

Integrated Resource Plan

Appendix 8A

**Load-Resource Balances, Base Resource Plans and
Contingency Resource Plans**

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1 Introduction

This appendix provides additional details of BC Hydro's energy and capacity load resource balances (**LRBs**) as presented in Chapter 2, Chapter 4 and Chapter 8 as follows:

- [Table 1](#) shows the system annual energy LRB supporting the surplus/deficit values presented in Table 2-7; Table 4-2 and Table 4-18 and the major differences between the three views;
- Similarly, [Table 2](#) shows the system peak capacity LRB supporting the surplus/deficit values presented in Table 2-8; Table 4-3 and Table 4-19 and the major differences between the three views; and
- The subsequent tables (Table 3 – Table 10) and figures (Figure 1 – Figure 8) provide the energy and capacity LRBs for BC Hydro's two Base Resource Plans (**BRPs**) and two Contingency Resource Plans (**CRPs**). These include assumptions on timing of resources consistent with the recommended actions described in Chapter 8.

2 BRP and CRP Construction

The BRPs and CRPs are constructed using the following general methodology:

- BRPs:
 - ▶ start with the energy and capacity surplus/deficits in Chapter 4 (Table 4-18 and Table 4-19)
 - ▶ schedule Site C for in-service in F2024
 - ▶ for the BRP with LNG, schedule 400 MW of gas-fired generation in F2020 to serve Expected LNG load

-
- 1 ▶ meet interim energy and capacity shortfalls prior to Site C with cost effective
2 market purchases first and power from the Columbia River Treaty second
- 3 ▶ fill in the energy shortfalls beyond Site C with cost-effective clean and
4 renewable supply-side resources, as required
- 5 ▶ fill in the capacity shortfalls beyond Site C with cost-effective supply-side
6 resources, as required. In doing so, the focus was first on clean resources
7 such as Revelstoke 6 that are the most cost-effective capacity options,
8 secondly on gas-fired generation allowed under the 7 per cent non-clean
9 headroom, and then on pumped storage
- 10 • CRPs:
- 11 ▶ start with the energy and capacity surplus/deficits in Chapter 4 (Table 4-18
12 and Table 4-19)
- 13 ▶ replace the mid load and mid demand side management (DSM) forecasts
14 that supported the surplus/deficit values provided in Table 4-18 and Table 4-
15 19 with the high load and low DSM forecasts resulting in new surplus/deficit
16 values with and without LNG
- 17 ▶ schedule Site C for in-service in F2024
- 18 ▶ for the CRP with LNG, schedule 400 MW of gas-fired generation in F2020 to
19 serve Expected LNG load
- 20 ▶ fill in the interim energy and capacity shortfalls prior to Site C with cost
21 effective supply-side resources, as available and permitted under the 93 per
22 cent clean target
- 23 ▪ For energy shortfalls, BC Hydro has assumed that there would be:
24 - a two to three-year delay before recognizing the load after DSM would
25 be on different trajectory that would require additional resources

-
- 1 - up to a five-year period¹ between that recognition and energy delivery
- 2 to account for the process of initiating a call to the award and
- 3 construction of new clean resources
- 4 - a two-year phase-in of acquisition resources
- 5 ▶ meet remaining interim energy and capacity shortfalls prior to Site C with
- 6 cost effective market purchases first and power from the Columbia River
- 7 Treaty second
- 8 ▶ fill in the energy shortfalls beyond Site C with clean and renewable supply-
- 9 side resources, as required
- 10 ▶ fill in the capacity shortfalls beyond Site C with cost-effective supply-side
- 11 resources, as required. In doing so, the focus was first on clean resources
- 12 such as Revelstoke 6 that are the most cost-effective capacity options,
- 13 secondly on gas-fired generation allowed under the 7 per cent non-clean
- 14 headroom, and then on pumped storage.

¹ The selection of five years is based on experience with BC Hydro's F2006 Call for Tenders and Clean Power Call acquisition processes.

Table 2 Capacity LRBs

Table with columns for years (F2014 to F2033) and rows for various resource categories: LRB with Existing and Committed Supply, Existing and Committed IPP Resources, Reserves, Supply Not Requiring Reserves, Demand - Integrated System Peak, Incremental Changes to LRB with Typical Resource Planning Volumes, and Incremental Changes to LRB from Short Term Energy Supply Management Recommended Actions. Includes sub-totals and surplus/deficit calculations.

Table 3 BRP without LNG – Energy

(GWh)	Operating										Planning									
	F2014	F2015	F2016	F2017	F2018	F2019	F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033
Existing and Committed Heritage Resources																				
Heritage Hydroelectric	44,962	44,884	45,737	42,425	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048
Heritage Hydroelectric Non-Firm / Market Allowance	0	0	0	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100
Heritage Thermal	31	31	31	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
Resource Smart	60	86	113	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133
Waneta Transaction	1,003	874	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865
Mica 5	0	73	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145
Mica 6	0	0	28	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
Ruskin	0	0	30	221	319	338	338	338	338	338	338	338	338	338	338	338	338	338	338	338
John Hart	0	0	0	300	806	806	806	806	806	806	806	806	806	806	806	806	806	806	806	806
Sub-total (a)	46,057	45,947	46,949	48,425	48,653	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671
Existing and Committed IPP Resources																				
Pre-F06 Call EPAs (incl. Rio Tinto Alcan)	7,078	6,865	4,309	5,936	5,786	5,135	4,977	4,869	4,869	2,699	2,437	2,197	2,057	1,956	1,851	1,561	1,497	1,482	1,481	1,477
F2006 Call	2,158	2,603	2,603	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,283	2,119	2,058	1,991	1,963
Standing Offer Program (signed EPAs)	214	228	228	201	201	201	201	201	201	201	201	201	201	201	201	197	190	187	186	186
Bioenergy Call Phase I	569	569	569	582	582	582	515	342	221	221	221	221	221	221	54	0	0	0	-2	-2
Clean Power Call	786	1,369	1,629	1,768	2,124	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,234
AltaGas Power (NTL)	0	593	873	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947
Waneta Expansion	0	0	567	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306
Integrated Power Offer	926	1,055	1,092	1,139	1,139	1,139	1,139	1,139	673	533	430	350	313	238	185	34	0	0	0	0
Bioenergy Call Phase II	0	109	360	565	565	565	565	565	565	565	565	565	565	565	565	565	565	565	565	565
Conifex	0	94	188	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
Sub-total (b)	11,731	13,483	12,418	13,952	14,158	13,637	13,412	13,130	12,543	10,233	9,868	9,549	9,371	9,196	8,870	8,330	8,064	7,981	7,909	7,856
Future Supply-Side Resources																				
IPP Renewals	88	654	1,096	1,147	1,245	1,570	1,683	1,824	2,117	4,357	4,670	4,950	5,109	5,247	5,463	5,900	6,149	6,232	6,303	6,356
Standing Offer Program	0	0	27	53	80	106	133	159	186	212	239	265	292	318	345	371	398	424	451	477
IBAs	0	0	0	0	0	0	167	167	167	167	167	167	167	167	167	167	167	167	167	167
Site C	0	0	0	0	0	0	0	0	0	388	4,435	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100
Revelstoke Unit 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	26	26
Gas Capacity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149
Clean Resources	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	154
Market Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-total (c)	88	654	1,123	1,200	1,325	1,676	1,983	2,150	2,470	5,124	9,511	10,482	10,668	10,833	11,074	11,539	11,814	11,936	12,047	12,429
Total Supply (d) = a + b + c	57,876	60,084	60,490	63,577	64,135	63,984	64,066	63,951	63,684	64,029	68,051	68,702	68,710	68,699	68,616	68,540	68,549	68,589	68,627	68,956
Demand - Integrated System Total Gross Requirements																				
2012 Mid Load Forecast Before DSM	(e)	-58,714	-60,378	-61,855	-63,238	-65,769	-67,545	-69,111	-70,207	-70,811	-71,721	-72,707	-73,428	-73,812	-74,512	-75,475	-76,386	-77,420	-78,433	-79,486
Future Demand Side Management & Other Measures																				
SMI Theft Reduction	0	0	0	65	129	193	256	318	380	442	503	562	562	562	562	562	562	562	561	561
Voltage and VAR Optimization	38	162	229	273	288	304	314	326	328	329	331	333	334	336	338	339	341	343	345	346
DSM Option 2 / DSM Target	1,919	2,666	3,564	4,364	4,942	5,893	6,842	7,790	8,202	8,423	8,947	9,186	9,590	9,862	10,196	10,274	10,505	10,746	10,906	10,995
Sub-total (f)	1,957	2,828	3,793	4,702	5,359	6,389	7,412	8,435	8,911	9,194	9,781	10,081	10,487	10,760	11,096	11,175	11,408	11,651	11,812	11,903
Surplus / Deficit prior to LNG (g) = d + e + f	1,119	2,533	2,427	5,041	3,725	2,828	2,366	2,179	1,784	1,502	5,125	5,356	5,385	4,948	4,236	3,329	2,537	1,806	953	543

Figure 1 BRP without LNG – Energy

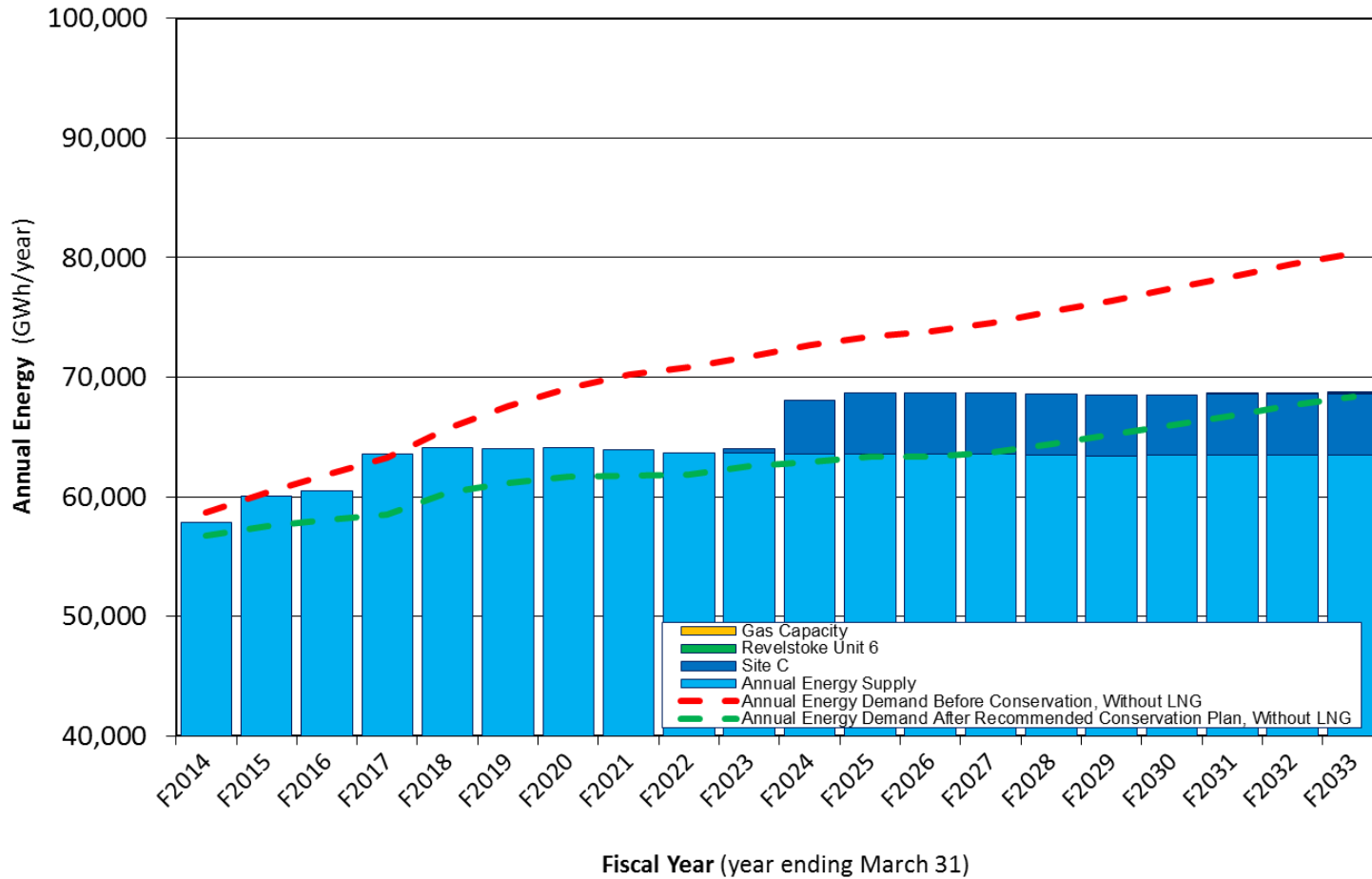
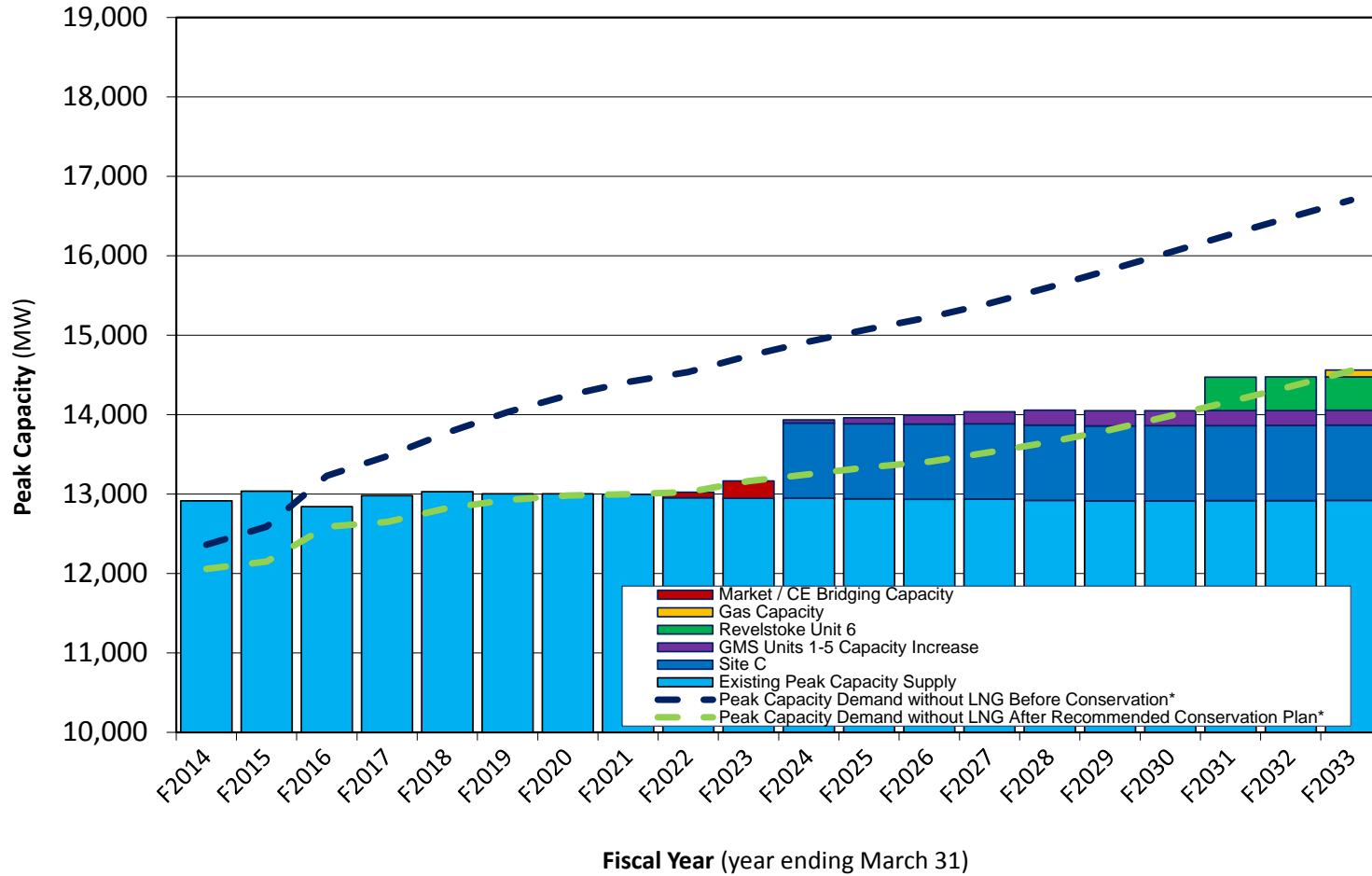


Table 4 BRP without LNG – Capacity

(MW)		F2014	F2015	F2016	F2017	F2018	F2019	F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033
Existing and Committed Heritage Resources																					
Heritage Hydroelectric		10,182	10,182	10,077	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072
Heritage Thermal		946	496	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
Resource Smart		51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Waneta Transaction		256	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249
Mica 5		0	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465
Mica 6		0	0	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460
Ruskin		0	0	73	76	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114
John Hart		0	0	0	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127
Sub-total	(a)	11,435	11,443	11,421	11,545	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584
Existing and Committed IPP Resources																					
Pre-F06 Call EPAs (excl. Rio Tinto Alcan)		667	557	553	547	523	462	426	426	426	151	145	139	134	134	123	123	122	122	122	122
F2006 Call		85	86	86	86	86	86	86	86	86	86	86	86	86	86	86	75	73	73	69	69
Standing Offer Program (signed EPAs)		10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	10	10	9	9
Bioenergy Call Phase I		67	67	67	67	67	67	54	29	29	29	29	29	29	29	0	0	0	0	0	0
Clean Power Call		86	112	128	141	159	162	162	162	162	162	162	162	162	162	162	162	162	162	162	156
AltaGas Power (NTL)		0	26	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Waneta Expansion		0	0	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Integrated Power Offer		128	152	165	165	165	165	165	165	82	65	65	41	29	29	21	0	0	0	0	0
Bioenergy Call Phase II		0	15	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Conifex		0	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
Sub-total	(b)	1,044	1,047	1,137	1,144	1,138	1,080	1,031	1,005	922	631	624	595	577	577	530	498	493	493	489	483
Future Supply-Side Resources																					
IPP Renewals		16	126	129	133	146	177	202	214	256	539	545	563	574	574	603	624	629	629	634	640
Standing Offer Program		0	0	2	4	6	8	10	12	14	16	18	20	22	24	26	29	31	33	35	37
IBAs		0	0	0	0	0	0	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Site C		0	0	0	0	0	0	0	0	0	0	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
Revelstoke Unit 6		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	488	488	488
GMS Units 1 - 5 Capacity Increase		0	0	0	0	0	0	0	0	0	44	88	132	176	220	220	220	220	220	220	220
Gas Capacity		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	98
Clean Resources		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Sub-total	(c)	16	126	131	137	152	185	235	250	294	579	1,731	1,795	1,852	1,898	1,973	1,996	2,004	2,494	2,500	2,617
Total Supply Requiring Reserves	(d) = a + b + c	12,495	12,615	12,688	12,826	12,874	12,849	12,850	12,839	12,800	12,793	13,939	13,973	14,013	14,059	14,087	14,078	14,080	14,571	14,573	14,684
Reserves																					
14% of Supply Requiring Reserves	-14% *d	-1,749	-1,766	-1,776	-1,796	-1,802	-1,799	-1,799	-1,797	-1,792	-1,791	-1,951	-1,956	-1,962	-1,968	-1,972	-1,971	-1,971	-2,040	-2,040	-2,056
400 MW market reliance		400	400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-total	(e)	-1,349	-1,366	-1,776	-1,796	-1,802	-1,799	-1,799	-1,797	-1,792	-1,791	-1,951	-1,956	-1,962	-1,968	-1,972	-1,971	-1,971	-2,040	-2,040	-2,056
Supply Not Requiring Reserves																					
Alcan 2007 EPA		419	419	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153
Market Purchases		0	0	0	0	0	0	0	4	71	216	0	0	0	0	0	0	0	0	0	0
Sub-total	(f)	419	419	153	153	153	153	153	157	224	369	153	153	153	153	153	153	153	153	153	153
Effective Load Carrying Capability	(g) = d + e + f	11,565	11,668	11,065	11,184	11,225	11,203	11,204	11,199	11,232	11,371	12,141	12,170	12,205	12,244	12,268	12,261	12,263	12,684	12,686	12,782
Demand - Integrated System Peak																					
2012 Mid Load Forecast Before DSM	(h)	-11,011	-11,222	-11,451	-11,681	-11,971	-12,230	-12,443	-12,613	-12,743	-12,950	-13,125	-13,288	-13,438	-13,609	-13,817	-14,036	-14,258	-14,482	-14,701	-14,915
Future Demand Side Management & Other Measures																					
SMI Theft Reduction		0	0	0	9	17	26	35	43	52	60	68	76	76	76	76	76	76	76	76	76
Voltage and VAR Optimization		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DSM Option 2 / DSM Target		304	439	638	820	932	1,078	1,224	1,371	1,460	1,519	1,601	1,663	1,743	1,797	1,873	1,939	1,983	2,028	2,057	2,074
Sub-total	(i)	304	439	638	829	949	1,104	1,259	1,414	1,511	1,578	1,670	1,739	1,819	1,873	1,949	2,015	2,059	2,104	2,133	2,150
Surplus / Deficit prior to LNG	(j) = g + h + i	858	885	252	332	204	77	21	0	0	0	685	622	586	508	400	240	64	307	118	17

Figure 2 BRP without LNG – Capacity



* including planning reserve requirements

Table 5 BRP with LNG – Energy

(GWh)	Operating			Planning																	
	F2014	F2015	F2016	F2017	F2018	F2019	F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033	
Existing and Committed Heritage Resources																					
Heritage Hydroelectric	44,962	44,884	45,737	42,425	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048
Heritage Hydroelectric Non-Firm / Market Allowance	0	0	0	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100
Heritage Thermal	31	31	31	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
Resource Smart	60	86	113	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133
Waneta Transaction	1,003	874	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865
Mica 5	0	73	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145
Mica 6	0	0	28	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
Ruskin	0	0	30	221	319	338	338	338	338	338	338	338	338	338	338	338	338	338	338	338	338
John Hart	0	0	0	300	806	806	806	806	806	806	806	806	806	806	806	806	806	806	806	806	806
Sub-total (a)	46,057	45,947	46,949	48,425	48,653	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671
Existing and Committed IPP Resources																					
Pre-F06 Call EPAs (incl. Rio Tinto Alcan)	7,078	6,865	4,309	5,936	5,786	5,135	4,977	4,869	4,869	2,699	2,437	2,197	2,057	1,956	1,851	1,561	1,497	1,482	1,481	1,477	1,477
F2006 Call	2,158	2,603	2,603	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,283	2,119	2,058	1,991	1,963	1,963
Standing Offer Program (signed EPAs)	214	228	228	201	201	201	201	201	201	201	201	201	201	201	201	201	197	190	187	186	186
Bioenergy Call Phase I	569	569	569	582	582	582	515	342	221	221	221	221	221	221	54	0	0	0	-2	-2	-2
Clean Power Call	786	1,369	1,629	1,768	2,124	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,234
AltaGas Power (NTL)	0	593	873	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947
Waneta Expansion	0	0	567	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306
Integrated Power Offer	926	1,055	1,092	1,139	1,139	1,139	1,139	1,139	673	533	430	350	313	238	185	34	0	0	0	0	0
Bioenergy Call Phase II	0	109	360	565	565	565	565	565	565	565	565	565	565	565	565	565	565	565	565	565	565
Conifex	0	94	188	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
Sub-total (b)	11,731	13,483	12,418	13,952	14,158	13,637	13,412	13,130	12,543	10,233	9,868	9,549	9,371	9,196	8,870	8,330	8,064	7,981	7,909	7,856	7,856
Future Supply-Side Resources																					
IPP Renewals	88	654	1,096	1,147	1,245	1,570	1,683	1,824	2,117	4,357	4,670	4,950	5,109	5,247	5,463	5,900	6,149	6,232	6,303	6,356	6,356
Standing Offer Program	0	0	27	53	80	106	133	159	186	212	239	265	292	318	345	371	398	424	451	477	477
IBAs	0	0	0	0	0	0	167	167	167	167	167	167	167	167	167	167	167	167	167	167	167
Site C	0	0	0	0	0	0	0	0	0	388	4,435	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100
Revelstoke Unit 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	26	26
Gas Capacity	0	0	0	0	0	0	595	595	595	595	595	595	595	595	595	595	595	595	595	595	595
Clean Resources	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	661	1,564	2,527	2,527
Market Purchases	0	0	0	0	0	0	0	0	621	903	0	0	0	0	0	0	0	0	0	0	0
Sub-total (c)	88	654	1,123	1,200	1,325	1,676	2,578	2,745	3,686	6,622	10,106	11,077	11,263	11,427	11,669	12,134	12,409	13,193	14,206	15,248	15,248
Total Supply (d) = a + b + c	57,876	60,084	60,490	63,577	64,135	63,984	64,661	64,546	64,900	65,527	68,646	69,297	69,305	69,294	69,211	69,135	69,144	69,845	70,786	71,775	71,775
Demand - Integrated System Total Gross Requirements																					
2012 Mid Load Forecast Before DSM (e)	-58,714	-60,378	-61,855	-63,238	-65,769	-67,545	-69,111	-70,207	-70,811	-71,721	-72,707	-73,428	-73,812	-74,512	-75,475	-76,386	-77,420	-78,433	-79,486	-80,316	-80,316
Expected LNG Load	0	0	0	0	0	0	-1,000	-2,000	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000
2012 Mid Load Forecast Before DSM with LNG (f)	-58,714	-60,378	-61,855	-63,238	-65,769	-67,545	-70,111	-72,207	-73,811	-74,721	-75,707	-76,428	-76,812	-77,512	-78,475	-79,386	-80,420	-81,433	-82,486	-83,316	-83,316
Future Demand Side Management & Other Measures																					
SMI Theft Reduction	0	0	0	65	129	193	256	318	380	442	503	562	562	562	562	562	562	562	561	561	561
Voltage and VAR Optimization	38	162	229	273	288	304	314	326	328	329	331	333	334	336	338	339	341	343	345	346	346
DSM Option 2 / DSM Target	1,919	2,666	3,564	4,364	4,942	5,893	6,842	7,790	8,202	8,423	8,947	9,186	9,590	9,862	10,196	10,274	10,505	10,746	10,906	10,995	10,995
Sub-total (g)	1,957	2,828	3,793	4,702	5,359	6,389	7,412	8,435	8,911	9,194	9,781	10,081	10,487	10,760	11,096	11,175	11,408	11,651	11,812	11,903	11,903
Surplus / Deficit with LNG (h) = d + f + g	1,119	2,533	2,427	5,041	3,725	2,828	1,961	774	0	0	2,720	2,951	2,980	2,543	1,831	924	132	63	112	361	361

Figure 3 BRP with LNG – Energy

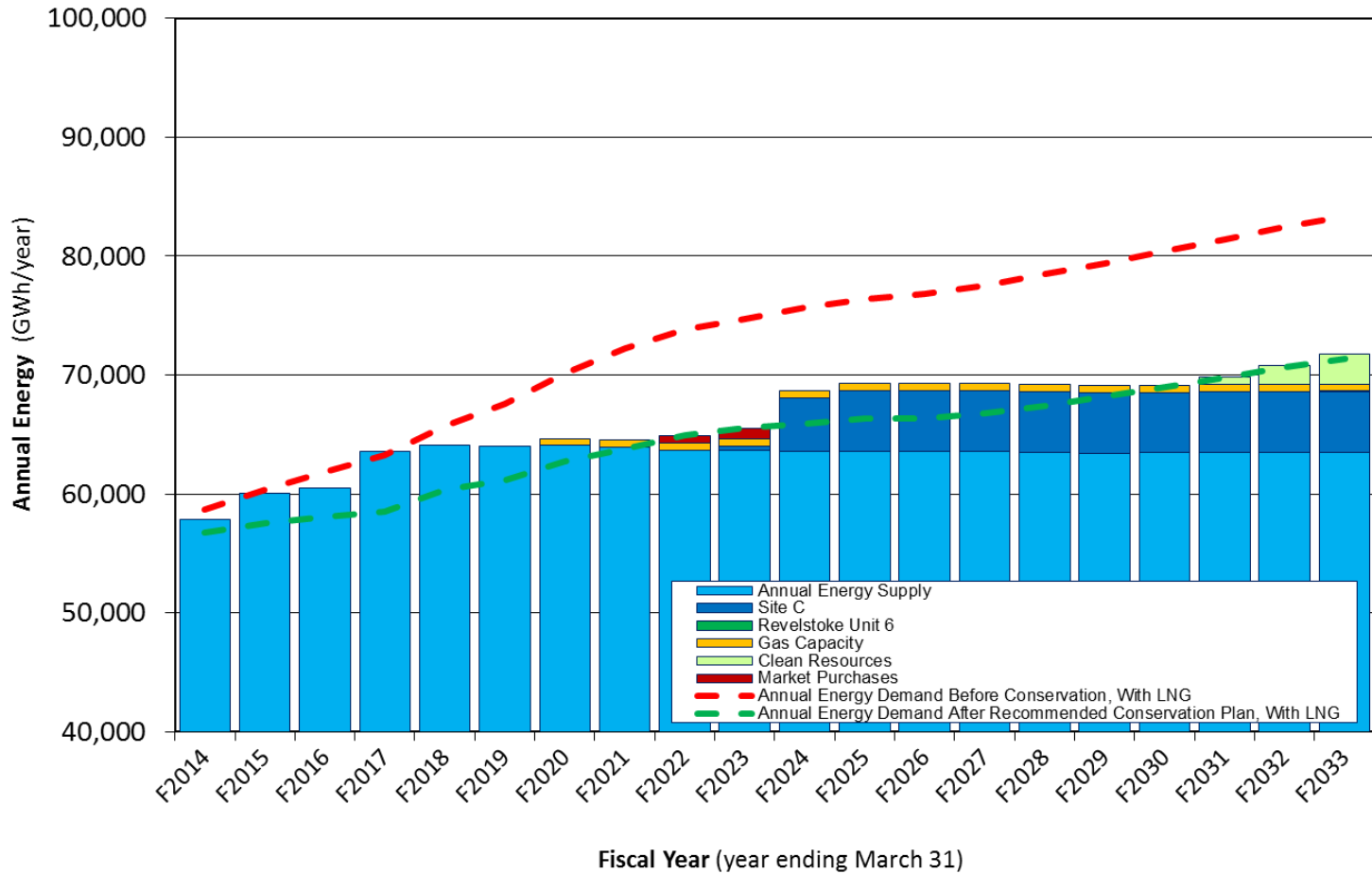
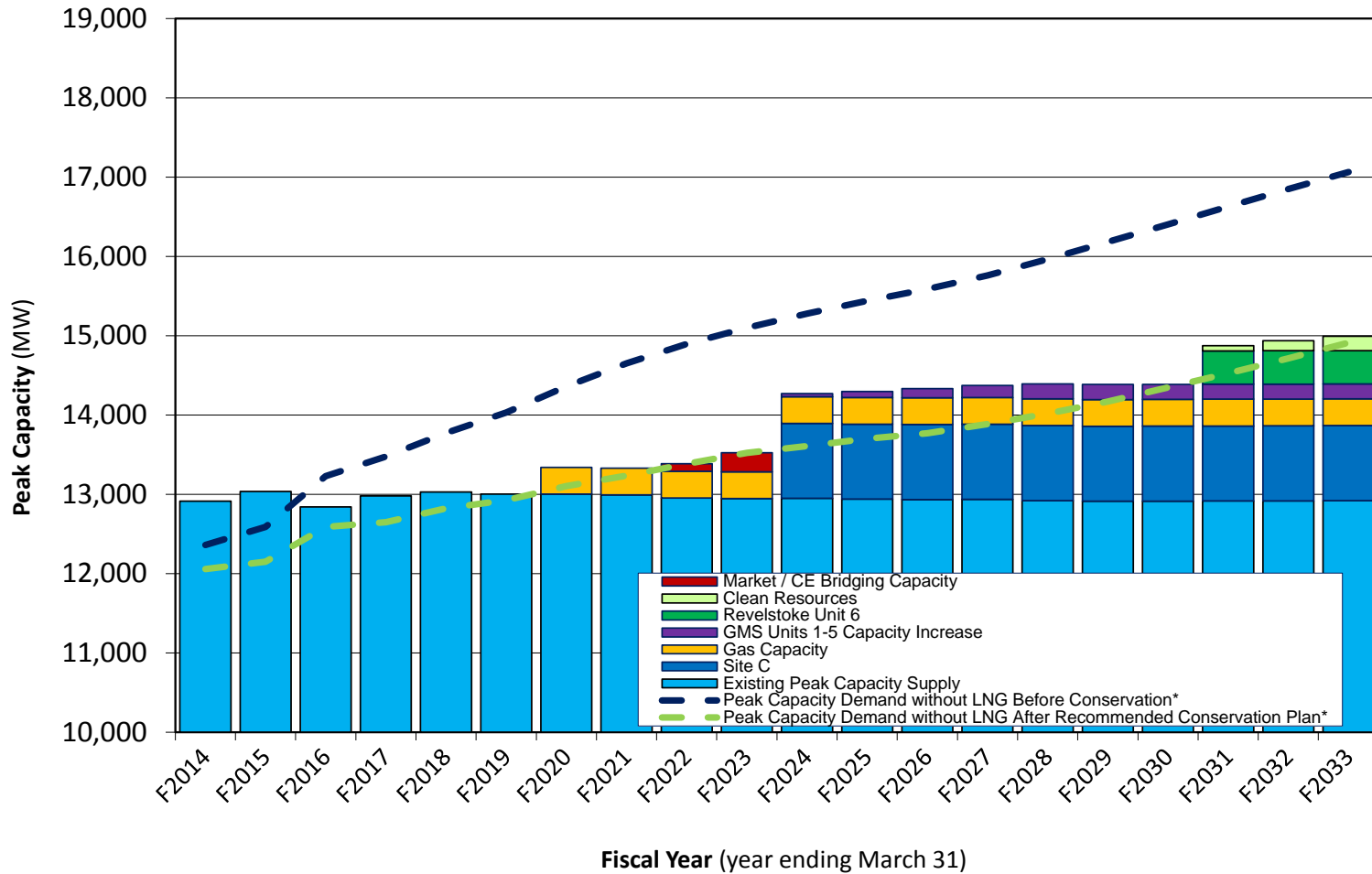


Table 6 BRP with LNG – Capacity

(MW)	Operating/Planning																			
	F2014	F2015	F2016	F2017	F2018	F2019	F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033
Existing and Committed Heritage Resources																				
Heritage Hydroelectric	10,182	10,182	10,077	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072
Heritage Thermal	946	496	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
Resource Smart	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Waneta Transaction	256	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249
Mica 5	0	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465
Mica 6	0	0	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460
Ruskin	0	0	73	76	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114
John Hart	0	0	0	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127
Sub-total (a)	11,435	11,443	11,421	11,545	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584
Existing and Committed IPP Resources																				
Pre-F06 Call EPAs (excl. Rio Tinto Alcan)	667	557	553	547	523	462	426	426	426	151	145	139	134	134	123	123	122	122	122	122
F2006 Call	85	86	86	86	86	86	86	86	86	86	86	86	86	86	86	75	73	73	69	69
Standing Offer Program (signed EPAs)	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	10	10	9	9	9
Bioenergy Call Phase I	67	67	67	67	67	67	54	29	29	29	29	29	29	29	0	0	0	0	0	0
Clean Power Call	86	112	128	141	159	162	162	162	162	162	162	162	162	162	162	162	162	162	162	156
AltaGas Power (NTL)	0	26	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Waneta Expansion	0	0	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Integrated Power Offer	128	152	165	165	165	165	165	165	82	65	65	41	29	29	21	0	0	0	0	0
Bioenergy Call Phase II	0	15	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Conifex	0	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
Sub-total (b)	1,044	1,047	1,137	1,144	1,138	1,080	1,031	1,005	922	631	624	595	577	577	530	498	493	493	489	483
Future Supply-Side Resources																				
IPP Renewals	16	126	129	133	146	177	202	214	256	539	545	563	574	574	603	624	629	629	634	640
Standing Offer Program	0	0	2	4	6	8	10	12	14	16	18	20	22	24	26	29	31	33	35	37
IBAs	0	0	0	0	0	0	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Site C	0	0	0	0	0	0	0	0	0	0	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
Revelstoke Unit 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	488	488	488
GMS Units 1 - 5 Capacity Increase	0	0	0	0	0	0	0	0	0	44	88	132	176	220	220	220	220	220	220	220
Gas Capacity	0	0	0	0	0	0	392	392	392	392	392	392	392	392	392	392	392	392	392	392
Clean Resources	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	145	211
Sub-total (c)	16	126	131	137	152	185	627	642	686	971	2,123	2,187	2,244	2,290	2,365	2,388	2,396	2,961	3,038	3,111
Total Supply Requiring Reserves (d) = a + b + c	12,495	12,615	12,688	12,826	12,874	12,849	13,242	13,231	13,192	13,185	14,331	14,365	14,405	14,451	14,479	14,470	14,472	15,038	15,110	15,178
Reserves																				
14% of Supply Requiring Reserves -14% *d	-1,749	-1,766	-1,776	-1,796	-1,802	-1,799	-1,854	-1,852	-1,847	-1,846	-2,006	-2,011	-2,017	-2,023	-2,027	-2,026	-2,026	-2,105	-2,115	-2,125
400 MW market reliance	400	400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-total (e)	-1,349	-1,366	-1,776	-1,796	-1,802	-1,799	-1,854	-1,852	-1,847	-1,846	-2,006	-2,011	-2,017	-2,023	-2,027	-2,026	-2,026	-2,105	-2,115	-2,125
Supply Not Requiring Reserves																				
Alcan 2007 EPA	419	419	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153
Market Purchases	0	0	0	0	0	0	0	0	94	239	0	0	0	0	0	0	0	0	0	0
Sub-total (f)	419	419	153	153	153	153	153	153	247	393	153	153	153	153	153	153	153	153	153	153
Effective Load Carrying Capability (g) = d + e + f	11,565	11,668	11,065	11,184	11,225	11,203	11,541	11,532	11,592	11,732	12,478	12,508	12,542	12,581	12,605	12,598	12,600	13,086	13,148	13,206
Demand - Integrated System Peak																				
2012 Mid Load Forecast Before DSM (h)	-11,011	-11,222	-11,451	-11,681	-11,971	-12,230	-12,443	-12,613	-12,743	-12,950	-13,125	-13,288	-13,438	-13,609	-13,817	-14,036	-14,258	-14,482	-14,701	-14,915
Expected LNG Load	0	0	0	0	0	0	-120	-240	-360	-360	-360	-360	-360	-360	-360	-360	-360	-360	-360	-360
2012 Mid Load Forecast Before DSM with LNG (i)	-11,011	-11,222	-11,451	-11,681	-11,971	-12,230	-12,563	-12,853	-13,104	-13,310	-13,486	-13,649	-13,798	-13,970	-14,178	-14,397	-14,618	-14,842	-15,061	-15,275
Future Demand Side Management & Other Measures																				
SMI Theft Reduction	0	0	0	9	17	26	35	43	52	60	68	76	76	76	76	76	76	76	76	76
Voltage and VAR Optimization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DSM Option 2 / DSM Target	304	439	638	820	932	1,078	1,224	1,371	1,460	1,519	1,601	1,663	1,743	1,797	1,873	1,939	1,983	2,028	2,057	2,074
Sub-total (j)	304	439	638	829	949	1,104	1,259	1,414	1,511	1,578	1,670	1,739	1,819	1,873	1,949	2,015	2,059	2,104	2,133	2,150
Surplus / Deficit with LNG (k) = g + i + j	858	885	252	332	204	77	237	93	0	0	662	598	563	485	377	217	40	348	220	81

Figure 4 BRP with LNG – Capacity



* including planning reserve requirements

Table 7 CRP without LNG – Energy

(GWh)	Operating										Planning										
	F2014	F2015	F2016	F2017	F2018	F2019	F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033	
Existing and Committed Heritage Resources																					
Heritage Hydroelectric	44,962	44,884	45,737	42,425	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	
Heritage Hydroelectric Non-Firm / Market Allowance	0	0	0	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	
Heritage Thermal	31	31	31	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	
Resource Smart	60	86	113	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	
Waneta Transaction	1,003	874	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	
Mica 5	0	73	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	
Mica 6	0	0	28	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	
Ruskin	0	0	30	221	319	338	338	338	338	338	338	338	338	338	338	338	338	338	338	338	
John Hart	0	0	0	300	806	806	806	806	806	806	806	806	806	806	806	806	806	806	806	806	
Sub-total (a)	46,057	45,947	46,949	48,425	48,653	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	
Existing and Committed IPP Resources																					
Pre-F06 Call EPAs (incl. Rio Tinto Alcan)	7,078	6,865	4,309	5,936	5,786	5,135	4,977	4,869	4,869	2,699	2,437	2,197	2,057	1,956	1,851	1,561	1,497	1,482	1,481	1,477	
F2006 Call	2,158	2,603	2,603	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,283	2,119	2,058	1,991	1,963	
Standing Offer Program (signed EPAs)	214	228	228	201	201	201	201	201	201	201	201	201	201	201	201	197	190	190	187	186	
Bioenergy Call Phase I	569	569	569	582	582	582	515	342	221	221	221	221	221	54	0	0	0	0	-2	-2	
Clean Power Call	786	1,369	1,629	1,768	2,124	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,234	
AltaGas Power (NTL)	0	593	873	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	
Waneta Expansion	0	0	567	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	
Integrated Power Offer	926	1,055	1,092	1,139	1,139	1,139	1,139	1,139	673	533	430	350	313	238	185	34	0	0	0	0	
Bioenergy Call Phase II	0	109	360	565	565	565	565	565	565	565	565	565	565	565	565	565	565	565	565	565	
Conifex	0	94	188	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	
Sub-total (b)	11,731	13,483	12,418	13,952	14,158	13,637	13,412	13,130	12,543	10,233	9,868	9,549	9,371	9,196	8,870	8,330	8,064	7,981	7,909	7,856	
Future Supply-Side Resources																					
IPP Renewals	88	654	1,096	1,147	1,245	1,570	1,683	1,824	2,117	4,357	4,670	4,950	5,109	5,247	5,463	5,900	6,149	6,232	6,303	6,356	
Standing Offer Program	0	0	27	53	80	106	133	159	186	212	239	265	292	318	345	371	398	424	451	477	
IBAs	0	0	0	0	0	0	167	167	167	167	167	167	167	167	167	167	167	167	167	167	
Site C	0	0	0	0	0	0	0	0	0	388	4,435	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	
Revelstoke Unit 6	0	0	0	0	0	0	0	13	26	26	26	26	26	26	26	26	26	26	26	26	
Gas Capacity	0	0	0	0	600	1,050	1,050	1,050	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,500	1,800	2,100	2,400	2,700	
Clean Resources	0	0	0	0	0	0	3,659	6,413	6,413	6,732	6,732	6,732	6,732	6,732	6,732	7,218	8,121	8,626	9,415	9,758	
Market Purchases	1,436	1,262	2,384	841	2,583	4,506	2,421	746	1,191	1,516	0	0	0	0	0	0	0	0	0	0	
Sub-total (c)	1,525	1,916	3,507	2,041	4,508	7,233	9,112	10,372	11,450	14,748	17,619	18,590	18,776	18,941	19,183	20,283	21,761	22,676	23,862	24,584	
Total Supply (d) = a + b + c	59,312	61,346	62,874	64,418	67,318	69,541	71,195	72,173	72,665	73,653	76,159	76,811	76,818	76,808	76,724	77,284	78,497	79,328	80,442	81,112	
Demand - Integrated System Total Gross Requirements																					
2012 High Load Forecast Before DSM	(e)	-61,207	-64,003	-66,326	-68,569	-71,902	-74,610	-76,745	-78,203	-79,060	-80,234	-81,516	-82,401	-82,954	-83,617	-84,768	-85,974	-87,280	-88,192	-89,478	-90,366
Future Demand Side Management & Other Measures																					
SMI Theft Reduction	0	0	0	65	129	193	256	318	380	442	503	562	562	562	562	562	562	562	561	561	
Voltage and VAR Optimization	38	162	229	273	288	304	314	326	328	329	331	333	334	336	338	339	341	343	345	346	
DSM Option 2 / DSM Target - Low Deliverability	1,857	2,495	3,224	3,813	4,167	4,574	4,980	5,385	5,688	5,810	6,221	6,357	6,671	6,872	7,181	7,839	8,015	8,199	8,321	8,389	
Sub-total (f)	1,895	2,657	3,453	4,151	4,584	5,070	5,550	6,030	6,396	6,581	7,055	7,251	7,567	7,770	8,080	8,740	8,917	9,103	9,227	9,297	
Surplus / Deficit prior to LNG (g) = d + e + f	0	0	0	0	0	0	0	0	0	0	1,697	1,661	1,432	961	36	50	134	240	191	42	

Figure 5 CRP without LNG – Energy

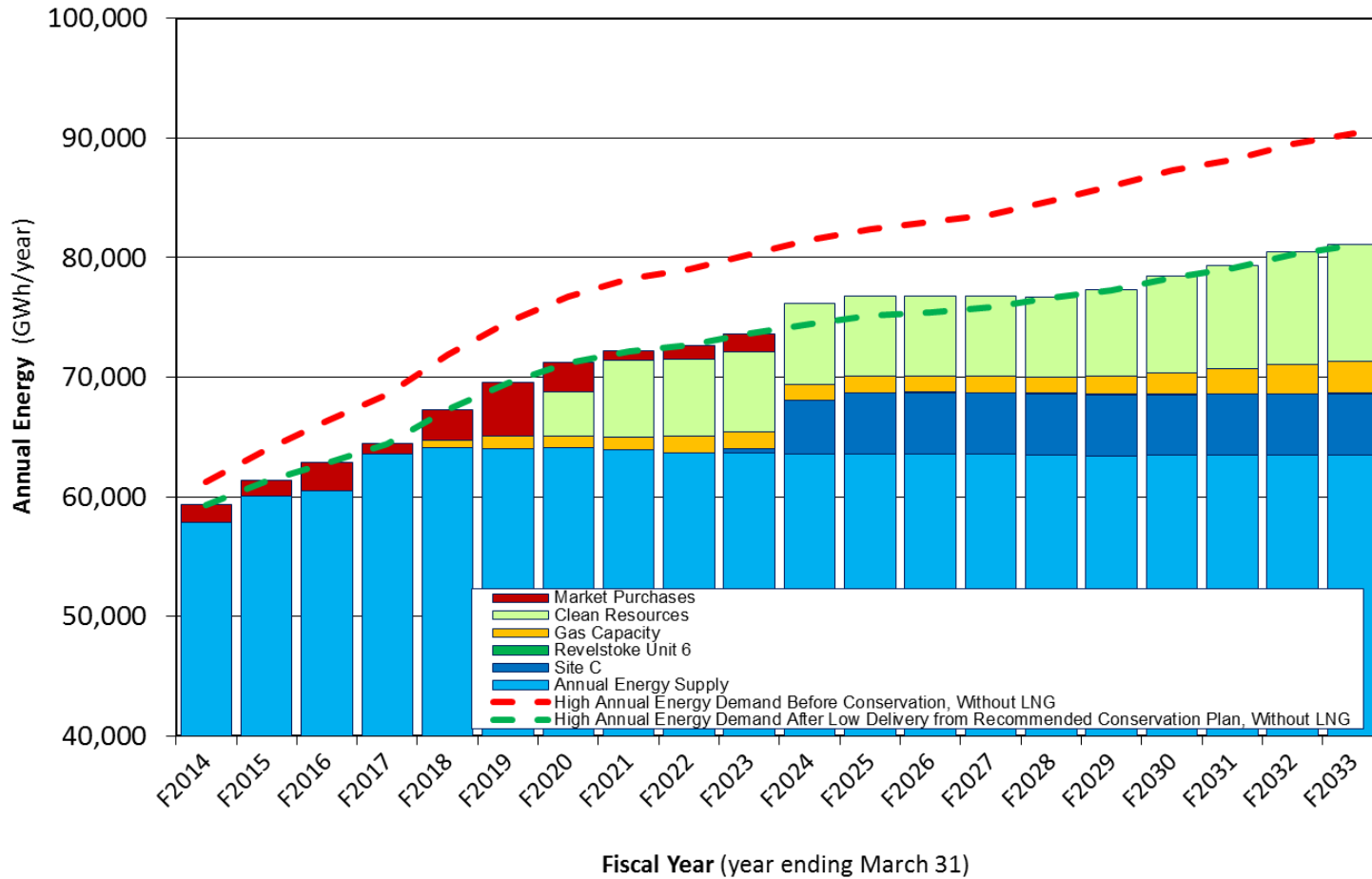
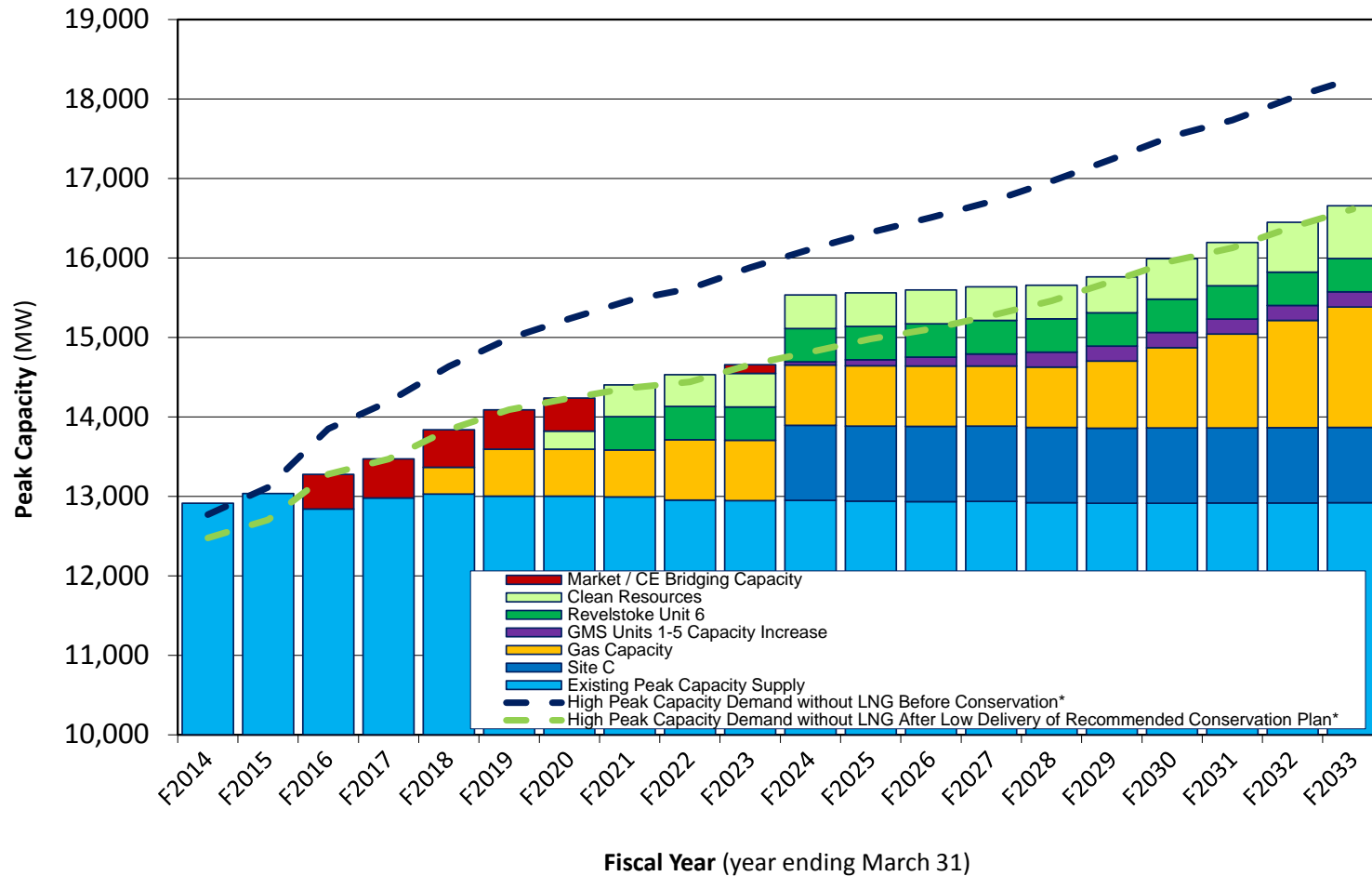


Table 8 CRP without LNG – Capacity

(MW)			Operating			Planning																
			F2014	F2015	F2016	F2017	F2018	F2019	F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033
Existing and Committed Heritage Resources																						
Heritage Hydroelectric			10,182	10,182	10,077	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072
Heritage Thermal			946	496	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
Resource Smart			51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Waneta Transaction			256	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249
Mica 5			0	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465
Mica 6			0	0	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460
Ruskin			0	0	73	76	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114
John Hart			0	0	0	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127
Sub-total	(a)		11,435	11,443	11,421	11,545	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584
Existing and Committed IPP Resources																						
Pre-F06 Call EPAs (excl. Rio Tinto Alcan)			667	557	553	547	523	462	426	426	151	145	139	134	134	123	123	122	122	122	122	122
F2006 Call			85	86	86	86	86	86	86	86	86	86	86	86	86	86	86	75	73	73	69	69
Standing Offer Program (signed EPAs)			10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	10	10	9	9	9
Bioenergy Call Phase I			67	67	67	67	67	67	54	29	29	29	29	29	29	0	0	0	0	0	0	0
Clean Power Call			86	112	128	141	159	162	162	162	162	162	162	162	162	162	162	162	162	162	162	156
AltaGas Power (NTL)			0	26	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Waneta Expansion			0	0	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Integrated Power Offer			128	152	165	165	165	165	165	82	65	65	41	29	29	21	0	0	0	0	0	0
Bioenergy Call Phase II			0	15	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Conifex			0	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
Sub-total	(b)		1,044	1,047	1,137	1,144	1,138	1,080	1,031	1,005	922	631	624	595	577	577	530	498	493	493	489	483
Future Supply-Side Resources																						
IPP Renewals			16	126	129	133	146	177	202	214	256	539	545	563	574	574	603	624	629	629	634	640
Standing Offer Program			0	0	2	4	6	8	10	12	14	16	18	20	22	24	26	29	31	33	35	37
IBAs			0	0	0	0	0	0	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Site C			0	0	0	0	0	0	0	0	0	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
Revelstoke Unit 6			0	0	0	0	0	0	0	488	488	488	488	488	488	488	488	488	488	488	488	488
GMS Units 1 - 5 Capacity Increase			0	0	0	0	0	0	0	0	0	44	88	132	176	220	220	220	220	220	220	220
Gas Capacity			0	0	0	0	392	686	686	686	882	882	882	882	882	882	882	980	1,176	1,372	1,568	1,764
Clean Resources			0	0	0	0	0	0	264	463	463	491	491	491	491	491	491	527	592	631	730	773
Sub-total	(c)		16	126	131	137	544	871	1,186	1,888	2,127	2,441	3,593	3,656	3,714	3,760	3,835	3,992	4,260	4,497	4,799	5,045
Total Supply Requiring Reserves	(d) = a + b + c		12,495	12,615	12,688	12,826	13,266	13,535	13,800	14,477	14,633	14,655	15,801	15,835	15,875	15,921	15,949	16,074	16,337	16,574	16,871	17,112
Reserves																						
14% of Supply Requiring Reserves	-14% *d		-1,749	-1,766	-1,776	-1,796	-1,857	-1,895	-1,932	-2,027	-2,049	-2,052	-2,212	-2,217	-2,222	-2,229	-2,233	-2,250	-2,287	-2,320	-2,362	-2,396
400 MW market reliance			400	400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-total	(e)		-1,349	-1,366	-1,776	-1,796	-1,857	-1,895	-1,932	-2,027	-2,049	-2,052	-2,212	-2,217	-2,222	-2,229	-2,233	-2,250	-2,287	-2,320	-2,362	-2,396
Supply Not Requiring Reserves																						
Alcan 2007 EPA			419	419	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153
Market Purchases			0	0	435	491	473	497	416	0	0	109	0	0	0	0	0	0	0	0	0	0
Sub-total	(f)		419	419	588	644	626	650	570	153	153	262	153	153	153	153	153	153	153	153	153	153
Effective Load Carrying Capability	(g) = d + e + f		11,565	11,668	11,500	11,675	12,035	12,290	12,438	12,603	12,738	12,866	13,742	13,772	13,806	13,845	13,869	13,977	14,203	14,407	14,662	14,870
Demand - Integrated System Peak																						
2012 High Load Forecast Before DSM	(h)		-11,421	-11,746	-12,074	-12,396	-12,832	-13,189	-13,438	-13,668	-13,823	-14,087	-14,319	-14,532	-14,721	-14,923	-15,178	-15,456	-15,747	-15,946	-16,231	-16,469
Future Demand Side Management & Other Measures																						
SMI Theft Reduction			0	0	0	9	17	26	35	43	52	60	68	76	76	76	76	76	76	76	76	76
Voltage and VAR Optimization			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DSM Option 2 / DSM Target - Low Deliverability			294	410	574	712	779	872	965	1,058	1,124	1,161	1,228	1,265	1,328	1,361	1,428	1,462	1,495	1,529	1,551	1,564
Sub-total	(i)		294	410	574	721	797	898	1,000	1,101	1,175	1,221	1,296	1,341	1,404	1,437	1,504	1,538	1,571	1,605	1,627	1,640
Surplus / Deficit prior to LNG	(j) = g + h + i		437	331	0	0	0	0	0	37	91	0	719	580	488	360	195	59	27	66	58	41

Figure 6 CRP without LNG – Capacity



* including planning reserve requirements

Table 9 CRP with LNG – Energy

(GWh)	Operating/Planning																			
	F2014	F2015	F2016	F2017	F2018	F2019	F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033
Existing and Committed Heritage Resources																				
Heritage Hydroelectric	44,962	44,884	45,737	42,425	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048	42,048
Heritage Hydroelectric Non-Firm / Market Allowance	0	0	0	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100
Heritage Thermal	31	31	31	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
Resource Smart	60	86	113	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133
Waneta Transaction	1,003	874	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865
Mica 5	0	73	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145
Mica 6	0	0	28	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
Ruskin	0	0	30	221	319	338	338	338	338	338	338	338	338	338	338	338	338	338	338	338
John Hart	0	0	0	300	806	806	806	806	806	806	806	806	806	806	806	806	806	806	806	806
Sub-total (a)	46,057	45,947	46,949	48,425	48,653	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671	48,671
Existing and Committed IPP Resources																				
Pre-F06 Call EPAs (incl. Rio Tinto Alcan)	7,078	6,865	4,309	5,936	5,786	5,135	4,977	4,869	4,869	2,699	2,437	2,197	2,057	1,956	1,851	1,561	1,497	1,482	1,481	1,477
F2006 Call	2,158	2,603	2,603	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,328	2,283	2,119	2,058	1,991	1,963
Standing Offer Program (signed EPAs)	214	228	228	201	201	201	201	201	201	201	201	201	201	201	201	201	197	190	187	186
Bioenergy Call Phase I	569	569	569	582	582	582	515	342	221	221	221	221	221	221	54	0	0	0	-2	-2
Clean Power Call	786	1,369	1,629	1,768	2,124	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,253	2,234
AltaGas Power (NTL)	0	593	873	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947
Waneta Expansion	0	0	567	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306
Integrated Power Offer	926	1,055	1,092	1,139	1,139	1,139	1,139	1,139	673	533	430	350	313	238	185	34	0	0	0	0
Bioenergy Call Phase II	0	109	360	565	565	565	565	565	565	565	565	565	565	565	565	565	565	565	565	565
Conifex	0	94	188	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
Sub-total (b)	11,731	13,483	12,418	13,952	14,158	13,637	13,412	13,130	12,543	10,233	9,868	9,549	9,371	9,196	8,870	8,330	8,064	7,981	7,909	7,856
Future Supply-Side Resources																				
IPP Renewals	88	654	1,096	1,147	1,245	1,570	1,683	1,824	2,117	4,357	4,670	4,950	5,109	5,247	5,463	5,900	6,149	6,232	6,303	6,356
Standing Offer Program	0	0	27	53	80	106	133	159	186	212	239	265	292	318	345	371	398	424	451	477
IBAs	0	0	0	0	0	0	167	167	167	167	167	167	167	167	167	167	167	167	167	167
Site C	0	0	0	0	0	0	0	0	0	388	4,435	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100	5,100
Revelstoke Unit 6	0	0	0	0	0	0	0	13	26	26	26	26	26	26	26	26	26	26	26	26
Gas Capacity	0	0	0	0	600	1,050	1,050	1,050	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,650	2,100	2,400	2,700	3,000
Clean Resources	0	0	0	0	0	0	4,477	8,626	9,415	9,758	9,758	9,758	9,758	9,758	9,758	10,520	10,759	11,785	12,006	12,563
Market Purchases	1,436	1,262	2,384	841	2,583	4,506	2,602	533	1,189	0	0	0	0	0	0	0	0	0	0	0
Sub-total (c)	1,525	1,916	3,507	2,041	4,508	7,233	10,112	12,372	14,450	17,748	20,645	21,617	21,802	21,967	22,209	23,734	24,698	26,134	26,752	27,689
Total Supply (d) = a + b + c	59,312	61,346	62,874	64,418	67,318	69,541	72,195	74,173	75,665	76,653	79,185	79,837	79,845	79,834	79,750	80,736	81,434	82,787	83,332	84,216
Demand - Integrated System Total Gross Requirements																				
2012 High Load Forecast Before DSM	(e) -61,207	-64,003	-66,326	-68,569	-71,902	-74,610	-76,745	-78,203	-79,060	-80,234	-81,516	-82,401	-82,954	-83,617	-84,768	-85,974	-87,280	-88,192	-89,478	-90,366
Expected LNG Load	0	0	0	0	0	0	-1,000	-2,000	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000	-3,000
2012 High Load Forecast Before DSM with LNG	(f) -61,207	-64,003	-66,326	-68,569	-71,902	-74,610	-77,745	-80,203	-82,060	-83,234	-84,516	-85,401	-85,954	-86,617	-87,768	-88,974	-90,280	-91,192	-92,478	-93,366
Future Demand Side Management & Other Measures																				
SMI Theft Reduction	0	0	0	65	129	193	256	318	380	442	503	562	562	562	562	562	562	562	561	561
Voltage and VAR Optimization	38	162	229	273	288	304	314	326	328	329	331	333	334	336	338	339	341	343	345	346
DSM Option 2 / DSM Target - Low Deliverability	1,857	2,495	3,224	3,813	4,167	4,574	4,980	5,385	5,688	5,810	6,221	6,357	6,671	6,872	7,181	7,839	8,015	8,199	8,321	8,389
Sub-total (g)	1,895	2,657	3,453	4,151	4,584	5,070	5,550	6,030	6,396	6,581	7,055	7,251	7,567	7,770	8,080	8,740	8,917	9,103	9,227	9,297
Surplus / Deficit with LNG (h) = d + f + g	0	0	0	0	0	0	0	0	0	0	1,724	1,687	1,458	987	62	501	71	698	81	146

Figure 7 CRP with LNG – Energy

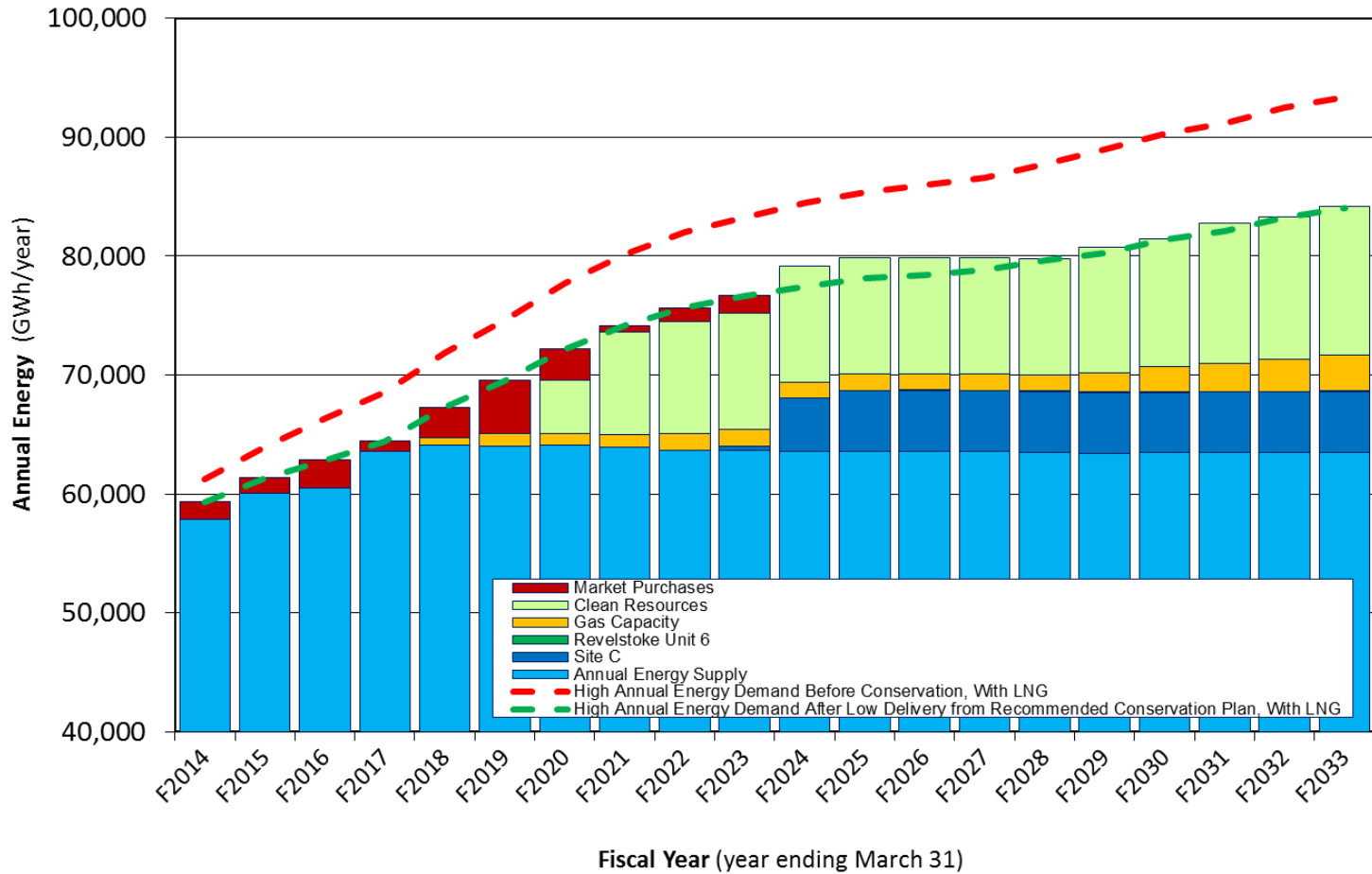
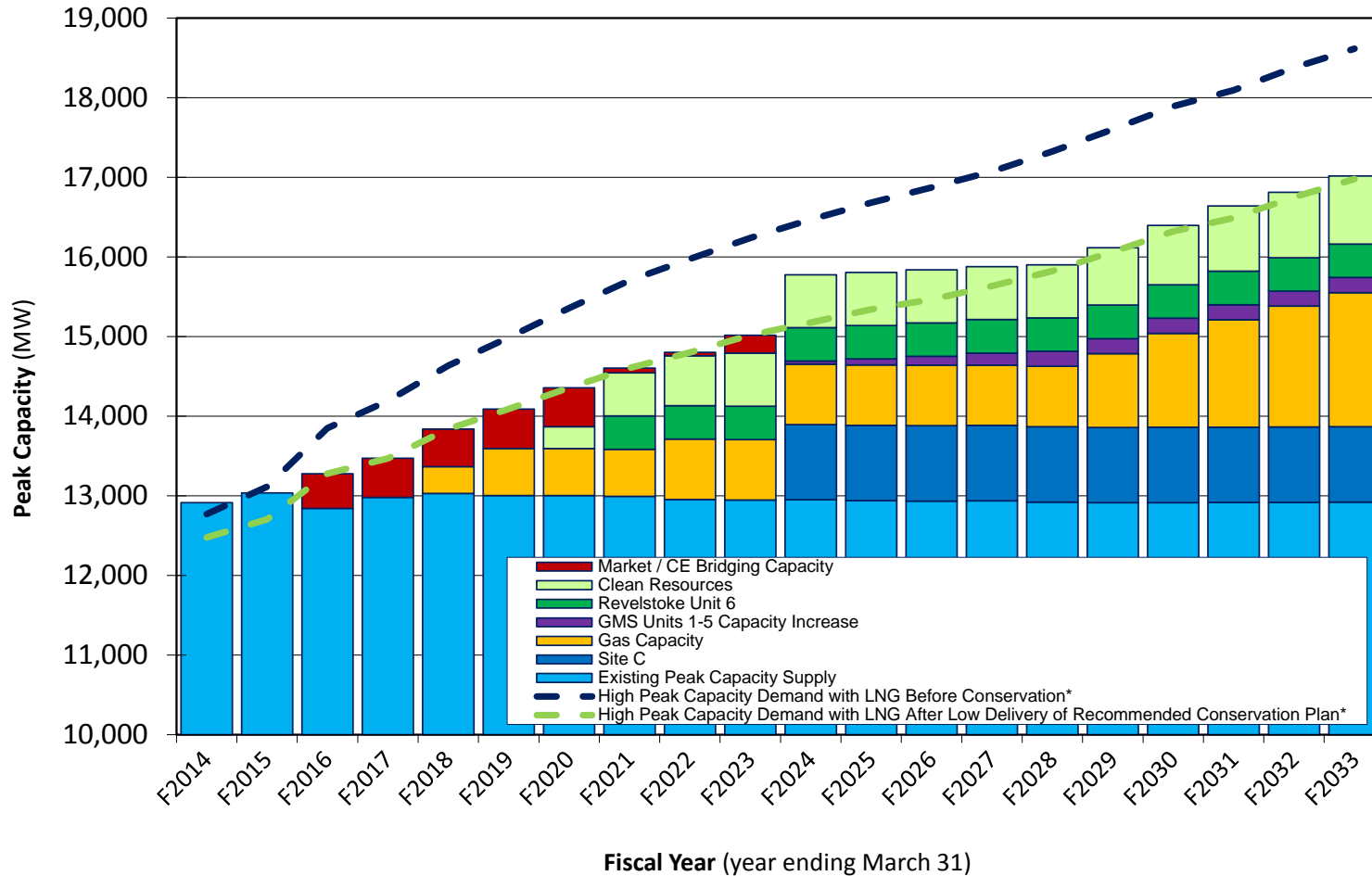


Table 10 CRP with LNG – Capacity

(MW)			Operating																		
	F2014	F2015	F2016	F2017	F2018	F2019	F2020	F2021	F2022	F2023	F2024	F2025	F2026	F2027	F2028	F2029	F2030	F2031	F2032	F2033	
Existing and Committed Heritage Resources																					
Heritage Hydroelectric	10,182	10,182	10,077	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072	10,072
Heritage Thermal	946	496	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
Resource Smart	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
Waneta Transaction	256	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249	249
Mica 5	0	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465	465
Mica 6	0	0	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460
Ruskin	0	0	73	76	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114
John Hart	0	0	0	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127
Sub-total (a)	11,435	11,443	11,421	11,545	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584	11,584
Existing and Committed IPP Resources																					
Pre-F06 Call EPAs (excl. Rio Tinto Alcan)	667	557	553	547	523	462	426	426	426	151	145	139	134	134	123	123	122	122	122	122	122
F2006 Call	85	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	75	73	73	69	69
Standing Offer Program (signed EPAs)	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	10	10	9	9	
Bioenergy Call Phase I	67	67	67	67	67	67	67	29	29	29	29	29	29	29	0	0	0	0	0	0	0
Clean Power Call	86	112	128	141	159	162	162	162	162	162	162	162	162	162	162	162	162	162	162	162	156
AltaGas Power (NTL)	0	26	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Waneta Expansion	0	0	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Integrated Power Offer	128	152	165	165	165	165	165	165	82	65	65	41	29	29	21	0	0	0	0	0	0
Bioenergy Call Phase II	0	15	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Conifex	0	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
Sub-total (b)	1,044	1,047	1,137	1,144	1,138	1,080	1,031	1,005	922	631	624	595	577	577	530	498	493	493	489	489	483
Future Supply-Side Resources																					
IPP Renewals	16	126	129	133	146	177	202	214	256	539	545	563	574	574	603	624	629	629	634	640	640
Standing Offer Program	0	0	2	4	6	8	10	12	14	16	18	20	22	24	26	29	31	33	35	37	37
IBAs	0	0	0	0	0	0	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Site C	0	0	0	0	0	0	0	0	0	0	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	
Revelstoke Unit 6	0	0	0	0	0	0	0	488	488	488	488	488	488	488	488	488	488	488	488	488	
GMS Units 1 - 5 Capacity Increase	0	0	0	0	0	0	0	0	0	44	88	132	176	220	220	220	220	220	220	220	
Gas Capacity	0	0	0	0	392	686	686	686	882	882	882	882	882	882	882	1,078	1,372	1,568	1,764	1,960	
Clean Resources	0	0	0	0	0	0	321	631	730	773	773	773	773	773	773	836	866	953	955	993	
Sub-total (c)	16	126	131	137	544	871	1,242	2,056	2,394	2,723	3,875	3,938	3,996	4,042	4,117	4,399	4,730	5,015	5,220	5,461	
Total Supply Requiring Reserves (d) = a + b + c	12,495	12,615	12,688	12,826	13,266	13,535	13,856	14,644	14,900	14,937	16,083	16,117	16,157	16,203	16,230	16,481	16,807	17,092	17,292	17,528	
Reserves																					
14% of Supply Requiring Reserves -14% *d	-1,749	-1,766	-1,776	-1,796	-1,857	-1,895	-1,940	-2,050	-2,086	-2,091	-2,252	-2,256	-2,262	-2,268	-2,272	-2,307	-2,353	-2,393	-2,421	-2,454	
400 MW market reliance	400	400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sub-total (e)	-1,349	-1,366	-1,776	-1,796	-1,857	-1,895	-1,940	-2,050	-2,086	-2,091	-2,252	-2,256	-2,262	-2,268	-2,272	-2,307	-2,353	-2,393	-2,421	-2,454	
Supply Not Requiring Reserves																					
Alcan 2007 EPA	419	419	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	
Market Purchases	0	0	435	491	473	497	488	59	40	227	0	0	0	0	0	0	0	0	0	0	
Sub-total (f)	419	419	588	644	626	650	641	212	194	380	153	153	153	153	153	153	153	153	153	153	
Effective Load Carrying Capability (g) = d + e + f	11,565	11,668	11,500	11,675	12,035	12,290	12,558	12,807	13,008	13,226	13,985	14,014	14,048	14,088	14,112	14,327	14,608	14,853	15,024	15,227	
Demand - Integrated System Peak																					
2012 High Load Forecast Before DSM (h)	-11,421	-11,746	-12,074	-12,396	-12,832	-13,189	-13,438	-13,668	-13,823	-14,087	-14,319	-14,532	-14,721	-14,923	-15,178	-15,456	-15,747	-15,946	-16,231	-16,469	
Expected LNG Load	0	0	0	0	0	0	-120	-240	-360	-360	-360	-360	-360	-360	-360	-360	-360	-360	-360	-360	
2012 High Load Forecast Before DSM with LNG (i)	-11,421	-11,746	-12,074	-12,396	-12,832	-13,189	-13,558	-13,908	-14,183	-14,447	-14,679	-14,892	-15,082	-15,283	-15,539	-15,817	-16,107	-16,307	-16,591	-16,830	
Future Demand Side Management & Other Measures																					
SMI Theft Reduction	0	0	0	9	17	26	35	43	52	60	68	76	76	76	76	76	76	76	76	76	
Voltage and VAR Optimization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
DSM Option 2 / DSM Target - Low Deliverability	294	410	574	712	779	872	965	1,058	1,124	1,161	1,228	1,265	1,328	1,361	1,428	1,462	1,495	1,529	1,551	1,564	
Sub-total (j)	294	410	574	721	797	898	1,000	1,101	1,175	1,221	1,296	1,341	1,404	1,437	1,504	1,538	1,571	1,605	1,627	1,640	
Surplus / Deficit with LNG (k) = g + i + j	437	331	0	0	0	0	0	0	0	0	601	462	370	241	77	48	71	151	60	38	

Figure 8 CRP with LNG – Capacity



* including planning reserve requirements