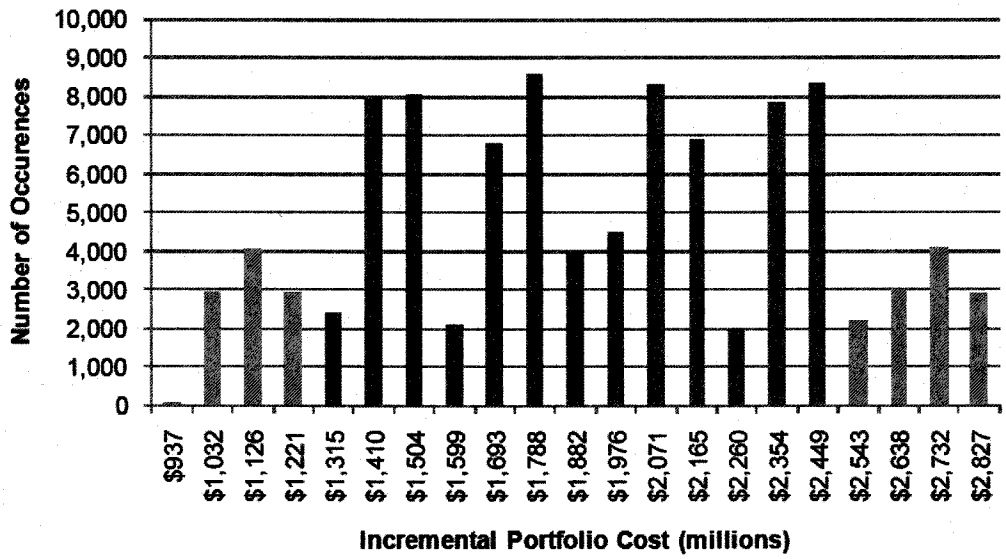
2-1 Nuclear (2021–2030)

Base Portfolio Cost[1]=$1,323,279[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	-$3,545	$5,887	$1,319,734	$1,329,166
REC	-$1,426	$713	$1,321,853	$1,323,992
Carbon	-$82,907	$138,144	$1,240,372	$1,461,423
Load	-$20,601	$7,743	$1,302,678	$1,331,022
DSM	-$2,183	$18,523	$1,321,096	$1,341,802
Capital	-$275,138	$1,332,273	$1,048,141	$2,655,552
Total	**-$385,800**	**$1,503,283**	**$937,479**	**$2,826,562**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



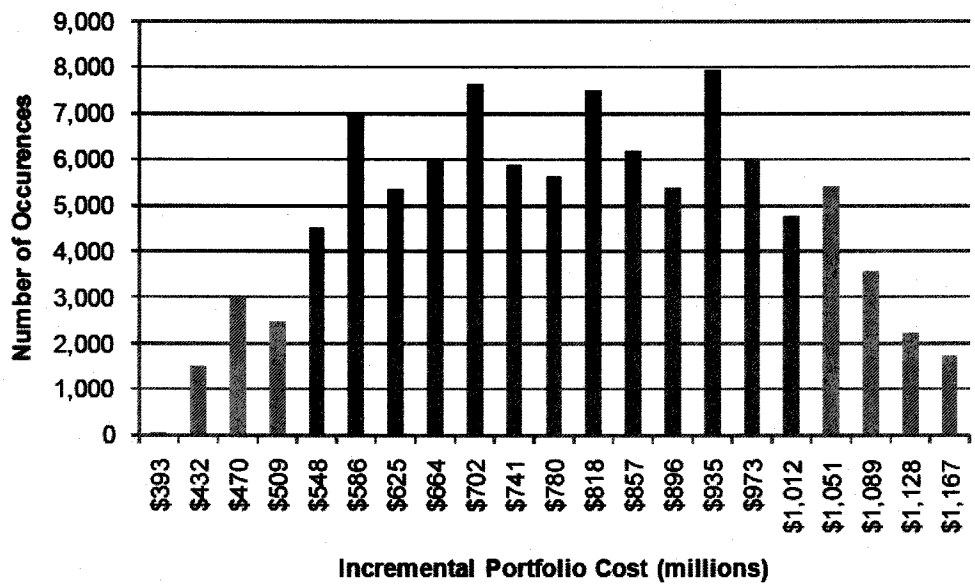
2-2 IGCC (2021–2030)

Base Portfolio Cost[1]=$625,319[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	-$31,374	-$5,816	$593,945	$619,503
REC	-$5,816	$2,907	$619,503	$628,226
Carbon	-$66,620	$102,031	$558,699	$727,350
Load	-$17,198	$2,835	$608,121	$628,154
DSM	-$1,438	$15,377	$623,881	$640,696
Capital	-$147,025	$458,193	$478,294	$1,083,512
Total	**-$269,471**	**$575,527**	**$355,848**	**$1,200,846**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



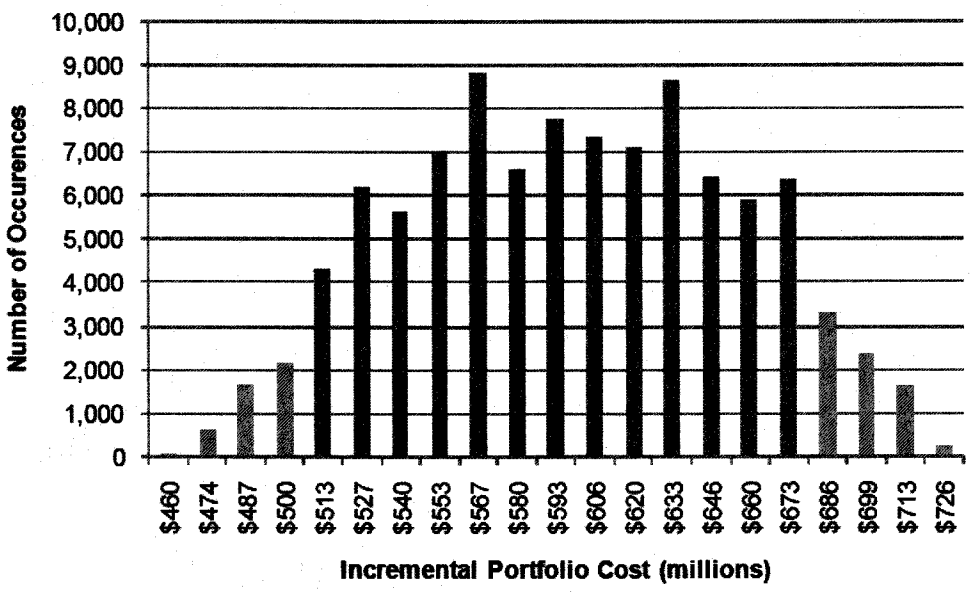
2-3 SCCT and Wind (2021–2030)

Base Portfolio Cost[1]=$564,334[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	$0	$2,979	$564,334	$567,313
REC	-$5,090	$2,546	$559,244	$566,880
Carbon	-$20,394	$33,400	$543,940	$597,734
Load	-$12,334	$85	$552,000	$564,419
DSM	$0	$11,526	$564,334	$575,860
Capital	-$66,147	$111,065	$498,187	$675,399
Total	**-$103,965**	**$161,601**	**$460,369**	**$725,935**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



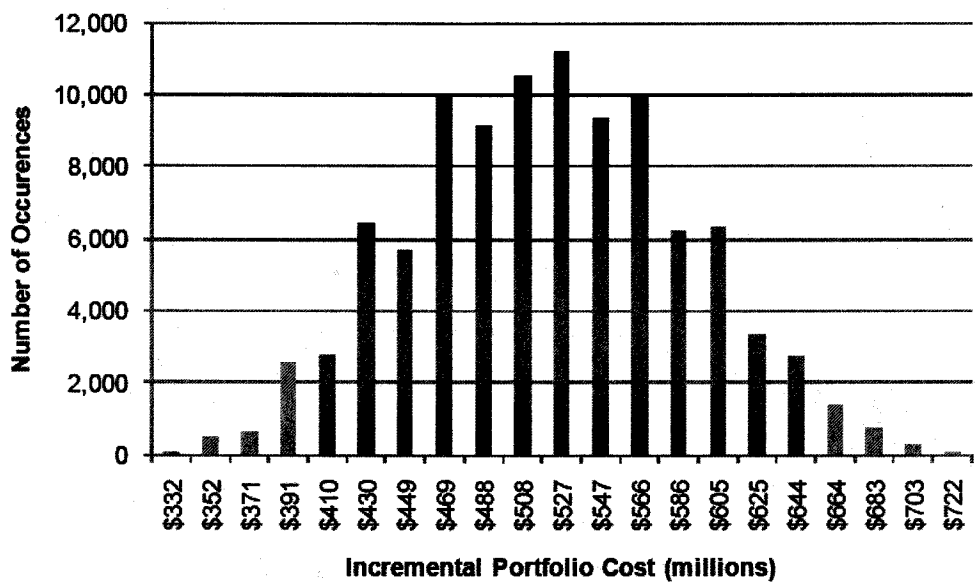
2-4 CCCT and Wind (2021–2030)

Base Portfolio Cost[1]=$565,377[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	-$125,279	$6,247	$440,098	$571,624
REC	-$247	$493	$565,130	$565,870
Carbon	-$23,134	$29,801	$542,243	$595,178
Load	-$19,581	$3,153	$545,796	$568,530
DSM	-$1,600	$15,457	$563,777	$580,834
Capital	-$63,506	$101,560	$501,871	$666,937
Total	**-$233,347**	**$156,711**	**$332,030**	**$722,088**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



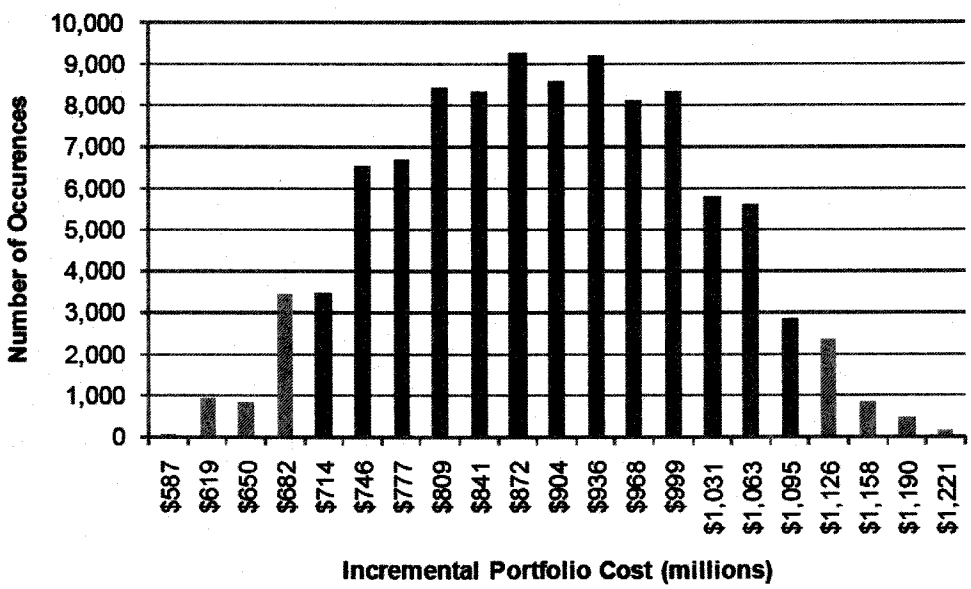
2-5 Hydro and CHP (2021–2030)

Base Portfolio Cost[1]=$860,503[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	-$90,313	$89,874	$770,190	$950,377
REC	-$13,337	$6,669	$847,166	$867,172
Carbon	-$17,244	$27,143	$843,259	$887,646
Load	-$18,627	$2,041	$841,876	$862,544
DSM	-$2,014	$14,674	$858,489	$875,177
Capital	-$132,066	$220,580	$728,437	$1,081,083
Total	**-$273,601**	**$360,981**	**$586,902**	**$1,221,484**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



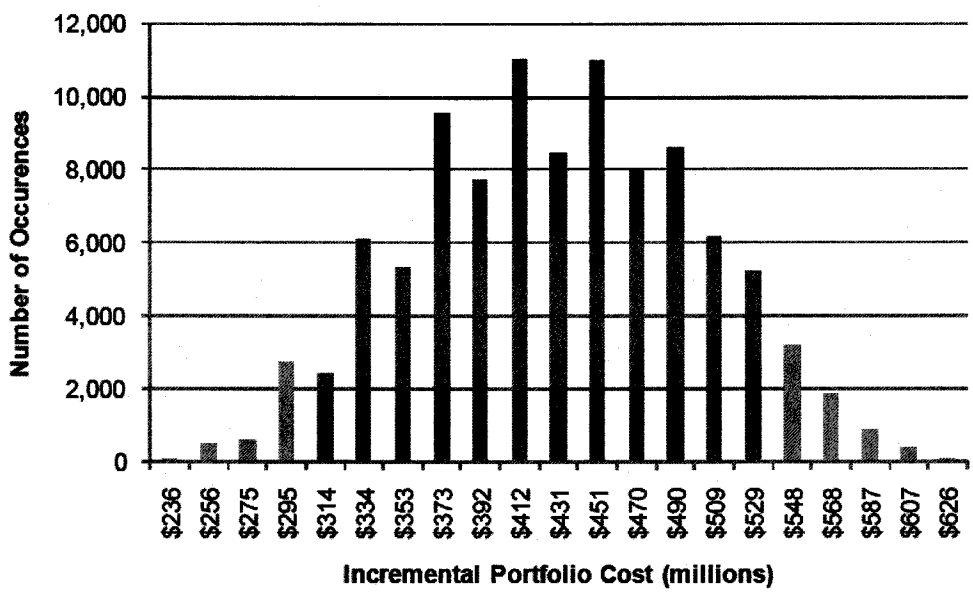
2-6 Balanced 1 (2021–2030)

Base Portfolio Cost[1]=$445,704[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	-$60,770	$21,871	$384,934	$467,575
REC	-$5,292	$2,646	$440,412	$448,350
Carbon	-$27,539	$41,639	$418,165	$487,343
Load	-$17,483	$2,948	$428,221	$448,652
DSM	-$784	$15,763	$444,920	$461,467
Capital	-$97,378	$95,892	$348,326	$541,596
Total	**-$209,246**	**$180,759**	**$236,458**	**$626,463**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



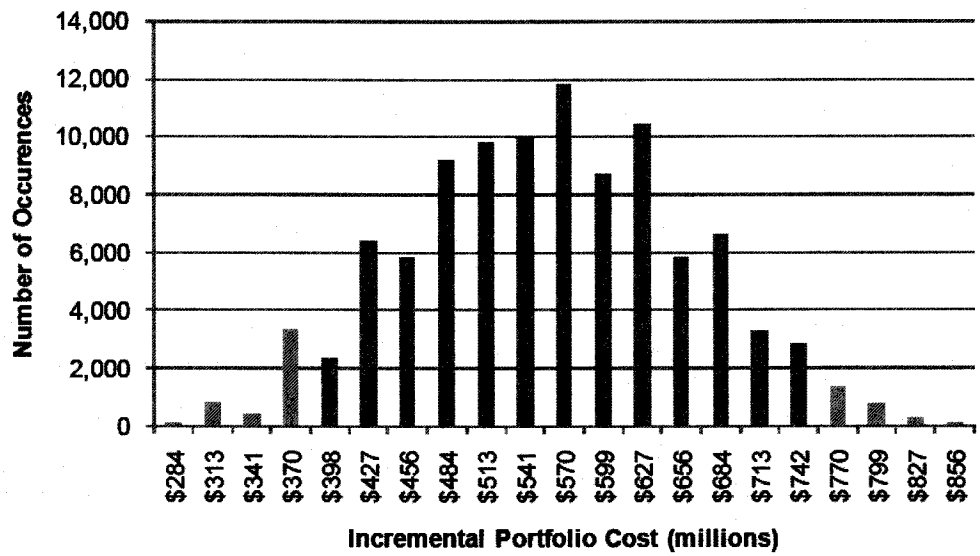
2-7 Balanced 2 (2021–2030)

Base Portfolio Cost[1]=$567,780[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	-$100,644	$86,232	$467,136	$654,012
REC	-$17,679	$8,840	$550,101	$576,620
Carbon	-$32,720	$52,081	$535,060	$619,861
Load	-$18,735	$3,957	$549,045	$571,737
DSM	-$2,067	$16,029	$565,713	$583,809
Capital	-$111,939	$120,961	$455,841	$688,741
Total	**-$283,784**	**$288,100**	**$283,996**	**$855,880**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



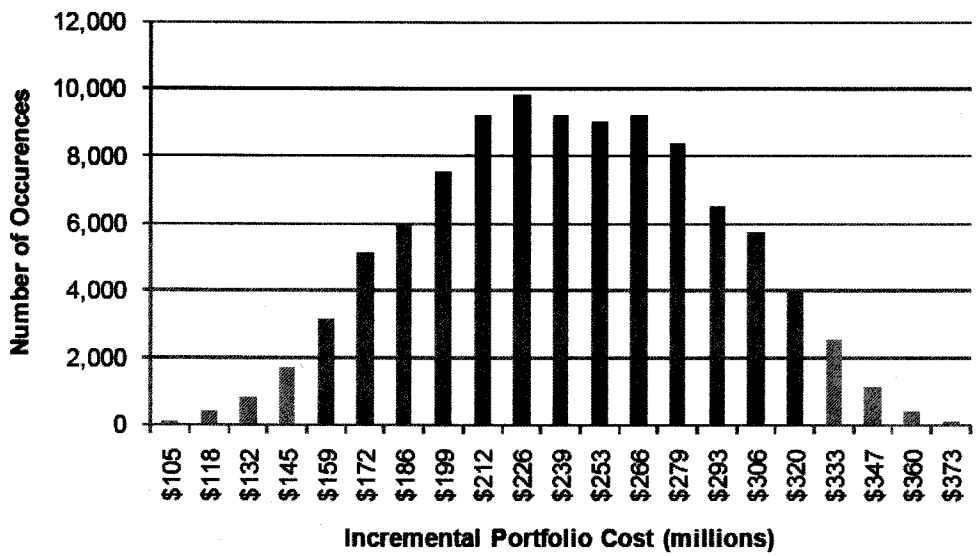
2-8 Pacific Northwest Transmission (2021–2030)

Base Portfolio Cost[1]=$240,492[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	-$12,338	$15,040	$228,154	$255,532
REC	-$3,545	$1,773	$236,947	$242,265
Carbon	-$27,435	$34,509	$213,057	$275,001
Load	-$16,963	-$278	$223,529	$240,214
DSM	-$2,142	$13,059	$238,350	$253,551
Capital	-$73,081	$68,842	$167,411	$309,334
Total	**-$135,504**	**$132,945**	**$104,988**	**$373,437**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



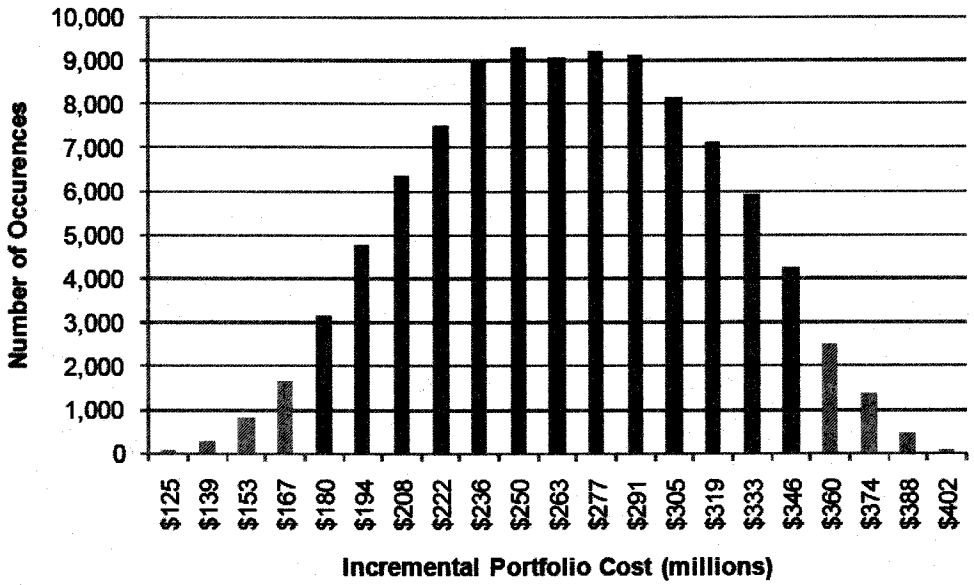
2-9 Eastside Transmission (2021–2030)

Base Portfolio Cost[1]=$260,903[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	-$9,856	$10,461	$251,047	$271,364
REC	-$3,545	$1,773	$257,358	$262,676
Carbon	-$25,113	$39,456	$235,790	$300,359
Load	-$19,808	$1,783	$241,095	$262,686
DSM	-$1,301	$14,522	$259,602	$275,425
Capital	-$76,125	$72,900	$184,778	$333,803
Total	**-$135,748**	**$140,895**	**$125,155**	**$401,798**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



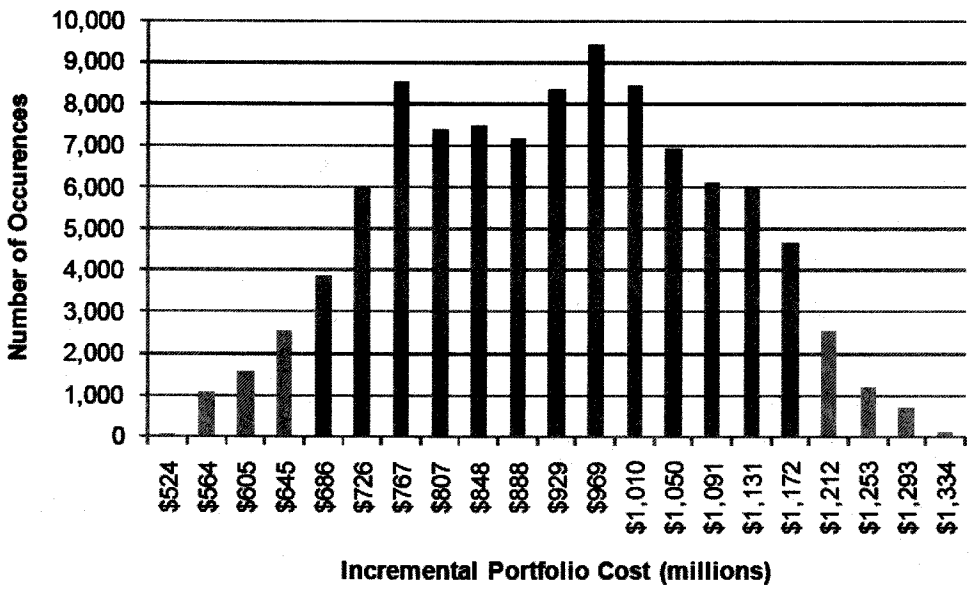
2-10 Renewable (2021–2030)

Base Portfolio Cost[1]=$966,716[2]

Risk Factor Adjustments	Adjustment to Base Incremental Portfolio Cost		Incremental Portfolio Cost Range	
	Low	High	Low	High
Natural gas	-$82,345	$80,758	$884,371	$1,047,474
REC	-$23,073	$11,537	$943,643	$978,253
Carbon	-$32,724	$42,734	$933,992	$1,009,450
Load	-$21,036	$2,232	$945,680	$968,948
DSM	-$1,710	$14,726	$965,006	$981,442
Capital	-$282,005	$215,025	$684,711	$1,181,741
Total	**-$442,893**	**$367,012**	**$523,823**	**$1,333,728**

[1] Incremental cost of portfolio under base-case assumptions for risk factors considered.
[2] All numbers in thousands

Distribution of Incremental Portfolio Cost for 100,000 Stochastic Draws



Regulatory Environmental Compliance Costs

	2011$s—000's			
Expected Case 2011–2020 Portfolios	**NO_x[1]**	**SO_2[2]**	**Hg[3]**	**CO_2[4]**
1-1 Sun and Steam	$91,290	$124	$2,259	$605,384
1-2 Solar	$89,818	$124	$2,260	$555,413
1-3 Boardman to Hemingway	$89,798	$124	$2,327	$555,740
1-4 SCCT	$90,168	$125	$2,281	$557,397
1-5 CCCT	$90,534	$124	$2,240	$578,372
1-6 CHP	$90,961	$124	$2,257	$599,447
1-7 Balanced	$90,835	$125	$2,257	$588,094
1-8 Pumped Storage	$90,121	$125	$2,251	$558,767
1-9 Distributed Gen	$90,216	$125	$2,250	$557,458
Expected Case 2021–2030 Portfolios				
2-1 Nuclear	$99,226	$74	$1,504	$761,248
2-2 IGCC	$100,599	$75	$2,031	$798,966
2-3 SCCT and Wind	$99,903	$74	$1,567	$764,301
2-4 CCCT and Wind	$100,428	$75	$1,465	$804,847
2-5 Hydro and CHP	$100,969	$75	$1,471	$826,847
2-6 Balanced 1	$99,432	$74	$1,440	$779,020
2-7 Balanced 2	$100,379	$75	$1,438	$816,536
2-8 Pacific Northwest Transmission	$99,082	$74	$1,463	$763,495
2-9 Eastside Transmission	$98,812	$73	$1,395	$757,107
2-10 Renewable	$100,537	$75	$1,428	$818,227
Low Case 2011–2020 Portfolios				
1-1 Sun and Steam	$68,468	$93	$1,694	$427,944
1-2 Solar	$67,364	$93	$1,695	$392,826
1-3 Boardman to Hemingway	$67,349	$93	$1,745	$393,070
1-4 SCCT	$67,626	$93	$1,710	$394,313
1-5 CCCT	$67,900	$93	$1,680	$409,167
1-6 CHP	$68,221	$93	$1,692	$423,540
1-7 Balanced	$68,127	$93	$1,692	$415,882
1-8 Pumped Storage	$67,590	$94	$1,688	$395,262
1-9 Distributed Gen	$67,662	$94	$1,687	$394,323
Low Case 2021–2030 Portfolios				
2-1 Nuclear	$74,419	$55	$1,128	$448,091
2-2 IGCC	$75,449	$56	$1,523	$468,986
2-3 SCCT and Wind	$74,927	$56	$1,175	$449,817
2-4 CCCT and Wind	$75,321	$56	$1,099	$473,483
2-5 Hydro and CHP	$75,727	$56	$1,103	$485,554
2-6 Balanced 1	$74,574	$55	$1,080	$457,832
2-7 Balanced 2	$75,285	$56	$1,078	$479,178
2-8 Pacific Northwest Transmission	$74,312	$55	$1,097	$449,233
2-9 Eastside Transmission	$74,109	$55	$1,046	$445,686
2-10 Renewable	$75,403	$56	$1,071	$480,823

[1] NO_x=Nitrogen Oxides, [2] SO_2=Sulfur Oxides, [3] Hg=Mercury, [4] CO_2=Carbon Dioxide

	2011$s—000's			
High Case 2011–2020 Portfolios	**NO_x**	**SO_2**	**Hg**	**CO_2**
1-1 Sun and Steam	$114,113	$155	$2,822	$803,059
1-2 Solar	$112,273	$155	$2,824	$736,402
1-3 Boardman to Hemingway	$112,248	$155	$2,907	$736,818
1-4 SCCT	$112,710	$156	$2,850	$738,882
1-5 CCCT	$113,167	$155	$2,799	$766,656
1-6 CHP	$113,702	$155	$2,820	$795,577
1-7 Balanced	$113,544	$156	$2,820	$779,836
1-8 Pumped Storage	$112,651	$156	$2,813	$740,737
1-9 Distributed Gen	$112,770	$156	$2,811	$739,022
High Case 2021–2030 Portfolios				
2-1 Nuclear	$124,032	$92	$1,879	$1,211,169
2-2 IGCC	$125,749	$93	$2,537	$1,274,632
2-3 SCCT and Wind	$124,879	$93	$1,958	$1,216,209
2-4 CCCT and Wind	$125,535	$93	$1,831	$1,281,220
2-5 Hydro and CHP	$126,211	$94	$1,838	$1,318,497
2-6 Balanced 1	$124,290	$92	$1,800	$1,241,332
2-7 Balanced 2	$125,474	$93	$1,797	$1,303,001
2-8 Pacific Northwest Transmission	$123,853	$92	$1,828	$1,215,227
2-9 Eastside Transmission	$123,516	$92	$1,743	$1,204,482
2-10 Renewable	$125,672	$93	$1,784	$1,303,934

Portfolio Incremental Transmission Analysis

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 1-1 Sun and Steam	
Project capital cost	
Local interconnection costs	$46,000,000
Network upgrades	$27,600,000
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$73,600,000**
New revenue requirements for project(s)	$11,176,616
New net revenue requirements	$107,350,291
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**450**
New system demand—including new uses	6,062
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$17.71
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	($353,043)
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$4,218,663
Long-term point-to-point revenue	$12,679,447
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$83,452,181
Net change	**$10,663,670**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 1-2 Solar	
Project capital cost	
Local interconnection costs	$39,537,000
Network upgrades	$273,687,209
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$313,224,209**
New revenue requirements for project(s)	$47,565,038
New net revenue requirements	$143,738,713
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**450**
New system demand—including new uses	6,062
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$23.71
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	($4,060,702)
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$5,507,193
Long-term point-to-point revenue	$16,977,387
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$114,254,133
Net change	**$41,465,622**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 1-3 with additional Boardman to Hemingway Third-Party Subscription	
Project capital cost	
Local interconnection costs	$228,837,209
Network upgrades	$18,377,000
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$247,214,209**
New revenue requirements for project(s)	$37,541,010
New net revenue requirements	$133,714,685
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**450**
New system demand—including new uses	6,062
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$22.06
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	($3,039,342)
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$5,152,238
Long-term point-to-point revenue	$15,793,420
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$105,769,027
Net change	**$32,980,516**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 1-4 SCCT	
Project capital cost	
Local interconnection costs	$–
Network upgrades	$47,150,000
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$47,150,000**
New revenue requirements for project(s)	$7,160,020
New net revenue requirements	$10,333,695
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**450**
New system demand—including new uses	6,062
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$17.05
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	$56,213
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$4,076,434
Long-term point-to-point revenue	$12,205,036
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$80,052,225
Net change	**$7,263,714**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 1-5 CCCT	
Project capital cost	
Local interconnection costs	$–
Network upgrades	$47,150,000
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$47,150,000**
New revenue requirements for project(s)	$7,160,020
New net revenue requirements	$10,333,695
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**450**
New system demand—including new uses	6,062
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$17.05
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	$56,213
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$4,076,434
Long-term point-to-point revenue	$12,205,036
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$80,052,225
Net change	**$7,263,714**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 1-6 CHP	
Project capital cost	
Local interconnection costs	$4,370,000
Network upgrades	$29,900,000
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$34,270,000**
New revenue requirements for project(s)	$5,204,112
New net revenue requirements	$101,377,787
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**450**
New system demand—including new uses	6,062
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$16.72
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	$255,503
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$4,007,174
Long-term point-to-point revenue	$11,974,018
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$78,396,595
Net change	**$5,608,084**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 1-7 Balanced	
Project capital cost	
Local interconnection costs	$12,897,500
Network upgrades	$28,600,000
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$41,497,500**
New revenue requirements for project(s)	$6,301,653
New net revenue requirements	$102,475,328
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**450**
New system demand—including new uses	6,062
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$16.90
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	$143,673
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$4,046,039
Long-term point-to-point revenue	$12,103,651
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$79,325,637
Net change	**$6,537,127**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 1-8 Pumped Storage	
Project capital cost	
Local interconnection costs	$15,525,000
Network upgrades	$34,500,000
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$50,025,000**
New revenue requirements for project(s)	$7,596,606
New net revenue requirements	$103,770,281
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**450**
New system demand—including new uses	6,062
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$17.12
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	$11,729
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$4,091,894
Long-term point-to-point revenue	$12,256,602
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$80,421,786
Net change	**$7,633,275**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 1-9 Distributed Generation	
Project capital cost	
Local interconnection costs	$–
Network upgrades	$47,150,000
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$47,150,000**
New revenue requirements for project(s)	$7,160,020
New net revenue requirements	$103,333,695
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**450**
New system demand—including new uses	6,062
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$17.05
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	$56,213
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$4,076,434
Long-term point-to-point revenue	$12,205,036
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$80,052,225
Net change	**$7,263,714**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 2-1 Nuclear	
Project capital cost	
Local interconnection costs	$39,652,000
Network upgrades	$570,767,399
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$610,419,399**
New revenue requirements for project(s)	$92,695,970
New net revenue requirements	$188,869,645
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**1,168**
New system demand—including new uses	6,780
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$27.86
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	($6,621,196)
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$6,385,760
Long-term point-to-point revenue	$19,945,526
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$155,538,359
Net change	**$82,749,848**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 2-2 IGCC	
Project capital cost	
Local interconnection costs	$57,592,000
Network upgrades	$1,066,803,876
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$1,124,395,876**
New revenue requirements for project(s)	$170,746,484
New net revenue requirements	$266,920,159
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**1,168**
New system demand—including new uses	6,780
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$39.37
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	($13,731,672)
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$8,871,411
Long-term point-to-point revenue	$28,188,029
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$222,860,720
Net change	**$150,072,209**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 2-3 SCCT/Wind	
Project capital cost	
Local interconnection costs	$39,077,000
Network upgrades	$599,079,709
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$638,156,709**
New revenue requirements for project(s)	$96,908,052
New net revenue requirements	$193,081,727
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**1,168**
New system demand—including new uses	6,780
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$28.48
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	($7,004,921)
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$6,519,900
Long-term point-to-point revenue	$20,390,342
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$159,171,485
Net change	**$86,382,974**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 2-4 CCCT/Wind	
Project capital cost	
Local interconnection costs	$32,177,000
Network upgrades	$599,079,709
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$631,256,709**
New revenue requirements for project(s)	$95,860,245
New net revenue requirements	$193,033,920
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**1,168**
New system demand—including new uses	6,780
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$28.32
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	($6,909,465)
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$6,486,531
Long-term point-to-point revenue	$20,279,688
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$158,267,700
Net change	**$85,479,189**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 2-5 Hydro/CHP	
Project capital cost	
Local interconnection costs	$72,772,000
Network upgrades	$572,514,709
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$645,286,709**
New revenue requirements for project(s)	$97,990,787
New net revenue requirements	$194,164,462
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**1,168**
New system demand—including new uses	6,780
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$28.64
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	($7,103,559)
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$6,554,382
Long-term point-to-point revenue	$20,504,684
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$160,105,396
Net change	**$87,316,886**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 2-6 Balanced 1	
Project capital cost	
Local interconnection costs	$57,994,500
Network upgrades	$332,337,209
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$390,331,709**
New revenue requirements for project(s)	$59,274,290
New net revenue requirements	$155,447,965
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**1,168**
New system demand—including new uses	6,780
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$22.93
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	($3,576,450)
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$5,321,390
Long-term point-to-point revenue	$16,416,039
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$126,710,536
Net change	**$53,922,026**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 2-7 Balanced 2	
Project capital cost	
Local interconnection costs	$63,342,000
Network upgrades	$330,037,209
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$393,379,209**
New revenue requirements for project(s)	$59,737,072
New net revenue requirements	$155,910,746
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**1,168**
New system demand—including new uses	6,780
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$23.00
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	($3,618,610)
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$5,336,128
Long-term point-to-point revenue	$16,464,911
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$127,109,708
Net change	**$54,321,197**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 2-8 PNW Transmission	
Project capital cost	
Local interconnection costs	$55,694,500
Network upgrades	$614,467,399
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$670,161,899**
New revenue requirements for project(s)	$101,768,239
New net revenue requirements	$197,941,914
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**1,168**
New system demand—including new uses	6,780
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$29.19
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	($7,447,689)
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$6,674,681
Long-term point-to-point revenue	$20,903,600
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$163,363,632
Net change	**$90,575,121**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 2-9 Eastside Transmission	
Project capital cost	
Local interconnection costs	$55,694,500
Network upgrades	$976,337,209
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$1,132,031,709**
New revenue requirements for project(s)	$156,720,413
New net revenue requirements	$252,894,088
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**1,168**
New system demand—including new uses	6,780
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$37.30
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	($12,453,884)
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$8,424,727
Long-term point-to-point revenue	$26,706,809
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$210,762,552
Net change	**$137,974,041**

Idaho Power Transmission Rate Approximation for 2011 IRP Analysis Portfolio 2-10 Renewable	
Project capital cost	
Local interconnection costs	$85,767,000
Network upgrades	$302,437,209
Annual Revenue Requirements	
Existing revenue requirements	$106,758,681
Existing revenue credits	($10,585,006)
Existing net revenue requirements	$96,173,675
New Project Capital	**$388,204,209**
New revenue requirements for project(s)	$58,951,216
New net revenue requirements	$155,124,891
System In Use (MW)	
Existing system peak demand	5,612
Future additional Idaho Power network use	**1,168**
New system demand—including new uses	6,780
Point-to-Point Transmission Rate (Dollars/kW-year)	
a) Existing rate	$17.14
b) New rate without third-party use	$22.88
Point-to-Point Revenue Adjustments (Incremental Change to Existing Revenue Credits	
Change in existing uses (increase > 100%)	100%
Existing uses adjusted at new rate b)	($3,547,018)
Network Transmission Revenue Requirements	
a) Existing	
BPA load ratio share	$4,114,966
Long-term point-to-point revenue	$12,270,198
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$72,788,511
b) Future—new projects without additional participation	
BPA load ratio share	$5,311,101
Long-term point-to-point revenue	$16,381,921
Legacy contract revenue	$7,000,000
Assigned to Idaho Power retail load service	$126,431,869
Net change	**$53,643,359**

Loss of Load Expectation Analysis

Loss of Load Expectation Summary Data–Preferred Portfolio (1-3 Boardman to Hemmingway and 2-6 Balanced 1)*

Year	Annual	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
2011	2.05	0.00	0.00	0.00	0.00	0.00	0.08	1.68	0.15	0.13	0.00	0.00	0.01
2012	0.62	0.00	0.00	0.00	0.00	0.00	0.01	0.57	0.03	0.00	0.00	0.00	0.00
2013	1.54	0.00	0.00	0.00	0.00	0.00	0.03	1.42	0.08	0.01	0.00	0.00	0.00
2014	1.65	0.00	0.00	0.00	0.00	0.00	0.15	1.39	0.08	0.03	0.00	0.00	0.00
2015	1.92	0.00	0.00	0.00	0.00	0.00	0.38	1.40	0.06	0.08	0.00	0.00	0.00
2016	0.21	0.00	0.00	0.00	0.00	0.00	0.01	0.19	0.01	0.00	0.00	0.00	0.00
2017	0.21	0.00	0.00	0.00	0.00	0.00	0.01	0.18	0.02	0.00	0.00	0.00	0.00
2018	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.02	0.00	0.00	0.00	0.00
2019	0.75	0.00	0.00	0.00	0.00	0.00	0.02	0.69	0.04	0.00	0.00	0.00	0.00
2020	2.17	0.00	0.00	0.00	0.00	0.00	0.07	2.01	0.08	0.01	0.00	0.00	0.00
2021	2.05	0.00	0.00	0.00	0.00	0.00	0.11	2.93	0.17	0.01	0.00	0.00	0.00
2022	0.62	0.00	0.00	0.00	0.00	0.00	0.04	1.16	0.08	0.00	0.00	0.00	0.00
2023	1.54	0.00	0.00	0.00	0.00	0.00	0.05	1.21	0.20	0.01	0.00	0.00	0.00
2024	1.65	0.00	0.00	0.00	0.00	0.00	0.04	1.51	0.10	0.01	0.00	0.00	0.00
2025	2.15	0.00	0.00	0.00	0.00	0.00	0.01	0.31	0.02	0.00	0.00	0.00	0.00
2026	0.88	0.00	0.00	0.00	0.00	0.00	0.02	0.95	0.04	0.00	0.00	0.00	0.00
2027	1.85	0.00	0.00	0.00	0.00	0.00	0.04	1.59	0.07	0.00	0.00	0.00	0.00
2028	2.06	0.00	0.00	0.00	0.00	0.00	0.03	0.92	0.14	0.00	0.00	0.00	0.00
2029	2.33	0.00	0.00	0.00	0.00	0.00	0.01	0.47	0.02	0.00	0.00	0.00	0.00
2030	1.51	0.00	0.00	0.00	0.00	0.00	0.03	0.88	0.06	0.00	0.00	0.00	0.00

* With CBM@330 MW and 83 MW & 158 MW Jul Eastside Purchases in 2013/2014.

Loss of Load Expectation Summary Data–Alternate Portfolio (1-4 SCCT)*

Year	Annual	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
2011	2.05	0.00	0.00	0.00	0.00	0.00	0.08	1.68	0.15	0.13	0.00	0.00	0.01
2012	0.62	0.00	0.00	0.00	0.00	0.00	0.01	0.57	0.03	0.00	0.00	0.00	0.00
2013	1.54	0.00	0.00	0.00	0.00	0.00	0.03	1.42	0.08	0.01	0.00	0.00	0.00
2014	1.65	0.00	0.00	0.00	0.00	0.00	0.15	1.39	0.08	0.03	0.00	0.00	0.00
2015	1.21	0.00	0.00	0.00	0.00	0.00	0.09	1.06	0.05	0.01	0.00	0.00	0.00
2016	1.95	0.00	0.00	0.00	0.00	0.00	0.18	1.63	0.11	0.02	0.00	0.00	0.00
2017	0.95	0.00	0.00	0.00	0.00	0.00	0.04	0.77	0.13	0.01	0.00	0.00	0.00
2018	1.69	0.00	0.00	0.00	0.00	0.00	0.03	1.58	0.07	0.01	0.00	0.00	0.00
2019	1.38	0.00	0.00	0.00	0.00	0.00	0.04	1.24	0.08	0.01	0.00	0.00	0.00
2020	1.38	0.00	0.00	0.00	0.00	0.00	0.04	1.24	0.08	0.01	0.00	0.00	0.00

* With CBM@330 MW

Loss of Load Expectation Summary Data–Alternate Portfolio (2-8 Pacific Northwest Transmission)*

Year	Annual	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
2021	2.05	0.00	0.00	0.00	0.00	0.00	0.11	2.93	0.17	0.01	0.00	0.00	0.00
2022	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
2023	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
2024	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
2025	2.38	0.00	0.00	0.00	0.00	0.00	0.01	0.17	0.01	0.00	0.00	0.00	0.00
2026	2.07	0.00	0.00	0.00	0.00	0.00	0.01	0.55	0.02	0.00	0.00	0.00	0.00
2027	2.05	0.00	0.00	0.00	0.00	0.00	0.02	0.89	0.03	0.00	0.00	0.00	0.00
2028	1.72	0.00	0.00	0.00	0.00	0.00	0.01	0.53	0.07	0.00	0.00	0.00	0.00
2029	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.01	0.00	0.00	0.00	0.00
2030	1.36	0.00	0.00	0.00	0.00	0.00	0.01	0.53	0.03	0.00	0.00	0.00	0.00

* With CBM@330 MW

Boardman to Hemingway Tipping Point Analysis Data

Market Price Increase Tipping Point Calculation

	Unit	1-3 Boardman to Hemingway	1-4 SCCT	Variance
Total portfolio cost (from Table 9.2)	2011 $s—000's	$3,177,308	$3,220,672	$43,364
2016-2020 market purchases (from AURORA)	MWh	6,826,175	6,763,722	(62,453)

Note: Market price increase necessary to make total portfolio cost equivalent: $694 $/MWh ($43,364,000/62,453 MWh)

STATE OF OREGON IRP GUIDELINES

ORDER NO. 07-047

ENTERED 02/09/07

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1056

In the Matter of	)	
	)	
PUBLIC UTILITY COMMISSION OF OREGON	)	ERRATA ORDER
	)	
	)	
Investigation Into Integrated Resource Planning.	)	
	)	

DISPOSITION: APPENDIX TO ORDER NO. 07-002 CORRECTED

In Order No. 07-002, we adopted guidelines to govern the Integrated Resource Planning (IRP) process. In setting forth those guidelines in an appendix, we inadvertently omitted Guideline 1(d), which we discussed and adopted in the body of the order on pages 7 and 8. Accordingly, Appendix A to Order No. 07-002 is replaced with the attached appendix to this order, which includes all the adopted guidelines. The remainder of the order is unchanged.

IT IS SO ORDERED.

Made, entered, and effective FEB 09 2007.

Lee Beyer
Chairman

John Savage
Commissioner

Ray Baum
Commissioner

A party may request rehearing or reconsideration of this order pursuant to ORS 756.561. A request for rehearing or reconsideration must be filed with the Commission within 60 days of the date of service of this order. The request must comply with the requirements in OAR 860-014-0095. A copy of any such request must also be served on each party to the proceeding as provided by OAR 860-013-0070(2). A party may appeal this order by filing a petition for review with the Court of Appeals in compliance with ORS 183.480-183.484.

ORDER NO. 07-047

Adopted IRP Guidelines

Guideline 1: Substantive Requirements

a. *All resources must be evaluated on a consistent and comparable basis.*

- *All known resources for meeting the utility's load should be considered, including supply-side options which focus on the generation, purchase and transmission of power – or gas purchases, transportation, and storage – and demand-side options which focus on conservation and demand response.*
- *Utilities should compare different resource fuel types, technologies, lead times, in-service dates, durations and locations in portfolio risk modeling.*
- *Consistent assumptions and methods should be used for evaluation of all resources.*
- *The after-tax marginal weighted-average cost of capital (WACC) should be used to discount all future resource costs.*

b. *Risk and uncertainty must be considered.*

- *At a minimum, utilities should address the following sources of risk and uncertainty:*

  1. *Electric utilities: load requirements, hydroelectric generation, plant forced outages, fuel prices, electricity prices, and costs to comply with any regulation of greenhouse gas emissions.*
  2. *Natural gas utilities: demand (peak, swing and base-load), commodity supply and price, transportation availability and price, and costs to comply with any regulation of greenhouse gas emissions.*

- *Utilities should identify in their plans any additional sources of risk and uncertainty.*

c. *The primary goal must be the selection of a portfolio of resources with the best combination of expected costs and*

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associated risks and uncertainties for the utility and its customers.[1]

- ☐ *The planning horizon for analyzing resource choices should be at least 20 years and account for end effects. Utilities should consider all costs with a reasonable likelihood of being included in rates over the long term, which extends beyond the planning horizon and the life of the resource.*

- ☐ *Utilities should use present value of revenue requirement (PVRR) as the key cost metric. The plan should include analysis of current and estimated future costs for all long-lived resources such as power plants, gas storage facilities, and pipelines, as well as all short-lived resources such as gas supply and short-term power purchases.*

- ☐ *To address risk, the plan should include, at a minimum:*

  1. *Two measures of PVRR risk: one that measures the variability of costs and one that measures the severity of bad outcomes.*

  2. *Discussion of the proposed use and impact on costs and risks of physical and financial hedging.*

- ☐ *The utility should explain in its plan how its resource choices appropriately balance cost and risk.*

d. *The plan must be consistent with the long-run public interest as expressed in Oregon and federal energy policies.*

Guideline 2: Procedural Requirements.

a. *The public, which includes other utilities, should be allowed significant involvement in the preparation of the IRP. Involvement includes opportunities to contribute information and ideas, as well as to receive information. Parties must have an opportunity to make relevant inquiries of the utility formulating the plan. Disputes about whether information requests are relevant or unreasonably burdensome, or whether a utility is being properly responsive, may be submitted to the Commission for resolution.*

[1] We sometimes refer to this portfolio as the "best cost/risk portfolio."

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b. *While confidential information must be protected, the utility should make public, in its plan, any non-confidential information that is relevant to its resource evaluation and action plan. Confidential information may be protected through use of a protective order, through aggregation or shielding of data, or through any other mechanism approved by the Commission.*

c. *The utility must provide a draft IRP for public review and comment prior to filing a final plan with the Commission.*

Guideline 3: Plan Filing, Review, and Updates.

a. *A utility must file an IRP within two years of its previous IRP acknowledgment order. If the utility does not intend to take any significant resource action for at least two years after its next IRP is due, the utility may request an extension of its filing date from the Commission.*

b. *The utility must present the results of its filed plan to the Commission at a public meeting prior to the deadline for written public comment.*

c. *Commission staff and parties should complete their comments and recommendations within six months of IRP filing.*

d. *The Commission will consider comments and recommendations on a utility's plan at a public meeting before issuing an order on acknowledgment. The Commission may provide the utility an opportunity to revise the plan before issuing an acknowledgment order.*

e. *The Commission may provide direction to a utility regarding any additional analyses or actions that the utility should undertake in its next IRP.*

f. *Each utility must submit an annual update on its most recently acknowledged plan. The update is due on or before the acknowledgment order anniversary date. Once a utility anticipates a significant deviation from its acknowledged IRP, it must file an update with the Commission, unless the utility is within six months of filing its next IRP. The utility must summarize the update at a Commission public meeting. The utility may request acknowledgment of changes in proposed actions identified in an update.*

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g. *Unless the utility requests acknowledgement of changes in proposed actions, the annual update is an informational filing that:*

- *Describes what actions the utility has taken to implement the plan;*
- *Provides an assessment of what has changed since the acknowledgment order that affects the action plan, including changes in such factors as load, expiration of resource contracts, supply-side and demand-side resource acquisitions, resource costs, and transmission availability; and*
- *Justifies any deviations from the acknowledged action plan.*

Guideline 4: Plan Components.

At a minimum, the plan must include the following elements:

a. *An explanation of how the utility met each of the substantive and procedural requirements;*

b. *Analysis of high and low load growth scenarios in addition to stochastic load risk analysis with an explanation of major assumptions;*

c. *For electric utilities, a determination of the levels of peaking capacity and energy capability expected for each year of the plan, given existing resources; identification of capacity and energy needed to bridge the gap between expected loads and resources; modeling of all existing transmission rights, as well as future transmission additions associated with the resource portfolios tested;*

d. *For natural gas utilities, a determination of the peaking, swing and base-load gas supply and associated transportation and storage expected for each year of the plan, given existing resources; and identification of gas supplies (peak, swing and base-load), transportation and storage needed to bridge the gap between expected loads and resources;*

e. *Identification and estimated costs of all supply-side and demand-side resource options, taking into account anticipated advances in technology;*

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f. Analysis of measures the utility intends to take to provide reliable service, including cost-risk tradeoffs;

g. Identification of key assumptions about the future(e.g., fuel prices and environmental compliance costs) and alternative scenarios considered;

h. Construction of a representative set of resource portfolios to test various operating characteristics, resource types, fuels and sources, technologies, lead times, in-service dates, durations and general locations – system-wide or delivered to a specific portion of the system;

i. Evaluation of the performance of the candidate portfolios over the range of identified risks and uncertainties;

j. Results of testing and rank ordering of the portfolios by cost and risk metric, and interpretation of those results;

k. Analysis of the uncertainties associated with each portfolio evaluated;

l. Selection of a portfolio that represents the best combination of cost and risk for the utility and its customers;

m. Identification and explanation of any inconsistencies of the selected portfolio with any state and federal energy policies that may affect a utility's plan and any barriers to implementation; and

n. An action plan with resource activities the utility intends to undertake over the next two to four years to acquire the identified resources, regardless of whether the activity was acknowledged in a previous IRP, with the key attributes of each resource specified as in portfolio testing.

Guideline 5: Transmission.

Portfolio analysis should include costs to the utility for the fuel transportation and electric transmission required for each resource being considered. In addition, utilities should consider fuel transportation and electric transmission facilities as resource options, taking into account their value for making additional purchases and sales, accessing less costly resources in remote

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locations, acquiring alternative fuel supplies, and improving reliability.

Guideline 6: Conservation.

a. *Each utility should ensure that a conservation potential study is conducted periodically for its entire service territory.*

b. *To the extent that a utility controls the level of funding for conservation programs in its service territory, the utility should include in its action plan all best cost/risk portfolio conservation resources for meeting projected resource needs, specifying annual savings targets.*

c. *To the extent that an outside party administers conservation programs in a utility's service territory at a level of funding that is beyond the utility's control, the utility should:*

   - *Determine the amount of conservation resources in the best cost/risk portfolio without regard to any limits on funding of conservation programs; and*

   - *Identify the preferred portfolio and action plan consistent with the outside party's projection of conservation acquisition.*

Guideline 7: Demand Response.

Plans should evaluate demand response resources, including voluntary rate programs, on par with other options for meeting energy, capacity, and transmission needs (for electric utilities) or gas supply and transportation needs (for natural gas utilities).

Guideline 8: Environmental Costs.

Utilities should include, in their base-case analyses, the regulatory compliance costs they expect for carbon dioxide (CO_2), nitrogen oxides, sulfur oxides, and mercury emissions. Utilities should analyze the range of potential CO_2 regulatory costs in Order No. 93-695, from zero to $40 (1990$). In addition, utilities should perform sensitivity analysis on a range of reasonably possible cost adders for nitrogen oxides, sulfur oxides, and mercury, if applicable.

Guideline 9: Direct Access Loads.

An electric utility's load-resource balance should exclude customer loads that are effectively committed to service by an alternative electricity supplier.

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Guideline 10: Multi-state Utilities.

Multi-state utilities should plan their generation and transmission systems, or gas supply and delivery, on an integrated-system basis that achieves a best cost/risk portfolio for all their retail customers.

Guideline 11: Reliability.

Electric utilities should analyze reliability within the risk modeling of the actual portfolios being considered. Loss of load probability, expected planning reserve margin, and expected and worst-case unserved energy should be determined by year for top-performing portfolios. Natural gas utilities should analyze, on an integrated basis, gas supply, transportation, and storage, along with demand-side resources, to reliably meet peak, swing, and base-load system requirements. Electric and natural gas utility plans should demonstrate that the utility's chosen portfolio achieves its stated reliability, cost and risk objectives.

Guideline 12: Distributed Generation.

Electric utilities should evaluate distributed generation technologies on par with other supply-side resources and should consider, and quantify where possible, the additional benefits of distributed generation.

Guideline 13: Resource Acquisition.

a. *An electric utility should, in its IRP:*

- ☐ *Identify its proposed acquisition strategy for each resource in its action plan.*
- ☐ *Assess the advantages and disadvantages of owning a resource instead of purchasing power from another party.*
- ☐ *Identify any Benchmark Resources it plans to consider in competitive bidding.*

b. *Natural gas utilities should either describe in the IRP their bidding practices for gas supply and transportation, or provide a description of those practices following IRP acknowledgment.*

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SUMMARY OF NORTHWEST UTILITY PLANNING CRITERIA

Utility	Planning Criteria
Avista Corporation	*Peak Load*—The maximum one-hour obligation, including operating reserves, on the expected average coldest day in January and the average hottest day in August.[1]
	Peak Resource Capability—The maximum one-hour generation capability of company resources, including net contract contribution, at the time of the one-hour system peak, and excluding resources that are on maintenance during peak load periods.[1]
	Planning Reserve—Set at a level equal to 15% planning reserve margin during the company's peak load hour.[1]
	Confidence Interval—Ninety percent confidence interval based on the monthly variability of load and the 10th percentile of monthly historical hydro energy. This results in a 10% chance of load exceeding the planning criteria for each month. In other words, there is a 10% chance that the company would need to purchase energy from the market in any given month.[1]
Bonneville Power Administration	*Load Forecast*—Based on normal weather conditions.[2]
	Hydro Conditions—Firm hydro energy and capacity estimates based on 1937 critical water conditions.[2]
	Hydro Energy—Based on current generation capability under average monthly river discharge. Uses operating year (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.[2]
	Federal Firm Energy Surplus Analysis—The amount of generation that can be produced in excess of firm loads using 1937 critical water conditions.[2]
	Hydroelectric Capacity—The monthly instantaneous capacity of hydroelectric projects is defined as the full-gate-flow maximum generation at mid-month reservoir elevation using 1929 through 1998 historical water conditions.[2]
Idaho Power	*Hydro Conditions*—70th percentile hydro conditions based on historical data from 1928–2009.[3]
	Load Forecast—Based on 50th percentile weather conditions.[3]
	Monthly Average Energy—Based on 70th percentile water and 70th percentile average load conditions.[3]
	Capacity—Based on monthly peak-hour Northwest transmission deficit assuming 90th percentile water, 70th percentile average load, and 95th percentile peak-hour load conditions.[3]
Northwest Power and Conservation Council	*Uses a fully probabilistic model*—Prospective plans are tested against 20 years of future conditions. The test process uses random simulations of the principal sources of uncertainty, including hydro conditions, regional electric loads, fuel prices, CO_2 control requirements, import and export markets, resource availability, and other factors. The council's analytical process creates a 2-dimensional mathematical surface defined by portfolio cost and portfolio risk. A subset of resource portfolios along the mathematical cost–risk frontier are selected for further consideration. The preferred portfolio is selected from the set of finalist portfolios using qualitative criteria.[4]
PacifiCorp	*Thermal*—Maximum dependable capacity for peak-hour assessment. Energy assessments used maximum dependable capacity de-rated for forced outages and maintenance.[5]
	Hydro Conditions—Critical water conditions. For peak hour assessment, decision support software is used to shape critical hydro energy to estimate maximum capability sustainable for one hour.[5]
	Loads—Average energy requirements based on normal weather conditions.[5]
	Planning Reserve—Planning reserve margin of 13% assumed for energy and peak-hour assessments.[5]

[1] 2009 Integrated Resource Plan, Avista Utilities, August 2009, Chapter 2.
[2] 2009 Pacific Northwest Loads and Resources Study, Bonneville Power Administration, July 2009, Sections 2 & 4.
[3] 2011 Integrated Resource Plan, Idaho Power Company, June 2011.
[4] Sixth Northwest Power Plan, Northwest Power and Conservation Council, February 2010.
[5] 2011 Integrated Resource Plan, PacifiCorp, March 31, 2011, Chapter 5.

Utility	Planning Criteria
Portland General Electric Company (PGE)	*Hydro Conditions*—Normal hydro conditions.[6]
	Loads—PGE identifies annual energy needs under a reference case (i.e., expected or most likely) and high-load and low-load forecasts, assuming normal weather conditions.[6]
	Capacity—PGE evaluates peaking needs by comparing the annual one-hour maximum load inclusive of 12% reserves (6% operating margin, 6% planning margin), calculated on a 1-in-2 or average basis, to the capability of energy-producing resources. Reports both the winter and the summer peak loads.[6]
Puget Sound Energy	*Loads*—For capacity, power demand was estimated at normal winter minimum temperature (23° F) plus a 15% planning margin. Five different economic growth scenarios were modeled in the resource plan.[7]
	Hydro—For capacity resource need, hydro projects assumed at full-capacity output[7]
	Thermal—For capacity resource need, thermal projects assumed at full-capacity output.[7]

[6] PGE 2009 Integrated Resource Plan, Portland General Electric, November 2009, Chapter 3.

[7] Integrated Resource Plan, Puget Sound Energy, July 2009, Chapters 5 & 8.

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